# Hewlett-Packard Company

TPC Benchmark™ C
Full Disclosure Report
for
HP ProLiant BL25p - 2P
using
Microsoft SQL Server 2005 Enterprise Edition
and
Windows Server 2003, Enterprise Edition SP1

**First Edition**
**Submitted for Review**
**September 30, 2005**


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First Edition – September 2005

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# *Preface*

The TPC Benchmark C was developed by the Transaction Processing Performance Council (TPC). The TPC was founded to define transaction processing benchmarks and to disseminate objective, verifiable performance data to the industry. This full disclosure report is based on the TPC Benchmark C Standard Specifications Version 5.4.

## TPC Benchmark C Overview

The TPC describes this benchmark in Clause 0.1 of the specifications as follows:

TPC Benchmark™ C (TPC-C) is an OLTP workload. It is a mixture of read-only and update intensive transactions that simulate the activities found in complex OLTP application environments. It does so by exercising a breadth of system components associated with such environments, which are characterized by:

- The simultaneous execution of multiple transaction types that span a breadth of complexity
- On-line and deferred transaction execution modes
- Multiple on-line terminal sessions
- Moderate system and application execution time
- Significant disk input/output
- Transaction integrity (ACID properties)
- Non-uniform distribution of data access through primary and secondary keys
- Databases consisting of many tables with a wide variety of sizes, attributes, and relationships
- Contention on data access and update

The performance metric reported by TPC-C is a "business throughput" measuring the number of orders processed per minute. Multiple transactions are used to simulate the business activity of processing an order, and each transaction is subject to a response time constraint. The performance metric for this benchmark is expressed in transactions-per-minute-C (tpmC). To be compliant with the TPC-C standard, all references to tpmC results must include the tpmC rate, the associated price-per-tpmC, and the availability date of the priced configuration.

Although these specifications express implementation in terms of a relational data model with conventional locking scheme, the database may be implemented using any commercially available database management system (DBMS), database server, file system, or other data repository that provides a functionally equivalent implementation. The terms "table", "row", and "column" are used in this document only as examples of logical data structures.

TPC-C uses terminology and metrics that are similar to other benchmarks, originated by the TPC or others. Such similarity in terminology does not in any way imply that TPC-C results are comparable to other benchmarks. The only benchmark results comparable to TPC-C are other TPC-C results conformant with the same revision.

Despite the fact that this benchmark offers a rich environment that emulates many OLTP applications, this benchmark does not reflect the entire range of OLTP requirements. In addition, the extent to which a customer can achieve the results reported by a vendor is highly dependent on how closely TPC-C approximates the customer application. The relative performance of systems derived from this benchmark does not necessarily hold for other workloads or environments. Extrapolations to any other environment are not recommended.

Benchmark results are highly dependent upon workload, specific application requirements, and systems design and implementation. Relative system performance will vary as a result of these and other factors. Therefore, TPC-C should not be used as a substitute for a specific customer application benchmarking when critical capacity planning and/or product evaluation decisions are contemplated.


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# *Abstract*

## Overview

This report documents the methodology and results of the TPC Benchmark C test conducted on the HP ProLiant BL25p. The operating system used for the benchmark was Windows Server 2003, Enterprise Edition SP1. The DBMS used was Microsoft SQL Server 2005 Enterprise Edition.

## TPC Benchmark C Metrics

The standard TPC Benchmark C metrics, tpmC (transactions per minute), price per tpmC (three year capital cost per measured tpmC), and the availability date are reported as:

107,010 tpmC
USD $2.93 per tpmC

The availability date is Nov. 8, 2005.

## Standard and Executive Summary Statements

The following pages contain executive summary of results for this benchmark.

## Auditor

The benchmark configuration, environment and methodology were audited by Lorna Livingtree of Performance Metrics, Inc. to verify compliance with the relevant TPC specifications.


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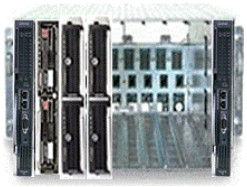
| Hewlett-Packard Company | HP ProLiant BL25p - 2P<br>C/S with 4 HP ProLiant BL35p | TPC-C Rev. 5.4<br>**Report Date: Sept. 30, 2005** |
|---|---|---|

| Total System Cost | TPC-C Throughput | Price/Performance | Availability Date |
|---|---|---|---|
| **$313,003 USD** | **107,010** | **$2.93 USD** | **Nov. 8, 2005** |

| Processors | Database Manager | Operating System | Other Software | Number of Users |
|---|---|---|---|---|
| 2 AMD Opteron<br>2.4 GHz/1 MB Dual Core - Server<br>4 AMD Opteron 2.4 GHz – Clients | Microsoft SQL Server 2005 Enterprise Edition | Windows Server 2003, Enterprise Edition SP1 | Microsoft Visual C++<br>Microsoft COM+ | **86760** |

**1X HP BLp Enhanced Enclosure containing:**
**1X HP ProLiant BL25p**
**4X HP ProLiant BL35p**
**1X HP BLp-Class C-GbE2 Interconnect Switch**



**3 HP Rack 5642 containing: 7X HP MSA1000 Enclosures with 14X 36 GB 15K Drives each, 1X HP MSA1000 Enclosure with 12X 72 GB 10K Drives, and 14X HP MSA30 SB Enclosures with 14X 36 GB 15K Drives each**

**6 RTEs simulating 86760 PCs connected to 4 HP ProLiant BL35p with 2x2.4GHz AMD Opteron, 2 GB RAM each**

| | Server | | Each Client | |
|---|---|---|---|---|
| **System Components** | Quantity | Description | Quantity | Description |
| Processor | 2 | AMD Opteron 2.4 GHz w/ 1MB Cache (Dual Core) | 2 | 2.4 GHz AMD Opteron w/ 1MB cache |
| Memory | 8 | 4 GB DDR | 4 | 512 MB |
| Disk Controllers | 1 | Integrated SMART 6i Array Controller | 1 | Integrated IDE Controller |
| | 1 | QLogic Fibre Channel Host Adapter (Dual Port) | | |
| Disk Drives | 12 | 72.8 GB SCSI Drive | 2 | 60 GB IDE Drive |
| | 296 | 36.4 GB SCSI Drive | | |
| Total Storage | | 11648 GB | | 120 GB |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| Hewlett-Packard Company | HP Proliant BL25p 2.4GHz Dual Core Client/Server | | | | TPC-C Rev. 5.4 Report Date: | 30-Sep-05 |
|---|---|---|---|---|---|---|
| **Description** | **Part Number** | **Third Party Brand** | **Unit Price Pricing** | **Qty** | **Extended Price** | **3 yr. Maint. Price** |
| **Server Hardware** | | | | | | |
| HP ProLiant BL25p 2.4Ghz-1M DC 2G 2P | 399598-B21 | | 1 5,399 | 1 | 5,399 | |
| - 2 embedded single port NC7781 Gigabit NICs | | | | | | |
| - embedded dual port NC7782 Gigabit NIC | | | | | | |
| - embedded Smart 6i array controller | | | | | | |
| HP 8GB REG PC2700 (2x4GB) | 395409-B21 | | 1 7,499 | 4 | 29,996 | |
| HP Storageworks MSA 30 SB Storage | 302969-B21 | | 1 2,829 | 14 | 39,606 | |
| Modular SAN Array 1000 | 201723-B22 | | 1 6,995 | 8 | 55,960 | |
| MSA SAN Switch 2/8 | 288247-B21 | | 1 4,149 | 2 | 8,298 | |
| HP 5642 Unassembled Rack | 358254-B21 | | 1 689 | 3 | 2,067 | |
| HP BL25/45p Dual Port Fiber Channel Adapter | 381881-B21 | | 1 599 | 1 | 599 | |
| UPS R1500 XR Low Voltage US | 204404-001 | | 1 866 | 1 | 866 | |
| HP BLp Enhanced Enclosure w/8 RDP Licenses | 281404-B22 | | 1 2,039 | 1 | 2,039 | |
| HP BLp-Class C-GbE2 Interconnect Switch | 283192-B21 | | 1 4,399 | 1 | 4,399 | |
| HP BLp 1U Pwr Encl w/6 Pwr Spply Kit | 378284-B21 | | 1 2,299 | 1 | 2,299 | |
| 36GB 15Krpm U320 UNI HDD (OS, data) | 286776-B22 | | 1 299 | 296 | 88,504 | |
| HP 72GB 15K U320 Pluggable Hard Drive (log) | 286778-B22 | | 1 569 | 12 | 6,828 | |
| Blade Server Care Pack 3yr 4hr 24x7 | UD188E | | 1 295 | 1 | | 295 |
| Blade Enclosure Care Pack 3yr 4hr 24x7 | HC032E | | 1 737 | 1 | | 737 |
| MSA1000 Care Pack 3yr 4hr 24x7 | U6357E | | 1 3,222 | 8 | | 25,776 |
| MSA30 Care Pack 3yr 4hr 24x7 | U8130E | | 1 1,827 | 14 | | 25,578 |
| Storage Works LC/LC 15m Fibre Cable | 221692-B23 | | 1 103 | 8 | 824 | |
| Storage Works LC/LC 15m Fibre Cable (10% spares) | 221692-B23 | | 1 103 | 2 | | 206 |
| HP CAT5 KVM USB 1 Pack Interface Adapter | 336047-B21 | | 1 99 | 1 | 99 | |
| HP s7540 17in. CRT Monitor | PF997AA#ABA | | 1 149 | 1 | 149 | |
| HP PS/2 Scroll Mouse carbonite | DG169AV | | 1 5 | 1 | 5 | |
| HP Enhanced Keyboard | DG170AV#ABA | | 1 10 | 1 | 10 | |
| | | | | **Subtotal** | **247,947** | **52,592** |
| **Server Software** | | | | | | |
| Microsoft SQL Server 2005 Enterprise (x86) Edition (per processor) | 810-00845 | Microsoft | 2 19,909 | 2 | 39,818 | |
| Visual C++ .Net Standard | 254-00170 | Microsoft | 2 109 | 1 | 109 | Incl below |
| Microsoft Windows 2003, Enterprise Edition | P72-00264 | Microsoft | 2 2,334 | 1 | 2,334 | Incl below |
| Microsoft Problem Resolution Services (1 incident) | | Microsoft | 2 245 | 1 | | 245 |
| | | | | **Subtotal** | **42,261** | **245** |
| **Client Hardware** | | | | | | |
| HP BL35p O2.4GHz 1M 2P Blade | 374212-B21 | | 1 3,499 | 4 | 13,996 | |
| - 2 GB PC3200 DDR SDRAM, 2 embedded NC7781 Gigabit NIC | | | | | | |
| HP BL35p Blade Sleeve Server | 354101-B21 | | 1 199 | 2 | 398 | |
| HP BL35p 60GB ATA Hard Drive | 354052-B21 | | 1 299 | 8 | 2,392 | |
| Blade Server Care Pack 3yr 4hr 24x7 | UD188E | | 1 295 | 4 | | 1,180 |
| | | | | **Subtotal** | **16,786** | **1,180** |
| **Client Software** | | | | | | |
| Microsoft Windows 2000 Server | C11-00821 | Microsoft | 2 738 | 4 | 2,952 | Incl. Above |
| | | | | **Subtotal** | **2,952** | **0** |
| Large Purchase and Net 30 discount (See Note 1) | 16.0% | | 1 | | **($42,357)** | **($8,604)** |
| | | | | **Total** | **$267,589** | **$45,413** |

Prices used in TPC benchmarks reflect the actual prices a customer would pay for a one-time purchase of the stated components. Individually negotiated discounts are not permitted. Special prices based on assumptions about past or future purchases are not permitted. All discounts reflect standard pricing policies for the listed components. For complete details, see the pricing sections of the TPC benchmark pricing specifications. If you find that the stated prices are not available according to these terms, please inform the TPC at pricing@tpc.org. Thank you.

**Three-Year Cost of Ownership: $313,003 USD**

**tpmC Rating: 107,010**

**$ / tpmC: $2.93 USD**

Pricing: 1=HP 2= Microsoft

Note 1 = Discount based on HP Direct guidence with large purchase and Net 30 discount. Discount applied to all items sold by HP, which are indicated with a 1 in the pricing column.

Note:The benchmark results and test methodology were audited by Lorna Livingtree of Performance Metrics, Inc.


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# Numerical Quantities Summary

## MQTH, Computed Maximum Qualified Throughput 107,010 tpmC

| Response Times (in seconds) | Average | 90% | Maximum |
|---|---|---|---|
| New-Order | 0.70 | 1.19 | 23.44 |
| Payment | 0.66 | 1.15 | 22.38 |
| Order-Status | 0.68 | 1.17 | 21.04 |
| Delivery (interactive portion) | 0.10 | 0.11 | 2.40 |
| Delivery (deferred portion) | 0.13 | 0.16 | 7.92 |
| Stock-Level | 0.68 | 1.16 | 30.98 |
| Menu | 0.10 | 0.11 | 2.41 |

| Transaction Mix, in percent of total transaction | |
|---|---|
| New-Order | 44.91% |
| Payment | 43.06% |
| Order-Status | 4.00% |
| Delivery | 4.00% |
| Stock-Level | 4.03% |

| Emulation Delay (in seconds) | Resp.Time | Menu |
|---|---|---|
| New-Order | 0.10 | 0.10 |
| Payment | 0.10 | 0.10 |
| Order-Status | 0.10 | 0.10 |
| Delivery (interactive) | 0.10 | 0.10 |
| Stock-Level | 0.10 | 0.10 |

| Keying/Think Times (in seconds) | Min. | Average | Max. |
|---|---|---|---|
| New-Order | 18.02/0.00 | 18.03/12.07 | 18.17/120.63 |
| Payment | 3.02/0.00 | 3.03/12.07 | 3.17/120.63 |
| Order-Status | 2.02/0.00 | 2.03/10.08 | 2.17/100.63 |
| Delivery (interactive) | 2.02/0.00 | 2.03/5.08 | 2.17/50.63 |
| Stock-Level | 2.02/0.00 | 2.03/5.08 | 2.17/50.63 |

| Test Duration | |
|---|---|
| Ramp-up time | 91 minutes |
| Measurement interval | 120 minutes |
| Transactions (all types) completed during measurement interval | 29,609,461 |
| Ramp down time | 7 minutes |

| Checkpointing | |
|---|---|
| Number of checkpoints | 4 |
| Checkpoint interval | 30 minutes |


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# *General Items*

## Test Sponsor

*A statement identifying the benchmark sponsor(s) and other participating companies must be provided.*

This benchmark was sponsored by Hewlett-Packard Company. The benchmark was developed and engineered by Hewlett-Packard Company. Testing took place at HP benchmarking laboratories in Houston, Texas.

## Application Code and Definition Statements

*The application program (as defined in clause 2.1.7) must be disclosed. This includes, but is not limited to, the code implementing the five transactions and the terminal input output functions.*

Appendix A contains all source code implemented in this benchmark.

## Parameter Settings

*Settings must be provided for all customer-tunable parameters and options which have been changed from the defaults found in actual products, including by not limited to:*

- *Database options*
- *Recover/commit options*
- *Consistency locking options*
- *Operating system and application configuration parameters*

*This requirement can be satisfied by providing a full list of all parameters.*

Appendix C contains the tunable parameters to for the database, the operating system, and the transaction monitor.

## Configuration Items

*Diagrams of both measured and priced configurations must be provided, accompanied by a description of the differences.*

The configuration diagram for both the tested and priced systems are included on the following page.


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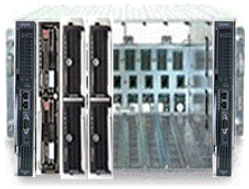
## Figure 1 Benchmarked and Priced Configuration

**3 HP Rack 5642 containing: 7X HP MSA1000 Enclosures with 14X 36 GB 15K Drives each, 1X HP MSA1000 Enclosure with 12X 72 GB 10K Drives, and 14X HP MSA30 SB Enclosures with 14X 36 GB 15K Drives each**

**1X HP BLp Enhanced Enclosure containing:**
**1X HP ProLiant BL25p**
**4X HP ProLiant BL35p**
**1X HP BLp-Class C-GbE2 Interconnect Switch**



**6 RTEs simulating 86760 PCs connected to 4 HP ProLiant BL35p with 2x2.4GHz AMD Opteron, 2 GB RAM each**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# *Clause 1 Related Items*

## Table Definitions

*Listing must be provided for all table definition statements and all other statements used to set up the database.*

Appendix B contains the code used to define and load the database tables.

## Physical Organization of Database

*The physical organization of tables and indices within the database must be disclosed.*
The tested configuration consisted of: 294 drives at 36.4 GB connected to 7 MSA1000 enclosures (each connected to 2 MSA30 enclosures) for database data, 2 36.4 GB drives for the operating system connected to the integrated SMART 6i controller and 12 drives at 72.8 GB in 1 MSA1000 enclosure for the database log.

### Benchmarked Configuration:

**Integrated SMART 6i Controller**
LOGICAL DRIVE C: Total Capacity = 33.91 GB RAID 0+1
Microsoft Windows Server 2003, Enterprise Edition SP1

**MSA1000 Controller, Array A**
LOGICAL DRIVE E: Total Capacity = 407.01 GB RAID 0+1
MSSQL_tpcc_log

**MSA1000 Controller, Array A**
LOGICAL DRIVE F: Total Capacity = 85.98 GB RAID 0
MSSQL_cs1
LOGICAL DRIVE T: Total Capacity = 669.27 GB RAID 0+1
Backup1

**MSA1000 Controller, Array A**
LOGICAL DRIVE G: Total Capacity = 85.98 GB RAID 0
MSSQL_cs2
LOGICAL DRIVE U: Total Capacity = 669.27 GB RAID 0+1
Backup2

**MSA1000 Controller, Array A**
LOGICAL DRIVE H: Total Capacity = 85.98 GB RAID 0
MSSQL_cs3
LOGICAL DRIVE V: Total Capacity = 669.27 GB RAID 0+1
Backup3

**MSA1000 Controller, Array A**
LOGICAL DRIVE I: Total Capacity = 85.98 GB RAID 0
MSSQL_cs4
LOGICAL DRIVE W: Total Capacity = 669.27 GB RAID 0+1
Backup4

**MSA1000 Controller, Array A**
LOGICAL DRIVE J: Total Capacity = 85.98 GB RAID 0


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| | | |
|---|---|---|
| MSSQL_cs5 | | |
| LOGICAL DRIVE X: | Total Capacity = 669.27 GB | RAID 0+1 |
| Backup5 | | |

**MSA1000 Controller, Array A**

| | | |
|---|---|---|
| LOGICAL DRIVE K: | Total Capacity = 85.98 GB | RAID 0 |
| MSSQL_cs6 | | |
| LOGICAL DRIVE Y: | Total Capacity = 669.27 GB | RAID 0+1 |
| Backup6 | | |

**MSA1000 Controller, Array A**

| | | |
|---|---|---|
| LOGICAL DRIVE L: | Total Capacity = 443.06 GB | RAID 0 |
| MSSQL_misc | | |
| LOGICAL DRIVE Z: | Total Capacity = 490.73 GB | RAID 0+1 |
| Backup7 | | |

## Priced Configuration vs. Measured Configuration:

The measured and priced configurations are the same.

## Insert and Delete Operations

*It must be ascertained that insert and/or delete operations to any of the tables can occur concurrently with the TPC-C transaction mix. Furthermore, any restrictions in the SUT database implementation that precludes inserts beyond the limits defined in Clause 1.4.11 must be disclosed. This includes the maximum number of rows that can be inserted and the minimum key value for these new rows.*

All insert and delete functions were fully operational during the entire benchmark.

## Partitioning

*While there are a few restrictions placed upon horizontal or vertical partitioning of tables and rows in the TPC-C benchmark, any such partitioning must be disclosed.*

No partitioning was used in this benchmark.

## Replication, Duplication or Additions

*Replication of tables, if used, must be disclosed. Additional and/or duplicated attributes in any table must be disclosed along with a statement on the impact on performance.*

No replications, duplications or additional attributes were used in this benchmark.


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# *Clause 2 Related Items*

## Random Number Generation

*The method of verification for the random number generation must be described.*

In the Benchcraft RTE from Microsoft, each driver engine uses an independent random number sequence. All of the users within a given driver draw from the same sequence.

The Benchcraft RTE computes random integers as described in “Random Numbers Generators: Good Ones Are Hard to Find." Communications of the ACM - October 1988 Volume 31 Number 10.

The seeds for each user were captured and verified by the auditor to be unique. In addition, the contents of the database were systematically searched, and randomly sampled by the auditor for patterns that would indicate the random number generator had affected any kind of a discernible pattern; none were found.

## Input/Output Screen Layout

*The actual layout of the terminal input/output screens must be disclosed.*

All screen layouts followed the specifications exactly.

## Priced Terminal Feature Verification

*The method used to verify that the emulated terminals provide all the features described in Clause 2.2.2.4 must be explained. Although not specifically priced, the type and model of the terminals used for the demonstration in 8.1.3.3 must be disclosed and commercially available (including supporting software and maintenance).*

The terminal attributes were verified by the auditor. The auditor manually exercised each specification on a representative HP ProLiant web server.

## Presentation Manager or Intelligent Terminal

*Any usage of presentation managers or intelligent terminals must be explained.*

Application code running on the client machines implemented the TPC-C user interface. No presentation manager software or intelligent terminal features were used. The source code for the forms applications is listed in Appendix A.


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## Transaction Statistics

*Table 2.1 lists the numerical quantities that Clauses 8.1.3.5 to 8.1.3.11 require.*

**Table 2.1 Transaction Statistics**

| Statistic | | Value |
|---|---|---|
| New Order | Home warehouse order lines | 99.00% |
| | Remote warehouse order lines | 1.00% |
| | Rolled back transactions | 1.00% |
| | Average items per order | 10.00 |
| Payment | Home warehouse payments | 85.00% |
| | Remote warehouse payments | 15.00% |
| | Accessed by last name | 60.00% |
| Order Status | Accessed by last name | 60.09% |
| Transaction Mix | New Order | 44.91% |
| | Payment | 43.06% |
| | Order status | 4.00% |
| | Delivery | 4.00% |
| | Stock level | 4.03% |

## Queuing Mechanism

*The queuing mechanism used to defer the execution of the Delivery transaction must be disclosed.*

Microsoft COM+ on each client machine served as the queuing mechanism to the database. Each delivery request was submitted to Microsoft COM+ asynchronously with control being returned to the client process immediately and the deferred delivery part completing asynchronously.

The source code is listed in Appendix A.


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# *Clause 3 Related Items*

## Transaction System Properties (ACID)

*The results of the ACID tests must be disclosed along with a description of how the ACID requirements were met. This includes disclosing which case was followed for the execution of Isolation Test 7.*

All ACID property tests were successful. The executions are described below.

## Atomicity

*The system under test must guarantee that the database transactions are atomic; the system will either perform all individual operations on the data or will assure that no partially completed operations leave any effects on the data.*

### Completed Transactions

A row was selected in a script from the warehouse, district and customer tables, and the balances noted. A payment transaction was started with the same warehouse, district and customer identifiers and a known amount. The payment transaction was committed and the rows were verified to contain correctly updated balances.

### Aborted Transactions

A row was selected in a script from the warehouse, district and customer tables, and the balances noted. A payment transaction was started with the same warehouse, district and customer identifiers and a known amount. The payment transaction was rolled back and the rows were verified to contain the original balances.

## Consistency

*Consistency is the property of the application that requires any execution of a database transaction to take the database from one consistent state to another, assuming that the database is initially in a consistent state.*

Consistency conditions one through four were tested using a script to issue queries to the database. The results of the queries verified that the database was consistent for all four tests.

A run was executed under full load lasting over two hours and included a checkpoint.

The script was executed again. The result of the same queries verified that the database remained consistent after the run.

## Isolation

*Sufficient conditions must be enabled at either the system or application level to ensure the required isolation defined above (clause 3.4.1) is obtained.*

Isolation tests one through nine were executed using shell scripts to issue queries to the database. Each script included timestamps to demonstrate the concurrency of operations. The results of the queries were captured to files. The captured files were verified by the auditor to demonstrate the required isolation had been met.

In addition, the phantom tests and the stock level tests were executed and verified.

For Isolation test seven, case A was followed.


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## Durability

*The tested system must guarantee durability: the ability to preserve the effects of committed transaction and insure database consistency after recovery from any one of the failures listed in Clause 3.5.3.*

### Durable Media Failure

#### Loss of Data and Log

This test was executed on a fully scaled database of 8676 warehouses under a full load of 8700 users, which accessed only the first 870 warehouses. To demonstrate recovery from a permanent failure of durable medium containing DBMS logs and TPC-C tables, the following steps were executed:

- The total number of New Orders was determined by the sum of D_NEXT_O_ID of all rows in the DISTRICT table giving the beginning count.
- The RTEs were started with 8700 users.
- The test was allowed to run for a minimum of 10 minutes.
- One log disk was removed from the server.
- Since the disk was mirrored, processing was not interrupted. This was verified by checking the user status on the RTE.
- One of the data disks was removed from a MSA 30.
- When Microsoft SQL Server recorded errors about not being able to access the database, the RTE was shut down and SQL stopped.
- Both disks were replaced with new disks, and the log drive was allowed to complete RAID1 recovery.
- Server was rebooted
- Microsoft SQL Server was restarted. A dump of the transaction log was taken.
- The database was restored from backup and the transaction log dump was applied.
- Consistency condition #3 was executed and verified.
- Step 1 was repeated and the difference between the first and second counts was noted.
- An RTE report was generated for the entire run time giving the number of NEW-ORDERS successfully returned to the RTE.
- The counts in step 13 and 14 were compared and the results verified that all committed transactions had been successfully recovered.
- Samples were taken from the RTE files and used to query the database to demonstrate successful transactions had corresponding rows in the ORDER table.

### Instantaneous Interruption and Loss of Memory

Because loss of power erases the contents of memory, the instantaneous interruption and the loss of memory tests were combined into a single test. This test was executed on a fully scaled database of 8676 warehouses under a full load of 86,760 users. The following steps were executed:

- The total number of New Orders was determined by the sum of D_NEXT_O_ID of all rows in the DISTRICT table giving the beginning count.
- The RTE was started with 86,760 users.
- The test was allowed to run for a minimum of 10 minutes.
- System crash and loss of memory were induced by pulling the power cord out of the system.
- The RTE was shutdown.
- Power was restored and the system restarted.
- Microsoft SQL Server was restarted and performed an automatic recovery.
- Consistency condition #3 was executed and verified.
- Step 1 was repeated and the difference between the first and second counts was noted.
- An RTE report was generated for the entire run time giving the number of NEW-ORDERS successfully returned to the RTE.


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- The counts in steps 9 and 10 were compared and the results verified that all committed transactions had been successfully recovered.
- Samples were taken from the RTE files and used to query the database to demonstrate successful transactions had corresponding rows in the ORDER table.


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# *Clause 4 Related Items*

## Initial Cardinality of Tables

*The cardinality (e.g. number of rows) of each table, as it existed at the start of the benchmark run, must be disclosed. If the database was over-scaled and inactive rows of the WAREHOUSE table were deleted, the cardinality of the WAREHOUSE table as initially configured and the number of rows deleted must be disclosed.*

**Table 4.1 Number of Rows for Server**

| Table | Cardinality as built |
|---|---|
| Warehouse | 8,676 |
| District | 86,760 |
| Customer | 260,280,000 |
| History | 260,280,000 |
| Orders | 260,280,000 |
| New Order | 78,084,000 |
| Order Line | 2,602,795,102 |
| Stock | 867,600,000 |
| Item | 100,000 |

## Database Layout

*The distribution of tables and logs across all media must be explicitly depicted for tested and priced systems.*

The benchmarked configuration used 8 MSA1000 enclosures and 14 MSA30 enclosures. Each MSA1000 enclosure is capable of accessing up to 42 disk drives (14 internal and 28 via SCSI connection to MSA30 enclosures, which can hold 14 disk drives in each enclosure) and has an array controller that supports RAID 0, RAID 0+1, and RAID 5 per each logical volume configured. The MSA1000 enclosure is connected to the system via fiber channel cables either directly or through a fiber channel switch. The data tables were stored in 7 RAID arrays of 42 36.4 GB drives each. All 7 arrays were configured with 1 RAID 0 logical drive for data and 1 RAID 0+1 logical drive used for database backups. The database log volume was configured using 12 72.8 GB drives as RAID 0+1 in an MSA1000 enclosure. The operating system was configured on the internal SMART 6i array controller on a RAID 0+1 volume on 2 36.4 GB disk drives in the internal drive bays. The array accelerators on the data controllers were configured as 100% write cache and were only enabled for the RAID 0 logical volumes. The log controller had its cache disabled. All RAID volumes used were hardware RAID.

Section 1.2 of this report details the distribution of database tables across all disks. The code that creates the filegroups and tables is included in Appendix B.


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## Type of Database

*A statement must be provided that describes:*

- *The data model implemented by DBMS used (e.g. relational, network, hierarchical).*
- *The database interface (e.g. embedded, call level) and access language (e.g. SQL, DL/1, COBOL read/write used to implement the TPC-C transaction. If more than one interface/access language is used to implement TPC-C, each interface/access language must be described and a list of which interface/access language is used with which transaction type must be disclosed.*

Microsoft SQL Server 2005 Enterprise Edition is a relational DBMS.

The interface used was Microsoft SQL Server stored procedures accessed with Remote Procedure Calls embedded in C code.

## Database Mapping

*The mapping of database partitions/replications must be explicitly described.*

The database was not replicated.

## 60 Day Space

*Details of the 60-day space computations along with proof that the database is configured to sustain 8 hours of growth for the dynamic tables (Order, Order-Line, and History) must be disclosed*.

To calculate the space required to sustain the database log for 8 hours of growth at steady state, the following steps were followed:

- The free space on the log file was queried using *dbcc sqlperf(logspace)*.
- Transactions were run against the database with a full load of users.
- The free space was again queried using *dbcc sqlperf(logspace)*.
- The space used was calculated as the difference between the first and second query.
- The number of NEW-ORDERS was verified from the difference in the sum(d_next_o_id) taken from before and after the run.
- The space used was divided by the number of NEW-ORDERS giving a space used per NEW-ORDER transaction.
- The space used per transaction was multiplied by the measured tpmC rate times 480 minutes.

The same methodology was used to compute growth requirements for dynamic tables Order, Order-Line and History.

The details of both the 8-hour transaction log space requirement and the 60-day space requirement are shown in Appendix D.


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# *Clause 5 Related Items*

## Throughput

*Measured tpmC must be reported*

Measured tpmC 107,010 tpmC
Price per tpmC USD $2.93 per tpmC

### Response Times

*Ninetieth percentile, maximum and average response times must be reported for all transaction types as well as for the menu response time.*

**Table 5.2: Response Times**

| Type | Average | 90th % | Maximum |
|---|---|---|---|
| New-Order | 0.70 | 1.19 | 23.44 |
| Payment | 0.66 | 1.15 | 22.38 |
| Order-Status | 0.68 | 1.17 | 21.04 |
| Interactive Delivery | 0.10 | 0.11 | 2.40 |
| Deferred Delivery | 0.13 | 0.16 | 7.92 |
| Stock-Level | 0.68 | 1.16 | 30.98 |
| Menu | 0.10 | 0.11 | 2.41 |

## Keying and Think Times

*The minimum, the average, and the maximum keying and think times must be reported for each transaction type.*

**Table 5.3: Keying Times**

| Type | Minimum | Average | Maximum |
|---|---|---|---|
| New-Order | 18.02 | 18.03 | 18.17 |
| Payment | 3.02 | 3.03 | 3.17 |
| Order-Status | 2.02 | 2.03 | 2.17 |
| Interactive Delivery | 2.02 | 2.03 | 2.17 |
| Stock-Level | 2.02 | 2.03 | 2.17 |


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**Table 5.4: Think Times**

| Type | Minimum | Average | Maximum |
|---|---|---|---|
| New-Order | 0.00 | 12.07 | 120.63 |
| Payment | 0.00 | 12.07 | 120.63 |
| Order-Status | 0.00 | 10.08 | 100.63 |
| Interactive Delivery | 0.00 | 5.08 | 50.63 |
| Stock-Level | 0.00 | 5.08 | 50.63 |

## Response Time Frequency Distribution Curves and Other Graphs

*Response Time frequency distribution curves (see Clause 5.6.1) must be reported for each transaction type.*

*The performance curve for response times versus throughput (see Clause 5.6.2) must be reported for the New-Order transaction.*

*Think Time frequency distribution curves (see Clause 5.6.3) must be reported for each transaction type.*

*Keying Time frequency distribution curves (see Clause 5.6.4) must be reported for each transaction type.*

*A graph of throughput versus elapsed time (see Clause 5.6.5) must be reported for the New-Order transaction.*


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**Figure 2 New Order Response Time Distribution**

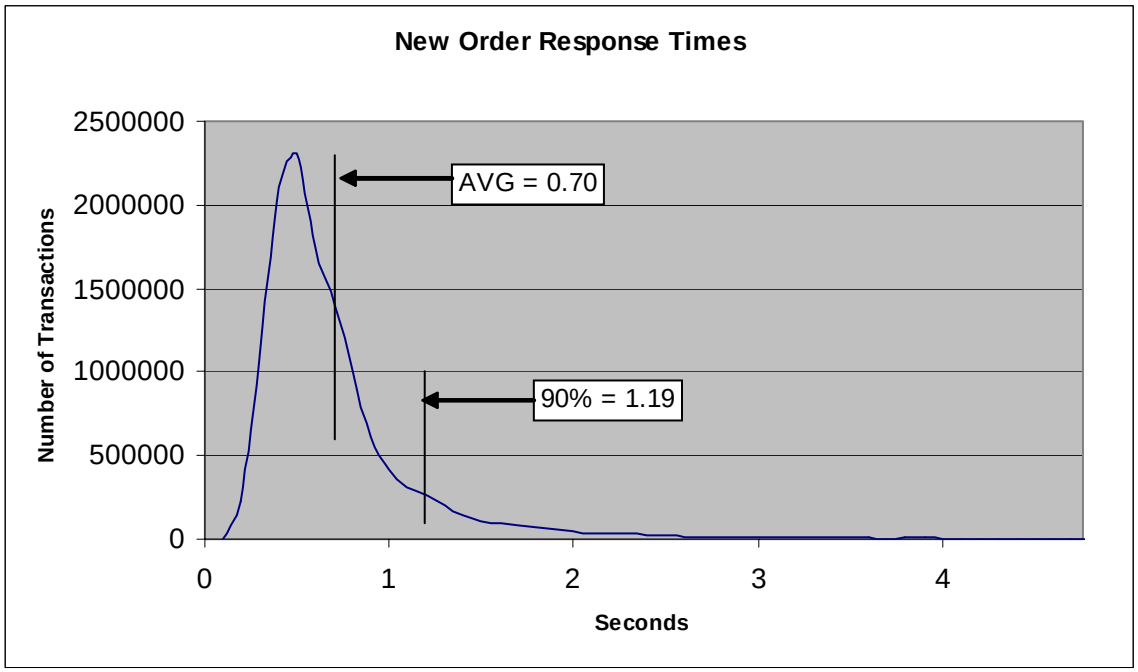


**Figure 3 Payment Response Time Distribution**

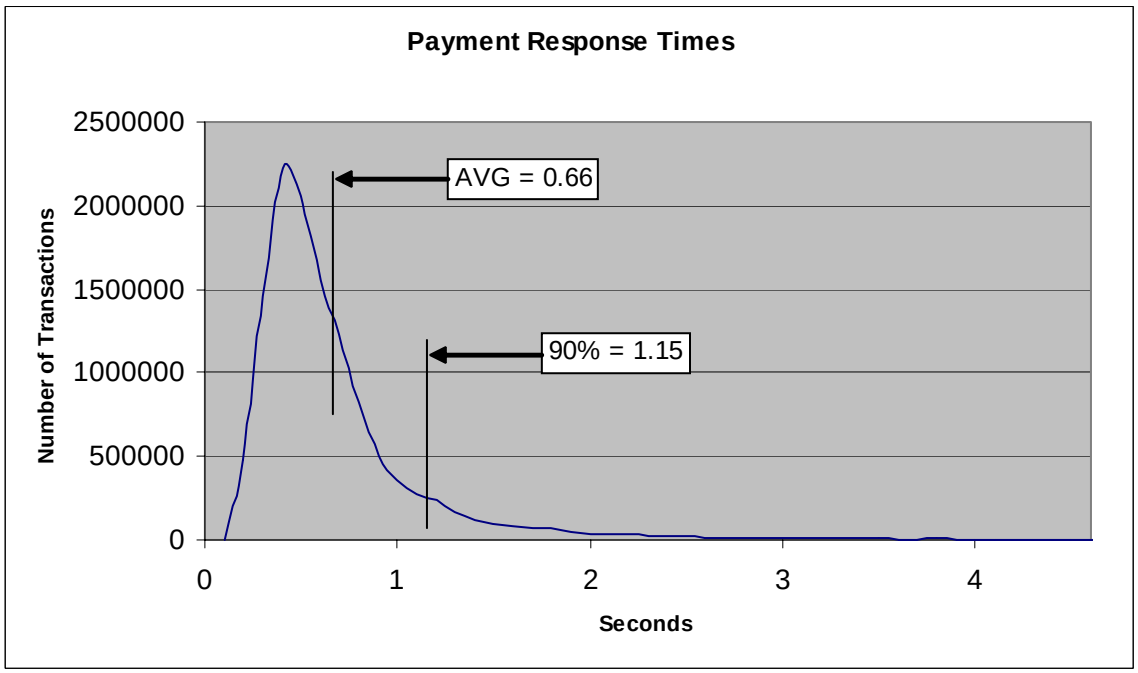



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**Figure 4 Order Status Response Time Distribution**

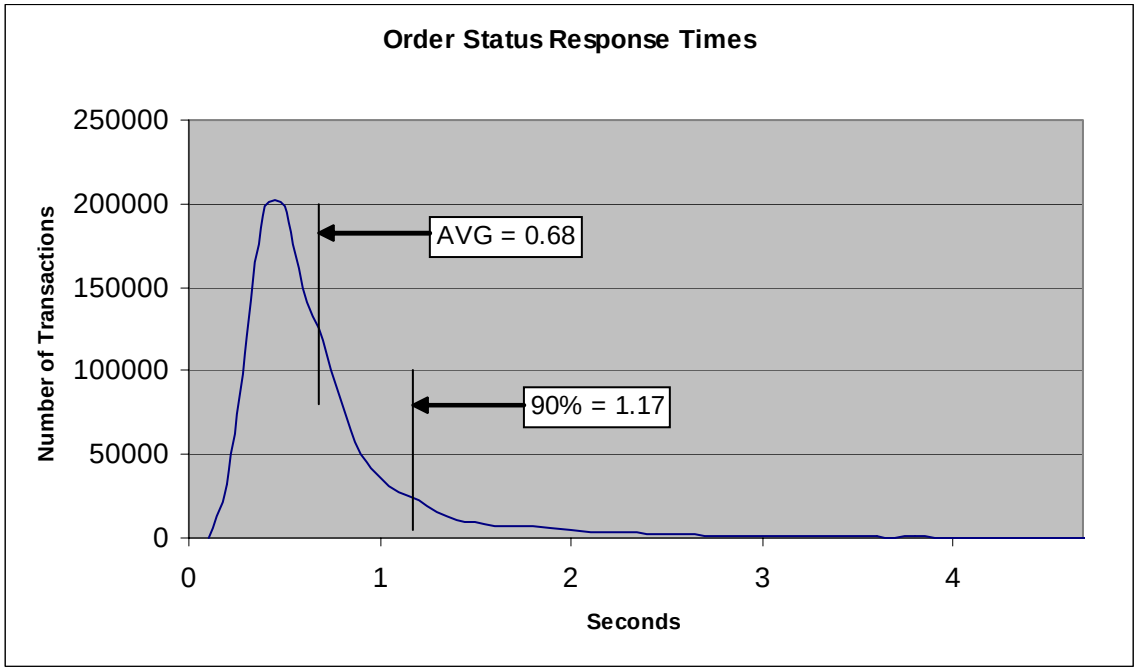


**Figure 5 Delivery Response Time Distribution**

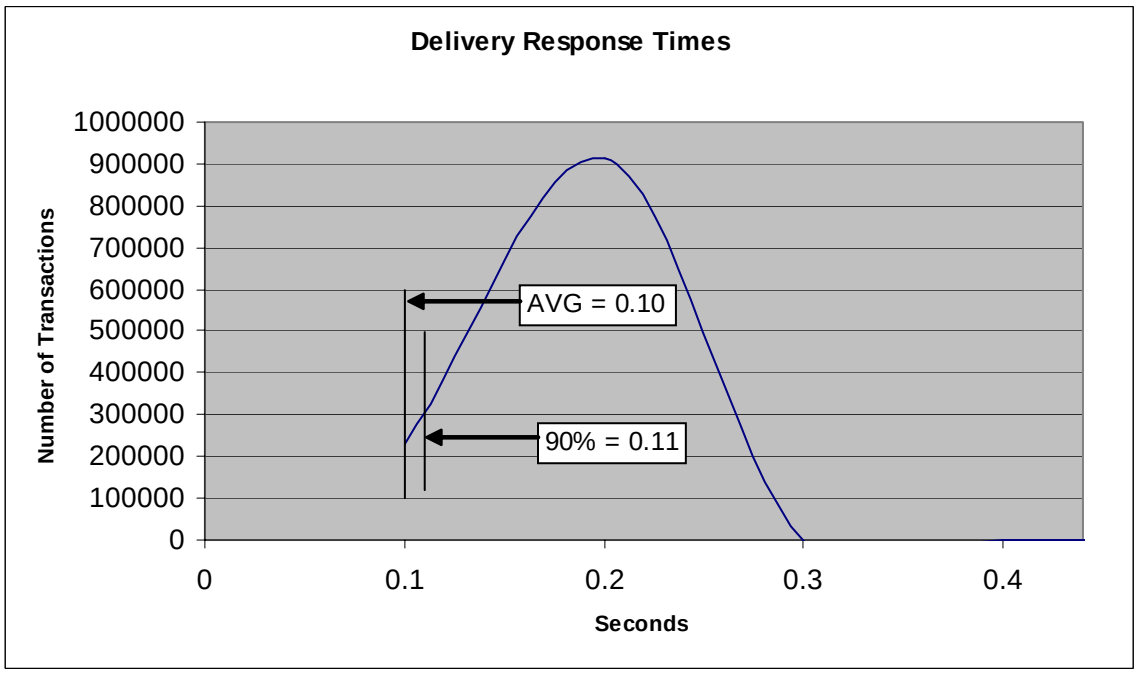



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**Figure 6 Stock Level Response Time Distribution**

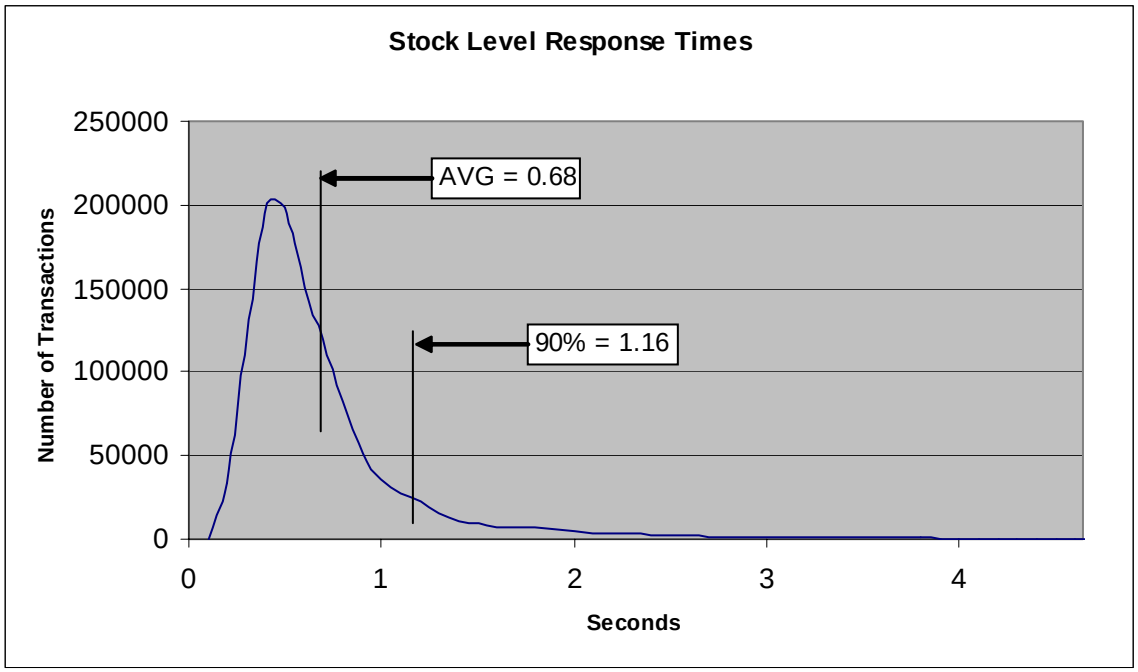


**Figure 7 Response Time vs. Throughput**

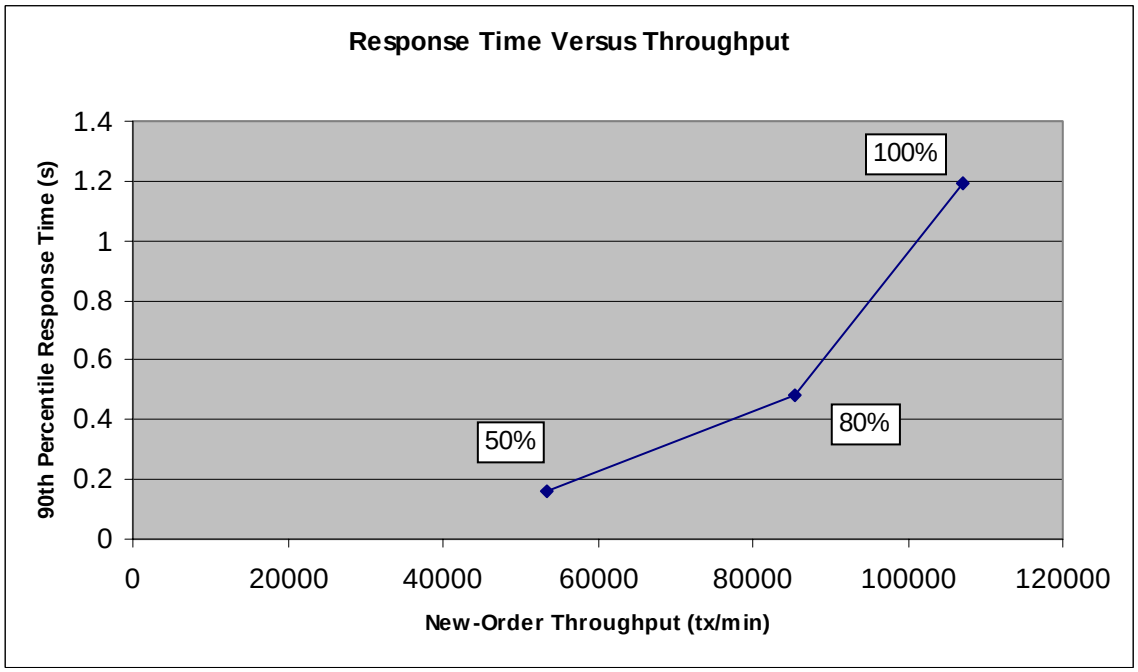



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**Figure 8 New Order Think Time Distribution**

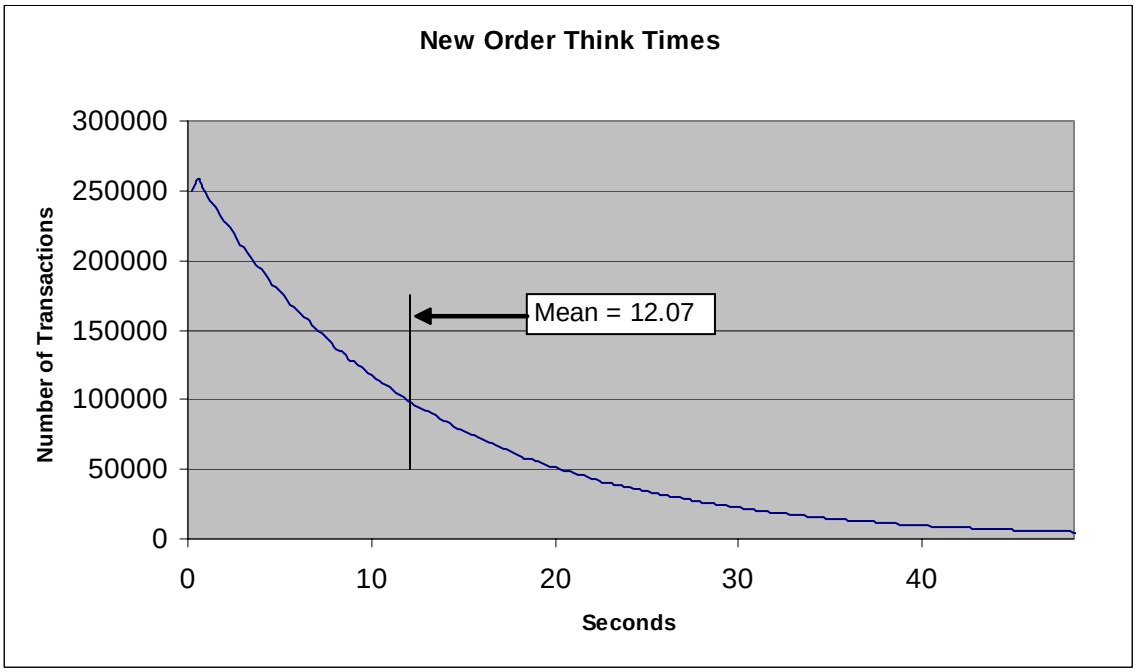
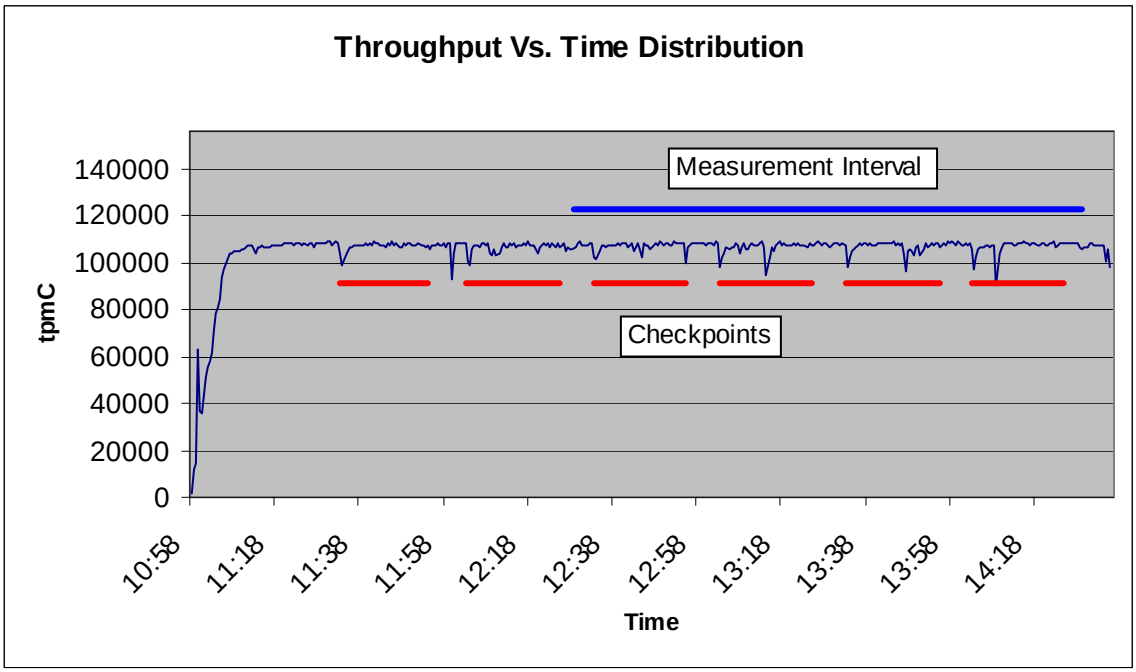



**Figure 9 Throughput vs. Time Distribution**





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## Steady State Determination

*The method used to determine that the SUT had reached a steady state prior to commencing the measurement interval must be disclosed.*

Steady state was determined using real time monitor utilities from the RTE. Steady state was further confirmed by the throughput data collected during the run and graphed in Figure 10.

## Work Performed During Steady State

*A description of how the work normally performed during a sustained test (for example checkpointing, writing redo/undo log records, etc.), actually occurred during the measurement interval must be reported.*

The RTE generated the required input data to choose a transaction from the menu. This data was timestamped. The input screen for the requested transaction was returned and timestamped. The difference between these two timestamps was the menu response time. The RTE writes to the log file once per transaction on selective fields such as order id. There is one log file per driver engine.

The RTE generated the required input data for the chosen transaction. It waited to complete the minimum required key time before transmitting the input screen. The transmission was timestamped. The return of the screen with the required response data was timestamped. The difference between these two timestamps was the response time for that transaction.

The RTE then waited the required think time interval before repeating the process starting at selecting a transaction from the menu.

The RTE transmissions were sent to application processes running on the client machines through Ethernet LANs. These client application processes handled all screen I/O as well as all requests to the database on the server. The applications communicated with the database server over gigabit Ethernet LANs using ODBC and RPC calls.

To perform checkpoints at specific intervals, the checkpoint was issued with the 1700 value and a script was written to schedule checkpoints at specific intervals. The script included a wait time between each checkpoint equal to 30 minutes so that the checkpoint interval was an integral multiple of the measurement interval, which was 120 minutes. The checkpoint script was started manually after the RTE had all users logged in and the database had achieved steady state.

At each checkpoint, Microsoft SQL Server wrote to disk all memory pages that had been updated but not yet physically written to disk. The positioning of the measurement interval is depicted on the graph in Figure 10.

## Measurement Period Duration

*A statement of the duration of the measurement interval for the reported Maximum Qualified Throughput (tpmC) must be included.*

The reported measured interval was exactly 120 minutes long.


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## Regulation of Transaction Mix

*The method of regulation of the transaction mix (e.g., card decks or weighted random distribution) must be described. If weighted distribution is used and the RTE adjusts the weights associated with each transaction type, the maximum adjustments to the weight from the initial value must be disclosed.*

The RTE was given a weighted random distribution, which was not adjusted during the run.

## Transaction Statistics

*The percentage of the total mix for each transaction type must be disclosed. The percentage of New-Order transactions rolled back as a result of invalid item number must be disclosed. The average number of order-lines entered per New-Order transaction must be disclosed. The percentage of remote order lines per New-Order transaction must be disclosed. The percentage of remote Payment transactions must be disclosed. The percentage of customer selections by customer last name in the Payment and Order-Status transactions must be disclosed. The percentage of Delivery transactions skipped due to there being fewer than necessary orders in the New-Order table must be disclosed.*

**Table 5.5: Transaction Statistics**

| Statistic | | Value |
|---|---|---|
| New Order | Home warehouse order lines | 99.00% |
| | Remote warehouse order lines | 1.00% |
| | Rolled back transactions | 1.00% |
| | Average items per order | 10.00 |
| Payment | Home warehouse payments | 85.00% |
| | Remote warehouse payments | 15.00% |
| | Accessed by last name | 60.00% |
| Delivery | Skipped transactions (interactive) | 0 |
| | Skipped transactions (deferred) | 0 |
| Order Status | Accessed by last name | 60.09% |
| Transaction Mix | New Order | 44.91% |
| | Payment | 43.06% |
| | Order status | 4.00% |
| | Delivery | 4.00% |
| | Stock level | 4.03% |


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## Checkpoint Count and Location

*The number of checkpoints in the Measurement Interval, the time in seconds from the start of the Measurement Interval to the first checkpoint, and the Checkpoint Interval must be disclosed.*

The initial checkpoint was started approximately 36 minutes after the start of the ramp-up. Subsequent checkpoints occurred every 30 minutes. Each checkpoint in the measurement interval lasted approximately 21-25 minutes. The measurement interval contains four checkpoints.

## Checkpoint Duration

*The start time and duration in seconds of at least the four longest checkpoints during the Measurement Interval must be disclosed.*

| Checkpoint Start Time | Duration |
|---|---|
| 12:33:46.73 p.m. | 21 minutes, 57.39 seconds |
| 1:03:41.70 p.m. | 22 minutes, 40.10 seconds |
| 1:33:36.73 p.m. | 25 minutes, 3.05 seconds |
| 2:03:31.73 p.m. | 21 minutes, 19.74 seconds |


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# *Clause 6 Related Items*

## RTE Descriptions

*If the RTE is commercially available, then its inputs must be specified. Otherwise, a description must be supplied of what inputs (e.g., scripts) to the RTE had been used.*

The RTE used was Microsoft Benchcraft RTE. Benchcraft is a proprietary tool provided by Microsoft and is not commercially available. The RTE's input is listed in Appendix A.

## Emulated Components

*It must be demonstrated that the functionality and performance of the components being emulated in the Driver System are equivalent to the priced system. The results of the test described in Clause 6.6.3.4 must be disclosed.*

The driver system consisted of 6 HP ProLiant servers. These driver machines emulated the users' web browsers.

## Functional Diagrams

*A complete functional diagram of both the benchmark configuration and the configuration of the proposed (target) system must be disclosed. A detailed list of all hardware and software functionality being performed on the Driver System and its interface to the SUT must be disclosed.*

The driver system performed the data generation and input functions of the priced display device. It also captured the input and output data and timestamps for post-processing of the reported metrics. No other functionality was included on the driver system.

Section 1.4 of this report contains detailed diagrams of both the benchmark configuration and the priced configuration.

## Networks

*The network configuration of both the tested services and proposed (target) services that are being represented and a thorough explanation of exactly which parts of the proposed configuration are being replaced with the Driver System must be disclosed.*

*The bandwidth of the networks used in the tested/priced configuration must be disclosed.*

In the tested configuration, 6 driver (RTE) machines were connected through the gigabit Ethernet switch in the blade enclosure to the client machines at 1Gbs, thus providing the path from the RTEs to the clients. The server (SUT) was connected to the clients through the same gigabit Ethernet switch.

The priced configuration was connected in the same manner as the tested configuration.

## Operator Intervention

*If the configuration requires operator intervention (see Clause 6.6.6), the mechanism and the frequency of this intervention must be disclosed.*

This configuration does not require any operator intervention to sustain eight hours of the reported throughput.


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# *Clause 7 Related Items*

## System Pricing

*A detailed list of hardware and software used in the priced system must be reported. Each separately orderable item must have vendor part number, description, and release/revision level, and either general availability status or committed delivery data. If package-pricing is used, vendor part number of the package and a description uniquely identifying each of the components of the package must be disclosed. Pricing source and effective date(s) of price(s) must also be reported.*

*The total 3 year price of the entire configuration must be reported, including: hardware, software, and maintenance charges. Separate component pricing is recommended. The basis of all discounts used must be disclosed.*

The details of the hardware and software are reported in the front of this report as part of the executive summary. All third party quotations are included at the end of this report as Appendix E.

## Availability, Throughput, and Price Performance

*The committed delivery date for general availability (availability date) of products used in the price calculation must be reported. When the priced system included products with different availability dates, the reported availability date for the priced system must be the date at which all components are committed to be available.*

*A statement of the measured tpmC as well as the respective calculations for the 5-year pricing, price/performance (price/tpmC), and the availability date must be included.*

- **Maximum Qualified Throughput** **107,010 tpmC**
- **Price per tpmC** **USD $2.93 per tpmC**
- **Availability** **Nov. 8, 2005**

## Country Specific Pricing

*Additional Clause 7 related items may be included in the Full Disclosure Report for each country specific priced configuration. Country specific pricing is subject to Clause 7.1.7*

This system is being priced for the United States of America.

## Usage Pricing

*For any usage pricing, the sponsor must disclose:*

- *Usage level at which the component was priced.*
- *A statement of the company policy allowing such pricing.*

The component pricing based on usage is shown below:

- 4 Microsoft Windows 2000 Server
- 1 Microsoft Windows Server 2003, Enterprise Edition SP1
- 2 Microsoft SQL Server 2005 Enterprise Edition (per processor licensing)
- 1 Microsoft Visual C++
- HP Servers include 3 years of support.


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# *Clause 9 Related Items*

## Auditor's Report

*The auditor's name, address, phone number, and a copy of the auditor's attestation letter indicating compliance must be included in the Full Disclosure Report.*

This implementation of the TPC Benchmark C was audited by Lorna Livingtree of Performance Metrics, Inc.

Performance Metrics, Inc.
PO Box 984
Klamath, CA 95548
(phone) (707) 482-0115
(fax) (707) 482-0575
e-mail: lornal@perfmetrics.com

## Availability of the Full Disclosure Report

*The Full Disclosure Report must be readily available to the public at a reasonable charge, similar to the charges for similar documents by the test sponsor. The report must be made available when results are made public. In order to use the phrase "TPC Benchmark™ C", the Full Disclosure Report must have been submitted to the TPC Administrator as well as written permission obtained to distribute same.*

Requests for this TPC Benchmark C Full Disclosure Report should be sent to:

Transaction Processing Performance Council
Presidio of San Francisco
P.O. Box 29920
San Francisco, CA 94129-0920

Voice: 415-561-6272
Fax: 415-561-6120
Email: info@tpc.org
or

Hewlett-Packard Company
Database Performance Engineering
P.O. Box 692000
Houston, TX 77269-2000


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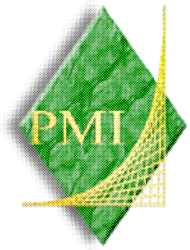


PERFORMANCE METRICS INC.
TPC Certified Auditors

September 28, 2005

Mr. John Ellyson
Database Performance Engineer
Hewlett-Packard Company
20555 SH 249
Houston, TX 77070

I have verified by remote the TPC Benchmark™ C for the following configuration:

Platform: HP ProLiant BL25p –2P
Database Manager: Microsoft SQL Server 2005 Enterprise Edition
Operating System: Microsoft Windows Server 2003 Enterprise Edition
Transaction Monitor: Microsoft COM+

| System Under Test: | | | | |
|---|---|---|---|---|
| CPU's | Memory | Disks (total) | 90% Response | TpmC |
| 2 AMD<br>@ 2.4 Ghz | Main: 32 GB | 296 @ 36 GB<br>12 @ 72 GB | 1.19 | 107,010 |

In my opinion, these performance results were produced in compliance with the TPC requirements for the benchmark. The following attributes of the benchmark were given special attention:

- The transactions were correctly implemented.
- The database files were properly sized.
- The database was properly scaled with 8,676 warehouses, all of which were active during the measured interval.
- The ACID properties were successfully demonstrated.
- Input data was generated according to the specified percentages.
- Eight hours of mirrored log space was present on the tested system.
- Eight hours of growth space for the dynamic tables was present on the tested system.
- The data for the 60 days space calculation was verified.
- The steady state portion of the test was 120 minutes.
- There was one complete checkpoint in steady state before the measured interval.

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- There were 4 checkpoints started and completed inside the measured interval.
- The system pricing was checked for major components and maintenance.
- Third party quotes were verified for compliance.

Auditor Notes: None

Sincerely,

Lorna Livingtree
Auditor

PO Box 984, Klamath, CA 95548
(707) 482-0523 fax: (707) 482-0575 email: LornaL@PerfMetrics.com




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# *Appendix A: Source Code*

The client source code is listed below.

## client_utils.c

```
/* client_utils.c
*/

#include <stdio.h>
#include <time.h>
#include <windows.h>
#include <winperf.h>
#include <winsock.h>
#include "client_utils.h"

#define Li2Double(x) ((double)((x).HighPart) *
4.294967296E9 + (double)((x).LowPart))

static LARGE_INTEGER pFreq;
static double sFreq;
static int print_thread_id = 1;
static int user_id = 0;
static char *user_code = "C";

/*
 *  get_thread_id
 *      A function that returns the thread ID of the
current thread
 */
static int get_thread_id()
{
    return(GetCurrentThreadId());
}


/*
 *  get_prefix
 *        Format the output prefix for printing:
 *        It contains the user_id, 'C' or 'T'
depending on whether it
 *        is a terminal or a client and optional a
thread identifier
 *        The prefix is written in the buffer passed
in by the caller.
 */
static void get_prefix(char *buffer)
{
    if (print_thread_id) {
                    int thread_id = get_thread_id();
                    sprintf(buffer,  "%s(%d-%s-
%d)%s",
                    user_id < 10 ?  "  " : user_id <
100 ? " " : "",
                    user_id,
                    user_code,
                    thread_id,
                    thread_id < 10 ? " " : "");
    } else {
                    sprintf(buffer,  "%s(%2d-%s)",
                    user_id < 10 ? " " : "", user_id,
user_code);
    }
}

/*
 * err_printf
 *      A var-arg function that appends the current
time and
 *      other data to the print request and sends it
to stderr
 *      if it is not a web client, to a file if it is
 */
void err_printf(char *format, ...)
{
    time_t cur_timet;
    char time_str[30];
    char line_prefix[50];
    va_list ap;

    va_start(ap, format);

    cur_timet = time(&cur_timet);
    strftime(time_str, 29, "%X",
localtime(&cur_timet));

    get_prefix(line_prefix);

    fprintf(ERROUT, "%s %s - ", line_prefix,
time_str);
    vfprintf(ERROUT, format, ap);
    fflush(ERROUT);

    va_end(ap);
}


/*
 *  encina_error_message
 *
 *  Report an encina error message by interpreting it
and writing
 *  it to both the logfile (if any) and to standard
error
 */
void encina_error_message(char *msg, unsigned long n)
{
    char errorMsg[ENCINA_MAX_STATUS_STRING_SIZE];
    encina_StatusToString(n,
ENCINA_MAX_STATUS_STRING_SIZE, errorMsg);
    err_printf("ERROR: %s.  Error code = %s (%d 0x%x)
\n", msg, errorMsg, n, n);
}

int get_time_init()
{
     QueryPerformanceFrequency(&pFreq);
     sFreq=Li2Double(pFreq);
     return 0;
}

int get_local_time(time_type *timeP)
{
    double cur_t;
    LARGE_INTEGER counter;

    QueryPerformanceCounter(&counter);
    cur_t = Li2Double(counter) / sFreq;
    timeP->sec = (long)cur_t;
/*    timeP->usec = ((long)cur_t - timeP->sec) *
1000000;*/
    timeP->usec = (long)((cur_t - timeP->sec) *
1000000);
          return 0;
}

/*
 *  time_diff_ms
 *      Return the difference in miliseconds between
two times
 */
int time_diff_ms(struct timeval *t2, struct timeval
*t1)
{
    int t_diff;

    t_diff = (t2->tv_usec + 1000000 - t1->tv_usec +
500) / 1000 +
              (t2->tv_sec - t1->tv_sec - 1) * 1000;

    return(t_diff);
}

/*
 * perfClntDataInit:
 *    Initialization for the shared file mapping.
 *
 * return: pointer to the shared memory space
 *
 * This routine creates a named mapped memory section
that is used
 * to communicate the TPCC performance data to the
extensible
 * counter DLL for NT perfmon.
 */
total_tran_count_t  *perfClntDataInit()
{
    HANDLE hMappedObject;
    total_tran_count_t  *pClntInfo = NULL;
    TCHAR  szMappedObjectName[] =
TEXT("TPCC_CLNT_COUNTER_BLOCK");

        /* create named section for the performance
data */
        hMappedObject =
CreateFileMapping((HANDLE)0xFFFFFFFF,
                      NULL,
                      PAGE_READWRITE,
```


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```
                    0,
                    sizeof(total_tran_count_t),
                    szMappedObjectName);
        if (hMappedObject == NULL) {
            err_printf("perfClntDataInit:
CreateFileMapping failed %x\n",
                     GetLastError());
            pClntInfo = NULL;
        } else {
            /* map the section and assign the counter
block pointer
             * to this section of memory
             */
            pClntInfo = (total_tran_count_t *)
MapViewOfFile(hMappedObject,
                          FILE_MAP_ALL_ACCESS,
                          0,
                          0,
                          0);
            if (pClntInfo == NULL) {
                err_printf("perfClntDataInit:
MapViewOfFile failed %x\n",
                          GetLastError());
            }
            else {
                err_printf("perfClntDataInit:
MapViewOfFile success \n");
            }
        }

    return(pClntInfo);
}
```

# client_utils.h

```
#ifndef TPCC_CLIENT_UTILS_H
#define TPCC_CLIENT_UTILS_H

#include <stdio.h>
#include <time.h>
#include <dce/rpc.h>
#include <dce/dce_error.h>
#include <encina/encina.h>
#include <stdlib.h>
#include <utils/trace.h>
#include <winsock.h>
#include "mon_client.h"
#include "../include/tpcc_type.h"

extern FILE * errtpcc;
extern FILE *logtpcc;
extern int debug;
extern char log_file_name[];
extern void logprintf( char *format, ...);
extern void err_printf( char *format, ...);
extern void encina_error_message(char *msg, unsigned
long n);
extern int time_diff_ms(struct timeval *t2, struct
timeval *t1);

typedef struct {
    int num;
    int errs;
    double RTtotal[2]; // 1 for server RT and 0 for
client RT
    int RTcount;
} tran_info_t;

/*
 * total_tran_count_t
 *
 * structure that holds the total count of
transaction of each type
 * as well as the reposne times.
 *
 */
typedef struct {
    tran_info_t tran[MAX_TRAN_TYPE + 1];
    int errors;
    double time;
} total_tran_count_t;

/* enc_status_t
 * structure that holds error information
 */
typedef struct {
    int status;
    int line;
    char file[268];
    unsigned long encinaError;
    char errorMsg[ENCINA_MAX_STATUS_STRING_SIZE];
} enc_status_t;

#define FALSE 0
#define TRUE  1

#define DPRINT(args)  if (0) err_printf args


#define CHECK_ENVIRON(str,var)  if (str == NULL) {
fprintf(ERROUT, \
                              "%s environment variable is
not defined.\n",var);  }

#define CHK_STATUS(st, val, _errMsg)
\
     if(st) {
          \
          enc_status.status=val;
\
          strcpy(enc_status.file, __FILE__);
\
          enc_status.line= __LINE__;
\
          enc_status.encinaError = st;
           \
          if(_errMsg)strcpy(enc_status.errorMsg,
_errMsg);       \
          if(st!=1) return;
           \
      }

#define UTIL_IDENT(a)           a

#if        ENCINA_C_ANSI_STRING_TOKEN_SUPPORT
#define UTIL_STRING(a)          # a
#define UTIL_CONCAT(a, b)       a ## b
#else   /* ENCINA_C_ANSI_STRING_TOKEN_SUPPORT */
#define UTIL_STRING(a)          "a"
#define UTIL_CONCAT(a, b)       UTIL_IDENT(a)b
#endif  /* ENCINA_C_ANSI_STRING_TOKEN_SUPPORT */

/*  ENCINA_CALL:  Make fail-fast calls on the various
services.  */
#define ENCINA_CALL(proc_name,call)             \
{                                               \
    unsigned long _status;                      \
    ENCINA_CALL_RC(proc_name,call,_status);     \
    if (_status) exit_program(_status);         \
}


#define ENCINA_CALL_RC(proc_name,call,rc)
\
{
\
    char _errorMsg[ENCINA_MAX_STATUS_STRING_SIZE];
\
    DPRINT(("ENCINA_CALL_RC: before call %s\n",
proc_name));                                \
    rc = (call);
\
    DPRINT(("ENCINA_CALL_RC: after call %s\n",
proc_name));                                    \
    if (rc)  {
\
        encina_StatusToString(rc,
ENCINA_MAX_STATUS_STRING_SIZE,       \
                              _errorMsg);
\
        err_printf( "%x \n", rc);
\
        err_printf( "%s \n", _errorMsg);
\
        err_printf( "%s \n", proc_name);
\
    }
\
}

void err_printf(char *format, ...);
void encina_error_message(char *msg, unsigned long
n);
int get_time_init();
int get_local_time(time_type *timeP);
int time_diff_ms(struct timeval *t2, struct timeval
*t1);

#endif /*  TPCC_CLIENT_UTILS_H  */
```

# databuf.h

```
/*
```


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```
 *     databuf.h
 *
 * $Revision: 1.1 $
 * $Date: 1998/11/06 21:10:11 $
 * $Log:  databuf.h,v $
 * Revision 4.2  95/05/16  10:55:31  10:55:31  tpcc
(TPCC Benchmark)
 * Added necessary RCS ident strings
 *
 * Revision 4.1  95/05/09  15:21:02  15:21:02  strue
(Scott Truesdale)
 * New code from Transarc - initial version
 *
 * Revision 3.2  95/04/03  17:43:09  17:43:09  strue
(Scott Truesdale)
 * Changes from Transarc - added sql error handling
in client; cleaned up debug handling with macros;
added check on db paramters via call to server.
 *
 * Revision 3.1  95/04/03  15:10:30  15:10:30  strue
(Scott Truesdale)
 * Base of rev 3 - shipped to transarc
 *
 *
 *
 *
 *  $TALog: databuf.h,v $
 * Revision 1.1  1998/11/06  21:10:11  dongfeng
 * - Move all files common to client and server to
tpcc/common
 *   directory
 * [added by delta dongfeng-23677-TPCC-new-directory-
structures, r1.1]
 *
 * Revision 1.3  1998/10/22  15:33:04  wenjian
 * Make changes to Encina server code to connect with
SQL server and add
 * callsql.c and sql directory.
 *
 * Add ERR_BAD_ITEM_ID, which is returned by SLQnew
and same as INVALID_NEWO
 * [from r1.2 by delta wenjian-23529-TPCC-integrate-
with-SQL-server, r1.1]
 *
 * Revision 1.2  1998/01/23  15:07:47  oz
 * - Updated the SP TPCC directory to the latest
files used
 *   during the SP tpcc audit.
 * [from r1.1 by delta oz-20774-TPCC-update-to-
latest-SP-version-11-27, r1.1]
 *
 * Revision 1.1  1997/04/20  11:57:57  oz
 * - This is the code base modified at IBM
Poughkeepsie
 *   by Ofer Zajicek and Radha Sivaramakrishnan for
the
 *   SP scaling test for TPCC.
 * [added by delta oz-19782-TPCC-add-ibm-sp-code,
r1.1]
 *
 * Revision 1.31  1995/10/30  19:10:54  oz
 * [merge of changes from 1.29 to 1.30 into 1.27]
 *
 * Revision 1.30  1995/10/27  15:41:30  oz
 * - Modified the tpc-c code to work with the new
informix
 *   sql code that is in ex_trans.ec
 * [from r1.29 by delta oz-16761-TPCC-modify-code-to-
work-with-oracle, r1.1]
 *
 * Revision 1.27  1995/10/20  18:44:30  ctipper
 * [merge of changes from 1.17 to 1.25 into 1.22]
 *
 * Revision 1.25  1995/10/20  18:15:34  ctipper
 * Incorporate changes per code review.
 *
 * - add DISTRIBUTED_TRAN_FAILED,
TPCC_DB_INFO_PARTIAL, and
 * TPCC_DB_INFO_FAILED error codes to tpcc_rc_t
 * - got rid of MAX_NUM_SERVERS variables
 * [from r1.23 by delta ctipper-16547-TPCC-more-
distributed-trans, r1.2]
 *
 * Revision 1.23  1995/10/13  17:00:26  ctipper
 * This delta encompasses all changes necessary to do
distributed, XA
 * transactions with the TPCC benchmark. This
includes the changes
 * necessary to build with Informix version 6.
 *
 * Each client still talks to only one server,
however, if a distributed
 * transaction is necessary, the client sends the
request to a different
 * interface of that server which then forwards all
or part of the
 * request on to the appropriate remote server.
 *
 * - added new error codes to the tpcc_rc_t
enumeration.
 * - defined MAX_NUM_SERVERS to be 10
 * [from r1.19 by delta ctipper-16547-TPCC-more-
distributed-trans, r1.1]
 *
 * Revision 1.19  1995/09/20  21:02:39  oz
 * -Corrected code for the payment transaction
 * - The distributed case now no longer uses
 *   stored procedures
 * [from r1.18 by delta oz-16547-TPCC-add-
distributed-transactions, r1.2]
 *
 * Revision 1.18  1995/09/20  17:51:10  oz
 * - Added distributed transactions for the new order
and
 *   payment transaction
 *
 * - Added new error codes
 * [from r1.17 by delta oz-16547-TPCC-add-
distributed-transactions, r1.1]
 *
 * Revision 1.22  1995/10/02  20:31:07  oz
 * - Corrected definition of ERROR()
 * [from r1.21 by delta oz-16638-tpcc-modify-
terminal-for-RTE, r1.3]
 *
 * Revision 1.21  1995/10/02  18:51:45  oz
 * - Added definitions needed for utils.c and
liberty.c
 * [from r1.20 by delta oz-16638-tpcc-modify-
terminal-for-RTE, r1.2]
 *
 * Revision 1.20  1995/10/02  15:52:35  oz
 * - Modified the TPC-C benchmark to be compatible
with the RTE.
 * - There are now 3 terminal processes:
 *     emulator: the old terminal process with a
built in
 *               simple emulator
 *     curses: An interactive terminal process using
curses
 *     liberty: An interactive terminal process to be
used with
 *              the RTE compatible with the liberty
freedom terminal.
 *
 * - Define TRUE and FALSE only if they are not
already defined.
 *   (curses.h defines TRUE)
 * - Removed READ_TO_DATE and YEAR_TO_SECOND
 * - Added term_type_t
 * - Added
 *        GOOD_INPUT (0)
 *        WRONG_INPUT (10)
 * [from r1.17 by delta oz-16638-tpcc-modify-
terminal-for-RTE, r1.1]
 *
 * Revision 1.17  1995/07/28  15:28:23  oz
 * - Added a -null and -no_marshalling option to TPCC
 *
 * - Added INVALID_TRAN_TYPE return code
 * [from r1.16 by delta oz-16070-TPCC-add-null-and-
marshalling-test, r1.1]
 *
 * Revision 1.16  1995/07/18  17:02:38  oz
 * - Added a DCE_ERROR error code
 * [from r1.15 by delta oz-15938-TPCC-add-dce-only-
client, r1.1]
 *
 * Revision 1.15  1995/05/22  19:50:48  shl
 * [merge of changes from 1.12 to 1.13 into 1.14]
 *
 * Revision 1.13  1995/05/18  15:11:27  oz
 * [from r1.12 by delta oz-15290-TPCC-incorporate-hp-
drop-of-05-16-95, r1.1]
 *
 * Revision 1.14  1995/05/22  17:26:35  ctipper
 * [merge of changes from 1.5 to 1.9 into 1.11]
 *
 * [*** log entries omitted ***]
 *
 */

#ifndef __TPCC_DATABUF_H__
#define __TPCC_DATABUF_H__

#define I_NAME_LEN      24
#define I_DATA          50
#define W_NAME_LEN      10
#define ADDR_LEN        20
```


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```
#define STATE_LEN       2
#define ZIP_LEN         9
#define DIST_INFO_LEN   24
#define S_DATA_LEN      50
#define D_NAME_LEN      10
#define H_DATA_LEN      24
#define CARRIER_LEN     2
#define C_LAST_LEN            17
#define C_MID_LEN       2
#define PHONE_LEN       16
#define CREDIT_LEN      2
#define C_DATA_LEN     500
#define BC_DTA_LEN  23

#define YEAR_TO_DATE   1
#define YEAR_TO_SECOND 2

#define ERROR(x) fprintf(stderr,"Error:
%s\n",#x),exit(11)

#define MAX_STR_LEN     255
#define MAX_OL                15

#ifndef TRUE
#define TRUE    1
#endif
#ifndef FALSE
#define FALSE   0
#endif

#define CANCEL             -1

#define DATETIME_LEN    19

#define D_PER_W         10

#define COLLECTOR   1                   /* ctipper
5/3/95 */

#define ERR_BAD_ITEM_ID  1  /* copied from sql/tpcc.h
*/
#define RPC_ERROR                -2
#define SUCCESS_CODE                        0

#define CHAR_NULL       '\0'            /* strue
1/23/95 */

typedef enum {
    liberty_term,
    curses_term,
    emulator_term
} term_type_t;

typedef enum {
    GOOD_INPUT = 0,

    SQL_ERROR = 2,
    DCE_ERROR = 4,
    NO_SUCH_LAST_NAME = 5,
    INVALID_TRAN_TYPE = 6,
    INVALID_HANDLE = 7,

    WRONG_INPUT = 10,
    DISTRIBUTED_TRAN_FAILED = 15,

    TPCC_DB_INFO_PARTIAL = 20,
    TPCC_DB_INFO_FAILED,

    TPCC_ERROR_BEGIN_NEWO = 110,

    TPCC_ERROR_DECL_NEWO_SEL_ITEM,
    TPCC_ERROR_OPEN_NEWO_SEL_ITEM,
    TPCC_ERROR_OPEN_DIST_NEWO_SEL_ITEM,
    TPCC_ERROR_FETCH_NEWO_SEL_ITEM,
    TPCC_ERROR_FETCH_DIST_NEWO_SEL_ITEM,
    TPCC_ERROR_PREP_NEWO_SEL_STCK,
    TPCC_ERROR_DECL_NEWO_SEL_STCK,
    TPCC_ERROR_OPEN_NEWO_SEL_STCK,
    TPCC_ERROR_OPEN_DIST_NEWO_SEL_STCK,
    TPCC_ERROR_FETCH_NEWO_SEL_STCK,
    TPCC_ERROR_FETCH_DIST_NEWO_SEL_STCK,
    TPCC_ERROR_NEWO_SELECT,
    TPCC_ERROR_NEWO_UPD_STCK,
    TPCC_ERROR_DIST_NEWO_UPD_STCK,
    TPCC_ERROR_NEWO_SELECT_2,
    TPCC_ERROR_DECL_NEWO_SEL_CUST,
    TPCC_ERROR_OPEN_NEWO_SEL_CUST,
    TPCC_ERROR_OPEN_DIST_NEWO_SEL_CUST,
    TPCC_ERROR_FETCH_NEWO_SEL_CUST,
    TPCC_ERROR_FETCH_DIST_NEWO_SEL_CUST,
    TPCC_ERROR_DECL_NEWO_SEL_DIST,
    TPCC_ERROR_OPEN_NEWO_SEL_DIST,
    TPCC_ERROR_OPEN_DIST_NEWO_SEL_DIST,
    TPCC_ERROR_FETCH_NEWO_SEL_DIST,
    TPCC_ERROR_FETCH_DIST_NEWO_SEL_DIST,
    TPCC_ERROR_PREP_NEWO_INS_OL,
    TPCC_ERROR_DECL_NEWO_INS_OL,
    TPCC_ERROR_OPEN_NEWO_INS_OL,
    TPCC_ERROR_OPEN_DIST_NEWO_INS_OL,
    TPCC_ERROR_PUT_NEWO_INS_OL,
    TPCC_ERROR_PUT_DIST_NEWO_INS_OL,
    TPCC_ERROR_DECL_NEWO_SEL_WARE,
    TPCC_ERROR_OPEN_NEWO_SEL_WARE,
    TPCC_ERROR_OPEN_DIST_NEWO_SEL_WARE,
    TPCC_ERROR_FETCH_NEWO_SEL_WARE,
    TPCC_ERROR_FETCH_DIST_NEWO_SEL_WARE,
    TPCC_ERROR_EXECUTE_NEWO_UPD_INS,
    TPCC_ERROR_UPDATE_NEWO_NEXT_OID,
    TPCC_ERROR_PREP_NEWO_INS,
    TPCC_ERROR_EXECUTE_DIST_NEWO_INS,
    TPCC_ERROR_EXECUTE_NEWO_COMMIT,
    TPCC_ERROR_ROLLBACK_NEWO,
    TPCC_ERROR_REMOTE_OL_SELECT,
    TPCC_ERROR_REMOTE_OL_UPDATE,

    TPCC_ERROR_OPEN_ORDS_CNT_CID = 200,
    TPCC_ERROR_FETCH_ORDS_CNT_CID,
    TPCC_ERROR_OPEN_ORDS_SEL_CLAST,
    TPCC_ERROR_FETCH_ORDS_SEL_CLAST,
    TPCC_ERROR_OPEN_ORDS_SEL_CID,
    TPCC_ERROR_FETCH_ORDS_SEL_CID,
    TPCC_ERROR_OPEN_ORDS_SEL_OLDORD,
    TPCC_ERROR_FETCH_ORDS_OLDORD,
    TPCC_ERROR_OPEN_ORDS_SEL_OL,
    TPCC_ERROR_FETCH_ORDS_SEL_OL,
    TPCC_ERROR_EXECUTE_ORDS_COMMIT,

    TPCC_ERROR_OPEN_DELIVERY_OLDEST_OID = 300,
    TPCC_ERROR_FETCH_DELIVERY_OLDEST_OID,
    TPCC_ERROR_EXECUTE_DELIVERY_COMMIT,
    TPCC_ERROR_OPEN_DELIVERY_SEL_ORD,
    TPCC_ERROR_FETCH_DELIVERY_SEL_ORD,
    TPCC_ERROR_OPEN_DELIVERY_SEL_SUM_OL,
    TPCC_ERROR_FETCH_DELIVERY_SEL_SUM_OL,
    TPCC_ERROR_EXECUTE_DELIVERY_EXEC_DVRY,
    TPCC_ERROR_SELECT_DELIVERY_ORDER_ID,
    TPCC_ERROR_SELECT_DELIVERY_CARRIER_ID,
    TPCC_ERROR_SELECT_DELIVERY_BALANCE,

    TPCC_ERROR_OPEN_STOCKLEVEL_SEL_OID = 400,
    TPCC_ERROR_FETCH_STOCKLEVEL_SEL_OID,
    TPCC_ERROR_OPEN_STOCKLEVEL_CNT_SID,
    TPCC_ERROR_FETCH_STOCKLEVEL_CNT_SID,
    TPCC_ERROR_OPEN_STOCKLEVEL_FIND,
    TPCC_ERROR_FETCH_STOCKLEVEL_FIND,
    TPCC_ERROR_EXECUTE_STOCKLEVEL_COMMIT,

    TPCC_ERROR_OPEN_PAYMENT_CNT_CID = 500,
    TPCC_ERROR_FETCH_PAYMENT_CNT_CID,
    TPCC_ERROR_OPEN_PAYMENT_SEL_CLAST,
    TPCC_ERROR_FETCH_PAYMENT_SEL_CLAST,
    TPCC_ERROR_OPEN_PAYMENT_SEL_CID,
    TPCC_ERROR_FETCH_PAYMENT_SEL_CID,
    TPCC_ERROR_DECL_PAYMENT_SEL_DIST,
    TPCC_ERROR_OPEN_PAYMENT_SEL_DIST,
    TPCC_ERROR_OPEN_DIST_PAYMENT_SEL_DIST,
    TPCC_ERROR_FETCH_PAYMENT_SEL_DIST,
    TPCC_ERROR_FETCH_DIST_PAYMENT_SEL_DIST,
    TPCC_ERROR_DECL_PAYMENT_SEL_WARE,
    TPCC_ERROR_OPEN_PAYMENT_SEL_WARE,
    TPCC_ERROR_OPEN_DIST_PAYMENT_SEL_WARE,
    TPCC_ERROR_FETCH_PAYMENT_SEL_WARE,
    TPCC_ERROR_FETCH_DIST_PAYMENT_SEL_WARE,
    TPCC_ERROR_EXECUTE_PAYMENT_UPD_CUST_LAST,
    TPCC_ERROR_EXECUTE_PAYMENT_UPD_CUST_ID,
    TPCC_ERROR_COMMIT_PAYMENT_UPD_CUST,
    TPCC_ERROR_SELECT_PAYMENT_W_YTD,
    TPCC_ERROR_SELECT_PAYMENT_D_YTD,
    TPCC_ERROR_BEGIN_PAYMENT,
    TPCC_ERROR_EXECUTE_PAYMENT_COMMIT,
    TPCC_ERROR_PAYMENT_UPD_CUST_BY_NAME,
    TPCC_ERROR_PAYMENT_UPD_CUST_BY_ID,
    TPCC_ERROR_PAYMENT_UPDATE_DIST,
    TPCC_ERROR_PAYMENT_UPDATE_WH,
    TPCC_ERROR_PAYMENT_INSERT_HISTORY,
    TPCC_ERROR_EXECUTE_PAYMENT_WH_DIST

} tpcc_rc_t;

typedef enum {
    TPCC_DEADLOCK_MSG = 10,
    TPCC_RETRY_MSG
} tpcc_msg_t;

#endif /* __TPCC_DATABUF_H__ */
```


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# delivery.h

```
#ifndef TRANSARC_delivery_h
#define TRANSARC_delivery_h

#include <trpc/trpc.h>
#include "_delivery.h"

#include <encina/c_prologue.h>

#if defined(BUILDDLL)
#define DLLEXPORT __declspec( dllexport )
#else
#define DLLEXPORT extern
#endif

#ifndef ENCINA_STUB_CALLING
#define ENCINA_STUB_CALLING ENCINA_RPC_CALLING
#endif

#define delivery_v1_0_c_ifspec
          _delivery_v1_0_c_ifspec
#define delivery_v1_0_s_ifspec
          _delivery_v1_0_s_ifspec

typedef struct delivery_v1_0_epv {
void (ENCINA_STUB_CALLING *impTPCCDelivery) (
#ifdef IDL_PROTOTYPES

                    idl_long_int length,
                    idl_char *dataP,
                    data_header *headerP,
                    trpc_status_t *trpcStatus
#endif
);

} delivery_v1_0_epv_t;

DLLEXPORT void ENCINA_STUB_CALLING impTPCCDelivery (
#ifdef IDL_PROTOTYPES

                    idl_long_int length,
                    idl_char *dataP,
                    data_header *headerP,
                    trpc_status_t *trpcStatus
#endif
);

trpc_handle_t        ENCINA_CALLING
mon_handle_t_tranBind(
#ifdef IDL_PROTOTYPES
          mon_handle_t        handle,
          trpc_tranInfo_t     *tranInfoP,
          trpc_ifSpec_t *ifSpecP
#endif
          );

void       ENCINA_CALLING mon_handle_t_tranUnBind(
#ifdef IDL_PROTOTYPES
          mon_handle_t        handle,
          trpc_handle_t       trpcHandle,
          trpc_tranInfo_t     *tranInfoP,
          trpc_ifSpec_t *ifSpecP
#endif
          );

trpc_handle_t        ENCINA_CALLING
mon_handle_t_tranBind(
#ifdef IDL_PROTOTYPES
          mon_handle_t        handle,
          trpc_tranInfo_t     *tranInfoP,
          trpc_ifSpec_t *ifSpecP
#endif
          );

void       ENCINA_CALLING mon_handle_t_tranUnBind(
#ifdef IDL_PROTOTYPES
          mon_handle_t        handle,
          trpc_handle_t       trpcHandle,
          trpc_tranInfo_t     *tranInfoP,
          trpc_ifSpec_t *ifSpecP
#endif
          );

extern delivery_v1_0_epv_t
          delivery_v1_0_client_epv;
extern _delivery_v1_0_epv_t
          delivery_v1_0_manager_epv;
extern rpc_mgr_epv_t
          delivery_v1_0_mgr_epv;

#include <encina/c_epilogue.h>
#endif /* TRANSARC_delivery_h */
```

# dlldata.c

```
/*********************************************************
*****
   DllData file -- generated by MIDL compiler

        DO NOT ALTER THIS FILE

   This file is regenerated by MIDL on every IDL file
compile.

   To completely reconstruct this file, delete it and
rerun MIDL
   on all the IDL files in this DLL, specifying this
file for the
   /dlldata command line option

*********************************************************
****/


#include <rpcproxy.h>

#ifdef __cplusplus
extern "C"   {
#endif

EXTERN_PROXY_FILE( tpcc_com_ps )


PROXYFILE_LIST_START
/* Start of list */
  REFERENCE_PROXY_FILE( tpcc_com_ps ),
/* End of list */
PROXYFILE_LIST_END


DLLDATA_ROUTINES( aProxyFileList, GET_DLL_CLSID )

#ifdef __cplusplus
}  /*extern "C" */
#endif

/* end of generated dlldata file */
```

# error.h

```
/*        FILE:                ERROR.H
 *                                          Microsoft
TPC-C Kit Ver. 4.20.000
 *                                          Copyright
Microsoft, 1999
 *              All Rights Reserved
 *
 *                                          Version
4.10.000 audited by Richard Gimarc, Performance
Metrics, 3/17/99
 *
 *        PURPOSE:  Header file for error exception
classes.
 *
 *  Change history:
 *                  4.20.000 - updated rev number to
match kit
 *                  4.21.000 - fixed bug: ~CBaseErr
needed to be declared virtual
 */

#pragma once

#ifndef _INC_STRING
          #include <string.h>
#endif

const int m_szMsg_size = 512;
const int m_szApp_size = 64;
const int m_szLoc_size = 64;

//error message structure used in ErrorText routines
typedef struct _SERRORMSG
{
          int                 iError;
                    //error id of message
          char      szMsg[256];
          //message to sent to browser
} SERRORMSG;
```


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```
typedef enum _ErrorLevel
{
        ERR_FATAL_LEVEL                         =
1,
        ERR_WARNING_LEVEL           = 2,
        ERR_INFORMATION_LEVEL       = 3
} ErrorLevel;


#define ERR_TYPE_LOGIC
                                    -1
        //logic error in program; internal error
#define ERR_SUCCESS
                                    0
        //success (a non-error error)
#define ERR_BAD_ITEM_ID
                                    1
        //expected abort record in txnRecord
#define ERR_TYPE_DELIVERY_POST
                                2
        //expected delivery post failed
#define   ERR_TYPE_WEBDLL
                                    3
        //tpcc web generated error
#define   ERR_TYPE_SQL
                                    4
        //sql server generated error
#define   ERR_TYPE_DBLIB
                                    5
        //dblib generated error
#define   ERR_TYPE_ODBC
                                    6
        //odbc generated error
#define ERR_TYPE_SOCKET
                                    7
        //error on communication socket client rte
only
#define ERR_TYPE_DEADLOCK
                            8
        //dblib and odbc only deadlock condition
#define ERR_TYPE_COM
                                    9
        //error from COM call
#define ERR_TYPE_TUXEDO
                                    10
        //tuxedo error
#define ERR_TYPE_OS
                                    11
        //operating system error
#define ERR_TYPE_MEMORY
                                    12
        //memory allocation error
#define ERR_TYPE_TPCC_ODBC
                            13
        //error from tpcc odbc txn module
#define ERR_TYPE_TPCC_DBLIB
                            14
        //error from tpcc dblib txn module
#define ERR_TYPE_DELISRV
                            15
        //delivery server error

#define ERR_TYPE_TXNLOG
                                    16
        //txn log error
#define ERR_TYPE_BCCONN
                                    17
        //Benchcraft connection class
#define ERR_TYPE_TPCC_CONN
                                18
        //Benchcraft connection class
#define ERR_TYPE_ENCINA
                                    19
        //Encina error
#define ERR_TYPE_COMPONENT
                                20
        //error from COM component
#define ERR_TYPE_RTE
                                    21
        //Benchcraft rte
#define ERR_TYPE_AUTOMATION
                                22
        //Benchcraft automation errors
#define ERR_TYPE_DRIVER
                                    23
        //Driver engine errors
#define ERR_TYPE_RTE_BASE
                                24
        //Framework errors
#define   ERR_BUF_OVERFLOW
                                25
        //Buffer overflow during receive
#define ERR_TYPE_SOAP_HTTP
                                26
        //HTTP/SOAP dll generated error
#define ERR_TYPE_OLEDB
                                    27
        //OLE-DB generated error
#define ERR_TYPE_TPCC_OLEDB
                                28
        //error from tpcc ole-db txn module
// TPC-W error types
#define ERR_TYPE_TPCW_CONN
                                50
        //Benchcraft connection class
#define ERR_TYPE_TPCW_HTML
                                51
        //error from TpcwHtml dll
#define ERR_TYPE_TPCW_USER
                                52
        //error from TPC-W user class
#define ERR_TYPE_TPCW_ENG_BASE
                                53
#define ERR_TYPE_TPCW_ENG_OS
                                54
#define ERR_TYPE_HTML_RESP
                                55
#define ERR_TYPE_TPCW_ODBC
                                56
#define ERR_TYPE_SCHANNEL
                                57
#define ERR_TYPE_THINK_LIST
                                58
//------ end TPC-W ----------

#define ERR_TYPE_XML_PROFILE
                                59
// TPC-E error types
#define ERR_TYPE_TPCE_CONN
                                    60
        //TPC-E pipe connection errors
#define ERR_TYPE_TPCE_RTE
                                    61
        //TPC-E Rte errors
#define ERR_TYPE_TPCE_ENG_BASE
                                    62
        //Tpce Driver engine errors
#define ERR_TYPE_TPCE_ENG_OS
                                    63                  //Tpce Driver
engine system errors
//#define ERR_TYPE_TPCE_MEE_ENG_BASE
                                    64                  //Tpce MEE
Driver engine errors
//#define ERR_TYPE_TPCE_MEE_ENG_OS
                                    65                  //Tpce MEE
Driver engine system errors

#define ERR_INS_MEMORY
        "Insufficient Memory to continue."
#define ERR_UNKNOWN
        "Unknown error."
#define ERR_MSG_BUF_SIZE                512
#define INV_ERROR_CODE                                  -1
#define ERR_INS_BUF_OVERFLOW    "Insufficient Buffer
size to receive HTML pages."



class CBaseErr
{
public:
        enum Action
        {
                eNone = 0
        };

        CBaseErr(LPCTSTR szLoc = NULL)
        {
                m_idMsg             =
GetLastError();     //take the error code
immediatelly before it is reset by other functions


                if (szLoc)
                {
                        m_szLoc = new
char[strlen(szLoc)+1/*m_szLoc_size*/];
                        strcpy(m_szLoc, szLoc);
                }
                else
                        m_szLoc   = NULL;

                m_szApp             = new
char[m_szApp_size];

        GetModuleFileName(GetModuleHandle(NULL),
m_szApp, m_szApp_size);
        }
```


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```
        CBaseErr(int idMsg, LPCTSTR szLoc = NULL)
        {
                m_idMsg             = idMsg;


                if (szLoc)
                {
                        m_szLoc = new
char[strlen(szLoc)+1/*m_szLoc_size*/];
                        strcpy(m_szLoc, szLoc);
                }
                else
                        m_szLoc   = NULL;

                m_szApp             = new
char[m_szApp_size];

        GetModuleFileName(GetModuleHandle(NULL),
m_szApp, m_szApp_size);
        }

        virtual ~CBaseErr(void)
        {
                if (m_szApp)
                        delete [] m_szApp;
                if (m_szLoc)
                        delete [] m_szLoc;
        };

        virtual void Draw(HWND hwnd, LPCTSTR szStr
= NULL)
        {
                int                 j = 0;
                char      szTmp[512];

                if (szStr)
                        j = wsprintf(szTmp,
"%s\n",szStr);
                if (ErrorNum() != INV_ERROR_CODE)
                        j += wsprintf(szTmp+j,
"Error = %d\n", ErrorNum());
                if (m_szLoc)
                        j += wsprintf(szTmp+j,
"Location = %s\n", GetLocation());

                j += wsprintf(szTmp+j, "%s\n",
ErrorText());

                MessageBox(hwnd, szTmp, m_szApp,
MB_OK);
        }

        char *GetApp(void) { return m_szApp; }
        char *GetLocation(void) { return m_szLoc; }
        virtual int ErrorNum() { return m_idMsg; }
        virtual int ErrorType() = 0;  // a value
which distinguishes the kind of error that occurred
        virtual char *ErrorTypeStr() = 0; // text
representation of the error type
        virtual char *ErrorText() = 0; // a string
(i.e., human readable) representation of the error
        virtual int ErrorAction() { return eNone; }
        // the function call that caused the error


protected:
        char      *m_szApp;
        char      *m_szLoc; // code location where
the error occurred
        int                 m_idMsg;

        //short   m_errType;
};

class CSocketErr : public CBaseErr
{
public:
        enum Action
        {
                eNone = 0,
                eSend,
                eSocket,
                eBind,
                eConnect,
                eListen,
                eHost,
                eRecv,
                eGetHostByName,
                eWSACreateEvent,
                eWSASend,
                eWSAGetOverlappedResult,
                eWSARecv,
                eWSAWaitForMultipleEvents,
                eWSAStartup,
                eWSAResetEvent,
                eWSAEnumNetworkEvents,
                eWSAEventSelect,
                eSelect,
                eAccept,
                eNonRetryable
        };

        CSocketErr(Action eAction, LPCTSTR
szLocation = NULL);

        ~CSocketErr()
        {
                if (m_szErrorText != NULL)
                        delete []
m_szErrorText;
        };

        Action    m_eAction;
        char      *m_szErrorText;

        int                 ErrorType() { return
ERR_TYPE_SOCKET;};
        char*     ErrorTypeStr() { return "SOCKET";
}
        char*     ErrorText(void);
        int                 ErrorAction() { return
(int)m_eAction; }

};

class CSystemErr : public CBaseErr
{
public:
        enum Action
        {
                eNone = 0,
                eTransactNamedPipe,
                eWaitNamedPipe,
                eSetNamedPipeHandleState,
                eCreateFile,
                eCreateProcess,
                eCallNamedPipe,
                eCreateEvent,
                eCreateThread,
                eVirtualAlloc,
                eReadFile = 10,
                eWriteFile,
                eMapViewOfFile,
                eCreateFileMapping,
                eInitializeSecurityDescriptor,
                eSetSecurityDescriptorDacl,
                eCreateNamedPipe,
                eConnectNamedPipe,
                eWaitForSingleObject,
                eRegOpenKeyEx,
                eRegQueryValueEx = 20,
                ebeginthread,
                eRegEnumValue,
                eRegSetValueEx,
                eRegCreateKeyEx,
                eWaitForMultipleObjects,
                eRegisterClassEx,
                eCreateWindow,
                eCreateSemaphore,
                eReleaseSemaphore,
                eFSeek,
                eFRead,
                eFWrite,
                eTmpFile,
                eSetFilePointer,
                eNew,
                eCloseHandle,
                eGetOverlappedResult
        };

                                CSystemErr(Action
eAction, LPCTSTR szLocation);
                                CSystemErr(int iError,
Action eAction, LPCTSTR szLocation);
        int                 ErrorType() { return
ERR_TYPE_OS;};
        char*     ErrorTypeStr() { return "SYSTEM";
}
        char      *ErrorText(void);
```


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```
        int                 ErrorAction() { return
(int)m_eAction; }
        void      Draw(HWND hwnd, LPCTSTR szStr =
NULL);

        Action    m_eAction;

private:
        char m_szMsg[ERR_MSG_BUF_SIZE];
};

class CMemoryErr : public CBaseErr
{
public:
        CMemoryErr();

        int                 ErrorType() {return
ERR_TYPE_MEMORY;}
        char*     ErrorTypeStr() { return "OUT OF
MEMORY"; }
        char*     ErrorText() {return
ERR_INS_MEMORY;}
};


class CBufferOverflowErr : public CBaseErr
{
        public:
        CBufferOverflowErr(int,LPTSTR);

        int                 ErrorType() {return
ERR_BUF_OVERFLOW;}
        char*     ErrorTypeStr() { return "BUFFER
OVERFLOW"; }
        char*     ErrorText() {return
ERR_INS_BUF_OVERFLOW;}
};

// Exception type for XML profiles
class CXMLProfileErr : public CBaseErr
{
        public:
                enum Action
                {
                        LoadProfile = 1,
                        LoadSchema,
                        ValidateProfile,
                        SaveProfile,
                        LoadFromXML,
                        SaveToXML,

        ApplyProcessingInstruction,
                        ApplyAttribute,
                        ApplyNode
                };

                CXMLProfileErr(Action eAction,
int eCode, LPCTSTR szLocation)
                {
                        m_eAction = eAction;
                        m_eCode = eCode;
                        m_bOverload = true;
                };
                CXMLProfileErr(Action eAction,
int eCode, LPCTSTR szLocation, char * szMsg)
                {
                        m_eAction = eAction;
                        m_eCode = eCode;
                        strcpy(m_szMsg, szMsg);
                        m_bOverload = false;
                };

                virtual int
        ErrorType() { return
ERR_TYPE_XML_PROFILE;};
                virtual char
        *ErrorTypeStr() { return "XML PROFILE"; };
                virtual char        *ErrorText();

                virtual int
        ErrorCode() { return m_eCode; };
                int
        ErrorAction() { return (int)m_eAction; }
                //virtual void      Draw(HWND
hwnd, LPCTSTR szStr = NULL)
                //{
                //        ::MessageBox(hwnd,
szStr, m_szLoc, MB_OK);
                //};
        private:
                char
        m_szMsg[ERR_MSG_BUF_SIZE];
                LPCTSTR m_szLoc;
                int                 m_eCode;
                bool      m_bOverload;
                Action    m_eAction;

};
```

# getargs.c

```
//        File:               GETARGS.C
//                                  Microsoft
TPC-C Kit Ver. 4.51
//                                  Copyright
Microsoft, 1996, 1997, 1998, 1999, 2000, 2001, 2002,
2003
//        Purpose:  Source file for command line
processing


// Includes
#include "tpcc.h"

//=================================================
==================
//
// Function name: GetArgsLoader
//
//=================================================
==================
void GetArgsLoader(int argc, char **argv,
TPCCLDR_ARGS *pargs)
{
    int             i;
    char  *ptr;

#ifdef DEBUG
    printf("[%ld]DBG: Entering GetArgsLoader()\n",
(int) GetCurrentThreadId());
#endif

    /* init args struct with some useful values */
    pargs->server                       =  SERVER;
    pargs->user                         =  USER;
    pargs->password                     =  PASSWORD;
    pargs->database                     =  DATABASE;
    pargs->batch                        =  BATCH;
    pargs->num_warehouses               =  UNDEF;
          pargs->tables_all                       =
TRUE;
          pargs->table_item                       =
FALSE;
          pargs->table_warehouse                  =
FALSE;
          pargs->table_customer                   =
FALSE;
          pargs->table_orders                     =
FALSE;
          pargs->loader_res_file                  =
LOADER_RES_FILE;
          pargs->log_path
          =  LOADER_LOG_PATH;
          pargs->pack_size                        =
DEFLDPACKSIZE;
          pargs->starting_warehouse     =
DEF_STARTING_WAREHOUSE;
          pargs->build_index                      =
BUILD_INDEX;
          pargs->index_order                      =
INDEX_ORDER;
          pargs->index_script_path      =
INDEX_SCRIPT_PATH;
          pargs->scale_down                       =
SCALE_DOWN;

    /* check for zero command line args */
    if ( argc == 1 )
                GetArgsLoaderUsage();

    for (i = 1; i < argc; ++i)
    {
                if (argv[i][0] != '-' &&
argv[i][0] != '/')
                {
                printf("\nUnrecognized command");
                GetArgsLoaderUsage();
                exit(1);
                }

                ptr = argv[i];

                switch (ptr[1])
                {
```


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```
                    case '?':     /* Fall throught */
          GetArgsLoaderUsage();
                                        break;
                    case 'D':
                                        pargs-
>database = ptr+2;
                                        break;
                    case 'P':
                                        pargs-
>password = ptr+2;
                                        break;
                    case 'S':
                                        pargs->server
= ptr+2;
                                        break;
                    case 'U':
                                        pargs->user =
ptr+2;
                                        break;
                    case 'b':
                                        pargs->batch
= atol(ptr+2);
                                        break;
                    case 'W':
                                        pargs-
>num_warehouses = atol(ptr+2);
                                        break;
                    case 's':
                                        pargs-
>starting_warehouse = atol(ptr+2);
                                        break;
                    case 't':
                                        {
          pargs->tables_all = FALSE;
                                                  if
(strcmp(ptr+2,"item") == 0)
          pargs->table_item = TRUE;
          else if (strcmp(ptr+2,"warehouse") == 0)
          pargs->table_warehouse = TRUE;
          else if (strcmp(ptr+2,"customer") == 0)
          pargs->table_customer = TRUE;
          else if (strcmp(ptr+2,"orders") == 0)
          pargs->table_orders = TRUE;
          else
                                                  {
          printf("\nUnrecognized command");
          GetArgsLoaderUsage();
          exit(1);
                                                  }
          break;
                                        }
                              case 'f':
                                        pargs-
>loader_res_file = ptr+2;
                                        break;
                              case 'L':
                                        pargs-
>log_path = ptr+2;
                                        break;
                              case 'p':
                                        pargs-
>pack_size = atol(ptr+2);
                                        break;
                              case 'i':
                                        pargs-
>build_index = atol(ptr+2);
                                        break;
                              case 'o':
                                        pargs-
>index_order = atol(ptr+2);
                                        break;
                              case 'c':
                                        pargs-
>scale_down = atol(ptr+2);
                                        break;
                    case 'd':
                                        pargs-
>index_script_path = ptr+2;
                                        break;
                              default:
                              GetArgsLoaderUsage();
                              exit(-1);
                              break;
                    }
    }
    /* check for required args */
    if (pargs->num_warehouses == UNDEF )
    {
                    printf("Number of Warehouses is
required\n");
                    exit(-2);
    }
    return;
}

//==================================================
==================
//
// Function name: GetArgsLoaderUsage
//
//==================================================
==================

void GetArgsLoaderUsage()
{

#ifdef DEBUG
    printf("[%ld]DBG: Entering
GetArgsLoaderUsage()\n", (int) GetCurrentThreadId());
#endif


    printf("TPCCLDR:\n\n");
          printf("Parameter
Default\n");
          printf("-----------------------------------
-------------------------\n");
    printf("-W Number of Warehouses to Load
Required \n");
    printf("-S Server
%s\n", SERVER);
    printf("-U Username
%s\n", USER);
    printf("-P Password
%s\n", PASSWORD);
    printf("-D Database
%s\n", DATABASE);
          printf("-b Batch Size
%ld\n", (long) BATCH);
          printf("-p TDS packet size
%ld\n", (long) DEFLDPACKSIZE);
          printf("-L Loader BCP Log Path
%s\n", LOADER_LOG_PATH);
          printf("-f Loader Results Output Filename
%s\n", LOADER_RES_FILE);
          printf("-s Starting Warehouse
%ld\n", (long) DEF_STARTING_WAREHOUSE);
          printf("-i Build Option (data = 0, data and
index = 1)        %ld\n", (long) BUILD_INDEX);
          printf("-o Cluster Index Build Order
(before = 1, after = 0)  %ld\n", (long) INDEX_ORDER);
          printf("-c Build Scaled Database (normal =
0, tiny = 1)       %ld\n", (long) SCALE_DOWN);
          printf("-d Index Script Path
%s\n", INDEX_SCRIPT_PATH);
          printf("-t Table to Load
all tables \n");
    printf("   [item|warehouse|customer|orders]\n");
    printf("   Notes: \n");
    printf("     - the '-t' parameter may be included
multiple times to \n");
    printf("       specify multiple tables to be
loaded \n");
    printf("     - 'item' loads ITEM table \n");
```


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```
    printf("     - 'warehouse' loads WAREHOUSE,
DISTRICT, and STOCK tables \n");
    printf("     - 'customer' loads CUSTOMER and
HISTORY tables \n");
    printf("     - 'orders' load NEW-ORDER, ORDERS,
ORDER-LINE tables \n");

          printf("\nNote:  Command line switches are
case sensitive.\n");

    exit(0);
}
```

# install.c

```
/*        FILE:               INSTALL.C
 *                                    Microsoft
TPC-C Kit Ver. 4.51.000
 *                                    Copyright
Microsoft, 2003
 *              All Rights Reserved
 *
 *                                    not audited
 *
 *        PURPOSE:  Automated installation
application for TPC-C Web Kit
 *        Contact:  Charles Levine
(clevine@microsoft.com)
 *
 *  Change history:
 *                  4.20.000 - added COM installation
steps
 *      4.50.000 - added IIS6 configuration options
 *                  4.51.000 - added routines to copy
Visual Studio runtime module (MSVCR70.DLL)
 *                                       to
SystemRoot\System32
 */

#include <windows.h>
#include <direct.h>
#include <io.h>
#include <stdlib.h>
#include <stdio.h>
#include <commctrl.h>
#include "..\..\common\src\ReadRegistry.h"
#include <process.h>

#include "resource.h"

#define   WM_INITTEXT                   WM_USER+100

HICON              hIcon;
HINSTANCE hInst;

DWORD                         versionExeMS;
DWORD                         versionExeLS;
DWORD                         versionExeMM;
DWORD                         versionExeLS;
DWORD                         versionDllMS;
DWORD                         versionDllLS;

// TPC-C registry settings
TPCCREGISTRYDATA    Reg;

static    int                 iPoolThreadLimit;
static    int                 iMaxPoolThreads;
static    int                 iThreadTimeout;
static    int                 iListenBackLog;
static    int                 iAcceptExOutstanding;
static    int                 iUriEnableCache;
static    int                 iUriScavengerPeriod;
static    int                 iMaxConnections;

static    int                 iIISMajorVersion;
static    int                 iNumberOfProcessors;

static    int                 iMaxPhysicalMemory;
          //max physical memory in MB
static    char      szLastFileName[64];           //
last file we worked on (for error reporting)


BOOL      CALLBACK  LicenseDlgProc(HWND hwnd, UINT
uMsg, WPARAM wParam, LPARAM lParam);
BOOL      CALLBACK  UpdatedDlgProc(HWND hwnd, UINT
uMsg, WPARAM wParam, LPARAM lParam);
BOOL      CALLBACK  MainDlgProc(HWND hwnd, UINT uMsg,
WPARAM wParam, LPARAM lParam);
BOOL      CALLBACK  CopyDlgProc(HWND hwnd, UINT uMsg,
WPARAM wParam, LPARAM lParam);
static    void                ProcessOK(HWND hwnd,
char *szDllPath, char *szWindowsPath);
static    void
          ReadRegistrySettings(void);
static    void
          WriteRegistrySettings(char *szDllPath);
static    BOOL                RegisterDLL(char
*szFileName);
static    int
          CopyFiles(HWND hDlg, char *szDllPath, char
*szWindowsPath);
static    BOOL                GetInstallPath(char
*szDllPath);
static    BOOL
          GetWindowsInstallPath(char *szWindowsPath);
static    void                GetVersionInfo(char
*szDLLPath, char *szExePath);
static    BOOL
          CheckWWWebService(void);
static    BOOL
          StartWWWebService(void);
static    BOOL                StopWWWebService(void);
static    void                UpdateDialog(HWND
hDlg);
static    void                ConfigureIIS6(HWND
hwnd, HWND hDlg);

SYSTEM_INFO siSysInfo;

BOOL install_com(char *szDllPath);

#include "..\..\common\src\ReadRegistry.cpp"

int WINAPI WinMain( HINSTANCE hInstance, HINSTANCE
hPrevInstance, LPSTR lpCmdLine, int nCmdShow )
{
          int iRc;

          hInst = hInstance;

          InitCommonControls();

          hIcon = LoadIcon(hInstance,
MAKEINTRESOURCE(IDI_ICON1));

          iRc = DialogBox(hInstance,
MAKEINTRESOURCE(IDD_DIALOG4), GetDesktopWindow(),
LicenseDlgProc);
          if ( iRc )
          {
                    iRc = DialogBox(hInstance,
MAKEINTRESOURCE(IDD_DIALOG1), GetDesktopWindow(),
MainDlgProc);
                    if ( iRc )
                    {

          DialogBoxParam(hInstance,
MAKEINTRESOURCE(IDD_DIALOG2), GetDesktopWindow(),
UpdatedDlgProc, (LPARAM)iRc);
                    }
          }

          DestroyIcon(hIcon);
          return 0;
}

BOOL CALLBACK LicenseDlgProc(HWND hwnd, UINT uMsg,
WPARAM wParam, LPARAM lParam)
{
          HGLOBAL                       hRes;
          HRSRC                         hResInfo;
          BYTE                          *pSrc, *pDst;
          DWORD                         dwSize;
          static HFONT        hFont;

          switch(uMsg)
          {
                    case WM_INITDIALOG:
                              hFont = CreateFont(-12,
0, 0, 0, 400, 0, 0, 0, 0, 0, 0, 0, 0, "Arial");
                              SendMessage(
GetDlgItem(hwnd, IDR_LICENSE1), WM_SETFONT,
(WPARAM)hFont, MAKELPARAM(0, 0) );
                              PostMessage(hwnd,
WM_INITTEXT, (WPARAM)0, (LPARAM)0);
                              return TRUE;
                    case WM_INITTEXT:
                              hResInfo =
FindResource(hInst, MAKEINTRESOURCE(IDR_LICENSE1),
"LICENSE");
                              dwSize =
SizeofResource(hInst, hResInfo);
                              hRes =
LoadResource(hInst, hResInfo );
```


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```
                              pSrc = (BYTE
*)LockResource(hRes);
                              pDst = (unsigned char
*)malloc(dwSize+1);
                              if ( pDst )
                              {
                                        memcpy(pDst,
pSrc, dwSize);
                                        pDst[dwSize]
= 0;

          SetDlgItemText(hwnd, IDC_LICENSE, (const
char *)pDst);
                                        free(pDst);
                              }
                              else

          SetDlgItemText(hwnd, IDC_LICENSE, (const
char *)pSrc);
                              return TRUE;
                    case WM_DESTROY:
                              DeleteObject(hFont);
                              return TRUE;
                    case WM_COMMAND:
                              if ( wParam == IDOK )

          EndDialog(hwnd, TRUE);
                              if ( wParam == IDCANCEL
)

          EndDialog(hwnd, FALSE);
                    default:
                              break;
          }
          return FALSE;
}

BOOL CALLBACK UpdatedDlgProc(HWND hwnd, UINT uMsg,
WPARAM wParam, LPARAM lParam)
{
          switch(uMsg)
          {
                    case WM_INITDIALOG:
                              switch(lParam)
                              {
                                        case 1:
                                        case 2:

          SetDlgItemText(hwnd, IDC_RESULTS, "TPC-C
Web Client Installed");

          break;
                              }
                              return TRUE;
                    case WM_COMMAND:
                              if ( wParam == IDOK )

          EndDialog(hwnd, TRUE);
                              break;
                    default:
                              break;
          }
          return FALSE;
}

BOOL CALLBACK MainDlgProc(HWND hwnd, UINT uMsg,
WPARAM wParam, LPARAM lParam)
{
          PAINTSTRUCT                    ps;
          MEMORYSTATUS         memoryStatus;
          OSVERSIONINFO        VI;
          char                           szTmp[256];
          static char
          szDllPath[256];
          static char
          szWindowsPath[256];
          static char
          szExePath[256];

          switch(uMsg)
          {
                    case WM_INITDIALOG:

          GlobalMemoryStatus(&memoryStatus);
                              iMaxPhysicalMemory  =
(memoryStatus.dwTotalPhys/ 1048576);

                              if (
GetWindowsInstallPath(szWindowsPath) )
                              {

          MessageBox(hwnd, "Error: Cannot determine
Windows System Root.", NULL, MB_ICONSTOP | MB_OK);

          EndDialog(hwnd, FALSE);
                                        return TRUE;
                              }

                              if (
GetInstallPath(szDllPath) )
                              {

          MessageBox(hwnd, "Error internet service
inetsrv is not installed.", NULL, MB_ICONSTOP |
MB_OK);

          EndDialog(hwnd, FALSE);
                                        return TRUE;
                              }

                              // set default values
                              ZeroMemory( &Reg,
sizeof(Reg) );

          Reg.dwNumberOfDeliveryThreads = 4;
                              Reg.dwMaxConnections =
100;

          Reg.dwMaxPendingDeliveries    = 100;
                              Reg.eDB_Protocol =
DBLIB;
                              Reg.eTxnMon = None;
                              strcpy(Reg.szDbServer,
                    "");
                              strcpy(Reg.szDbName,
                    "tpcc");
                              strcpy(Reg.szDbUser,
                    "sa");

          strcpy(Reg.szDbPassword,      "");

                              iPoolThreadLimit =
iMaxPhysicalMemory * 2;
                              iThreadTimeout = 86400;
                              iListenBackLog = 15;
                              iAcceptExOutstanding =
40;


          ReadTPCCRegistrySettings( &Reg );
                              ReadRegistrySettings();

                              // copy the hardware
information to the SYSTEM_INFO structure

          GetSystemInfo(&siSysInfo);
                              // store the number of
processors on this system
                              iNumberOfProcessors =
siSysInfo.dwNumberOfProcessors;


          GetModuleFileName(hInst, szExePath,
sizeof(szExePath));

          GetVersionInfo(szDllPath, szExePath);

                              wsprintf(szTmp,
"Version %d.%2.2d.%3.3d", versionExeMS, versionExeMM,
versionExeLS);
                              SetDlgItemText(hwnd,
IDC_VERSION, szTmp);

                              SetDlgItemText(hwnd,
IDC_PATH, szDllPath);

                              SetDlgItemText(hwnd,
ED_DB_SERVER, Reg.szDbServer);
                              SetDlgItemText(hwnd,
ED_DB_USER_ID, Reg.szDbUser);
                              SetDlgItemText(hwnd,
ED_DB_PASSWORD, Reg.szDbPassword);
                              SetDlgItemText(hwnd,
ED_DB_NAME, Reg.szDbName);

                              SetDlgItemInt(hwnd,
ED_THREADS, Reg.dwNumberOfDeliveryThreads, FALSE);
                              SetDlgItemInt(hwnd,
ED_MAXCONNECTION, Reg.dwMaxConnections, FALSE);
                              SetDlgItemInt(hwnd,
ED_MAXDELIVERIES, Reg.dwMaxPendingDeliveries, FALSE);
                              SetDlgItemInt(hwnd,
ED_IIS_MAX_THEAD_POOL_LIMIT, iPoolThreadLimit,
FALSE);
                              SetDlgItemInt(hwnd,
ED_IIS_THREAD_TIMEOUT, iThreadTimeout, FALSE);
                              SetDlgItemInt(hwnd,
ED_IIS_LISTEN_BACKLOG, iListenBackLog, FALSE);
```


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```
                        SetDlgItemInt(hwnd,
ED_WEB_SERVICE_BACKLOG_QUEUE_SIZE,
iAcceptExOutstanding, FALSE);

                        CheckDlgButton(hwnd,
IDC_DBLIB, 0);
                        CheckDlgButton(hwnd,
IDC_ODBC,  0);
                        if ( Reg.eDB_Protocol
== DBLIB )

          CheckDlgButton(hwnd, IDC_DBLIB, 1);
                        else

          CheckDlgButton(hwnd, IDC_ODBC,  1);

                        // check OS version
level for COM.  Must be at least Windows 2000
                        VI.dwOSVersionInfoSize
= sizeof(VI);
                        GetVersionEx( &VI );
                        if (VI.dwMajorVersion <
5)
                        {
                                HWND hDlg =
GetDlgItem( hwnd, IDC_TM_MTS );
                                EnableWindow(
hDlg, 0 );          // disable COM option
                                if
(Reg.eTxnMon == COM)

          Reg.eTxnMon = None;
                        }

                        CheckDlgButton(hwnd,
IDC_TM_NONE,   0);
                        CheckDlgButton(hwnd,
IDC_TM_TUXEDO, 0);
                        CheckDlgButton(hwnd,
IDC_TM_MTS,    0);
                        CheckDlgButton(hwnd,
IDC_TM_ENCINA,      0);
                        switch (Reg.eTxnMon)
                        {
                        case None:

          CheckDlgButton(hwnd, IDC_TM_NONE,   1);
                                break;
                        case TUXEDO:

          CheckDlgButton(hwnd, IDC_TM_TUXEDO, 1);
                                break;
                        case ENCINA:

          CheckDlgButton(hwnd, IDC_TM_ENCINA, 1);
                                break;
                        case COM:

          CheckDlgButton(hwnd, IDC_TM_MTS,        1);
                                break;
                        }

                        return TRUE;
```

```
                        case WM_PAINT:
                                if ( IsIconic(hwnd) )
                                {

          BeginPaint(hwnd, &ps);

          DrawIcon(ps.hdc, 0, 0, hIcon);

          EndPaint(hwnd, &ps);
                                        return TRUE;
                                }
                                break;
                        case WM_COMMAND:
                                if ( HIWORD(wParam) ==
BN_CLICKED )
                                {
                                        switch(
LOWORD(wParam) )
                                        {

          case IDC_DBLIB:

          return TRUE;

          case IDC_ODBC:

          return TRUE;

          case IDOK:

          ProcessOK(hwnd, szDllPath, szWindowsPath);

          return TRUE;

          case IDCANCEL:

          EndDialog(hwnd, FALSE);

          return TRUE;

          default:

          return FALSE;
                                        }
                                }
                                break;
                        default:
                                break;
          }
          return FALSE;
}

static void ProcessOK(HWND hwnd, char *szDllPath,
char *szWindowsPath)
{
          int             d;
          HWND      hDlg;
          int             rc;
          BOOL      bSvcRunning;

          char      szFullName[256];
          char      szErrTxt[128];
```

```
          // read settings from dialog
          Reg.dwNumberOfDeliveryThreads  =
GetDlgItemInt(hwnd, ED_THREADS, &d, FALSE);
          Reg.dwMaxConnections = GetDlgItemInt(hwnd,
ED_MAXCONNECTION, &d, FALSE);
          Reg.dwMaxPendingDeliveries =
GetDlgItemInt(hwnd, ED_MAXDELIVERIES, &d, FALSE);

          GetDlgItemText(hwnd, ED_DB_SERVER,
Reg.szDbServer, sizeof(Reg.szDbServer));
          GetDlgItemText(hwnd, ED_DB_USER_ID,
Reg.szDbUser, sizeof(Reg.szDbUser));
          GetDlgItemText(hwnd, ED_DB_PASSWORD,
Reg.szDbPassword, sizeof(Reg.szDbPassword));
          GetDlgItemText(hwnd, ED_DB_NAME,
Reg.szDbName, sizeof(Reg.szDbName));

          if ( IsDlgButtonChecked(hwnd, IDC_DBLIB) )
          {
                    Reg.eDB_Protocol = DBLIB;
                    rc = 1;
          }
          else if ( IsDlgButtonChecked(hwnd,
IDC_ODBC) )
          {
                    Reg.eDB_Protocol = ODBC;
                    rc = 2;
          }

          if ( IsDlgButtonChecked(hwnd, IDC_TM_NONE)
)
                    Reg.eTxnMon = None;
          else if ( IsDlgButtonChecked(hwnd,
IDC_TM_TUXEDO) )
                    Reg.eTxnMon = TUXEDO;
          else if ( IsDlgButtonChecked(hwnd,
IDC_TM_MTS) )
                    Reg.eTxnMon = COM;
          else if ( IsDlgButtonChecked(hwnd,
IDC_TM_ENCINA) )
                    Reg.eTxnMon = ENCINA;

          iPoolThreadLimit = GetDlgItemInt(hwnd,
ED_IIS_MAX_THEAD_POOL_LIMIT, &d, FALSE);
          iThreadTimeout = GetDlgItemInt(hwnd,
ED_IIS_THREAD_TIMEOUT,        &d, FALSE);
          iListenBackLog = GetDlgItemInt(hwnd,
ED_IIS_LISTEN_BACKLOG, &d, FALSE);
          iAcceptExOutstanding = GetDlgItemInt(hwnd,
ED_WEB_SERVICE_BACKLOG_QUEUE_SIZE, &d, FALSE);


          ShowWindow(hwnd, SW_HIDE);
          hDlg = CreateDialog(hInst,
MAKEINTRESOURCE(IDD_DIALOG3), hwnd, CopyDlgProc);
          ShowWindow(hDlg, SW_SHOWNA);
          UpdateDialog(hDlg);

          // check to see if the web services are
running
          bSvcRunning = CheckWWWebService();
          if ( bSvcRunning )
          {
```


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```
                    SetDlgItemText(hDlg, IDC_STATUS,
"Stopping Web Service.");
                    SendDlgItemMessage(hDlg,
IDC_PROGRESS1, PBM_STEPIT, 0, 0);
                    UpdateDialog(hDlg);

                    StopWWWebService();
                    SendDlgItemMessage(hDlg,
IDC_PROGRESS1, PBM_STEPIT, 0, 0);
                    UpdateDialog(hDlg);
          }

          // write binaries to inetpub\wwwroot
          rc = CopyFiles(hDlg, szDllPath,
szWindowsPath);
          if ( !rc )
          {
                    ShowWindow(hwnd, SW_SHOWNA);
                    DestroyWindow(hDlg);
                    strcpy( szErrTxt, "Error(s)
occured when creating " );
                    strcat( szErrTxt, szLastFileName
);
                    MessageBox(hwnd, szErrTxt, NULL,
MB_ICONSTOP | MB_OK);
                    EndDialog(hwnd, 0);
                    return;
          }

          // while we have the web services shutdown,
check to see if this
          // is IIS6.  If it is, then call
ConfigureIIS6
          if ( iIISMajorVersion == 6)
          {
                    ConfigureIIS6(hwnd, hDlg);
          }

          //if we stopped service restart it.
          if ( bSvcRunning )
          {
                    SetDlgItemText(hDlg, IDC_STATUS,
"Starting Web Service.");
                    SendDlgItemMessage(hDlg,
IDC_PROGRESS1, PBM_STEPIT, 0, 0);
                    UpdateDialog(hDlg);
                    StartWWWebService();
          }

          // update registry
          SetDlgItemText(hDlg, IDC_STATUS, "Updating
Registry.");
          SendDlgItemMessage(hDlg, IDC_PROGRESS1,
PBM_STEPIT, 0, 0);
          UpdateDialog(hDlg);
          WriteRegistrySettings(szDllPath);

          // register com proxy stub
          strcpy(szFullName, szDllPath);
          strcat(szFullName, "tpcc_com_ps.dll");
          if (!RegisterDLL(szFullName))
          {
                    ShowWindow(hwnd, SW_SHOWNA);
                    DestroyWindow(hDlg);
                    strcpy( szErrTxt, "Error occured
when registering " );
                    strcat( szErrTxt, szFullName );
                    MessageBox(hwnd, szErrTxt, NULL,
MB_ICONSTOP | MB_OK);
                    EndDialog(hwnd, 0);
                    return;
          }

          // if using COM
          if (Reg.eTxnMon == COM)
          {
                    SetDlgItemText(hDlg, IDC_STATUS,
"Configuring COM.");
                    SendDlgItemMessage(hDlg,
IDC_PROGRESS1, PBM_STEPIT, 0, 0);
                    UpdateDialog(hDlg);

                    if (install_com(szDllPath))
                    {
                              ShowWindow(hwnd,
SW_SHOWNA);
                              DestroyWindow(hDlg);
                              strcpy( szErrTxt,
"Error occured when configuring COM settings." );
                              MessageBox(hwnd,
szErrTxt, NULL, MB_ICONSTOP |
MB_OK);
                              EndDialog(hwnd, 0);
                              return;
                    }
          }

          Sleep(100);

          ShowWindow(hwnd, SW_SHOWNA);
          DestroyWindow(hDlg);

          EndDialog(hwnd, rc);
          return;
}

static void ReadRegistrySettings(void)
{
          HKEY      hKey;
          DWORD     size;
          DWORD     type;

          if ( RegOpenKeyEx(HKEY_LOCAL_MACHINE,
"SOFTWARE\\Microsoft\\InetStp", 0, KEY_READ, &hKey)
== ERROR_SUCCESS )
          {
                    size = sizeof(iIISMajorVersion);
                    if ( RegQueryValueEx(hKey,
"MajorVersion", 0, &type, (char *)&iIISMajorVersion,
&size) == ERROR_SUCCESS )
                              if ( !iIISMajorVersion
)
          iIISMajorVersion = 5;
          }

          if ( RegOpenKeyEx(HKEY_LOCAL_MACHINE,
"SYSTEM\\CurrentControlSet\\Services\\Inetinfo\\Param
eters", 0, KEY_READ, &hKey) == ERROR_SUCCESS )
          {
                    if ( iIISMajorVersion == 6)
                    {
                              // since IIS6 handles
the pool thread parameters differently, we need to
fill in the dialog
                              // with the
MaxPoolThreads rather thatn PoolThreadLimit
                              // for ease of coding,
we are just going to stuff the value into
iPoolThreadLimit
                    size = sizeof(iPoolThreadLimit);
                              if (
RegQueryValueEx(hKey, "MaxPoolThreads", 0, &type,
(char *)&iPoolThreadLimit, &size) == ERROR_SUCCESS )
                              if ( !iPoolThreadLimit
)

          iPoolThreadLimit =  iMaxPhysicalMemory * 2;
                    }
                    else
                    {
                              size =
sizeof(iPoolThreadLimit);
                              if (
RegQueryValueEx(hKey, "MaxPoolThreads", 0, &type,
(char *)&iPoolThreadLimit, &size) == ERROR_SUCCESS )
                              if ( !iPoolThreadLimit
)

          iPoolThreadLimit =  iMaxPhysicalMemory * 2;
                    }

                    size = sizeof(iThreadTimeout);
                    if ( RegQueryValueEx(hKey,
"ThreadTimeout", 0, &type, (char *)&iThreadTimeout,
&size) == ERROR_SUCCESS )
                              if ( !iThreadTimeout )

          iThreadTimeout = 86400;

                    size = sizeof(iListenBackLog);
                    if ( RegQueryValueEx(hKey,
"ListenBackLog", 0, &type, (char *)&iListenBackLog,
&size) == ERROR_SUCCESS )
                              if ( !iListenBackLog )

          iListenBackLog = 15;

                    RegCloseKey(hKey);
          }

          if ( RegOpenKeyEx(HKEY_LOCAL_MACHINE,
"SYSTEM\\CurrentControlSet\\Services\\W3SVC\\Paramete
rs", 0, KEY_READ, &hKey) == ERROR_SUCCESS )
          {
                    size =
sizeof(iAcceptExOutstanding);
```


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```
                    if ( RegQueryValueEx(hKey,
"AcceptExOutstanding", 0, &type, (char
*)&iAcceptExOutstanding, &size) == ERROR_SUCCESS )
                              if (
!iAcceptExOutstanding )

          iAcceptExOutstanding = 40;

                    RegCloseKey(hKey);
          }
          if ( RegOpenKeyEx(HKEY_LOCAL_MACHINE,
"SYSTEM\\CurrentControlSet\\Services\\HTTP\\Parameter
s", 0, KEY_READ, &hKey) == ERROR_SUCCESS )
          {
                    size = sizeof(iUriEnableCache);
                    if ( RegQueryValueEx(hKey,
"UriEnableCache", 0, &type, (char *)&iUriEnableCache,
&size) == ERROR_SUCCESS )
                              if ( !iUriEnableCache )

          iUriEnableCache = 0;

                    size =
sizeof(iUriScavengerPeriod);
                    if ( RegQueryValueEx(hKey,
"UriScavengerPeriod", 0, &type, (char
*)&iUriScavengerPeriod, &size) == ERROR_SUCCESS )
                              if (
!iUriScavengerPeriod )

          iUriScavengerPeriod = 10800;

                    size = sizeof(iMaxConnections);
                    if ( RegQueryValueEx(hKey,
"MaxConnections", 0, &type, (char *)&iMaxConnections,
&size) == ERROR_SUCCESS )
                              if ( !iMaxConnections )

          iMaxConnections = 100000;

                    RegCloseKey(hKey);
          }
}


static void WriteRegistrySettings(char *szDllPath)
{
          HKEY      hKey;
          DWORD     dwDisposition;
          char      szTmp[256];
          char      *ptr;
          int                 iRc;

          if ( RegCreateKeyEx(HKEY_LOCAL_MACHINE,
"SOFTWARE\\Microsoft\\TPCC", 0, NULL,
REG_OPTION_NON_VOLATILE, KEY_ALL_ACCESS, NULL, &hKey,
&dwDisposition) == ERROR_SUCCESS )
          {
                    strcpy(szTmp, szDllPath);
                    ptr = strstr(szTmp, "tpcc");
                    if ( ptr )
                              *ptr = 0;
                    RegSetValueEx(hKey, "Path", 0,
REG_SZ, szTmp, strlen(szTmp)+1);

                    RegSetValueEx(hKey,
"NumberOfDeliveryThreads", 0, REG_DWORD, (char
*)&Reg.dwNumberOfDeliveryThreads,
sizeof(Reg.dwNumberOfDeliveryThreads));
                    RegSetValueEx(hKey,
"MaxConnections", 0, REG_DWORD, (char
*)&Reg.dwMaxConnections,
sizeof(Reg.dwMaxConnections));
                    RegSetValueEx(hKey,
"MaxPendingDeliveries", 0, REG_DWORD, (char
*)&Reg.dwMaxPendingDeliveries,
sizeof(Reg.dwMaxPendingDeliveries));

                    RegSetValueEx(hKey,
"DB_Protocol", 0, REG_SZ,
szDBNames[Reg.eDB_Protocol],
strlen(szDBNames[Reg.eDB_Protocol])+1);
                    RegSetValueEx(hKey, "TxnMonitor",
0, REG_SZ, szTxnMonNames[Reg.eTxnMon],
strlen(szTxnMonNames[Reg.eTxnMon])+1);

                    RegSetValueEx(hKey, "DbServer",
0, REG_SZ, Reg.szDbServer, strlen(Reg.szDbServer)+1);
                    RegSetValueEx(hKey, "DbName", 0,
REG_SZ, Reg.szDbName, strlen(Reg.szDbName)+1);
                    RegSetValueEx(hKey, "DbUser", 0,
REG_SZ, Reg.szDbUser, strlen(Reg.szDbUser)+1);
                    RegSetValueEx(hKey, "DbPassword",
0, REG_SZ, Reg.szDbPassword,
strlen(Reg.szDbPassword)+1);

                    strcpy(szTmp, "YES");
                    RegSetValueEx(hKey,
"COM_SinglePool", 0, REG_SZ, szTmp, strlen(szTmp)+1);

                    RegFlushKey(hKey);
                    RegCloseKey(hKey);
          }

          if (
(iRc=RegCreateKeyEx(HKEY_LOCAL_MACHINE,
"SYSTEM\\CurrentControlSet\\Services\\Inetinfo\\Param
eters", 0, NULL, REG_OPTION_NON_VOLATILE,
KEY_ALL_ACCESS, NULL, &hKey, &dwDisposition)) ==
ERROR_SUCCESS )
          {
                    // if this is IIS6, then we need
to treat the PoolThreadLimit differently
                    // if IIS6, then PoolThreadLimit
is the maximum number of threads for the entire
system.
                    // IIS6 added MaxPoolThreads
which controls the number of threads per processor.
For IIS6
                    // we will set MaxPoolThreads to
the value the user proivided in the dialog and then
set
                    // PoolThreadLimit to
MaxPoolThreads * number of processors on this system
                    if ( iIISMajorVersion == 6 )
                    {
                              iMaxPoolThreads =
iPoolThreadLimit;
                              iPoolThreadLimit =
iMaxPoolThreads * iNumberOfProcessors;
                              RegSetValueEx(hKey,
"PoolThreadLimit", 0, REG_DWORD, (char
*)&iPoolThreadLimit, sizeof(iPoolThreadLimit));
                              RegSetValueEx(hKey,
"MaxPoolThreads", 0, REG_DWORD, (char
*)&iMaxPoolThreads, sizeof(iMaxPoolThreads));
                    }
                    else
                    {
                              RegSetValueEx(hKey,
"PoolThreadLimit", 0, REG_DWORD, (char
*)&iPoolThreadLimit, sizeof(iPoolThreadLimit));
                    }

                    RegSetValueEx(hKey,
"ThreadTimeout", 0, REG_DWORD, (char
*)&iThreadTimeout, sizeof(iThreadTimeout));
                    RegSetValueEx(hKey,
"ListenBackLog", 0, REG_DWORD, (char
*)&iListenBackLog, sizeof(iListenBackLog));

                    RegFlushKey(hKey);
                    RegCloseKey(hKey);
          }

          if (
(iRc=RegCreateKeyEx(HKEY_LOCAL_MACHINE,
"SYSTEM\\CurrentControlSet\\Services\\W3SVC\\Paramete
rs", 0, NULL, REG_OPTION_NON_VOLATILE,
KEY_ALL_ACCESS, NULL, &hKey, &dwDisposition)) ==
ERROR_SUCCESS )
          {
                    RegSetValueEx(hKey,
"AcceptExOutstanding", 0, REG_DWORD, (char
*)&iAcceptExOutstanding,
sizeof(iAcceptExOutstanding));

                    RegFlushKey(hKey);
                    RegCloseKey(hKey);
          }

          return;
}

BOOL CALLBACK CopyDlgProc(HWND hwnd, UINT uMsg,
WPARAM wParam, LPARAM lParam)
{
          if ( uMsg == WM_INITDIALOG )
          {
                    SendDlgItemMessage(hwnd,
IDC_PROGRESS1, PBM_SETRANGE, 0, MAKELPARAM(0, 16));
                    SendDlgItemMessage(hwnd,
IDC_PROGRESS1, PBM_SETSTEP, (WPARAM)1, 0);
                    return TRUE;
          }
          return FALSE;
}
```


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```
BOOL RegisterDLL(char *szFileName)
{
          HINSTANCE hLib;
          FARPROC             lpDllEntryPoint;

          hLib = LoadLibrary(szFileName);
          if ( hLib == NULL )
                    return FALSE;
          // Find the entry point.
          lpDllEntryPoint = GetProcAddress(hLib,
"DllRegisterServer");
          if (lpDllEntryPoint != NULL)
          {
                    return ((*lpDllEntryPoint)() ==
S_OK);
          }
          else
                    return FALSE;       //unable to
locate entry point
}

BOOL FileFromResource( char *szResourceName, int
iResourceId, char *szDllPath, char *szFileName )
{
          HGLOBAL                         hDLL;
          HRSRC                           hResInfo;
          HANDLE                          hFile;
          DWORD                           dwSize;
          BYTE                            *pSrc;
          DWORD                           d;
          char
          szFullName[256];

          hResInfo = FindResource(hInst,
MAKEINTRESOURCE(iResourceId), szResourceName);

          strcpy(szFullName, szDllPath);
          strcat(szFullName, szFileName);

          dwSize = SizeofResource(hInst, hResInfo);
          hDLL = LoadResource(hInst, hResInfo );
          pSrc = (BYTE *)LockResource(hDLL);
          remove(szFullName);

          if ( !(hFile = CreateFile(szFullName,
GENERIC_WRITE, 0, NULL, CREATE_ALWAYS,
FILE_ATTRIBUTE_NORMAL, NULL)) )
                    return FALSE;

          if ( !WriteFile(hFile, pSrc, dwSize, &d,
NULL) )
                    return FALSE;

          CloseHandle(hFile);

          UnlockResource(hDLL);
          FreeResource(hDLL);
          return TRUE;
}

static int CopyFiles(HWND hDlg, char *szDllPath, char
*szWindowsPath)
{
          SetDlgItemText(hDlg, IDC_STATUS, "Copying
Files...");
          SendDlgItemMessage(hDlg, IDC_PROGRESS1,
PBM_STEPIT, 0, 0);
          UpdateDialog(hDlg);

          // install TPCC.DLL
          strcpy( szLastFileName, "tpcc.dll" );
          if (!FileFromResource( "TPCCDLL",
IDR_TPCCDLL, szDllPath, szLastFileName ))
                    return 0;
          SendDlgItemMessage(hDlg, IDC_PROGRESS1,
PBM_STEPIT, 0, 0);
          UpdateDialog(hDlg);


          // install MSVCR70.DLL
          strcpy( szLastFileName, "msvcr70.dll" );
          if (!FileFromResource( "MSVCRT70",
IDR_MSVCRT701, szWindowsPath, szLastFileName ))
                    return 0;
          SendDlgItemMessage(hDlg, IDC_PROGRESS1,
PBM_STEPIT, 0, 0);
          UpdateDialog(hDlg);

          // install tpcc_dblib.dll
          strcpy( szLastFileName, "tpcc_dblib.dll" );
          if (!FileFromResource( "DBLIB_DLL",
IDR_DBLIB_DLL, szDllPath, szLastFileName ))
                    return 0;
          SendDlgItemMessage(hDlg, IDC_PROGRESS1,
PBM_STEPIT, 0, 0);
          UpdateDialog(hDlg);

          // install tpcc_odbc.dll
          strcpy( szLastFileName, "tpcc_odbc.dll" );
          if (!FileFromResource( "ODBC_DLL",
IDR_ODBC_DLL, szDllPath, szLastFileName ))
                    return 0;
          SendDlgItemMessage(hDlg, IDC_PROGRESS1,
PBM_STEPIT, 0, 0);
          UpdateDialog(hDlg);

          // install tuxapp.exe
          strcpy( szLastFileName, "tuxapp.exe" );
          if (!FileFromResource( "TUXEDO_APP",
IDR_TUXEDO_APP, szDllPath, szLastFileName ))
                    return 0;
          //SendDlgItemMessage(hDlg, IDC_PROGRESS1,
PBM_STEPIT, 0, 0);
          //UpdateDialog(hDlg);

          // install tpcc_tuxedo.dll
          strcpy( szLastFileName, "tpcc_tuxedo.dll"
);
          if (!FileFromResource( "TUXEDO_DLL",
IDR_TUXEDO_DLL, szDllPath, szLastFileName ))
                    return 0;
          //SendDlgItemMessage(hDlg, IDC_PROGRESS1,
PBM_STEPIT, 0, 0);
          //UpdateDialog(hDlg);

          // install tpcc_com.dll
          strcpy( szLastFileName, "tpcc_com.dll" );
          if (!FileFromResource( "COM_DLL",
IDR_COM_DLL, szDllPath, szLastFileName ))
                    return 0;
          SendDlgItemMessage(hDlg, IDC_PROGRESS1,
PBM_STEPIT, 0, 0);
          UpdateDialog(hDlg);

          // install tpcc_com_all.tlb
          strcpy( szLastFileName, "tpcc_com_all.tlb"
);
          if (!FileFromResource( "COM_TYPLIB",
IDR_COMTYPLIB_DLL, szDllPath, szLastFileName ))
                    return 0;
          SendDlgItemMessage(hDlg, IDC_PROGRESS1,
PBM_STEPIT, 0, 0);
          UpdateDialog(hDlg);

          // install tpcc_com_ps.dll
          strcpy( szLastFileName, "tpcc_com_ps.dll"
);
          if (!FileFromResource( "COM_PS_DLL",
IDR_COMPS_DLL, szDllPath, szLastFileName ))
                    return 0;
          SendDlgItemMessage(hDlg, IDC_PROGRESS1,
PBM_STEPIT, 0, 0);
          UpdateDialog(hDlg);

          // install tpcc_com_all.dll
          strcpy( szLastFileName, "tpcc_com_all.dll"
);
          if (!FileFromResource( "COM_ALL_DLL",
IDR_COMALL_DLL, szDllPath, szLastFileName ))
                    return 0;
          SendDlgItemMessage(hDlg, IDC_PROGRESS1,
PBM_STEPIT, 0, 0);
          UpdateDialog(hDlg);

          SendDlgItemMessage(hDlg, IDC_PROGRESS1,
PBM_STEPIT, 0, 0);
          UpdateDialog(hDlg);

          return 1;
}

static BOOL GetInstallPath(char *szDllPath)
{
    HKEY  hKey;
          BYTE      szData[256];
          DWORD     sv;
          BOOL      bRc;
          int                 len;
          int                 iRc;


          // Registry key
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\InetStp\PathWWW
Root is used to find the
          // IIS default web site directory and
determine that IIS is installed.

          szDllPath[0] =  0;
          bRc = TRUE;
```


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```
        if ( RegOpenKeyEx(HKEY_LOCAL_MACHINE,
"SOFTWARE\\Microsoft\\InetStp", 0, KEY_ALL_ACCESS,
&hKey) == ERROR_SUCCESS )
        {
                sv = sizeof(szData);
                iRc = RegQueryValueEx( hKey,
"PathWWWRoot", NULL, NULL, szData, &sv );  // used by
IIS 5.0 & 6.0
                if (iRc == ERROR_SUCCESS)
                {
                        bRc = FALSE;
                        strcpy(szDllPath,
szData);
                        len =
strlen(szDllPath);
                        if ( szDllPath[len-1]
!= '\\' )
                        {

        szDllPath[len] = '\\';

        szDllPath[len+1] = 0;
                        }
                }

                RegCloseKey(hKey);
        }

        return bRc;
}

static BOOL GetWindowsInstallPath(char
*szWindowsPath)
{
    HKEY  hKey;
        BYTE      szData[256];
        DWORD     sv;
        BOOL      bRc;
        int               len;
        int               iRc;


        // Registry key
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Windows
NT\CurrentVersion\SystemRoot is used to find the
        // system root to install the VC70 DLL.

        szWindowsPath[0] =  0;
        bRc = TRUE;
        if ( RegOpenKeyEx(HKEY_LOCAL_MACHINE,
"SOFTWARE\\Microsoft\\Windows NT\\CurrentVersion", 0,
KEY_ALL_ACCESS, &hKey) == ERROR_SUCCESS )
        {
                sv = sizeof(szData);
                iRc = RegQueryValueEx( hKey,
"SystemRoot", NULL, NULL, szData, &sv );
                if (iRc == ERROR_SUCCESS)
                {
                        bRc = FALSE;
                        strcpy(szWindowsPath,
szData);
                        len =
strlen(szWindowsPath);
                        if ( szWindowsPath[len-
1] != '\\' )
                        {

        szWindowsPath[len] = '\\';

        szWindowsPath[len+1] = 0;
                        }
                        // now append the path
to SYSTEM32
                        strcat(szWindowsPath,
"SYSTEM32\\");
                }

                RegCloseKey(hKey);
        }

        return bRc;
}
static void GetVersionInfo(char *szDLLPath, char
*szExePath)
{
        DWORD                                   d;
        DWORD
        dwSize;
        DWORD
        dwBytes;
        char
        *ptr;
        VS_FIXEDFILEINFO    *vs;

        versionDllMS = 0;
        versionDllLS = 0;
        if ( _access(szDLLPath, 00) == 0 )
        {
                dwSize =
GetFileVersionInfoSize(szDLLPath, &d);
                if ( dwSize )
                {
                        ptr = (char
*)malloc(dwSize);

        GetFileVersionInfo(szDLLPath, 0, dwSize,
ptr);
                        VerQueryValue(ptr,
"\\",&vs, &dwBytes);
                        versionDllMS = vs-
>dwProductVersionMS;
                        versionDllLS = vs-
>dwProductVersionLS;
                        free(ptr);
                }
        }

        versionExeMS = 0x7FFF;
        versionExeLS = 0x7FFF;
        dwSize = GetFileVersionInfoSize(szExePath,
&d);
        if ( dwSize )
        {
                ptr = (char *)malloc(dwSize);
                GetFileVersionInfo(szExePath, 0,
dwSize, ptr);
                VerQueryValue(ptr, "\\",&vs,
&dwBytes);
                versionExeMS = vs-
>dwProductVersionMS;
                versionExeLS = LOWORD(vs-
>dwProductVersionLS);
                versionExeMM = HIWORD(vs-
>dwProductVersionLS);
                free(ptr);
        }
        return;
}

static BOOL CheckWWWebService(void)
{
        SC_HANDLE           schSCManager;
        SC_HANDLE           schService;
        SERVICE_STATUS      ssStatus;

        schSCManager = OpenSCManager(NULL, NULL,
SC_MANAGER_ALL_ACCESS);
        schService = OpenService(schSCManager,
TEXT("W3SVC"), SERVICE_ALL_ACCESS);
        if (schService == NULL)
                return FALSE;

        if (! QueryServiceStatus(schService,
&ssStatus) )
                goto ServiceNotRunning;

        if ( !ControlService(schService,
SERVICE_CONTROL_STOP, &ssStatus) )
                goto ServiceNotRunning;
        //start Service pending, Check the status
until the service is running.
        if (! QueryServiceStatus(schService,
&ssStatus) )
                goto ServiceNotRunning;

        CloseServiceHandle(schService);
        return TRUE;

ServiceNotRunning:

        CloseServiceHandle(schService);
        return FALSE;
}

static BOOL StartWWWebService(void)
{
        SC_HANDLE           schSCManager;
        SC_HANDLE           schService;
        SERVICE_STATUS      ssStatus;
        DWORD
        dwOldCheckPoint;

        schSCManager = OpenSCManager(NULL, NULL,
SC_MANAGER_ALL_ACCESS);
        schService = OpenService(schSCManager,
TEXT("W3SVC"), SERVICE_ALL_ACCESS);
        if (schService == NULL)
                return FALSE;
```


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```
        if (! StartService(schService, 0, NULL) )
                goto StartWWWebErr;
        //start Service pending, Check the status
until the service is running.
        if (! QueryServiceStatus(schService,
&ssStatus) )
                goto StartWWWebErr;
        while( ssStatus.dwCurrentState !=
SERVICE_RUNNING)
        {

                dwOldCheckPoint =
ssStatus.dwCheckPoint;
        //Save the current checkpoint.
                Sleep(ssStatus.dwWaitHint);

        //Wait for the specified interval.
                if (
!QueryServiceStatus(schService, &ssStatus) )
        //Check the status again.
                        break;
                if (dwOldCheckPoint >=
ssStatus.dwCheckPoint)                  //Break if
the checkpoint has not been incremented.
                        break;
        }

        if (ssStatus.dwCurrentState ==
SERVICE_RUNNING)
                goto StartWWWebErr;

        CloseServiceHandle(schService);
        return TRUE;

StartWWWebErr:
        CloseServiceHandle(schService);
        return FALSE;
}

static BOOL StopWWWebService(void)
{
        SC_HANDLE           schSCManager;
        SC_HANDLE           schService;
        SERVICE_STATUS      ssStatus;
        DWORD
        dwOldCheckPoint;

        schSCManager = OpenSCManager(NULL, NULL,
SC_MANAGER_ALL_ACCESS);
        //schService = OpenService(schSCManager,
TEXT("W3SVC"), SERVICE_ALL_ACCESS);
        schService = OpenService(schSCManager,
TEXT("IISADMIN"), SERVICE_ALL_ACCESS);
        if (schService == NULL)
                return FALSE;

        if (! QueryServiceStatus(schService,
&ssStatus) )
                goto StopWWWebErr;

        if ( !ControlService(schService,
SERVICE_CONTROL_STOP, &ssStatus) )
                goto StopWWWebErr;
        //start Service pending, Check the status
until the service is running.
        if (! QueryServiceStatus(schService,
&ssStatus) )
                goto StopWWWebErr;
        while( ssStatus.dwCurrentState ==
SERVICE_RUNNING)
        {

                dwOldCheckPoint =
ssStatus.dwCheckPoint;
        //Save the current checkpoint.
                Sleep(ssStatus.dwWaitHint);

        //Wait for the specified interval.
                if (
!QueryServiceStatus(schService, &ssStatus) )
        //Check the status again.
                        break;
                if (dwOldCheckPoint >=
ssStatus.dwCheckPoint)                  //Break if
the checkpoint has not been incremented.
                        break;
        }

        if (ssStatus.dwCurrentState ==
SERVICE_RUNNING)
                goto StopWWWebErr;

        CloseServiceHandle(schService);
        return TRUE;

StopWWWebErr:
        CloseServiceHandle(schService);
        return FALSE;
}

static void UpdateDialog(HWND hDlg)
{
        MSG msg;

        UpdateWindow(hDlg);
        while( PeekMessage(&msg, hDlg, 0, 0,
PM_REMOVE) )
        {
                TranslateMessage(&msg);
                DispatchMessage(&msg);
        }
        Sleep(250);
        return;
}

static void ConfigureIIS6(HWND hwnd, HWND hDlg)
{
        int                 irc;
        char      szErrTxt[128];
        FILE      *fErrorFile;

        SetDlgItemText(hDlg, IDC_STATUS,
"Configuring IIS6...");
        //SendDlgItemMessage(hDlg, IDC_PROGRESS1,
PBM_STEPIT, 0, 0);
        UpdateDialog(hDlg);

        irc = system("IIS6_CONFIG.CMD");

        // since the return code from the command
file is always 1,
        // check to see if the file iis6_config.err
exists
        // if it does, then something hosed
        fErrorFile = fopen("IIS6_CONFIG.err","r");
        if ( fErrorFile != NULL )
        {
                ShowWindow(hwnd, SW_SHOWNA);
                DestroyWindow(hDlg);
                strcpy( szErrTxt, "IIS6
configuration error." );
                strcat( szErrTxt, "Check
iis6_config.err" );
                MessageBox(hwnd, szErrTxt, NULL,
MB_ICONSTOP | MB_OK);
                EndDialog(hwnd, 0);
                return;
        }
}
```

# install.h

```
//{{NO_DEPENDENCIES}}
// Microsoft Developer Studio generated include file.
// Used by install.rc
//

#define IDD_DIALOG1                             101
#define IDI_ICON1                               102
#define IDR_TPCCDLL                             103
#define IDD_DIALOG2                             105
#define IDI_ICON2                               106
#define IDR_DELIVERY                            107
#define IDD_DIALOG3                             108

#define BN_LOG
          1001
#define ED_KEEP
          1002
#define ED_THREADS
          1003
#define ED_THREADS2
          1004
#define IDC_PATH
          1007
#define IDC_VERSION
          1009
#define IDC_RESULTS
          1010
#define IDC_PROGRESS1
          1011
#define IDC_STATUS
          1012
#define IDC_BUTTON1
          1013
```


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```
#define ED_MAXCONNECTION
          1014
#define ED_IIS_MAX_THEAD_POOL_LIMIT
          1015
#define ED_WEB_SERVICE_BACKLOG_QUEUE_SIZE
          1017
#define ED_IIS_THREAD_TIMEOUT
          1018
#define ED_IIS_LISTEN_BACKLOG
          1019
#define IDC_DBLIB
          1021
#define IDC_ODBC
          1022
#define IDC_CONNECT_POOL
                    1023
#define ED_USER_CONNECT_DELAY_TIME
          1024

// Next default values for new objects
//
```

# install.rc

```
// Microsoft Visual C++ generated resource script.
//
#include "resource.h"

#define APSTUDIO_READONLY_SYMBOLS
////////////////////////////////////////////////////
//////////////////////
//
// Generated from the TEXTINCLUDE 2 resource.
//
#include "afxres.h"

////////////////////////////////////////////////////
//////////////////////
#undef APSTUDIO_READONLY_SYMBOLS

////////////////////////////////////////////////////
//////////////////////
// English (U.S.) resources

#if !defined(AFX_RESOURCE_DLL) ||
defined(AFX_TARG_ENU)
#ifdef _WIN32
LANGUAGE LANG_ENGLISH, SUBLANG_ENGLISH_US
#pragma code_page(1252)
#endif //_WIN32

////////////////////////////////////////////////////
//////////////////////
//
// Dialog
//

IDD_DIALOG1 DIALOGEX 0, 0, 219, 351
STYLE DS_SETFONT | DS_MODALFRAME | DS_CENTER |
WS_MINIMIZEBOX | WS_POPUP |
    WS_CAPTION | WS_SYSMENU
CAPTION "TPC-C Web Client Installation Utility"
FONT 8, "MS Sans Serif", 0, 0, 0x1
BEGIN
    EDITTEXT        ED_THREADS,164,45,34,12,ES_RIGHT
| ES_NUMBER,
                    WS_EX_RTLREADING
    EDITTEXT
ED_MAXDELIVERIES,164,59,34,12,ES_RIGHT | ES_NUMBER,
                    WS_EX_RTLREADING
    EDITTEXT
ED_MAXCONNECTION,164,73,34,12,ES_RIGHT | ES_NUMBER,
                    WS_EX_RTLREADING
    CONTROL
"None",IDC_TM_NONE,"Button",BS_AUTORADIOBUTTON |
                    WS_GROUP |
WS_TABSTOP,43,100,33,10
    CONTROL
"COM",IDC_TM_MTS,"Button",BS_AUTORADIOBUTTON |
                    WS_TABSTOP,43,113,32,10
    CONTROL
"TUXEDO",IDC_TM_TUXEDO,"Button",BS_AUTORADIOBUTTON |
                    WS_TABSTOP,106,100,46,10
    CONTROL
"ENCINA",IDC_TM_ENCINA,"Button",BS_AUTORADIOBUTTON |
                    WS_DISABLED |
WS_TABSTOP,106,113,43,10
    EDITTEXT
ED_DB_SERVER,131,152,67,12,ES_AUTOHSCROLL
    EDITTEXT
ED_DB_USER_ID,131,165,67,12,ES_AUTOHSCROLL
    EDITTEXT
ED_DB_PASSWORD,131,178,67,12,ES_AUTOHSCROLL
    EDITTEXT
ED_DB_NAME,131,191,67,12,ES_AUTOHSCROLL
    CONTROL
"DBLIB",IDC_DBLIB,"Button",BS_AUTORADIOBUTTON |
WS_GROUP |
                    WS_TABSTOP,45,219,39,12
    CONTROL
"ODBC",IDC_ODBC,"Button",BS_AUTORADIOBUTTON |
WS_TABSTOP,
                    91,219,39,12
    EDITTEXT
ED_IIS_MAX_THEAD_POOL_LIMIT,164,263,34,12,ES_RIGHT |
                    ES_NUMBER,WS_EX_RTLREADING
    EDITTEXT
ED_WEB_SERVICE_BACKLOG_QUEUE_SIZE,164,277,34,12,ES_RI
GHT |
                    ES_NUMBER,WS_EX_RTLREADING
    EDITTEXT
ED_IIS_THREAD_TIMEOUT,164,291,34,12,ES_RIGHT |
ES_NUMBER,
                    WS_EX_RTLREADING
    EDITTEXT
ED_IIS_LISTEN_BACKLOG,164,305,34,12,ES_RIGHT |
ES_NUMBER,
                    WS_EX_RTLREADING
    DEFPUSHBUTTON   "OK",IDOK,53,331,50,14
    PUSHBUTTON      "Cancel",IDCANCEL,119,331,50,14
    EDITTEXT
IDC_PATH,106,26,91,13,ES_AUTOHSCROLL | ES_READONLY
    LTEXT           "Number of Delivery
Threads:",IDC_STATIC,35,45,115,12
    LTEXT           "Max Number of
Connections:",IDC_STATIC,35,73,115,12
    RTEXT           "Version
4.11",IDC_VERSION,120,4,89,9
    LTEXT           "IIS Max Thread Pool
Limit:",IDC_STATIC,36,263,115,12
    LTEXT           "Web Service Backlog Queue
Size:",IDC_STATIC,36,277,115,
                    12
    LTEXT           "IIS Thread Timeout
(seconds):",IDC_STATIC,36,291,115,12
    LTEXT           "IIS Listen
Backlog:",IDC_STATIC,36,307,115,10
    GROUPBOX        "Database
Interface",IDC_STATIC,35,208,163,27,WS_GROUP
    LTEXT           "Installation
directory:",IDC_STATIC,35,29,71,10
    GROUPBOX        "Transaction
Monitor",IDC_STATIC,33,90,165,37
    LTEXT           "Server
Name:",IDC_STATIC,35,155,56,8
    LTEXT           "User ID:",IDC_STATIC,35,168,60,8
    LTEXT           "User
Password:",IDC_STATIC,35,181,83,8
    LTEXT           "Database
Name:",IDC_STATIC,35,194,54,8
    GROUPBOX        "SQL Server Connection
Properties",IDC_STATIC,22,139,187,
                    102
    GROUPBOX        "Web Client
Properties",IDC_STATIC,22,15,187,118
    GROUPBOX        "IIS
Settings",IDC_STATIC,22,247,187,79
    LTEXT           "Max Pending
Deliveries:",IDC_STATIC,35,59,115,12
END

IDD_DIALOG2 DIALOGEX 0, 0, 117, 62
STYLE DS_SETFONT | DS_SETFOREGROUND | DS_3DLOOK |
DS_CENTER | WS_POPUP |
    WS_BORDER
EXSTYLE WS_EX_STATICEDGE
FONT 12, "MS Sans Serif", 0, 0, 0x1
BEGIN
    DEFPUSHBUTTON   "OK",IDOK,33,45,50,9
    CTEXT           "HTML TPC-C Installation
Successfull",IDC_RESULTS,7,22,
                    102,18,0,WS_EX_CLIENTEDGE
    ICON
IDI_ICON2,IDC_STATIC,50,7,18,20,SS_REALSIZEIMAGE,
                    WS_EX_TRANSPARENT
END

IDD_DIALOG3 DIALOG  0, 0, 91, 40
STYLE DS_SYSMODAL | DS_SETFONT | DS_MODALFRAME |
DS_3DLOOK | DS_CENTER |
    WS_CAPTION
CAPTION "Installing TPC-C Web Client"
FONT 12, "Arial Black"
BEGIN
```


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```
    CONTROL
"Progress1",IDC_PROGRESS1,"msctls_progress32",WS_BORD
ER,
                    7,20,77,13
    CTEXT
"Static",IDC_STATUS,7,7,77,12,SS_SUNKEN
END

IDD_DIALOG4 DIALOG  0, 0, 291, 202
STYLE DS_SETFONT | DS_MODALFRAME | DS_CENTER |
WS_POPUP | WS_CAPTION |
    WS_SYSMENU
CAPTION "Client End User License"
FONT 8, "MS Sans Serif"
BEGIN
    EDITTEXT
IDC_LICENSE,7,7,271,167,ES_MULTILINE | ES_AUTOVSCROLL
|
                    ES_AUTOHSCROLL | ES_READONLY |
WS_VSCROLL | WS_HSCROLL
    DEFPUSHBUTTON    "I &Agree",IDOK,87,181,50,14
    PUSHBUTTON      "&Cancel",IDCANCEL,153,181,50,14
END


/////////////////////////////////////////////////////
//////////////////////
//
// DESIGNINFO
//

#ifdef APSTUDIO_INVOKED
GUIDELINES DESIGNINFO
BEGIN
    IDD_DIALOG1, DIALOG
    BEGIN
        LEFTMARGIN, 22
        RIGHTMARGIN, 209
        VERTGUIDE, 35
        VERTGUIDE, 198
        TOPMARGIN, 4
        BOTTOMMARGIN, 345
    END

    IDD_DIALOG2, DIALOG
    BEGIN
        LEFTMARGIN, 7
        RIGHTMARGIN, 109
        TOPMARGIN, 7
        BOTTOMMARGIN, 54
    END

    IDD_DIALOG3, DIALOG
    BEGIN
        LEFTMARGIN, 7
        RIGHTMARGIN, 84
        TOPMARGIN, 7
        BOTTOMMARGIN, 33
    END

    IDD_DIALOG4, DIALOG
    BEGIN
        LEFTMARGIN, 7
        RIGHTMARGIN, 278
        TOPMARGIN, 7
        BOTTOMMARGIN, 195
    END
END
#endif    // APSTUDIO_INVOKED


#ifdef APSTUDIO_INVOKED
/////////////////////////////////////////////////////
//////////////////////
//
// TEXTINCLUDE
//

1 TEXTINCLUDE
BEGIN
    "resource.h\0"
END

2 TEXTINCLUDE
BEGIN
    "#include ""afxres.h""\r\n"
    "\0"
END

3 TEXTINCLUDE
BEGIN
    "\r\n"
    "\0"
END

#endif    // APSTUDIO_INVOKED


/////////////////////////////////////////////////////
//////////////////////
//
// Icon
//

// Icon with lowest ID value placed first to ensure
application icon
// remains consistent on all systems.
IDI_ICON1               ICON
"icon1.ico"
IDI_ICON2               ICON
"icon2.ico"

/////////////////////////////////////////////////////
//////////////////////
//
// TPCCDLL
//

IDR_TPCCDLL             TPCCDLL
"..\\..\\isapi_dll\\bin\\tpcc.dll"

/////////////////////////////////////////////////////
//////////////////////
//
// Version
//

VS_VERSION_INFO VERSIONINFO
 FILEVERSION 0,4,50,0
 PRODUCTVERSION 0,4,50,0
 FILEFLAGSMASK 0x3fL
#ifdef _DEBUG
 FILEFLAGS 0x1L
#else
 FILEFLAGS 0x0L
#endif
 FILEOS 0x40004L
 FILETYPE 0x1L
 FILESUBTYPE 0x0L
BEGIN
    BLOCK "StringFileInfo"
    BEGIN
        BLOCK "040904b0"
        BEGIN
            VALUE "Comments", "TPC-C Web Client
Installer"
            VALUE "CompanyName", "Microsoft"
            VALUE "FileDescription", "install"
            VALUE "FileVersion", "0, 4, 20, 0"
            VALUE "InternalName", "install"
            VALUE "LegalCopyright", "Copyright ©
1999"
            VALUE "OriginalFilename", "install.exe"
            VALUE "ProductName", "Microsoft install"
            VALUE "ProductVersion", "0, 4, 20, 0"
        END
    END
    BLOCK "VarFileInfo"
    BEGIN
        VALUE "Translation", 0x409, 1200
    END
END


/////////////////////////////////////////////////////
//////////////////////
//
// LICENSE
//

IDR_LICENSE1            LICENSE
"license.txt"

/////////////////////////////////////////////////////
//////////////////////
//
// DBLIB_DLL
//

IDR_DBLIB_DLL           DBLIB_DLL
"..\\..\\db_dblib_dll\\bin\\Release\\tpcc_dblib.dll"

/////////////////////////////////////////////////////
//////////////////////
//
// ODBC_DLL
//
```


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```
IDR_ODBC_DLL            ODBC_DLL
"..\\..\\db_odbc_dll\\bin\\Release\\tpcc_odbc.dll"

//////////////////////////////////////////////////
//////////////////////
//
// TUXEDO_APP
//

IDR_TUXEDO_APP          TUXEDO_APP
"..\\..\\tuxapp\\bin\\tuxapp.exe"

//////////////////////////////////////////////////
//////////////////////
//
// TUXEDO_DLL
//

IDR_TUXEDO_DLL          TUXEDO_DLL
"..\\..\\tm_tuxedo_dll\\bin\\tpcc_tuxedo.dll"

//////////////////////////////////////////////////
//////////////////////
//
// COM_DLL
//

IDR_COM_DLL             COM_DLL
"..\\..\\tm_com_dll\\bin\\tpcc_com.dll"

//////////////////////////////////////////////////
//////////////////////
//
// COM_PS_DLL
//

IDR_COMPS_DLL           COM_PS_DLL
"..\\..\\tpcc_com_ps\\bin\\tpcc_com_ps.dll"

//////////////////////////////////////////////////
//////////////////////
//
// COM_ALL_DLL
//

IDR_COMALL_DLL          COM_ALL_DLL
"..\\..\\tpcc_com_all\\bin\\tpcc_com_all.dll"

//////////////////////////////////////////////////
//////////////////////
//
// COM_TYPLIB
//

IDR_COMTYPLIB_DLL       COM_TYPLIB
"..\\..\\tpcc_com_all\\src\\tpcc_com_all.tlb"

//////////////////////////////////////////////////
//////////////////////
//
// MSVCRT70
//

IDR_MSVCRT701           MSVCRT70
"C:\\WINDOWS\\system32\\msvcr70.dll"
#endif    // English (U.S.) resources
//////////////////////////////////////////////////
//////////////////////



#ifndef APSTUDIO_INVOKED
//////////////////////////////////////////////////
//////////////////////
//
// Generated from the TEXTINCLUDE 3 resource.
//


//////////////////////////////////////////////////
//////////////////////
#endif    // not APSTUDIO_INVOKED
```

# install_com.cpp

```
/*        FILE:               INSTALL_COM.CPP
 *                                    Microsoft
TPC-C Kit Ver. 4.51.000
 *                                    Copyright
Microsoft, 1999
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 *
 *                                    not audited
 *
 *        PURPOSE:  installation code for COM
application for TPC-C Web Kit
 *        Contact:  Charles Levine
(clevine@microsoft.com)
 *
 *  Change history:
 *                  4.20.000 - first version
 */

#define _WIN32_WINNT 0x0500

#include <comdef.h>
#include <comadmin.h>
#include <stdio.h>
#include <tchar.h>

extern "C"
{
          BOOL install_com(char *szDllPath);
}

BOOL install_com(char *szDllPath)
{
          ICOMAdminCatalog*   pCOMAdminCat = NULL;
          ICatalogCollection* pCatalogCollectionApp
= NULL;
          ICatalogCollection* pCatalogCollectionCo
= NULL;
          ICatalogCollection* pCatalogCollectionItf
= NULL;
          ICatalogCollection*
          pCatalogCollectionMethod = NULL;

          ICatalogObject*
          pCatalogObjectApp    = NULL;
          ICatalogObject*
          pCatalogObjectCo     = NULL;
          ICatalogObject*
          pCatalogObjectItf    = NULL;
          ICatalogObject*
          pCatalogObjectMethod = NULL;

          _bstr_t
          bstrTemp, bstrTemp2, bstrTemp3, bstrTemp4;
          _bstr_t
          bstrDllPath = szDllPath;
          _variant_t
          vTmp, vKey;
          long
          lActProp, lCount, lCountCo, lCountItf,
lCountMethod;
          bool
          bTmp;


          CoInitializeEx(NULL, COINIT_MULTITHREADED);

          HRESULT hr =
CoCreateInstance(CLSID_COMAdminCatalog,

                                          NULL,


          CLSCTX_INPROC_SERVER,


          IID_ICOMAdminCatalog,

                                          (void**)
&pCOMAdminCat);

          if (!SUCCEEDED(hr)) goto Error;

          bstrTemp = "Applications";

          // Attempt to connect to "Applications" in
the Catalog
          hr = pCOMAdminCat->GetCollection(bstrTemp,

                                          (IDispatch**)
&pCatalogCollectionApp);
          if (!SUCCEEDED(hr)) goto Error;

          // Attempt to load the "Applications"
collection
          hr = pCatalogCollectionApp->Populate();
          if (!SUCCEEDED(hr)) goto Error;

          hr = pCatalogCollectionApp-
>get_Count(&lCount);
          if (!SUCCEEDED(hr)) goto Error;
```


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```
        // iterate through applications to delete
existing "TPC-C" application (if any)
        while (lCount > 0)
        {
                hr = pCatalogCollectionApp-
>get_Item(lCount - 1, (IDispatch**)
&pCatalogObjectApp);
                if (!SUCCEEDED(hr)) goto Error;

                hr = pCatalogObjectApp-
>get_Name(&vTmp);
                if (!SUCCEEDED(hr)) goto Error;

                if (wcscmp(vTmp.bstrVal, L"TPC-
C"))
                {
                        lCount--;
                        continue;
                }
                else
                {
                        hr =
pCatalogCollectionApp->Remove(lCount - 1);
                        if (!SUCCEEDED(hr))
goto Error;
                        break;
                }
        }

        hr = pCatalogCollectionApp-
>SaveChanges(&lActProp);
        if (!SUCCEEDED(hr)) goto Error;

        // add the new application
        hr = pCatalogCollectionApp-
>Add((IDispatch**) &pCatalogObjectApp);
        if (!SUCCEEDED(hr)) goto Error;

        // set properties
        bstrTemp = "Name";
        vTmp = "TPC-C";
        hr = pCatalogObjectApp->put_Value(bstrTemp,
vTmp);
        if (!SUCCEEDED(hr)) goto Error;

        // set as a library (in process)
application
        bstrTemp = "Activation";
        lActProp = COMAdminActivationInproc;
        vTmp = lActProp;
        hr = pCatalogObjectApp->put_Value(bstrTemp,
vTmp);
        if (!SUCCEEDED(hr)) goto Error;

        // set security level to process
        bstrTemp = "AccessChecksLevel";
        lActProp =
COMAdminAccessChecksApplicationLevel;
        vTmp = lActProp;
        hr = pCatalogObjectApp->put_Value(bstrTemp,
vTmp);
        if (!SUCCEEDED(hr)) goto Error;

        // save key to get the Components
collection later
        hr = pCatalogObjectApp->get_Key(&vKey);
        if (!SUCCEEDED(hr)) goto Error;

        // save changes (app creation) so component
installation will work
        hr = pCatalogCollectionApp-
>SaveChanges(&lActProp);
        if (!SUCCEEDED(hr)) goto Error;

        pCatalogObjectApp->Release();
        pCatalogObjectApp = NULL;

        bstrTemp  = "TPC-C";
                // app name
        bstrTemp2 =         bstrDllPath +
"tpcc_com_all.dll";         // DLL
        bstrTemp3 =         bstrDllPath +
"tpcc_com_all.tlb";         // type library (TLB)
        bstrTemp4 =         bstrDllPath +
"tpcc_com_ps.dll";          // proxy/stub dll

        hr = pCOMAdminCat-
>InstallComponent(bstrTemp,


        bstrTemp2,


        bstrTemp3,


        bstrTemp4);
        if (!SUCCEEDED(hr)) goto Error;


        bstrTemp = "Components";
        hr = pCatalogCollectionApp-
>GetCollection(bstrTemp, vKey, (IDispatch**)
&pCatalogCollectionCo);
        if (!SUCCEEDED(hr)) goto Error;

        hr = pCatalogCollectionCo->Populate();
        if (!SUCCEEDED(hr)) goto Error;

        hr = pCatalogCollectionCo-
>get_Count(&lCountCo);
        if (!SUCCEEDED(hr)) goto Error;

        // iterate through components in
application and set the properties
        while (lCountCo > 0)
        {
                hr = pCatalogCollectionCo-
>get_Item(lCountCo - 1, (IDispatch**)
&pCatalogObjectCo);
                if (!SUCCEEDED(hr)) goto Error;

                // used for debugging (view the
name)
                hr = pCatalogObjectCo-
>get_Name(&vTmp);
                if (!SUCCEEDED(hr)) goto Error;

                bstrTemp = "ConstructionEnabled";
                bTmp = TRUE;
                vTmp = bTmp;
                hr = pCatalogObjectCo-
>put_Value(bstrTemp, vTmp);
                if (!SUCCEEDED(hr)) goto Error;

                bstrTemp = "ConstructorString";
                bstrTemp2 = "dummy string (do not
remove)";
                vTmp = bstrTemp2;
                hr = pCatalogObjectCo-
>put_Value(bstrTemp, vTmp);
                if (!SUCCEEDED(hr)) goto Error;

                bstrTemp =
"JustInTimeActivation";
                bTmp = TRUE;
                vTmp = bTmp;
                hr = pCatalogObjectCo-
>put_Value(bstrTemp, vTmp);
                if (!SUCCEEDED(hr)) goto Error;

                bstrTemp = "MaxPoolSize";
                vTmp.Clear();       // clear
variant so it isn't stored as a bool (_variant_t
feature)
                vTmp = (long)30;
                hr = pCatalogObjectCo-
>put_Value(bstrTemp, vTmp);
                if (!SUCCEEDED(hr)) goto Error;

                bstrTemp =
"ObjectPoolingEnabled";
                bTmp = TRUE;
                vTmp = bTmp;
                hr = pCatalogObjectCo-
>put_Value(bstrTemp, vTmp);
                if (!SUCCEEDED(hr)) goto Error;



                // save key to get the
InterfacesForComponent collection
                hr = pCatalogObjectCo-
>get_Key(&vKey);
                if (!SUCCEEDED(hr)) goto Error;

                bstrTemp =
"InterfacesForComponent";
                hr = pCatalogCollectionCo-
>GetCollection(bstrTemp, vKey, (IDispatch**)
&pCatalogCollectionItf);
                if (!SUCCEEDED(hr)) goto Error;

                hr = pCatalogCollectionItf-
>Populate();
                if (!SUCCEEDED(hr)) goto Error;
```


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```
                    hr = pCatalogCollectionItf-
>get_Count(&lCountItf);
                    if (!SUCCEEDED(hr)) goto Error;

                    // iterate through interfaces in
component
                    while (lCountItf > 0)
                    {
                              hr =
pCatalogCollectionItf->get_Item(lCountItf - 1,
(IDispatch**) &pCatalogObjectItf);
                              if (!SUCCEEDED(hr))
goto Error;

                              // save key to get the
MethodsForInterface collection
                              hr = pCatalogObjectItf-
>get_Key(&vKey);
                              if (!SUCCEEDED(hr))
goto Error;

                              bstrTemp =
"MethodsForInterface";
                              hr =
pCatalogCollectionItf->GetCollection(bstrTemp, vKey,
(IDispatch**) &pCatalogCollectionMethod);
                              if (!SUCCEEDED(hr))
goto Error;

                              hr =
pCatalogCollectionMethod->Populate();
                              if (!SUCCEEDED(hr))
goto Error;

                              hr =
pCatalogCollectionMethod->get_Count(&lCountMethod);
                              if (!SUCCEEDED(hr))
goto Error;

                              // iterate through
methods of interface
                              while (lCountMethod >
0)
                              {
                                        hr =
pCatalogCollectionMethod->get_Item(lCountMethod - 1,
(IDispatch**) &pCatalogObjectMethod);
                                        if
(!SUCCEEDED(hr)) goto Error;

                                        bstrTemp =
"AutoComplete";
                                        bTmp = TRUE;
                                        vTmp = bTmp;
                                        hr =
pCatalogObjectMethod->put_Value(bstrTemp, vTmp);
                                        if
(!SUCCEEDED(hr)) goto Error;


          pCatalogObjectMethod->Release();

          pCatalogObjectMethod = NULL;

                                        lCountMethod-
-;
                              }

                              // save changes
                              hr =
pCatalogCollectionMethod->SaveChanges(&lActProp);
                              if (!SUCCEEDED(hr))
goto Error;

                              pCatalogObjectItf-
>Release();
                              pCatalogObjectItf =
NULL;

                              lCountItf--;

                    }


                    pCatalogObjectCo->Release();
                    pCatalogObjectCo = NULL;

                    lCountCo--;
          }


          // save changes
          hr = pCatalogCollectionCo-
>SaveChanges(&lActProp);
          if (!SUCCEEDED(hr)) goto Error;

          pCatalogCollectionApp->Release();
          pCatalogCollectionApp = NULL;

          pCatalogCollectionCo->Release();
          pCatalogCollectionCo = NULL;

          pCatalogCollectionItf->Release();
          pCatalogCollectionItf = NULL;

          pCatalogCollectionMethod->Release();
          pCatalogCollectionMethod = NULL;


Error:
          CoUninitialize();

          if (!SUCCEEDED(hr))
          {
                    LPTSTR lpBuf;
                    DWORD dwRes =
FormatMessage(FORMAT_MESSAGE_ALLOCATE_BUFFER |
FORMAT_MESSAGE_FROM_SYSTEM,

                                        NULL,

                                        hr,


          MAKELANGID(LANG_NEUTRAL, SUBLANG_DEFAULT),

                                        (LPTSTR)
&lpBuf,

                                        0,

                                        NULL);
//                  _tprintf(__T("Error adding
components.  HRESULT: 0x%x\n%s"), hr, lpBuf);
                    return TRUE;
          }
          else
                    return FALSE;
}
```

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```
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```

# Methods.h

```
/*        FILE:               METHODS.H
 *                                      Microsoft
TPC-C Kit Ver. 4.20.000
 *                                      Copyright
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 *
 *                                      not yet
audited
 *
 *        PURPOSE:  Header file for COM components.
 *
 *  Change history:
 *                  4.20.000 - first version
 */


enum COMPONENT_ERROR
{
          ERR_MISSING_REGISTRY_ENTRIES = 1,
          ERR_LOADDLL_FAILED,
          ERR_GETPROCADDR_FAILED,
          ERR_UNKNOWN_DB_PROTOCOL
};

class CCOMPONENT_ERR : public CBaseErr
{
          public:
                    CCOMPONENT_ERR(COMPONENT_ERROR
Err)
                    {
                              m_Error = Err;
                              m_szTextDetail = NULL;
                              m_SystemErr = 0;
                              m_szErrorText = NULL;
                    };

                    CCOMPONENT_ERR(COMPONENT_ERROR
Err, char *szTextDetail, DWORD dwSystemErr)
                    {
                              m_Error = Err;
                              m_szTextDetail = new
char[strlen(szTextDetail)+1];
                              strcpy( m_szTextDetail,
szTextDetail );
                              m_SystemErr =
dwSystemErr;
                              m_szErrorText = NULL;
                    };

                    ~CCOMPONENT_ERR()
                    {
                              if (m_szTextDetail !=
NULL)
                                        delete []
m_szTextDetail;
                              if (m_szErrorText !=
NULL)
                                        delete []
m_szErrorText;
                    };

                    COMPONENT_ERROR     m_Error;
                    char
          *m_szTextDetail;
                    char
          *m_szErrorText;
                    DWORD
          m_SystemErr;

                    int ErrorType() {return
ERR_TYPE_COMPONENT;};
                    char *ErrorTypeStr() { return
"COMPONENT"; }
                    int ErrorNum() {return m_Error;};
                    char *ErrorText();
};


static void WriteMessageToEventLog(LPTSTR lpszMsg);


/////////////////////////////////////////////////////
//////////////////////
// CTPCC_Common
class CTPCC_Common :
          public ITPCC,
          public IObjectControl,
          public IObjectConstruct,
          public
CComObjectRootEx<CComSingleThreadModel>
{
public:
BEGIN_COM_MAP(CTPCC_Common)
          COM_INTERFACE_ENTRY(ITPCC)
          COM_INTERFACE_ENTRY(IObjectControl)
          COM_INTERFACE_ENTRY(IObjectConstruct)
END_COM_MAP()

          CTPCC_Common();
          ~CTPCC_Common();

// ITPCC
public:
          HRESULT __stdcall NewOrder(
          VARIANT txn_in, VARIANT* txn_out);
          HRESULT __stdcall Payment(
          VARIANT txn_in, VARIANT* txn_out);
          HRESULT __stdcall Delivery(
          VARIANT txn_in, VARIANT* txn_out) {return
E_NOTIMPL;}
          HRESULT __stdcall StockLevel( VARIANT
txn_in, VARIANT* txn_out);
          HRESULT __stdcall OrderStatus(
          VARIANT txn_in, VARIANT* txn_out);

          HRESULT __stdcall CallSetComplete();

// IObjectControl
          STDMETHODIMP_(BOOL) CanBePooled() { return
m_bCanBePooled; }
          STDMETHODIMP Activate() { return S_OK; }
          // we don't support COM Services
transactions (no enlistment)
          STDMETHODIMP_(void) Deactivate() { /*
nothing to do */ }

// IObjectConstruct
          STDMETHODIMP Construct(IDispatch * pUnk);

          // helper methods
private:
          BOOL                m_bCanBePooled;
          CTPCC_BASE          *m_pTxn;

          struct COM_DATA
          {
                    int retval;
                    int error;
                    union
                    {
                              NEW_ORDER_DATA
          NewOrder;
                              PAYMENT_DATA
          Payment;
                              DELIVERY_DATA
          Delivery;
                              STOCK_LEVEL_DATA
          StockLevel;
                              ORDER_STATUS_DATA
          OrderStatus;
                    } u;
          };

};
```


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```
////////////////////////////////////////////////
//////////////////////
// CTPCC
class CTPCC :
          public CTPCC_Common,
          public CComCoClass<CTPCC, &CLSID_TPCC>
{
public:
DECLARE_REGISTRY_RESOURCEID(IDR_TPCC)

BEGIN_COM_MAP(CTPCC)
          //COM_INTERFACE_ENTRY2(IUnknown,
CComObjectRootEx<CComSingleThreadModel>)
          COM_INTERFACE_ENTRY2(IUnknown, ITPCC)
          COM_INTERFACE_ENTRY_CHAIN(CTPCC_Common)
END_COM_MAP()

};


////////////////////////////////////////////////
//////////////////////
// CNewOrder
class CNewOrder :
          public CTPCC_Common,
          public CComCoClass<CNewOrder,
&CLSID_NewOrder>
{
public:
DECLARE_REGISTRY_RESOURCEID(IDR_NEWORDER)

BEGIN_COM_MAP(CNewOrder)
//        COM_INTERFACE_ENTRY2(IUnknown,
CComObjectRootEx)
          COM_INTERFACE_ENTRY2(IUnknown, ITPCC)
          COM_INTERFACE_ENTRY_CHAIN(CTPCC_Common)
END_COM_MAP()

// ITPCC
public:
//        HRESULT __stdcall NewOrder(
          VARIANT txn_in, VARIANT* txn_out) {return
E_NOTIMPL;}
          HRESULT __stdcall Payment(
          VARIANT txn_in, VARIANT* txn_out) {return
E_NOTIMPL;}
          HRESULT __stdcall StockLevel( VARIANT
txn_in, VARIANT* txn_out) {return E_NOTIMPL;}
          HRESULT __stdcall OrderStatus(
          VARIANT txn_in, VARIANT* txn_out) {return
E_NOTIMPL;}
};


          ////////////////////////////////////////
////////////////////////////////
// COrderStatus
class COrderStatus :
          public CTPCC_Common,
          public CComCoClass<COrderStatus,
&CLSID_OrderStatus>
{
public:
DECLARE_REGISTRY_RESOURCEID(IDR_ORDERSTATUS)

BEGIN_COM_MAP(COrderStatus)
//        COM_INTERFACE_ENTRY2(IUnknown,
CComObjectRootEx)
          COM_INTERFACE_ENTRY2(IUnknown, ITPCC)
          COM_INTERFACE_ENTRY_CHAIN(CTPCC_Common)
END_COM_MAP()

// ITPCC
public:
          HRESULT __stdcall NewOrder(
          VARIANT txn_in, VARIANT* txn_out) {return
E_NOTIMPL;}
          HRESULT __stdcall Payment(
          VARIANT txn_in, VARIANT* txn_out) {return
E_NOTIMPL;}
          HRESULT __stdcall StockLevel( VARIANT
txn_in, VARIANT* txn_out) {return E_NOTIMPL;}
//        HRESULT __stdcall OrderStatus(
          VARIANT txn_in, VARIANT* txn_out) {return
E_NOTIMPL;}
};


////////////////////////////////////////////////
//////////////////////
// CPayment
class CPayment :
          public CTPCC_Common,
          public CComCoClass<CPayment,
&CLSID_Payment>
{
public:
DECLARE_REGISTRY_RESOURCEID(IDR_PAYMENT)

BEGIN_COM_MAP(CPayment)
//        COM_INTERFACE_ENTRY2(IUnknown,
CComObjectRootEx)
          COM_INTERFACE_ENTRY2(IUnknown, ITPCC)
          COM_INTERFACE_ENTRY_CHAIN(CTPCC_Common)
END_COM_MAP()

// ITPCC
public:
          HRESULT __stdcall NewOrder(
          VARIANT txn_in, VARIANT* txn_out) {return
E_NOTIMPL;}
//        HRESULT __stdcall Payment(
          VARIANT txn_in, VARIANT* txn_out) {return
E_NOTIMPL;}
          HRESULT __stdcall StockLevel( VARIANT
txn_in, VARIANT* txn_out) {return E_NOTIMPL;}
          HRESULT __stdcall OrderStatus(
          VARIANT txn_in, VARIANT* txn_out) {return
E_NOTIMPL;}
};


////////////////////////////////////////////////
//////////////////////
// CStockLevel
class CStockLevel :
          public CTPCC_Common,
          public CComCoClass<CStockLevel,
&CLSID_StockLevel>
{
public:
DECLARE_REGISTRY_RESOURCEID(IDR_STOCKLEVEL)

BEGIN_COM_MAP(CStockLevel)
//        COM_INTERFACE_ENTRY2(IUnknown,
CComObjectRootEx)
          COM_INTERFACE_ENTRY2(IUnknown, ITPCC)
          COM_INTERFACE_ENTRY_CHAIN(CTPCC_Common)
END_COM_MAP()

// ITPCC
public:
          HRESULT __stdcall NewOrder(
          VARIANT txn_in, VARIANT* txn_out) {return
E_NOTIMPL;}
          HRESULT __stdcall Payment(
          VARIANT txn_in, VARIANT* txn_out) {return
E_NOTIMPL;}
//        HRESULT __stdcall StockLevel( VARIANT
txn_in, VARIANT* txn_out) {return E_NOTIMPL;}
          HRESULT __stdcall OrderStatus(
          VARIANT txn_in, VARIANT* txn_out) {return
E_NOTIMPL;}
};
```

# mon_client.c

```
/*
 *        mon_client.c
 *
 */

#include <stdio.h>
#include <stdlib.h>
#include <string.h>
#include <stdarg.h>
#include <time.h>
#include <pthread.h>
#include <tpm/mon/mon.h>
#include <utils/trace.h>
#include "../include/delivery.h"
#include "../include/neworder.h"
#include "../include/payment.h"
#include "../include/stocklevel.h"
#include "../include/orderstatus.h"
#include "../include/tpcc_type.h"
#include "mon_client.h"
#include "client_utils.h"

extern total_tran_count_t  *perfClntDataInit();
static void read_mon_environment(void);

static char *cellName;
static int envRetrieval = 0;
static int useSecurity = FALSE;
static CRITICAL_SECTION    init_lock;
```


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```
static total_tran_count_t  *pClientInfo=NULL;  /*
keep stats for the client process */
static num_active_threads = 0;
static int iStatsFrequency = 1;
FILE    *errtpcc;
char    *errFile = "C:/temp/tpcc_encina.out";
enc_status_t enc_status;

#define NewOrder_code    NEWO_TRANS
#define Payment_code     PAYMENT_TRANS
#define OrderStatus_code ORDER_STAT_TRANS
#define Delivery_code    DELIVERY_TRANS
#define StockLevel_code  STOCK_TRANS


#define INT_ENV_VALUE(var, default) \
  (var = getenv(#var) ? atoi(getenv(#var)) : default)

#define PRE_RPC_WORK(headerP, tran, sub_tran) \
        if (iStatsFrequency > 0) \
                    pre_rpc(headerP, tran, sub_tran);
\
          else
                      \
                     (headerP)->stats = 0;
#define POST_RPC_WORK(headerP, tran) \
        if (iStatsFrequency > 0) \
                    post_rpc(headerP, tran)

/*  CALTPCC
 *  Macro to sends 1 RPC and then handles any errors.
 *
 *  The macro takes the name of the RPC (e.g.,
NewOrder)
 *  and makes the RPC by calling the appropriate
function
 *  (e.g., impTPCCNewOrder).
 */
#define
CALLTPCC(name,length,dataP,header,trpcStatusP)
\
{
\

UTIL_CONCAT(impTPCC,name)(length,dataP,&header,trpcSt
atusP);         \
  if (*(trpcStatusP)) {
\
    char msg[100];
\
    sprintf(msg, "TRPC error during impTPCC%s",
UTIL_STRING(name));    \
    header.returncode = TRPC_ERROR;
\
    encina_error_message(msg, *(trpcStatusP));
\
  } else if ((header.returncode != TPCC_SUCCESS) &&
\
             (header.returncode != INVALID_NEWO)) {
\
    char msg[100];
\
    sprintf(msg, "App error during impTPCC%s: ",
UTIL_STRING(name));   \
    encina_error_message(msg, header.returncode);
\
  }
\
}

/*
 *  pre_rpc --   For debug purposes
 *
 *  Called before an RPC is made.
 *  Set the state of the thread and keep track of the
time the RPC is sent.
 *  This is used by the Background thread to report
the state of the client.
 */
static void pre_rpc(data_header *headerP,
                    int tran_type,
                    int sub_tran_type)
{
    if (iStatsFrequency < 1) {
                    headerP->stats = 0;
    } else {
        int num;
        num = ++ (pClientInfo->tran[tran_type].num);
        headerP->stats = (num % iStatsFrequency==0) ?
1 : 0;
        if (headerP->stats)
                    { /* measure the time for RT */

          get_local_time(&headerP->clnt_start);
                    headerP->srv_start.sec = 0;   /*
initialize the server time */
                    headerP->srv_start.usec = 0;
                    headerP->srv_end.sec = 0;
                    headerP->srv_end.usec = 0;
                    }
    }
}

/*
 *  post_rpc
 *
 *  Called when the RPC returns from the server
 *
 *  Keeps track of the client response time and the
server response time
 *  as well as the state of the thread.  This is used
by the background
 *  debug thread to report the state of the client
 */
static void post_rpc(data_header *headerP,
                         int tran_type)
{
    double time_diff;
    int tran_failed;
    struct timeval start_time, end_time;

    if (headerP->stats)
                    get_local_time(&headerP-
>clnt_end);
    else
                    return;

    /* Store the info for each client.
     * Note: Since we don't use mutex for performance
reason, pClientInfo
     *       may not be accurate if more than one
thread work on the same
     *       data at a same time. But this should
give us reasonable info.
     */
    if ((headerP->returncode == TPCC_SUCCESS) ||
        (headerP->returncode == INVALID_NEWO)) {
      tran_failed = 0;
    } else {
      pClientInfo->tran[tran_type].errs ++;
      pClientInfo->errors ++;
      tran_failed = 1;
    }
    if (headerP->stats && tran_type <= MAX_TRAN_TYPE
&& tran_type > 0
        && !tran_failed) {
          /* update total server round trip response
time */
            start_time.tv_sec = headerP-
>srv_start.sec;
            start_time.tv_usec = headerP-
>srv_start.usec;
            end_time.tv_sec = headerP->srv_end.sec;
            end_time.tv_usec = headerP->srv_end.usec;
          time_diff = time_diff_ms(&end_time,
&start_time);
          pClientInfo->tran[tran_type].RTtotal[1] +=
time_diff;
            DPRINT(("srv start_time %d.%d, end_time
%d.%d, time_diff %f\n",
                                start_time.tv_sec,
start_time.tv_usec,
                                end_time.tv_sec,
end_time.tv_usec,
                                time_diff));

          /* update total client round trip response
time */
            start_time.tv_sec = headerP-
>clnt_start.sec;
            start_time.tv_usec = headerP-
>clnt_start.usec;
            end_time.tv_sec = headerP->clnt_end.sec;
            end_time.tv_usec = headerP-
>clnt_end.usec;
          time_diff = time_diff_ms(&end_time,
&start_time);
          pClientInfo->tran[tran_type].RTtotal[0] +=
time_diff;
            DPRINT(("clnt start_time %d.%d, end_time
%d.%d, time_diff %f\n",
                                start_time.tv_sec,
start_time.tv_usec,
                                end_time.tv_sec,
end_time.tv_usec,
                                time_diff));
```


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```
           /* update num for the number of trans
which have RT measured */
      pClientInfo->tran[tran_type].RTcount ++;

    }
}

/*
 *  The following send_*** functions are called from
CTPCC_ENCINA class.
 *
 */

/*
 *  send_new_order
 *        Send a new order request to the server
 */
int send_new_order(long length, unsigned char *dataP)
{
    trpc_status_t trpcStatus;
    data_header  header;

    PRE_RPC_WORK(&header, NEWO_TRANS, 0);

CALLTPCC(NewOrder,length,dataP,header,&trpcStatus)
    POST_RPC_WORK(&header, NEWO_TRANS);
    if (header.returncode == INVALID_NEWO)
          return TPCC_SUCCESS;
    else
          return header.returncode;
}

/*
 *  send_payment
 *        Send a payment request to the server
 */
int send_payment(long length, unsigned char *dataP)
{
    trpc_status_t trpcStatus;
    data_header  header;

    PRE_RPC_WORK(&header, PAYMENT_TRANS, 0);

CALLTPCC(Payment,length,dataP,header,&trpcStatus);
    POST_RPC_WORK(&header, PAYMENT_TRANS);
    return header.returncode;
}

/*
 *  send_order_status
 *        Send a order status request to the server
 */
int send_order_status(long length, unsigned char
*dataP)
{
    trpc_status_t trpcStatus;
    data_header  header;

    PRE_RPC_WORK(&header, ORDER_STAT_TRANS, 0);

CALLTPCC(OrderStatus,length,dataP,header,&trpcStatus)
;
    POST_RPC_WORK(&header, ORDER_STAT_TRANS);
    return header.returncode;
}

/*
 *  send_delivery
 *        Send a delivery request to the server
 */
int send_delivery(long length, unsigned char *dataP)
{
    trpc_status_t trpcStatus;
    data_header  header;

    PRE_RPC_WORK(&header, DELIVERY_TRANS, 0);

CALLTPCC(Delivery,length,dataP,header,&trpcStatus);
    POST_RPC_WORK(&header, DELIVERY_TRANS);
    return header.returncode;
}

/*
 *  send_stock_level
 *        Send a stock level request to the server
 */
int send_stock_level(long length, unsigned char
*dataP)
{
    trpc_status_t trpcStatus;
    data_header  header;

    PRE_RPC_WORK(&header, STOCK_TRANS, 0);

CALLTPCC(StockLevel,length,dataP,header,&trpcStatus);
    POST_RPC_WORK(&header, STOCK_TRANS);
    return header.returncode;
}



/*
 *  Enroll the client:
 *        get the necessary handles.
 *  This function should be called only once. Use
static var client_enrolled to control it.
 */
void enroll_client()
{
    static  char  *clientName="tpcc_client";
    unsigned long status ;
    static  int   client_enrolled = 0;
    unsigned32      client_authnLevel;
    unsigned32      client_authzSvc;
    time_type a_time;
          char err_msg[100];

    MUTEX_INIT(&init_lock);
    get_local_time(&a_time);
    srand(a_time.sec ^ a_time.usec);

    MUTEX_LOCK(&init_lock);
    if (client_enrolled) {
          MUTEX_UNLOCK(&init_lock);
                return;
    }

    /* open output file for tracing */
    errtpcc = fopen(errFile, "w");
    if(!errtpcc)
    {
                sprintf(err_msg, "Cannot open
file %s", errFile);
                CHK_STATUS(1,
ERROUT_FILE_NOT_FOUND,err_msg);
    }

    get_time_init();
          // initialize the space for perfmon
    pClientInfo = perfClntDataInit();
    if (pClientInfo == NULL)  // in case something
wrong
          pClientInfo =
malloc(sizeof(total_tran_count_t));
    memset(pClientInfo, 0,
sizeof(total_tran_count_t));

    read_mon_environment();

    if(!cellName)
          CHK_STATUS(30, CELL_NAME_UNAVAILABLE,
                "ENCINA_TPM_CELL is not set!");

    if (useSecurity) {
                client_authnLevel =
rpc_c_protect_level_connect;
                client_authzSvc =
rpc_c_authz_dce;
    } else {
                client_authnLevel =
rpc_c_protect_level_none;
                client_authzSvc =
rpc_c_authz_none;
    }

    if (envRetrieval == 0) {

ENCINA_CALL_RC("mon_RetrieveEnable",mon_RetrieveEnabl
e(FALSE),status);
        CHK_STATUS(status, MON_RETRIEVEENABLE_FAILED,
                "mon_RetrieveEnable failed");
    }

    err_printf("enroll_client: calling mon_InitClient
\n");

ENCINA_CALL_RC("mon_InitClient",mon_InitClient(client
Name,cellName),status);
    CHK_STATUS(status, MON_INITCLIENT_FAILED,
                "mon_InitClient failed");

    DPRINT(("mon_SecuritySetDefaults-> authn %d,
authz %d\n",
              client_authnLevel, client_authzSvc));
    ENCINA_CALL_RC("mon_SecuritySetDefaults",

          mon_SecuritySetDefaults(client_authnLevel,c
lient_authzSvc),
              status);
```


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```
    CHK_STATUS(status, MON_SECURITYSET_FAILED,
               "mon_SecuritySetDefaults failed");


ENCINA_CALL_RC("mon_SetHandleCacheRefreshInterval",

          mon_SetHandleCacheRefreshInterval(300),
status);
    CHK_STATUS(status, MON_SETREFRESHINTERVAL_FAILED,
               "mon_SetHandleCacheRefreshInterval
failed");

    {
        dbInfo_data_t data;
        trpc_status_t trpcStatus;
        /* Get DB Info -- currently id does not do
anything
           but it will tell us if there is a server
out there.
           Better to know instead of when all the
terminals
           are up and ready
         */
        impTPCCNOInfo(&data, &trpcStatus);
        if (trpcStatus) {
            char msg[100];
            sprintf(msg, "TRPC error during db info
at init.");
            encina_error_message(msg, trpcStatus);
            CHK_STATUS(33,NOINFO_TRPC_ERROR,
                       "TRPC error during db info at
init");
        }
    }

    client_enrolled = 1;
    MUTEX_UNLOCK(&init_lock);
    err_printf("end of enroll_client\n");
}


/*-----------------------------------------------------
-----------*/
/*        Read environment paramaters and registry
entries      */
/*-----------------------------------------------------
-----------*/
static void read_mon_environment()
{
    char *env_str;
    char    *registryKey =
"SOFTWARE\\TransarcCorporation\\TxTpcc";
    HKEY    hKey;
    DWORD   size;
    DWORD   type;
    char    szTmp[256];

    cellName = getenv("ENCINA_TPM_CELL");
    CHECK_ENVIRON(cellName, "ENCINA_TPM_CELL");

    if (env_str = getenv("TPCC_ENV_RETRIEVE")) {
        envRetrieval = atoi(env_str);
    }

    if ( RegOpenKeyEx(HKEY_LOCAL_MACHINE,
registryKey, 0, KEY_READ, &hKey) != ERROR_SUCCESS )
        return;

    size = sizeof(szTmp);
    if ( RegQueryValueEx(hKey, "StatsFrequency", 0,
&type, szTmp, &size)==ERROR_SUCCESS)
        iStatsFrequency = atoi(szTmp);

    RegCloseKey(hKey);
}
```

# mon_client.h

```
/*
 *        mon_client.h
 *
 */

#ifndef MON_CLIENT_H
#define MON_CLIENT_H

#define MUTEX_T CRITICAL_SECTION
#define MUTEX_LOCK(a) EnterCriticalSection(a)
#define MUTEX_UNLOCK(a) LeaveCriticalSection(a)
#define MUTEX_INIT(mut)
InitializeCriticalSection(mut)
#define MUTEX_DESTROY(mut) DeleteCriticalSection(mut)
#define ERROUT errtpcc

/*initialization status */
#define INIT_SUCCESS 0
#define INIT_FAILED  1
#define CELL_NAME_UNAVAILABLE 2
#define MON_RETRIEVEENABLE_FAILED 3
#define MON_INITCLIENT_FAILED 4
#define MON_SECURITYSET_FAILED 5
#define MON_SETREFRESHINTERVAL_FAILED 6
#define NOINFO_TRPC_ERROR 7
#define ENROLL_CLIENT_EXCEPTION 8
#define ERROUT_FILE_NOT_FOUND 9
#define LOG_FILE_NOT_FOUND 10
#define TPCC_KEY_NOT_FOUND 11
#define TERM_ALLOC_FAILED 12

/*
 *  Routines and declarations that are common to all
clients
 */
#if defined(__cplusplus)
extern "C" {
#endif
int send_new_order(long, unsigned char *);
int send_payment(long, unsigned char *);
int send_order_status(long, unsigned char *);
int send_delivery(long, unsigned char *);
int send_stock_level(long, unsigned char *);
void enroll_client();
#if defined(__cplusplus)
}
#endif

#endif  /*  MON_CLIENT_H  */
```

# neworder.h

```
#ifndef TRANSARC_neworder_h
#define TRANSARC_neworder_h

#include <trpc/trpc.h>
#include "_neworder.h"

#include <encina/c_prologue.h>

#if defined(BUILDDLL)
#define DLLEXPORT __declspec( dllexport )
#else
#define DLLEXPORT extern
#endif

#ifndef ENCINA_STUB_CALLING
#define ENCINA_STUB_CALLING ENCINA_RPC_CALLING
#endif

#define neworder_v1_0_c_ifspec
          _neworder_v1_0_c_ifspec
#define neworder_v1_0_s_ifspec
          _neworder_v1_0_s_ifspec

typedef struct neworder_v1_0_epv {
void (ENCINA_STUB_CALLING *impTPCCNewOrder) (
#ifdef IDL_PROTOTYPES

                    idl_long_int length,
                    idl_char *dataP,
                    data_header *headerP,
                    trpc_status_t *trpcStatus
#endif
);

void (ENCINA_STUB_CALLING *impTPCCNOInfo) (
#ifdef IDL_PROTOTYPES

                    dbInfo_data_t *dataP,
                    trpc_status_t *trpcStatus
#endif
);

} neworder_v1_0_epv_t;

DLLEXPORT void ENCINA_STUB_CALLING impTPCCNewOrder (
#ifdef IDL_PROTOTYPES

                    idl_long_int length,
                    idl_char *dataP,
                    data_header *headerP,
                    trpc_status_t *trpcStatus
#endif
```


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```
);

DLLEXPORT void ENCINA_STUB_CALLING impTPCCNOInfo (
#ifdef IDL_PROTOTYPES

                    dbInfo_data_t *dataP,
                    trpc_status_t *trpcStatus
#endif
);

trpc_handle_t        ENCINA_CALLING
mon_handle_t_tranBind(
#ifdef IDL_PROTOTYPES
          mon_handle_t        handle,
          trpc_tranInfo_t     *tranInfoP,
          trpc_ifSpec_t *ifSpecP
#endif
          );

void       ENCINA_CALLING mon_handle_t_tranUnBind(
#ifdef IDL_PROTOTYPES
          mon_handle_t        handle,
          trpc_handle_t       trpcHandle,
          trpc_tranInfo_t     *tranInfoP,
          trpc_ifSpec_t *ifSpecP
#endif
          );

trpc_handle_t        ENCINA_CALLING
mon_handle_t_tranBind(
#ifdef IDL_PROTOTYPES
          mon_handle_t        handle,
          trpc_tranInfo_t     *tranInfoP,
          trpc_ifSpec_t *ifSpecP
#endif
          );

void       ENCINA_CALLING mon_handle_t_tranUnBind(
#ifdef IDL_PROTOTYPES
          mon_handle_t        handle,
          trpc_handle_t       trpcHandle,
          trpc_tranInfo_t     *tranInfoP,
          trpc_ifSpec_t *ifSpecP
#endif
          );

extern neworder_v1_0_epv_t
          neworder_v1_0_client_epv;
extern _neworder_v1_0_epv_t
          neworder_v1_0_manager_epv;
extern rpc_mgr_epv_t
          neworder_v1_0_mgr_epv;

#include <encina/c_epilogue.h>
#endif /* TRANSARC_neworder_h */
```

# orderstatus.h

```
#ifndef TRANSARC_orderstatus_h
#define TRANSARC_orderstatus_h

#include <trpc/trpc.h>
#include "_orderstatus.h"

#include <encina/c_prologue.h>

#if defined(BUILDDLL)
#define DLLEXPORT __declspec( dllexport )
#else
#define DLLEXPORT extern
#endif

#ifndef ENCINA_STUB_CALLING
#define ENCINA_STUB_CALLING ENCINA_RPC_CALLING
#endif

#define orderstatus_v1_0_c_ifspec
          _orderstatus_v1_0_c_ifspec
#define orderstatus_v1_0_s_ifspec
          _orderstatus_v1_0_s_ifspec

typedef struct orderstatus_v1_0_epv {
void (ENCINA_STUB_CALLING *impTPCCOrderStatus) (
#ifdef IDL_PROTOTYPES

                    idl_long_int length,
                    idl_char *dataP,
                    data_header *headerP,
                    trpc_status_t *trpcStatus
#endif
);

} orderstatus_v1_0_epv_t;

DLLEXPORT void ENCINA_STUB_CALLING impTPCCOrderStatus
(
#ifdef IDL_PROTOTYPES

                    idl_long_int length,
                    idl_char *dataP,
                    data_header *headerP,
                    trpc_status_t *trpcStatus
#endif
);

trpc_handle_t        ENCINA_CALLING
mon_handle_t_tranBind(
#ifdef IDL_PROTOTYPES
          mon_handle_t        handle,
          trpc_tranInfo_t     *tranInfoP,
          trpc_ifSpec_t *ifSpecP
#endif
          );

void       ENCINA_CALLING mon_handle_t_tranUnBind(
#ifdef IDL_PROTOTYPES
          mon_handle_t        handle,
          trpc_handle_t       trpcHandle,
          trpc_tranInfo_t     *tranInfoP,
          trpc_ifSpec_t *ifSpecP
#endif
          );

trpc_handle_t        ENCINA_CALLING
mon_handle_t_tranBind(
#ifdef IDL_PROTOTYPES
          mon_handle_t        handle,
          trpc_tranInfo_t     *tranInfoP,
          trpc_ifSpec_t *ifSpecP
#endif
          );

void       ENCINA_CALLING mon_handle_t_tranUnBind(
#ifdef IDL_PROTOTYPES
          mon_handle_t        handle,
          trpc_handle_t       trpcHandle,
          trpc_tranInfo_t     *tranInfoP,
          trpc_ifSpec_t *ifSpecP
#endif
          );

extern orderstatus_v1_0_epv_t
          orderstatus_v1_0_client_epv;
extern _orderstatus_v1_0_epv_t
          orderstatus_v1_0_manager_epv;
extern rpc_mgr_epv_t
          orderstatus_v1_0_mgr_epv;

#include <encina/c_epilogue.h>
#endif /* TRANSARC_orderstatus_h */
```

# payment.h

```
#ifndef TRANSARC_payment_h
#define TRANSARC_payment_h

#include <trpc/trpc.h>
#include "_payment.h"

#include <encina/c_prologue.h>

#if defined(BUILDDLL)
#define DLLEXPORT __declspec( dllexport )
#else
#define DLLEXPORT extern
#endif

#ifndef ENCINA_STUB_CALLING
#define ENCINA_STUB_CALLING ENCINA_RPC_CALLING
#endif

#define payment_v1_0_c_ifspec _payment_v1_0_c_ifspec
#define payment_v1_0_s_ifspec _payment_v1_0_s_ifspec

typedef struct payment_v1_0_epv {
void (ENCINA_STUB_CALLING *impTPCCPayment) (
#ifdef IDL_PROTOTYPES

                    idl_long_int length,
                    idl_char *dataP,
                    data_header *headerP,
                    trpc_status_t *trpcStatus
#endif
```


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```
);

} payment_v1_0_epv_t;

DLLEXPORT void ENCINA_STUB_CALLING impTPCCPayment (
#ifdef IDL_PROTOTYPES

                    idl_long_int length,
                    idl_char *dataP,
                    data_header *headerP,
                    trpc_status_t *trpcStatus
#endif
);

trpc_handle_t        ENCINA_CALLING
mon_handle_t_tranBind(
#ifdef IDL_PROTOTYPES
          mon_handle_t        handle,
          trpc_tranInfo_t     *tranInfoP,
          trpc_ifSpec_t *ifSpecP
#endif
          );

void       ENCINA_CALLING mon_handle_t_tranUnBind(
#ifdef IDL_PROTOTYPES
          mon_handle_t        handle,
          trpc_handle_t       trpcHandle,
          trpc_tranInfo_t     *tranInfoP,
          trpc_ifSpec_t *ifSpecP
#endif
          );

trpc_handle_t        ENCINA_CALLING
mon_handle_t_tranBind(
#ifdef IDL_PROTOTYPES
          mon_handle_t        handle,
          trpc_tranInfo_t     *tranInfoP,
          trpc_ifSpec_t *ifSpecP
#endif
          );

void       ENCINA_CALLING mon_handle_t_tranUnBind(
#ifdef IDL_PROTOTYPES
          mon_handle_t        handle,
          trpc_handle_t       trpcHandle,
          trpc_tranInfo_t     *tranInfoP,
          trpc_ifSpec_t *ifSpecP
#endif
          );

extern payment_v1_0_epv_t
          payment_v1_0_client_epv;
extern _payment_v1_0_epv_t
          payment_v1_0_manager_epv;
extern rpc_mgr_epv_t
          payment_v1_0_mgr_epv;

#include <encina/c_epilogue.h>
#endif /* TRANSARC_payment_h */
```

# random.c

```
//        File:               RANDOM.C
//                                        Microsoft
TPC-C Kit Ver. 4.62
//                                        Copyright
Microsoft, 1996, 1997, 1998, 1999, 2000, 2001, 2002,
2005
//        Purpose:  Random number generation routines
for database loader


// Includes
#include "tpcc.h"
#include "math.h"

// Defines
#define A             16807
#define M       2147483647
#define Q           127773      /* M div A */
#define R             2836      /* M mod A */
#define Thread      __declspec(thread)

// Globals
long      Thread Seed = 0;       /* thread local seed
*/

/*************************************************
************************
*
*
* random -
*
*       Implements a GOOD pseudo random number
generator.  This generator     *
*       will/should? run the complete period before
repeating.               *
*
*
* Copied from:
*
*       Random Numbers Generators: Good Ones Are Hard
to Find.                *
*       Communications of the ACM - October 1988
Volume 31 Number 10          *
*
*
* Machine Dependencies:
*
*       long must be 2 ^ 31 - 1 or greater.
*
*
*
*************************************************
************************/

/*************************************************
************************
* seed - load the Seed value used in irand and drand.
Should be used before  *
*       first call to irand or drand.
*
*************************************************
************************/

void seed(long val)
{

#ifdef DEBUG
    printf("[%ld]DBG: Entering seed()...\n", (int)
GetCurrentThreadId());
          printf("Old Seed %ld New Seed %ld\n",Seed,
val);
#endif

    if ( val < 0 )
              val = abs(val);

    Seed = val;

}


/*************************************************
************************
*
*
* irand - returns a 32 bit integer pseudo random
number with a period of     *
*       1 to 2 ^ 32 - 1.
*
*
*
* parameters:
*
*       none.
*
*
*
* returns:
*
*       32 bit integer - defined as long ( see above
).                          *
*
*
* side effects:
*
*       seed get recomputed.
*
*************************************************
************************/

long irand()
{
    register long    s;      /* copy of seed */
    register long    test;   /* test flag */
    register long    hi;     /* tmp value for speed
*/
    register long    lo;     /* tmp value for speed
*/

#ifdef DEBUG
```


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```
    printf("[%ld]DBG: Entering irand()...\n", (int)
GetCurrentThreadId());
#endif

    s = Seed;
    hi = s / Q;
    lo = s % Q;

    test = A * lo - R * hi;
    if ( test > 0 )
                    Seed = test;
    else
                    Seed = test + M;

    return( Seed );
}


/*************************************************
************************
*
*
* drand - returns a double pseudo random number
between 0.0 and 1.0.          *
*       See irand.
*
*************************************************
***********************/
double drand()
{

#ifdef DEBUG
    printf("[%ld]DBG: Entering drand()...\n", (int)
GetCurrentThreadId());
#endif

    return( (double)irand() / 2147483647.0);
}


//=================================================
====================
// Function   : RandomNumber
//
// Description:
//=================================================
====================
long RandomNumber(long lower, long upper)
{
    long rand_num;

#ifdef DEBUG
    printf("[%ld]DBG: Entering RandomNumber()...\n",
(int) GetCurrentThreadId());
#endif

          if ( upper == lower )         /* pgd 08-13-
96 perf enhancement */
                    return lower;

          upper++;

    if ( upper <= lower )
                    rand_num = upper;
    else
                    rand_num = lower + irand() %
(upper - lower); /* pgd 08-13-96 perf enhancement */


#ifdef DEBUG
    printf("[%ld]DBG: RandomNumber between %ld & %ld
==> %ld\n",
                                        (int)
GetCurrentThreadId(), lower, upper, rand_num);
#endif


    return rand_num;
}


#if 0

//Orginal code pgd 08/13/96

long RandomNumber(long lower,
                                        long upper)
{
    long rand_num;

#ifdef DEBUG
    printf("[%ld]DBG: Entering RandomNumber()...\n",
(int) GetCurrentThreadId());
#endif

          upper++;

    if ((upper <= lower))
                    rand_num = upper;
    else
                    rand_num = lower + irand() %
((upper > lower) ? upper - lower : upper);


#ifdef DEBUG
    printf("[%ld]DBG: RandomNumber between %ld & %ld
==> %ld\n",
                                        (int)
GetCurrentThreadId(), lower, upper, rand_num);
#endif


    return rand_num;
}
#endif

//=================================================
====================
// Function   : NURand
//
// Description:
//=================================================
====================
long NURand(int iConst,
              long x,
              long y,
              long C)
{
    long rand_num;

#ifdef DEBUG
    printf("[%ld]DBG: Entering NURand()...\n", (int)
GetCurrentThreadId());
#endif

    rand_num = (((RandomNumber(0,iConst) |
RandomNumber(x,y)) + C) % (y-x+1))+x;

#ifdef DEBUG
    printf("[%ld]DBG: NURand: num = %d\n", (int)
GetCurrentThreadId(), rand_num);
#endif

    return rand_num;
}
```

# ReadRegistry.cpp

```
/*        FILE:               READREGISTRY.CPP
 *                                        Microsoft
TPC-C Kit Ver. 4.20.000
 *                                        Copyright
Microsoft, 1999
 *             All Rights Reserved
 *
 *                                        not yet
audited
 *
 *        PURPOSE:  Implementation for TPC-C Tuxedo
class.
 *        Contact:  Charles Levine
(clevine@microsoft.com)
 *
 *  Change history:
 *                  4.20.000 - first version
 */


/* FUNCTION: ReadTPCCRegistrySettings
 *
 * PURPOSE:         This function reads the NT
registry for startup parameters. There parameters are
 *                           under the TPCC key.
 *
 * RETURNS          FALSE = no errors
 *                           TRUE  = error reading
registry
 */
BOOL ReadTPCCRegistrySettings( TPCCREGISTRYDATA *pReg
)
{
          HKEY      hKey;
          DWORD     size;
          DWORD     type;
```


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```
        DWORD     dwTmp;
        char      szTmp[256];

        if ( RegOpenKeyEx(HKEY_LOCAL_MACHINE,
"SOFTWARE\\Microsoft\\TPCC", 0, KEY_READ, &hKey) !=
ERROR_SUCCESS )
                return TRUE;

        // determine database protocol to use; may
be either ODBC or DBLIB
        pReg->eDB_Protocol = Unspecified;
        size = sizeof(szTmp);
        if ( RegQueryValueEx(hKey, "DB_Protocol",
0, &type, (BYTE *)&szTmp, &size) == ERROR_SUCCESS )
        {
                if ( !stricmp(szTmp,
szDBNames[ODBC]) )
                        pReg->eDB_Protocol =
ODBC;
                else if ( !stricmp(szTmp,
szDBNames[DBLIB]) )
                        pReg->eDB_Protocol =
DBLIB;
        }

        pReg->eTxnMon = None;
        // determine txn monitor to use; may be
either TUXEDO, or blank
        size = sizeof(szTmp);
        if ( RegQueryValueEx(hKey, "TxnMonitor", 0,
&type, (BYTE *)&szTmp, &size) == ERROR_SUCCESS )
        {
                if ( !stricmp(szTmp,
szTxnMonNames[TUXEDO]) )
                        pReg->eTxnMon = TUXEDO;
                else if ( !stricmp(szTmp,
szTxnMonNames[ENCINA]) )
                        pReg->eTxnMon = ENCINA;
                else if ( !stricmp(szTmp,
szTxnMonNames[COM]) )
                        pReg->eTxnMon = COM;
        }

        pReg->bCOM_SinglePool = FALSE;
        size = sizeof(szTmp);
        if ( RegQueryValueEx(hKey,
"COM_SinglePool", 0, &type, (BYTE *)&szTmp, &size) ==
ERROR_SUCCESS )
        {
                if ( !stricmp(szTmp, "YES") )
                        pReg->bCOM_SinglePool =
TRUE;
        }

        pReg->dwMaxConnections = 0;
        size = sizeof(dwTmp);
        if ( ( RegQueryValueEx(hKey,
"MaxConnections", 0, &type, (LPBYTE)&dwTmp, &size) ==
ERROR_SUCCESS )
                && (type == REG_DWORD) )
                pReg->dwMaxConnections = dwTmp;

        pReg->dwMaxPendingDeliveries = 0;
        size = sizeof(dwTmp);
        if ( ( RegQueryValueEx(hKey,
"MaxPendingDeliveries", 0, &type, (LPBYTE)&dwTmp,
&size) == ERROR_SUCCESS )
                && (type == REG_DWORD) )
                pReg->dwMaxPendingDeliveries =
dwTmp;

        pReg->dwNumberOfDeliveryThreads = 0;
        size = sizeof(dwTmp);
        if ( ( RegQueryValueEx(hKey,
"NumberOfDeliveryThreads", 0, &type, (LPBYTE)&dwTmp,
&size) == ERROR_SUCCESS )
                && (type == REG_DWORD) )
                pReg->dwNumberOfDeliveryThreads =
dwTmp;

        size = sizeof( pReg->szPath );
        if ( RegQueryValueEx(hKey, "Path", 0,
&type, (BYTE *)&pReg->szPath, &size) != ERROR_SUCCESS
)
                pReg->szPath[0] = 0;

        size = sizeof( pReg->szDbServer );
        if ( RegQueryValueEx(hKey, "DbServer", 0,
&type, (BYTE *)&pReg->szDbServer, &size) !=
ERROR_SUCCESS )
                pReg->szDbServer[0] = 0;

        size = sizeof( pReg->szDbName );
        if ( RegQueryValueEx(hKey, "DbName", 0,
&type, (BYTE *)&pReg->szDbName, &size) !=
ERROR_SUCCESS )
                pReg->szDbName[0] = 0;

        size = sizeof( pReg->szDbUser );
        if ( RegQueryValueEx(hKey, "DbUser", 0,
&type, (BYTE *)&pReg->szDbUser, &size) !=
ERROR_SUCCESS )
                pReg->szDbUser[0] = 0;

        size = sizeof( pReg->szDbPassword );
        if ( RegQueryValueEx(hKey, "DbPassword", 0,
&type, (BYTE *)&pReg->szDbPassword, &size) !=
ERROR_SUCCESS )
                pReg->szDbPassword[0] = 0;

        size = sizeof( pReg->szSPPrefix );
        if ( RegQueryValueExW(hKey, L"SPPrefix", 0,
&type, (BYTE *)&pReg->szSPPrefix, &size) !=
ERROR_SUCCESS )
                pReg->szSPPrefix[0] = L'\0';

        pReg->dwConnectDelay = 0;
        size = sizeof(dwTmp);
        if ( ( RegQueryValueEx(hKey,
"ConnectDelay", 0, &type, (LPBYTE)&dwTmp, &size) ==
ERROR_SUCCESS )
                && (type == REG_DWORD) )
                pReg->dwConnectDelay = dwTmp;

        pReg->bCallNoDuplicatesNewOrder = FALSE;
        size = sizeof(dwTmp);
        if ( ( RegQueryValueEx(hKey,
"CallNoDuplicatesNewOrder", 0, &type, (LPBYTE)&dwTmp,
&size) == ERROR_SUCCESS )
                && (type == REG_DWORD) )
                pReg->bCallNoDuplicatesNewOrder =
dwTmp;

        RegCloseKey(hKey);

        return FALSE;
}
```

# ReadRegistry.h

```
/*        FILE:                ReadRegistry.h
 *                                        Microsoft
TPC-C Kit Ver. 4.20.000
 *                                        Copyright
Microsoft, 1999
 *             All Rights Reserved
 *
 *                                        not audited
 *
 *        PURPOSE:  Header for registry related code.
 *
 *  Change history:
 *                4.20.000 - first version
 */

enum DBPROTOCOL { Unspecified, ODBC, DBLIB };
const char *szDBNames[] = { "Unspecified", "ODBC",
"DBLIB" };

enum TXNMON { None, TUXEDO, ENCINA, COM };
const char *szTxnMonNames[] = { "NONE", "TUXEDO",
"ENCINA", "COM" };

//This structure defines the data necessary to keep
distinct for each terminal or client connection.
typedef struct _TPCCREGISTRYDATA
{
        enum DBPROTOCOL eDB_Protocol;
        enum TXNMON eTxnMon;
        BOOL bCOM_SinglePool;
        DWORD dwMaxConnections;
        DWORD dwMaxPendingDeliveries;
        DWORD dwNumberOfDeliveryThreads;
        char szPath[128];
        char szDbServer[32];
        char szDbName[32];
        char szDbUser[32];
        char szDbPassword[32];
        wchar_t szSPPrefix[32];
        //tpcc_odbc.dll stored procedures prefix
        DWORD dwConnectDelay;         // delay in
ms to use in pacing connection open and close
        BOOL bCallNoDuplicatesNewOrder;         //
whether to check for non-duplicate item ids and call
a different New Order SP
} TPCCREGISTRYDATA, *PTPCCREGISTRYDATA;
```


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```
BOOL ReadTPCCRegistrySettings( TPCCREGISTRYDATA *pReg
);
```

# RESOURCE.H

```
//{{NO_DEPENDENCIES}}
// Microsoft Visual C++ generated include file.
// Used by install.rc
//
#define IDD_DIALOG1                     101
#define IDI_ICON1                       102
#define IDR_TPCCDLL                     103
#define IDD_DIALOG2                     105
#define IDI_ICON2                       106
#define IDR_DELIVERY                    107
#define IDD_DIALOG3                     108
#define IDR_LICENSE1                    112
#define IDD_DIALOG4                     113
#define IDR_TPCCOBJ1                    117
#define IDR_TPCCSTUB1                   118
#define IDR_DBLIB_DLL                   122
#define IDR_ODBC_DLL                    123
#define IDR_TUXEDO_APP                  124
#define IDR_TUXEDO_DLL                  125
#define IDR_COM_DLL                     126
#define IDR_COMPS_DLL                   127
#define IDR_COMALL_DLL                  128
#define IDR_COMTYPLIB_DLL               129
#define IDR_MSVCRT701                   130
#define BN_LOG                          1001
#define ED_KEEP                         1002
#define ED_THREADS                      1003
#define ED_THREADS2                     1004
#define IDC_PATH                        1007
#define IDC_VERSION                     1009
#define IDC_RESULTS                     1010
#define IDC_PROGRESS1                   1011
#define IDC_STATUS                      1012
#define IDC_BUTTON1                     1013
#define ED_MAXCONNECTION                1014
#define ED_IIS_MAX_THEAD_POOL_LIMIT     1015
#define ED_MAXDELIVERIES                1016
#define ED_WEB_SERVICE_BACKLOG_QUEUE_SIZE 1017
#define ED_IIS_THREAD_TIMEOUT           1018
#define ED_IIS_LISTEN_BACKLOG           1019
#define IDC_DBLIB                       1021
#define IDC_LICENSE                     1022
#define IDC_ODBC                        1022
#define IDC_CONNECT_POOL                1023
#define ED_DB_SERVER                    1023
#define ED_USER_CONNECT_DELAY_TIME      1024
#define ED_DB_USER_ID                   1024
#define IDC_MTS                         1025
#define IDC_TM_MTS                      1025
#define IDC_TM_TUXEDO                   1026
#define IDC_TM_NONE                     1027
#define ED_DB_PASSWORD                  1028
#define ED_DB_NAME                      1029
#define IDC_TM_ENCINA                   1030

// Next default values for new objects
//
#ifdef APSTUDIO_INVOKED
#ifndef APSTUDIO_READONLY_SYMBOLS
#define _APS_NEXT_RESOURCE_VALUE        131
#define _APS_NEXT_COMMAND_VALUE         40001
#define _APS_NEXT_CONTROL_VALUE         1031
#define _APS_NEXT_SYMED_VALUE           101
#endif
#endif
```

# rtetime.h

```
/* FILE: rtetime.h : header file
 * Copyright 1997 Microsoft Corp., All rights
reserved.
 *
 * Source code licensed to Tandem Computers  for
Internal
 * use only.  Redistribution of source or object
files or
 * any derivative works is prohibited. By agreement,
this
 * notice may not be removed.
 *
 * Authors: Charles Levine, Philip Durr
 *                              Microsoft Corp.
 *
 */

//FILE: RTETIME.H

#define   MAX_JULIAN_TIME
          0x7FFFFFFFFFFFFFFF
#define JULIAN_TIME __int64
#define   TC_TIME             DWORD
extern "C"
{
BOOL                InitJulianTime(LPSYSTEMTIME
lpInitTime);
JULIAN_TIME         GetJulianTime(void);
DWORD               MyTickCount(void);
void                GetJulianAndTC(JULIAN_TIME
*pJulian, DWORD *pTC);
JULIAN_TIME         ConvertTo64BitTime(int iYear, int
iMonth, int iDay, int iHour, int iMinute, int
iSecond);
JULIAN_TIME         Get64BitTime(LPSYSTEMTIME
lpInitTime);
int                         JulianDay( int yr, int
mm, int dd );
void                JulianToTime(JULIAN_TIME
julianTS, int* yr, int* mm, int* dd, int *hh, int
*mi, int *ss );
void                JulianToCalendar( int day, int*
yr, int* mm, int* dd );
}
```

# spinlock.h

```
/*        FILE: SPINLOCK.H
 *
 * Copyright 1997 Microsoft Corp., All rights
reserved.
 *
 * Source code licensed to Tandem Computers  for
Internal
 * use only.  Redistribution of source or object
files or
 * any derivative works is prohibited. By agreement,
this
 * notice may not be removed.
 *
 * Authors: Mike Parkes, Charles Levine, Philip Durr
 *                              Microsoft Corp.
 */

#ifndef _INC_Spinlock

          const LONG LockClosed         = 1;
          const LONG LockOpen           = 0;

          /*****************************************
********************
           *
           *   Spinlock and Semaphore locking.
           *
           *   This class provides a very
conservative locking scheme.
           *   The assumption behind the code is that
locks will be
           *   held for a very short time.  When a
lock is taken a memory
           *   location is exchanged.  All other
threads that want this
           *   lock wait by spinning and sometimes
sleeping on a semaphore
           *   until it becomes free again.  The only
other choice is not
           *   to wait at all and move on to do
something else.  This
           *   module should normally be used in
conjunction with cache
           *   aligned memory in minimize cache line
misses.
           *

************************************************
**********/

          class Spinlock
          {
                    // Private data.
                    HANDLE
Semaphore;
                    volatile LONG
m_Spinlock;
                    volatile LONG
Waiting;
```


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```
                    #ifdef _DEBUG
                              // Counters for
debugging builds.
                              volatile LONG
          TotalLocks;
                              volatile LONG
          TotalSleeps;
                              volatile LONG
          TotalSpins;
                              volatile LONG
          TotalWaits;
                    #endif

                    public:
                              // Public functions.

                              Spinlock( void );

                              inline BOOL ClaimLock(
BOOL Wait = TRUE );
                              inline void
ReleaseLock( void );
                              ~Spinlock( void );
                              // Disabled operations.
                              Spinlock( const
Spinlock & Copy );
                              void operator=( const
Spinlock & Copy );

                    private:
                              // Private functions.
                              inline BOOL
ClaimSpinlock( volatile LONG *sl );
                              void WaitForLock( void
);
                              void WakeAllSleepers(
void );
          };

          /*****************************************
******************
           *
           *   A guaranteed atomic exchange.
           *
           *   An attempt is made to claim the
Spinlock.  This action is
           *   guaranteed to be atomic.
           *

************************************************
*********/

          inline BOOL Spinlock::ClaimSpinlock(
volatile LONG *Spinlock )
          {
                    #ifdef _DEBUG
                              InterlockedIncrement(
(LPLONG) & TotalLocks );
                    #endif
                    return ( ((*Spinlock) ==
LockOpen) && (InterlockedExchange( (LPLONG)Spinlock,
LockClosed ) == LockOpen) );
          }

          /*****************************************
*********
           *
           *   Claim the Spinlock.
           *
           *   Claim the lock if available else wait
or exit.
           *

************************************************/

          inline BOOL Spinlock::ClaimLock( BOOL Wait
)
          {
                    if ( ! ClaimSpinlock( (volatile
LONG*) & m_Spinlock ) )
                    {
                              if ( Wait )

          WaitForLock();
                              return Wait;
                    }
                    return TRUE;
          }

          /*****************************************
**************
           *
           *   Release the Spinlock.
           *
           *   Release the lock and if needed wakeup
any sleepers.
           *

************************************************
***/

          inline void Spinlock::ReleaseLock( void )
          {
                    m_Spinlock = LockOpen;
                    if ( Waiting > 0 )
                              WakeAllSleepers();
          }

          #define _INC_Spinlock

#endif
```

# stocklevel.h

```
#ifndef TRANSARC_stocklevel_h
#define TRANSARC_stocklevel_h

#include <trpc/trpc.h>
#include "_stocklevel.h"

#include <encina/c_prologue.h>

#if defined(BUILDDLL)
#define DLLEXPORT __declspec( dllexport )
#else
#define DLLEXPORT extern
#endif

#ifndef ENCINA_STUB_CALLING
#define ENCINA_STUB_CALLING ENCINA_RPC_CALLING
#endif

#define stocklevel_v1_0_c_ifspec
          _stocklevel_v1_0_c_ifspec
#define stocklevel_v1_0_s_ifspec
          _stocklevel_v1_0_s_ifspec

typedef struct stocklevel_v1_0_epv {
void (ENCINA_STUB_CALLING *impTPCCStockLevel) (
#ifdef IDL_PROTOTYPES

                    idl_long_int length,
                    idl_char *dataP,
                    data_header *headerP,
                    trpc_status_t *trpcStatus
#endif
);

} stocklevel_v1_0_epv_t;

DLLEXPORT void ENCINA_STUB_CALLING impTPCCStockLevel
(
#ifdef IDL_PROTOTYPES

                    idl_long_int length,
                    idl_char *dataP,
                    data_header *headerP,
                    trpc_status_t *trpcStatus
#endif
);

trpc_handle_t        ENCINA_CALLING
mon_handle_t_tranBind(
#ifdef IDL_PROTOTYPES
          mon_handle_t        handle,
          trpc_tranInfo_t     *tranInfoP,
          trpc_ifSpec_t *ifSpecP
#endif
          );

void       ENCINA_CALLING mon_handle_t_tranUnBind(
#ifdef IDL_PROTOTYPES
          mon_handle_t        handle,
          trpc_handle_t       trpcHandle,
          trpc_tranInfo_t     *tranInfoP,
          trpc_ifSpec_t *ifSpecP
#endif
          );

trpc_handle_t        ENCINA_CALLING
mon_handle_t_tranBind(
#ifdef IDL_PROTOTYPES
          mon_handle_t        handle,
          trpc_tranInfo_t     *tranInfoP,
          trpc_ifSpec_t *ifSpecP
```


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```
#endif
          );

void       ENCINA_CALLING mon_handle_t_tranUnBind(
#ifdef IDL_PROTOTYPES
          mon_handle_t        handle,
          trpc_handle_t       trpcHandle,
          trpc_tranInfo_t     *tranInfoP,
          trpc_ifSpec_t *ifSpecP
#endif
          );

extern stocklevel_v1_0_epv_t
          stocklevel_v1_0_client_epv;
extern _stocklevel_v1_0_epv_t
          stocklevel_v1_0_manager_epv;
extern rpc_mgr_epv_t
          stocklevel_v1_0_mgr_epv;

#include <encina/c_epilogue.h>
#endif /* TRANSARC_stocklevel_h */
```

# strings.c

```
//        File:               STRINGS.C
//                                      Microsoft
TPC-C Kit Ver. 4.51
//                                      Copyright
Microsoft, 1996, 1997, 1998, 1999, 2000, 2001, 2002,
2003
//        Purpose:  Source file for database loader
string functions


// Includes
#include "tpcc.h"
#include <string.h>
#include <ctype.h>

//=================================================
==================
//
// Function name: MakeAddress
//
//=================================================
==================

void MakeAddress(char *street_1,
                                        char
*street_2,
                                        char *city,
                                        char *state,
                                        char *zip)
{

#ifdef DEBUG
    printf("[%ld]DBG: Entering MakeAddress()\n",
(int) GetCurrentThreadId());
#endif
    MakeAlphaString (10, 20, ADDRESS_LEN, street_1);
    MakeAlphaString (10, 20, ADDRESS_LEN, street_2);
    MakeAlphaString (10, 20, ADDRESS_LEN, city);
    MakeAlphaString ( 2,  2, STATE_LEN, state);
    MakeZipNumberString( 9,  9, ZIP_LEN, zip);

#ifdef DEBUG
    printf("[%ld]DBG: MakeAddress: street_1: %s,
street_2: %s, city: %s, state: %s, zip: %s\n",
                                  (int)
GetCurrentThreadId(), street_1, street_2, city,
state, zip);
#endif

    return;

}


//=================================================
==================
//
// Function name: LastName
//
//=================================================
==================

void LastName(int  num,
                              char *name)
{
    static char *n[] =
    {
                    "BAR" , "OUGHT", "ABLE" , "PRI"
, "PRES",
                    "ESE" , "ANTI" , "CALLY",
"ATION", "EING"
    };

#ifdef DEBUG
    printf("[%ld]DBG: Entering LastName()\n", (int)
GetCurrentThreadId());
#endif

    if ((num >= 0) && (num < 1000))
    {
                    strcpy(name, n[(num/100)%10]);
                    strcat(name, n[(num/10)%10]);
                    strcat(name, n[(num/1)%10]);

                    if (strlen(name) < LAST_NAME_LEN)
                    {

          PaddString(LAST_NAME_LEN, name);
                    }

    }
    else
    {
                    printf("\nError in LastName()...
num <%ld> out of range (0,999)\n", num);
                    exit(-1);
    }
#ifdef DEBUG
    printf("[%ld]DBG: LastName: num = [%d] ==>
[%d][%d][%d]\n",
                                  (int)
GetCurrentThreadId(), num, num/100, (num/10)%10,
num%10);
          printf("[%ld]DBG: LastName: String = %s\n",
(int) GetCurrentThreadId(), name);
#endif

    return;

}


//=================================================
==================
//
// Function name: MakeAlphaString
//
//=================================================
==================

//philipdu 08/13/96 Changed MakeAlphaString to use A-
Z, a-z, and 0-9 in
//accordance with spec see below:
//The spec says:
//4.3.2.2 The notation random a-string [x .. y]
//(respectively, n-string [x .. y]) represents a
string of random alphanumeric
//(respectively, numeric) characters of a random
length of minimum x, maximum y,
//and mean (y+x)/2. Alphanumerics are A..Z, a..z, and
0..9.  The only other
//requirement is that the character set used "must be
able to represent a minimum
//of 128 different characters".  We are using 8-bit
chars, so this is a non issue.
//It is completely unreasonable to stuff non-printing
chars into the text fields.
//-CLevine 08/13/96

int MakeAlphaString( int  x, int  y, int  z, char
*str)
{
          int                 len;
          int                 i;
    char    cc = 'a';
          static    char chArray[] =
"0123456789ABCDEFGHIJKLMNOPQRSTUVWXYZabcdefghijklmnop
qrstuvwxyz";
          static    int       chArrayMax = 61;

#ifdef DEBUG
    printf("[%ld]DBG: Entering MakeAlphaString()\n",
(int) GetCurrentThreadId());
#endif

          len= RandomNumber(x, y);

          for (i=0; i<len; i++)
```


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```
                    str[i] =
chArray[RandomNumber(0,chArrayMax)];
          str[len] = 0;

    return len;
}

int MakeAlphaStringPadded( int  minLen, int  maxLen,
int  padLen, char *str)
{
          int                 len;
          int                 i;
    char    cc = 'a';
          static    char chArray[] =
"0123456789ABCDEFGHIJKLMNOPQRSTUVWXYZabcdefghijklmnop
qrstuvwxyz";
          static    int       chArrayMax = 61;

#ifdef DEBUG
    printf("[%ld]DBG: Entering
MakeAlphaStringPadded()\n", (int)
GetCurrentThreadId());
#endif

          len= RandomNumber(minLen, maxLen);

          for (i=0; i<len; i++)
                    str[i] =
chArray[RandomNumber(0,chArrayMax)];
          if (len < padLen)
                    memset(str+len, ' ', padLen -
len);
          str[padLen] = 0;
    return padLen;
}



//==================================================
==================
//
// Function name: MakeOriginalAlphaString
//
//==================================================
==================

int MakeOriginalAlphaString(int  x,

              int  y,

                    int  z,

              char *str,

          int  percent)
{
    int             len;
    int             val;
    int             start;

#ifdef DEBUG
    printf("[%ld]DBG: Entering
MakeOriginalAlphaString()\n", (int)
GetCurrentThreadId());
#endif

    // verify prercentage is valid
    if ((percent < 0) || (percent > 100))
    {
                    printf("MakeOrigianlAlphaString:
Invalid percentage: %d\n", percent);
                    exit(-1);
    }

    // verify string is at least 8 chars in length
    if (x < 8)
    {
                    printf("MakeOriginalAlphaString:
string length must be >= 8\n");
                    exit(-1);
    }

    // Make Alpha String
    len = MakeAlphaString(x,y, z, str);

    val = RandomNumber(1,100);
    if (val <= percent)
    {
                    start = RandomNumber(0, len - 8);
                    strncpy(str + start, "ORIGINAL",
8);
    }


#ifdef DEBUG
    printf("[%ld]DBG: MakeOriginalAlphaString: :
%s\n",
                              (int)
GetCurrentThreadId(), str);
#endif

    return len;
}


//==================================================
==================
//
// Function name: MakeNumberString
//
//==================================================
==================
int MakeNumberString(int  x, int  y, int  z, char
*str)
{
          char tmp[16];

          //MakeNumberString is always called
MakeZipNumberString(16, 16, 16, string)

          memset(str, '0', 16);
          itoa(RandomNumber(0, 99999999), tmp, 10);
          memcpy(str, tmp, strlen(tmp));
          itoa(RandomNumber(0, 99999999), tmp, 10);
          memcpy(str+8, tmp, strlen(tmp));

          str[16] = 0;

    return 16;
}


//==================================================
==================
//
// Function name: MakeZipNumberString
//
//==================================================
==================
int MakeZipNumberString(int  x, int  y, int  z, char
*str)
{
          char tmp[16];

          //MakeZipNumberString is always called
MakeZipNumberString(9, 9, 9, string)

          strcpy(str, "000011111");

          itoa(RandomNumber(0, 9999), tmp, 10);
          memcpy(str, tmp, strlen(tmp));

    return 9;
}


//==================================================
==================
//
// Function name: InitString
//
//==================================================
==================
void InitString(char *str, int len)
{
#ifdef DEBUG
    printf("[%ld]DBG: Entering InitString()\n", (int)
GetCurrentThreadId());
#endif

          memset(str, ' ', len);
    str[len] = 0;
}


//==================================================
==================
// Function name: InitAddress
//
// Description:
//
//==================================================
==================

void InitAddress(char *street_1, char *street_2, char
*city, char *state, char *zip)
```


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```
{
          memset(street_1, ' ', ADDRESS_LEN+1);
          memset(street_2, ' ', ADDRESS_LEN+1);
          memset(city, ' ', ADDRESS_LEN+1);

    street_1[ADDRESS_LEN+1] = 0;
    street_2[ADDRESS_LEN+1] = 0;
    city[ADDRESS_LEN+1]     = 0;

          memset(state, ' ', STATE_LEN+1);
    state[STATE_LEN+1] = 0;

          memset(zip, ' ', ZIP_LEN+1);
    zip[ZIP_LEN+1] = 0;
}


//=================================================
====================
//
// Function name: PaddString
//
//=================================================
====================

void PaddString(int max, char *name)
{
          int                 len;

          len = strlen(name);
          if ( len < max )
                    memset(name+len, ' ', max - len);
          name[max] = 0;

          return;
}
```

# time.c

```
//        File:               TIME.C
//                                        Microsoft
TPC-C Kit Ver. 4.62
//                                        Copyright
Microsoft, 1996, 1997, 1998, 1999, 2000, 2001, 2002,
2005
//        Purpose:  Source file for time functions


// Includes
#include "tpcc.h"

// Globals
static long start_sec;


//=================================================
====================
//
// Function name: TimeNow
//
//=================================================
====================

long TimeNow()
{
   long             time_now;
   struct _timeb el_time;

#ifdef DEBUG
    printf("[%ld]DBG: Entering TimeNow()\n", (int)
GetCurrentThreadId());
#endif

   _ftime(&el_time);

   time_now = ((el_time.time - start_sec) * 1000) +
el_time.millitm;

   return time_now;
}
```

# tpcc.cpp

```
/*        FILE:               TPCC.C
 *                                        Microsoft
TPC-C Kit Ver. 4.20.000
 *                                        Copyright
Microsoft, 1999
 *             All Rights Reserved
 *
 *                                        Version
4.10.000 audited by Richard Gimarc, Performance
Metrics, 3/17/99
 *
 *        PURPOSE:  Main module for TPCC.DLL which is
an ISAPI service dll.
 *        Contact:  Charles Levine
(clevine@microsoft.com)
 *
 *  Change history:
 *                  4.20.000 - reworked error
handling; added options for COM and Encina txn
monitors
 */

#include <windows.h>
#include <process.h>
#include <tchar.h>
#include <stdio.h>
#include <stdarg.h>
#include <malloc.h>
#include <stdlib.h>
#include <string.h>
#include <time.h>
#include <sys\timeb.h>
#include <io.h>
#include <assert.h>
#include <sqltypes.h>

#ifdef ICECAP
#include <icapexp.h>
#endif

#include "..\..\common\src\trans.h"
          //tpckit transaction header contains
definations of structures specific to TPC-C
#include "..\..\common\src\error.h"
#include "..\..\common\src\txn_base.h"
#include "..\..\common\src\ReadRegistry.h"

#include "..\..\common\txnlog\include\rtetime.h"
#include "..\..\common\txnlog\include\spinlock.h"
#include "..\..\common\txnlog\include\txnlog.h"

// Database layer includes
#include "..\..\db_dblib_dll\src\tpcc_dblib.h"
          // DBLIB implementation of TPC-C txns
#include "..\..\db_odbc_dll\src\tpcc_odbc.h"
          // ODBC implementation of TPC-C txns

// Txn monitor layer includes
#include "..\..\tm_com_dll\src\tpcc_com.h"
                    // COM Services implementation on
TPC-C txns
#include "..\..\tm_tuxedo_dll\src\tpcc_tux.h"
          // interface to Tuxedo libraries
#include "..\..\tm_encina_dll\src\tpcc_enc.h"
          // interface to Encina libraries

#include "httpext.h"
          //ISAPI DLL information header
#include "tpcc.h"
          //this dlls specific structure, value e.t.
header.


#define   LEN_ERR_STRING      256

// defines for Make<Txn>Form calls to distinguish
input and output flavors
#define   OUTPUT_FORM         0
#define INPUT_FORM  1

char
          szMyComputerName[MAX_COMPUTERNAME_LENGTH+1]
;

//Terminal client id structure
TERM      Term = { 0, 0, 0, NULL };

// The WEBCLIENT_VERSION string specifies the version
level of this web client interface.
// The RTE must be synchronized with the interface
level on login, otherwise the login
// will fail.  This is a sanity check to catch
problems resulting from mismatched versions
// of the RTE and web client.
#define WEBCLIENT_VERSION "420"
```


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```
static    CRITICAL_SECTION
          TermCriticalSection;

static  HINSTANCE hLibInstanceTm = NULL;
static  HINSTANCE hLibInstanceDb = NULL;

TYPE_CTPCC_DBLIB    *pCTPCC_DBLIB_new;
TYPE_CTPCC_ODBC               *pCTPCC_ODBC_new;
TYPE_CTPCC_TUXEDO   *pCTPCC_TUXEDO_new;
TYPE_CTPCC_ENCINA   *pCTPCC_ENCINA_new;
TYPE_CTPCC_ENCINA   *pCTPCC_ENCINA_post_init;
TYPE_CTPCC_COM                *pCTPCC_COM_new;

// For deferred Delivery txns:

CTxnLog
          *txnDelilog = NULL;
          //used to log delivery transaction
information

HANDLE
          hWorkerSemaphore    = INVALID_HANDLE_VALUE;
HANDLE
          hDoneEvent                                =
INVALID_HANDLE_VALUE;
HANDLE
          *pDeliHandles                = NULL;

// configuration settings from registry
TPCCREGISTRYDATA              Reg;


DWORD
          dwNumDeliveryThreads = 4;
CRITICAL_SECTION              DelBuffCriticalSection;
                    //critical section for delivery
transactions cache
DELIVERY_TRANSACTION          *pDelBuff
          = NULL;
DWORD
          dwDelBuffSize                = 100;
          // size of circular buffer for delivery
txns
DWORD
          dwDelBuffFreeCount;
          // number of buffers free
DWORD
          dwDelBuffBusyIndex  = 0;                //
index position of entry waiting to be delivered
DWORD
          dwDelBuffFreeIndex  = 0;                //
index position of unused entry

// Critical section to synchronize connection open
and close.
//
CRITICAL_SECTION hConnectCriticalSection;

#include "..\..\common\src\ReadRegistry.cpp"

/* FUNCTION: DllMain
 *
 * PURPOSE:         This function is the entry point
for the DLL.  This implementation is based on the
 *                                fact that
DLL_PROCESS_ATTACH is only called from the inet
service once.
 *
 * ARGUMENTS:       HANDLE    hModule
                    module handle
 *                                DWORD
          ul_reason_for_call  reason for call
 *                                LPVOID
          lpReserved
          reserved for future use
 *
 * RETURNS:                   BOOL      FALSE
                              errors occured in
initialization
 *
          TRUE                                    DLL
successfully initialized
 */

BOOL APIENTRY DllMain(HANDLE hModule, DWORD
ul_reason_for_call, LPVOID lpReserved)
{
          DWORD  i;
          char szEvent[LEN_ERR_STRING] = "\0";
          char szLogFile[128];
          char szDllName[128];

// debugging....
// DebugBreak();

          try
          {
                    switch( ul_reason_for_call )
                    {
                              case
DLL_PROCESS_ATTACH:
                                        {

          DWORD dwSize = MAX_COMPUTERNAME_LENGTH+1;

          GetComputerName(szMyComputerName, &dwSize);

          szMyComputerName[dwSize] = 0;
                                        }


          DisableThreadLibraryCalls((HMODULE)hModule)
;

          InitializeCriticalSection(&TermCriticalSect
ion);

                                        if (
ReadTPCCRegistrySettings( &Reg ) )

          throw new CWEBCLNT_ERR(
ERR_MISSING_REGISTRY_ENTRIES );
                                                  dwDelBuffSize
= min( Reg.dwMaxPendingDeliveries, 10000 );  // min
with 10000 as a sanity constraint

          dwNumDeliveryThreads = min(
Reg.dwNumberOfDeliveryThreads, 100 );  // min with
100 as a sanity constraint

                                                  TermInit();

                                                  // load DLL
for txn monitor
                                                  if
(Reg.eTxnMon == TUXEDO)
                                                  {

          strcpy( szDllName, Reg.szPath );

          strcat( szDllName, "tpcc_tuxedo.dll");

          hLibInstanceTm = LoadLibrary( szDllName );
                                                            if
(hLibInstanceTm == NULL)

          throw new CWEBCLNT_ERR( ERR_LOADDLL_FAILED,
szDllName, GetLastError() );

                                                            //
get function pointer to wrapper for class constructor

          pCTPCC_TUXEDO_new = (TYPE_CTPCC_TUXEDO*)
GetProcAddress(hLibInstanceTm,"CTPCC_TUXEDO_new");
                                                            if
(pCTPCC_TUXEDO_new == NULL)

          throw new CWEBCLNT_ERR(
ERR_GETPROCADDR_FAILED, szDllName, GetLastError() );
                                                  }
                                                  else if
(Reg.eTxnMon == ENCINA)
                                                  {

          strcpy( szDllName, Reg.szPath );

          strcat( szDllName, "tpcc_encina.dll");

          hLibInstanceTm = LoadLibrary( szDllName );
                                                            if
(hLibInstanceTm == NULL)

          throw new CWEBCLNT_ERR( ERR_LOADDLL_FAILED,
szDllName, GetLastError() );
                                                            //
get function pointer to wrapper for class constructor

          pCTPCC_ENCINA_new = (TYPE_CTPCC_ENCINA*)
GetProcAddress(hLibInstanceTm,"CTPCC_ENCINA_new");

          pCTPCC_ENCINA_post_init =
(TYPE_CTPCC_ENCINA*)
GetProcAddress(hLibInstanceTm,"CTPCC_ENCINA_post_init
");
```


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```
                                                  if
(pCTPCC_ENCINA_new == NULL)

          throw new CWEBCLNT_ERR(
ERR_GETPROCADDR_FAILED, szDllName, GetLastError() );
                                        }
                                        else if
(Reg.eTxnMon == COM)
                                        {

          strcpy( szDllName, Reg.szPath );

          strcat( szDllName, "tpcc_com.dll");

          hLibInstanceTm = LoadLibrary( szDllName );
                                                  if
(hLibInstanceTm == NULL)

          throw new CWEBCLNT_ERR( ERR_LOADDLL_FAILED,
szDllName, GetLastError() );

                                                  //
get function pointer to wrapper for class constructor

          pCTPCC_COM_new = (TYPE_CTPCC_COM*)
GetProcAddress(hLibInstanceTm,"CTPCC_COM_new");
                                                  if
(pCTPCC_COM_new == NULL)

          throw new CWEBCLNT_ERR(
ERR_GETPROCADDR_FAILED, szDllName, GetLastError() );
                                        }

                                        // load DLL
for database connection
                                        if
((Reg.eTxnMon == None) || (dwNumDeliveryThreads > 0))
                                        {
                                                  if
(Reg.eDB_Protocol == DBLIB)
                                                  {

          strcpy( szDllName, Reg.szPath );

          strcat( szDllName, "tpcc_dblib.dll");

          hLibInstanceDb = LoadLibrary( szDllName );

          if (hLibInstanceDb == NULL)

                    throw new CWEBCLNT_ERR(
ERR_LOADDLL_FAILED, szDllName, GetLastError() );


          // get function pointer to wrapper for
class constructor

          pCTPCC_DBLIB_new = (TYPE_CTPCC_DBLIB*)
GetProcAddress(hLibInstanceDb,"CTPCC_DBLIB_new");

          if (pCTPCC_DBLIB_new == NULL)

                    throw new CWEBCLNT_ERR(
ERR_GETPROCADDR_FAILED, szDllName, GetLastError() );
                                                  }

          else if (Reg.eDB_Protocol == ODBC)
                                                  {

          strcpy( szDllName, Reg.szPath );

          strcat( szDllName, "tpcc_odbc.dll");

          hLibInstanceDb = LoadLibrary( szDllName );

          if (hLibInstanceDb == NULL)

                    throw new CWEBCLNT_ERR(
ERR_LOADDLL_FAILED, szDllName, GetLastError() );


          // get function pointer to wrapper for
class constructor

          pCTPCC_ODBC_new = (TYPE_CTPCC_ODBC*)
GetProcAddress(hLibInstanceDb,"CTPCC_ODBC_new");

          if (pCTPCC_ODBC_new == NULL)

                    throw new CWEBCLNT_ERR(
ERR_GETPROCADDR_FAILED, szDllName, GetLastError() );


                                                  }
                                        }

                                        if
(dwNumDeliveryThreads)
                                        {
                                                  //
Initialize delivery delay critical section
                                                  //

          InitializeCriticalSection(&hConnectCritical
Section);

                                                  //
for deferred delivery txns:

          hDoneEvent = CreateEvent( NULL, TRUE /*
manual reset */, FALSE /* initially not signalled */,
NULL );

          InitializeCriticalSection(&DelBuffCriticalS
ection);

          hWorkerSemaphore = CreateSemaphore( NULL,
0, dwDelBuffSize, NULL );

          dwDelBuffFreeCount = dwDelBuffSize;


          InitJulianTime(NULL);

                                                  //
create unique log file name based on delilog-yymmdd-
hhmm.log

          SYSTEMTIME Time;

          GetLocalTime( &Time );

          wsprintf( szLogFile, "%sdelivery-
%2.2d%2.2d%2.2d-%2.2d%2.2d-%2.2ds%2.2dms.log",

          Reg.szPath, Time.wYear % 100, Time.wMonth,
Time.wDay, Time.wHour, Time.wMinute, Time.wSecond,
Time.wMilliseconds );

          txnDelilog = new CTxnLog(szLogFile,
TXN_LOG_WRITE);


          //write event into txn log for START

          txnDelilog-
>WriteCtrlRecToLog(TXN_EVENT_START, szMyComputerName,
sizeof(szMyComputerName));

                                                  //
allocate structures for delivery buffers and thread
mgmt

          pDeliHandles = new
HANDLE[dwNumDeliveryThreads];

          pDelBuff = new
DELIVERY_TRANSACTION[dwDelBuffSize];
                                                  //
launch DeliveryWorkerThread to perform actual
delivery txns

          for(i=0; i<dwNumDeliveryThreads; i++)
                                                  {

          pDeliHandles[i] = (HANDLE) _beginthread(
DeliveryWorkerThread, 0, NULL );

          if (pDeliHandles[i] ==
INVALID_HANDLE_VALUE)

                    throw new CWEBCLNT_ERR(
ERR_DELIVERY_THREAD_FAILED );
                                                  }
                                        }

                                        break;

                              case
DLL_PROCESS_DETACH:
                                        if
(dwNumDeliveryThreads)
                                        {
                                                  if
(txnDelilog != NULL)
                                                  {
```


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```
          //write event into txn log for STOP

          txnDelilog-
>WriteCtrlRecToLog(TXN_EVENT_STOP, szMyComputerName,
sizeof(szMyComputerName));


          // This will do a clean shutdown of the
delivery log file

          CTxnLog   *txnDelilogLocal = txnDelilog;

          txnDelilog= NULL;

          delete txnDelilogLocal;
                                                  }


          delete [] pDeliHandles;

          delete [] pDelBuff;


          CloseHandle( hWorkerSemaphore );

          CloseHandle( hDoneEvent );

          DeleteCriticalSection(&DelBuffCriticalSecti
on);

                                                  //
Delete delivery delay critical section
                                                  //

          DeleteCriticalSection(&hConnectCriticalSect
ion);
                                        }


          DeleteCriticalSection(&TermCriticalSection)
;

                                        if
(hLibInstanceTm != NULL)

          FreeLibrary( hLibInstanceTm );

          hLibInstanceTm = NULL;

                                        if
(hLibInstanceDb != NULL)

          FreeLibrary( hLibInstanceDb );

          hLibInstanceDb = NULL;

                                        Sleep(500);
                                        break;

                              default:
                                        /* nothing
*/;
                    }
          }
          catch (CBaseErr *e)
          {
                    TCHAR szMsg[256];

                    _sntprintf(szMsg, sizeof(szMsg),
"%s error, code %d: %s",
                                                  e-
>ErrorTypeStr(), e->ErrorNum(), e->ErrorText());
                    WriteMessageToEventLog( szMsg );
                    delete e;
                    TerminateExtension(0);
                    return FALSE;
          }
          catch (...)
          {

          WriteMessageToEventLog(TEXT("Unhandled
exception.  DLL could not load."));
                    TerminateExtension(0);
                    return FALSE;
          }

          return TRUE;
}


/* FUNCTION: GetExtensionVersion
 *
 * PURPOSE:         This function is called by the
inet service when the DLL is first loaded.
 *
 * ARGUMENTS:       HSE_VERSION_INFO    *pVer
          passed in structure in which to place
expected version number.
 *
 * RETURNS:                   TRUE      inet service
expected return value.
 */

BOOL WINAPI GetExtensionVersion(HSE_VERSION_INFO
*pVer)
{
          pVer->dwExtensionVersion =
MAKELONG(HSE_VERSION_MINOR, HSE_VERSION_MAJOR);
          lstrcpyn(pVer->lpszExtensionDesc, "TPC-C
Server.", HSE_MAX_EXT_DLL_NAME_LEN);

          // TODO: why do we need this here instead
of in the DLL attach?
          if (Reg.eTxnMon == ENCINA)
                    pCTPCC_ENCINA_post_init();

          return TRUE;
}

/* FUNCTION: TerminateExtension
 *
 * PURPOSE:         This function is called by the
inet service when the DLL is about to be unloaded.
 *                                 Release all resources
in anticipation of being unloaded.
 *
 * RETURNS:                   TRUE      inet service
expected return value.
 */

BOOL WINAPI TerminateExtension( DWORD dwFlags )
{
          if (pDeliHandles)
          {
                    SetEvent( hDoneEvent );
                    for(DWORD i=0;
i<dwNumDeliveryThreads; i++)
                                        WaitForSingleObject(
pDeliHandles[i], INFINITE );
          }

          TermDeleteAll();
          return TRUE;
}


/* FUNCTION: HttpExtensionProc
 *
 * PURPOSE:         This function is the main entry
point for the TPCC DLL. The internet service
 *                                 calls this function
passing in the http string.
 *
 * ARGUMENTS:       EXTENSION_CONTROL_BLOCK
          *pECB     structure pointer to passed in
internet
 *

                    service information.
 *
 * RETURNS:                   DWORD
          HSE_STATUS_SUCCESS
                    connection can be dropped if
error
 *
          HSE_STATUS_SUCCESS_AND_KEEP_CONN
          keep connect valid comment sent
 *
 * COMMENTS:        None
 *
 */

DWORD WINAPI
HttpExtensionProc(EXTENSION_CONTROL_BLOCK *pECB)
{
          int                               iCmd, FormId,
TermId, iSyncId;
          char                szBuffer[4096];

          int                               lpbSize;
          static char         szHeader[] = "200 Ok";
          DWORD               dwSize = 6;
          // initial value is strlen(szHeader)
          char                szHeader1[4096];


#ifdef ICECAP
          StartCAP();
```


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```
#endif

        try
        {
                //process http query
                ProcessQueryString(pECB, &iCmd,
&FormId, &TermId, &iSyncId);

                if (TermId != 0)
                {
                        if ( TermId < 0 ||
TermId >= Term.iNumEntries ||
Term.pClientData[TermId].iNextFree != -1 )
                        {
                                //
debugging...
                                char
szTmp[128];
                                wsprintf(
szTmp, "Invalid term ID; TermId = %d", TermId );

        WriteMessageToEventLog( szTmp );

                                throw new
CWEBCLNT_ERR( ERR_INVALID_TERMID );
                        }

                        //must have a valid
syncid here since termid is valid
                        if (iSyncId !=
Term.pClientData[TermId].iSyncId)
                                throw new
CWEBCLNT_ERR( ERR_INVALID_SYNC_CONNECTION );

                        //set use time

        Term.pClientData[TermId].iTickCount =
GetTickCount();
                }


                switch(iCmd)
                {
                case 0:
                        WelcomeForm(pECB,
szBuffer);
                        break;
                case 1:
                        switch( FormId )
                        {
                                case
WELCOME_FORM:
                                case
MAIN_MENU_FORM:

        break;
                                case
NEW_ORDER_FORM:

        ProcessNewOrderForm(pECB, TermId,
szBuffer);

        break;
                                case
PAYMENT_FORM:

        ProcessPaymentForm(pECB, TermId, szBuffer);

        break;
                                case
DELIVERY_FORM:

        ProcessDeliveryForm(pECB, TermId,
szBuffer);

        break;
                                case
ORDER_STATUS_FORM:

        ProcessOrderStatusForm(pECB, TermId,
szBuffer);

        break;
                                case
STOCK_LEVEL_FORM:

        ProcessStockLevelForm(pECB, TermId,
szBuffer);

        break;
                        }
                        break;
                case 2:
                        // new-order selected
from menu; display new-order input form

        MakeNewOrderForm(TermId, NULL, INPUT_FORM,
szBuffer);
                        break;
                case 3:
                        // payment selected
from menu; display payment input form
                        MakePaymentForm(TermId,
NULL, INPUT_FORM, szBuffer);
                        break;
                case 4:
                        // delivery selected
from menu; display delivery input form

        MakeDeliveryForm(TermId, NULL, INPUT_FORM,
szBuffer);
                        break;
                case 5:
                        // order-status
selected from menu; display order-status input form

        MakeOrderStatusForm(TermId, NULL,
INPUT_FORM, szBuffer);
                        break;
                case 6:
                        // stock-level selected
from menu; display stock-level input form

        MakeStockLevelForm(TermId, NULL,
INPUT_FORM, szBuffer);
                        break;
                case 7:
                        // ExitCmd
                        TermDelete(TermId);
                        WelcomeForm(pECB,
szBuffer);
                        break;
                case 8:
                        SubmitCmd(pECB,
szBuffer);
                        break;
                case 9:
                        // menu

        MakeMainMenuForm(TermId,
Term.pClientData[TermId].iSyncId, szBuffer);
                        break;
                case 10:
                        // CMD=Clear
                        // resets all
connections; should only be used when no other
connections are active
                        TermDeleteAll();
                        TermInit();
                        WelcomeForm(pECB,
szBuffer);
                        break;
                case 11:  // CMD=Stats
                        StatsCmd(pECB,
szBuffer);
                        break;
                }
        }
        catch (CBaseErr *e)
        {
                ErrorForm( pECB, e->ErrorType(),
e->ErrorNum(), TermId, iSyncId, e->ErrorText(),
szBuffer );
                delete e;
        }
        catch (...)
        {
                ErrorForm( pECB, ERR_TYPE_WEBDLL,
0, TermId, iSyncId, "Error: Unhandled exception in
Web Client.", szBuffer );
        }

#ifdef ICECAP
        StopCAP();
#endif


        lpbSize = strlen(szBuffer);
        wsprintf(szHeader1,
                        "Content-Type:
text/html\r\n"
                        "Content-Length:
%d\r\n"
                        "Connection: Keep-
Alive\r\n\r\n" , lpbSize);
        strcat( szHeader1, szBuffer );
```


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```
        (*pECB->ServerSupportFunction)(pECB-
>ConnID, HSE_REQ_SEND_RESPONSE_HEADER, szHeader,
(LPDWORD) &dwSize, (LPDWORD)szHeader1);

        //finish up and keep connection
        pECB->dwHttpStatusCode = 200;
        return HSE_STATUS_SUCCESS_AND_KEEP_CONN;
}


void WriteMessageToEventLog(LPTSTR lpszMsg)
{
    TCHAR   szMsg[256];
    HANDLE  hEventSource;
    LPTSTR  lpszStrings[2];

    // Use event logging to log the error.
    //
    hEventSource = RegisterEventSource(NULL,
TEXT("TPCC.DLL"));

    _stprintf(szMsg, TEXT("Error in TPCC.DLL: "));
    lpszStrings[0] = szMsg;
    lpszStrings[1] = lpszMsg;

    if (hEventSource != NULL)
        {
        ReportEvent(hEventSource, // handle of event
source
            EVENTLOG_ERROR_TYPE,  // event type
            0,                    // event category
            0,                    // event ID
            NULL,                 // current user's
SID
            2,                    // strings in
lpszStrings
            0,                    // no bytes of raw
data
            (LPCTSTR *)lpszStrings,    // array of
error strings
            NULL);                // no raw data

        (VOID) DeregisterEventSource(hEventSource);
    }
}


/* FUNCTION: DeliveryWorkerThread
 *
 * PURPOSE:         This function processes deferred
delivery txns.  There are typically several
 *                          threads running this
routine.  The number of threads is determined by an
entry
 *                          read from the registry.
The thread waits for work by waiting on semaphore.
 *                          When a delivery txn is
posted, the semaphore is released.  After processing
 *                          the delivery txn,
information is logged to record the txn status and
execution
 *                          time.
 */
```

```
/*static*/ void DeliveryWorkerThread(void *ptr)
{
        CTPCC_BASE                      *pTxn = NULL;

        DELIVERY_TRANSACTION
        delivery;
        PDELIVERY_DATA
        pDeliveryData;
        TXN_RECORD_TPCC_DELIV_DEF     txnDeliRec;

        DWORD
        index;
        HANDLE
        handles[2];

        SYSTEMTIME                      trans_end;
                //delivery transaction finished
time
        SYSTEMTIME                      trans_start;
        //delivery transaction start time

        assert(txnDelilog != NULL);

        try
        {
                if (Reg.eDB_Protocol == ODBC)
                {
                        if (Reg.dwConnectDelay
> 0)
                        {
                                //
Synchronize connect (for VIA)
                                //

        EnterCriticalSection(&hConnectCriticalSecti
on);


        Sleep(Reg.dwConnectDelay);

                                pTxn =
pCTPCC_ODBC_new( Reg.szDbServer, Reg.szDbUser,
Reg.szDbPassword,


        szMyComputerName, Reg.szDbName,


        Reg.szSPPrefix,
Reg.bCallNoDuplicatesNewOrder );


        LeaveCriticalSection(&hConnectCriticalSecti
on);
                        }
                }
                else
                {
                        if (Reg.eDB_Protocol ==
DBLIB)
```

```
                                pTxn =
pCTPCC_DBLIB_new( Reg.szDbServer, Reg.szDbUser,
Reg.szDbPassword, szMyComputerName, Reg.szDbName );
                        }
                        pDeliveryData = pTxn-
>BuffAddr_Delivery();
                }
                catch (CBaseErr *e)
                {
                        char szTmp[1024];
                        wsprintf( szTmp, "Error in
Delivery Txn thread.  Could not connect to database.
"
                                "%s.
Server=%s, User=%s, Password=%s, Database=%s",
                                e-
>ErrorText(), Reg.szDbServer, Reg.szDbUser,
Reg.szDbPassword, Reg.szDbName );
                        WriteMessageToEventLog( szTmp );
                        delete e;
                        goto ErrorExit;
                }
                catch (...)
                {

                WriteMessageToEventLog(TEXT("Unhandled
exception caught in DeliveryWorkerThread."));
                        goto ErrorExit;
                }

                while (TRUE)
                {
                        try
                        {
                                //while delivery thread
running, i.e. user has not requested termination
                                while (TRUE)
                                {
                                        // need to
wait for multiple objects: program exit or worker
semaphore;
                                        handles[0] =
hDoneEvent;
                                        handles[1] =
hWorkerSemaphore;
                                        index =
WaitForMultipleObjects( 2, &handles[0], FALSE,
INFINITE );
                                        if (index ==
WAIT_OBJECT_0)

                        goto ErrorExit;


                        ZeroMemory(&txnDeliRec,
sizeof(txnDeliRec));

                        txnDeliRec.TxnType =
TXN_REC_TYPE_TPCC_DELIV_DEF;

                                        // make a
local copy of current entry from delivery buffer and
increment buffer index
```


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```
        EnterCriticalSection(&DelBuffCriticalSectio
n);
                                        delivery =
*(pDelBuff+dwDelBuffBusyIndex);

        dwDelBuffFreeCount++;

        dwDelBuffBusyIndex++;
                                        if
(dwDelBuffBusyIndex == dwDelBuffSize)   // wrap-
around if at end of buffer

        dwDelBuffBusyIndex = 0;


        LeaveCriticalSection(&DelBuffCriticalSectio
n);


        pDeliveryData->w_id = delivery.w_id;

        pDeliveryData->o_carrier_id =
delivery.o_carrier_id;


        txnDeliRec.w_id = pDeliveryData->w_id;

        txnDeliRec.o_carrier_id = pDeliveryData-
>o_carrier_id;

        txnDeliRec.TxnStartT0 =
Get64BitTime(&delivery.queue);

                                        GetLocalTime(
&trans_start );
                                        pTxn-
>Delivery();
                                        GetLocalTime(
&trans_end );

                                        //log txn

        txnDeliRec.TxnStatus = ERR_SUCCESS;
                                        for (int i=0;
i<10; i++)

        txnDeliRec.o_id[i] = pDeliveryData-
>o_id[i];

        txnDeliRec.DeltaT4 =
(int)(Get64BitTime(&trans_end) -
txnDeliRec.TxnStartT0);

        txnDeliRec.DeltaTxnExec =
(int)(Get64BitTime(&trans_end) -
Get64BitTime(&trans_start));

                                        if
(txnDelilog != NULL)

        txnDelilog->WriteToLog(&txnDeliRec);
                        }
                        }
                        catch (CBaseErr *e)
                        {
                                char szTmp[1024];
                                wsprintf( szTmp, "%s
Error (code %d) in Delivery Txn thread. %s",

e->ErrorTypeStr(), e->ErrorNum(), e->ErrorText() );
                                WriteMessageToEventLog(
szTmp );

                                // log the error txn
                                txnDeliRec.TxnStatus =
e->ErrorType();
                                if (txnDelilog != NULL)
                                        txnDelilog-
>WriteToLog(&txnDeliRec);

                                delete e;
                        }
                        catch (...)
                        {
                                // unhandled exception;
shouldn't happen; not much we can do...

        WriteMessageToEventLog(TEXT("Unhandled
exception caught in DeliveryWorkerThread."));
                        }
        }

ErrorExit:
        if (Reg.dwConnectDelay > 0)
        {
                // Synchronize disconnect (for
VIA)
                //

        EnterCriticalSection(&hConnectCriticalSecti
on);

                Sleep(Reg.dwConnectDelay);

                delete pTxn;


        LeaveCriticalSection(&hConnectCriticalSecti
on);
        }

        _endthread();
}

/* FUNCTION: PostDeliveryInfo
 *
 * PURPOSE:         This function enters the delivery
txn into the deferred delivery buffer.
 *
 * RETURNS:                 BOOL      FALSE
        delivery information posted successfully
 *
        TRUE      error cannot post delivery info
 */

BOOL PostDeliveryInfo(long w_id, short o_carrier_id)
{
        BOOL bError;

        EnterCriticalSection(&DelBuffCriticalSectio
n);
        if (dwDelBuffFreeCount > 0)
        {
                bError = FALSE;
                (pDelBuff+dwDelBuffFreeIndex)-
>w_id                   = w_id;
                (pDelBuff+dwDelBuffFreeIndex)-
>o_carrier_id       = o_carrier_id;

        GetLocalTime(&(pDelBuff+dwDelBuffFreeIndex)
->queue);

                dwDelBuffFreeCount--;
                dwDelBuffFreeIndex++;
                if (dwDelBuffFreeIndex ==
dwDelBuffSize)
                        dwDelBuffFreeIndex = 0;
                // wrap-around if at end of
buffer
        }
        else
                // No free buffers.  Return an
error, which indicates that the delivery buffer is
full.
                // Most likely, the number of
delivery worker threads needs to be increased to keep
up
                // with the txn rate.
                bError = TRUE;
        LeaveCriticalSection(&DelBuffCriticalSectio
n);

        if (!bError)
                // increment worker semaphore to
wake up a worker thread
                ReleaseSemaphore(
hWorkerSemaphore, 1, NULL );

        return bError;
}

/* FUNCTION: ProcessQueryString
 *
 * PURPOSE:         This function extracts the
relevent information out of the http command passed
in from
 *                          the browser.
 *
 * COMMENTS:        If this is the initial connection
i.e. client is at welcome screen then
 *                                  there will
not be a terminal id or current form id.  If this is
the case
 *                                  then the
pTermid and pFormid return values are undefined.
 */
```


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```
void ProcessQueryString(EXTENSION_CONTROL_BLOCK
*pECB, int *pCmd, int *pFormId, int *pTermId, int
*pSyncId)
{
          char *ptr = pECB->lpszQueryString;
          char szBuffer[25];
          int i;

          //allowable client command strings i.e.
CMD=command
          static char *szCmds[] =
          {
                    "Process", "..NewOrder..",
"..Payment..", "..Delivery..", "..Order-Status..",
"..Stock-Level..",
                    "..Exit..", "Submit", "Menu",
"Clear", "Stats", ""
          };

          *pCmd      = 0;               // default is
the login screen
          *pTermId = 0;

          // if no params (i.e., empty query string),
then return login screen
          if (strlen(pECB->lpszQueryString) == 0)
                    return;

          // parse FORMID, TERMID, and SYNCID
          *pFormId = GetIntKeyValue(&ptr, "FORMID",
NO_ERR, NO_ERR);
          *pTermId = GetIntKeyValue(&ptr, "TERMID",
NO_ERR, NO_ERR);
          *pSyncId = GetIntKeyValue(&ptr, "SYNCID",
NO_ERR, NO_ERR);

          // parse CMD
          GetKeyValue(&ptr, "CMD", szBuffer,
sizeof(szBuffer), ERR_COMMAND_UNDEFINED);

          // see which command it matches
          for(i=0; ; i++)
          {
                    if (szCmds[i][0] == 0)
                              // no more; no match;
return error
                              throw new CWEBCLNT_ERR(
ERR_COMMAND_UNDEFINED );
                    if ( !strcmp(szCmds[i], szBuffer)
)
                    {
                              *pCmd = i+1;
                              break;
                    }
          }
}

/* FUNCTION: void WelcomeForm
 *
 */

void WelcomeForm(EXTENSION_CONTROL_BLOCK *pECB, char
*szBuffer)
{
          char szTmp[1024];

          //welcome to tpc-c html form buffer, this
is first form client sees.
          strcpy( szBuffer,
          "<HTML><HEAD><TITLE>TPC-C Web
Client</TITLE></HEAD><BODY>"

          "<B><BIG>Microsoft TPC-C Web Client (ver
4.20)</BIG></B> <BR> <BR>"

          "<font face=\"Courier New\"><PRE>"

          "Compiled: "__DATE__", "__TIME__" <BR>"

          "Source:   "__FILE__" ("__TIMESTAMP__")
<BR>"

          "</PRE></font>"

          "<FORM ACTION=\"tpcc.dll\" METHOD=\"GET\">"

          "<INPUT TYPE=\"hidden\" NAME=\"STATUSID\"
VALUE=\"0\">"

          "<INPUT TYPE=\"hidden\" NAME=\"ERROR\"
VALUE=\"0\">"

          "<INPUT TYPE=\"hidden\" NAME=\"FORMID\"
VALUE=\"1\">"

          "<INPUT TYPE=\"hidden\" NAME=\"TERMID\"
VALUE=\"0\">"

          "<INPUT TYPE=\"hidden\" NAME=\"SYNCID\"
VALUE=\"0\">"

          "<INPUT TYPE=\"hidden\" NAME=\"VERSION\"
VALUE=\"" WEBCLIENT_VERSION "\">"
                              );

          sprintf( szTmp,     "Configuration
Settings: <BR><font face=\"Courier New\"
color=\"blue\"><PRE>"

          "Txn Monitor            = <B>%s</B><BR>"

          "Database protocol      = <B>%s</B><BR>"

          "Max Connections        = <B>%d</B><BR>"
                                                  "#
of Delivery Threads  = <B>%d</B><BR>"

          "Max Pending Deliveries = <B>%d</B><BR>"
                              ,
szTxnMonNames[Reg.eTxnMon],
szDBNames[Reg.eDB_Protocol],
                              Reg.dwMaxConnections,
dwNumDeliveryThreads, dwDelBuffSize );
          strcat( szBuffer, szTmp);

          if (Reg.eTxnMon == COM)
          {
                    sprintf( szTmp,     "COM Single
Pool        = <B>%s</B><BR>",
                              Reg.bCOM_SinglePool ?
"YES" : "NO" );
                    strcat( szBuffer, szTmp);
          }
          strcat( szBuffer, "</PRE></font>");

          if (Reg.eTxnMon == None)
                    // connection options may be
specified when not using a txn monitor
                    sprintf( szTmp,     "Please enter
your database options for this connection:<BR>"

          "<font face=\"Courier New\"
color=\"blue\"><PRE>"

          "DB Server    = <INPUT NAME=\"db_server\"
SIZE=20 VALUE=\"%s\"><BR>"

          "DB User ID   = <INPUT NAME=\"db_user\"
SIZE=20 VALUE=\"%s\"><BR>"

          "DB Password  = <INPUT NAME=\"db_passwd\"
SIZE=20 VALUE=\"%s\"><BR>"

          "DB Name      = <INPUT NAME=\"db_name\"
SIZE=20 VALUE=\"%s\"><BR>"

          "</PRE></font>"
                                        ,
Reg.szDbServer, Reg.szDbUser, Reg.szDbPassword,
Reg.szDbName );
          else
                    // if using a txn monitor,
connection options are determined from registry;
can't
                    // set per user.  show options
fyi
                    sprintf( szTmp,     "Database
options which will be used by the transaction
monitor:<BR>"

          "<font face=\"Courier New\"
color=\"blue\"><PRE>"

          "DB Server              = <B>%s</B><BR>"

          "DB User ID             = <B>%s</B><BR>"

          "DB Password            = <B>%s</B><BR>"

          "DB Name                = <B>%s</B><BR>"

          "</PRE></font>"
                                        ,
Reg.szDbServer, Reg.szDbUser, Reg.szDbPassword,
Reg.szDbName );
          strcat( szBuffer, szTmp);

          sprintf( szTmp,     "Please enter your
Warehouse and District for this session:<BR>"
```


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```
          "<font face=\"Courier New\"
color=\"blue\"><PRE>" );
          strcat( szBuffer, szTmp);
          strcat( szBuffer,   "Warehouse ID = <INPUT
NAME=\"w_id\" SIZE=6><BR>"

          "District ID  = <INPUT NAME=\"d_id\"
SIZE=2><BR>"

          "</PRE></font><HR>"

          "<INPUT TYPE=\"submit\" NAME=\"CMD\"
VALUE=\"Submit\">"

          "</FORM></BODY></HTML>");
}

/* FUNCTION: SubmitCmd
 *
 * PURPOSE:         This function allocated a new
terminal id in the Term structure array.
 *
 */

void SubmitCmd(EXTENSION_CONTROL_BLOCK *pECB, char
*szBuffer)
{
          int                 iNewTerm;
          char      *ptr = pECB->lpszQueryString;

          char      szVersion[32]       = { 0 };
          char      szServer[32]        = { 0 };
          char      szUser[32]                    =
"sa";
          char      szPassword[32]      = { 0 };
          char      szDatabase[32]      = "tpcc";

          // validate version field; the version
field ensures that the RTE is synchronized with the
web client
          GetKeyValue(&ptr, "VERSION", szVersion,
sizeof(szVersion), ERR_VERSION_MISMATCH);
          if ( strcmp( szVersion, WEBCLIENT_VERSION )
)
                    throw new CWEBCLNT_ERR(
ERR_VERSION_MISMATCH );

          if (Reg.eTxnMon == None)
          {
                    // parse Server name
                    GetKeyValue(&ptr, "db_server",
szServer, sizeof(szServer), ERR_NO_SERVER_SPECIFIED);
                    // parse User name
                    GetKeyValue(&ptr, "db_user",
szUser, sizeof(szUser), NO_ERR);
                    // parse Password
                    GetKeyValue(&ptr, "db_passwd",
szPassword, sizeof(szPassword), NO_ERR);
                    // parse Database name
                    GetKeyValue(&ptr, "db_name",
szDatabase, sizeof(szDatabase), NO_ERR);
          }

          // parse warehouse ID
          int w_id = GetIntKeyValue(&ptr, "w_id",
ERR_HTML_ILL_FORMED, ERR_W_ID_INVALID);
          if ( w_id < 1 )
                    throw new CWEBCLNT_ERR(
ERR_W_ID_INVALID );

          // parse district ID
          int d_id = GetIntKeyValue(&ptr, "d_id",
ERR_HTML_ILL_FORMED, ERR_D_ID_INVALID);
          if ( d_id < 1 || d_id > 10 )
                    throw new CWEBCLNT_ERR(
ERR_D_ID_INVALID );


          iNewTerm = TermAdd();

          Term.pClientData[iNewTerm].w_id = w_id;
          Term.pClientData[iNewTerm].d_id = d_id;

          try
          {
                    if (Reg.eTxnMon == TUXEDO)

          Term.pClientData[iNewTerm].pTxn =
pCTPCC_TUXEDO_new();
                    else if (Reg.eTxnMon == ENCINA)

          Term.pClientData[iNewTerm].pTxn =
pCTPCC_ENCINA_new();
                    else if (Reg.eTxnMon == COM)

          Term.pClientData[iNewTerm].pTxn =
pCTPCC_COM_new( Reg.bCOM_SinglePool );
                    else if (Reg.eDB_Protocol ==
ODBC)

          Term.pClientData[iNewTerm].pTxn =
pCTPCC_ODBC_new(    szServer, szUser, szPassword,
szMyComputerName,



          szDatabase, Reg.szSPPrefix,



          Reg.bCallNoDuplicatesNewOrder );
                    else if (Reg.eDB_Protocol ==
DBLIB)

          Term.pClientData[iNewTerm].pTxn =
pCTPCC_DBLIB_new( szServer, szUser, szPassword,
szMyComputerName, szDatabase );
          }
          catch (...)
          {
                    TermDelete(iNewTerm);
                    throw;              // pass
exception upward
          }

          MakeMainMenuForm(iNewTerm,
Term.pClientData[iNewTerm].iSyncId, szBuffer);
}

/* FUNCTION: StatsCmd
 *
 * PURPOSE:         This function returns to the
browser the total number of active terminal ids.
 *                         This routine is for
development/debugging purposes.
 *
 */

void StatsCmd(EXTENSION_CONTROL_BLOCK *pECB, char
*szBuffer)
{
          int i;
          int       iTotal;

          EnterCriticalSection(&TermCriticalSection);

          iTotal = 0;
          for(i=0; i<Term.iNumEntries; i++)
          {
                    if (Term.pClientData[i].iNextFree
== -1)
                              iTotal++;
          }

          LeaveCriticalSection(&TermCriticalSection);

          wsprintf( szBuffer,

          "<HTML><HEAD><TITLE>TPC-C Web Client
Stats</TITLE></HEAD>"
                              "<BODY><B><BIG> Total
Active Connections: %d </BIG></B><BR></BODY></HTML>"
                              , iTotal );
}

char *CWEBCLNT_ERR::ErrorText()
{
          static SERRORMSG errorMsgs[] =
          {
                    {         ERR_COMMAND_UNDEFINED,

          "Command undefined."

                                                       },
                    {         ERR_D_ID_INVALID,

          "Invalid District ID Must be 1 to 10."

                    },
                    {
          ERR_DELIVERY_CARRIER_ID_RANGE,
                    "Delivery Carrier ID out of range
must be 1 - 10."
          },
                    {
          ERR_DELIVERY_CARRIER_INVALID,
          "Delivery Carrier ID invalid must be
numeric 1 - 10."                                    },
```


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```
                {
        ERR_DELIVERY_MISSING_OCD_KEY,
        "Delivery missing Carrier ID key \"OCD*\"."

                },
                {
        ERR_DELIVERY_THREAD_FAILED,
                "Could not start delivery worker
thread."
                },
                {       ERR_GETPROCADDR_FAILED,

        "Could not map proc in DLL.  GetProcAddr
error.  DLL="                                   },
                {       ERR_HTML_ILL_FORMED,

        "Required key field is missing from HTML
string."                                        },
                {
        ERR_INVALID_SYNC_CONNECTION,
        "Invalid Terminal Sync ID."

                                },
                {       ERR_INVALID_TERMID,

        "Invalid Terminal ID."

                                                },
                {       ERR_LOADDLL_FAILED,

        "Load of DLL failed.  DLL="

                                },
                {
        ERR_MAX_CONNECTIONS_EXCEEDED,
        "No connections available.  Max Connections
is probably too low."   },
                {
        ERR_MISSING_REGISTRY_ENTRIES,
        "Required registry entries are missing.
Rerun INSTALL to correct."    },
                {
        ERR_NEWORDER_CUSTOMER_INVALID,
                "New Order customer id invalid
data type, range = 1 to 3000."                  },
                {
        ERR_NEWORDER_CUSTOMER_KEY,
                "New Order missing Customer key
\"CID*\"."
                        },
                {
        ERR_NEWORDER_DISTRICT_INVALID,
                "New Order District ID Invalid
range 1 - 10."
                },
                {
        ERR_NEWORDER_FORM_MISSING_DID,
                "New Order missing District key
\"DID*\"."
                        },
                {
        ERR_NEWORDER_ITEMID_INVALID,
                "New Order Item Id is wrong data type, must
be numeric."                            },
                {
        ERR_NEWORDER_ITEMID_RANGE,
                "New Order Item Id is out of
range. Range = 1 to 999999."                    },
                {
        ERR_NEWORDER_ITEMID_WITHOUT_SUPPW,
        "New Order Item_Id field entered without a
corresponding Supp_W."          },
                {
        ERR_NEWORDER_MISSING_IID_KEY,
        "New Order missing Item Id key \"IID*\"."

                },
                {
        ERR_NEWORDER_MISSING_QTY_KEY,
        "New Order Missing Qty key \"Qty##*\"."

                },
                {
        ERR_NEWORDER_MISSING_SUPPW_KEY,
                "New Order missing Supp_W key
\"SP##*\"."
                                },
                {
        ERR_NEWORDER_NOITEMS_ENTERED,
        "New Order No order lines entered."

                                },
                {
        ERR_NEWORDER_QTY_INVALID,
                "New Order Qty invalid must be
numeric range 1 - 99."
        },
                {       ERR_NEWORDER_QTY_RANGE,

        "New Order Qty is out of range. Range = 1
to 99."                                         },
                {
        ERR_NEWORDER_QTY_WITHOUT_SUPPW,
                "New Order Qty field entered
without a corresponding Supp_W."                },
                {
        ERR_NEWORDER_SUPPW_INVALID,
                "New Order Supp_W invalid data
type must be numeric."
        },
                {
        ERR_NO_SERVER_SPECIFIED,
                "No Server name specified."

                                                },
                {
        ERR_ORDERSTATUS_CID_AND_CLT,
        "Order Status Only Customer ID or Last Name
may be entered, not both."      },
                {
        ERR_ORDERSTATUS_CID_INVALID,
        "Order Status Customer ID invalid, range
must be numeric 1 - 3000."      },
                {
        ERR_ORDERSTATUS_CLT_RANGE,
                "Order Status Customer last name
longer than 16 characters."             },
                {
        ERR_ORDERSTATUS_DID_INVALID,
        "Order Status District invalid, value must
be numeric 1 - 10."             },
                {
        ERR_ORDERSTATUS_MISSING_CID_CLT,
        "Order Status Either Customer ID or Last
Name must be entered."                  },
                {
        ERR_ORDERSTATUS_MISSING_CID_KEY,
        "Order Status missing Customer key
\"CID*\"."
                },
                {
        ERR_ORDERSTATUS_MISSING_CLT_KEY,
        "Order Status missing Customer Last Name
key \"CLT*\"."                                  },
                {
        ERR_ORDERSTATUS_MISSING_DID_KEY,
        "Order Status missing District key
\"DID*\"."
                },
                {
        ERR_PAYMENT_CDI_INVALID,
                "Payment Customer district
invalid must be numeric."
        },
                {
        ERR_PAYMENT_CID_AND_CLT,
                "Payment Only Customer ID or Last
Name may be entered, not both."         },
                {
        ERR_PAYMENT_CUSTOMER_INVALID,
        "Payment Customer data type invalid, must
be numeric."                                    },
                {
        ERR_PAYMENT_CWI_INVALID,
                "Payment Customer Warehouse
invalid, must be numeric."
        },
                {
        ERR_PAYMENT_DISTRICT_INVALID,
        "Payment District ID is invalid, must be 1
- 10."                                          },
                {
        ERR_PAYMENT_HAM_INVALID,
                "Payment Amount invalid data type
must be numeric."
        },
                {       ERR_PAYMENT_HAM_RANGE,

        "Payment Amount out of range, 0 - 9999.99."

                },
                {
        ERR_PAYMENT_LAST_NAME_TO_LONG,
                "Payment Customer last name
longer than 16 characters."
        },
                {
        ERR_PAYMENT_MISSING_CDI_KEY,
```


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```
          "Payment missing Customer district key
\"CDI*\"."
          },
                    {
          ERR_PAYMENT_MISSING_CID_CLT,
          "Payment Either Customer ID or Last Name
must be entered."                         },
                    {
          ERR_PAYMENT_MISSING_CID_KEY,
          "Payment missing Customer Key \"CID*\"."

                    },
                    {
          ERR_PAYMENT_MISSING_CLT_KEY,
          "Payment missing Customer Last Name key
\"CLT*\"."
          },
                    {
          ERR_PAYMENT_MISSING_CWI_KEY,
          "Payment missing Customer Warehouse key
\"CWI*\"."
          },
                    {
          ERR_PAYMENT_MISSING_DID_KEY,
          "Payment missing District Key \"DID*\"."

                    },
                    {
          ERR_PAYMENT_MISSING_HAM_KEY,
          "Payment missing Amount key \"HAM*\"."

                    },
                    {
          ERR_STOCKLEVEL_MISSING_THRESHOLD_KEY,
          "Stock Level; missing Threshold key
\"TT*\"."
          },
                    {
          ERR_STOCKLEVEL_THRESHOLD_INVALID,
          "Stock Level; Threshold value must be in
the range = 1 - 99."                      },
                    {
          ERR_STOCKLEVEL_THRESHOLD_RANGE,
                    "Stock Level Threshold out of
range, range must be 1 - 99."                     },
                    {         ERR_VERSION_MISMATCH,

          "Invalid version field.  RTE and Web Client
are probably out of sync." },
                    {         ERR_W_ID_INVALID,

          "Invalid Warehouse ID."

                                                    },
                    {         0,

                              ""



                                                    }
          };

          char szTmp[256];

          int i = 0;
          while (TRUE)
          {
                    if (errorMsgs[i].szMsg[0] == 0)
                    {
                              strcpy( szTmp, "Unknown
error number." );
                              break;
                    }
                    if (m_Error ==
errorMsgs[i].iError)
                    {
                              strcpy( szTmp,
errorMsgs[i].szMsg );
                              break;
                    }
                    i++;
          }

          if (m_szTextDetail)
                    strcat( szTmp, m_szTextDetail );
          if (m_SystemErr)
                    wsprintf( szTmp+strlen(szTmp), "
Error=%d", m_SystemErr );

          m_szErrorText = new char[strlen(szTmp)+1];
          strcpy( m_szErrorText, szTmp );
          return m_szErrorText;

}

/* FUNCTION: GetKeyValue
 *
 * PURPOSE:         This function parses a http
formatted string for specific key values.
 *
 * ARGUMENTS:       char
          *pQueryString       http string from client
browser
 *                                   char
                    *pKey                         key
value to look for
 *                                   char
                    *pValue
          character array into which to place key's
value
 *                                   int
                              iMax
          maximum length of key value array.
 *                                   WEBERROR
          err
          error value to throw
 *
 * RETURNS:                 nothing.
 *
 * ERROR:           if (the pKey value is not found)
then
 *                                                  if
(err == 0)
 *
          return (empty string)
 *
          else
 *
          throw CWEBCLNT_ERR(err)
 *
 * COMMENTS:        http keys are formatted either
KEY=value& or KEY=value\0. This DLL formats
 *                                   TPC-C input
fields in such a manner that the keys can be
extracted in the
 *                                   above manner.
 */

void GetKeyValue(char **pQueryString, char *pKey,
char *pValue, int iMax, WEBERROR err)
{
          char *ptr;

          if ( !(ptr=strstr(*pQueryString, pKey)) )
                    goto ErrorExit;
          ptr += strlen(pKey);
          if ( *ptr != '=' )
                    goto ErrorExit;
          ptr++;

          iMax--;  // one position is for terminating
null
          while( *ptr && *ptr != '&' && iMax)
          {
                    *pValue++ = *ptr++;
                    iMax--;
          }
          *pValue = 0;  // terminating null

          *pQueryString = ptr;
          return;

ErrorExit:
          if (err != NO_ERR)
                    throw new CWEBCLNT_ERR( err );
          *pValue = 0;  // return empty result string
}

/* FUNCTION: GetIntKeyValue
 *
 * PURPOSE:         This function parses a http
formatted string for a specific key value.
 *
 * ARGUMENTS:       char
          *pQueryString       http string from client
browser
 *                                   char
                    *pKey                         key
value to look for
 *                                   WEBERROR
          NoKeyErr            error value to throw if
key not found
 *                                   WEBERROR
          NotIntErr           error value to throw if
value not numeric
 *
 * RETURNS:                 integer
 *
 * ERROR:           if (the pKey value is not found)
then
```


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```
 *                                                  if
(NoKeyErr != NO_ERR)
 *
         throw CWEBCLNT_ERR(err)
 *
         else
 *
         return 0
 *                                  else if (non-
numeric char found) then
 *                                                  if
(NotIntErr != NO_ERR) then
 *
         throw CWEBCLNT_ERR(err)
 *
         else
 *
         return 0
 *
 * COMMENTS:        http keys are formatted either
KEY=value& or KEY=value\0. This DLL formats
 *                                  TPC-C input
fields in such a manner that the keys can be
extracted in the
 *                                  above manner.
 */

int GetIntKeyValue(char **pQueryString, char *pKey,
WEBERROR NoKeyErr, WEBERROR NotIntErr)
{
         char *ptr0;
         char *ptr;

         if ( !(ptr=strstr(*pQueryString, pKey)) )
                  goto ErrorNoKey;
         ptr += strlen(pKey);
         if ( *ptr != '=' )
                  goto ErrorNoKey;
         ptr++;

         ptr0 = ptr;                    // remember
starting point
         // scan string until a terminator (null or
&) or a non-digit
         while( *ptr && *ptr != '&' && isdigit(*ptr)
)
                  ptr++;

         // make sure we stopped scanning for the
right reason
         if ((ptr0 == ptr) || (*ptr && *ptr != '&'))
         {
                  if (NotIntErr != NO_ERR)
                           throw new CWEBCLNT_ERR(
NoKeyErr );
                  return 0;
         }

         *pQueryString = ptr;
         return atoi(ptr0);

ErrorNoKey:
         if (NoKeyErr != NO_ERR)
                  throw new CWEBCLNT_ERR( NoKeyErr
);
         return 0;
}

/* FUNCTION: TermInit
 *
 * PURPOSE:         This function initializes the
client terminal structure; it is called when the
TPCC.DLL
 *                                  is first loaded by the
inet service.
 *
 */

void TermInit(void)
{
         EnterCriticalSection(&TermCriticalSection);

         Term.iMasterSyncId  = 1;
         Term.iNumEntries    =
Reg.dwMaxConnections+1;

         Term.pClientData    = NULL;
         Term.pClientData    =
(PCLIENTDATA)malloc(Term.iNumEntries *
sizeof(CLIENTDATA));
         if (Term.pClientData == NULL)
         {

         LeaveCriticalSection(&TermCriticalSection);
                  throw new CWEBCLNT_ERR(
ERR_MEM_ALLOC_FAILED );
         }

         ZeroMemory( Term.pClientData,
Term.iNumEntries * sizeof(CLIENTDATA) );

         Term.iFreeList                 =
Term.iNumEntries-1;
         // build free list
         // note: Term.pClientData[0].iNextFree gets
set to -1, which marks it as "in use".
         //       This is intentional, as the zero
entry is used as an anchor and never
         //                  allocated as an actual
terminal.
         for(int i=0; i<Term.iNumEntries; i++)
                  Term.pClientData[i].iNextFree =
i-1;

         LeaveCriticalSection(&TermCriticalSection);
}

/* FUNCTION: TermDeleteAll
 *
 * PURPOSE:         This function frees allocated
resources associated with the terminal structure.
 *
 * ARGUMENTS:       none
 *
 * RETURNS:                   None
 *
 * COMMENTS:        This function is called only when
the inet service unloads the TPCC.DLL
 *
 */

void TermDeleteAll(void)
{
         EnterCriticalSection(&TermCriticalSection);

         for(int i=1; i<Term.iNumEntries; i++)
         {
                  if (Term.pClientData[i].iNextFree
== -1)
                           delete
Term.pClientData[i].pTxn;
         }

         Term.iFreeList                 = 0;
         Term.iNumEntries    = 0;
         if ( Term.pClientData )
                  free(Term.pClientData);
         Term.pClientData    = NULL;

         LeaveCriticalSection(&TermCriticalSection);
}

/* FUNCTION: TermAdd
 *
 * PURPOSE:         This function assigns a terminal
id which is used to identify a client browser.
 *
 * RETURNS:                   int
         assigned terminal id
 *
 */

int TermAdd(void)
{
         DWORD     i;
         int                  iNewTerm, iTickCount;

         if (Term.iNumEntries == 0)
                  return -1;

         EnterCriticalSection(&TermCriticalSection);
         if (Term.iFreeList != 0)
         {         // position is available
                  iNewTerm = Term.iFreeList;
                  Term.iFreeList =
Term.pClientData[iNewTerm].iNextFree;

         Term.pClientData[iNewTerm].iNextFree = -1;
// indicates this position is in use
         }
         else
         {         // no open slots, so find the
slot that hasn't been used in the longest time and
reuse it
                  for(iNewTerm=1, i=1,
iTickCount=0x7FFFFFFF; i<Reg.dwMaxConnections; i++)
                  {
                           if (iTickCount >
Term.pClientData[i].iTickCount)
```


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```
                                {
                                        iTickCount =
Term.pClientData[i].iTickCount;
                                        iNewTerm = i;
                                }
                        }
                        // if oldest term is less than
one minute old, it probably means that more
connections
                        // are being attempted than were
specified as "Max Connections" at install.  In this
case,
                        // do not bump existing
connection; instead, return error to requestor.
                        if ((GetTickCount() - iTickCount)
< 60000)
                        {

                LeaveCriticalSection(&TermCriticalSection);
                                throw new CWEBCLNT_ERR(
ERR_MAX_CONNECTIONS_EXCEEDED );
                        }
                }

                Term.pClientData[iNewTerm].iTickCount =
GetTickCount();
                Term.pClientData[iNewTerm].iSyncId =
Term.iMasterSyncId++;
                Term.pClientData[iNewTerm].pTxn = NULL;

                LeaveCriticalSection(&TermCriticalSection);
                return iNewTerm;
}

/* FUNCTION: TermDelete
 *
 * PURPOSE:             This function makes a terminal
entry in the Term array available for reuse.
 *
 * ARGUMENTS:           int
                                id
                Terminal id of client exiting
 *
 */

void TermDelete(int id)
{
                if ( id > 0 && id < Term.iNumEntries )
                {
                        delete Term.pClientData[id].pTxn;

                        // put onto free list

                EnterCriticalSection(&TermCriticalSection);

                        Term.pClientData[id].iNextFree =
Term.iFreeList;
                        Term.iFreeList = id;


                LeaveCriticalSection(&TermCriticalSection);
                }
}
```

```
/* FUNCTION: MakeErrorForm
 */

void ErrorForm(EXTENSION_CONTROL_BLOCK *pECB, int
iType, int iErrorNum, int iTermId, int iSyncId, char
*szErrorText, char *szBuffer )
{
                wsprintf(szBuffer,
                        "<HTML><HEAD><TITLE>TPC-C
Error</TITLE></HEAD><BODY>"
                        "<FORM ACTION=\"tpcc.dll\"
METHOD=\"GET\">"
                        "<INPUT TYPE=\"hidden\"
NAME=\"STATUSID\" VALUE=\"%d\">"
                        "<INPUT TYPE=\"hidden\"
NAME=\"ERROR\" VALUE=\"%d\">"
                        "<INPUT TYPE=\"hidden\"
NAME=\"FORMID\" VALUE=\"%d\">"
                        "<INPUT TYPE=\"hidden\"
NAME=\"TERMID\" VALUE=\"%d\">"
                        "<INPUT TYPE=\"hidden\"
NAME=\"SYNCID\" VALUE=\"%d\">"
                        "<BOLD>An Error
Occurred</BOLD><BR><BR>"
                        "%s"
                        "<BR><BR><HR>"
                        "<INPUT TYPE=\"submit\"
NAME=\"CMD\" VALUE=\"..NewOrder..\">"
                        "<INPUT TYPE=\"submit\"
NAME=\"CMD\" VALUE=\"..Payment..\">"
                        "<INPUT TYPE=\"submit\"
NAME=\"CMD\" VALUE=\"..Delivery..\">"
                        "<INPUT TYPE=\"submit\"
NAME=\"CMD\" VALUE=\"..Order-Status..\">"
                        "<INPUT TYPE=\"submit\"
NAME=\"CMD\" VALUE=\"..Stock-Level..\">"
                        "<INPUT TYPE=\"submit\"
NAME=\"CMD\" VALUE=\"..Exit..\">"
                        "</FORM></BODY></HTML>"
                        , iType, iErrorNum,
MAIN_MENU_FORM, iTermId, iSyncId, szErrorText );
}

/* FUNCTION: MakeMainMenuForm
 */

void MakeMainMenuForm(int iTermId, int iSyncId, char
*szForm)
{
                wsprintf(szForm,
                        "<HTML><HEAD><TITLE>TPC-C Main
Menu</TITLE></HEAD><BODY>"
                        "Select Desired
Transaction.<BR><HR>"
                        "<FORM ACTION=\"tpcc.dll\"
METHOD=\"GET\">"
                        "<INPUT TYPE=\"hidden\"
NAME=\"STATUSID\" VALUE=\"0\">"
                        "<INPUT TYPE=\"hidden\"
NAME=\"ERROR\" VALUE=\"0\">"
                        "<INPUT TYPE=\"hidden\"
NAME=\"FORMID\" VALUE=\"%d\">"
                        "<INPUT TYPE=\"hidden\"
NAME=\"TERMID\" VALUE=\"%d\">"
                        "<INPUT TYPE=\"hidden\"
NAME=\"SYNCID\" VALUE=\"%d\">"
                        "<INPUT TYPE=\"submit\"
NAME=\"CMD\" VALUE=\"..NewOrder..\">"
                        "<INPUT TYPE=\"submit\"
NAME=\"CMD\" VALUE=\"..Payment..\">"
                        "<INPUT TYPE=\"submit\"
NAME=\"CMD\" VALUE=\"..Delivery..\">"
                        "<INPUT TYPE=\"submit\"
NAME=\"CMD\" VALUE=\"..Order-Status..\">"
                        "<INPUT TYPE=\"submit\"
NAME=\"CMD\" VALUE=\"..Stock-Level..\">"
                        "<INPUT TYPE=\"submit\"
NAME=\"CMD\" VALUE=\"..Exit..\">"
                        "</FORM></BODY></HTML>"
                        , MAIN_MENU_FORM, iTermId,
iSyncId);
}

/* FUNCTION: MakeStockLevelForm
 *
 * PURPOSE:             This function constructs the
Stock Level HTML page.
 *
 * COMMENTS:            The internal client buffer is
created when the terminal id is assigned and should
not
 *                                       be freed
except when the client terminal id is no longer
needed.
 */

void MakeStockLevelForm(int iTermId, STOCK_LEVEL_DATA
*pStockLevelData, BOOL bInput, char *szForm)
{
          int       c;

          c = wsprintf(szForm,
                        "<HTML><HEAD><TITLE>TPC-C Stock
Level</TITLE></HEAD><FORM ACTION=\"tpcc.dll\"
METHOD=\"GET\">"
                        "<INPUT TYPE=\"hidden\"
NAME=\"STATUSID\" VALUE=\"0\">"
                        "<INPUT TYPE=\"hidden\"
NAME=\"ERROR\" VALUE=\"0\">"
                        "<INPUT TYPE=\"hidden\"
NAME=\"FORMID\" VALUE=\"%d\">"
                        "<INPUT TYPE=\"hidden\"
NAME=\"TERMID\" VALUE=\"%d\">"
                        "<INPUT TYPE=\"hidden\"
NAME=\"SYNCID\" VALUE=\"%d\">"
                        "<INPUT TYPE=\"submit\"
NAME=\"CMD\" VALUE=\"..NewOrder..\">"
                        "<INPUT TYPE=\"submit\"
NAME=\"CMD\" VALUE=\"..Payment..\">"
                        "<INPUT TYPE=\"submit\"
NAME=\"CMD\" VALUE=\"..Delivery..\">"
                        "<INPUT TYPE=\"submit\"
NAME=\"CMD\" VALUE=\"..Order-Status..\">"
                        "<INPUT TYPE=\"submit\"
NAME=\"CMD\" VALUE=\"..Stock-Level..\">"
                        "<INPUT TYPE=\"submit\"
NAME=\"CMD\" VALUE=\"..Exit..\">"
                        "<PRE><font face=\"Courier\">
Stock-Level<BR>"
                        "Warehouse: %6.6d   District:
%2.2d<BR> <BR>",
                        STOCK_LEVEL_FORM, iTermId,
Term.pClientData[iTermId].iSyncId,
                        Term.pClientData[iTermId].w_id,
Term.pClientData[iTermId].d_id);
```


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```
        if ( bInput )
        {
                strcpy(szForm+c,
                        "Stock Level Threshold:
<INPUT NAME=\"TT*\" SIZE=2><BR> <BR>"
                        "low stock:
</font><BR> <BR> <BR> <BR> <BR> <BR> <BR> <BR> <BR>
<BR>"
                        " <BR> <BR> <BR> <BR>
<BR> <BR> <BR></PRE><HR>"
                        "<INPUT TYPE=\"submit\"
NAME=\"CMD\" VALUE=\"Process\">"
                        "<INPUT TYPE=\"submit\"
NAME=\"CMD\" VALUE=\"Menu\">"
                        "</FORM></HTML>" );
        }
        else
        {
                wsprintf(szForm+c,
                        "Stock Level Threshold:
%2.2d<BR> <BR>"
                        "low stock:
%3.3d</font> <BR> <BR> <BR> <BR> <BR> <BR> <BR> <BR>
<BR>"
                        " <BR> <BR> <BR> <BR>
<BR> <BR> <BR> <BR></PRE><HR>"
                        "<INPUT TYPE=\"submit\"
NAME=\"CMD\" VALUE=\"..NewOrder..\">"
                        "<INPUT TYPE=\"submit\"
NAME=\"CMD\" VALUE=\"..Payment..\">"
                        "<INPUT TYPE=\"submit\"
NAME=\"CMD\" VALUE=\"..Delivery..\">"
                        "<INPUT TYPE=\"submit\"
NAME=\"CMD\" VALUE=\"..Order-Status..\">"
                        "<INPUT TYPE=\"submit\"
NAME=\"CMD\" VALUE=\"..Stock-Level..\">"
                        "<INPUT TYPE=\"submit\"
NAME=\"CMD\" VALUE=\"..Exit..\">"
                        "</FORM></HTML>"
                        , pStockLevelData-
>threshold, pStockLevelData->low_stock);
        }
}

/* FUNCTION: MakeNewOrderForm
 *
 * COMMENTS:        The internal client buffer is
created when the terminal id is assigned and should
not
 *                                      be freed
except when the client terminal id is no longer
needed.
 */

void MakeNewOrderForm(int iTermId, NEW_ORDER_DATA
*pNewOrderData, BOOL bInput, char *szForm)
{
        int             i, c;
        BOOL    bValid;
        static  char szBR[] = " <BR> <BR> <BR>
<BR> <BR> <BR> <BR> <BR> <BR> <BR> <BR> <BR> <BR>
<BR> <BR>";

        if (!bInput)
                assert( pNewOrderData-
>exec_status_code == eOK || pNewOrderData-
>exec_status_code == eInvalidItem );

        bValid = (bInput || (pNewOrderData-
>exec_status_code == eOK));

        c = wsprintf(szForm,
                "<HTML><HEAD><TITLE>TPC-C New
Order</TITLE></HEAD><BODY>"
                "<FORM ACTION=\"tpcc.dll\"
METHOD=\"GET\">"
                "<INPUT TYPE=\"hidden\"
NAME=\"STATUSID\" VALUE=\"%d\">"
                "<INPUT TYPE=\"hidden\"
NAME=\"ERROR\" VALUE=\"0\">"
                "<INPUT TYPE=\"hidden\"
NAME=\"FORMID\" VALUE=\"%d\">"
                "<INPUT TYPE=\"hidden\"
NAME=\"TERMID\" VALUE=\"%d\">"
                "<INPUT TYPE=\"hidden\"
NAME=\"SYNCID\" VALUE=\"%d\">"
                "<PRE><font face=\"Courier\">
New Order<BR>"
                , bValid ? 0 : ERR_BAD_ITEM_ID,
NEW_ORDER_FORM, iTermId,
Term.pClientData[iTermId].iSyncId);

        if ( bInput )
        {
                c += wsprintf(szForm+c,
"Warehouse: %6.6d   ", Term.pClientData[iTermId].w_id
);

                strcpy( szForm+c,
                        "District: <INPUT
NAME=\"DID*\" SIZE=1>
Date:<BR>"
                        "Customer:  <INPUT
NAME=\"CID*\" SIZE=4>   Name:
Credit:      %Disc:<BR>"
                        "Order Number:
Number of Lines:           W_tax:         D_tax:<BR>
<BR>"
                        " Supp_W  Item_Id  Item
Name                 Qty  Stock  B/G  Price
Amount<BR>"
                        "  <INPUT
NAME=\"SP00*\" SIZE=4>  <INPUT NAME=\"IID00*\"
SIZE=6>                         <INPUT
NAME=\"Qty00*\" SIZE=1><BR>"
                        "  <INPUT
NAME=\"SP01*\" SIZE=4>  <INPUT NAME=\"IID01*\"
SIZE=6>                         <INPUT
NAME=\"Qty01*\" SIZE=1><BR>"
                        "  <INPUT
NAME=\"SP02*\" SIZE=4>  <INPUT NAME=\"IID02*\"
SIZE=6>                         <INPUT
NAME=\"Qty02*\" SIZE=1><BR>"
                        "  <INPUT
NAME=\"SP03*\" SIZE=4>  <INPUT NAME=\"IID03*\"
SIZE=6>                         <INPUT
NAME=\"Qty03*\" SIZE=1><BR>"
                        "  <INPUT
NAME=\"SP04*\" SIZE=4>  <INPUT NAME=\"IID04*\"
SIZE=6>                         <INPUT
NAME=\"Qty04*\" SIZE=1><BR>"
                        "  <INPUT
NAME=\"SP05*\" SIZE=4>  <INPUT NAME=\"IID05*\"
SIZE=6>                         <INPUT
NAME=\"Qty05*\" SIZE=1><BR>"
                        "  <INPUT
NAME=\"SP06*\" SIZE=4>  <INPUT NAME=\"IID06*\"
SIZE=6>                         <INPUT
NAME=\"Qty06*\" SIZE=1><BR>"
                        "  <INPUT
NAME=\"SP07*\" SIZE=4>  <INPUT NAME=\"IID07*\"
SIZE=6>                         <INPUT
NAME=\"Qty07*\" SIZE=1><BR>"
                        "  <INPUT
NAME=\"SP08*\" SIZE=4>  <INPUT NAME=\"IID08*\"
SIZE=6>                         <INPUT
NAME=\"Qty08*\" SIZE=1><BR>"
                        "  <INPUT
NAME=\"SP09*\" SIZE=4>  <INPUT NAME=\"IID09*\"
SIZE=6>                         <INPUT
NAME=\"Qty09*\" SIZE=1><BR>"
                        "  <INPUT
NAME=\"SP10*\" SIZE=4>  <INPUT NAME=\"IID10*\"
SIZE=6>                         <INPUT
NAME=\"Qty10*\" SIZE=1><BR>"
                        "  <INPUT
NAME=\"SP11*\" SIZE=4>  <INPUT NAME=\"IID11*\"
SIZE=6>                         <INPUT
NAME=\"Qty11*\" SIZE=1><BR>"
                        "  <INPUT
NAME=\"SP12*\" SIZE=4>  <INPUT NAME=\"IID12*\"
SIZE=6>                         <INPUT
NAME=\"Qty12*\" SIZE=1><BR>"
                        "  <INPUT
NAME=\"SP13*\" SIZE=4>  <INPUT NAME=\"IID13*\"
SIZE=6>                         <INPUT
NAME=\"Qty13*\" SIZE=1><BR>"
                        "  <INPUT
NAME=\"SP14*\" SIZE=4>  <INPUT NAME=\"IID14*\"
SIZE=6>                         <INPUT
NAME=\"Qty14*\" SIZE=1><BR>"
                        "Execution Status:
Total:<BR>"
                        "</font></PRE><HR>"
                        "<INPUT TYPE=\"submit\"
NAME=\"CMD\" VALUE=\"Process\">"
                        "<INPUT TYPE=\"submit\"
NAME=\"CMD\" VALUE=\"Menu\">"
                        "</FORM></HTML>"
                        );
        }
        else
        {
                c += wsprintf(szForm+c,
"Warehouse: %6.6d   District: %2.2d
Date: ",
                        pNewOrderData->w_id,
                        pNewOrderData->d_id);
```


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```
                    if ( bValid )
                    {
                              c += wsprintf(szForm+c,
"%2.2d-%2.2d-%4.4d %2.2d:%2.2d:%2.2d",

          pNewOrderData->o_entry_d.day,

          pNewOrderData->o_entry_d.month,

          pNewOrderData->o_entry_d.year,

          pNewOrderData->o_entry_d.hour,

          pNewOrderData->o_entry_d.minute,

          pNewOrderData->o_entry_d.second);
                    }

                    c += wsprintf(szForm+c,
"<BR>Customer:  %4.4d   Name: %-16s   Credit: %-2s
",
                              pNewOrderData->c_id,
pNewOrderData->c_last, pNewOrderData->c_credit);

                    if ( bValid )
                    {
                              c += sprintf(szForm+c,

          "%%Disc: %5.2f            <BR>"

          "Order Number: %8.8d  Number of Lines:
%2.2d        W_tax: %5.2f   D_tax: %5.2f  <BR> <BR>"

          " Supp_W  Item_Id  Item Name
Qty  Stock  B/G  Price    Amount<BR>",

          100.0*pNewOrderData->c_discount,

          pNewOrderData->o_id,

          pNewOrderData->o_ol_cnt,
                                        100.0 *
pNewOrderData->w_tax,
                                        100.0 *
pNewOrderData->d_tax);

                              for(i=0;
i<pNewOrderData->o_ol_cnt; i++)
                              {
                                        c +=
sprintf(szForm+c, "%6.6d   %6.6d   %-24s  %2.2d
%3.3d    %1.1s   $%6.2f  $%7.2f  <BR>",

          pNewOrderData->OL[i].ol_supply_w_id,

          pNewOrderData->OL[i].ol_i_id,

          pNewOrderData->OL[i].ol_i_name,

          pNewOrderData->OL[i].ol_quantity,

          pNewOrderData->OL[i].ol_stock,

          pNewOrderData->OL[i].ol_brand_generic,

          pNewOrderData->OL[i].ol_i_price,

          pNewOrderData->OL[i].ol_amount );
                              }
                    }
                    else
                    {
                              c += wsprintf(szForm+c,
                                        "%Disc:<BR>"
                                        "Order
Number: %8.8d  Number of Lines:              W_tax:
D_tax:<BR> <BR>"
                                        " Supp_W
Item_Id  Item Name                 Qty  Stock  B/G
Price    Amount<BR>"
                                        ,
pNewOrderData->o_id);

                              i = 0;
                    }

                    strncpy( szForm+c, szBR, (15-i)*5
);
                    c += (15-i)*5;

                    if ( bValid )
                              c += sprintf(szForm+c,
"Execution Status: Transaction commited.
Total:  $%8.2f  ",

          pNewOrderData->total_amount);
                    else
                              c += wsprintf(szForm+c,
"Execution Status: Item number is not valid.
Total:");

                    strcpy(szForm+c,
                              "
<BR></font></PRE><HR>"
                              "<INPUT TYPE=\"submit\"
NAME=\"CMD\" VALUE=\"..NewOrder..\">"
                              "<INPUT TYPE=\"submit\"
NAME=\"CMD\" VALUE=\"..Payment..\">"
                              "<INPUT TYPE=\"submit\"
NAME=\"CMD\" VALUE=\"..Delivery..\">"
                              "<INPUT TYPE=\"submit\"
NAME=\"CMD\" VALUE=\"..Order-Status..\">"
                              "<INPUT TYPE=\"submit\"
NAME=\"CMD\" VALUE=\"..Stock-Level..\">"
                              "<INPUT TYPE=\"submit\"
NAME=\"CMD\" VALUE=\"..Exit..\">"
                              "</FORM></HTML>"
                              );
          }
}

/* FUNCTION: MakePaymentForm
 *
 * COMMENTS:        The internal client buffer is
created when the terminal id is assigned and should
not
 *                                  be freed
except when the client terminal id is no longer
needed.
 */

void MakePaymentForm(int iTermId, PAYMENT_DATA
*pPaymentData, BOOL bInput, char *szForm)
{
          int c;

          c = wsprintf(szForm,
                    "<HTML><HEAD><TITLE>TPC-C
Payment</TITLE></HEAD><BODY>"
                    "<FORM ACTION=\"tpcc.dll\"
METHOD=\"GET\">"
                    "<INPUT TYPE=\"hidden\"
NAME=\"STATUSID\" VALUE=\"0\">"
                    "<INPUT TYPE=\"hidden\"
NAME=\"ERROR\" VALUE=\"0\">"
                    "<INPUT TYPE=\"hidden\"
NAME=\"FORMID\" VALUE=\"%d\">"
                    "<INPUT TYPE=\"hidden\"
NAME=\"TERMID\" VALUE=\"%d\">"
                    "<INPUT TYPE=\"hidden\"
NAME=\"SYNCID\" VALUE=\"%d\">"
                    "<PRE><font face=\"Courier\">
Payment<BR>"
                    "Date: "
                    , PAYMENT_FORM, iTermId,
Term.pClientData[iTermId].iSyncId);

          if ( !bInput )
          {
                    c += wsprintf(szForm+c, "%2.2d-
%2.2d-%4.4d %2.2d:%2.2d:%2.2d",
                              pPaymentData-
>h_date.day,
                              pPaymentData-
>h_date.month,
                              pPaymentData-
>h_date.year,
                              pPaymentData-
>h_date.hour,
                              pPaymentData-
>h_date.minute,
                              pPaymentData-
>h_date.second);
          }

          if ( bInput )
          {
                    c += wsprintf(szForm+c,
                              "<BR> <BR>Warehouse:
%6.6d"
                              "
District: <INPUT NAME=\"DID*\" SIZE=1><BR> <BR> <BR>
<BR> <BR>"
                              "Customer: <INPUT
NAME=\"CID*\" SIZE=4>"
```


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```
                              "Cust-Warehouse: <INPUT
NAME=\"CWI*\" SIZE=4>  "
                              "Cust-District: <INPUT
NAME=\"CDI*\" SIZE=1><BR>"
                              "Name:
<INPUT NAME=\"CLT*\" SIZE=16>
Since:<BR>"
                              "
Credit:<BR>"
                              "
Disc:<BR>"
                              "
Phone:<BR> <BR>"
                              "Amount Paid:
$<INPUT NAME=\"HAM*\" SIZE=7>      New Cust-
Balance:<BR>"
                              "Credit Limit:<BR>
<BR>Cust-Data: <BR> <BR> <BR> <BR>
<BR></font></PRE><HR>"
                              "<INPUT TYPE=\"submit\"
NAME=\"CMD\" VALUE=\"Process\"><INPUT TYPE=\"submit\"
NAME=\"CMD\" VALUE=\"Menu\">"
                              "</BODY></FORM></HTML>"
                              ,
Term.pClientData[iTermId].w_id);
          }
          else
          {
                    c += wsprintf(szForm+c,
                              "<BR> <BR>Warehouse:
%6.6d                        District: %2.2d<BR>"
                              "%-20s
%-20s<BR>"
                              "%-20s
%-20s<BR>"
                              "%-20s %-2s %5.5s-%4.4s
%-20s %-2s %5.5s-%4.4s<BR> <BR>"
                              "Customer: %4.4d  Cust-
Warehouse: %6.6d  Cust-District: %2.2d<BR>"
                              "Name:   %-16s %-2s %-
16s     Since:  %2.2d-%2.2d-%4.4d<BR>"
                              "        %-20s
Credit: %-2s<BR>"

                              ,
Term.pClientData[iTermId].w_id, pPaymentData->d_id
                              , pPaymentData-
>w_street_1, pPaymentData->d_street_1
                              , pPaymentData-
>w_street_2, pPaymentData->d_street_2
                              , pPaymentData->w_city,
pPaymentData->w_state, pPaymentData->w_zip,
pPaymentData->w_zip+5
                              , pPaymentData->d_city,
pPaymentData->d_state, pPaymentData->d_zip,
pPaymentData->d_zip+5
                              , pPaymentData->c_id,
pPaymentData->c_w_id,         pPaymentData->c_d_id
                              , pPaymentData-
>c_first, pPaymentData->c_middle, pPaymentData-
>c_last
                              , pPaymentData-
>c_since.day, pPaymentData->c_since.month,
                    pPaymentData->c_since.year
                              , pPaymentData-
>c_street_1, pPaymentData->c_credit
                              );

          c += sprintf(szForm+c,
                              "        %-20s
%%Disc:  %5.2f<BR>",
                              pPaymentData-
>c_street_2, 100.0*pPaymentData->c_discount);

                    c += wsprintf(szForm+c,
                              "        %-20s %-2s
%5.5s-%4.4s       Phone:  %6.6s-%3.3s-%3.3s-%4.4s<BR>
<BR>",
                              pPaymentData->c_city,
pPaymentData->c_state, pPaymentData->c_zip,
pPaymentData->c_zip+5,
                              pPaymentData->c_phone,
pPaymentData->c_phone+6, pPaymentData->c_phone+9,
pPaymentData->c_phone+12 );

                    c += sprintf(szForm+c,
                              "Amount Paid:
$%7.2f      New Cust-Balance: $%14.2f<BR>"
                              "Credit Limit:
$%13.2f<BR> <BR>"
                              , pPaymentData-
>h_amount, pPaymentData->c_balance
                              , pPaymentData-
>c_credit_lim
                              );

                    if ( pPaymentData->c_credit[0] ==
'B' && pPaymentData->c_credit[1] == 'C' )
                              c += wsprintf(szForm+c,

          "Cust-Data: %-50.50s<BR>           %-
50.50s<BR>           %-50.50s<BR>           %-
50.50s<BR>",

          pPaymentData->c_data, pPaymentData-
>c_data+50, pPaymentData->c_data+100, pPaymentData-
>c_data+150 );
                    else
                              strcpy(szForm+c, "Cust-
Data: <BR> <BR> <BR> <BR>");

                    strcat(szForm,      "
<BR></font></PRE><HR>"

          "<INPUT TYPE=\"submit\" NAME=\"CMD\"
VALUE=\"..NewOrder..\">"

          "<INPUT TYPE=\"submit\" NAME=\"CMD\"
VALUE=\"..Payment..\">"

          "<INPUT TYPE=\"submit\" NAME=\"CMD\"
VALUE=\"..Delivery..\">"

          "<INPUT TYPE=\"submit\" NAME=\"CMD\"
VALUE=\"..Order-Status..\">"

          "<INPUT TYPE=\"submit\" NAME=\"CMD\"
VALUE=\"..Stock-Level..\">"

          "<INPUT TYPE=\"submit\" NAME=\"CMD\"
VALUE=\"..Exit..\">"

          "</BODY></FORM></HTML>");
          }

}

/* FUNCTION: MakeOrderStatusForm
 *
 * COMMENTS:        The internal client buffer is
created when the terminal id is assigned and should
not
 *                                  be freed
except when the client terminal id is no longer
needed.
 */

void MakeOrderStatusForm(int iTermId,
ORDER_STATUS_DATA *pOrderStatusData, BOOL bInput,
char *szForm)
{
          int               i, c;
          static char szBR[] = " <BR> <BR> <BR> <BR>
<BR> <BR> <BR> <BR> <BR> <BR> <BR> <BR> <BR> <BR>
<BR>";

          c = wsprintf(szForm,
                    "<HTML><HEAD><TITLE>TPC-C Order-
Status</TITLE></HEAD><BODY>"
                    "<FORM ACTION=\"tpcc.dll\"
METHOD=\"GET\">"
                    "<INPUT TYPE=\"hidden\"
NAME=\"STATUSID\" VALUE=\"0\">"
                    "<INPUT TYPE=\"hidden\"
NAME=\"ERROR\" VALUE=\"0\">"
                    "<INPUT TYPE=\"hidden\"
NAME=\"FORMID\" VALUE=\"%d\">"
                    "<INPUT TYPE=\"hidden\"
NAME=\"TERMID\" VALUE=\"%d\">"
                    "<INPUT TYPE=\"hidden\"
NAME=\"SYNCID\" VALUE=\"%d\">"
                    "<PRE><font face=\"Courier\">
Order-Status<BR>"
                    "Warehouse: %6.6d   ",
                    ORDER_STATUS_FORM, iTermId,
Term.pClientData[iTermId].iSyncId,
Term.pClientData[iTermId].w_id);

          if ( bInput )
          {
                    strcpy(szForm+c,
                              "District: <INPUT
NAME=\"DID*\" SIZE=1><BR>"
```


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```
                              "Customer: <INPUT
NAME=\"CID*\" SIZE=4>   Name:
<INPUT NAME=\"CLT*\" SIZE=23><BR>"
                              "Cust-Balance:<BR>
<BR>"
                              "Order-Number:
Entry-Date:                       Carrier-
Number:<BR>"
                              "Supply-W     Item-Id
Qty     Amount      Delivery-Date<BR> <BR> <BR> <BR>
<BR>"
                              " <BR> <BR> <BR> <BR>
<BR> <BR> <BR> <BR> <BR> <BR></font></PRE>"
                              "<HR><INPUT
TYPE=\"submit\" NAME=\"CMD\" VALUE=\"Process\"><INPUT
TYPE=\"submit\" NAME=\"CMD\" VALUE=\"Menu\">"
                              "</BODY></FORM></HTML>"
);
          }
          else
          {
                    c += wsprintf(szForm+c,
                              "District: %2.2d<BR>"
                              "Customer: %4.4d
Name: %-16s %-2s %-16s<BR>",
                              pOrderStatusData->d_id,
pOrderStatusData->c_id,
                              pOrderStatusData-
>c_first, pOrderStatusData->c_middle,
pOrderStatusData->c_last);

                    c += sprintf(szForm+c, "Cust-
Balance: $%9.2f<BR> <BR>",
                              pOrderStatusData-
>c_balance);

                    c += wsprintf(szForm+c,
                              "Order-Number: %8.8d
Entry-Date: %2.2d-%2.2d-%4.4d %2.2d:%2.2d:%2.2d
Carrier-Number: %2.2d<BR>"
                              "Supply-W     Item-Id
Qty     Amount      Delivery-Date<BR>",
                              pOrderStatusData->o_id,
                              pOrderStatusData-
>o_entry_d.day,
                              pOrderStatusData-
>o_entry_d.month,
                              pOrderStatusData-
>o_entry_d.year,
                              pOrderStatusData-
>o_entry_d.hour,
                              pOrderStatusData-
>o_entry_d.minute,
                              pOrderStatusData-
>o_entry_d.second,
                              pOrderStatusData-
>o_carrier_id);

                    for(i=0; i< pOrderStatusData-
>o_ol_cnt; i++)
                    {
                              c += sprintf(szForm+c,
"  %6.6d     %6.6d     %2.2d     $%8.2f      %2.2d-
%2.2d-%4.4d<BR>",

          pOrderStatusData->OL[i].ol_supply_w_id,

          pOrderStatusData->OL[i].ol_i_id,

          pOrderStatusData->OL[i].ol_quantity,

          pOrderStatusData->OL[i].ol_amount,

          pOrderStatusData->OL[i].ol_delivery_d.day,

          pOrderStatusData-
>OL[i].ol_delivery_d.month,

          pOrderStatusData-
>OL[i].ol_delivery_d.year);
                    }

                    strncpy( szForm+c, szBR, (15-i)*5
);
                    c += (15-i)*5;

                    strcpy(szForm+c,

          "</font></PRE><HR><INPUT TYPE=\"submit\"
NAME=\"CMD\" VALUE=\"..NewOrder..\">"
                              "<INPUT TYPE=\"submit\"
NAME=\"CMD\" VALUE=\"..Payment..\">"
                              "<INPUT TYPE=\"submit\"
NAME=\"CMD\" VALUE=\"..Delivery..\">"
                              "<INPUT TYPE=\"submit\"
NAME=\"CMD\" VALUE=\"..Order-Status..\">"
                              "<INPUT TYPE=\"submit\"
NAME=\"CMD\" VALUE=\"..Stock-Level..\">"
                              "<INPUT TYPE=\"submit\"
NAME=\"CMD\" VALUE=\"..Exit..\">"
                              "</BODY></FORM></HTML>"
);
          }
}

/* FUNCTION: MakeDeliveryForm
 *
 * COMMENTS:        The internal client buffer is
created when the terminal id is assigned and should
not
 *                                        be freed
except when the client terminal id is no longer
needed.
 */

void MakeDeliveryForm(int iTermId, DELIVERY_DATA
*pDeliveryData, BOOL bInput, char *szForm)
{
          int       c;

          c = wsprintf(szForm,
                    "<HTML><HEAD><TITLE>TPC-C
Delivery</TITLE></HEAD><BODY>"
                    "<FORM ACTION=\"tpcc.dll\"
METHOD=\"GET\">"
                    "<INPUT TYPE=\"hidden\"
NAME=\"STATUSID\" VALUE=\"%d\">"
                    "<INPUT TYPE=\"hidden\"
NAME=\"ERROR\" VALUE=\"0\">"
                    "<INPUT TYPE=\"hidden\"
NAME=\"FORMID\" VALUE=\"%d\">"
                    "<INPUT TYPE=\"hidden\"
NAME=\"TERMID\" VALUE=\"%d\">"
                    "<INPUT TYPE=\"hidden\"
NAME=\"SYNCID\" VALUE=\"%d\">"
                    "<PRE><font face=\"Courier\">
Delivery<BR>"
                    "Warehouse: %6.6d<BR> <BR>",
                    (!bInput && (pDeliveryData-
>exec_status_code != eOK)) ? ERR_TYPE_DELIVERY_POST :
0,
                    DELIVERY_FORM, iTermId,
Term.pClientData[iTermId].iSyncId,
Term.pClientData[iTermId].w_id);

          if ( bInput )
          {
                    strcpy( szForm+c,
                              "Carrier Number: <INPUT
NAME=\"OCD*\" SIZE=1><BR> <BR>"
                              "Execution Status: <BR>
<BR> <BR> <BR> <BR> <BR> <BR>"
                              " <BR> <BR> <BR> <BR>
<BR> <BR> <BR> <BR> </font></PRE><HR>"
                              "<INPUT TYPE=\"submit\"
NAME=\"CMD\" VALUE=\"Process\">"
                              "<INPUT TYPE=\"submit\"
NAME=\"CMD\" VALUE=\"Menu\">"
                              "</BODY></FORM></HTML>"
);
          }
          else
          {
                    wsprintf( szForm+c,
                              "Carrier Number:
%2.2d<BR> <BR>"
                              "Execution Status: %s
<BR> <BR> <BR> <BR> <BR> <BR> <BR>"
                              " <BR> <BR> <BR> <BR>
<BR> <BR> <BR> <BR> </font></PRE>"
                              "<HR><INPUT
TYPE=\"submit\" NAME=\"CMD\" VALUE=\"..NewOrder..\">"
                              "<INPUT TYPE=\"submit\"
NAME=\"CMD\" VALUE=\"..Payment..\">"
                              "<INPUT TYPE=\"submit\"
NAME=\"CMD\" VALUE=\"..Delivery..\">"
                              "<INPUT TYPE=\"submit\"
NAME=\"CMD\" VALUE=\"..Order-Status..\">"
                              "<INPUT TYPE=\"submit\"
NAME=\"CMD\" VALUE=\"..Stock-Level..\">"
                              "<INPUT TYPE=\"submit\"
NAME=\"CMD\" VALUE=\"..Exit..\">"
                              "</BODY></FORM></HTML>"

                              , pDeliveryData-
>o_carrier_id,
```


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```
                              (pDeliveryData-
>exec_status_code == eOK) ? "Delivery has been
queued." : "Delivery Post Failed     "
                              );
          }
}

/* FUNCTION: ProcessNewOrderForm
 *
 * PURPOSE:          This function gets and validates
the input data from the new order form
 *                              filling in the required
input variables. it then calls the SQLNewOrder
 *                              transaction, constructs
the output form and writes it back to client
 *                              browser.
 */

void ProcessNewOrderForm(EXTENSION_CONTROL_BLOCK
          *pECB, int iTermId, char *szBuffer)
{
          PNEW_ORDER_DATA               pNewOrder;

          pNewOrder = Term.pClientData[iTermId].pTxn-
>BuffAddr_NewOrder();

          ZeroMemory(pNewOrder,
sizeof(NEW_ORDER_DATA));
          pNewOrder->w_id =
Term.pClientData[iTermId].w_id;
          GetNewOrderData(pECB->lpszQueryString,
pNewOrder);

          Term.pClientData[iTermId].pTxn->NewOrder();

          pNewOrder = Term.pClientData[iTermId].pTxn-
>BuffAddr_NewOrder();
          MakeNewOrderForm(iTermId, pNewOrder,
OUTPUT_FORM, szBuffer );
}

/* FUNCTION: void ProcessPaymentForm
 *
 * PURPOSE:          This function gets and validates
the input data from the payment form
 *                              filling in the required
input variables. It then calls the SQLPayment
 *                              transaction, constructs
the output form and writes it back to client
 *                              browser.
 *
 * ARGUMENTS:        EXTENSION_CONTROL_BLOCK
          *pECB     passed in structure pointer from
inetsrv.
 *                                    int

          iTermId   client browser terminal id
 *
 */

void ProcessPaymentForm(EXTENSION_CONTROL_BLOCK
*pECB, int iTermId, char *szBuffer)
{
          PPAYMENT_DATA       pPayment;

          pPayment = Term.pClientData[iTermId].pTxn-
>BuffAddr_Payment();
          ZeroMemory(pPayment, sizeof(PAYMENT_DATA));
          pPayment->w_id =
Term.pClientData[iTermId].w_id;
          GetPaymentData(pECB->lpszQueryString,
pPayment);

          Term.pClientData[iTermId].pTxn->Payment();

          pPayment = Term.pClientData[iTermId].pTxn-
>BuffAddr_Payment();
          MakePaymentForm(iTermId, pPayment,
OUTPUT_FORM, szBuffer);
}

/* FUNCTION: ProcessOrderStatusForm
 *
 * PURPOSE:          This function gets and validates
the input data from the Order Status
 *                              form filling in the
required input variables. It then calls the
 *                              SQLOrderStatus
transaction, constructs the output form and writes it
 *                              back to client browser.
 *
 * ARGUMENTS:        EXTENSION_CONTROL_BLOCK
          *pECB     passed in structure pointer from
inetsrv.
 *                                    int

          iTermId   client browser terminal id
 *
 */

void ProcessOrderStatusForm(EXTENSION_CONTROL_BLOCK
*pECB, int iTermId, char *szBuffer)
{
          PORDER_STATUS_DATA  pOrderStatus;

          pOrderStatus =
Term.pClientData[iTermId].pTxn-
>BuffAddr_OrderStatus();
          ZeroMemory(pOrderStatus,
sizeof(ORDER_STATUS_DATA));
          pOrderStatus->w_id =
Term.pClientData[iTermId].w_id;
          GetOrderStatusData(pECB->lpszQueryString,
pOrderStatus);

          Term.pClientData[iTermId].pTxn-
>OrderStatus();

          pOrderStatus =
Term.pClientData[iTermId].pTxn-
>BuffAddr_OrderStatus();
          MakeOrderStatusForm(iTermId, pOrderStatus,
OUTPUT_FORM, szBuffer);
}

/* FUNCTION: ProcessDeliveryForm
 *
 * PURPOSE:          This function gets and validates
the input data from the delivery form
 *                              filling in the required
input variables. It then calls the PostDeliveryInfo
 *                              Api, The client is then
informed that the transaction has been posted.
 *
 * ARGUMENTS:        EXTENSION_CONTROL_BLOCK
          *pECB     passed in structure pointer from
inetsrv.
 *                                    int

          iTermId   client browser terminal id
 *
 */

void ProcessDeliveryForm(EXTENSION_CONTROL_BLOCK
*pECB, int iTermId, char *szBuffer)
{
          char      *ptr = pECB->lpszQueryString;

          PDELIVERY_DATA      pDelivery;

          pDelivery = Term.pClientData[iTermId].pTxn-
>BuffAddr_Delivery();
          ZeroMemory(pDelivery,
sizeof(DELIVERY_DATA));
          pDelivery->w_id =
Term.pClientData[iTermId].w_id;

          pDelivery->o_carrier_id       =
GetIntKeyValue(&ptr, "OCD*",
ERR_DELIVERY_MISSING_OCD_KEY,
ERR_DELIVERY_CARRIER_INVALID);
          if ( pDelivery->o_carrier_id > 10 ||
pDelivery->o_carrier_id < 1 )
                    throw new CWEBCLNT_ERR(
ERR_DELIVERY_CARRIER_ID_RANGE );

          if (dwNumDeliveryThreads)
          {
                    //post delivery info
                    if ( PostDeliveryInfo(pDelivery-
>w_id, pDelivery->o_carrier_id) )
                              pDelivery-
>exec_status_code = eDeliveryFailed;
                    else
                              pDelivery-
>exec_status_code = eOK;
          }
          else // delivery is done synchronously if
no delivery threads configured
                    Term.pClientData[iTermId].pTxn-
>Delivery();

          pDelivery = Term.pClientData[iTermId].pTxn-
>BuffAddr_Delivery();
          MakeDeliveryForm(iTermId, pDelivery,
OUTPUT_FORM, szBuffer);
}

/* FUNCTION: ProcessStockLevelForm
```


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```
 *
 * PURPOSE:         This function gets and validates
the input data from the Stock Level
 *                          form filling in the
required input variables. It then calls the
 *                          SQLStockLevel
transaction, constructs the output form and writes it
 *                          back to client browser.
 *
 * ARGUMENTS:       EXTENSION_CONTROL_BLOCK
         *pECB     passed in structure pointer from
inetsrv.
 *                                   int

         iTermId   client browser terminal id
 *
 */

void ProcessStockLevelForm(EXTENSION_CONTROL_BLOCK
*pECB, int iTermId, char *szBuffer)
{
         char               *ptr = pECB-
>lpszQueryString;

         PSTOCK_LEVEL_DATA   pStockLevel;

         pStockLevel =
Term.pClientData[iTermId].pTxn-
>BuffAddr_StockLevel();
         ZeroMemory( pStockLevel,
sizeof(STOCK_LEVEL_DATA) );

         pStockLevel->w_id =
Term.pClientData[iTermId].w_id;
         pStockLevel->d_id =
Term.pClientData[iTermId].d_id;

         pStockLevel->threshold =
GetIntKeyValue(&ptr, "TT*",
ERR_STOCKLEVEL_MISSING_THRESHOLD_KEY,
ERR_STOCKLEVEL_THRESHOLD_INVALID);
         if ( pStockLevel->threshold >= 100 ||
pStockLevel->threshold < 0 )
                  throw new CWEBCLNT_ERR(
ERR_STOCKLEVEL_THRESHOLD_RANGE );

         Term.pClientData[iTermId].pTxn-
>StockLevel();

         pStockLevel =
Term.pClientData[iTermId].pTxn-
>BuffAddr_StockLevel();
         MakeStockLevelForm(iTermId, pStockLevel,
OUTPUT_FORM, szBuffer);
}

/* FUNCTION: GetNewOrderData
 *
 * PURPOSE:         This function extracts and
validates the new order form data from an http
command string.
 *
 * ARGUMENTS:       LPSTR
         lpszQueryString              client
browser http command string
 *
         NEW_ORDER_DATA      *pNewOrderData
         pointer to new order data structure
 *
 */

void GetNewOrderData(LPSTR lpszQueryString,
NEW_ORDER_DATA *pNewOrderData)
{
         char      szTmp[26];
         int                i;
         short     items;
         int                ol_i_id, ol_quantity;
         char      *ptr = lpszQueryString;

         static char szSP[MAX_OL_NEW_ORDER_ITEMS][6]
=
                  { "SP00*", "SP01*", "SP02*",
"SP03*", "SP04*",
                    "SP05*", "SP06*", "SP07*",
"SP08*", "SP09*",
                    "SP10*", "SP11*", "SP12*",
"SP13*", "SP14*" };
         static char
szIID[MAX_OL_NEW_ORDER_ITEMS][7] =
                  { "IID00*", "IID01*", "IID02*",
"IID03*", "IID04*",
                    "IID05*", "IID06*", "IID07*",
"IID08*", "IID09*",
                    "IID10*", "IID11*", "IID12*",
"IID13*", "IID14*" };
         static char
szQty[MAX_OL_NEW_ORDER_ITEMS][7] =
                  { "Qty00*", "Qty01*", "Qty02*",
"Qty03*", "Qty04*",
                    "Qty05*", "Qty06*", "Qty07*",
"Qty08*", "Qty09*",
                    "Qty10*", "Qty11*", "Qty12*",
"Qty13*", "Qty14*" };

         pNewOrderData->d_id = GetIntKeyValue(&ptr,
"DID*", ERR_NEWORDER_FORM_MISSING_DID,
ERR_NEWORDER_DISTRICT_INVALID);
         pNewOrderData->c_id = GetIntKeyValue(&ptr,
"CID*", ERR_NEWORDER_CUSTOMER_KEY,
ERR_NEWORDER_CUSTOMER_INVALID);

         for(i=0, items=0; i<MAX_OL_NEW_ORDER_ITEMS;
i++)
         {
                  GetKeyValue(&ptr, szSP[i], szTmp,
sizeof(szTmp), ERR_NEWORDER_MISSING_SUPPW_KEY);
                  if ( szTmp[0] )
                  {
                           if ( !IsNumeric(szTmp)
)                                        throw new
CWEBCLNT_ERR( ERR_NEWORDER_SUPPW_INVALID );
                                    pNewOrderData-
>OL[items].ol_supply_w_id = atoi(szTmp);
                                    ol_i_id =
pNewOrderData->OL[items].ol_i_id =

                  GetIntKeyValue(&ptr, szIID[i],
ERR_NEWORDER_MISSING_IID_KEY,
ERR_NEWORDER_ITEMID_INVALID);
                                    if ( ol_i_id > 999999
|| ol_i_id < 1 )
                                             throw new
CWEBCLNT_ERR( ERR_NEWORDER_ITEMID_RANGE );

                                    ol_quantity =
pNewOrderData->OL[items].ol_quantity =

                  GetIntKeyValue(&ptr, szQty[i],
ERR_NEWORDER_MISSING_QTY_KEY,
ERR_NEWORDER_QTY_INVALID);
                                    if ( ol_quantity > 99
|| ol_quantity < 1 )
                                             throw new
CWEBCLNT_ERR( ERR_NEWORDER_QTY_RANGE );

                                    items++;
                           }
                           else
                           {         // nothing entered for
supply warehouse, so item id and qty must also be
blank
                                    GetKeyValue(&ptr,
szIID[i], szTmp, sizeof(szTmp),
ERR_NEWORDER_MISSING_IID_KEY);
                                    if ( szTmp[0] )
                                             throw new
CWEBCLNT_ERR( ERR_NEWORDER_ITEMID_WITHOUT_SUPPW );

                                    GetKeyValue(&ptr,
szQty[i], szTmp, sizeof(szTmp),
ERR_NEWORDER_MISSING_QTY_KEY);
                                    if ( szTmp[0] )
                                             throw new
CWEBCLNT_ERR( ERR_NEWORDER_QTY_WITHOUT_SUPPW );
                           }
                  }
                  if ( items == 0 )
                           throw new CWEBCLNT_ERR(
ERR_NEWORDER_NOITEMS_ENTERED );

         pNewOrderData->o_ol_cnt = items;
}

/* FUNCTION: GetPaymentData
 *
 * PURPOSE:         This function extracts and
validates the payment form data from an http command
string.
 *
 * ARGUMENTS:       LPSTR
         lpszQueryString              client
browser http command string
 *                                   PAYMENT_DATA
         *pPaymentData                pointer to
payment data structure
```


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```
 */

void GetPaymentData(LPSTR lpszQueryString,
PAYMENT_DATA *pPaymentData)
{
          char      szTmp[26];
          char      *ptr = lpszQueryString;
          BOOL      bCustIdBlank;
          int                 iLen;

          pPaymentData->d_id = GetIntKeyValue(&ptr,
"DID*", ERR_PAYMENT_MISSING_DID_KEY,
ERR_PAYMENT_DISTRICT_INVALID);

          GetKeyValue(&ptr, "CID*", szTmp,
sizeof(szTmp), ERR_PAYMENT_MISSING_CID_KEY);
          if ( szTmp[0] == 0 )
          {
                    bCustIdBlank = TRUE;
                    pPaymentData->c_id = 0;
          }
          else
          {         // parse customer id and verify
that last name was NOT entered
                    bCustIdBlank = FALSE;
                    if ( !IsNumeric(szTmp) )
                              throw new CWEBCLNT_ERR(
ERR_PAYMENT_CUSTOMER_INVALID );
                    pPaymentData->c_id = atoi(szTmp);
          }

          pPaymentData->c_w_id = GetIntKeyValue(&ptr,
"CWI*", ERR_PAYMENT_MISSING_CWI_KEY,
ERR_PAYMENT_CWI_INVALID);
          pPaymentData->c_d_id = GetIntKeyValue(&ptr,
"CDI*", ERR_PAYMENT_MISSING_CDI_KEY,
ERR_PAYMENT_CDI_INVALID);

          if ( bCustIdBlank )
          {         // customer id is blank, so last
name must be entered
                    GetKeyValue(&ptr, "CLT*", szTmp,
sizeof(szTmp), ERR_PAYMENT_MISSING_CLT_KEY);
                    if ( szTmp[0] == 0 )
                              throw new CWEBCLNT_ERR(
ERR_PAYMENT_MISSING_CID_CLT );

                    _strupr( szTmp );
                    if ( strlen(szTmp) >
LAST_NAME_LEN )
                              throw new CWEBCLNT_ERR(
ERR_PAYMENT_LAST_NAME_TO_LONG );

                    strcpy(pPaymentData->c_last,
szTmp);
                    // pad with spaces so that the
client layer doesn't have to do it
                    // before passing parameters to
stored procedure
                    iLen = strlen(pPaymentData-
>c_last);
                    memset(pPaymentData->c_last +
iLen, ' ', LAST_NAME_LEN - iLen);
                    pPaymentData-
>c_last[LAST_NAME_LEN] = 0;
          }
          else
          {         // parse customer id and verify
that last name was NOT entered
                    GetKeyValue(&ptr, "CLT*", szTmp,
sizeof(szTmp), ERR_PAYMENT_MISSING_CLT_KEY);
                    if ( szTmp[0] != 0 )
                              throw new CWEBCLNT_ERR(
ERR_PAYMENT_CID_AND_CLT );
          }

          GetKeyValue(&ptr, "HAM*", szTmp,
sizeof(szTmp), ERR_PAYMENT_MISSING_HAM_KEY);
          if (!IsDecimal(szTmp))
                    throw new CWEBCLNT_ERR(
ERR_PAYMENT_HAM_INVALID );
          pPaymentData->h_amount = atof(szTmp);
          if ( pPaymentData->h_amount >= 10000.00 ||
pPaymentData->h_amount < 0 )
                    throw new CWEBCLNT_ERR(
ERR_PAYMENT_HAM_RANGE );
}

/* FUNCTION: GetOrderStatusData
 *
 * PURPOSE:         This function extracts and
validates the payment form data from an http command
string.
 *
 */
void GetOrderStatusData(LPSTR lpszQueryString,
ORDER_STATUS_DATA *pOrderStatusData)
{
          char      szTmp[26];
          char      *ptr = lpszQueryString;
          int                 iLen;

          pOrderStatusData->d_id =
GetIntKeyValue(&ptr, "DID*",
ERR_ORDERSTATUS_MISSING_DID_KEY,
ERR_ORDERSTATUS_DID_INVALID);

          GetKeyValue(&ptr, "CID*", szTmp,
sizeof(szTmp), ERR_ORDERSTATUS_MISSING_CID_KEY);
          if ( szTmp[0] == 0 )
          {         // customer id is blank, so last
name must be entered
                    pOrderStatusData->c_id = 0;
                    GetKeyValue(&ptr, "CLT*", szTmp,
sizeof(szTmp), ERR_ORDERSTATUS_MISSING_CLT_KEY);
                    if ( szTmp[0] == 0 )
                              throw new CWEBCLNT_ERR(
ERR_ORDERSTATUS_MISSING_CID_CLT );

                    _strupr( szTmp );
                    if ( strlen(szTmp) >
LAST_NAME_LEN )
                              throw new CWEBCLNT_ERR(
ERR_ORDERSTATUS_CLT_RANGE );

                    strcpy(pOrderStatusData->c_last,
szTmp);
                    // pad with spaces so that the
client layer doesn't have to do it
                    // before passing parameters to
stored procedure
                    iLen = strlen(pOrderStatusData-
>c_last);
                    memset(pOrderStatusData->c_last +
iLen, ' ', LAST_NAME_LEN - iLen);
                    pOrderStatusData-
>c_last[LAST_NAME_LEN] = 0;
          }
          else
          {         // parse customer id and verify
that last name was NOT entered
                    if ( !IsNumeric(szTmp) )
                              throw new CWEBCLNT_ERR(
ERR_ORDERSTATUS_CID_INVALID );
                    pOrderStatusData->c_id =
atoi(szTmp);
                    GetKeyValue(&ptr, "CLT*", szTmp,
sizeof(szTmp), ERR_ORDERSTATUS_MISSING_CLT_KEY);
                    if ( szTmp[0] != 0 )
                              throw new CWEBCLNT_ERR(
ERR_ORDERSTATUS_CID_AND_CLT );
          }

}

/* FUNCTION: BOOL IsNumeric(char *ptr)
 *
 * PURPOSE:         This function determines if a
string is numeric. It fails if any characters other
 *                         than numeric and null
terminator are present.
 *
 * ARGUMENTS:       char
          *ptr      pointer to string to check.
 *
 * RETURNS:                  BOOL      FALSE     if
string is not all numeric
 *
          TRUE      if string contains only numeric
characters i.e. '0' - '9'
 */

BOOL IsNumeric(char *ptr)
{
          if ( *ptr == 0 )
                    return FALSE;

          while( *ptr && isdigit(*ptr) )
                    ptr++;
          return ( !*ptr );
}

/* FUNCTION: BOOL IsDecimal(char *ptr)
 *
 * PURPOSE:         This function determines if a
string is a non-negative decimal value.
 *          It fails if any characters other than a
series of numbers followed by
```


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```
 *                          a decimal point,
another series of numbers, and a null terminator are
present.
 *
 * ARGUMENTS:       char
         *ptr      pointer to string to check.
 *
 * RETURNS:                  BOOL      FALSE     if
string is not a valid non-negative decimal value
 *
         TRUE      if string is OK
 */

BOOL IsDecimal(char *ptr)
{
         char *dotptr;
         BOOL  bValid;

         if ( *ptr == 0 )
                  return FALSE;

         // find decimal point
         dotptr = strchr( ptr, '.' );
         if (dotptr == NULL)
                  // no decimal point, so just
check for numeric
                  return IsNumeric(ptr);
         *dotptr = 0;  // temporarily replace
decimal with a terminator

         if ( *ptr != 0 )
                  bValid = IsNumeric(ptr);
         // string starts with decimal point
         else if (*(dotptr+1) == 0)
                  return FALSE;  // nothing but a
decimal point is bad
         else
                  bValid = TRUE;

         if (*(dotptr+1) != 0)
                  // check text after decimal point
                  bValid &= IsNumeric(dotptr+1);

         *dotptr = '.';  // replace decimal point
         return bValid;
}
```

# tpcc.h

```
//        File:               TPCC.H
//                                  Microsoft
TPC-C Kit Ver. 4.51
//                                  Copyright
Microsoft, 1996, 1997, 1998, 1999, 2000, 2001, 2002,
2003, 2005
//        Purpose:  Header file for TPC-C database
loader


// Build number of TPC Benchmark Kit
#define TPCKIT_VER  "4.51"

// General headers
#include <windows.h>
#include <winbase.h>
#include <stdlib.h>
#include <stdio.h>
#include <process.h>
#include <stddef.h>
#include <stdarg.h>
#include <string.h>
#include <time.h>
#include <sys\timeb.h>
#include <sys\types.h>
#include <math.h>

// ODBC headers
#include <sql.h>
#include <sqlext.h>
#include <odbcss.h>

// General constants
#define MILLI                              1000
#define FALSE                                 0
#define TRUE                                  1
#define UNDEF
            -1
#define MINPRINTASCII
32
#define MAXPRINTASCII
126

// Default environment constants
#define SERVER                                ""
#define DATABASE
          "tpcc"
#define USER
          "sa"
#define PASSWORD                            ""

// Default loader arguments
#define BATCH
                    10000
#define DEFLDPACKSIZE
          32768
#define LOADER_RES_FILE
          "C:\\MSTPCC.450\\SETUP\\LOGS\\load.out"
#define LOADER_LOG_PATH
          "C:\\MSTPCC.450\\SETUP\\LOGS\\"
#define LOADER_NURAND_C
          123
#define DEF_STARTING_WAREHOUSE                1
#define BUILD_INDEX
          1         // build both data and indexes
#define INDEX_ORDER
          1         // build indexes before load
#define SCALE_DOWN
          0   // build a normal scale database
#define INDEX_SCRIPT_PATH
          "scripts"

typedef struct
{
     char
          *server;
     char
          *database;
     char
          *user;
     char
          *password;
          BOOL
          tables_all;                              //
set if loading all tables
          BOOL
          table_item;                              //
set if loading ITEM table specifically
          BOOL
          table_warehouse;    // set if loading
WAREHOUSE, DISTRICT, and STOCK
          BOOL
          table_customer;               // set if
loading CUSTOMER and HISTORY
          BOOL
          table_orders;                 // set if
loading NEW-ORDER, ORDERS, ORDER-LINE
     long
          num_warehouses;
     long
          batch;
     long
          verbose;
          long
          pack_size;
          char
          *loader_res_file;
          char
          *log_path;
          char
          *synch_servername;
          long
          case_sensitivity;
          long
          starting_warehouse;
          long
          build_index;
          long
          index_order;
          long
          scale_down;
          char
          *index_script_path;
} TPCCLDR_ARGS;

// String length constants
          #define SERVER_NAME_LEN            20
          #define DATABASE_NAME_LEN          20
          #define USER_NAME_LEN              20
          #define PASSWORD_LEN               20
          #define TABLE_NAME_LEN             20
          #define I_DATA_LEN                 50
          #define I_NAME_LEN                 24
          #define BRAND_LEN                   1
          #define LAST_NAME_LEN              16
          #define W_NAME_LEN                 10
          #define ADDRESS_LEN                20
```


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```
#define STATE_LEN                    2
#define ZIP_LEN                      9
#define S_DIST_LEN                  24
#define S_DATA_LEN                  50
#define D_NAME_LEN                  10
#define FIRST_NAME_LEN              16
#define MIDDLE_NAME_LEN              2
#define PHONE_LEN                   16
#define CREDIT_LEN                   2
#define C_DATA_LEN                 500
#define H_DATA_LEN                  24
#define DIST_INFO_LEN               24
#define MAX_OL_NEW_ORDER_ITEMS      15
#define MAX_OL_ORDER_STATUS_ITEMS   15
#define STATUS_LEN                  25
#define OL_DIST_INFO_LEN
24
#define C_SINCE_LEN
   23
#define H_DATE_LEN
   23
#define OL_DELIVERY_D_LEN
23
#define O_ENTRY_D_LEN               23


// Functions in random.c
void      seed();
long      irand();
double    drand();
void      WUCreate();
short     WURand();
long      RandomNumber(long lower, long upper);

// Functions in getargs.c;
void      GetArgsLoader();
void      GetArgsLoaderUsage();

// Functions in time.c
long      TimeNow();

// Functions in strings.c
void      MakeAddress();
void      LastName();
int       MakeAlphaString();
int               MakeAlphaStringPadded();
int       MakeOriginalAlphaString();
int       MakeNumberString();
int       MakeZipNumberString();
void      InitString();
void      InitAddress();
void      PaddString();
```

# tpcc.rc

```
//Microsoft Developer Studio generated resource
script.
//
#include "resource.h"

#define APSTUDIO_READONLY_SYMBOLS
//////////////////////////////////////////////////
//////////////////////////
//
// Generated from the TEXTINCLUDE 2 resource.
//
#include "afxres.h"

//////////////////////////////////////////////////
//////////////////////////
#undef APSTUDIO_READONLY_SYMBOLS

//////////////////////////////////////////////////
//////////////////////////
// English (U.S.) resources

#if !defined(AFX_RESOURCE_DLL) ||
defined(AFX_TARG_ENU)
#ifdef _WIN32
LANGUAGE LANG_ENGLISH, SUBLANG_ENGLISH_US
#pragma code_page(1252)
#endif //_WIN32

#ifndef _MAC
//////////////////////////////////////////////////
//////////////////////////
//
// Version
//

VS_VERSION_INFO VERSIONINFO
 FILEVERSION 0,4,0,0
 PRODUCTVERSION 0,4,0,0
 FILEFLAGSMASK 0x3fL
#ifdef _DEBUG
 FILEFLAGS 0x1L
#else
 FILEFLAGS 0x0L
#endif
 FILEOS 0x40004L
 FILETYPE 0x2L
 FILESUBTYPE 0x0L
BEGIN
    BLOCK "StringFileInfo"
    BEGIN
        BLOCK "040904b0"
        BEGIN
            VALUE "Comments", "TPC-C HTML DLL Server
(DBLIB)\0"
            VALUE "CompanyName", "Microsoft\0"
            VALUE "FileDescription", "TPC-C HTML DLL
Server (DBLIB)\0"
            VALUE "FileVersion", "0, 4, 0, 0\0"
            VALUE "InternalName", "tpcc\0"
            VALUE "LegalCopyright", "Copyright ©
1997\0"
            VALUE "OriginalFilename", "tpcc.dll\0"
            VALUE "ProductName", "Microsoft tpcc\0"
            VALUE "ProductVersion", "0, 4, 0, 0\0"
        END
    END
    BLOCK "VarFileInfo"
    BEGIN
        VALUE "Translation", 0x409, 1200
    END
END

#endif    // !_MAC


#ifdef APSTUDIO_INVOKED
//////////////////////////////////////////////////
//////////////////////////
//
// TEXTINCLUDE
//

1 TEXTINCLUDE DISCARDABLE
BEGIN
    "resource.h\0"
END

2 TEXTINCLUDE DISCARDABLE
BEGIN
    "#include ""afxres.h""\r\n"
    "\0"
END

3 TEXTINCLUDE DISCARDABLE
BEGIN
    "\r\n"
    "\0"
END

#endif    // APSTUDIO_INVOKED


//////////////////////////////////////////////////
//////////////////////////
//
// Dialog
//

IDD_DIALOG1 DIALOG DISCARDABLE  0, 0, 186, 95
STYLE DS_MODALFRAME | WS_POPUP | WS_CAPTION |
WS_SYSMENU
CAPTION "Dialog"
FONT 8, "MS Sans Serif"
BEGIN
    DEFPUSHBUTTON   "OK",IDOK,129,7,50,14
    PUSHBUTTON      "Cancel",IDCANCEL,129,24,50,14
END


//////////////////////////////////////////////////
//////////////////////////
//
// DESIGNINFO
//

#ifdef APSTUDIO_INVOKED
GUIDELINES DESIGNINFO DISCARDABLE
BEGIN
    IDD_DIALOG1, DIALOG
    BEGIN
        LEFTMARGIN, 7
```


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```
        RIGHTMARGIN, 179
        TOPMARGIN, 7
        BOTTOMMARGIN, 88
    END
END
#endif    // APSTUDIO_INVOKED

#endif    // English (U.S.) resources
/////////////////////////////////////////////////////
////////////////////////



#ifndef APSTUDIO_INVOKED
/////////////////////////////////////////////////////
////////////////////////
//
// Generated from the TEXTINCLUDE 3 resource.
//


/////////////////////////////////////////////////////
////////////////////////
#endif    // not APSTUDIO_INVOKED
```

# tpccldr.c

```
//=================================================
==================
//        File:               TPCCLDR.C
//                                    Microsoft
TPC-C Kit Ver. 4.51
//                                    Copyright
Microsoft, 1996, 1997, 1998, 1999,
//                                    2000, 2001,
2002, 2003
//        Purpose:  Source file for TPC-C database
loader
//=================================================
==================
// Includes
#include "tpcc.h"
#include "search.h"

// Defines
#define MAXITEMS                100000
#define MAXITEMS_SCALE_DOWN             100
#define CUSTOMERS_PER_DISTRICT  3000
#define CUSTOMERS_SCALE_DOWN  30
#define DISTRICT_PER_WAREHOUSE  10
#define ORDERS_PER_DISTRICT     3000
#define ORDERS_SCALE_DOWN       30
#define MAX_CUSTOMER_THREADS    2
#define MAX_ORDER_THREADS       3
#define MAX_MAIN_THREADS        4
#define MAX_SQL_ERRORS                                  10

// Functions declarations
void HandleErrorDBC (SQLHDBC  hdbc1);
long NURand();
void LoadItem();
void LoadWarehouse();
void Stock();
void District();
void LoadCustomer();
void CustomerBufInit();
void CustomerBufLoad();
void LoadCustomerTable();
void LoadHistoryTable();
void LoadOrders();
void OrdersBufInit();
void OrdersBufLoad();
void LoadOrdersTable();
void LoadNewOrderTable();
void LoadOrderLineTable();
void GetPermutation();
void CheckForCommit();
void CheckForCommit_Big();
void OpenConnections();
void BuildIndex();
void FormatDate ();

// Shared memory structures
typedef struct
{
          double                                        ol;
    long                ol_i_id;
          long
          ol_supply_w_id;
    short               ol_quantity;
    double              ol_amount;
    char
ol_dist_info[DIST_INFO_LEN+1];
          char
          ol_delivery_d[OL_DELIVERY_D_LEN+1];
} ORDER_LINE_STRUCT;

typedef struct
{
    long                o_id;
    short               o_d_id;
          long
          o_w_id;
    long                o_c_id;
    short               o_carrier_id;
    short               o_ol_cnt;
    short               o_all_local;
          ORDER_LINE_STRUCT   o_ol[15];
} ORDERS_STRUCT;

typedef struct
{
    long                                    c_id;
    short                                   c_d_id;
          long
          c_w_id;
          char
          c_first[FIRST_NAME_LEN+1];
    char
          c_middle[MIDDLE_NAME_LEN+1];
    char
          c_last[LAST_NAME_LEN+1];
    char
          c_street_1[ADDRESS_LEN+1];
    char
          c_street_2[ADDRESS_LEN+1];
    char
          c_city[ADDRESS_LEN+1];
    char
          c_state[STATE_LEN+1];
    char
          c_zip[ZIP_LEN+1];
    char
          c_phone[PHONE_LEN+1];
    char
          c_credit[CREDIT_LEN+1];
    double
          c_credit_lim;
    double
          c_discount;
          char
          c_balance[6];
    double
          c_ytd_payment;
          short
          c_payment_cnt;
          short
          c_delivery_cnt;
          char
          c_data[C_DATA_LEN+1];
          double
          h_amount;
    char
          h_data[H_DATA_LEN+1];
} CUSTOMER_STRUCT;

typedef struct
{
          char
          c_last[LAST_NAME_LEN+1];
          char
          c_first[FIRST_NAME_LEN+1];
    long                                    c_id;
} CUSTOMER_SORT_STRUCT;

typedef struct
{
    long                time_start;
} LOADER_TIME_STRUCT;


// Global variables
char      szLastError[300];

HENV      henv;

HDBC      v_hdbc;
                    // for SQL Server version
verification
HDBC      i_hdbc1;
          // for ITEM table
HDBC      w_hdbc1;
          // for WAREHOUSE, DISTRICT, STOCK
HDBC      c_hdbc1;
          // for CUSTOMER
```


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```
HDBC      c_hdbc2;
          // for HISTORY
HDBC      o_hdbc1;
          // for ORDERS
HDBC      o_hdbc2;
          // for NEW-ORDER

HDBC      o_hdbc3;
          // for ORDER-LINE

HSTMT     v_hstmt;
          // for SQL Server version verification
HSTMT     i_hstmt1;
HSTMT     w_hstmt1;
HSTMT     c_hstmt1, c_hstmt2;
HSTMT     o_hstmt1, o_hstmt2, o_hstmt3;

int                 total_db_errors;

ORDERS_STRUCT       orders_buf[ORDERS_PER_DISTRICT];
CUSTOMER_STRUCT
          customer_buf[CUSTOMERS_PER_DISTRICT];
long                          orders_rows_loaded;
double                        new_order_rows_loaded;
double                        order_line_rows_loaded;
long                          history_rows_loaded;
long                          customer_rows_loaded;
double                        stock_rows_loaded;
long                          district_rows_loaded;
long                          item_rows_loaded;
long                          warehouse_rows_loaded;
long                          main_time_start;
long                          main_time_end;
long                          max_items;
long                          customers_per_district;
long                          orders_per_district;
long                          first_new_order;
long                          last_new_order;

TPCCLDR_ARGS    *aptr, args;

//==============================================================
//
// Function name: main
//
//==============================================================
int main(int  argc, char **argv)
{

          DWORD
dwThreadID[MAX_MAIN_THREADS];
          HANDLE          hThread[MAX_MAIN_THREADS];
          FILE            *fLoader;
          char            buffer[255];
          int                                     i;

          for (i=0; i<MAX_MAIN_THREADS; i++)
                    hThread[i] = NULL;

printf("\n*****************************************
********");
          printf("\n*
*");
          printf("\n*  Microsoft SQL Server
*");
          printf("\n*
*");
          printf("\n*  TPC-C BENCHMARK KIT:  Database
loader          *");
          printf("\n*  Version %s
*", TPCKIT_VER);
          printf("\n*
*");
          printf("\n*********************************
*****************\n\n");

    // process command line arguments
    aptr = &args;
    GetArgsLoader(argc, argv, aptr);

          printf("Build interface is ODBC.\n");

          if (aptr->build_index == 0)
                    printf("Data load only - no index
creation.\n");
          else
                    printf("Data load and index
creation.\n");

          if (aptr->index_order == 0)
                    printf("Clustered indexes will be
created after bulk load.\n");
          else
                    printf("Clustered indexes will be
created before bulk load.\n");

          // set database scale values
          if (aptr->scale_down == 1)
          {
                    printf("*** Scaled Down Database
***\n");
                    max_items = MAXITEMS_SCALE_DOWN;
                    customers_per_district =
CUSTOMERS_SCALE_DOWN;
                    orders_per_district =
ORDERS_SCALE_DOWN;
                    first_new_order = 0;
                    last_new_order  = 30;
          }
          else
          {
                    max_items = MAXITEMS;
                    customers_per_district =
CUSTOMERS_PER_DISTRICT;
                    orders_per_district =
ORDERS_PER_DISTRICT;
                    first_new_order = 2100;
                    last_new_order  = 3000;
          }

          // open connections to SQL Server
          OpenConnections();

          // open file for loader results
          fLoader = fopen(aptr->loader_res_file,
"w");


    if (fLoader == NULL)
          {
                    printf("Error, loader result file
open failed.");
                    exit(-1);
          }

    // start loading data
    sprintf(buffer,"TPC-C load started for %ld
warehouses.\n",aptr->num_warehouses);
          if        (aptr->scale_down == 1)
          {
                    sprintf(buffer,"SCALED DOWN
DATABASE.\n");
          }

          printf("%s",buffer);
          fprintf(fLoader,"%s",buffer);

          main_time_start = (TimeNow() / MILLI);

          // start parallel load threads
          if (aptr->tables_all || aptr->table_item)
          {
                    fprintf(fLoader, "\nStarting
loader threads for: item\n");


                    hThread[0] = CreateThread(NULL,

                              0,


(LPTHREAD_START_ROUTINE) LoadItem,

                              NULL,

                              0,

                              &dwThreadID[0]);

                    if (hThread[0] == NULL)
                    {
                              printf("Error, failed
in creating creating thread = 0.\n");
                              exit(-1);
                    }
          }

          if (aptr->tables_all || aptr-
>table_warehouse)
          {
                    fprintf(fLoader, "Starting loader
threads for: warehouse\n");

                    hThread[1] = CreateThread(NULL,
```


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```
                                0,

(LPTHREAD_START_ROUTINE) LoadWarehouse,

                                NULL,

                                0,

                                &dwThreadID[1]);

                    if (hThread[1] == NULL)
                    {
                                printf("Error, failed
in creating creating thread = 1.\n");
                                exit(-1);
                    }
          }

          if (aptr->tables_all || aptr-
>table_customer)
          {
                    fprintf(fLoader, "Starting loader
threads for: customer\n");

                    hThread[2] = CreateThread(NULL,

                                0,

(LPTHREAD_START_ROUTINE) LoadCustomer,

                                NULL,

                                0,

                                &dwThreadID[2]);

                    if (hThread[2] == NULL)
                    {
                                printf("Error, failed
in creating creating main thread = 2.\n");
                                exit(-1);
                    }
          }

          if (aptr->tables_all || aptr->table_orders)
          {
                    fprintf(fLoader, "Starting loader
threads for: orders\n");

                    hThread[3] = CreateThread(NULL,

                                0,

(LPTHREAD_START_ROUTINE) LoadOrders,

                                NULL,

                                0,

                                &dwThreadID[3]);

                    if (hThread[3] == NULL)
                    {
                                printf("Error, failed
in creating creating main thread = 3.\n");
                                exit(-1);
                    }
          }

          // Wait for threads to finish...
          for (i=0; i<MAX_MAIN_THREADS; i++)
          {
                    if (hThread[i] != NULL)
                    {
                                WaitForSingleObject(
hThread[i], INFINITE );

          CloseHandle(hThread[i]);
                                hThread[i] = NULL;
                    }
          }

          main_time_end = (TimeNow() / MILLI);

    sprintf(buffer,"\nTPC-C load completed
successfully in %ld minutes.\n",
                                (main_time_end -
main_time_start)/60);

          printf("%s",buffer);
          fprintf(fLoader, "%s", buffer);

          fclose(fLoader);

          SQLFreeEnv(henv);

    exit(0);

          return 0;
}


//================================================
==================
//
// Function name: LoadItem
//
//================================================
==================
void LoadItem()
{
    int                 i;
          long          i_id;
          long          i_im_id;
    char          i_name[I_NAME_LEN+1];
    double              i_price;
    char          i_data[I_DATA_LEN+1];
          char          name[20];
          long          time_start;
          RETCODE       rc;
          DBINT         rcint;
          char          bcphint[128];
          char          err_log_path[256];

          // Seed with unique number
          seed(11);

          printf("Loading item table...\n");

          //if build index before load
          if ((aptr->build_index == 1) && (aptr-
>index_order == 1))
                    BuildIndex("idxitmcl");

          InitString(i_name, I_NAME_LEN+1);
          InitString(i_data, I_DATA_LEN+1);

          sprintf(name, "%s..%s", aptr->database,
"item");

          strcpy(err_log_path,aptr->log_path);
          strcat(err_log_path,"item.err");
          rc = bcp_init(i_hdbc1, name, NULL,
err_log_path , DB_IN);
          if (rc != SUCCEED)
                    HandleErrorDBC(i_hdbc1);

          if ((aptr->build_index == 1) && (aptr-
>index_order == 1))
          {
                    sprintf(bcphint, "tablock, order
(i_id), ROWS_PER_BATCH = 100000");
                    rc = bcp_control(i_hdbc1,
BCPHINTS, (void*) bcphint);
                    if (rc != SUCCEED)

          HandleErrorDBC(i_hdbc1);
          }

          i = 0;
          rc = bcp_bind(i_hdbc1, (BYTE *) &i_id, 0,
SQL_VARLEN_DATA, NULL, 0, SQLINT4, ++i);
          if (rc != SUCCEED)
                    HandleErrorDBC(i_hdbc1);
          rc = bcp_bind(i_hdbc1, (BYTE *) i_name, 0,
I_NAME_LEN, NULL, 0, 0, ++i);
          if (rc != SUCCEED)
                    HandleErrorDBC(i_hdbc1);
          rc = bcp_bind(i_hdbc1, (BYTE *) &i_price,
0, SQL_VARLEN_DATA, NULL, 0, SQLFLT8, ++i);
          if (rc != SUCCEED)
                    HandleErrorDBC(i_hdbc1);
          rc = bcp_bind(i_hdbc1, (BYTE *) i_data, 0,
SQL_VARLEN_DATA, "", 1, 0, ++i);
          if (rc != SUCCEED)
                    HandleErrorDBC(i_hdbc1);
          rc = bcp_bind(i_hdbc1, (BYTE *) &i_im_id,
0, SQL_VARLEN_DATA, NULL, 0, SQLINT4, ++i);
          if (rc != SUCCEED)
                    HandleErrorDBC(i_hdbc1);

          time_start = (TimeNow() / MILLI);

          item_rows_loaded = 0;
```


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```
          for (i_id = 1; i_id <= max_items; i_id++)
          {
                    i_im_id = RandomNumber(1L,
10000L);

                    MakeAlphaStringPadded(14, 24,
I_NAME_LEN, i_name);

                    i_price = ((float)
RandomNumber(100L, 10000L))/100.0;

                    MakeOriginalAlphaString(26, 50,
I_DATA_LEN, i_data, 10);

                    rc = bcp_sendrow(i_hdbc1);

                    if (rc != SUCCEED)

          HandleErrorDBC(i_hdbc1);

                    item_rows_loaded++;
                    CheckForCommit(i_hdbc1, i_hstmt1,
item_rows_loaded, "item", &time_start);
          }

          rcint = bcp_done(i_hdbc1);
          if (rcint < 0)
                    HandleErrorDBC(i_hdbc1);


          printf("Finished loading item table.\n");


          SQLFreeStmt(i_hstmt1, SQL_DROP);
          SQLDisconnect(i_hdbc1);
          SQLFreeConnect(i_hdbc1);

          // if build index after load
          if ((aptr->build_index == 1) && (aptr-
>index_order == 0))
                    BuildIndex("idxitmcl");

}

//=================================================
=========================
//
// Function   : LoadWarehouse
//
// Loads WAREHOUSE table and loads Stock and District
as Warehouses are created
//
//=================================================
=========================
void LoadWarehouse()
{
          int                 i;
          long      w_id;
    char  w_name[W_NAME_LEN+1];
    char  w_street_1[ADDRESS_LEN+1];
    char  w_street_2[ADDRESS_LEN+1];
    char  w_city[ADDRESS_LEN+1];
    char  w_state[STATE_LEN+1];
    char  w_zip[ZIP_LEN+1];
    double          w_tax;
    double          w_ytd;
          char      name[20];
          long      time_start;
          RETCODE   rc;
          DBINT     rcint;
          char      bcphint[128];
          char      err_log_path[256];

          // Seed with unique number
          seed(2);

          printf("Loading warehouse table...\n");

          // if build index before load...
          if ((aptr->build_index == 1) && (aptr-
>index_order == 1))
                    BuildIndex("idxwarcl");

          InitString(w_name, W_NAME_LEN+1);
          InitAddress(w_street_1, w_street_2, w_city,
w_state, w_zip);

          sprintf(name, "%s..%s", aptr->database,
"warehouse");

          strcpy(err_log_path,aptr->log_path);
          strcat(err_log_path,"whouse.err");
          rc = bcp_init(w_hdbc1, name, NULL,
err_log_path, DB_IN);

          if (rc != SUCCEED)
                    HandleErrorDBC(w_hdbc1);

          if ((aptr->build_index == 1) && (aptr-
>index_order == 1))
          {
                    sprintf(bcphint, "tablock, order
(w_id), ROWS_PER_BATCH = %d", aptr->num_warehouses);
                    rc = bcp_control(w_hdbc1,
BCPHINTS, (void*) bcphint);
                    if (rc != SUCCEED)

          HandleErrorDBC(w_hdbc1);
          }

          i = 0;
          rc = bcp_bind(w_hdbc1, (BYTE *) &w_id, 0,
SQL_VARLEN_DATA, NULL, 0, SQLINT4, ++i);
          if (rc != SUCCEED)
                    HandleErrorDBC(w_hdbc1);
          rc = bcp_bind(w_hdbc1, (BYTE *) &w_ytd, 0,
SQL_VARLEN_DATA, NULL, 0, SQLFLT8, ++i);
          if (rc != SUCCEED)
                    HandleErrorDBC(w_hdbc1);
          rc = bcp_bind(w_hdbc1, (BYTE *) &w_tax, 0,
SQL_VARLEN_DATA, NULL, 0, SQLFLT8, ++i);
          if (rc != SUCCEED)
                    HandleErrorDBC(w_hdbc1);
          rc = bcp_bind(w_hdbc1, (BYTE *) w_name, 0,
W_NAME_LEN, NULL, 0, 0, ++i);
          if (rc != SUCCEED)
                    HandleErrorDBC(w_hdbc1);
          rc = bcp_bind(w_hdbc1, (BYTE *) w_street_1,
0, ADDRESS_LEN, NULL, 0, 0, ++i);
          if (rc != SUCCEED)
                    HandleErrorDBC(w_hdbc1);
          rc = bcp_bind(w_hdbc1, (BYTE *) w_street_2,
0, ADDRESS_LEN, NULL, 0, 0, ++i);
          if (rc != SUCCEED)
                    HandleErrorDBC(w_hdbc1);
          rc = bcp_bind(w_hdbc1, (BYTE *) w_city, 0,
ADDRESS_LEN, NULL, 0, 0, ++i);
          if (rc != SUCCEED)
                    HandleErrorDBC(w_hdbc1);
          rc = bcp_bind(w_hdbc1, (BYTE *) w_state, 0,
STATE_LEN, NULL, 0, 0, ++i);
          if (rc != SUCCEED)
                    HandleErrorDBC(w_hdbc1);
          rc = bcp_bind(w_hdbc1, (BYTE *) w_zip, 0,
ZIP_LEN, NULL, 0, 0, ++i);
          if (rc != SUCCEED)
                    HandleErrorDBC(w_hdbc1);

          time_start = (TimeNow() / MILLI);

          warehouse_rows_loaded = 0;

          for (w_id = (long)aptr->starting_warehouse;
w_id <= aptr->num_warehouses; w_id++)
          {
                    MakeAlphaStringPadded(6,10,
W_NAME_LEN, w_name);

                    MakeAddress(w_street_1,
w_street_2, w_city, w_state, w_zip);

                    w_tax = ((float)
RandomNumber(0L,2000L))/10000.00;

                    w_ytd = 300000.00;

                    rc = bcp_sendrow(w_hdbc1);
                    if (rc != SUCCEED)

          HandleErrorDBC(w_hdbc1);

                    warehouse_rows_loaded++;
                    CheckForCommit(w_hdbc1, i_hstmt1,
warehouse_rows_loaded, "warehouse", &time_start);
          }

          rcint = bcp_done(w_hdbc1);
          if (rcint < 0)
                    HandleErrorDBC(w_hdbc1);


          printf("Finished loading warehouse
table.\n");

          // if build index after load...
          if ((aptr->build_index == 1) && (aptr-
>index_order == 0))
                    BuildIndex("idxwarcl");
```


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```
        stock_rows_loaded = 0;
        district_rows_loaded = 0;

        District();
        Stock();
}

//=================================================
==================
//
// Function   : District
//
//=================================================
==================
void District()
{
    int             i;
        short       d_id;
        long        d_w_id;
    char  d_name[D_NAME_LEN+1];
    char  d_street_1[ADDRESS_LEN+1];
    char  d_street_2[ADDRESS_LEN+1];
    char  d_city[ADDRESS_LEN+1];
    char  d_state[STATE_LEN+1];
    char  d_zip[ZIP_LEN+1];
    double          d_tax;
    double          d_ytd;
        char        name[20];
    long  d_next_o_id;
        long        time_start;
        long        w_id;
        RETCODE     rc;
        DBINT       rcint;
        char        bcphint[128];
        char        err_log_path[256];

        // Seed with unique number
        seed(4);

        printf("Loading district table...\n");

        // build index before load
        if ((aptr->build_index == 1) && (aptr-
>index_order == 1))
                BuildIndex("idxdiscl");

        InitString(d_name, D_NAME_LEN+1);
        InitAddress(d_street_1, d_street_2, d_city,
d_state, d_zip);
        sprintf(name, "%s..%s", aptr->database,
"district");

        strcpy(err_log_path,aptr->log_path);
        strcat(err_log_path,"district.err");
        rc = bcp_init(w_hdbc1, name, NULL,
err_log_path, DB_IN);
        if (rc != SUCCEED)
                HandleErrorDBC(w_hdbc1);

        if ((aptr->build_index == 1) && (aptr-
>index_order == 1))
        {
                sprintf(bcphint, "tablock, order
(d_w_id, d_id), ROWS_PER_BATCH = %u", (aptr-
>num_warehouses * 10));
                rc = bcp_control(w_hdbc1,
BCPHINTS, (void*) bcphint);
                if (rc != SUCCEED)

        HandleErrorDBC(w_hdbc1);
        }

        i = 0;
        rc = bcp_bind(w_hdbc1, (BYTE *) &d_id, 0,
SQL_VARLEN_DATA, NULL, 0, SQLINT2, ++i);
        if (rc != SUCCEED)
                HandleErrorDBC(w_hdbc1);
        rc = bcp_bind(w_hdbc1, (BYTE *) &d_w_id, 0,
SQL_VARLEN_DATA, NULL, 0, SQLINT4, ++i);
        if (rc != SUCCEED)
                HandleErrorDBC(w_hdbc1);
        rc = bcp_bind(w_hdbc1, (BYTE *) &d_ytd, 0,
SQL_VARLEN_DATA, NULL, 0, SQLFLT8, ++i);
        if (rc != SUCCEED)
                HandleErrorDBC(w_hdbc1);
        rc = bcp_bind(w_hdbc1, (BYTE *)
&d_next_o_id, 0, SQL_VARLEN_DATA, NULL, 0, SQLINT4,
++i);
        if (rc != SUCCEED)
                HandleErrorDBC(w_hdbc1);
        rc = bcp_bind(w_hdbc1, (BYTE *) &d_tax, 0,
SQL_VARLEN_DATA, NULL, 0, SQLFLT8, ++i);
        if (rc != SUCCEED)
                HandleErrorDBC(w_hdbc1);
        rc = bcp_bind(w_hdbc1, (BYTE *) d_name, 0,
D_NAME_LEN, NULL, 0, 0, ++i);
        if (rc != SUCCEED)
                HandleErrorDBC(w_hdbc1);
        rc = bcp_bind(w_hdbc1, (BYTE *) d_street_1,
0, ADDRESS_LEN, NULL, 0, 0, ++i);
        if (rc != SUCCEED)
                HandleErrorDBC(w_hdbc1);
        rc = bcp_bind(w_hdbc1, (BYTE *) d_street_2,
0, ADDRESS_LEN, NULL, 0, 0, ++i);
        if (rc != SUCCEED)
                HandleErrorDBC(w_hdbc1);
        rc = bcp_bind(w_hdbc1, (BYTE *) d_city, 0,
ADDRESS_LEN, NULL, 0, 0, ++i);
        if (rc != SUCCEED)
                HandleErrorDBC(w_hdbc1);
        rc = bcp_bind(w_hdbc1, (BYTE *) d_state, 0,
STATE_LEN, NULL, 0, 0, ++i);
        if (rc != SUCCEED)
                HandleErrorDBC(w_hdbc1);
        rc = bcp_bind(w_hdbc1, (BYTE *) d_zip, 0,
ZIP_LEN, NULL, 0, 0, ++i);
        if (rc != SUCCEED)
                HandleErrorDBC(w_hdbc1);

        d_ytd  = 30000.0;

        d_next_o_id = orders_per_district+1;

        time_start = (TimeNow() / MILLI);

        for (w_id = aptr->starting_warehouse; w_id
<= aptr->num_warehouses; w_id++)
        {
                d_w_id = w_id;

                for (d_id = 1; d_id <=
DISTRICT_PER_WAREHOUSE; d_id++)
                {

        MakeAlphaStringPadded(6,10,D_NAME_LEN,
d_name);

                        MakeAddress(d_street_1,
d_street_2, d_city, d_state, d_zip);

                        d_tax = ((float)
RandomNumber(0L,2000L))/10000.00;

                        rc =
bcp_sendrow(w_hdbc1);
                        if (rc != SUCCEED)

        HandleErrorDBC(w_hdbc1);

                        district_rows_loaded++;
                        CheckForCommit(w_hdbc1,
w_hstmt1, district_rows_loaded, "district",
&time_start);
                }
    }

        rcint = bcp_done(w_hdbc1);
        if (rcint < 0)
                HandleErrorDBC(w_hdbc1);


        printf("Finished loading district
table.\n");

        // if build index after load...
        if ((aptr->build_index == 1) && (aptr-
>index_order == 0))
                BuildIndex("idxdiscl");

    return;
}

//=================================================
==================
//
// Function   : Stock
//
//=================================================
==================
void Stock()
{
        int             i;
        long      s_i_id;
        long      s_w_id;
    short s_quantity;
    char  s_dist_01[S_DIST_LEN+1];
    char  s_dist_02[S_DIST_LEN+1];
    char  s_dist_03[S_DIST_LEN+1];
```


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```
    char  s_dist_04[S_DIST_LEN+1];
    char  s_dist_05[S_DIST_LEN+1];
    char  s_dist_06[S_DIST_LEN+1];
    char  s_dist_07[S_DIST_LEN+1];
    char  s_dist_08[S_DIST_LEN+1];
    char  s_dist_09[S_DIST_LEN+1];
    char  s_dist_10[S_DIST_LEN+1];
    long  s_ytd;
    short s_order_cnt;
    short s_remote_cnt;
    char  s_data[S_DATA_LEN+1];
    short len;
          char      name[20];
          long      time_start;
          RETCODE   rc;
          DBINT     rcint;
          char      bcphint[128];
          char      err_log_path[256];

          // Seed with unique number
          seed(3);

          // if build index before load...
          if ((aptr->build_index == 1) && (aptr-
>index_order == 1))
                    BuildIndex("idxstkcl");

          sprintf(name, "%s..%s", aptr->database,
"stock");

          strcpy(err_log_path,aptr->log_path);
          strcat(err_log_path,"stock.err");
          rc = bcp_init(w_hdbc1, name, NULL,
err_log_path, DB_IN);
          if (rc != SUCCEED)
                    HandleErrorDBC(w_hdbc1);

          if ((aptr->build_index == 1) && (aptr-
>index_order == 1))
          {
                    sprintf(bcphint, "tablock, order
(s_i_id, s_w_id), ROWS_PER_BATCH = %u", (aptr-
>num_warehouses * 100000));
                    rc = bcp_control(w_hdbc1,
BCPHINTS, (void*) bcphint);
                    if (rc != SUCCEED)

          HandleErrorDBC(w_hdbc1);
          }

          i = 0;
          rc = bcp_bind(w_hdbc1, (BYTE *) &s_i_id, 0,
SQL_VARLEN_DATA, NULL, 0, SQLINT4, ++i);
          if (rc != SUCCEED)
                    HandleErrorDBC(w_hdbc1);
          rc = bcp_bind(w_hdbc1, (BYTE *) &s_w_id, 0,
SQL_VARLEN_DATA, NULL, 0, SQLINT4, ++i);
          if (rc != SUCCEED)
                    HandleErrorDBC(w_hdbc1);
          rc = bcp_bind(w_hdbc1, (BYTE *)
&s_quantity, 0, SQL_VARLEN_DATA, NULL, 0, SQLINT2,
++i);
          if (rc != SUCCEED)
                    HandleErrorDBC(w_hdbc1);
          rc = bcp_bind(w_hdbc1, (BYTE *) &s_ytd, 0,
SQL_VARLEN_DATA, NULL, 0, SQLINT4, ++i);
          if (rc != SUCCEED)
                    HandleErrorDBC(w_hdbc1);
          rc = bcp_bind(w_hdbc1, (BYTE *)
&s_order_cnt, 0, SQL_VARLEN_DATA, NULL, 0, SQLINT2,
++i);
          if (rc != SUCCEED)
                    HandleErrorDBC(w_hdbc1);
          rc = bcp_bind(w_hdbc1, (BYTE *)
&s_remote_cnt, 0, SQL_VARLEN_DATA, NULL, 0, SQLINT2,
++i);
          if (rc != SUCCEED)
                    HandleErrorDBC(w_hdbc1);
          rc = bcp_bind(w_hdbc1, (BYTE *) s_data, 0,
SQL_VARLEN_DATA, "", 1, 0, ++i);
          if (rc != SUCCEED)
                    HandleErrorDBC(w_hdbc1);
          rc = bcp_bind(w_hdbc1, (BYTE *) s_dist_01,
0, S_DIST_LEN, NULL, 0, 0, ++i);
          if (rc != SUCCEED)
                    HandleErrorDBC(w_hdbc1);
          rc = bcp_bind(w_hdbc1, (BYTE *) s_dist_02,
0, S_DIST_LEN, NULL, 0, 0, ++i);
          if (rc != SUCCEED)
                    HandleErrorDBC(w_hdbc1);
          rc = bcp_bind(w_hdbc1, (BYTE *) s_dist_03,
0, S_DIST_LEN, NULL, 0, 0, ++i);
          if (rc != SUCCEED)
                    HandleErrorDBC(w_hdbc1);
          rc = bcp_bind(w_hdbc1, (BYTE *) s_dist_04,
0, S_DIST_LEN, NULL, 0, 0, ++i);
          if (rc != SUCCEED)
                    HandleErrorDBC(w_hdbc1);
          rc = bcp_bind(w_hdbc1, (BYTE *) s_dist_05,
0, S_DIST_LEN, NULL, 0, 0, ++i);
          if (rc != SUCCEED)
                    HandleErrorDBC(w_hdbc1);
          rc = bcp_bind(w_hdbc1, (BYTE *) s_dist_06,
0, S_DIST_LEN, NULL, 0, 0, ++i);
          if (rc != SUCCEED)
                    HandleErrorDBC(w_hdbc1);
          rc = bcp_bind(w_hdbc1, (BYTE *) s_dist_07,
0, S_DIST_LEN, NULL, 0, 0, ++i);
          if (rc != SUCCEED)
                    HandleErrorDBC(w_hdbc1);
          rc = bcp_bind(w_hdbc1, (BYTE *) s_dist_08,
0, S_DIST_LEN, NULL, 0, 0, ++i);
          if (rc != SUCCEED)
                    HandleErrorDBC(w_hdbc1);
          rc = bcp_bind(w_hdbc1, (BYTE *) s_dist_09,
0, S_DIST_LEN, NULL, 0, 0, ++i);
          if (rc != SUCCEED)
                    HandleErrorDBC(w_hdbc1);
          rc = bcp_bind(w_hdbc1, (BYTE *) s_dist_10,
0, S_DIST_LEN, NULL, 0, 0, ++i);
          if (rc != SUCCEED)
                    HandleErrorDBC(w_hdbc1);

          s_ytd = s_order_cnt = s_remote_cnt = 0;

          time_start = (TimeNow() / MILLI);

          printf("...Loading stock table\n");

          for (s_i_id=1; s_i_id <= max_items;
s_i_id++)
          {

                    for (s_w_id = (long)aptr-
>starting_warehouse; s_w_id <= aptr->num_warehouses;
s_w_id++)
                    {

                              s_quantity =
(short)RandomNumber(10L,100L);
                              len =
MakeAlphaString(24,24,S_DIST_LEN, s_dist_01);
                              len =
MakeAlphaString(24,24,S_DIST_LEN, s_dist_02);
                              len =
MakeAlphaString(24,24,S_DIST_LEN, s_dist_03);
                              len =
MakeAlphaString(24,24,S_DIST_LEN, s_dist_04);
                              len =
MakeAlphaString(24,24,S_DIST_LEN, s_dist_05);
                              len =
MakeAlphaString(24,24,S_DIST_LEN, s_dist_06);
                              len =
MakeAlphaString(24,24,S_DIST_LEN, s_dist_07);
                              len =
MakeAlphaString(24,24,S_DIST_LEN, s_dist_08);
                              len =
MakeAlphaString(24,24,S_DIST_LEN, s_dist_09);
                              len =
MakeAlphaString(24,24,S_DIST_LEN, s_dist_10);

                              len =
MakeOriginalAlphaString(26,50, S_DATA_LEN,
s_data,10);

                              rc =
bcp_sendrow(w_hdbc1);
                              if (rc != SUCCEED)

          HandleErrorDBC(w_hdbc1);

                              stock_rows_loaded++;

          CheckForCommit_Big(w_hdbc1, w_hstmt1,
stock_rows_loaded, "stock", &time_start);
                    }
          }

          rcint = bcp_done(w_hdbc1);
          if (rcint < 0)
                    HandleErrorDBC(w_hdbc1);


          printf("Finished loading stock table.\n");

          SQLFreeStmt(w_hstmt1, SQL_DROP);
          SQLDisconnect(w_hdbc1);
          SQLFreeConnect(w_hdbc1);
```


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```
          // if build index after load...
          if ((aptr->build_index == 1) && (aptr-
>index_order == 0))
                    BuildIndex("idxstkcl");

          return;
}

//=================================================
==================
//
// Function   : LoadCustomer
//
//=================================================
==================
void LoadCustomer()
{
          LOADER_TIME_STRUCT
customer_time_start;
          LOADER_TIME_STRUCT      history_time_start;
          long
          w_id;
    short                         d_id;
          DWORD
          dwThreadID[MAX_CUSTOMER_THREADS];
          HANDLE
          hThread[MAX_CUSTOMER_THREADS];
          char                              name[20];
          RETCODE
          rc;
          DBINT
          rcint;
          char
          bcphint[128];
          char
          cmd[256];
          int
                    num_procs;
          char
          err_log_path_cust[256];
          char
          err_log_path_hist[256];

          // Seed with unique number
          seed(5);

          printf("Loading customer and history
tables...\n");

          // if build index before load...
          if ((aptr->build_index == 1) && (aptr-
>index_order == 1))
          {
                    BuildIndex("idxcuscl");
                     // check the number of
processors on this system
                     // if 8 or more processors, then
build index on History.
                     // if less than 8 processors, do
not build the index
                    num_procs = atoi(getenv(
"NUMBER_OF_PROCESSORS" ));
                    if ( num_procs >= 8 )
                              BuildIndex("idxhiscl");
          }

          // Initialize bulk copy
          sprintf(name, "%s..%s", aptr->database,
"customer");

          strcpy(err_log_path_cust,aptr->log_path);
          strcat(err_log_path_cust,"customer.err");
          rc = bcp_init(c_hdbc1, name, NULL,
err_log_path_cust, DB_IN);
          if (rc != SUCCEED)
                    HandleErrorDBC(c_hdbc1);

          if ((aptr->build_index == 1) && (aptr-
>index_order == 1))
          {
                    sprintf(bcphint, "tablock, order
(c_w_id, c_d_id, c_id), ROWS_PER_BATCH = %u", (aptr-
>num_warehouses * 30000));
                    rc = bcp_control(c_hdbc1,
BCPHINTS, (void*) bcphint);
                    if (rc != SUCCEED)

          HandleErrorDBC(c_hdbc1);
          }

          sprintf(name, "%s..%s", aptr->database,
"history");

          rc = bcp_init(c_hdbc2, name, NULL,
"logs\\history.err", DB_IN);
          strcpy(err_log_path_hist,aptr->log_path);
          strcat(err_log_path_hist,"history.err");
          rc = bcp_init(c_hdbc2, name, NULL,
err_log_path_hist, DB_IN);
          if (rc != SUCCEED)
                    HandleErrorDBC(c_hdbc2);

          sprintf(bcphint, "tablock");
          rc = bcp_control(c_hdbc2, BCPHINTS, (void*)
bcphint);
          if (rc != SUCCEED)
                    HandleErrorDBC(c_hdbc2);

          customer_rows_loaded    = 0;
          history_rows_loaded     = 0;

          CustomerBufInit();

          customer_time_start.time_start = (TimeNow()
/ MILLI);
          history_time_start.time_start = (TimeNow()
/ MILLI);

          for (w_id = (long)aptr->starting_warehouse;
w_id <= aptr->num_warehouses; w_id++)
          {
                    for (d_id = 1; d_id <=
DISTRICT_PER_WAREHOUSE; d_id++)
                    {
                              CustomerBufLoad(d_id,
w_id);

                              // Start parallel
loading threads here...
                              // Start customer table
thread
                              printf("...Loading
customer table for: d_id = %d, w_id = %d\n", d_id,
w_id);

                              hThread[0] =
CreateThread(NULL,

                                        0,


(LPTHREAD_START_ROUTINE) LoadCustomerTable,


&customer_time_start,

                                        0,


&dwThreadID[0]);

                              if (hThread[0] == NULL)
                              {

          printf("Error, failed in creating creating
thread = 0.\n");
                                        exit(-1);
                              }

                              // Start History table
thread
                              printf("...Loading
history table for: d_id = %d, w_id = %d\n", d_id,
w_id);

                              hThread[1] =
CreateThread(NULL,

                                        0,


(LPTHREAD_START_ROUTINE) LoadHistoryTable,


&history_time_start,

                                        0,


&dwThreadID[1]);

                              if (hThread[1] == NULL)
                              {

          printf("Error, failed in creating creating
thread = 1.\n");
                                        exit(-1);
```


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```
                        }

                        WaitForSingleObject(
hThread[0], INFINITE );
                        WaitForSingleObject(
hThread[1], INFINITE );

                        if
(CloseHandle(hThread[0]) == FALSE)
                        {

        printf("Error, failed in closing customer
thread handle with errno: %d\n", GetLastError());
                        }

                        if
(CloseHandle(hThread[1]) == FALSE)
                        {

        printf("Error, failed in closing history
thread handle with errno: %d\n", GetLastError());
                        }
                }
        }

        // flush the bulk connection
        rcint = bcp_done(c_hdbc1);
        if (rcint < 0)
                HandleErrorDBC(c_hdbc1);


        rcint = bcp_done(c_hdbc2);
        if (rcint < 0)
                HandleErrorDBC(c_hdbc2);


        printf("Finished loading customer
table.\n");

        // if build index after load...
        if ((aptr->build_index == 1) && (aptr-
>index_order == 0))
        {
                BuildIndex("idxcuscl");
                // check the number of processors
on this system
                // if 8 or more processors, then
build index on History.
                // if less than 8 processors, do
not build the index
                num_procs = atoi(getenv(
"NUMBER_OF_PROCESSORS" ));
                if (num_procs >= 8)
                        BuildIndex("idxhiscl");
        }

        // build non-clustered index
        if (aptr->build_index == 1)
                BuildIndex("idxcusnc");

        // Output the NURAND used for the loader
into C_FIRST for C_ID = 1,
        // C_W_ID = 1, and C_D_ID = 1
        sprintf(cmd, "osql -S%s -U%s -P%s -d%s -e -
Q\"update customer set c_first = 'C_LOAD = %d' where
c_id = 1 and c_w_id = 1 and c_d_id = 1\" >
%snurand_load.log",
                                        aptr->server,
                                        aptr->user,
                                        aptr-
>password,
                                        aptr-
>database,

        LOADER_NURAND_C,
                                        aptr-
>log_path);

        system(cmd);

        SQLFreeStmt(c_hstmt1, SQL_DROP);
        SQLDisconnect(c_hdbc1);
        SQLFreeConnect(c_hdbc1);

        SQLFreeStmt(c_hstmt2, SQL_DROP);
        SQLDisconnect(c_hdbc2);
        SQLFreeConnect(c_hdbc2);

    return;
}

//==============================================
====================
//
// Function   : CustomerBufInit
//
//==============================================
====================
void CustomerBufInit()
{
        long     i;

        for (i=0;i<customers_per_district;i++)
        {
                customer_buf[i].c_id = 0;
                customer_buf[i].c_d_id = 0;
                customer_buf[i].c_w_id = 0;


        strcpy(customer_buf[i].c_first,"");

        strcpy(customer_buf[i].c_middle,"");

        strcpy(customer_buf[i].c_last,"");

        strcpy(customer_buf[i].c_street_1,"");

        strcpy(customer_buf[i].c_street_2,"");

        strcpy(customer_buf[i].c_city,"");

        strcpy(customer_buf[i].c_state,"");
                strcpy(customer_buf[i].c_zip,"");

        strcpy(customer_buf[i].c_phone,"");

        strcpy(customer_buf[i].c_credit,"");

                customer_buf[i].c_credit_lim = 0;
                customer_buf[i].c_discount =
(float) 0;

        strcpy(customer_buf[i].c_balance,"");

                customer_buf[i].c_ytd_payment =
0;
                customer_buf[i].c_payment_cnt =
0;
                customer_buf[i].c_delivery_cnt =
0;


        strcpy(customer_buf[i].c_data,"");


                customer_buf[i].h_amount = 0;


        strcpy(customer_buf[i].h_data,"");
        }
}

//==============================================
====================
//
// Function   : CustomerBufLoad
//
// Fills shared buffer for HISTORY and CUSTOMER
//==============================================
====================
void CustomerBufLoad(int d_id, long w_id)
{
        long                                    i;
    CUSTOMER_SORT_STRUCT
c[CUSTOMERS_PER_DISTRICT];

        for (i=0;i<customers_per_district;i++)
        {
                if (i < 1000)
                        LastName(i,
c[i].c_last);
                else

        LastName(NURand(255,0,999,LOADER_NURAND_C),
c[i].c_last);


        MakeAlphaStringPadded(8,16,FIRST_NAME_LEN,
c[i].c_first);

                c[i].c_id = i+1;
        }

        printf("...Loading customer buffer for:
d_id = %d, w_id = %d\n",
                        d_id, w_id);
```


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```
        for (i=0;i<customers_per_district;i++)
        {
                customer_buf[i].c_d_id = d_id;
                customer_buf[i].c_w_id = w_id;
                customer_buf[i].h_amount = 10.0;
                customer_buf[i].c_ytd_payment  =
10.0;
                customer_buf[i].c_payment_cnt  =
1;
                customer_buf[i].c_delivery_cnt =
0;
                customer_buf[i].c_id = c[i].c_id;
                strcpy(customer_buf[i].c_first,
c[i].c_first);
                strcpy(customer_buf[i].c_last,
c[i].c_last);
                customer_buf[i].c_middle[0] =
'O';
                customer_buf[i].c_middle[1] =
'E';

        MakeAddress(customer_buf[i].c_street_1,

customer_buf[i].c_street_2,

customer_buf[i].c_city,

customer_buf[i].c_state,

customer_buf[i].c_zip);
                MakeNumberString(16, 16,
PHONE_LEN, customer_buf[i].c_phone);

                if (RandomNumber(1L, 100L) > 10)

        customer_buf[i].c_credit[0] = 'G';
                else

        customer_buf[i].c_credit[0] = 'B';
                customer_buf[i].c_credit[1] =
'C';
                customer_buf[i].c_credit_lim =
50000.0;
                customer_buf[i].c_discount =
((float) RandomNumber(0L, 5000L)) / 10000.0;


        strcpy(customer_buf[i].c_balance,"-10.0");
                MakeAlphaStringPadded(300, 500,
C_DATA_LEN, customer_buf[i].c_data);

                // Generate HISTORY data
                MakeAlphaStringPadded(12, 24,
H_DATA_LEN, customer_buf[i].h_data);
        }
}

//================================================
==================
//
// Function   : LoadCustomerTable
//
```

```
//================================================
==================
void LoadCustomerTable(LOADER_TIME_STRUCT
*customer_time_start)
{
        long                i;
    long        c_id;
    short       c_d_id;
        long                c_w_id;
    char        c_first[FIRST_NAME_LEN+1];
    char        c_middle[MIDDLE_NAME_LEN+1];
    char        c_last[LAST_NAME_LEN+1];
    char        c_street_1[ADDRESS_LEN+1];
    char        c_street_2[ADDRESS_LEN+1];
    char        c_city[ADDRESS_LEN+1];
    char        c_state[STATE_LEN+1];
    char        c_zip[ZIP_LEN+1];
    char        c_phone[PHONE_LEN+1];
    char        c_credit[CREDIT_LEN+1];
    double      c_credit_lim;
    double      c_discount;
        char                c_balance[6];
    double      c_ytd_payment;
    short       c_payment_cnt;
    short       c_delivery_cnt;
    char        c_data[C_DATA_LEN+1];
        char                c_since[C_SINCE_LEN+1];

        RETCODE             rc;

    i = 0;
        rc = bcp_bind(c_hdbc1, (BYTE *) &c_id, 0,
SQL_VARLEN_DATA, NULL, 0, SQLINT4, ++i);
        if (rc != SUCCEED)
                HandleErrorDBC(c_hdbc1);
    rc = bcp_bind(c_hdbc1, (BYTE *) &c_d_id, 0,
SQL_VARLEN_DATA, NULL, 0, SQLINT2, ++i);
        if (rc != SUCCEED)
                HandleErrorDBC(c_hdbc1);
        rc = bcp_bind(c_hdbc1, (BYTE *) &c_w_id, 0,
SQL_VARLEN_DATA, NULL, 0, SQLINT4, ++i);
        if (rc != SUCCEED)
                HandleErrorDBC(c_hdbc1);
    rc = bcp_bind(c_hdbc1, (BYTE *) &c_discount, 0,
SQL_VARLEN_DATA, NULL, 0, SQLFLT8, ++i);
        if (rc != SUCCEED)
                HandleErrorDBC(c_hdbc1);
    rc = bcp_bind(c_hdbc1, (BYTE *) &c_credit_lim, 0,
SQL_VARLEN_DATA, NULL, 0, SQLFLT8, ++i);
        if (rc != SUCCEED)
                HandleErrorDBC(c_hdbc1);
    rc = bcp_bind(c_hdbc1, (BYTE *) c_last, 0,
LAST_NAME_LEN, NULL, 0, 0, ++i);
        if (rc != SUCCEED)
                HandleErrorDBC(c_hdbc1);
        rc = bcp_bind(c_hdbc1, (BYTE *) c_first, 0,
FIRST_NAME_LEN, NULL, 0, 0, ++i);
        if (rc != SUCCEED)
                HandleErrorDBC(c_hdbc1);
    rc = bcp_bind(c_hdbc1, (BYTE *) c_credit, 0,
CREDIT_LEN, NULL, 0, 0, ++i);
        if (rc != SUCCEED)
                HandleErrorDBC(c_hdbc1);
```

```
    rc = bcp_bind(c_hdbc1, (BYTE *) c_balance, 0, 5,
NULL, 0, SQLCHARACTER, ++i);
        if (rc != SUCCEED)
                HandleErrorDBC(c_hdbc1);
    rc = bcp_bind(c_hdbc1, (BYTE *) &c_ytd_payment,
0, SQL_VARLEN_DATA, NULL, 0, SQLFLT8, ++i);
        if (rc != SUCCEED)
                HandleErrorDBC(c_hdbc1);
    rc = bcp_bind(c_hdbc1, (BYTE *) &c_payment_cnt,
0, SQL_VARLEN_DATA, NULL, 0, SQLINT2, ++i);
        if (rc != SUCCEED)
                HandleErrorDBC(c_hdbc1);
    rc = bcp_bind(c_hdbc1, (BYTE *)
&c_delivery_cnt,0, SQL_VARLEN_DATA, NULL, 0, SQLINT2,
++i);
        if (rc != SUCCEED)
                HandleErrorDBC(c_hdbc1);
    rc = bcp_bind(c_hdbc1, (BYTE *) c_street_1, 0,
ADDRESS_LEN, NULL, 0, 0, ++i);
        if (rc != SUCCEED)
                HandleErrorDBC(c_hdbc1);
    rc = bcp_bind(c_hdbc1, (BYTE *) c_street_2, 0,
ADDRESS_LEN, NULL,0,0, ++i);
        if (rc != SUCCEED)
                HandleErrorDBC(c_hdbc1);
    rc = bcp_bind(c_hdbc1, (BYTE *) c_city, 0,
ADDRESS_LEN, NULL, 0, 0, ++i);
        if (rc != SUCCEED)
                HandleErrorDBC(c_hdbc1);
    rc = bcp_bind(c_hdbc1, (BYTE *) c_state, 0,
STATE_LEN, NULL, 0, 0, ++i);
        if (rc != SUCCEED)
                HandleErrorDBC(c_hdbc1);
    rc = bcp_bind(c_hdbc1, (BYTE *) c_zip, 0,
ZIP_LEN, NULL, 0, 0, ++i);
        if (rc != SUCCEED)
                HandleErrorDBC(c_hdbc1);
    rc = bcp_bind(c_hdbc1, (BYTE *) c_phone, 0,
PHONE_LEN, NULL, 0, 0, ++i);
        if (rc != SUCCEED)
                HandleErrorDBC(c_hdbc1);
        rc = bcp_bind(c_hdbc1, (BYTE *) &c_since,
0, C_SINCE_LEN, NULL, 0, SQLCHARACTER, ++i);
        if (rc != SUCCEED)
                HandleErrorDBC(c_hdbc1);
        rc = bcp_bind(c_hdbc1, (BYTE *) c_middle,
0, MIDDLE_NAME_LEN,NULL, 0, 0, ++i);
        if (rc != SUCCEED)
                HandleErrorDBC(c_hdbc1);
    rc = bcp_bind(c_hdbc1, (BYTE *) c_data, 0,
C_DATA_LEN, NULL, 0, 0, ++i);
        if (rc != SUCCEED)
                HandleErrorDBC(c_hdbc1);

    for (i = 0; i < customers_per_district; i++)
    {
                c_id = customer_buf[i].c_id;
                c_d_id = customer_buf[i].c_d_id;
                c_w_id = customer_buf[i].c_w_id;

                strcpy(c_first,
customer_buf[i].c_first);
```


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```
                    strcpy(c_middle,
customer_buf[i].c_middle);
                    strcpy(c_last,
customer_buf[i].c_last);
                    strcpy(c_street_1,
customer_buf[i].c_street_1);
                    strcpy(c_street_2,
customer_buf[i].c_street_2);
                    strcpy(c_city,
customer_buf[i].c_city);
                    strcpy(c_state,
customer_buf[i].c_state);
                    strcpy(c_zip,
customer_buf[i].c_zip);
                    strcpy(c_phone,
customer_buf[i].c_phone);
                    strcpy(c_credit,
customer_buf[i].c_credit);

                    FormatDate(&c_since);


                    c_credit_lim =
customer_buf[i].c_credit_lim;
                    c_discount =
customer_buf[i].c_discount;
                    strcpy(c_balance,
customer_buf[i].c_balance);
                    c_ytd_payment =
customer_buf[i].c_ytd_payment;
                    c_payment_cnt =
customer_buf[i].c_payment_cnt;
                    c_delivery_cnt =
customer_buf[i].c_delivery_cnt;
                    strcpy(c_data,
customer_buf[i].c_data);

                    // Send data to server
                    rc = bcp_sendrow(c_hdbc1);
                    if (rc != SUCCEED)

          HandleErrorDBC(c_hdbc1);

                    customer_rows_loaded++;
                    CheckForCommit(c_hdbc1, c_hstmt1,
customer_rows_loaded, "customer",
&customer_time_start->time_start);
    }
}

//================================================
====================
//
// Function   : LoadHistoryTable
//
//================================================
====================
void LoadHistoryTable(LOADER_TIME_STRUCT
*history_time_start)
{
          long               i;
    long        c_id;
    short       c_d_id;
          long               c_w_id;
          double    h_amount;
    char        h_data[H_DATA_LEN+1];
          char               h_date[H_DATE_LEN+1];

          RETCODE            rc;

          i = 0;
    rc = bcp_bind(c_hdbc2, (BYTE *) &c_id, 0,
SQL_VARLEN_DATA, NULL, 0, SQLINT4, ++i);
          if (rc != SUCCEED)
                    HandleErrorDBC(c_hdbc2);
    rc = bcp_bind(c_hdbc2, (BYTE *) &c_d_id, 0,
SQL_VARLEN_DATA, NULL, 0, SQLINT2, ++i);
          if (rc != SUCCEED)
                    HandleErrorDBC(c_hdbc2);
          rc = bcp_bind(c_hdbc2, (BYTE *) &c_w_id, 0,
SQL_VARLEN_DATA, NULL, 0, SQLINT4, ++i);
          if (rc != SUCCEED)
                    HandleErrorDBC(c_hdbc2);
    rc = bcp_bind(c_hdbc2, (BYTE *) &c_d_id, 0,
SQL_VARLEN_DATA, NULL, 0, SQLINT2, ++i);
          if (rc != SUCCEED)
                    HandleErrorDBC(c_hdbc2);
          rc = bcp_bind(c_hdbc2, (BYTE *) &c_w_id, 0,
SQL_VARLEN_DATA, NULL, 0, SQLINT4, ++i);
          if (rc != SUCCEED)
                    HandleErrorDBC(c_hdbc2);
          rc = bcp_bind(c_hdbc2, (BYTE *) &h_date, 0,
H_DATE_LEN, NULL, 0, SQLCHARACTER, ++i);
          if (rc != SUCCEED)
                    HandleErrorDBC(c_hdbc2);
    rc = bcp_bind(c_hdbc2, (BYTE *) &h_amount, 0,
SQL_VARLEN_DATA, NULL, 0, SQLFLT8, ++i);
          if (rc != SUCCEED)
                    HandleErrorDBC(c_hdbc2);
    rc = bcp_bind(c_hdbc2, (BYTE *) h_data, 0,
H_DATA_LEN, NULL, 0, 0, ++i);
          if (rc != SUCCEED)
                    HandleErrorDBC(c_hdbc2);

    for (i = 0; i < customers_per_district; i++)
    {
                    c_id = customer_buf[i].c_id;
                    c_d_id = customer_buf[i].c_d_id;
                    c_w_id = customer_buf[i].c_w_id;
                    h_amount =
customer_buf[i].h_amount;
                    strcpy(h_data,
customer_buf[i].h_data);


                    FormatDate(&h_date);


                    // send to server
                    rc = bcp_sendrow(c_hdbc2);
                    if (rc != SUCCEED)


          HandleErrorDBC(c_hdbc2);

                    history_rows_loaded++;
                    CheckForCommit(c_hdbc2, c_hstmt2,
history_rows_loaded, "history", &history_time_start-
>time_start);
    }
}

//================================================
=========-===============
//
// Function   : LoadOrders
//
//================================================
=========================
void LoadOrders()
{
          LOADER_TIME_STRUCT      orders_time_start;
          LOADER_TIME_STRUCT
new_order_time_start;
          LOADER_TIME_STRUCT
order_line_time_start;
          long
          w_id;
    short                     d_id;
          DWORD
          dwThreadID[MAX_ORDER_THREADS];
          HANDLE
          hThread[MAX_ORDER_THREADS];
          char                          name[20];
          RETCODE
          rc;
          char
          bcphint[128];
          char
          err_log_path_ord[256];
          char
          err_log_path_nord[256];
          char
          err_log_path_ordl[256];

          // seed with unique number
          seed(6);

          printf("Loading orders...\n");

          // if build index before load...
          if ((aptr->build_index == 1) && (aptr-
>index_order == 1))
          {
                    BuildIndex("idxordcl");
                    BuildIndex("idxnodcl");
                    BuildIndex("idxodlcl");
          }

          // initialize bulk copy
          sprintf(name, "%s..%s", aptr->database,
"orders");

          rc = bcp_init(o_hdbc1, name, NULL,
"logs\\orders.err", DB_IN);
          strcpy(err_log_path_ord,aptr->log_path);
          strcat(err_log_path_ord,"orders.err");
          rc = bcp_init(o_hdbc1, name, NULL,
err_log_path_ord, DB_IN);
```


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```
          if (rc != SUCCEED)
                    HandleErrorDBC(o_hdbc1);

          if ((aptr->build_index == 1) && (aptr-
>index_order == 1))
          {
                    sprintf(bcphint, "tablock, order
(o_w_id, o_d_id, o_id), ROWS_PER_BATCH = %u", (aptr-
>num_warehouses * 30000));
                    rc = bcp_control(o_hdbc1,
BCPHINTS, (void*) bcphint);
                    if (rc != SUCCEED)

          HandleErrorDBC(o_hdbc1);
          }

          sprintf(name, "%s..%s", aptr->database,
"new_order");

          rc = bcp_init(o_hdbc2, name, NULL,
"logs\\neword.err", DB_IN);
          strcpy(err_log_path_nord,aptr->log_path);
          strcat(err_log_path_nord,"neword.err");
          rc = bcp_init(o_hdbc2, name, NULL,
err_log_path_nord, DB_IN);
          if (rc != SUCCEED)
                    HandleErrorDBC(o_hdbc2);

          if ((aptr->build_index == 1) && (aptr-
>index_order == 1))
          {
                    sprintf(bcphint, "tablock, order
(no_w_id, no_d_id, no_o_id), ROWS_PER_BATCH = %u",
(aptr->num_warehouses * 9000));
                    rc = bcp_control(o_hdbc2,
BCPHINTS, (void*) bcphint);
                    if (rc != SUCCEED)

          HandleErrorDBC(o_hdbc2);
          }

          sprintf(name, "%s..%s", aptr->database,
"order_line");

          rc = bcp_init(o_hdbc3, name, NULL,
"logs\\ordline.err", DB_IN);
          strcpy(err_log_path_ordl,aptr->log_path);
          strcat(err_log_path_ordl,"ordline.err");
          rc = bcp_init(o_hdbc3, name, NULL,
err_log_path_ordl, DB_IN);
          if (rc != SUCCEED)
                    HandleErrorDBC(o_hdbc3);

    if ((aptr->build_index == 1) && (aptr-
>index_order == 1))
          {
                    sprintf(bcphint, "tablock, order
(ol_w_id, ol_d_id, ol_o_id, ol_number),
ROWS_PER_BATCH = %u", (aptr->num_warehouses *
300000));
                    rc = bcp_control(o_hdbc3,
BCPHINTS, (void*) bcphint);
                    if (rc != SUCCEED)

          HandleErrorDBC(o_hdbc3);
          }

          orders_rows_loaded      = 0;
          new_order_rows_loaded   = 0;
          order_line_rows_loaded  = 0;

          OrdersBufInit();

          orders_time_start.time_start = (TimeNow() /
MILLI);
          new_order_time_start.time_start =
(TimeNow() / MILLI);
          order_line_time_start.time_start =
(TimeNow() / MILLI);

          for (w_id = (long)aptr->starting_warehouse;
w_id <= aptr->num_warehouses; w_id++)
          {
                    for (d_id = 1; d_id <=
DISTRICT_PER_WAREHOUSE; d_id++)
                    {

                              OrdersBufLoad(d_id,
w_id);

                              // start parallel
loading threads here...
                              // start Orders table
thread
                              printf("...Loading
Order Table for: d_id = %d, w_id = %d\n", d_id,
w_id);

                              hThread[0] =
CreateThread(NULL,

                                        0,


(LPTHREAD_START_ROUTINE) LoadOrdersTable,


&orders_time_start,

                                        0,


&dwThreadID[0]);

                              if (hThread[0] == NULL)
                              {

          printf("Error, failed in creating creating
thread = 0.\n");
                                        exit(-1);
                              }

                              // start NewOrder table
thread
                              printf("...Loading New-
Order Table for: d_id = %d, w_id = %d\n", d_id,
w_id);

                              hThread[1] =
CreateThread(NULL,

                                        0,


(LPTHREAD_START_ROUTINE) LoadNewOrderTable,


&new_order_time_start,

                                        0,


&dwThreadID[1]);

                              if (hThread[1] == NULL)
                              {

          printf("Error, failed in creating creating
thread = 1.\n");
                                        exit(-1);
                              }

                              // start Order-Line
table thread
                              printf("...Loading
Order-Line Table for: d_id = %d, w_id = %d\n", d_id,
w_id);

                              hThread[2] =
CreateThread(NULL,

                                        0,


(LPTHREAD_START_ROUTINE) LoadOrderLineTable,


&order_line_time_start,

                                        0,


&dwThreadID[2]);

                              if (hThread[2] == NULL)
                              {

          printf("Error, failed in creating creating
thread = 2.\n");
                                        exit(-1);
                              }

                              WaitForSingleObject(
hThread[0], INFINITE );
                              WaitForSingleObject(
hThread[1], INFINITE );
```


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```
                              WaitForSingleObject(
hThread[2], INFINITE );

                              if
(CloseHandle(hThread[0]) == FALSE)
                              {

          printf("Error, failed in closing Orders
thread handle with errno: %d\n", GetLastError());
                              }

                              if
(CloseHandle(hThread[1]) == FALSE)
                              {

          printf("Error, failed in closing NewOrder
thread handle with errno: %d\n", GetLastError());
                              }

                              if
(CloseHandle(hThread[2]) == FALSE)
                              {

          printf("Error, failed in closing OrderLine
thread handle with errno: %d\n", GetLastError());
                              }
                    }
          }

          printf("Finished loading orders.\n");

    return;
}

//=================================================
====================
//
// Function   : OrdersBufInit
//
// Clears shared buffer for ORDERS, NEWORDER, and
ORDERLINE
//
//=================================================
====================
void OrdersBufInit()
{
          int     i;
          int                   j;

          for (i=0;i<orders_per_district;i++)
          {
                    orders_buf[i].o_id = 0;
                    orders_buf[i].o_d_id = 0;
                    orders_buf[i].o_w_id = 0;
                    orders_buf[i].o_c_id = 0;
                    orders_buf[i].o_carrier_id = 0;
                    orders_buf[i].o_ol_cnt = 0;
                    orders_buf[i].o_all_local = 0;

                    for (j=0;j<=14;j++)
                    {

          orders_buf[i].o_ol[j].ol = 0;

          orders_buf[i].o_ol[j].ol_i_id = 0;

          orders_buf[i].o_ol[j].ol_supply_w_id = 0;

          orders_buf[i].o_ol[j].ol_quantity = 0;

          orders_buf[i].o_ol[j].ol_amount = 0;

          strcpy(orders_buf[i].o_ol[j].ol_dist_info,"
");
                    }
          }
}

//=================================================
====================
//
// Function   : OrdersBufLoad
//
// Fills shared buffer for ORDERS, NEWORDER, and
ORDERLINE
//
//=================================================
====================
void OrdersBufLoad(short d_id, long w_id)
{

          int     cust[ORDERS_PER_DISTRICT+1];
          long    o_id;
          long      ol;

          printf("...Loading Order Buffer for: d_id =
%d, w_id = %d\n",
                              d_id, w_id);

          GetPermutation(cust, orders_per_district);

          for
(o_id=0;o_id<orders_per_district;o_id++)
          {
                    // Generate ORDER and NEW-ORDER
data
                    orders_buf[o_id].o_d_id = d_id;
                    orders_buf[o_id].o_w_id = w_id;
                    orders_buf[o_id].o_id = o_id+1;
                    orders_buf[o_id].o_c_id =
cust[o_id+1];
                    orders_buf[o_id].o_ol_cnt =
(short)RandomNumber(5L, 15L);

                    if (o_id < first_new_order)
                    {

          orders_buf[o_id].o_carrier_id =
(short)RandomNumber(1L, 10L);

          orders_buf[o_id].o_all_local  = 1;
                    }
                    else
                    {

          orders_buf[o_id].o_carrier_id = 0;

          orders_buf[o_id].o_all_local  = 1;
                    }

                    for (ol=0;
ol<orders_buf[o_id].o_ol_cnt; ol++)
                    {


          orders_buf[o_id].o_ol[ol].ol = ol+1;

          orders_buf[o_id].o_ol[ol].ol_i_id =
RandomNumber(1L, max_items);

          orders_buf[o_id].o_ol[ol].ol_supply_w_id =
w_id;

          orders_buf[o_id].o_ol[ol].ol_quantity = 5;
                              MakeAlphaString(24, 24,
OL_DIST_INFO_LEN,
&orders_buf[o_id].o_ol[ol].ol_dist_info);

                              // Generate ORDER-LINE
data
                              if (o_id <
first_new_order)
                              {

          orders_buf[o_id].o_ol[ol].ol_amount = 0;
                                                  // Added to
insure ol_delivery_d set properly during load

          FormatDate(&orders_buf[o_id].o_ol[ol].ol_de
livery_d);

                              }
                              else
                              {

          orders_buf[o_id].o_ol[ol].ol_amount =
RandomNumber(1,999999)/100.0;
                                                  // Added to
insure ol_delivery_d set properly during load

                                                  // odbc
datetime format

          strcpy(orders_buf[o_id].o_ol[ol].ol_deliver
y_d,"1899-12-31 00:00:00.000");
                              }
                    }
          }
}

//=================================================
====================
//
// Function   : LoadOrdersTable
//
//=================================================
====================
void LoadOrdersTable(LOADER_TIME_STRUCT
*orders_time_start)
```


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```
{
        int         i;
    long        o_id;
        short       o_d_id;
        long                    o_w_id;
    long        o_c_id;
    short       o_carrier_id;
    short       o_ol_cnt;
    short       o_all_local;
        char
        o_entry_d[O_ENTRY_D_LEN+1];
        RETCODE             rc;
        DBINT               rcint;

        // bind ORDER data
    i = 0;
        rc = bcp_bind(o_hdbc1, (BYTE *) &o_id, 0,
SQL_VARLEN_DATA, NULL, 0, SQLINT4, ++i);
        if (rc != SUCCEED)
                HandleErrorDBC(o_hdbc1);
    rc = bcp_bind(o_hdbc1, (BYTE *) &o_d_id, 0,
SQL_VARLEN_DATA, NULL, 0, SQLINT2, ++i);
        if (rc != SUCCEED)
                HandleErrorDBC(o_hdbc1);
        rc = bcp_bind(o_hdbc1, (BYTE *) &o_w_id, 0,
SQL_VARLEN_DATA, NULL, 0, SQLINT4, ++i);
        if (rc != SUCCEED)
                HandleErrorDBC(o_hdbc1);
    rc = bcp_bind(o_hdbc1, (BYTE *) &o_c_id, 0,
SQL_VARLEN_DATA, NULL, 0, SQLINT4, ++i);
        if (rc != SUCCEED)
                HandleErrorDBC(o_hdbc1);
    rc = bcp_bind(o_hdbc1, (BYTE *) &o_carrier_id, 0,
SQL_VARLEN_DATA, NULL, 0, SQLINT2, ++i);
        if (rc != SUCCEED)
                HandleErrorDBC(o_hdbc1);
    rc = bcp_bind(o_hdbc1, (BYTE *) &o_ol_cnt, 0,
SQL_VARLEN_DATA, NULL, 0, SQLINT2, ++i);
        if (rc != SUCCEED)
                HandleErrorDBC(o_hdbc1);
    rc = bcp_bind(o_hdbc1, (BYTE *) &o_all_local, 0,
SQL_VARLEN_DATA, NULL, 0, SQLINT2, ++i);
        if (rc != SUCCEED)
                HandleErrorDBC(o_hdbc1);
        rc = bcp_bind(o_hdbc1, (BYTE *) &o_entry_d,
0, O_ENTRY_D_LEN, NULL, 0, SQLCHARACTER, ++i);
        if (rc != SUCCEED)
                HandleErrorDBC(o_hdbc1);

    for (i = 0; i < orders_per_district; i++)
    {
                o_id        =
orders_buf[i].o_id;
                o_d_id      =
orders_buf[i].o_d_id;
                o_w_id      =
orders_buf[i].o_w_id;
                o_c_id      =
orders_buf[i].o_c_id;
                o_carrier_id =
orders_buf[i].o_carrier_id;
                o_ol_cnt    =
orders_buf[i].o_ol_cnt;
                o_all_local  =
orders_buf[i].o_all_local;

                FormatDate(&o_entry_d);

                // send data to server
                rc = bcp_sendrow(o_hdbc1);
                if (rc != SUCCEED)


        HandleErrorDBC(o_hdbc1);

                orders_rows_loaded++;
                CheckForCommit(o_hdbc1, o_hstmt1,
orders_rows_loaded, "orders", &orders_time_start-
>time_start);
    }

        if ((o_w_id == aptr->num_warehouses) &&
(o_d_id == 10))
        {
                rcint = bcp_done(o_hdbc1);

                if (rcint < 0)

        HandleErrorDBC(o_hdbc1);

                SQLFreeStmt(o_hstmt1, SQL_DROP);
                SQLDisconnect(o_hdbc1);
                SQLFreeConnect(o_hdbc1);

                // if build index after load...
                if ((aptr->build_index == 1) &&
(aptr->index_order == 0))
                        BuildIndex("idxordcl");

                // build non-clustered index
                if (aptr->build_index == 1)
                        BuildIndex("idxordnc");
        }
}

//=================================================
====================
//
// Function   : LoadNewOrderTable
//
//=================================================
====================
void LoadNewOrderTable(LOADER_TIME_STRUCT
*new_order_time_start)
{
        long                i;
    long        o_id;
    short       o_d_id;
        long                o_w_id;
        RETCODE             rc;
        DBINT               rcint;

        // Bind NEW-ORDER data
        i = 0;
    rc = bcp_bind(o_hdbc2, (BYTE *) &o_id, 0,
SQL_VARLEN_DATA, NULL, 0, SQLINT4, ++i);
        if (rc != SUCCEED)
                HandleErrorDBC(o_hdbc2);
    rc = bcp_bind(o_hdbc2, (BYTE *) &o_d_id, 0,
SQL_VARLEN_DATA, NULL, 0, SQLINT2, ++i);
        if (rc != SUCCEED)
                HandleErrorDBC(o_hdbc2);
        rc = bcp_bind(o_hdbc2, (BYTE *) &o_w_id, 0,
SQL_VARLEN_DATA, NULL, 0, SQLINT4, ++i);
        if (rc != SUCCEED)
                HandleErrorDBC(o_hdbc2);

        for (i = first_new_order; i <
last_new_order; i++)
        {
                o_id    = orders_buf[i].o_id;
                o_d_id  = orders_buf[i].o_d_id;
                o_w_id  = orders_buf[i].o_w_id;

                rc = bcp_sendrow(o_hdbc2);
                if (rc != SUCCEED)


        HandleErrorDBC(o_hdbc2);

                new_order_rows_loaded++;

                CheckForCommit_Big(o_hdbc2,
o_hstmt2, new_order_rows_loaded, "new_order",
&new_order_time_start->time_start);
        }

        if ((o_w_id == aptr->num_warehouses) &&
(o_d_id == 10))
        {
                rcint = bcp_done(o_hdbc2);

                if (rcint < 0)

        HandleErrorDBC(o_hdbc2);

                SQLFreeStmt(o_hstmt2, SQL_DROP);
                SQLDisconnect(o_hdbc2);
                SQLFreeConnect(o_hdbc2);

                // if build index after load...
                if ((aptr->build_index == 1) &&
(aptr->index_order == 0))
                        BuildIndex("idxnodcl");
        }
}

//=================================================
====================
//
// Function   : LoadOrderLineTable
//
//=================================================
====================
void LoadOrderLineTable(LOADER_TIME_STRUCT
*order_line_time_start)
{
        long                i;
        long                j;
```


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```
    long        o_id;
          short     o_d_id;
          long                o_w_id;
          double              ol;
          long      ol_i_id;
          long                ol_supply_w_id;
    short       ol_quantity;
    double      ol_amount;
    char        ol_dist_info[DIST_INFO_LEN+1];
          char
          ol_delivery_d[OL_DELIVERY_D_LEN+1];
          RETCODE             rc;
          DBINT               rcint;

          // bind ORDER-LINE data
          i = 0;
    rc = bcp_bind(o_hdbc3, (BYTE *) &o_id, 0,
SQL_VARLEN_DATA, NULL, 0, SQLINT4, ++i);
          if (rc != SUCCEED)
                    HandleErrorDBC(o_hdbc3);
    rc = bcp_bind(o_hdbc3, (BYTE *) &o_d_id, 0,
SQL_VARLEN_DATA, NULL, 0, SQLINT2, ++i);
          if (rc != SUCCEED)
                    HandleErrorDBC(o_hdbc3);
          rc = bcp_bind(o_hdbc3, (BYTE *) &o_w_id, 0,
SQL_VARLEN_DATA, NULL, 0, SQLINT4, ++i);
          if (rc != SUCCEED)
                    HandleErrorDBC(o_hdbc3);
          rc = bcp_bind(o_hdbc3, (BYTE *) &ol, 0,
SQL_VARLEN_DATA, NULL, 0, SQLFLT8, ++i);
          if (rc != SUCCEED)
                    HandleErrorDBC(o_hdbc3);
    rc = bcp_bind(o_hdbc3, (BYTE *) &ol_i_id, 0,
SQL_VARLEN_DATA, NULL, 0, SQLINT4, ++i);
          if (rc != SUCCEED)
                    HandleErrorDBC(o_hdbc3);
          rc = bcp_bind(o_hdbc3, (BYTE *)
&ol_delivery_d, 0, OL_DELIVERY_D_LEN, NULL, 0,
SQLCHARACTER, ++i);
          if (rc != SUCCEED)
                    HandleErrorDBC(o_hdbc3);
    rc = bcp_bind(o_hdbc3, (BYTE *) &ol_amount, 0,
SQL_VARLEN_DATA, NULL, 0, SQLFLT8, ++i);
          if (rc != SUCCEED)
                    HandleErrorDBC(o_hdbc3);
          rc = bcp_bind(o_hdbc3, (BYTE *)
&ol_supply_w_id, 0, SQL_VARLEN_DATA, NULL, 0,
SQLINT4, ++i);
          if (rc != SUCCEED)
                    HandleErrorDBC(o_hdbc3);
    rc = bcp_bind(o_hdbc3, (BYTE *) &ol_quantity, 0,
SQL_VARLEN_DATA, NULL, 0, SQLINT2, ++i);
          if (rc != SUCCEED)
                    HandleErrorDBC(o_hdbc3);
    rc = bcp_bind(o_hdbc3, (BYTE *) ol_dist_info, 0,
DIST_INFO_LEN, NULL, 0, 0, ++i);
          if (rc != SUCCEED)
                    HandleErrorDBC(o_hdbc3);

          for (i = 0; i < orders_per_district; i++)
    {
                    o_id    = orders_buf[i].o_id;
                    o_d_id  = orders_buf[i].o_d_id;
                    o_w_id  = orders_buf[i].o_w_id;

                    for (j=0; j <
orders_buf[i].o_ol_cnt; j++)
                    {
                              ol              =
orders_buf[i].o_ol[j].ol;
                              ol_i_id         =
orders_buf[i].o_ol[j].ol_i_id;
                              ol_supply_w_id =
orders_buf[i].o_ol[j].ol_supply_w_id;
                              ol_quantity     =
orders_buf[i].o_ol[j].ol_quantity;
                              ol_amount       =
orders_buf[i].o_ol[j].ol_amount;


          strcpy(ol_delivery_d,orders_buf[i].o_ol[j].
ol_delivery_d);


          strcpy(ol_dist_info,orders_buf[i].o_ol[j].o
l_dist_info);

                              rc =
bcp_sendrow(o_hdbc3);
                              if (rc != SUCCEED)


          HandleErrorDBC(o_hdbc3);


          order_line_rows_loaded++;


          CheckForCommit_Big(o_hdbc3, o_hstmt3,
order_line_rows_loaded, "order_line",
&order_line_time_start->time_start);
                    }
          }

          if ((o_w_id == aptr->num_warehouses) &&
(o_d_id == 10))
          {
                    rcint = bcp_done(o_hdbc3);

                    if (rcint < 0)

          HandleErrorDBC(o_hdbc3);

                    SQLFreeStmt(o_hstmt3, SQL_DROP);
                    SQLDisconnect(o_hdbc3);
                    SQLFreeConnect(o_hdbc3);

                    // if build index after load...
                    if ((aptr->build_index == 1) &&
(aptr->index_order == 0))
                              BuildIndex("idxodlcl");
          }
}

//================================================
====================


//
// Function   : GetPermutation
//
//================================================
====================
void GetPermutation(int perm[], int n)
{
          int i, r, t;

          for (i=1;i<=n;i++)
                    perm[i] = i;

          for (i=1;i<=n;i++)
          {
                    r = RandomNumber(i,n);
                    t = perm[i];
                    perm[i] = perm[r];
                    perm[r] = t;
          }
}

//================================================
====================
//
// Function   : CheckForCommit
//
//================================================
====================
void CheckForCommit(HDBC hdbc,

          HSTMT hstmt,

          long rows_loaded,

          char *table_name,
                                        long
*time_start)
{

    long  time_end, time_diff;

    if ( !(rows_loaded % aptr->batch) )
    {
                    time_end = (TimeNow() / MILLI);
                    time_diff = time_end -
*time_start;

                    printf("-> Loaded %ld rows into
%s in %ld sec - Total = %d (%.2f rps)\n",
                                        aptr->batch,
                                        table_name,
                                                  time_diff,
                                        rows_loaded,
                                                  (float) aptr-
>batch / (time_diff ? time_diff : 1L));

                    *time_start = time_end;
    }

    return;
}
```


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```
//==================================================
====================
//
// Function   : CheckForCommit_Big
//
//==================================================
====================
void CheckForCommit_Big(HDBC hdbc,

          HSTMT hstmt,

          double rows_loaded,

          char *table_name,
                                        long
*time_start)
{

    long  time_end, time_diff;

    if ( !(fmod(rows_loaded,aptr->batch) ) )
    {
                    time_end = (TimeNow() / MILLI);
                    time_diff = time_end -
*time_start;

                    printf("-> Loaded %ld rows into
%s in %ld sec - Total = %.0f (%.2f rps)\n",
                              aptr->batch,
                              table_name,
                                        time_diff,
                              rows_loaded,
                                        (float) aptr-
>batch / (time_diff ? time_diff : 1L));

                    *time_start = time_end;
    }

    return;
}

//==================================================
====================
//
// Function   : OpenConnections
//
//==================================================
====================
void OpenConnections()
{

          RETCODE         rc;

          char
          szDriverString[300];
          char
          szDriverStringOut[1024];
          SQLSMALLINT
          cbDriverStringOut;


          SQLAllocHandle(SQL_HANDLE_ENV,
SQL_NULL_HANDLE, &henv );

          SQLSetEnvAttr(henv, SQL_ATTR_ODBC_VERSION,
(void*)SQL_OV_ODBC3, 0 );

          SQLAllocHandle(SQL_HANDLE_DBC, henv ,
&i_hdbc1);
          SQLAllocHandle(SQL_HANDLE_DBC, henv ,
&w_hdbc1);
          SQLAllocHandle(SQL_HANDLE_DBC, henv ,
&c_hdbc1);
          SQLAllocHandle(SQL_HANDLE_DBC, henv ,
&c_hdbc2);
          SQLAllocHandle(SQL_HANDLE_DBC, henv ,
&o_hdbc1);
          SQLAllocHandle(SQL_HANDLE_DBC, henv ,
&o_hdbc2);
          SQLAllocHandle(SQL_HANDLE_DBC, henv ,
&o_hdbc3);

          SQLSetConnectAttr(i_hdbc1, SQL_COPT_SS_BCP,
(void *)SQL_BCP_ON, SQL_IS_INTEGER );
          SQLSetConnectAttr(w_hdbc1, SQL_COPT_SS_BCP,
(void *)SQL_BCP_ON, SQL_IS_INTEGER );
          SQLSetConnectAttr(c_hdbc1, SQL_COPT_SS_BCP,
(void *)SQL_BCP_ON, SQL_IS_INTEGER );
          SQLSetConnectAttr(c_hdbc2, SQL_COPT_SS_BCP,
(void *)SQL_BCP_ON, SQL_IS_INTEGER );
          SQLSetConnectAttr(o_hdbc1, SQL_COPT_SS_BCP,
(void *)SQL_BCP_ON, SQL_IS_INTEGER );
          SQLSetConnectAttr(o_hdbc2, SQL_COPT_SS_BCP,
(void *)SQL_BCP_ON, SQL_IS_INTEGER );
          SQLSetConnectAttr(o_hdbc3, SQL_COPT_SS_BCP,
(void *)SQL_BCP_ON, SQL_IS_INTEGER );

          // Open connections to SQL Server
          // Connection 1
          sprintf( szDriverString , "DRIVER={SQL
Server};SERVER=%s;UID=%s;PWD=%s;DATABASE=%s" ,

            aptr->server,

            aptr->user,

            aptr->password,

            aptr->database );

          rc = SQLSetConnectOption (i_hdbc1,
SQL_PACKET_SIZE, aptr->pack_size);
          if (rc != SUCCEED)
                    HandleErrorDBC(i_hdbc1);

          rc = SQLDriverConnect ( i_hdbc1,
NULL,

          (SQLCHAR*)&szDriverString[0] ,

          SQL_NTS,

          (SQLCHAR*)&szDriverStringOut[0],

          sizeof(szDriverStringOut),

          &cbDriverStringOut,

          SQL_DRIVER_NOPROMPT );
          if ( (rc != SUCCEED) &&
                    (rc != SQL_SUCCESS_WITH_INFO) )
          {
                    HandleErrorDBC(i_hdbc1);
                    printf("TPC-C Loader
aborted!\n");
                    exit(9);
          }

          // Connection 2
          sprintf( szDriverString , "DRIVER={SQL
Server};SERVER=%s;UID=%s;PWD=%s;DATABASE=%s" ,

            aptr->server,

            aptr->user,

            aptr->password,

            aptr->database );

          rc = SQLSetConnectOption (w_hdbc1,
SQL_PACKET_SIZE, aptr->pack_size);

          if (rc != SUCCEED)
                    HandleErrorDBC(w_hdbc1);

          rc = SQLDriverConnect ( w_hdbc1,

                    NULL,

                    (SQLCHAR*)&szDriverString[0] ,

                    SQL_NTS,

                    (SQLCHAR*)&szDriverStringOut[0],

                    sizeof(szDriverStringOut),

                    &cbDriverStringOut,

                    SQL_DRIVER_NOPROMPT );

          if ( (rc != SUCCEED) &&
                    (rc != SQL_SUCCESS_WITH_INFO) )
          {
                    HandleErrorDBC(w_hdbc1);
                    printf("TPC-C Loader
aborted!\n");
                    exit(9);
          }

          // Connection 3
          sprintf( szDriverString , "DRIVER={SQL
Server};SERVER=%s;UID=%s;PWD=%s;DATABASE=%s" ,

            aptr->server,

            aptr->user,
```


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```
            aptr->password,

            aptr->database );

          rc = SQLSetConnectOption (c_hdbc1,
SQL_PACKET_SIZE, aptr->pack_size);
          if (rc != SUCCEED)
                    HandleErrorDBC(c_hdbc1);

          rc = SQLDriverConnect ( c_hdbc1,

                    NULL,

                    (SQLCHAR*)&szDriverString[0] ,

                    SQL_NTS,

                    (SQLCHAR*)&szDriverStringOut[0],

                    sizeof(szDriverStringOut),

                    &cbDriverStringOut,

                    SQL_DRIVER_NOPROMPT );
          if ( (rc != SUCCEED) &&
                     (rc != SQL_SUCCESS_WITH_INFO) )
          {
                    HandleErrorDBC(c_hdbc1);
                    printf("TPC-C Loader
aborted!\n");
                    exit(9);
          }

          // Connection 4
          sprintf( szDriverString , "DRIVER={SQL
Server};SERVER=%s;UID=%s;PWD=%s;DATABASE=%s" ,

            aptr->server,

            aptr->user,

            aptr->password,

            aptr->database );

          rc = SQLSetConnectOption (c_hdbc2,
SQL_PACKET_SIZE, aptr->pack_size);
          if (rc != SUCCEED)
                    HandleErrorDBC(c_hdbc2);

          rc = SQLDriverConnect ( c_hdbc2,

                    NULL,

                    (SQLCHAR*)&szDriverString[0] ,

                    SQL_NTS,

                    (SQLCHAR*)&szDriverStringOut[0],

                    sizeof(szDriverStringOut),

                    &cbDriverStringOut,

                    SQL_DRIVER_NOPROMPT );
          if ( (rc != SUCCEED) &&
                     (rc != SQL_SUCCESS_WITH_INFO) )
          {
                    HandleErrorDBC(c_hdbc2);
                    printf("TPC-C Loader
aborted!\n");
                    exit(9);
          }

          // Connection 5
          sprintf( szDriverString , "DRIVER={SQL
Server};SERVER=%s;UID=%s;PWD=%s;DATABASE=%s" ,

            aptr->server,

            aptr->user,

            aptr->password,

            aptr->database );

          rc = SQLSetConnectOption (o_hdbc1,
SQL_PACKET_SIZE, aptr->pack_size);
          if (rc != SUCCEED)
                    HandleErrorDBC(o_hdbc1);

          rc = SQLDriverConnect ( o_hdbc1,

                    NULL,

                    (SQLCHAR*)&szDriverString[0] ,

                    SQL_NTS,

                    (SQLCHAR*)&szDriverStringOut[0],

                    sizeof(szDriverStringOut),

                    &cbDriverStringOut,

                    SQL_DRIVER_NOPROMPT );
          if ( (rc != SUCCEED) &&
                     (rc != SQL_SUCCESS_WITH_INFO) )
          {
                    HandleErrorDBC(o_hdbc1);
                    printf("TPC-C Loader
aborted!\n");
                    exit(9);
          }

          // Connection 6
          sprintf( szDriverString , "DRIVER={SQL
Server};SERVER=%s;UID=%s;PWD=%s;DATABASE=%s" ,

            aptr->server,

            aptr->user,

            aptr->password,

            aptr->database );

          rc = SQLSetConnectOption (o_hdbc2,
SQL_PACKET_SIZE, aptr->pack_size);
          if (rc != SUCCEED)
                    HandleErrorDBC(o_hdbc2);

          rc = SQLDriverConnect ( o_hdbc2,

                    NULL,

                    (SQLCHAR*)&szDriverString[0] ,

                    SQL_NTS,

                    (SQLCHAR*)&szDriverStringOut[0],

                    sizeof(szDriverStringOut),

                    &cbDriverStringOut,

                    SQL_DRIVER_NOPROMPT );
          if ( (rc != SUCCEED) &&
                     (rc != SQL_SUCCESS_WITH_INFO) )
          {
                    HandleErrorDBC(o_hdbc2);
                    printf("TPC-C Loader
aborted!\n");
                    exit(9);
          }

          // Connection 7
          sprintf( szDriverString , "DRIVER={SQL
Server};SERVER=%s;UID=%s;PWD=%s;DATABASE=%s" ,

            aptr->server,

            aptr->user,

            aptr->password,

            aptr->database );

          rc = SQLSetConnectOption (o_hdbc3,
SQL_PACKET_SIZE, aptr->pack_size);
          if (rc != SUCCEED)
                    HandleErrorDBC(o_hdbc3);

          rc = SQLDriverConnect ( o_hdbc3,

                    NULL,

                    (SQLCHAR*)&szDriverString[0] ,

                    SQL_NTS,

                    (SQLCHAR*)&szDriverStringOut[0],

                    sizeof(szDriverStringOut),

                    &cbDriverStringOut,
```


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```
                    SQL_DRIVER_NOPROMPT );
          if ( (rc != SUCCEED) &&
                     (rc != SQL_SUCCESS_WITH_INFO) )
          {
                    HandleErrorDBC(o_hdbc3);
                    printf("TPC-C Loader
aborted!\n");
                    exit(9);
          }
}

//================================================
==================
//
// Function name: BuildIndex
//
//================================================
==================
void BuildIndex(char          *index_script)
{
          char      cmd[256];

          printf("Starting index creation:
%s\n",index_script);

          sprintf(cmd, "osql -S%s -U%s -P%s -e -
i%s\\%s.sql > %s%s.log",
                                        aptr->server,
                                        aptr->user,
                                        aptr-
>password,
                                        aptr-
>index_script_path,
                                        index_script,
                                        aptr-
>log_path,

          index_script);

          system(cmd);

          printf("Finished index creation:
%s\n",index_script);
}

//================================================
==================
//
// Function name: HandleErrorDBC
//
//================================================
==================
void HandleErrorDBC (SQLHDBC  hdbc1)
{

          SQLCHAR             SqlState[6],
Msg[SQL_MAX_MESSAGE_LENGTH];
          SQLLEN              NativeError;
          SQLSMALLINT i, MsgLen;
          SQLRETURN   rc2;
          char                timebuf[128];
          char                datebuf[128];
          char                err_log_path[256];
          FILE                *fp1;

          i = 1;
          while (( rc2 = SQLGetDiagRec(SQL_HANDLE_DBC
, hdbc1, i, SqlState , &NativeError,
                                                  Msg,
sizeof(Msg) , &MsgLen )) != SQL_NO_DATA )
          {
                    sprintf( szLastError , "%s" ,
Msg );

                    _strtime(timebuf);
                    _strdate(datebuf);

                    printf( "[%s : %s]
%s\n==>SQLState: %s\n" , datebuf, timebuf,
szLastError, SqlState);

                    strcpy(err_log_path,aptr-
>log_path);

          strcat(err_log_path,"tpccldr.err");
                    fp1 = fopen(err_log_path,"a+");
                    if (fp1 == NULL)
                              printf("ERROR:  Unable
to open errorlog file.\n");
                    else
                    {
                              fprintf(fp1, "[%s : %s]
%s\nSQLState: %s\n" , datebuf, timebuf, szLastError,
SqlState);
                              fclose(fp1);
                    }

                    i++;
          }
}

//================================================
==================
//
// Function   : HandleErrorSTMT
//
//================================================
==================
void HandleErrorSTMT (HSTMT  hstmt1)
{
          SQLCHAR             SqlState[6],
Msg[SQL_MAX_MESSAGE_LENGTH];
          SQLLEN              NativeError;
          SQLSMALLINT i, MsgLen;
          SQLRETURN   rc2;
          char                timebuf[128];
          char                datebuf[128];
          char                err_log_path[256];
          FILE                *fp1;

          i = 1;
          while (( rc2 =
SQLGetDiagRec(SQL_HANDLE_STMT , hstmt1, i, SqlState ,
&NativeError,
                                                  Msg,
sizeof(Msg) , &MsgLen )) != SQL_NO_DATA )
          {
                    if (total_db_errors >=
MAX_SQL_ERRORS)
                    {
                              printf(">>>>> Maximum
SQL errors of %d exceeded.  Terminating
TPCCLDR.<<<<<\n",total_db_errors);
                              exit(9);
                    }
                    total_db_errors++;

                    sprintf( szLastError , "%s" ,
Msg );

                    _strtime(timebuf);
                    _strdate(datebuf);

                    printf( "[%s : %s] %s\nSQLState:
%s\n" , datebuf, timebuf, szLastError, SqlState);

                    strcpy(err_log_path,aptr-
>log_path);

          strcat(err_log_path,"tpccldr.err");
                    fp1 = fopen(err_log_path,"a+");
                    if (fp1 == NULL)
                              printf("ERROR:  Unable
to open errorlog file.\n");
                    else
                    {
                              fprintf(fp1, "[%s : %s]
%s\nSQLState: %s\n" , datebuf, timebuf, szLastError,
SqlState);
                              fclose(fp1);
                    }

                    i++;
          }
}

//================================================
==================
//
// Function   : FormatDate
//
//================================================
==================
void FormatDate ( char* szTimeCOutput )
{
          struct tm when;
          time_t now;

          time( &now );
          when  = *localtime( &now );

          mktime( &when );

          // odbc datetime format
          strftime( szTimeCOutput , 30 , "%Y-%m-%d
%H:%M:%S.000", &when );
```


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```
        return;
}
```

# tpcc_com.cpp

```
/*      FILE:               TPCC_COM.CPP
 *                                  Microsoft
TPC-C Kit Ver. 4.20.000
 *                                  Copyright
Microsoft, 1999
 *              All Rights Reserved
 *
 *                                  not yet
audited
 *
 *      PURPOSE:  Source file for TPC-C COM+ class
implementation.
 *      Contact:  Charles Levine
(clevine@microsoft.com)
 *
 *  Change history:
 *                  4.20.000 - first version
 */

// needed for CoinitializeEx
#define _WIN32_WINNT 0x0400

#include <windows.h>

// need to declare functions for export
#define DllDecl  __declspec( dllexport )

#include "..\..\common\src\trans.h"
          //tpckit transaction header contains
definations of structures specific to TPC-C
#include "..\..\common\src\error.h"
#include "..\..\common\src\txn_base.h"
#include "tpcc_com.h"

#include "..\..\tpcc_com_ps\src\tpcc_com_ps_i.c"
#include "..\..\tpcc_com_all\src\tpcc_com_all_i.c"

// wrapper routine for class constructor
__declspec(dllexport) CTPCC_COM* CTPCC_COM_new(BOOL
bSinglePool)
{
          return new CTPCC_COM(bSinglePool);
}

CTPCC_COM::CTPCC_COM(BOOL bSinglePool)
{
          HRESULT hr = NULL;
          long lRet = 0;
          ULONG ulTmpSize = 0;

          m_pTxn                          = NULL;
          m_pNewOrder                     = NULL;
          m_pPayment                      = NULL;
          m_pStockLevel       = NULL;
          m_pOrderStatus      = NULL;
          m_bSinglePool       = bSinglePool;

          ulTmpSize = (ULONG) sizeof(COM_DATA);
          VariantInit(&m_vTxn);
          m_vTxn.vt = VT_SAFEARRAY;

          m_vTxn.parray =
SafeArrayCreateVector(VT_UI1, ulTmpSize, ulTmpSize);
          if (!m_vTxn.parray)
                    throw new CCOMERR( E_FAIL );

          memset((void*)m_vTxn.parray-
>pvData,0,ulTmpSize);
          m_pTxn = (COM_DATA*)m_vTxn.parray->pvData;

          hr = CoInitializeEx(NULL,
COINIT_MULTITHREADED);
          if (FAILED(hr))
          {
                    throw new CCOMERR( hr );
          }

          // create components
          if (m_bSinglePool)
          {
                    hr = CoCreateInstance(CLSID_TPCC,
NULL, CLSCTX_SERVER, IID_ITPCC, (void
**)&m_pNewOrder);
                    if (FAILED(hr))
                              throw new CCOMERR(hr);

                    // all txns will use same
component
                    m_pPayment = m_pNewOrder;
                    m_pStockLevel = m_pNewOrder;
                    m_pOrderStatus = m_pNewOrder;
          }
          else
          {
                    // use different components for
each txn

                    hr =
CoCreateInstance(CLSID_NewOrder, NULL, CLSCTX_SERVER,
IID_ITPCC, (void **)&m_pNewOrder);
                    if (FAILED(hr))
                              throw new CCOMERR(hr);

                    hr =
CoCreateInstance(CLSID_Payment, NULL, CLSCTX_SERVER,
IID_ITPCC, (void **)&m_pPayment);
                    if (FAILED(hr))
                              throw new CCOMERR(hr);

                    hr =
CoCreateInstance(CLSID_StockLevel, NULL,
CLSCTX_SERVER, IID_ITPCC, (void **)&m_pStockLevel);
                    if (FAILED(hr))
                              throw new CCOMERR(hr);

                    hr =
CoCreateInstance(CLSID_OrderStatus, NULL,
CLSCTX_SERVER, IID_ITPCC, (void **)&m_pOrderStatus);
                    if (FAILED(hr))
                              throw new CCOMERR(hr);
          }

          // call setcomplete to release each
component back into pool
          hr = m_pNewOrder->CallSetComplete();
          if (FAILED(hr))
                    throw new CCOMERR(hr);

          if (!m_bSinglePool)
          {
                    hr = m_pPayment-
>CallSetComplete();
                    if (FAILED(hr))
                              throw new CCOMERR(hr);

                    hr = m_pStockLevel-
>CallSetComplete();
                    if (FAILED(hr))
                              throw new CCOMERR(hr);

                    hr = m_pOrderStatus-
>CallSetComplete();
                    if (FAILED(hr))
                              throw new CCOMERR(hr);
          }
}

CTPCC_COM::~CTPCC_COM()
{
          if (m_pTxn)
                    SafeArrayDestroy(m_vTxn.parray);

          ReleaseInterface(m_pNewOrder);
          if (!m_bSinglePool)
          {
                    ReleaseInterface(m_pPayment);
                    ReleaseInterface(m_pStockLevel);
                    ReleaseInterface(m_pOrderStatus);
          }
          CoUninitialize();
}

void CTPCC_COM::NewOrder()
{
          VARIANT   vTxn_out;

          HRESULT hr = m_pNewOrder->NewOrder(m_vTxn,
&vTxn_out);
          if (FAILED(hr))
                    throw new CCOMERR( hr );
          memcpy(m_pTxn, (void *)vTxn_out.parray-
>pvData,vTxn_out.parray->rgsabound[0].cElements);
          SafeArrayDestroy(vTxn_out.parray);

          if ( m_pTxn->ErrorType != ERR_SUCCESS )
                    throw new CCOMERR( m_pTxn-
>ErrorType, m_pTxn->error );
}
```


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```
void CTPCC_COM::Payment()
{
          VARIANT   vTxn_out;

          HRESULT hr = m_pPayment->Payment(m_vTxn,
&vTxn_out);
          if (FAILED(hr))
                    throw new CCOMERR( hr );
          memcpy(m_pTxn, (void *)vTxn_out.parray-
>pvData,vTxn_out.parray->rgsabound[0].cElements);
          SafeArrayDestroy(vTxn_out.parray);

          if ( m_pTxn->ErrorType != ERR_SUCCESS )
                    throw new CCOMERR( m_pTxn-
>ErrorType, m_pTxn->error );
}

void CTPCC_COM::StockLevel()
{
          VARIANT   vTxn_out;

          HRESULT hr = m_pStockLevel-
>StockLevel(m_vTxn, &vTxn_out);
          if (FAILED(hr))
                    throw new CCOMERR( hr );
          memcpy(m_pTxn, (void *)vTxn_out.parray-
>pvData,vTxn_out.parray->rgsabound[0].cElements);
          SafeArrayDestroy(vTxn_out.parray);

          if ( m_pTxn->ErrorType != ERR_SUCCESS )
                    throw new CCOMERR( m_pTxn-
>ErrorType, m_pTxn->error );
}

void CTPCC_COM::OrderStatus()
{
          VARIANT   vTxn_out;

          HRESULT hr = m_pOrderStatus-
>OrderStatus(m_vTxn, &vTxn_out);
          if (FAILED(hr))
                    throw new CCOMERR( hr );
          memcpy(m_pTxn, (void *)vTxn_out.parray-
>pvData,vTxn_out.parray->rgsabound[0].cElements);
          SafeArrayDestroy(vTxn_out.parray);

          if ( m_pTxn->ErrorType != ERR_SUCCESS )
                    throw new CCOMERR( m_pTxn-
>ErrorType, m_pTxn->error );
}
```

# tpcc_com.h

```
/*        FILE:               TPCC_COM.H
 *                                        Microsoft
TPC-C Kit Ver. 4.20.000
 *                                        Copyright
Microsoft, 1999
 *             All Rights Reserved
 *
 *                                        not yet
audited
 *
 *        PURPOSE:  Header file for TPC-C COM+ class
implementation.
 *
 *  Change history:
 *                  4.20.000 - first version
 */

#pragma once

#include <stdio.h>
#include "..\..\tpcc_com_ps\src\tpcc_com_ps.h"

// need to declare functions for import, unless
define has already been created
// by the DLL's .cpp module for export.
#ifndef DllDecl
#define DllDecl  __declspec( dllimport )
#endif

class CCOMERR : public CBaseErr
{
          private:
                    char m_szErrorText[64];

          public:
                    // use this interface for genuine
COM errors
                    CCOMERR( HRESULT hr )
                    {
                              m_hr = hr;
                              m_iErrorType = 0;
                              m_iError = 0;
                    }

                    // use this interface to
impersonate a non-COM error type
                    CCOMERR( int iErrorType, int
iError )
                    {
                              m_iErrorType =
iErrorType;
                              m_iError = iError;
                              m_hr = S_OK;
                    }

                    int                 m_hr;
                    int                 m_iErrorType;
                    int                 m_iError;

                    // A CCOMERR class can
impersonate another class, which happens if the error
                    // was not actually a COM
Services error, but was simply transmitted back via
COM.
                    int ErrorType()
                    {
                              if (m_iErrorType == 0)
                                        return
ERR_TYPE_COM;
                              else
                                        return
m_iErrorType;
                    }

                    char *ErrorTypeStr() { return
"COM"; }

                    int ErrorNum() {return m_hr;}

                    char *ErrorText()
                    {
                              if (m_hr == S_OK)
                                        sprintf(
m_szErrorText, "Error: Class %d, error # %d",
m_iErrorType, m_iError );
                              else
                                        sprintf(
m_szErrorText, "Error: COM HRESULT %x", m_hr );
                              return m_szErrorText;
                    }
};

class DllDecl CTPCC_COM : public CTPCC_BASE
{
          private:
                    BOOL m_bSinglePool;

                    // COM Interface pointers
                    ITPCC*
          m_pNewOrder;
                    ITPCC*
          m_pPayment;
                    ITPCC*
          m_pStockLevel;
                    ITPCC*
          m_pOrderStatus;

                    struct COM_DATA
                    {
                              int ErrorType;
                              int error;
                              union
                              {

          NEW_ORDER_DATA                NewOrder;
                                        PAYMENT_DATA
                    Payment;
                                        DELIVERY_DATA
                    Delivery;

          STOCK_LEVEL_DATA    StockLevel;

          ORDER_STATUS_DATA   OrderStatus;
                              } u;
                    } *m_pTxn;

                    VARIANT m_vTxn;
          public:
                    CTPCC_COM(BOOL bSinglePool);
                    ~CTPCC_COM(void);
```


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```
                    inline PNEW_ORDER_DATA
          BuffAddr_NewOrder()           { return
&m_pTxn->u.NewOrder;    };
                    inline PPAYMENT_DATA
          BuffAddr_Payment()            { return
&m_pTxn->u.Payment;     };
                    inline PDELIVERY_DATA
          BuffAddr_Delivery()           { return
&m_pTxn->u.Delivery;    };
                    inline PSTOCK_LEVEL_DATA
          BuffAddr_StockLevel()         { return
&m_pTxn->u.StockLevel;  };
                    inline PORDER_STATUS_DATA
          BuffAddr_OrderStatus()        { return
&m_pTxn->u.OrderStatus; };

                    void NewOrder                 ();
                    void Payment                  ();
                    void StockLevel               ();
                    void OrderStatus    ();
                    void Delivery                 ()
{ throw new CCOMERR(E_NOTIMPL); }  // not supported
};


inline void ReleaseInterface(IUnknown *pUnk)
{
          if (pUnk)
          {
                    pUnk->Release();
                    pUnk = NULL;
          }
}


// wrapper routine for class constructor
extern "C" __declspec(dllexport) CTPCC_COM*
CTPCC_COM_new(BOOL);

typedef CTPCC_COM* (TYPE_CTPCC_COM)(BOOL);
```

# tpcc_com_all.cpp

```
/*        FILE:               TPCC_COM_ALL.CPP
 *                                  Microsoft
TPC-C Kit Ver. 4.20.000
 *                                  Copyright
Microsoft, 1999
 *              All Rights Reserved
 *
 *                                  Version
4.10.000 audited by Richard Gimarc, Performance
Metrics, 3/17/99
 *
 *        PURPOSE:  Implementation for TPC-C Tuxedo
class.
 *        Contact:  Charles Levine
(clevine@microsoft.com)
 *
 *  Change history:
 *                  4.20.000 - updated rev number to
match kit
 */

#define STRICT
#define _WIN32_WINNT 0x0400
#define _ATL_APARTMENT_THREADED

#include <stdio.h>
#include <atlbase.h>
//You may derive a class from CComModule and use it
if you want to override
//something, but do not change the name of _Module
extern CComModule _Module;

#include <atlcom.h>
#include <initguid.h>
#include <transact.h>
//#include <atlimpl.cpp>
#include <comsvcs.h>

#include <sqltypes.h>
#include <sql.h>
#include <sqlext.h>

#include "tpcc_com_ps.h"
#include "..\..\common\src\trans.h"
                                  //tpckit transaction
header contains defination of structures specific to
TPC-C
#include "..\..\common\src\txn_base.h"
#include "..\..\common\src\error.h"
#include "..\..\common\src\ReadRegistry.h"
#include "..\..\db_dblib_dll\src\tpcc_dblib.h"
          // DBLIB implementation of TPC-C txns
#include "..\..\db_odbc_dll\src\tpcc_odbc.h"
          // ODBC implementation of TPC-C txns

#include "resource.h"
#include "tpcc_com_all.h"
#include "tpcc_com_all_i.c"
#include "Methods.h"
#include "..\..\tpcc_com_ps\src\tpcc_com_ps_i.c"
#include "..\..\common\src\ReadRegistry.cpp"


CComModule _Module;

BEGIN_OBJECT_MAP(ObjectMap)
          OBJECT_ENTRY(CLSID_TPCC, CTPCC)
          OBJECT_ENTRY(CLSID_NewOrder, CNewOrder)
          OBJECT_ENTRY(CLSID_OrderStatus,
COrderStatus)
          OBJECT_ENTRY(CLSID_Payment, CPayment)
          OBJECT_ENTRY(CLSID_StockLevel, CStockLevel)
END_OBJECT_MAP()


// configuration settings from registry
TPCCREGISTRYDATA    Reg;
char
          szMyComputerName[MAX_COMPUTERNAME_LENGTH+1]
;
static  HINSTANCE hLibInstanceDb = NULL;

TYPE_CTPCC_DBLIB    *pCTPCC_DBLIB_new;
TYPE_CTPCC_ODBC               *pCTPCC_ODBC_new;

// Critical section to synchronize connection open
and close.
//
CRITICAL_SECTION hConnectCriticalSection;

////////////////////////////////////////////////////
////////////////////////
// DLL Entry Point

extern "C"
BOOL WINAPI DllMain(HINSTANCE hInstance, DWORD
dwReason, LPVOID /*lpReserved*/)
{
          char szDllName[128];

          try
          {
                    if (dwReason ==
DLL_PROCESS_ATTACH)
                    {
                              _Module.Init(ObjectMap,
hInstance);

          DisableThreadLibraryCalls(hInstance);

                              DWORD dwSize =
MAX_COMPUTERNAME_LENGTH+1;

          GetComputerName(szMyComputerName, &dwSize);

          szMyComputerName[dwSize] = 0;

                              if (
ReadTPCCRegistrySettings( &Reg ) )
                                        throw new
CCOMPONENT_ERR( ERR_MISSING_REGISTRY_ENTRIES );

                              if (Reg.eDB_Protocol ==
DBLIB)
                              {
                                        strcpy(
szDllName, Reg.szPath );
                                        strcat(
szDllName, "tpcc_dblib.dll");

          hLibInstanceDb = LoadLibrary( szDllName );
                                        if
(hLibInstanceDb == NULL)

          throw new CCOMPONENT_ERR(
ERR_LOADDLL_FAILED, szDllName, GetLastError() );

                                        // get
function pointer to wrapper for class constructor

          pCTPCC_DBLIB_new = (TYPE_CTPCC_DBLIB*)
GetProcAddress(hLibInstanceDb,"CTPCC_DBLIB_new");
```


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```
                                        if
(pCTPCC_DBLIB_new == NULL)

          throw new CCOMPONENT_ERR(
ERR_GETPROCADDR_FAILED, szDllName, GetLastError() );
                                }
                                else if
(Reg.eDB_Protocol == ODBC)
                                {
                                        strcpy(
szDllName, Reg.szPath );
                                        strcat(
szDllName, "tpcc_odbc.dll");

          hLibInstanceDb = LoadLibrary( szDllName );
                                        if
(hLibInstanceDb == NULL)

          throw new CCOMPONENT_ERR(
ERR_LOADDLL_FAILED, szDllName, GetLastError() );

                                        // get
function pointer to wrapper for class constructor

          pCTPCC_ODBC_new = (TYPE_CTPCC_ODBC*)
GetProcAddress(hLibInstanceDb,"CTPCC_ODBC_new");
                                        if
(pCTPCC_ODBC_new == NULL)

          throw new CCOMPONENT_ERR(
ERR_GETPROCADDR_FAILED, szDllName, GetLastError() );
                                }
                                else
                                        throw new
CCOMPONENT_ERR( ERR_UNKNOWN_DB_PROTOCOL );

                                if (Reg.dwConnectDelay
> 0)
                                {

          InitializeCriticalSection(&hConnectCritical
Section);
                                }

                    }
                    else if (dwReason ==
DLL_PROCESS_DETACH)
                                _Module.Term();

          }
          catch (CBaseErr *e)
          {
                    TCHAR szMsg[256];

                    _sntprintf(szMsg, sizeof(szMsg),
"%s error, code %d: %s",
                                        e-
>ErrorTypeStr(), e->ErrorNum(), e->ErrorText());
                    WriteMessageToEventLog( szMsg );

                    delete e;
                    return FALSE;
          }
          catch (...)
          {

          WriteMessageToEventLog(TEXT("Unhandled
exception in object DllMain"));
                    return FALSE;
          }

          return TRUE;        // OK
}

////////////////////////////////////////////////////
//////////////////////
// Used to determine whether the DLL can be unloaded
by OLE

STDAPI DllCanUnloadNow(void)
{
          return (_Module.GetLockCount()==0) ? S_OK :
S_FALSE;
}

////////////////////////////////////////////////////
//////////////////////
// Returns a class factory to create an object of the
requested type

STDAPI DllGetClassObject(REFCLSID rclsid, REFIID
riid, LPVOID* ppv)
{
          return _Module.GetClassObject(rclsid, riid,
ppv);
}

////////////////////////////////////////////////////
//////////////////////
// DllRegisterServer - Adds entries to the system
registry

STDAPI DllRegisterServer(void)
{
          // registers object, typelib and all
interfaces in typelib
          return _Module.RegisterServer(TRUE);
}

////////////////////////////////////////////////////
//////////////////////
// DllUnregisterServer - Removes entries from the
system registry

STDAPI DllUnregisterServer(void)
{
          _Module.UnregisterServer();
          return S_OK;
}


static void WriteMessageToEventLog(LPTSTR lpszMsg)
{
    TCHAR   szMsg[256];
    HANDLE  hEventSource;
    LPTSTR  lpszStrings[2];

    // Use event logging to log the error.
    //
    hEventSource = RegisterEventSource(NULL,
TEXT("tpcc_com_all.dll"));

    _stprintf(szMsg, TEXT("Error in COM+ TPC-C
Component: "));
    lpszStrings[0] = szMsg;
    lpszStrings[1] = lpszMsg;

    if (hEventSource != NULL)
          {
        ReportEvent(hEventSource, // handle of event
source
            EVENTLOG_ERROR_TYPE,  // event type
            0,                    // event category
            0,                    // event ID
            NULL,                 // current user's
SID
            2,                    // strings in
lpszStrings
            0,                    // no bytes of raw
data
            (LPCTSTR *)lpszStrings,    // array of
error strings
            NULL);                // no raw data

        (VOID) DeregisterEventSource(hEventSource);
    }
}

inline void ReleaseInterface(IUnknown *pUnk)
{
          if (pUnk)
          {
                    pUnk->Release();
                    pUnk = NULL;
          }
}

/* FUNCTION: CCOMPONENT_ERR::ErrorText
 *
 */

char* CCOMPONENT_ERR::ErrorText(void)
{
          static SERRORMSG errorMsgs[] =
          {
                    { ERR_MISSING_REGISTRY_ENTRIES,
          "Required entries missing from registry."
                                        },
                    { ERR_LOADDLL_FAILED,
                    "Load of DLL failed.  DLL="

                    },
                    { ERR_GETPROCADDR_FAILED,
          "Could not map proc in DLL.  GetProcAddr
error.  DLL="       },
                    { ERR_UNKNOWN_DB_PROTOCOL,
          "Unknown database protocol specified in
registry."                   },
```


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```
                { 0,
                                        ""


                        }
        };

        char szTmp[256];
        int i = 0;
        while (TRUE)
        {
                if (errorMsgs[i].szMsg[0] == 0)
                {
                        strcpy( szTmp, "Unknown
error number." );
                        break;
                }
                if (m_Error ==
errorMsgs[i].iError)
                {
                        strcpy( szTmp,
errorMsgs[i].szMsg );
                        break;
                }
                i++;
        }

        if (m_szTextDetail)
                strcat( szTmp, m_szTextDetail );
        if (m_SystemErr)
                wsprintf( szTmp+strlen(szTmp), "
Error=%d", m_SystemErr );

        m_szErrorText = new char[strlen(szTmp)+1];
        strcpy( m_szErrorText, szTmp );
        return m_szErrorText;
}


CTPCC_Common::CTPCC_Common()
{
        m_pTxn = NULL;
        m_bCanBePooled = TRUE;
}

CTPCC_Common::~CTPCC_Common()
{
        // Pace connection close for VIA.
        //
        if (Reg.dwConnectDelay > 0)
        {

        EnterCriticalSection(&hConnectCriticalSecti
on);

                Sleep(Reg.dwConnectDelay);
        }

        if (m_pTxn)
        {
                delete m_pTxn;
        }
        if (Reg.dwConnectDelay > 0)
        {

        LeaveCriticalSection(&hConnectCriticalSecti
on);
        }
}

HRESULT CTPCC_Common::CallSetComplete()
{
        IObjectContext* pObjectContext = NULL;

        // get our object context
        HRESULT hr = CoGetObjectContext(
IID_IObjectContext, (void **)&pObjectContext );
        pObjectContext->SetComplete();
        ReleaseInterface(pObjectContext);
        return hr;
}

//
//      called by the ctor activator
//
STDMETHODIMP CTPCC_Common::Construct(IDispatch *
pUnk)
{
        // Code to access construction string, if
needed later...
        //      if (!pUnk)
        //              return E_UNEXPECTED;
        //      IObjectConstructString * pString
= NULL;
        //      HRESULT hr = pUnk-
>QueryInterface(IID_IObjectConstructString, (void
**)&pString);
        //      pString->Release();

        try
        {
                // Pace connection creation for
VIA.
                //
                if (Reg.dwConnectDelay > 0)
                {

        EnterCriticalSection(&hConnectCriticalSecti
on);


        Sleep(Reg.dwConnectDelay);
                }

                if (Reg.eDB_Protocol == ODBC)
                        m_pTxn =
pCTPCC_ODBC_new(    Reg.szDbServer, Reg.szDbUser,
Reg.szDbPassword,


        szMyComputerName, Reg.szDbName,


        Reg.szSPPrefix,
Reg.bCallNoDuplicatesNewOrder );
                else if (Reg.eDB_Protocol ==
DBLIB)
                        m_pTxn =
pCTPCC_DBLIB_new( Reg.szDbServer, Reg.szDbUser,
Reg.szDbPassword, szMyComputerName, Reg.szDbName );

                if (Reg.dwConnectDelay > 0)
                {

        LeaveCriticalSection(&hConnectCriticalSecti
on);
                }
        }
        catch (CBaseErr *e)
        {
                TCHAR szMsg[256];

                _sntprintf(szMsg, sizeof(szMsg),
"%s error in CTPCC_Common::Construct, code %d: %s",
                                                e-
>ErrorTypeStr(), e->ErrorNum(), e->ErrorText());
                WriteMessageToEventLog( szMsg );
                delete e;
                return E_FAIL;
        }
        catch (...)
        {

        WriteMessageToEventLog(TEXT("Unhandled
exception in object ::Construct"));
                return E_FAIL;
        }

        return S_OK;
}

HRESULT CTPCC_Common::NewOrder(VARIANT txn_in,
VARIANT* txn_out)
{
        PNEW_ORDER_DATA     pNewOrder;
        COM_DATA            *pData;
        try
        {
                pData = (COM_DATA*)txn_in.parray-
>pvData;
                pNewOrder = m_pTxn-
>BuffAddr_NewOrder();

                memcpy(pNewOrder, &pData-
>u.NewOrder, sizeof(NEW_ORDER_DATA));

                m_pTxn->NewOrder();           //
do the actual txn

                VariantInit(txn_out);
                txn_out->vt = VT_SAFEARRAY;
                txn_out->parray =
SafeArrayCreateVector(VT_UI1,

                txn_in.parray->rgsabound-
>cElements,
```


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```
                    txn_in.parray->rgsabound-
>cElements);
                    pData = (COM_DATA*) txn_out-
>parray->pvData;

                    memcpy( &pData->u.NewOrder,
pNewOrder, sizeof(NEW_ORDER_DATA));

                    pData->retval = ERR_SUCCESS;
                    pData->error = 0;
                    return S_OK;
          }
          catch (CBaseErr *e)
          {
                    // check for lost database
connection; if yes, component is toast
                    if ( ((e->ErrorType() ==
ERR_TYPE_DBLIB) && (e->ErrorNum() == 10005)) ||
                              ((e->ErrorType() ==
ERR_TYPE_ODBC) && (e->ErrorNum() == 10054)) )
                             m_bCanBePooled = FALSE;

                    pData->retval = e->ErrorType();
                    pData->error = e->ErrorNum();
                    delete e;
                    return E_FAIL;
          }
          catch (...)
          {

          WriteMessageToEventLog(TEXT("Unhandled
exception."));
                    pData->retval = ERR_TYPE_LOGIC;
                    pData->error = 0;
                    m_bCanBePooled = FALSE;
                    return E_FAIL;
          }
}

HRESULT CTPCC_Common::Payment(VARIANT txn_in,
VARIANT* txn_out)
{
          PPAYMENT_DATA       pPayment;
          COM_DATA            *pData;
          try
          {
                    pData = (COM_DATA*)txn_in.parray-
>pvData;
                    pPayment = m_pTxn-
>BuffAddr_Payment();

                    memcpy(pPayment, &pData-
>u.Payment, sizeof(PAYMENT_DATA));

                    m_pTxn->Payment();            //
do the actual txn

                    VariantInit(txn_out);
                    txn_out->vt = VT_SAFEARRAY;
                    txn_out->parray =
SafeArrayCreateVector( VT_UI1,

                    txn_in.parray->rgsabound-
>cElements,

                    txn_in.parray->rgsabound-
>cElements);
                    pData = (COM_DATA*) txn_out-
>parray->pvData;

                    memcpy( &pData->u.Payment,
pPayment, sizeof(PAYMENT_DATA));

                    pData->retval = ERR_SUCCESS;
                    pData->error = 0;
                    return S_OK;
          }
          catch (CBaseErr *e)
          {
                    // check for lost database
connection; if yes, component is toast
                    if ( ((e->ErrorType() ==
ERR_TYPE_DBLIB) && (e->ErrorNum() == 10005)) ||
                              ((e->ErrorType() ==
ERR_TYPE_ODBC) && (e->ErrorNum() == 10054)) )
                             m_bCanBePooled = FALSE;

                    pData->retval = e->ErrorType();
                    pData->error = e->ErrorNum();
                    delete e;
                    return E_FAIL;
          }
          catch (...)
          {

          WriteMessageToEventLog(TEXT("Unhandled
exception."));
                    pData->retval = ERR_TYPE_LOGIC;
                    pData->error = 0;
                    m_bCanBePooled = FALSE;
                    return E_FAIL;
          }
}

HRESULT CTPCC_Common::StockLevel(VARIANT txn_in,
VARIANT* txn_out)
{
          PSTOCK_LEVEL_DATA   pStockLevel;
          COM_DATA                      *pData;

          try
          {
                    pData = (COM_DATA*)txn_in.parray-
>pvData;
                    pStockLevel = m_pTxn-
>BuffAddr_StockLevel();

                    memcpy(pStockLevel, &pData-
>u.StockLevel, sizeof(STOCK_LEVEL_DATA));

                    m_pTxn->StockLevel();

                    VariantInit(txn_out);
                    txn_out->vt = VT_SAFEARRAY;
                    txn_out->parray =
SafeArrayCreateVector( VT_UI1,

                    txn_in.parray->rgsabound-
>cElements,

                    txn_in.parray->rgsabound-
>cElements);
                    pData = (COM_DATA*)txn_out-
>parray->pvData;

                    memcpy( &pData->u.StockLevel,
pStockLevel, sizeof(STOCK_LEVEL_DATA));

                    pData->retval = ERR_SUCCESS;
                    pData->error = 0;
                    return S_OK;
          }
          catch (CBaseErr *e)
          {
                    // check for lost database
connection; if yes, component is toast
                    if ( ((e->ErrorType() ==
ERR_TYPE_DBLIB) && (e->ErrorNum() == 10005)) ||
                              ((e->ErrorType() ==
ERR_TYPE_ODBC) && (e->ErrorNum() == 10054)) )
                             m_bCanBePooled = FALSE;

                    pData->retval = e->ErrorType();
                    pData->error = e->ErrorNum();
                    delete e;
                    return E_FAIL;
          }
          catch (...)
          {

          WriteMessageToEventLog(TEXT("Unhandled
exception."));
                    pData->retval = ERR_TYPE_LOGIC;
                    pData->error = 0;
                    m_bCanBePooled = FALSE;
                    return E_FAIL;
          }
}

HRESULT CTPCC_Common::OrderStatus(VARIANT txn_in,
VARIANT* txn_out)
{
          PORDER_STATUS_DATA  pOrderStatus;
          COM_DATA                      *pData;
          try
          {
                    pData = (COM_DATA*)txn_in.parray-
>pvData;
                    pOrderStatus = m_pTxn-
>BuffAddr_OrderStatus();

                    memcpy(pOrderStatus, &pData-
>u.OrderStatus, sizeof(ORDER_STATUS_DATA));

                    m_pTxn->OrderStatus();

                    VariantInit(txn_out);
```


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```
                    txn_out->vt = VT_SAFEARRAY;
                    txn_out->parray =
SafeArrayCreateVector( VT_UI1,

                    txn_in.parray->rgsabound-
>cElements,

                    txn_in.parray->rgsabound-
>cElements);
                    pData = (COM_DATA*)txn_out-
>parray->pvData;

                    memcpy( &pData->u.OrderStatus,
pOrderStatus, sizeof(ORDER_STATUS_DATA));

                    pData->retval = ERR_SUCCESS;
                    pData->error = 0;
                    return S_OK;
          }
          catch (CBaseErr *e)
          {
                    // check for lost database
connection; if yes, component is toast
                    if ( ((e->ErrorType() ==
ERR_TYPE_DBLIB) && (e->ErrorNum() == 10005)) ||
                              ((e->ErrorType() ==
ERR_TYPE_ODBC) && (e->ErrorNum() == 10054)) )
                             m_bCanBePooled = FALSE;

                    pData->retval = e->ErrorType();
                    pData->error = e->ErrorNum();
                    delete e;
                    return E_FAIL;
          }
          catch (...)
          {

          WriteMessageToEventLog(TEXT("Unhandled
exception."));
                    pData->retval = ERR_TYPE_LOGIC;
                    pData->error = 0;
                    m_bCanBePooled = FALSE;
                    return E_FAIL;
          }
}
```

# tpcc_com_all.h

```
#pragma warning( disable: 4049 )  /* more than 64k
source lines */

/* this ALWAYS GENERATED file contains the
definitions for the interfaces */


 /* File created by MIDL compiler version 6.00.0347
*/
/* at Fri Apr 15 14:48:53 2005
 */
/* Compiler settings for .\src\tpcc_com_all.idl:
    Oicf, W1, Zp8, env=Win32 (32b run)
    protocol : dce , ms_ext, c_ext
    error checks: allocation ref bounds_check enum
stub_data
    VC __declspec() decoration level:
         __declspec(uuid()), __declspec(selectany),
__declspec(novtable)
         DECLSPEC_UUID(), MIDL_INTERFACE()
*/
//@@MIDL_FILE_HEADING(  )


/* verify that the <rpcndr.h> version is high enough
to compile this file*/
#ifndef __REQUIRED_RPCNDR_H_VERSION__
#define __REQUIRED_RPCNDR_H_VERSION__ 440
#endif

#include "rpc.h"
#include "rpcndr.h"

#ifndef __tpcc_com_all_h__
#define __tpcc_com_all_h__

#if defined(_MSC_VER) && (_MSC_VER >= 1020)
#pragma once
#endif

/* Forward Declarations */

#ifndef __TPCC_FWD_DEFINED__
#define __TPCC_FWD_DEFINED__

#ifdef __cplusplus
typedef class TPCC TPCC;
#else
typedef struct TPCC TPCC;
#endif /* __cplusplus */

#endif    /* __TPCC_FWD_DEFINED__ */


#ifndef __NewOrder_FWD_DEFINED__
#define __NewOrder_FWD_DEFINED__

#ifdef __cplusplus
typedef class NewOrder NewOrder;
#else
typedef struct NewOrder NewOrder;
#endif /* __cplusplus */

#endif    /* __NewOrder_FWD_DEFINED__ */


#ifndef __OrderStatus_FWD_DEFINED__
#define __OrderStatus_FWD_DEFINED__

#ifdef __cplusplus
typedef class OrderStatus OrderStatus;
#else
typedef struct OrderStatus OrderStatus;
#endif /* __cplusplus */

#endif    /* __OrderStatus_FWD_DEFINED__ */


#ifndef __Payment_FWD_DEFINED__
#define __Payment_FWD_DEFINED__

#ifdef __cplusplus
typedef class Payment Payment;
#else
typedef struct Payment Payment;
#endif /* __cplusplus */

#endif    /* __Payment_FWD_DEFINED__ */


#ifndef __StockLevel_FWD_DEFINED__
#define __StockLevel_FWD_DEFINED__

#ifdef __cplusplus
typedef class StockLevel StockLevel;
#else
typedef struct StockLevel StockLevel;
#endif /* __cplusplus */

#endif    /* __StockLevel_FWD_DEFINED__ */


/* header files for imported files */
#include "oaidl.h"
#include "ocidl.h"
#include "tpcc_com_ps.h"

#ifdef __cplusplus
extern "C"{
#endif

void * __RPC_USER MIDL_user_allocate(size_t);
void __RPC_USER MIDL_user_free( void * );

/* interface __MIDL_itf_tpcc_com_all_0000 */
/* [local] */




extern RPC_IF_HANDLE
__MIDL_itf_tpcc_com_all_0000_v0_0_c_ifspec;
extern RPC_IF_HANDLE
__MIDL_itf_tpcc_com_all_0000_v0_0_s_ifspec;


#ifndef __TPCCLib_LIBRARY_DEFINED__
#define __TPCCLib_LIBRARY_DEFINED__

/* library TPCCLib */
/* [helpstring][version][uuid] */
```


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```
EXTERN_C const IID LIBID_TPCCLib;

EXTERN_C const CLSID CLSID_TPCC;

#ifdef __cplusplus

class DECLSPEC_UUID("122A3128-2520-11D3-BA71-
00C04FBFE08B")
TPCC;
#endif

EXTERN_C const CLSID CLSID_NewOrder;

#ifdef __cplusplus

class DECLSPEC_UUID("975BAABF-84A7-11D2-BA47-
00C04FBFE08B")
NewOrder;
#endif

EXTERN_C const CLSID CLSID_OrderStatus;

#ifdef __cplusplus

class DECLSPEC_UUID("266836AD-A50D-11D2-BA4E-
00C04FBFE08B")
OrderStatus;
#endif

EXTERN_C const CLSID CLSID_Payment;

#ifdef __cplusplus

class DECLSPEC_UUID("CD02F7EF-A4FA-11D2-BA4E-
00C04FBFE08B")
Payment;
#endif

EXTERN_C const CLSID CLSID_StockLevel;

#ifdef __cplusplus

class DECLSPEC_UUID("2668369E-A50D-11D2-BA4E-
00C04FBFE08B")
StockLevel;
#endif
#endif /* __TPCCLib_LIBRARY_DEFINED__ */

/* Additional Prototypes for ALL interfaces */

/* end of Additional Prototypes */

#ifdef __cplusplus
}
#endif

#endif
```

# tpcc_com_all.rc

```
//Microsoft Developer Studio generated resource
script.
//
#include "resource.h"

#define APSTUDIO_READONLY_SYMBOLS
//////////////////////////////////////////////////
//////////////////////
//
// Generated from the TEXTINCLUDE 2 resource.
//
#include "winres.h"

//////////////////////////////////////////////////
//////////////////////
#undef APSTUDIO_READONLY_SYMBOLS

//////////////////////////////////////////////////
//////////////////////
// English (U.S.) resources

#if !defined(AFX_RESOURCE_DLL) ||
defined(AFX_TARG_ENU)
#ifdef _WIN32
LANGUAGE LANG_ENGLISH, SUBLANG_ENGLISH_US
#pragma code_page(1252)
#endif //_WIN32

#ifdef APSTUDIO_INVOKED
//////////////////////////////////////////////////
//////////////////////
//
// TEXTINCLUDE
//

1 TEXTINCLUDE DISCARDABLE
BEGIN
    "resource.h\0"
END

2 TEXTINCLUDE DISCARDABLE
BEGIN
    "#include ""winres.h""\r\n"
    "\0"
END

3 TEXTINCLUDE DISCARDABLE
BEGIN
    "1 TYPELIB ""tpcc_com_all.tlb""\r\n"
    "\0"
END

#endif    // APSTUDIO_INVOKED


#ifndef _MAC
//////////////////////////////////////////////////
//////////////////////
//
// Version
//

VS_VERSION_INFO VERSIONINFO
 FILEVERSION 1,0,0,1
 PRODUCTVERSION 1,0,0,1
 FILEFLAGSMASK 0x3fL
#ifdef _DEBUG
 FILEFLAGS 0x1L
#else
 FILEFLAGS 0x0L
#endif
 FILEOS 0x4L
 FILETYPE 0x2L
 FILESUBTYPE 0x0L
BEGIN
    BLOCK "StringFileInfo"
    BEGIN
        BLOCK "040904B0"
        BEGIN
            VALUE "CompanyName", "\0"
            VALUE "FileDescription", "tpcc_com_all
Module\0"
            VALUE "FileVersion", "1, 0, 0, 1\0"
            VALUE "InternalName", "TPCCNEWORDER\0"
            VALUE "LegalCopyright", "Copyright
1997\0"
            VALUE "OriginalFilename",
"tpcc_com_all.DLL\0"
            VALUE "ProductName", "tpcc_com_all
Module\0"
            VALUE "ProductVersion", "1, 0, 0, 1\0"
            VALUE "OLESelfRegister", "\0"
        END
    END
    BLOCK "VarFileInfo"
    BEGIN
        VALUE "Translation", 0x409, 1200
    END
END

#endif    // !_MAC


//////////////////////////////////////////////////
//////////////////////
//
// REGISTRY
//

IDR_TPCC                REGISTRY DISCARDABLE
"tpcc_com_all.rgs"
IDR_NEWORDER            REGISTRY DISCARDABLE
"tpcc_com_no.rgs"
IDR_ORDERSTATUS         REGISTRY DISCARDABLE
"tpcc_com_os.rgs"
IDR_PAYMENT             REGISTRY DISCARDABLE
"tpcc_com_pay.rgs"
IDR_STOCKLEVEL          REGISTRY DISCARDABLE
"tpcc_com_sl.rgs"

//////////////////////////////////////////////////
//////////////////////
```


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```
//
// String Table
//

STRINGTABLE DISCARDABLE
BEGIN
    IDS_PROJNAME            "tpcc_com_all"
END

#endif    // English (U.S.) resources
/////////////////////////////////////////////////////
////////////////////////


#ifndef APSTUDIO_INVOKED
/////////////////////////////////////////////////////
////////////////////////
//
// Generated from the TEXTINCLUDE 3 resource.
//
1 TYPELIB "tpcc_com_all.tlb"

/////////////////////////////////////////////////////
////////////////////////
#endif    // not APSTUDIO_INVOKED
```

# tpcc_com_all.rgs

```
HKCR
{
          TPCC.AllTxns.1 = s 'All Txns Class'
          {
                    CLSID = s '{122A3128-2520-11D3-
BA71-00C04FBFE08B}'
          }
          TPCC.AllTxns = s 'TPCC Class'
          {
                    CurVer = s 'TPCC.AllTxns.1'
          }
          NoRemove CLSID
          {
                    ForceRemove {122A3128-2520-11D3-
BA71-00C04FBFE08B} = s 'TPCC Class'
                    {
                              ProgID = s
'TPCC.AllTxns.1'

          VersionIndependentProgID = s 'TPCC.AllTxns'
                              InprocServer32 = s
'%MODULE%'
                              {
                                        val
ThreadingModel = s 'Both'
                              }
                    }
          }
}
```

# tpcc_com_all_i.c

```
#pragma warning( disable: 4049 )  /* more than 64k
source lines */

/* this ALWAYS GENERATED file contains the IIDs and
CLSIDs */

/* link this file in with the server and any clients
*/


 /* File created by MIDL compiler version 6.00.0347
*/
/* at Fri Apr 15 14:48:53 2005
 */
/* Compiler settings for .\src\tpcc_com_all.idl:
    Oicf, W1, Zp8, env=Win32 (32b run)
    protocol : dce , ms_ext, c_ext
    error checks: allocation ref bounds_check enum
stub_data
    VC __declspec() decoration level:
         __declspec(uuid()), __declspec(selectany),
__declspec(novtable)
         DECLSPEC_UUID(), MIDL_INTERFACE()
*/
//@@MIDL_FILE_HEADING(  )

#if !defined(_M_IA64) && !defined(_M_AMD64)

#ifdef __cplusplus
extern "C"{
#endif


#include <rpc.h>
#include <rpcndr.h>

#ifdef _MIDL_USE_GUIDDEF_

#ifndef INITGUID
#define INITGUID
#include <guiddef.h>
#undef INITGUID
#else
#include <guiddef.h>
#endif

#define
MIDL_DEFINE_GUID(type,name,l,w1,w2,b1,b2,b3,b4,b5,b6,
b7,b8) \

DEFINE_GUID(name,l,w1,w2,b1,b2,b3,b4,b5,b6,b7,b8)

#else // !_MIDL_USE_GUIDDEF_

#ifndef __IID_DEFINED__
#define __IID_DEFINED__

typedef struct _IID
{
    unsigned long x;
    unsigned short s1;
    unsigned short s2;
    unsigned char  c[8];
} IID;

#endif // __IID_DEFINED__

#ifndef CLSID_DEFINED
#define CLSID_DEFINED
typedef IID CLSID;
#endif // CLSID_DEFINED

#define
MIDL_DEFINE_GUID(type,name,l,w1,w2,b1,b2,b3,b4,b5,b6,
b7,b8) \
        const type name =
{l,w1,w2,{b1,b2,b3,b4,b5,b6,b7,b8}}

#endif !_MIDL_USE_GUIDDEF_

MIDL_DEFINE_GUID(IID,
LIBID_TPCCLib,0x122A3117,0x2520,0x11D3,0xBA,0x71,0x00
,0xC0,0x4F,0xBF,0xE0,0x8B);


MIDL_DEFINE_GUID(CLSID,
CLSID_TPCC,0x122A3128,0x2520,0x11D3,0xBA,0x71,0x00,0x
C0,0x4F,0xBF,0xE0,0x8B);


MIDL_DEFINE_GUID(CLSID,
CLSID_NewOrder,0x975BAABF,0x84A7,0x11D2,0xBA,0x47,0x0
0,0xC0,0x4F,0xBF,0xE0,0x8B);


MIDL_DEFINE_GUID(CLSID,
CLSID_OrderStatus,0x266836AD,0xA50D,0x11D2,0xBA,0x4E,
0x00,0xC0,0x4F,0xBF,0xE0,0x8B);


MIDL_DEFINE_GUID(CLSID,
CLSID_Payment,0xCD02F7EF,0xA4FA,0x11D2,0xBA,0x4E,0x00
,0xC0,0x4F,0xBF,0xE0,0x8B);


MIDL_DEFINE_GUID(CLSID,
CLSID_StockLevel,0x2668369E,0xA50D,0x11D2,0xBA,0x4E,0
x00,0xC0,0x4F,0xBF,0xE0,0x8B);

#undef MIDL_DEFINE_GUID

#ifdef __cplusplus
}
#endif



#endif /* !defined(_M_IA64) && !defined(_M_AMD64)*/
```


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```
#pragma warning( disable: 4049 )  /* more than 64k
source lines */

/* this ALWAYS GENERATED file contains the IIDs and
CLSIDs */

/* link this file in with the server and any clients
*/


 /* File created by MIDL compiler version 6.00.0347
*/
/* at Fri Apr 15 14:48:53 2005
 */
/* Compiler settings for .\src\tpcc_com_all.idl:
    Oicf, W1, Zp8, env=Win64 (32b run,appending)
    protocol : dce , ms_ext, c_ext, robust
    error checks: allocation ref bounds_check enum
stub_data
    VC __declspec() decoration level:
         __declspec(uuid()), __declspec(selectany),
__declspec(novtable)
         DECLSPEC_UUID(), MIDL_INTERFACE()
*/
//@@MIDL_FILE_HEADING(  )

#if defined(_M_IA64) || defined(_M_AMD64)

#ifdef __cplusplus
extern "C"{
#endif


#include <rpc.h>
#include <rpcndr.h>

#ifdef _MIDL_USE_GUIDDEF_

#ifndef INITGUID
#define INITGUID
#include <guiddef.h>
#undef INITGUID
#else
#include <guiddef.h>
#endif

#define
MIDL_DEFINE_GUID(type,name,l,w1,w2,b1,b2,b3,b4,b5,b6,
b7,b8) \

DEFINE_GUID(name,l,w1,w2,b1,b2,b3,b4,b5,b6,b7,b8)

#else // !_MIDL_USE_GUIDDEF_

#ifndef __IID_DEFINED__
#define __IID_DEFINED__

typedef struct _IID
{
    unsigned long x;
    unsigned short s1;
    unsigned short s2;
    unsigned char  c[8];
} IID;

#endif // __IID_DEFINED__

#ifndef CLSID_DEFINED
#define CLSID_DEFINED
typedef IID CLSID;
#endif // CLSID_DEFINED

#define
MIDL_DEFINE_GUID(type,name,l,w1,w2,b1,b2,b3,b4,b5,b6,
b7,b8) \
        const type name =
{l,w1,w2,{b1,b2,b3,b4,b5,b6,b7,b8}}

#endif !_MIDL_USE_GUIDDEF_

MIDL_DEFINE_GUID(IID,
LIBID_TPCCLib,0x122A3117,0x2520,0x11D3,0xBA,0x71,0x00
,0xC0,0x4F,0xBF,0xE0,0x8B);


MIDL_DEFINE_GUID(CLSID,
CLSID_TPCC,0x122A3128,0x2520,0x11D3,0xBA,0x71,0x00,0x
C0,0x4F,0xBF,0xE0,0x8B);


MIDL_DEFINE_GUID(CLSID,
CLSID_NewOrder,0x975BAABF,0x84A7,0x11D2,0xBA,0x47,0x0
0,0xC0,0x4F,0xBF,0xE0,0x8B);


MIDL_DEFINE_GUID(CLSID,
CLSID_OrderStatus,0x266836AD,0xA50D,0x11D2,0xBA,0x4E,
0x00,0xC0,0x4F,0xBF,0xE0,0x8B);


MIDL_DEFINE_GUID(CLSID,
CLSID_Payment,0xCD02F7EF,0xA4FA,0x11D2,0xBA,0x4E,0x00
,0xC0,0x4F,0xBF,0xE0,0x8B);


MIDL_DEFINE_GUID(CLSID,
CLSID_StockLevel,0x2668369E,0xA50D,0x11D2,0xBA,0x4E,0
x00,0xC0,0x4F,0xBF,0xE0,0x8B);

#undef MIDL_DEFINE_GUID

#ifdef __cplusplus
}
#endif



#endif /* defined(_M_IA64) || defined(_M_AMD64)*/
```

# tpcc_com_no.rgs

```
HKCR
{
          TPCC.NewOrder.1 = s 'NewOrder Class'
          {
                    CLSID = s '{975BAABF-84A7-11D2-
BA47-00C04FBFE08B}'
          }
          TPCC.NewOrder = s 'NewOrder Class'
          {
                    CurVer = s 'TPCC.NewOrder.1'
          }
          NoRemove CLSID
          {
                    ForceRemove {975BAABF-84A7-11D2-
BA47-00C04FBFE08B} = s 'NewOrder Class'
                    {
                              ProgID = s
'TPCC.NewOrder.1'

          VersionIndependentProgID = s
'TPCC.NewOrder'
                              InprocServer32 = s
'%MODULE%'
                              {
                                        val
ThreadingModel = s 'Both'
                              }
                    }
          }
}
```

# tpcc_com_os.rgs

```
HKCR
{
          TPCC.OrderStatus.1 = s 'OrderStatus Class'
          {
                    CLSID = s '{266836AD-A50D-11D2-
BA4E-00C04FBFE08B}'
          }
          TPCC.OrderStatus = s 'OrderStatus Class'
          {
                    CurVer = s 'TPCC.OrderStatus.1'
          }
          NoRemove CLSID
          {
                    ForceRemove {266836AD-A50D-11D2-
BA4E-00C04FBFE08B} = s 'OrderStatus Class'
                    {
                              ProgID = s
'TPCC.OrderStatus.1'

          VersionIndependentProgID = s
'TPCC.OrderStatus'
                              InprocServer32 = s
'%MODULE%'
                              {
                                        val
ThreadingModel = s 'Both'
                              }
                    }
```


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```
        }
}
```

# tpcc_com_pay.rgs

```
HKCR
{
        TPCC.Payment.1 = s 'Payment Class'
        {
                CLSID = s '{CD02F7EF-A4FA-11D2-
BA4E-00C04FBFE08B}'
        }
        TPCC.Payment = s 'Payment Class'
        {
                CurVer = s 'TPCC.Payment.1'
        }
        NoRemove CLSID
        {
                ForceRemove {CD02F7EF-A4FA-11D2-
BA4E-00C04FBFE08B} = s 'Payment Class'
                {
                        ProgID = s
'TPCC.Payment.1'

        VersionIndependentProgID = s 'TPCC.Payment'
                        InprocServer32 = s
'%MODULE%'
                        {
                                val
ThreadingModel = s 'Both'
                        }
                }
        }
}
```

# tpcc_com_ps.h

```
#pragma warning( disable: 4049 )  /* more than 64k
source lines */

/* this ALWAYS GENERATED file contains the
definitions for the interfaces */


 /* File created by MIDL compiler version 6.00.0347
*/
/* at Fri Apr 15 14:48:43 2005
 */
/* Compiler settings for .\src\tpcc_com_ps.idl:
    Oicf, W1, Zp8, env=Win32 (32b run)
    protocol : dce , ms_ext, c_ext
    error checks: allocation ref bounds_check enum
stub_data
    VC __declspec() decoration level:
         __declspec(uuid()), __declspec(selectany),
__declspec(novtable)
        DECLSPEC_UUID(), MIDL_INTERFACE()
*/
//@@MIDL_FILE_HEADING(  )


/* verify that the <rpcndr.h> version is high enough
to compile this file*/
#ifndef __REQUIRED_RPCNDR_H_VERSION__
#define __REQUIRED_RPCNDR_H_VERSION__ 440
#endif

#include "rpc.h"
#include "rpcndr.h"

#ifndef __RPCNDR_H_VERSION__
#error this stub requires an updated version of
<rpcndr.h>
#endif // __RPCNDR_H_VERSION__

#ifndef COM_NO_WINDOWS_H
#include "windows.h"
#include "ole2.h"
#endif /*COM_NO_WINDOWS_H*/

#ifndef __tpcc_com_ps_h__
#define __tpcc_com_ps_h__

#if defined(_MSC_VER) && (_MSC_VER >= 1020)
#pragma once
#endif

/* Forward Declarations */

#ifndef __ITPCC_FWD_DEFINED__
#define __ITPCC_FWD_DEFINED__
typedef interface ITPCC ITPCC;
#endif    /* __ITPCC_FWD_DEFINED__ */


/* header files for imported files */
#include "oaidl.h"
#include "ocidl.h"

#ifdef __cplusplus
extern "C"{
#endif

void * __RPC_USER MIDL_user_allocate(size_t);
void __RPC_USER MIDL_user_free( void * );

/* interface __MIDL_itf_tpcc_com_ps_0000 */
/* [local] */



extern RPC_IF_HANDLE
__MIDL_itf_tpcc_com_ps_0000_v0_0_c_ifspec;
extern RPC_IF_HANDLE
__MIDL_itf_tpcc_com_ps_0000_v0_0_s_ifspec;

#ifndef __ITPCC_INTERFACE_DEFINED__
#define __ITPCC_INTERFACE_DEFINED__

/* interface ITPCC */
/* [unique][helpstring][uuid][oleautomation][object]
*/


EXTERN_C const IID IID_ITPCC;

#if defined(__cplusplus) && !defined(CINTERFACE)

    MIDL_INTERFACE("FEEE6AA2-84B1-11d2-BA47-
00C04FBFE08B")
    ITPCC : public IUnknown
    {
    public:
        virtual HRESULT __stdcall NewOrder(
            /* [in] */ VARIANT txn_in,
            /* [out] */ VARIANT *txn_out) = 0;

        virtual HRESULT __stdcall Payment(
            /* [in] */ VARIANT txn_in,
            /* [out] */ VARIANT *txn_out) = 0;

        virtual HRESULT __stdcall Delivery(
            /* [in] */ VARIANT txn_in,
            /* [out] */ VARIANT *txn_out) = 0;

        virtual HRESULT __stdcall StockLevel(
            /* [in] */ VARIANT txn_in,
            /* [out] */ VARIANT *txn_out) = 0;

        virtual HRESULT __stdcall OrderStatus(
            /* [in] */ VARIANT txn_in,
            /* [out] */ VARIANT *txn_out) = 0;

        virtual HRESULT __stdcall CallSetComplete(
void) = 0;

    };

#else     /* C style interface */

    typedef struct ITPCCVtbl
    {
        BEGIN_INTERFACE

        HRESULT ( STDMETHODCALLTYPE *QueryInterface
)(
            ITPCC * This,
            /* [in] */ REFIID riid,
            /* [iid_is][out] */ void **ppvObject);

        ULONG ( STDMETHODCALLTYPE *AddRef )(
            ITPCC * This);

        ULONG ( STDMETHODCALLTYPE *Release )(
            ITPCC * This);

        HRESULT ( __stdcall *NewOrder )(
            ITPCC * This,
            /* [in] */ VARIANT txn_in,
            /* [out] */ VARIANT *txn_out);

        HRESULT ( __stdcall *Payment )(
```


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```
            ITPCC * This,
            /* [in] */ VARIANT txn_in,
            /* [out] */ VARIANT *txn_out);

        HRESULT ( __stdcall *Delivery )(
            ITPCC * This,
            /* [in] */ VARIANT txn_in,
            /* [out] */ VARIANT *txn_out);

        HRESULT ( __stdcall *StockLevel )(
            ITPCC * This,
            /* [in] */ VARIANT txn_in,
            /* [out] */ VARIANT *txn_out);

        HRESULT ( __stdcall *OrderStatus )(
            ITPCC * This,
            /* [in] */ VARIANT txn_in,
            /* [out] */ VARIANT *txn_out);

        HRESULT ( __stdcall *CallSetComplete )(
            ITPCC * This);

        END_INTERFACE
    } ITPCCVtbl;

    interface ITPCC
    {
        CONST_VTBL struct ITPCCVtbl *lpVtbl;
    };



#ifdef COBJMACROS


#define ITPCC_QueryInterface(This,riid,ppvObject) \
    (This)->lpVtbl ->
QueryInterface(This,riid,ppvObject)

#define ITPCC_AddRef(This)    \
    (This)->lpVtbl -> AddRef(This)

#define ITPCC_Release(This)   \
    (This)->lpVtbl -> Release(This)


#define ITPCC_NewOrder(This,txn_in,txn_out)       \
    (This)->lpVtbl -> NewOrder(This,txn_in,txn_out)

#define ITPCC_Payment(This,txn_in,txn_out)        \
    (This)->lpVtbl -> Payment(This,txn_in,txn_out)

#define ITPCC_Delivery(This,txn_in,txn_out)       \
    (This)->lpVtbl -> Delivery(This,txn_in,txn_out)

#define ITPCC_StockLevel(This,txn_in,txn_out)     \
    (This)->lpVtbl -> StockLevel(This,txn_in,txn_out)

#define ITPCC_OrderStatus(This,txn_in,txn_out)    \
    (This)->lpVtbl ->
OrderStatus(This,txn_in,txn_out)

#define ITPCC_CallSetComplete(This)     \
    (This)->lpVtbl -> CallSetComplete(This)

#endif /* COBJMACROS */


#endif    /* C style interface */



HRESULT __stdcall ITPCC_NewOrder_Proxy(
    ITPCC * This,
    /* [in] */ VARIANT txn_in,
    /* [out] */ VARIANT *txn_out);


void __RPC_STUB ITPCC_NewOrder_Stub(
    IRpcStubBuffer *This,
    IRpcChannelBuffer *_pRpcChannelBuffer,
    PRPC_MESSAGE _pRpcMessage,
    DWORD *_pdwStubPhase);


HRESULT __stdcall ITPCC_Payment_Proxy(
    ITPCC * This,
    /* [in] */ VARIANT txn_in,
    /* [out] */ VARIANT *txn_out);


void __RPC_STUB ITPCC_Payment_Stub(
    IRpcStubBuffer *This,
    IRpcChannelBuffer *_pRpcChannelBuffer,
    PRPC_MESSAGE _pRpcMessage,
    DWORD *_pdwStubPhase);


HRESULT __stdcall ITPCC_Delivery_Proxy(
    ITPCC * This,
    /* [in] */ VARIANT txn_in,
    /* [out] */ VARIANT *txn_out);


void __RPC_STUB ITPCC_Delivery_Stub(
    IRpcStubBuffer *This,
    IRpcChannelBuffer *_pRpcChannelBuffer,
    PRPC_MESSAGE _pRpcMessage,
    DWORD *_pdwStubPhase);


HRESULT __stdcall ITPCC_StockLevel_Proxy(
    ITPCC * This,
    /* [in] */ VARIANT txn_in,
    /* [out] */ VARIANT *txn_out);


void __RPC_STUB ITPCC_StockLevel_Stub(
    IRpcStubBuffer *This,
    IRpcChannelBuffer *_pRpcChannelBuffer,
    PRPC_MESSAGE _pRpcMessage,
    DWORD *_pdwStubPhase);


HRESULT __stdcall ITPCC_OrderStatus_Proxy(
    ITPCC * This,
    /* [in] */ VARIANT txn_in,
    /* [out] */ VARIANT *txn_out);


void __RPC_STUB ITPCC_OrderStatus_Stub(
    IRpcStubBuffer *This,
    IRpcChannelBuffer *_pRpcChannelBuffer,
    PRPC_MESSAGE _pRpcMessage,
    DWORD *_pdwStubPhase);


HRESULT __stdcall ITPCC_CallSetComplete_Proxy(
    ITPCC * This);


void __RPC_STUB ITPCC_CallSetComplete_Stub(
    IRpcStubBuffer *This,
    IRpcChannelBuffer *_pRpcChannelBuffer,
    PRPC_MESSAGE _pRpcMessage,
    DWORD *_pdwStubPhase);



#endif    /* __ITPCC_INTERFACE_DEFINED__ */


/* Additional Prototypes for ALL interfaces */

unsigned long             __RPC_USER
VARIANT_UserSize(     unsigned long *, unsigned long
, VARIANT * );
unsigned char * __RPC_USER  VARIANT_UserMarshal(
unsigned long *, unsigned char *, VARIANT * );
unsigned char * __RPC_USER
VARIANT_UserUnmarshal(unsigned long *, unsigned char
*, VARIANT * );
void                      __RPC_USER
VARIANT_UserFree(     unsigned long *, VARIANT * );

/* end of Additional Prototypes */

#ifdef __cplusplus
}
#endif

#endif
```

# tpcc_com_ps_i.c

```
#pragma warning( disable: 4049 )  /* more than 64k
source lines */

/* this ALWAYS GENERATED file contains the IIDs and
CLSIDs */

/* link this file in with the server and any clients
*/
```


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```
 /* File created by MIDL compiler version 6.00.0347
*/
/* at Fri Apr 15 14:48:43 2005
 */
/* Compiler settings for .\src\tpcc_com_ps.idl:
    Oicf, W1, Zp8, env=Win32 (32b run)
    protocol : dce , ms_ext, c_ext
    error checks: allocation ref bounds_check enum
stub_data
    VC __declspec() decoration level:
         __declspec(uuid()), __declspec(selectany),
__declspec(novtable)
         DECLSPEC_UUID(), MIDL_INTERFACE()
*/
//@@MIDL_FILE_HEADING(  )

#if !defined(_M_IA64) && !defined(_M_AMD64)

#ifdef __cplusplus
extern "C"{
#endif


#include <rpc.h>
#include <rpcndr.h>

#ifdef _MIDL_USE_GUIDDEF_

#ifndef INITGUID
#define INITGUID
#include <guiddef.h>
#undef INITGUID
#else
#include <guiddef.h>
#endif

#define
MIDL_DEFINE_GUID(type,name,l,w1,w2,b1,b2,b3,b4,b5,b6,
b7,b8) \

DEFINE_GUID(name,l,w1,w2,b1,b2,b3,b4,b5,b6,b7,b8)

#else // !_MIDL_USE_GUIDDEF_

#ifndef __IID_DEFINED__
#define __IID_DEFINED__

typedef struct _IID
{
    unsigned long x;
    unsigned short s1;
    unsigned short s2;
    unsigned char  c[8];
} IID;

#endif // __IID_DEFINED__

#ifndef CLSID_DEFINED
#define CLSID_DEFINED
typedef IID CLSID;
#endif // CLSID_DEFINED

#define
MIDL_DEFINE_GUID(type,name,l,w1,w2,b1,b2,b3,b4,b5,b6,
b7,b8) \
        const type name =
{l,w1,w2,{b1,b2,b3,b4,b5,b6,b7,b8}}

#endif !_MIDL_USE_GUIDDEF_

MIDL_DEFINE_GUID(IID,
IID_ITPCC,0xFEEE6AA2,0x84B1,0x11d2,0xBA,0x47,0x00,0xC
0,0x4F,0xBF,0xE0,0x8B);

#undef MIDL_DEFINE_GUID

#ifdef __cplusplus
}
#endif



#endif /* !defined(_M_IA64) && !defined(_M_AMD64)*/


#pragma warning( disable: 4049 )  /* more than 64k
source lines */

/* this ALWAYS GENERATED file contains the IIDs and
CLSIDs */

/* link this file in with the server and any clients
*/


 /* File created by MIDL compiler version 6.00.0347
*/
/* at Fri Apr 15 14:48:43 2005
 */
/* Compiler settings for .\src\tpcc_com_ps.idl:
    Oicf, W1, Zp8, env=Win64 (32b run,appending)
    protocol : dce , ms_ext, c_ext, robust
    error checks: allocation ref bounds_check enum
stub_data
    VC __declspec() decoration level:
         __declspec(uuid()), __declspec(selectany),
__declspec(novtable)
         DECLSPEC_UUID(), MIDL_INTERFACE()
*/
//@@MIDL_FILE_HEADING(  )

#if defined(_M_IA64) || defined(_M_AMD64)

#ifdef __cplusplus
extern "C"{
#endif


#include <rpc.h>
#include <rpcndr.h>

#ifdef _MIDL_USE_GUIDDEF_

#ifndef INITGUID
#define INITGUID
#include <guiddef.h>
#undef INITGUID
#else
#include <guiddef.h>
#endif

#define
MIDL_DEFINE_GUID(type,name,l,w1,w2,b1,b2,b3,b4,b5,b6,
b7,b8) \

DEFINE_GUID(name,l,w1,w2,b1,b2,b3,b4,b5,b6,b7,b8)

#else // !_MIDL_USE_GUIDDEF_

#ifndef __IID_DEFINED__
#define __IID_DEFINED__

typedef struct _IID
{
    unsigned long x;
    unsigned short s1;
    unsigned short s2;
    unsigned char  c[8];
} IID;

#endif // __IID_DEFINED__

#ifndef CLSID_DEFINED
#define CLSID_DEFINED
typedef IID CLSID;
#endif // CLSID_DEFINED

#define
MIDL_DEFINE_GUID(type,name,l,w1,w2,b1,b2,b3,b4,b5,b6,
b7,b8) \
        const type name =
{l,w1,w2,{b1,b2,b3,b4,b5,b6,b7,b8}}

#endif !_MIDL_USE_GUIDDEF_

MIDL_DEFINE_GUID(IID,
IID_ITPCC,0xFEEE6AA2,0x84B1,0x11d2,0xBA,0x47,0x00,0xC
0,0x4F,0xBF,0xE0,0x8B);

#undef MIDL_DEFINE_GUID

#ifdef __cplusplus
}
#endif



#endif /* defined(_M_IA64) || defined(_M_AMD64)*/
```

# tpcc_com_ps_p.c


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```
#pragma warning( disable: 4049 )  /* more than 64k
source lines */

/* this ALWAYS GENERATED file contains the proxy stub
code */


 /* File created by MIDL compiler version 6.00.0347
*/
/* at Fri Apr 15 14:48:43 2005
 */
/* Compiler settings for .\src\tpcc_com_ps.idl:
    Oicf, W1, Zp8, env=Win32 (32b run)
    protocol : dce , ms_ext, c_ext
    error checks: allocation ref bounds_check enum
stub_data
    VC __declspec() decoration level:
         __declspec(uuid()), __declspec(selectany),
__declspec(novtable)
        DECLSPEC_UUID(), MIDL_INTERFACE()
*/
//@@MIDL_FILE_HEADING(  )

#if !defined(_M_IA64) && !defined(_M_AMD64)
#define USE_STUBLESS_PROXY


/* verify that the <rpcproxy.h> version is high
enough to compile this file*/
#ifndef __REDQ_RPCPROXY_H_VERSION__
#define __REQUIRED_RPCPROXY_H_VERSION__ 440
#endif


#include "rpcproxy.h"
#ifndef __RPCPROXY_H_VERSION__
#error this stub requires an updated version of
<rpcproxy.h>
#endif // __RPCPROXY_H_VERSION__


#include "tpcc_com_ps.h"

#define TYPE_FORMAT_STRING_SIZE   1023
#define PROC_FORMAT_STRING_SIZE   193
#define TRANSMIT_AS_TABLE_SIZE    0
#define WIRE_MARSHAL_TABLE_SIZE   1

typedef struct _MIDL_TYPE_FORMAT_STRING
    {
    short          Pad;
    unsigned char  Format[ TYPE_FORMAT_STRING_SIZE ];
    } MIDL_TYPE_FORMAT_STRING;

typedef struct _MIDL_PROC_FORMAT_STRING
    {
    short          Pad;
    unsigned char  Format[ PROC_FORMAT_STRING_SIZE ];
    } MIDL_PROC_FORMAT_STRING;


static RPC_SYNTAX_IDENTIFIER  _RpcTransferSyntax =
{{0x8A885D04,0x1CEB,0x11C9,{0x9F,0xE8,0x08,0x00,0x2B,
0x10,0x48,0x60}},{2,0}};


extern const MIDL_TYPE_FORMAT_STRING
__MIDL_TypeFormatString;
extern const MIDL_PROC_FORMAT_STRING
__MIDL_ProcFormatString;


extern const MIDL_STUB_DESC Object_StubDesc;


extern const MIDL_SERVER_INFO ITPCC_ServerInfo;
extern const MIDL_STUBLESS_PROXY_INFO
ITPCC_ProxyInfo;


extern const USER_MARSHAL_ROUTINE_QUADRUPLE
UserMarshalRoutines[ WIRE_MARSHAL_TABLE_SIZE ];

#if !defined(__RPC_WIN32__)
#error  Invalid build platform for this stub.
#endif

#if !(TARGET_IS_NT40_OR_LATER)
#error You need a Windows NT 4.0 or later to run this
stub because it uses these features:
#error   -Oif or -Oicf, [wire_marshal] or
[user_marshal] attribute.
#error However, your C/C++ compilation flags indicate
you intend to run this app on earlier systems.
#error This app will die there with the
RPC_X_WRONG_STUB_VERSION error.
#endif


static const MIDL_PROC_FORMAT_STRING
__MIDL_ProcFormatString =
    {
        0,
        {

          /* Procedure NewOrder */

                                0x33,               /*
FC_AUTO_HANDLE */
                                0x6c,               /*
Old Flags:  object, Oi2 */
/*  2 */  NdrFcLong( 0x0 ),   /* 0 */
/*  6 */  NdrFcShort( 0x3 ),  /* 3 */
/*  8 */  NdrFcShort( 0x1c ), /* x86 Stack
size/offset = 28 */
/* 10 */  NdrFcShort( 0x0 ),  /* 0 */
/* 12 */  NdrFcShort( 0x8 ),  /* 8 */
/* 14 */  0x7,                /* Oi2 Flags:  srv must
size, clt must size, has return, */
                                0x3,                /*
3 */

          /* Parameter txn_in */

/* 16 */  NdrFcShort( 0x8b ), /* Flags:  must size,
must free, in, by val, */
/* 18 */  NdrFcShort( 0x4 ),  /* x86 Stack
size/offset = 4 */
/* 20 */  NdrFcShort( 0x3e2 ),          /* Type
Offset=994 */

          /* Parameter txn_out */

/* 22 */  NdrFcShort( 0x4113 ),         /* Flags:
must size, must free, out, simple ref, srv alloc
size=16 */
/* 24 */  NdrFcShort( 0x14 ), /* x86 Stack
size/offset = 20 */
/* 26 */  NdrFcShort( 0x3f4 ),          /* Type
Offset=1012 */

          /* Return value */

/* 28 */  NdrFcShort( 0x70 ), /* Flags:  out, return,
base type, */
/* 30 */  NdrFcShort( 0x18 ), /* x86 Stack
size/offset = 24 */
/* 32 */  0x8,                /* FC_LONG */
                                0x0,                /*
0 */

          /* Procedure Payment */

/* 34 */  0x33,               /* FC_AUTO_HANDLE */
                                0x6c,               /*
Old Flags:  object, Oi2 */
/* 36 */  NdrFcLong( 0x0 ),   /* 0 */
/* 40 */  NdrFcShort( 0x4 ),  /* 4 */
/* 42 */  NdrFcShort( 0x1c ), /* x86 Stack
size/offset = 28 */
/* 44 */  NdrFcShort( 0x0 ),  /* 0 */
/* 46 */  NdrFcShort( 0x8 ),  /* 8 */
/* 48 */  0x7,                /* Oi2 Flags:  srv must
size, clt must size, has return, */
                                0x3,                /*
3 */

          /* Parameter txn_in */

/* 50 */  NdrFcShort( 0x8b ), /* Flags:  must size,
must free, in, by val, */
/* 52 */  NdrFcShort( 0x4 ),  /* x86 Stack
size/offset = 4 */
/* 54 */  NdrFcShort( 0x3e2 ),          /* Type
Offset=994 */

          /* Parameter txn_out */

/* 56 */  NdrFcShort( 0x4113 ),         /* Flags:
must size, must free, out, simple ref, srv alloc
size=16 */
/* 58 */  NdrFcShort( 0x14 ), /* x86 Stack
size/offset = 20 */
/* 60 */  NdrFcShort( 0x3f4 ),          /* Type
Offset=1012 */

          /* Return value */
```


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```
/* 62 */  NdrFcShort( 0x70 ), /* Flags:  out, return,
base type, */
/* 64 */  NdrFcShort( 0x18 ), /* x86 Stack
size/offset = 24 */
/* 66 */  0x8,                /* FC_LONG */
                              0x0,                /*
0 */

          /* Procedure Delivery */

/* 68 */  0x33,               /* FC_AUTO_HANDLE */
                              0x6c,               /*
Old Flags:  object, Oi2 */
/* 70 */  NdrFcLong( 0x0 ),   /* 0 */
/* 74 */  NdrFcShort( 0x5 ),  /* 5 */
/* 76 */  NdrFcShort( 0x1c ), /* x86 Stack
size/offset = 28 */
/* 78 */  NdrFcShort( 0x0 ),  /* 0 */
/* 80 */  NdrFcShort( 0x8 ),  /* 8 */
/* 82 */  0x7,                /* Oi2 Flags:  srv must
size, clt must size, has return, */
                              0x3,                /*
3 */

          /* Parameter txn_in */

/* 84 */  NdrFcShort( 0x8b ), /* Flags:  must size,
must free, in, by val, */
/* 86 */  NdrFcShort( 0x4 ),  /* x86 Stack
size/offset = 4 */
/* 88 */  NdrFcShort( 0x3e2 ),          /* Type
Offset=994 */

          /* Parameter txn_out */

/* 90 */  NdrFcShort( 0x4113 ),         /* Flags:
must size, must free, out, simple ref, srv alloc
size=16 */
/* 92 */  NdrFcShort( 0x14 ), /* x86 Stack
size/offset = 20 */
/* 94 */  NdrFcShort( 0x3f4 ),          /* Type
Offset=1012 */

          /* Return value */

/* 96 */  NdrFcShort( 0x70 ), /* Flags:  out, return,
base type, */
/* 98 */  NdrFcShort( 0x18 ), /* x86 Stack
size/offset = 24 */
/* 100 */ 0x8,                /* FC_LONG */
                              0x0,                /*
0 */

          /* Procedure StockLevel */

/* 102 */ 0x33,               /* FC_AUTO_HANDLE */
                              0x6c,               /*
Old Flags:  object, Oi2 */
/* 104 */ NdrFcLong( 0x0 ),   /* 0 */
/* 108 */ NdrFcShort( 0x6 ),  /* 6 */
/* 110 */ NdrFcShort( 0x1c ), /* x86 Stack
size/offset = 28 */
/* 112 */ NdrFcShort( 0x0 ),  /* 0 */
/* 114 */ NdrFcShort( 0x8 ),  /* 8 */
/* 116 */ 0x7,                /* Oi2 Flags:  srv must
size, clt must size, has return, */
                              0x3,                /*
3 */

          /* Parameter txn_in */

/* 118 */ NdrFcShort( 0x8b ), /* Flags:  must size,
must free, in, by val, */
/* 120 */ NdrFcShort( 0x4 ),  /* x86 Stack
size/offset = 4 */
/* 122 */ NdrFcShort( 0x3e2 ),          /* Type
Offset=994 */

          /* Parameter txn_out */

/* 124 */ NdrFcShort( 0x4113 ),         /* Flags:
must size, must free, out, simple ref, srv alloc
size=16 */
/* 126 */ NdrFcShort( 0x14 ), /* x86 Stack
size/offset = 20 */
/* 128 */ NdrFcShort( 0x3f4 ),          /* Type
Offset=1012 */

          /* Return value */

/* 130 */ NdrFcShort( 0x70 ), /* Flags:  out, return,
base type, */
/* 132 */ NdrFcShort( 0x18 ), /* x86 Stack
size/offset = 24 */
/* 134 */ 0x8,                /* FC_LONG */
                              0x0,                /*
0 */

          /* Procedure OrderStatus */

/* 136 */ 0x33,               /* FC_AUTO_HANDLE */
                              0x6c,               /*
Old Flags:  object, Oi2 */
/* 138 */ NdrFcLong( 0x0 ),   /* 0 */
/* 142 */ NdrFcShort( 0x7 ),  /* 7 */
/* 144 */ NdrFcShort( 0x1c ), /* x86 Stack
size/offset = 28 */
/* 146 */ NdrFcShort( 0x0 ),  /* 0 */
/* 148 */ NdrFcShort( 0x8 ),  /* 8 */
/* 150 */ 0x7,                /* Oi2 Flags:  srv must
size, clt must size, has return, */
                              0x3,                /*
3 */

          /* Parameter txn_in */

/* 152 */ NdrFcShort( 0x8b ), /* Flags:  must size,
must free, in, by val, */
/* 154 */ NdrFcShort( 0x4 ),  /* x86 Stack
size/offset = 4 */
/* 156 */ NdrFcShort( 0x3e2 ),          /* Type
Offset=994 */

          /* Parameter txn_out */

/* 158 */ NdrFcShort( 0x4113 ),         /* Flags:
must size, must free, out, simple ref, srv alloc
size=16 */
/* 160 */ NdrFcShort( 0x14 ), /* x86 Stack
size/offset = 20 */
/* 162 */ NdrFcShort( 0x3f4 ),          /* Type
Offset=1012 */

          /* Return value */

/* 164 */ NdrFcShort( 0x70 ), /* Flags:  out, return,
base type, */
/* 166 */ NdrFcShort( 0x18 ), /* x86 Stack
size/offset = 24 */
/* 168 */ 0x8,                /* FC_LONG */
                              0x0,                /*
0 */

          /* Procedure CallSetComplete */

/* 170 */ 0x33,               /* FC_AUTO_HANDLE */
                              0x6c,               /*
Old Flags:  object, Oi2 */
/* 172 */ NdrFcLong( 0x0 ),   /* 0 */
/* 176 */ NdrFcShort( 0x8 ),  /* 8 */
/* 178 */ NdrFcShort( 0x8 ),  /* x86 Stack
size/offset = 8 */
/* 180 */ NdrFcShort( 0x0 ),  /* 0 */
/* 182 */ NdrFcShort( 0x8 ),  /* 8 */
/* 184 */ 0x4,                /* Oi2 Flags:  has
return, */
                              0x1,                /*
1 */

          /* Return value */

/* 186 */ NdrFcShort( 0x70 ), /* Flags:  out, return,
base type, */
/* 188 */ NdrFcShort( 0x4 ),  /* x86 Stack
size/offset = 4 */
/* 190 */ 0x8,                /* FC_LONG */
                              0x0,                /*
0 */

                              0x0
        }
    };

static const MIDL_TYPE_FORMAT_STRING
__MIDL_TypeFormatString =
    {
        0,
        {
                              NdrFcShort( 0x0 ),  /*
0 */
/*  2 */
                              0x12, 0x0,          /*
FC_UP */
/*  4 */  NdrFcShort( 0x3ca ),          /* Offset=
970 (974) */
/*  6 */
                              0x2b,               /*
FC_NON_ENCAPSULATED_UNION */
```


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```
                            0x9,                /*
FC_ULONG */
/*  8 */  0x7,                /* Corr desc: FC_USHORT
*/
                            0x0,                /*
*/
/* 10 */  NdrFcShort( 0xfff8 ),         /* -8 */
/* 12 */  NdrFcShort( 0x2 ),  /* Offset= 2 (14) */
/* 14 */  NdrFcShort( 0x10 ), /* 16 */
/* 16 */  NdrFcShort( 0x2f ), /* 47 */
/* 18 */  NdrFcLong( 0x14 ),  /* 20 */
/* 22 */  NdrFcShort( 0x800b ),         /* Simple arm
type: FC_HYPER */
/* 24 */  NdrFcLong( 0x3 ),   /* 3 */
/* 28 */  NdrFcShort( 0x8008 ),         /* Simple arm
type: FC_LONG */
/* 30 */  NdrFcLong( 0x11 ),  /* 17 */
/* 34 */  NdrFcShort( 0x8001 ),         /* Simple arm
type: FC_BYTE */
/* 36 */  NdrFcLong( 0x2 ),   /* 2 */
/* 40 */  NdrFcShort( 0x8006 ),         /* Simple arm
type: FC_SHORT */
/* 42 */  NdrFcLong( 0x4 ),   /* 4 */
/* 46 */  NdrFcShort( 0x800a ),         /* Simple arm
type: FC_FLOAT */
/* 48 */  NdrFcLong( 0x5 ),   /* 5 */
/* 52 */  NdrFcShort( 0x800c ),         /* Simple arm
type: FC_DOUBLE */
/* 54 */  NdrFcLong( 0xb ),   /* 11 */
/* 58 */  NdrFcShort( 0x8006 ),         /* Simple arm
type: FC_SHORT */
/* 60 */  NdrFcLong( 0xa ),   /* 10 */
/* 64 */  NdrFcShort( 0x8008 ),         /* Simple arm
type: FC_LONG */
/* 66 */  NdrFcLong( 0x6 ),   /* 6 */
/* 70 */  NdrFcShort( 0xe8 ), /* Offset= 232 (302) */
/* 72 */  NdrFcLong( 0x7 ),   /* 7 */
/* 76 */  NdrFcShort( 0x800c ),         /* Simple arm
type: FC_DOUBLE */
/* 78 */  NdrFcLong( 0x8 ),   /* 8 */
/* 82 */  NdrFcShort( 0xe2 ), /* Offset= 226 (308) */
/* 84 */  NdrFcLong( 0xd ),   /* 13 */
/* 88 */  NdrFcShort( 0xf4 ), /* Offset= 244 (332) */
/* 90 */  NdrFcLong( 0x9 ),   /* 9 */
/* 94 */  NdrFcShort( 0x100 ),          /* Offset=
256 (350) */
/* 96 */  NdrFcLong( 0x2000 ),          /* 8192 */
/* 100 */ NdrFcShort( 0x10c ),          /* Offset=
268 (368) */
/* 102 */ NdrFcLong( 0x24 ),  /* 36 */
/* 106 */ NdrFcShort( 0x31a ),          /* Offset=
794 (900) */
/* 108 */ NdrFcLong( 0x4024 ),          /* 16420 */
/* 112 */ NdrFcShort( 0x314 ),          /* Offset=
788 (900) */
/* 114 */ NdrFcLong( 0x4011 ),          /* 16401 */
/* 118 */ NdrFcShort( 0x312 ),          /* Offset=
786 (904) */
/* 120 */ NdrFcLong( 0x4002 ),          /* 16386 */
/* 124 */ NdrFcShort( 0x310 ),          /* Offset=
784 (908) */
/* 126 */ NdrFcLong( 0x4003 ),          /* 16387 */
/* 130 */ NdrFcShort( 0x30e ),          /* Offset=
782 (912) */
/* 132 */ NdrFcLong( 0x4014 ),          /* 16404 */
/* 136 */ NdrFcShort( 0x30c ),          /* Offset=
780 (916) */
/* 138 */ NdrFcLong( 0x4004 ),          /* 16388 */
/* 142 */ NdrFcShort( 0x30a ),          /* Offset=
778 (920) */
/* 144 */ NdrFcLong( 0x4005 ),          /* 16389 */
/* 148 */ NdrFcShort( 0x308 ),          /* Offset=
776 (924) */
/* 150 */ NdrFcLong( 0x400b ),          /* 16395 */
/* 154 */ NdrFcShort( 0x2f2 ),          /* Offset=
754 (908) */
/* 156 */ NdrFcLong( 0x400a ),          /* 16394 */
/* 160 */ NdrFcShort( 0x2f0 ),          /* Offset=
752 (912) */
/* 162 */ NdrFcLong( 0x4006 ),          /* 16390 */
/* 166 */ NdrFcShort( 0x2fa ),          /* Offset=
762 (928) */
/* 168 */ NdrFcLong( 0x4007 ),          /* 16391 */
/* 172 */ NdrFcShort( 0x2f0 ),          /* Offset=
752 (924) */
/* 174 */ NdrFcLong( 0x4008 ),          /* 16392 */
/* 178 */ NdrFcShort( 0x2f2 ),          /* Offset=
754 (932) */
/* 180 */ NdrFcLong( 0x400d ),          /* 16397 */
/* 184 */ NdrFcShort( 0x2f0 ),          /* Offset=
752 (936) */
/* 186 */ NdrFcLong( 0x4009 ),          /* 16393 */
/* 190 */ NdrFcShort( 0x2ee ),          /* Offset=
750 (940) */
/* 192 */ NdrFcLong( 0x6000 ),          /* 24576 */
/* 196 */ NdrFcShort( 0x2ec ),          /* Offset=
748 (944) */
/* 198 */ NdrFcLong( 0x400c ),          /* 16396 */
/* 202 */ NdrFcShort( 0x2ea ),          /* Offset=
746 (948) */
/* 204 */ NdrFcLong( 0x10 ),  /* 16 */
/* 208 */ NdrFcShort( 0x8002 ),         /* Simple arm
type: FC_CHAR */
/* 210 */ NdrFcLong( 0x12 ),  /* 18 */
/* 214 */ NdrFcShort( 0x8006 ),         /* Simple arm
type: FC_SHORT */
/* 216 */ NdrFcLong( 0x13 ),  /* 19 */
/* 220 */ NdrFcShort( 0x8008 ),         /* Simple arm
type: FC_LONG */
/* 222 */ NdrFcLong( 0x15 ),  /* 21 */
/* 226 */ NdrFcShort( 0x800b ),         /* Simple arm
type: FC_HYPER */
/* 228 */ NdrFcLong( 0x16 ),  /* 22 */
/* 232 */ NdrFcShort( 0x8008 ),         /* Simple arm
type: FC_LONG */
/* 234 */ NdrFcLong( 0x17 ),  /* 23 */
/* 238 */ NdrFcShort( 0x8008 ),         /* Simple arm
type: FC_LONG */
/* 240 */ NdrFcLong( 0xe ),   /* 14 */
/* 244 */ NdrFcShort( 0x2c8 ),          /* Offset=
712 (956) */
/* 246 */ NdrFcLong( 0x400e ),          /* 16398 */
/* 250 */ NdrFcShort( 0x2cc ),          /* Offset=
716 (966) */
/* 252 */ NdrFcLong( 0x4010 ),          /* 16400 */
/* 256 */ NdrFcShort( 0x2ca ),          /* Offset=
714 (970) */
/* 258 */ NdrFcLong( 0x4012 ),          /* 16402 */
/* 262 */ NdrFcShort( 0x286 ),          /* Offset=
646 (908) */
/* 264 */ NdrFcLong( 0x4013 ),          /* 16403 */
/* 268 */ NdrFcShort( 0x284 ),          /* Offset=
644 (912) */
/* 270 */ NdrFcLong( 0x4015 ),          /* 16405 */
/* 274 */ NdrFcShort( 0x282 ),          /* Offset=
642 (916) */
/* 276 */ NdrFcLong( 0x4016 ),          /* 16406 */
/* 280 */ NdrFcShort( 0x278 ),          /* Offset=
632 (912) */
/* 282 */ NdrFcLong( 0x4017 ),          /* 16407 */
/* 286 */ NdrFcShort( 0x272 ),          /* Offset=
626 (912) */
/* 288 */ NdrFcLong( 0x0 ),   /* 0 */
/* 292 */ NdrFcShort( 0x0 ),  /* Offset= 0 (292) */
/* 294 */ NdrFcLong( 0x1 ),   /* 1 */
/* 298 */ NdrFcShort( 0x0 ),  /* Offset= 0 (298) */
/* 300 */ NdrFcShort( 0xffffffff ),     /* Offset= -1
(299) */
/* 302 */
                            0x15,               /*
FC_STRUCT */
                            0x7,                /*
7 */
/* 304 */ NdrFcShort( 0x8 ),  /* 8 */
/* 306 */ 0xb,                /* FC_HYPER */
                            0x5b,               /*
FC_END */
/* 308 */
                            0x12, 0x0,          /*
FC_UP */
/* 310 */ NdrFcShort( 0xc ),  /* Offset= 12 (322) */
/* 312 */
                            0x1b,               /*
FC_CARRAY */
                            0x1,                /*
1 */
/* 314 */ NdrFcShort( 0x2 ),  /* 2 */
/* 316 */ 0x9,                /* Corr desc: FC_ULONG
*/
                            0x0,                /*
*/
/* 318 */ NdrFcShort( 0xfffc ),         /* -4 */
/* 320 */ 0x6,                /* FC_SHORT */
                            0x5b,               /*
FC_END */
/* 322 */
                            0x17,               /*
FC_CSTRUCT */
                            0x3,                /*
3 */
/* 324 */ NdrFcShort( 0x8 ),  /* 8 */
/* 326 */ NdrFcShort( 0xfffffff2 ),     /* Offset= -
14 (312) */
/* 328 */ 0x8,                /* FC_LONG */
                            0x8,                /*
FC_LONG */
/* 330 */ 0x5c,               /* FC_PAD */
```


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```
                            0x5b,               /*
FC_END */
/* 332 */
                            0x2f,               /*
FC_IP */
                            0x5a,               /*
FC_CONSTANT_IID */
/* 334 */ NdrFcLong( 0x0 ),   /* 0 */
/* 338 */ NdrFcShort( 0x0 ),  /* 0 */
/* 340 */ NdrFcShort( 0x0 ),  /* 0 */
/* 342 */ 0xc0,               /* 192 */
                            0x0,                /*
0 */
/* 344 */ 0x0,                /* 0 */
                            0x0,                /*
0 */
/* 346 */ 0x0,                /* 0 */
                            0x0,                /*
0 */
/* 348 */ 0x0,                /* 0 */
                            0x46,               /*
70 */
/* 350 */
                            0x2f,               /*
FC_IP */
                            0x5a,               /*
FC_CONSTANT_IID */
/* 352 */ NdrFcLong( 0x20400 ),         /* 132096 */
/* 356 */ NdrFcShort( 0x0 ),  /* 0 */
/* 358 */ NdrFcShort( 0x0 ),  /* 0 */
/* 360 */ 0xc0,               /* 192 */
                            0x0,                /*
0 */
/* 362 */ 0x0,                /* 0 */
                            0x0,                /*
0 */
/* 364 */ 0x0,                /* 0 */
                            0x0,                /*
0 */
/* 366 */ 0x0,                /* 0 */
                            0x46,               /*
70 */
/* 368 */
                            0x12, 0x10,         /*
FC_UP [pointer_deref] */
/* 370 */ NdrFcShort( 0x2 ),  /* Offset= 2 (372) */
/* 372 */
                            0x12, 0x0,          /*
FC_UP */
/* 374 */ NdrFcShort( 0x1fc ),          /* Offset=
508 (882) */
/* 376 */
                            0x2a,               /*
FC_ENCAPSULATED_UNION */
                            0x49,               /*
73 */
/* 378 */ NdrFcShort( 0x18 ), /* 24 */
/* 380 */ NdrFcShort( 0xa ),  /* 10 */
/* 382 */ NdrFcLong( 0x8 ),   /* 8 */
/* 386 */ NdrFcShort( 0x58 ), /* Offset= 88 (474) */
/* 388 */ NdrFcLong( 0xd ),   /* 13 */
/* 392 */ NdrFcShort( 0x78 ), /* Offset= 120 (512) */
/* 394 */ NdrFcLong( 0x9 ),   /* 9 */
/* 398 */ NdrFcShort( 0x94 ), /* Offset= 148 (546) */
/* 400 */ NdrFcLong( 0xc ),   /* 12 */
/* 404 */ NdrFcShort( 0xbc ), /* Offset= 188 (592) */
/* 406 */ NdrFcLong( 0x24 ),  /* 36 */
/* 410 */ NdrFcShort( 0x114 ),          /* Offset=
276 (686) */
/* 412 */ NdrFcLong( 0x800d ),          /* 32781 */
/* 416 */ NdrFcShort( 0x130 ),          /* Offset=
304 (720) */
/* 418 */ NdrFcLong( 0x10 ),  /* 16 */
/* 422 */ NdrFcShort( 0x148 ),          /* Offset=
328 (750) */
/* 424 */ NdrFcLong( 0x2 ),   /* 2 */
/* 428 */ NdrFcShort( 0x160 ),          /* Offset=
352 (780) */
/* 430 */ NdrFcLong( 0x3 ),   /* 3 */
/* 434 */ NdrFcShort( 0x178 ),          /* Offset=
376 (810) */
/* 436 */ NdrFcLong( 0x14 ),  /* 20 */
/* 440 */ NdrFcShort( 0x190 ),          /* Offset=
400 (840) */
/* 442 */ NdrFcShort( 0xffffffff ),     /* Offset= -1
(441) */
/* 444 */
                                        0x1b,               /*
FC_CARRAY */
                                        0x3,                /*
3 */
/* 446 */ NdrFcShort( 0x4 ),  /* 4 */
/* 448 */ 0x19,               /* Corr desc:  field
pointer, FC_ULONG */
                                        0x0,                /*
*/
/* 450 */ NdrFcShort( 0x0 ),  /* 0 */
/* 452 */
                                        0x4b,               /*
FC_PP */
                                        0x5c,               /*
FC_PAD */
/* 454 */
                                        0x48,               /*
FC_VARIABLE_REPEAT */
                                        0x49,               /*
FC_FIXED_OFFSET */
/* 456 */ NdrFcShort( 0x4 ),  /* 4 */
/* 458 */ NdrFcShort( 0x0 ),  /* 0 */
/* 460 */ NdrFcShort( 0x1 ),  /* 1 */
/* 462 */ NdrFcShort( 0x0 ),  /* 0 */
/* 464 */ NdrFcShort( 0x0 ),  /* 0 */
/* 466 */ 0x12, 0x0,          /* FC_UP */
/* 468 */ NdrFcShort( 0xffffff6e ),     /* Offset= -
146 (322) */
/* 470 */
                                        0x5b,               /*
FC_END */
                                        0x8,                /*
FC_LONG */
/* 472 */ 0x5c,               /* FC_PAD */
                                        0x5b,               /*
FC_END */
/* 474 */
                                        0x16,               /*
FC_PSTRUCT */
                                        0x3,                /*
3 */
/* 476 */ NdrFcShort( 0x8 ),  /* 8 */
/* 478 */
                                        0x4b,               /*
FC_PP */
                                        0x5c,               /*
FC_PAD */
/* 480 */
                                        0x46,               /*
FC_NO_REPEAT */
                                        0x5c,               /*
FC_PAD */
/* 482 */ NdrFcShort( 0x4 ),  /* 4 */
/* 484 */ NdrFcShort( 0x4 ),  /* 4 */
/* 486 */ 0x11, 0x0,          /* FC_RP */
/* 488 */ NdrFcShort( 0xffffffd4 ),     /* Offset= -
44 (444) */
/* 490 */
                                        0x5b,               /*
FC_END */
                                        0x8,                /*
FC_LONG */
/* 492 */ 0x8,                /* FC_LONG */
                                        0x5b,               /*
FC_END */
/* 494 */
                                        0x21,               /*
FC_BOGUS_ARRAY */
                                        0x3,                /*
3 */
/* 496 */ NdrFcShort( 0x0 ),  /* 0 */
/* 498 */ 0x19,               /* Corr desc:  field
pointer, FC_ULONG */
                                        0x0,                /*
*/
/* 500 */ NdrFcShort( 0x0 ),  /* 0 */
/* 502 */ NdrFcLong( 0xffffffff ),      /* -1 */
/* 506 */ 0x4c,               /* FC_EMBEDDED_COMPLEX
*/
                                        0x0,                /*
0 */
/* 508 */ NdrFcShort( 0xffffff50 ),     /* Offset= -
176 (332) */
/* 510 */ 0x5c,               /* FC_PAD */
                                        0x5b,               /*
FC_END */
/* 512 */
                                        0x1a,               /*
FC_BOGUS_STRUCT */
                                        0x3,                /*
3 */
/* 514 */ NdrFcShort( 0x8 ),  /* 8 */
/* 516 */ NdrFcShort( 0x0 ),  /* 0 */
/* 518 */ NdrFcShort( 0x6 ),  /* Offset= 6 (524) */
/* 520 */ 0x8,                /* FC_LONG */
                                        0x36,               /*
FC_POINTER */
/* 522 */ 0x5c,               /* FC_PAD */
```


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```
                            0x5b,               /*
FC_END */
/* 524 */
                            0x11, 0x0,          /*
FC_RP */
/* 526 */ NdrFcShort( 0xffffffe0 ),     /* Offset= -
32 (494) */
/* 528 */
                            0x21,               /*
FC_BOGUS_ARRAY */
                            0x3,                /*
3 */
/* 530 */ NdrFcShort( 0x0 ),  /* 0 */
/* 532 */ 0x19,               /* Corr desc:  field
pointer, FC_ULONG */
                            0x0,                /*
*/
/* 534 */ NdrFcShort( 0x0 ),  /* 0 */
/* 536 */ NdrFcLong( 0xffffffff ),      /* -1 */
/* 540 */ 0x4c,               /* FC_EMBEDDED_COMPLEX
*/
                            0x0,                /*
0 */
/* 542 */ NdrFcShort( 0xffffff40 ),     /* Offset= -
192 (350) */
/* 544 */ 0x5c,               /* FC_PAD */
                            0x5b,               /*
FC_END */
/* 546 */
                            0x1a,               /*
FC_BOGUS_STRUCT */
                            0x3,                /*
3 */
/* 548 */ NdrFcShort( 0x8 ),  /* 8 */
/* 550 */ NdrFcShort( 0x0 ),  /* 0 */
/* 552 */ NdrFcShort( 0x6 ),  /* Offset= 6 (558) */
/* 554 */ 0x8,                /* FC_LONG */
                            0x36,               /*
FC_POINTER */
/* 556 */ 0x5c,               /* FC_PAD */
                            0x5b,               /*
FC_END */
/* 558 */
                            0x11, 0x0,          /*
FC_RP */
/* 560 */ NdrFcShort( 0xffffffe0 ),     /* Offset= -
32 (528) */
/* 562 */
                            0x1b,               /*
FC_CARRAY */
                            0x3,                /*
3 */
/* 564 */ NdrFcShort( 0x4 ),  /* 4 */
/* 566 */ 0x19,               /* Corr desc:  field
pointer, FC_ULONG */
                            0x0,                /*
*/
/* 568 */ NdrFcShort( 0x0 ),  /* 0 */
/* 570 */
                            0x4b,               /*
FC_PP */
                            0x5c,               /*
FC_PAD */
/* 572 */
                            0x48,               /*
FC_VARIABLE_REPEAT */
                            0x49,               /*
FC_FIXED_OFFSET */
/* 574 */ NdrFcShort( 0x4 ),  /* 4 */
/* 576 */ NdrFcShort( 0x0 ),  /* 0 */
/* 578 */ NdrFcShort( 0x1 ),  /* 1 */
/* 580 */ NdrFcShort( 0x0 ),  /* 0 */
/* 582 */ NdrFcShort( 0x0 ),  /* 0 */
/* 584 */ 0x12, 0x0,          /* FC_UP */
/* 586 */ NdrFcShort( 0x184 ),          /* Offset=
388 (974) */
/* 588 */
                            0x5b,               /*
FC_END */


                            0x8,                /*
FC_LONG */
/* 590 */ 0x5c,               /* FC_PAD */
                            0x5b,               /*
FC_END */
/* 592 */
                            0x1a,               /*
FC_BOGUS_STRUCT */
                            0x3,                /*
3 */
/* 594 */ NdrFcShort( 0x8 ),  /* 8 */
/* 596 */ NdrFcShort( 0x0 ),  /* 0 */
/* 598 */ NdrFcShort( 0x6 ),  /* Offset= 6 (604) */
/* 600 */ 0x8,                /* FC_LONG */
                            0x36,               /*
FC_POINTER */
/* 602 */ 0x5c,               /* FC_PAD */
                            0x5b,               /*
FC_END */
/* 604 */
                            0x11, 0x0,          /*
FC_RP */
/* 606 */ NdrFcShort( 0xffffffd4 ),     /* Offset= -
44 (562) */
/* 608 */
                            0x2f,               /*
FC_IP */
                            0x5a,               /*
FC_CONSTANT_IID */
/* 610 */ NdrFcLong( 0x2f ),  /* 47 */
/* 614 */ NdrFcShort( 0x0 ),  /* 0 */
/* 616 */ NdrFcShort( 0x0 ),  /* 0 */
/* 618 */ 0xc0,               /* 192 */
                            0x0,                /*
0 */
/* 620 */ 0x0,                /* 0 */
                            0x0,                /*
0 */
/* 622 */ 0x0,                /* 0 */
                            0x0,                /*
0 */
/* 624 */ 0x0,                /* 0 */
                            0x46,               /*
70 */
/* 626 */
                            0x1b,               /*
FC_CARRAY */
                            0x0,                /*
0 */
/* 628 */ NdrFcShort( 0x1 ),  /* 1 */
/* 630 */ 0x19,               /* Corr desc:  field
pointer, FC_ULONG */
                            0x0,                /*
*/
/* 632 */ NdrFcShort( 0x4 ),  /* 4 */
/* 634 */ 0x1,                /* FC_BYTE */
                            0x5b,               /*
FC_END */
/* 636 */
                            0x1a,               /*
FC_BOGUS_STRUCT */
                            0x3,                /*
3 */
/* 638 */ NdrFcShort( 0x10 ), /* 16 */
/* 640 */ NdrFcShort( 0x0 ),  /* 0 */
/* 642 */ NdrFcShort( 0xa ),  /* Offset= 10 (652) */
/* 644 */ 0x8,                /* FC_LONG */
                            0x8,                /*
FC_LONG */
/* 646 */ 0x4c,               /* FC_EMBEDDED_COMPLEX
*/
                            0x0,                /*
0 */
/* 648 */ NdrFcShort( 0xfffffff8 ),     /* Offset= -
40 (608) */
/* 650 */ 0x36,               /* FC_POINTER */
                            0x5b,               /*
FC_END */
/* 652 */
                            0x12, 0x0,          /*
FC_UP */
/* 654 */ NdrFcShort( 0xffffffe4 ),     /* Offset= -
28 (626) */
/* 656 */
                            0x1b,               /*
FC_CARRAY */
                            0x3,                /*
3 */
/* 658 */ NdrFcShort( 0x4 ),  /* 4 */
/* 660 */ 0x19,               /* Corr desc:  field
pointer, FC_ULONG */
                            0x0,                /*
*/
/* 662 */ NdrFcShort( 0x0 ),  /* 0 */
/* 664 */
                            0x4b,               /*
FC_PP */
                            0x5c,               /*
FC_PAD */
/* 666 */
                            0x48,               /*
FC_VARIABLE_REPEAT */
                            0x49,               /*
FC_FIXED_OFFSET */
/* 668 */ NdrFcShort( 0x4 ),  /* 4 */
/* 670 */ NdrFcShort( 0x0 ),  /* 0 */
/* 672 */ NdrFcShort( 0x1 ),  /* 1 */
/* 674 */ NdrFcShort( 0x0 ),  /* 0 */
```


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```
/* 676 */ NdrFcShort( 0x0 ),  /* 0 */
/* 678 */ 0x12, 0x0,          /* FC_UP */
/* 680 */ NdrFcShort( 0xffffffd4 ),     /* Offset= -
44 (636) */
/* 682 */
                               0x5b,               /*
FC_END */

                               0x8,                /*
FC_LONG */
/* 684 */ 0x5c,               /* FC_PAD */
                               0x5b,               /*
FC_END */
/* 686 */
                               0x1a,               /*
FC_BOGUS_STRUCT */
                               0x3,                /*
3 */
/* 688 */ NdrFcShort( 0x8 ),  /* 8 */
/* 690 */ NdrFcShort( 0x0 ),  /* 0 */
/* 692 */ NdrFcShort( 0x6 ),  /* Offset= 6 (698) */
/* 694 */ 0x8,                /* FC_LONG */
                               0x36,               /*
FC_POINTER */
/* 696 */ 0x5c,               /* FC_PAD */
                               0x5b,               /*
FC_END */
/* 698 */
                               0x11, 0x0,          /*
FC_RP */
/* 700 */ NdrFcShort( 0xffffffd4 ),     /* Offset= -
44 (656) */
/* 702 */
                               0x1d,               /*
FC_SMFARRAY */
                               0x0,                /*
0 */
/* 704 */ NdrFcShort( 0x8 ),  /* 8 */
/* 706 */ 0x1,                /* FC_BYTE */
                               0x5b,               /*
FC_END */
/* 708 */
                               0x15,               /*
FC_STRUCT */
                               0x3,                /*
3 */
/* 710 */ NdrFcShort( 0x10 ), /* 16 */
/* 712 */ 0x8,                /* FC_LONG */
                               0x6,                /*
FC_SHORT */
/* 714 */ 0x6,                /* FC_SHORT */
                               0x4c,               /*
FC_EMBEDDED_COMPLEX */
/* 716 */ 0x0,                /* 0 */
                               NdrFcShort( 0xfffffff1
),        /* Offset= -15 (702) */
                               0x5b,               /*
FC_END */
/* 720 */
                               0x1a,               /*
FC_BOGUS_STRUCT */
                               0x3,                /*
3 */
/* 722 */ NdrFcShort( 0x18 ), /* 24 */
/* 724 */ NdrFcShort( 0x0 ),  /* 0 */
/* 726 */ NdrFcShort( 0xa ),  /* Offset= 10 (736) */
/* 728 */ 0x8,                /* FC_LONG */
                               0x36,               /*
FC_POINTER */
/* 730 */ 0x4c,               /* FC_EMBEDDED_COMPLEX
*/
                               0x0,                /*
0 */
/* 732 */ NdrFcShort( 0xfffffe8 ),     /* Offset= -
24 (708) */
/* 734 */ 0x5c,               /* FC_PAD */
                               0x5b,               /*
FC_END */
/* 736 */
                               0x11, 0x0,          /*
FC_RP */
/* 738 */ NdrFcShort( 0xffffff0c ),     /* Offset= -
244 (494) */
/* 740 */
                               0x1b,               /*
FC_CARRAY */
                               0x0,                /*
0 */
/* 742 */ NdrFcShort( 0x1 ),  /* 1 */
/* 744 */ 0x19,               /* Corr desc:  field
pointer, FC_ULONG */
                               0x0,                /*
*/
/* 746 */ NdrFcShort( 0x0 ),  /* 0 */
/* 748 */ 0x1,                /* FC_BYTE */
                               0x5b,               /*
FC_END */
/* 750 */
                               0x16,               /*
FC_PSTRUCT */
                               0x3,                /*
3 */
/* 752 */ NdrFcShort( 0x8 ),  /* 8 */
/* 754 */
                               0x4b,               /*
FC_PP */
                               0x5c,               /*
FC_PAD */
/* 756 */
                               0x46,               /*
FC_NO_REPEAT */
                               0x5c,               /*
FC_PAD */
/* 758 */ NdrFcShort( 0x4 ),  /* 4 */
/* 760 */ NdrFcShort( 0x4 ),  /* 4 */
/* 762 */ 0x12, 0x0,          /* FC_UP */
/* 764 */ NdrFcShort( 0xfffffe8 ),     /* Offset= -
24 (740) */
/* 766 */
                               0x5b,               /*
FC_END */

                               0x8,                /*
FC_LONG */
/* 768 */ 0x8,                /* FC_LONG */
                               0x5b,               /*
FC_END */
/* 770 */
                               0x1b,               /*
FC_CARRAY */
                               0x1,                /*
1 */
/* 772 */ NdrFcShort( 0x2 ),  /* 2 */
/* 774 */ 0x19,               /* Corr desc:  field
pointer, FC_ULONG */
                               0x0,                /*
*/
/* 776 */ NdrFcShort( 0x0 ),  /* 0 */
/* 778 */ 0x6,                /* FC_SHORT */
                               0x5b,               /*
FC_END */
/* 780 */
                               0x16,               /*
FC_PSTRUCT */
                               0x3,                /*
3 */
/* 782 */ NdrFcShort( 0x8 ),  /* 8 */
/* 784 */
                               0x4b,               /*
FC_PP */
                               0x5c,               /*
FC_PAD */
/* 786 */
                               0x46,               /*
FC_NO_REPEAT */
                               0x5c,               /*
FC_PAD */
/* 788 */ NdrFcShort( 0x4 ),  /* 4 */
/* 790 */ NdrFcShort( 0x4 ),  /* 4 */
/* 792 */ 0x12, 0x0,          /* FC_UP */
/* 794 */ NdrFcShort( 0xfffffe8 ),     /* Offset= -
24 (770) */
/* 796 */
                               0x5b,               /*
FC_END */

                               0x8,                /*
FC_LONG */
/* 798 */ 0x8,                /* FC_LONG */
                               0x5b,               /*
FC_END */
/* 800 */
                               0x1b,               /*
FC_CARRAY */
                               0x3,                /*
3 */
/* 802 */ NdrFcShort( 0x4 ),  /* 4 */
/* 804 */ 0x19,               /* Corr desc:  field
pointer, FC_ULONG */
                               0x0,                /*
*/
/* 806 */ NdrFcShort( 0x0 ),  /* 0 */
/* 808 */ 0x8,                /* FC_LONG */
                               0x5b,               /*
FC_END */
/* 810 */
                               0x16,               /*
FC_PSTRUCT */
```


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```
                            0x3,                /*
3 */
/* 812 */ NdrFcShort( 0x8 ),  /* 8 */
/* 814 */
                            0x4b,               /*
FC_PP */
                            0x5c,               /*
FC_PAD */
/* 816 */
                            0x46,               /*
FC_NO_REPEAT */
                            0x5c,               /*
FC_PAD */
/* 818 */ NdrFcShort( 0x4 ),  /* 4 */
/* 820 */ NdrFcShort( 0x4 ),  /* 4 */
/* 822 */ 0x12, 0x0,          /* FC_UP */
/* 824 */ NdrFcShort( 0xfffffff8 ),     /* Offset= -
24 (800) */
/* 826 */
                            0x5b,               /*
FC_END */

                            0x8,                /*
FC_LONG */
/* 828 */ 0x8,                /* FC_LONG */
                            0x5b,               /*
FC_END */
/* 830 */
                            0x1b,               /*
FC_CARRAY */
                            0x7,                /*
7 */
/* 832 */ NdrFcShort( 0x8 ),  /* 8 */
/* 834 */ 0x19,               /* Corr desc:  field
pointer, FC_ULONG */
                            0x0,                /*
*/
/* 836 */ NdrFcShort( 0x0 ),  /* 0 */
/* 838 */ 0xb,                /* FC_HYPER */
                            0x5b,               /*
FC_END */
/* 840 */
                            0x16,               /*
FC_PSTRUCT */
                            0x3,                /*
3 */
/* 842 */ NdrFcShort( 0x8 ),  /* 8 */
/* 844 */
                            0x4b,               /*
FC_PP */
                            0x5c,               /*
FC_PAD */
/* 846 */
                            0x46,               /*
FC_NO_REPEAT */
                            0x5c,               /*
FC_PAD */
/* 848 */ NdrFcShort( 0x4 ),  /* 4 */
/* 850 */ NdrFcShort( 0x4 ),  /* 4 */
/* 852 */ 0x12, 0x0,          /* FC_UP */
/* 854 */ NdrFcShort( 0xfffffff8 ),     /* Offset= -
24 (830) */
/* 856 */
                            0x5b,               /*
FC_END */

                            0x8,                /*
FC_LONG */
/* 858 */ 0x8,                /* FC_LONG */
                            0x5b,               /*
FC_END */
/* 860 */
                            0x15,               /*
FC_STRUCT */
                            0x3,                /*
3 */
/* 862 */ NdrFcShort( 0x8 ),  /* 8 */
/* 864 */ 0x8,                /* FC_LONG */
                            0x8,                /*
FC_LONG */
/* 866 */ 0x5c,               /* FC_PAD */
                            0x5b,               /*
FC_END */
/* 868 */
                            0x1b,               /*
FC_CARRAY */
                            0x3,                /*
3 */
/* 870 */ NdrFcShort( 0x8 ),  /* 8 */
/* 872 */ 0x7,                /* Corr desc: FC_USHORT
*/
                            0x0,                /*
*/
/* 874 */ NdrFcShort( 0xffd8 ),         /* -40 */
/* 876 */ 0x4c,               /* FC_EMBEDDED_COMPLEX
*/
                            0x0,                /*
0 */
/* 878 */ NdrFcShort( 0xffffffee ),     /* Offset= -
18 (860) */
/* 880 */ 0x5c,               /* FC_PAD */
                            0x5b,               /*
FC_END */
/* 882 */
                            0x1a,               /*
FC_BOGUS_STRUCT */
                            0x3,                /*
3 */
/* 884 */ NdrFcShort( 0x28 ), /* 40 */
/* 886 */ NdrFcShort( 0xffffffee ),     /* Offset= -
18 (868) */
/* 888 */ NdrFcShort( 0x0 ),  /* Offset= 0 (888) */
/* 890 */ 0x6,                /* FC_SHORT */
                            0x6,                /*
FC_SHORT */
/* 892 */ 0x8,                /* FC_LONG */
                            0x8,                /*
FC_LONG */
/* 894 */ 0x4c,               /* FC_EMBEDDED_COMPLEX
*/
                            0x0,                /*
0 */
/* 896 */ NdrFcShort( 0xfffffdf8 ),     /* Offset= -
520 (376) */
/* 898 */ 0x5c,               /* FC_PAD */
                            0x5b,               /*
FC_END */
/* 900 */
                            0x12, 0x0,          /*
FC_UP */
/* 902 */ NdrFcShort( 0xfffffef6 ),     /* Offset= -
266 (636) */
/* 904 */
                            0x12, 0x8,          /*
FC_UP [simple_pointer] */
/* 906 */ 0x1,                /* FC_BYTE */
                            0x5c,               /*
FC_PAD */
/* 908 */
                            0x12, 0x8,          /*
FC_UP [simple_pointer] */
/* 910 */ 0x6,                /* FC_SHORT */
                            0x5c,               /*
FC_PAD */
/* 912 */
                            0x12, 0x8,          /*
FC_UP [simple_pointer] */
/* 914 */ 0x8,                /* FC_LONG */
                            0x5c,               /*
FC_PAD */
/* 916 */
                            0x12, 0x8,          /*
FC_UP [simple_pointer] */
/* 918 */ 0xb,                /* FC_HYPER */
                            0x5c,               /*
FC_PAD */
/* 920 */
                            0x12, 0x8,          /*
FC_UP [simple_pointer] */
/* 922 */ 0xa,                /* FC_FLOAT */
                            0x5c,               /*
FC_PAD */
/* 924 */
                            0x12, 0x8,          /*
FC_UP [simple_pointer] */
/* 926 */ 0xc,                /* FC_DOUBLE */
                            0x5c,               /*
FC_PAD */
/* 928 */
                            0x12, 0x0,          /*
FC_UP */
/* 930 */ NdrFcShort( 0xfffffd8c ),     /* Offset= -
628 (302) */
/* 932 */
                            0x12, 0x10,         /*
FC_UP [pointer_deref] */
/* 934 */ NdrFcShort( 0xfffffd8e ),     /* Offset= -
626 (308) */
/* 936 */
                            0x12, 0x10,         /*
FC_UP [pointer_deref] */
/* 938 */ NdrFcShort( 0xfffffda2 ),     /* Offset= -
606 (332) */
/* 940 */
                            0x12, 0x10,         /*
FC_UP [pointer_deref] */
/* 942 */ NdrFcShort( 0xfffffdb0 ),     /* Offset= -
592 (350) */
```


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```
/* 944 */
                            0x12, 0x10,         /*
FC_UP [pointer_deref] */
/* 946 */ NdrFcShort( 0xfffffdbe ),     /* Offset= -
578 (368) */
/* 948 */
                            0x12, 0x10,         /*
FC_UP [pointer_deref] */
/* 950 */ NdrFcShort( 0x2 ),  /* Offset= 2 (952) */
/* 952 */
                            0x12, 0x0,          /*
FC_UP */
/* 954 */ NdrFcShort( 0x14 ), /* Offset= 20 (974) */
/* 956 */
                            0x15,               /*
FC_STRUCT */
                            0x7,                /*
7 */
/* 958 */ NdrFcShort( 0x10 ), /* 16 */
/* 960 */ 0x6,                /* FC_SHORT */
                            0x1,                /*
FC_BYTE */
/* 962 */ 0x1,                /* FC_BYTE */
                            0x8,                /*
FC_LONG */
/* 964 */ 0xb,                /* FC_HYPER */
                            0x5b,               /*
FC_END */
/* 966 */
                            0x12, 0x0,          /*
FC_UP */
/* 968 */ NdrFcShort( 0xfffffff4 ),     /* Offset= -
12 (956) */
/* 970 */
                            0x12, 0x8,          /*
FC_UP [simple_pointer] */
/* 972 */ 0x2,                /* FC_CHAR */
                            0x5c,               /*
FC_PAD */
/* 974 */
                            0x1a,               /*
FC_BOGUS_STRUCT */
                            0x7,                /*
7 */
/* 976 */ NdrFcShort( 0x20 ), /* 32 */
/* 978 */ NdrFcShort( 0x0 ),  /* 0 */
/* 980 */ NdrFcShort( 0x0 ),  /* Offset= 0 (980) */
/* 982 */ 0x8,                /* FC_LONG */
                            0x8,                /*
FC_LONG */
/* 984 */ 0x6,                /* FC_SHORT */
                            0x6,                /*
FC_SHORT */
/* 986 */ 0x6,                /* FC_SHORT */
                            0x6,                /*
FC_SHORT */
/* 988 */ 0x4c,               /* FC_EMBEDDED_COMPLEX
*/
                            0x0,                /*
0 */
/* 990 */ NdrFcShort( 0xfffffc28 ),     /* Offset= -
984 (6) */
/* 992 */ 0x5c,               /* FC_PAD */
                            0x5b,               /*
FC_END */
/* 994 */ 0xb4,               /* FC_USER_MARSHAL */
                            0x83,               /*
131 */
/* 996 */ NdrFcShort( 0x0 ),  /* 0 */
/* 998 */ NdrFcShort( 0x10 ), /* 16 */
/* 1000 */          NdrFcShort( 0x0 ),  /* 0 */
/* 1002 */          NdrFcShort( 0xffffffc18 ),     /*
Offset= -1000 (2) */
/* 1004 */
                            0x11, 0x4,          /*
FC_RP [alloced_on_stack] */
/* 1006 */          NdrFcShort( 0x6 ),  /* Offset= 6
(1012) */
/* 1008 */
                            0x13, 0x0,          /*
FC_OP */
/* 1010 */          NdrFcShort( 0xfffffffdc ),     /*
Offset= -36 (974) */
/* 1012 */          0xb4,               /*
FC_USER_MARSHAL */
                            0x83,               /*
131 */
/* 1014 */          NdrFcShort( 0x0 ),  /* 0 */
/* 1016 */          NdrFcShort( 0x10 ), /* 16 */
/* 1018 */          NdrFcShort( 0x0 ),  /* 0 */
/* 1020 */          NdrFcShort( 0xfffffff4 ),     /*
Offset= -12 (1008) */
                            0x0
        }
    };

static const USER_MARSHAL_ROUTINE_QUADRUPLE
UserMarshalRoutines[ WIRE_MARSHAL_TABLE_SIZE ] =
        {

            {
            VARIANT_UserSize
            ,VARIANT_UserMarshal
            ,VARIANT_UserUnmarshal
            ,VARIANT_UserFree
            }

        };



/* Standard interface: __MIDL_itf_tpcc_com_ps_0000,
ver. 0.0,

GUID={0x00000000,0x0000,0x0000,{0x00,0x00,0x00,0x00,0
x00,0x00,0x00,0x00}} */


/* Object interface: IUnknown, ver. 0.0,

GUID={0x00000000,0x0000,0x0000,{0xC0,0x00,0x00,0x00,0
x00,0x00,0x00,0x46}} */


/* Object interface: ITPCC, ver. 0.0,
GUID={0xFEEE6AA2,0x84B1,0x11d2,{0xBA,0x47,0x00,0xC0,0
x4F,0xBF,0xE0,0x8B}} */

#pragma code_seg(".orpc")
static const unsigned short
ITPCC_FormatStringOffsetTable[] =
    {
    0,
    34,
    68,
    102,
    136,
    170
    };

static const MIDL_STUBLESS_PROXY_INFO ITPCC_ProxyInfo
=
    {
    &Object_StubDesc,
    __MIDL_ProcFormatString.Format,
    &ITPCC_FormatStringOffsetTable[-3],
    0,
    0,
    0
    };


static const MIDL_SERVER_INFO ITPCC_ServerInfo =
    {
    &Object_StubDesc,
    0,
    __MIDL_ProcFormatString.Format,
    &ITPCC_FormatStringOffsetTable[-3],
    0,
    0,
    0,
    0};
CINTERFACE_PROXY_VTABLE(9) _ITPCCProxyVtbl =
{
    &ITPCC_ProxyInfo,
    &IID_ITPCC,
    IUnknown_QueryInterface_Proxy,
    IUnknown_AddRef_Proxy,
    IUnknown_Release_Proxy ,
    (void *) (INT_PTR) -1 /* ITPCC::NewOrder */ ,
    (void *) (INT_PTR) -1 /* ITPCC::Payment */ ,
    (void *) (INT_PTR) -1 /* ITPCC::Delivery */ ,
    (void *) (INT_PTR) -1 /* ITPCC::StockLevel */ ,
    (void *) (INT_PTR) -1 /* ITPCC::OrderStatus */ ,
    (void *) (INT_PTR) -1 /* ITPCC::CallSetComplete
*/
};

const CInterfaceStubVtbl _ITPCCStubVtbl =
{
    &IID_ITPCC,
    &ITPCC_ServerInfo,
    9,
    0, /* pure interpreted */
    CStdStubBuffer_METHODS
};
```


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```
static const MIDL_STUB_DESC Object_StubDesc =
    {
    0,
    NdrOleAllocate,
    NdrOleFree,
    0,
    0,
    0,
    0,
    0,
    __MIDL_TypeFormatString.Format,
    1, /* -error bounds_check flag */
    0x20000, /* Ndr library version */
    0,
    0x600015b, /* MIDL Version 6.0.347 */
    0,
    UserMarshalRoutines,
    0,  /* notify & notify_flag routine table */
    0x1, /* MIDL flag */
    0, /* cs routines */
    0,   /* proxy/server info */
    0   /* Reserved5 */
    };

const CInterfaceProxyVtbl *
_tpcc_com_ps_ProxyVtblList[] =
{
    ( CInterfaceProxyVtbl *) &_ITPCCProxyVtbl,
    0
};

const CInterfaceStubVtbl *
_tpcc_com_ps_StubVtblList[] =
{
    ( CInterfaceStubVtbl *) &_ITPCCStubVtbl,
    0
};

PCInterfaceName const
_tpcc_com_ps_InterfaceNamesList[] =
{
    "ITPCC",
    0
};


#define _tpcc_com_ps_CHECK_IID(n)
          IID_GENERIC_CHECK_IID( _tpcc_com_ps, pIID,
n)

int __stdcall _tpcc_com_ps_IID_Lookup( const IID *
pIID, int * pIndex )
{

    if(!_tpcc_com_ps_CHECK_IID(0))
        {
        *pIndex = 0;
        return 1;
        }

    return 0;
}
```

```
const ExtendedProxyFileInfo tpcc_com_ps_ProxyFileInfo
=
{
    (PCInterfaceProxyVtblList *) &
_tpcc_com_ps_ProxyVtblList,
    (PCInterfaceStubVtblList *) &
_tpcc_com_ps_StubVtblList,
    (const PCInterfaceName * ) &
_tpcc_com_ps_InterfaceNamesList,
    0, // no delegation
    & _tpcc_com_ps_IID_Lookup,
    1,
    2,
    0, /* table of [async_uuid] interfaces */
    0, /* Filler1 */
    0, /* Filler2 */
    0  /* Filler3 */
};


#endif /* !defined(_M_IA64) && !defined(_M_AMD64)*/


#pragma warning( disable: 4049 )  /* more than 64k
source lines */

/* this ALWAYS GENERATED file contains the proxy stub
code */


 /* File created by MIDL compiler version 6.00.0347
*/
/* at Fri Apr 15 14:48:43 2005
 */
/* Compiler settings for .\src\tpcc_com_ps.idl:
    Oicf, W1, Zp8, env=Win64 (32b run,appending)
    protocol : dce , ms_ext, c_ext, robust
    error checks: allocation ref bounds_check enum
stub_data
    VC __declspec() decoration level:
         __declspec(uuid()), __declspec(selectany),
__declspec(novtable)
        DECLSPEC_UUID(), MIDL_INTERFACE()
*/
//@@MIDL_FILE_HEADING(  )

#if defined(_M_IA64) || defined(_M_AMD64)
#define USE_STUBLESS_PROXY


/* verify that the <rpcproxy.h> version is high
enough to compile this file*/
#ifndef __REDQ_RPCPROXY_H_VERSION__
#define __REQUIRED_RPCPROXY_H_VERSION__ 475
#endif


#include "rpcproxy.h"
#ifndef __RPCPROXY_H_VERSION__
#error this stub requires an updated version of
<rpcproxy.h>
#endif // __RPCPROXY_H_VERSION__
```

```
#include "tpcc_com_ps.h"

#define TYPE_FORMAT_STRING_SIZE   1003
#define PROC_FORMAT_STRING_SIZE   253
#define TRANSMIT_AS_TABLE_SIZE    0
#define WIRE_MARSHAL_TABLE_SIZE   1

typedef struct _MIDL_TYPE_FORMAT_STRING
    {
    short          Pad;
    unsigned char  Format[ TYPE_FORMAT_STRING_SIZE ];
    } MIDL_TYPE_FORMAT_STRING;

typedef struct _MIDL_PROC_FORMAT_STRING
    {
    short          Pad;
    unsigned char  Format[ PROC_FORMAT_STRING_SIZE ];
    } MIDL_PROC_FORMAT_STRING;


static RPC_SYNTAX_IDENTIFIER  _RpcTransferSyntax =
{{0x8A885D04,0x1CEB,0x11C9,{0x9F,0xE8,0x08,0x00,0x2B,
0x10,0x48,0x60}},{2,0}};


extern const MIDL_TYPE_FORMAT_STRING
__MIDL_TypeFormatString;
extern const MIDL_PROC_FORMAT_STRING
__MIDL_ProcFormatString;


extern const MIDL_STUB_DESC Object_StubDesc;


extern const MIDL_SERVER_INFO ITPCC_ServerInfo;
extern const MIDL_STUBLESS_PROXY_INFO
ITPCC_ProxyInfo;


extern const USER_MARSHAL_ROUTINE_QUADRUPLE
UserMarshalRoutines[ WIRE_MARSHAL_TABLE_SIZE ];

#if !defined(__RPC_WIN64__)
#error  Invalid build platform for this stub.
#endif

static const MIDL_PROC_FORMAT_STRING
__MIDL_ProcFormatString =
    {
        0,
        {

          /* Procedure NewOrder */

                                0x33,               /*
FC_AUTO_HANDLE */
                                0x6c,               /*
Old Flags:  object, Oi2 */
/*  2 */  NdrFcLong( 0x0 ),   /* 0 */
/*  6 */  NdrFcShort( 0x3 ),  /* 3 */
/*  8 */  NdrFcShort( 0x30 ), /* ia64 Stack
size/offset = 48 */
```


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```
/* 10 */  NdrFcShort( 0x0 ),  /* 0 */
/* 12 */  NdrFcShort( 0x8 ),  /* 8 */
/* 14 */  0x47,               /* Oi2 Flags:  srv must
size, clt must size, has return, has ext, */
                              0x3,                /*
3 */
/* 16 */  0xa,                /* 10 */
                              0x7,                /*
Ext Flags:  new corr desc, clt corr check, srv corr
check, */
/* 18 */  NdrFcShort( 0x20 ), /* 32 */
/* 20 */  NdrFcShort( 0x20 ), /* 32 */
/* 22 */  NdrFcShort( 0x0 ),  /* 0 */
/* 24 */  NdrFcShort( 0x0 ),  /* 0 */

          /* Parameter txn_in */

/* 26 */  NdrFcShort( 0x8b ), /* Flags:  must size,
must free, in, by val, */
/* 28 */  NdrFcShort( 0x8 ),  /* ia64 Stack
size/offset = 8 */
/* 30 */  NdrFcShort( 0x3ce ),          /* Type
Offset=974 */

          /* Parameter txn_out */

/* 32 */  NdrFcShort( 0x6113 ),         /* Flags:
must size, must free, out, simple ref, srv alloc
size=24 */
/* 34 */  NdrFcShort( 0x20 ), /* ia64 Stack
size/offset = 32 */
/* 36 */  NdrFcShort( 0x3e0 ),          /* Type
Offset=992 */

          /* Return value */

/* 38 */  NdrFcShort( 0x70 ), /* Flags:  out, return,
base type, */
/* 40 */  NdrFcShort( 0x28 ), /* ia64 Stack
size/offset = 40 */
/* 42 */  0x8,                /* FC_LONG */
                              0x0,                /*
0 */

          /* Procedure Payment */

/* 44 */  0x33,               /* FC_AUTO_HANDLE */
                              0x6c,               /*
Old Flags:  object, Oi2 */
/* 46 */  NdrFcLong( 0x0 ),   /* 0 */
/* 50 */  NdrFcShort( 0x4 ),  /* 4 */
/* 52 */  NdrFcShort( 0x30 ), /* ia64 Stack
size/offset = 48 */
/* 54 */  NdrFcShort( 0x0 ),  /* 0 */
/* 56 */  NdrFcShort( 0x8 ),  /* 8 */
/* 58 */  0x47,               /* Oi2 Flags:  srv must
size, clt must size, has return, has ext, */
                              0x3,                /*
3 */
/* 60 */  0xa,                /* 10 */
                              0x7,                /*
Ext Flags:  new corr desc, clt corr check, srv corr
check, */
/* 62 */  NdrFcShort( 0x20 ), /* 32 */
/* 64 */  NdrFcShort( 0x20 ), /* 32 */
/* 66 */  NdrFcShort( 0x0 ),  /* 0 */
/* 68 */  NdrFcShort( 0x0 ),  /* 0 */

          /* Parameter txn_in */

/* 70 */  NdrFcShort( 0x8b ), /* Flags:  must size,
must free, in, by val, */
/* 72 */  NdrFcShort( 0x8 ),  /* ia64 Stack
size/offset = 8 */
/* 74 */  NdrFcShort( 0x3ce ),          /* Type
Offset=974 */

          /* Parameter txn_out */

/* 76 */  NdrFcShort( 0x6113 ),         /* Flags:
must size, must free, out, simple ref, srv alloc
size=24 */
/* 78 */  NdrFcShort( 0x20 ), /* ia64 Stack
size/offset = 32 */
/* 80 */  NdrFcShort( 0x3e0 ),          /* Type
Offset=992 */

          /* Return value */

/* 82 */  NdrFcShort( 0x70 ), /* Flags:  out, return,
base type, */
/* 84 */  NdrFcShort( 0x28 ), /* ia64 Stack
size/offset = 40 */
/* 86 */  0x8,                /* FC_LONG */
                              0x0,                /*
0 */

          /* Procedure Delivery */

/* 88 */  0x33,               /* FC_AUTO_HANDLE */
                              0x6c,               /*
Old Flags:  object, Oi2 */
/* 90 */  NdrFcLong( 0x0 ),   /* 0 */
/* 94 */  NdrFcShort( 0x5 ),  /* 5 */
/* 96 */  NdrFcShort( 0x30 ), /* ia64 Stack
size/offset = 48 */
/* 98 */  NdrFcShort( 0x0 ),  /* 0 */
/* 100 */ NdrFcShort( 0x8 ),  /* 8 */
/* 102 */ 0x47,               /* Oi2 Flags:  srv must
size, clt must size, has return, has ext, */
                              0x3,                /*
3 */
/* 104 */ 0xa,                /* 10 */
                              0x7,                /*
Ext Flags:  new corr desc, clt corr check, srv corr
check, */
/* 106 */ NdrFcShort( 0x20 ), /* 32 */
/* 108 */ NdrFcShort( 0x20 ), /* 32 */
/* 110 */ NdrFcShort( 0x0 ),  /* 0 */
/* 112 */ NdrFcShort( 0x0 ),  /* 0 */

          /* Parameter txn_in */

/* 114 */ NdrFcShort( 0x8b ), /* Flags:  must size,
must free, in, by val, */
/* 116 */ NdrFcShort( 0x8 ),  /* ia64 Stack
size/offset = 8 */
/* 118 */ NdrFcShort( 0x3ce ),          /* Type
Offset=974 */

          /* Parameter txn_out */

/* 120 */ NdrFcShort( 0x6113 ),         /* Flags:
must size, must free, out, simple ref, srv alloc
size=24 */
/* 122 */ NdrFcShort( 0x20 ), /* ia64 Stack
size/offset = 32 */
/* 124 */ NdrFcShort( 0x3e0 ),          /* Type
Offset=992 */

          /* Return value */

/* 126 */ NdrFcShort( 0x70 ), /* Flags:  out, return,
base type, */
/* 128 */ NdrFcShort( 0x28 ), /* ia64 Stack
size/offset = 40 */
/* 130 */ 0x8,                /* FC_LONG */
                              0x0,                /*
0 */

          /* Procedure StockLevel */

/* 132 */ 0x33,               /* FC_AUTO_HANDLE */
                              0x6c,               /*
Old Flags:  object, Oi2 */
/* 134 */ NdrFcLong( 0x0 ),   /* 0 */
/* 138 */ NdrFcShort( 0x6 ),  /* 6 */
/* 140 */ NdrFcShort( 0x30 ), /* ia64 Stack
size/offset = 48 */
/* 142 */ NdrFcShort( 0x0 ),  /* 0 */
/* 144 */ NdrFcShort( 0x8 ),  /* 8 */
/* 146 */ 0x47,               /* Oi2 Flags:  srv must
size, clt must size, has return, has ext, */
                              0x3,                /*
3 */
/* 148 */ 0xa,                /* 10 */
                              0x7,                /*
Ext Flags:  new corr desc, clt corr check, srv corr
check, */
/* 150 */ NdrFcShort( 0x20 ), /* 32 */
/* 152 */ NdrFcShort( 0x20 ), /* 32 */
/* 154 */ NdrFcShort( 0x0 ),  /* 0 */
/* 156 */ NdrFcShort( 0x0 ),  /* 0 */

          /* Parameter txn_in */

/* 158 */ NdrFcShort( 0x8b ), /* Flags:  must size,
must free, in, by val, */
/* 160 */ NdrFcShort( 0x8 ),  /* ia64 Stack
size/offset = 8 */
/* 162 */ NdrFcShort( 0x3ce ),          /* Type
Offset=974 */

          /* Parameter txn_out */

/* 164 */ NdrFcShort( 0x6113 ),         /* Flags:
must size, must free, out, simple ref, srv alloc
size=24 */
```


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```
/* 166 */ NdrFcShort( 0x20 ), /* ia64 Stack
size/offset = 32 */
/* 168 */ NdrFcShort( 0x3e0 ),          /* Type
Offset=992 */

         /* Return value */

/* 170 */ NdrFcShort( 0x70 ), /* Flags:  out, return,
base type, */
/* 172 */ NdrFcShort( 0x28 ), /* ia64 Stack
size/offset = 40 */
/* 174 */ 0x8,                /* FC_LONG */
                              0x0,                /*
0 */

         /* Procedure OrderStatus */

/* 176 */ 0x33,               /* FC_AUTO_HANDLE */
                              0x6c,               /*
Old Flags:  object, Oi2 */
/* 178 */ NdrFcLong( 0x0 ),   /* 0 */
/* 182 */ NdrFcShort( 0x7 ),  /* 7 */
/* 184 */ NdrFcShort( 0x30 ), /* ia64 Stack
size/offset = 48 */
/* 186 */ NdrFcShort( 0x0 ),  /* 0 */
/* 188 */ NdrFcShort( 0x8 ),  /* 8 */
/* 190 */ 0x47,               /* Oi2 Flags:  srv must
size, clt must size, has return, has ext, */
                              0x3,                /*
3 */
/* 192 */ 0xa,                /* 10 */
                              0x7,                /*
Ext Flags:  new corr desc, clt corr check, srv corr
check, */
/* 194 */ NdrFcShort( 0x20 ), /* 32 */
/* 196 */ NdrFcShort( 0x20 ), /* 32 */
/* 198 */ NdrFcShort( 0x0 ),  /* 0 */
/* 200 */ NdrFcShort( 0x0 ),  /* 0 */

         /* Parameter txn_in */

/* 202 */ NdrFcShort( 0x8b ), /* Flags:  must size,
must free, in, by val, */
/* 204 */ NdrFcShort( 0x8 ),  /* ia64 Stack
size/offset = 8 */
/* 206 */ NdrFcShort( 0x3ce ),          /* Type
Offset=974 */

         /* Parameter txn_out */

/* 208 */ NdrFcShort( 0x6113 ),         /* Flags:
must size, must free, out, simple ref, srv alloc
size=24 */
/* 210 */ NdrFcShort( 0x20 ), /* ia64 Stack
size/offset = 32 */
/* 212 */ NdrFcShort( 0x3e0 ),          /* Type
Offset=992 */

         /* Return value */

/* 214 */ NdrFcShort( 0x70 ), /* Flags:  out, return,
base type, */
/* 216 */ NdrFcShort( 0x28 ), /* ia64 Stack
size/offset = 40 */
/* 218 */ 0x8,                /* FC_LONG */
                              0x0,                /*
0 */

         /* Procedure CallSetComplete */

/* 220 */ 0x33,               /* FC_AUTO_HANDLE */
                              0x6c,               /*
Old Flags:  object, Oi2 */
/* 222 */ NdrFcLong( 0x0 ),   /* 0 */
/* 226 */ NdrFcShort( 0x8 ),  /* 8 */
/* 228 */ NdrFcShort( 0x10 ), /* ia64 Stack
size/offset = 16 */
/* 230 */ NdrFcShort( 0x0 ),  /* 0 */
/* 232 */ NdrFcShort( 0x8 ),  /* 8 */
/* 234 */ 0x44,               /* Oi2 Flags:  has
return, has ext, */
                              0x1,                /*
1 */
/* 236 */ 0xa,                /* 10 */
                              0x1,                /*
Ext Flags:  new corr desc, */
/* 238 */ NdrFcShort( 0x0 ),  /* 0 */
/* 240 */ NdrFcShort( 0x0 ),  /* 0 */
/* 242 */ NdrFcShort( 0x0 ),  /* 0 */
/* 244 */ NdrFcShort( 0x0 ),  /* 0 */

         /* Return value */

/* 246 */ NdrFcShort( 0x70 ), /* Flags:  out, return,
base type, */
/* 248 */ NdrFcShort( 0x8 ),  /* ia64 Stack
size/offset = 8 */
/* 250 */ 0x8,                /* FC_LONG */
                              0x0,                /*
0 */

                              0x0
        }
    };

static const MIDL_TYPE_FORMAT_STRING
__MIDL_TypeFormatString =
    {
        0,
        {
                              NdrFcShort( 0x0 ),  /*
0 */
/*  2 */
                              0x12, 0x0,          /*
FC_UP */
/*  4 */  NdrFcShort( 0x3b6 ),          /* Offset=
950 (954) */
/*  6 */
                              0x2b,               /*
FC_NON_ENCAPSULATED_UNION */
                              0x9,                /*
FC_ULONG */
/*  8 */  0x7,                /* Corr desc: FC_USHORT
*/
                              0x0,                /*
*/
/* 10 */  NdrFcShort( 0xfff8 ),         /* -8 */
/* 12 */  NdrFcShort( 0x1 ),  /* Corr flags:  early,
*/
/* 14 */  NdrFcShort( 0x2 ),  /* Offset= 2 (16) */
/* 16 */  NdrFcShort( 0x10 ), /* 16 */
/* 18 */  NdrFcShort( 0x2f ), /* 47 */
/* 20 */  NdrFcLong( 0x14 ),  /* 20 */
/* 24 */  NdrFcShort( 0x800b ),         /* Simple arm
type: FC_HYPER */
/* 26 */  NdrFcLong( 0x3 ),   /* 3 */
/* 30 */  NdrFcShort( 0x8008 ),         /* Simple arm
type: FC_LONG */
/* 32 */  NdrFcLong( 0x11 ),  /* 17 */
/* 36 */  NdrFcShort( 0x8001 ),         /* Simple arm
type: FC_BYTE */
/* 38 */  NdrFcLong( 0x2 ),   /* 2 */
/* 42 */  NdrFcShort( 0x8006 ),         /* Simple arm
type: FC_SHORT */
/* 44 */  NdrFcLong( 0x4 ),   /* 4 */
/* 48 */  NdrFcShort( 0x800a ),         /* Simple arm
type: FC_FLOAT */
/* 50 */  NdrFcLong( 0x5 ),   /* 5 */
/* 54 */  NdrFcShort( 0x800c ),         /* Simple arm
type: FC_DOUBLE */
/* 56 */  NdrFcLong( 0xb ),   /* 11 */
/* 60 */  NdrFcShort( 0x8006 ),         /* Simple arm
type: FC_SHORT */
/* 62 */  NdrFcLong( 0xa ),   /* 10 */
/* 66 */  NdrFcShort( 0x8008 ),         /* Simple arm
type: FC_LONG */
/* 68 */  NdrFcLong( 0x6 ),   /* 6 */
/* 72 */  NdrFcShort( 0xe8 ), /* Offset= 232 (304) */
/* 74 */  NdrFcLong( 0x7 ),   /* 7 */
/* 78 */  NdrFcShort( 0x800c ),         /* Simple arm
type: FC_DOUBLE */
/* 80 */  NdrFcLong( 0x8 ),   /* 8 */
/* 84 */  NdrFcShort( 0xe2 ), /* Offset= 226 (310) */
/* 86 */  NdrFcLong( 0xd ),   /* 13 */
/* 90 */  NdrFcShort( 0xf6 ), /* Offset= 246 (336) */
/* 92 */  NdrFcLong( 0x9 ),   /* 9 */
/* 96 */  NdrFcShort( 0x102 ),          /* Offset=
258 (354) */
/* 98 */  NdrFcLong( 0x2000 ),          /* 8192 */
/* 102 */ NdrFcShort( 0x10e ),          /* Offset=
270 (372) */
/* 104 */ NdrFcLong( 0x24 ),  /* 36 */
/* 108 */ NdrFcShort( 0x304 ),          /* Offset=
772 (880) */
/* 110 */ NdrFcLong( 0x4024 ),          /* 16420 */
/* 114 */ NdrFcShort( 0x2fe ),          /* Offset=
766 (880) */
/* 116 */ NdrFcLong( 0x4011 ),          /* 16401 */
/* 120 */ NdrFcShort( 0x2fc ),          /* Offset=
764 (884) */
/* 122 */ NdrFcLong( 0x4002 ),          /* 16386 */
/* 126 */ NdrFcShort( 0x2fa ),          /* Offset=
762 (888) */
/* 128 */ NdrFcLong( 0x4003 ),          /* 16387 */
/* 132 */ NdrFcShort( 0x2f8 ),          /* Offset=
760 (892) */
/* 134 */ NdrFcLong( 0x4014 ),          /* 16404 */
```


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```
/* 138 */ NdrFcShort( 0x2f6 ),          /* Offset=
758 (896) */
/* 140 */ NdrFcLong( 0x4004 ),          /* 16388 */
/* 144 */ NdrFcShort( 0x2f4 ),          /* Offset=
756 (900) */
/* 146 */ NdrFcLong( 0x4005 ),          /* 16389 */
/* 150 */ NdrFcShort( 0x2f2 ),          /* Offset=
754 (904) */
/* 152 */ NdrFcLong( 0x400b ),          /* 16395 */
/* 156 */ NdrFcShort( 0x2dc ),          /* Offset=
732 (888) */
/* 158 */ NdrFcLong( 0x400a ),          /* 16394 */
/* 162 */ NdrFcShort( 0x2da ),          /* Offset=
730 (892) */
/* 164 */ NdrFcLong( 0x4006 ),          /* 16390 */
/* 168 */ NdrFcShort( 0x2e4 ),          /* Offset=
740 (908) */
/* 170 */ NdrFcLong( 0x4007 ),          /* 16391 */
/* 174 */ NdrFcShort( 0x2da ),          /* Offset=
730 (904) */
/* 176 */ NdrFcLong( 0x4008 ),          /* 16392 */
/* 180 */ NdrFcShort( 0x2dc ),          /* Offset=
732 (912) */
/* 182 */ NdrFcLong( 0x400d ),          /* 16397 */
/* 186 */ NdrFcShort( 0x2da ),          /* Offset=
730 (916) */
/* 188 */ NdrFcLong( 0x4009 ),          /* 16393 */
/* 192 */ NdrFcShort( 0x2d8 ),          /* Offset=
728 (920) */
/* 194 */ NdrFcLong( 0x6000 ),          /* 24576 */
/* 198 */ NdrFcShort( 0x2d6 ),          /* Offset=
726 (924) */
/* 200 */ NdrFcLong( 0x400c ),          /* 16396 */
/* 204 */ NdrFcShort( 0x2d4 ),          /* Offset=
724 (928) */
/* 206 */ NdrFcLong( 0x10 ),  /* 16 */
/* 210 */ NdrFcShort( 0x8002 ),         /* Simple arm
type: FC_CHAR */
/* 212 */ NdrFcLong( 0x12 ),  /* 18 */
/* 216 */ NdrFcShort( 0x8006 ),         /* Simple arm
type: FC_SHORT */
/* 218 */ NdrFcLong( 0x13 ),  /* 19 */
/* 222 */ NdrFcShort( 0x8008 ),         /* Simple arm
type: FC_LONG */
/* 224 */ NdrFcLong( 0x15 ),  /* 21 */
/* 228 */ NdrFcShort( 0x800b ),         /* Simple arm
type: FC_HYPER */
/* 230 */ NdrFcLong( 0x16 ),  /* 22 */
/* 234 */ NdrFcShort( 0x8008 ),         /* Simple arm
type: FC_LONG */
/* 236 */ NdrFcLong( 0x17 ),  /* 23 */
/* 240 */ NdrFcShort( 0x8008 ),         /* Simple arm
type: FC_LONG */
/* 242 */ NdrFcLong( 0xe ),   /* 14 */
/* 246 */ NdrFcShort( 0x2b2 ),          /* Offset=
690 (936) */
/* 248 */ NdrFcLong( 0x400e ),          /* 16398 */
/* 252 */ NdrFcShort( 0x2b6 ),          /* Offset=
694 (946) */
/* 254 */ NdrFcLong( 0x4010 ),          /* 16400 */
/* 258 */ NdrFcShort( 0x2b4 ),          /* Offset=
692 (950) */
/* 260 */ NdrFcLong( 0x4012 ),          /* 16402 */
/* 264 */ NdrFcShort( 0x270 ),          /* Offset=
624 (888) */
/* 266 */ NdrFcLong( 0x4013 ),          /* 16403 */
/* 270 */ NdrFcShort( 0x26e ),          /* Offset=
622 (892) */
/* 272 */ NdrFcLong( 0x4015 ),          /* 16405 */
/* 276 */ NdrFcShort( 0x26c ),          /* Offset=
620 (896) */
/* 278 */ NdrFcLong( 0x4016 ),          /* 16406 */
/* 282 */ NdrFcShort( 0x262 ),          /* Offset=
610 (892) */
/* 284 */ NdrFcLong( 0x4017 ),          /* 16407 */
/* 288 */ NdrFcShort( 0x25c ),          /* Offset=
604 (892) */
/* 290 */ NdrFcLong( 0x0 ),   /* 0 */
/* 294 */ NdrFcShort( 0x0 ),  /* Offset= 0 (294) */
/* 296 */ NdrFcLong( 0x1 ),   /* 1 */
/* 300 */ NdrFcShort( 0x0 ),  /* Offset= 0 (300) */
/* 302 */ NdrFcShort( 0xffffffff ),     /* Offset= -1
(301) */
/* 304 */
                                0x15,               /*
FC_STRUCT */
                                0x7,                /*
7 */
/* 306 */ NdrFcShort( 0x8 ),  /* 8 */
/* 308 */ 0xb,                /* FC_HYPER */
                                0x5b,               /*
FC_END */
/* 310 */
                                0x12, 0x0,          /*
FC_UP */
/* 312 */ NdrFcShort( 0xe ),  /* Offset= 14 (326) */
/* 314 */
                                0x1b,               /*
FC_CARRAY */
                                0x1,                /*
1 */
/* 316 */ NdrFcShort( 0x2 ),  /* 2 */
/* 318 */ 0x9,                /* Corr desc: FC_ULONG
*/
                                0x0,                /*
*/
/* 320 */ NdrFcShort( 0xfffc ),         /* -4 */
/* 322 */ NdrFcShort( 0x1 ),  /* Corr flags:  early,
*/
/* 324 */ 0x6,                /* FC_SHORT */
                                0x5b,               /*
FC_END */
/* 326 */
                                0x17,               /*
FC_CSTRUCT */
                                0x3,                /*
3 */
/* 328 */ NdrFcShort( 0x8 ),  /* 8 */
/* 330 */ NdrFcShort( 0xfffffff0 ),     /* Offset= -
16 (314) */
/* 332 */ 0x8,                /* FC_LONG */
                                0x8,                /*
FC_LONG */
/* 334 */ 0x5c,               /* FC_PAD */
                                0x5b,               /*
FC_END */
/* 336 */
                                0x2f,               /*
FC_IP */
                                0x5a,               /*
FC_CONSTANT_IID */
/* 338 */ NdrFcLong( 0x0 ),   /* 0 */
/* 342 */ NdrFcShort( 0x0 ),  /* 0 */
/* 344 */ NdrFcShort( 0x0 ),  /* 0 */
/* 346 */ 0xc0,               /* 192 */
                                0x0,                /*
0 */
/* 348 */ 0x0,                /* 0 */
                                0x0,                /*
0 */
/* 350 */ 0x0,                /* 0 */
                                0x0,                /*
0 */
/* 352 */ 0x0,                /* 0 */
                                0x46,               /*
70 */
/* 354 */
                                0x2f,               /*
FC_IP */
                                0x5a,               /*
FC_CONSTANT_IID */
/* 356 */ NdrFcLong( 0x20400 ),         /* 132096 */
/* 360 */ NdrFcShort( 0x0 ),  /* 0 */
/* 362 */ NdrFcShort( 0x0 ),  /* 0 */
/* 364 */ 0xc0,               /* 192 */
                                0x0,                /*
0 */
/* 366 */ 0x0,                /* 0 */
                                0x0,                /*
0 */
/* 368 */ 0x0,                /* 0 */
                                0x0,                /*
0 */
/* 370 */ 0x0,                /* 0 */
                                0x46,               /*
70 */
/* 372 */
                                0x12, 0x10,         /*
FC_UP [pointer_deref] */
/* 374 */ NdrFcShort( 0x2 ),  /* Offset= 2 (376) */
/* 376 */
                                0x12, 0x0,          /*
FC_UP */
/* 378 */ NdrFcShort( 0x1e4 ),          /* Offset=
484 (862) */
/* 380 */
                                0x2a,               /*
FC_ENCAPSULATED_UNION */
                                0x89,               /*
137 */
/* 382 */ NdrFcShort( 0x20 ), /* 32 */
/* 384 */ NdrFcShort( 0xa ),  /* 10 */
/* 386 */ NdrFcLong( 0x8 ),   /* 8 */
/* 390 */ NdrFcShort( 0x50 ), /* Offset= 80 (470) */
/* 392 */ NdrFcLong( 0xd ),   /* 13 */
/* 396 */ NdrFcShort( 0x70 ), /* Offset= 112 (508) */
/* 398 */ NdrFcLong( 0x9 ),   /* 9 */
/* 402 */ NdrFcShort( 0x90 ), /* Offset= 144 (546) */
/* 404 */ NdrFcLong( 0xc ),   /* 12 */
```


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```
/* 408 */ NdrFcShort( 0xb0 ), /* Offset= 176 (584) */
/* 410 */ NdrFcLong( 0x24 ),  /* 36 */
/* 414 */ NdrFcShort( 0x102 ),          /* Offset=
258 (672) */
/* 416 */ NdrFcLong( 0x800d ),          /* 32781 */
/* 420 */ NdrFcShort( 0x11e ),          /* Offset=
286 (706) */
/* 422 */ NdrFcLong( 0x10 ),  /* 16 */
/* 426 */ NdrFcShort( 0x138 ),          /* Offset=
312 (738) */
/* 428 */ NdrFcLong( 0x2 ),   /* 2 */
/* 432 */ NdrFcShort( 0x14e ),          /* Offset=
334 (766) */
/* 434 */ NdrFcLong( 0x3 ),   /* 3 */
/* 438 */ NdrFcShort( 0x164 ),          /* Offset=
356 (794) */
/* 440 */ NdrFcLong( 0x14 ),  /* 20 */
/* 444 */ NdrFcShort( 0x17a ),          /* Offset=
378 (822) */
/* 446 */ NdrFcShort( 0xffffffff ),     /* Offset= -1
(445) */
/* 448 */
                                0x21,                /*
FC_BOGUS_ARRAY */
                                0x3,                 /*
3 */
/* 450 */ NdrFcShort( 0x0 ),  /* 0 */
/* 452 */ 0x19,                /* Corr desc:  field
pointer, FC_ULONG */
                                0x0,                 /*
*/
/* 454 */ NdrFcShort( 0x0 ),  /* 0 */
/* 456 */ NdrFcShort( 0x1 ),  /* Corr flags:  early,
*/
/* 458 */ NdrFcLong( 0xffffffff ),      /* -1 */
/* 462 */ NdrFcShort( 0x0 ),  /* Corr flags:  */
/* 464 */
                                0x12, 0x0,           /*
FC_UP */
/* 466 */ NdrFcShort( 0xffffff74 ),     /* Offset= -
140 (326) */
/* 468 */ 0x5c,                /* FC_PAD */
                                0x5b,                /*
FC_END */
/* 470 */
                                0x1a,                /*
FC_BOGUS_STRUCT */
                                0x3,                 /*
3 */
/* 472 */ NdrFcShort( 0x10 ), /* 16 */
/* 474 */ NdrFcShort( 0x0 ),  /* 0 */
/* 476 */ NdrFcShort( 0x6 ),  /* Offset= 6 (482) */
/* 478 */ 0x8,                 /* FC_LONG */
                                0x40,                /*
FC_STRUCTPAD4 */
/* 480 */ 0x36,                /* FC_POINTER */
                                0x5b,                /*
FC_END */
/* 482 */
                                0x11, 0x0,           /*
FC_RP */
/* 484 */ NdrFcShort( 0xffffffdc ),     /* Offset= -
36 (448) */
/* 486 */
                                0x21,                /*
FC_BOGUS_ARRAY */
                                0x3,                 /*
3 */
/* 488 */ NdrFcShort( 0x0 ),  /* 0 */
/* 490 */ 0x19,                /* Corr desc:  field
pointer, FC_ULONG */
                                0x0,                 /*
*/
/* 492 */ NdrFcShort( 0x0 ),  /* 0 */
/* 494 */ NdrFcShort( 0x1 ),  /* Corr flags:  early,
*/
/* 496 */ NdrFcLong( 0xffffffff ),      /* -1 */
/* 500 */ NdrFcShort( 0x0 ),  /* Corr flags:  */
/* 502 */ 0x4c,                /* FC_EMBEDDED_COMPLEX
*/
                                0x0,                 /*
0 */
/* 504 */ NdrFcShort( 0xffffff58 ),     /* Offset= -
168 (336) */
/* 506 */ 0x5c,                /* FC_PAD */
                                0x5b,                /*
FC_END */
/* 508 */
                                0x1a,                /*
FC_BOGUS_STRUCT */
                                0x3,                 /*
3 */
/* 510 */ NdrFcShort( 0x10 ), /* 16 */
/* 512 */ NdrFcShort( 0x0 ),  /* 0 */
/* 514 */ NdrFcShort( 0x6 ),  /* Offset= 6 (520) */
/* 516 */ 0x8,                 /* FC_LONG */
                                0x40,                /*
FC_STRUCTPAD4 */
/* 518 */ 0x36,                /* FC_POINTER */
                                0x5b,                /*
FC_END */
/* 520 */
                                0x11, 0x0,           /*
FC_RP */
/* 522 */ NdrFcShort( 0xffffffdc ),     /* Offset= -
36 (486) */
/* 524 */
                                0x21,                /*
FC_BOGUS_ARRAY */
                                0x3,                 /*
3 */
/* 526 */ NdrFcShort( 0x0 ),  /* 0 */
/* 528 */ 0x19,                /* Corr desc:  field
pointer, FC_ULONG */
                                0x0,                 /*
*/
/* 530 */ NdrFcShort( 0x0 ),  /* 0 */
/* 532 */ NdrFcShort( 0x1 ),  /* Corr flags:  early,
*/
/* 534 */ NdrFcLong( 0xffffffff ),      /* -1 */
/* 538 */ NdrFcShort( 0x0 ),  /* Corr flags:  */
/* 540 */ 0x4c,                /* FC_EMBEDDED_COMPLEX
*/
                                0x0,                 /*
0 */
/* 542 */ NdrFcShort( 0xffffff44 ),     /* Offset= -
188 (354) */
/* 544 */ 0x5c,                /* FC_PAD */
                                0x5b,                /*
FC_END */
/* 546 */
                                0x1a,                /*
FC_BOGUS_STRUCT */
                                0x3,                 /*
3 */
/* 548 */ NdrFcShort( 0x10 ), /* 16 */
/* 550 */ NdrFcShort( 0x0 ),  /* 0 */
/* 552 */ NdrFcShort( 0x6 ),  /* Offset= 6 (558) */
/* 554 */ 0x8,                 /* FC_LONG */
                                0x40,                /*
FC_STRUCTPAD4 */
/* 556 */ 0x36,                /* FC_POINTER */
                                0x5b,                /*
FC_END */
/* 558 */
                                0x11, 0x0,           /*
FC_RP */
/* 560 */ NdrFcShort( 0xffffffdc ),     /* Offset= -
36 (524) */
/* 562 */
                                0x21,                /*
FC_BOGUS_ARRAY */
                                0x3,                 /*
3 */
/* 564 */ NdrFcShort( 0x0 ),  /* 0 */
/* 566 */ 0x19,                /* Corr desc:  field
pointer, FC_ULONG */
                                0x0,                 /*
*/
/* 568 */ NdrFcShort( 0x0 ),  /* 0 */
/* 570 */ NdrFcShort( 0x1 ),  /* Corr flags:  early,
*/
/* 572 */ NdrFcLong( 0xffffffff ),      /* -1 */
/* 576 */ NdrFcShort( 0x0 ),  /* Corr flags:  */
/* 578 */
                                0x12, 0x0,           /*
FC_UP */
/* 580 */ NdrFcShort( 0x176 ),          /* Offset=
374 (954) */
/* 582 */ 0x5c,                /* FC_PAD */
                                0x5b,                /*
FC_END */
/* 584 */
                                0x1a,                /*
FC_BOGUS_STRUCT */
                                0x3,                 /*
3 */
/* 586 */ NdrFcShort( 0x10 ), /* 16 */
/* 588 */ NdrFcShort( 0x0 ),  /* 0 */
/* 590 */ NdrFcShort( 0x6 ),  /* Offset= 6 (596) */
/* 592 */ 0x8,                 /* FC_LONG */
                                0x40,                /*
FC_STRUCTPAD4 */
/* 594 */ 0x36,                /* FC_POINTER */
                                0x5b,                /*
FC_END */
/* 596 */
```


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```
                            0x11, 0x0,          /*
FC_RP */
/* 598 */ NdrFcShort( 0xffffffdc ),     /* Offset= -
36 (562) */
/* 600 */
                            0x2f,               /*
FC_IP */
                            0x5a,               /*
FC_CONSTANT_IID */
/* 602 */ NdrFcLong( 0x2f ),  /* 47 */
/* 606 */ NdrFcShort( 0x0 ),  /* 0 */
/* 608 */ NdrFcShort( 0x0 ),  /* 0 */
/* 610 */ 0xc0,               /* 192 */
                            0x0,                /*
0 */
/* 612 */ 0x0,                /* 0 */
                            0x0,                /*
0 */
/* 614 */ 0x0,                /* 0 */
                            0x0,                /*
0 */
/* 616 */ 0x0,                /* 0 */
                            0x46,               /*
70 */
/* 618 */
                            0x1b,               /*
FC_CARRAY */
                            0x0,                /*
0 */
/* 620 */ NdrFcShort( 0x1 ),  /* 1 */
/* 622 */ 0x19,               /* Corr desc:  field
pointer, FC_ULONG */
                            0x0,                /*
*/
/* 624 */ NdrFcShort( 0x4 ),  /* 4 */
/* 626 */ NdrFcShort( 0x1 ),  /* Corr flags:  early,
*/
/* 628 */ 0x1,                /* FC_BYTE */
                            0x5b,               /*
FC_END */
/* 630 */
                            0x1a,               /*
FC_BOGUS_STRUCT */
                            0x3,                /*
3 */
/* 632 */ NdrFcShort( 0x18 ), /* 24 */
/* 634 */ NdrFcShort( 0x0 ),  /* 0 */
/* 636 */ NdrFcShort( 0xa ),  /* Offset= 10 (646) */
/* 638 */ 0x8,                /* FC_LONG */
                            0x8,                /*
FC_LONG */
/* 640 */ 0x4c,               /* FC_EMBEDDED_COMPLEX
*/
                            0x0,                /*
0 */
/* 642 */ NdrFcShort( 0xffffffd6 ),     /* Offset= -
42 (600) */
/* 644 */ 0x36,               /* FC_POINTER */
                            0x5b,               /*
FC_END */
/* 646 */
                            0x12, 0x0,          /*
FC_UP */
/* 648 */ NdrFcShort( 0xfffffe2 ),     /* Offset= -
30 (618) */
/* 650 */
                            0x21,               /*
FC_BOGUS_ARRAY */
                            0x3,                /*
3 */
/* 652 */ NdrFcShort( 0x0 ),  /* 0 */
/* 654 */ 0x19,               /* Corr desc:  field
pointer, FC_ULONG */
                            0x0,                /*
*/
/* 656 */ NdrFcShort( 0x0 ),  /* 0 */
/* 658 */ NdrFcShort( 0x1 ),  /* Corr flags:  early,
*/
/* 660 */ NdrFcLong( 0xffffffff ),      /* -1 */
/* 664 */ NdrFcShort( 0x0 ),  /* Corr flags:  */
/* 666 */
                            0x12, 0x0,          /*
FC_UP */
/* 668 */ NdrFcShort( 0xffffffda ),     /* Offset= -
38 (630) */
/* 670 */ 0x5c,               /* FC_PAD */
                            0x5b,               /*
FC_END */
/* 672 */
                            0x1a,               /*
FC_BOGUS_STRUCT */
                            0x3,                /*
3 */
/* 674 */ NdrFcShort( 0x10 ), /* 16 */
/* 676 */ NdrFcShort( 0x0 ),  /* 0 */
/* 678 */ NdrFcShort( 0x6 ),  /* Offset= 6 (684) */
/* 680 */ 0x8,                /* FC_LONG */
                            0x40,               /*
FC_STRUCTPAD4 */
/* 682 */ 0x36,               /* FC_POINTER */
                            0x5b,               /*
FC_END */
/* 684 */
                            0x11, 0x0,          /*
FC_RP */
/* 686 */ NdrFcShort( 0xffffffdc ),     /* Offset= -
36 (650) */
/* 688 */
                            0x1d,               /*
FC_SMFARRAY */
                            0x0,                /*
0 */
/* 690 */ NdrFcShort( 0x8 ),  /* 8 */
/* 692 */ 0x1,                /* FC_BYTE */
                            0x5b,               /*
FC_END */
/* 694 */
                            0x15,               /*
FC_STRUCT */
                            0x3,                /*
3 */
/* 696 */ NdrFcShort( 0x10 ), /* 16 */
/* 698 */ 0x8,                /* FC_LONG */
                            0x6,                /*
FC_SHORT */
/* 700 */ 0x6,                /* FC_SHORT */
                            0x4c,               /*
FC_EMBEDDED_COMPLEX */
/* 702 */ 0x0,                /* 0 */
                            NdrFcShort( 0xfffffff1
),        /* Offset= -15 (688) */
                            0x5b,               /*
FC_END */
/* 706 */
                            0x1a,               /*
FC_BOGUS_STRUCT */
                            0x3,                /*
3 */
/* 708 */ NdrFcShort( 0x20 ), /* 32 */
/* 710 */ NdrFcShort( 0x0 ),  /* 0 */
/* 712 */ NdrFcShort( 0xa ),  /* Offset= 10 (722) */
/* 714 */ 0x8,                /* FC_LONG */
                            0x40,               /*
FC_STRUCTPAD4 */
/* 716 */ 0x36,               /* FC_POINTER */
                            0x4c,               /*
FC_EMBEDDED_COMPLEX */
/* 718 */ 0x0,                /* 0 */
                            NdrFcShort( 0xffffffe7
),        /* Offset= -25 (694) */
                            0x5b,               /*
FC_END */
/* 722 */
                            0x11, 0x0,          /*
FC_RP */
/* 724 */ NdrFcShort( 0xffffff12 ),     /* Offset= -
238 (486) */
/* 726 */
                            0x1b,               /*
FC_CARRAY */
                            0x0,                /*
0 */
/* 728 */ NdrFcShort( 0x1 ),  /* 1 */
/* 730 */ 0x19,               /* Corr desc:  field
pointer, FC_ULONG */
                            0x0,                /*
*/
/* 732 */ NdrFcShort( 0x0 ),  /* 0 */
/* 734 */ NdrFcShort( 0x1 ),  /* Corr flags:  early,
*/
/* 736 */ 0x1,                /* FC_BYTE */
                            0x5b,               /*
FC_END */
/* 738 */
                            0x1a,               /*
FC_BOGUS_STRUCT */
                            0x3,                /*
3 */
/* 740 */ NdrFcShort( 0x10 ), /* 16 */
/* 742 */ NdrFcShort( 0x0 ),  /* 0 */
/* 744 */ NdrFcShort( 0x6 ),  /* Offset= 6 (750) */
/* 746 */ 0x8,                /* FC_LONG */
                            0x40,               /*
FC_STRUCTPAD4 */
/* 748 */ 0x36,               /* FC_POINTER */
                            0x5b,               /*
FC_END */
/* 750 */
```


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```
                            0x12, 0x0,          /*
FC_UP */
/* 752 */ NdrFcShort( 0xffffffe6 ),     /* Offset= -
26 (726) */
/* 754 */
                            0x1b,               /*
FC_CARRAY */
                            0x1,                /*
1 */
/* 756 */ NdrFcShort( 0x2 ),  /* 2 */
/* 758 */ 0x19,               /* Corr desc:  field
pointer, FC_ULONG */
                            0x0,                /*
*/
/* 760 */ NdrFcShort( 0x0 ),  /* 0 */
/* 762 */ NdrFcShort( 0x1 ),  /* Corr flags:  early,
*/
/* 764 */ 0x6,                /* FC_SHORT */
                            0x5b,               /*
FC_END */
/* 766 */
                            0x1a,               /*
FC_BOGUS_STRUCT */
                            0x3,                /*
3 */
/* 768 */ NdrFcShort( 0x10 ), /* 16 */
/* 770 */ NdrFcShort( 0x0 ),  /* 0 */
/* 772 */ NdrFcShort( 0x6 ),  /* Offset= 6 (778) */
/* 774 */ 0x8,                /* FC_LONG */
                            0x40,               /*
FC_STRUCTPAD4 */
/* 776 */ 0x36,               /* FC_POINTER */
                            0x5b,               /*
FC_END */
/* 778 */
                            0x12, 0x0,          /*
FC_UP */
/* 780 */ NdrFcShort( 0xffffffe6 ),     /* Offset= -
26 (754) */
/* 782 */
                            0x1b,               /*
FC_CARRAY */
                            0x3,                /*
3 */
/* 784 */ NdrFcShort( 0x4 ),  /* 4 */
/* 786 */ 0x19,               /* Corr desc:  field
pointer, FC_ULONG */
                            0x0,                /*
*/
/* 788 */ NdrFcShort( 0x0 ),  /* 0 */
/* 790 */ NdrFcShort( 0x1 ),  /* Corr flags:  early,
*/
/* 792 */ 0x8,                /* FC_LONG */
                            0x5b,               /*
FC_END */
/* 794 */
                            0x1a,               /*
FC_BOGUS_STRUCT */
                            0x3,                /*
3 */
/* 796 */ NdrFcShort( 0x10 ), /* 16 */
/* 798 */ NdrFcShort( 0x0 ),  /* 0 */
/* 800 */ NdrFcShort( 0x6 ),  /* Offset= 6 (806) */
/* 802 */ 0x8,                /* FC_LONG */
                            0x40,               /*
FC_STRUCTPAD4 */
/* 804 */ 0x36,               /* FC_POINTER */
                            0x5b,               /*
FC_END */
/* 806 */
                            0x12, 0x0,          /*
FC_UP */
/* 808 */ NdrFcShort( 0xffffffe6 ),     /* Offset= -
26 (782) */
/* 810 */
                            0x1b,               /*
FC_CARRAY */
                            0x7,                /*
7 */
/* 812 */ NdrFcShort( 0x8 ),  /* 8 */
/* 814 */ 0x19,               /* Corr desc:  field
pointer, FC_ULONG */
                            0x0,                /*
*/
/* 816 */ NdrFcShort( 0x0 ),  /* 0 */
/* 818 */ NdrFcShort( 0x1 ),  /* Corr flags:  early,
*/
/* 820 */ 0xb,                /* FC_HYPER */
                            0x5b,               /*
FC_END */
/* 822 */
                            0x1a,               /*
FC_BOGUS_STRUCT */
                            0x3,                /*
3 */
/* 824 */ NdrFcShort( 0x10 ), /* 16 */
/* 826 */ NdrFcShort( 0x0 ),  /* 0 */
/* 828 */ NdrFcShort( 0x6 ),  /* Offset= 6 (834) */
/* 830 */ 0x8,                /* FC_LONG */
                            0x40,               /*
FC_STRUCTPAD4 */
/* 832 */ 0x36,               /* FC_POINTER */
                            0x5b,               /*
FC_END */
/* 834 */
                            0x12, 0x0,          /*
FC_UP */
/* 836 */ NdrFcShort( 0xffffffe6 ),     /* Offset= -
26 (810) */
/* 838 */
                            0x15,               /*
FC_STRUCT */
                            0x3,                /*
3 */
/* 840 */ NdrFcShort( 0x8 ),  /* 8 */
/* 842 */ 0x8,                /* FC_LONG */
                            0x8,                /*
FC_LONG */
/* 844 */ 0x5c,               /* FC_PAD */
                            0x5b,               /*
FC_END */
/* 846 */
                            0x1b,               /*
FC_CARRAY */
                            0x3,                /*
3 */
/* 848 */ NdrFcShort( 0x8 ),  /* 8 */
/* 850 */ 0x7,                /* Corr desc: FC_USHORT
*/
                            0x0,                /*
*/
/* 852 */ NdrFcShort( 0xffc8 ),         /* -56 */
/* 854 */ NdrFcShort( 0x1 ),  /* Corr flags:  early,
*/
/* 856 */ 0x4c,               /* FC_EMBEDDED_COMPLEX
*/
                            0x0,                /*
0 */
/* 858 */ NdrFcShort( 0xffffffec ),     /* Offset= -
20 (838) */
/* 860 */ 0x5c,               /* FC_PAD */
                            0x5b,               /*
FC_END */
/* 862 */
                            0x1a,               /*
FC_BOGUS_STRUCT */
                            0x3,                /*
3 */
/* 864 */ NdrFcShort( 0x38 ), /* 56 */
/* 866 */ NdrFcShort( 0xffffffec ),     /* Offset= -
20 (846) */
/* 868 */ NdrFcShort( 0x0 ),  /* Offset= 0 (868) */
/* 870 */ 0x6,                /* FC_SHORT */
                            0x6,                /*
FC_SHORT */
/* 872 */ 0x8,                /* FC_LONG */
                            0x8,                /*
FC_LONG */
/* 874 */ 0x40,               /* FC_STRUCTPAD4 */
                            0x4c,               /*
FC_EMBEDDED_COMPLEX */
/* 876 */ 0x0,                /* 0 */
                            NdrFcShort( 0xfffffe0f
),        /* Offset= -497 (380) */
                            0x5b,               /*
FC_END */
/* 880 */
                            0x12, 0x0,          /*
FC_UP */
/* 882 */ NdrFcShort( 0xffffff04 ),     /* Offset= -
252 (630) */
/* 884 */
                            0x12, 0x8,          /*
FC_UP [simple_pointer] */
/* 886 */ 0x1,                /* FC_BYTE */
                            0x5c,               /*
FC_PAD */
/* 888 */
                            0x12, 0x8,          /*
FC_UP [simple_pointer] */
/* 890 */ 0x6,                /* FC_SHORT */
                            0x5c,               /*
FC_PAD */
/* 892 */
                            0x12, 0x8,          /*
FC_UP [simple_pointer] */
/* 894 */ 0x8,                /* FC_LONG */
                            0x5c,               /*
FC_PAD */
```


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```
/* 896 */
                        0x12, 0x8,          /*
FC_UP [simple_pointer] */
/* 898 */ 0xb,          /* FC_HYPER */
                        0x5c,               /*
FC_PAD */
/* 900 */
                        0x12, 0x8,          /*
FC_UP [simple_pointer] */
/* 902 */ 0xa,          /* FC_FLOAT */
                        0x5c,               /*
FC_PAD */
/* 904 */
                        0x12, 0x8,          /*
FC_UP [simple_pointer] */
/* 906 */ 0xc,          /* FC_DOUBLE */
                        0x5c,               /*
FC_PAD */
/* 908 */
                        0x12, 0x0,          /*
FC_UP */
/* 910 */ NdrFcShort( 0xfffffda2 ),     /* Offset= -
606 (304) */
/* 912 */
                        0x12, 0x10,         /*
FC_UP [pointer_deref] */
/* 914 */ NdrFcShort( 0xfffffda4 ),     /* Offset= -
604 (310) */
/* 916 */
                        0x12, 0x10,         /*
FC_UP [pointer_deref] */
/* 918 */ NdrFcShort( 0xfffffdba ),     /* Offset= -
582 (336) */
/* 920 */
                        0x12, 0x10,         /*
FC_UP [pointer_deref] */
/* 922 */ NdrFcShort( 0xfffffdc8 ),     /* Offset= -
568 (354) */
/* 924 */
                        0x12, 0x10,         /*
FC_UP [pointer_deref] */
/* 926 */ NdrFcShort( 0xfffffdd6 ),     /* Offset= -
554 (372) */
/* 928 */
                        0x12, 0x10,         /*
FC_UP [pointer_deref] */
/* 930 */ NdrFcShort( 0x2 ),  /* Offset= 2 (932) */
/* 932 */
                        0x12, 0x0,          /*
FC_UP */
/* 934 */ NdrFcShort( 0x14 ), /* Offset= 20 (954) */
/* 936 */
                        0x15,               /*
FC_STRUCT */
                        0x7,                /*
7 */
/* 938 */ NdrFcShort( 0x10 ), /* 16 */
/* 940 */ 0x6,          /* FC_SHORT */
                        0x1,                /*
FC_BYTE */
/* 942 */ 0x1,          /* FC_BYTE */
                        0x8,                /*
FC_LONG */
/* 944 */ 0xb,          /* FC_HYPER */
                        0x5b,               /*
FC_END */
/* 946 */
                        0x12, 0x0,          /*
FC_UP */
/* 948 */ NdrFcShort( 0xfffffff4 ),     /* Offset= -
12 (936) */
/* 950 */
                        0x12, 0x8,          /*
FC_UP [simple_pointer] */
/* 952 */ 0x2,          /* FC_CHAR */
                        0x5c,               /*
FC_PAD */
/* 954 */
                        0x1a,               /*
FC_BOGUS_STRUCT */
                        0x7,                /*
7 */
/* 956 */ NdrFcShort( 0x20 ), /* 32 */
/* 958 */ NdrFcShort( 0x0 ),  /* 0 */
/* 960 */ NdrFcShort( 0x0 ),  /* Offset= 0 (960) */
/* 962 */ 0x8,          /* FC_LONG */
                        0x8,                /*
FC_LONG */
/* 964 */ 0x6,          /* FC_SHORT */
                        0x6,                /*
FC_SHORT */
/* 966 */ 0x6,          /* FC_SHORT */
                        0x6,                /*
FC_SHORT */
/* 968 */ 0x4c,         /* FC_EMBEDDED_COMPLEX
*/
                        0x0,                /*
0 */
/* 970 */ NdrFcShort( 0xffffffc3c ),    /* Offset= -
964 (6) */
/* 972 */ 0x5c,         /* FC_PAD */
                        0x5b,               /*
FC_END */
/* 974 */ 0xb4,         /* FC_USER_MARSHAL */
                        0x83,               /*
131 */
/* 976 */ NdrFcShort( 0x0 ),  /* 0 */
/* 978 */ NdrFcShort( 0x18 ), /* 24 */
/* 980 */ NdrFcShort( 0x0 ),  /* 0 */
/* 982 */ NdrFcShort( 0xffffffc2c ),    /* Offset= -
980 (2) */
/* 984 */
                        0x11, 0x4,          /*
FC_RP [alloced_on_stack] */
/* 986 */ NdrFcShort( 0x6 ),  /* Offset= 6 (992) */
/* 988 */
                        0x13, 0x0,          /*
FC_OP */
/* 990 */ NdrFcShort( 0xffffffdc ),     /* Offset= -
36 (954) */
/* 992 */ 0xb4,         /* FC_USER_MARSHAL */
                        0x83,               /*
131 */
/* 994 */ NdrFcShort( 0x0 ),  /* 0 */
/* 996 */ NdrFcShort( 0x18 ), /* 24 */
/* 998 */ NdrFcShort( 0x0 ),  /* 0 */
/* 1000 */          NdrFcShort( 0xfffffff4 ),    /*
Offset= -12 (988) */
                                0x0
        }
    };

static const USER_MARSHAL_ROUTINE_QUADRUPLE
UserMarshalRoutines[ WIRE_MARSHAL_TABLE_SIZE ] =
        {

            {
            VARIANT_UserSize
            ,VARIANT_UserMarshal
            ,VARIANT_UserUnmarshal
            ,VARIANT_UserFree
            }

        };



/* Standard interface: __MIDL_itf_tpcc_com_ps_0000,
ver. 0.0,

GUID={0x00000000,0x0000,0x0000,{0x00,0x00,0x00,0x00,0
x00,0x00,0x00,0x00}} */


/* Object interface: IUnknown, ver. 0.0,

GUID={0x00000000,0x0000,0x0000,{0xC0,0x00,0x00,0x00,0
x00,0x00,0x00,0x46}} */


/* Object interface: ITPCC, ver. 0.0,

GUID={0xFEEE6AA2,0x84B1,0x11d2,{0xBA,0x47,0x00,0xC0,0
x4F,0xBF,0xE0,0x8B}} */

#pragma code_seg(".orpc")
static const unsigned short
ITPCC_FormatStringOffsetTable[] =
    {
    0,
    44,
    88,
    132,
    176,
    220
    };

static const MIDL_STUBLESS_PROXY_INFO ITPCC_ProxyInfo
=
    {
    &Object_StubDesc,
    __MIDL_ProcFormatString.Format,
    &ITPCC_FormatStringOffsetTable[-3],
    0,
    0,
    0
    };
```


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```
static const MIDL_SERVER_INFO ITPCC_ServerInfo =
    {
    &Object_StubDesc,
    0,
    __MIDL_ProcFormatString.Format,
    &ITPCC_FormatStringOffsetTable[-3],
    0,
    0,
    0,
    0};
CINTERFACE_PROXY_VTABLE(9) _ITPCCProxyVtbl =
{
    &ITPCC_ProxyInfo,
    &IID_ITPCC,
    IUnknown_QueryInterface_Proxy,
    IUnknown_AddRef_Proxy,
    IUnknown_Release_Proxy ,
    (void *) (INT_PTR) -1 /* ITPCC::NewOrder */ ,
    (void *) (INT_PTR) -1 /* ITPCC::Payment */ ,
    (void *) (INT_PTR) -1 /* ITPCC::Delivery */ ,
    (void *) (INT_PTR) -1 /* ITPCC::StockLevel */ ,
    (void *) (INT_PTR) -1 /* ITPCC::OrderStatus */ ,
    (void *) (INT_PTR) -1 /* ITPCC::CallSetComplete
*/
};

const CInterfaceStubVtbl _ITPCCStubVtbl =
{
    &IID_ITPCC,
    &ITPCC_ServerInfo,
    9,
    0, /* pure interpreted */
    CStdStubBuffer_METHODS
};

static const MIDL_STUB_DESC Object_StubDesc =
    {
    0,
    NdrOleAllocate,
    NdrOleFree,
    0,
    0,
    0,
    0,
    0,
    __MIDL_TypeFormatString.Format,
    1, /* -error bounds_check flag */
    0x50002, /* Ndr library version */
    0,
    0x600015b, /* MIDL Version 6.0.347 */
    0,
    UserMarshalRoutines,
    0,  /* notify & notify_flag routine table */
    0x1, /* MIDL flag */
    0, /* cs routines */
    0,   /* proxy/server info */
    0   /* Reserved5 */
    };

const CInterfaceProxyVtbl *
_tpcc_com_ps_ProxyVtblList[] =
{
    ( CInterfaceProxyVtbl *) &_ITPCCProxyVtbl,
    0
};

const CInterfaceStubVtbl *
_tpcc_com_ps_StubVtblList[] =
{
    ( CInterfaceStubVtbl *) &_ITPCCStubVtbl,
    0
};

PCInterfaceName const
_tpcc_com_ps_InterfaceNamesList[] =
{
    "ITPCC",
    0
};


#define _tpcc_com_ps_CHECK_IID(n)
          IID_GENERIC_CHECK_IID( _tpcc_com_ps, pIID,
n)

int __stdcall _tpcc_com_ps_IID_Lookup( const IID *
pIID, int * pIndex )
{

    if(!_tpcc_com_ps_CHECK_IID(0))
        {
        *pIndex = 0;
        return 1;
        }

    return 0;
}

const ExtendedProxyFileInfo tpcc_com_ps_ProxyFileInfo
=
{
    (PCInterfaceProxyVtblList *) &
_tpcc_com_ps_ProxyVtblList,
    (PCInterfaceStubVtblList *) &
_tpcc_com_ps_StubVtblList,
    (const PCInterfaceName * ) &
_tpcc_com_ps_InterfaceNamesList,
    0, // no delegation
    & _tpcc_com_ps_IID_Lookup,
    1,
    2,
    0, /* table of [async_uuid] interfaces */
    0, /* Filler1 */
    0, /* Filler2 */
    0  /* Filler3 */
};


#endif /* defined(_M_IA64) || defined(_M_AMD64)*/
```

# tpcc_com_sl.rgs

```
HKCR
{
          TPCC.StockLevel.1 = s 'StockLevel Class'
          {
                    CLSID = s '{2668369E-A50D-11D2-
BA4E-00C04FBFE08B}'
          }
          TPCC.StockLevel = s 'StockLevel Class'
          {
                    CurVer = s 'TPCC.StockLevel.1'
          }
          NoRemove CLSID
          {
                    ForceRemove {2668369E-A50D-11D2-
BA4E-00C04FBFE08B} = s 'StockLevel Class'
                    {
                              ProgID = s
'TPCC.StockLevel.1'

          VersionIndependentProgID = s
'TPCC.StockLevel'
                              InprocServer32 = s
'%MODULE%'
                              {
                                        val
ThreadingModel = s 'Both'
                              }
                    }
          }
}
```

# tpcc_dblib.cpp

```
/*        FILE:               TPCC_DBLIB.CPP
 *                                        Microsoft
TPC-C Kit Ver. 4.42.000
 *                                        Copyright
Microsoft, 2002
 *             All Rights Reserved
 *
 *                                        Version
4.10.000 audited by Richard Gimarc, Performance
Metrics, 3/17/99
 *
 *        PURPOSE:  Implements dblib calls for TPC-C
txns.
 *        Contact:  Charles Levine
(clevine@microsoft.com)
 *
 *  Change history:
 *                  4.42.000 - changed w_id fields
from short to long to support >32K warehouses
 *                  4.20.000 - updated rev number to
match kit
 *                  4.10.001 - not deleting error
class in catch handler on deadlock retry;
```


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```
 *                                       not a
functional bug, but a memory leak
 *                                     - had to
tweak some declarations to compile with latest SDK;
no functional change
 */

#include <windows.h>
#include <stdio.h>
#include <assert.h>

#define DBNTWIN32
#include <sqlfront.h>
#include <sqldb.h>

#ifdef ICECAP
#include <icapexp.h>
#endif

// need to declare functions for export
#define DllDecl  __declspec( dllexport )

#include "..\..\common\src\error.h"
#include "..\..\common\src\trans.h"
#include "..\..\common\src\txn_base.h"
#include "tpcc_dblib.h"

#define   DEFCLPACKSIZE
          4096

// version string; must match return value from
tpcc_version stored proc
const char          sVersion[] = "4.20.000";

const                         iMaxRetries = 10;
          // how many retries on deadlock
static    long      iConnectionCount = 0;  // number
of current dblib connections

const int iErrOleDbProvider = 7312;
const char sErrTimeoutExpired[] = "Timeout expired";

BOOL APIENTRY DllMain(HMODULE hModule, DWORD
ul_reason_for_call, LPVOID lpReserved)
{
          switch( ul_reason_for_call )
          {
                    case DLL_PROCESS_ATTACH:

          DisableThreadLibraryCalls(hModule);
                              dbinit();           //
initialize dblib
                              break;

                    case DLL_PROCESS_DETACH:
                              dbexit();           //
close all dblib structures/connections
                              break;

                    default:
                              /* nothing */;
          }
          return TRUE;
}


int err_handler(DBPROCESS *dbproc, int severity, int
dberr, int oserr, LPCSTR dberrstr, LPCSTR oserrstr)
{
          CTPCC_DBLIB
          *pConn;

          assert(dbproc != NULL);
          pConn =
(CTPCC_DBLIB*)dbgetuserdata(dbproc);

          if (pConn != NULL)
          {
                    pConn->SetDbLibError( severity,
dberr, oserr, dberrstr, oserrstr );
          }
          return INT_CANCEL;
}

/* FUNCTION: int msg_handler(DBPROCESS *dbproc, DBINT
msgno, int msgstate, int severity, char *msgtext)
 *
 * PURPOSE:         This function handles DB-Library
SQL Server error messages
 *
 * ARGUMENTS:       DBPROCESS           *dbproc
                    DBPROCESS id pointer
 *                                      DBINT
                    msgno
          message number
 *                                      int
                                  msgstate
          message state
 *                                      int
                                  severity
          message severity
 *                                      char
                    *msgtext            printable
message description
 *
 * RETURNS:                     int
                    INT_CONTINUE        continue if
error is SQLETIME else INT_CANCEL action
 *                                  INT_CANCEL
          cancel operation
 *
 * COMMENTS:        This function also sets the dead
lock dbproc variable if necessary.
 *
 */

// typedef INT (SQLAPI *DBMSGHANDLE_PROC)(PDBPROCESS,
DBINT, INT, INT, LPCSTR, LPCSTR, LPCSTR,
DBUSMALLINT);

int msg_handler(DBPROCESS *dbproc, DBINT msgno, int
msgstate, int severity,
                                        LPCSTR
msgtext, LPCSTR srvname, LPCSTR procname, DBUSMALLINT
line)
{
          CTPCC_DBLIB
          *pConn;

          assert(dbproc != NULL);
          pConn =
(CTPCC_DBLIB*)dbgetuserdata(dbproc);

          if (pConn != NULL)
          {
                    pConn->SetSqlError( msgno,
msgstate, severity, msgtext );
          }

          return 0;
}

/* FUNCTION: void UtilStrCpy(char * pDest, char *
pSrc, int n)
 *
 * PURPOSE:         This function copies n characters
from string pSrc to pDst and places a
 *                                  null character at the
end of the destination string.
 *
 * ARGUMENTS:       char
          *pDest    destination string pointer
 *                                  char
                    *pSrc     source string pointer
 *                                  int
                                  n
          number of characters to copy
 *
 * RETURNS:                     None
 *
 * COMMENTS:        Unlike strncpy this function
ensures that the result string is
 *                                  always null
terminated.
 *
 */

inline static void UtilStrCpy(char * pDest, const
BYTE * pSrc, int n)
{
    strncpy(pDest, (char *)pSrc, n);
    pDest[n] = '\0';

          return;
}

/* FUNCTION: CTPCC_DBLIB_ERR::ErrorText
 *
 */

char* CTPCC_DBLIB_ERR::ErrorText(void)
{
          int i;

          static SERRORMSG errorMsgs[] =
          {
```


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```
                { ERR_WRONG_SP_VERSION,
        "Wrong version of stored procs on database
server"   },
                { ERR_INVALID_CUST,
        "Invalid Customer id,name."
                                                },
                { ERR_NO_SUCH_ORDER,
        "No orders found for customer."
                                                },
                { ERR_RETRIED_TRANS,
        "Retries before transaction succeeded."
                                },
                { 0,
                                ""



        }
        };

        static char szNotFound[] = "Unknown error
number.";

        for(i=0; errorMsgs[i].szMsg[0]; i++)
        {
                if ( m_errno ==
errorMsgs[i].iError )
                        break;
        }
        if ( !errorMsgs[i].szMsg[0] )
                return szNotFound;
        else
                return errorMsgs[i].szMsg;
}

// wrapper routine for class constructor
__declspec(dllexport) CTPCC_DBLIB* CTPCC_DBLIB_new(
        LPCSTR szServer,              // name of
SQL server
        LPCSTR szUser,                          //
user name for login
        LPCSTR szPassword,            // password
for login
        LPCSTR szHost,                          //
workstation name; shows up in sp_who; max 30 chars,
only first 10 kept by SQL Server
        LPCSTR szDatabase )           // name of
database to use
{
        return new CTPCC_DBLIB( szServer, szUser,
szPassword, szHost, szDatabase );
}


CTPCC_DBLIB::CTPCC_DBLIB (
        LPCSTR szServer,              // name of
SQL server
        LPCSTR szUser,                          //
user name for login
        LPCSTR szPassword,            // password
for login
        LPCSTR szHost,                          //
workstation name; shows up in sp_who; max 30 chars,
only first 10 kept by SQL Server
        LPCSTR szDatabase )           // name of
database to use
{
        LOGINREC  *login;
        const BYTE          *pData;

        // initialization
        m_dbproc = NULL;
        m_DbLibErr = (CDBLIBERR*)NULL;
        m_SqlErr = (CSQLERR*)NULL;

        m_MaxRetries = 10;            // how many
retries on deadlock

        // increase max number of connections if
getting close
        if ( dbgetmaxprocs() < (iConnectionCount+5)
)
        {
                if (
dbsetmaxprocs(iConnectionCount+10) == FAIL )

        ThrowError(CDBLIBERR::eDbSetMaxProcs);
        }

        // allocate a login structure
        login = dblogin();
        if (login == NULL)
                ThrowError(CDBLIBERR::eLogin);
        InterlockedIncrement( &iConnectionCount );

        // register error and message handler
functions
        if (dbprocerrhandle(login, err_handler) ==
NULL)

        ThrowError(CDBLIBERR::eDbProcHandler);

        if (dbprocmsghandle(login, msg_handler) ==
NULL)

        ThrowError(CDBLIBERR::eDbProcHandler);


        DBSETLUSER(login, szUser);
        DBSETLPWD(login, szPassword);
        DBSETLHOST(login, szHost);
        DBSETLPACKET(login, (unsigned
short)DEFCLPACKSIZE);
        DBSETLVERSION(login, DBVER60);
        // use dblib ver 6.0 client behavior

        // set time to wait for login
        if (dbsetlogintime(60) == FAIL)
                ThrowError(CDBLIBERR::eDbSet);

        // set time to wait for statement execution
        if (dbsettime(180) == FAIL)
                ThrowError(CDBLIBERR::eDbSet);

        m_dbproc = dbopen(login, szServer);

        // deallocate login structure before
checking for success
        dbfreelogin( login );

        if (m_dbproc == NULL)
                ThrowError(CDBLIBERR::eDbOpen);

        // save address of class instance so that
the message and error handler
        // can get to data.
        dbsetuserdata(m_dbproc, (LPVOID)this);

        // Use the the right database
        if (dbuse(m_dbproc, szDatabase) == FAIL)
                ThrowError(CDBLIBERR::eDbUse);

        dbcmd(m_dbproc, "set nocount on ");
                // do not return row counts
        dbcmd(m_dbproc, "set XACT_ABORT ON");
        // rollback transaction on abort

        if (dbsqlexec(m_dbproc) == FAIL)

        ThrowError(CDBLIBERR::eDbSqlExec);

        DiscardNextResults(2);

        // verify that version of stored procs on
server is correct
        dbrpcinit(m_dbproc, "tpcc_version", 0);

        if (dbrpcexec(m_dbproc) == FAIL)

        ThrowError(CDBLIBERR::eDbRpcExec);

        if (dbresults(m_dbproc) != SUCCEED)

        ThrowError(CDBLIBERR::eDbResults);

        if (dbnextrow(m_dbproc) != REG_ROW)

        ThrowError(CDBLIBERR::eDbNextRow);

        char szSrvVersion[16];
        pData=dbdata(m_dbproc, 1);
        if (pData)
                UtilStrCpy(szSrvVersion, pData,
dbdatlen(m_dbproc, 1));
        else
                szSrvVersion[0]=0;
        if (strcmp(szSrvVersion,sVersion))
                throw new CTPCC_DBLIB_ERR(
CTPCC_DBLIB_ERR::ERR_WRONG_SP_VERSION );


        DiscardNextRows(0);
        DiscardNextResults(0);
}


CTPCC_DBLIB::~CTPCC_DBLIB( void )
{
```


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```
        // close db connection and deallocate
resources
        dbclose(m_dbproc);
        InterlockedDecrement( &iConnectionCount );
        if (m_DbLibErr != NULL)
                delete m_DbLibErr;
        if (m_SqlErr != NULL)
                delete m_SqlErr;
}

void CTPCC_DBLIB::SetDbLibError(int severity, int
dberr, int oserr, LPCSTR dberrstr, LPCSTR oserrstr)
{
        delete m_DbLibErr;
        m_DbLibErr = new
CDBLIBERR(CDBLIBERR::eUnknown, severity, dberr,
oserr);

        if (dberrstr != NULL)
        {
                m_DbLibErr->m_dberrstr = new
char[ strlen(dberrstr)+1 ];
                strcpy( m_DbLibErr->m_dberrstr,
dberrstr );
        }

        if (oserrstr != NULL)
        {
                m_DbLibErr->m_oserrstr = new
char[ strlen(oserrstr)+1 ];
                strcpy( m_DbLibErr->m_oserrstr,
oserrstr );
        }

}

void CTPCC_DBLIB::SetSqlError( int /*DBINT*/ msgno,
int msgstate, int severity, LPCSTR msgtext )
{
        if (m_SqlErr == NULL)
                m_SqlErr = new CSQLERR();

        m_SqlErr->m_msgno = msgno;
        m_SqlErr->m_msgstate = msgstate;
        m_SqlErr->m_severity = severity;

        delete [] m_SqlErr->m_msgtext;
        if (msgtext != NULL)
        {
                m_SqlErr->m_msgtext = new char[
strlen(msgtext)+1 ];
                strcpy( m_SqlErr->m_msgtext,
msgtext );
        }
}

void CTPCC_DBLIB::ThrowError( CDBLIBERR::ACTION
eAction )
{
        // discard anything still in return buffer
        DiscardNextRows(-1);
        DiscardNextResults(-1);
        // check for SQL Server error first;  if
yes, throw it and ignore any DBLib error.
        if (m_SqlErr != NULL)
        {
                CSQLERR             *pSqlErr;
                pSqlErr = m_SqlErr;
                m_SqlErr = NULL;    // clear our
pointer to instance; catch handler will delete
                throw pSqlErr;
        }

        CDBLIBERR *pDbLibErr;
        if (m_DbLibErr == NULL)
                // this case isn't expected to
happen, since it means that an error was returned
                // but the error handlers were
not called.
                pDbLibErr = new
CDBLIBERR(eAction);
        else
        {
                pDbLibErr = m_DbLibErr;
                pDbLibErr->m_eAction = eAction;
                m_DbLibErr = NULL;            //
clear our pointer to instance; catch handler will
delete
        }

        throw pDbLibErr;
}

// Read and discard rows until no more.  Throw an
exception if number of rows read doesn't
// match number of rows expected.  The row count will
be ignored if the expected count value
// passed in is negative.  A typical use of this
routine is to verify that there are no more
// rows to be read.
void CTPCC_DBLIB::DiscardNextRows(int iExpectedCount)
{
        int                 iRowsRead = 0;
        RETCODE   rc;

        while (TRUE)
        {
                rc = dbnextrow(m_dbproc);
                if (rc == NO_MORE_ROWS)
                        break;
                if (rc == FAIL)
                {
                        if (iExpectedCount >=
0)

        ThrowError(CDBLIBERR::eDbNextRow);
                        else
                                break;
                }
                iRowsRead++;
        }

        if ((iExpectedCount >= 0) &&
                (iExpectedCount != iRowsRead))
        ThrowError(CDBLIBERR::eWrongRowCount);
}

// Read and discard results until no more.  Throw an
exception if number of result sets read doesn't
// match number expected.  The result set count will
be ignored if the expected count value
// passed in is negative.  A typical use of this
routine is to verify that there are no more
// result sets to be read.
void CTPCC_DBLIB::DiscardNextResults(int
iExpectedCount)
{
        int                 iResultsRead = 0;
        RETCODE   rc;

        while (TRUE)
        {
                rc = dbresults(m_dbproc);
                if (rc == NO_MORE_RESULTS)
                        break;
                if (rc == FAIL)
                {
                        if (iExpectedCount >=
0)

        ThrowError(CDBLIBERR::eDbResults);
                        else
                                break;
                }

                DiscardNextRows(-1);
                iResultsRead++;
        }

        if ((iExpectedCount >= 0) &&
                (iExpectedCount != iResultsRead))

        ThrowError(CDBLIBERR::eWrongRowCount);
}

void CTPCC_DBLIB::StockLevel()
{
        int                         iTryCount =
0;
        const BYTE          *pData;

        ResetError();

        while (TRUE)
        {
                try
                {
                        dbrpcinit(m_dbproc,
"tpcc_stocklevel", 0);

                        dbrpcparam(m_dbproc,
NULL, 0, SQLINT4, -1, -1, (BYTE *)
&m_txn.StockLevel.w_id);              // @w_id int
                        dbrpcparam(m_dbproc,
NULL, 0, SQLINT1, -1, -1, (BYTE *)
```


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```
&m_txn.StockLevel.d_id);                // @d_id
tinyint
                        dbrpcparam(m_dbproc,
NULL, 0, SQLINT2, -1, -1, (BYTE *)
&m_txn.StockLevel.threshold);   // @threshhold
smallint

                        if (dbrpcexec(m_dbproc)
== FAIL)

        ThrowError(CDBLIBERR::eDbRpcExec);

                        if (dbresults(m_dbproc)
!= SUCCEED)

        ThrowError(CDBLIBERR::eDbResults);

                        if (dbnextrow(m_dbproc)
!= REG_ROW)

        ThrowError(CDBLIBERR::eDbNextRow);

                        if
(pData=dbdata(m_dbproc, 1))

        m_txn.StockLevel.low_stock = *((long *)
pData);

                        DiscardNextRows(0);
                        DiscardNextResults(0);


        m_txn.StockLevel.exec_status_code = eOK;
                        return;
                }
                catch (CSQLERR *e)
                {
                        if ((e->m_msgno == 1205
||
                                (e->m_msgno
== iErrOleDbProvider &&
                                strstr(e-
>m_msgtext, sErrTimeoutExpired) != NULL)) &&
                                (++iTryCount
<= iMaxRetries))
                        {
                                // hit
deadlock; backoff for increasingly longer period
                                delete e;
                                Sleep(10 *
iTryCount);
                        }
                        else
                                throw;
                }
        }       // while (TRUE)

        //if (iTryCount)
        //      throw new
CTPCC_DBLIB_ERR(CTPCC_DBLIB_ERR::ERR_RETRIED_TRANS,
iTryCount);
}
```

```
void CTPCC_DBLIB::NewOrder()
{
        int                     i;
        DBINT           commit_flag;
        DBDATETIME      datetime;
        DBDATEREC daterec;

        int                     iTryCount =
0;
        const BYTE      *pData;

        ResetError();

        while (TRUE)
        {
                try
                {
                        dbrpcinit(m_dbproc,
"tpcc_neworder", 0);

                        dbrpcparam(m_dbproc,
NULL, 0, SQLINT4, -1, -1, (BYTE *)
&m_txn.NewOrder.w_id);
                        dbrpcparam(m_dbproc,
NULL, 0, SQLINT1, -1, -1, (BYTE *)
&m_txn.NewOrder.d_id);
                        dbrpcparam(m_dbproc,
NULL, 0, SQLINT4, -1, -1, (BYTE *)
&m_txn.NewOrder.c_id);
                        dbrpcparam(m_dbproc,
NULL, 0, SQLINT1, -1, -1, (BYTE *)
&m_txn.NewOrder.o_ol_cnt);

                        // check whether any
order lines are for a remote warehouse

        m_txn.NewOrder.o_all_local = 1;
                        for (i = 0; i <
m_txn.NewOrder.o_ol_cnt; i++)
                        {
                                if
(m_txn.NewOrder.OL[i].ol_supply_w_id !=
m_txn.NewOrder.w_id)
                                {

        m_txn.NewOrder.o_all_local = 0;  // at
least one remote warehouse

        break;
                                }
                        }
                        dbrpcparam(m_dbproc,
NULL, 0, SQLINT1, -1, -1, (BYTE *)
&m_txn.NewOrder.o_all_local);

                        for (i = 0; i <
m_txn.NewOrder.o_ol_cnt; i++)
                        {

        dbrpcparam(m_dbproc, NULL, 0, SQLINT4, -1,
-1, (BYTE *) &m_txn.NewOrder.OL[i].ol_i_id);

        dbrpcparam(m_dbproc, NULL, 0, SQLINT4, -1,
-1, (BYTE *) &m_txn.NewOrder.OL[i].ol_supply_w_id);

        dbrpcparam(m_dbproc, NULL, 0, SQLINT2, -1,
-1, (BYTE *) &m_txn.NewOrder.OL[i].ol_quantity);
                        }

                        if (dbrpcexec(m_dbproc)
== FAIL)

        ThrowError(CDBLIBERR::eDbRpcExec);


                        // Get order line
results

        m_txn.NewOrder.total_amount = 0;
                        for (i = 0;
i<m_txn.NewOrder.o_ol_cnt; i++)
                        {
                                if
(dbresults(m_dbproc) != SUCCEED)

        ThrowError(CDBLIBERR::eDbResults);

                                if
(dbnumcols(m_dbproc) != 5)

        ThrowError(CDBLIBERR::eWrongNumCols);

                                if
(dbnextrow(m_dbproc) != REG_ROW)

        ThrowError(CDBLIBERR::eDbNextRow);


        if(pData=dbdata(m_dbproc, 1))

        UtilStrCpy(m_txn.NewOrder.OL[i].ol_i_name,
pData, dbdatlen(m_dbproc, 1));

        if(pData=dbdata(m_dbproc, 2))

        m_txn.NewOrder.OL[i].ol_stock =
(*(DBSMALLINT *) pData);

        if(pData=dbdata(m_dbproc, 3))

        UtilStrCpy(m_txn.NewOrder.OL[i].ol_brand_ge
neric, pData, dbdatlen(m_dbproc, 3));

        if(pData=dbdata(m_dbproc, 4))

        dbconvert(m_dbproc, SQLNUMERIC,
(LPCBYTE)pData, dbdatlen(m_dbproc,4),

        SQLFLT8, (BYTE
*)&m_txn.NewOrder.OL[i].ol_i_price, 8);

        if(pData=dbdata(m_dbproc, 5))
```


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```
          dbconvert(m_dbproc, SQLNUMERIC,
(LPCBYTE)pData, dbdatlen(m_dbproc,5),

          SQLFLT8, (BYTE
*)&m_txn.NewOrder.OL[i].ol_amount, 8);


          m_txn.NewOrder.total_amount =
m_txn.NewOrder.total_amount +
m_txn.NewOrder.OL[i].ol_amount;


          DiscardNextRows(0);
                              }


                              // get remaining values
for w_tax, d_tax, o_id, c_last, c_discount, c_credit,
o_entry_d, commit_flag
                              if (dbresults(m_dbproc)
!= SUCCEED)

          ThrowError(CDBLIBERR::eDbResults);

                              if (dbnextrow(m_dbproc)
!= REG_ROW)

          ThrowError(CDBLIBERR::eDbNextRow);

                              if (dbnumcols(m_dbproc)
!= 8)

          ThrowError(CDBLIBERR::eWrongNumCols);

                              if
(pData=dbdata(m_dbproc, 1))




          dbconvert(m_dbproc, SQLNUMERIC,
(LPCBYTE)pData, dbdatlen(m_dbproc,1), SQLFLT8, (BYTE
*)&m_txn.NewOrder.w_tax, 8);
                              if
(pData=dbdata(m_dbproc, 2))


          dbconvert(m_dbproc, SQLNUMERIC,
(LPCBYTE)pData, dbdatlen(m_dbproc,2), SQLFLT8, (BYTE
*)&m_txn.NewOrder.d_tax, 8);
                              if
(pData=dbdata(m_dbproc, 3))

          m_txn.NewOrder.o_id = (*(DBINT *) pData);
                              if
(pData=dbdata(m_dbproc, 4))

          UtilStrCpy(m_txn.NewOrder.c_last, pData,
dbdatlen(m_dbproc, 4));
                              if
(pData=dbdata(m_dbproc, 5))
```

```
          dbconvert(m_dbproc, SQLNUMERIC,
(LPCBYTE)pData, dbdatlen(m_dbproc,5), SQLFLT8, (BYTE
*)&m_txn.NewOrder.c_discount, 8);
                              if
(pData=dbdata(m_dbproc, 6))

          UtilStrCpy(m_txn.NewOrder.c_credit, pData,
dbdatlen(m_dbproc, 6));
                              if
(pData=dbdata(m_dbproc, 7))
                              {
                                        datetime =
*((DBDATETIME *) pData);

          dbdatecrack(m_dbproc, &daterec, &datetime);

          m_txn.NewOrder.o_entry_d.year   =
daterec.year;

          m_txn.NewOrder.o_entry_d.month  =
daterec.month;

          m_txn.NewOrder.o_entry_d.day    =
daterec.day;

          m_txn.NewOrder.o_entry_d.hour   =
daterec.hour;

          m_txn.NewOrder.o_entry_d.minute =
daterec.minute;

          m_txn.NewOrder.o_entry_d.second =
daterec.second;
                              }
                              if
(pData=dbdata(m_dbproc, 8))
                                        commit_flag =
(*(DBTINYINT *) pData);

                              DiscardNextRows(0);
                              DiscardNextResults(0);


                              if (commit_flag == 1)
                              {

          m_txn.NewOrder.total_amount *= ((1 +
m_txn.NewOrder.w_tax + m_txn.NewOrder.d_tax) * (1 -
m_txn.NewOrder.c_discount));

          m_txn.NewOrder.exec_status_code = eOK;
                              }
                              else

          m_txn.NewOrder.exec_status_code =
eInvalidItem;

                              return;
                    }
                    catch (CSQLERR *e)
                    {
```

```
                              if ((e->m_msgno == 1205
||
                                        (e->m_msgno
== iErrOleDbProvider &&
                                        strstr(e-
>m_msgtext, sErrTimeoutExpired) != NULL)) &&
                                        (++iTryCount
<= iMaxRetries))
                              {
                                        // hit
deadlock; backoff for increasingly longer period
                                        delete e;
                                        Sleep(10 *
iTryCount);
                              }
                              else
                                        throw;
                    }
          }         // while (TRUE)

//        if (iTryCount)
//                  throw new
CTPCC_DBLIB_ERR(CTPCC_DBLIB_ERR::ERR_RETRIED_TRANS,
iTryCount);
}


void CTPCC_DBLIB::Payment()
{
          DBDATETIME          datetime;
          DBDATEREC daterec;

          int                           iTryCount =
0;
          const BYTE          *pData;

          ResetError();

          while (TRUE)
          {
                    try
                    {
                              dbrpcinit(m_dbproc,
"tpcc_payment", 0);

                              dbrpcparam(m_dbproc,
NULL, 0, SQLINT4, -1, -1, (BYTE *)
&m_txn.Payment.w_id);
                              dbrpcparam(m_dbproc,
NULL, 0, SQLINT4, -1, -1, (BYTE *)
&m_txn.Payment.c_w_id);
                              dbrpcparam(m_dbproc,
NULL, 0, SQLFLT8, -1, -1, (BYTE *)
&m_txn.Payment.h_amount);
                              dbrpcparam(m_dbproc,
NULL, 0, SQLINT1, -1, -1, (BYTE *)
&m_txn.Payment.d_id);
                              dbrpcparam(m_dbproc,
NULL, 0, SQLINT1, -1, -1, (BYTE *)
&m_txn.Payment.c_d_id);
                              dbrpcparam(m_dbproc,
NULL, 0, SQLINT4, -1, -1, (BYTE *)
&m_txn.Payment.c_id);
```


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```
                        // if customer id is
zero, then payment is by name
                        if (m_txn.Payment.c_id
== 0)

          dbrpcparam(m_dbproc, NULL, 0, SQLCHAR, -1,
strlen(m_txn.Payment.c_last), (unsigned char
*)m_txn.Payment.c_last);

                        if (dbrpcexec(m_dbproc)
== FAIL)

          ThrowError(CDBLIBERR::eDbRpcExec);

                        if (dbresults(m_dbproc)
!= SUCCEED)

          ThrowError(CDBLIBERR::eDbResults);

                        if (dbnextrow(m_dbproc)
!= REG_ROW)

          ThrowError(CDBLIBERR::eDbNextRow);

                        if (dbnumcols(m_dbproc)
!= 27)

          ThrowError(CDBLIBERR::eWrongNumCols);

                        if
(pData=dbdata(m_dbproc, 1))

          m_txn.Payment.c_id = *((DBINT *) pData);
                        if
(pData=dbdata(m_dbproc, 2))

          UtilStrCpy(m_txn.Payment.c_last, pData,
dbdatlen(m_dbproc, 2));
                        if
(pData=dbdata(m_dbproc, 3))
                        {
                                datetime =
*((DBDATETIME *) pData);

          dbdatecrack(m_dbproc, &daterec, &datetime);

          m_txn.Payment.h_date.year   = daterec.year;

          m_txn.Payment.h_date.month  =
daterec.month;

          m_txn.Payment.h_date.day    = daterec.day;

          m_txn.Payment.h_date.hour   = daterec.hour;

          m_txn.Payment.h_date.minute =
daterec.minute;

          m_txn.Payment.h_date.second =
daterec.second;
                        }
                                if
(pData=dbdata(m_dbproc, 4))

          UtilStrCpy(m_txn.Payment.w_street_1, pData,
dbdatlen(m_dbproc, 4));
                                if
(pData=dbdata(m_dbproc, 5))

          UtilStrCpy(m_txn.Payment.w_street_2, pData,
dbdatlen(m_dbproc, 5));
                                if
(pData=dbdata(m_dbproc, 6))

          UtilStrCpy(m_txn.Payment.w_city, pData,
dbdatlen(m_dbproc, 6));
                                if
(pData=dbdata(m_dbproc, 7))

          UtilStrCpy(m_txn.Payment.w_state, pData,
dbdatlen(m_dbproc, 7));
                                if
(pData=dbdata(m_dbproc, 8))

          UtilStrCpy(m_txn.Payment.w_zip, pData,
dbdatlen(m_dbproc, 8));
                                if
(pData=dbdata(m_dbproc, 9))

          UtilStrCpy(m_txn.Payment.d_street_1, pData,
dbdatlen(m_dbproc, 9));
                                if
(pData=dbdata(m_dbproc, 10))

          UtilStrCpy(m_txn.Payment.d_street_2, pData,
dbdatlen(m_dbproc, 10));
                                if
(pData=dbdata(m_dbproc, 11))

          UtilStrCpy(m_txn.Payment.d_city, pData,
dbdatlen(m_dbproc, 11));
                                if
(pData=dbdata(m_dbproc, 12))

          UtilStrCpy(m_txn.Payment.d_state, pData,
dbdatlen(m_dbproc, 12));
                                if
(pData=dbdata(m_dbproc, 13))

          UtilStrCpy(m_txn.Payment.d_zip, pData,
dbdatlen(m_dbproc, 13));
                                if
(pData=dbdata(m_dbproc, 14))

          UtilStrCpy(m_txn.Payment.c_first, pData,
dbdatlen(m_dbproc, 14));
                                if
(pData=dbdata(m_dbproc, 15))

          UtilStrCpy(m_txn.Payment.c_middle, pData,
dbdatlen(m_dbproc, 15));
                                if
(pData=dbdata(m_dbproc, 16))

          UtilStrCpy(m_txn.Payment.c_street_1, pData,
dbdatlen(m_dbproc, 16));
                                if
(pData=dbdata(m_dbproc, 17))

          UtilStrCpy(m_txn.Payment.c_street_2, pData,
dbdatlen(m_dbproc, 17));
                                if
(pData=dbdata(m_dbproc, 18))

          UtilStrCpy(m_txn.Payment.c_city, pData,
dbdatlen(m_dbproc, 18));
                                if
(pData=dbdata(m_dbproc, 19))

          UtilStrCpy(m_txn.Payment.c_state, pData,
dbdatlen(m_dbproc, 19));
                                if
(pData=dbdata(m_dbproc, 20))

          UtilStrCpy(m_txn.Payment.c_zip, pData,
dbdatlen(m_dbproc, 20));
                                if
(pData=dbdata(m_dbproc, 21))

          UtilStrCpy(m_txn.Payment.c_phone, pData,
dbdatlen(m_dbproc, 21));
                                if
(pData=dbdata(m_dbproc, 22))
                                {
                                        datetime =
*((DBDATETIME *) pData);

          dbdatecrack(m_dbproc, &daterec, &datetime);

          m_txn.Payment.c_since.year   =
daterec.year;

          m_txn.Payment.c_since.month  =
daterec.month;

          m_txn.Payment.c_since.day    = daterec.day;

          m_txn.Payment.c_since.hour   =
daterec.hour;

          m_txn.Payment.c_since.minute =
daterec.minute;

          m_txn.Payment.c_since.second =
daterec.second;
                                }

          if(pData=dbdata(m_dbproc, 23))

          UtilStrCpy(m_txn.Payment.c_credit, pData,
dbdatlen(m_dbproc, 23));

          if(pData=dbdata(m_dbproc, 24))

          dbconvert(m_dbproc, SQLNUMERIC,
```


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```
(LPCBYTE)pData, dbdatlen(m_dbproc,24), SQLFLT8, (BYTE
*)&m_txn.Payment.c_credit_lim, 8);

          if(pData=dbdata(m_dbproc, 25))

          dbconvert(m_dbproc, SQLNUMERIC,
(LPCBYTE)pData, dbdatlen(m_dbproc,25), SQLFLT8, (BYTE
*)&m_txn.Payment.c_discount, 8);

          if(pData=dbdata(m_dbproc, 26))

          dbconvert(m_dbproc, SQLNUMERIC,
(LPCBYTE)pData, dbdatlen(m_dbproc,26), SQLFLT8, (BYTE
*)&m_txn.Payment.c_balance, 8);

          if(pData=dbdata(m_dbproc, 27))

          UtilStrCpy(m_txn.Payment.c_data, pData,
dbdatlen(m_dbproc, 27));

                              DiscardNextRows(0);
                              DiscardNextResults(0);


                              if (m_txn.Payment.c_id
== 0)
                                        throw new
CTPCC_DBLIB_ERR( CTPCC_DBLIB_ERR::ERR_INVALID_CUST );
                              else

          m_txn.Payment.exec_status_code = eOK;

                              return;
                    }
                    catch (CSQLERR *e)
                    {
                              if ((e->m_msgno == 1205
||
                                        (e->m_msgno
== iErrOleDbProvider &&
                                        strstr(e-
>m_msgtext, sErrTimeoutExpired) != NULL)) &&
                                        (++iTryCount
<= iMaxRetries))
                              {
                                        // hit
deadlock; backoff for increasingly longer period
                                        delete e;
                                        Sleep(10 *
iTryCount);
                              }
                              else
                                        throw;
                    }
          }         // while (TRUE)

//        if (iTryCount)
//                  throw new
CTPCC_DBLIB_ERR(CTPCC_DBLIB_ERR::ERR_RETRIED_TRANS,
iTryCount);
}
```

```
void CTPCC_DBLIB::OrderStatus()
{
          int                         i;
          DBDATETIME          datetime;
          DBDATEREC daterec;

          int                         iTryCount =
0;
          RETCODE             rc;
          const BYTE          *pData;

          ResetError();

          while (TRUE)
          {
                    try
                    {
                              dbrpcinit(m_dbproc,
"tpcc_orderstatus", 0);

                              dbrpcparam(m_dbproc,
NULL, 0, SQLINT4, -1, -1, (BYTE *)
&m_txn.OrderStatus.w_id);
                              dbrpcparam(m_dbproc,
NULL, 0, SQLINT1, -1, -1, (BYTE *)
&m_txn.OrderStatus.d_id);
                              dbrpcparam(m_dbproc,
NULL, 0, SQLINT4, -1, -1, (BYTE *)
&m_txn.OrderStatus.c_id);

                              // if customer id is
zero, then order status is by name
                              if
(m_txn.OrderStatus.c_id == 0)

          dbrpcparam(m_dbproc, NULL, 0, SQLCHAR, -1,
strlen(m_txn.OrderStatus.c_last), (unsigned char
*)m_txn.OrderStatus.c_last);


                              if (dbrpcexec(m_dbproc)
== FAIL)

          ThrowError(CDBLIBERR::eDbRpcExec);

                              // Get order lines
                              if (dbresults(m_dbproc)
!= SUCCEED)
                              {
                                        if
((m_DbLibErr == NULL) && (m_SqlErr == NULL))

          throw new CTPCC_DBLIB_ERR(
CTPCC_DBLIB_ERR::ERR_NO_SUCH_ORDER );
                                        else

          ThrowError(CDBLIBERR::eDbResults);
                              }

                              if (dbnumcols(m_dbproc)
!= 5)

          ThrowError(CDBLIBERR::eWrongNumCols);

                              i = 0;
                              while (TRUE)
                              {
                                        rc =
dbnextrow(m_dbproc);
                                        if (rc ==
NO_MORE_ROWS)

          break;
                                        if (rc !=
REG_ROW)

          ThrowError(CDBLIBERR::eDbNextRow);


          if(pData=dbdata(m_dbproc, 1))

          m_txn.OrderStatus.OL[i].ol_supply_w_id =
(*(DBSMALLINT *) pData);

          if(pData=dbdata(m_dbproc, 2))

          m_txn.OrderStatus.OL[i].ol_i_id = (*(DBINT
*) pData);

          if(pData=dbdata(m_dbproc, 3))

          m_txn.OrderStatus.OL[i].ol_quantity =
(*(DBSMALLINT *) pData);

          if(pData=dbdata(m_dbproc, 4))

          dbconvert(m_dbproc, SQLNUMERIC,
(LPCBYTE)pData, dbdatlen(m_dbproc,4),

                    SQLFLT8, (BYTE
*)&m_txn.OrderStatus.OL[i].ol_amount, 8);

          if(pData=dbdata(m_dbproc, 5))
                                                  {

          datetime = *((DBDATETIME *) pData);

          dbdatecrack(m_dbproc, &daterec, &datetime);

          m_txn.OrderStatus.OL[i].ol_delivery_d.year
= daterec.year;

          m_txn.OrderStatus.OL[i].ol_delivery_d.month
= daterec.month;

          m_txn.OrderStatus.OL[i].ol_delivery_d.day
= daterec.day;

          m_txn.OrderStatus.OL[i].ol_delivery_d.hour
= daterec.hour;

          m_txn.OrderStatus.OL[i].ol_delivery_d.minut
e = daterec.minute;
```


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```
        m_txn.OrderStatus.OL[i].ol_delivery_d.secon
d = daterec.second;
                                        }
                                        i++;
                                }

        m_txn.OrderStatus.o_ol_cnt = i;


                                if (dbresults(m_dbproc)
!= SUCCEED)

        ThrowError(CDBLIBERR::eDbResults);

                                if (dbnextrow(m_dbproc)
!= REG_ROW)

        ThrowError(CDBLIBERR::eDbNextRow);

                                if (dbnumcols(m_dbproc)
!= 8)

        ThrowError(CDBLIBERR::eWrongNumCols);


        if(pData=dbdata(m_dbproc, 1))

        m_txn.OrderStatus.c_id = (*(DBINT *)
pData);

        if(pData=dbdata(m_dbproc, 2))

        UtilStrCpy(m_txn.OrderStatus.c_last, pData,
dbdatlen(m_dbproc,2));

        if(pData=dbdata(m_dbproc, 3))

        UtilStrCpy(m_txn.OrderStatus.c_first,
pData, dbdatlen(m_dbproc,3));

        if(pData=dbdata(m_dbproc, 4))

        UtilStrCpy(m_txn.OrderStatus.c_middle,
pData, dbdatlen(m_dbproc, 4));

        if(pData=dbdata(m_dbproc, 5))
                                {
                                        datetime =
*((DBDATETIME *) pData);

        dbdatecrack(m_dbproc, &daterec, &datetime);

        m_txn.OrderStatus.o_entry_d.year   =
daterec.year;

        m_txn.OrderStatus.o_entry_d.month  =
daterec.month;

        m_txn.OrderStatus.o_entry_d.day    =
daterec.day;

        m_txn.OrderStatus.o_entry_d.hour   =
daterec.hour;

        m_txn.OrderStatus.o_entry_d.minute =
daterec.minute;

        m_txn.OrderStatus.o_entry_d.second =
daterec.second;
                                }

        if(pData=dbdata(m_dbproc, 6))

        m_txn.OrderStatus.o_carrier_id =
(*(DBSMALLINT *) pData);

        if(pData=dbdata(m_dbproc, 7))

        dbconvert(m_dbproc, SQLNUMERIC,
(LPCBYTE)pData, dbdatlen(m_dbproc,7),

          SQLFLT8, (BYTE
*)&m_txn.OrderStatus.c_balance, 8);

        if(pData=dbdata(m_dbproc, 8))

        m_txn.OrderStatus.o_id = (*(DBINT *)
pData);

                                DiscardNextRows(0);
                                DiscardNextResults(0);


                                if
(m_txn.OrderStatus.o_ol_cnt == 0)
                                        throw new
CTPCC_DBLIB_ERR( CTPCC_DBLIB_ERR::ERR_NO_SUCH_ORDER
);
                                else if
(m_txn.OrderStatus.c_id == 0 &&
m_txn.OrderStatus.c_last[0] == 0)
                                        throw new
CTPCC_DBLIB_ERR( CTPCC_DBLIB_ERR::ERR_INVALID_CUST );
                                else

        m_txn.OrderStatus.exec_status_code = eOK;

                                return;
                        }
                        catch (CSQLERR *e)
                        {
                                if ((e->m_msgno == 1205
||
                                        (e->m_msgno
== iErrOleDbProvider &&
                                        strstr(e-
>m_msgtext, sErrTimeoutExpired) != NULL)) &&
                                        (++iTryCount
<= iMaxRetries))
                                {
                                        // hit
deadlock; backoff for increasingly longer period
                                        delete e;
                                        Sleep(10 *
iTryCount);
                                }
                                else
                                        throw;
                        }
                }         // while (TRUE)

//              if (iTryCount)
//                      throw new
CTPCC_DBLIB_ERR(CTPCC_DBLIB_ERR::ERR_RETRIED_TRANS,
iTryCount);
}


void CTPCC_DBLIB::Delivery()
{
        int                             i;
        int                             iTryCount =
0;
        const BYTE          *pData;

        ResetError();

        while (TRUE)
        {
                try
                {
                        dbrpcinit(m_dbproc,
"tpcc_delivery", 0);

                        dbrpcparam(m_dbproc,
NULL, 0, SQLINT4, -1, -1, (BYTE *)
&m_txn.Delivery.w_id);
                        dbrpcparam(m_dbproc,
NULL, 0, SQLINT1, -1, -1, (BYTE *)
&m_txn.Delivery.o_carrier_id);

                        if (dbrpcexec(m_dbproc)
== FAIL)

        ThrowError(CDBLIBERR::eDbRpcExec);

                        if (dbresults(m_dbproc)
!= SUCCEED)

        ThrowError(CDBLIBERR::eDbResults);

                        if (dbnextrow(m_dbproc)
!= REG_ROW)

        ThrowError(CDBLIBERR::eDbNextRow);

                        if (dbnumcols(m_dbproc)
!= 10)

        ThrowError(CDBLIBERR::eWrongNumCols);

                        for (i=0; i<10; i++)
                        {
                                if (pData =
dbdata(m_dbproc, i+1))
```


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```
        m_txn.Delivery.o_id[i] = *((DBINT *)pData);
                        }

                        DiscardNextRows(0);
                        DiscardNextResults(0);


        m_txn.Delivery.exec_status_code = eOK;
                        return;
                }
                catch (CSQLERR *e)
                {
                        if ((e->m_msgno == 1205
||
                                (e->m_msgno
== iErrOleDbProvider &&
                                strstr(e-
>m_msgtext, sErrTimeoutExpired) != NULL)) &&
                                (++iTryCount
<= iMaxRetries))
                        {
                                // hit
deadlock; backoff for increasingly longer period
                                delete e;
                                Sleep(10 *
iTryCount);
                        }
                        else
                                throw;
                }
        }       // while (TRUE)

//      if (iTryCount)
//              throw new
CTPCC_DBLIB_ERR(CTPCC_DBLIB_ERR::ERR_RETRIED_TRANS,
iTryCount);
}

void CTPCC_DBLIB::ResetError()
{
        if (m_DbLibErr != NULL)
        {
                delete m_DbLibErr;
                m_DbLibErr = (CDBLIBERR*)NULL;
        }

        if (m_SqlErr != NULL)
        {
                delete m_SqlErr;
                m_SqlErr = (CSQLERR*)NULL;
        }
        return;
}
```

# tpcc_dblib.h

```
/*      FILE:           TPCC_DBLIB.H
 *                              Microsoft
TPC-C Kit Ver. 4.20.000
 *                                      Copyright
Microsoft, 1999
 *              All Rights Reserved
 *
 *                                      Version
4.10.000 audited by Richard Gimarc, Performance
Metrics, 3/17/99
 *
 *       PURPOSE:  Header file for TPC-C txn class
implementation.
 *
 *  Change history:
 *                  4.20.000 - updated rev number to
match kit
 */
#pragma once

#ifndef PDBPROCESS
#define DBPROCESS void   // dbprocess structure type
typedef DBPROCESS * PDBPROCESS;
#endif

// need to declare functions for import, unless
define has already been created
// by the DLL's .cpp module for export.
#ifndef DllDecl
#define DllDecl  __declspec( dllimport )
#endif

class CSQLERR : public CBaseErr
{
        public:

                CSQLERR(void)
                {
                        m_msgno = 0;
                        m_msgstate = 0;
                        m_severity = 0;
                        m_msgtext = NULL;
                };

                ~CSQLERR()
                {
                        delete [] m_msgtext;
                };

                int             m_msgno;
                int             m_msgstate;
                int             m_severity;
                char   *m_msgtext;

                int             ErrorType()
{return ERR_TYPE_SQL;};
                char*   ErrorTypeStr() { return
"SQL"; }
                int             ErrorNum()
{return m_msgno;};
                char*   ErrorText() {return
m_msgtext;};

};

class CDBLIBERR : public CBaseErr
{
        public:
                enum ACTION
                {
                        eNone,
                        eUnknown,
                        eLogin,
                // error from dblogin
                        eDbOpen,
        // error from dbopen
                        eDbUse,
                // error from dbuse
                        eDbSqlExec,
                // error from dbsqlexec
                        eDbSet,
                // error from one of the dbset*
routines
                        eDbNextRow,
                // error from dbnextrow
                        eWrongRowCount,
        // more or less rows returned than expected
                        eWrongNumCols,
        // more or less columns returned than
expected
                        eDbResults,
                // error from dbresults
                        eDbRpcExec,
                // error from dbrpcexec
                        eDbSetMaxProcs,
        // error from dbsetmaxprocs
                        eDbProcHandler
        // error from either dbprocerrhandle or
dbprocmsghandle
                };

                CDBLIBERR(ACTION eAction, int
severity = 0, int dberror = 0, int oserr = 0)
                {
                        m_eAction = eAction;
                        m_severity = severity;
                        m_dberror = dberror;
                        m_oserr = oserr;

                        m_dberrstr = NULL;
                        m_oserrstr = NULL;
                };

                ~CDBLIBERR()
                {
                        delete [] m_dberrstr;
                        delete [] m_oserrstr;
                };

                ACTION    m_eAction;
                int             m_severity;
                int             m_dberror;
                int             m_oserr;
                char   *m_dberrstr;
                char   *m_oserrstr;

                int             ErrorType()
{return ERR_TYPE_DBLIB;};
```


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```
                    char*     ErrorTypeStr() { return
"DBLIB"; }
                    int                 ErrorNum()
{return m_dberror;};
                    char*     ErrorText() {return
m_dberrstr;};
                    int                 ErrorAction()
{ return (int)m_eAction; }

};

class CTPCC_DBLIB_ERR : public CBaseErr
{
          public:
                    enum CTPCC_DBLIB_ERRS
                    {
                              ERR_WRONG_SP_VERSION =
1,        // "Wrong version of stored procs on
database server"
                              ERR_INVALID_CUST,
                    // "Invalid Customer id,name."
                              ERR_NO_SUCH_ORDER,
                    // "No orders found for
customer."
                              ERR_RETRIED_TRANS,
                    // "Retries before transaction
succeeded."
                    };

                    CTPCC_DBLIB_ERR( int iErr ) {
m_errno = iErr; m_iTryCount = 0; };

                    CTPCC_DBLIB_ERR( int iErr, int
iTryCount ) { m_errno = iErr; m_iTryCount =
iTryCount; };

                    int                 m_errno;
                    int                 m_iTryCount;

                    int                 ErrorType()
{return ERR_TYPE_TPCC_DBLIB;};
                    char*     ErrorTypeStr() { return
"TPCC DBLIB"; }
                    int                 ErrorNum()
{return m_errno;};

                    char*     ErrorText();
};

class DllDecl CTPCC_DBLIB : public CTPCC_BASE
{
          private:
                    // declare variables and private
functions here...
                    PDBPROCESS          m_dbproc;
                    CDBLIBERR *m_DbLibErr;
          // not allocated until needed (maybe never)
                    CSQLERR             *m_SqlErr;
                              // not allocated until
needed (maybe never)
                    int
          m_MaxRetries;               // retry
count on deadlock
                    void DiscardNextRows(int
iExpectedCount);
                    void DiscardNextResults(int
iExpectedCount);
                    void ThrowError(
CDBLIBERR::ACTION eAction );
                    void ResetError();

                    union
                    {
                              NEW_ORDER_DATA
          NewOrder;
                              PAYMENT_DATA
          Payment;
                              DELIVERY_DATA
          Delivery;
                              STOCK_LEVEL_DATA
          StockLevel;
                              ORDER_STATUS_DATA
          OrderStatus;
                    }
          m_txn;

          public:
                    CTPCC_DBLIB(LPCSTR szServer,
LPCSTR szUser, LPCSTR szPassword, LPCSTR szHost,
LPCSTR szDatabase );
                    ~CTPCC_DBLIB(void);

                    inline PNEW_ORDER_DATA
          BuffAddr_NewOrder()           { return
&m_txn.NewOrder;    };
                    inline PPAYMENT_DATA
          BuffAddr_Payment()            { return
&m_txn.Payment;     };
                    inline PDELIVERY_DATA
          BuffAddr_Delivery()           { return
&m_txn.Delivery;    };
                    inline PSTOCK_LEVEL_DATA
          BuffAddr_StockLevel()         { return
&m_txn.StockLevel;  };
                    inline PORDER_STATUS_DATA
          BuffAddr_OrderStatus()        { return
&m_txn.OrderStatus; };

                    void NewOrder                 ();
                    void Payment                  ();
                    void Delivery                 ();
                    void StockLevel               ();
                    void OrderStatus    ();


                    // these are public because they
must be called from the dblib err_handler and
msg_hangler
                    // outside of the class
                    void SetDbLibError(int severity,
int dberr, int oserr, LPCSTR dberrstr, LPCSTR
oserrstr);
                    void SetSqlError( int msgno, int
msgstate, int severity, LPCSTR msgtext );
};

extern "C" DllDecl CTPCC_DBLIB* CTPCC_DBLIB_new
          ( LPCSTR szServer, LPCSTR szUser, LPCSTR
szPassword, LPCSTR szHost, LPCSTR szDatabase );

typedef CTPCC_DBLIB* (TYPE_CTPCC_DBLIB)(LPCSTR,
LPCSTR, LPCSTR, LPCSTR, LPCSTR);
```

# tpcc_enc.cpp

```
// ctpcc_enc.cpp: implementation of the CTPCC_ENCINA
class.
//
//////////////////////////////////////////////////
////////////////

#include <windows.h>
#include <process.h>
#include <stdio.h>
#include <stdarg.h>
#include <malloc.h>
#include <stdlib.h>
#include <string.h>
#include <time.h>
#include <sys\timeb.h>
#include <io.h>

#ifdef ICECAP
#include <icapexp.h>
#endif

// need to declare functions for export
#define DllDecl  __declspec( dllexport )

#include "..\..\common\src\trans.h"
//tpckit transaction header contains definitions of
structures specific to TPC-C
#include "..\..\common\src\error.h"
#include "..\..\common\src\txn_base.h"
#include "tpcc_enc.h"
#include "..\include\tpcc_type.h"
#include "mon_client.h"
#include "client_utils.h"

static CRITICAL_SECTION         TpCriticalSection;
extern "C" char *errFile;

BOOL APIENTRY DllMain(HANDLE hModule, DWORD
ul_reason_for_call, LPVOID lpReserved)
{

        switch( ul_reason_for_call )
        {
                case DLL_PROCESS_ATTACH:


DisableThreadLibraryCalls(hModule);

InitializeCriticalSection(&TpCriticalSection);
```


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```
                        break;

                case DLL_PROCESS_DETACH:

DeleteCriticalSection(&TpCriticalSection);
                        break;

                default:
                        /* nothing */;
        }
        return TRUE;
}

// wrapper routine for class constructor
__declspec(dllexport) CTPCC_ENCINA*
CTPCC_ENCINA_new()
{
          return new CTPCC_ENCINA();
}

// wrapper routine for enroll_client
__declspec(dllexport) CTPCC_ENCINA*
CTPCC_ENCINA_post_init()
{
          enroll_client();
          return NULL;
}

// constructor and destructor
CTPCC_ENCINA::CTPCC_ENCINA()
{
          //        Add initialization of ENCINA
Structures if any
          m_txn = (ENC_DATA
*)malloc(sizeof(ENC_DATA));
          if (m_txn == NULL)
                    throw new
CENCERR(ERR_TYPE_MEMORY, ERR_FATAL_LEVEL);
}

CTPCC_ENCINA::~CTPCC_ENCINA()
{
          // free the data structure allocated with
tpalloc
          free((char *)m_txn);
}

void CTPCC_ENCINA::NewOrder()
{

          // question: if we need to prepare the
data?
    if (send_new_order(sizeof(ENC_DATA), (unsigned
char *)m_txn) == TRPC_ERROR)
                    throw new CENCERR(TRPC_ERROR);

    if ( m_txn->ErrorType != ERR_SUCCESS )
                    throw new CENCERR( m_txn-
>ErrorType, m_txn->error );
}

void CTPCC_ENCINA::Payment()
{
    if (send_payment(sizeof(ENC_DATA), (unsigned char
*)m_txn) == TRPC_ERROR)
                    throw new CENCERR(TRPC_ERROR);

    if ( m_txn->ErrorType != ERR_SUCCESS )
                    throw new CENCERR( m_txn-
>ErrorType, m_txn->error );
}

void CTPCC_ENCINA::Delivery()
{

          // Note: Delivery txn code in the tuxedo
server does not implement logging of the delivery
          //       txn results, so cannot be used as
is to run an auditable TPC-C result.  For that
          //       reason, delivery txns should not
be done via Tuxedo.
          //       The code is included for
completeness.
          //m_txn->u.Delivery.exec_status_code =
eDeliveryFailed;
          //return;

          // Note: If we use the delivery thread in
tpcc.dll, it is not possible to get to this
          //       point for delivery txns. But if we
use Encina delivery server, the code is
          //       needed. It is suggested using the
delivery thread in tpcc.dll since it is
          //       convenient and provides best
performance.
          GetLocalTime(&m_txn-
>u.Delivery.queue_time);

    if (send_delivery(sizeof(ENC_DATA), (unsigned
char *)m_txn) == TRPC_ERROR)
                    m_txn-
>u.Delivery.exec_status_code = eDeliveryFailed;
    else
                    m_txn-
>u.Delivery.exec_status_code = eOK;
}

void CTPCC_ENCINA::StockLevel()
{

    if (send_stock_level(sizeof(ENC_DATA), (unsigned
char *)m_txn) == TRPC_ERROR)
                    throw new CENCERR(TRPC_ERROR);

    if ( m_txn->ErrorType != ERR_SUCCESS )
                    throw new CENCERR( m_txn-
>ErrorType, m_txn->error );
}

void CTPCC_ENCINA::OrderStatus()
{

    if (send_order_status(sizeof(ENC_DATA), (unsigned
char *)m_txn) == TRPC_ERROR)
                    throw new CENCERR(TRPC_ERROR);

    if ( m_txn->ErrorType != ERR_SUCCESS )
                    throw new CENCERR( m_txn-
>ErrorType, m_txn->error );
}

char *CENCERR::ErrorText()
{
          if (m_iErrorType == TRPC_ERROR)
          {
                    sprintf( m_szErrorText, "Error:
ENCINA TRPC error (see log file %s for details)",
errFile);
          }
          else
                    sprintf( m_szErrorText, "Error:
Class %d, error # %d", m_iErrorType, m_iError );
          return m_szErrorText;
};
```

# tpcc_enc.h

```
/*        FILE:               TPCC_ENCINA.H
 *                                          Microsoft
TPC-C Kit Ver. 4.10.000
 *                                          not yet
audited
 *
 *        PURPOSE:  Header file for TPC-C Encina
class implementation.
 *                                          Copyright
Microsoft, 1999
 *              All Rights Reserved
 *
 */

#if !defined(_TPCC_ENCINA_H_)
#define _TPCC_ENCINA_H_

#pragma once

// need to declare functions for import, unless
define has already been created
// by the DLL's .cpp module for export.
#ifndef DllDecl
#define DllDecl  __declspec( dllimport )
#endif

class CTPCC_ENCINA : public CTPCC_BASE
{
          private:
                    struct ENC_DATA
                    {
                              int
                              ErrorType;
                              int
                              error;

                              union
                              {
```


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```
        NEW_ORDER_DATA                  NewOrder;
                                        PAYMENT_DATA
                Payment;
                                        DELIVERY_DATA
                Delivery;

        STOCK_LEVEL_DATA    StockLevel;

        ORDER_STATUS_DATA   OrderStatus;
                            } u;
                } *m_txn;

        public:

                CTPCC_ENCINA();
                virtual ~CTPCC_ENCINA();

                inline PNEW_ORDER_DATA
        BuffAddr_NewOrder()             { return
&m_txn->u.NewOrder;     };
                inline PPAYMENT_DATA
        BuffAddr_Payment()              { return
&m_txn->u.Payment;      };
                inline PDELIVERY_DATA
        BuffAddr_Delivery()             { return
&m_txn->u.Delivery;     };
                inline PSTOCK_LEVEL_DATA
        BuffAddr_StockLevel()           { return
&m_txn->u.StockLevel;   };
                inline PORDER_STATUS_DATA
        BuffAddr_OrderStatus()          { return
&m_txn->u.OrderStatus; };

                void NewOrder                   ();
                void Payment                    ();
                void Delivery                   ();
                void StockLevel                 ();
                void OrderStatus    ();
};


class CENCERR : public CBaseErr
{

        private:
                char      m_szErrorText[64];
        public:
                int                     m_errno;
        //
                int                     m_iErrorType;
// match ErrorType in CTPCC_ENCINA
                int                     m_iError;
        // machine error in CTPCC_ENCINA

                // use this interface for genuine
Encina errors
                CENCERR( int iErr )
                {
                        m_errno = iErr;     //
ENCINA error
                        m_iErrorType =
ERR_TYPE_ENCINA;
                        m_iError = 0;       //
only meaningful if m_errno == TPEOS
                };

                // use this interface to
impersonate a non-Encina error type
                CENCERR( int iErrorType, int
iError )
                {
                        m_iErrorType =
iErrorType;
                        m_iError = iError;
                        m_errno = iError;   //
???
                }

                // A CENCERR class can
impersonate another class, which happens if the error
                // was not actually a Tuxedo
error, but was simply transmitted back via Tuxedo.
                int ErrorType()
                {
                        return m_iErrorType;
                }

                int ErrorNum() {return m_errno;};
                char *ErrorText();
};

// wrapper routine for class constructor:
extern "C" __declspec(dllexport) CTPCC_ENCINA*
CTPCC_ENCINA_new();
extern "C" __declspec(dllexport) CTPCC_ENCINA*
CTPCC_ENCINA_post_init();

typedef CTPCC_ENCINA* (TYPE_CTPCC_ENCINA)();

#endif // !defined(_TPCC_ENCINA_H_)
```

# tpcc_odbc.cpp

```
/*        FILE:               TPCC_ODBC.CPP
 *                                      Microsoft
TPC-C Kit Ver. 4.42.000
 *                                      Copyright
Microsoft, 2002
 *              All Rights Reserved
 *
 *                                      Version
4.10.000 audited by Richard Gimarc, Performance
Metrics, 3/17/99
 *
 *        PURPOSE:  Implements ODBC calls for TPC-C
txns.
 *        Contact:  Charles Levine
(clevine@microsoft.com)
 *
 *  Change history:
 *                  4.42.000 - changed w_id fields
from short to long to support >32K warehouses
 *                  4.20.000 - updated rev number to
match kit
 *                  4.10.001 - not deleting error
class in catch handler on deadlock retry;
 *                                              not a
functional bug, but a memory leak
 */

#include <windows.h>
#include <stdio.h>
#include <assert.h>

#define DBNTWIN32
#include <sqltypes.h>
#include <sql.h>
#include <sqlext.h>

//#define COMPILE_FOR_SNAC    // define that to
compile for SQL Native Client; comment out to use
MDAC

#ifndef COMPILE_FOR_SNAC
#include <odbcss.h>
#else
// Compile for SNAC
#include <sqlncli.h>
#endif

#ifdef ICECAP
#include <icapexp.h>
#endif

// need to declare functions for export
#define DllDecl  __declspec( dllexport )

#include "..\..\common\src\error.h"
#include "..\..\common\src\trans.h"
#include "..\..\common\src\txn_base.h"
#include "tpcc_odbc.h"

// version string; must match return value from
tpcc_version stored proc
const char          sVersion[] = "4.20.000";

const iMaxRetries = 10;                 // how many
retries on deadlock

const int iErrOleDbProvider = 7312;
const char sErrTimeoutExpired[] = "Timeout expired";

static SQLHENV henv = SQL_NULL_HENV;
                // ODBC environment handle

BOOL APIENTRY DllMain(HMODULE hModule, DWORD
ul_reason_for_call, LPVOID lpReserved)
{
          switch( ul_reason_for_call )
          {
                  case DLL_PROCESS_ATTACH:

          DisableThreadLibraryCalls(hModule);
```


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```
                              if (
SQLAllocHandleStd(SQL_HANDLE_ENV, SQL_NULL_HANDLE,
&henv) != SQL_SUCCESS )
                                        return FALSE;
                              break;

                    case DLL_PROCESS_DETACH:
                              if (henv != NULL)

          SQLFreeEnv(henv);
                              break;

                    default:
                              /* nothing */;
          }
          return TRUE;
}

/* FUNCTION: CTPCC_ODBC_ERR::ErrorText
 *
 */

char* CTPCC_ODBC_ERR::ErrorText(void)
{
          int i;

          static SERRORMSG errorMsgs[] =
          {
                    { ERR_WRONG_SP_VERSION,
          "Wrong version of stored procs on database
server"   },
                    { ERR_INVALID_CUST,
          "Invalid Customer id,name."
                                                  },
                    { ERR_NO_SUCH_ORDER,
          "No orders found for customer."
                                                  },
                    { ERR_RETRIED_TRANS,
          "Retries before transaction succeeded."
                              },
                    { 0,
                              ""



          }
          };

          static char szNotFound[] = "Unknown error
number.";

          for(i=0; errorMsgs[i].szMsg[0]; i++)
          {
                    if ( m_errno ==
errorMsgs[i].iError )
                              break;
          }
          if ( !errorMsgs[i].szMsg[0] )
                    return szNotFound;
          else
                    return errorMsgs[i].szMsg;
}

// wrapper routine for class constructor

__declspec(dllexport) CTPCC_ODBC* CTPCC_ODBC_new(
          LPCSTR szServer,              // name of
SQL server
          LPCSTR szUser,                          //
user name for login
          LPCSTR szPassword,            // password
for login
          LPCSTR szHost,                          //
not used
          LPCSTR szDatabase,            // name of
database to use
          LPCWSTR szSPPrefix,           // prefix to
append to the stored procedure names
          BOOL bCallNoDuplicatesNewOrder ) // whether
to check for non-duplicate items in NewOrder and call
a new SP
{
          return new CTPCC_ODBC( szServer, szUser,
szPassword, szHost, szDatabase, szSPPrefix,
bCallNoDuplicatesNewOrder );
}


CTPCC_ODBC::CTPCC_ODBC (
          LPCSTR szServer,
          // name of SQL server
          LPCSTR szUser,
                    // user name for login
          LPCSTR szPassword,
          // password for login
          LPCSTR szHost,
                    // not used
          LPCSTR szDatabase,
          // name of database to use
          LPCWSTR szSPPrefix,
          // prefix to append to the stored procedure
names
          BOOL      bCallNoDuplicatesNewOrder //
whether to check for non-duplicate items in NewOrder
and call a new SP
          )
:
m_bCallNoDuplicatesNewOrder(bCallNoDuplicatesNewOrder
)
{
          RETCODE             rc;

          // initialization
          m_hdbc = SQL_NULL_HDBC;
          m_hstmt = SQL_NULL_HSTMT;

          m_hstmtNewOrder = SQL_NULL_HSTMT;
          m_hstmtPayment = SQL_NULL_HSTMT;
          m_hstmtDelivery = SQL_NULL_HSTMT;
          m_hstmtOrderStatus = SQL_NULL_HSTMT;
          m_hstmtStockLevel = SQL_NULL_HSTMT;

          m_descNewOrderCols1 = SQL_NULL_HDESC;
          m_descNewOrderCols2 = SQL_NULL_HDESC;
          m_descOrderStatusCols1 = SQL_NULL_HDESC;
          m_descOrderStatusCols2 = SQL_NULL_HDESC;

          wcsncpy(m_szSPPrefix, szSPPrefix,
sizeof(m_szSPPrefix)/sizeof(m_szSPPrefix[0]));


          if ( SQLAllocHandle(SQL_HANDLE_DBC, henv,
&m_hdbc) != SQL_SUCCESS )

          ThrowError(CODBCERR::eAllocHandle);

          if ( SQLSetConnectOption(m_hdbc,
SQL_PACKET_SIZE, 4096) != SQL_SUCCESS )

          ThrowError(CODBCERR::eConnOption);

          {
                    char
          szConnectStr[256];
                    char
          szOutStr[1024];
                    SQLSMALLINT
          iOutStrLen;

#ifndef COMPILE_FOR_SNAC
                    sprintf( szConnectStr,
"DRIVER=SQL
Server;SERVER=%s;UID=%s;PWD=%s;DATABASE=%s",
                              szServer, szUser,
szPassword, szDatabase );
#else
                    // Compile for SNAC
                    sprintf( szConnectStr,
"DRIVER=SQL Native
Client;SERVER=%s;UID=%s;PWD=%s;DATABASE=%s",
                              szServer, szUser,
szPassword, szDatabase );
#endif
                    rc = SQLDriverConnect(m_hdbc,
NULL, (SQLCHAR*)szConnectStr, sizeof(szConnectStr),
                              (SQLCHAR*)szOutStr,
sizeof(szOutStr), &iOutStrLen, SQL_DRIVER_NOPROMPT );

                    if (rc != SQL_SUCCESS && rc !=
SQL_SUCCESS_WITH_INFO)

          ThrowError(CODBCERR::eConnect);
          }

          if (SQLAllocHandle(SQL_HANDLE_STMT, m_hdbc,
&m_hstmt) != SQL_SUCCESS)

          ThrowError(CODBCERR::eAllocHandle);

          {
                    char                buffer[128];

                    // set some options affecting
connection behavior
                    strcpy(buffer, "set nocount on
set XACT_ABORT ON");
                    rc = SQLExecDirect(m_hstmt,
(unsigned char *)buffer, SQL_NTS);
                    if (rc != SQL_SUCCESS && rc !=
SQL_SUCCESS_WITH_INFO)
```


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```
        ThrowError(CODBCERR::eExecDirect);

                // verify that version of stored
procs on server is correct
                char db_sp_version[10];
                strcpy(buffer, "{call
tpcc_version}");
                rc = SQLExecDirect(m_hstmt,
(unsigned char *)buffer, SQL_NTS);
                if (rc != SQL_SUCCESS && rc !=
SQL_SUCCESS_WITH_INFO)

        ThrowError(CODBCERR::eExecDirect);
                if ( SQLBindCol(m_hstmt, 1,
SQL_C_CHAR, &db_sp_version, sizeof(db_sp_version),
NULL) != SQL_SUCCESS )

        ThrowError(CODBCERR::eBindCol);
                if ( SQLFetch(m_hstmt) ==
SQL_ERROR )

        ThrowError(CODBCERR::eFetch);
                if
(strcmp(db_sp_version,sVersion))
                        throw new
CTPCC_ODBC_ERR( CTPCC_ODBC_ERR::ERR_WRONG_SP_VERSION
);

                SQLFreeHandle(SQL_HANDLE_STMT,
m_hstmt);
        }

        // Bind parameters for each of the
transactions
        InitNewOrderParams();
        InitPaymentParams();
        InitOrderStatusParams();
        InitDeliveryParams();
        InitStockLevelParams();
}

CTPCC_ODBC::~CTPCC_ODBC( void )
{
        // note: descriptors are automatically
released when the connection is dropped
        SQLFreeHandle(SQL_HANDLE_STMT,
m_hstmtNewOrder);
        SQLFreeHandle(SQL_HANDLE_STMT,
m_hstmtPayment);
        SQLFreeHandle(SQL_HANDLE_STMT,
m_hstmtDelivery);
        SQLFreeHandle(SQL_HANDLE_STMT,
m_hstmtOrderStatus);
        SQLFreeHandle(SQL_HANDLE_STMT,
m_hstmtStockLevel);

        SQLDisconnect(m_hdbc);
        SQLFreeHandle(SQL_HANDLE_DBC, m_hdbc);
}

void CTPCC_ODBC::ThrowError( CODBCERR::ACTION eAction
)
{
        RETCODE             rc;
        SDWORD              lNativeError;
        char                szState[6];
        char
        szMsg[SQL_MAX_MESSAGE_LENGTH];
        char
        szTmp[6*SQL_MAX_MESSAGE_LENGTH];
        CODBCERR   *pODBCErr;
        // not allocated until needed (maybe never)

        pODBCErr = new CODBCERR();

        pODBCErr->m_NativeError = 0;
        pODBCErr->m_eAction = eAction;
        pODBCErr->m_bDeadLock = FALSE;

        szTmp[0] = 0;
        while (TRUE)
        {
                rc = SQLError(henv, m_hdbc,
m_hstmt, (BYTE *)&szState, &lNativeError,

(BYTE *)&szMsg, sizeof(szMsg), NULL);
                if (rc == SQL_NO_DATA)
                        break;

                // check for deadlock
                if (lNativeError == 1205 ||
(lNativeError == iErrOleDbProvider &&
                        strstr(szMsg,
sErrTimeoutExpired) != NULL))
                        pODBCErr->m_bDeadLock =
TRUE;

                // capture the (first) database
error
                if (pODBCErr->m_NativeError == 0
&& lNativeError != 0)
                        pODBCErr->m_NativeError
= lNativeError;

                // quit if there isn't enough
room to concatenate error text
                if ( (strlen(szMsg) + 2) >
(sizeof(szTmp) - strlen(szTmp)) )
                        break;

                // include line break after first
error msg
                if (szTmp[0] != 0)
                        strcat( szTmp, "\n");
                strcat( szTmp, szMsg );
        }

        if (pODBCErr->m_odbcerrstr != NULL)
        {
                delete [] pODBCErr->m_odbcerrstr;
                pODBCErr->m_odbcerrstr = NULL;
        }

        if (strlen(szTmp) > 0)
        {
                pODBCErr->m_odbcerrstr = new
char[ strlen(szTmp)+1 ];
                strcpy( pODBCErr->m_odbcerrstr,
szTmp );
        }

        SQLFreeStmt(m_hstmt, SQL_CLOSE);
        throw pODBCErr;
}

void CTPCC_ODBC::InitStockLevelParams()
{
        if (   SQLAllocHandle(SQL_HANDLE_STMT,
m_hdbc, &m_hstmtStockLevel) != SQL_SUCCESS )

        ThrowError(CODBCERR::eAllocHandle);

        m_hstmt = m_hstmtStockLevel;

        int i = 0;
        if (   SQLBindParameter(m_hstmt, ++i,
SQL_PARAM_INPUT, SQL_C_SLONG, SQL_INTEGER, 0, 0,
&m_txn.StockLevel.w_id, 0, NULL) != SQL_SUCCESS
                || SQLBindParameter(m_hstmt, ++i,
SQL_PARAM_INPUT, SQL_C_UTINYINT, SQL_TINYINT, 0, 0,
&m_txn.StockLevel.d_id, 0, NULL) != SQL_SUCCESS
                || SQLBindParameter(m_hstmt, ++i,
SQL_PARAM_INPUT, SQL_C_SSHORT, SQL_SMALLINT, 0, 0,
&m_txn.StockLevel.threshold, 0, NULL) != SQL_SUCCESS
                )
                ThrowError(CODBCERR::eBindParam);

        if ( SQLBindCol(m_hstmt, 1, SQL_C_SLONG,
&m_txn.StockLevel.low_stock, 0, NULL) != SQL_SUCCESS
)
                ThrowError(CODBCERR::eBindCol);

        //Compose Stock Level statement
        _snwprintf(m_szStockLevelCommand,
sizeof(m_szStockLevelCommand)/sizeof(m_szStockLevelCo
mmand[0]),
                L"{call %stpcc_stocklevel
(?,?,?)}", m_szSPPrefix);
}

void CTPCC_ODBC::StockLevel()
{
        RETCODE             rc;
        int                         iTryCount =
0;

        m_hstmt = m_hstmtStockLevel;

        while (TRUE)
        {
                try
                {
                        rc =
SQLExecDirectW(m_hstmt, m_szStockLevelCommand,
SQL_NTS);
                        if (rc != SQL_SUCCESS
&& rc != SQL_SUCCESS_WITH_INFO)
```


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```
			ThrowError(CODBCERR::eExecDirect);

				if ( SQLFetch(m_hstmt)
== SQL_ERROR )

			ThrowError(CODBCERR::eFetch);

				SQLFreeStmt(m_hstmt,
SQL_CLOSE);


			m_txn.StockLevel.exec_status_code = eOK;
				break;
			}
			catch (CODBCERR *e)
			{
				if ((!e->m_bDeadLock)
|| (++iTryCount > iMaxRetries))
					throw;

				// hit deadlock;
backoff for increasingly longer period
				delete e;
				Sleep(10 * iTryCount);
			}
	}

//	if (iTryCount)
//		throw new
CTPCC_ODBC_ERR(CTPCC_ODBC_ERR::ERR_RETRIED_TRANS,
iTryCount);
}

void CTPCC_ODBC::InitNewOrderParams()
{
	if (	SQLAllocHandle(SQL_HANDLE_STMT,
m_hdbc, &m_hstmtNewOrder) != SQL_SUCCESS
		||
SQLAllocHandle(SQL_HANDLE_STMT, m_hdbc,
&m_hstmtNewOrderNoDuplicates) != SQL_SUCCESS
		||
SQLAllocHandle(SQL_HANDLE_DESC, m_hdbc,
&m_descNewOrderCols1) != SQL_SUCCESS
		||
SQLAllocHandle(SQL_HANDLE_DESC, m_hdbc,
&m_descNewOrderCols2) != SQL_SUCCESS
		||
SQLAllocHandle(SQL_HANDLE_DESC, m_hdbc,
&m_descNewOrderNoDuplicatesCols1) != SQL_SUCCESS
		||
SQLAllocHandle(SQL_HANDLE_DESC, m_hdbc,
&m_descNewOrderNoDuplicatesCols2) != SQL_SUCCESS
		)

	ThrowError(CODBCERR::eAllocHandle);

	m_hstmt = m_hstmtNewOrder;

	if ( SQLSetStmtAttrW( m_hstmt,
SQL_ATTR_APP_ROW_DESC, m_descNewOrderCols1,
SQL_IS_POINTER ) != SQL_SUCCESS )

	ThrowError(CODBCERR::eSetStmtAttr);

	int i = 0;
	if (	SQLBindParameter(m_hstmt, ++i,
SQL_PARAM_INPUT, SQL_C_SLONG, SQL_INTEGER, 0, 0,
&m_txn.NewOrder.w_id, 0, NULL) != SQL_SUCCESS
		|| SQLBindParameter(m_hstmt, ++i,
SQL_PARAM_INPUT, SQL_C_UTINYINT, SQL_TINYINT, 0, 0,
&m_txn.NewOrder.d_id, 0, NULL) != SQL_SUCCESS
		|| SQLBindParameter(m_hstmt, ++i,
SQL_PARAM_INPUT, SQL_C_SLONG, SQL_INTEGER, 0, 0,
&m_txn.NewOrder.c_id, 0, NULL) != SQL_SUCCESS
		|| SQLBindParameter(m_hstmt, ++i,
SQL_PARAM_INPUT, SQL_C_UTINYINT, SQL_TINYINT, 0, 0,
&m_txn.NewOrder.o_ol_cnt, 0, NULL) != SQL_SUCCESS
		|| SQLBindParameter(m_hstmt, ++i,
SQL_PARAM_INPUT, SQL_C_UTINYINT, SQL_TINYINT, 0, 0,
&m_txn.NewOrder.o_all_local, 0, NULL) != SQL_SUCCESS
		)
		ThrowError(CODBCERR::eBindParam);

	for (int j=0; j<MAX_OL_NEW_ORDER_ITEMS;
j++)
	{
		if (	SQLBindParameter(m_hstmt,
++i, SQL_PARAM_INPUT, SQL_C_SLONG, SQL_INTEGER, 0, 0,
&m_txn.NewOrder.OL[j].ol_i_id, 0, NULL) !=
SQL_SUCCESS
				||
SQLBindParameter(m_hstmt, ++i, SQL_PARAM_INPUT,
SQL_C_SLONG, SQL_INTEGER, 0, 0,
&m_txn.NewOrder.OL[j].ol_supply_w_id, 0, NULL) !=
SQL_SUCCESS
				||
SQLBindParameter(m_hstmt, ++i, SQL_PARAM_INPUT,
SQL_C_SSHORT, SQL_SMALLINT, 0, 0,
&m_txn.NewOrder.OL[j].ol_quantity, 0, NULL) !=
SQL_SUCCESS
				)

	ThrowError(CODBCERR::eBindParam);
	}

	// set the bind offset pointer
	if ( SQLSetStmtAttrW( m_hstmt,
SQL_ATTR_ROW_BIND_OFFSET_PTR, &m_BindOffset,
SQL_IS_POINTER ) != SQL_SUCCESS )

	ThrowError(CODBCERR::eSetStmtAttr);

	i = 0;
	if (	SQLBindCol(m_hstmt, ++i, SQL_C_CHAR,
&m_txn.NewOrder.OL[0].ol_i_name,
sizeof(m_txn.NewOrder.OL[0].ol_i_name), NULL) !=
SQL_SUCCESS
		|| SQLBindCol(m_hstmt, ++i,
SQL_C_SSHORT, &m_txn.NewOrder.OL[0].ol_stock, 0,
NULL) != SQL_SUCCESS
		|| SQLBindCol(m_hstmt, ++i,
SQL_C_CHAR,	&m_txn.NewOrder.OL[0].ol_brand_generic,
sizeof(m_txn.NewOrder.OL[0].ol_brand_generic), NULL)
!= SQL_SUCCESS
		|| SQLBindCol(m_hstmt, ++i,
SQL_C_DOUBLE, &m_txn.NewOrder.OL[0].ol_i_price, 0,
NULL) != SQL_SUCCESS
		|| SQLBindCol(m_hstmt, ++i,
SQL_C_DOUBLE, &m_txn.NewOrder.OL[0].ol_amount, 0,
NULL) != SQL_SUCCESS
		)
		ThrowError(CODBCERR::eBindCol);

	// associate the column bindings for the
second result set
	if ( SQLSetStmtAttrW( m_hstmt,
SQL_ATTR_APP_ROW_DESC, m_descNewOrderCols2,
SQL_IS_POINTER ) != SQL_SUCCESS )

	ThrowError(CODBCERR::eSetStmtAttr);

	i = 0;
	if (	SQLBindCol(m_hstmt, ++i,
SQL_C_DOUBLE,	&m_txn.NewOrder.w_tax, 0, NULL) !=
SQL_SUCCESS
		|| SQLBindCol(m_hstmt, ++i,
SQL_C_DOUBLE,	&m_txn.NewOrder.d_tax, 0, NULL) !=
SQL_SUCCESS
		|| SQLBindCol(m_hstmt, ++i,
SQL_C_SLONG,	&m_txn.NewOrder.o_id, 0, NULL) !=
SQL_SUCCESS
		|| SQLBindCol(m_hstmt, ++i,
SQL_C_CHAR,	&m_txn.NewOrder.c_last,
sizeof(m_txn.NewOrder.c_last), NULL) != SQL_SUCCESS
		|| SQLBindCol(m_hstmt, ++i,
SQL_C_DOUBLE,	&m_txn.NewOrder.c_discount, 0, NULL)
!= SQL_SUCCESS
		|| SQLBindCol(m_hstmt, ++i,
SQL_C_CHAR,	&m_txn.NewOrder.c_credit,
sizeof(m_txn.NewOrder.c_credit), NULL) != SQL_SUCCESS
		|| SQLBindCol(m_hstmt, ++i,
SQL_C_TYPE_TIMESTAMP, &m_txn.NewOrder.o_entry_d, 0,
NULL) != SQL_SUCCESS
		|| SQLBindCol(m_hstmt, ++i,
SQL_C_SLONG,	&m_no_commit_flag, 0, NULL) !=
SQL_SUCCESS
	   )
		ThrowError(CODBCERR::eBindCol);

	//Compose the New Order statement
	_snwprintf(m_szNewOrderCommand,
sizeof(m_szNewOrderCommand)/sizeof(m_szNewOrderComman
d[0]),
			// 0	1	2
			//
0123456789012345678901234567890123456789
				L"{call
%stpcc_neworder(?,?,?,?,?,?,?,?,?,?,?,?,?,?,?,?,?,?,?
,?,?,?,?,?,?,"

	L"?,?,?,?,?,?,?,?,?,?,?,?,?,?,?,?,?,?,?,?
,?,?,?,?)}", m_szSPPrefix);

	m_iBeginNewOrderVariablePart = 29 +
wcslen(m_szSPPrefix);		// fixed part + prefix
part
```


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```
        ////////////////////////////////////////
////////////////////////////////////////
        //
        //        Now initialize New Order that
works on no duplicate (w_id,i_id) pairs
        //        and returns one result set for
lineitem details.
        //
        //
        m_hstmt = m_hstmtNewOrderNoDuplicates;

        if ( SQLSetStmtAttrW( m_hstmt,
SQL_ATTR_APP_ROW_DESC,
m_descNewOrderNoDuplicatesCols1, SQL_IS_POINTER ) !=
SQL_SUCCESS )

        ThrowError(CODBCERR::eSetStmtAttr);

        i = 0;
        if (   SQLBindParameter(m_hstmt, ++i,
SQL_PARAM_INPUT, SQL_C_SLONG, SQL_INTEGER, 0, 0,
&m_txn.NewOrder.w_id, 0, NULL) != SQL_SUCCESS
                || SQLBindParameter(m_hstmt, ++i,
SQL_PARAM_INPUT, SQL_C_UTINYINT, SQL_TINYINT, 0, 0,
&m_txn.NewOrder.d_id, 0, NULL) != SQL_SUCCESS
                || SQLBindParameter(m_hstmt, ++i,
SQL_PARAM_INPUT, SQL_C_SLONG, SQL_INTEGER, 0, 0,
&m_txn.NewOrder.c_id, 0, NULL) != SQL_SUCCESS
                || SQLBindParameter(m_hstmt, ++i,
SQL_PARAM_INPUT, SQL_C_UTINYINT, SQL_TINYINT, 0, 0,
&m_txn.NewOrder.o_ol_cnt, 0, NULL) != SQL_SUCCESS
                || SQLBindParameter(m_hstmt, ++i,
SQL_PARAM_INPUT, SQL_C_UTINYINT, SQL_TINYINT, 0, 0,
&m_txn.NewOrder.o_all_local, 0, NULL) != SQL_SUCCESS
                )
                ThrowError(CODBCERR::eBindParam);

        for (int j=0; j<MAX_OL_NEW_ORDER_ITEMS;
j++)
        {
                if (   SQLBindParameter(m_hstmt,
++i, SQL_PARAM_INPUT, SQL_C_SLONG, SQL_INTEGER, 0, 0,
&m_txn.NewOrder.OL[j].ol_i_id, 0, NULL) !=
SQL_SUCCESS
                        ||
SQLBindParameter(m_hstmt, ++i, SQL_PARAM_INPUT,
SQL_C_SLONG, SQL_INTEGER, 0, 0,
&m_txn.NewOrder.OL[j].ol_supply_w_id, 0, NULL) !=
SQL_SUCCESS
                        ||
SQLBindParameter(m_hstmt, ++i, SQL_PARAM_INPUT,
SQL_C_SSHORT, SQL_SMALLINT, 0, 0,
&m_txn.NewOrder.OL[j].ol_quantity, 0, NULL) !=
SQL_SUCCESS
                        )

        ThrowError(CODBCERR::eBindParam);
        }

        // set row-wise binding
        if (   SQLSetStmtAttrW(m_hstmt,
SQL_ATTR_ROW_BIND_TYPE,
(SQLPOINTER)sizeof(m_txn.NewOrder.OL[0]),
SQL_IS_UINTEGER) != SQL_SUCCESS
                || SQLSetStmtAttrW(m_hstmt,
SQL_ATTR_ROWS_FETCHED_PTR, &m_RowsFetched, 0) !=
SQL_SUCCESS )

        ThrowError(CODBCERR::eSetStmtAttr);

        i = 0;
        if (   SQLBindCol(m_hstmt, ++i, SQL_C_CHAR,
&m_txn.NewOrder.OL[0].ol_i_name,
sizeof(m_txn.NewOrder.OL[0].ol_i_name), NULL) !=
SQL_SUCCESS
                || SQLBindCol(m_hstmt, ++i,
SQL_C_SSHORT, &m_txn.NewOrder.OL[0].ol_stock, 0,
NULL) != SQL_SUCCESS
                || SQLBindCol(m_hstmt, ++i,
SQL_C_CHAR,   &m_txn.NewOrder.OL[0].ol_brand_generic,
sizeof(m_txn.NewOrder.OL[0].ol_brand_generic), NULL)
!= SQL_SUCCESS
                || SQLBindCol(m_hstmt, ++i,
SQL_C_DOUBLE, &m_txn.NewOrder.OL[0].ol_i_price, 0,
NULL) != SQL_SUCCESS
                || SQLBindCol(m_hstmt, ++i,
SQL_C_DOUBLE, &m_txn.NewOrder.OL[0].ol_amount, 0,
NULL) != SQL_SUCCESS
                )
                ThrowError(CODBCERR::eBindCol);

        // associate the column bindings for the
second result set
        if ( SQLSetStmtAttrW( m_hstmt,
SQL_ATTR_APP_ROW_DESC,
m_descNewOrderNoDuplicatesCols2, SQL_IS_POINTER ) !=
SQL_SUCCESS )

        ThrowError(CODBCERR::eSetStmtAttr);

        i = 0;
        if (   SQLBindCol(m_hstmt, ++i,
SQL_C_DOUBLE,    &m_txn.NewOrder.w_tax, 0, NULL) !=
SQL_SUCCESS
                || SQLBindCol(m_hstmt, ++i,
SQL_C_DOUBLE,    &m_txn.NewOrder.d_tax, 0, NULL) !=
SQL_SUCCESS
                || SQLBindCol(m_hstmt, ++i,
SQL_C_SLONG,     &m_txn.NewOrder.o_id, 0, NULL) !=
SQL_SUCCESS
                || SQLBindCol(m_hstmt, ++i,
SQL_C_CHAR,      &m_txn.NewOrder.c_last,
sizeof(m_txn.NewOrder.c_last), NULL) != SQL_SUCCESS
                || SQLBindCol(m_hstmt, ++i,
SQL_C_DOUBLE,    &m_txn.NewOrder.c_discount, 0, NULL)
!= SQL_SUCCESS
                || SQLBindCol(m_hstmt, ++i,
SQL_C_CHAR,      &m_txn.NewOrder.c_credit,
sizeof(m_txn.NewOrder.c_credit), NULL) != SQL_SUCCESS
                || SQLBindCol(m_hstmt, ++i,
SQL_C_TYPE_TIMESTAMP, &m_txn.NewOrder.o_entry_d, 0,
NULL) != SQL_SUCCESS
                || SQLBindCol(m_hstmt, ++i,
SQL_C_SLONG,     &m_no_commit_flag, 0, NULL) !=
SQL_SUCCESS
                )
                ThrowError(CODBCERR::eBindCol);

        //Compose the New Order statement
        _snwprintf(m_szNewOrderNoDuplicatesCommand,
sizeof(m_szNewOrderNoDuplicatesCommand)/sizeof(m_szNe
wOrderNoDuplicatesCommand[0]),
                        L"{call
%stpcc_neworder_new(?,?,?,?,?,?,?,?,?,?,?,?,?,?,?,?
,?,?,?,?,?,?,?,?,"

        L"?,?,?,?,?,?,?,?,?,?,?,?,?,?,?,?,?,?,?,?,?
,?,?,?,?)}", m_szSPPrefix);

        m_iBeginNewOrderNoDuplicatesVariablePart =
33 + wcslen(m_szSPPrefix);    // fixed part + prefix
part
}

//
//        Returns true if there are duplicate
(warehouse_id, item_id)
//        lineitem pairs in New Order input
parameters.
//
bool CTPCC_ODBC::DuplicatesInNewOrder()
{
        int i, j;

        for (i = 0; i < m_txn.NewOrder.o_ol_cnt;
++i)
        {
                for (j = i+1; j<
m_txn.NewOrder.o_ol_cnt; ++j)
                {
                        if
(m_txn.NewOrder.OL[i].ol_i_id ==
m_txn.NewOrder.OL[j].ol_i_id)
                        {
                                return true;
                        }
                }
        }

        return false;
}

void CTPCC_ODBC::NewOrder()
{
        if (m_bCallNoDuplicatesNewOrder)
        {
                if (DuplicatesInNewOrder())
                {
                        NewOrderDuplicates();
                }
                else
                {
                        NewOrderNoDuplicates();
                }
        }
        else
        {
                NewOrderDuplicates();
```


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```
        }
}

void CTPCC_ODBC::NewOrderDuplicates()
{
        int
        i;
        RETCODE                                 rc;
        int
        iTryCount = 0;

                                                //
0       1       2

                                                //
01234567890123456789012345678 9
        wchar_t
        szSqlTemplate[iMAX_SP_NAME_LEN];

                                        //= L"{call
tpcc_neworder(?,?,?,?,?,"

                                        //
L"?,?,?,?,?,?,?,?,?,?,?,?,?,?,?,"

                                        //
L"?,?,?,?,?,?,?,?,?,?,?,?,?,?,?,"

                                        //
L"?,?,?,?,?,?,?,?,?,?,?,?,?,?,?)}";

        m_hstmt = m_hstmtNewOrder;

        // associate the parameter and column
bindings for this transaction
        if ( SQLSetStmtAttrW( m_hstmt,
SQL_ATTR_APP_ROW_DESC, m_descNewOrderCols1,
SQL_IS_POINTER ) != SQL_SUCCESS )

        ThrowError(CODBCERR::eSetStmtAttr);

        // clip statement buffer based on number of
parameters
        // fixed part is 29 chars and variable part
is 6 chars per line item
        wcscpy(szSqlTemplate, m_szNewOrderCommand);
        i = m_iBeginNewOrderVariablePart +
m_txn.NewOrder.o_ol_cnt*6;
        wcscpy( &szSqlTemplate[i], L")}" );

        // check whether any order lines are for a
remote warehouse
        m_txn.NewOrder.o_all_local = 1;
        for (i = 0; i < m_txn.NewOrder.o_ol_cnt;
i++)
        {
                if
(m_txn.NewOrder.OL[i].ol_supply_w_id !=
m_txn.NewOrder.w_id)
                {

        m_txn.NewOrder.o_all_local = 0;  // at
least one remote warehouse
                                break;
                }
        }

        while (TRUE)
        {
                try
                {
                                m_BindOffset = 0;
                                rc =
SQLExecDirectW(m_hstmt, szSqlTemplate, SQL_NTS);
                                if (rc != SQL_SUCCESS
&& rc != SQL_SUCCESS_WITH_INFO)

        ThrowError(CODBCERR::eExecDirect);

                                // Get order line
results

        m_txn.NewOrder.total_amount = 0;
                                for (i = 0;
i<m_txn.NewOrder.o_ol_cnt; i++)
                                {
                                        // set the
bind offset value...
                                        m_BindOffset
= i * sizeof(m_txn.NewOrder.OL[0]);

                                        if (
SQLFetch(m_hstmt) == SQL_ERROR)

        ThrowError(CODBCERR::eFetch);

                                        // move to
the next resultset
                                        if (
SQLMoreResults(m_hstmt) == SQL_ERROR )

        ThrowError(CODBCERR::eMoreResults);


        m_txn.NewOrder.total_amount +=
m_txn.NewOrder.OL[i].ol_amount;
                                }

                                // associate the column
bindings for the second result set
                                if ( SQLSetStmtAttrW(
m_hstmt, SQL_ATTR_APP_ROW_DESC, m_descNewOrderCols2,
SQL_IS_POINTER ) != SQL_SUCCESS )

        ThrowError(CODBCERR::eSetStmtAttr);

                                if ( SQLFetch(m_hstmt)
== SQL_ERROR)

        ThrowError(CODBCERR::eFetch);

                                SQLFreeStmt(m_hstmt,
SQL_CLOSE);

                                if (m_no_commit_flag ==
1)
                                {

        m_txn.NewOrder.total_amount *= ((1 +
m_txn.NewOrder.w_tax + m_txn.NewOrder.d_tax) * (1 -
m_txn.NewOrder.c_discount));

        m_txn.NewOrder.exec_status_code = eOK;
                                }
                                else

        m_txn.NewOrder.exec_status_code =
eInvalidItem;

                                break;
                }
                catch (CODBCERR *e)
                {
                                if ((!e->m_bDeadLock)
|| (++iTryCount > iMaxRetries))
                                        throw;

                                // hit deadlock;
backoff for increasingly longer period
                                delete e;
                                Sleep(10 * iTryCount);
                }
        }

//      if (iTryCount)
//              throw new
CTPCC_ODBC_ERR(CTPCC_ODBC_ERR::ERR_RETRIED_TRANS,
iTryCount);
}

//
//      No lineitem duplicates optimized version.
//
void CTPCC_ODBC::NewOrderNoDuplicates()
{
        int
        i;
        RETCODE                                 rc;
        int
        iTryCount = 0;

                                                //
0       1       2       3

                                                //
01234567890123456789012345678 9
        wchar_t
        szSqlTemplate[iMAX_SP_NAME_LEN];

                                        //= L"{call
tpcc_neworder_new(?,?,?,?,?,"

                                        //
L"?,?,?,?,?,?,?,?,?,?,?,?,?,?,?,"

                                        //
L"?,?,?,?,?,?,?,?,?,?,?,?,?,?,?,"
```


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```
                                        //
L"?,?,?,?,?,?,?,?,?,?,?,?,?,?,?)}";

          m_hstmt = m_hstmtNewOrderNoDuplicates;

          // associate the parameter and column
bindings for this transaction
          if ( SQLSetStmtAttrW( m_hstmt,
SQL_ATTR_APP_ROW_DESC,
m_descNewOrderNoDuplicatesCols1, SQL_IS_POINTER ) !=
SQL_SUCCESS )

          ThrowError(CODBCERR::eSetStmtAttr);

          // clip statement buffer based on number of
parameters
          // fixed part is 33 chars and variable part
is 6 chars per line item
          wcscpy(szSqlTemplate,
m_szNewOrderNoDuplicatesCommand);
          i =
m_iBeginNewOrderNoDuplicatesVariablePart +
m_txn.NewOrder.o_ol_cnt*6;
          wcscpy( &szSqlTemplate[i], L")}" );

          // check whether any order lines are for a
remote warehouse
          m_txn.NewOrder.o_all_local = 1;
          for (i = 0; i < m_txn.NewOrder.o_ol_cnt;
i++)
          {
                    if
(m_txn.NewOrder.OL[i].ol_supply_w_id !=
m_txn.NewOrder.w_id)
                    {

          m_txn.NewOrder.o_all_local = 0;  // at
least one remote warehouse
                              break;
                    }
          }

          while (TRUE)
          {
                    try
                    {
                              // configure block
cursor
                              if (
SQLSetStmtAttrW(m_hstmt, SQL_ATTR_ROW_ARRAY_SIZE,
(SQLPOINTER)1, 0) != SQL_SUCCESS )

          ThrowError(CODBCERR::eSetStmtAttr);

                              rc =
SQLExecDirectW(m_hstmt, szSqlTemplate, SQL_NTS);
                              if (rc != SQL_SUCCESS
&& rc != SQL_SUCCESS_WITH_INFO)

          ThrowError(CODBCERR::eExecDirect);

                              // configure block
cursor
                              if
(SQLSetStmtAttrW(m_hstmt, SQL_ATTR_ROW_ARRAY_SIZE,
(SQLPOINTER)MAX_OL_NEW_ORDER_ITEMS, 0) !=
SQL_SUCCESS)

          ThrowError(CODBCERR::eSetStmtAttr);

                              // Get order line
results
                              if ( SQLFetch(m_hstmt)
== SQL_ERROR)

          ThrowError(CODBCERR::eFetch);



          m_txn.NewOrder.total_amount = 0;
                              for (i = 0;
i<m_txn.NewOrder.o_ol_cnt; i++)
                              {


          m_txn.NewOrder.total_amount +=
m_txn.NewOrder.OL[i].ol_amount;
                              }

                              // associate the column
bindings for the second result set
                              if ( SQLSetStmtAttrW(
m_hstmt, SQL_ATTR_APP_ROW_DESC,
m_descNewOrderNoDuplicatesCols2, SQL_IS_POINTER ) !=
SQL_SUCCESS )

          ThrowError(CODBCERR::eSetStmtAttr);

                              // move to the next
resultset
                              if (
SQLMoreResults(m_hstmt) == SQL_ERROR )

          ThrowError(CODBCERR::eMoreResults);

                              if ( SQLFetch(m_hstmt)
== SQL_ERROR)

          ThrowError(CODBCERR::eFetch);

                              SQLFreeStmt(m_hstmt,
SQL_CLOSE);

                              if (m_no_commit_flag ==
1)
                              {

          m_txn.NewOrder.total_amount *= ((1 +
m_txn.NewOrder.w_tax + m_txn.NewOrder.d_tax) * (1 -
m_txn.NewOrder.c_discount));

          m_txn.NewOrder.exec_status_code = eOK;
                              }
                              else
          m_txn.NewOrder.exec_status_code =
eInvalidItem;

                              break;
                    }
                    catch (CODBCERR *e)
                    {
                              if ((!e->m_bDeadLock)
|| (++iTryCount > iMaxRetries))
                                        throw;

                              // hit deadlock;
backoff for increasingly longer period
                              delete e;
                              Sleep(10 * iTryCount);
                    }
          }

//        if (iTryCount)
//                  throw new
CTPCC_ODBC_ERR(CTPCC_ODBC_ERR::ERR_RETRIED_TRANS,
iTryCount);
}

void CTPCC_ODBC::InitPaymentParams()
{
          if (   SQLAllocHandle(SQL_HANDLE_STMT,
m_hdbc, &m_hstmtPayment) != SQL_SUCCESS )

          ThrowError(CODBCERR::eAllocHandle);

          m_hstmt = m_hstmtPayment;

          int i = 0;
          if (   SQLBindParameter(m_hstmt, ++i,
SQL_PARAM_INPUT, SQL_C_SLONG, SQL_INTEGER, 0, 0,
&m_txn.Payment.w_id, 0, NULL) != SQL_SUCCESS
                    || SQLBindParameter(m_hstmt, ++i,
SQL_PARAM_INPUT, SQL_C_SLONG, SQL_INTEGER, 0, 0,
&m_txn.Payment.c_w_id, 0, NULL) != SQL_SUCCESS
                    || SQLBindParameter(m_hstmt, ++i,
SQL_PARAM_INPUT, SQL_C_DOUBLE, SQL_NUMERIC, 6, 2,
&m_txn.Payment.h_amount, 0, NULL) != SQL_SUCCESS
                    || SQLBindParameter(m_hstmt, ++i,
SQL_PARAM_INPUT, SQL_C_UTINYINT, SQL_TINYINT, 0, 0,
&m_txn.Payment.d_id, 0, NULL) != SQL_SUCCESS
                    || SQLBindParameter(m_hstmt, ++i,
SQL_PARAM_INPUT, SQL_C_UTINYINT, SQL_TINYINT, 0, 0,
&m_txn.Payment.c_d_id, 0, NULL) != SQL_SUCCESS
                    || SQLBindParameter(m_hstmt, ++i,
SQL_PARAM_INPUT, SQL_C_SLONG, SQL_INTEGER, 0, 0,
&m_txn.Payment.c_id, 0, NULL) != SQL_SUCCESS
                    || SQLBindParameter(m_hstmt, ++i,
SQL_PARAM_INPUT, SQL_C_CHAR, SQL_CHAR,
sizeof(m_txn.Payment.c_last), 0,
&m_txn.Payment.c_last, sizeof(m_txn.Payment.c_last),
NULL) != SQL_SUCCESS
                    )
                    ThrowError(CODBCERR::eBindParam);

          i = 0;
```


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```
        if (   SQLBindCol(m_hstmt, ++i,
SQL_C_SLONG,     &m_txn.Payment.c_id,             0,
NULL) != SQL_SUCCESS
                || SQLBindCol(m_hstmt, ++i,
SQL_C_CHAR,      &m_txn.Payment.c_last,
        sizeof(m_txn.Payment.c_last), NULL) !=
SQL_SUCCESS
                || SQLBindCol(m_hstmt, ++i,
SQL_C_TYPE_TIMESTAMP, &m_txn.Payment.h_date,
        0, NULL) != SQL_SUCCESS
                || SQLBindCol(m_hstmt, ++i,
SQL_C_CHAR,      &m_txn.Payment.w_street_1,
        sizeof(m_txn.Payment.w_street_1), NULL) !=
SQL_SUCCESS
                || SQLBindCol(m_hstmt, ++i,
SQL_C_CHAR,      &m_txn.Payment.w_street_2,
        sizeof(m_txn.Payment.w_street_2), NULL) !=
SQL_SUCCESS
                || SQLBindCol(m_hstmt, ++i,
SQL_C_CHAR,      &m_txn.Payment.w_city,
        sizeof(m_txn.Payment.w_city), NULL) !=
SQL_SUCCESS
                || SQLBindCol(m_hstmt, ++i,
SQL_C_CHAR,      &m_txn.Payment.w_state,
        sizeof(m_txn.Payment.w_state), NULL) !=
SQL_SUCCESS
                || SQLBindCol(m_hstmt, ++i,
SQL_C_CHAR,      &m_txn.Payment.w_zip,
        sizeof(m_txn.Payment.w_zip), NULL) !=
SQL_SUCCESS
                || SQLBindCol(m_hstmt, ++i,
SQL_C_CHAR,      &m_txn.Payment.d_street_1,
        sizeof(m_txn.Payment.d_street_1), NULL) !=
SQL_SUCCESS
                || SQLBindCol(m_hstmt, ++i,
SQL_C_CHAR,      &m_txn.Payment.d_street_2,
        sizeof(m_txn.Payment.d_street_2), NULL) !=
SQL_SUCCESS
                || SQLBindCol(m_hstmt, ++i,
SQL_C_CHAR,      &m_txn.Payment.d_city,
        sizeof(m_txn.Payment.d_city), NULL) !=
SQL_SUCCESS
                || SQLBindCol(m_hstmt, ++i,
SQL_C_CHAR,      &m_txn.Payment.d_state,
        sizeof(m_txn.Payment.d_state), NULL) !=
SQL_SUCCESS
                || SQLBindCol(m_hstmt, ++i,
SQL_C_CHAR,      &m_txn.Payment.d_zip,
        sizeof(m_txn.Payment.d_zip), NULL) !=
SQL_SUCCESS
                || SQLBindCol(m_hstmt, ++i,
SQL_C_CHAR,      &m_txn.Payment.c_first,
        sizeof(m_txn.Payment.c_first), NULL) !=
SQL_SUCCESS
                || SQLBindCol(m_hstmt, ++i,
SQL_C_CHAR,      &m_txn.Payment.c_middle,
        sizeof(m_txn.Payment.c_middle), NULL) !=
SQL_SUCCESS
                || SQLBindCol(m_hstmt, ++i,
SQL_C_CHAR,      &m_txn.Payment.c_street_1,
        sizeof(m_txn.Payment.c_street_1), NULL) !=
SQL_SUCCESS
                || SQLBindCol(m_hstmt, ++i,
SQL_C_CHAR,      &m_txn.Payment.c_street_2,
        sizeof(m_txn.Payment.c_street_2), NULL) !=
SQL_SUCCESS
                || SQLBindCol(m_hstmt, ++i,
SQL_C_CHAR,      &m_txn.Payment.c_city,
        sizeof(m_txn.Payment.c_city), NULL) !=
SQL_SUCCESS
                || SQLBindCol(m_hstmt, ++i,
SQL_C_CHAR,      &m_txn.Payment.c_state,
        sizeof(m_txn.Payment.c_state), NULL) !=
SQL_SUCCESS
                || SQLBindCol(m_hstmt, ++i,
SQL_C_CHAR,      &m_txn.Payment.c_zip,
        sizeof(m_txn.Payment.c_zip), NULL) !=
SQL_SUCCESS
                || SQLBindCol(m_hstmt, ++i,
SQL_C_CHAR,      &m_txn.Payment.c_phone,
        sizeof(m_txn.Payment.c_phone), NULL) !=
SQL_SUCCESS
                || SQLBindCol(m_hstmt, ++i,
SQL_C_TYPE_TIMESTAMP, &m_txn.Payment.c_since,
        0, NULL) != SQL_SUCCESS
                || SQLBindCol(m_hstmt, ++i,
SQL_C_CHAR,      &m_txn.Payment.c_credit,
        sizeof(m_txn.Payment.c_credit), NULL) !=
SQL_SUCCESS
                || SQLBindCol(m_hstmt, ++i,
SQL_C_DOUBLE,    &m_txn.Payment.c_credit_lim,0, NULL)
!= SQL_SUCCESS
                || SQLBindCol(m_hstmt, ++i,
SQL_C_DOUBLE,    &m_txn.Payment.c_discount,       0,
NULL) != SQL_SUCCESS
                || SQLBindCol(m_hstmt, ++i,
SQL_C_DOUBLE,    &m_txn.Payment.c_balance,        0,
NULL) != SQL_SUCCESS
                || SQLBindCol(m_hstmt, ++i,
SQL_C_CHAR,      &m_txn.Payment.c_data,
        sizeof(m_txn.Payment.c_data), NULL) !=
SQL_SUCCESS
                )
                ThrowError(CODBCERR::eBindCol);

        //Compose Payment statement
        _snwprintf(m_szPaymentCommand,
sizeof(m_szPaymentCommand)/sizeof(m_szPaymentCommand[
0]),
                L"{call %stpcc_payment
(?,?,?,?,?,?,?)}", m_szSPPrefix);
}

void CTPCC_ODBC::Payment()
{
        RETCODE             rc;
        int                         iTryCount =
0;

        m_hstmt = m_hstmtPayment;

        if (m_txn.Payment.c_id != 0)
                m_txn.Payment.c_last[0] = 0;

        while (TRUE)
        {
                try
                {
                        rc =
SQLExecDirectW(m_hstmt, m_szPaymentCommand, SQL_NTS);
                        if (rc != SQL_SUCCESS
&& rc != SQL_SUCCESS_WITH_INFO)

        ThrowError(CODBCERR::eExecDirect);

                        if ( SQLFetch(m_hstmt)
== SQL_ERROR)

        ThrowError(CODBCERR::eFetch);

                        SQLFreeStmt(m_hstmt,
SQL_CLOSE);

                        if (m_txn.Payment.c_id
== 0)
                                throw new
CTPCC_ODBC_ERR( CTPCC_ODBC_ERR::ERR_INVALID_CUST );
                        else

        m_txn.Payment.exec_status_code = eOK;

                        break;
                }
                catch (CODBCERR *e)
                {
                        if ((!e->m_bDeadLock)
|| (++iTryCount > iMaxRetries))
                                throw;

                        // hit deadlock;
backoff for increasingly longer period
                        delete e;
                        Sleep(10 * iTryCount);
                }
        }

//      if (iTryCount)
//              throw new
CTPCC_ODBC_ERR(CTPCC_ODBC_ERR::ERR_RETRIED_TRANS,
iTryCount);
}

void CTPCC_ODBC::InitOrderStatusParams()
{
        if (   SQLAllocHandle(SQL_HANDLE_STMT,
m_hdbc, &m_hstmtOrderStatus) != SQL_SUCCESS
                ||
SQLAllocHandle(SQL_HANDLE_DESC, m_hdbc,
&m_descOrderStatusCols1) != SQL_SUCCESS
                ||
SQLAllocHandle(SQL_HANDLE_DESC, m_hdbc,
&m_descOrderStatusCols2) != SQL_SUCCESS
                )

        ThrowError(CODBCERR::eAllocHandle);

        m_hstmt = m_hstmtOrderStatus;
```


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```
          if (   SQLSetStmtAttrW( m_hstmt,
SQL_ATTR_APP_ROW_DESC, m_descOrderStatusCols1,
SQL_IS_POINTER ) != SQL_SUCCESS )

          ThrowError(CODBCERR::eSetStmtAttr);

          int i = 0;
          if (   SQLBindParameter(m_hstmt, ++i,
SQL_PARAM_INPUT, SQL_C_SLONG, SQL_INTEGER, 0, 0,
&m_txn.OrderStatus.w_id, 0, NULL) != SQL_SUCCESS
                    || SQLBindParameter(m_hstmt, ++i,
SQL_PARAM_INPUT, SQL_C_UTINYINT, SQL_TINYINT, 0, 0,
&m_txn.OrderStatus.d_id, 0, NULL) != SQL_SUCCESS
                    || SQLBindParameter(m_hstmt, ++i,
SQL_PARAM_INPUT, SQL_C_SLONG, SQL_INTEGER, 0, 0,
&m_txn.OrderStatus.c_id, 0, NULL) != SQL_SUCCESS
                    || SQLBindParameter(m_hstmt, ++i,
SQL_PARAM_INPUT, SQL_C_CHAR, SQL_CHAR,
sizeof(m_txn.OrderStatus.c_last), 0,
&m_txn.OrderStatus.c_last,
sizeof(m_txn.OrderStatus.c_last), NULL) !=
SQL_SUCCESS
                    )
                    ThrowError(CODBCERR::eBindParam);

          // configure block cursor
          if (   SQLSetStmtAttrW(m_hstmt,
SQL_ATTR_ROW_BIND_TYPE,
(SQLPOINTER)sizeof(m_txn.OrderStatus.OL[0]), 0) !=
SQL_SUCCESS
                    || SQLSetStmtAttrW(m_hstmt,
SQL_ATTR_ROWS_FETCHED_PTR, &m_RowsFetched, 0) !=
SQL_SUCCESS
                    )

          ThrowError(CODBCERR::eSetStmtAttr);

          i = 0;
          if (   SQLBindCol(m_hstmt, ++i,
SQL_C_SLONG, &m_txn.OrderStatus.OL[0].ol_supply_w_id,
0, NULL) != SQL_SUCCESS
                    || SQLBindCol(m_hstmt, ++i,
SQL_C_SLONG, &m_txn.OrderStatus.OL[0].ol_i_id, 0,
NULL) != SQL_SUCCESS
                    || SQLBindCol(m_hstmt, ++i,
SQL_C_SSHORT, &m_txn.OrderStatus.OL[0].ol_quantity,
0, NULL) != SQL_SUCCESS
                    || SQLBindCol(m_hstmt, ++i,
SQL_C_DOUBLE, &m_txn.OrderStatus.OL[0].ol_amount, 0,
NULL) != SQL_SUCCESS
                    || SQLBindCol(m_hstmt, ++i,
SQL_C_TYPE_TIMESTAMP,
&m_txn.OrderStatus.OL[0].ol_delivery_d, 0, NULL) !=
SQL_SUCCESS
                    )
                    ThrowError(CODBCERR::eBindCol);


          if ( SQLSetStmtAttrW( m_hstmt,
SQL_ATTR_APP_ROW_DESC, m_descOrderStatusCols2,
SQL_IS_POINTER ) != SQL_SUCCESS )

          ThrowError(CODBCERR::eSetStmtAttr);

          i = 0;
          if (   SQLBindCol(m_hstmt, ++i,
SQL_C_SLONG, &m_txn.OrderStatus.c_id, 0, NULL) !=
SQL_SUCCESS
                    || SQLBindCol(m_hstmt, ++i,
SQL_C_CHAR, &m_txn.OrderStatus.c_last,
sizeof(m_txn.OrderStatus.c_last), NULL) !=
SQL_SUCCESS
                    || SQLBindCol(m_hstmt, ++i,
SQL_C_CHAR, &m_txn.OrderStatus.c_first,
sizeof(m_txn.OrderStatus.c_first), NULL) !=
SQL_SUCCESS
                    || SQLBindCol(m_hstmt, ++i,
SQL_C_CHAR, &m_txn.OrderStatus.c_middle,
sizeof(m_txn.OrderStatus.c_middle), NULL) !=
SQL_SUCCESS
                    || SQLBindCol(m_hstmt, ++i,
SQL_C_TYPE_TIMESTAMP, &m_txn.OrderStatus.o_entry_d,
0, NULL) != SQL_SUCCESS
                    || SQLBindCol(m_hstmt, ++i,
SQL_C_SSHORT, &m_txn.OrderStatus.o_carrier_id, 0,
NULL) != SQL_SUCCESS
                    || SQLBindCol(m_hstmt, ++i,
SQL_C_DOUBLE, &m_txn.OrderStatus.c_balance, 0, NULL)
!= SQL_SUCCESS
                    || SQLBindCol(m_hstmt, ++i,
SQL_C_SLONG, &m_txn.OrderStatus.o_id, 0, NULL) !=
SQL_SUCCESS
                    )
                    ThrowError(CODBCERR::eBindCol);

          //Compose Order Status statement
          _snwprintf(m_szOrderStatusCommand,
sizeof(m_szOrderStatusCommand)/sizeof(m_szOrderStatus
Command[0]),
                    L"{call %stpcc_orderstatus
(?,?,?,?)}", m_szSPPrefix);
}

void CTPCC_ODBC::OrderStatus()
{
          int
                    iTryCount = 0;
          RETCODE
          rc;

          m_hstmt = m_hstmtOrderStatus;

          if ( SQLSetStmtAttrW( m_hstmt,
SQL_ATTR_APP_ROW_DESC, m_descOrderStatusCols1,
SQL_IS_POINTER ) != SQL_SUCCESS )

          ThrowError(CODBCERR::eSetStmtAttr);

          if (m_txn.OrderStatus.c_id != 0)
                    m_txn.OrderStatus.c_last[0] = 0;

          while (TRUE)
          {
                    try
                    {
                              // configure block
cursor
                              if (
SQLSetStmtAttrW(m_hstmt, SQL_ATTR_ROW_ARRAY_SIZE,
(SQLPOINTER)1, 0) != SQL_SUCCESS )

                    ThrowError(CODBCERR::eSetStmtAttr);

                              rc =
SQLExecDirectW(m_hstmt, m_szOrderStatusCommand,
SQL_NTS);
                              if ( ((rc ==
SQL_SUCCESS_WITH_INFO) && (m_RowsFetched != 0)) ||
(rc == SQL_ERROR) )

                    ThrowError(CODBCERR::eExecDirect);

                              // configure block
cursor
                              if (
SQLSetStmtAttrW(m_hstmt, SQL_ATTR_ROW_ARRAY_SIZE,
(SQLPOINTER)MAX_OL_ORDER_STATUS_ITEMS, 0) !=
SQL_SUCCESS )

                    ThrowError(CODBCERR::eSetStmtAttr);

                              rc = SQLFetchScroll(
m_hstmt, SQL_FETCH_NEXT, 0 );
                              if ( ((rc ==
SQL_SUCCESS_WITH_INFO) && (m_RowsFetched != 0)) ||
(rc == SQL_ERROR) )

                    ThrowError(CODBCERR::eFetchScroll);


                    m_txn.OrderStatus.o_ol_cnt =
(short)m_RowsFetched;

                              if
(m_txn.OrderStatus.o_ol_cnt != 0)
                              {
                                        if (
SQLSetStmtAttrW( m_hstmt, SQL_ATTR_APP_ROW_DESC,
m_descOrderStatusCols2, SQL_IS_POINTER ) !=
SQL_SUCCESS )

                    ThrowError(CODBCERR::eSetStmtAttr);

                                        if (
SQLMoreResults(m_hstmt) == SQL_ERROR )

                    ThrowError(CODBCERR::eMoreResults);

                                        if ( (rc =
SQLFetch(m_hstmt)) == SQL_ERROR)

                    ThrowError(CODBCERR::eFetch);
                              }

                              SQLFreeStmt(m_hstmt,
SQL_CLOSE);
```


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```
                        if
(m_txn.OrderStatus.o_ol_cnt == 0)
                                throw new
CTPCC_ODBC_ERR( CTPCC_ODBC_ERR::ERR_NO_SUCH_ORDER );
                        else if
(m_txn.OrderStatus.c_id == 0 &&
m_txn.OrderStatus.c_last[0] == 0)
                                throw new
CTPCC_ODBC_ERR( CTPCC_ODBC_ERR::ERR_INVALID_CUST );
                        else

          m_txn.OrderStatus.exec_status_code = eOK;

                        break;
                }
                catch (CODBCERR *e)
                {
                        if ((!e->m_bDeadLock)
|| (++iTryCount > iMaxRetries))
                                throw;

                        // hit deadlock;
backoff for increasingly longer period
                        delete e;
                        Sleep(10 * iTryCount);
                }
          }

//        if (iTryCount)
//                throw new
CTPCC_ODBC_ERR(CTPCC_ODBC_ERR::ERR_RETRIED_TRANS,
iTryCount);
}

void CTPCC_ODBC::InitDeliveryParams()
{
          if (   SQLAllocHandle(SQL_HANDLE_STMT,
m_hdbc, &m_hstmtDelivery) != SQL_SUCCESS )

          ThrowError(CODBCERR::eAllocHandle);

          m_hstmt = m_hstmtDelivery;

          int i = 0;
          if (   SQLBindParameter(m_hstmt, ++i,
SQL_PARAM_INPUT, SQL_C_SLONG, SQL_INTEGER, 0, 0,
&m_txn.Delivery.w_id, 0, NULL) != SQL_SUCCESS
                || SQLBindParameter(m_hstmt, ++i,
SQL_PARAM_INPUT, SQL_C_SSHORT, SQL_SMALLINT, 0, 0,
&m_txn.Delivery.o_carrier_id, 0, NULL) != SQL_SUCCESS
                )
                ThrowError(CODBCERR::eBindParam);

          for (i=0;i<10;i++)
          {
                if ( SQLBindCol(m_hstmt,
(UWORD)(i+1), SQL_C_SLONG, &m_txn.Delivery.o_id[i],
0, NULL) != SQL_SUCCESS )

          ThrowError(CODBCERR::eBindCol);
          }

          //Compose Delivery statement
          _snwprintf(m_szDeliveryCommand,
sizeof(m_szDeliveryCommand)/sizeof(m_szDeliveryComman
d[0]),
                        L"{call %stpcc_delivery (?,?)}",
m_szSPPrefix);
}

void CTPCC_ODBC::Delivery()
{
          RETCODE             rc;
          int                           iTryCount =
0;

          m_hstmt = m_hstmtDelivery;

          while (TRUE)
          {
                try
                {
                        rc =
SQLExecDirectW(m_hstmt, m_szDeliveryCommand,
SQL_NTS);
                        if (rc != SQL_SUCCESS
&& rc != SQL_SUCCESS_WITH_INFO)

          ThrowError(CODBCERR::eExecDirect);

                        if ( SQLFetch(m_hstmt)
== SQL_ERROR )

          ThrowError(CODBCERR::eFetch);

                        SQLFreeStmt(m_hstmt,
SQL_CLOSE);

          m_txn.Delivery.exec_status_code = eOK;
                        break;
                }
                catch (CODBCERR *e)
                {
                        if ((!e->m_bDeadLock)
|| (++iTryCount > iMaxRetries))
                                throw;

                        // hit deadlock;
backoff for increasingly longer period
                        delete e;
                        Sleep(10 * iTryCount);
                }
          }

//        if (iTryCount)
//                throw new
CTPCC_ODBC_ERR(CTPCC_ODBC_ERR::ERR_RETRIED_TRANS,
iTryCount);
}
```

# tpcc_odbc.h

```
/*        FILE:               TPCC_ODBC.H
 *                                  Microsoft
TPC-C Kit Ver. 4.20.000
 *                                  Copyright
Microsoft, 1999
 *              All Rights Reserved
 *
 *                                  Version
4.10.000 audited by Richard Gimarc, Performance
Metrics, 3/17/99
 *
 *        PURPOSE:  Header file for TPC-C txn class
implementation.
 *
 *  Change history:
 *                4.20.000 - updated rev number to
match kit
 */
#pragma once

// need to declare functions for import, unless
define has already been created
// by the DLL's .cpp module for export.
#ifndef DllDecl
#define DllDecl  __declspec( dllimport )
#endif

#define iMAX_SP_NAME_LEN 256  //maximum length of a
stored procedure name with parameters

class CODBCERR : public CBaseErr
{
          public:
                enum ACTION
                {
                        eNone,
                        eUnknown,
                        eAllocConn,
                // error from SQLAllocConnect
                        eAllocHandle,
          // error from SQLAllocHandle
                        eConnOption,
          // error from SQLSetConnectOption
                        eConnect,
          // error from SQLConnect
                        eAllocStmt,
                 // error from SQLAllocStmt
                        eExecDirect,
          // error from SQLExecDirect
                        eBindParam,
                 // error from SQLBindParameter
                        eBindCol,
          // error from SQLBindCol
                        eFetch,
                 // error from SQLFetch
                        eFetchScroll,
          // error from SQLFetchScroll
                        eMoreResults,
          // error from SQLMoreResults
                        ePrepare,
          // error from SQLPrepare
                        eExecute,
          // error from SQLExecute
```


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```
                        eSetEnvAttr,
        // error from SQLSetEnvAttr
                        eSetStmtAttr
        // error from SQLSetStmtAttr
                };

                CODBCERR(void)
                {
                        m_eAction = eNone;
                        m_NativeError = 0;
                        m_bDeadLock = FALSE;
                        m_odbcerrstr = NULL;
                };

                ~CODBCERR()
                {
                        if (m_odbcerrstr !=
NULL)
                                delete []
m_odbcerrstr;
                };

                ACTION    m_eAction;
                int
        m_NativeError;
                BOOL      m_bDeadLock;
                char   *m_odbcerrstr;

                int                ErrorType()
{return ERR_TYPE_ODBC;};
                char*     ErrorTypeStr() { return
"ODBC"; }
                int                ErrorNum()
{return m_NativeError;};
                char*     ErrorText() {return
m_odbcerrstr;};
                int                ErrorAction()
{ return (int)m_eAction; }
};

class CTPCC_ODBC_ERR : public CBaseErr
{
        public:
                enum TPCC_ODBC_ERRS
                {
                        ERR_WRONG_SP_VERSION =
1,        // "Wrong version of stored procs on
database server"
                        ERR_INVALID_CUST,
                // "Invalid Customer id,name."
                        ERR_NO_SUCH_ORDER,
                // "No orders found for
customer."
                        ERR_RETRIED_TRANS,
                // "Retries before transaction
succeeded."
                };

                CTPCC_ODBC_ERR( int iErr ) {
m_errno = iErr; m_iTryCount = 0; };
                CTPCC_ODBC_ERR( int iErr, int
iTryCount ) { m_errno = iErr; m_iTryCount =
iTryCount; };

                int                m_errno;
                int                m_iTryCount;

                int                ErrorType()
{return ERR_TYPE_TPCC_ODBC;};
                char*     ErrorTypeStr() { return
"TPCC ODBC"; }
                int                ErrorNum()
{return m_errno;};

                char*     ErrorText();
};

class DllDecl CTPCC_ODBC : public CTPCC_BASE
{
        private:
                // declare variables and private
functions here...
                BOOL               m_bDeadlock;
                // transaction was selected as
deadlock victim
                int
        m_MaxRetries;              // retry
count on deadlock

                SQLHENV            m_henv;
                        // ODBC environment
handle
                SQLHDBC            m_hdbc;
                SQLHSTMT  m_hstmt;
        // the current hstmt

                SQLHSTMT  m_hstmtNewOrder;
                SQLHSTMT
        m_hstmtNewOrderNoDuplicates;  // NewOrder
with one result set for lineitem details
                SQLHSTMT  m_hstmtPayment;
                SQLHSTMT  m_hstmtDelivery;
                SQLHSTMT  m_hstmtOrderStatus;
                SQLHSTMT  m_hstmtStockLevel;

                SQLHDESC  m_descNewOrderCols1;
                SQLHDESC  m_descNewOrderCols2;
                SQLHDESC
        m_descNewOrderNoDuplicatesCols1;        //
NewOrder with one result set for lineitem details
                SQLHDESC
        m_descNewOrderNoDuplicatesCols2;        //
NewOrder with one result set for lineitem details
                SQLHDESC  m_descOrderStatusCols1;
                SQLHDESC  m_descOrderStatusCols2;

                wchar_t
        m_szSPPrefix[32];   // stored procedures
prefix

                wchar_t
        m_szNewOrderCommand[iMAX_SP_NAME_LEN];
                wchar_t
        m_szNewOrderNoDuplicatesCommand[iMAX_SP_NAM
E_LEN];
                int
        m_iBeginNewOrderVariablePart; // begining
of the variable part in NewOrder statement
                int
        m_iBeginNewOrderNoDuplicatesVariablePart;
                // begining of the variable part in
NewOrder statement
                wchar_t
        m_szPaymentCommand[iMAX_SP_NAME_LEN];
                wchar_t
        m_szDeliveryCommand[iMAX_SP_NAME_LEN];
                wchar_t
        m_szOrderStatusCommand[iMAX_SP_NAME_LEN];
                wchar_t
        m_szStockLevelCommand[iMAX_SP_NAME_LEN];

                // new-order specific fields
                SQLUINTEGER         m_BindOffset;
                SQLUINTEGER
        m_RowsFetched;
                int
        m_no_commit_flag;

                // tpcc_neworder_new flag
                BOOL
        m_bCallNoDuplicatesNewOrder;

                void ThrowError( CODBCERR::ACTION
eAction );

                void InitNewOrderParams();
                void InitPaymentParams();
                void InitDeliveryParams();
                void InitStockLevelParams();
                void InitOrderStatusParams();

                union
                {
                        NEW_ORDER_DATA
        NewOrder;
                        PAYMENT_DATA
        Payment;
                        DELIVERY_DATA
        Delivery;
                        STOCK_LEVEL_DATA
        StockLevel;
                        ORDER_STATUS_DATA
        OrderStatus;
                }
        m_txn;

                bool DuplicatesInNewOrder();
                void NewOrderDuplicates();
                void NewOrderNoDuplicates();

        public:
                CTPCC_ODBC(         LPCSTR
szServer, LPCSTR szUser, LPCSTR szPassword,

        LPCSTR szHost, LPCSTR szDatabase,
```


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```
        LPCWSTR szSPPrefix, BOOL
bCallNoDuplicatesNewOrder);
                    ~CTPCC_ODBC(void);

                    inline PNEW_ORDER_DATA
          BuffAddr_NewOrder()           { return
&m_txn.NewOrder;    };
                    inline PPAYMENT_DATA
          BuffAddr_Payment()            { return
&m_txn.Payment;     };
                    inline PDELIVERY_DATA
          BuffAddr_Delivery()           { return
&m_txn.Delivery;    };
                    inline PSTOCK_LEVEL_DATA
          BuffAddr_StockLevel()         { return
&m_txn.StockLevel;  };
                    inline PORDER_STATUS_DATA
          BuffAddr_OrderStatus()        { return
&m_txn.OrderStatus; };

                    void NewOrder                 ();
                    void Payment                  ();
                    void Delivery                 ();
                    void StockLevel               ();
                    void OrderStatus    ();

};


// wrapper routine for class constructor
extern "C" DllDecl CTPCC_ODBC* CTPCC_ODBC_new
          (         LPCSTR szServer, LPCSTR szUser,
LPCSTR szPassword,
                    LPCSTR szHost, LPCSTR szDatabase,
                    LPCWSTR szSPPrefix, BOOL
bCallNoDuplicatesNewOrder );

typedef CTPCC_ODBC* (TYPE_CTPCC_ODBC)(LPCSTR, LPCSTR,
LPCSTR, LPCSTR, LPCSTR, LPCWSTR, BOOL);
```

# tpcc_oledb.cpp

```
/*        FILE:               TPCC_OLEDB.CPP
 *                                  Microsoft
TPC-C Kit Ver. 4.42.000
 *                                  Copyright
Microsoft, 2004
 *                                  Written by
Sergey Vasilevskiy
 *              All Rights Reserved
 *
 *
 *
 *        PURPOSE:  Implements OLEDB calls for TPC-C
txns.
 *        Contact:  Charles Levine
(clevine@microsoft.com)
 *
 *
 */

#include <windows.h>
#include <stdio.h>
#include <assert.h>
#include <stddef.h>

#define DBINITCONSTANTS
#include <oledb.h>
//#include <sqloledb.h> // Use MDAC
#include <sqlncli.h>          // Use SNAC
#include <oledberr.h>

#ifdef ICECAP
#include <icapexp.h>
#endif

// need to declare functions for export
#define DllDecl  __declspec( dllexport )

#include "..\..\common\src\error.h"
#include "..\..\common\src\trans.h"
#include "..\..\common\src\txn_base.h"
#include "tpcc_oledb.h"

#ifndef SQL_MAX_MESSAGE_LENGTH
#define SQL_MAX_MESSAGE_LENGTH 512
#endif

// version string; must match return value from
tpcc_version stored proc
const char          sVersion[] = "4.20.000";

const iMaxRetries = 10;                 // how many
retries on deadlock

const int iErrOleDbProvider = 7312;
const char sErrTimeoutExpired[] = "Timeout expired";

// this needs to be the same as the max length of
machine/database/user/password in Benchcraft
(engstut.h)
const static int    iMaxNameLen = 32;

BOOL APIENTRY DllMain(HMODULE hModule, DWORD
ul_reason_for_call, LPVOID lpReserved)
{
          switch( ul_reason_for_call )
          {
                    case DLL_PROCESS_ATTACH:

          DisableThreadLibraryCalls(hModule);

                              break;

                    case DLL_PROCESS_DETACH:

                              break;

                    default:
                              /* nothing */;
          }
          return TRUE;
}

/* FUNCTION: CTPCC_OLEDB_ERR::ErrorText
 *
 */

char* CTPCC_OLEDB_ERR::ErrorText(void)
{
          int i;

          static SERRORMSG errorMsgs[] =
          {
                    { ERR_WRONG_SP_VERSION,
          "Wrong version of stored procs on database
server"   },
                    { ERR_INVALID_CUST,
          "Invalid Customer id,name."
                                                        },
                    { ERR_NO_SUCH_ORDER,
          "No orders found for customer."
                                                        },
                    { ERR_RETRIED_TRANS,
          "Retries before transaction succeeded."
                              },
                    { 0,
                              ""



          }
          };

          static char szNotFound[] = "Unknown error
number.";

          for(i=0; errorMsgs[i].szMsg[0]; i++)
          {
                    if ( m_errno ==
errorMsgs[i].iError )
                              break;
          }
          if ( !errorMsgs[i].szMsg[0] )
                    return szNotFound;
          else
                    return errorMsgs[i].szMsg;
}

// wrapper routine for class constructor
__declspec(dllexport) CTPCC_OLEDB* CTPCC_OLEDB_new(
          LPCSTR szServer,              // name of
SQL server
          LPCSTR szUser,                          //
user name for login
          LPCSTR szPassword,            // password
for login
          LPCSTR szHost,                          //
not used
          LPCSTR szDatabase,            // name of
database to use
          LPCWSTR szSPPrefix )                    //
prefix to append to the stored procedure names
{
          return new CTPCC_OLEDB( szServer, szUser,
szPassword, szHost, szDatabase, szSPPrefix );
```


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```
}


CTPCC_OLEDB::CTPCC_OLEDB (
          LPCSTR szServer,
          // name of SQL server
          LPCSTR szUser,
                    // user name for login
          LPCSTR szPassword,
          // password for login
          LPCSTR szHost,
                    // not used
          LPCSTR szDatabase,
          // name of database to use
          LPCWSTR szSPPrefix
          // prefix to append to the stored procedure
names
          )
          : m_pIMalloc(NULL)
{
          int
          iRc;
          int
          i;
          HRESULT                                   hr;

          IDBInitialize*
          pIDBInitialize = NULL;                    //
data source interface
          IDBProperties*
          pIDBProperties = NULL;
          ICommandText*
          pICommandText;
          // SQL command without parameters
          wchar_t
          szwServer[iMaxNameLen];                   //
Unicode string used to convert to BSTR
          wchar_t
          szwDatabase[iMaxNameLen];     // Unicode
string used to convert to BSTR
          wchar_t
          szwUser[iMaxNameLen];                     //
Unicode string used to convert to BSTR
          wchar_t
          szwPassword[iMaxNameLen];     // Unicode
string used to convert to BSTR

          // Copy stored procedures prefix
          wcsncpy(m_szSPPrefix, szSPPrefix,
sizeof(m_szSPPrefix)/sizeof(m_szSPPrefix[0]));

          // Convert single byte ANSI strings to
Unicode (for later conversion to BSTR)
          iRc = MultiByteToWideChar(CP_THREAD_ACP,
MB_PRECOMPOSED, szServer, (int)strlen(szServer)+1,
szwServer, iMaxNameLen);
          iRc = MultiByteToWideChar(CP_THREAD_ACP,
MB_PRECOMPOSED, szDatabase,
(int)strlen(szDatabase)+1, szwDatabase, iMaxNameLen);
          iRc = MultiByteToWideChar(CP_THREAD_ACP,
MB_PRECOMPOSED, szUser, (int)strlen(szUser)+1,
szwUser, iMaxNameLen);
          iRc = MultiByteToWideChar(CP_THREAD_ACP,
MB_PRECOMPOSED, szPassword,
(int)strlen(szPassword)+1, szwPassword, iMaxNameLen);

          // Initialize COM library to be able to use
OLE-DB interfaces
          CoInitialize(NULL);

          // Initialization - create SQLOLEDB
component
          //hr = CoCreateInstance(CLSID_SQLOLEDB, //
GUID of SQLOLEDB component
          // Compile for SNAC
          hr = CoCreateInstance(CLSID_SQLNCLI,    //
GUID of SQLNCLI component
                              NULL,
                         // not defining an aggregate
component, so NULL
                              CLSCTX_INPROC_SERVER,   //
run the component in our process
                              IID_IDBInitialize,
                              (void **) &pIDBInitialize);
    /*
    Initialize the property values needed
    to establish the connection.
    */
    for(i = 0; i < 4; i++)
        VariantInit(&m_InitProperties[i].vValue);
    //Server name.
    m_InitProperties[0].dwPropertyID  =
DBPROP_INIT_DATASOURCE;
    m_InitProperties[0].vValue.vt     = VT_BSTR;
    m_InitProperties[0].vValue.bstrVal=
SysAllocString(szwServer);
    m_InitProperties[0].dwOptions     =
DBPROPOPTIONS_REQUIRED;
    m_InitProperties[0].colid         = DB_NULLID;
    //Database.
    m_InitProperties[1].dwPropertyID  =
DBPROP_INIT_CATALOG;
    m_InitProperties[1].vValue.vt     = VT_BSTR;
    m_InitProperties[1].vValue.bstrVal=
SysAllocString(szwDatabase);
    m_InitProperties[1].dwOptions     =
DBPROPOPTIONS_REQUIRED;
    m_InitProperties[1].colid         = DB_NULLID;
    //Username (login).
    m_InitProperties[2].dwPropertyID  =
DBPROP_AUTH_USERID;
    m_InitProperties[2].vValue.vt     = VT_BSTR;
    m_InitProperties[2].vValue.bstrVal=
SysAllocString(szwUser);
    m_InitProperties[2].dwOptions     =
DBPROPOPTIONS_REQUIRED;
    m_InitProperties[2].colid         = DB_NULLID;
    //Password.
    m_InitProperties[3].dwPropertyID  =
DBPROP_AUTH_PASSWORD;
    m_InitProperties[3].vValue.vt     = VT_BSTR;
    m_InitProperties[3].vValue.bstrVal=
SysAllocString(szwPassword);
    m_InitProperties[3].dwOptions     =
DBPROPOPTIONS_REQUIRED;
    m_InitProperties[3].colid         = DB_NULLID;
    /*
    Construct the DBPROPSET
structure(m_rgInitPropSet). The
    DBPROPSET structure is used to pass an array of
DBPROP
    structures (m_InitProperties) to the
SetProperties method.
    */
    m_rgInitPropSet.guidPropertySet =
DBPROPSET_DBINIT;
    m_rgInitPropSet.cProperties    = 4;
    m_rgInitPropSet.rgProperties   =
m_InitProperties;
    //Set initialization properties.
          if (FAILED(hr = pIDBInitialize-
>QueryInterface(IID_IDBProperties,


                    (void **)&pIDBProperties)))
          {
                    ThrowError(pIDBInitialize,
COLEDBERR::eQueryInterface, "CTPCC_OLEDB()");
          }

    hr = pIDBProperties->SetProperties(1,
&m_rgInitPropSet);

    pIDBProperties->Release();
    //Now establish the connection to the data
source.
    hr = pIDBInitialize->Initialize();

          // Free BSTR property strings
          for(i = 0; i < 4; i++)
          {

SysFreeString(m_InitProperties[i].vValue.bstrVal);

          }

          hr = pIDBInitialize-
>QueryInterface(IID_IDBCreateSession, (void
**)&m_pIDBCreateSession);

          // Releasing this has no effect on the SQL
Server connection
    // of the data source object because of the
reference maintained by
    // m_pIDBCreateSession.
    pIDBInitialize->Release();
    pIDBInitialize = NULL;

          hr = m_pIDBCreateSession-
>CreateSession(NULL, IID_IDBCreateCommand, (IUnknown
**)&m_pIDBCreateCommand);
          if (FAILED(hr))
          {
                    ThrowError(m_pIDBCreateSession,
COLEDBERR::eCreateSession, "CTPCC_OLEDB()");
          }
```


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```
        hr = m_pIDBCreateCommand-
>CreateCommand(NULL, IID_ICommandText, (IUnknown
**)&pICommandText);
        if (FAILED(hr))
        {
                ThrowError(m_pIDBCreateCommand,
COLEDBERR::eCreateCommand, "CTPCC_OLEDB()");
        }

        hr = pICommandText-
>SetCommandText(DBGUID_SQL, L"set nocount on set
XACT_ABORT ON");
        if (FAILED(hr))
        {
                ThrowError(pICommandText,
COLEDBERR::eSetCommandText, "CTPCC_OLEDB()");
        }

        hr = pICommandText->Execute(NULL, IID_NULL,
NULL, NULL, NULL);
        if (FAILED(hr))
        {
                ThrowError(pICommandText,
COLEDBERR::eExecute, "CTPCC_OLEDB()");
        }

        pICommandText->Release();

        // verify that version of stored procs on
server is correct
        CheckSPVersion();

        // Get IMalloc interface
        hr = CoGetMalloc(1, (LPMALLOC
*)&m_pIMalloc);

        // Bind parameters for each of the
transactions
        InitNewOrderParams();
        InitPaymentParams();
        InitOrderStatusParams();
        InitDeliveryParams();
        InitStockLevelParams();
}

CTPCC_OLEDB::~CTPCC_OLEDB( void )
{
        if (m_pIMalloc != NULL)
        {
                m_pIMalloc->Release();
        }
        m_pIPaymentCommand->Release();
        m_pIDBCreateCommand->Release();
        m_pIDBCreateSession->Release();

        CoUninitialize();   // uninitialize COM
library
}

/*
*       Check stored procedures version on the
server.
*/
void CTPCC_OLEDB::CheckSPVersion()
{
        HRESULT                 hr;
        char
        db_sp_version[10];
        ICommandText*       pICommandText;
        IAccessor*              pIAccessor;
        IRowset*            pRowset;
        const ULONG             nOutputParams
= 1;    // output 1st result set columns
        HACCESSOR
        hTpccVersionOutputAccessor;
        // Structure to bind in accessor
        DBBINDING
        acOutputDBBinding[nOutputParams];
        DBBINDSTATUS
        acOutputDBBindStatus[nOutputParams];
        LONG                    cRows = 1;
        // number of rows returned in the rowset
        ULONG
        cRowsObtained;
        HROW                    rghRow;
        //returned row handles
        HROW*                   prghRow =
&rghRow;


        hr = m_pIDBCreateCommand-
>CreateCommand(NULL, IID_ICommandText, (IUnknown
**)&pICommandText);
        if (FAILED(hr))
        {
                ThrowError(m_pIDBCreateCommand,
COLEDBERR::eCreateCommand, "CheckSPVersion()");
        }

        hr = pICommandText-
>SetCommandText(DBGUID_SQL, L"{call tpcc_version}");
        if (FAILED(hr))
        {
                ThrowError(pICommandText,
COLEDBERR::eSetCommandText, "CheckSPVersion()");
        }

        hr = pICommandText-
>QueryInterface(IID_IAccessor, (void **)&pIAccessor);
        if (FAILED(hr))
        {
                ThrowError(pICommandText,
COLEDBERR::eQueryInterface, "CheckSPVersion()");
        }

        // Now fill the binding information for
result set 1 output columns
        InitBindings(&acOutputDBBinding[0],
nOutputParams, eOutputColumn);

        // Binding for a rowset
        SetBinding(&acOutputDBBinding[0], 0,
sizeof(db_sp_version), DBTYPE_STR);

        hr = pIAccessor->CreateAccessor(
                        DBACCESSOR_ROWDATA,
                        nOutputParams,
                        acOutputDBBinding,
                        sizeof(db_sp_version),
&hTpccVersionOutputAccessor,
                        acOutputDBBindStatus);
        if (FAILED(hr))
        {
                ThrowError(pIAccessor,
COLEDBERR::eCreateAccessor, "CheckSPVersion()");
        }

        hr = pICommandText->Execute(NULL,
IID_IRowset, NULL, NULL, (IUnknown **)&pRowset);
        if (FAILED(hr))
        {
                ThrowError(pICommandText,
COLEDBERR::eExecute, "CheckSPVersion()");
        }

        // Fetch the result row handle(s)
        hr = pRowset->GetNextRows(DB_NULL_HCHAPTER,
0, cRows, &cRowsObtained, &prghRow);
        if (FAILED(hr))
        {
                ThrowError(pICommandText,
COLEDBERR::eGetNextRows, "CheckSPVersion()");
        }

        // Fetch the actual row data by handle
        hr = pRowset->GetData(rghRow,
hTpccVersionOutputAccessor, &db_sp_version);
        if (FAILED(hr))
        {
                ThrowError(pICommandText,
COLEDBERR::eGetData, "CheckSPVersion()");
        }

        // Release row(s)
        hr = pRowset->Release();

        pICommandText->Release();

        // Check the retrieved version
        if (strcmp(db_sp_version,sVersion))
                        throw new
CTPCC_OLEDB_ERR(
CTPCC_OLEDB_ERR::ERR_WRONG_SP_VERSION );
}

void CTPCC_OLEDB::ThrowError( IUnknown*
pObjectWithError, COLEDBERR::ACTION eAction, LPCTSTR
szLocation)
{
        HRESULT
        hr;
        //char
        szState[6];
        char
        szMsg[SQL_MAX_MESSAGE_LENGTH];
        char
        szTmp[6*SQL_MAX_MESSAGE_LENGTH];
```


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```
        COLEDBERR
        *pOLEDBErr;                                  //
not allocated until needed (maybe never)
        int
                iLen;
        // Interfaces
        IErrorInfo*             pIErrorInfoAll
= NULL;
        IErrorInfo*             pIErrorInfoRecord
= NULL;
        IErrorRecords*          pIErrorRecords
= NULL;
        ISupportErrorInfo*      pISupportErrorInfo
= NULL;
        ISQLServerErrorInfo*
pISQLServerErrorInfo    = NULL;
        ISQLErrorInfo*
        pISQLErrorInfo    = NULL;

        // Information used when cannot get custom
error object
        ERRORINFO
        BasicErrorInfo;
        BSTR
        bstrDescription;
        // Number of error records.
        ULONG                   nRecs;
        ULONG                   nRec;

        // SQL Server error information from
ISQLServerErrorInfo.
        SSERRORINFO*            pSSErrorInfo =
NULL;
        OLECHAR*                pSSErrorStrings =
NULL;

        assert(pObjectWithError != NULL);

        pOLEDBErr = new COLEDBERR(szLocation);

        pOLEDBErr->m_NativeError = 0;
        pOLEDBErr->m_eAction = eAction;
        pOLEDBErr->m_bDeadLock = FALSE;

        szTmp[0] = 0;

        // Only ask for error information if the
interface supports it.
        // Note: SQLOLEDB provider supports error
interface, so this check is
        // for good style only.
        hr = pObjectWithError-
>QueryInterface(IID_ISupportErrorInfo, (void**)
&pISupportErrorInfo);
        if (FAILED(hr))
        {
                _snprintf(szMsg, sizeof(szMsg),
"SupportErrorInfo interface not supported (hr=0x%X)",
hr);
                pOLEDBErr->m_OLEDBErrStr = new
char[strlen(szMsg)+1];
                strcpy(pOLEDBErr->m_OLEDBErrStr,
szMsg);
                throw pOLEDBErr;
        }
        /*if (FAILED(pISupportErrorInfo-
>InterfaceSupportsErrorInfo(IID_InterfaceWithError)))
        {
                _snprintf(szMsg, sizeof(szMsg),
"InterfaceWithError interface not supported");
                pOLEDBErr->m_OLEDBErrStr = new
char[strlen(szMsg)+1];
                strcpy(pOLEDBErr->m_OLEDBErrStr,
szMsg);
                return;
        }*/

        // Do not test the return of GetErrorInfo.
It can succeed and return
        // a NULL pointer in pIErrorInfoAll. Simply
test the pointer.
        GetErrorInfo(0, &pIErrorInfoAll);

        if (pIErrorInfoAll != NULL)
        {
                // Test to see if it's a valid
OLE DB IErrorInfo interface
                // exposing a list of records.
                if (SUCCEEDED(pIErrorInfoAll-
>QueryInterface(IID_IErrorRecords,      (void**)
&pIErrorRecords)))
                {
                        pIErrorRecords-
>GetRecordCount(&nRecs);

                        // Within each record,
retrieve information from each
                        // of the defined
interfaces.
                        for (nRec = 0; nRec <
nRecs; nRec++)
                        {
                                // Request
the generic SQL error interface.
        pIErrorRecords->GetCustomErrorObject(nRec,

        IID_ISQLErrorInfo, // generic SQL error
interface

        (IUnknown**) &pISQLErrorInfo);

                                if
(pISQLErrorInfo != NULL)
                                {
                                        //
Request SQL Server-specific error interface, not the
generic SQL error interface.

        pISQLErrorInfo->QueryInterface(

        IID_ISQLServerErrorInfo, // SQL Server
error interface
        (void**) &pISQLServerErrorInfo);
                                }

                                // Test to
ensure the reference is valid, then
                                // get error
information from ISQLServerErrorInfo.
                                if
(pISQLServerErrorInfo != NULL)
                                {

        pISQLServerErrorInfo-
>GetErrorInfo(&pSSErrorInfo, &pSSErrorStrings);

                                        //
ISQLServerErrorInfo::GetErrorInfo succeeds
                                        //
even when it has nothing to return. Test the
                                        //
pointers before using.
                                        if
(pSSErrorInfo)
                                        {

        // First, add the error message.


        // Convert Unicode error string to ANSI.

        WideCharToMultiByte(CP_THREAD_ACP, 0,

                pSSErrorInfo->pwszMessage, -1,

                szMsg, sizeof(szMsg),

                NULL, NULL);


        // quit if there isn't enough room to
concatenate error text

        if ( (strlen(szMsg) + 2) > (sizeof(szTmp) -
strlen(szTmp)) )

                break;


        // include line break after first error msg

        if (szTmp[0] != 0)

                strcat( szTmp, "\r\n");

        // concatenate the error record to the
overall error message

        strcat( szTmp, szMsg );


        // Second, add the stored procedure name
and line number, if available.
```


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```
        if (wcslen(pSSErrorInfo->pwszProcedure)>0)
        {
                // Prefix with a line break
                iLen = sprintf(szMsg,
"\r\nProcedure: ");

                // Convert Unicode error string
to ANSI.

        WideCharToMultiByte(CP_THREAD_ACP, 0,
                        pSSErrorInfo-
>pwszProcedure, -1,
                        &szMsg[iLen],
sizeof(szMsg) - iLen,
                        NULL, NULL);

                // Check if have space to add the
line number.
                // Assume the line number takes
no more than 3 digits.
                if ((strlen(szMsg) + 4)<
sizeof(szMsg))
                {

        _snprintf(&szMsg[strlen(szMsg)],
sizeof(szMsg),
                                ":%d",
pSSErrorInfo->wLineNumber);
                }

                // quit if there isn't enough
room to concatenate error text
                if ( (strlen(szMsg) + 2) >
(sizeof(szTmp) - strlen(szTmp)) )
                        break;

                // concatenate the error record
to the overall error message
                strcat( szTmp, szMsg );

                // copy the overall error string
to the exception
                pOLEDBErr->m_OLEDBErrStr = new
char[strlen(szTmp)+1];
                strcpy(pOLEDBErr->m_OLEDBErrStr,
szTmp);
        }

        // Third, capture the (first) database
error

        if (pOLEDBErr->m_NativeError == 0 &&
pSSErrorInfo->lNative != 0)
        {
                pOLEDBErr->m_NativeError =
pSSErrorInfo->lNative;

                // Check for deadlock error code
and set the deadlock flag
                if (pSSErrorInfo->lNative ==
1205)
                {
                        pOLEDBErr->m_bDeadLock
= TRUE;
                }
        }

        // IMalloc::Free needed to release
references
        // on returned values.
        if (m_pIMalloc != NULL)
        {
                m_pIMalloc-
>Free(pSSErrorStrings);
                m_pIMalloc->Free(pSSErrorInfo);
        }
                                                }

        pISQLServerErrorInfo->Release();
                                        }
                                        else
                                        {
                                                //
Custom error object is not supported.
                                                //
Use general OLE-DB error interface.

                                                //
Get the numeric error code

        pIErrorRecords->GetBasicErrorInfo(nRec,
&BasicErrorInfo);

                                                if
(pOLEDBErr->m_NativeError == 0)
                                                {
        // Get the failed call HRESULT code, which
is not really the native error

        pOLEDBErr->m_NativeError =
BasicErrorInfo.hrError;
                                                }

                                                //
Try to get the string description of the error.

        pIErrorRecords->GetErrorInfo(nRec,
LOCALE_USER_DEFAULT,
(IErrorInfo**)&pIErrorInfoRecord);

                                                if
(pIErrorInfoRecord)
                                                {

        pIErrorInfoRecord-
>GetDescription(&bstrDescription);

        // Convert Unicode error string to ANSI.

        WideCharToMultiByte(CP_THREAD_ACP, 0,
                bstrDescription, -1,
                szMsg, sizeof(szMsg),
                NULL, NULL);

        pOLEDBErr->m_OLEDBErrStr = new
char[strlen(szMsg)+1];

        strcpy(pOLEDBErr->m_OLEDBErrStr, szMsg);

                                                }
                                        }
                                }       // for()
                        }       // if
(SUCCEEDED(pIErrorInfoAll-
>QueryInterface(IID_IErrorRecords, (void**)
&pIErrorRecords)))
                else
```


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```
                    {         // No IErrorRecords
interface supported. Use default IErrorInfo.
                              // Note: SQLOLEDB
supports IErrorRecords, so this check is for good
style only.
                              _snprintf(szMsg,
sizeof(szMsg), "IErrorRecords interface not
supported");
                              pOLEDBErr-
>m_OLEDBErrStr = new char[strlen(szMsg)+1];
                              strcpy(pOLEDBErr-
>m_OLEDBErrStr, szMsg);
                    }

                    pIErrorInfoAll->Release();

          }         // if (pIErrorInfoAll != NULL)
          else
          {
                    // No IErrorInfo interface
supported.
                    // Note: SQLOLEDB supports
IErrorInfo, so this check is for good style only.
                    _snprintf(szMsg, sizeof(szMsg),
"IErrorInfo interface not supported");
                    pOLEDBErr->m_OLEDBErrStr = new
char[strlen(szMsg)+1];
                    strcpy(pOLEDBErr->m_OLEDBErrStr,
szMsg);
          }

          throw pOLEDBErr;
}

/*
*
*         Create a new command object from the SQL
text passed in.
*
*/
void CTPCC_OLEDB::CreateCommand(wchar_t*
szSQLCommand,                         // I: SQL
query for the command

                              ICommandText**
ppICommandText      // O: returned command object

                              )
{
          HRESULT                                   hr;

          // Create a new command object
          hr = m_pIDBCreateCommand-
>CreateCommand(NULL, IID_ICommandText, (IUnknown
**)ppICommandText);
          if (FAILED(hr))
          {
                    ThrowError(m_pIDBCreateCommand,
COLEDBERR::eCreateCommand,
"CTPCC_OLEDB::CreateCommand");
          }

          // Set command text
          hr = (*ppICommandText)-
>SetCommandText(DBGUID_SQL, szSQLCommand);
          if (FAILED(hr))
          {
                    ThrowError(*ppICommandText,
COLEDBERR::eSetCommandText,
"CTPCC_OLEDB::CreateCommand");
          }

          // Prepare the command
          PrepareCommand(*ppICommandText);
}

/*
*         QueryInterface and Prepare in one function
for simplicity.
*         DEFERRED PREPARE property is set to off to
prepare immediatelly.
*/
void CTPCC_OLEDB::PrepareCommand(ICommandText*
pICommandText)
{
          HRESULT                                   hr;
          ICommandPrepare*    pICommandPrepare;
          ICommandProperties* pICommandProperties;
          DBPROPSET
          rowSetPropSet;
          DBPROP
          rowSetProp;

          // Set the deferred prepare property to
false.
          rowSetProp.dwPropertyID =
SSPROP_DEFERPREPARE;
          memset(&rowSetProp.vValue, 0,
sizeof(rowSetProp.vValue));
          rowSetProp.dwOptions =
DBPROPOPTIONS_REQUIRED;
          rowSetProp.colid = DB_NULLID;

          rowSetPropSet.cProperties = 1;
          rowSetPropSet.guidPropertySet =
DBPROPSET_SQLSERVERROWSET;
          rowSetPropSet.rgProperties = &rowSetProp;

          // Query interface for setting properties
          hr = pICommandText-
>QueryInterface(IID_ICommandProperties, (void
**)&pICommandProperties);
          if (FAILED(hr))
          {
                    ThrowError(pICommandText,
COLEDBERR::eQueryInterface,
"CTPCC_OLEDB::PrepareCommand");
          }

          // Set the property set
          hr = pICommandProperties->SetProperties(1,
&rowSetPropSet);
          if (FAILED(hr))
          {
                    ThrowError(pICommandText,
COLEDBERR::eQueryInterface,
"CTPCC_OLEDB::PrepareCommand");
          }

          // Get interface for preparing commands
          hr = pICommandText-
>QueryInterface(IID_ICommandPrepare, (void
**)&pICommandPrepare);
          if (FAILED(hr))
          {
                    ThrowError(pICommandText,
COLEDBERR::eQueryInterface,
"CTPCC_OLEDB::PrepareCommand");
          }

          // Prepare Payment command
          hr = pICommandPrepare->Prepare(0xFFFFFFFF);
          if (FAILED(hr))
          {
                    ThrowError(pICommandPrepare,
COLEDBERR::ePrepare, "CTPCC_OLEDB::PrepareCommand");
          }
}

/*
*         Initialize fields of an array of bindings
structures.
*         Needs to be called before setting
individual parameter/column bindings.
*/
void CTPCC_OLEDB::InitBindings(DBBINDING*
pDBBindings,        // IO: array of bindings

                    int iCount,
                              // I: number of
elements in the array

                    eBindingType BindingType)     //
I: what the bindings will be used for
(parameters/columns)
{
          int i;

          for(i = 0; i < iCount; i++)
    {
                    pDBBindings[i].iOrdinal = i + 1;
          pDBBindings[i].obLength = 0;
          pDBBindings[i].obStatus = 0;
          pDBBindings[i].pTypeInfo = NULL;
          pDBBindings[i].pObject = NULL;
          pDBBindings[i].pBindExt = NULL;
          pDBBindings[i].dwPart = DBPART_VALUE;

                    switch (BindingType)
                    {
                    case eInputParameter:
                              pDBBindings[i].eParamIO
= DBPARAMIO_INPUT;
                              break;
                    case eOutputParameter:
                              pDBBindings[i].eParamIO
= DBPARAMIO_OUTPUT;
```


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```
                        break;
                case eInputOutputParameter:
                        pDBBindings[i].eParamIO
= DBPARAMIO_INPUT | DBPARAMIO_OUTPUT;
                        break;
                case eOutputColumn:
                        pDBBindings[i].eParamIO
= DBPARAMIO_NOTPARAM;
                        break;
                default:
                        assert(false);      //
this should never happen
                }

        pDBBindings[i].dwMemOwner =
DBMEMOWNER_CLIENTOWNED;
        pDBBindings[i].dwFlags = 0;
                pDBBindings[i].bPrecision = 0;
        pDBBindings[i].bScale = 0;
    }
}

/*
*         Perform binding for one parameter or output
column.
*
*/
void CTPCC_OLEDB::SetBinding(DBBINDING* pDBBinding,
// I: binding row structure

                    size_t obValue,
          // I: parameter (column) offset in the user
buffer

                    size_t cbMaxLen,             //
I: parameter (column) length

                    DBTYPE wType
          // I: parameter (column) type

                    )
{
          pDBBinding->obValue = (ULONG)obValue;
          pDBBinding->cbMaxLen = (ULONG)cbMaxLen;
          pDBBinding->wType = wType;
}

void CTPCC_OLEDB::InitStockLevelParams()
{
          int
                    i;
          HRESULT
          hr;
          wchar_t
          szName[iMAX_SP_NAME_LEN];
          IAccessor*
          pIAccessor;
    const ULONG
          nInputParams = 3;   // input parameters
          const ULONG
          nOutputParams = 1;  // output 1st result
set columns
          // Structure to bind in accessor
          DBBINDING
          acInputDBBinding[nInputParams];
          DBBINDSTATUS
          acInputDBBindStatus[nInputParams];
          DBBINDING
          acOutputDBBinding[nOutputParams];
          DBBINDSTATUS
          acOutputDBBindStatus[nOutputParams];

          // Set command text
          _snwprintf(szName,
sizeof(szName)/sizeof(szName[0]),
                              L"{call
%stpcc_stocklevel (?,?,?)}", m_szSPPrefix);

          // Create and Prepare a new command object
for StockLevel.
          CreateCommand(szName,
&m_pIStockLevelCommand);

          // Describe the consumer buffer by filling
in the array
    // of DBBINDING structures.  Each binding
associates
    // a single parameter to the consumer's buffer.
          InitBindings(&acInputDBBinding[0],
nInputParams, eInputParameter);

          i = 0;
    // StockLevel parameter 1
          SetBinding(&acInputDBBinding[i++],
offsetof(STOCK_LEVEL_DATA, w_id),
sizeof(m_txn.StockLevel.w_id), DBTYPE_I4);

    // StockLevel parameter 2
          SetBinding(&acInputDBBinding[i++],
offsetof(STOCK_LEVEL_DATA, d_id),
sizeof(m_txn.StockLevel.d_id), DBTYPE_UI1);

          // StockLevel parameter 3
          SetBinding(&acInputDBBinding[i++],
offsetof(STOCK_LEVEL_DATA, threshold),
sizeof(m_txn.StockLevel.threshold), DBTYPE_I2);

          hr = m_pIStockLevelCommand-
>QueryInterface(IID_IAccessor, (void **)&pIAccessor);
          if (FAILED(hr))
          {
                    ThrowError(m_pIStockLevelCommand,
COLEDBERR::eQueryInterface,
"InitStockLevelParams()");
          }

          hr = pIAccessor->CreateAccessor(
                              DBACCESSOR_PARAMETERDATA,
                              nInputParams,
                              acInputDBBinding,
                              sizeof(STOCK_LEVEL_DATA),

&m_hStockLevelInputAccessor,
                              acInputDBBindStatus);
          if (FAILED(hr))
          {
                    ThrowError(pIAccessor,
COLEDBERR::eCreateAccessor,
"InitStockLevelParams()");
          }

          m_StockLevelExecuteParams.cParamSets = 1;
          m_StockLevelExecuteParams.hAccessor =
m_hStockLevelInputAccessor;
          m_StockLevelExecuteParams.pData =
&m_txn.StockLevel;

          // Now fill the binding information for
result set 1 output columns
          InitBindings(&acOutputDBBinding[0],
nOutputParams, eOutputColumn);

          // Binding for a rowset that may return
more than one row.
          i = 0;
          // StockLevel output column 1
          SetBinding(&acOutputDBBinding[i++],
offsetof(STOCK_LEVEL_DATA, low_stock),
sizeof(m_txn.StockLevel.low_stock), DBTYPE_I4);

          hr = pIAccessor->CreateAccessor(
                              DBACCESSOR_ROWDATA |
DBACCESSOR_OPTIMIZED,
                              nOutputParams,
                              acOutputDBBinding,
                              sizeof(STOCK_LEVEL_DATA),

&m_hStockLevelOutputAccessor,
                              acOutputDBBindStatus);
          if (FAILED(hr))
          {
                    ThrowError(pIAccessor,
COLEDBERR::eCreateAccessor,
"InitStockLevelParams()");
          }
}

void CTPCC_OLEDB::StockLevel()
{
          HRESULT                         hr;
          int
          iTryCount = 0;
          IRowset*            pRowset;
          LONG                            cRows = 1;
          // number of rows returned in the rowset
          ULONG
          cRowsObtained;
          HROW                            rghRow;
          //returned row handles
          HROW*                           prghRow =
&rghRow;

          while (TRUE)
          {
                    try
                    {
                              // Execute the prepared
command
```


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```
                        hr =
m_pIStockLevelCommand->Execute(NULL, IID_IRowset,
&m_StockLevelExecuteParams, NULL,


          (IUnknown **)&pRowset);
                        if (FAILED(hr))
                        {

          ThrowError(m_pIStockLevelCommand,
COLEDBERR::eExecute, "StockLevel()");
                        }

                        // Fetch the result row
handle(s)
                        hr = pRowset-
>GetNextRows(DB_NULL_HCHAPTER, 0, cRows,
&cRowsObtained, &prghRow);
                        if (FAILED(hr))
                        {

          ThrowError(m_pIStockLevelCommand,
COLEDBERR::eGetNextRows, "StockLevel()");
                        }

                        // Fetch the actual row
data by handle
                        hr = pRowset-
>GetData(rghRow, m_hStockLevelOutputAccessor,
&m_txn.StockLevel);
                        if (FAILED(hr))
                        {

          ThrowError(m_pIStockLevelCommand,
COLEDBERR::eGetData, "StockLevel()");
                        }

                        // Release row(s)
                        hr = pRowset-
>ReleaseRows(cRowsObtained, prghRow, NULL, NULL,
NULL);
                        // Release rowset
                        hr = pRowset-
>Release();


          m_txn.StockLevel.exec_status_code = eOK;

                        break;
                }
                catch (COLEDBERR *e)
                {
                        if ((!e->m_bDeadLock)
|| (++iTryCount > iMaxRetries))
                                throw;

                        // hit deadlock;
backoff for increasingly longer period
                        delete e;
                        Sleep(10 * iTryCount);
                }
        }
```

```
//        if (iTryCount)
//                throw new
CTPCC_OLEDB_ERR(CTPCC_OLEDB_ERR::ERR_RETRIED_TRANS,
iTryCount);
}

void CTPCC_OLEDB::InitNewOrderParams()
{
          int
                  i, j, iOlCount;
          HRESULT
          hr;
          wchar_t
          szName[iMAX_SP_NAME_LEN];
          IAccessor*
          pIAccessor;
    const ULONG
          nInputParams = 5 +
3*MAX_OL_NEW_ORDER_ITEMS;     // input parameters
          const ULONG
          nOutputParams = 5;  // output 1st result
set columns
          const ULONG
          nOutputParams2 = 8; // output 2nd result
set columns
          // Structure to bind in accessor
          DBBINDING
          acInputDBBinding[nInputParams];
          DBBINDSTATUS
          acInputDBBindStatus[nInputParams];
          DBBINDING
          acOutputDBBinding[nOutputParams];
          DBBINDSTATUS
          acOutputDBBindStatus[nOutputParams];
          DBBINDING
          acOutputDBBinding2[nOutputParams2];
          DBBINDSTATUS
          acOutputDBBindStatus2[nOutputParams2];


          // Describe the consumer buffer by filling
in the array
    // of DBBINDING structures.  Each binding
associates
    // a single parameter to the consumer's buffer.
          InitBindings(&acInputDBBinding[0],
nInputParams, eInputParameter);

          i = 0;
    // NewOrder parameter 1
          SetBinding(&acInputDBBinding[i++],
offsetof(NEW_ORDER_DATA, w_id),
sizeof(m_txn.NewOrder.w_id), DBTYPE_I4);

    // NewOrder parameter 2
          SetBinding(&acInputDBBinding[i++],
offsetof(NEW_ORDER_DATA, d_id),
sizeof(m_txn.NewOrder.d_id), DBTYPE_UI1);

          // NewOrder parameter 3
          SetBinding(&acInputDBBinding[i++],
offsetof(NEW_ORDER_DATA, c_id),
sizeof(m_txn.NewOrder.c_id), DBTYPE_I4);
```

```
          // NewOrder parameter 4
          SetBinding(&acInputDBBinding[i++],
offsetof(NEW_ORDER_DATA, o_ol_cnt),
sizeof(m_txn.NewOrder.o_ol_cnt), DBTYPE_UI1);

          // NewOrder parameter 5
          SetBinding(&acInputDBBinding[i++],
offsetof(NEW_ORDER_DATA, o_all_local),
sizeof(m_txn.NewOrder.o_all_local), DBTYPE_UI1);

          for (j=0; j<MAX_OL_NEW_ORDER_ITEMS; j++)
          {

          SetBinding(&acInputDBBinding[i++],
offsetof(NEW_ORDER_DATA, OL[j].ol_i_id),
sizeof(m_txn.NewOrder.OL[j].ol_i_id), DBTYPE_I4);

          SetBinding(&acInputDBBinding[i++],
offsetof(NEW_ORDER_DATA, OL[j].ol_supply_w_id),
sizeof(m_txn.NewOrder.OL[j].ol_supply_w_id),
DBTYPE_I4);

          SetBinding(&acInputDBBinding[i++],
offsetof(NEW_ORDER_DATA, OL[j].ol_quantity),
sizeof(m_txn.NewOrder.OL[j].ol_quantity), DBTYPE_I2);

          }


          // Now fill the binding information for
result set 1 output columns
          InitBindings(&acOutputDBBinding[0],
nOutputParams, eOutputColumn);

          // Binding for the order line rowsets (each
consist of one row).
          // Bind to offsets of the OL_NEW_ORDER_DATA
structure instead of NEW_ORDER_DATA.
          // IRowset::GetData() will be passed
individual array slots OL[i] to fetch the data
          // from the row set.

          i = 0;
          // NewOrder output column 1
          SetBinding(&acOutputDBBinding[i++],
offsetof(OL_NEW_ORDER_DATA, ol_i_name),
sizeof(m_txn.NewOrder.OL[0].ol_i_name), DBTYPE_STR);

          // NewOrder output column 2
          SetBinding(&acOutputDBBinding[i++],
offsetof(OL_NEW_ORDER_DATA, ol_stock),
sizeof(m_txn.NewOrder.OL[0].ol_stock), DBTYPE_I2);

          // NewOrder output column 3
          SetBinding(&acOutputDBBinding[i++],
offsetof(OL_NEW_ORDER_DATA, ol_brand_generic),
sizeof(m_txn.NewOrder.OL[0].ol_brand_generic),
DBTYPE_STR);

          // NewOrder output column 4
          SetBinding(&acOutputDBBinding[i++],
offsetof(OL_NEW_ORDER_DATA, ol_i_price),
sizeof(m_txn.NewOrder.OL[0].ol_i_price), DBTYPE_R8);
```


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```
          // NewOrder output column 5
          SetBinding(&acOutputDBBinding[i++],
offsetof(OL_NEW_ORDER_DATA, ol_amount),
sizeof(m_txn.NewOrder.OL[0].ol_amount), DBTYPE_R8);



          // Now fill the binding information for
result set 2 output columns
          InitBindings(&acOutputDBBinding2[0],
nOutputParams2, eOutputColumn);

          i = 0;
          // NewOrder output column 1
          SetBinding(&acOutputDBBinding2[i++],
offsetof(NEW_ORDER_DATA, w_tax),
sizeof(m_txn.NewOrder.w_tax), DBTYPE_R8);

          // NewOrder output column 2
          SetBinding(&acOutputDBBinding2[i++],
offsetof(NEW_ORDER_DATA, d_tax),
sizeof(m_txn.NewOrder.d_tax), DBTYPE_R8);

          // NewOrder output column 3
          SetBinding(&acOutputDBBinding2[i++],
offsetof(NEW_ORDER_DATA, o_id),
sizeof(m_txn.NewOrder.o_id), DBTYPE_I4);

          // NewOrder output column 4
          SetBinding(&acOutputDBBinding2[i++],
offsetof(NEW_ORDER_DATA, c_last),
sizeof(m_txn.NewOrder.c_last), DBTYPE_STR);

          // NewOrder output column 5
          SetBinding(&acOutputDBBinding2[i++],
offsetof(NEW_ORDER_DATA, c_discount),
sizeof(m_txn.NewOrder.c_discount), DBTYPE_R8);

          // NewOrder output column 6
          SetBinding(&acOutputDBBinding2[i++],
offsetof(NEW_ORDER_DATA, c_credit),
sizeof(m_txn.NewOrder.c_credit), DBTYPE_STR);

          // NewOrder output column 7
          SetBinding(&acOutputDBBinding2[i++],
offsetof(NEW_ORDER_DATA, o_entry_d),
sizeof(m_txn.NewOrder.o_entry_d),
DBTYPE_DBTIMESTAMP);

          // NewOrder output column 8
          SetBinding(&acOutputDBBinding2[i++],
offsetof(NEW_ORDER_DATA, o_commit_flag),
sizeof(m_txn.NewOrder.o_commit_flag), DBTYPE_I2);

          for (j=0; j<MAX_OL_NEW_ORDER_ITEMS; j++)
          {
                    // Set command text first

                    // Print the fixed first portion
of parameters
                    i = _snwprintf(szName,
sizeof(szName)/sizeof(szName[0]),
          L"{call %stpcc_neworder (?,?,?,?,?",
m_szSPPrefix);

                    // Now print the variable portion
depending on the number of order line parameters
                    for (iOlCount = 0; iOlCount <= j;
++iOlCount)
                    {
                              i +=
_snwprintf(&szName[i],
sizeof(szName)/sizeof(szName[0]) - i, L",?,?,?");

                    }

                    // Print the fixed end
                    if (j != MAX_OL_NEW_ORDER_ITEMS -
1)
                    {         // append 'default' for
the parameters that are not used
                              i +=
_snwprintf(&szName[i],
sizeof(szName)/sizeof(szName[0]) - i, L",default)}");

                    }
                    else      // using all 15 order
line parameters
                    {
                              i +=
_snwprintf(&szName[i],
sizeof(szName)/sizeof(szName[0]) - i, L")}");
                    }

                    // Create and Prepare a new
command object for NewOrder.
                    CreateCommand(szName,
&m_pINewOrderCommand[j]);

                    // Now create the input accessor
for this prepared command
                    hr = m_pINewOrderCommand[j]-
>QueryInterface(IID_IAccessor, (void **)&pIAccessor);
                    if (FAILED(hr))
                    {

          ThrowError(m_pINewOrderCommand[j],
COLEDBERR::eQueryInterface, "InitNewOrderParams()");
                    }

                    hr = pIAccessor->CreateAccessor(


          DBACCESSOR_PARAMETERDATA,

                                                  5 +
3 * (j + 1),


          acInputDBBinding,


          sizeof(NEW_ORDER_DATA),


          &m_hNewOrderInputAccessor[j],


          acInputDBBindStatus);
                    if (FAILED(hr))
                    {
                              ThrowError(pIAccessor,
COLEDBERR::eCreateAccessor, "InitNewOrderParams()");
                    }



          m_NewOrderExecuteParams[j].cParamSets = 1;
                    //
m_NewOrderExecuteParams.hAccessor is set dynamically
at run-time
                    // based on the number of new
order items for the particular transaction call.

          m_NewOrderExecuteParams[j].hAccessor =
m_hNewOrderInputAccessor[j];
                    m_NewOrderExecuteParams[j].pData
= &m_txn.NewOrder;

                    // Create accessor for the first
rowset
                    hr = pIAccessor->CreateAccessor(
                              DBACCESSOR_ROWDATA |
DBACCESSOR_OPTIMIZED,
                              nOutputParams,
                              acOutputDBBinding,

          sizeof(OL_NEW_ORDER_DATA),

          &m_hNewOrderOutputAccessor[j],
                              acOutputDBBindStatus);
                    if (FAILED(hr))
                    {
                              ThrowError(pIAccessor,
COLEDBERR::eCreateAccessor, "InitNewOrderParams()");
                    }

                    // Create accessor for the second
rowset
                    hr = pIAccessor->CreateAccessor(
                              DBACCESSOR_ROWDATA, //
cannot be optimized too because #1 accessor is
                              nOutputParams2,
                              acOutputDBBinding2,
                              sizeof(NEW_ORDER_DATA),

          &m_hNewOrderOutputAccessor2[j],
                              acOutputDBBindStatus2);
                    if (FAILED(hr))
                    {
                              ThrowError(pIAccessor,
COLEDBERR::eCreateAccessor, "InitNewOrderParams()");
                    }

                    pIAccessor->Release();
          }
```


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```
}

void CTPCC_OLEDB::NewOrder()
{
          HRESULT                                   hr;
          int
          iTryCount = 0;
          IMultipleResults*   pMultipleResults;
          IRowset*                        pRowset;
          IRowset*                        pRowset2;
          LONG
          cRows = 1;          // number of rows
returned in the 1st rowset
          ULONG
          cRowsObtained;
          HROW
          rghRows;            //returned row handles
for the 1st result set
          HROW*
          prghRows = &rghRows;
          LONG
          cRows2 = 1;         // number of rows
returned in the 2nd rowset
          ULONG
          cRowsObtained2;
          HROW
          rghRows2;           //returned row handle
for the 2nd result set
          HROW*
          prghRows2 = &rghRows2;
          int
          i;
          long
          lRowsAffected;      // the number of
affected rows for a rowset
          int
          iHandleIndex;       // index into the
handle arrays based on the orders count

          // check whether any order lines are for a
remote warehouse
          m_txn.NewOrder.o_all_local = 1;
          for (i = 0; i < m_txn.NewOrder.o_ol_cnt;
i++)
          {
                    if
(m_txn.NewOrder.OL[i].ol_supply_w_id !=
m_txn.NewOrder.w_id)
                    {

          m_txn.NewOrder.o_all_local = 0;  // at
least one remote warehouse
                              break;
                    }
          }

          iHandleIndex = m_txn.NewOrder.o_ol_cnt - 1;
          // for convenience

          while (TRUE)
          {
                    try
                    {
                              // Execute the prepared
command (according to the number of new orders)
                              // Ask for
IMultipleResults because it returns 2 rowsets.
                              hr =
m_pINewOrderCommand[iHandleIndex]->Execute(


          NULL, IID_IMultipleResults,


          &m_NewOrderExecuteParams[iHandleIndex],


          NULL,


          (IUnknown **)&pMultipleResults);
                              if (FAILED(hr))
                              {

          ThrowError(m_pINewOrderCommand[iHandleIndex
], COLEDBERR::eExecute, "NewOrder()");
                              }


          ////////////////////////
                              // Get order line
results

          ////////////////////////

          m_txn.NewOrder.total_amount = 0;
                              for (i = 0; i <
m_txn.NewOrder.o_ol_cnt; ++i)
                              {
                                        // Get the
first rowset object
                                        hr =
pMultipleResults->GetResult(NULL, 0, IID_IRowset,
&lRowsAffected, (IUnknown **)&pRowset);
                                        if
(FAILED(hr))
                                        {


          char szTmp[256];


          _snprintf(szTmp, sizeof(szTmp), "NewOrder()
result set %d, hr=0x%X", i, hr);


          ThrowError(m_pINewOrderCommand[m_txn.NewOrd
er.o_ol_cnt - 1], COLEDBERR::eGetResult, szTmp);
                                        }

                                        // Fetch the
result row handle(s)
                                        hr = pRowset-
>GetNextRows(DB_NULL_HCHAPTER, 0, cRows,
&cRowsObtained, &prghRows);
                                        if
(FAILED(hr))
                                        {

          ThrowError(m_pINewOrderCommand[iHandleIndex
], COLEDBERR::eGetNextRows, "NewOrder()");
                                        }

                                        // Fetch the
actual row data by handle
                                        hr = pRowset-
>GetData(rghRows,
m_hNewOrderOutputAccessor[iHandleIndex],
&m_txn.NewOrder.OL[i]);
                                        if
(FAILED(hr))
                                        {

          ThrowError(m_pINewOrderCommand[iHandleIndex
], COLEDBERR::eGetData, "NewOrder()");
                                        }


          m_txn.NewOrder.total_amount +=
m_txn.NewOrder.OL[i].ol_amount;

                                        // Release
row(s)
                                        hr = pRowset-
>ReleaseRows(cRowsObtained, prghRows, NULL, NULL,
NULL);
                                        // Release
rowset
                                        hr = pRowset-
>Release();
                              }


          ////////////////////////////////
                              // Get the second
rowset object

          ////////////////////////////////
                              hr = pMultipleResults-
>GetResult(NULL, 0, IID_IRowset, &lRowsAffected,
(IUnknown **)&pRowset2);
                              if (FAILED(hr))
                              {
                                        char
szTmp[256];


          _snprintf(szTmp, sizeof(szTmp), "NewOrder()
result set %d, hr=%d", i, hr);


          ThrowError(m_pINewOrderCommand[iHandleIndex
], COLEDBERR::eGetResult, szTmp);
                              }

                              // Fetch the result row
handle(s)
                              hr = pRowset2-
>GetNextRows(DB_NULL_HCHAPTER, 0, cRows2,
&cRowsObtained2, &prghRows2);
```


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```
                            if (FAILED(hr))
                            {

          ThrowError(m_pINewOrderCommand[iHandleIndex
], COLEDBERR::eGetNextRows, "NewOrder()");
                            }

                            // Fetch the actual row
data by handle
                            hr = pRowset2-
>GetData(rghRows2,
m_hNewOrderOutputAccessor2[iHandleIndex],
&m_txn.NewOrder);
                            if (FAILED(hr))
                            {

          ThrowError(m_pINewOrderCommand[iHandleIndex
], COLEDBERR::eGetData, "NewOrder()");
                            }

                            // Release row(s)
                            hr = pRowset2-
>ReleaseRows(cRowsObtained2, prghRows2, NULL, NULL,
NULL);
                            // Release rowset
                            hr = pRowset2-
>Release();

                            // Release the common
MultipleResults interface
                            hr = pMultipleResults-
>Release();

                            if
(m_txn.NewOrder.o_all_local == 1)
                            {

          m_txn.NewOrder.total_amount *= ((1 +
m_txn.NewOrder.w_tax + m_txn.NewOrder.d_tax) * (1 -
m_txn.NewOrder.c_discount));

          m_txn.NewOrder.exec_status_code = eOK;
                            }
                            else
                            {

          m_txn.NewOrder.exec_status_code =
eInvalidItem;
                            }

                            break;

                  }
                  catch (COLEDBERR *e)
                  {
                            if ((!e->m_bDeadLock)
|| (++iTryCount > iMaxRetries))
                                      throw;

                            // hit deadlock;
backoff for increasingly longer period
                            delete e;
                            Sleep(10 * iTryCount);
                  }
          }

//        if (iTryCount)
//                  throw new
CTPCC_OLEDB_ERR(CTPCC_OLEDB_ERR::ERR_RETRIED_TRANS,
iTryCount);
}

void CTPCC_OLEDB::InitPaymentParams()
{
          int
                  i;
          HRESULT
          hr;
          wchar_t
          szName[iMAX_SP_NAME_LEN];
          IAccessor*
          pIAccessor;
    const ULONG
          nInputParams = 7;   // input parameters
          const ULONG
          nOutputParams = 27; // output result set
columns
          // Structure to bind in accessor
          DBBINDING
          acInputDBBinding[nInputParams];
          DBBINDSTATUS
          acInputDBBindStatus[nInputParams];
          DBBINDING
          acOutputDBBinding[nOutputParams];
          DBBINDSTATUS
          acOutputDBBindStatus[nOutputParams];

          // Set command text
          _snwprintf(szName,
sizeof(szName)/sizeof(szName[0]), L"{call
%stpcc_payment(?,?,?,?,?,?,?)}", m_szSPPrefix);

          // Create and Prepare a new command object
for Payment.
          CreateCommand(szName, &m_pIPaymentCommand);


          // Describe the consumer buffer by filling
in the array
    // of DBBINDING structures.  Each binding
associates
    // a single parameter to the consumer's buffer.
          InitBindings(&acInputDBBinding[0],
nInputParams, eInputParameter);

          i = 0;
    // Payment parameter 1
          SetBinding(&acInputDBBinding[i++],
offsetof(PAYMENT_DATA, w_id),
sizeof(m_txn.Payment.w_id), DBTYPE_I4);

    // Payment parameter 2
          SetBinding(&acInputDBBinding[i++],
offsetof(PAYMENT_DATA, c_w_id),
sizeof(m_txn.Payment.c_w_id), DBTYPE_I4);

          // Payment parameter 3
          SetBinding(&acInputDBBinding[i++],
offsetof(PAYMENT_DATA, h_amount),
sizeof(m_txn.Payment.h_amount), DBTYPE_R8);

    // Payment parameter 4
          SetBinding(&acInputDBBinding[i++],
offsetof(PAYMENT_DATA, d_id),
sizeof(m_txn.Payment.d_id), DBTYPE_UI1);

          // Payment parameter 5
          SetBinding(&acInputDBBinding[i++],
offsetof(PAYMENT_DATA, c_d_id),
sizeof(m_txn.Payment.c_d_id), DBTYPE_UI1);

          // Payment parameter 6
          SetBinding(&acInputDBBinding[i++],
offsetof(PAYMENT_DATA, c_id),
sizeof(m_txn.Payment.c_id), DBTYPE_I4);

          // Payment parameter 7
          SetBinding(&acInputDBBinding[i++],
offsetof(PAYMENT_DATA, c_last),
sizeof(m_txn.Payment.c_last), DBTYPE_STR);

          hr = m_pIPaymentCommand-
>QueryInterface(IID_IAccessor, (void **)&pIAccessor);
          if (FAILED(hr))
          {
                    ThrowError(m_pIPaymentCommand,
COLEDBERR::eQueryInterface, "InitPaymentParams()");
          }

          hr = pIAccessor->CreateAccessor(
                              DBACCESSOR_PARAMETERDATA,
                              nInputParams,
                              acInputDBBinding,
                              sizeof(PAYMENT_DATA),
                              &m_hPaymentInputAccessor,
                              acInputDBBindStatus);
          if (FAILED(hr))
          {
                    ThrowError(pIAccessor,
COLEDBERR::eCreateAccessor, "InitPaymentParams()");
          }

          m_PaymentExecuteParams.cParamSets = 1;
          m_PaymentExecuteParams.hAccessor =
m_hPaymentInputAccessor;
          m_PaymentExecuteParams.pData =
&m_txn.Payment;

          // Now fill the binding information for
output columns
          InitBindings(&acOutputDBBinding[0],
nOutputParams, eOutputColumn);

          i = 0;
          // Payment output column 1
          SetBinding(&acOutputDBBinding[i++],
offsetof(PAYMENT_DATA, c_id),
sizeof(m_txn.Payment.c_id), DBTYPE_I4);
```


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```
          // Payment output column 2
          SetBinding(&acOutputDBBinding[i++],
offsetof(PAYMENT_DATA, c_last),
sizeof(m_txn.Payment.c_last), DBTYPE_STR);

          // Payment output column 3
          SetBinding(&acOutputDBBinding[i++],
offsetof(PAYMENT_DATA, h_date),
sizeof(m_txn.Payment.h_date), DBTYPE_DBTIMESTAMP);

          // Payment output column 4
          SetBinding(&acOutputDBBinding[i++],
offsetof(PAYMENT_DATA, w_street_1),
sizeof(m_txn.Payment.w_street_1), DBTYPE_STR);

          // Payment output column 5
          SetBinding(&acOutputDBBinding[i++],
offsetof(PAYMENT_DATA, w_street_2),
sizeof(m_txn.Payment.w_street_2), DBTYPE_STR);

          // Payment output column 6
          SetBinding(&acOutputDBBinding[i++],
offsetof(PAYMENT_DATA, w_city),
sizeof(m_txn.Payment.w_city), DBTYPE_STR);

          // Payment output column 7
          SetBinding(&acOutputDBBinding[i++],
offsetof(PAYMENT_DATA, w_state),
sizeof(m_txn.Payment.w_state), DBTYPE_STR);

          // Payment output column 8
          SetBinding(&acOutputDBBinding[i++],
offsetof(PAYMENT_DATA, w_zip),
sizeof(m_txn.Payment.w_zip), DBTYPE_STR);

          // Payment output column 9
          SetBinding(&acOutputDBBinding[i++],
offsetof(PAYMENT_DATA, d_street_1),
sizeof(m_txn.Payment.d_street_1), DBTYPE_STR);

          // Payment output column 10
          SetBinding(&acOutputDBBinding[i++],
offsetof(PAYMENT_DATA, d_street_2),
sizeof(m_txn.Payment.d_street_2), DBTYPE_STR);

          // Payment output column 11
          SetBinding(&acOutputDBBinding[i++],
offsetof(PAYMENT_DATA, d_city),
sizeof(m_txn.Payment.d_city), DBTYPE_STR);

          // Payment output column 12
          SetBinding(&acOutputDBBinding[i++],
offsetof(PAYMENT_DATA, d_state),
sizeof(m_txn.Payment.d_state), DBTYPE_STR);

          // Payment output column 13
          SetBinding(&acOutputDBBinding[i++],
offsetof(PAYMENT_DATA, d_zip),
sizeof(m_txn.Payment.d_zip), DBTYPE_STR);

          // Payment output column 14
          SetBinding(&acOutputDBBinding[i++],
offsetof(PAYMENT_DATA, c_first),
sizeof(m_txn.Payment.c_first), DBTYPE_STR);

          // Payment output column 15
          SetBinding(&acOutputDBBinding[i++],
offsetof(PAYMENT_DATA, c_middle),
sizeof(m_txn.Payment.c_middle), DBTYPE_STR);

          // Payment output column 16
          SetBinding(&acOutputDBBinding[i++],
offsetof(PAYMENT_DATA, d_street_1),
sizeof(m_txn.Payment.d_street_1), DBTYPE_STR);

          // Payment output column 17
          SetBinding(&acOutputDBBinding[i++],
offsetof(PAYMENT_DATA, d_street_2),
sizeof(m_txn.Payment.d_street_2), DBTYPE_STR);

          // Payment output column 18
          SetBinding(&acOutputDBBinding[i++],
offsetof(PAYMENT_DATA, d_city),
sizeof(m_txn.Payment.d_city), DBTYPE_STR);

          // Payment output column 19
          SetBinding(&acOutputDBBinding[i++],
offsetof(PAYMENT_DATA, d_state),
sizeof(m_txn.Payment.d_state), DBTYPE_STR);

          // Payment output column 20
          SetBinding(&acOutputDBBinding[i++],
offsetof(PAYMENT_DATA, d_zip),
sizeof(m_txn.Payment.d_zip), DBTYPE_STR);

          // Payment output column 21
          SetBinding(&acOutputDBBinding[i++],
offsetof(PAYMENT_DATA, c_phone),
sizeof(m_txn.Payment.c_phone), DBTYPE_STR);

          // Payment output column 22
          SetBinding(&acOutputDBBinding[i++],
offsetof(PAYMENT_DATA, c_since),
sizeof(m_txn.Payment.c_since), DBTYPE_DBTIMESTAMP);

          // Payment output column 23
          SetBinding(&acOutputDBBinding[i++],
offsetof(PAYMENT_DATA, c_credit),
sizeof(m_txn.Payment.c_credit), DBTYPE_STR);

          // Payment output column 24
          SetBinding(&acOutputDBBinding[i++],
offsetof(PAYMENT_DATA, c_credit_lim),
sizeof(m_txn.Payment.c_credit_lim), DBTYPE_R8);

          // Payment output column 25
          SetBinding(&acOutputDBBinding[i++],
offsetof(PAYMENT_DATA, c_discount),
sizeof(m_txn.Payment.c_discount), DBTYPE_R8);

          // Payment output column 26
          SetBinding(&acOutputDBBinding[i++],
offsetof(PAYMENT_DATA, c_balance),
sizeof(m_txn.Payment.c_balance), DBTYPE_R8);

          // Payment output column 27
          SetBinding(&acOutputDBBinding[i++],
offsetof(PAYMENT_DATA, c_data),
sizeof(m_txn.Payment.c_data), DBTYPE_STR);

          hr = pIAccessor->CreateAccessor(
                              DBACCESSOR_ROWDATA |
DBACCESSOR_OPTIMIZED,
                              nOutputParams,
                              acOutputDBBinding,
                              sizeof(PAYMENT_DATA),

&m_hPaymentOutputAccessor,
                              acOutputDBBindStatus);
          if (FAILED(hr))
          {
                    ThrowError(pIAccessor,
COLEDBERR::eCreateAccessor, "InitPaymentParams()");
          }
}

void CTPCC_OLEDB::Payment()
{
          HRESULT                         hr;
          int
          iTryCount = 0;
          IRowset*              pRowset;
          LONG                            cRows = 1;
          // number of rows returned in the rowset
          ULONG
          cRowsObtained;
          HROW                            rghRow;
          //returned row handles
          HROW*                           prghRow =
&rghRow;


          if (m_txn.Payment.c_id != 0)
                    m_txn.Payment.c_last[0] = 0;

          while (TRUE)
          {
                    try
                    {
                              // Execute the prepared
command
                              hr =
m_pIPaymentCommand->Execute(NULL, IID_IRowset,
&m_PaymentExecuteParams, NULL,


          (IUnknown **)&pRowset);
                              if (FAILED(hr))
                              {

          ThrowError(m_pIPaymentCommand,
COLEDBERR::eExecute, "Payment()");
                              }

                              // Fetch the result row
handle(s)
```


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```
                              hr = pRowset-
>GetNextRows(DB_NULL_HCHAPTER, 0, cRows,
&cRowsObtained, &prghRow);
                              if (FAILED(hr))
                              {

          ThrowError(m_pIPaymentCommand,
COLEDBERR::eGetNextRows, "Payment()");
                              }

                              // Fetch the actual row
data by handle
                              hr = pRowset-
>GetData(rghRow, m_hPaymentOutputAccessor,
&m_txn.Payment);
                              if (FAILED(hr))
                              {

          ThrowError(m_pIPaymentCommand,
COLEDBERR::eGetData, "Payment()");
                              }

                              // Release row(s)
                              hr = pRowset-
>ReleaseRows(cRowsObtained, prghRow, NULL, NULL,
NULL);
                              // Release rowset
                              hr = pRowset-
>Release();

                              if (m_txn.Payment.c_id
== 0)
                                        throw new
CTPCC_OLEDB_ERR( CTPCC_OLEDB_ERR::ERR_INVALID_CUST );
                              else

          m_txn.Payment.exec_status_code = eOK;

                              break;
                    }
                    catch (COLEDBERR *e)
                    {
                              if ((!e->m_bDeadLock)
|| (++iTryCount > iMaxRetries))
                                        throw;

                              // hit deadlock;
backoff for increasingly longer period
                              delete e;
                              Sleep(10 * iTryCount);
                    }
          }

//        if (iTryCount)
//                  throw new
CTPCC_OLEDB_ERR(CTPCC_OLEDB_ERR::ERR_RETRIED_TRANS,
iTryCount);
}

void CTPCC_OLEDB::InitOrderStatusParams()
{
          int
                    i;
          HRESULT
          hr;
          wchar_t
          szName[iMAX_SP_NAME_LEN];
          IAccessor*
          pIAccessor;
    const ULONG
          nInputParams = 4;   // input parameters
          const ULONG
          nOutputParams = 5;  // output 1st result
set columns
          const ULONG
          nOutputParams2 = 8; // output 2nd result
set columns
          // Structure to bind in accessor
          DBBINDING
          acInputDBBinding[nInputParams];
          DBBINDSTATUS
          acInputDBBindStatus[nInputParams];
          DBBINDING
          acOutputDBBinding[nOutputParams];
          DBBINDSTATUS
          acOutputDBBindStatus[nOutputParams];
          DBBINDING
          acOutputDBBinding2[nOutputParams2];
          DBBINDSTATUS
          acOutputDBBindStatus2[nOutputParams2];

          // Set command text
          _snwprintf(szName,
sizeof(szName)/sizeof(szName[0]),
                                        L"{call
%stpcc_orderstatus (?,?,?,?)}", m_szSPPrefix);

          // Create and Prepare a new command object
for OrderStatus.
          CreateCommand(szName,
&m_pIOrderStatusCommand);

          // Describe the consumer buffer by filling
in the array
    // of DBBINDING structures.  Each binding
associates
    // a single parameter to the consumer's buffer.
          InitBindings(&acInputDBBinding[0],
nInputParams, eInputParameter);

          i = 0;
    // OrderStatus parameter 1
          SetBinding(&acInputDBBinding[i++],
offsetof(ORDER_STATUS_DATA, w_id),
sizeof(m_txn.OrderStatus.w_id), DBTYPE_I4);

    // OrderStatus parameter 2
          SetBinding(&acInputDBBinding[i++],
offsetof(ORDER_STATUS_DATA, d_id),
sizeof(m_txn.OrderStatus.d_id), DBTYPE_UI1);

          // OrderStatus parameter 3
          SetBinding(&acInputDBBinding[i++],
offsetof(ORDER_STATUS_DATA, c_id),
sizeof(m_txn.OrderStatus.c_id), DBTYPE_I4);

          // OrderStatus parameter 4
          SetBinding(&acInputDBBinding[i++],
offsetof(ORDER_STATUS_DATA, c_last),
sizeof(m_txn.OrderStatus.c_last), DBTYPE_STR);

          hr = m_pIOrderStatusCommand-
>QueryInterface(IID_IAccessor, (void **)&pIAccessor);
          if (FAILED(hr))
          {

          ThrowError(m_pIOrderStatusCommand,
COLEDBERR::eQueryInterface,
"InitOrderStatusParams()");
          }

          hr = pIAccessor->CreateAccessor(
                              DBACCESSOR_PARAMETERDATA,
                              nInputParams,
                              acInputDBBinding,

sizeof(ORDER_STATUS_DATA),

&m_hOrderStatusInputAccessor,
                              acInputDBBindStatus);
          if (FAILED(hr))
          {
                    ThrowError(pIAccessor,
COLEDBERR::eCreateAccessor,
"InitOrderStatusParams()");
          }

          m_OrderStatusExecuteParams.cParamSets = 1;
          m_OrderStatusExecuteParams.hAccessor =
m_hOrderStatusInputAccessor;
          m_OrderStatusExecuteParams.pData =
&m_txn.OrderStatus;

          // Now fill the binding information for
result set 1 output columns
          InitBindings(&acOutputDBBinding[0],
nOutputParams, eOutputColumn);

          // Binding for a rowset that may return
more than one row.
          // Bind to offsets of the
OL_ORDER_STATUS_DATA structure instead of
ORDER_STATUS_DATA.
          // IRowset::GetData() will be passed
individual array slots OL[i] to fetch the data
          // from the row set.

          i = 0;
          // OrderStatus output column 1
          SetBinding(&acOutputDBBinding[i++],
offsetof(OL_ORDER_STATUS_DATA, ol_supply_w_id),
sizeof(m_txn.OrderStatus.OL[0].ol_supply_w_id),
DBTYPE_I4);

          // OrderStatus output column 2
          SetBinding(&acOutputDBBinding[i++],
offsetof(OL_ORDER_STATUS_DATA, ol_i_id),
sizeof(m_txn.OrderStatus.OL[0].ol_i_id), DBTYPE_I4);
```


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```
          // OrderStatus output column 3
          SetBinding(&acOutputDBBinding[i++],
offsetof(OL_ORDER_STATUS_DATA, ol_quantity),
sizeof(m_txn.OrderStatus.OL[0].ol_quantity),
DBTYPE_I2);

          // OrderStatus output column 4
          SetBinding(&acOutputDBBinding[i++],
offsetof(OL_ORDER_STATUS_DATA, ol_amount),
sizeof(m_txn.OrderStatus.OL[0].ol_amount),
DBTYPE_R8);

          // OrderStatus output column 5
          SetBinding(&acOutputDBBinding[i++],
offsetof(OL_ORDER_STATUS_DATA, ol_delivery_d),
sizeof(m_txn.OrderStatus.OL[0].ol_delivery_d),
DBTYPE_DBTIMESTAMP);

          hr = pIAccessor->CreateAccessor(
                              DBACCESSOR_ROWDATA |
DBACCESSOR_OPTIMIZED,
                              nOutputParams,
                              acOutputDBBinding,

sizeof(OL_ORDER_STATUS_DATA),

&m_hOrderStatusOutputAccessor,
                              acOutputDBBindStatus);
          if (FAILED(hr))
          {
                    ThrowError(pIAccessor,
COLEDBERR::eCreateAccessor,
"InitOrderStatusParams()");
          }

          // Now fill the binding information for
result set 2 output columns
          InitBindings(&acOutputDBBinding2[0],
nOutputParams2, eOutputColumn);

          i = 0;
          // OrderStatus output column 1
          SetBinding(&acOutputDBBinding2[i++],
offsetof(ORDER_STATUS_DATA, c_id),
sizeof(m_txn.OrderStatus.c_id), DBTYPE_I4);

          // OrderStatus output column 2
          SetBinding(&acOutputDBBinding2[i++],
offsetof(ORDER_STATUS_DATA, c_last),
sizeof(m_txn.OrderStatus.c_last), DBTYPE_STR);

          // OrderStatus output column 3
          SetBinding(&acOutputDBBinding2[i++],
offsetof(ORDER_STATUS_DATA, c_first),
sizeof(m_txn.OrderStatus.c_first), DBTYPE_STR);

          // OrderStatus output column 4
          SetBinding(&acOutputDBBinding2[i++],
offsetof(ORDER_STATUS_DATA, c_middle),
sizeof(m_txn.OrderStatus.c_middle), DBTYPE_STR);

          // OrderStatus output column 5
          SetBinding(&acOutputDBBinding2[i++],
offsetof(ORDER_STATUS_DATA, o_entry_d),
sizeof(m_txn.OrderStatus.o_entry_d),
DBTYPE_DBTIMESTAMP);

          // OrderStatus output column 7
          SetBinding(&acOutputDBBinding2[i++],
offsetof(ORDER_STATUS_DATA, o_carrier_id),
sizeof(m_txn.OrderStatus.o_carrier_id), DBTYPE_I2);

          // OrderStatus output column 8
          SetBinding(&acOutputDBBinding2[i++],
offsetof(ORDER_STATUS_DATA, c_balance),
sizeof(m_txn.OrderStatus.c_balance), DBTYPE_R8);

          // OrderStatus output column 9
          SetBinding(&acOutputDBBinding2[i++],
offsetof(ORDER_STATUS_DATA, o_id),
sizeof(m_txn.OrderStatus.o_id), DBTYPE_I4);

          hr = pIAccessor->CreateAccessor(
                              DBACCESSOR_ROWDATA, //
cannot be optimized too because #1 accessor is
                              nOutputParams2,
                              acOutputDBBinding2,
                              sizeof(NEW_ORDER_DATA),

&m_hOrderStatusOutputAccessor2,
                              acOutputDBBindStatus2);
          if (FAILED(hr))
          {
                    ThrowError(pIAccessor,
COLEDBERR::eCreateAccessor,
"InitOrderStatusParams()");
          }
}

void CTPCC_OLEDB::OrderStatus()
{
          HRESULT                                   hr;
          int
          iTryCount = 0;
          IMultipleResults*   pMultipleResults;
          IRowset*                        pRowset;
          IRowset*                        pRowset2;
          LONG
          cRows = MAX_OL_ORDER_STATUS_ITEMS;      //
number of rows returned in the 1st rowset
          ULONG
          cRowsObtained;
          HROW
          rghRows[MAX_OL_ORDER_STATUS_ITEMS];
          //returned row handles for the 1st result
set
          HROW*
          prghRows = &rghRows[0];
          LONG
          cRows2 = 1;         // number of rows
returned in the 2nd rowset
          ULONG
          cRowsObtained2;
          HROW
          rghRows2;           //returned row handle
for the 2nd result set
          HROW*
          prghRows2 = &rghRows2;
          int
          i;
          long
          lRowsAffected;      // the number of
affected rows for a rowset

          if (m_txn.OrderStatus.c_id != 0)
                    m_txn.OrderStatus.c_last[0] = 0;

          while (TRUE)
          {
                    try
                    {
                              // Execute the prepared
command
                              // Ask for
IMultipleResults because it returns 2 rowsets.
                              hr =
m_pIOrderStatusCommand->Execute(NULL,
IID_IMultipleResults, &m_OrderStatusExecuteParams,
NULL,


          (IUnknown **)&pMultipleResults);
                              if (FAILED(hr))
                              {

          ThrowError(m_pIOrderStatusCommand,
COLEDBERR::eExecute, "OrderStatus()");
                              }


          //////////////////////////
                              // Get order line
results

          //////////////////////////



                              // Get the first rowset
object
                              hr = pMultipleResults-
>GetResult(NULL, 0, IID_IRowset, &lRowsAffected,
(IUnknown **)&pRowset);
                              if (FAILED(hr))
                              {

          ThrowError(m_pIOrderStatusCommand,
COLEDBERR::eGetResult, "OrderStatus()");
                              }

                              // Fetch the result row
handle(s)
                              hr = pRowset-
>GetNextRows(DB_NULL_HCHAPTER, 0, cRows,
&cRowsObtained, &prghRows);
                              if (FAILED(hr))
                              {
```


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```
        ThrowError(m_pIOrderStatusCommand,
COLEDBERR::eGetNextRows, "OrderStatus()");
                        }


        m_txn.OrderStatus.o_ol_cnt =
(short)cRowsObtained;

                        // Get the data from
multiple rows in this rowset
                        for (i = 0; i <
m_txn.OrderStatus.o_ol_cnt; ++i)
                        {
                                // Fetch the
actual row data by handle
                                hr = pRowset-
>GetData(rghRows[i], m_hOrderStatusOutputAccessor,
&m_txn.OrderStatus.OL[i]);
                                if
(FAILED(hr))
                                {

        ThrowError(m_pIOrderStatusCommand,
COLEDBERR::eGetData, "OrderStatus()");
                                }
                        }

                        // Release row(s)
                        hr = pRowset-
>ReleaseRows(cRowsObtained, prghRows, NULL, NULL,
NULL);
                        // Release rowset
                        hr = pRowset-
>Release();


        ////////////////////////////////
                        // Get the second
rowset object

        ////////////////////////////////
                        if
(m_txn.OrderStatus.o_ol_cnt > 0)
                        {
                                hr =
pMultipleResults->GetResult(NULL, 0, IID_IRowset,
&lRowsAffected, (IUnknown **)&pRowset2);
                                if
(FAILED(hr))
                                {

        ThrowError(m_pIOrderStatusCommand,
COLEDBERR::eGetResult, "OrderStatus()");
                                }

                                // Fetch the
result row handle(s)
                                hr =
pRowset2->GetNextRows(DB_NULL_HCHAPTER, 0, cRows2,
&cRowsObtained2, &prghRows2);
                                if
(FAILED(hr))
                                {

        ThrowError(m_pIOrderStatusCommand,
COLEDBERR::eGetNextRows, "OrderStatus()");
                                }

                                // Fetch the
actual row data by handle
                                hr =
pRowset2->GetData(rghRows2,
m_hOrderStatusOutputAccessor2, &m_txn.OrderStatus);
                                if
(FAILED(hr))
                                {

        ThrowError(m_pIOrderStatusCommand,
COLEDBERR::eGetData, "OrderStatus()");
                                }

                                // Release
row(s)
                                hr =
pRowset2->Release();
                        }

                        // Release the common
MultipleResults interface
                        hr = pMultipleResults-
>Release();

                        if
(m_txn.OrderStatus.o_ol_cnt == 0)
                                throw new
CTPCC_OLEDB_ERR( CTPCC_OLEDB_ERR::ERR_NO_SUCH_ORDER
);
                        else if
(m_txn.OrderStatus.c_id == 0 &&
m_txn.OrderStatus.c_last[0] == 0)
                                throw new
CTPCC_OLEDB_ERR( CTPCC_OLEDB_ERR::ERR_INVALID_CUST );
                        else

        m_txn.OrderStatus.exec_status_code = eOK;

                        break;

                }
                catch (COLEDBERR *e)
                {
                        if ((!e->m_bDeadLock)
|| (++iTryCount > iMaxRetries))
                                throw;

                        // hit deadlock;
backoff for increasingly longer period
                        delete e;
                        Sleep(10 * iTryCount);
                }
        }

//      if (iTryCount)
//              throw new
CTPCC_OLEDB_ERR(CTPCC_OLEDB_ERR::ERR_RETRIED_TRANS,
iTryCount);
}

void CTPCC_OLEDB::InitDeliveryParams()
{
        int
                i;
        HRESULT
        hr;
        wchar_t
        szName[iMAX_SP_NAME_LEN];
        IAccessor*
        pIAccessor;
    const ULONG
        nInputParams = 2;   // input parameters
        const ULONG
        nOutputParams = 10; // output 1st result
set columns
        // Structure to bind in accessor
        DBBINDING
        acInputDBBinding[nInputParams];
        DBBINDSTATUS
        acInputDBBindStatus[nInputParams];
        DBBINDING
        acOutputDBBinding[nOutputParams];
        DBBINDSTATUS
        acOutputDBBindStatus[nOutputParams];

        // Set command text
        _snwprintf(szName,
sizeof(szName)/sizeof(szName[0]),
                        L"{call %stpcc_delivery
(?,?)}", m_szSPPrefix);

        // Create and Prepare a new command object
for Delivery.
        CreateCommand(szName,
&m_pIDeliveryCommand);

        // Describe the consumer buffer by filling
in the array
    // of DBBINDING structures.  Each binding
associates
    // a single parameter to the consumer's buffer.
        InitBindings(&acInputDBBinding[0],
nInputParams, eInputParameter);

        i = 0;
    // Delivery parameter 1
        SetBinding(&acInputDBBinding[i++],
offsetof(DELIVERY_DATA, w_id),
sizeof(m_txn.Delivery.w_id), DBTYPE_I4);

    // Delivery parameter 2
        SetBinding(&acInputDBBinding[i++],
offsetof(DELIVERY_DATA, o_carrier_id),
sizeof(m_txn.Delivery.o_carrier_id), DBTYPE_I2);

        hr = m_pIDeliveryCommand-
>QueryInterface(IID_IAccessor, (void **)&pIAccessor);
        if (FAILED(hr))
```


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```
        {
                ThrowError(m_pIDeliveryCommand,
COLEDBERR::eQueryInterface, "InitDeliveryParams()");
        }

        hr = pIAccessor->CreateAccessor(
                        DBACCESSOR_PARAMETERDATA,
                        nInputParams,
                        acInputDBBinding,
                        sizeof(DELIVERY_DATA),

&m_hDeliveryInputAccessor,
                        acInputDBBindStatus);
        if (FAILED(hr))
        {
                ThrowError(pIAccessor,
COLEDBERR::eCreateAccessor, "InitDeliveryParams()");
        }

        m_DeliveryExecuteParams.cParamSets = 1;
        m_DeliveryExecuteParams.hAccessor =
m_hDeliveryInputAccessor;
        m_DeliveryExecuteParams.pData =
&m_txn.Delivery;

        // Now fill the binding information for
result set 1 output columns
        InitBindings(&acOutputDBBinding[0],
nOutputParams, eOutputColumn);

        // Binding for a rowset that may return
more than one row.
        for (i = 0; i < 10; ++i)
        {
                // Delivery output column 1
                SetBinding(&acOutputDBBinding[i],
offsetof(DELIVERY_DATA, o_id[i]),
sizeof(m_txn.Delivery.o_id[i]), DBTYPE_I4);
        }

        hr = pIAccessor->CreateAccessor(
                        DBACCESSOR_ROWDATA |
DBACCESSOR_OPTIMIZED,
                        nOutputParams,
                        acOutputDBBinding,
                        sizeof(DELIVERY_DATA),

&m_hDeliveryOutputAccessor,
                        acOutputDBBindStatus);
        if (FAILED(hr))
        {
                ThrowError(pIAccessor,
COLEDBERR::eCreateAccessor, "InitDeliveryParams()");
        }
}

void CTPCC_OLEDB::Delivery()
{
        HRESULT                         hr;
        int
        iTryCount = 0;
        IRowset*            pRowset;
        LONG                            cRows = 1;
        // number of rows returned in the rowset
        ULONG
        cRowsObtained;
        HROW                            rghRow;
        //returned row handles
        HROW*                           prghRow =
&rghRow;

        while (TRUE)
        {
                try
                {
                        // Execute the prepared
command
                        hr =
m_pIDeliveryCommand->Execute(NULL, IID_IRowset,
&m_DeliveryExecuteParams, NULL,


        (IUnknown **)&pRowset);
                        if (FAILED(hr))
                        {

        ThrowError(m_pIDeliveryCommand,
COLEDBERR::eExecute, "Delivery()");
                        }

                        // Fetch the result row
handle(s)
                        hr = pRowset-
>GetNextRows(DB_NULL_HCHAPTER, 0, cRows,
&cRowsObtained, &prghRow);
                        if (FAILED(hr))
                        {

        ThrowError(m_pIDeliveryCommand,
COLEDBERR::eGetNextRows, "Delivery()");
                        }

                        // Fetch the actual row
data by handle
                        hr = pRowset-
>GetData(rghRow, m_hDeliveryOutputAccessor,
&m_txn.Delivery);
                        if (FAILED(hr))
                        {

        ThrowError(m_pIDeliveryCommand,
COLEDBERR::eGetData, "Delivery()");
                        }

                        // Release row(s)
                        hr = pRowset-
>ReleaseRows(cRowsObtained, prghRow, NULL, NULL,
NULL);
                        // Release rowset
                        hr = pRowset-
>Release();


        m_txn.Delivery.exec_status_code = eOK;
                        break;
                }
                catch (COLEDBERR *e)
                {
                        if ((!e->m_bDeadLock)
|| (++iTryCount > iMaxRetries))
                                throw;

                        // hit deadlock;
backoff for increasingly longer period
                        delete e;
                        Sleep(10 * iTryCount);
                }
        }

//      if (iTryCount)
//              throw new
CTPCC_OLEDB_ERR(CTPCC_OLEDB_ERR::ERR_RETRIED_TRANS,
iTryCount);
}
```

# tpcc_oledb.h

```
/*      FILE:               TPCC_OLEDB.H
 *                                  Microsoft
TPC-C Kit Ver. 4.20.000
 *                                  Copyright
Microsoft, 1999-2004
 *                                  Written by
Sergey Vasilevskiy
 *              All Rights Reserved
 *
 *
 *
 *      PURPOSE:  Header file for TPC-C txn class
OLE DB implementation.
 *
 *
 */
#pragma once

// need to declare functions for import, unless
define has already been created
// by the DLL's .cpp module for export.
#ifndef DllDecl
#define DllDecl  __declspec( dllimport )
#endif

#define iMAX_SP_NAME_LEN 256  //maximum length of a
stored procedure name with parameters

// Type of parameter and result set column bindings.
enum eBindingType
{
        eInputParameter,
        eOutputParameter,
        eInputOutputParameter,
        eOutputColumn
};
```


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```
class COLEDBERR : public CBaseErr
{
          public:
                    enum ACTION
                    {
                              eNone,
                              eUnknown,
                              eQueryInterface,
                    // error from QueryInterface
                              eCreateSession,
                              eCreateCommand,
                              eSetCommandText,
                              eExecute,
          // = 6
                              eCreateAccessor,
                              ePrepare,
                              eGetNextRows,
                              eGetData,
                              eGetResult
                    // = 11
                    };

                    COLEDBERR(LPCTSTR szLoc)
                              : CBaseErr(szLoc)
                    {
                              m_eAction = eNone;
                              m_NativeError = 0;
                              m_bDeadLock = FALSE;
                              m_OLEDBErrStr = NULL;
                    };

                    ~COLEDBERR()
                    {
                              if (m_OLEDBErrStr !=
NULL)
                                        delete []
m_OLEDBErrStr;
                    };

                    ACTION    m_eAction;
                    int
          m_NativeError;
                    BOOL      m_bDeadLock;
                    char   *m_OLEDBErrStr;

                    int                 ErrorType()
{return ERR_TYPE_OLEDB;};
                    char*     ErrorTypeStr() { return
"OLEDB"; }
                    int                 ErrorNum()
{return m_NativeError;};
                    char*     ErrorText() {return
m_OLEDBErrStr;};
                    int                 ErrorAction()
{ return (int)m_eAction; }

};

class CTPCC_OLEDB_ERR : public CBaseErr
{
          public:
                    enum TPCC_OLEDB_ERRS
                    {
                              ERR_WRONG_SP_VERSION =
1,        // "Wrong version of stored procs on
database server"
                              ERR_INVALID_CUST,
                    // "Invalid Customer id,name."
                              ERR_NO_SUCH_ORDER,
                    // "No orders found for
customer."
                              ERR_RETRIED_TRANS,
                    // "Retries before transaction
succeeded."
                    };

                    CTPCC_OLEDB_ERR( int iErr ) {
m_errno = iErr; m_iTryCount = 0; };

                    CTPCC_OLEDB_ERR( int iErr, int
iTryCount ) { m_errno = iErr; m_iTryCount =
iTryCount; };

                    int                 m_errno;
                    int                 m_iTryCount;

                    int                 ErrorType()
{return ERR_TYPE_TPCC_OLEDB;};
                    char*     ErrorTypeStr() { return
"TPCC OLEDB"; }
                    int                 ErrorNum()
{return m_errno;};

                    char*     ErrorText();
};

class DllDecl CTPCC_OLEDB : public CTPCC_BASE
{
          private:
                    // declare variables and private
functions here...
                    BOOL
                    m_bDeadlock;                //
transaction was selected as deadlock victim
                    int
                              m_MaxRetries;
          // retry count on deadlock

                    DBPROPSET
                    m_rgInitPropSet;            //
initialization property set used to establish a
connection
                    DBPROP
                    m_InitProperties[4];        //
individual initialization properties

                    IDBCreateSession*
                    m_pIDBCreateSession;        // session
(connection) interface
                    IDBCreateCommand*
                    m_pIDBCreateCommand;        // SQL
command creation interface

                    IMalloc*
                    m_pIMalloc;
                    // Needed to release error strings.

                    // StockLevel
                    ICommandText*
                    m_pIStockLevelCommand;
                    HACCESSOR
                    m_hStockLevelInputAccessor;   // accessor
to bind input parameters
                    HACCESSOR
                    m_hStockLevelOutputAccessor;  // accessor
to bind output columns
                    DBPARAMS
                    m_StockLevelExecuteParams;              //
parameter structure for Execute

                    // NewOrder
                    // One prepared command for each
possible number of new order line items
                    ICommandText*
                    m_pINewOrderCommand[MAX_OL_NEW_ORDER_ITEMS]
;
                    // accessors to bind input
parameters
                    // one for each possible number
of new order line items
                    HACCESSOR
                    m_hNewOrderInputAccessor[MAX_OL_NEW_ORDER_I
TEMS];
                    // accessor to bind output
columns of the first rowset
                    HACCESSOR
                    m_hNewOrderOutputAccessor[MAX_OL_NEW_ORDER_
ITEMS];
                    // accessor to bind output
columns of the second rowset
                    HACCESSOR
                    m_hNewOrderOutputAccessor2[MAX_OL_NEW_ORDER
_ITEMS];
                    // parameter structure for
Execute
                    DBPARAMS
                    m_NewOrderExecuteParams[MAX_OL_NEW_ORDER_IT
EMS];

                    // Payment
                    ICommandText*
                    m_pIPaymentCommand;
                    HACCESSOR
                    m_hPaymentInputAccessor;      // accessor
to bind input parameters
                    HACCESSOR
                    m_hPaymentOutputAccessor;     // accessor
to bind output columns
                    DBPARAMS
                    m_PaymentExecuteParams;                 //
parameter structure for Execute

                    // OrderStatus
                    ICommandText*
                    m_pIOrderStatusCommand;
                    HACCESSOR
                    m_hOrderStatusInputAccessor;  // accessor
to bind input parameters
```


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```
                    HACCESSOR
          m_hOrderStatusOutputAccessor; // accessor
to bind output columns
                    HACCESSOR
          m_hOrderStatusOutputAccessor2;          //
accessor to bind output columns
                    DBPARAMS
          m_OrderStatusExecuteParams;             //
parameter structure for Execute

                    // Delivery
                    ICommandText*
          m_pIDeliveryCommand;
                    HACCESSOR
          m_hDeliveryInputAccessor;     // accessor
to bind input parameters
                    HACCESSOR
          m_hDeliveryOutputAccessor;    // accessor
to bind output columns
                    DBPARAMS
          m_DeliveryExecuteParams;      // parameter
structure for Execute

                    wchar_t
                    m_szSPPrefix[32];   // stored
procedures prefix

                    // new-order specific fields

                    int
                              m_no_commit_flag;

                    void ThrowError( IUnknown*
pObjectWithError, COLEDBERR::ACTION eAction, LPCTSTR
szLocation );

                    void CheckSPVersion();

                    void InitNewOrderParams();
                    void InitPaymentParams();
                    void InitDeliveryParams();
                    void InitStockLevelParams();
                    void InitOrderStatusParams();

                    // Helper function to create and
prepare a command
                    void CreateCommand(wchar_t*
szSQLCommand, ICommandText** ppICommandText);
                    // Helper function to prepare a
command
                    void PrepareCommand(ICommandText*
pICommand);

                    // Helper function to fill one
binding
                    // Used for both input parameter
and output column bindings
                    void SetBinding(DBBINDING*
pDBBinding, size_t obValue, size_t cbMaxLen, DBTYPE
wType);

                    // Helper function to initialize
an array of bindings
                    void InitBindings(DBBINDING*
pDBBindings, int iCount, eBindingType BindingType);

                    union
                    {
                              NEW_ORDER_DATA
          NewOrder;
                              PAYMENT_DATA
          Payment;
                              DELIVERY_DATA
          Delivery;
                              STOCK_LEVEL_DATA
          StockLevel;
                              ORDER_STATUS_DATA
          OrderStatus;
                    }
          m_txn;

          public:
                    CTPCC_OLEDB(LPCSTR szServer,
LPCSTR szUser, LPCSTR szPassword, LPCSTR szHost,
LPCSTR szDatabase, LPCWSTR szSPPrefix);
                    ~CTPCC_OLEDB(void);

                    inline PNEW_ORDER_DATA
          BuffAddr_NewOrder()           { return
&m_txn.NewOrder;    };
                    inline PPAYMENT_DATA
          BuffAddr_Payment()            { return
&m_txn.Payment;     };
                    inline PDELIVERY_DATA
          BuffAddr_Delivery()           { return
&m_txn.Delivery;    };
                    inline PSTOCK_LEVEL_DATA
          BuffAddr_StockLevel()         { return
&m_txn.StockLevel;  };
                    inline PORDER_STATUS_DATA
          BuffAddr_OrderStatus()        { return
&m_txn.OrderStatus; };

                    void NewOrder                 ();
                    void Payment                  ();
                    void Delivery                 ();
                    void StockLevel               ();
                    void OrderStatus    ();

};


// wrapper routine for class constructor
extern "C" DllDecl CTPCC_OLEDB* CTPCC_OLEDB_new
          ( LPCSTR szServer, LPCSTR szUser, LPCSTR
szPassword, LPCSTR szHost, LPCSTR szDatabase, LPCWSTR
szSPPrefix );

typedef CTPCC_OLEDB* (TYPE_CTPCC_OLEDB)(LPCSTR,
LPCSTR, LPCSTR, LPCSTR, LPCSTR, LPCWSTR);
```

# tpcc_tux.cpp

```
/*        FILE:               TPCC_TUX.CPP
 *                                        Microsoft
TPC-C Kit Ver. 4.20.000
 *                                        Copyright
Microsoft, 1999
 *              All Rights Reserved
 *
 *                                        Version
4.10.000 audited by Richard Gimarc, Performance
Metrics, 3/17/99
 *
 *        PURPOSE:  Implementation for TPC-C Tuxedo
class.
 *        Contact:  Charles Levine
(clevine@microsoft.com)
 *
 *  Change history:
 *                  4.20.000 - updated rev number to
match kit
 */

#include <windows.h>
#include <process.h>
#include <stdio.h>
#include <stdarg.h>
#include <malloc.h>
#include <stdlib.h>
#include <string.h>
#include <time.h>
#include <sys\timeb.h>
#include <io.h>
#include <assert.h>

#include <tmenv.h>
#include <xa.h>
#include <atmi.h>

#ifdef ICECAP
// for IceCAP profiling
#include <icapexp.h>
#endif

// need to declare functions for export
#define DllDecl  __declspec( dllexport )

#include "..\..\common\src\trans.h"
          //tpckit transaction header contains
definations of structures specific to TPC-C
#include "..\..\common\src\error.h"
#include "..\..\common\src\txn_base.h"
#include "tpcc_tux.h"
                    // interface to Tuxedo libraries

static TPINIT
          *tpinf;
static DWORD
          TLSIsTpInitedKey;
static CRITICAL_SECTION
          TpCriticalSection;
```


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```
BOOL APIENTRY DllMain(HMODULE hModule, DWORD
ul_reason_for_call, LPVOID lpReserved)
{
          switch( ul_reason_for_call )
          {
                    case DLL_PROCESS_ATTACH:

          DisableThreadLibraryCalls(hModule);

                              // create thread local
storage to determine Tuxedo initialization per
thread.
                              // it really should be
possible to do this in the DLL_THREAD_ATTACH call,
but
                              // Ed says he could not
get it to work.
                              // assumption:value
init'd to 0
                              TLSIsTpInitedKey =
TlsAlloc();

                              if ((tpinf = (TPINIT
*)tpalloc("TPINIT", NULL, sizeof(TPINIT))) == NULL)
                              {
                                        // int TpRc =
tperrno;
                                        return FALSE;
                              }
                              tpinf->flags |=
TPMULTICONTEXTS;


          InitializeCriticalSection(&TpCriticalSectio
n);
                              break;

                    case DLL_PROCESS_DETACH:

          TlsFree(TLSIsTpInitedKey);

          DeleteCriticalSection(&TpCriticalSection);
                              break;

                    default:
                              /* nothing */;
          }
          return TRUE;
}

static void ThrTpInit()
{
          static int num_tpinits=0;
          int iRc, TpRc;

          // has this thread been initialized?  check
thread local storage
          if(!TlsGetValue(TLSIsTpInitedKey))
          {

          EnterCriticalSection(&TpCriticalSection);
                    itoa(++num_tpinits, tpinf-
>cltname, 10);

                    iRc = tpinit(tpinf);
                    TpRc = tperrno;

          LeaveCriticalSection(&TpCriticalSection);

                    if (iRc < 0)
                              throw new CTUXERR(
tperrno );

                    int value = 1;

          TlsSetValue(TLSIsTpInitedKey,&value);
          }
}

// wrapper routine for class constructor
__declspec(dllexport) CTPCC_TUXEDO*
CTPCC_TUXEDO_new()
{
          return new CTPCC_TUXEDO();
}

CTPCC_TUXEDO::CTPCC_TUXEDO()
{
          //        Add initialization of Tuxedo
Structures
          m_txn = (TUX_DATA *)tpalloc("CARRAY", NULL,
sizeof(TUX_DATA));
          if (m_txn == NULL)
                    throw new CTUXERR( tperrno );
}

CTPCC_TUXEDO::~CTPCC_TUXEDO()
{
          // free the data structure allocated with
tpalloc
          tpfree((char *)m_txn);
}

void CTPCC_TUXEDO::NewOrder()
{
          long      ilen, *olen;

          ThrTpInit();

          ilen = sizeof(TUX_DATA);
          olen = &ilen;

          if (tpcall("NEWORDER", (char *)m_txn, ilen,
(char **)&m_txn, (long *)olen, TPSIGRSTRT) == -1)
                    throw new CTUXERR( tperrno );

          if ( m_txn->ErrorType != ERR_SUCCESS )
                    throw new CTUXERR( m_txn-
>ErrorType, m_txn->error );
}

void CTPCC_TUXEDO::Payment()
{
          long      ilen, *olen;

          ThrTpInit();

          ilen = sizeof(TUX_DATA);
          olen = &ilen;

          if (tpcall("PAYMENT", (char *)m_txn, ilen,
(char **)&m_txn, (long *)olen, TPSIGRSTRT) == -1)
                    throw new CTUXERR( tperrno );

          if ( m_txn->ErrorType != ERR_SUCCESS )
                    throw new CTUXERR( m_txn-
>ErrorType, m_txn->error );
}

void CTPCC_TUXEDO::Delivery()
{
          int                iRc;
          long      ilen, *olen;

          // Note: Delivery txn code in the tuxedo
server does not implement logging of the delivery
          //       txn results, so cannot be used as
is to run an auditable TPC-C result.  For that
          //       reason, delivery txns should not
be done via tuxedo.
          //       The code is included for
completeness.
          m_txn->u.Delivery.exec_status_code =
eDeliveryFailed;
          return;

          //  normal path...

          ThrTpInit();

          GetLocalTime(&m_txn-
>u.Delivery.queue_time);

          ilen = sizeof(TUX_DATA);
          olen = &ilen;

          if ((iRc = tpacall("DELIVERY", (char
*)m_txn, ilen, TPNOREPLY)) == -1)
          {
                    int TpRc = tperrno;
                    m_txn-
>u.Delivery.exec_status_code = eDeliveryFailed;
          }
          else
                    m_txn-
>u.Delivery.exec_status_code = eOK;

}

void CTPCC_TUXEDO::StockLevel()
{
          long      ilen, *olen;

          ThrTpInit();

          ilen = sizeof(TUX_DATA);
          olen = &ilen;
```


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```
          if (tpcall("STOCKLEVEL", (char *)m_txn,
ilen, (char **)&m_txn, (long *)olen, TPSIGRSTRT) == -
1)
                    throw new CTUXERR( tperrno );

          if ( m_txn->ErrorType != ERR_SUCCESS )
                    throw new CTUXERR( m_txn-
>ErrorType, m_txn->error );
}

void CTPCC_TUXEDO::OrderStatus()
{
          long      ilen, *olen;

          ThrTpInit();

          ilen = sizeof(TUX_DATA);
          olen = &ilen;

          if (tpcall("ORDERSTATUS", (char *)m_txn,
ilen, (char **)&m_txn, (long *)olen, TPSIGRSTRT) == -
1)
                    throw new CTUXERR( tperrno );

          if ( m_txn->ErrorType != ERR_SUCCESS )
                    throw new CTUXERR( m_txn-
>ErrorType, m_txn->error );
}

char *CTUXERR::ErrorText()
{
          if (m_iErrorType == 0)
          {
                    if (m_errno == TPEOS)
                              sprintf( m_szErrorText,
"Error: TUXEDO error # %d, OS error # %d", m_errno,
m_iError );
                    else
                              sprintf( m_szErrorText,
"Error: TUXEDO error # %d", m_errno );
          }
          else
                    sprintf( m_szErrorText, "Error:
Class %d, error # %d", m_iErrorType, m_iError );
          return m_szErrorText;
};
```

# tpcc_tux.h

```
/*        FILE:               TPCC_TUX.H
 *                                  Microsoft
TPC-C Kit Ver. 4.20.000
 *                                  Copyright
Microsoft, 1999
 *              All Rights Reserved
 *
 *                                  Version
4.10.000 audited by Richard Gimarc, Performance
Metrics, 3/17/99
 *
 *        PURPOSE:  Header file for TPC-C Tuxedo
class implementation.
 *
 *  Change history:
 *                  4.20.000 - updated rev number to
match kit
 */

#pragma once

// need to declare functions for import, unless
define has already been created
// by the DLL's .cpp module for export.
#ifndef DllDecl
#define DllDecl  __declspec( dllimport )
#endif

class DllDecl CTPCC_TUXEDO : public CTPCC_BASE
{
          private:
                    struct TUX_DATA
                    {
                              int
                              ErrorType;
                              int
                              error;

                              union
                              {

          NEW_ORDER_DATA                NewOrder;
                                        PAYMENT_DATA
                    Payment;            DELIVERY_DATA
                    Delivery;

          STOCK_LEVEL_DATA    StockLevel;

          ORDER_STATUS_DATA   OrderStatus;
                              } u;
                    } *m_txn;

          public:
                    CTPCC_TUXEDO();
                    ~CTPCC_TUXEDO(void);

                    inline PNEW_ORDER_DATA
          BuffAddr_NewOrder()           { return
&m_txn->u.NewOrder;     };
                    inline PPAYMENT_DATA
          BuffAddr_Payment()            { return
&m_txn->u.Payment;      };
                    inline PDELIVERY_DATA
          BuffAddr_Delivery()           { return
&m_txn->u.Delivery;     };
                    inline PSTOCK_LEVEL_DATA
          BuffAddr_StockLevel()         { return
&m_txn->u.StockLevel;  };
                    inline PORDER_STATUS_DATA
          BuffAddr_OrderStatus()        { return
&m_txn->u.OrderStatus; };
                    void NewOrder                 ();
                    void Payment                  ();
                    void Delivery                 ();
                    void StockLevel               ();
                    void OrderStatus    ();
};

class CTUXERR : public CBaseErr
{
          private:

                    // TODO: should use the sz_Msg
field of the base class instead
                    char m_szErrorText[64];

          public:
                    // use this interface for genuine
Tuxedo errors
                    CTUXERR( int iErr )
                    {
                              m_errno = iErr;
                              m_iErrorType = 0;
                              m_iError =
GetLastError();     // only meaningful if m_errno ==
TPEOS
                    };

                    // use this interface to
impersonate a non-Tuxedo error type
                    CTUXERR( int iErrorType, int
iError )
                    {
                              m_iErrorType =
iErrorType;
                              m_iError = iError;
                              m_errno = 0;
                    }

                    int                 m_errno;
                    int                 m_iErrorType;
                    int                 m_iError;

                    // A CTUXERR class can
impersonate another class, which happens if the error
                    // was not actually a Tuxedo
error, but was simply transmitted back via Tuxedo.
                    int ErrorType()
                    {
                              if (m_iErrorType == 0)
                                        return
ERR_TYPE_TUXEDO;
                              else
                                        return
m_iErrorType;
                    }

                    int ErrorNum() {return m_errno;};
                    char *ErrorText();
};

// wrapper routine for class constructor
```


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```
extern "C" __declspec(dllexport) CTPCC_TUXEDO*
CTPCC_TUXEDO_new();

typedef CTPCC_TUXEDO* (TYPE_CTPCC_TUXEDO)();
```

# tpcc_type.h

```
/* Generated by IDL compiler version DEC DCE V2.0.0-6
*/
#ifndef tpcc_types_v1_0_included
#define tpcc_types_v1_0_included
#ifndef IDLBASE_H
#include <dce\idlbase.h>
#endif

#ifdef __cplusplus
    extern "C" {
#endif

#ifndef nbase_v0_0_included
#include "dce\nbase.h"
#endif
#define NAME_LENGTH (32)
#define NEWO_INTERFACE (1)
#define PAYMENT_INTERFACE (2)
#define ORDER_STAT_INTERFACE (4)
#define DELIVERY_INTERFACE (8)
#define STOCK_INTERFACE (16)
#define ONLINE_INTERFACES (23)
#define ALL_INTERFACE (65535)
#define NEWO_TRANS (1)
#define PAYMENT_TRANS (2)
#define ORDER_STAT_TRANS (3)
#define DELIVERY_TRANS (4)
#define STOCK_TRANS (5)
#define MAX_TRAN_TYPE (5)
#define TPCC_SUCCESS (0)
#define TRPC_ERROR (1)
#define INVALID_NEWO (100)
typedef struct  {
idl_long_int sec;
idl_long_int usec;
} time_type;
typedef struct  {
idl_short_int returncode;
idl_short_int stats;
time_type srv_start;
time_type srv_end;
time_type clnt_start;
time_type clnt_end;
} data_header;
typedef struct  {
idl_long_int first_wh;
idl_long_int last_wh;
idl_long_int server_id;
} dbInfo_data_t;

#ifdef __cplusplus
    }
#endif
#endif
```

# trans.h

```
/*        FILE:               TRANS.H
 *                                        Microsoft
TPC-C Kit Ver. 4.42.000
 *                                        Copyright
Microsoft, 2002
 *             All Rights Reserved
 *
 *                                        Version
4.10.000 audited by Richard Gimarc, Performance
Metrics, 3/17/99
 *
 *        PURPOSE:  Header file for TPC-C structure
templates.
 *
 *  Change history:
 *                  4.42.000 - changed w_id fields
from short to long to support >32K warehouses
 *                  4.20.000 - updated rev number to
match kit
 */
#pragma once

// String length constants
#define SERVER_NAME_LEN            20
#define DATABASE_NAME_LEN          20
#define USER_NAME_LEN              20
#define PASSWORD_LEN               20
#define TABLE_NAME_LEN             20
#define I_DATA_LEN                 50
#define I_NAME_LEN                 24
#define BRAND_LEN                   1
#define LAST_NAME_LEN              16
#define W_NAME_LEN                 10
#define ADDRESS_LEN                20
#define STATE_LEN                   2
#define ZIP_LEN                     9
#define S_DIST_LEN                 24
#define S_DATA_LEN                 50
#define D_NAME_LEN                 10
#define FIRST_NAME_LEN             16
#define MIDDLE_NAME_LEN             2
#define PHONE_LEN                  16
#define DATETIME_LEN               30
#define CREDIT_LEN                  2
#define C_DATA_LEN                250
#define H_DATA_LEN                 24
#define DIST_INFO_LEN              24
#define MAX_OL_NEW_ORDER_ITEMS     15
#define MAX_OL_ORDER_STATUS_ITEMS  15
#define STATUS_LEN                 25
#define OL_DIST_INFO_LEN                  24

// TIMESTAMP_STRUCT is provided by the ODBC header
file sqltypes.h, but is not available
// when compiling with dblib, so redefined here.
Note: we are using the symbol "__SQLTYPES"
// (declared in sqltypes.h) as a way to determine if
TIMESTAMP_STRUCT has been declared.
#ifndef __SQLTYPES
          typedef struct
          {
                                  short
          /* SQLSMALLINT */   year;
                                  unsigned short      /*
SQLUSMALLINT */     month;
                                  unsigned short      /*
SQLUSMALLINT */     day;
                                  unsigned short      /*
SQLUSMALLINT */     hour;
                                  unsigned short      /*
SQLUSMALLINT */     minute;
                                  unsigned short      /*
SQLUSMALLINT */     second;
                                  unsigned long       /*
SQLUINTEGER */      fraction;
          } TIMESTAMP_STRUCT;
#endif

// possible values for exec_status_code after
transaction completes
enum EXEC_STATUS
{
          eOK,                          // 0
          "Transaction commited."
          eInvalidItem,       // 1      "Item number
is not valid."
          eDeliveryFailed     // 2      "Delivery
Post Failed."
};

// transaction structures
typedef struct
{
          // input params
          long
          ol_supply_w_id;
          long
          ol_i_id;
          short
          ol_quantity;

          // output params
          char
          ol_i_name[I_NAME_LEN+1];
          char
          ol_brand_generic[BRAND_LEN+1];
          double
          ol_i_price;
          double
          ol_amount;
          short
          ol_stock;
} OL_NEW_ORDER_DATA;

typedef struct
{
          // input params
```


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```
        long                w_id;
        short               d_id;
        long                c_id;
        short               o_ol_cnt;

        // output params
        EXEC_STATUS
        exec_status_code;
        char
        c_last[LAST_NAME_LEN+1];
        char                c_credit[CREDIT_LEN+1];
        double              c_discount;
        double              w_tax;
        double              d_tax;
        long                            o_id;
        short
        o_commit_flag;
        TIMESTAMP_STRUCT    o_entry_d;
        short               o_all_local;
        double              total_amount;
        OL_NEW_ORDER_DATA
        OL[MAX_OL_NEW_ORDER_ITEMS];
} NEW_ORDER_DATA, *PNEW_ORDER_DATA;

typedef struct
{       // input params
        long
w_id;
        short
d_id;
        long
c_id;
        short
c_d_id;
        long
c_w_id;
        double
h_amount;
        char
c_last[LAST_NAME_LEN+1];

        // output params
        EXEC_STATUS
exec_status_code;
        TIMESTAMP_STRUCT     h_date;
        char
w_street_1[ADDRESS_LEN+1];
        char
w_street_2[ADDRESS_LEN+1];
        char
w_city[ADDRESS_LEN+1];
        char
w_state[STATE_LEN+1];
        char
w_zip[ZIP_LEN+1];
        char
d_street_1[ADDRESS_LEN+1];
        char
d_street_2[ADDRESS_LEN+1];
        char
d_city[ADDRESS_LEN+1];
        char
d_state[STATE_LEN+1];
        char
d_zip[ZIP_LEN+1];
        char
c_first[FIRST_NAME_LEN+1];
        char
c_middle[MIDDLE_NAME_LEN + 1];
        char
c_street_1[ADDRESS_LEN+1];
        char
c_street_2[ADDRESS_LEN+1];
        char
c_city[ADDRESS_LEN+1];
        char
c_state[STATE_LEN+1];
        char
c_zip[ZIP_LEN+1];
        char
c_phone[PHONE_LEN+1];
        TIMESTAMP_STRUCT     c_since;
        char
c_credit[CREDIT_LEN+1];
        double
c_credit_lim;
        double
c_discount;
        double
c_balance;
        char
c_data[200+1];
} PAYMENT_DATA, *PPAYMENT_DATA;

typedef struct
{
        long
        ol_i_id;
        long
        ol_supply_w_id;
        short
        ol_quantity;
        double
        ol_amount;
        TIMESTAMP_STRUCT    ol_delivery_d;
} OL_ORDER_STATUS_DATA;

typedef struct
{       // input params
        long                w_id;
        short               d_id;
        long                c_id;
        char
c_last[LAST_NAME_LEN+1];

        // output params
        EXEC_STATUS
exec_status_code;
        char
c_first[FIRST_NAME_LEN+1];
        char
c_middle[MIDDLE_NAME_LEN+1];
        double              c_balance;
        long                o_id;
        TIMESTAMP_STRUCT    o_entry_d;
        short               o_carrier_id;
        OL_ORDER_STATUS_DATA
OL[MAX_OL_ORDER_STATUS_ITEMS];
        short               o_ol_cnt;
} ORDER_STATUS_DATA, *PORDER_STATUS_DATA;


typedef struct
{       // input params
        long                            w_id;
        short                           o_carrier_id;

        // output params
        EXEC_STATUS
        exec_status_code;
        SYSTEMTIME                      queue_time;
        long
        o_id[10];           // id's of delivered
orders for districts 1 to 10
} DELIVERY_DATA, *PDELIVERY_DATA;

//This structure is used for posting delivery
transactions and for writing them to the delivery
server.
typedef struct _DELIVERY_TRANSACTION
{
        SYSTEMTIME          queue;
        //time delivery transaction queued
        long                w_id;
        //delivery warehouse
        short               o_carrier_id;
        //carrier id
} DELIVERY_TRANSACTION;

typedef struct
{       // input params
        long
        w_id;
        short
        d_id;
        short
        threshold;

        // output params
        EXEC_STATUS
        exec_status_code;
        long
        low_stock;
} STOCK_LEVEL_DATA, *PSTOCK_LEVEL_DATA;
```

# tuxapp.cpp

```
/*      FILE:               TUXAPP.CPP
 *                                      Microsoft
TPC-C Kit Ver. 4.20.000
 *                                      Copyright
Microsoft, 1999
 *             All Rights Reserved
 *
```


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```
 *                                    Version
4.10.000 audited by Richard Gimarc, Performance
Metrics, 3/17/99
 *
 *        PURPOSE:  Implementation for TPC-C Tuxedo
server.
 *        Contact:  Charles Levine
(clevine@microsoft.com)
 *
 *  Change history:
 *                  4.20.000 - updated rev number to
match kit
 */

#include <windows.h>
#include <process.h>
#include <tchar.h>
#include <stdio.h>
#include <stdarg.h>
#include <iostream.h>
#include <malloc.h>
#include <stdlib.h>
#include <string.h>
#include <time.h>
#include <sys\timeb.h>
#include <io.h>
#include <assert.h>

#include <sqltypes.h>
#include <sql.h>
#include <sqlext.h>

#include <tmenv.h>
#include <xa.h>
#include <atmi.h>

#include "..\..\common\src\trans.h"
          //tpckit transaction header contains
definations of structures specific to TPC-C
#include "..\..\common\src\error.h"
#include "..\..\common\src\txn_base.h"
#include "..\..\common\src\ReadRegistry.h"
#include "..\..\db_dblib_dll\src\tpcc_dblib.h"
          // DBLIB implementation of TPC-C txns
#include "..\..\db_odbc_dll\src\tpcc_odbc.h"
          // ODBC implementation of TPC-C txns
#include "tuxapp.h"

char
          szMyComputerName[MAX_COMPUTERNAME_LENGTH+1]
;

// configuration settings from registry
TPCCREGISTRYDATA              Reg;

CTPCC_BASE                    *pTxn = NULL;


#include "..\..\common\src\ReadRegistry.cpp"

/* FUNCTION: tpsvrinit ( int argc, char *argv[])
 *
 * PURPOSE:         Initialize the Server to Database
connection.
 *
 * RETURNS:                   int       0
          Success
 *                                                -1
          Failure
 */

int tpsvrinit ( int argc, char *argv[] )
{
          try
          {
                    DWORD dwSize =
MAX_COMPUTERNAME_LENGTH+1;
                    GetComputerName(szMyComputerName,
&dwSize);
                    szMyComputerName[dwSize] = 0;

                    if ( ReadTPCCRegistrySettings(
&Reg ) )
                              throw new CTUXAPP_ERR(
ERR_MISSING_REGISTRY_ENTRIES );

                    GetParameters(argc, argv);

                    switch (Reg.eDB_Protocol)
                    {
                    case ODBC:
                              pTxn = new CTPCC_ODBC(
Reg.szDbServer, Reg.szDbUser, Reg.szDbPassword,
szMyComputerName, Reg.szDbName );
                              break;
                    case DBLIB:
                              pTxn = new CTPCC_DBLIB(
Reg.szDbServer, Reg.szDbUser, Reg.szDbPassword,
szMyComputerName, Reg.szDbName );
                              break;
                    }
          }
          catch (CBaseErr *e)
          {
                    WriteMessageToEventLog(e-
>ErrorText());
                    delete e;
          }
          catch (...)
          {

          WriteMessageToEventLog(TEXT("Unhandled
exception."));
          }

          return 0;
}

/* FUNCTION: tpsvrdone ( void )
 *
 */

void tpsvrdone ( void )
{
          delete pTxn;
          pTxn = NULL;
}

/* FUNCTION: BOOL GetParameters(int argc, char
*argv[])
 *
 * PURPOSE:         This function parses the command
line passed in to the delivery executable,
initializing
 *                              and filling in global
variable parameters.
 *
 * ARGUMENTS:       int                 argc
          number of command line arguments passed to
delivery
 *                                      char
          *argv[]   array of command line argument
pointers
 *
 */

static void GetParameters(int argc, char *argv[])
{
          // advance through args until "--" is found
          for(int j=0; j<argc; j++)
          {
                    if (strcmp(argv[j],"--") == 0)
                              break;
          }

          for(int i=j+1; i<argc; i++)
          {
                    if ( argv[i][0] == '-' ||
argv[i][0] == '/' )
                    {
                              switch(argv[i][1])
                              {
                                        case 'S':

          strcpy(Reg.szDbServer, argv[i]+2);

          break;
                                        case 'D':

          strcpy(Reg.szDbName, argv[i]+2);

          break;
                                        case 'P':

          strcpy(Reg.szDbPassword, argv[i]+2);

          break;
                                        case 'U':

          strcpy(Reg.szDbUser, argv[i]+2);

          break;
                                        default:

          cout << "Microsoft TPC-C Kit" << endl;

          cout << "Tuxedo Server" << endl << endl;
```


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```
          cout << "Usage:" << endl;

          cout << "    tuxapp [<tuxedo-args>] -- -
S<sql-server> [-D<database>] [-U<user>] [-
P<password>]" << endl << endl;

          cout << "All parameters default to values
in registry." << endl;

          throw new CTUXAPP_ERR( ERR_BAD_SYNTAX );
                              }
                    }
          }
}

static void WriteMessageToEventLog(LPTSTR lpszMsg)
{
    TCHAR   szMsg[256];
    HANDLE  hEventSource;
    LPTSTR  lpszStrings[2];

    // Use event logging to log the error.
    //
    hEventSource = RegisterEventSource(NULL,
TEXT("TUXAPP.EXE"));

    _stprintf(szMsg, TEXT("Error in TUXAPP.EXE: "));
    lpszStrings[0] = szMsg;
    lpszStrings[1] = lpszMsg;

    if (hEventSource != NULL)
          {
        ReportEvent(hEventSource, // handle of event
source
            EVENTLOG_ERROR_TYPE,  // event type
            0,                    // event category
            0,                    // event ID
            NULL,                 // current user's
SID
            2,                    // strings in
lpszStrings
            0,                    // no bytes of raw
data
            (LPCTSTR *)lpszStrings,    // array of
error strings
            NULL);                // no raw data

        (VOID) DeregisterEventSource(hEventSource);
    }
}

void NEWORDER( TPSVCINFO *rqst )
{
          PNEW_ORDER_DATA     pNewOrder;
          TUX_DATA            *pData;
          const int           iSize = sizeof(pData-
>u.NewOrder);

          try
          {
                    pData = (TUX_DATA*)rqst->data;
                    pData->retval = ERR_SUCCESS;
                    pData->error = 0;

                    pNewOrder = pTxn-
>BuffAddr_NewOrder();
                    assert( rqst->len ==
sizeof(TUX_DATA) );
                    memcpy(pNewOrder, &pData-
>u.NewOrder, iSize );

                    pTxn->NewOrder();
                    memcpy( &pData->u.NewOrder,
pNewOrder, iSize );
                    tpreturn( TPSUCCESS, 0, rqst-
>data, sizeof(TUX_DATA), 0);
          }
          catch (CBaseErr *e)
          {
                    pData->retval = e->ErrorType();
                    pData->error = e->ErrorNum();
                    memcpy( &pData->u.NewOrder,
pNewOrder, iSize );
                    tpreturn( TPSUCCESS, 0, rqst-
>data, sizeof(TUX_DATA), 0);
                    delete e;
          }
          catch (...)
          {

          WriteMessageToEventLog(TEXT("Unhandled
exception."));
                    pData->retval = ERR_TYPE_LOGIC;
                    pData->error = 0;
                    memcpy( &pData->u.NewOrder,
pNewOrder, iSize );
                    tpreturn( TPSUCCESS, 0, rqst-
>data, sizeof(TUX_DATA), 0);
          }
}

void PAYMENT( TPSVCINFO *rqst )
{
          PPAYMENT_DATA       pPayment;
          TUX_DATA            *pData;
          const int           iSize = sizeof(pData-
>u.Payment);

          try
          {
                    pData = (TUX_DATA*)rqst->data;
                    pData->retval = ERR_SUCCESS;
                    pData->error = 0;

                    pPayment = pTxn-
>BuffAddr_Payment();
                    assert( rqst->len ==
sizeof(TUX_DATA) );
                    memcpy(pPayment, &pData-
>u.Payment, iSize );

                    pTxn->Payment();
                    memcpy( &pData->u.Payment,
pPayment, iSize );
                    tpreturn( TPSUCCESS, 0, rqst-
>data, sizeof(TUX_DATA), 0);
          }
          catch (CBaseErr *e)
          {
                    pData->retval = e->ErrorType();
                    pData->error = e->ErrorNum();
                    memcpy( &pData->u.Payment,
pPayment, iSize );
                    tpreturn( TPSUCCESS, 0, rqst-
>data, sizeof(TUX_DATA), 0);
                    delete e;
          }
          catch (...)
          {

          WriteMessageToEventLog(TEXT("Unhandled
exception."));
                    pData->retval = ERR_TYPE_LOGIC;
                    pData->error = 0;
                    memcpy( &pData->u.Payment,
pPayment, iSize );
                    tpreturn( TPSUCCESS, 0, rqst-
>data, sizeof(TUX_DATA), 0);
          }
}

// Note: Delivery txn code below does not implement
logging of the delivery
//       txn results, so cannot be used as is to run
an auditable TPC-C result.
//       The code is included for completeness.
void DELIVERY( TPSVCINFO *rqst )
{
          PDELIVERY_DATA      pDelivery;
          TUX_DATA            *pData;
          const int           iSize = sizeof(pData-
>u.Delivery);

          try
          {
                    pData = (TUX_DATA*)rqst->data;
                    pData->retval = ERR_SUCCESS;
                    pData->error = 0;

                    pDelivery = pTxn-
>BuffAddr_Delivery();
                    assert( rqst->len ==
sizeof(TUX_DATA) );
                    memcpy(pDelivery, &pData-
>u.Delivery, iSize );

                    pTxn->Delivery();

                    memcpy( &pData->u.Delivery,
pDelivery, iSize );
                    tpreturn( TPSUCCESS, 0, rqst-
>data, sizeof(TUX_DATA), 0);
          }
          catch (CBaseErr *e)
          {
                    pData->retval = e->ErrorType();
                    pData->error = e->ErrorNum();
```


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```
                    memcpy( &pData->u.Delivery,
pDelivery, iSize );
                    tpreturn( TPSUCCESS, 0, rqst-
>data, sizeof(TUX_DATA), 0);
                    delete e;
          }
          catch (...)
          {

          WriteMessageToEventLog(TEXT("Unhandled
exception."));
                    pData->retval = ERR_TYPE_LOGIC;
                    pData->error = 0;
                    memcpy( &pData->u.Delivery,
pDelivery, iSize );
                    tpreturn( TPSUCCESS, 0, rqst-
>data, sizeof(TUX_DATA), 0);
          }
}

void STOCKLEVEL( TPSVCINFO *rqst )
{
          PSTOCK_LEVEL_DATA   pStockLevel;
          TUX_DATA                    *pData;
          const int                   iSize =
sizeof(pData->u.StockLevel);

          try
          {
                    pData = (TUX_DATA*)rqst->data;
                    pData->retval = ERR_SUCCESS;
                    pData->error = 0;

                    pStockLevel = pTxn-
>BuffAddr_StockLevel();
                    assert( rqst->len ==
sizeof(TUX_DATA) );
                    memcpy(pStockLevel, &pData-
>u.StockLevel, iSize );

                    pTxn->StockLevel();
                    memcpy( &pData->u.StockLevel,
pStockLevel, iSize );
                    tpreturn( TPSUCCESS, 0, rqst-
>data, sizeof(TUX_DATA), 0);
          }
          catch (CBaseErr *e)
          {
                    pData->retval = e->ErrorType();
                    pData->error = e->ErrorNum();
                    memcpy( &pData->u.StockLevel,
pStockLevel, iSize );
                    tpreturn( TPSUCCESS, 0, rqst-
>data, sizeof(TUX_DATA), 0);
                    delete e;
          }
          catch (...)
          {

          WriteMessageToEventLog(TEXT("Unhandled
exception."));
                    pData->retval = ERR_TYPE_LOGIC;
                    pData->error = 0;
                    memcpy( &pData->u.StockLevel,
pStockLevel, iSize );
                    tpreturn( TPSUCCESS, 0, rqst-
>data, sizeof(TUX_DATA), 0);
          }
}

void ORDERSTATUS( TPSVCINFO *rqst )
{
          PORDER_STATUS_DATA  pOrderStatus;
          TUX_DATA            *pData;
          const int iSize = sizeof(pData-
>u.OrderStatus);

          try
          {
                    pData = (TUX_DATA*)rqst->data;
                    pData->retval = ERR_SUCCESS;
                    pData->error = 0;

                    pOrderStatus = pTxn-
>BuffAddr_OrderStatus();
                    assert( rqst->len ==
sizeof(TUX_DATA) );
                    memcpy(pOrderStatus, &pData-
>u.OrderStatus, iSize );

                    pTxn->OrderStatus();
                    memcpy( &pData->u.OrderStatus,
pOrderStatus, iSize );
                    tpreturn( TPSUCCESS, 0, rqst-
>data, sizeof(TUX_DATA), 0);
          }
          catch (CBaseErr *e)
          {
                    pData->retval = e->ErrorType();
                    pData->error = e->ErrorNum();
                    memcpy( &pData->u.OrderStatus,
pOrderStatus, iSize );
                    tpreturn( TPSUCCESS, 0, rqst-
>data, sizeof(TUX_DATA), 0);
                    delete e;
          }
          catch (...)
          {

          WriteMessageToEventLog(TEXT("Unhandled
exception."));
                    pData->retval = ERR_TYPE_LOGIC;
                    pData->error = 0;
                    memcpy( &pData->u.OrderStatus,
pOrderStatus, iSize );
                    tpreturn( TPSUCCESS, 0, rqst-
>data, sizeof(TUX_DATA), 0);
          }
}

/* FUNCTION: CTUXAPP_ERR::ErrorText
 *
 */

char* CTUXAPP_ERR::ErrorText(void)
{
          int i;

          static SERRORMSG errorMsgs[] =
          {
                    { ERR_MISSING_REGISTRY_ENTRIES,
          "Required entries missing from registry."
                              },
                    { ERR_BAD_SYNTAX,
                    "Syntax error in input
parameters."
          },
                    { ERR_UNKNOWN_DB_PROTOCOL,
          "Unknown database protocol specified in
registry."          },
                    { 0,
                                        ""


                    }
          };

          static char szNotFound[] = "Unknown error
number.";

          for(i=0; errorMsgs[i].szMsg[0]; i++)
          {
                    if ( m_Error ==
errorMsgs[i].iError )
                              break;
          }
          if ( !errorMsgs[i].szMsg[0] )
                    return szNotFound;
          else
                    return errorMsgs[i].szMsg;
}
```

# tuxapp.h

```
/*        FILE:               TUXAPP.H
 *                                        Microsoft
TPC-C Kit Ver. 4.20.000
 *                                        Copyright
Microsoft, 1999
 *              All Rights Reserved
 *
 *                                        Version
4.10.000 audited by Richard Gimarc, Performance
Metrics, 3/17/99
 *
 *        PURPOSE:  Header file for TPC-C Tuxedo
server.
 *
 *  Change history:
 *                  4.20.000 - updated rev number to
match kit
 */

enum TUXERROR
```


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```
{
          ERR_MISSING_REGISTRY_ENTRIES = 1,
          ERR_BAD_SYNTAX,
          ERR_UNKNOWN_DB_PROTOCOL
};

class CTUXAPP_ERR : public CBaseErr
{
          public:
                    TUXERROR m_Error;

                    CTUXAPP_ERR(TUXERROR Err) {
          m_Error = Err; };
                    ~CTUXAPP_ERR() {};

                    int ErrorType() {return
ERR_TYPE_TUXEDO;};
                    int ErrorNum() {return m_Error;};
                    char *ErrorText();
};

struct TUX_DATA
{
          int
          retval;
          int
          error;

          union
          {
                    NEW_ORDER_DATA
          NewOrder;
                    PAYMENT_DATA
          Payment;
                    DELIVERY_DATA
          Delivery;
                    STOCK_LEVEL_DATA    StockLevel;
                    ORDER_STATUS_DATA   OrderStatus;
          } u;
};

static void GetParameters(int argc, char *argv[]);
static void WriteMessageToEventLog(LPTSTR lpszMsg);

#if defined(__cplusplus)
extern "C" {
#endif

void NEWORDER( TPSVCINFO *rqst );
void PAYMENT( TPSVCINFO *rqst );
void DELIVERY( TPSVCINFO *rqst );
void STOCKLEVEL( TPSVCINFO *rqst );
void ORDERSTATUS( TPSVCINFO *rqst );

#if defined(__cplusplus)
}
#endif
```

# tuxmain.c

```
/*        FILE:               TUXMAIN.C
 *                                        Microsoft
TPC-C Kit Ver. 4.20.000
 *                                        Copyright
Microsoft, 1999
 *             All Rights Reserved
 *
 *                                        Version
4.10.000 audited by Richard Gimarc, Performance
Metrics, 3/17/99
 *
 *        PURPOSE:  Implementation for TPC-C Tuxedo
server.
 *        Contact:  Charles Levine
(clevine@microsoft.com)
 *
 *  Change history:
 *                  4.20.000 - updated rev number to
match kit
 */

#include <stdio.h>
#include <xa.h>
#include <atmi.h>

#if defined(__cplusplus)
extern "C" {
#endif
extern int _tmrunserver _((int));
extern void DELIVERY _((TPSVCINFO *));
extern void NEWORDER _((TPSVCINFO *));
extern void ORDERSTATUS _((TPSVCINFO *));
extern void PAYMENT _((TPSVCINFO *));
extern void STOCKLEVEL _((TPSVCINFO *));
#if defined(__cplusplus)
}
#endif

static struct tmdsptchtbl_t _tmdsptchtbl[] = {
          { "DELIVERY", "DELIVERY", (void (*)
_((TPSVCINFO *))) DELIVERY, 0, 0 },
          { "NEWORDER", "NEWORDER", (void (*)
_((TPSVCINFO *))) NEWORDER, 1, 0 },
          { "ORDERSTATUS", "ORDERSTATUS", (void (*)
_((TPSVCINFO *))) ORDERSTATUS, 2, 0 },
          { "PAYMENT", "PAYMENT", (void (*)
_((TPSVCINFO *))) PAYMENT, 3, 0 },
          { "STOCKLEVEL", "STOCKLEVEL", (void (*)
_((TPSVCINFO *))) STOCKLEVEL, 4, 0 },
          { NULL, NULL, NULL, 0, 0 }
};

#ifndef _TMDLLIMPORT
#define _TMDLLIMPORT
#endif

_TMDLLIMPORT extern struct xa_switch_t tmnull_switch;

struct tmsvrargs_t tmsvrargs = {
          NULL,
          &_tmdsptchtbl[0],
          0,
          tpsvrinit,
          tpsvrdone,
          _tmrunserver,       /* PRIVATE  */
          NULL,                          /* RESERVED
*/
          NULL,                          /* RESERVED
*/
          NULL,                          /* RESERVED
*/
          NULL                           /* RESERVED
*/
};

struct tmsvrargs_t *
#ifdef _TMPROTOTYPES
_tmgetsvrargs(void)
#else
_tmgetsvrargs()
#endif
{
          tmsvrargs.xa_switch = &tmnull_switch;
          return(&tmsvrargs);
}

int
#ifdef _TMPROTOTYPES
main(int argc, char **argv)
#else
main(argc,argv)
int argc;
char **argv;
#endif
{
#ifdef TMMAINEXIT
#include "mainexit.h"
#endif

          return( _tmstartserver( argc, argv,
_tmgetsvrargs()));
}
```

# txnlog.h

```
/*        FILE:               TXNLOG.H
 *                                        Microsoft
TPC-C Kit Ver. 4.10.000
 *                                        not yet
audited
 *
 *        PURPOSE:  Header file for txn log class
 *                                        Copyright
Microsoft, 1999
 *              All Rights Reserved
 *
 */
#include <stdio.h>            //needed for FILE
```


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```
#define DRIVER_NAME_LEN
                    32        //max length of the
driver engine name - must be the same as in
engstut.h!
#define TXN_LOG_INCORRECTLY_SHUT_DOWN   100
          //ctrl rec subtype generated by the txn log
when reading an abruptly shut down log

#pragma once

    typedef struct _TXN_NEWORDER
          {
        BYTE        OL_Count;           //range 0 to
31
        BYTE        OL_Remote_Count;    //range 0 to
31
        WORD        c_id;
        int                 o_id;
          } TXN_NEWORDER;

    typedef struct _TXN_PAYMENT
          {
        BYTE        CustByName;
        BYTE        IsRemote;
          } TXN_PAYMENT;

    typedef struct _TXN_ORDERSTATUS
          {
                    BYTE      CustByName;
          } TXN_ORDERSTATUS;

          typedef union _TXN_DETAILS
          {
                    TXN_NEWORDER        NewOrder;
                    TXN_PAYMENT
          Payment;
                    TXN_ORDERSTATUS     OrderStatus;
          } TXN_DETAILS;


          // Common header for all records in txn
log.  The TxnType field is
          // a switch which identifies the particular
variant.
          #define TXN_REC_TYPE_CONTROL           1
          //
          #define TXN_REC_TYPE_TPCC
          2         // replaces TRANSACTION_TYPE_TPCC
          #define TXN_REC_TYPE_TPCC_DELIV_DEF     3

          #define TXN_REC_TYPE_TPCW
          4         // replaces TRANSACTION_TYPE_TPCW

          typedef struct _TXN_RECORD_HEADER
          {
                    JULIAN_TIME         TxnStartT0;
                    // start of txn
                    BYTE      TxnType;
          // one of TXN_REC_TYPE_*
                    BYTE      TxnSubType;
                    // depends on TxnType
          } TXN_RECORD_HEADER, *PTXN_RECORD_HEADER;


          typedef struct _TXN_RECORD_CONTROL
          {
                    // common header; must exactly
match TXN_RECORD_HEADER
                    JULIAN_TIME         TxnStartT0;
                    // start of txn
                    BYTE      TxnType;
          // = TXN_REC_TYPE_CONTROL
                    BYTE      TxnSubType;
                    // depends on TxnType
                    // end of common header

                    DWORD     Len;
                    // number of bytes after this
field
          } TXN_RECORD_CONTROL, *PTXN_RECORD_CONTROL;


          // TPC-C Txn Record Layout:
          //
    //'TxnStartT0' is a Julian timestamp
corresponding to the moment the
    //txn is sent to the SUT, i.e., beginning of
response time.  Deltas
    //are in milliseconds.  Note that if RTDelay > 0,
then the txn was
    //delayed by this amount.  The delay occurs at
the beginning of the
    //response time.  So if RTDelay > 0, then the txn
was actually sent
    //at TxnStartT0 + RTDelay.
    //
    //Graphically:
    //
    //  time -->
    //
    //    |--- Menu  ---|-- Keying  --|-- Response --
|--- Think  --|
    //     <- DeltaT1 -> <- DeltaT2 -> <- DeltaT4  ->
<- DeltaT3 ->
    //                                 ^
    //                                 ^ TxnStartT0
    //
    //RTDelay is the amount of response time delay
included in DeltaT4.
    //RTDelay is recorded per txn because this value
can be changed on
    //the fly, and so may vary from txn to txn.
    //
    //TxnStatus is the txn completion code.  It is
used to indicate errors.
    //For example, in the New Order txn, 1% of txns
abort.  TxnStatus will
    //reflect this.

          typedef struct _TXN_RECORD_TPCC
          {
                    // common header; must exactly
match TXN_RECORD_HEADER
                    JULIAN_TIME         TxnStartT0;
                    // start of txn
                    BYTE      TxnType;
          // = TXN_REC_TYPE_TPCC
                    BYTE      TxnSubType;
                    // depends on TxnType
                    // end of common header

                    int     DeltaT1;              //
menu time (ms)
                    int     DeltaT2;              //
keying time (ms)
                    int     DeltaT3;              //
think time (ms)
                    int     DeltaT4;              //
response time (ms)
                    int     RTDelay;              //
response time delay (ms)
                    int                 TxnError;
          // error code providing more detail for
TxnStatus
                    int                 w_id;
                    // warehouse ID
                    BYTE      d_id;
          // assigned district ID for this thread
                    BYTE      d_id_ThisTxn;       //
district ID chosen for this particular
                    BYTE      TxnStatus;
          // completion status for txn to indicate
errors
                    BYTE      reserved;           //
for word alignment
                    TXN_DETAILS         TxnDetails;
          //

                    bool IsSuccessRecord() { return
(TxnStatus == ERR_SUCCESS || TxnStatus ==
ERR_BAD_ITEM_ID || TxnStatus ==
ERR_TYPE_DELIVERY_POST); }
          } TXN_RECORD_TPCC, *PTXN_RECORD_TPCC;

          // TPC-C Deferred Delivery Txn Record
Layout:
          //
    //Incorporating delivery transaction information
into the above
          //structure would increase the size of
TXN_DETAILS from 8 to 42 bytes.
    //Hence, we store delivery transaction details in
a separate structure.
    //
          typedef struct _TXN_RECORD_TPCC_DELIV_DEF
          {
                    // common header; must exactly
match TXN_RECORD_HEADER
                    JULIAN_TIME         TxnStartT0;
                    // start of txn
                    BYTE      TxnType;
          // = TXN_REC_TYPE_TPCC_DELIV_DEF
                    BYTE      TxnSubType;
                    // = 0
                    // end of common header

                    int     DeltaT4;              //
response time (ms)
```


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```
                    int                 DeltaTxnExec;
          // execution time (ms)
                    int                 w_id;
                    // warehouse ID
                    BYTE      TxnStatus;
          // completion status for txn to indicate
errors
                    BYTE      reserved;           //
for word alignment
                    short   o_carrier_id;         //
carrier id
                    long      o_id[10];           //
returned delivery transaction ids

                    bool IsSuccessRecord() { return
(TxnStatus == ERR_SUCCESS || TxnStatus ==
ERR_BAD_ITEM_ID || TxnStatus ==
ERR_TYPE_DELIVERY_POST); }
          } TXN_RECORD_TPCC_DELIV_DEF,
*PTXN_RECORD_TPCC_DELIV_DEF;

          //
          //TPC-W records.
          //
          typedef struct _TXN_RECORD_TPCW
          {
                    // common header; must exactly
match TXN_RECORD_HEADER
                    JULIAN_TIME         TxnStartT0;
                    // start of txn
                    BYTE      TxnType;
          // = TXN_REC_TYPE_TPCW
                    BYTE      TxnSubType;
                    // depends on TxnType
                    // end of common header

                    int     ThinkTime;            //
think time (ms)
                    int     WIRT;
          // response time (ms)
                    int                 TxnError;
          // error code providing more detail for
TxnStatus
                    BYTE      TxnStatus;
          // completion status for txn to indicate
errors
                    //This field below depends on the
txn sub type:
                    //- for Home interaction:     it
indicates whether the user was a new customer (or
returning)
                    //- for Buy Confirm:
          it indicates whether the shipping address
was updated
                    //- for Search Request:
          it indicates the search type (Author,
Title, or Subject)
                    //This statistics needs to be
reported according to 5.5.5.1 clause in the specs.
                    //Because this field occupies 1
byte, the record structure is already aligned on word
boundary.
                    union     {
                              BYTE      newCustomer;
                              BYTE      addrUpdated;
                              BYTE      searchType;
                    }         intrDetails;

                    //This field is mostly for
informational/debugging purposes.
                    //It indicates what user
performed this web interaction and what instance
(session) of that use it was.
                    //The first 22 bits indicate the
user #, and the top 10 bits indicate instance
(session) #.
                    unsigned __int32    uiUser;

                    bool IsSuccessRecord() { return
(TxnStatus == ERR_SUCCESS); }
          } TXN_RECORD_TPCW, *PTXN_RECORD_TPCW;

          //
          //        Data part of a control record
written when a user is created (or it's new session)
- to record USMD
          typedef struct _TXN_RECORD_TPCW_USER_DATA
          {
                    unsigned __int32    uiUser;
                              // user number
                    JULIAN_TIME
          USMD;                                   //
USMD for this user
                    BYTE
          bRetCust;                   // returning
customer?
          } TXN_RECORD_TPCW_USER_DATA,
*PTXN_RECORD_TPCW_USER_DATA;

          //The entire TPCW User control record
structure
          typedef struct _TXN_RECORD_TPCW_USER
          {
                    // common header; must exactly
match TXN_RECORD_HEADER
                    JULIAN_TIME         TxnStartT0;
                    // start of txn
                    BYTE      TxnType;
          // = TXN_REC_TYPE_CONTROL
                    BYTE      TxnSubType;
                    // depends on TxnType
                    // end of common header

                    DWORD     Len;
                    // number of bytes after this
field
                    //The fields above must exactly
match TXN_RECORD_CONTROL

                    //The fields below must exactly
match TXN_RECORD_TPCW_USER_DATA
                    unsigned __int32    uiUser;
                              // user number
                    JULIAN_TIME
          USMD;                                   //
USMD for this user
                    BYTE
          bRetCust;                   // returning
customer?
          } TXN_RECORD_TPCW_USER,
*PTXN_RECORD_TPCW_USER;


#define             USER_INDEX_NBITS    22
#define             USER_INDEX_MASK
          0x003fffff                  //lower 22
bits mask for user field in TPCW record
#define             USER_SESSION_MASK   0xffc00000
                    //upper 10 bits mask for user
field in TPCW record
#define             USER_CREATE_REC               254
                    //subtype for the control record
written when a user is created

#define             TXN_LOG_VERSION               2
#define             TXN_DATA_START
          4096      // offset in log file where log
records start
#define             TXN_LOG_EYE_CATCHER "BC"      //
signature bytes at the start of log file


          ////////////////////////////////////////
////////////////////////////////
          // The transaction log has a header as the
first 4K block.
          //
          typedef struct _TXN_LOG_HEADER
          {
                    char
          EyeCatcher[2];      // signature bytes;
should always be "BC"
                    int
          LogVersion;                 // set to
TXN_LOG_VERSION
                    JULIAN_TIME
          BeginTxnTS;                 // timestamp
of first (lowest) txn start
                    JULIAN_TIME
          EndTxnTS;           // timestamp of last
(highest) txn completion time
                    int
          iRecCount;                  // number of
records in log file
                    BOOL
          bLogSorted;
                    int
          iFileSize;                  // file size
in bytes

                    // driver engine that created
this log file
                    char
          szDriverEngineName[DRIVER_NAME_LEN];
                    // the record map provides a fast
way to get close to a particular timestamp in a
sorted log file.
//                  struct
//                  {
```


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```
//                              JULIAN_TIME
        TS;                             // timestamp
of record
//                              int
                iPos;               // byte
position in file
//                              }
        RecMap[RecMapSize];
//#define           RecMapSize
        200

        } TXN_LOG_HEADER, *PTXN_LOG_HEADER;

        /* Header of the sorted pointers blocks in
Temp file (in merging). */
        typedef struct BLOCK_HEADER {
                long      BlockPos;
                __int64 CurPos;
                DWORD     BytesRead;
                int                 nRecords;
                BYTE      *offset;  /* offset of
pointers to records in the log file */
        } BLOCK_HEADER, *PBLOCK_HEADER;



#define   READ_BUFFER_SIZE              64*1024
//#define WRITE_BUFFER_SIZE              8*1024
#define   WRITE_BUFFER_SIZE              128*1024

#define   NUM_READ_BUFFERS              1
#define   NUM_WRITE_BUFFERS             2
#define   MAX_NUM_BUFFERS                           2

// flags passed in to the constructor
#define   TXN_LOG_WRITE                 0x01
#define   TXN_LOG_READ                  0x02
#define   TXN_LOG_SORTED                0x04
#define TXN_LOG_CRASHOPEN     0x08                //
if set, invalid headers will be tolerated; used for
recovery

#define   TXN_LOG_OS_ERROR    1
#define   TXN_LOG_NOT_SORTED  2

#define SKIP_CTRL_RECS                  1

class CTxnLog
{
        private:
                DWORD               iBufferSize;
                            //buffer allocated size
                DWORD
        iBytesFreeInBuffer;           //total bytes
available for use in buffer
                int
        iNumBuffers;
        //buffers in use
                int
        iActiveBuffer;
        //indicates which buffer is active: 0 or 1
                int
        iIoBuffer;
        //buffer for any pending IO operation
//              int
        iFilePointer;
        //position in file.
                LARGE_INTEGER       lFilePointer;
                //position in file.
                int
        iNextRec;
        //when reading, ordinal value of next
record

                // A "save point" is remembered
each time GetNextRecord is called with a start time
specified.
                // The next time it is called, if
start time is after the save point, we start scanning
from the
                // save point.  This is
particularly useful in FindBestInterval, where the
log is scanned repeatedly.
                JULIAN_TIME
        SavePtTime;
//              int
        iSavePtFilePointer;
                LARGE_INTEGER
        lSavePtFilePointer;
                int
        iSavePtNextRec;

                JULIAN_TIME         lastTS;
                                    //when
writing sorted output, used to verify records are
sorted
                BOOL                bWrite;
                                    //writing log
file
                BOOL                bCrashOpen;
                                    // tolerate
bad headers and consistency checks

                BOOL
        bLogSorted;                                 //
is log file sorted?  applies to both input and output
                JULIAN_TIME
        BeginTxnTS;                                 //
timestamp of first (lowest) txn start
                JULIAN_TIME
        EndTxnTS;                   // timestamp
of last (highest) txn completion time
                int
        iRecCount;                                  //
number of records in log file
                // To write a checkpoint
information into the header, need to know the
EndTxnTS for the
                // last record written to the
disk. It is not necessarily the last record in the
                // last written buffer, as the
last record may be only partially in the buffer.
                // So remember the timestamps for
2 last records that begin in the buffer - one of
                // them will the last complete
record written to disk.
                JULIAN_TIME
        PrevEndTxnTS;               // timestamp
of the previous to last record
                union {
                        TXN_LOG_HEADER
        HeaderForCheckpoint;// header written on
every checkpoint
                        char
                szHeaderBuffer[512];          //
512 bytes is the minimum we can write to the disk

                } HeaderBuffer;     //need the
union because can't write sizeof(TXN_LOG_HEADER) -
too few bytes

                // Control record returned from
GetNextRecord if the file
                // currently opened for read was
not properly shut down
                struct
                {
                        TXN_RECORD_CONTROL
        RecHeader;
                        char
                szDriverName[DRIVER_NAME_LEN];

                } IncorrectShutDownRec;

                BYTE                *pCurrent;
                                    //ptr to
current buffer
                BYTE
        *pBuffer[MAX_NUM_BUFFERS];

                PTXN_RECORD_HEADER  *TxnArray;
                //transaction record pointer
array for sort

                DWORD               dwError;
                DWORD
        dwCheckpointError;          //error in
checkpoint thread
                HANDLE              hTxnFile;
                        //handle to log file
                HANDLE              hMapFile;
                        //map file used when
sorting the log
                HANDLE              hIoComplete;
                        //event to signify that
there are no pending IOs
                HANDLE              hLogFileIo;
                                    //event to
signal the IO thread to write the inactive buffer
                HANDLE
        hStopCheckpointThread;      //event to
signal the checkpoint thread to exit

                Spinlock  Spin;
                        //spin lock to protect
the txn log file buffers
```


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```
                    Spinlock  WriteSpin;
                              //spin lock to protect
the WriteFile operation between IO and Checkpoint
threads

                    FILE
          *tmpFile;           //temp file for merging
sorted pieces
                    PBLOCK_HEADER
          tmpHeaders;                 //sorted
pointers block header
                    BYTE
          **recPointers;      //record pointer
buffers for each sorted block
                    PTXN_RECORD_HEADER  *recBuffers;
          //record buffers for each sorted block
                    int
          *PointersRead;
          //# of pointers processed in each block
                    BOOL      *BlockAvailable;
                    //whether to check a particular
block for jmin

                    int                 nBlocks;
                    int                 jmin;

          //index (block-wise) of the lowest
timestamp record
                    int
          iAvgRecordLen;
          //average record length

                    int
          iSortedReturnedCount;
          //keeps track of the # of sorted records
returned through GetSortedRecord()

                    BOOL      bIncorrectShutDown;
                    // indicates whether the log
opened for read was not correctly shut down

                    int Write(BYTE *ptr, DWORD Size);
                    static void LogFileIO(CTxnLog *);

                    void LoadBuffers(int j);
                    //used in sort/merge to load
record buffers

                    static void
CheckpointThread(CTxnLog *);  // checkpointing thread

          public:

                    CTxnLog(LPCTSTR szFileName, DWORD
dwOpts, char *szDriver = NULL);
                    ~CTxnLog(void);

                    int WriteToLog(PTXN_RECORD_TPCC
pTxnRcrd);
                    int
WriteToLog(PTXN_RECORD_TPCC_DELIV_DEF pTxnRcrd);
                    int
WriteToLog(PTXN_RECORD_CONTROL pCtrlRec);
                    int WriteToLog(PTXN_RECORD_HEADER
pCtrlRec);
                    int WriteToLog(PTXN_RECORD_TPCW
pTxnRcrd);          //support for TPC-W

                    int WriteCtrlRecToLog(BYTE
SubType, LPTSTR lpStr, DWORD dwLen);

                    void
CloseTransactionLogFile(void);

                    PTXN_RECORD_HEADER
GetNextRecord(BOOL bSkipCtrlRecs = FALSE);
                    PTXN_RECORD_HEADER
GetNextRecord(JULIAN_TIME SeekTimeT0, BOOL
bSkipCtrlRecs = FALSE);

                    int Sort(void);
                    PTXN_RECORD_HEADER
GetSortedRecord();

                    inline BOOL IsSorted(void) {
return bLogSorted; };
                    inline JULIAN_TIME BeginTS(void)
{ return BeginTxnTS; };
                    inline JULIAN_TIME EndTS(void) {
return EndTxnTS; };
                    inline int RecordCount(void) {
return iRecCount; };
};

class CTXNLOG_ERR : public CBaseErr
{
          public:
                    enum CTXNLOG_ERRS
                    {
                              ERR_BAD_FILE_FORMAT,
                    // "File format is invalid."

          ERR_UNKNOWN_LOG_VERSION,      // "Log file
version is unknown."
                              ERR_BROKEN_LOG_FILE,
                    // "Log file is broken."
                              ERR_LOG_NOT_SORTED,
                    // "Log file is not sorted"
                              ERR_INVALID_TIME_SEQ,
                    // "Internal Error: Record Time
Sequence invalid."
                    };

                    CTXNLOG_ERR(int iErr) :
CBaseErr(iErr) {};

                    int ErrorType() {return
ERR_TYPE_TXNLOG;};
                    char *ErrorTypeStr() { return
"TXN LOG"; }

                    char *ErrorText()
                    {
                              static char *szMsgs[] =
{
                                        "File format
is invalid.",
                                        "Log file
version is unknown.",
                                        "Log file is
broken.",
                                        "Log file is
not sorted",
                                        "Internal
Error: Record Time Sequence invalid.",
                                        ""
                              };

                              for(int i = 0;
szMsgs[i][0]; i++)
                              {
                                        if ( m_idMsg
== i )

          break;
                              }

                              return(szMsgs[i][0] ?
szMsgs[i] : ERR_UNKNOWN);
                    };
};
```

# txn_base.h

```
/*        FILE:               TXN_BASE.H
 *                                        Microsoft
TPC-C Kit Ver. 4.20.000
 *                                        Copyright
Microsoft, 1999
 *              All Rights Reserved
 *
 *                                        Version
4.10.000 audited by Richard Gimarc, Performance
Metrics, 3/17/99
 *
 *        PURPOSE:  Header file for TPC-C txn class
implementation.
 *
 *  Change history:
 *                  4.20.000 - updated rev number to
match kit
 */

#pragma once

// need to declare functions for import, unless
define has already been created
// by the DLL's .cpp module for export.
#ifndef DllDecl
#define DllDecl  __declspec( dllimport )
#endif

class DllDecl CTPCC_BASE
{
          public:
```


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```
                    CTPCC_BASE(void) {};
                    virtual ~CTPCC_BASE(void) {};

                    virtual PNEW_ORDER_DATA
          BuffAddr_NewOrder()           = 0;
                    virtual PPAYMENT_DATA
          BuffAddr_Payment()            = 0;
                    virtual PDELIVERY_DATA
          BuffAddr_Delivery()           = 0;
                    virtual PSTOCK_LEVEL_DATA
          BuffAddr_StockLevel()         = 0;
                    virtual PORDER_STATUS_DATA
          BuffAddr_OrderStatus()        = 0;

                    virtual void NewOrder
          () = 0;
                    virtual void Payment
          () = 0;
                    virtual void Delivery
          () = 0;
                    virtual void StockLevel
          () = 0;
                    virtual void OrderStatus      ()
= 0;
};
```

# _delivery.h

```
/* Generated by IDL compiler version DEC DCE V2.0.0-6
*/
#ifndef _delivery_v1_0_included
#define _delivery_v1_0_included
#ifndef IDLBASE_H
#include <dce\idlbase.h>
#endif
#include <dce\rpc.h>
#include "trpc/trpc.h"

#ifdef __cplusplus
    extern "C" {
#endif

#ifndef nbase_v0_0_included
#include "dce\nbase.h"
#endif
#ifndef trpcImports_v0_0_included
#include "trpc\trpcImports.h"
#endif
#ifndef mon_handle_v1_0_included
#include "tpm/mon\mon_handle.h"
#endif
#ifndef tpcc_types_v1_0_included
#include "tpcc_type.h"
#endif
#include <dce\rpcexc.h>
extern EXCEPTION encina_x_transaction_aborted;
extern EXCEPTION encina_x_server_shutdown;
extern EXCEPTION encina_x_permission_denied;
extern EXCEPTION encina_x_object_not_found;
extern EXCEPTION encina_x_empty_slot1;
extern EXCEPTION encina_x_empty_slot2;
extern EXCEPTION encina_x_empty_slot3;
extern EXCEPTION encina_x_empty_slot4;
extern EXCEPTION encina_x_empty_slot5;
extern EXCEPTION encina_x_undefined_exception;
extern void  IDL_STD_STDCALL _delivery_GetApplId(
#ifdef IDL_PROTOTYPES
    /* [in] */ handle_t handle,
    /* [out] */ trpc_byteData_t applString,
    /* [out] */ idl_ulong_int *applStringLength,
    /* [out] */ trpc_byteData_t address,
    /* [out] */ idl_ulong_int *addressLength,
    /* [out] */ error_status_t *c_status,
    /* [out] */ error_status_t *f_status
#endif
);
extern void  IDL_STD_STDCALL _impTPCCDelivery(
#ifdef IDL_PROTOTYPES
    /* [in] */ handle_t trpc_h,
    /* [in] */ idl_long_int length,
    /* [in, out] */ idl_char *dataP,
    /* [in, out] */ data_header *headerP,
    /* [in] */ trpc_byteData_t applAndAddress,
    /* [in] */ idl_ulong_int applAndAddressLength,
    /* [in] */ trpc_callbackData_t inCallbackData,
    /* [in] */ idl_ulong_int numOfInCallbackData
#endif
);
globalref mon_handle_t handle;
#if defined(__VMS) && (defined(__DECC) ||
defined(__cplusplus))
#pragma extern_model __save
#pragma extern_model __common_block __shr
#endif
typedef struct _delivery_v1_0_epv_t {
void ( IDL_STD_STDCALL *_delivery_GetApplId)(
#ifdef IDL_PROTOTYPES
    /* [in] */ handle_t handle,
    /* [out] */ trpc_byteData_t applString,
    /* [out] */ idl_ulong_int *applStringLength,
    /* [out] */ trpc_byteData_t address,
    /* [out] */ idl_ulong_int *addressLength,
    /* [out] */ error_status_t *c_status,
    /* [out] */ error_status_t *f_status
#endif
);
void ( IDL_STD_STDCALL *_impTPCCDelivery)(
#ifdef IDL_PROTOTYPES
    /* [in] */ handle_t trpc_h,
    /* [in] */ idl_long_int length,
    /* [in, out] */ idl_char *dataP,
    /* [in, out] */ data_header *headerP,
    /* [in] */ trpc_byteData_t applAndAddress,
    /* [in] */ idl_ulong_int applAndAddressLength,
    /* [in] */ trpc_callbackData_t inCallbackData,
    /* [in] */ idl_ulong_int numOfInCallbackData
#endif
);
} _delivery_v1_0_epv_t;
extern rpc_if_handle_t _delivery_v1_0_c_ifspec;
extern rpc_if_handle_t _delivery_v1_0_s_ifspec;
#if defined(__VMS) && (defined(__DECC) ||
defined(__cplusplus))
#pragma extern_model __restore
#endif

#ifdef __cplusplus
    }

#else
#endif
#endif
```

# _neworder.h

```
/* Generated by IDL compiler version DEC DCE V2.0.0-6
*/
#ifndef _neworder_v1_0_included
#define _neworder_v1_0_included
#ifndef IDLBASE_H
#include <dce\idlbase.h>
#endif
#include <dce\rpc.h>
#include "trpc/trpc.h"

#ifdef __cplusplus
    extern "C" {
#endif

#ifndef nbase_v0_0_included
#include "dce\nbase.h"
#endif
#ifndef trpcImports_v0_0_included
#include "trpc\trpcImports.h"
#endif
#ifndef mon_handle_v1_0_included
#include "tpm/mon\mon_handle.h"
#endif
#ifndef tpcc_types_v1_0_included
#include "tpcc_type.h"
#endif
#include <dce\rpcexc.h>
extern EXCEPTION encina_x_transaction_aborted;
extern EXCEPTION encina_x_server_shutdown;
extern EXCEPTION encina_x_permission_denied;
extern EXCEPTION encina_x_object_not_found;
extern EXCEPTION encina_x_empty_slot1;
extern EXCEPTION encina_x_empty_slot2;
extern EXCEPTION encina_x_empty_slot3;
extern EXCEPTION encina_x_empty_slot4;
extern EXCEPTION encina_x_empty_slot5;
extern EXCEPTION encina_x_undefined_exception;
extern void  IDL_STD_STDCALL _neworder_GetApplId(
#ifdef IDL_PROTOTYPES
    /* [in] */ handle_t handle,
    /* [out] */ trpc_byteData_t applString,
    /* [out] */ idl_ulong_int *applStringLength,
    /* [out] */ trpc_byteData_t address,
    /* [out] */ idl_ulong_int *addressLength,
    /* [out] */ error_status_t *c_status,
    /* [out] */ error_status_t *f_status
#endif
);
```


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```
extern void  IDL_STD_STDCALL _impTPCCNewOrder(
#ifdef IDL_PROTOTYPES
    /* [in] */ handle_t trpc_h,
    /* [in] */ idl_long_int length,
    /* [in, out] */ idl_char *dataP,
    /* [in, out] */ data_header *headerP,
    /* [in] */ trpc_byteData_t applAndAddress,
    /* [in] */ idl_ulong_int applAndAddressLength,
    /* [in] */ trpc_callbackData_t inCallbackData,
    /* [in] */ idl_ulong_int numOfInCallbackData
#endif
);
extern void  IDL_STD_STDCALL _impTPCCNOInfo(
#ifdef IDL_PROTOTYPES
    /* [in] */ handle_t trpc_h,
    /* [out] */ dbInfo_data_t *dataP,
    /* [in] */ trpc_byteData_t applAndAddress,
    /* [in] */ idl_ulong_int applAndAddressLength,
    /* [in] */ trpc_callbackData_t inCallbackData,
    /* [in] */ idl_ulong_int numOfInCallbackData
#endif
);
globalref mon_handle_t handle;
#if defined(__VMS) && (defined(__DECC) ||
defined(__cplusplus))
#pragma extern_model __save
#pragma extern_model __common_block __shr
#endif
typedef struct _neworder_v1_0_epv_t {
void ( IDL_STD_STDCALL *_neworder_GetApplId)(
#ifdef IDL_PROTOTYPES
    /* [in] */ handle_t handle,
    /* [out] */ trpc_byteData_t applString,
    /* [out] */ idl_ulong_int *applStringLength,
    /* [out] */ trpc_byteData_t address,
    /* [out] */ idl_ulong_int *addressLength,
    /* [out] */ error_status_t *c_status,
    /* [out] */ error_status_t *f_status
#endif
);
void ( IDL_STD_STDCALL *_impTPCCNewOrder)(
#ifdef IDL_PROTOTYPES
    /* [in] */ handle_t trpc_h,
    /* [in] */ idl_long_int length,
    /* [in, out] */ idl_char *dataP,
    /* [in, out] */ data_header *headerP,
    /* [in] */ trpc_byteData_t applAndAddress,
    /* [in] */ idl_ulong_int applAndAddressLength,
    /* [in] */ trpc_callbackData_t inCallbackData,
    /* [in] */ idl_ulong_int numOfInCallbackData
#endif
);
void ( IDL_STD_STDCALL *_impTPCCNOInfo)(
#ifdef IDL_PROTOTYPES
    /* [in] */ handle_t trpc_h,
    /* [out] */ dbInfo_data_t *dataP,
    /* [in] */ trpc_byteData_t applAndAddress,
    /* [in] */ idl_ulong_int applAndAddressLength,
    /* [in] */ trpc_callbackData_t inCallbackData,
    /* [in] */ idl_ulong_int numOfInCallbackData
#endif
);
} _neworder_v1_0_epv_t;
extern rpc_if_handle_t _neworder_v1_0_c_ifspec;
extern rpc_if_handle_t _neworder_v1_0_s_ifspec;
#if defined(__VMS) && (defined(__DECC) ||
defined(__cplusplus))
#pragma extern_model __restore
#endif

#ifdef __cplusplus
    }

#else
#endif
#endif
```

# _orderstatus.h

```
/* Generated by IDL compiler version DEC DCE V2.0.0-6
*/
#ifndef _orderstatus_v1_0_included
#define _orderstatus_v1_0_included
#ifndef IDLBASE_H
#include <dce\idlbase.h>
#endif
#include <dce\rpc.h>
#include "trpc/trpc.h"

#ifdef __cplusplus
    extern "C" {
#endif

#ifndef nbase_v0_0_included
#include "dce\nbase.h"
#endif
#ifndef trpcImports_v0_0_included
#include "trpc\trpcImports.h"
#endif
#ifndef mon_handle_v1_0_included
#include "tpm/mon\mon_handle.h"
#endif
#ifndef tpcc_types_v1_0_included
#include "tpcc_type.h"
#endif
#include <dce\rpcexc.h>
extern EXCEPTION encina_x_transaction_aborted;
extern EXCEPTION encina_x_server_shutdown;
extern EXCEPTION encina_x_permission_denied;
extern EXCEPTION encina_x_object_not_found;
extern EXCEPTION encina_x_empty_slot1;
extern EXCEPTION encina_x_empty_slot2;
extern EXCEPTION encina_x_empty_slot3;
extern EXCEPTION encina_x_empty_slot4;
extern EXCEPTION encina_x_empty_slot5;
extern EXCEPTION encina_x_undefined_exception;
extern void  IDL_STD_STDCALL _orderstatus_GetApplId(
#ifdef IDL_PROTOTYPES
    /* [in] */ handle_t handle,
    /* [out] */ trpc_byteData_t applString,
    /* [out] */ idl_ulong_int *applStringLength,
    /* [out] */ trpc_byteData_t address,
    /* [out] */ idl_ulong_int *addressLength,
    /* [out] */ error_status_t *c_status,
    /* [out] */ error_status_t *f_status
#endif
);
extern void  IDL_STD_STDCALL _impTPCCOrderStatus(
#ifdef IDL_PROTOTYPES
    /* [in] */ handle_t trpc_h,
    /* [in] */ idl_long_int length,
    /* [in, out] */ idl_char *dataP,
    /* [in, out] */ data_header *headerP,
    /* [in] */ trpc_byteData_t applAndAddress,
    /* [in] */ idl_ulong_int applAndAddressLength,
    /* [in] */ trpc_callbackData_t inCallbackData,
    /* [in] */ idl_ulong_int numOfInCallbackData
#endif
);
globalref mon_handle_t handle;
#if defined(__VMS) && (defined(__DECC) ||
defined(__cplusplus))
#pragma extern_model __save
#pragma extern_model __common_block __shr
#endif
typedef struct _orderstatus_v1_0_epv_t {
void ( IDL_STD_STDCALL *_orderstatus_GetApplId)(
#ifdef IDL_PROTOTYPES
    /* [in] */ handle_t handle,
    /* [out] */ trpc_byteData_t applString,
    /* [out] */ idl_ulong_int *applStringLength,
    /* [out] */ trpc_byteData_t address,
    /* [out] */ idl_ulong_int *addressLength,
    /* [out] */ error_status_t *c_status,
    /* [out] */ error_status_t *f_status
#endif
);
void ( IDL_STD_STDCALL *_impTPCCOrderStatus)(
#ifdef IDL_PROTOTYPES
    /* [in] */ handle_t trpc_h,
    /* [in] */ idl_long_int length,
    /* [in, out] */ idl_char *dataP,
    /* [in, out] */ data_header *headerP,
    /* [in] */ trpc_byteData_t applAndAddress,
    /* [in] */ idl_ulong_int applAndAddressLength,
    /* [in] */ trpc_callbackData_t inCallbackData,
    /* [in] */ idl_ulong_int numOfInCallbackData
#endif
);
} _orderstatus_v1_0_epv_t;
extern rpc_if_handle_t _orderstatus_v1_0_c_ifspec;
extern rpc_if_handle_t _orderstatus_v1_0_s_ifspec;
#if defined(__VMS) && (defined(__DECC) ||
defined(__cplusplus))
#pragma extern_model __restore
#endif

#ifdef __cplusplus
    }

#else
#endif
#endif
```


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# _payment.h

```
/* Generated by IDL compiler version DEC DCE V2.0.0-6
*/
#ifndef _payment_v1_0_included
#define _payment_v1_0_included
#ifndef IDLBASE_H
#include <dce\idlbase.h>
#endif
#include <dce\rpc.h>
#include "trpc/trpc.h"

#ifdef __cplusplus
    extern "C" {
#endif

#ifndef nbase_v0_0_included
#include "dce\nbase.h"
#endif
#ifndef trpcImports_v0_0_included
#include "trpc\trpcImports.h"
#endif
#ifndef mon_handle_v1_0_included
#include "tpm/mon\mon_handle.h"
#endif
#ifndef tpcc_types_v1_0_included
#include "tpcc_type.h"
#endif
#include <dce\rpcexc.h>
extern EXCEPTION encina_x_transaction_aborted;
extern EXCEPTION encina_x_server_shutdown;
extern EXCEPTION encina_x_permission_denied;
extern EXCEPTION encina_x_object_not_found;
extern EXCEPTION encina_x_empty_slot1;
extern EXCEPTION encina_x_empty_slot2;
extern EXCEPTION encina_x_empty_slot3;
extern EXCEPTION encina_x_empty_slot4;
extern EXCEPTION encina_x_empty_slot5;
extern EXCEPTION encina_x_undefined_exception;
extern void  IDL_STD_STDCALL _payment_GetApplId(
#ifdef IDL_PROTOTYPES
    /* [in] */ handle_t handle,
    /* [out] */ trpc_byteData_t applString,
    /* [out] */ idl_ulong_int *applStringLength,
    /* [out] */ trpc_byteData_t address,
    /* [out] */ idl_ulong_int *addressLength,
    /* [out] */ error_status_t *c_status,
    /* [out] */ error_status_t *f_status
#endif
);
extern void  IDL_STD_STDCALL _impTPCCPayment(
#ifdef IDL_PROTOTYPES
    /* [in] */ handle_t trpc_h,
    /* [in] */ idl_long_int length,
    /* [in, out] */ idl_char *dataP,
    /* [in, out] */ data_header *headerP,
    /* [in] */ trpc_byteData_t applAndAddress,
    /* [in] */ idl_ulong_int applAndAddressLength,
    /* [in] */ trpc_callbackData_t inCallbackData,
    /* [in] */ idl_ulong_int numOfInCallbackData
#endif
);
globalref mon_handle_t handle;
#if defined(__VMS) && (defined(__DECC) ||
defined(__cplusplus))
#pragma extern_model __save
#pragma extern_model __common_block __shr
#endif
typedef struct _payment_v1_0_epv_t {
void ( IDL_STD_STDCALL *_payment_GetApplId)(
#ifdef IDL_PROTOTYPES
    /* [in] */ handle_t handle,
    /* [out] */ trpc_byteData_t applString,
    /* [out] */ idl_ulong_int *applStringLength,
    /* [out] */ trpc_byteData_t address,
    /* [out] */ idl_ulong_int *addressLength,
    /* [out] */ error_status_t *c_status,
    /* [out] */ error_status_t *f_status
#endif
);
void ( IDL_STD_STDCALL *_impTPCCPayment)(
#ifdef IDL_PROTOTYPES
    /* [in] */ handle_t trpc_h,
    /* [in] */ idl_long_int length,
    /* [in, out] */ idl_char *dataP,
    /* [in, out] */ data_header *headerP,
    /* [in] */ trpc_byteData_t applAndAddress,
    /* [in] */ idl_ulong_int applAndAddressLength,
    /* [in] */ trpc_callbackData_t inCallbackData,
    /* [in] */ idl_ulong_int numOfInCallbackData
#endif
);
} _payment_v1_0_epv_t;
extern rpc_if_handle_t _payment_v1_0_c_ifspec;
extern rpc_if_handle_t _payment_v1_0_s_ifspec;
#if defined(__VMS) && (defined(__DECC) ||
defined(__cplusplus))
#pragma extern_model __restore
#endif

#ifdef __cplusplus
    }

#else
#endif
#endif
```

# _stocklevel.h

```
/* Generated by IDL compiler version DEC DCE V2.0.0-6
*/
#ifndef _stocklevel_v1_0_included
#define _stocklevel_v1_0_included
#ifndef IDLBASE_H
#include <dce\idlbase.h>
#endif
#include <dce\rpc.h>
#include "trpc/trpc.h"

#ifdef __cplusplus
    extern "C" {
#endif

#ifndef nbase_v0_0_included
#include "dce\nbase.h"
#endif
#ifndef trpcImports_v0_0_included
#include "trpc\trpcImports.h"
#endif
#ifndef mon_handle_v1_0_included
#include "tpm/mon\mon_handle.h"
#endif
#ifndef tpcc_types_v1_0_included
#include "tpcc_type.h"
#endif
#include <dce\rpcexc.h>
extern EXCEPTION encina_x_transaction_aborted;
extern EXCEPTION encina_x_server_shutdown;
extern EXCEPTION encina_x_permission_denied;
extern EXCEPTION encina_x_object_not_found;
extern EXCEPTION encina_x_empty_slot1;
extern EXCEPTION encina_x_empty_slot2;
extern EXCEPTION encina_x_empty_slot3;
extern EXCEPTION encina_x_empty_slot4;
extern EXCEPTION encina_x_empty_slot5;
extern EXCEPTION encina_x_undefined_exception;
extern void  IDL_STD_STDCALL _stocklevel_GetApplId(
#ifdef IDL_PROTOTYPES
    /* [in] */ handle_t handle,
    /* [out] */ trpc_byteData_t applString,
    /* [out] */ idl_ulong_int *applStringLength,
    /* [out] */ trpc_byteData_t address,
    /* [out] */ idl_ulong_int *addressLength,
    /* [out] */ error_status_t *c_status,
    /* [out] */ error_status_t *f_status
#endif
);
extern void  IDL_STD_STDCALL _impTPCCStockLevel(
#ifdef IDL_PROTOTYPES
    /* [in] */ handle_t trpc_h,
    /* [in] */ idl_long_int length,
    /* [in, out] */ idl_char *dataP,
    /* [in, out] */ data_header *headerP,
    /* [in] */ trpc_byteData_t applAndAddress,
    /* [in] */ idl_ulong_int applAndAddressLength,
    /* [in] */ trpc_callbackData_t inCallbackData,
    /* [in] */ idl_ulong_int numOfInCallbackData
#endif
);
globalref mon_handle_t handle;
#if defined(__VMS) && (defined(__DECC) ||
defined(__cplusplus))
#pragma extern_model __save
#pragma extern_model __common_block __shr
#endif
typedef struct _stocklevel_v1_0_epv_t {
void ( IDL_STD_STDCALL *_stocklevel_GetApplId)(
#ifdef IDL_PROTOTYPES
    /* [in] */ handle_t handle,
    /* [out] */ trpc_byteData_t applString,
    /* [out] */ idl_ulong_int *applStringLength,
    /* [out] */ trpc_byteData_t address,
    /* [out] */ idl_ulong_int *addressLength,
    /* [out] */ error_status_t *c_status,
```


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```
    /* [out] */ error_status_t *f_status
#endif
);
void ( IDL_STD_STDCALL *_impTPCCStockLevel)(
#ifdef IDL_PROTOTYPES
    /* [in] */ handle_t trpc_h,
    /* [in] */ idl_long_int length,
    /* [in, out] */ idl_char *dataP,
    /* [in, out] */ data_header *headerP,
    /* [in] */ trpc_byteData_t applAndAddress,
    /* [in] */ idl_ulong_int applAndAddressLength,
    /* [in] */ trpc_callbackData_t inCallbackData,
    /* [in] */ idl_ulong_int numOfInCallbackData
#endif
);
} _stocklevel_v1_0_epv_t;
extern rpc_if_handle_t _stocklevel_v1_0_c_ifspec;
extern rpc_if_handle_t _stocklevel_v1_0_s_ifspec;
#if defined(__VMS) && (defined(__DECC) ||
defined(__cplusplus))
#pragma extern_model __restore
#endif

#ifdef __cplusplus
    }

#else
#endif
#endif
```


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# *Appendix B: Database Design*

The TPC-C database was created with the following Transact-SQL scripts:

## backup.sql

```
------------------------------------------------------
-------------
--
--
--  File:   BACKUP.SQL
--
--          Microsoft TPC-C Benchmark Kit Ver. 4.62
--
--          Copyright Microsoft, 2005
--
--
--
------------------------------------------------------
-------------

DECLARE @startdate  DATETIME,
             @enddate        DATETIME

SELECT  @startdate = GETDATE()
SELECT  'Start date:',
                  CONVERT(VARCHAR(30),@startdate,
21)

DUMP DATABASE tpcc TO tpccback1, tpccback2,
tpccback3, tpccback4, tpccback5, tpccback6, tpccback7
WITH init, stats = 1

SELECT  @enddate = GETDATE()
SELECT  'End date: ',
                  CONVERT(VARCHAR(30),@enddate, 21)
SELECT  'Elapsed time (in seconds): ',
                  DATEDIFF(second, @startdate,
@enddate)
GO
```

## backupdev.sql

```
------------------------------------------------------
-------------
--
--
--  File:   BACKUPDEV.SQL
--
--          Microsoft TPC-C Benchmark Kit Ver. 4.62
--
--          Copyright Microsoft, 2005
--
--
--
------------------------------------------------------
-------------

USE master
GO

------------------------
-- create backup devices
------------------------
EXEC sp_addumpdevice
'disk','tpccback1','T:\tpccback1_8676wh.dmp'
GO
EXEC sp_addumpdevice
'disk','tpccback2','U:\tpccback2_8676wh.dmp'
GO
EXEC sp_addumpdevice
'disk','tpccback3','V:\tpccback3_8676wh.dmp'
GO
EXEC sp_addumpdevice
'disk','tpccback4','W:\tpccback4_8676wh.dmp'
GO
EXEC sp_addumpdevice
'disk','tpccback5','X:\tpccback5_8676wh.dmp'
GO
EXEC sp_addumpdevice
'disk','tpccback6','Y:\tpccback6_8676wh.dmp'
GO
EXEC sp_addumpdevice
'disk','tpccback7','Z:\tpccback7_8676wh.dmp'
GO
```

## config.sql

```
--  File:     CONFIG.SQL
--            Microsoft TPC-C Benchmark Kit Ver. 4.00
--            Copyright Microsoft, 1996
--  Purpose:  Collects SQL Server configuration
parameters

print " "
select convert(char(30), getdate(),9)
print " "
go

sp_configure "show advanced",1
go
reconfigure with override
go
exec sp_configure "affinity mask",              15
exec sp_configure "cost threshold for parallelism",
5
exec sp_configure "index create memory",        704
exec sp_configure "lightweight pooling",        1
exec sp_configure "awe enabled",                1
exec sp_configure "locks",                      0
exec sp_configure "max degree of parallelism",  1
exec sp_configure "max server memory",
2147483647
exec sp_configure "max worker threads",         400
exec sp_configure "min memory per query",       512
exec sp_configure "min server memory",          0
exec sp_configure "nested triggers",            1
exec sp_configure "network packet size",        2048
exec sp_configure "open objects",               0
exec sp_configure "priority boost",               1
exec sp_configure "recovery interval",          32767
exec sp_configure "set working set size",       0
exec sp_configure "user connections",           0

go

reconfigure with override
go
sp_configure
go
```

## createdb.sql

```
------------------------------------------------------
-------------
--
--
--  File:   CREATEDB.SQL
--
--          Microsoft TPC-C Benchmark Kit Ver. 4.62
--
--          Copyright Microsoft, 2005
--
--
--
------------------------------------------------------
-------------

SET ANSI_NULL_DFLT_OFF ON
GO

USE master
GO

-----------------------------------
-- Create temporary table for timing
-----------------------------------
IF EXISTS( SELECT name FROM sysobjects WHERE name =
'tpcc_timer' )
    DROP TABLE tpcc_timer
GO
```


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```
CREATE TABLE tpcc_timer
                (start_date   CHAR(30),
                 end_date     CHAR(30))
GO

INSERT INTO tpcc_timer VALUES(0,0)
GO

----------------------
-- Store starting time
----------------------
UPDATE  tpcc_timer
SET     start_date  = (SELECT   CONVERT(CHAR(30),
GETDATE(), 21))
GO

-----------------------------
-- create main database files
-----------------------------

CREATE DATABASE tpcc
ON PRIMARY
(         NAME                = MSSQL_tpcc_root,
          FILENAME  = "C:\MSSQL_tpcc_root.mdf",
          SIZE                = 8MB,
          FILEGROWTH          =0),
FILEGROUP MSSQL_cs_fg
(         NAME                = MSSQL_cs1,
          FILENAME  = "F:",
          SIZE                = 88000MB,
          FILEGROWTH          = 0),
(         NAME                = MSSQL_cs2,
          FILENAME  = "G:",
          SIZE                = 88000MB,
          FILEGROWTH          = 0),
(         NAME                = MSSQL_cs3,
          FILENAME  = "H:",
          SIZE                = 88000MB,
          FILEGROWTH          = 0),
(         NAME                = MSSQL_cs4,
          FILENAME  = "I:",
          SIZE                = 88000MB,
          FILEGROWTH          = 0),
(         NAME                = MSSQL_cs5,
          FILENAME  = "J:",
          SIZE                = 88000MB,
          FILEGROWTH          = 0),
(         NAME                = MSSQL_cs6,
          FILENAME  = "K:",
          SIZE                = 88000MB,
          FILEGROWTH          = 0),
FILEGROUP MSSQL_misc_fg
(         NAME                = MSSQL_misc1,
          FILENAME  = "L:",
          SIZE                = 453650MB,
          FILEGROWTH          = 0)
LOG ON
(         NAME                =MSSQL_tpcc_log,
          FILENAME  ="E:",
          SIZE                =416750MB,
          FILEGROWTH          =0)
GO
```

```
--------------------
-- Store ending time
--------------------
UPDATE  tpcc_timer
SET     end_date    = (SELECT   CONVERT(CHAR(30),
GETDATE(), 21))
GO

SELECT  DATEDIFF(second,(SELECT start_date FROM
tpcc_timer),(SELECT end_date FROM tpcc_timer))
GO

-------------------------
-- remove temporary table
-------------------------
IF EXISTS ( SELECT name FROM sysobjects WHERE name =
'tpcc_timer' )
    DROP TABLE tpcc_timer
GO
```

# dbopt1.sql

```
------------------------------------------------------
-------------
--
--
--  File:   DBOPT1.SQL
--
--          Microsoft TPC-C Benchmark Kit Ver. 4.62
--
--          Copyright Microsoft, 2005
--
--
--
--          Sets database options for load
--
--
--
------------------------------------------------------
-------------
USE master
GO

ALTER DATABASE tpcc SET RECOVERY BULK_LOGGED
GO

EXEC sp_dboption tpcc,'trunc. log on chkpt.',TRUE
GO

ALTER DATABASE tpcc SET TORN_PAGE_DETECTION OFF
GO

ALTER DATABASE tpcc SET PAGE_VERIFY NONE
GO

USE tpcc
GO

CHECKPOINT
GO
```

# dbopt2.sql

```
------------------------------------------------------
-------------
--
--
--  File:   DBOPT2.SQL
--
--          Microsoft TPC-C Benchmark Kit Ver. 4.62
--
--          Copyright Microsoft, 2005
--
--
--
--          Sets database options after load
--
--
--
------------------------------------------------------
-------------
ALTER DATABASE tpcc SET RECOVERY FULL
GO

USE tpcc
GO

CHECKPOINT
GO

sp_configure 'allow updates',1
GO

RECONFIGURE WITH OVERRIDE
GO

DECLARE   @msg                varchar(50)

-----------------------------------------------
--        OPTIONS FOR SQL SERVER 2000         --
-- Set option values for user-defined indexes --
-----------------------------------------------

SET     @msg    = ' '
PRINT   @msg
SET     @msg    = 'Setting SQL Server indexoptions'
PRINT   @msg
SET     @msg    = ' '
PRINT   @msg

EXEC sp_indexoption 'customer',
'DisAllowPageLocks',          TRUE
EXEC sp_indexoption 'district',
'DisAllowPageLocks',          TRUE
EXEC sp_indexoption 'warehouse',
'DisAllowPageLocks',          TRUE
EXEC sp_indexoption 'stock',
'DisAllowPageLocks',          TRUE
```


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```
EXEC sp_indexoption 'order_line',
'DisAllowRowLocks',     TRUE
EXEC sp_indexoption 'orders',
'DisAllowRowLocks',     TRUE
EXEC sp_indexoption 'new_order',
'DisAllowRowLocks',     TRUE
EXEC sp_indexoption 'item',
'DisAllowRowLocks',     TRUE
EXEC sp_indexoption 'item',
'DisAllowPageLocks',    FALSE
GO

Print ' '
Print '******************'
Print 'Pre-specified Locking Hierarchy:'
Print '     Lockflag = 0 ==> No pre-specified
hierarchy'
Print '   Lockflag = 1 ==> Lock at Page-level then
Table-level'
Print '   Lockflag = 2 ==> Lock at Row-level then
Table-level'
Print '   Lockflag = 3 ==> Lock at Table-level'
Print ' '

SELECT  name,
        lockflags
FROM    sysindexes
WHERE   object_id('warehouse')  = id OR
        object_id('district')   = id OR
        object_id('customer')   = id OR
        object_id('stock')      = id OR
        object_id('orders')     = id OR
        object_id('order_line') = id OR
        object_id('history')    = id OR
        object_id('new_order')  = id OR
        object_id('item')       = id
ORDER   BY lockflags asc
GO

sp_configure 'allow updates',0
GO

RECONFIGURE WITH OVERRIDE
GO

EXEC sp_dboption tpcc,        'auto update
statistics',        FALSE
EXEC sp_dboption tpcc,        'auto create
statistics',        FALSE
GO

DECLARE @db_id  int,
        @tbl_id int

SET     @db_id  = DB_ID('tpcc')
SET     @tbl_id = OBJECT_ID('tpcc..warehouse')
DBCC PINTABLE (@db_id, @tbl_id)

SET     @tbl_id = OBJECT_ID('tpcc..district')
DBCC PINTABLE (@db_id, @tbl_id)

SET     @tbl_id = OBJECT_ID('tpcc..new_order')
DBCC PINTABLE (@db_id, @tbl_id)

SET     @tbl_id = OBJECT_ID('tpcc..item')
DBCC PINTABLE (@db_id, @tbl_id)
GO
```

# delivery.sql

```
-----------------------------------------------------
-------------
--
--
--  File:   DELIVERY.SQL
--
--          Microsoft TPC-C Benchmark Kit Ver. 4.62
--
--          Copyright Microsoft, 2005
--
--
--
--          Creates delivery stored procedure
--
--
--
--          Interface Level:    4.20.000
--
--
--
-----------------------------------------------------
-------------
SET QUOTED_IDENTIFIER OFF
GO

SET ANSI_NULLS ON
GO

USE tpcc
GO

IF EXISTS ( SELECT name FROM sysobjects WHERE name =
'tpcc_delivery' )
    DROP PROCEDURE tpcc_delivery
GO

CREATE PROC tpcc_delivery
                @w_id           int,

                @o_carrier_id   smallint

AS

DECLARE @d_id       tinyint,
        @o_id       int,
        @c_id       int,
        @total      money,
        @oid1       int,
        @oid2       int,
        @oid3       int,
        @oid4       int,
        @oid5       int,
        @oid6       int,
        @oid7       int,
        @oid8       int,
        @oid9       int,
        @oid10      int

SELECT  @d_id   = 0

BEGIN TRANSACTION d
    WHILE (@d_id < 10)
    BEGIN
        SELECT  @d_id   = @d_id + 1,
                @total  = 0,
                @o_id   = 0

        SELECT  TOP 1
                @o_id   = no_o_id
        FROM    new_order WITH  (serializable
updlock)
        WHERE   no_w_id = @w_id AND
                no_d_id = @d_id
        ORDER   BY no_o_id ASC

        IF (@@rowcount <> 0)
        BEGIN
            --  claim the order for this district
            DELETE  new_order
            WHERE   no_w_id = @w_id AND
                    no_d_id = @d_id AND
                    no_o_id = @o_id

            --  set carrier_id on this order (and get
customer id)
            UPDATE  orders
            SET     o_carrier_id    = @o_carrier_id,
                    @c_id           = o_c_id
            WHERE   o_w_id          = @w_id AND
                    o_d_id          = @d_id AND
                    o_id            = @o_id

            --  set date in all lineitems for this
order (and sum amounts)
            UPDATE  order_line
            SET     ol_delivery_d   = GETDATE(),
                    @total          = @total +
ol_amount
            WHERE   ol_w_id         = @w_id AND
                    ol_d_id         = @d_id AND
                    ol_o_id         = @o_id

            --  accummulate lineitem amounts for this
order into customer
            UPDATE  customer
            SET     c_balance       = c_balance +
@total,
                    c_delivery_cnt  = c_delivery_cnt
+ 1
            WHERE   c_w_id          = @w_id AND
                    c_d_id          = @d_id AND
                    c_id            = @c_id
        END

    SELECT  @oid1   = CASE @d_id WHEN   1   THEN
@o_id ELSE @oid1   END,
```


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```
            @oid2   = CASE @d_id WHEN   2   THEN
@o_id ELSE @oid2   END,
            @oid3   = CASE @d_id WHEN   3   THEN
@o_id ELSE @oid3   END,
            @oid4   = CASE @d_id WHEN   4   THEN
@o_id ELSE @oid4   END,
            @oid5   = CASE @d_id WHEN   5   THEN
@o_id ELSE @oid5   END,
            @oid6   = CASE @d_id WHEN   6   THEN
@o_id ELSE @oid6   END,
            @oid7   = CASE @d_id WHEN   7   THEN
@o_id ELSE @oid7   END,
            @oid8   = CASE @d_id WHEN   8   THEN
@o_id ELSE @oid8   END,
            @oid9   = CASE @d_id WHEN   9   THEN
@o_id ELSE @oid9   END,
            @oid10  = CASE @d_id WHEN  10   THEN
@o_id ELSE @oid10  END
    END

COMMIT TRANSACTION d

-- return delivery data to client

SELECT  @oid1,
        @oid2,
        @oid3,
        @oid4,
        @oid5,
        @oid6,
        @oid7,
        @oid8,
        @oid9,
        @oid10
GO

SET QUOTED_IDENTIFIER OFF
GO

SET ANSI_NULLS ON
GO
```

# getargs.c

```
//        File:               GETARGS.C
//                                    Microsoft
TPC-C Kit Ver. 4.51
//                                    Copyright
Microsoft, 1996, 1997, 1998, 1999, 2000, 2001, 2002,
2003
//        Purpose:  Source file for command line
processing


// Includes
#include "tpcc.h"

//=================================================
====================
//
// Function name: GetArgsLoader
//
//=================================================
====================

void GetArgsLoader(int argc, char **argv,
TPCCLDR_ARGS *pargs)
{
    int             i;
    char  *ptr;

#ifdef DEBUG
    printf("[%ld]DBG: Entering GetArgsLoader()\n",
(int) GetCurrentThreadId());
#endif

    /* init args struct with some useful values */
    pargs->server                       =  SERVER;
    pargs->user                         =  USER;
    pargs->password                     =  PASSWORD;
    pargs->database                     =  DATABASE;
    pargs->batch                        =  BATCH;
    pargs->num_warehouses               =  UNDEF;
          pargs->tables_all                       =
TRUE;
          pargs->table_item                       =
FALSE;
          pargs->table_warehouse                  =
FALSE;
          pargs->table_customer                   =
FALSE;
          pargs->table_orders                     =
FALSE;
          pargs->loader_res_file                  =
LOADER_RES_FILE;
          pargs->log_path
          =  LOADER_LOG_PATH;
          pargs->pack_size                        =
DEFLDPACKSIZE;
          pargs->starting_warehouse     =
DEF_STARTING_WAREHOUSE;
          pargs->build_index                      =
BUILD_INDEX;
          pargs->index_order                      =
INDEX_ORDER;
          pargs->index_script_path      =
INDEX_SCRIPT_PATH;
          pargs->scale_down                       =
SCALE_DOWN;

    /* check for zero command line args */
    if ( argc == 1 )
                    GetArgsLoaderUsage();

    for (i = 1; i < argc; ++i)
    {
                    if (argv[i][0] != '-' &&
argv[i][0] != '/')
                    {
                    printf("\nUnrecognized command");
                    GetArgsLoaderUsage();
                    exit(1);
                    }
                    ptr = argv[i];

                    switch (ptr[1])
                    {
                    case '?':     /* Fall throught */
          GetArgsLoaderUsage();
                                        break;

                    case 'D':
                                        pargs-
>database = ptr+2;
                                        break;

                    case 'P':
                                        pargs-
>password = ptr+2;
                                        break;

                    case 'S':
                                        pargs->server
= ptr+2;
                                        break;

                    case 'U':
                                        pargs->user =
ptr+2;
                                        break;

                    case 'b':
                                        pargs->batch
= atol(ptr+2);
                                        break;

                    case 'W':
                                        pargs-
>num_warehouses = atol(ptr+2);
                                        break;

                    case 's':
                                        pargs-
>starting_warehouse = atol(ptr+2);
                                        break;

                    case 't':
                                        {
          pargs->tables_all = FALSE;
                                                  if
(strcmp(ptr+2,"item") == 0)
          pargs->table_item = TRUE;
          else if (strcmp(ptr+2,"warehouse") == 0)
          pargs->table_warehouse = TRUE;
          else if (strcmp(ptr+2,"customer") == 0)
          pargs->table_customer = TRUE;
          else if (strcmp(ptr+2,"orders") == 0)
```


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```
        pargs->table_orders = TRUE;

        else
                                                {
        printf("\nUnrecognized command");

        GetArgsLoaderUsage();

        exit(1);
                                                }


        break;
                                        }

                                case 'f':
                                        pargs-
>loader_res_file = ptr+2;
                                        break;

                                case 'L':
                                        pargs-
>log_path = ptr+2;
                                        break;

                                case 'p':
                                        pargs-
>pack_size = atol(ptr+2);
                                        break;

                                case 'i':
                                        pargs-
>build_index = atol(ptr+2);
                                        break;

                                case 'o':
                                        pargs-
>index_order = atol(ptr+2);
                                        break;

                                case 'c':
                                        pargs-
>scale_down = atol(ptr+2);
                                        break;

                        case 'd':
                                        pargs-
>index_script_path = ptr+2;
                                        break;

                                default:
                                GetArgsLoaderUsage();
                                exit(-1);
                                break;
                        }
    }

    /* check for required args */
    if (pargs->num_warehouses == UNDEF )
    {
                        printf("Number of Warehouses is
required\n");
                        exit(-2);
    }

    return;
}


//=================================================
==================
//
// Function name: GetArgsLoaderUsage
//
//=================================================
==================

void GetArgsLoaderUsage()
{

#ifdef DEBUG
    printf("[%ld]DBG: Entering
GetArgsLoaderUsage()\n", (int) GetCurrentThreadId());
#endif


    printf("TPCCLDR:\n\n");
          printf("Parameter
Default\n");
          printf("-----------------------------------
--------------------------\n");
    printf("-W Number of Warehouses to Load
Required \n");
    printf("-S Server
%s\n", SERVER);
    printf("-U Username
%s\n", USER);
    printf("-P Password
%s\n", PASSWORD);
    printf("-D Database
%s\n", DATABASE);
          printf("-b Batch Size
%ld\n", (long) BATCH);
          printf("-p TDS packet size
%ld\n", (long) DEFLDPACKSIZE);
          printf("-L Loader BCP Log Path
%s\n", LOADER_LOG_PATH);
          printf("-f Loader Results Output Filename
%s\n", LOADER_RES_FILE);
          printf("-s Starting Warehouse
%ld\n", (long) DEF_STARTING_WAREHOUSE);
          printf("-i Build Option (data = 0, data and
index = 1)        %ld\n", (long) BUILD_INDEX);
          printf("-o Cluster Index Build Order
(before = 1, after = 0)  %ld\n", (long) INDEX_ORDER);
          printf("-c Build Scaled Database (normal =
0, tiny = 1)       %ld\n", (long) SCALE_DOWN);
          printf("-d Index Script Path
%s\n", INDEX_SCRIPT_PATH);
          printf("-t Table to Load
all tables \n");
    printf("   [item|warehouse|customer|orders]\n");
    printf("   Notes: \n");
    printf("     - the '-t' parameter may be included
multiple times to \n");
    printf("       specify multiple tables to be
loaded \n");
    printf("     - 'item' loads ITEM table \n");
    printf("     - 'warehouse' loads WAREHOUSE,
DISTRICT, and STOCK tables \n");
    printf("     - 'customer' loads CUSTOMER and
HISTORY tables \n");
    printf("     - 'orders' load NEW-ORDER, ORDERS,
ORDER-LINE tables \n");

          printf("\nNote:  Command line switches are
case sensitive.\n");

    exit(0);
}
```

# idxcuscl.sql

```
-------------------------------------------------------
-------------
--
--
--  File:   IDXCUSCL.SQL
--
--          Microsoft TPC-C Benchmark Kit Ver. 4.60
--
--          Copyright Microsoft, 2005
--
--
--
--          Creates clustered index on customer table
--
-------------------------------------------------------
-------------
USE tpcc
GO

DECLARE @startdate  DATETIME,
        @enddate    DATETIME

SELECT  @startdate = GETDATE()
SELECT  'Start date:',
        CONVERT(VARCHAR(30),@startdate,21)

IF EXISTS ( SELECT name FROM sysindexes WHERE name =
'customer_c1' )
    DROP INDEX customer.customer_c1

CREATE UNIQUE CLUSTERED INDEX customer_c1 ON
customer(c_w_id, c_d_id, c_id)
    ON MSSQL_cs_fg

SELECT  @enddate = GETDATE()
SELECT  'End date:',
        CONVERT(VARCHAR(30),@enddate,21)
SELECT  'Elapsed time (in seconds): ',
```


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```
        DATEDIFF(second, @startdate, @enddate)
GO
```

# idxcusnc.sql

```
-------------------------------------------------------
-------------
--
--
--  File:   IDXCUSNC.SQL
--
--          Microsoft TPC-C Benchmark Kit Ver. 4.60
--
--          Copyright Microsoft, 2005
--
--
--
--          Creates non-clustered index on customer
table       --
-------------------------------------------------------
-------------
USE tpcc
GO

DECLARE @startdate  DATETIME,
        @enddate    DATETIME

SELECT  @startdate = GETDATE()
SELECT  'Start date:',
        CONVERT(VARCHAR(30),@startdate,21)

IF EXISTS ( SELECT name FROM sysindexes WHERE name =
'customer_nc1' )
    DROP INDEX customer.customer_nc1

CREATE UNIQUE NONCLUSTERED INDEX customer_nc1 ON
customer(c_w_id, c_d_id, c_last, c_first, c_id)
    ON MSSQL_cs_fg

SELECT  @enddate = GETDATE()
SELECT  'End date:',
        CONVERT(VARCHAR(30),@enddate,21)
SELECT  'Elapsed time (in seconds): ',
        DATEDIFF(second, @startdate, @enddate)
GO
```

# idxdiscl.sql

```
-------------------------------------------------------
-------------
--
--
--  File:   IDXDISCL.SQL
--
--          Microsoft TPC-C Benchmark Kit Ver. 4.60
--
--          Copyright Microsoft, 2005
--
--
--
--          Creates clustered index on district table
--
-------------------------------------------------------
-------------
USE tpcc
GO

DECLARE @startdate  DATETIME,
        @enddate    DATETIME

SELECT  @startdate = GETDATE()
SELECT  'Start date:',
        CONVERT(VARCHAR(30),@startdate,21)

IF EXISTS ( SELECT name FROM sysindexes WHERE name =
'district_c1' )
    DROP INDEX district.district_c1

CREATE UNIQUE CLUSTERED INDEX district_c1 ON
district(d_w_id, d_id)
    WITH FILLFACTOR=100 ON MSSQL_misc_fg

SELECT  @enddate = GETDATE()
SELECT  'End date:',
        CONVERT(VARCHAR(30),@enddate,21)
SELECT  'Elapsed time (in seconds): ',
        DATEDIFF(second, @startdate, @enddate)
GO
```

# idxhiscl.sql

```
-------------------------------------------------------
-------------
--
--
--  File:   IDXHISCL.SQL
--
--          Microsoft TPC-C Benchmark Kit Ver. 4.60
--
--          Copyright Microsoft, 2005
--
--
--
--          Creates clustered index on history table
--
--
--
--          CAUTION: This index is only beneficial
for systems  --
--          CAUTION: with 8 or more processors.
--
--          CAUTION: It may negatively impact
performance on    --
--          CAUTION: systems with less than 8
processors.       --
--
--
-------------------------------------------------------
-------------
USE tpcc
GO

DECLARE @startdate  DATETIME,
        @enddate    DATETIME

SELECT  @startdate = GETDATE()
SELECT  'Start date:',
        CONVERT(VARCHAR(30),@startdate,21)

IF EXISTS ( SELECT name FROM sysindexes WHERE name =
'history_c1' )
    DROP INDEX history.history_c1

CREATE UNIQUE CLUSTERED INDEX history_c1 ON
history(h_c_w_id, h_date, h_c_d_id, h_c_id, h_amount)
    ON MSSQL_misc_fg

SELECT  @enddate = GETDATE()
SELECT  'End date:',
        CONVERT(VARCHAR(30),@enddate,21)
SELECT  'Elapsed time (in seconds): ',
        DATEDIFF(second, @startdate, @enddate)
GO
```

# idxitmcl.sql

```
-------------------------------------------------------
-------------
--
--
--  File:   IDXITMCL.SQL
--
--          Microsoft TPC-C Benchmark Kit Ver. 4.60
--
--          Copyright Microsoft, 2005
--
--
--
--          Creates clustered index on item table
--
--
--
-------------------------------------------------------
-------------
USE tpcc
GO

DECLARE @startdate  DATETIME,
        @enddate    DATETIME

SELECT  @startdate = GETDATE()
SELECT  'Start date:',
        CONVERT(VARCHAR(30),@startdate,21)

IF EXISTS ( SELECT name FROM sysindexes WHERE name =
'item_c1' )
    DROP INDEX item.item_c1
```


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```
CREATE UNIQUE CLUSTERED INDEX item_c1 ON item(i_id)
    ON MSSQL_misc_fg

SELECT  @enddate = GETDATE()
SELECT  'End date:',
        CONVERT(VARCHAR(30),@enddate,21)
SELECT  'Elapsed time (in seconds): ',
        DATEDIFF(second, @startdate, @enddate)
GO
```

# idxnodcl.sql

```
-------------------------------------------------------
-------------
--
--
--  File:   IDXNODCL.SQL
--
--          Microsoft TPC-C Benchmark Kit Ver. 4.60
--
--          Copyright Microsoft, 2005
--
--
--
--          Creates clustered index on new-order
table          --
--
--
-------------------------------------------------------
-------------
USE tpcc
GO

DECLARE @startdate  DATETIME,
        @enddate    DATETIME

SELECT  @startdate = GETDATE()
SELECT  'Start date:',
        CONVERT(VARCHAR(30),@startdate,21)

IF EXISTS ( SELECT name FROM sysindexes WHERE name =
'new_order_c1' )
    DROP INDEX new_order.new_order_c1

CREATE UNIQUE CLUSTERED INDEX new_order_c1 ON
new_order(no_w_id, no_d_id, no_o_id)
    ON MSSQL_misc_fg

SELECT  @enddate = GETDATE()
SELECT  'End date:',
        CONVERT(VARCHAR(30),@enddate,21)
SELECT  'Elapsed time (in seconds): ',
        DATEDIFF(second, @startdate, @enddate)
GO
```

# idxodlcl.sql

```
-------------------------------------------------------
-------------
--
--
--  File:   IDXODLCL.SQL
--
--          Microsoft TPC-C Benchmark Kit Ver. 4.60
--
--          Copyright Microsoft, 2005
--
--
--
--          Creates clustered index on order-line
table          --
--
--
-------------------------------------------------------
-------------
USE tpcc
GO

DECLARE @startdate  DATETIME,
        @enddate    DATETIME

SELECT  @startdate = GETDATE()
SELECT  'Start date:',
        CONVERT(VARCHAR(30),@startdate,21)

IF EXISTS ( SELECT name FROM sysindexes WHERE name =
'order_line_c1' )
    DROP INDEX order_line.order_line_c1

CREATE UNIQUE CLUSTERED INDEX order_line_c1 ON
order_line(ol_w_id, ol_d_id, ol_o_id, ol_number)
    ON MSSQL_misc_fg

SELECT  @enddate = GETDATE()
SELECT  'End date:',
        CONVERT(VARCHAR(30),@enddate,21)
SELECT  'Elapsed time (in seconds): ',
        DATEDIFF(second, @startdate, @enddate)
GO
```

# idxordcl.sql

```
-------------------------------------------------------
-------------
--
--
--  File:   IDXORDCL.SQL
--
--          Microsoft TPC-C Benchmark Kit Ver. 4.60
--
--          Copyright Microsoft, 2005
--
--
--
--          Creates clustered index on orders table
--
--
--
-------------------------------------------------------
-------------
USE tpcc
GO

DECLARE @startdate  DATETIME,
        @enddate    DATETIME

SELECT  @startdate = GETDATE()
SELECT  'Start date:',
        CONVERT(VARCHAR(30),@startdate,21)

IF EXISTS ( SELECT name FROM sysindexes WHERE name =
'orders_c1' )
    DROP INDEX orders.orders_c1

CREATE UNIQUE CLUSTERED INDEX orders_c1 ON
orders(o_w_id, o_d_id, o_id)
    ON MSSQL_misc_fg

SELECT  @enddate = GETDATE()
SELECT  'End date:',
        CONVERT(VARCHAR(30),@enddate,21)
SELECT  'Elapsed time (in seconds): ',
        DATEDIFF(second, @startdate, @enddate)
GO
```

# idxstkcl.sql

```
-------------------------------------------------------
-------------
--
--
--  File:   IDXSTKCL.SQL
--
--          Microsoft TPC-C Benchmark Kit Ver. 4.60
--
--          Copyright Microsoft, 2005
--
--
--
--          Creates clustered index on stock table
--
--
--
-------------------------------------------------------
-------------
USE tpcc
GO

DECLARE @startdate  DATETIME,
        @enddate    DATETIME

SELECT  @startdate = GETDATE()
SELECT  'Start date:',
        CONVERT(VARCHAR(30),@startdate,21)
```


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```
IF EXISTS ( SELECT name FROM sysindexes WHERE name =
'stock_c1' )
    DROP INDEX stock.stock_c1

CREATE UNIQUE CLUSTERED INDEX stock_c1 ON
stock(s_i_id, s_w_id)
    ON MSSQL_cs_fg

SELECT  @enddate = GETDATE()
SELECT  'End date:',
        CONVERT(VARCHAR(30),@enddate,21)
SELECT  'Elapsed time (in seconds): ',
        DATEDIFF(second, @startdate, @enddate)
GO
```

# idxwarcl.sql

```
-------------------------------------------------------
-------------
--
--
--  File:   IDXWARCL.SQL
--
--          Microsoft TPC-C Benchmark Kit Ver. 4.60
--
--          Copyright Microsoft, 2005
--
--
--
--          Creates clustered index on warehouse
table          --
--
--
-------------------------------------------------------
-------------
USE tpcc
GO

DECLARE @startdate  DATETIME,
        @enddate    DATETIME

SELECT  @startdate = GETDATE()
SELECT  'Start date:',
        CONVERT(VARCHAR(30),@startdate,21)

IF EXISTS ( SELECT name FROM sysindexes WHERE name =
'warehouse_c1' )
    DROP INDEX warehouse.warehouse_c1

CREATE UNIQUE CLUSTERED INDEX warehouse_c1 ON
warehouse(w_id)
    WITH FILLFACTOR=100 ON MSSQL_misc_fg

SELECT  @enddate = GETDATE()
SELECT  'End date:',
        CONVERT(VARCHAR(30),@enddate,21)
SELECT  'Elapsed time (in seconds): ',
        DATEDIFF(second, @startdate, @enddate)
GO
```

# neword.sql

```
-------------------------------------------------------
-------------
--
--
--  File:   NEWORD.SQL
--
--          Microsoft TPC-C Benchmark Kit Ver. 4.62
--
--          Copyright Microsoft, 2005
--
--
--
--          Creates neworder stored procedure
--
--
--
--          Interface Level:    4.20.000
--
--
--
-------------------------------------------------------
-------------
SET QUOTED_IDENTIFIER OFF
GO

SET ANSI_NULLS ON
GO

USE tpcc
GO

IF EXISTS ( SELECT name FROM sysobjects WHERE name =
'tpcc_neworder' )
    DROP PROCEDURE tpcc_neworder
GO

CREATE PROCEDURE    tpcc_neworder
                        @w_id           int,
                        @d_id           tinyint,
                        @c_id           int,
                        @o_ol_cnt       tinyint,
                        @o_all_local    tinyint,
                        @i_id1  int = 0, @s_w_id1
int = 0, @ol_qty1  smallint = 0,
                        @i_id2  int = 0, @s_w_id2
int = 0, @ol_qty2  smallint = 0,
                        @i_id3  int = 0, @s_w_id3
int = 0, @ol_qty3  smallint = 0,
                        @i_id4  int = 0, @s_w_id4
int = 0, @ol_qty4  smallint = 0,
                        @i_id5  int = 0, @s_w_id5
int = 0, @ol_qty5  smallint = 0,
                        @i_id6  int = 0, @s_w_id6
int = 0, @ol_qty6  smallint = 0,
                        @i_id7  int = 0, @s_w_id7
int = 0, @ol_qty7  smallint = 0,
                        @i_id8  int = 0, @s_w_id8
int = 0, @ol_qty8  smallint = 0,
                        @i_id9  int = 0, @s_w_id9
int = 0, @ol_qty9  smallint = 0,
                        @i_id10 int = 0, @s_w_id10
int = 0, @ol_qty10 smallint = 0,
                        @i_id11 int = 0, @s_w_id11
int = 0, @ol_qty11 smallint = 0,
                        @i_id12 int = 0, @s_w_id12
int = 0, @ol_qty12 smallint = 0,
                        @i_id13 int = 0, @s_w_id13
int = 0, @ol_qty13 smallint = 0,
                        @i_id14 int = 0, @s_w_id14
int = 0, @ol_qty14 smallint = 0,
                        @i_id15 int = 0, @s_w_id15
int = 0, @ol_qty15 smallint = 0



AS
DECLARE @w_tax          smallmoney,
        @d_tax          smallmoney,
        @c_last         char(16),
        @c_credit       char(2),
        @c_discount     smallmoney,
        @i_price        smallmoney,
        @i_name         char(24),
        @i_data         char(50),
        @o_entry_d      datetime,
        @remote_flag    int,
        @s_quantity     smallint,
        @s_data         char(50),
        @s_dist         char(24),
        @li_no          int,
        @o_id           int,
        @commit_flag    tinyint,
        @li_id          int,
        @li_s_w_id      int,
        @li_qty         smallint,
        @ol_number      int,
        @c_id_local     int

BEGIN

BEGIN TRANSACTION n

-------------------------------------------------------
------
--  get district tax and next availible order id and
update
--  plus initialize local variables
-------------------------------------------------------
------
    UPDATE  district
    SET     @d_tax          = d_tax,
            @o_id           = d_next_o_id,
            d_next_o_id     = d_next_o_id + 1,
            @o_entry_d      = GETDATE(),
            @li_no          = 0,
            @commit_flag    = 1
    WHERE   d_w_id          = @w_id AND
            d_id            = @d_id

----------------------
--  process orderlines
```


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```
----------------------
    WHILE (@li_no < @o_ol_cnt)
    BEGIN
        SELECT  @li_no  = @li_no + 1

-----------------------------------------------
--  set i_id, s_w_id, and qty for this lineitem
-----------------------------------------------
        SELECT  @li_id = CASE @li_no
                              WHEN 1 THEN @i_id1
                              WHEN 2 THEN @i_id2
                              WHEN 3 THEN @i_id3
                              WHEN 4 THEN @i_id4
                              WHEN 5 THEN @i_id5
                              WHEN 6 THEN @i_id6
                              WHEN 7 THEN @i_id7
                              WHEN 8 THEN @i_id8
                              WHEN 9 THEN @i_id9
                              WHEN 10 THEN @i_id10
                              WHEN 11 THEN @i_id11
                              WHEN 12 THEN @i_id12
                              WHEN 13 THEN @i_id13
                              WHEN 14 THEN @i_id14
                              WHEN 15 THEN @i_id15
                         END,

                @li_s_w_id = CASE @li_no
                              WHEN 1 THEN @s_w_id1
                              WHEN 2 THEN @s_w_id2
                              WHEN 3 THEN @s_w_id3
                              WHEN 4 THEN @s_w_id4
                              WHEN 5 THEN @s_w_id5
                              WHEN 6 THEN @s_w_id6
                              WHEN 7 THEN @s_w_id7
                              WHEN 8 THEN @s_w_id8
                              WHEN 9 THEN @s_w_id9
                              WHEN 10 THEN
@s_w_id10
                              WHEN 11 THEN
@s_w_id11
                              WHEN 12 THEN
@s_w_id12
                              WHEN 13 THEN
@s_w_id13
                              WHEN 14 THEN
@s_w_id14
                              WHEN 15 THEN
@s_w_id15
                            END,

                @li_qty = CASE  @li_no
                              WHEN 1 THEN @ol_qty1
                              WHEN 2 THEN @ol_qty2
                              WHEN 3 THEN @ol_qty3
                              WHEN 4 THEN @ol_qty4
                              WHEN 5 THEN @ol_qty5
                              WHEN 6 THEN @ol_qty6
                              WHEN 7 THEN @ol_qty7
                              WHEN 8 THEN @ol_qty8
                              WHEN 9 THEN @ol_qty9
                              WHEN 10 THEN
@ol_qty10
                              WHEN 11 THEN
@ol_qty11
                              WHEN 12 THEN
@ol_qty12
                              WHEN 13 THEN
@ol_qty13
                              WHEN 14 THEN
@ol_qty14
                              WHEN 15 THEN
@ol_qty15
                            END

---------------------------------------
--  get item data (no one updates item)
---------------------------------------
        SELECT  @i_price    = i_price,
                @i_name     = i_name,
                @i_data     = i_data
        FROM    item WITH (repeatableread)
        WHERE   i_id        = @li_id

-----------------------
--  update stock values
-----------------------
        UPDATE  stock
        SET     s_ytd           = s_ytd + @li_qty,
                @s_quantity     = s_quantity   =
s_quantity - @li_qty +
                                  CASE WHEN
(s_quantity - @li_qty < 10) THEN 91 ELSE 0 END,
                s_order_cnt     = s_order_cnt + 1,
                s_remote_cnt    = s_remote_cnt +
                                  CASE WHEN
(@li_s_w_id = @w_id) THEN 0 ELSE 1 END,
                @s_data         = s_data,
                @s_dist         = CASE @d_id
                                    WHEN 1  THEN
s_dist_01
                                    WHEN 2  THEN
s_dist_02
                                    WHEN 3  THEN
s_dist_03
                                    WHEN 4  THEN
s_dist_04
                                    WHEN 5  THEN
s_dist_05
                                    WHEN 6  THEN
s_dist_06
                                    WHEN 7  THEN
s_dist_07
                                    WHEN 8  THEN
s_dist_08
                                    WHEN 9  THEN
s_dist_09
                                    WHEN 10 THEN
s_dist_10
                                  END
        WHERE   s_i_id          = @li_id AND
                s_w_id          = @li_s_w_id

-----------------------------------------------------
-----------------

--  if there actually is a stock (and item) with
these ids, go to work
-----------------------------------------------------
-----------------
        IF (@@rowcount > 0)
        BEGIN
-----------------------------------------------------
------
--  insert order_line data (using data from item and
stock)
-----------------------------------------------------
------
            INSERT INTO order_line VALUES(  @o_id,
                                            @d_id,

                                            @w_id,
                                            @li_no,
                                            @li_id,
                                            'dec 31,
1899',
                                            @i_price
* @li_qty,

@li_s_w_id,
                                            @li_qty,
                                            @s_dist)

---------------------------------
--  send line-item data to client
---------------------------------
            SELECT  @i_name,
                    @s_quantity,
                    b_g = CASE  WHEN (
(patindex('%ORIGINAL%',@i_data) > 0) AND


(patindex('%ORIGINAL%',@s_data) > 0) )

THEN 'B' ELSE 'G' END,
                    @i_price,
                    @i_price * @li_qty
                    END
                    ELSE
                    BEGIN
-----------------------------------------------------
-----
--  no item (or stock) found - triggers rollback
condition
-----------------------------------------------------
-----
            SELECT  '',0,'',0,0
            SELECT  @commit_flag    = 0
                    END
          END
-----------------------------------------------------
--
--  get customer last name, discount, and credit
rating
-----------------------------------------------------
--
    SELECT  @c_last     = c_last,
            @c_discount = c_discount,
            @c_credit   = c_credit,
```


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```
            @c_id_local = c_id
    FROM    customer WITH (repeatableread)
    WHERE   c_id        = @c_id AND
            c_w_id      = @w_id AND
            c_d_id      = @d_id

-------------------------------------
--  insert fresh row into orders table
-------------------------------------
    INSERT INTO orders VALUES ( @o_id,
                                @d_id,
                                @w_id,
                                @c_id_local,
                                0,
                                @o_ol_cnt,
                                @o_all_local,
                                @o_entry_d)

-----------------------------------------------
--  insert corresponding row into new-order table
-----------------------------------------------
    INSERT INTO new_order VALUES (  @o_id,
                                    @d_id,
                                    @w_id)


------------------------
--  select warehouse tax
------------------------
    SELECT  @w_tax  = w_tax
    FROM    warehouse WITH (repeatableread)
    WHERE   w_id    = @w_id

    IF (@commit_flag = 1)

                    COMMIT TRANSACTION n
    ELSE
-------------------------------
--  all that work for nuthin!!!
-------------------------------
        ROLLBACK TRANSACTION n

-------------------------------
--  return order data to client
-------------------------------
    SELECT  @w_tax,
            @d_tax,
            @o_id,
            @c_last,
            @c_discount,
            @c_credit,
            @o_entry_d,
            @commit_flag
END
GO

SET QUOTED_IDENTIFIER OFF
GO

SET ANSI_NULLS ON
GO
```

# neworder_new.sql

```
SET QUOTED_IDENTIFIER OFF
GO
SET ANSI_NULLS OFF
GO
-- 8666: full showplan text info (to see if rowset
sharing)
dbcc traceon(8666)
go
-- prevent sort over tvf
dbcc traceon(8710)
go

use tpcc
go

drop procedure tpcc_neworder_new
go
-- neworder_new v2.5 6/23/05 PeterCa
-- 1q stock/order_line/client.  upd district & ins
neworder.
--  cust/warehouse select together, ins order
separate
--  uses rownumber to distinct w any transform
--  uses in-memory sort for distinct on iid,wid
--  uses charindex
-- will rollback if (@i_idX,@s_w_idX pairs not
unique) OR (@i_idX not unique).
create proc tpcc_neworder_new
          @w_id           int,
          @d_id           tinyint,
          @c_id           int,
          @o_ol_cnt       tinyint,
          @o_all_local    tinyint,
          @i_id1  int = 0, @s_w_id1  int = 0,
@ol_qty1  smallint = 0,
          @i_id2  int = 0, @s_w_id2  int = 0,
@ol_qty2  smallint = 0,
          @i_id3  int = 0, @s_w_id3  int = 0,
@ol_qty3  smallint = 0,
          @i_id4  int = 0, @s_w_id4  int = 0,
@ol_qty4  smallint = 0,
          @i_id5  int = 0, @s_w_id5  int = 0,
@ol_qty5  smallint = 0,
          @i_id6  int = 0, @s_w_id6  int = 0,
@ol_qty6  smallint = 0,
          @i_id7  int = 0, @s_w_id7  int = 0,
@ol_qty7  smallint = 0,
          @i_id8  int = 0, @s_w_id8  int = 0,
@ol_qty8  smallint = 0,
          @i_id9  int = 0, @s_w_id9  int = 0,
@ol_qty9  smallint = 0,
          @i_id10 int = 0, @s_w_id10 int = 0,
@ol_qty10 smallint = 0,
          @i_id11 int = 0, @s_w_id11 int = 0,
@ol_qty11 smallint = 0,
          @i_id12 int = 0, @s_w_id12 int = 0,
@ol_qty12 smallint = 0,
          @i_id13 int = 0, @s_w_id13 int = 0,
@ol_qty13 smallint = 0,
          @i_id14 int = 0, @s_w_id14 int = 0,
@ol_qty14 smallint = 0,
          @i_id15 int = 0, @s_w_id15 int = 0,
@ol_qty15 smallint = 0



as
begin
declare   @o_id               int,
        @d_tax          smallmoney,
        @o_entry_d      datetime,
          @commit_flag    tinyint



begin transaction n

--  get district tax and next availible order id and
update
--  insert corresponding row into new-order table
--  plus initialize local variables

          update    district
          set       @d_tax       = d_tax,
                    @o_id        = d_next_o_id,
                    d_next_o_id  = d_next_o_id + 1,
                    @o_entry_d   = getdate(),
                    @commit_flag = 1
          output deleted.d_next_o_id,@d_id,@w_id into
new_order
          where     d_w_id       = @w_id and
                    d_id         = @d_id

-- update stock from stock join (item join (params))
-- output to orderline, output to client
-- NOTE: @@rowcount != @ol_o_cnt
--        if (@i_idX,@s_w_idX pairs not unique) OR
(@i_idX not unique).
update stock
          set       s_ytd               = s_ytd +
info.ol_qty,
                    s_quantity   = s_quantity -
info.ol_qty +
                                case when (s_quantity -
info.ol_qty < 10) then 91 else 0 end,
                    s_order_cnt         = s_order_cnt
+ 1,
                    s_remote_cnt        =
s_remote_cnt +
                                case when (info.w_id =
@w_id) then 0 else 1 end

output @o_id,@d_id,@w_id,info.lino,
          info.i_id,"dec 31, 1899",
          info.i_price * info.ol_qty,
          info.w_id,info.ol_qty,
    case @d_id when 1  then inserted.s_dist_01
                       when 2  then inserted.s_dist_02
                       when 3  then inserted.s_dist_03
                       when 4  then inserted.s_dist_04
                       when 5  then inserted.s_dist_05
                       when 6  then inserted.s_dist_06
```


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```
                    when 7  then inserted.s_dist_07
                    when 8  then inserted.s_dist_08
                    when 9  then inserted.s_dist_09
                    when 10 then inserted.s_dist_10
   end
into order_line

output info.i_name,inserted.s_quantity,
                    case when
((charindex("ORIGINAL",info.i_data) > 0) and

(charindex("ORIGINAL",inserted.s_data) > 0) )
                        then "B" else "G" end,
          info.i_price,info.i_price*info.ol_qty

from
stock inner join

(select iid,wid,
          lino,ol_qty,
          i_price,
          i_name,
          i_data
from
          (select iid,wid,lino,qty,
                    row_number() over (partition by
iid,wid order by iid,wid) from
                    (select
@i_id1,@s_w_id1,1,@ol_qty1 union all
                    select @i_id2,@s_w_id2,2,@ol_qty2
union all
                    select @i_id3,@s_w_id3,3,@ol_qty3
union all
                    select @i_id4,@s_w_id4,4,@ol_qty4
union all
                    select @i_id5,@s_w_id5,5,@ol_qty5
union all
                    select @i_id6,@s_w_id6,6,@ol_qty6
union all
                    select @i_id7,@s_w_id7,7,@ol_qty7
union all
                    select @i_id8,@s_w_id8,8,@ol_qty8
union all
                    select @i_id9,@s_w_id9,9,@ol_qty9
union all
                    select
@i_id10,@s_w_id10,10,@ol_qty10 union all
                    select
@i_id11,@s_w_id11,11,@ol_qty11 union all
                    select
@i_id12,@s_w_id12,12,@ol_qty12 union all
                    select
@i_id13,@s_w_id13,13,@ol_qty13 union all
                    select
@i_id14,@s_w_id14,14,@ol_qty14 union all
                    select
@i_id15,@s_w_id15,15,@ol_qty15) as
uo1(iid,wid,lino,qty)
          ) as o1(iid,wid,lino,ol_qty,rownum)
inner join
          item (repeatableread) on i_id = iid  --
filters out invalid items
          and rownum=1
) as
info(i_id,w_id,lino,ol_qty,i_price,i_name,i_data)

on        s_i_id              = info.i_id and
          s_w_id              = info.w_id


if (@@rowcount <> @o_ol_cnt)  -- must have an invalid
item
          select @commit_flag = 0  -- 2.4.2.3
requires rest to proceed

--  insert fresh row into orders table
          insert into orders values (   @o_id,

          @d_id,

          @w_id,

          @c_id,
                                                  0,

          @o_ol_cnt,

          @o_all_local,

          @o_entry_d)

--  get customer last name, discount, and credit
rating
--  get warehouse tax
-- return order_data to client

                    select w_tax,@d_tax,@o_id,

          c_last,c_discount,c_credit,
                              @o_entry_d,@commit_flag
                    from

          warehouse(repeatableread),customer(repeatab
leread)
                    where     w_id      = @w_id and
                              c_id                =
@c_id and
                              c_w_id              =
@w_id and
                              c_d_id              =
@d_id

          -- @@rowcount checks that previous select
found a valid customer
          if ((@commit_flag = 1) and (@@rowcount =
1))
                    commit transaction n
          else    -- all that work for nothing.
                    rollback transaction n


end
go
set showplan_text on
go
```

```
{call tpcc_neworder_new(1,1,1,10,1,
1,1,1,2,1,1,3,1,1,4,1,1,5,1,1,6,1,1,7,1,1,8,1,1,9,1,1
,10,1,1)}
go
```

# null-txns.sql

```
------------------------------------------------------
------------
--
--
--  File:   NULL-TXNS.SQL
--
--          Microsoft TPC-C Benchmark Kit Ver. 4.62
--
--          Copyright Microsoft, 2005
--
--
--
--          This script will create stored procs
which          --
--          accept the same parameters and return
correctly     --
--          formed results sets to match the standard
TPC-C     --
--          stored procs.  Of course, the advantage
is that     --
--          these stored procs place almost no load
on          --
--          SQL Server and do not require a database.
--
--
--
--          Interface Level:    4.10.000
--
--
--
------------------------------------------------------
------------
USE tpce
GO

IF EXISTS ( SELECT name FROM sysobjects WHERE name =
'tpcc_delivery' )
    DROP PROCEDURE tpcc_neworder
GO
IF EXISTS ( SELECT name FROM sysobjects WHERE name =
'tpcc_neworder' )
    DROP PROCEDURE tpcc_neworder
GO
IF EXISTS ( SELECT name FROM sysobjects WHERE name =
'tpcc_orderstatus' )
    DROP PROCEDURE tpcc_neworder
GO
IF EXISTS ( SELECT name FROM sysobjects WHERE name =
'tpcc_payment' )
    DROP PROCEDURE tpcc_neworder
GO
```


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```
IF EXISTS ( SELECT name FROM sysobjects WHERE name =
'tpcc_stocklevel' )
    DROP PROCEDURE tpcc_neworder
GO
IF EXISTS ( SELECT name FROM sysobjects WHERE name =
'tpcc_version' )
    DROP PROCEDURE tpcc_neworder
GO
IF EXISTS ( SELECT name FROM sysobjects WHERE name =
'order_line_null' )
    DROP PROCEDURE order_line_null
GO

CREATE PROCEDURE    tpcc_delivery
                        @w_id           int,

                        @o_carrier_id   smallint

AS

DECLARE @d_id       tinyint,
        @o_id       int,
        @c_id       int,
        @total      numeric(12,2),
        @oid1       int,
        @oid2       int,
        @oid3       int,
        @oid4       int,
        @oid5       int,
        @oid6       int,
        @oid7       int,
        @oid8       int,
        @oid9       int,
        @oid10      int,
        @delaytime  varchar(30)

------------------------------------------------
-- uniform random delay of 0 - 1 second; avg = 0.50
------------------------------------------------
SELECT  @delaytime = '00:00:0' +
CAST(CAST((RAND()*1.00) AS decimal(4,3)) AS char(5))

WAITFOR delay @delaytime

SELECT  3001, 3001, 3001, 3001, 3001, 3001, 3001,
3001, 3001, 3001
GO

CREATE PROCEDURE    tpcc_neworder
                        @w_id           int,
                        @d_id           tinyint,
                        @c_id           int,
                        @o_ol_cnt       tinyint,
                        @o_all_local    tinyint,
                        @i_id1  int = 0, @s_w_id1 int
= 0, @ol_qty1 smallint = 0,
                        @i_id2  int = 0, @s_w_id2 int
= 0, @ol_qty2 smallint = 0,
                        @i_id3  int = 0, @s_w_id3 int
= 0, @ol_qty3 smallint = 0,
                        @i_id4  int = 0, @s_w_id4 int
= 0, @ol_qty4 smallint = 0,
                        @i_id5  int = 0, @s_w_id5 int
= 0, @ol_qty5 smallint = 0,
                        @i_id6  int = 0, @s_w_id6 int
= 0, @ol_qty6 smallint = 0,
                        @i_id7  int = 0, @s_w_id7 int
= 0, @ol_qty7 smallint = 0,
                        @i_id8  int = 0, @s_w_id8 int
= 0, @ol_qty8 smallint = 0,
                        @i_id9  int = 0, @s_w_id9 int
= 0, @ol_qty9 smallint = 0,
                        @i_id10 int = 0, @s_w_id10
int = 0, @ol_qty10 smallint = 0,
                        @i_id11 int = 0, @s_w_id11
int = 0, @ol_qty11 smallint = 0,
                        @i_id12 int = 0, @s_w_id12
int = 0, @ol_qty12 smallint = 0,
                        @i_id13 int = 0, @s_w_id13
int = 0, @ol_qty13 smallint = 0,
                        @i_id14 int = 0, @s_w_id14
int = 0, @ol_qty14 smallint = 0,
                        @i_id15 int = 0, @s_w_id15
int = 0, @ol_qty15 smallint = 0



AS
DECLARE @w_tax          numeric(4,4),
        @d_tax          numeric(4,4),
        @c_last         char(16),
        @c_credit       char(2),
        @c_discount     numeric(4,4),
        @i_price        numeric(5,2),
        @i_name         char(24),
        @o_entry_d      datetime,
        @li_no          int,
        @o_id           int,
        @commit_flag    tinyint,
        @li_id          int,
        @li_qty         smallint,
        @delaytime      varchar(30)

BEGIN
    ------------------------------------------------
---
    -- uniform random delay of 0 - 0.6 second; avg =
0.3
    ------------------------------------------------
---
    SELECT  @delaytime  = '00:00:0' +
CAST(CAST((RAND()*0.60) AS decimal(4,3)) AS char(5))

    WAITFOR delay @delaytime

    ----------------------
    --  process orderlines
    ----------------------
    SELECT  @commit_flag    = 1,
            @li_no          = 0

    WHILE (@li_no < @o_ol_cnt)
    BEGIN
        SELECT  @li_id  = CASE @li_no
                              WHEN  1 THEN @i_id1
                              WHEN  2 THEN @i_id2
                              WHEN  3 THEN @i_id3
                              WHEN  4 THEN @i_id4
                              WHEN  5 THEN @i_id5
                              WHEN  6 THEN @i_id6
                              WHEN  7 THEN @i_id7
                              WHEN  8 THEN @i_id8
                              WHEN  9 THEN @i_id9
                              WHEN 10 THEN @i_id10
                              WHEN 11 THEN @i_id11
                              WHEN 12 THEN @i_id12
                              WHEN 13 THEN @i_id13
                              WHEN 14 THEN @i_id14
                              WHEN 15 THEN @i_id15
                          END

        SELECT  @li_no      = @li_no + 1


        SELECT  @i_price    = 23.45, @li_qty = @li_no

        IF (@li_id = 999999)
        BEGIN
            SELECT  '',0,'',0,0

            SELECT  @commit_flag = 0
        END
        ELSE
        BEGIN
            SELECT  'Item Name blah',
                    17,
                    'G',
                    @i_price,
                    @i_price * @li_qty
        END
    END

    ------------------------------
    --  return order data to client
    ------------------------------
    SELECT  @w_tax      = 0.1234,
            @d_tax      = 0.0987,
            @o_id       = 3001,
            @c_last     = 'BAROUGHTABLE',
            @c_discount = 0.2198,
            @c_credit   = 'GC',
            @o_entry_d  = GETDATE()

    SELECT  @w_tax,
            @d_tax,
            @o_id,
            @c_last,
            @c_discount,
            @c_credit,
            @o_entry_d,
            @commit_flag

END
GO

CREATE PROCEDURE    tpcc_orderstatus
                        @w_id       int,
```


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```
                        @d_id       tinyint,


                        @c_id       int,
                        @c_last     char(16) = ''


AS
DECLARE @c_balance      numeric(12,2),
        @c_first        char(16),
        @c_middle       char(2),
        @o_id           int,
        @o_entry_d      datetime,
        @o_carrier_id   smallint,
        @ol_cnt         smallint,
        @delaytime      varchar(30)

-----------------------------------------------------
-- uniform random delay of 0 - 0.2 second; avg = 0.1
-----------------------------------------------------
SELECT  @delaytime  = '00:00:0' +
CAST(CAST((RAND()*0.20) AS decimal(4,3)) AS char(5))

WAITFOR delay @delaytime

SELECT  @c_id       = 113,
        @c_balance  = -10.00,
        @c_first    = '8YCodgytqCj8',
        @c_middle   = 'OE',
        @c_last     = 'OUGHTOUGHTABLE',
        @o_id       = 3456,
        @o_entry_d  = GETDATE(),
        @o_carrier_id   = 1

SELECT  @ol_cnt = (RAND() * 11) + 5

SET     ROWCOUNT @ol_cnt

SELECT  ol_supply_w_id,
        ol_i_id,
        ol_quantity,
        ol_amount,
        ol_delivery_d
FROM    order_line_null

SELECT  @c_id,
        @c_last,
        @c_first,
        @c_middle,
        @o_entry_d,
        @o_carrier_id,
        @c_balance,
        @o_id
GO

CREATE PROCEDURE    tpcc_payment
                        @w_id       int,
                        @c_w_id     int,
                        @h_amount   numeric(6,2),
                        @d_id       tinyint,
                        @c_d_id     tinyint,
                        @c_id       int,
                        @c_last     char(16) = ''


AS
DECLARE @w_street_1     char(20),
        @w_street_2     char(20),
        @w_city         char(20),
        @w_state        char(2),
        @w_zip          char(9),
        @w_name         char(10),
        @d_street_1     char(20),
        @d_street_2     char(20),
        @d_city         char(20),
        @d_state        char(2),
        @d_zip          char(9),
        @d_name         char(10),
        @c_first        char(16),
        @c_middle       char(2),
        @c_street_1     char(20),
        @c_street_2     char(20),
        @c_city         char(20),
        @c_state        char(2),
        @c_zip          char(9),
        @c_phone        char(16),
        @c_since        datetime,
        @c_credit       char(2),
        @c_credit_lim   numeric(12,2),
        @c_balance      numeric(12,2),
        @c_discount     numeric(4,4),
        @data           char(500),
        @c_data         char(500),
        @datetime       datetime,
        @w_ytd          numeric(12,2),
        @d_ytd          numeric(12,2),
        @cnt            smallint,
        @val            smallint,
        @screen_data          char(200),
        @d_id_local     tinyint,
        @w_id_local     int,
        @c_id_local     int,
        @delaytime      varchar(30)

-----------------------------------------------------
-- uniform random delay of 0 - 0.3 second; avg = 0.15
-----------------------------------------------------
SELECT  @delaytime  = '00:00:0' +
CAST(CAST((RAND()*0.20) AS decimal(4,3)) AS char(5))

WAITFOR delay @delaytime

SELECT  @screen_data    = ''

-----------------------------------------
--  get customer info and update balances
-----------------------------------------
SELECT  @d_street_1 = 'rqSHHakqyV',
        @d_street_2 = 'zZ98nW3BR2s',
        @d_city     = 'ArNr4GNFV9',
        @d_state    = 'aV',
        @d_zip      = '453511111'


-----------------------------------------------
--  get warehouse data and update year-to-date
-----------------------------------------------
SELECT  @w_street_1 = 'rqSHHakqyV',
        @w_street_2 = 'zZ98nW3BR2s',
        @w_city     = 'ArNr4GNFV9',
        @w_state    = 'aV',
        @w_zip      = '453511111'

SELECT  @c_id               = 123,
        @c_balance      = -10000.00,
        @c_first        = 'KmR03Xureb',
        @c_middle       = 'OE',
        @c_last         = 'BAROUGHTBAR',
        @c_street_1     = 'QpGdOHjv8mR9vNI8V',
        @c_street_2     = 'dzKoCObBqbC3yu',
        @c_city         = 'zAKZXdC037FQxq',
        @c_state        = 'QA',
        @c_zip          = '700311111',
        @c_phone        = '2967264064528555',
        @c_credit       = 'GC',
        @c_credit_lim   = 50000.00,
        @c_discount     = 0.3069,
        @c_since        = GETDATE(),
        @datetime       = GETDATE()

-------------------------
--  return data to client
-------------------------
SELECT  @c_id,
        @c_last,
        @datetime,
        @w_street_1,
        @w_street_2,
        @w_city,
        @w_state,
        @w_zip,
        @d_street_1,
        @d_street_2,
        @d_city,
        @d_state,
        @d_zip,
        @c_first,
        @c_middle,
        @c_street_1,
        @c_street_2,
        @c_city,
        @c_state,
        @c_zip,
        @c_phone,
        @c_since,
        @c_credit,
        @c_credit_lim,
        @c_discount,
        @c_balance,
        @screen_data
GO

CREATE PROCEDURE    tpcc_stocklevel
                        @w_id           int,
                        @d_id           tinyint,
                        @threshhold     smallint
AS
DECLARE @delaytime  varchar(30)

-----------------------------------------------------
```


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```
-- uniform random delay of 0 - 3.6 second; avg = 1.8
-----------------------------------------------------
SELECT  @delaytime  = '00:00:0' +
CAST(CAST((RAND()*0.20) AS decimal(4,3)) AS char(5))

WAITFOR delay @delaytime

SELECT  49
GO

CREATE PROCEDURE tpcc_version

AS
DECLARE @version    char(8)

BEGIN
    SELECT  @version = '4.10.000'

    SELECT  @version AS 'Version'
END
GO

CREATE TABLE    order_line_null (
                                    [ol_i_id] [int]
NOT NULL ,
                                    [ol_supply_w_id]
[int] NOT NULL ,
                                    [ol_delivery_d]
[datetime] NOT NULL ,
                                    [ol_quantity]
[smallint] NOT NULL ,
                                    [ol_amount]
[numeric](6, 2) NOT NULL
) ON [PRIMARY]
GO

INSERT INTO order_line_null VALUES ( 101, 1,
GETDATE(), 1, 123.45 )
INSERT INTO order_line_null VALUES ( 102, 1,
GETDATE(), 2, 123.45 )
INSERT INTO order_line_null VALUES ( 103, 1,
GETDATE(), 3, 123.45 )
INSERT INTO order_line_null VALUES ( 104, 1,
GETDATE(), 4, 123.45 )
INSERT INTO order_line_null VALUES ( 105, 1,
GETDATE(), 5, 123.45 )
INSERT INTO order_line_null VALUES ( 106, 1,
GETDATE(), 1, 123.45 )
INSERT INTO order_line_null VALUES ( 107, 1,
GETDATE(), 2, 123.45 )
INSERT INTO order_line_null VALUES ( 108, 1,
GETDATE(), 3, 123.45 )
INSERT INTO order_line_null VALUES ( 109, 1,
GETDATE(), 4, 123.45 )
INSERT INTO order_line_null VALUES ( 110, 1,
GETDATE(), 5, 123.45 )
INSERT INTO order_line_null VALUES ( 111, 1,
GETDATE(), 1, 123.45 )
INSERT INTO order_line_null VALUES ( 112, 1,
GETDATE(), 2, 123.45 )
INSERT INTO order_line_null VALUES ( 113, 1,
GETDATE(), 3, 123.45 )
INSERT INTO order_line_null VALUES ( 114, 1,
GETDATE(), 4, 123.45 )
INSERT INTO order_line_null VALUES ( 115, 1,
GETDATE(), 5, 123.45 )
GO
```

# ordstat.sql

```
------------------------------------------------------
-------------
--
--
--  File:   ORDSTAT.SQL
--
--          Microsoft TPC-C Benchmark Kit Ver. 4.62
--
--          Copyright Microsoft, 2005
--
--
--
--          Creates order status stored procedure
--
--
--
--          Interface Level:    4.20.000
--
--
--
------------------------------------------------------
-------------
SET QUOTED_IDENTIFIER OFF
GO

SET ANSI_NULLS ON
GO

USE tpcc
GO

IF EXISTS ( SELECT name FROM sysobjects WHERE name =
'tpcc_orderstatus' )
    DROP PROCEDURE tpcc_orderstatus
GO

CREATE PROCEDURE    tpcc_orderstatus
                        @w_id       int,
                        @d_id       tinyint,


                        @c_id       int,
                        @c_last     char(16) = ''

AS
DECLARE @c_balance      money,
        @c_first        char(16),
        @c_middle       char(2),
        @o_id           int,
        @o_entry_d      datetime,
        @o_carrier_id   smallint,
        @cnt            smallint

BEGIN TRANSACTION o
    IF (@c_id = 0)
    BEGIN
        ---------------------------------------------
        --  get customer id and info using last name
        ---------------------------------------------
        SELECT  @cnt    = (count(*)+1)/2
        FROM    customer WITH (repeatableread)
        WHERE   c_last  = @c_last AND
                c_w_id  = @w_id AND
                c_d_id  = @d_id

        SET     rowcount @cnt

        SELECT  @c_id       = c_id,
                @c_balance  = c_balance,
                @c_first    = c_first,
                @c_last     = c_last,
                @c_middle   = c_middle
        FROM    customer WITH (repeatableread)
        WHERE   c_last      = @c_last AND
                c_w_id      = @w_id AND
                c_d_id      = @d_id
        ORDER   BY c_w_id, c_d_id, c_last, c_first

        SET rowcount 0
    END
    ELSE
    BEGIN
        ------------------------------
        --  get customer info if by id
        ------------------------------
        SELECT  @c_balance  = c_balance,
                @c_first    = c_first,
                @c_middle   = c_middle,
                @c_last     = c_last
        FROM    customer WITH (repeatableread)
        WHERE   c_id        = @c_id AND
                c_d_id      = @d_id AND
                c_w_id      = @w_id

        SELECT  @cnt          = @@rowcount
    END

    -----------------------
    --  if no such customer
    -----------------------
    IF (@cnt = 0)
    BEGIN
        RAISERROR('Customer not found',18,1)
        GOTO custnotfound
    END

    ------------------
    --  get order info
    ------------------
    SELECT  @o_id           = o_id,
            @o_entry_d      = o_entry_d,
            @o_carrier_id   = o_carrier_id

    FROM    orders WITH (serializable)
    WHERE   o_c_id          = @c_id AND
```


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```
            o_d_id          = @d_id AND
            o_w_id          = @w_id
    ORDER   BY o_id ASC

    -----------------------------------------
    --  select order lines for the current order
    -----------------------------------------
    SELECT  ol_supply_w_id,
            ol_i_id,
            ol_quantity,
            ol_amount,
            ol_delivery_d
    FROM    order_line WITH (repeatableread)
    WHERE   ol_o_id = @o_id AND
            ol_d_id = @d_id AND
            ol_w_id = @w_id

    custnotfound:

    COMMIT TRANSACTION o

    -------------------------
    --  return data to client
    -------------------------
    SELECT  @c_id,
            @c_last,
            @c_first,
            @c_middle,

            @o_entry_d,
            @o_carrier_id,
            @c_balance,
            @o_id
GO
```

# payment.sql

```
-------------------------------------------------------
-------------
--
--
--  File:   PAYMENT.SQL
--
--          Microsoft TPC-C Benchmark Kit Ver. 4.62
--
--          Copyright Microsoft, 2005
--
--
--
--          Creates payment stored procedure
--
--
--
--          Interface Level:    4.20.000
--
--
--
-------------------------------------------------------
-------------
SET QUOTED_IDENTIFIER OFF
GO

SET ANSI_NULLS ON
GO

USE tpcc
GO

IF EXISTS ( SELECT name FROM sysobjects WHERE name =
'tpcc_payment' )
    DROP PROCEDURE tpcc_payment
GO

CREATE PROCEDURE    tpcc_payment
                        @w_id       int,
                        @c_w_id     int,
                        @h_amount   smallmoney,
                        @d_id       tinyint,
                        @c_d_id     tinyint,
                        @c_id       int,
                        @c_last     char(16) = ""


AS
DECLARE @w_street_1     char(20),
        @w_street_2     char(20),
        @w_city         char(20),
        @w_state        char(2),
        @w_zip          char(9),
        @w_name         char(10),
        @d_street_1     char(20),
        @d_street_2     char(20),
        @d_city         char(20),
        @d_state        char(2),
        @d_zip          char(9),
        @d_name         char(10),
        @c_first        char(16),
        @c_middle       char(2),
        @c_street_1     char(20),
        @c_street_2     char(20),
        @c_city         char(20),
        @c_state        char(2),
        @c_zip          char(9),
        @c_phone        char(16),
        @c_since        datetime,
        @c_credit       char(2),
        @c_credit_lim   money,
        @c_balance      money,
        @c_discount     smallmoney,
        @c_data         char(42),
        @datetime       datetime,
        @w_ytd          money,
        @d_ytd          money,
        @cnt            smallint,
        @val            smallint,
        @screen_data    char(200),
        @d_id_local     tinyint,
        @w_id_local     int,
        @c_id_local     int

SELECT  @screen_data    = ""

BEGIN TRANSACTION p

    --  get payment date
    SELECT  @datetime = GETDATE()

    IF (@c_id = 0)
    BEGIN
        --  get customer id and info using last name
        SELECT  @cnt    = COUNT(*)
        FROM    customer WITH (repeatableread)
        WHERE   c_last  = @c_last AND
                        c_w_id  = @c_w_id AND
                        c_d_id  = @c_d_id



        SELECT  @val    = (@cnt + 1) / 2

        SET     rowcount @val

        SELECT  @c_id   = c_id
        FROM    customer WITH (repeatableread)
        WHERE   c_last  = @c_last AND
                        c_w_id  = @c_w_id AND
                        c_d_id  = @c_d_id
        ORDER   BY c_last, c_first

        SET     rowcount 0
    END

    --  get customer info and update balances

    UPDATE  customer
    SET     @c_balance      = c_balance = c_balance -
@h_amount,
            c_payment_cnt   = c_payment_cnt + 1,
            c_ytd_payment   = c_ytd_payment +
@h_amount,
            @c_first        = c_first,
            @c_middle       = c_middle,
            @c_last         = c_last,
            @c_street_1     = c_street_1,
            @c_street_2     = c_street_2,
            @c_city         = c_city,
            @c_state        = c_state,
            @c_zip          = c_zip,
            @c_phone        = c_phone,
            @c_credit       = c_credit,
            @c_credit_lim   = c_credit_lim,
            @c_discount     = c_discount,
            @c_since        = c_since,
            @c_id_local     = c_id
    WHERE   c_id            = @c_id AND
            c_w_id          = @c_w_id AND
            c_d_id          = @c_d_id

    --  if customer has bad credit get some more info
    IF (@c_credit = "BC")
    BEGIN
        --          compute new info
        SELECT  @c_data =   convert(char(5),@c_id) +
                            convert(char(4),@c_d_id)
+
                            convert(char(5),@c_w_id)
+
```


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```
                        convert(char(4),@d_id) +
                        convert(char(5),@w_id) +

convert(char(19),@h_amount)

        --  update customer info
        UPDATE  customer
        SET     c_data          = @c_data +
substring(c_data, 1, 458),
                @screen_data    = @c_data +
substring(c_data, 1, 158)
        WHERE   c_id            = @c_id AND
                c_w_id          = @c_w_id AND
                c_d_id          = @c_d_id
    END

    --  get district data and update year-to-date
    UPDATE  district
    SET     d_ytd       = d_ytd + @h_amount,
            @d_street_1 = d_street_1,
            @d_street_2 = d_street_2,
            @d_city     = d_city,
            @d_state    = d_state,
            @d_zip      = d_zip,
            @d_name     = d_name,
            @d_id_local = d_id
    WHERE   d_w_id      = @w_id AND
            d_id        = @d_id

    --  get warehouse data and update year-to-date
    UPDATE  warehouse
    SET     w_ytd       = w_ytd + @h_amount,
            @w_street_1 = w_street_1,
            @w_street_2 = w_street_2,
            @w_city     = w_city,
            @w_state     = w_state,
            @w_zip      = w_zip,
            @w_name     = w_name,
            @w_id_local = w_id
    WHERE   w_id        = @w_id

    --  create history record
        INSERT INTO         history VALUES
(@c_id_local,
                            @c_d_id,
                            @c_w_id,
                            @d_id_local,
                            @w_id_local,
                            @datetime,
                            @h_amount,
                            @w_name + '    ' +
@d_name)

    COMMIT TRANSACTION p

    --  return data to client
    SELECT  @c_id,
            @c_last,
            @datetime,
            @w_street_1,
            @w_street_2,
            @w_city,
            @w_state,
            @w_zip,
            @d_street_1,
            @d_street_2,
            @d_city,
            @d_state,
            @d_zip,
            @c_first,
            @c_middle,
            @c_street_1,
            @c_street_2,
            @c_city,
            @c_state,
            @c_zip,
            @c_phone,
            @c_since,
            @c_credit,
            @c_credit_lim,
            @c_discount,
            @c_balance,
            @screen_data
GO

SET QUOTED_IDENTIFIER OFF
GO

SET ANSI_NULLS ON
GO
```

# random.c

```
//        File:               RANDOM.C
//                                    Microsoft
TPC-C Kit Ver. 4.62
//                                    Copyright
Microsoft, 1996, 1997, 1998, 1999, 2000, 2001, 2002,
2005
//        Purpose:  Random number generation routines
for database loader


// Includes
#include "tpcc.h"
#include "math.h"

// Defines
#define A            16807
#define M       2147483647
#define Q           127773      /* M div A */
#define R             2836      /* M mod A */
#define Thread      __declspec(thread)

// Globals
long      Thread Seed = 0;       /* thread local seed
*/

/*************************************************
*************************
*
*
* random -
*
*       Implements a GOOD pseudo random number
generator.  This generator     *
*       will/should? run the complete period before
repeating.                *
*
*
* Copied from:
*
*       Random Numbers Generators: Good Ones Are Hard
to Find.                  *
*       Communications of the ACM - October 1988
Volume 31 Number 10          *
*
*
* Machine Dependencies:
*
*       long must be 2 ^ 31 - 1 or greater.
*
*
*
*************************************************
************************/

/*************************************************
************************
* seed - load the Seed value used in irand and drand.
Should be used before  *
*       first call to irand or drand.
*
*************************************************
************************/

void seed(long val)
{

#ifdef DEBUG
    printf("[%ld]DBG: Entering seed()...\n", (int)
GetCurrentThreadId());
         printf("Old Seed %ld New Seed %ld\n",Seed,
val);
#endif

    if ( val < 0 )
            val = abs(val);

    Seed = val;

}


/*************************************************
************************
*
*
* irand - returns a 32 bit integer pseudo random
number with a period of     *
*       1 to 2 ^ 32 - 1.
*
*
*
```


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```
* parameters:
*
*       none.
*
*
*
* returns:
*
*       32 bit integer - defined as long ( see above
).                      *
*
*
* side effects:
*
*       seed get recomputed.
*
*************************************************
**********************/

long irand()
{
    register long    s;      /* copy of seed */
    register long    test;   /* test flag */
    register long    hi;     /* tmp value for speed
*/
    register long    lo;     /* tmp value for speed
*/

#ifdef DEBUG
    printf("[%ld]DBG: Entering irand()...\n", (int)
GetCurrentThreadId());
#endif

    s = Seed;
    hi = s / Q;
    lo = s % Q;

    test = A * lo - R * hi;
    if ( test > 0 )
                    Seed = test;
    else
                    Seed = test + M;

    return( Seed );
}


/*************************************************
************************
*
*
* drand - returns a double pseudo random number
between 0.0 and 1.0.          *
*       See irand.
*
*************************************************
**********************/
double drand()
{

#ifdef DEBUG
    printf("[%ld]DBG: Entering drand()...\n", (int)
GetCurrentThreadId());
#endif

    return( (double)irand() / 2147483647.0);
}


//=================================================
====================
// Function   : RandomNumber
//
// Description:
//=================================================
====================
long RandomNumber(long lower, long upper)
{
    long rand_num;

#ifdef DEBUG
    printf("[%ld]DBG: Entering RandomNumber()...\n",
(int) GetCurrentThreadId());
#endif

          if ( upper == lower )         /* pgd 08-13-
96 perf enhancement */
                    return lower;

          upper++;

    if ( upper <= lower )
                    rand_num = upper;
    else
                    rand_num = lower + irand() %
(upper - lower); /* pgd 08-13-96 perf enhancement */


#ifdef DEBUG
    printf("[%ld]DBG: RandomNumber between %ld & %ld
==> %ld\n",
                                                (int)
GetCurrentThreadId(), lower, upper, rand_num);
#endif


    return rand_num;
}


#if 0

//Orginal code pgd 08/13/96

long RandomNumber(long lower,
                                                long upper)
{
    long rand_num;

#ifdef DEBUG
    printf("[%ld]DBG: Entering RandomNumber()...\n",
(int) GetCurrentThreadId());
#endif

          upper++;

    if ((upper <= lower))
                    rand_num = upper;
    else
                    rand_num = lower + irand() %
((upper > lower) ? upper - lower : upper);


#ifdef DEBUG
    printf("[%ld]DBG: RandomNumber between %ld & %ld
==> %ld\n",
                                                (int)
GetCurrentThreadId(), lower, upper, rand_num);
#endif


    return rand_num;
}
#endif

//=================================================
====================
// Function   : NURand
//
// Description:
//=================================================
====================
long NURand(int iConst,
              long x,
              long y,
              long C)
{
    long rand_num;

#ifdef DEBUG
    printf("[%ld]DBG: Entering NURand()...\n", (int)
GetCurrentThreadId());
#endif

    rand_num = (((RandomNumber(0,iConst) |
RandomNumber(x,y)) + C) % (y-x+1))+x;

#ifdef DEBUG
    printf("[%ld]DBG: NURand: num = %d\n", (int)
GetCurrentThreadId(), rand_num);
#endif

    return rand_num;
}
```

# removedb.sql

```
-------------------------------------------------------
-------------
--
--
--  File:   REMOVEDB.SQL
--
```


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```
--          Microsoft TPC-C Benchmark Kit Ver. 4.62
--
--          Copyright Microsoft, 2005
--
--
--
-------------------------------------------------------
-------------
USE master
GO

-------------------------------------------------------
-------------
-- remove any existing database and backup files
-------------------------------------------------------
-------------
--EXEC sp_dbremove tpcc, dropdev
--GO

EXEC sp_dropdevice 'tpccback1'
EXEC sp_dropdevice 'tpccback2'
EXEC sp_dropdevice 'tpccback3'
EXEC sp_dropdevice 'tpccback4'
EXEC sp_dropdevice 'tpccback5'
EXEC sp_dropdevice 'tpccback6'
EXEC sp_dropdevice 'tpccback7'
GO
```

# restore.sql

```
-------------------------------------------------------
-------------
--
--
--  File:   RESTORE.SQL
--
--          Microsoft TPC-C Benchmark Kit Ver. 4.62
--
--          Copyright Microsoft, 2005
--
--
--
-------------------------------------------------------
-------------

DECLARE @startdate  DATETIME,
        @enddate    DATETIME

SELECT  @startdate = GETDATE()
SELECT  'Start date:',
                  CONVERT(VARCHAR(30),@startdate,
21)

LOAD DATABASE tpcc FROM tpccback1, tpccback2,
tpccback3, tpccback4, tpccback5, tpccback6, tpccback7
WITH stats = 1, replace

SELECT  @enddate = GETDATE()
SELECT  'End date: ',
        CONVERT(VARCHAR(30),@enddate, 21)
SELECT  'Elapsed time (in seconds): ',
        DATEDIFF(second, @startdate, @enddate)
GO

sp_dboption tpcc,'torn page detection','false'
GO
```

# RunSQLCfg.sql

```
-------------------------------------------------------
-------------
--
--
--  File:   RUNSQLCFG.SQL
--
--          Microsoft TPC-C Benchmark Kit Ver. 4.62
--
--          Copyright Microsoft, 2005
--
--
--
--          Sets suggested runtime server
configuration       --
--          parameters
--
--
--
-------------------------------------------------------
-------------
EXEC sp_configure 'show advanced option', 1
GO

RECONFIGURE WITH OVERRIDE
GO

-------------------------------------------------------
---------------------
-- change this value to approximately the number of
connected users
-------------------------------------------------------
---------------------
EXEC sp_configure 'max worker threads',255

-------------------------------------------------------
---------------------
-- increase priority of user threads
-------------------------------------------------------
---------------------
EXEC sp_configure 'priority boost',1

-------------------------------------------------------
---------------------
-- disable automatic checkpointing
-------------------------------------------------------
---------------------
EXEC sp_configure 'recovery interval',32767

-------------------------------------------------------
---------------------
-- change to a mask appropriate for the number of
processors on the server
-------------------------------------------------------
---------------------
EXEC sp_configure 'affinity mask',0xf

-------------------------------------------------------
---------------------
-- enable fibers
-------------------------------------------------------
---------------------
EXEC sp_configure 'lightweight pooling',1
GO

RECONFIGURE WITH OVERRIDE
GO
```

# sqlshutdown.sql

```
-------------------------------------------------------
-------------
--
--
--  File:   SQLSHUTDOWN.SQL
--
--          Microsoft TPC-C Benchmark Kit Ver. 4.62
--
--          Copyright Microsoft, 2005
--
--
--
--          Checkpoints tpcc database and issues a
shutdown     --
--
--
-------------------------------------------------------
-------------
USE tpcc
GO

CHECKPOINT
GO

SHUTDOWN
GO
```

# stocklev.sql

```
-------------------------------------------------------
-------------
--
--
--  File:   STOCKLEV.SQL
--
--          Microsoft TPC-C Benchmark Kit Ver. 4.62
--
--          Copyright Microsoft, 2005
--
```


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```
--
--
--          Creates stock level stored procedure
--
--
--
--          Interface Level:    4.20.000
--
--
--
-----------------------------------------------------
-------------
SET QUOTED_IDENTIFIER OFF
GO

SET ANSI_NULLS ON
GO

USE tpcc
GO

IF EXISTS ( SELECT name FROM sysobjects WHERE name =
'tpcc_stocklevel' )
    DROP PROCEDURE tpcc_stocklevel
GO

CREATE PROCEDURE    tpcc_stocklevel
                        @w_id           int,
                        @d_id           tinyint,
                        @threshhold     smallint

AS
DECLARE @o_id_low   int,
        @o_id_high  int

SELECT  @o_id_low   = (d_next_o_id - 20),
        @o_id_high  = (d_next_o_id - 1)
FROM    district
WHERE   d_w_id      = @w_id AND
        d_id        = @d_id

SELECT  COUNT(DISTINCT(s_i_id))
FROM    stock,
        order_line
WHERE   ol_w_id     = @w_id AND
        ol_d_id     = @d_id and
        ol_o_id     BETWEEN @o_id_low AND
                            @o_id_high AND
        s_w_id      = ol_w_id AND
        s_i_id      = ol_i_id AND
        s_quantity  < @threshhold
OPTION(ORDER GROUP)
GO

SET QUOTED_IDENTIFIER OFF
GO

SET ANSI_NULLS ON
GO
```

# strings.c

```
//        File:               STRINGS.C
//                                        Microsoft
TPC-C Kit Ver. 4.51
//                                        Copyright
Microsoft, 1996, 1997, 1998, 1999, 2000, 2001, 2002,
2003
//        Purpose:  Source file for database loader
string functions


// Includes
#include "tpcc.h"
#include <string.h>
#include <ctype.h>

//=================================================
====================
//
// Function name: MakeAddress
//
//=================================================
====================

void MakeAddress(char *street_1,
                                            char
*street_2,
                                            char *city,
                                            char *state,
                                            char *zip)
{

#ifdef DEBUG
    printf("[%ld]DBG: Entering MakeAddress()\n",
(int) GetCurrentThreadId());
#endif

    MakeAlphaString (10, 20, ADDRESS_LEN, street_1);
    MakeAlphaString (10, 20, ADDRESS_LEN, street_2);
    MakeAlphaString (10, 20, ADDRESS_LEN, city);
    MakeAlphaString ( 2,  2, STATE_LEN, state);
    MakeZipNumberString( 9,  9, ZIP_LEN, zip);

#ifdef DEBUG
    printf("[%ld]DBG: MakeAddress: street_1: %s,
street_2: %s, city: %s, state: %s, zip: %s\n",
                                (int)
GetCurrentThreadId(), street_1, street_2, city,
state, zip);
#endif

    return;

}


//=================================================
====================
//
// Function name: LastName
//
//=================================================
====================

void LastName(int  num,
                            char *name)
{
    static char *n[] =
    {
                    "BAR" , "OUGHT", "ABLE" , "PRI"
, "PRES",
                    "ESE" , "ANTI" , "CALLY",
"ATION", "EING"
    };

#ifdef DEBUG
    printf("[%ld]DBG: Entering LastName()\n", (int)
GetCurrentThreadId());
#endif

    if ((num >= 0) && (num < 1000))
    {
                    strcpy(name, n[(num/100)%10]);
                    strcat(name, n[(num/10)%10]);
                    strcat(name, n[(num/1)%10]);

                    if (strlen(name) < LAST_NAME_LEN)
                    {

          PaddString(LAST_NAME_LEN, name);
                    }

    }
    else
    {
                    printf("\nError in LastName()...
num <%ld> out of range (0,999)\n", num);
                    exit(-1);
    }


#ifdef DEBUG
    printf("[%ld]DBG: LastName: num = [%d] ==>
[%d][%d][%d]\n",
                                (int)
GetCurrentThreadId(), num, num/100, (num/10)%10,
num%10);
          printf("[%ld]DBG: LastName: String = %s\n",
(int) GetCurrentThreadId(), name);
#endif

    return;

}


//=================================================
====================
//
// Function name: MakeAlphaString
//
//=================================================
====================
```


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```
//philipdu 08/13/96 Changed MakeAlphaString to use A-
Z, a-z, and 0-9 in
//accordance with spec see below:
//The spec says:
//4.3.2.2 The notation random a-string [x .. y]
//(respectively, n-string [x .. y]) represents a
string of random alphanumeric
//(respectively, numeric) characters of a random
length of minimum x, maximum y,
//and mean (y+x)/2. Alphanumerics are A..Z, a..z, and
0..9.  The only other
//requirement is that the character set used "must be
able to represent a minimum
//of 128 different characters".  We are using 8-bit
chars, so this is a non issue.
//It is completely unreasonable to stuff non-printing
chars into the text fields.
//-CLevine 08/13/96

int MakeAlphaString( int  x, int  y, int  z, char
*str)
{
          int                 len;
          int                 i;
    char    cc = 'a';
          static    char chArray[] =
"0123456789ABCDEFGHIJKLMNOPQRSTUVWXYZabcdefghijklmnop
qrstuvwxyz";
          static    int       chArrayMax = 61;

#ifdef DEBUG
    printf("[%ld]DBG: Entering MakeAlphaString()\n",
(int) GetCurrentThreadId());
#endif

          len= RandomNumber(x, y);

          for (i=0; i<len; i++)
                    str[i] =
chArray[RandomNumber(0,chArrayMax)];
          str[len] = 0;

    return len;
}

int MakeAlphaStringPadded( int  minLen, int  maxLen,
int  padLen, char *str)
{
          int                 len;
          int                 i;
    char    cc = 'a';
          static    char chArray[] =
"0123456789ABCDEFGHIJKLMNOPQRSTUVWXYZabcdefghijklmnop
qrstuvwxyz";
          static    int       chArrayMax = 61;

#ifdef DEBUG
    printf("[%ld]DBG: Entering
MakeAlphaStringPadded()\n", (int)
GetCurrentThreadId());
#endif

          len= RandomNumber(minLen, maxLen);

          for (i=0; i<len; i++)
                    str[i] =
chArray[RandomNumber(0,chArrayMax)];
          if (len < padLen)
                    memset(str+len, ' ', padLen -
len);
          str[padLen] = 0;
    return padLen;
}



//=================================================
====================
//
// Function name: MakeOriginalAlphaString
//
//=================================================
====================

int MakeOriginalAlphaString(int  x,

              int  y,

                    int  z,

              char *str,

          int  percent)
{
    int             len;
    int             val;
    int             start;

#ifdef DEBUG
    printf("[%ld]DBG: Entering
MakeOriginalAlphaString()\n", (int)
GetCurrentThreadId());
#endif

    // verify prercentage is valid
    if ((percent < 0) || (percent > 100))
    {
                    printf("MakeOrigianlAlphaString:
Invalid percentage: %d\n", percent);
                    exit(-1);
    }

    // verify string is at least 8 chars in length
    if (x < 8)
    {
                    printf("MakeOriginalAlphaString:
string length must be >= 8\n");
                    exit(-1);
    }

    // Make Alpha String
    len = MakeAlphaString(x,y, z, str);

    val = RandomNumber(1,100);
    if (val <= percent)
    {
                    start = RandomNumber(0, len - 8);
                    strncpy(str + start, "ORIGINAL",
8);
    }


#ifdef DEBUG
    printf("[%ld]DBG: MakeOriginalAlphaString: :
%s\n",
                              (int)
GetCurrentThreadId(), str);
#endif

    return len;
}


//=================================================
====================
//
// Function name: MakeNumberString
//
//=================================================
====================
int MakeNumberString(int  x, int  y, int  z, char
*str)
{
          char tmp[16];

          //MakeNumberString is always called
MakeZipNumberString(16, 16, 16, string)

          memset(str, '0', 16);
          itoa(RandomNumber(0, 99999999), tmp, 10);
          memcpy(str, tmp, strlen(tmp));

          itoa(RandomNumber(0, 99999999), tmp, 10);
          memcpy(str+8, tmp, strlen(tmp));

          str[16] = 0;

    return 16;
}


//=================================================
====================
//
// Function name: MakeZipNumberString
//
//=================================================
====================
int MakeZipNumberString(int  x, int  y, int  z, char
*str)
{
          char tmp[16];

          //MakeZipNumberString is always called
MakeZipNumberString(9, 9, 9, string)

          strcpy(str, "000011111");
```


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```
        itoa(RandomNumber(0, 9999), tmp, 10);
        memcpy(str, tmp, strlen(tmp));

    return 9;
}


//=================================================
==================
//
// Function name: InitString
//
//=================================================
==================
void InitString(char *str, int len)
{
#ifdef DEBUG
    printf("[%ld]DBG: Entering InitString()\n", (int)
GetCurrentThreadId());
#endif

        memset(str, ' ', len);
    str[len] = 0;
}


//=================================================
==================
// Function name: InitAddress
//
// Description:
//
//=================================================
==================

void InitAddress(char *street_1, char *street_2, char
*city, char *state, char *zip)
{
        memset(street_1, ' ', ADDRESS_LEN+1);
        memset(street_2, ' ', ADDRESS_LEN+1);
        memset(city, ' ', ADDRESS_LEN+1);

    street_1[ADDRESS_LEN+1] = 0;
    street_2[ADDRESS_LEN+1] = 0;
    city[ADDRESS_LEN+1]     = 0;

        memset(state, ' ', STATE_LEN+1);
    state[STATE_LEN+1] = 0;

        memset(zip, ' ', ZIP_LEN+1);
    zip[ZIP_LEN+1] = 0;
}


//=================================================
==================
//
// Function name: PaddString
//
//=================================================
==================

void PaddString(int max, char *name)
{
        int                 len;

        len = strlen(name);
        if ( len < max )
                memset(name+len, ' ', max - len);
        name[max] = 0;

        return;
}
```

# tables.sql

```
-------------------------------------------------------
-------------
--
--
--  File:   TABLES.SQL
--
--          Microsoft TPC-C Benchmark Kit Ver. 4.60
--
--          Copyright Microsoft, 2005
--
--
--
--          Creates TPC-C tables
--
-------------------------------------------------------
-------------

SET ANSI_NULL_DFLT_OFF ON
GO

USE tpcc
GO

-----------------------------------
-- Remove all existing TPC-C tables
-----------------------------------
IF EXISTS ( SELECT name FROM sysobjects WHERE name =
'warehouse' )
    DROP TABLE warehouse
GO
IF EXISTS ( SELECT name FROM sysobjects WHERE name =
'district' )
    DROP TABLE district
GO
IF EXISTS ( SELECT name FROM sysobjects WHERE name =
'customer' )
    DROP TABLE customer
GO
IF EXISTS ( SELECT name FROM sysobjects WHERE name =
'history' )
    DROP TABLE history
GO
IF EXISTS ( SELECT name FROM sysobjects WHERE name =
'new_order' )
    DROP TABLE new_order
GO
IF EXISTS ( SELECT name FROM sysobjects WHERE name =
'orders' )
    DROP TABLE orders
GO
IF EXISTS ( SELECT name FROM sysobjects WHERE name =
'order_line' )
    DROP TABLE order_line
GO
IF EXISTS ( SELECT name FROM sysobjects WHERE name =
'item' )
    DROP TABLE item
GO
IF EXISTS ( SELECT name FROM sysobjects WHERE name =
'stock' )
    DROP TABLE stock
GO

--------------------
-- Create new tables
--------------------
create table warehouse
(
          w_id                int,
          w_ytd               money,
          w_tax               smallmoney,
          w_name              char(10),
          w_street_1          char(20),
          w_street_2          char(20),
          w_city              char(20),
          w_state             char(2),
          w_zip               char(9)
) on MSSQL_misc_fg
go

create table district
(
          d_id                tinyint,
          d_w_id              int,
          d_ytd               money,
          d_next_o_id                 int,

          d_tax               smallmoney,
          d_name              char(10),
          d_street_1          char(20),
          d_street_2          char(20),
          d_city              char(20),
          d_state             char(2),
          d_zip               char(9)
) on MSSQL_misc_fg
go

create table customer
(
          c_id                int,
          c_d_id              tinyint,
          c_w_id              int,
          c_discount          smallmoney,
          c_credit_lim        money,
          c_last              char(16),
          c_first             char(16),
          c_credit            char(2),
          c_balance           money,
          c_ytd_payment       money,
```


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```
          c_payment_cnt       smallint,
          c_delivery_cnt      smallint,
          c_street_1          char(20),
          c_street_2          char(20),
          c_city              char(20),
          c_state             char(2),
          c_zip               char(9),
          c_phone             char(16),
          c_since             datetime,
          c_middle            char(2),
          c_data              char(500)
) on MSSQL_cs_fg
go

-- Use the following table option if using c_data
varchar(max)
-- sp_tableoption 'customer','large value types out
of row','1'
-- go

create table history
(
          h_c_id              int,
          h_c_d_id            tinyint,
          h_c_w_id            int,
          h_d_id              tinyint,
          h_w_id              int,
          h_date              datetime,
          h_amount            smallmoney,
          h_data              char(24)
) on MSSQL_misc_fg
go

create table new_order
(
          no_o_id             int,
          no_d_id             tinyint,
          no_w_id             int
) on MSSQL_misc_fg
go

create table orders
(
          o_id                int,
          o_d_id              tinyint,
          o_w_id              int,
          o_c_id              int,
          o_carrier_id        tinyint,
          o_ol_cnt            tinyint,
          o_all_local         tinyint,
          o_entry_d           datetime
) on MSSQL_misc_fg
go

create table order_line
(
          ol_o_id             int,
          ol_d_id             tinyint,
          ol_w_id             int,
          ol_number           tinyint,
          ol_i_id             int,
          ol_delivery_d       datetime,
          ol_amount           smallmoney,
          ol_supply_w_id      int,
          ol_quantity         smallint,
          ol_dist_info        char(24)
) on MSSQL_misc_fg
go

create table item
(
          i_id                int,
          i_name              char(24),
          i_price             smallmoney,
          i_data              char(50),
          i_im_id             int
) on MSSQL_misc_fg
go

create table stock
(
          s_i_id              int,
          s_w_id              int,
          s_quantity          smallint,
          s_ytd               int,
          s_order_cnt         smallint,
          s_remote_cnt        smallint,
          s_data              char(50),
          s_dist_01           char(24),
          s_dist_02           char(24),
          s_dist_03           char(24),
          s_dist_04           char(24),
          s_dist_05           char(24),
          s_dist_06           char(24),
          s_dist_07           char(24),
          s_dist_08           char(24),
          s_dist_09           char(24),
          s_dist_10           char(24)
) on MSSQL_cs_fg
go
```

# time.c

```
//        File:               TIME.C
//                                        Microsoft
TPC-C Kit Ver. 4.62
//                                        Copyright
Microsoft, 1996, 1997, 1998, 1999, 2000, 2001, 2002,
2005
//        Purpose:  Source file for time functions


// Includes
#include "tpcc.h"

// Globals
static long start_sec;


//=================================================
==================
//
// Function name: TimeNow
//
//=================================================
==================

long TimeNow()
{
   long             time_now;
   struct _timeb el_time;

#ifdef DEBUG
    printf("[%ld]DBG: Entering TimeNow()\n", (int)
GetCurrentThreadId());
#endif

   _ftime(&el_time);

   time_now = ((el_time.time - start_sec) * 1000) +
el_time.millitm;

   return time_now;
}
```

# tpcc.h

```
//        File:               TPCC.H
//                                        Microsoft
TPC-C Kit Ver. 4.51
//                                        Copyright
Microsoft, 1996, 1997, 1998, 1999, 2000, 2001, 2002,
2003, 2005
//        Purpose:  Header file for TPC-C database
loader


// Build number of TPC Benchmark Kit
#define TPCKIT_VER  "4.51"

// General headers
#include <windows.h>
#include <winbase.h>
#include <stdlib.h>
#include <stdio.h>
#include <process.h>
#include <stddef.h>
#include <stdarg.h>
#include <string.h>
#include <time.h>
#include <sys\timeb.h>
#include <sys\types.h>
#include <math.h>

// ODBC headers
#include <sql.h>
#include <sqlext.h>
#include <odbcss.h>

// General constants
#define MILLI                                1000
```


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```
#define FALSE                                   0
#define TRUE                                    1
#define UNDEF
            -1
#define MINPRINTASCII
32
#define MAXPRINTASCII
126

// Default environment constants
#define SERVER                                  ""
#define DATABASE
          "tpcc"
#define USER
          "sa"
#define PASSWORD                              ""

// Default loader arguments
#define BATCH
                    10000
#define DEFLDPACKSIZE
          32768
#define LOADER_RES_FILE
          "C:\\MSTPCC.450\\SETUP\\LOGS\\load.out"
#define LOADER_LOG_PATH
          "C:\\MSTPCC.450\\SETUP\\LOGS\\"
#define LOADER_NURAND_C
          123
#define DEF_STARTING_WAREHOUSE                  1
#define BUILD_INDEX
          1         // build both data and indexes
#define INDEX_ORDER
          1         // build indexes before load
#define SCALE_DOWN
          0   // build a normal scale database
#define INDEX_SCRIPT_PATH
          "scripts"

typedef struct
{
    char
          *server;
    char
          *database;
    char
          *user;
    char
          *password;
          BOOL
          tables_all;                           //
set if loading all tables
          BOOL
          table_item;                           //
set if loading ITEM table specifically
          BOOL
          table_warehouse;    // set if loading
WAREHOUSE, DISTRICT, and STOCK
          BOOL
          table_customer;               // set if
loading CUSTOMER and HISTORY
          BOOL
          table_orders;                 // set if
loading NEW-ORDER, ORDERS, ORDER-LINE
    long
          num_warehouses;
    long
          batch;
    long
          verbose;
          long
          pack_size;
          char
          *loader_res_file;
          char
          *log_path;
          char
          *synch_servername;
          long
          case_sensitivity;
          long
          starting_warehouse;
          long
          build_index;
          long
          index_order;
          long
          scale_down;
          char
          *index_script_path;
} TPCCLDR_ARGS;

// String length constants
          #define SERVER_NAME_LEN            20
          #define DATABASE_NAME_LEN          20
          #define USER_NAME_LEN              20
          #define PASSWORD_LEN               20
          #define TABLE_NAME_LEN             20
          #define I_DATA_LEN                 50
          #define I_NAME_LEN                 24
          #define BRAND_LEN                   1
          #define LAST_NAME_LEN              16
          #define W_NAME_LEN                 10
          #define ADDRESS_LEN                20
          #define STATE_LEN                   2
          #define ZIP_LEN                     9
          #define S_DIST_LEN                 24
          #define S_DATA_LEN                 50
          #define D_NAME_LEN                 10
          #define FIRST_NAME_LEN             16
          #define MIDDLE_NAME_LEN             2
          #define PHONE_LEN                  16
          #define CREDIT_LEN                  2
          #define C_DATA_LEN                500
          #define H_DATA_LEN                 24
          #define DIST_INFO_LEN              24
          #define MAX_OL_NEW_ORDER_ITEMS     15
          #define MAX_OL_ORDER_STATUS_ITEMS  15
          #define STATUS_LEN                 25
          #define OL_DIST_INFO_LEN
24
          #define C_SINCE_LEN
             23
          #define H_DATE_LEN
             23
          #define OL_DELIVERY_D_LEN
23
          #define O_ENTRY_D_LEN              23

// Functions in random.c
void      seed();
long      irand();
double    drand();
void      WUCreate();
short     WURand();
long      RandomNumber(long lower, long upper);

// Functions in getargs.c;
void      GetArgsLoader();
void      GetArgsLoaderUsage();

// Functions in time.c
long      TimeNow();

// Functions in strings.c
void      MakeAddress();
void      LastName();
int       MakeAlphaString();
int                MakeAlphaStringPadded();
int       MakeOriginalAlphaString();
int       MakeNumberString();
int       MakeZipNumberString();
void      InitString();
void      InitAddress();
void      PaddString();
```

# tpccldr.c

```
//=================================================
====================
//        File:               TPCCLDR.C
//                                        Microsoft
TPC-C Kit Ver. 4.51
//                                        Copyright
Microsoft, 1996, 1997, 1998, 1999,
//                                        2000, 2001,
2002, 2003
//        Purpose:  Source file for TPC-C database
loader
//=================================================
====================
// Includes
#include "tpcc.h"
#include "search.h"

// Defines
#define MAXITEMS                100000
#define MAXITEMS_SCALE_DOWN             100
#define CUSTOMERS_PER_DISTRICT  3000
#define CUSTOMERS_SCALE_DOWN  30
#define DISTRICT_PER_WAREHOUSE  10
#define ORDERS_PER_DISTRICT     3000
#define ORDERS_SCALE_DOWN       30
#define MAX_CUSTOMER_THREADS    2
#define MAX_ORDER_THREADS       3
#define MAX_MAIN_THREADS        4
```


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```
#define MAX_SQL_ERRORS                          10

// Functions declarations
void HandleErrorDBC (SQLHDBC  hdbc1);
long NURand();
void LoadItem();
void LoadWarehouse();
void Stock();
void District();
void LoadCustomer();
void CustomerBufInit();
void CustomerBufLoad();
void LoadCustomerTable();
void LoadHistoryTable();
void LoadOrders();
void OrdersBufInit();
void OrdersBufLoad();
void LoadOrdersTable();
void LoadNewOrderTable();
void LoadOrderLineTable();
void GetPermutation();
void CheckForCommit();
void CheckForCommit_Big();
void OpenConnections();
void BuildIndex();
void FormatDate ();

// Shared memory structures
typedef struct
{
          double                                ol;
    long                ol_i_id;
          long
          ol_supply_w_id;
    short               ol_quantity;
    double              ol_amount;
    char
ol_dist_info[DIST_INFO_LEN+1];
          char
          ol_delivery_d[OL_DELIVERY_D_LEN+1];
} ORDER_LINE_STRUCT;

typedef struct
{
    long                o_id;
    short               o_d_id;
          long
          o_w_id;
    long                o_c_id;
    short               o_carrier_id;
    short               o_ol_cnt;
    short               o_all_local;
          ORDER_LINE_STRUCT   o_ol[15];
} ORDERS_STRUCT;

typedef struct
{
    long                                c_id;
    short                               c_d_id;
          long
          c_w_id;
          char
          c_first[FIRST_NAME_LEN+1];
          char
          c_middle[MIDDLE_NAME_LEN+1];
          char
          c_last[LAST_NAME_LEN+1];
          char
          c_street_1[ADDRESS_LEN+1];
          char
          c_street_2[ADDRESS_LEN+1];
          char
          c_city[ADDRESS_LEN+1];
          char
          c_state[STATE_LEN+1];
          char
          c_zip[ZIP_LEN+1];
          char
          c_phone[PHONE_LEN+1];
          char
          c_credit[CREDIT_LEN+1];
          double
          c_credit_lim;
          double
          c_discount;
          char
          c_balance[6];
          double
          c_ytd_payment;
          short
          c_payment_cnt;
          short
          c_delivery_cnt;
          char
          c_data[C_DATA_LEN+1];
          double
          h_amount;
          char
          h_data[H_DATA_LEN+1];
} CUSTOMER_STRUCT;

typedef struct
{
          char
          c_last[LAST_NAME_LEN+1];
          char
          c_first[FIRST_NAME_LEN+1];
    long                                      c_id;
} CUSTOMER_SORT_STRUCT;

typedef struct
{
    long                time_start;
} LOADER_TIME_STRUCT;


// Global variables
char      szLastError[300];

HENV      henv;

HDBC      v_hdbc;
                    // for SQL Server version
verification
HDBC      i_hdbc1;
          // for ITEM table
HDBC      w_hdbc1;
          // for WAREHOUSE, DISTRICT, STOCK
HDBC      c_hdbc1;
          // for CUSTOMER
HDBC      c_hdbc2;
          // for HISTORY
HDBC      o_hdbc1;
          // for ORDERS
HDBC      o_hdbc2;
          // for NEW-ORDER

HDBC      o_hdbc3;
          // for ORDER-LINE

HSTMT     v_hstmt;
          // for SQL Server version verification
HSTMT     i_hstmt1;
HSTMT     w_hstmt1;
HSTMT     c_hstmt1, c_hstmt2;
HSTMT     o_hstmt1, o_hstmt2, o_hstmt3;

int                 total_db_errors;

ORDERS_STRUCT       orders_buf[ORDERS_PER_DISTRICT];
CUSTOMER_STRUCT
          customer_buf[CUSTOMERS_PER_DISTRICT];
long                          orders_rows_loaded;
double                        new_order_rows_loaded;
double                        order_line_rows_loaded;
long                          history_rows_loaded;
long                          customer_rows_loaded;
double                        stock_rows_loaded;
long                          district_rows_loaded;
long                          item_rows_loaded;
long                          warehouse_rows_loaded;
long                          main_time_start;
long                          main_time_end;
long                          max_items;
long                          customers_per_district;
long                          orders_per_district;
long                          first_new_order;
long                          last_new_order;

TPCCLDR_ARGS    *aptr, args;

//================================================
==================
//
// Function name: main
//
//================================================
==================
int main(int  argc, char **argv)
{

          DWORD
dwThreadID[MAX_MAIN_THREADS];
          HANDLE          hThread[MAX_MAIN_THREADS];
          FILE            *fLoader;
          char            buffer[255];
          int                                     i;

          for (i=0; i<MAX_MAIN_THREADS; i++)
```


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```
                    hThread[i] = NULL;


printf("\n*****************************************
********");
          printf("\n*
*");
          printf("\n*  Microsoft SQL Server
*");
          printf("\n*
*");
          printf("\n*  TPC-C BENCHMARK KIT:  Database
loader          *");
          printf("\n*  Version %s
*", TPCKIT_VER);
          printf("\n*
*");
          printf("\n*********************************
******************\n\n");

    // process command line arguments
    aptr = &args;
    GetArgsLoader(argc, argv, aptr);

          printf("Build interface is ODBC.\n");

          if (aptr->build_index == 0)
                    printf("Data load only - no index
creation.\n");
          else
                    printf("Data load and index
creation.\n");

          if (aptr->index_order == 0)
                    printf("Clustered indexes will be
created after bulk load.\n");
          else
                    printf("Clustered indexes will be
created before bulk load.\n");

          // set database scale values
          if (aptr->scale_down == 1)
          {
                    printf("*** Scaled Down Database
***\n");
                    max_items = MAXITEMS_SCALE_DOWN;
                    customers_per_district =
CUSTOMERS_SCALE_DOWN;
                    orders_per_district =
ORDERS_SCALE_DOWN;
                    first_new_order = 0;
                    last_new_order  = 30;
          }
          else
          {
                    max_items = MAXITEMS;
                    customers_per_district =
CUSTOMERS_PER_DISTRICT;
                    orders_per_district =
ORDERS_PER_DISTRICT;
                    first_new_order = 2100;
                    last_new_order  = 3000;
          }

          // open connections to SQL Server
          OpenConnections();

          // open file for loader results
          fLoader = fopen(aptr->loader_res_file,
"w");


    if (fLoader == NULL)
          {
                    printf("Error, loader result file
open failed.");
                    exit(-1);
          }

    // start loading data
    sprintf(buffer,"TPC-C load started for %ld
warehouses.\n",aptr->num_warehouses);
          if        (aptr->scale_down == 1)
          {
                    sprintf(buffer,"SCALED DOWN
DATABASE.\n");
          }

          printf("%s",buffer);
          fprintf(fLoader,"%s",buffer);

          main_time_start = (TimeNow() / MILLI);

          // start parallel load threads
          if (aptr->tables_all || aptr->table_item)
          {
                    fprintf(fLoader, "\nStarting
loader threads for: item\n");


                    hThread[0] = CreateThread(NULL,

                              0,


(LPTHREAD_START_ROUTINE) LoadItem,

                              NULL,

                              0,

                              &dwThreadID[0]);

                    if (hThread[0] == NULL)
                    {
                              printf("Error, failed
in creating creating thread = 0.\n");
                              exit(-1);
                    }
          }

          if (aptr->tables_all || aptr-
>table_warehouse)
          {
                    fprintf(fLoader, "Starting loader
threads for: warehouse\n");

                    hThread[1] = CreateThread(NULL,

                              0,


(LPTHREAD_START_ROUTINE) LoadWarehouse,

                              NULL,

                              0,

                              &dwThreadID[1]);

                    if (hThread[1] == NULL)
                    {
                              printf("Error, failed
in creating creating thread = 1.\n");
                              exit(-1);
                    }
          }

          if (aptr->tables_all || aptr-
>table_customer)
          {
                    fprintf(fLoader, "Starting loader
threads for: customer\n");

                    hThread[2] = CreateThread(NULL,

                              0,


(LPTHREAD_START_ROUTINE) LoadCustomer,

                              NULL,

                              0,

                              &dwThreadID[2]);

                    if (hThread[2] == NULL)
                    {
                              printf("Error, failed
in creating creating main thread = 2.\n");
                              exit(-1);
                    }
          }

          if (aptr->tables_all || aptr->table_orders)
          {
                    fprintf(fLoader, "Starting loader
threads for: orders\n");

                    hThread[3] = CreateThread(NULL,

                              0,


(LPTHREAD_START_ROUTINE) LoadOrders,

                              NULL,
```


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```
                                0,

                                &dwThreadID[3]);

                    if (hThread[3] == NULL)
                    {
                                printf("Error, failed
in creating creating main thread = 3.\n");
                                exit(-1);
                    }
          }

          // Wait for threads to finish...
          for (i=0; i<MAX_MAIN_THREADS; i++)
          {
                    if (hThread[i] != NULL)
                    {
                                WaitForSingleObject(
hThread[i], INFINITE );

          CloseHandle(hThread[i]);
                                hThread[i] = NULL;
                    }
          }

          main_time_end = (TimeNow() / MILLI);

    sprintf(buffer,"\nTPC-C load completed
successfully in %ld minutes.\n",
                                (main_time_end -
main_time_start)/60);

          printf("%s",buffer);
          fprintf(fLoader, "%s", buffer);

          fclose(fLoader);

          SQLFreeEnv(henv);

    exit(0);

          return 0;
}


//=================================================
==================
//
// Function name: LoadItem
//
//=================================================
==================
void LoadItem()
{
    int                         i;
          long                  i_id;
          long                  i_im_id;
    char            i_name[I_NAME_LEN+1];
    double                      i_price;
    char            i_data[I_DATA_LEN+1];
          char                  name[20];
          long                  time_start;
          RETCODE               rc;
          DBINT                 rcint;
          char                  bcphint[128];
          char                  err_log_path[256];

          // Seed with unique number
          seed(11);

          printf("Loading item table...\n");

          //if build index before load
          if ((aptr->build_index == 1) && (aptr-
>index_order == 1))
                    BuildIndex("idxitmcl");

          InitString(i_name, I_NAME_LEN+1);
          InitString(i_data, I_DATA_LEN+1);

          sprintf(name, "%s..%s", aptr->database,
"item");

          strcpy(err_log_path,aptr->log_path);
          strcat(err_log_path,"item.err");
          rc = bcp_init(i_hdbc1, name, NULL,
err_log_path , DB_IN);
          if (rc != SUCCEED)
                    HandleErrorDBC(i_hdbc1);

          if ((aptr->build_index == 1) && (aptr-
>index_order == 1))
          {
                    sprintf(bcphint, "tablock, order
(i_id), ROWS_PER_BATCH = 100000");
                    rc = bcp_control(i_hdbc1,
BCPHINTS, (void*) bcphint);
                    if (rc != SUCCEED)

          HandleErrorDBC(i_hdbc1);
          }

          i = 0;
          rc = bcp_bind(i_hdbc1, (BYTE *) &i_id, 0,
SQL_VARLEN_DATA, NULL, 0, SQLINT4, ++i);
          if (rc != SUCCEED)
                    HandleErrorDBC(i_hdbc1);
          rc = bcp_bind(i_hdbc1, (BYTE *) i_name, 0,
I_NAME_LEN, NULL, 0, 0, ++i);
          if (rc != SUCCEED)
                    HandleErrorDBC(i_hdbc1);
          rc = bcp_bind(i_hdbc1, (BYTE *) &i_price,
0, SQL_VARLEN_DATA, NULL, 0, SQLFLT8, ++i);
          if (rc != SUCCEED)
                    HandleErrorDBC(i_hdbc1);
          rc = bcp_bind(i_hdbc1, (BYTE *) i_data, 0,
SQL_VARLEN_DATA, "", 1, 0, ++i);
          if (rc != SUCCEED)
                    HandleErrorDBC(i_hdbc1);
          rc = bcp_bind(i_hdbc1, (BYTE *) &i_im_id,
0, SQL_VARLEN_DATA, NULL, 0, SQLINT4, ++i);
          if (rc != SUCCEED)
                    HandleErrorDBC(i_hdbc1);

          time_start = (TimeNow() / MILLI);
          item_rows_loaded = 0;

          for (i_id = 1; i_id <= max_items; i_id++)
          {
                    i_im_id = RandomNumber(1L,
10000L);

                    MakeAlphaStringPadded(14, 24,
I_NAME_LEN, i_name);

                    i_price = ((float)
RandomNumber(100L, 10000L))/100.0;

                    MakeOriginalAlphaString(26, 50,
I_DATA_LEN, i_data, 10);

                    rc = bcp_sendrow(i_hdbc1);

                    if (rc != SUCCEED)

          HandleErrorDBC(i_hdbc1);

                    item_rows_loaded++;
                    CheckForCommit(i_hdbc1, i_hstmt1,
item_rows_loaded, "item", &time_start);
          }

          rcint = bcp_done(i_hdbc1);
          if (rcint < 0)
                    HandleErrorDBC(i_hdbc1);


          printf("Finished loading item table.\n");


          SQLFreeStmt(i_hstmt1, SQL_DROP);
          SQLDisconnect(i_hdbc1);
          SQLFreeConnect(i_hdbc1);

          // if build index after load
          if ((aptr->build_index == 1) && (aptr-
>index_order == 0))
                    BuildIndex("idxitmcl");

}

//=================================================
==========================
//
// Function   : LoadWarehouse
//
// Loads WAREHOUSE table and loads Stock and District
as Warehouses are created
//
//=================================================
==========================
void LoadWarehouse()
{
          int                 i;
          long      w_id;
    char  w_name[W_NAME_LEN+1];
    char  w_street_1[ADDRESS_LEN+1];
```


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```
    char  w_street_2[ADDRESS_LEN+1];
    char  w_city[ADDRESS_LEN+1];
    char  w_state[STATE_LEN+1];
    char  w_zip[ZIP_LEN+1];
    double          w_tax;
    double          w_ytd;
          char      name[20];
          long      time_start;
          RETCODE   rc;
          DBINT     rcint;
          char      bcphint[128];
          char      err_log_path[256];

          // Seed with unique number
          seed(2);

          printf("Loading warehouse table...\n");

          // if build index before load...
          if ((aptr->build_index == 1) && (aptr-
>index_order == 1))
                    BuildIndex("idxwarcl");

          InitString(w_name, W_NAME_LEN+1);
          InitAddress(w_street_1, w_street_2, w_city,
w_state, w_zip);

          sprintf(name, "%s..%s", aptr->database,
"warehouse");

          strcpy(err_log_path,aptr->log_path);
          strcat(err_log_path,"whouse.err");
          rc = bcp_init(w_hdbc1, name, NULL,
err_log_path, DB_IN);

          if (rc != SUCCEED)
                    HandleErrorDBC(w_hdbc1);

          if ((aptr->build_index == 1) && (aptr-
>index_order == 1))
          {
                    sprintf(bcphint, "tablock, order
(w_id), ROWS_PER_BATCH = %d", aptr->num_warehouses);
                    rc = bcp_control(w_hdbc1,
BCPHINTS, (void*) bcphint);
                    if (rc != SUCCEED)

          HandleErrorDBC(w_hdbc1);
          }

          i = 0;
          rc = bcp_bind(w_hdbc1, (BYTE *) &w_id, 0,
SQL_VARLEN_DATA, NULL, 0, SQLINT4, ++i);
          if (rc != SUCCEED)
                    HandleErrorDBC(w_hdbc1);
          rc = bcp_bind(w_hdbc1, (BYTE *) &w_ytd, 0,
SQL_VARLEN_DATA, NULL, 0, SQLFLT8, ++i);
          if (rc != SUCCEED)
                    HandleErrorDBC(w_hdbc1);
          rc = bcp_bind(w_hdbc1, (BYTE *) &w_tax, 0,
SQL_VARLEN_DATA, NULL, 0, SQLFLT8, ++i);
          if (rc != SUCCEED)
                    HandleErrorDBC(w_hdbc1);
          rc = bcp_bind(w_hdbc1, (BYTE *) w_name, 0,
W_NAME_LEN, NULL, 0, 0, ++i);
          if (rc != SUCCEED)
                    HandleErrorDBC(w_hdbc1);
          rc = bcp_bind(w_hdbc1, (BYTE *) w_street_1,
0, ADDRESS_LEN, NULL, 0, 0, ++i);
          if (rc != SUCCEED)
                    HandleErrorDBC(w_hdbc1);
          rc = bcp_bind(w_hdbc1, (BYTE *) w_street_2,
0, ADDRESS_LEN, NULL, 0, 0, ++i);
          if (rc != SUCCEED)
                    HandleErrorDBC(w_hdbc1);
          rc = bcp_bind(w_hdbc1, (BYTE *) w_city, 0,
ADDRESS_LEN, NULL, 0, 0, ++i);
          if (rc != SUCCEED)
                    HandleErrorDBC(w_hdbc1);
          rc = bcp_bind(w_hdbc1, (BYTE *) w_state, 0,
STATE_LEN, NULL, 0, 0, ++i);
          if (rc != SUCCEED)
                    HandleErrorDBC(w_hdbc1);
          rc = bcp_bind(w_hdbc1, (BYTE *) w_zip, 0,
ZIP_LEN, NULL, 0, 0, ++i);
          if (rc != SUCCEED)
                    HandleErrorDBC(w_hdbc1);

          time_start = (TimeNow() / MILLI);

          warehouse_rows_loaded = 0;

          for (w_id = (long)aptr->starting_warehouse;
w_id <= aptr->num_warehouses; w_id++)
          {
                    MakeAlphaStringPadded(6,10,
W_NAME_LEN, w_name);

                    MakeAddress(w_street_1,
w_street_2, w_city, w_state, w_zip);

                    w_tax = ((float)
RandomNumber(0L,2000L))/10000.00;

                    w_ytd = 300000.00;

                    rc = bcp_sendrow(w_hdbc1);
                    if (rc != SUCCEED)

          HandleErrorDBC(w_hdbc1);

                    warehouse_rows_loaded++;
                    CheckForCommit(w_hdbc1, i_hstmt1,
warehouse_rows_loaded, "warehouse", &time_start);
          }

          rcint = bcp_done(w_hdbc1);
          if (rcint < 0)
                    HandleErrorDBC(w_hdbc1);


          printf("Finished loading warehouse
table.\n");

          // if build index after load...
          if ((aptr->build_index == 1) && (aptr-
>index_order == 0))
                    BuildIndex("idxwarcl");

          stock_rows_loaded = 0;
          district_rows_loaded = 0;

          District();
          Stock();
}

//================================================
==================
//
// Function   : District
//
//================================================
==================
void District()
{
    int             i;
          short     d_id;
          long      d_w_id;
    char  d_name[D_NAME_LEN+1];
    char  d_street_1[ADDRESS_LEN+1];
    char  d_street_2[ADDRESS_LEN+1];
    char  d_city[ADDRESS_LEN+1];
    char  d_state[STATE_LEN+1];
    char  d_zip[ZIP_LEN+1];
    double          d_tax;
    double          d_ytd;
          char      name[20];
    long  d_next_o_id;
          long      time_start;
          long      w_id;
          RETCODE   rc;
          DBINT     rcint;
          char      bcphint[128];
          char      err_log_path[256];

          // Seed with unique number
          seed(4);

          printf("Loading district table...\n");

          // build index before load
          if ((aptr->build_index == 1) && (aptr-
>index_order == 1))
                    BuildIndex("idxdiscl");

          InitString(d_name, D_NAME_LEN+1);
          InitAddress(d_street_1, d_street_2, d_city,
d_state, d_zip);
          sprintf(name, "%s..%s", aptr->database,
"district");

          strcpy(err_log_path,aptr->log_path);
          strcat(err_log_path,"district.err");
          rc = bcp_init(w_hdbc1, name, NULL,
err_log_path, DB_IN);
          if (rc != SUCCEED)
                    HandleErrorDBC(w_hdbc1);
```


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```
        if ((aptr->build_index == 1) && (aptr-
>index_order == 1))
        {
                sprintf(bcphint, "tablock, order
(d_w_id, d_id), ROWS_PER_BATCH = %u", (aptr-
>num_warehouses * 10));
                rc = bcp_control(w_hdbc1,
BCPHINTS, (void*) bcphint);
                if (rc != SUCCEED)

        HandleErrorDBC(w_hdbc1);
        }

        i = 0;
        rc = bcp_bind(w_hdbc1, (BYTE *) &d_id, 0,
SQL_VARLEN_DATA, NULL, 0, SQLINT2, ++i);
        if (rc != SUCCEED)
                HandleErrorDBC(w_hdbc1);
        rc = bcp_bind(w_hdbc1, (BYTE *) &d_w_id, 0,
SQL_VARLEN_DATA, NULL, 0, SQLINT4, ++i);
        if (rc != SUCCEED)
                HandleErrorDBC(w_hdbc1);
        rc = bcp_bind(w_hdbc1, (BYTE *) &d_ytd, 0,
SQL_VARLEN_DATA, NULL, 0, SQLFLT8, ++i);
        if (rc != SUCCEED)
                HandleErrorDBC(w_hdbc1);
        rc = bcp_bind(w_hdbc1, (BYTE *)
&d_next_o_id, 0, SQL_VARLEN_DATA, NULL, 0, SQLINT4,
++i);
        if (rc != SUCCEED)
                HandleErrorDBC(w_hdbc1);
        rc = bcp_bind(w_hdbc1, (BYTE *) &d_tax, 0,
SQL_VARLEN_DATA, NULL, 0, SQLFLT8, ++i);
        if (rc != SUCCEED)
                HandleErrorDBC(w_hdbc1);
        rc = bcp_bind(w_hdbc1, (BYTE *) d_name, 0,
D_NAME_LEN, NULL, 0, 0, ++i);
        if (rc != SUCCEED)
                HandleErrorDBC(w_hdbc1);
        rc = bcp_bind(w_hdbc1, (BYTE *) d_street_1,
0, ADDRESS_LEN, NULL, 0, 0, ++i);
        if (rc != SUCCEED)
                HandleErrorDBC(w_hdbc1);
        rc = bcp_bind(w_hdbc1, (BYTE *) d_street_2,
0, ADDRESS_LEN, NULL, 0, 0, ++i);
        if (rc != SUCCEED)
                HandleErrorDBC(w_hdbc1);
        rc = bcp_bind(w_hdbc1, (BYTE *) d_city, 0,
ADDRESS_LEN, NULL, 0, 0, ++i);
        if (rc != SUCCEED)
                HandleErrorDBC(w_hdbc1);
        rc = bcp_bind(w_hdbc1, (BYTE *) d_state, 0,
STATE_LEN, NULL, 0, 0, ++i);
        if (rc != SUCCEED)
                HandleErrorDBC(w_hdbc1);
        rc = bcp_bind(w_hdbc1, (BYTE *) d_zip, 0,
ZIP_LEN, NULL, 0, 0, ++i);
        if (rc != SUCCEED)
                HandleErrorDBC(w_hdbc1);

        d_ytd  = 30000.0;

        d_next_o_id = orders_per_district+1;

        time_start = (TimeNow() / MILLI);

        for (w_id = aptr->starting_warehouse; w_id
<= aptr->num_warehouses; w_id++)
        {
                d_w_id = w_id;

                for (d_id = 1; d_id <=
DISTRICT_PER_WAREHOUSE; d_id++)
                {

        MakeAlphaStringPadded(6,10,D_NAME_LEN,
d_name);

                        MakeAddress(d_street_1,
d_street_2, d_city, d_state, d_zip);

                        d_tax = ((float)
RandomNumber(0L,2000L))/10000.00;

                        rc =
bcp_sendrow(w_hdbc1);
                        if (rc != SUCCEED)

        HandleErrorDBC(w_hdbc1);

                        district_rows_loaded++;
                        CheckForCommit(w_hdbc1,
w_hstmt1, district_rows_loaded, "district",
&time_start);
                }
    }

        rcint = bcp_done(w_hdbc1);
        if (rcint < 0)
                HandleErrorDBC(w_hdbc1);


        printf("Finished loading district
table.\n");

        // if build index after load...
        if ((aptr->build_index == 1) && (aptr-
>index_order == 0))
                BuildIndex("idxdiscl");

    return;
}

//==============================================
==================
//
// Function   : Stock
//
//==============================================
==================
void Stock()
{
        int             i;
        long    s_i_id;
        long    s_w_id;
    short s_quantity;
    char  s_dist_01[S_DIST_LEN+1];
    char  s_dist_02[S_DIST_LEN+1];
    char  s_dist_03[S_DIST_LEN+1];
    char  s_dist_04[S_DIST_LEN+1];
    char  s_dist_05[S_DIST_LEN+1];
    char  s_dist_06[S_DIST_LEN+1];
    char  s_dist_07[S_DIST_LEN+1];
    char  s_dist_08[S_DIST_LEN+1];
    char  s_dist_09[S_DIST_LEN+1];
    char  s_dist_10[S_DIST_LEN+1];
    long  s_ytd;
    short s_order_cnt;
    short s_remote_cnt;
    char  s_data[S_DATA_LEN+1];
    short len;
        char    name[20];
        long    time_start;
        RETCODE rc;
        DBINT   rcint;
        char    bcphint[128];
        char    err_log_path[256];

        // Seed with unique number
        seed(3);

        // if build index before load...
        if ((aptr->build_index == 1) && (aptr-
>index_order == 1))
                BuildIndex("idxstkcl");

        sprintf(name, "%s..%s", aptr->database,
"stock");

        strcpy(err_log_path,aptr->log_path);
        strcat(err_log_path,"stock.err");
        rc = bcp_init(w_hdbc1, name, NULL,
err_log_path, DB_IN);
        if (rc != SUCCEED)
                HandleErrorDBC(w_hdbc1);

        if ((aptr->build_index == 1) && (aptr-
>index_order == 1))
        {
                sprintf(bcphint, "tablock, order
(s_i_id, s_w_id), ROWS_PER_BATCH = %u", (aptr-
>num_warehouses * 100000));
                rc = bcp_control(w_hdbc1,
BCPHINTS, (void*) bcphint);
                if (rc != SUCCEED)

        HandleErrorDBC(w_hdbc1);
        }

        i = 0;
        rc = bcp_bind(w_hdbc1, (BYTE *) &s_i_id, 0,
SQL_VARLEN_DATA, NULL, 0, SQLINT4, ++i);
        if (rc != SUCCEED)
                HandleErrorDBC(w_hdbc1);
        rc = bcp_bind(w_hdbc1, (BYTE *) &s_w_id, 0,
SQL_VARLEN_DATA, NULL, 0, SQLINT4, ++i);
        if (rc != SUCCEED)
                HandleErrorDBC(w_hdbc1);
```


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```
          rc = bcp_bind(w_hdbc1, (BYTE *)
&s_quantity, 0, SQL_VARLEN_DATA, NULL, 0, SQLINT2,
++i);
          if (rc != SUCCEED)
                    HandleErrorDBC(w_hdbc1);
          rc = bcp_bind(w_hdbc1, (BYTE *) &s_ytd, 0,
SQL_VARLEN_DATA, NULL, 0, SQLINT4, ++i);
          if (rc != SUCCEED)
                    HandleErrorDBC(w_hdbc1);
          rc = bcp_bind(w_hdbc1, (BYTE *)
&s_order_cnt, 0, SQL_VARLEN_DATA, NULL, 0, SQLINT2,
++i);
          if (rc != SUCCEED)
                    HandleErrorDBC(w_hdbc1);
          rc = bcp_bind(w_hdbc1, (BYTE *)
&s_remote_cnt, 0, SQL_VARLEN_DATA, NULL, 0, SQLINT2,
++i);
          if (rc != SUCCEED)
                    HandleErrorDBC(w_hdbc1);
          rc = bcp_bind(w_hdbc1, (BYTE *) s_data, 0,
SQL_VARLEN_DATA, "", 1, 0, ++i);
          if (rc != SUCCEED)
                    HandleErrorDBC(w_hdbc1);
          rc = bcp_bind(w_hdbc1, (BYTE *) s_dist_01,
0, S_DIST_LEN, NULL, 0, 0, ++i);
          if (rc != SUCCEED)
                    HandleErrorDBC(w_hdbc1);
          rc = bcp_bind(w_hdbc1, (BYTE *) s_dist_02,
0, S_DIST_LEN, NULL, 0, 0, ++i);
          if (rc != SUCCEED)
                    HandleErrorDBC(w_hdbc1);
          rc = bcp_bind(w_hdbc1, (BYTE *) s_dist_03,
0, S_DIST_LEN, NULL, 0, 0, ++i);
          if (rc != SUCCEED)
                    HandleErrorDBC(w_hdbc1);
          rc = bcp_bind(w_hdbc1, (BYTE *) s_dist_04,
0, S_DIST_LEN, NULL, 0, 0, ++i);
          if (rc != SUCCEED)
                    HandleErrorDBC(w_hdbc1);
          rc = bcp_bind(w_hdbc1, (BYTE *) s_dist_05,
0, S_DIST_LEN, NULL, 0, 0, ++i);
          if (rc != SUCCEED)
                    HandleErrorDBC(w_hdbc1);
          rc = bcp_bind(w_hdbc1, (BYTE *) s_dist_06,
0, S_DIST_LEN, NULL, 0, 0, ++i);
          if (rc != SUCCEED)
                    HandleErrorDBC(w_hdbc1);
          rc = bcp_bind(w_hdbc1, (BYTE *) s_dist_07,
0, S_DIST_LEN, NULL, 0, 0, ++i);
          if (rc != SUCCEED)
                    HandleErrorDBC(w_hdbc1);
          rc = bcp_bind(w_hdbc1, (BYTE *) s_dist_08,
0, S_DIST_LEN, NULL, 0, 0, ++i);
          if (rc != SUCCEED)
                    HandleErrorDBC(w_hdbc1);
          rc = bcp_bind(w_hdbc1, (BYTE *) s_dist_09,
0, S_DIST_LEN, NULL, 0, 0, ++i);
          if (rc != SUCCEED)
                    HandleErrorDBC(w_hdbc1);
          rc = bcp_bind(w_hdbc1, (BYTE *) s_dist_10,
0, S_DIST_LEN, NULL, 0, 0, ++i);
          if (rc != SUCCEED)
                    HandleErrorDBC(w_hdbc1);

          s_ytd = s_order_cnt = s_remote_cnt = 0;

          time_start = (TimeNow() / MILLI);

          printf("...Loading stock table\n");

          for (s_i_id=1; s_i_id <= max_items;
s_i_id++)
          {

                    for (s_w_id = (long)aptr-
>starting_warehouse; s_w_id <= aptr->num_warehouses;
s_w_id++)
                    {

                              s_quantity =
(short)RandomNumber(10L,100L);
                              len =
MakeAlphaString(24,24,S_DIST_LEN, s_dist_01);
                              len =
MakeAlphaString(24,24,S_DIST_LEN, s_dist_02);
                              len =
MakeAlphaString(24,24,S_DIST_LEN, s_dist_03);
                              len =
MakeAlphaString(24,24,S_DIST_LEN, s_dist_04);
                              len =
MakeAlphaString(24,24,S_DIST_LEN, s_dist_05);
                              len =
MakeAlphaString(24,24,S_DIST_LEN, s_dist_06);
                              len =
MakeAlphaString(24,24,S_DIST_LEN, s_dist_07);
                              len =
MakeAlphaString(24,24,S_DIST_LEN, s_dist_08);
                              len =
MakeAlphaString(24,24,S_DIST_LEN, s_dist_09);
                              len =
MakeAlphaString(24,24,S_DIST_LEN, s_dist_10);

                              len =
MakeOriginalAlphaString(26,50, S_DATA_LEN,
s_data,10);

                              rc =
bcp_sendrow(w_hdbc1);
                              if (rc != SUCCEED)

          HandleErrorDBC(w_hdbc1);

                              stock_rows_loaded++;

          CheckForCommit_Big(w_hdbc1, w_hstmt1,
stock_rows_loaded, "stock", &time_start);
                    }
          }

          rcint = bcp_done(w_hdbc1);
          if (rcint < 0)
                    HandleErrorDBC(w_hdbc1);


          printf("Finished loading stock table.\n");

          SQLFreeStmt(w_hstmt1, SQL_DROP);
          SQLDisconnect(w_hdbc1);
          SQLFreeConnect(w_hdbc1);

          // if build index after load...
          if ((aptr->build_index == 1) && (aptr-
>index_order == 0))
                    BuildIndex("idxstkcl");

          return;
}

//================================================
==================
//
// Function   : LoadCustomer
//
//================================================
==================
void LoadCustomer()
{
          LOADER_TIME_STRUCT
customer_time_start;
          LOADER_TIME_STRUCT      history_time_start;
          long
          w_id;
    short                     d_id;
          DWORD
          dwThreadID[MAX_CUSTOMER_THREADS];
          HANDLE
          hThread[MAX_CUSTOMER_THREADS];
          char                              name[20];
          RETCODE
          rc;
          DBINT
          rcint;
          char
          bcphint[128];
          char
          cmd[256];
          int
                    num_procs;
          char
          err_log_path_cust[256];
          char
          err_log_path_hist[256];

          // Seed with unique number
          seed(5);

          printf("Loading customer and history
tables...\n");

          // if build index before load...
          if ((aptr->build_index == 1) && (aptr-
>index_order == 1))
          {
                    BuildIndex("idxcuscl");
                     // check the number of
processors on this system
                      // if 8 or more processors, then
build index on History.
```


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```
                    // if less than 8 processors, do
not build the index
                    num_procs = atoi(getenv(
"NUMBER_OF_PROCESSORS" ));
                    if ( num_procs >= 8 )
                              BuildIndex("idxhiscl");
          }

          // Initialize bulk copy
          sprintf(name, "%s..%s", aptr->database,
"customer");

          strcpy(err_log_path_cust,aptr->log_path);
          strcat(err_log_path_cust,"customer.err");
          rc = bcp_init(c_hdbc1, name, NULL,
err_log_path_cust, DB_IN);
          if (rc != SUCCEED)
                    HandleErrorDBC(c_hdbc1);

          if ((aptr->build_index == 1) && (aptr-
>index_order == 1))
          {
                    sprintf(bcphint, "tablock, order
(c_w_id, c_d_id, c_id), ROWS_PER_BATCH = %u", (aptr-
>num_warehouses * 30000));
                    rc = bcp_control(c_hdbc1,
BCPHINTS, (void*) bcphint);
                    if (rc != SUCCEED)

          HandleErrorDBC(c_hdbc1);
          }

          sprintf(name, "%s..%s", aptr->database,
"history");

          rc = bcp_init(c_hdbc2, name, NULL,
"logs\\history.err", DB_IN);
          strcpy(err_log_path_hist,aptr->log_path);
          strcat(err_log_path_hist,"history.err");
          rc = bcp_init(c_hdbc2, name, NULL,
err_log_path_hist, DB_IN);
          if (rc != SUCCEED)
                    HandleErrorDBC(c_hdbc2);

          sprintf(bcphint, "tablock");
          rc = bcp_control(c_hdbc2, BCPHINTS, (void*)
bcphint);
          if (rc != SUCCEED)
                    HandleErrorDBC(c_hdbc2);

          customer_rows_loaded    = 0;
          history_rows_loaded     = 0;

          CustomerBufInit();

          customer_time_start.time_start = (TimeNow()
/ MILLI);
          history_time_start.time_start = (TimeNow()
/ MILLI);

          for (w_id = (long)aptr->starting_warehouse;
w_id <= aptr->num_warehouses; w_id++)
          {
                    for (d_id = 1; d_id <=
DISTRICT_PER_WAREHOUSE; d_id++)
                    {

                              CustomerBufLoad(d_id,
w_id);

                              // Start parallel
loading threads here...
                              // Start customer table
thread
                              printf("...Loading
customer table for: d_id = %d, w_id = %d\n", d_id,
w_id);

                              hThread[0] =
CreateThread(NULL,

                                        0,


(LPTHREAD_START_ROUTINE) LoadCustomerTable,


&customer_time_start,

                                        0,


&dwThreadID[0]);

                              if (hThread[0] == NULL)
                              {

          printf("Error, failed in creating creating
thread = 0.\n");
                                        exit(-1);
                              }

                              // Start History table
thread
                              printf("...Loading
history table for: d_id = %d, w_id = %d\n", d_id,
w_id);

                              hThread[1] =
CreateThread(NULL,

                                        0,


(LPTHREAD_START_ROUTINE) LoadHistoryTable,


&history_time_start,

                                        0,


&dwThreadID[1]);

                              if (hThread[1] == NULL)
                              {

          printf("Error, failed in creating creating
thread = 1.\n");
                                        exit(-1);
                              }

                              WaitForSingleObject(
hThread[0], INFINITE );
                              WaitForSingleObject(
hThread[1], INFINITE );

                              if
(CloseHandle(hThread[0]) == FALSE)
                              {

          printf("Error, failed in closing customer
thread handle with errno: %d\n", GetLastError());
                              }

                              if
(CloseHandle(hThread[1]) == FALSE)
                              {

          printf("Error, failed in closing history
thread handle with errno: %d\n", GetLastError());
                              }
                    }
          }

          // flush the bulk connection
          rcint = bcp_done(c_hdbc1);
          if (rcint < 0)
                    HandleErrorDBC(c_hdbc1);


          rcint = bcp_done(c_hdbc2);
          if (rcint < 0)
                    HandleErrorDBC(c_hdbc2);


          printf("Finished loading customer
table.\n");

          // if build index after load...
          if ((aptr->build_index == 1) && (aptr-
>index_order == 0))
          {
                    BuildIndex("idxcuscl");
                    // check the number of processors
on this system
                    // if 8 or more processors, then
build index on History.
                    // if less than 8 processors, do
not build the index
                    num_procs = atoi(getenv(
"NUMBER_OF_PROCESSORS" ));
                    if (num_procs >= 8)
                              BuildIndex("idxhiscl");
          }

          // build non-clustered index
          if (aptr->build_index == 1)
                    BuildIndex("idxcusnc");
```


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```
          // Output the NURAND used for the loader
into C_FIRST for C_ID = 1,
          // C_W_ID = 1, and C_D_ID = 1
          sprintf(cmd, "osql -S%s -U%s -P%s -d%s -e -
Q\"update customer set c_first = 'C_LOAD = %d' where
c_id = 1 and c_w_id = 1 and c_d_id = 1\" >
%snurand_load.log",
                                        aptr->server,
                                        aptr->user,
                                        aptr-
>password,
                                        aptr-
>database,

          LOADER_NURAND_C,
                                        aptr-
>log_path);

          system(cmd);

          SQLFreeStmt(c_hstmt1, SQL_DROP);
          SQLDisconnect(c_hdbc1);
          SQLFreeConnect(c_hdbc1);

          SQLFreeStmt(c_hstmt2, SQL_DROP);
          SQLDisconnect(c_hdbc2);
          SQLFreeConnect(c_hdbc2);

    return;
}

//================================================
==================
//
// Function   : CustomerBufInit
//
//================================================
==================
void CustomerBufInit()
{
          long     i;

          for (i=0;i<customers_per_district;i++)
          {
                    customer_buf[i].c_id = 0;
                    customer_buf[i].c_d_id = 0;
                    customer_buf[i].c_w_id = 0;


          strcpy(customer_buf[i].c_first,"");

          strcpy(customer_buf[i].c_middle,"");

          strcpy(customer_buf[i].c_last,"");

          strcpy(customer_buf[i].c_street_1,"");

          strcpy(customer_buf[i].c_street_2,"");

          strcpy(customer_buf[i].c_city,"");

          strcpy(customer_buf[i].c_state,"");

                    strcpy(customer_buf[i].c_zip,"");

          strcpy(customer_buf[i].c_phone,"");

          strcpy(customer_buf[i].c_credit,"");

                    customer_buf[i].c_credit_lim = 0;
                    customer_buf[i].c_discount =
(float) 0;


          strcpy(customer_buf[i].c_balance,"");

                    customer_buf[i].c_ytd_payment =
0;
                    customer_buf[i].c_payment_cnt =
0;
                    customer_buf[i].c_delivery_cnt =
0;


          strcpy(customer_buf[i].c_data,"");


                    customer_buf[i].h_amount = 0;


          strcpy(customer_buf[i].h_data,"");
          }
}

//================================================
==================
//
// Function   : CustomerBufLoad
//
// Fills shared buffer for HISTORY and CUSTOMER
//================================================
==================
void CustomerBufLoad(int d_id, long w_id)
{
          long                                    i;
     CUSTOMER_SORT_STRUCT
c[CUSTOMERS_PER_DISTRICT];

          for (i=0;i<customers_per_district;i++)
          {
                    if (i < 1000)
                              LastName(i,
c[i].c_last);
                    else

          LastName(NURand(255,0,999,LOADER_NURAND_C),
c[i].c_last);


          MakeAlphaStringPadded(8,16,FIRST_NAME_LEN,
c[i].c_first);

                    c[i].c_id = i+1;
          }

          printf("...Loading customer buffer for:
d_id = %d, w_id = %d\n",
                              d_id, w_id);

          for (i=0;i<customers_per_district;i++)
          {
                    customer_buf[i].c_d_id = d_id;
                    customer_buf[i].c_w_id = w_id;
                    customer_buf[i].h_amount = 10.0;
                    customer_buf[i].c_ytd_payment  =
10.0;
                    customer_buf[i].c_payment_cnt  =
1;
                    customer_buf[i].c_delivery_cnt =
0;
                    customer_buf[i].c_id = c[i].c_id;
                    strcpy(customer_buf[i].c_first,
c[i].c_first);
                    strcpy(customer_buf[i].c_last,
c[i].c_last);
                    customer_buf[i].c_middle[0] =
'O';
                    customer_buf[i].c_middle[1] =
'E';

          MakeAddress(customer_buf[i].c_street_1,

customer_buf[i].c_street_2,

customer_buf[i].c_city,

customer_buf[i].c_state,

customer_buf[i].c_zip);
                    MakeNumberString(16, 16,
PHONE_LEN, customer_buf[i].c_phone);

                    if (RandomNumber(1L, 100L) > 10)

          customer_buf[i].c_credit[0] = 'G';
                    else

          customer_buf[i].c_credit[0] = 'B';
                    customer_buf[i].c_credit[1] =
'C';
                    customer_buf[i].c_credit_lim =
50000.0;
                    customer_buf[i].c_discount =
((float) RandomNumber(0L, 5000L)) / 10000.0;


          strcpy(customer_buf[i].c_balance,"-10.0");
                    MakeAlphaStringPadded(300, 500,
C_DATA_LEN, customer_buf[i].c_data);

                    // Generate HISTORY data
                    MakeAlphaStringPadded(12, 24,
H_DATA_LEN, customer_buf[i].h_data);
          }
}

//================================================
==================
```


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```
//
// Function   : LoadCustomerTable
//
//=================================================
==================
void LoadCustomerTable(LOADER_TIME_STRUCT
*customer_time_start)
{
          long                i;
    long        c_id;
    short       c_d_id;
          long                c_w_id;
    char        c_first[FIRST_NAME_LEN+1];
    char        c_middle[MIDDLE_NAME_LEN+1];
    char        c_last[LAST_NAME_LEN+1];
    char        c_street_1[ADDRESS_LEN+1];
    char        c_street_2[ADDRESS_LEN+1];
    char        c_city[ADDRESS_LEN+1];
    char        c_state[STATE_LEN+1];
    char        c_zip[ZIP_LEN+1];
    char        c_phone[PHONE_LEN+1];
    char        c_credit[CREDIT_LEN+1];
    double      c_credit_lim;
    double      c_discount;
          char                c_balance[6];
    double      c_ytd_payment;
    short       c_payment_cnt;
    short       c_delivery_cnt;
    char        c_data[C_DATA_LEN+1];
          char                c_since[C_SINCE_LEN+1];

          RETCODE             rc;

    i = 0;
          rc = bcp_bind(c_hdbc1, (BYTE *) &c_id, 0,
SQL_VARLEN_DATA, NULL, 0, SQLINT4, ++i);
          if (rc != SUCCEED)
                    HandleErrorDBC(c_hdbc1);
    rc = bcp_bind(c_hdbc1, (BYTE *) &c_d_id, 0,
SQL_VARLEN_DATA, NULL, 0, SQLINT2, ++i);
          if (rc != SUCCEED)
                    HandleErrorDBC(c_hdbc1);
          rc = bcp_bind(c_hdbc1, (BYTE *) &c_w_id, 0,
SQL_VARLEN_DATA, NULL, 0, SQLINT4, ++i);
          if (rc != SUCCEED)
                    HandleErrorDBC(c_hdbc1);
    rc = bcp_bind(c_hdbc1, (BYTE *) &c_discount, 0,
SQL_VARLEN_DATA, NULL, 0, SQLFLT8, ++i);
          if (rc != SUCCEED)
                    HandleErrorDBC(c_hdbc1);
    rc = bcp_bind(c_hdbc1, (BYTE *) &c_credit_lim, 0,
SQL_VARLEN_DATA, NULL, 0, SQLFLT8, ++i);
          if (rc != SUCCEED)
                    HandleErrorDBC(c_hdbc1);
    rc = bcp_bind(c_hdbc1, (BYTE *) c_last, 0,
LAST_NAME_LEN, NULL, 0, 0, ++i);
          if (rc != SUCCEED)
                    HandleErrorDBC(c_hdbc1);
          rc = bcp_bind(c_hdbc1, (BYTE *) c_first, 0,
FIRST_NAME_LEN, NULL, 0, 0, ++i);
          if (rc != SUCCEED)
                    HandleErrorDBC(c_hdbc1);
    rc = bcp_bind(c_hdbc1, (BYTE *) c_credit, 0,
CREDIT_LEN, NULL, 0, 0, ++i);
          if (rc != SUCCEED)
                    HandleErrorDBC(c_hdbc1);
    rc = bcp_bind(c_hdbc1, (BYTE *) c_balance, 0, 5,
NULL, 0, SQLCHARACTER, ++i);
          if (rc != SUCCEED)
                    HandleErrorDBC(c_hdbc1);
    rc = bcp_bind(c_hdbc1, (BYTE *) &c_ytd_payment,
0, SQL_VARLEN_DATA, NULL, 0, SQLFLT8, ++i);
          if (rc != SUCCEED)
                    HandleErrorDBC(c_hdbc1);
    rc = bcp_bind(c_hdbc1, (BYTE *) &c_payment_cnt,
0, SQL_VARLEN_DATA, NULL, 0, SQLINT2, ++i);
          if (rc != SUCCEED)
                    HandleErrorDBC(c_hdbc1);
    rc = bcp_bind(c_hdbc1, (BYTE *)
&c_delivery_cnt,0, SQL_VARLEN_DATA, NULL, 0, SQLINT2,
++i);
          if (rc != SUCCEED)
                    HandleErrorDBC(c_hdbc1);
    rc = bcp_bind(c_hdbc1, (BYTE *) c_street_1, 0,
ADDRESS_LEN, NULL, 0, 0, ++i);
          if (rc != SUCCEED)
                    HandleErrorDBC(c_hdbc1);
    rc = bcp_bind(c_hdbc1, (BYTE *) c_street_2, 0,
ADDRESS_LEN, NULL,0,0, ++i);
          if (rc != SUCCEED)
                    HandleErrorDBC(c_hdbc1);
    rc = bcp_bind(c_hdbc1, (BYTE *) c_city, 0,
ADDRESS_LEN, NULL, 0, 0, ++i);
          if (rc != SUCCEED)
                    HandleErrorDBC(c_hdbc1);
    rc = bcp_bind(c_hdbc1, (BYTE *) c_state, 0,
STATE_LEN, NULL, 0, 0, ++i);
          if (rc != SUCCEED)
                    HandleErrorDBC(c_hdbc1);
    rc = bcp_bind(c_hdbc1, (BYTE *) c_zip, 0,
ZIP_LEN, NULL, 0, 0, ++i);
          if (rc != SUCCEED)
                    HandleErrorDBC(c_hdbc1);
    rc = bcp_bind(c_hdbc1, (BYTE *) c_phone, 0,
PHONE_LEN, NULL, 0, 0, ++i);
          if (rc != SUCCEED)
                    HandleErrorDBC(c_hdbc1);
          rc = bcp_bind(c_hdbc1, (BYTE *) &c_since,
0, C_SINCE_LEN, NULL, 0, SQLCHARACTER, ++i);
          if (rc != SUCCEED)
                    HandleErrorDBC(c_hdbc1);
          rc = bcp_bind(c_hdbc1, (BYTE *) c_middle,
0, MIDDLE_NAME_LEN,NULL, 0, 0, ++i);
          if (rc != SUCCEED)
                    HandleErrorDBC(c_hdbc1);
    rc = bcp_bind(c_hdbc1, (BYTE *) c_data, 0,
C_DATA_LEN, NULL, 0, 0, ++i);
          if (rc != SUCCEED)
                    HandleErrorDBC(c_hdbc1);


    for (i = 0; i < customers_per_district; i++)
    {
                    c_id = customer_buf[i].c_id;
                    c_d_id = customer_buf[i].c_d_id;
                    c_w_id = customer_buf[i].c_w_id;
                    strcpy(c_first,
customer_buf[i].c_first);
                    strcpy(c_middle,
customer_buf[i].c_middle);
                    strcpy(c_last,
customer_buf[i].c_last);
                    strcpy(c_street_1,
customer_buf[i].c_street_1);
                    strcpy(c_street_2,
customer_buf[i].c_street_2);
                    strcpy(c_city,
customer_buf[i].c_city);
                    strcpy(c_state,
customer_buf[i].c_state);
                    strcpy(c_zip,
customer_buf[i].c_zip);
                    strcpy(c_phone,
customer_buf[i].c_phone);
                    strcpy(c_credit,
customer_buf[i].c_credit);

                    FormatDate(&c_since);


                    c_credit_lim =
customer_buf[i].c_credit_lim;
                    c_discount =
customer_buf[i].c_discount;
                    strcpy(c_balance,
customer_buf[i].c_balance);
                    c_ytd_payment =
customer_buf[i].c_ytd_payment;
                    c_payment_cnt =
customer_buf[i].c_payment_cnt;
                    c_delivery_cnt =
customer_buf[i].c_delivery_cnt;
                    strcpy(c_data,
customer_buf[i].c_data);

                    // Send data to server
                    rc = bcp_sendrow(c_hdbc1);
                    if (rc != SUCCEED)

          HandleErrorDBC(c_hdbc1);

                    customer_rows_loaded++;
                    CheckForCommit(c_hdbc1, c_hstmt1,
customer_rows_loaded, "customer",
&customer_time_start->time_start);
    }
}

//=================================================
==================
//
// Function   : LoadHistoryTable
//
//=================================================
==================
void LoadHistoryTable(LOADER_TIME_STRUCT
*history_time_start)
{
```


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```
        long                i;
    long        c_id;
    short       c_d_id;
        long                c_w_id;
        double    h_amount;
    char        h_data[H_DATA_LEN+1];
        char                h_date[H_DATE_LEN+1];

        RETCODE             rc;

        i = 0;
    rc = bcp_bind(c_hdbc2, (BYTE *) &c_id, 0,
SQL_VARLEN_DATA, NULL, 0, SQLINT4, ++i);
        if (rc != SUCCEED)
                HandleErrorDBC(c_hdbc2);
    rc = bcp_bind(c_hdbc2, (BYTE *) &c_d_id, 0,
SQL_VARLEN_DATA, NULL, 0, SQLINT2, ++i);
        if (rc != SUCCEED)
                HandleErrorDBC(c_hdbc2);
        rc = bcp_bind(c_hdbc2, (BYTE *) &c_w_id, 0,
SQL_VARLEN_DATA, NULL, 0, SQLINT4, ++i);
        if (rc != SUCCEED)
                HandleErrorDBC(c_hdbc2);
    rc = bcp_bind(c_hdbc2, (BYTE *) &c_d_id, 0,
SQL_VARLEN_DATA, NULL, 0, SQLINT2, ++i);
        if (rc != SUCCEED)
                HandleErrorDBC(c_hdbc2);
        rc = bcp_bind(c_hdbc2, (BYTE *) &c_w_id, 0,
SQL_VARLEN_DATA, NULL, 0, SQLINT4, ++i);
        if (rc != SUCCEED)
                HandleErrorDBC(c_hdbc2);
        rc = bcp_bind(c_hdbc2, (BYTE *) &h_date, 0,
H_DATE_LEN, NULL, 0, SQLCHARACTER, ++i);
        if (rc != SUCCEED)
                HandleErrorDBC(c_hdbc2);
    rc = bcp_bind(c_hdbc2, (BYTE *) &h_amount, 0,
SQL_VARLEN_DATA, NULL, 0, SQLFLT8, ++i);
        if (rc != SUCCEED)
                HandleErrorDBC(c_hdbc2);
    rc = bcp_bind(c_hdbc2, (BYTE *) h_data, 0,
H_DATA_LEN, NULL, 0, 0, ++i);
        if (rc != SUCCEED)
                HandleErrorDBC(c_hdbc2);

    for (i = 0; i < customers_per_district; i++)
    {
                c_id = customer_buf[i].c_id;
                c_d_id = customer_buf[i].c_d_id;
                c_w_id = customer_buf[i].c_w_id;
                h_amount =
customer_buf[i].h_amount;
                strcpy(h_data,
customer_buf[i].h_data);


                FormatDate(&h_date);


                // send to server
                rc = bcp_sendrow(c_hdbc2);
                if (rc != SUCCEED)
                        HandleErrorDBC(c_hdbc2);

                history_rows_loaded++;
                CheckForCommit(c_hdbc2, c_hstmt2,
history_rows_loaded, "history", &history_time_start-
>time_start);
    }
}

//================================================
=========-===============
//
// Function   : LoadOrders
//
//================================================
=========================
void LoadOrders()
{
        LOADER_TIME_STRUCT      orders_time_start;
        LOADER_TIME_STRUCT
new_order_time_start;
        LOADER_TIME_STRUCT
order_line_time_start;
        long
        w_id;
    short                       d_id;
        DWORD
        dwThreadID[MAX_ORDER_THREADS];
        HANDLE
        hThread[MAX_ORDER_THREADS];
        char                            name[20];
        RETCODE
        rc;
        char
        bcphint[128];
        char
        err_log_path_ord[256];
        char
        err_log_path_nord[256];
        char
        err_log_path_ordl[256];

        // seed with unique number
        seed(6);

        printf("Loading orders...\n");

        // if build index before load...
        if ((aptr->build_index == 1) && (aptr-
>index_order == 1))
        {
                        BuildIndex("idxordcl");
                        BuildIndex("idxnodcl");
                        BuildIndex("idxodlcl");
        }

        // initialize bulk copy
        sprintf(name, "%s..%s", aptr->database,
"orders");

        rc = bcp_init(o_hdbc1, name, NULL,
"logs\\orders.err", DB_IN);
        strcpy(err_log_path_ord,aptr->log_path);
        strcat(err_log_path_ord,"orders.err");
        rc = bcp_init(o_hdbc1, name, NULL,
err_log_path_ord, DB_IN);
        if (rc != SUCCEED)
                HandleErrorDBC(o_hdbc1);

        if ((aptr->build_index == 1) && (aptr-
>index_order == 1))
        {
                sprintf(bcphint, "tablock, order
(o_w_id, o_d_id, o_id), ROWS_PER_BATCH = %u", (aptr-
>num_warehouses * 30000));
                rc = bcp_control(o_hdbc1,
BCPHINTS, (void*) bcphint);
                if (rc != SUCCEED)

        HandleErrorDBC(o_hdbc1);
        }

        sprintf(name, "%s..%s", aptr->database,
"new_order");

        rc = bcp_init(o_hdbc2, name, NULL,
"logs\\neword.err", DB_IN);
        strcpy(err_log_path_nord,aptr->log_path);
        strcat(err_log_path_nord,"neword.err");
        rc = bcp_init(o_hdbc2, name, NULL,
err_log_path_nord, DB_IN);
        if (rc != SUCCEED)
                HandleErrorDBC(o_hdbc2);

        if ((aptr->build_index == 1) && (aptr-
>index_order == 1))
        {
                sprintf(bcphint, "tablock, order
(no_w_id, no_d_id, no_o_id), ROWS_PER_BATCH = %u",
(aptr->num_warehouses * 9000));
                rc = bcp_control(o_hdbc2,
BCPHINTS, (void*) bcphint);
                if (rc != SUCCEED)

        HandleErrorDBC(o_hdbc2);
        }

        sprintf(name, "%s..%s", aptr->database,
"order_line");

        rc = bcp_init(o_hdbc3, name, NULL,
"logs\\ordline.err", DB_IN);
        strcpy(err_log_path_ordl,aptr->log_path);
        strcat(err_log_path_ordl,"ordline.err");
        rc = bcp_init(o_hdbc3, name, NULL,
err_log_path_ordl, DB_IN);
        if (rc != SUCCEED)
                HandleErrorDBC(o_hdbc3);

    if ((aptr->build_index == 1) && (aptr-
>index_order == 1))
        {
                sprintf(bcphint, "tablock, order
(ol_w_id, ol_d_id, ol_o_id, ol_number),
```


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```
ROWS_PER_BATCH = %u", (aptr->num_warehouses *
300000));
                    rc = bcp_control(o_hdbc3,
BCPHINTS, (void*) bcphint);
                    if (rc != SUCCEED)

          HandleErrorDBC(o_hdbc3);
          }

          orders_rows_loaded      = 0;
          new_order_rows_loaded   = 0;
          order_line_rows_loaded  = 0;

          OrdersBufInit();

          orders_time_start.time_start = (TimeNow() /
MILLI);
          new_order_time_start.time_start =
(TimeNow() / MILLI);
          order_line_time_start.time_start =
(TimeNow() / MILLI);

          for (w_id = (long)aptr->starting_warehouse;
w_id <= aptr->num_warehouses; w_id++)
          {
                    for (d_id = 1; d_id <=
DISTRICT_PER_WAREHOUSE; d_id++)
                    {

                              OrdersBufLoad(d_id,
w_id);

                              // start parallel
loading threads here...
                              // start Orders table
thread
                              printf("...Loading
Order Table for: d_id = %d, w_id = %d\n", d_id,
w_id);

                              hThread[0] =
CreateThread(NULL,

                                        0,


(LPTHREAD_START_ROUTINE) LoadOrdersTable,


&orders_time_start,

                                        0,


&dwThreadID[0]);

                              if (hThread[0] == NULL)
                              {

          printf("Error, failed in creating creating
thread = 0.\n");
                                        exit(-1);
                              }

                              // start NewOrder table
thread
                              printf("...Loading New-
Order Table for: d_id = %d, w_id = %d\n", d_id,
w_id);

                              hThread[1] =
CreateThread(NULL,

                                        0,


(LPTHREAD_START_ROUTINE) LoadNewOrderTable,


&new_order_time_start,

                                        0,


&dwThreadID[1]);

                              if (hThread[1] == NULL)
                              {

          printf("Error, failed in creating creating
thread = 1.\n");
                                        exit(-1);
                              }

                              // start Order-Line
table thread
                              printf("...Loading
Order-Line Table for: d_id = %d, w_id = %d\n", d_id,
w_id);

                              hThread[2] =
CreateThread(NULL,

                                        0,


(LPTHREAD_START_ROUTINE) LoadOrderLineTable,


&order_line_time_start,

                                        0,


&dwThreadID[2]);

                              if (hThread[2] == NULL)
                              {

          printf("Error, failed in creating creating
thread = 2.\n");
                                        exit(-1);
                              }

                              WaitForSingleObject(
hThread[0], INFINITE );
                              WaitForSingleObject(
hThread[1], INFINITE );
                              WaitForSingleObject(
hThread[2], INFINITE );

                              if
(CloseHandle(hThread[0]) == FALSE)
                              {

          printf("Error, failed in closing Orders
thread handle with errno: %d\n", GetLastError());
                              }

                              if
(CloseHandle(hThread[1]) == FALSE)
                              {

          printf("Error, failed in closing NewOrder
thread handle with errno: %d\n", GetLastError());
                              }

                              if
(CloseHandle(hThread[2]) == FALSE)
                              {

          printf("Error, failed in closing OrderLine
thread handle with errno: %d\n", GetLastError());
                              }
                    }
          }

          printf("Finished loading orders.\n");

    return;
}

//=================================================
====================
//
// Function   : OrdersBufInit
//
// Clears shared buffer for ORDERS, NEWORDER, and
ORDERLINE
//
//=================================================
====================
void OrdersBufInit()
{
          int     i;
          int                 j;

          for (i=0;i<orders_per_district;i++)
          {
                    orders_buf[i].o_id = 0;
                    orders_buf[i].o_d_id = 0;
                    orders_buf[i].o_w_id = 0;
                    orders_buf[i].o_c_id = 0;
                    orders_buf[i].o_carrier_id = 0;
                    orders_buf[i].o_ol_cnt = 0;
                    orders_buf[i].o_all_local = 0;

                    for (j=0;j<=14;j++)
                    {
```


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```
          orders_buf[i].o_ol[j].ol = 0;

          orders_buf[i].o_ol[j].ol_i_id = 0;

          orders_buf[i].o_ol[j].ol_supply_w_id = 0;

          orders_buf[i].o_ol[j].ol_quantity = 0;

          orders_buf[i].o_ol[j].ol_amount = 0;

          strcpy(orders_buf[i].o_ol[j].ol_dist_info,"
");
                    }
          }
}

//=================================================
====================
//
// Function   : OrdersBufLoad
//
// Fills shared buffer for ORDERS, NEWORDER, and
ORDERLINE
//
//=================================================
====================
void OrdersBufLoad(short d_id, long w_id)
{

          int     cust[ORDERS_PER_DISTRICT+1];
          long    o_id;
          long      ol;

          printf("...Loading Order Buffer for: d_id =
%d, w_id = %d\n",
                              d_id, w_id);

          GetPermutation(cust, orders_per_district);

          for
(o_id=0;o_id<orders_per_district;o_id++)
          {
                    // Generate ORDER and NEW-ORDER
data
                    orders_buf[o_id].o_d_id = d_id;
                    orders_buf[o_id].o_w_id = w_id;
                    orders_buf[o_id].o_id = o_id+1;
                    orders_buf[o_id].o_c_id =
cust[o_id+1];
                    orders_buf[o_id].o_ol_cnt =
(short)RandomNumber(5L, 15L);

                    if (o_id < first_new_order)
                    {

          orders_buf[o_id].o_carrier_id =
(short)RandomNumber(1L, 10L);

          orders_buf[o_id].o_all_local  = 1;
                    }
                    else
                    {

          orders_buf[o_id].o_carrier_id = 0;

          orders_buf[o_id].o_all_local  = 1;
                    }

                    for (ol=0;
ol<orders_buf[o_id].o_ol_cnt; ol++)
                    {


          orders_buf[o_id].o_ol[ol].ol = ol+1;

          orders_buf[o_id].o_ol[ol].ol_i_id =
RandomNumber(1L, max_items);

          orders_buf[o_id].o_ol[ol].ol_supply_w_id =
w_id;

          orders_buf[o_id].o_ol[ol].ol_quantity = 5;
                              MakeAlphaString(24, 24,
OL_DIST_INFO_LEN,
&orders_buf[o_id].o_ol[ol].ol_dist_info);

                              // Generate ORDER-LINE
data
                              if (o_id <
first_new_order)
                              {

          orders_buf[o_id].o_ol[ol].ol_amount = 0;
                                                  // Added to
insure ol_delivery_d set properly during load

          FormatDate(&orders_buf[o_id].o_ol[ol].ol_de
livery_d);

                              }
                              else
                              {

          orders_buf[o_id].o_ol[ol].ol_amount =
RandomNumber(1,999999)/100.0;
                                                  // Added to
insure ol_delivery_d set properly during load

                                                  // odbc
datetime format

          strcpy(orders_buf[o_id].o_ol[ol].ol_deliver
y_d,"1899-12-31 00:00:00.000");
                              }
                    }
          }
}

//=================================================
====================
//
// Function   : LoadOrdersTable
//
//=================================================
====================

void LoadOrdersTable(LOADER_TIME_STRUCT
*orders_time_start)
{
          int         i;
    long        o_id;
          short     o_d_id;
          long                o_w_id;
    long        o_c_id;
    short       o_carrier_id;
    short       o_ol_cnt;
    short       o_all_local;
          char
          o_entry_d[O_ENTRY_D_LEN+1];
          RETCODE             rc;
          DBINT               rcint;

          // bind ORDER data
    i = 0;
          rc = bcp_bind(o_hdbc1, (BYTE *) &o_id, 0,
SQL_VARLEN_DATA, NULL, 0, SQLINT4, ++i);
          if (rc != SUCCEED)
                    HandleErrorDBC(o_hdbc1);
    rc = bcp_bind(o_hdbc1, (BYTE *) &o_d_id, 0,
SQL_VARLEN_DATA, NULL, 0, SQLINT2, ++i);
          if (rc != SUCCEED)
                    HandleErrorDBC(o_hdbc1);
          rc = bcp_bind(o_hdbc1, (BYTE *) &o_w_id, 0,
SQL_VARLEN_DATA, NULL, 0, SQLINT4, ++i);
          if (rc != SUCCEED)
                    HandleErrorDBC(o_hdbc1);
    rc = bcp_bind(o_hdbc1, (BYTE *) &o_c_id, 0,
SQL_VARLEN_DATA, NULL, 0, SQLINT4, ++i);
          if (rc != SUCCEED)
                    HandleErrorDBC(o_hdbc1);
    rc = bcp_bind(o_hdbc1, (BYTE *) &o_carrier_id, 0,
SQL_VARLEN_DATA, NULL, 0, SQLINT2, ++i);
          if (rc != SUCCEED)
                    HandleErrorDBC(o_hdbc1);
    rc = bcp_bind(o_hdbc1, (BYTE *) &o_ol_cnt, 0,
SQL_VARLEN_DATA, NULL, 0, SQLINT2, ++i);
          if (rc != SUCCEED)
                    HandleErrorDBC(o_hdbc1);
    rc = bcp_bind(o_hdbc1, (BYTE *) &o_all_local, 0,
SQL_VARLEN_DATA, NULL, 0, SQLINT2, ++i);
          if (rc != SUCCEED)
                    HandleErrorDBC(o_hdbc1);
          rc = bcp_bind(o_hdbc1, (BYTE *) &o_entry_d,
0, O_ENTRY_D_LEN, NULL, 0, SQLCHARACTER, ++i);
          if (rc != SUCCEED)
                    HandleErrorDBC(o_hdbc1);

    for (i = 0; i < orders_per_district; i++)
    {
                    o_id         =
orders_buf[i].o_id;
                    o_d_id       =
orders_buf[i].o_d_id;
                    o_w_id       =
orders_buf[i].o_w_id;
                    o_c_id       =
orders_buf[i].o_c_id;
                    o_carrier_id =
orders_buf[i].o_carrier_id;
```


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```
                    o_ol_cnt     =
orders_buf[i].o_ol_cnt;
                    o_all_local  =
orders_buf[i].o_all_local;

                    FormatDate(&o_entry_d);

                    // send data to server
                    rc = bcp_sendrow(o_hdbc1);
                    if (rc != SUCCEED)


          HandleErrorDBC(o_hdbc1);

                    orders_rows_loaded++;
                    CheckForCommit(o_hdbc1, o_hstmt1,
orders_rows_loaded, "orders", &orders_time_start-
>time_start);
     }

          if ((o_w_id == aptr->num_warehouses) &&
(o_d_id == 10))
          {
                    rcint = bcp_done(o_hdbc1);

                    if (rcint < 0)

          HandleErrorDBC(o_hdbc1);

                    SQLFreeStmt(o_hstmt1, SQL_DROP);
                    SQLDisconnect(o_hdbc1);
                    SQLFreeConnect(o_hdbc1);

                    // if build index after load...
                    if ((aptr->build_index == 1) &&
(aptr->index_order == 0))
                              BuildIndex("idxordcl");

                    // build non-clustered index
                    if (aptr->build_index == 1)
                              BuildIndex("idxordnc");
          }
}

//================================================
==================
//
// Function   : LoadNewOrderTable
//
//================================================
==================
void LoadNewOrderTable(LOADER_TIME_STRUCT
*new_order_time_start)
{
          long                i;
     long        o_id;
     short       o_d_id;
          long                o_w_id;
          RETCODE             rc;
          DBINT               rcint;

          // Bind NEW-ORDER data
          i = 0;
     rc = bcp_bind(o_hdbc2, (BYTE *) &o_id, 0,
SQL_VARLEN_DATA, NULL, 0, SQLINT4, ++i);
          if (rc != SUCCEED)
                    HandleErrorDBC(o_hdbc2);
     rc = bcp_bind(o_hdbc2, (BYTE *) &o_d_id, 0,
SQL_VARLEN_DATA, NULL, 0, SQLINT2, ++i);
          if (rc != SUCCEED)
                    HandleErrorDBC(o_hdbc2);
          rc = bcp_bind(o_hdbc2, (BYTE *) &o_w_id, 0,
SQL_VARLEN_DATA, NULL, 0, SQLINT4, ++i);
          if (rc != SUCCEED)
                    HandleErrorDBC(o_hdbc2);

          for (i = first_new_order; i <
last_new_order; i++)
          {
                    o_id    = orders_buf[i].o_id;
                    o_d_id  = orders_buf[i].o_d_id;
                    o_w_id  = orders_buf[i].o_w_id;

                    rc = bcp_sendrow(o_hdbc2);
                    if (rc != SUCCEED)


          HandleErrorDBC(o_hdbc2);

                    new_order_rows_loaded++;

                    CheckForCommit_Big(o_hdbc2,
o_hstmt2, new_order_rows_loaded, "new_order",
&new_order_time_start->time_start);
          }

          if ((o_w_id == aptr->num_warehouses) &&
(o_d_id == 10))
          {
                    rcint = bcp_done(o_hdbc2);

                    if (rcint < 0)

          HandleErrorDBC(o_hdbc2);

                    SQLFreeStmt(o_hstmt2, SQL_DROP);
                    SQLDisconnect(o_hdbc2);
                    SQLFreeConnect(o_hdbc2);

                    // if build index after load...
                    if ((aptr->build_index == 1) &&
(aptr->index_order == 0))
                              BuildIndex("idxnodcl");
          }
}

//================================================
==================
//
// Function   : LoadOrderLineTable
//
//================================================
==================
void LoadOrderLineTable(LOADER_TIME_STRUCT
*order_line_time_start)
{
          long                i;
          long                j;
     long        o_id;
          short     o_d_id;
          long                o_w_id;
          double              ol;
          long      ol_i_id;
          long                ol_supply_w_id;
     short       ol_quantity;
     double      ol_amount;
     char        ol_dist_info[DIST_INFO_LEN+1];
          char
          ol_delivery_d[OL_DELIVERY_D_LEN+1];
          RETCODE             rc;
          DBINT               rcint;

          // bind ORDER-LINE data
          i = 0;
     rc = bcp_bind(o_hdbc3, (BYTE *) &o_id, 0,
SQL_VARLEN_DATA, NULL, 0, SQLINT4, ++i);
          if (rc != SUCCEED)
                    HandleErrorDBC(o_hdbc3);
     rc = bcp_bind(o_hdbc3, (BYTE *) &o_d_id, 0,
SQL_VARLEN_DATA, NULL, 0, SQLINT2, ++i);
          if (rc != SUCCEED)
                    HandleErrorDBC(o_hdbc3);
          rc = bcp_bind(o_hdbc3, (BYTE *) &o_w_id, 0,
SQL_VARLEN_DATA, NULL, 0, SQLINT4, ++i);
          if (rc != SUCCEED)
                    HandleErrorDBC(o_hdbc3);
          rc = bcp_bind(o_hdbc3, (BYTE *) &ol, 0,
SQL_VARLEN_DATA, NULL, 0, SQLFLT8, ++i);
          if (rc != SUCCEED)
                    HandleErrorDBC(o_hdbc3);
     rc = bcp_bind(o_hdbc3, (BYTE *) &ol_i_id, 0,
SQL_VARLEN_DATA, NULL, 0, SQLINT4, ++i);
          if (rc != SUCCEED)
                    HandleErrorDBC(o_hdbc3);
          rc = bcp_bind(o_hdbc3, (BYTE *)
&ol_delivery_d, 0, OL_DELIVERY_D_LEN, NULL, 0,
SQLCHARACTER, ++i);
          if (rc != SUCCEED)
                    HandleErrorDBC(o_hdbc3);
     rc = bcp_bind(o_hdbc3, (BYTE *) &ol_amount, 0,
SQL_VARLEN_DATA, NULL, 0, SQLFLT8, ++i);
          if (rc != SUCCEED)
                    HandleErrorDBC(o_hdbc3);
          rc = bcp_bind(o_hdbc3, (BYTE *)
&ol_supply_w_id, 0, SQL_VARLEN_DATA, NULL, 0,
SQLINT4, ++i);
          if (rc != SUCCEED)
                    HandleErrorDBC(o_hdbc3);
     rc = bcp_bind(o_hdbc3, (BYTE *) &ol_quantity, 0,
SQL_VARLEN_DATA, NULL, 0, SQLINT2, ++i);
          if (rc != SUCCEED)
                    HandleErrorDBC(o_hdbc3);
     rc = bcp_bind(o_hdbc3, (BYTE *) ol_dist_info, 0,
DIST_INFO_LEN, NULL, 0, 0, ++i);
          if (rc != SUCCEED)
                    HandleErrorDBC(o_hdbc3);

          for (i = 0; i < orders_per_district; i++)
     {
```


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```
                    o_id    = orders_buf[i].o_id;
                    o_d_id  = orders_buf[i].o_d_id;
                    o_w_id  = orders_buf[i].o_w_id;

                    for (j=0; j <
orders_buf[i].o_ol_cnt; j++)
                    {
                              ol             =
orders_buf[i].o_ol[j].ol;
                              ol_i_id        =
orders_buf[i].o_ol[j].ol_i_id;
                              ol_supply_w_id =
orders_buf[i].o_ol[j].ol_supply_w_id;
                              ol_quantity    =
orders_buf[i].o_ol[j].ol_quantity;
                              ol_amount      =
orders_buf[i].o_ol[j].ol_amount;


          strcpy(ol_delivery_d,orders_buf[i].o_ol[j].
ol_delivery_d);


          strcpy(ol_dist_info,orders_buf[i].o_ol[j].o
l_dist_info);

                              rc =
bcp_sendrow(o_hdbc3);
                              if (rc != SUCCEED)


          HandleErrorDBC(o_hdbc3);


          order_line_rows_loaded++;


          CheckForCommit_Big(o_hdbc3, o_hstmt3,
order_line_rows_loaded, "order_line",
&order_line_time_start->time_start);
                    }
          }

          if ((o_w_id == aptr->num_warehouses) &&
(o_d_id == 10))
          {
                    rcint = bcp_done(o_hdbc3);

                    if (rcint < 0)

          HandleErrorDBC(o_hdbc3);

                    SQLFreeStmt(o_hstmt3, SQL_DROP);
                    SQLDisconnect(o_hdbc3);
                    SQLFreeConnect(o_hdbc3);

                    // if build index after load...
                    if ((aptr->build_index == 1) &&
(aptr->index_order == 0))
                              BuildIndex("idxodlcl");
          }
}
```

```
//=================================================
====================
//
// Function   : GetPermutation
//
//=================================================
====================
void GetPermutation(int perm[], int n)
{
          int i, r, t;

          for (i=1;i<=n;i++)
                    perm[i] = i;

          for (i=1;i<=n;i++)
          {
                    r = RandomNumber(i,n);
                    t = perm[i];
                    perm[i] = perm[r];
                    perm[r] = t;
          }
}

//=================================================
====================
//
// Function   : CheckForCommit
//
//=================================================
====================
void CheckForCommit(HDBC hdbc,

          HSTMT hstmt,

          long rows_loaded,

          char *table_name,                         long
*time_start)
{

    long  time_end, time_diff;

    if ( !(rows_loaded % aptr->batch) )
    {
                    time_end = (TimeNow() / MILLI);
                    time_diff = time_end -
*time_start;

                    printf("-> Loaded %ld rows into
%s in %ld sec - Total = %d (%.2f rps)\n",
                              aptr->batch,
                              table_name,
                                        time_diff,
                              rows_loaded,
                                        (float) aptr-
>batch / (time_diff ? time_diff : 1L));

                    *time_start = time_end;
    }

    return;
}
```

```
//=================================================
====================
//
// Function   : CheckForCommit_Big
//
//=================================================
====================
void CheckForCommit_Big(HDBC hdbc,

          HSTMT hstmt,

          double rows_loaded,

          char *table_name,                         long
*time_start)
{

    long  time_end, time_diff;

    if ( !(fmod(rows_loaded,aptr->batch) ) )
    {
                    time_end = (TimeNow() / MILLI);
                    time_diff = time_end -
*time_start;

                    printf("-> Loaded %ld rows into
%s in %ld sec - Total = %.0f (%.2f rps)\n",
                              aptr->batch,
                              table_name,
                                        time_diff,
                              rows_loaded,
                                        (float) aptr-
>batch / (time_diff ? time_diff : 1L));

                    *time_start = time_end;
    }

    return;
}

//=================================================
====================
//
// Function   : OpenConnections
//
//=================================================
====================
void OpenConnections()
{

          RETCODE         rc;

          char
          szDriverString[300];
          char
          szDriverStringOut[1024];
          SQLSMALLINT
          cbDriverStringOut;
```


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```
          SQLAllocHandle(SQL_HANDLE_ENV,
SQL_NULL_HANDLE, &henv );

          SQLSetEnvAttr(henv, SQL_ATTR_ODBC_VERSION,
(void*)SQL_OV_ODBC3, 0 );

          SQLAllocHandle(SQL_HANDLE_DBC, henv ,
&i_hdbc1);
          SQLAllocHandle(SQL_HANDLE_DBC, henv ,
&w_hdbc1);
          SQLAllocHandle(SQL_HANDLE_DBC, henv ,
&c_hdbc1);
          SQLAllocHandle(SQL_HANDLE_DBC, henv ,
&c_hdbc2);
          SQLAllocHandle(SQL_HANDLE_DBC, henv ,
&o_hdbc1);
          SQLAllocHandle(SQL_HANDLE_DBC, henv ,
&o_hdbc2);
          SQLAllocHandle(SQL_HANDLE_DBC, henv ,
&o_hdbc3);

          SQLSetConnectAttr(i_hdbc1, SQL_COPT_SS_BCP,
(void *)SQL_BCP_ON, SQL_IS_INTEGER );
          SQLSetConnectAttr(w_hdbc1, SQL_COPT_SS_BCP,
(void *)SQL_BCP_ON, SQL_IS_INTEGER );
          SQLSetConnectAttr(c_hdbc1, SQL_COPT_SS_BCP,
(void *)SQL_BCP_ON, SQL_IS_INTEGER );
          SQLSetConnectAttr(c_hdbc2, SQL_COPT_SS_BCP,
(void *)SQL_BCP_ON, SQL_IS_INTEGER );
          SQLSetConnectAttr(o_hdbc1, SQL_COPT_SS_BCP,
(void *)SQL_BCP_ON, SQL_IS_INTEGER );
          SQLSetConnectAttr(o_hdbc2, SQL_COPT_SS_BCP,
(void *)SQL_BCP_ON, SQL_IS_INTEGER );
          SQLSetConnectAttr(o_hdbc3, SQL_COPT_SS_BCP,
(void *)SQL_BCP_ON, SQL_IS_INTEGER );

          // Open connections to SQL Server
          // Connection 1
          sprintf( szDriverString , "DRIVER={SQL
Server};SERVER=%s;UID=%s;PWD=%s;DATABASE=%s" ,

            aptr->server,

            aptr->user,

            aptr->password,

            aptr->database );

          rc = SQLSetConnectOption (i_hdbc1,
SQL_PACKET_SIZE, aptr->pack_size);
          if (rc != SUCCEED)
                    HandleErrorDBC(i_hdbc1);

          rc = SQLDriverConnect ( i_hdbc1,

NULL,

          (SQLCHAR*)&szDriverString[0] ,

          SQL_NTS,

          (SQLCHAR*)&szDriverStringOut[0],

          sizeof(szDriverStringOut),

          &cbDriverStringOut,

          SQL_DRIVER_NOPROMPT );
          if ( (rc != SUCCEED) &&
                    (rc != SQL_SUCCESS_WITH_INFO) )
          {
                    HandleErrorDBC(i_hdbc1);
                    printf("TPC-C Loader
aborted!\n");
                    exit(9);
          }

          // Connection 2
          sprintf( szDriverString , "DRIVER={SQL
Server};SERVER=%s;UID=%s;PWD=%s;DATABASE=%s" ,

            aptr->server,

            aptr->user,

            aptr->password,

            aptr->database );

          rc = SQLSetConnectOption (w_hdbc1,
SQL_PACKET_SIZE, aptr->pack_size);

          if (rc != SUCCEED)
                    HandleErrorDBC(w_hdbc1);

          rc = SQLDriverConnect ( w_hdbc1,

                    NULL,

                    (SQLCHAR*)&szDriverString[0] ,

                    SQL_NTS,

                    (SQLCHAR*)&szDriverStringOut[0],

                    sizeof(szDriverStringOut),

                    &cbDriverStringOut,

                    SQL_DRIVER_NOPROMPT );

          if ( (rc != SUCCEED) &&
                    (rc != SQL_SUCCESS_WITH_INFO) )
          {
                    HandleErrorDBC(w_hdbc1);
                    printf("TPC-C Loader
aborted!\n");
                    exit(9);
          }

          // Connection 3
          sprintf( szDriverString , "DRIVER={SQL
Server};SERVER=%s;UID=%s;PWD=%s;DATABASE=%s" ,

            aptr->server,

            aptr->user,

            aptr->password,

            aptr->database );

          rc = SQLSetConnectOption (c_hdbc1,
SQL_PACKET_SIZE, aptr->pack_size);
          if (rc != SUCCEED)
                    HandleErrorDBC(c_hdbc1);

          rc = SQLDriverConnect ( c_hdbc1,

                    NULL,

                    (SQLCHAR*)&szDriverString[0] ,

                    SQL_NTS,

                    (SQLCHAR*)&szDriverStringOut[0],

                    sizeof(szDriverStringOut),

                    &cbDriverStringOut,

                    SQL_DRIVER_NOPROMPT );
          if ( (rc != SUCCEED) &&
                    (rc != SQL_SUCCESS_WITH_INFO) )
          {
                    HandleErrorDBC(c_hdbc1);
                    printf("TPC-C Loader
aborted!\n");
                    exit(9);
          }

          // Connection 4
          sprintf( szDriverString , "DRIVER={SQL
Server};SERVER=%s;UID=%s;PWD=%s;DATABASE=%s" ,

            aptr->server,

            aptr->user,

            aptr->password,

            aptr->database );

          rc = SQLSetConnectOption (c_hdbc2,
SQL_PACKET_SIZE, aptr->pack_size);
          if (rc != SUCCEED)
                    HandleErrorDBC(c_hdbc2);

          rc = SQLDriverConnect ( c_hdbc2,

                    NULL,

                    (SQLCHAR*)&szDriverString[0] ,

                    SQL_NTS,

                    (SQLCHAR*)&szDriverStringOut[0],
```


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```
                    sizeof(szDriverStringOut),

                    &cbDriverStringOut,

                    SQL_DRIVER_NOPROMPT );
          if ( (rc != SUCCEED) &&
                     (rc != SQL_SUCCESS_WITH_INFO) )
          {
                    HandleErrorDBC(c_hdbc2);
                    printf("TPC-C Loader
aborted!\n");
                    exit(9);
          }

          // Connection 5
          sprintf( szDriverString , "DRIVER={SQL
Server};SERVER=%s;UID=%s;PWD=%s;DATABASE=%s" ,

            aptr->server,

            aptr->user,

            aptr->password,

            aptr->database );

          rc = SQLSetConnectOption (o_hdbc1,
SQL_PACKET_SIZE, aptr->pack_size);
          if (rc != SUCCEED)
                    HandleErrorDBC(o_hdbc1);

          rc = SQLDriverConnect ( o_hdbc1,

                    NULL,

                    (SQLCHAR*)&szDriverString[0] ,

                    SQL_NTS,

                    (SQLCHAR*)&szDriverStringOut[0],

                    sizeof(szDriverStringOut),

                    &cbDriverStringOut,

                    SQL_DRIVER_NOPROMPT );
          if ( (rc != SUCCEED) &&
                     (rc != SQL_SUCCESS_WITH_INFO) )
          {
                    HandleErrorDBC(o_hdbc1);
                    printf("TPC-C Loader
aborted!\n");
                    exit(9);
          }

          // Connection 6
          sprintf( szDriverString , "DRIVER={SQL
Server};SERVER=%s;UID=%s;PWD=%s;DATABASE=%s" ,

            aptr->server,

            aptr->user,

            aptr->password,

            aptr->database );

          rc = SQLSetConnectOption (o_hdbc2,
SQL_PACKET_SIZE, aptr->pack_size);
          if (rc != SUCCEED)
                    HandleErrorDBC(o_hdbc2);

          rc = SQLDriverConnect ( o_hdbc2,

                    NULL,

                    (SQLCHAR*)&szDriverString[0] ,

                    SQL_NTS,

                    (SQLCHAR*)&szDriverStringOut[0],

                    sizeof(szDriverStringOut),

                    &cbDriverStringOut,

                    SQL_DRIVER_NOPROMPT );
          if ( (rc != SUCCEED) &&
                     (rc != SQL_SUCCESS_WITH_INFO) )
          {
                    HandleErrorDBC(o_hdbc2);
                    printf("TPC-C Loader
aborted!\n");
                    exit(9);
          }

          // Connection 7
          sprintf( szDriverString , "DRIVER={SQL
Server};SERVER=%s;UID=%s;PWD=%s;DATABASE=%s" ,

            aptr->server,

            aptr->user,

            aptr->password,

            aptr->database );

          rc = SQLSetConnectOption (o_hdbc3,
SQL_PACKET_SIZE, aptr->pack_size);
          if (rc != SUCCEED)
                    HandleErrorDBC(o_hdbc3);

          rc = SQLDriverConnect ( o_hdbc3,

                    NULL,

                    (SQLCHAR*)&szDriverString[0] ,

                    SQL_NTS,

                    (SQLCHAR*)&szDriverStringOut[0],

                    sizeof(szDriverStringOut),

                    &cbDriverStringOut,

                    SQL_DRIVER_NOPROMPT );
          if ( (rc != SUCCEED) &&
                     (rc != SQL_SUCCESS_WITH_INFO) )
          {
                    HandleErrorDBC(o_hdbc3);
                    printf("TPC-C Loader
aborted!\n");
                    exit(9);
          }
}

//================================================
==================
//
// Function name: BuildIndex
//
//================================================
==================
void BuildIndex(char          *index_script)
{
          char      cmd[256];

          printf("Starting index creation:
%s\n",index_script);

          sprintf(cmd, "osql -S%s -U%s -P%s -e -
i%s\\%s.sql > %s%s.log",
                                        aptr->server,
                                        aptr->user,
                                        aptr-
>password,
                                        aptr-
>index_script_path,
                                        index_script,
                                        aptr-
>log_path,

          index_script);

          system(cmd);

          printf("Finished index creation:
%s\n",index_script);
}

//================================================
==================
//
// Function name: HandleErrorDBC
//
//================================================
==================
void HandleErrorDBC (SQLHDBC  hdbc1)
{

          SQLCHAR             SqlState[6],
Msg[SQL_MAX_MESSAGE_LENGTH];
          SQLLEN              NativeError;
          SQLSMALLINT i, MsgLen;
          SQLRETURN   rc2;
```


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```
        char                timebuf[128];
        char                datebuf[128];
        char                err_log_path[256];
        FILE                *fp1;

        i = 1;
        while (( rc2 = SQLGetDiagRec(SQL_HANDLE_DBC
, hdbc1, i, SqlState , &NativeError,
                                        Msg,
sizeof(Msg) , &MsgLen )) != SQL_NO_DATA )
        {
                sprintf( szLastError , "%s" ,
Msg );

                _strtime(timebuf);
                _strdate(datebuf);

                printf( "[%s : %s]
%s\n==>SQLState: %s\n" , datebuf, timebuf,
szLastError, SqlState);

                strcpy(err_log_path,aptr-
>log_path);

        strcat(err_log_path,"tpccldr.err");
                fp1 = fopen(err_log_path,"a+");
                if (fp1 == NULL)
                        printf("ERROR:  Unable
to open errorlog file.\n");
                else
                {
                        fprintf(fp1, "[%s : %s]
%s\nSQLState: %s\n" , datebuf, timebuf, szLastError,
SqlState);
                        fclose(fp1);
                }

                i++;
        }
}

//=================================================
==================
//
// Function   : HandleErrorSTMT
//
//=================================================
==================
void HandleErrorSTMT (HSTMT  hstmt1)
{
        SQLCHAR             SqlState[6],
Msg[SQL_MAX_MESSAGE_LENGTH];
        SQLLEN              NativeError;
        SQLSMALLINT i, MsgLen;
        SQLRETURN   rc2;
        char                timebuf[128];
        char                datebuf[128];
        char                err_log_path[256];
        FILE                *fp1;

        i = 1;
        while (( rc2 =
SQLGetDiagRec(SQL_HANDLE_STMT , hstmt1, i, SqlState ,
&NativeError,
                                        Msg,
sizeof(Msg) , &MsgLen )) != SQL_NO_DATA )
        {
                if (total_db_errors >=
MAX_SQL_ERRORS)
                {
                        printf(">>>>> Maximum
SQL errors of %d exceeded.  Terminating
TPCCLDR.<<<<<\n",total_db_errors);
                        exit(9);
                }
                total_db_errors++;

                sprintf( szLastError , "%s" ,
Msg );

                _strtime(timebuf);
                _strdate(datebuf);

                printf( "[%s : %s] %s\nSQLState:
%s\n" , datebuf, timebuf, szLastError, SqlState);

                strcpy(err_log_path,aptr-
>log_path);

        strcat(err_log_path,"tpccldr.err");
                fp1 = fopen(err_log_path,"a+");
                if (fp1 == NULL)
                        printf("ERROR:  Unable
to open errorlog file.\n");
                else
                {
                        fprintf(fp1, "[%s : %s]
%s\nSQLState: %s\n" , datebuf, timebuf, szLastError,
SqlState);
                        fclose(fp1);
                }

                i++;
        }
}

//=================================================
==================
//
// Function   : FormatDate
//
//=================================================
==================
void FormatDate ( char* szTimeCOutput )
{
        struct tm when;
        time_t now;

        time( &now );
        when  = *localtime( &now );

        mktime( &when );

        // odbc datetime format
        strftime( szTimeCOutput , 30 , "%Y-%m-%d
%H:%M:%S.000", &when );

        return;
}
```

# VerifyTpccLoad.sql

```
-------------------------------------------------------
-------------
--
--
--  File:   VerifyTPCCLoad.SQL
--
--          Microsoft TPC-C Benchmark Kit Ver. 4.62
--
--          Copyright Microsoft, 2005
--
--
--
-------------------------------------------------------
-------------
SET NOCOUNT ON
PRINT   ' '
SELECT  CONVERT(CHAR(30), GETDATE(), 21)
PRINT   ' '

USE       tpcc
GO

IF  EXISTS  (SELECT name
             FROM   sysobjects
             WHERE  name    = 'TPCC_INFO' AND
                    type    = 'U')
    DROP TABLE TPCC_INFO
GO
PRINT   'WAREHOUSE TABLE'
SELECT  count_big(*)
FROM    warehouse
GO

PRINT   'DISTRICT TABLE = (10 * No of warehouses)'
SELECT  count_big(*)
FROM    district
GO

PRINT   'ITEM TABLE = 100,000'
SELECT  count_big(*)
FROM    item
GO

PRINT   'CUSTOMER TABLE = (30,000 * No of
warehouses)'
SELECT  count_big(*)
FROM    customer
GO

PRINT   'ORDERS TABLE = (30,000 * No of warehouses)'
SELECT  count_big(*)
FROM    orders
```


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```
GO

PRINT   'HISTORY TABLE = (30,000 * No of warehouses)'
SELECT  count_big(*)
FROM    history
GO

PRINT   'STOCK TABLE = (100,000 * No of warehouses)'
SELECT  count_big(*)
FROM    stock
GO

PRINT   'ORDER_LINE TABLE = (300,000 * No of
warehouses + some change)'
SELECT  count_big(*)
FROM    order_line
GO

PRINT   'NEW_ORDER TABLE = (9000 * No of warehouses)'
SELECT  count_big(*)
FROM    new_order
GO

CREATE TABLE TPCC_INFO
    (   INFO_DATE                   datetime,
        NUM_WAREHOUSE               bigint,
        WAREHOUSE_TARGET            bigint,
        NUM_DISTRICT                bigint,
        DISTRICT_TARGET             bigint,
        NUM_ITEM                    bigint,
        ITEM_TARGET                 bigint,
        NUM_CUSTOMER                bigint,
        CUSTOMER_TARGET             bigint,
        NUM_ORDERS                  bigint,
        ORDERS_TARGET               bigint,
        ORDERS_TARGET_LOW           bigint,
        ORDERS_TARGET_HIGH          bigint,
        NUM_ORDER_LINE              bigint,
        ORDER_LINE_TARGET           bigint,
        ORDER_LINE_TARGET_LOW       bigint,
        ORDER_LINE_TARGET_HIGH      bigint,
        NUM_NEW_ORDER               bigint,
        NEW_ORDER_TARGET            bigint,
        NEW_ORDER_TARGET_LOW        bigint,
        NEW_ORDER_TARGET_HIGH       bigint,
        NUM_HISTORY                 bigint,
        HISTORY_TARGET              bigint,
        NUM_STOCK                   bigint,
        STOCK_TARGET                bigint)
GO

DECLARE @NUM_WAREHOUSE              bigint,
        @WAREHOUSE_TARGET           bigint,
        @NUM_DISTRICT               bigint,
        @DISTRICT_TARGET            bigint,
        @NUM_ITEM                   bigint,
        @ITEM_TARGET                bigint,
        @NUM_CUSTOMER               bigint,
        @CUSTOMER_TARGET            bigint,
        @NUM_ORDERS                 bigint,
        @ORDERS_TARGET              bigint,
        @ORDERS_TARGET_LOW          bigint,
        @ORDERS_TARGET_HIGH         bigint,
        @NUM_ORDER_LINE             bigint,
        @ORDER_LINE_TARGET          bigint,
        @ORDER_LINE_TARGET_LOW      bigint,
        @ORDER_LINE_TARGET_HIGH     bigint,
        @NUM_NEW_ORDER              bigint,
        @NEW_ORDER_TARGET           bigint,
        @NEW_ORDER_TARGET_LOW       bigint,
        @NEW_ORDER_TARGET_HIGH      bigint,
        @NUM_HISTORY                bigint,
        @HISTORY_TARGET             bigint,
        @NUM_STOCK                  bigint,
        @STOCK_TARGET               bigint

-- set the local variables prior to inserting them
into the TPCC_INFO table
SELECT  @NUM_WAREHOUSE      = COUNT_BIG(*)
FROM    warehouse

SELECT  @NUM_DISTRICT       = COUNT_BIG(*)
FROM    district

SELECT  @NUM_ITEM           = COUNT_BIG(*)
FROM    item

SELECT  @NUM_CUSTOMER       = COUNT_BIG(*)
FROM    customer

SELECT  @NUM_ORDERS         = COUNT_BIG(*)
FROM    orders

SELECT  @NUM_ORDER_LINE     = COUNT_BIG(*)
FROM    order_line

SELECT  @NUM_NEW_ORDER      = COUNT_BIG(*)
FROM    new_order

SELECT  @NUM_HISTORY        = COUNT_BIG(*)
FROM    history

SELECT  @NUM_STOCK          = COUNT_BIG(*)
FROM    stock

--- now calculate and set the target values
SELECT  @WAREHOUSE_TARGET       = @NUM_WAREHOUSE,
        @DISTRICT_TARGET        = @NUM_WAREHOUSE *
10,
        @ITEM_TARGET            = 100000,
        @CUSTOMER_TARGET        = @NUM_WAREHOUSE *
30000,
        @ORDERS_TARGET          = @NUM_WAREHOUSE *
30000,
        @ORDERS_TARGET_LOW      = @ORDERS_TARGET -
FLOOR(@ORDERS_TARGET * .01),
        @ORDERS_TARGET_HIGH     = @ORDERS_TARGET +
FLOOR(@ORDERS_TARGET * .01),
        @ORDER_LINE_TARGET      = @NUM_WAREHOUSE *
300000,
        @ORDER_LINE_TARGET_LOW  = @ORDER_LINE_TARGET
- FLOOR(@ORDER_LINE_TARGET * .01),
        @ORDER_LINE_TARGET_HIGH = @ORDER_LINE_TARGET
+ FLOOR(@ORDER_LINE_TARGET * .01),
        @NEW_ORDER_TARGET       = @NUM_WAREHOUSE *
9000,
        @NEW_ORDER_TARGET_LOW   = @NEW_ORDER_TARGET -
FLOOR(@NEW_ORDER_TARGET * .01),
        @NEW_ORDER_TARGET_HIGH  = @NEW_ORDER_TARGET +
FLOOR(@NEW_ORDER_TARGET * .01),
        @HISTORY_TARGET         = @NUM_WAREHOUSE *
30000,
        @STOCK_TARGET           = @NUM_WAREHOUSE *
100000

--- insert the values into TPCC_INFO
INSERT INTO TPCC_INFO VALUES    (GETDATE(),
                                 @NUM_WAREHOUSE,
                                 @WAREHOUSE_TARGET,
                                 @NUM_DISTRICT,
                                 @DISTRICT_TARGET,
                                 @NUM_ITEM,
                                 @ITEM_TARGET,
                                 @NUM_CUSTOMER,
                                 @CUSTOMER_TARGET,
                                 @NUM_ORDERS,
                                 @ORDERS_TARGET,
                                 @ORDERS_TARGET_LOW,
                                 @ORDERS_TARGET_HIGH,
                                 @NUM_ORDER_LINE,
                                 @ORDER_LINE_TARGET,

@ORDER_LINE_TARGET_LOW,

@ORDER_LINE_TARGET_HIGH,
                                 @NUM_NEW_ORDER,
                                 @NEW_ORDER_TARGET,

@NEW_ORDER_TARGET_LOW,

@NEW_ORDER_TARGET_HIGH,
                                 @NUM_HISTORY,
                                 @HISTORY_TARGET,
                                 @NUM_STOCK,
                                 @STOCK_TARGET)
GO

--- output the row counts from the build
PRINT   ''
PRINT   ''
PRINT   '---------------------------'
PRINT   '|    WAREHOUSE TABLE      |'
PRINT   '---------------------------'
SELECT  TOP 1
        CONVERT(CHAR(30),INFO_DATE,21)  AS  'Date',
        NUM_WAREHOUSE                   AS
'Warehouse Rows',
        WAREHOUSE_TARGET                AS
          'Warehouse Target',
        CASE WHEN (NUM_WAREHOUSE = WAREHOUSE_TARGET)
             THEN 'OK!'
             ELSE 'ERROR!!!'
        END                             AS
'Warehouse Message'
FROM    TPCC_INFO
GO

PRINT   ''
PRINT   ''
```


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```
PRINT   '---------------------------'
PRINT   '|    DISTRICT TABLE       |'
PRINT   '---------------------------'
SELECT  TOP 1
        CONVERT(CHAR(30),INFO_DATE,21)  AS  'Date',
        NUM_DISTRICT                    AS  'District
Rows',
        DISTRICT_TARGET                 AS
          'District Target',
        CASE WHEN (NUM_DISTRICT = DISTRICT_TARGET)
             THEN 'OK!'
             ELSE 'ERROR!!!'
        END                             AS  'District
Message'
FROM    TPCC_INFO
GO

PRINT   ''
PRINT   ''
PRINT   '---------------------------'
PRINT   '|      ITEM TABLE         |'
PRINT   '---------------------------'
SELECT  TOP 1
        CONVERT(CHAR(30),INFO_DATE,21)  AS  'Date',
        NUM_ITEM                        AS  'Item
Rows',
        ITEM_TARGET                     AS
          'Item Target',
        CASE WHEN (NUM_ITEM = ITEM_TARGET)
             THEN 'OK!'
             ELSE 'ERROR!!!'
        END                             AS  'Item
Message'
FROM    TPCC_INFO
GO

PRINT   ''
PRINT   ''
PRINT   '---------------------------'
PRINT   '|    CUSTOMER TABLE       |'
PRINT   '---------------------------'
SELECT  TOP 1
        CONVERT(CHAR(30),INFO_DATE,21)  AS  'Date',
        NUM_CUSTOMER                    AS  'Customer
Rows',
        CUSTOMER_TARGET                 AS
          'Customer Target',
        CASE WHEN (NUM_CUSTOMER = CUSTOMER_TARGET)
             THEN 'OK!'
             ELSE 'ERROR!!!'
        END                             AS  'Customer
Message'
FROM    TPCC_INFO
GO

PRINT   ''
PRINT   ''
PRINT   '---------------------------'
PRINT   '|     ORDERS TABLE        |'
PRINT   '---------------------------'
SELECT  TOP 1
        CONVERT(CHAR(30),INFO_DATE,21)  AS  'Date',
        NUM_ORDERS                      AS  'Orders
Rows',
        ORDERS_TARGET                   AS
          'Orders Target',
        CASE WHEN (NUM_ORDERS = ORDERS_TARGET)
             THEN 'OK!'
             WHEN (NUM_ORDERS BETWEEN
ORDERS_TARGET_LOW AND ORDERS_TARGET_HIGH)
             THEN 'OK! (within 1%)'
             ELSE 'ERROR!!!'
        END                             AS  'Orders
Message'
FROM    TPCC_INFO
GO

PRINT   ''
PRINT   ''
PRINT   '---------------------------'
PRINT   '|   ORDER LINE TABLE      |'
PRINT   '---------------------------'
SELECT  TOP 1
        CONVERT(CHAR(30),INFO_DATE,21)  AS  'Date',
        NUM_ORDER_LINE                  AS  'Order
Line Rows',
        ORDER_LINE_TARGET               AS
          'Order Line Target',
        CASE WHEN (NUM_ORDER_LINE =
ORDER_LINE_TARGET)
             THEN 'OK!'
             WHEN (NUM_ORDER_LINE BETWEEN
ORDER_LINE_TARGET_LOW AND ORDER_LINE_TARGET_HIGH)
             THEN 'OK! (within 1%)'
             ELSE 'ERROR!!!'
        END                             AS  'Orders
Message'
FROM    TPCC_INFO
GO

PRINT   ''
PRINT   ''
PRINT   '---------------------------'
PRINT   '|    NEW ORDER TABLE      |'
PRINT   '---------------------------'
SELECT  TOP 1
        CONVERT(CHAR(30),INFO_DATE,21)  AS  'Date',
        NUM_NEW_ORDER                   AS  'New
Order Rows',
        NEW_ORDER_TARGET                AS
          'New Order Target',
        CASE WHEN (NUM_NEW_ORDER = NEW_ORDER_TARGET)
             THEN 'OK!'
             WHEN (NUM_NEW_ORDER BETWEEN
NEW_ORDER_TARGET_LOW AND NEW_ORDER_TARGET_HIGH)
             THEN 'OK! (within 1%)'
             ELSE 'ERROR!!!'
        END                             AS  'New
Order Message'
FROM    TPCC_INFO
GO

PRINT   ''
PRINT   ''
PRINT   '---------------------------'
PRINT   '|     HISTORY TABLE       |'
PRINT   '---------------------------'
SELECT  TOP 1
        CONVERT(CHAR(30),INFO_DATE,21)  AS  'Date',
        NUM_HISTORY                     AS  'History
Rows',
        HISTORY_TARGET                  AS
          'History Target',
        CASE WHEN (NUM_HISTORY = HISTORY_TARGET)
             THEN 'OK!'
             ELSE 'ERROR!!!'
        END                             AS  'New
Order Message'
FROM    TPCC_INFO
GO

PRINT   ''
PRINT   ''
PRINT   '---------------------------'
PRINT   '|      STOCK TABLE        |'
PRINT   '---------------------------'
SELECT  TOP 1
        CONVERT(CHAR(30),INFO_DATE,21)  AS  'Date',
        NUM_STOCK                       AS  'Stock
Rows',
        STOCK_TARGET                    AS
          'Stock Target',
        CASE WHEN (NUM_STOCK = STOCK_TARGET)
             THEN 'OK!'
             ELSE 'ERROR!!!'
        END                             AS  'Stock
Message'
FROM    TPCC_INFO
GO

------------------
-- Check Indexes
------------------
USE tpcc
GO

PRINT   ''
PRINT   ''
PRINT   '---------------------------'
PRINT   '|      TPC-C INDEXES       |'
PRINT   '---------------------------'
EXEC    sp_helpindex    warehouse
EXEC    sp_helpindex    district
EXEC    sp_helpindex    item
EXEC    sp_helpindex    customer
EXEC    sp_helpindex    orders
EXEC    sp_helpindex    order_line
EXEC    sp_helpindex    new_order
EXEC    sp_helpindex    history
EXEC    sp_helpindex    stock
GO
```


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# version.sql

```
------------------------------------------------------
-------------
--
--
--  File:   VERSION.SQL
--
--          Microsoft TPC-C Benchmark Kit Ver. 4.62
--
--          Copyright Microsoft, 2005
--
--
--
--          Extracts current version of SQL Server
--
--
--
------------------------------------------------------
-------------
USE master
GO

SELECT  CONVERT(char(20),
SERVERPROPERTY('ProductVersion')),
        CONVERT(char(20),
SERVERPROPERTY('ProductLevel')),
        CONVERT(char(29), SERVERPROPERTY('Edition'))
GO

SELECT  CONVERT(char(30), GETDATE(), 21)
GO
```


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# *Appendix C: Tunable Parameters*

## Microsoft SQL Server 2005 Startup Parameters

```
sqlservr.exe -c -x -T3428 -T3502 -T677 -T8011 -T8012
-T8018 -T8019 -T661 -T8710

Where:
-c        Start SQL Server independently of the
Windows NT Service Control Manager
-x        Disables the keeping of CPU time and cache-
hit ratio statistics
-T3428  enable fast recovery
-T3502  Prints a message to the SQL Server log at the
start and end of each checkpoint
-T8011  Disable diagnostics for resource monitor
-T8012  Disable ring buffer for scheduler
-T8018  Disable exceptions rung buffer
-T8019  Disable stack collection for exception ring
buffer
-T661   Disable ghost writer
-T677   Disable AM debug info
-T8710  Disable HP checks.
File locations:
sqlserver.exe                C:\Program
Files\Microsoft SQL Server\MSSQL.1\MSSQL\BINN
ERRORLOG            C:\Program Files\Microsoft SQL
Server\MSSQL.1\MSSQL\LOG
```

## Boot.ini Parameters

```
[boot loader]
timeout=10
default=multi(0)disk(0)rdisk(0)partition(1)\WINDOWS
[operating systems]
multi(0)disk(0)rdisk(0)partition(1)\WINDOWS="Windows
Server 2003, Enterprise" /fastdetect /PAE
multi(0)disk(0)rdisk(0)partition(1)\WINDOWS="Windows
Server 2003, Enterprise (/NoExecute=OptIn)"
/fastdetect /PAE /NoExecute=OptIn
```

## Microsoft SQL Server 2005 Configuration Parameters

```
1> 2>  name                                minimum
maximum     config_value run_value
 ----------------------------------- ----------- ----
------- ------------ -----------
 Ad Hoc Distributed Queries                     0
1           0           0
 affinity I/O mask                  -2147483648
2147483647           0           0
 affinity mask                      -2147483648
2147483647          15          15
 Agent XPs                                      0
1           0           0
 allow updates                                  0
1           0           0
 awe enabled                                    0
1           1           1
 blocked process threshold                      0
86400           0           0
 c2 audit mode                                  0
1           0           0
 clr enabled                                    0
1           0           0
 cost threshold for parallelism                 0
32767           5           5
 cross db ownership chaining                    0
1           0           0
 cursor threshold                              -1
2147483647          -1          -1
 Database Mail XPs                              0
1           0           0
 default full-text language                     0
2147483647        1033        1033
 default language                               0
9999           0           0
 default trace enabled                          0
1           1           1
 disallow results from triggers                 0
1           0           0
 fill factor (%)                                0
100           0           0
 ft crawl bandwidth (max)                       0
32767         100         100
 ft crawl bandwidth (min)                       0
32767           0           0
 ft notify bandwidth (max)                      0
32767         100         100
 ft notify bandwidth (min)                      0
32767           0           0
 in-doubt xact resolution                       0
2           0           0
 index create memory (KB)                     704
2147483647         704         704
 lightweight pooling                            0
1           1           1
 locks                                       5000
2147483647           0           0
 max degree of parallelism                      0
64           1           1
 max full-text crawl range                      0
256           4           4
 max server memory (MB)                        16
2147483647   2147483647  2147483647
 max text repl size (B)                         0
2147483647        65536       65536
 max worker threads                           128
32767         400         400
 media retention                                0
365           0           0
 min memory per query (KB)                    512
2147483647         512         512
 min server memory (MB)                         0
2147483647           0           8
 nested triggers                                0
1           1           1
 network packet size (B)                      512
32767        2048        2048
 Ole Automation Procedures                      0
1           0           0
 open objects                                   0
2147483647           0           0
 PH timeout (s)                                 1
3600          60          60
 precompute rank                                0
1           0           0
 priority boost                                 0
1           1           1
 query governor cost limit                      0
2147483647           0           0
 query wait (s)                                -1
2147483647          -1          -1
 recovery interval (min)                        0
32767        32767       32767
 remote access                                  0
1           1           1
 remote admin connections                       0
1           0           0
 remote login timeout (s)                       0
2147483647          20          20
 remote proc trans                              0
1           0           0
 remote query timeout (s)                       0
2147483647         600         600
 Replication XPs                                0
1           0           0
 scan for startup procs                         0
1           0           0
 server trigger recursion                       0
1           1           1
 set working set size                           0
1           0           0
 show advanced options                          0
1           1           1
 SMO and DMO XPs                                0
1           1           1
 SQL Mail XPs                                   0
1           0           0
```


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```
 transform noise words                          0
1           0           0
 two digit year cutoff                       1753
9999         2049        2049
 user connections                               0
32767           0           0
 user options                                   0
32767           0           0
 Web Assistant Procedures                       0
1           0           0
 xp_cmdshell                                    0
1           0           0

1> 2> 3>
```

# Microsoft SQL Server 2005 Torn Page Detection Status

```
1> 2>  OptionName
CurrentSetting
 ---------------------------------- --------------
 torn page detection                off

1> 2> 3>
```

# Benchcraft Profile

```
Profile:  bl25p_8676_4bl
File Path:          C:\Program
Files\BenchCraft\bl25p_8676_4bl.xml
Version:  5

          Number of Engines: 12

                    Name: bl9a
                    Description:
                    Directory: c:\blog\bl9a.log
                    Machine: n65
                    Parameter Set: 1.001_best
                    Index: 700000000
                    Seed: 4678
                    Configured Users: 7230
                    Pipe Name: DRIVER44265281
                    Connect Rate: 10000
                    Start Rate: 10000
                    Max. Concurrency: 7100
                    Concurrency Rate: 10000
                    CLIENT_NURAND: 25
                    CPU: 0
                    Additional Options:

                    Name: bl9b
                    Description:
                    Directory: c:\blog\bl9b.log
                    Machine: n65
                    Parameter Set: 1.001_best
                    Index: 100000000
                    Seed: 4678
                    Configured Users: 7230
                    Pipe Name: DRIVER2356275906
                    Connect Rate: 10000
                    Start Rate: 10000
                    Max. Concurrency: 7100
                    Concurrency Rate: 10000
                    CLIENT_NURAND: 25
                    CPU: 0
                    Additional Options:

                    Name: bl9c
                    Description:
                    Directory: c:\blog\bl9c.log
                    Machine: n66
                    Parameter Set: 1.001_best
                    Index: 200000000
                    Seed: 4678
                    Configured Users: 7230
                    Pipe Name: DRIVER3356313875
                    Connect Rate: 10000
                    Start Rate: 10000
                    Max. Concurrency: 7100
                    Concurrency Rate: 10000
                    CLIENT_NURAND: 25
                    CPU: 0
                    Additional Options:

                    Name: bl10a
                    Description:
                    Directory: c:\blog\bl10a.log
                    Machine: n66
                    Parameter Set: 1.001_best
                    Index: 300000000
                    Seed: 4678
                    Configured Users: 7230
                    Pipe Name: DRIVER4356346296
                    Connect Rate: 10000
                    Start Rate: 10000
                    Max. Concurrency: 7100
                    Concurrency Rate: 10000
                    CLIENT_NURAND: 25
                    CPU: 0
                    Additional Options:

                    Name: bl10b
                    Description:
                    Directory: c:\blog\bl10b.log
                    Machine: n67
                    Parameter Set: 1.001_best
                    Index: 400000000
                    Seed: 4678
                    Configured Users: 7230
                    Pipe Name: DRIVER5356379093
                    Connect Rate: 10000
                    Start Rate: 10000
                    Max. Concurrency: 7100
                    Concurrency Rate: 10000
                    CLIENT_NURAND: 25
                    CPU: 0
                    Additional Options:

                    Name: bl10c
                    Description:
                    Directory: c:\blog\bl10c.log
                    Machine: n67
                    Parameter Set: 1.001_best
                    Index: 500000000
                    Seed: 4678
                    Configured Users: 7230
                    Pipe Name: DRIVER658015
                    Connect Rate: 10000
                    Start Rate: 10000
                    Max. Concurrency: 7100
                    Concurrency Rate: 10000
                    CLIENT_NURAND: 25
                    CPU: 1
                    Additional Options:

                    Name: bl11a
                    Description:
                    Directory: c:\blog\bl11a.log
                    Machine: n68
                    Parameter Set: 1.001_best
                    Index: 600000000
                    Seed: 4678
                    Configured Users: 7230
                    Pipe Name: DRIVER7103390
                    Connect Rate: 10000
                    Start Rate: 10000
                    Max. Concurrency: 7100
                    Concurrency Rate: 10000
                    CLIENT_NURAND: 25
                    CPU: 1
                    Additional Options:

                    Name: bl11b
                    Description:
                    Directory: c:\blog\bl11b.log
                    Machine: n68
                    Parameter Set: 1.001_best
                    Index: 1200000000
                    Seed: 4678
                    Configured Users: 7230
                    Pipe Name: DRIVER8140828
                    Connect Rate: 10000
                    Start Rate: 10000
                    Max. Concurrency: 7100
                    Concurrency Rate: 10000
                    CLIENT_NURAND: 25
                    CPU: 1
                    Additional Options:

                    Name: bl11c
                    Description:
                    Directory: c:\blog\bl11c.log
                    Machine: n40
                    Parameter Set: 1.001_best
                    Index: 800000000
                    Seed: 4678
                    Configured Users: 7230
                    Pipe Name: DRIVER9185546
```


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```
Connect Rate: 10000
Start Rate: 10000
Max. Concurrency: 7100
Concurrency Rate: 10000
CLIENT_NURAND: 25
CPU: 1
Additional Options:

Name: bl12a
Description:
Directory: c:\blog\bl12a.log
Machine: n40
Parameter Set: 1.001_best
Index: 900000000
Seed: 4678
Configured Users: 7230
Pipe Name: DRIVER10221546
Connect Rate: 10000
Start Rate: 10000
Max. Concurrency: 7100
Concurrency Rate: 10000
CLIENT_NURAND: 25
CPU: 1
Additional Options:

Name: bl12b
Description:
Directory: c:\blog\bl12b.log
Machine: n43
Parameter Set: 1.001_best
Index: 1000000000
Seed: 4678
Configured Users: 7230
Pipe Name: DRIVER11707683593
Connect Rate: 10000
Start Rate: 10000
Max. Concurrency: 7100
Concurrency Rate: 10000
CLIENT_NURAND: 25
CPU: 0
Additional Options:

Name: bl12c
Description:
Directory: c:\blog\bl12c.log
Machine: n43
Parameter Set: 1.001_best
Index: 1100000000
Seed: 4678
Configured Users: 7230
Pipe Name: DRIVER12707730843
Connect Rate: 10000
Start Rate: 10000
Max. Concurrency: 7100
Concurrency Rate: 10000
CLIENT_NURAND: 25
CPU: 1
Additional Options:

Number of User groups: 12

Driver Engine: bl9a
IIS Server: br9
SQL Server: bl25p
Database: tpcc
User: sa
Protocol: HTML
w_id Range: 1 - 723
w_id Min Warehouse: 1
w_id Max Warehouse: 8676
Scale: Normal
User Count: 7230
District id: 1
Scale Down: No

Driver Engine: bl9b
IIS Server: br9
SQL Server: bl25p
Database: tpcc
User: sa
Protocol: HTML
w_id Range: 724 - 1446
w_id Min Warehouse: 1
w_id Max Warehouse: 8676
Scale: Normal
User Count: 7230
District id: 1
Scale Down: No

Driver Engine: bl9c
IIS Server: br9
SQL Server: bl25p
Database: tpcc
User: sa
Protocol: HTML
w_id Range: 1447 - 2169
w_id Min Warehouse: 1
w_id Max Warehouse: 8676
Scale: Normal
User Count: 7230
District id: 1
Scale Down: No

Driver Engine: bl10a
IIS Server: br10
SQL Server: bl25p
Database: tpcc
User: sa
Protocol: HTML
w_id Range: 2170 - 2892
w_id Min Warehouse: 1
w_id Max Warehouse: 8676
Scale: Normal
User Count: 7230
District id: 1
Scale Down: No

Driver Engine: bl10b
IIS Server: br10
SQL Server: bl25p
Database: tpcc
User: sa
Protocol: HTML
w_id Range: 2893 - 3615
w_id Min Warehouse: 1
w_id Max Warehouse: 8676
Scale: Normal
User Count: 7230
District id: 1
Scale Down: No

Driver Engine: bl10c
IIS Server: br10
SQL Server: bl25p
Database: tpcc
User: sa
Protocol: HTML
w_id Range: 3616 - 4338
w_id Min Warehouse: 1
w_id Max Warehouse: 8676
Scale: Normal
User Count: 7230
District id: 1
Scale Down: No

Driver Engine: bl11a
IIS Server: br11
SQL Server: bl25p
Database: tpcc
User: sa
Protocol: HTML
w_id Range: 4339 - 5061
w_id Min Warehouse: 1
w_id Max Warehouse: 8676
Scale: Normal
User Count: 7230
District id: 1
Scale Down: No

Driver Engine: bl11b
IIS Server: br11
SQL Server: bl25p
Database: tpcc
User: sa
Protocol: HTML
w_id Range: 5062 - 5784
w_id Min Warehouse: 1
w_id Max Warehouse: 8676
Scale: Normal
User Count: 7230
District id: 1
Scale Down: No

Driver Engine: bl11c
IIS Server: br11
SQL Server: bl25p
Database: tpcc
User: sa
Protocol: HTML
w_id Range: 5785 - 6507
w_id Min Warehouse: 1
w_id Max Warehouse: 8676
Scale: Normal
User Count: 7230
District id: 1
Scale Down: No

Driver Engine: bl12a
IIS Server: br12
```


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```
                SQL Server: bl25p
                Database: tpcc
                User: sa
                Protocol: HTML
                w_id Range: 6508 - 7230
                w_id Min Warehouse: 1
                w_id Max Warehouse: 8676
                Scale: Normal
                User Count: 7230
                District id: 1
                Scale Down: No

                Driver Engine: bl12b
                IIS Server: br12
                SQL Server: bl25p
                Database: tpcc
                User: sa
                Protocol: HTML
                w_id Range: 7231 - 7953
                w_id Min Warehouse: 1
                w_id Max Warehouse: 8676
                Scale: Normal
                User Count: 7230
                District id: 1
                Scale Down: No

                Driver Engine: bl12c
                IIS Server: br12
                SQL Server: bl25p
                Database: tpcc
                User: sa
                Protocol: HTML
                w_id Range: 7954 - 8676
                w_id Min Warehouse: 1
                w_id Max Warehouse: 8676
                Scale: Normal
                User Count: 7230
                District id: 1
                Scale Down: No

        Number of Parameter Sets: 65


                ~Default
                Default Parameter Set
                                Txn     Think
Key     RT      RT      Menu
                                Weight  Time
Time    Delay   Fence   Delay
                New Order         10.00
12.05       18.01      0.10      5.00      0.10
                Payment           10.00
12.05        3.01      0.10      5.00      0.10
                Delivery           1.00
5.05         2.01      0.10      5.00      0.10
                Stock Level        1.00
5.05         2.01      0.10     20.00      0.10
                Order Status       1.00
10.05        2.01      0.10      5.00      0.10

                Tuned Distribution
```

```
                                Txn     Think
Key     RT      RT      Menu
                                Weight  Time
Time    Delay   Fence   Delay
                New Order         44.75
12.05       18.01      0.10      5.00      0.10
                Payment           43.10
12.05        3.01      0.10      5.00      0.10
                Delivery           4.05
5.05         2.01      0.10      5.00      0.10
                Stock Level        4.05
5.05         2.01      0.10     20.00      0.10
                Order Status       4.05
10.05        2.01      0.10      5.00      0.10

                No Think

                                Txn     Think
Key     RT      RT      Menu
                                Weight  Time
Time    Delay   Fence   Delay
                New Order         10.00
0.00         0.00      0.00      5.00      0.00
                Payment           10.00
0.00         0.00      0.00      5.00      0.00
                Delivery           1.00
0.00         0.00      0.00      5.00      0.00
                Stock Level        1.00
0.00         0.00      0.00     20.00      0.00
                Order Status       1.00
0.00         0.00      0.00      5.00      0.00

                95%

                                Txn     Think
Key     RT      RT      Menu
                                Weight  Time
Time    Delay   Fence   Delay
                New Order         44.75
13.00       18.01      0.10      5.00      0.10
                Payment           43.10
13.00        3.01      0.10      5.00      0.10
                Delivery           4.05
6.00         2.01      0.10      5.00      0.10
                Stock Level        4.05
6.00         2.01      0.10     20.00      0.10
                Order Status       4.05
11.00        2.01      0.10      5.00      0.10

                90%

                                Txn     Think
Key     RT      RT      Menu
                                Weight  Time
Time    Delay   Fence   Delay
                New Order         44.83
16.00       18.01      0.10      5.00      0.10
                Payment           43.05
16.00        3.01      0.10      5.00      0.10
                Delivery           4.04
9.00         2.01      0.10      5.00      0.10
                Stock Level        4.04
9.00         2.01      0.10     20.00      0.10
```

```
                Order Status       4.04
14.00        2.01      0.10      5.00      0.10

                3.0

                                Txn     Think
Key     RT      RT      Menu
                                Weight  Time
Time    Delay   Fence   Delay
                New Order         44.75
36.15        0.00      0.10      5.00      0.10
                Payment           43.10
36.15        0.00      0.10      5.00      0.10
                Delivery           4.05
15.15        0.00      0.10      5.00      0.10
                Stock Level        4.05
15.15        0.00      0.10     20.00      0.10
                Order Status       4.05
30.15        0.00      0.10      5.00      0.10

                4.0
                4.0 tt
                                Txn     Think
Key     RT      RT      Menu
                                Weight  Time
Time    Delay   Fence   Delay
                New Order         44.75
48.20       18.01      0.10      5.00      0.10
                Payment           43.10
48.20        3.01      0.10      5.00      0.10
                Delivery           4.05
20.20        2.01      0.10      5.00      0.10
                Stock Level        4.05
20.20        2.01      0.10     20.00      0.10
                Order Status       4.05
40.20        2.01      0.10      5.00      0.10

                3.8
                3.8 tt
                                Txn     Think
Key     RT      RT      Menu
                                Weight  Time
Time    Delay   Fence   Delay
                New Order         44.75
45.70       18.01      0.10      5.00      0.10
                Payment           43.10
45.70        3.01      0.10      5.00      0.10
                Delivery           4.05
19.10        2.01      0.10      5.00      0.10
                Stock Level        4.05
19.10        2.01      0.10     20.00      0.10
                Order Status       4.05
38.10        2.01      0.10      5.00      0.10

                3.6
                3.6 tt
                                Txn     Think
Key     RT      RT      Menu
                                Weight  Time
Time    Delay   Fence   Delay
                New Order         44.75
43.30       18.01      0.10      5.00      0.10
```


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```
                    Payment           43.10
43.30        3.01       0.10      5.00       0.10
                    Delivery           4.05
18.10        2.01       0.10      5.00       0.10
                    Stock Level        4.05
18.10        2.01       0.10     20.00       0.10
                    Order Status       4.05
36.18        2.01       0.10      5.00       0.10


                    3.4
                    3.4 tt
                                        Txn     Think
Key     RT      RT      Menu
                                     Weight  Time
Time    Delay   Fence   Delay
                    New Order         44.75
40.90       18.01       0.10      5.00       0.10
                    Payment           43.10
40.90        3.01       0.10      5.00       0.10
                    Delivery           4.05
17.10        2.01       0.10      5.00       0.10
                    Stock Level        4.05
17.10        2.01       0.10     20.00       0.10
                    Order Status       4.05
17.10        2.01       0.10      5.00       0.10


                    3.2
                    3.2 tt
                                        Txn     Think
Key     RT      RT      Menu
                                     Weight  Time
Time    Delay   Fence   Delay
                    New Order         44.75
38.50       18.01       0.10      5.00       0.10
                    Payment           43.10
38.50        3.01       0.10      5.00       0.10
                    Delivery           4.05
16.10        2.01       0.10      5.00       0.10
                    Stock Level        4.05
16.10        2.01       0.10     20.00       0.10
                    Order Status       4.05
32.10        2.01       0.10      5.00       0.10


                    2.8
                    2.8 tt
                                        Txn     Think
Key     RT      RT      Menu
                                     Weight  Time
Time    Delay   Fence   Delay
                    New Order         44.75
33.74       18.01       0.10      5.00       0.10
                    Payment           43.10
33.74        3.01       0.10      5.00       0.10
                    Delivery           4.05
14.14        2.01       0.10      5.00       0.10
                    Stock Level        4.05
14.14        2.01       0.10     20.00       0.10
                    Order Status       4.05
28.14        2.01       0.10      5.00       0.10


                    2.6
                    2.6 tt
                                        Txn     Think
Key     RT      RT      Menu
                                     Weight  Time
Time    Delay   Fence   Delay
                    New Order         44.75
31.30       18.01       0.10      5.00       0.10
                    Payment           43.10
31.30        3.01       0.10      5.00       0.10
                    Delivery           4.05
13.10        2.01       0.10      5.00       0.10
                    Stock Level        4.05
13.10        2.01       0.10     20.00       0.10
                    Order Status       4.05
26.10        2.01       0.10      5.00       0.10


                    2.4
                    2.4 tt
                                        Txn     Think
Key     RT      RT      Menu
                                     Weight  Time
Time    Delay   Fence   Delay
                    New Order         44.75
28.90       18.01       0.10      5.00       0.10
                    Payment           43.10
28.90        3.01       0.10      5.00       0.10
                    Delivery           4.05
12.10        2.01       0.10      5.00       0.10
                    Stock Level        4.05
12.10        2.01       0.10     20.00       0.10
                    Order Status       4.05
24.10        2.01       0.10      5.00       0.10


                    2.2
                    2.2 tt
                                        Txn     Think
Key     RT      RT      Menu
                                     Weight  Time
Time    Delay   Fence   Delay
                    New Order         44.75
28.90       18.01       0.10      5.00       0.10
                    Payment           43.10
28.90        3.01       0.10      5.00       0.10
                    Delivery           4.05
12.10        2.01       0.10      5.00       0.10
                    Stock Level        4.05
12.10        2.01       0.10     20.00       0.10
                    Order Status       4.05
24.12        2.01       0.10      5.00       0.10


                    2.0
                    2.0 tt
                                        Txn     Think
Key     RT      RT      Menu
                                     Weight  Time
Time    Delay   Fence   Delay
                    New Order         44.75
24.10       18.01       0.10      5.00       0.10
                    Payment           43.10
24.10        3.01       0.10      5.00       0.10
                    Delivery           4.05
10.10        2.01       0.10      5.00       0.10
                    Stock Level        4.05
10.10        2.01       0.10     20.00       0.10
                    Order Status       4.05
20.10        2.01       0.10      5.00       0.10


                    5.0
                    5.0 tt
                                        Txn     Think
Key     RT      RT      Menu
                                     Weight  Time
Time    Delay   Fence   Delay
                    New Order         44.75
60.25       18.01       0.10      5.00       0.10
                    Payment           43.10
60.25        3.01       0.10      5.00       0.10
                    Delivery           4.05
25.25        2.01       0.10      5.00       0.10
                    Stock Level        4.05
25.25        2.01       0.10     20.00       0.10
                    Order Status       4.05
50.25        2.01       0.10      5.00       0.10


                    4.5
                    4.5 tt
                                        Txn     Think
Key     RT      RT      Menu
                                     Weight  Time
Time    Delay   Fence   Delay
                    New Order         44.75
54.20       18.01       0.10      5.00       0.10
                    Payment           43.10
54.20        3.01       0.10      5.00       0.10
                    Delivery           4.05
22.70        2.01       0.10      5.00       0.10
                    Stock Level        4.05
22.70        2.01       0.10     20.00       0.10
                    Order Status       4.05
45.20        2.01       0.10      5.00       0.10


                    3.5
                    3.5 tt
                                        Txn     Think
Key     RT      RT      Menu
                                     Weight  Time
Time    Delay   Fence   Delay
                    New Order         44.75
42.10       18.01       0.10      5.00       0.10
                    Payment           43.10
42.10        3.01       0.10      5.00       0.10
                    Delivery           4.05
17.60        2.01       0.10      5.00       0.10
                    Stock Level        4.05
17.60        2.01       0.10     20.00       0.10
                    Order Status       4.05
35.10        2.01       0.10      5.00       0.10


                    1.8
                    1.8 tt
                                        Txn     Think
Key     RT      RT      Menu
                                     Weight  Time
Time    Delay   Fence   Delay
                    New Order         44.75
21.60       18.01       0.10      5.00       0.10
```


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```
                    Payment           43.10
21.60         3.01      0.10      5.00      0.10
                    Delivery           4.05
9.09          2.01      0.10      5.00      0.10
                    Stock Level        4.05
9.09          2.01      0.10     20.00      0.10
                    Order Status       4.05
18.09         2.01      0.10      5.00      0.10


                    4.2
                    4.2 tt
                                      Txn     Think
Key     RT      RT      Menu
                                   Weight  Time
Time    Delay   Fence   Delay
                    New Order         44.75
54.20       18.01     0.10      5.00      0.10
                    Payment           43.10
54.20         3.01      0.10      5.00      0.10
                    Delivery           4.05
22.70         2.01      0.10      5.00      0.10
                    Stock Level        4.05
22.70         2.01      0.10     20.00      0.10
                    Order Status       4.05
45.20         2.01      0.10      5.00      0.10


                    1.6
                    1.6 tt
                                      Txn     Think
Key     RT      RT      Menu
                                   Weight  Time
Time    Delay   Fence   Delay
                    New Order         44.75
19.20       18.01     0.10      5.00      0.10
                    Payment           43.10
19.20         3.01      0.10      5.00      0.10
                    Delivery           4.05
8.08          2.01      0.10      5.00      0.10
                    Stock Level        4.05
8.08          2.01      0.10     20.00      0.10
                    Order Status       4.05
16.08         2.01      0.10      5.00      0.10


                    1.4
                    1.4 tt
                                      Txn     Think
Key     RT      RT      Menu
                                   Weight  Time
Time    Delay   Fence   Delay
                    New Order         44.75
16.87       18.01     0.10      5.00      0.10
                    Payment           43.10
16.87         3.01      0.10      5.00      0.10
                    Delivery           4.05
7.07          2.01      0.10      5.00      0.10
                    Stock Level        4.05
7.07          2.01      0.10     20.00      0.10
                    Order Status       4.05
14.07         2.01      0.10      5.00      0.10


                    1.2
                    1.2 tt
                                      Txn     Think
Key     RT      RT      Menu
                                   Weight  Time
Time    Delay   Fence   Delay
                    New Order         44.83
14.46       18.01     0.10      5.00      0.10
                    Payment           43.05
14.46         3.01      0.10      5.00      0.10
                    Delivery           4.04
6.06          2.01      0.10      5.00      0.10
                    Stock Level        4.04
6.06          2.01      0.10     20.00      0.10
                    Order Status       4.04
12.06         2.01      0.10      5.00      0.10


                    3.5
                    3.5 tt
                                      Txn     Think
Key     RT      RT      Menu
                                   Weight  Time
Time    Delay   Fence   Delay
                    New Order         44.75
42.10       18.01     0.10      5.00      0.10
                    Payment           43.10
42.10         3.01      0.10      5.00      0.10
                    Delivery           4.05
17.60         2.01      0.10      5.00      0.10
                    Stock Level        4.05
17.60         2.01      0.10     20.00      0.10
                    Order Status       4.05
35.10         2.01      0.10      5.00      0.10


                    1.9
                    1.9 tt
                                      Txn     Think
Key     RT      RT      Menu
                                   Weight  Time
Time    Delay   Fence   Delay
                    New Order         44.75
22.89       18.01     0.10      5.00      0.10
                    Payment           43.10
22.89         3.01      0.10      5.00      0.10
                    Delivery           4.05
9.59          2.01      0.10      5.00      0.10
                    Stock Level        4.05
9.59          2.01      0.10     20.00      0.10
                    Order Status       4.05
19.09         2.01      0.10      5.00      0.10


                    1.1
                    1.1 tt
                                      Txn     Think
Key     RT      RT      Menu
                                   Weight  Time
Time    Delay   Fence   Delay
                    New Order         44.83
13.25       18.01     0.10      5.00      0.10
                    Payment           43.05
13.25         3.01      0.10      5.00      0.10
                    Delivery           4.04
5.55          2.01      0.10      5.00      0.10
                    Stock Level        4.04
5.55          2.01      0.10     20.00      0.10
                    Order Status       4.04
11.05         2.01      0.10      5.00      0.10


                    1.05 better
                    1.05 tt better
                                      Txn     Think
Key     RT      RT      Menu
                                   Weight  Time
Time    Delay   Fence   Delay
                    New Order         44.92
12.65       18.01     0.10      5.00      0.10
                    Payment           43.01
12.65         3.01      0.10      5.00      0.10
                    Delivery           4.02
5.30          2.01      0.10      5.00      0.10
                    Stock Level        4.03
5.30          2.01      0.10     20.00      0.10
                    Order Status       4.02
10.55         2.01      0.10      5.00      0.10


                    1.09
                    1.09 tt
                                      Txn     Think
Key     RT      RT      Menu
                                   Weight  Time
Time    Delay   Fence   Delay
                    New Order         44.83
13.13       18.01     0.10      5.00      0.10
                    Payment           43.05
13.13         3.01      0.10      5.00      0.10
                    Delivery           4.04
5.50          2.01      0.10      5.00      0.10
                    Stock Level        4.04
5.50          2.01      0.10     20.00      0.10
                    Order Status       4.04
10.95         2.01      0.10      5.00      0.10


                    1.08
                    1.08 tt
                                      Txn     Think
Key     RT      RT      Menu
                                   Weight  Time
Time    Delay   Fence   Delay
                    New Order         44.83
13.01       18.01     0.10      5.00      0.10
                    Payment           43.05
13.01         3.01      0.10      5.00      0.10
                    Delivery           4.04
5.45          2.01      0.10      5.00      0.10
                    Stock Level        4.04
5.45          2.01      0.10     20.00      0.10
                    Order Status       4.04
10.85         2.01      0.10      5.00      0.10


                    1.07
                    1.07 tt
                                      Txn     Think
Key     RT      RT      Menu
                                   Weight  Time
Time    Delay   Fence   Delay
                    New Order         44.83
12.89       18.01     0.10      5.00      0.10
```


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```
                Payment           43.05
12.89       3.01      0.10      5.00      0.10
                Delivery           4.04
5.40        2.01      0.10      5.00      0.10
                Stock Level        4.04
5.40        2.01      0.10     20.00      0.10
                Order Status       4.04
10.75       2.01      0.10      5.00      0.10


                1.06
                1.06 tt
                                    Txn     Think
Key     RT      RT      Menu
                                  Weight  Time
Time    Delay   Fence   Delay
                New Order         44.83
12.77      18.01      0.10      5.00      0.10
                Payment           43.05
12.77       3.01      0.10      5.00      0.10
                Delivery           4.04
5.35        2.01      0.10      5.00      0.10
                Stock Level        4.04
5.35        2.01      0.10     20.00      0.10
                Order Status       4.04
10.65       2.01      0.10      5.00      0.10


                1.15
                1.15 tt
                                    Txn     Think
Key     RT      RT      Menu
                                  Weight  Time
Time    Delay   Fence   Delay
                New Order         44.75
13.85      18.01      0.10      5.00      0.10
                Payment           43.10
13.85       3.01      0.10      5.00      0.10
                Delivery           4.05
5.80        2.01      0.10      5.00      0.10
                Stock Level        4.05
5.80        2.01      0.10     20.00      0.10
                Order Status       4.05
11.55       2.01      0.10      5.00      0.10


                1.25
                1.25 tt
                                    Txn     Think
Key     RT      RT      Menu
                                  Weight  Time
Time    Delay   Fence   Delay
                New Order         44.83
15.06      18.01      0.10      5.00      0.10
                Payment           43.05
15.06       3.01      0.10      5.00      0.10
                Delivery           4.04
6.31        2.01      0.10      5.00      0.10
                Stock Level        4.04
6.31        2.01      0.10     20.00      0.10
                Order Status       4.04
12.56       2.01      0.10      5.00      0.10


                1.3
                1.3 tt
                                    Txn     Think
Key     RT      RT      Menu
                                  Weight  Time
Time    Delay   Fence   Delay
                New Order         44.83
15.66      18.01      0.10      5.00      0.10
                Payment           43.05
15.66       3.01      0.10      5.00      0.10
                Delivery           4.04
6.56        2.01      0.10      5.00      0.10
                Stock Level        4.04
6.56        2.01      0.10     20.00      0.10
                Order Status       4.04
13.06       2.01      0.10      5.00      0.10


                1.12
                1.12 tt
                                    Txn     Think
Key     RT      RT      Menu
                                  Weight  Time
Time    Delay   Fence   Delay
                New Order         44.75
13.49      18.01      0.10      5.00      0.10
                Payment           43.10
13.49       3.01      0.10      5.00      0.10
                Delivery           4.05
5.65        2.01      0.10      5.00      0.10
                Stock Level        4.05
5.65        2.01      0.10     20.00      0.10
                Order Status       4.05
11.25       2.01      0.10      5.00      0.10


                1.18
                1.18 tt
                                    Txn     Think
Key     RT      RT      Menu
                                  Weight  Time
Time    Delay   Fence   Delay
                New Order         44.75
14.21      18.01      0.10      5.00      0.10
                Payment           43.10
14.21       3.01      0.10      5.00      0.10
                Delivery           4.05
5.95        2.01      0.10      5.00      0.10
                Stock Level        4.05
5.95        2.01      0.10     20.00      0.10
                Order Status       4.05
11.85       2.01      0.10      5.00      0.10


                1.22
                1.22 tt
                                    Txn     Think
Key     RT      RT      Menu
                                  Weight  Time
Time    Delay   Fence   Delay
                New Order         44.75
14.70      18.01      0.10      5.00      0.10
                Payment           43.10
14.70       3.01      0.10      5.00      0.10
                Delivery           4.05
6.16        2.01      0.10      5.00      0.10
                Stock Level        4.05
6.16        2.01      0.10     20.00      0.10
                Order Status       4.05
12.26       2.01      0.10      5.00      0.10


                1.28
                1.28 tt
                                    Txn     Think
Key     RT      RT      Menu
                                  Weight  Time
Time    Delay   Fence   Delay
                New Order         44.75
15.42      18.01      0.10      5.00      0.10
                Payment           43.10
15.42       3.01      0.10      5.00      0.10
                Delivery           4.05
6.46        2.01      0.10      5.00      0.10
                Stock Level        4.05
6.46        2.01      0.10     20.00      0.10
                Order Status       4.05
12.86       2.01      0.10      5.00      0.10


                1.04
                1.04 tt
                                    Txn     Think
Key     RT      RT      Menu
                                  Weight  Time
Time    Delay   Fence   Delay
                New Order         44.83
12.53      18.01      0.10      5.00      0.10
                Payment           43.05
12.53       3.01      0.10      5.00      0.10
                Delivery           4.04
5.25        2.01      0.10      5.00      0.10
                Stock Level        4.04
5.25        2.01      0.10     20.00      0.10
                Order Status       4.04
10.45       2.01      0.10      5.00      0.10


                1.03
                1.03 tt
                                    Txn     Think
Key     RT      RT      Menu
                                  Weight  Time
Time    Delay   Fence   Delay
                New Order         44.83
12.41      18.01      0.10      5.00      0.10
                Payment           43.05
12.41       3.01      0.10      5.00      0.10
                Delivery           4.04
5.20        2.01      0.10      5.00      0.10
                Stock Level        4.04
5.20        2.01      0.10     20.00      0.10
                Order Status       4.04
10.35       2.01      0.10      5.00      0.10


                1.02
                1.02 tt
                                    Txn     Think
Key     RT      RT      Menu
                                  Weight  Time
Time    Delay   Fence   Delay
                New Order         44.83
12.29      18.01      0.10      5.00      0.10
```


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```
                    Payment           43.05
12.29        3.01       0.10      5.00       0.10
                    Delivery           4.04
5.15         2.01       0.10      5.00       0.10
                    Stock Level        4.04
5.15         2.01       0.10     20.00       0.10
                    Order Status       4.04
10.25        2.01       0.10      5.00       0.10


                    1.01
                    1.01 tt
                                      Txn     Think
Key     RT      RT      Menu
                                   Weight  Time
Time    Delay   Fence   Delay
                    New Order         44.83
12.17       18.01      0.10      5.00       0.10
                    Payment           43.05
12.17        3.01       0.10      5.00       0.10
                    Delivery           4.04
5.10         2.01       0.10      5.00       0.10
                    Stock Level        4.04
5.10         2.01       0.10     20.00       0.10
                    Order Status       4.04
10.15        2.01       0.10      5.00       0.10


                    1.005_best
                    1.005 tt best
                                      Txn     Think
Key     RT      RT      Menu
                                   Weight  Time
Time    Delay   Fence   Delay
                    New Order         44.88
12.11       18.01      0.10      5.00       0.10
                    Payment           43.02
12.11        3.01       0.10      5.00       0.10
                    Delivery           4.03
5.07         2.01       0.10      5.00       0.10
                    Stock Level        4.03
5.07         2.01       0.10     20.00       0.10
                    Order Status       4.03
10.10        2.01       0.10      5.00       0.10


                    1.001_best
                    1.001 tt best
                                      Txn     Think
Key     RT      RT      Menu
                                   Weight  Time
Time    Delay   Fence   Delay
                    New Order         44.90
12.06       18.02      0.10      5.00       0.10
                    Payment           43.06
12.06        3.01       0.10      5.00       0.10
                    Delivery           4.00
5.06         2.01       0.10      5.00       0.10
                    Stock Level        4.03
5.06         2.01       0.10     20.00       0.10
                    Order Status       4.01
10.06        2.01       0.10      5.00       0.10


                    1.03 better
                    1.03 tt more aggressive
                                      Txn     Think
Key     RT      RT      Menu
                                   Weight  Time
Time    Delay   Fence   Delay
                    New Order         44.92
12.41       18.01      0.10      5.00       0.10
                    Payment           43.01
12.41        3.01       0.10      5.00       0.10
                    Delivery           4.02
5.20         2.01       0.10      5.00       0.10
                    Stock Level        4.03
5.20         2.01       0.10     20.00       0.10
                    Order Status       4.02
10.35        2.01       0.10      5.00       0.10


                    1.005 better
                    1.005 tt more aggressive
                                      Txn     Think
Key     RT      RT      Menu
                                   Weight  Time
Time    Delay   Fence   Delay
                    New Order         44.90
12.11       18.01      0.10      5.00       0.10
                    Payment           43.05
12.11        3.01       0.10      5.00       0.10
                    Delivery           4.01
5.07         2.01       0.10      5.00       0.10
                    Stock Level        4.03
5.07         2.01       0.10     20.00       0.10
                    Order Status       4.01
10.10        2.01       0.10      5.00       0.10


                    1.02 better
                    1.02 tt more aggressive
                                      Txn     Think
Key     RT      RT      Menu
                                   Weight  Time
Time    Delay   Fence   Delay
                    New Order         44.92
12.29       18.01      0.10      5.00       0.10
                    Payment           43.01
12.29        3.01       0.10      5.00       0.10
                    Delivery           4.02
5.15         2.01       0.10      5.00       0.10
                    Stock Level        4.03
5.15         2.01       0.10     20.00       0.10
                    Order Status       4.02
10.25        2.01       0.10      5.00       0.10


                    1.01 best
                    1.01 tt best
                                      Txn     Think
Key     RT      RT      Menu
                                   Weight  Time
Time    Delay   Fence   Delay
                    New Order         44.90
12.17       18.01      0.10      5.00       0.10
                    Payment           43.05
12.17        3.01       0.10      5.00       0.10
                    Delivery           4.01
5.10         2.01       0.10      5.00       0.10
                    Stock Level        4.03
5.10         2.01       0.10     20.00       0.10
                    Order Status       4.01
10.15        2.01       0.10      5.00       0.10


                    1.02 best
                    1.02 tt best
                                      Txn     Think
Key     RT      RT      Menu
                                   Weight  Time
Time    Delay   Fence   Delay
                    New Order         44.96
12.29       18.01      0.10      5.00       0.10
                    Payment           43.00
12.29        3.01       0.10      5.00       0.10
                    Delivery           4.00
5.15         2.01       0.10      5.00       0.10
                    Stock Level        4.03
5.15         2.01       0.10     20.00       0.10
                    Order Status       4.01
10.25        2.01       0.10      5.00       0.10


                    1.03 best
                    1.03 tt best
                                      Txn     Think
Key     RT      RT      Menu
                                   Weight  Time
Time    Delay   Fence   Delay
                    New Order         44.96
12.41       18.01      0.10      5.00       0.10
                    Payment           43.01
12.41        3.01       0.10      5.00       0.10
                    Delivery           4.01
5.20         2.01       0.10      5.00       0.10
                    Stock Level        4.01
5.20         2.01       0.10     20.00       0.10
                    Order Status       4.01
10.35        2.01       0.10      5.00       0.10


                    5.5
                    5.5 tt
                                      Txn     Think
Key     RT      RT      Menu
                                   Weight  Time
Time    Delay   Fence   Delay
                    New Order         44.83
66.28       18.01      0.10      5.00       0.10
                    Payment           43.05
66.28        3.01       0.10      5.00       0.10
                    Delivery           4.04
27.77        2.01       0.10      5.00       0.10
                    Stock Level        4.04
27.77        2.01       0.10     20.00       0.10
                    Order Status       4.04
55.27        2.01       0.10      5.00       0.10


                    6.0
                    6.0 tt
                                      Txn     Think
Key     RT      RT      Menu
                                   Weight  Time
Time    Delay   Fence   Delay
                    New Order         44.83
72.30       18.01      0.10      5.00       0.10
```


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```
                    Payment           43.05
72.30        3.01       0.10      5.00       0.10
                    Delivery           4.04
30.30        2.01       0.10      5.00       0.10
                    Stock Level        4.04
30.30        2.01       0.10     20.00       0.10
                    Order Status       4.04
60.30        2.01       0.10      5.00       0.10


                    6.5
                    6.5 tt
                                        Txn     Think
Key     RT      RT      Menu
                                     Weight  Time
Time    Delay   Fence   Delay
                    New Order         44.83
79.53       18.01       0.10      5.00       0.10
                    Payment           43.05
79.53        3.01       0.10      5.00       0.10
                    Delivery           4.04
33.33        2.01       0.10      5.00       0.10
                    Stock Level        4.04
33.33        2.01       0.10     20.00       0.10
                    Order Status       4.04
66.33        2.01       0.10      5.00       0.10


                    7.0
                    7.0 tt
                                        Txn     Think
Key     RT      RT      Menu
                                     Weight  Time
Time    Delay   Fence   Delay
                    New Order         44.83
84.35       18.01       0.10      5.00       0.10
                    Payment           43.05
84.35        3.01       0.10      5.00       0.10
                    Delivery           4.04
35.35        2.01       0.10      5.00       0.10
                    Stock Level        4.04
35.35        2.01       0.10     20.00       0.10
                    Order Status       4.04
70.35        2.01       0.10      5.00       0.10


                    7.5
                    7.5 tt
                                        Txn     Think
Key     RT      RT      Menu
                                     Weight  Time
Time    Delay   Fence   Delay
                    New Order         44.83
90.38       18.01       0.10      5.00       0.10
                    Payment           43.05
90.38        3.01       0.10      5.00       0.10
                    Delivery           4.04
37.88        2.01       0.10      5.00       0.10
                    Stock Level        4.04
37.88        2.01       0.10     20.00       0.10
                    Order Status       4.04
75.38        2.01       0.10      5.00       0.10


                    8.0
                    8.0 tt
                                        Txn     Think
Key     RT      RT      Menu
                                     Weight  Time
Time    Delay   Fence   Delay
                    New Order         44.83
96.40       18.01       0.10      5.00       0.10
                    Payment           43.05
96.40        3.01       0.10      5.00       0.10
                    Delivery           4.04
40.40        2.01       0.10      5.00       0.10
                    Stock Level        4.04
40.40        2.01       0.10     20.00       0.10
                    Order Status       4.04
80.40        2.01       0.10      5.00       0.10


                    8.5
                    8.5 tt
                                        Txn     Think
Key     RT      RT      Menu
                                     Weight  Time
Time    Delay   Fence   Delay
                    New Order         44.83
102.43      18.01       0.10      5.00       0.10
                    Payment           43.05
192.43       3.01       0.10      5.00       0.10
                    Delivery           4.04
42.92        2.01       0.10      5.00       0.10
                    Stock Level        4.04
42.92        2.01       0.10     20.00       0.10
                    Order Status       4.04
85.42        2.01       0.10      5.00       0.10


                    9.0
                    9.0 tt
                                        Txn     Think
Key     RT      RT      Menu
                                     Weight  Time
Time    Delay   Fence   Delay
                    New Order         44.83
108.45      18.01       0.10      5.00       0.10
                    Payment           43.05
108.45       3.01       0.10      5.00       0.10
                    Delivery           4.04
45.45        2.01       0.10      5.00       0.10
                    Stock Level        4.04
45.45        2.01       0.10     20.00       0.10
                    Order Status       4.04
90.45        2.01       0.10      5.00       0.10


                    9.5
                    9.5 tt
                                        Txn     Think
Key     RT      RT      Menu
                                     Weight  Time
Time    Delay   Fence   Delay
                    New Order         44.83
114.47      18.01       0.10      5.00       0.10
                    Payment           43.05
114.47       3.01       0.10      5.00       0.10
                    Delivery           4.04
47.98        2.01       0.10      5.00       0.10
                    Stock Level        4.04
47.98        2.01       0.10     20.00       0.10
                    Order Status       4.04
95.47        2.01       0.10      5.00       0.10


                    10
                    10 tt
                                        Txn     Think
Key     RT      RT      Menu
                                     Weight  Time
Time    Delay   Fence   Delay
                    New Order         44.83
120.50      18.01       0.10      5.00       0.10
                    Payment           43.05
120.50       3.01       0.10      5.00       0.10
                    Delivery           4.04
50.50        2.01       0.10      5.00       0.10
                    Stock Level        4.04
50.50        2.01       0.10     20.00       0.10
                    Order Status       4.04
100.50       2.01       0.10      5.00       0.10


                    1.02 better
                    1.02 more agressive
                                        Txn     Think
Key     RT      RT      Menu
                                     Weight  Time
Time    Delay   Fence   Delay
                    New Order         44.92
12.05       18.01       0.10      5.00       0.10
                    Payment           43.01
12.05        3.01       0.10      5.00       0.10
                    Delivery           4.02
5.05         2.01       0.10      5.00       0.10
                    Stock Level        4.03
5.05         2.01       0.10     20.00       0.10
                    Order Status       4.02
10.05        2.01       0.10      5.00       0.10


                    1.01 better
                    1.01 more aggressive
                                        Txn     Think
Key     RT      RT      Menu
                                     Weight  Time
Time    Delay   Fence   Delay
                    New Order         44.92
12.17       18.01       0.10      5.00       0.10
                    Payment           43.01
12.17        3.01       0.10      5.00       0.10
                    Delivery           4.02
5.10         2.01       0.10      5.00       0.10
                    Stock Level        4.03
5.10         2.01       0.10     20.00       0.10
                    Order Status       4.02
10.15        2.01       0.10      5.00       0.10


                    1.001 better
                    1.001 more aggressive
                                        Txn     Think
Key     RT      RT      Menu
                                     Weight  Time
Time    Delay   Fence   Delay
                    New Order         44.92
12.06       18.01       0.10      5.00       0.10
```


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```
                    Payment           43.01
12.06         3.01      0.10      5.00      0.10
                    Delivery           4.02
5.06          2.01      0.10      5.00      0.10
                    Stock Level        4.03
5.06          2.01      0.10     20.00      0.10
                    Order Status       4.02
10.06         2.01      0.10      5.00      0.10

                    FullSpeed
                    1.000 tt
                                      Txn     Think
Key     RT      RT      Menu
                                     Weight  Time
Time    Delay   Fence   Delay
                    New Order          44.92
12.05       18.03     0.10      5.00      0.10
                    Payment           43.01
12.05         3.01      0.10      5.00      0.10
                    Delivery           4.02
5.05          2.01      0.10      5.00      0.10
                    Stock Level        4.03
5.05          2.01      0.10     20.00      0.10
                    Order Status       4.02
10.05         2.01      0.10      5.00      0.10
```

# Internet Information Server Registry Parameters

```
REGEDIT4

[HKEY_LOCAL_MACHINE\SYSTEM\CurrentControlSet\Services
\InetInfo]

[HKEY_LOCAL_MACHINE\SYSTEM\CurrentControlSet\Services
\InetInfo\Parameters]
"ListenBackLog"=dword:00000019
"DispatchEntries"=hex(7):4c,44,41,50,53,56,43,00,00
"PoolThreadLimit"=dword:00000ffe
"ThreadTimeout"=dword:00015180

[HKEY_LOCAL_MACHINE\SYSTEM\CurrentControlSet\Services
\InetInfo\Performance]
"Library"="infoctrs.dll"
"Open"="OpenINFOPerformanceData"
"Close"="CloseINFOPerformanceData"
"Collect"="CollectINFOPerformanceData"
"Last Counter"=dword:00000966
"Last Help"=dword:00000967
"First Counter"=dword:00000926
"First Help"=dword:00000927
"Library Validation
Code"=hex:a0,76,dc,2e,a0,ad,c5,01,10,25,00,00,00,00,0
0,00
"WbemAdapFileTime"=hex:00,a0,38,ed,84,36,c3,01
"WbemAdapFileSize"=dword:00002510
"WbemAdapStatus"=dword:00000000
```

# World Wide Web Service Registry Parameters

```
REGEDIT4

[HKEY_LOCAL_MACHINE\SYSTEM\CurrentControlSet\Services
\W3SVC]
"Type"=dword:00000020
"Start"=dword:00000002
"ErrorControl"=dword:00000001
"ImagePath"=hex(2):43,3a,5c,57,49,4e,4e,54,5c,53,79,7
3,74,65,6d,33,32,5c,69,6e,\

65,74,73,72,76,5c,69,6e,65,74,69,6e,66,6f,2e,65,78,65
,00
"DisplayName"="World Wide Web Publishing Service"
"DependOnService"=hex(7):49,49,53,41,44,4d,49,4e,00,0
0
"DependOnGroup"=hex(7):00
"ObjectName"="LocalSystem"
"Description"="Provides Web connectivity and
administration through the Internet Information
Services snap-in."

[HKEY_LOCAL_MACHINE\SYSTEM\CurrentControlSet\Services
\W3SVC\ASP]
"NOTE"="This is for backward compatibility only."

[HKEY_LOCAL_MACHINE\SYSTEM\CurrentControlSet\Services
\W3SVC\ASP\Parameters]

[HKEY_LOCAL_MACHINE\SYSTEM\CurrentControlSet\Services
\W3SVC\Parameters]
"MajorVersion"=dword:00000005
"MinorVersion"=dword:00000000
"InstallPath"="C:\\WINNT\\System32\\inetsrv"
"CertMapList"="C:\\WINNT\\System32\\inetsrv\\iiscrmap
.dll"
"AccessDeniedMessage"="Error: Access is Denied."
"Filter DLLs"=""
"LogFileDirectory"="C:\\WINNT\\System32\\LogFiles"
"AcceptExOutstanding"=dword:00000028

[HKEY_LOCAL_MACHINE\SYSTEM\CurrentControlSet\Services
\W3SVC\Parameters\ADCLaunch]

[HKEY_LOCAL_MACHINE\SYSTEM\CurrentControlSet\Services
\W3SVC\Parameters\ADCLaunch\AdvancedDataFactory]

[HKEY_LOCAL_MACHINE\SYSTEM\CurrentControlSet\Services
\W3SVC\Parameters\ADCLaunch\RDSServer.DataFactory]

[HKEY_LOCAL_MACHINE\SYSTEM\CurrentControlSet\Services
\W3SVC\Parameters\Script Map]

[HKEY_LOCAL_MACHINE\SYSTEM\CurrentControlSet\Services
\W3SVC\Parameters\Virtual Roots]
"/"="c:\\inetpub\\wwwroot,,207"
"/Scripts"="c:\\inetpub\\scripts,,204"
"/IISHelp"="c:\\winnt\\help\\iishelp,,201"
"/IISAdmin"="C:\\WINNT\\System32\\inetsrv\\iisadmin,,
201"
"/IISSamples"="c:\\inetpub\\iissamples,,201"
"/MSADC"="c:\\program files\\common
files\\system\\msadc,,205"
"/Printers"="C:\\WINNT\\web\\printers,,201"

[HKEY_LOCAL_MACHINE\SYSTEM\CurrentControlSet\Services
\W3SVC\Performance]
"Library"="w3ctrs.dll"
"Open"="OpenW3PerformanceData"
"Close"="CloseW3PerformanceData"
"Collect"="CollectW3PerformanceData"
"Last Counter"=dword:00000a0a
"Last Help"=dword:00000a0b
"First Counter"=dword:00000968
"First Help"=dword:00000969
"Library Validation
Code"=hex:82,c5,54,28,a6,5f,c5,01,10,3d,00,00,00,00,0
0,00
"WbemAdapFileTime"=hex:00,a0,38,ed,84,36,c3,01
"WbemAdapFileSize"=dword:00001d10
"WbemAdapStatus"=dword:00000000

[HKEY_LOCAL_MACHINE\SYSTEM\CurrentControlSet\Services
\W3SVC\Security]
"Security"=hex:01,00,14,80,a0,00,00,00,ac,00,00,00,14
,00,00,00,30,00,00,00,02,\

00,1c,00,01,00,00,00,02,80,14,00,ff,01,0f,00,01,01,00
,00,00,00,00,01,00,00,\

00,00,02,00,70,00,04,00,00,00,00,00,18,00,fd,01,02,00
,01,01,00,00,00,00,00,\

05,12,00,00,00,74,00,6f,00,00,00,1c,00,ff,01,0f,00,01
,02,00,00,00,00,00,05,\

20,00,00,00,20,02,00,00,72,00,73,00,00,00,18,00,8d,01
,02,00,01,01,00,00,00,\

00,00,05,0b,00,00,00,20,02,00,00,00,00,1c,00,fd,01,02
,00,01,02,00,00,00,00,\

00,05,20,00,00,00,23,02,00,00,72,00,73,00,01,01,00,00
,00,00,00,05,12,00,00,\
  00,01,01,00,00,00,00,00,05,12,00,00,00

[HKEY_LOCAL_MACHINE\SYSTEM\CurrentControlSet\Services
\W3SVC\Enum]
"0"="Root\\LEGACY_W3SVC\\0000"
"Count"=dword:00000001
"NextInstance"=dword:00000001
```


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# TPCC Application Registry Parameters

```
REGEDIT4

[HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\TPCC]
"Path"="C:\\Inetpub\\wwwroot\\"
"NumberOfDeliveryThreads"=dword:00000014
"MaxConnections"=dword:000059d8
"MaxPendingDeliveries"=dword:000007d0
"DB_Protocol"="ODBC"
"TxnMonitor"="COM"
"DbServer"="bl25pdc"
"DbName"="tpcc"
"DbUser"="sa"
"DbPassword"=""
"COM_SinglePool"="YES"
"ConnectDelay"=dword:00000001
```

# Fiber Channel Driver Registry Parameters

```
Key Name:
HKEY_LOCAL_MACHINE\SYSTEM\CurrentControlSet\Services\
ql2300
Class Name:         <NO CLASS>
Last Write Time:    9/28/2005 - 9:17 AM
Value 0
  Name:             ErrorControl
  Type:             REG_DWORD
  Data:             0x1

Value 1
  Name:             Group
  Type:             REG_SZ
  Data:             SCSI miniport

Value 2
  Name:             Start
  Type:             REG_DWORD
  Data:             0

Value 3
  Name:             Tag
  Type:             REG_DWORD
  Data:             0x28

Value 4
  Name:             Type
  Type:             REG_DWORD
  Data:             0x1

Value 5
  Name:             DisplayName
  Type:             REG_SZ
  Data:             QLogic Fibre Channel SCSI Miniport
Driver (w32 IP)

Value 6
  Name:             ImagePath
  Type:             REG_EXPAND_SZ
  Data:             system32\DRIVERS\ql2300.sys


Key Name:
HKEY_LOCAL_MACHINE\SYSTEM\CurrentControlSet\Services\
ql2300\Parameters
Class Name:         <NO CLASS>
Last Write Time:    6/27/2005 - 4:16 PM
Value 0
  Name:             BusType
  Type:             REG_DWORD
  Data:             0x6


Key Name:
HKEY_LOCAL_MACHINE\SYSTEM\CurrentControlSet\Services\
ql2300\Parameters\Device
Class Name:         <NO CLASS>
Last Write Time:    7/26/2005 - 5:34 PM
Value 0
  Name:             DriverParameters
  Type:             REG_SZ
  Data:             UseSameNN=0;

Value 1
  Name:             BusType
  Type:             REG_DWORD
  Data:             0x6

Value 2
  Name:             MaximumSGList
  Type:             REG_DWORD
  Data:             0x21

Value 3
  Name:             NumberOfRequests
  Type:             REG_DWORD
  Data:             0x96

Value 4
  Name:             CreateInitiatorLU
  Type:             REG_DWORD
  Data:             0x1


Key Name:
HKEY_LOCAL_MACHINE\SYSTEM\CurrentControlSet\Services\
ql2300\Parameters\PnpInterface
Class Name:         <NO CLASS>
Last Write Time:    10/27/2004 - 7:31 PM
Value 0
  Name:             5
  Type:             REG_DWORD
  Data:             0x1


Key Name:
HKEY_LOCAL_MACHINE\SYSTEM\CurrentControlSet\Services\
ql2300\Enum
Class Name:         <NO CLASS>
Last Write Time:    9/28/2005 - 9:17 AM
Value 0
  Name:             0
  Type:             REG_SZ
  Data:
PCI\VEN_1077&DEV_2312&SUBSYS_01050E11&REV_02\4&9630b5
6&0&0850

Value 1
  Name:             Count
  Type:             REG_DWORD
  Data:             0x2

Value 2
  Name:             NextInstance
  Type:             REG_DWORD
  Data:             0x2

Value 3
  Name:             1
  Type:             REG_SZ
  Data:
PCI\VEN_1077&DEV_2312&SUBSYS_01050E11&REV_02\4&9630b5
6&0&0950
```

# QLogic QLDirect Driver Registry Parameters

```
Key Name:
HKEY_LOCAL_MACHINE\SYSTEM\CurrentControlSet\Services\
qldirect
Class Name:         <NO CLASS>
Last Write Time:    9/28/2005 - 9:17 AM
Value 0
  Name:             ERRORCONTROL
  Type:             REG_DWORD
  Data:             0x1

Value 1
  Name:             TYPE
  Type:             REG_DWORD
  Data:             0x1

Value 2
  Name:             GROUP
  Type:             REG_SZ
  Data:             qldirect

Value 3
  Name:             START
  Type:             REG_DWORD
  Data:             0x2
```


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```
Key Name:
HKEY_LOCAL_MACHINE\SYSTEM\CurrentControlSet\Services\
qldirect\Parameters
Class Name:        <NO CLASS>
Last Write Time:   9/21/2005 - 12:32 PM
Value 0
  Name:            SRBLISTSIZE
  Type:            REG_DWORD
  Data:            0x400

Value 1
  Name:            FLAGS
  Type:            REG_DWORD
  Data:            0

Value 2
  Name:            MAXPATHSPERDEVICE
  Type:            REG_DWORD
  Data:            0x10

Value 3
  Name:            INSPECTIONINTERVAL
  Type:            REG_DWORD
  Data:            0x258

Value 4
  Name:            OPTIMIZATION
  Type:            REG_DWORD
  Data:            0

Value 5
  Name:            MAXRETRIESPERPATH
  Type:            REG_DWORD
  Data:            0x3

Value 6
  Name:            MAXRETRIESPERIO
  Type:            REG_DWORD
  Data:            0x31


Key Name:
HKEY_LOCAL_MACHINE\SYSTEM\CurrentControlSet\Services\
qldirect\Enum
Class Name:        <NO CLASS>
Last Write Time:   9/28/2005 - 9:17 AM
Value 0
  Name:            0
  Type:            REG_SZ
  Data:            Root\LEGACY_QLDIRECT\0000

Value 1
  Name:            Count
  Type:            REG_DWORD
  Data:            0x1

Value 2
  Name:            NextInstance
  Type:            REG_DWORD
  Data:            0x1
```

# Microsoft SQL Server 2005 Registry Parameters

```
Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:51 PM
Value 0
  Name:            IsListenerActive
  Type:            REG_SZ
  Data:            Yes

Value 1
  Name:            SsrpActiveServer
  Type:            REG_SZ
  Data:

Value 2
  Name:            InstalledInstances
  Type:            REG_MULTI_SZ
  Data:            MSSQLSERVER


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 5:05 PM
Value 0
  Name:            SharedCode
  Type:            REG_SZ
  Data:            C:\Program Files\Microsoft SQL
Server\90\Shared\

Value 1
  Name:            VerSpecificRootDir
  Type:            REG_SZ
  Data:            C:\Program Files\Microsoft SQL
Server\90\

Value 2
  Name:            EnableErrorReporting
  Type:            REG_DWORD
  Data:            0

Value 3
  Name:            ErrorReportingDir
  Type:            REG_SZ
  Data:            C:\Program Files\Microsoft SQL
Server\90\Shared\ErrorDumps\

Value 4
  Name:            CustomerFeedback
  Type:            REG_DWORD
  Data:            0

Value 5
  Name:            TimeOfReporting
  Type:            REG_DWORD
  Data:            0xf0

Value 6
  Name:            CollectorParameters
  Type:            REG_SZ
  Data:


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Bootstrap
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:51 PM
Value 0
  Name:            BootstrapDir
  Type:            REG_SZ
  Data:            C:\Program Files\Microsoft SQL
Server\90\Setup Bootstrap\


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Bootstrap\MSIRefCount
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:51 PM
Value 0
  Name:            Uninstall
  Type:            REG_SZ
  Data:            {11111111-1111-1111-1111-
111111111111},{982DB00A-9C4E-436B-8707-
18E113BAA44C},{E0A41F96-7231-4AE8-A654-
EEB34F935462},{63A5DC0D-1EDD-4D69-8F31-
87FAEB1F7084},{2373A92B-1C1C-4E71-B494-
5CA97F96AA19},{90032DD0-ABEE-4424-AC1E-B076BDD4E350}


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Bootstrap\Setup
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:51 PM
Value 0
  Name:            PatchLevel
  Type:            REG_SZ
  Data:            9.00.1187.07


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\DTS
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:51 PM

Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\DTS\Setup
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:51 PM
Value 0
  Name:            Version
```


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```
  Type:            REG_SZ
  Data:            9.00.1187.07

Value 1
  Name:            Language
  Type:            REG_DWORD
  Data:            0x409

Value 2
  Name:            ProductCode
  Type:            REG_SZ
  Data:            {E0A41F96-7231-4AE8-A654-
EEB34F935462}

Value 3
  Name:            FeatureList
  Type:            REG_SZ
  Data:            SQL_DTS=3

Value 4
  Name:            PatchLevel
  Type:            REG_SZ
  Data:            9.00.1187.07

Value 5
  Name:            checksum
  Type:            REG_BINARY
  Data:
00000000   38 36 33 66 66 66 30 65 - 62 38 32 62 30
34 37 62  863fff0eb82b047b
00000010   31 30 35 31 36 38 32 31 - 30 30 63 64 36
66 33 65  1051682100cd6f3e
00000020   62 31 61 63 30 64 31 39 - 64 61 33 37 38
32 64 39  b1ac0d19da3782d9
00000030   30 62 61 34 34 39 39 36 - 34 31 63 30 35
66 39 66  0ba4499641c05f9f
00000040   39 34 36 33 35 38 65 35 - 36 38 32 63 66
64 35 30  946358e5682cfd50
00000050   30 30 34 35 34 31 33 37 - 39 35 39 38 34
37 36 36  0045413795984766
00000060   33 62 30 62 30 38 63 35 - 63 65 31 31 65
38 63 39  3b0b08c5ce11e8c9
00000070   61 61 38 30 61 34 30 61 - 64 66 32 62 34
31 32 34  aa80a40adf2b4124
00000080   35 39 33 64 63 31 63 64 - 36 39 38 31 39
33 36 39  593dc1cd69819369
00000090   64 30 39 31 65 36 36 35 - 38 33 65 61 30
33 35 38  d091e66583ea0358
64 32 65 36 31 36 39 64 - 32 38 32 34 61 35 00
d2e6169d2824a5.

Value 6
  Name:            Edition
  Type:            REG_SZ
  Data:            Beta Edition


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\NodeConfiguration
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 5:05 PM

Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\NodeConfiguration\Node0
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 5:05 PM
Value 0
  Name:            CPUMask
  Type:            REG_DWORD
  Data:            0x1


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\NodeConfiguration\Node1
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 5:05 PM
Value 0
  Name:            CPUMask
  Type:            REG_DWORD
  Data:            0x2


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\NodeConfiguration\Node2
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 5:05 PM
Value 0
  Name:            CPUMask
  Type:            REG_DWORD
  Data:            0x4


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\NodeConfiguration\Node3
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 5:05 PM
Value 0
  Name:            CPUMask
  Type:            REG_DWORD
  Data:            0x8


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\NS
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:52 PM

Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\NS\Setup
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:52 PM
Value 0
  Name:            Version
  Type:            REG_SZ
  Data:            9.00.1187.07

Value 1
  Name:            Language
  Type:            REG_DWORD
  Data:            0x409

Value 2
  Name:            ProductCode
  Type:            REG_SZ
  Data:            {63A5DC0D-1EDD-4D69-8F31-
87FAEB1F7084}

Value 3
  Name:            FeatureList
  Type:            REG_SZ
  Data:            Notification_Services=3
NS_Engine=3 NS_Client=3

Value 4
  Name:            PatchLevel
  Type:            REG_SZ
  Data:            9.00.1187.07

Value 5
  Name:            checksum
  Type:            REG_BINARY
  Data:
00000000   38 36 33 66 66 66 30 65 - 62 38 32 62 30
34 37 62  863fff0eb82b047b
00000010   31 30 35 31 36 38 32 31 - 30 30 63 66 30
37 64 36  1051682100cf07d6
00000020   39 39 34 32 61 66 63 62 - 32 33 35 34 36
37 36 33  9942afcb23546763
00000030   61 36 31 64 35 34 62 63 - 30 38 36 34 66
35 32 62  a61d54bc0864f52b
00000040   35 37 37 63 31 61 63 64 - 36 61 66 38 38
64 64 38  577c1acd6af88dd8
00000050   64 65 61 61 62 34 35 64 - 34 38 31 39 62
64 63 37  deaab45d4819bdc7
00000060   32 33 63 66 36 36 64 37 - 63 32 66 37 63
66 37 30  23cf66d7c2f7cf70
00000070   61 30 39 35 61 61 66 32 - 34 34 30 39 64
63 37 31  a095aaf24409dc71
00000080   62 34 61 39 37 66 36 36 - 39 61 35 30 30
32 61 34  b4a97f669a5002a4
00000090   65 37 65 39 63 66 65 63 - 36 64 62 33 38
37 34 64  e7e9cfec6db3874d
33 39 37 61 35 30 37 31 - 34 66 63 39 62 37 00
397a50714fc9b7.

Value 6
  Name:            Edition
  Type:            REG_SZ
  Data:            Beta Edition


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\SQL Browser
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:51 PM
Value 0
  Name:            AnalysisServiceListener
  Type:            REG_DWORD
  Data:            0x1

Value 1
```


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```
  Name:            SsrpListener
  Type:            REG_DWORD
  Data:            0x1

Value 2
  Name:            Contexts
  Type:            REG_DWORD
  Data:            0x4

Value 3
  Name:            Threads
  Type:            REG_DWORD
  Data:            0x4


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\SQL Browser\Servers
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:51 PM
Value 0
  Name:            SQLServer
  Type:            REG_SZ
  Data:            1434


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:53 PM

Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\ClientSetup
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:53 PM
Value 0
  Name:            SQLBinRoot
  Type:            REG_SZ
  Data:            C:\Program Files\Microsoft SQL
Server\90\Shared\

Value 1
  Name:            SQLPath
  Type:            REG_SZ
  Data:            C:\Program Files\Microsoft SQL
Server\90\Tools

Value 2
  Name:            checksum
  Type:            REG_BINARY
  Data:
00000000   38 36 33 66 66 66 30 65 - 62 38 32 62 30
34 37 62  863fff0eb82b047b
00000010   31 30 35 31 36 38 32 31 - 30 30 63 66 30
32 66 37  1051682100cf02f7
00000020   61 63 37 36 34 65 36 63 - 66 31 36 32 62
39 34 63  ac764e6cf162b94c
00000030   62 32 33 35 32 31 37 63 - 31 36 63 62 39
39 38 38  b235217c16cb9988
00000040   64 65 35 30 64 33 64 37 - 32 36 65 38 37
36 39 35  de50d3d726e87695
00000050   33 61 31 62 62 35 66 63 - 35 33 65 66 38
37 63 34  3a1bb5fc53ef87c4
00000060   31 61 32 65 36 31 39 32 - 39 63 61 39 31
37 30 37  1a2e61929ca91707
00000070   32 65 30 31 39 62 32 37 - 61 38 33 66 34
61 39 36  2e019b27a83f4a96
00000080   34 32 36 36 32 37 31 38 - 64 36 31 31 61
33 65 39  42662718d611a3e9
00000090   39 61 61 30 30 35 37 38 - 34 36 63 64 65
37 34 33  9aa0057846cde743
65 32 37 33 64 35 35 65 - 35 36 31 31 32 36 00
e273d55e561126.

Value 3
  Name:            Path
  Type:            REG_SZ
  Data:            C:\Program Files\Microsoft SQL
Server\90\Tools\binn\

Value 4
  Name:            SqlToolsPath
  Type:            REG_SZ
  Data:


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\ClientSetup\CurrentVersion
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:51 PM
Value 0
  Name:            Language
  Type:            REG_DWORD
  Data:            0x409

Value 1
  Name:            CurrentVersion
  Type:            REG_SZ
  Data:            9.00.1187.07


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Service Manager
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:51 PM
Value 0
  Name:            Services
  Type:            REG_MULTI_SZ
  Data:            ;


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Setup
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:53 PM
Value 0
  Name:            Version
  Type:            REG_SZ
  Data:            9.00.1187.07

Value 1
  Name:            Language
  Type:            REG_DWORD
  Data:            0x409

Value 2
  Name:            ProductCode
  Type:            REG_SZ
  Data:            {90032DD0-ABEE-4424-AC1E-
B076BDD4E350}

Value 3
  Name:            FeatureList
  Type:            REG_SZ
  Data:            Client_Components=3
SQL_Documentation=3 Connectivity=3 SQL_Tools90=3
SQL_Profiler90=3 SQL_WarehouseDevWorkbench=3 SDK=3
SQLXML=3 Tools_Legacy=3 SQL_BooksOnline=3
SQL_SQLServerBooksOnline=3
SQL_SQLServerMobileBooksOnline=3

Value 4
  Name:            PatchLevel
  Type:            REG_SZ
  Data:            9.00.1187.07

Value 5
  Name:            checksum
  Type:            REG_BINARY
  Data:
00000000   38 36 33 66 66 66 30 65 - 62 38 32 62 30
34 37 62  863fff0eb82b047b
00000010   31 30 35 31 36 38 32 31 - 30 30 63 66 30
32 66 37  1051682100cf02f7
00000020   61 63 37 36 34 65 36 63 - 66 31 36 32 62
39 34 63  ac764e6cf162b94c
00000030   62 32 33 35 32 31 37 63 - 31 36 63 62 39
39 38 38  b235217c16cb9988
00000040   64 65 35 30 64 33 64 37 - 32 36 65 38 37
36 39 35  de50d3d726e87695
00000050   33 61 31 62 62 35 66 63 - 35 33 65 66 38
37 63 34  3a1bb5fc53ef87c4
00000060   31 61 32 65 36 31 39 32 - 39 63 61 39 31
37 30 37  1a2e61929ca91707
00000070   32 65 30 31 39 62 32 37 - 61 38 33 66 34
61 39 36  2e019b27a83f4a96
00000080   34 32 36 36 32 37 31 38 - 64 36 31 31 61
33 65 39  42662718d611a3e9
00000090   39 61 61 30 30 35 37 38 - 34 36 63 64 65
37 34 33  9aa0057846cde743
65 32 37 33 64 35 35 65 - 35 36 31 31 32 36 00
e273d55e561126.

Value 6
  Name:            Edition
  Type:            REG_SZ
  Data:            Beta Edition


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:54 PM
```


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```
Value 0
  Name:            <NO NAME>
  Type:            REG_SZ
  Data:

Value 1
  Name:            InstallDir
  Type:            REG_SZ
  Data:            C:\Program Files\Microsoft SQL
Server\90\Tools\Binn\VSShell\Common7\IDE\

Value 2
  Name:            XmlFileLocation
  Type:            REG_SZ
  Data:            C:\Program Files\Microsoft SQL
Server\90\Tools\Binn\VSShell\Common7\IDE\

Value 3
  Name:            ApplicationID
  Type:            REG_SZ
  Data:            SQLServer


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\AD7Metrics
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:53 PM

Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\AD7Metrics\EEExtensions
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:53 PM

Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\AD7Metrics\EEExtensions\{274F99
4E-C88C-4894-9054-97DAE30B5ACF}
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:53 PM
Value 0
  Name:            ExtensionDll
  Type:            REG_SZ
  Data:            C:\Program Files\Microsoft SQL
Server\90\Tools\Binn\VSShell\Common7\Packages\Debugge
r\vsdebug.dll

Value 1
  Name:            RegistersSupported
  Type:            REG_SZ
  Data:            $user

Value 2
  Name:            RegistersEntryPoint
  Type:            REG_SZ
  Data:            EEExtension_UserRegister


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\AD7Metrics\Engine
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:53 PM

Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\AD7Metrics\Engine\{0796D276-
21B7-4092-9EAB-236AB427682E}
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:53 PM
Value 0
  Name:            CLSID
  Type:            REG_SZ
  Data:            {0796D276-21B7-4092-9EAB-
236AB427682E}


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\AD7Metrics\Engine\{1202F5B4-
3522-4149-BAD8-58B2079D704F}
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:53 PM
Value 0
  Name:            <NO NAME>
  Type:            REG_SZ
  Data:            guidSQLEng2

Value 1
  Name:            Name
  Type:            REG_SZ
  Data:            resource=C:\Program
Files\Microsoft SQL
Server\90\Tools\Binn\VSShell\Common7\Packages\Debugge
r\*\vsdebugui.dll#6007


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\AD7Metrics\Engine\{3B476D35-
A401-11D2-AAD4-00C04F990171}
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:53 PM
Value 0
  Name:            <NO NAME>
  Type:            REG_SZ
  Data:            guidNativeOnlyEng

Value 1
  Name:            Name
  Type:            REG_SZ
  Data:            resource=C:\Program
Files\Microsoft SQL
Server\90\Tools\Binn\VSShell\Common7\Packages\Debugge
r\*\vsdebugui.dll#6008


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\AD7Metrics\Engine\{449EC4CC-
30D2-4032-9256-EE18EB41B62B}
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:53 PM
Value 0
  Name:            <NO NAME>
  Type:            REG_SZ
  Data:            guidCOMPlusOnlyEng

Value 1
  Name:            Name
  Type:            REG_SZ
  Data:            resource=C:\Program
Files\Microsoft SQL
Server\90\Tools\Binn\VSShell\Common7\Packages\Debugge
r\*\vsdebugui.dll#6012


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\AD7Metrics\Engine\{5AF6F83C-
B555-11D1-8418-00C04FA302A1}
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:53 PM
Value 0
  Name:            <NO NAME>
  Type:            REG_SZ
  Data:            guidSQLEng

Value 1
  Name:            Name
  Type:            REG_SZ
  Data:            resource=C:\Program
Files\Microsoft SQL
Server\90\Tools\Binn\VSShell\Common7\Packages\Debugge
r\*\vsdebugui.dll#6007


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\AD7Metrics\Engine\{92EF0900-
2251-11D2-B72E-0000F87572EF}
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:53 PM
Value 0
  Name:            <NO NAME>
  Type:            REG_SZ
  Data:            guidCOMPlusNativeEng

Value 1
  Name:            Name
  Type:            REG_SZ
  Data:            resource=C:\Program
Files\Microsoft SQL
Server\90\Tools\Binn\VSShell\Common7\Packages\Debugge
r\*\vsdebugui.dll#6013


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\AD7Metrics\Engine\{E04BDE58-
45EC-48DB-9807-513F78865212}
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:53 PM
Value 0
  Name:            <NO NAME>
  Type:            REG_SZ
  Data:            guidCOMPlusSQLLocalEng
```


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```
Value 1
  Name:            Name
  Type:            REG_SZ
  Data:            resource=C:\Program
Files\Microsoft SQL
Server\90\Tools\Binn\VSShell\Common7\Packages\Debugge
r\*\vsdebugui.dll#6012


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\AppCommandLine
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:53 PM
Value 0
  Name:            ExeName
  Type:            REG_SZ
  Data:            {C9DD4A57-47FB-11D2-83E7-
00C04F9902C1}

Value 1
  Name:            JitDebug
  Type:            REG_SZ
  Data:            {C9DD4A57-47FB-11D2-83E7-
00C04F9902C1}


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\AppCommandLine\vs7jitdebuggingh
elp
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:53 PM
Value 0
  Name:            DemandLoad
  Type:            REG_DWORD
  Data:            0

Value 1
  Name:            HelpString
  Type:            REG_SZ
  Data:            #5078

Value 2
  Name:            Arguments
  Type:            REG_SZ
  Data:            0

Value 3
  Name:            Package
  Type:            REG_SZ
  Data:            {C9DD4A57-47FB-11D2-83E7-
00C04F9902C1}


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\AutoLoadPackages
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:53 PM

Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\AutoLoadPackages\{53544C4D-
FFD5-48A9-B04A-0700CCD31070}
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:53 PM
Value 0
  Name:            {53544C4D-B03D-4209-A7D0-
D9DD13A4019B}
  Type:            REG_DWORD
  Data:            0


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\AutoLoadPackages\{93694fa0-
0397-11d1-9f4e-00a0c911004f}
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:53 PM
Value 0
  Name:            {588205e0-66e0-11d3-8600-
00c04f6123b3}
  Type:            REG_DWORD
  Data:            0


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\AutoLoadPackages\{ADFC4E64-
0397-11D1-9F4E-00A0C911004F}
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:53 PM
Value 0
  Name:            {53544C4D-E3F8-4AA0-8195-
8A8D16019423}
  Type:            REG_DWORD
  Data:            0


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\AutoLoadPackages\{adfc4e66-
0397-11d1-9f4e-00a0c911004f}
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:53 PM
Value 0
  Name:            {588205e0-66e0-11d3-8600-
00c04f6123b3}
  Type:            REG_DWORD
  Data:            0


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\AutoLoadPackages\{F1536EF8-
92EC-443C-9ED7-FDADF150DA82}
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:53 PM
Value 0
  Name:            {C9DD4A57-47FB-11D2-83E7-
00C04F9902C1}
  Type:            REG_DWORD
  Data:            0


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\AutomationProperties
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:53 PM
Value 0
  Name:            <NO NAME>
  Type:            REG_SZ
  Data:            #14558

Value 1
  Name:            Package
  Type:            REG_SZ
  Data:            {DA9FB551-C724-11d0-AE1F-
00A0C90FFFC3}

Value 2
  Name:            Description
  Type:            REG_SZ
  Data:            #15069


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\AutomationProperties\Environmen
t
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:53 PM
Value 0
  Name:            <NO NAME>
  Type:            REG_SZ
  Data:            #14559

Value 1
  Name:            Package
  Type:            REG_SZ
  Data:            {DA9FB551-C724-11d0-AE1F-
00A0C90FFFC3}

Value 2
  Name:            Description
  Type:            REG_SZ
  Data:            #15070


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\AutomationProperties\Environmen
t\Documents
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:53 PM
Value 0
  Name:            <NO NAME>
  Type:            REG_SZ
  Data:            #14562

Value 1
  Name:            Package
  Type:            REG_SZ
  Data:            {DA9FB551-C724-11d0-AE1F-
00A0C90FFFC3}

Value 2
```


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```
  Name:            Name
  Type:            REG_SZ
  Data:            Environment.Documents

Value 3
  Name:            ProfileSave
  Type:            REG_DWORD
  Data:            0x1

Value 4
  Name:            Description
  Type:            REG_SZ
  Data:            #14892


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\AutomationProperties\Environmen
t\General
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:53 PM
Value 0
  Name:            <NO NAME>
  Type:            REG_SZ
  Data:            #14560

Value 1
  Name:            Package
  Type:            REG_SZ
  Data:            {DA9FB551-C724-11d0-AE1F-
00A0C90FFFC3}

Value 2
  Name:            Name
  Type:            REG_SZ
  Data:            Environment.General

Value 3
  Name:            ProfileSave
  Type:            REG_DWORD
  Data:            0x1

Value 4
  Name:            Description
  Type:            REG_SZ
  Data:            #14891


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\AutomationProperties\Environmen
t\Help
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:53 PM
Value 0
  Name:            <NO NAME>
  Type:            REG_SZ
  Data:            #1006

Value 1
  Name:            Name
  Type:            REG_SZ
  Data:            HelpToolsOptions

Value 2
  Name:            Package
  Type:            REG_SZ
  Data:            {4A791146-19E4-11d3-B86B-
00C04F79F802}


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\AutomationProperties\Environmen
t\Import and Export Settings
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:53 PM
Value 0
  Name:            <NO NAME>
  Type:            REG_SZ
  Data:            #14569

Value 1
  Name:            Package
  Type:            REG_SZ
  Data:            {DA9FB551-C724-11d0-AE1F-
00A0C90FFFC3}

Value 2
  Name:            Name
  Type:            REG_SZ
  Data:            Environment.Import and Export
Settings

Value 3
  Name:            ProfileSave
  Type:            REG_DWORD
  Data:            0x1

Value 4
  Name:            Description
  Type:            REG_SZ
  Data:            #14894

Value 5
  Name:            SecurityLevel
  Type:            REG_DWORD
  Data:            0x2

Value 6
  Name:            SensitivityLevel
  Type:            REG_DWORD
  Data:            0x1


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\AutomationProperties\Environmen
t\International
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:53 PM
Value 0
  Name:            Package
  Type:            REG_SZ
  Data:            {DA9FB551-C724-11d0-AE1F-
00A0C90FFFC3}

Value 1
  Name:            Name
  Type:            REG_SZ
  Data:            Environment.International


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\AutomationProperties\Environmen
t\Keyboard
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:53 PM
Value 0
  Name:            <NO NAME>
  Type:            REG_SZ
  Data:            #14561

Value 1
  Name:            Package
  Type:            REG_SZ
  Data:            {DA9FB551-C724-11d0-AE1F-
00A0C90FFFC3}

Value 2
  Name:            Name
  Type:            REG_SZ
  Data:            Environment.Keyboard


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\AutomationProperties\Environmen
t\ProjectsAndSolution
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:53 PM
Value 0
  Name:            <NO NAME>
  Type:            REG_SZ
  Data:            #14563

Value 1
  Name:            Package
  Type:            REG_SZ
  Data:            {DA9FB551-C724-11d0-AE1F-
00A0C90FFFC3}

Value 2
  Name:            Name
  Type:            REG_SZ
  Data:            Environment.ProjectsAndSolution

Value 3
  Name:            ProfileSave
  Type:            REG_DWORD
  Data:            0x1

Value 4
  Name:            Description
  Type:            REG_SZ
  Data:            #14893
```


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```
Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\AutomationProperties\Environmen
t\Startup
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:53 PM
Value 0
  Name:            <NO NAME>
  Type:            REG_SZ
  Data:            #13216

Value 1
  Name:            Package
  Type:            REG_SZ
  Data:            {DA9FB551-C724-11d0-AE1F-
00A0C90FFFC3}

Value 2
  Name:            Name
  Type:            REG_SZ
  Data:            Environment.Startup

Value 3
  Name:            ProfileSave
  Type:            REG_DWORD
  Data:            0x1

Value 4
  Name:            Description
  Type:            REG_SZ
  Data:            #14989


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\AutomationProperties\Environmen
t\TaskList
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:53 PM
Value 0
  Name:            <NO NAME>
  Type:            REG_SZ
  Data:            #14557

Value 1
  Name:            Name
  Type:            REG_SZ
  Data:            Environment.TaskList

Value 2
  Name:            Package
  Type:            REG_SZ
  Data:            {4A9B7E50-AA16-11d0-A8C5-
00A0C921A4D2}

Value 3
  Name:            ProfileSave
  Type:            REG_DWORD
  Data:            0x1

Value 4
  Name:            Description
  Type:            REG_SZ
  Data:            #14899


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\AutomationProperties\Environmen
t\WebBrowser
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:53 PM
Value 0
  Name:            <NO NAME>
  Type:            REG_SZ
  Data:            #1002

Value 1
  Name:            Name
  Type:            REG_SZ
  Data:            Environment.WebBrowser

Value 2
  Name:            Package
  Type:            REG_SZ
  Data:            {e8b06f41-6d01-11d2-aa7d-
00c04f990343}

Value 3
  Name:            ProfileSave
  Type:            REG_DWORD
  Data:            0x1

Value 4
  Name:            Description
  Type:            REG_SZ
  Data:            #14895


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\AutomationProperties\FontsAndCo
lors
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:53 PM

Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\AutomationProperties\FontsAndCo
lors\Printer
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:53 PM
Value 0
  Name:            Package
  Type:            REG_SZ
  Data:            {DA9FB551-C724-11d0-AE1F-
00A0C90FFFC3}

Value 1
  Name:            Name
  Type:            REG_SZ
  Data:            FontsAndColors.Printer


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\AutomationProperties\FontsAndCo
lors\TextEditor
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:53 PM
Value 0
  Name:            Package
  Type:            REG_SZ
  Data:            {DA9FB551-C724-11d0-AE1F-
00A0C90FFFC3}

Value 1
  Name:            Name
  Type:            REG_SZ
  Data:            FontsAndColors.Text Editor


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\AutomationProperties\TextEditor
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:53 PM
Value 0
  Name:            <NO NAME>
  Type:            REG_SZ
  Data:            #13022

Value 1
  Name:            Package
  Type:            REG_SZ
  Data:            {F5E7E720-1401-11d1-883B-
0000F87579D2}

Value 2
  Name:            Description
  Type:            REG_SZ
  Data:            #15072


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\AutomationProperties\TextEditor
\AllLanguages
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:53 PM
Value 0
  Name:            <NO NAME>
  Type:            REG_SZ
  Data:            #14059

Value 1
  Name:            Package
  Type:            REG_SZ
  Data:            {F5E7E720-1401-11d1-883B-
0000F87579D2}

Value 2
  Name:            Name
  Type:            REG_SZ
  Data:            TextEditor.AllLanguages

Value 3
  Name:            ProfileSave
  Type:            REG_DWORD
```


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```
  Data:            0x1


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\AutomationProperties\TextEditor
\Fonts
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:53 PM
Value 0
  Name:            <NO NAME>
  Type:            REG_SZ
  Data:            #14604

Value 1
  Name:            Package
  Type:            REG_SZ
  Data:            {F5E7E720-1401-11d1-883B-
0000F87579D2}

Value 2
  Name:            Name
  Type:            REG_SZ
  Data:            Fonts

Value 3
  Name:            ProfileSave
  Type:            REG_DWORD
  Data:            0x1

Value 4
  Name:            Description
  Type:            REG_SZ
  Data:            #14889


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\AutomationProperties\TextEditor
\General
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:53 PM
Value 0
  Name:            <NO NAME>
  Type:            REG_SZ
  Data:            #13565

Value 1
  Name:            Package
  Type:            REG_SZ
  Data:            {F5E7E720-1401-11d1-883B-
0000F87579D2}

Value 2
  Name:            Name
  Type:            REG_SZ
  Data:            General

Value 3
  Name:            ProfileSave
  Type:            REG_DWORD
  Data:            0x1

Value 4
  Name:            Description
  Type:            REG_SZ
  Data:            #14888


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\AutomationProperties\TextEditor
\PlainText
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:53 PM
Value 0
  Name:            <NO NAME>
  Type:            REG_SZ
  Data:            #13679

Value 1
  Name:            Package
  Type:            REG_SZ
  Data:            {F5E7E720-1401-11d1-883B-
0000F87579D2}

Value 2
  Name:            Name
  Type:            REG_SZ
  Data:            Plain Text

Value 3
  Name:            ProfileSave
  Type:            REG_DWORD
  Data:            0x1

Value 4
  Name:            Description
  Type:            REG_SZ
  Data:            #14890


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\AutomationProperties\TextEditor
\XML
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:53 PM
Value 0
  Name:            <NO NAME>
  Type:            REG_SZ
  Data:            #200

Value 1
  Name:            Name
  Type:            REG_SZ
  Data:            XML

Value 2
  Name:            Package
  Type:            REG_SZ
  Data:            {F5E7E720-1401-11D1-883B-
0000F87579D2}

Value 3
  Name:            ProfileSave
  Type:            REG_DWORD
  Data:            0x1

Value 4
  Name:            ResourcePackage
  Type:            REG_SZ
  Data:            {87569308-4813-40a0-9cd0-
d7a30838ca3f}


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\AutomationProperties\TextEditor
\XmlEditor
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:53 PM
Value 0
  Name:            <NO NAME>
  Type:            REG_SZ
  Data:            #205

Value 1
  Name:            Name
  Type:            REG_SZ
  Data:            XML.Miscellaneous

Value 2
  Name:            Package
  Type:            REG_SZ
  Data:            {87569308-4813-40a0-9cd0-
d7a30838ca3f}


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\CLSID
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:53 PM
Value 0
  Name:            <NO NAME>
  Type:            REG_SZ
  Data:


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\CLSID\{0024861F-E26C-4D23-B286-
1C607B4ACB01}
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:53 PM
Value 0
  Name:            <NO NAME>
  Type:            REG_SZ
  Data:
Microsoft.DataTransformationServices.Project.DataTran
sformationsBuildPropertyPage

Value 1
  Name:            InprocServer32
  Type:            REG_SZ
  Data:            mscoree.dll

Value 2
```


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```
  Name:            ThreadingModel
  Type:            REG_SZ
  Data:            Both

Value 3
  Name:            Class
  Type:            REG_SZ
  Data:
Microsoft.DataTransformationServices.Project.DataTran
sformationsBuildPropertyPage

Value 4
  Name:            Assembly
  Type:            REG_SZ
  Data:
Microsoft.DataTransformationServices.VsIntegration

Value 5
  Name:            RuntimeVersion
  Type:            REG_SZ
  Data:            v1.1.4322


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\CLSID\{0452cd78-e6bf-4d67-848b-
994dce92a503}
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:53 PM
Value 0
  Name:            ThreadingModel
  Type:            REG_SZ
  Data:            Both

Value 1
  Name:            Assembly
  Type:            REG_SZ
  Data:            Microsoft.VisualStudio.Design,
Version=2.0.0.0, Culture=neutral,
PublicKeyToken=b03f5f7f11d50a3a

Value 2
  Name:            Class
  Type:            REG_SZ
  Data:
Microsoft.VisualStudio.Design.Serialization.VBMyResXF
ileCodeGenerator

Value 3
  Name:            InprocServer32
  Type:            REG_SZ
  Data:            C:\WINDOWS\system32\mscoree.dll

Value 4
  Name:            <NO NAME>
  Type:            REG_SZ
  Data:
Microsoft.VisualStudio.Design.Serialization.VBMyResXF
ileCodeGenerator


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\CLSID\{04b5c000-df2e-42be-8682-
2a9f39c8daa5}
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:53 PM
Value 0
  Name:            ThreadingModel
  Type:            REG_SZ
  Data:            Apartment

Value 1
  Name:            InprocServer32
  Type:            REG_SZ
  Data:            C:\Program Files\Microsoft SQL
Server\90\Tools\Binn\VSShell\Common7\Tools\VDT\vdt80.
dll

Value 2
  Name:            <NO NAME>
  Type:            REG_SZ
  Data:            PrimerMgr Class


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\CLSID\{04b5c000-df2e-42be-8682-
2a9f39c8daa5}\Programmable
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:53 PM
Value 0
  Name:            <NO NAME>
  Type:            REG_SZ
  Data:


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\CLSID\{05DD7650-130A-11d3-AFCB-
00105A9991EF}
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:53 PM
Value 0
  Name:            InprocServer32
  Type:            REG_SZ
  Data:            C:\Program Files\Microsoft SQL
Server\90\Tools\Binn\VSShell\Common7\IDE\msenv.dll

Value 1
  Name:            <NO NAME>
  Type:            REG_SZ
  Data:            VsTextTipWindow class


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\CLSID\{0796D276-21B7-4092-9EAB-
236AB427682E}
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:53 PM
Value 0
  Name:            <NO NAME>
  Type:            REG_SZ
  Data:
Microsoft.DataWarehouse.Project.CubeDebugger.CubeDebu
gEngine

Value 1
  Name:            InprocServer32
  Type:            REG_SZ
  Data:            mscoree.dll

Value 2
  Name:            ThreadingModel
  Type:            REG_SZ
  Data:            Both

Value 3
  Name:            Class
  Type:            REG_SZ
  Data:
Microsoft.DataWarehouse.Project.CubeDebugger.CubeDebu
gEngine

Value 4
  Name:            Assembly
  Type:            REG_SZ
  Data:
Microsoft.AnalysisServices.Project,
Version=9.00.242.00, Culture=neutral,
PublicKeyToken=89845dcd8080cc91

Value 5
  Name:            RuntimeVersion
  Type:            REG_SZ
  Data:            v1.0.3705


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\CLSID\{0dfbe0f3-bc01-3308-a764-
9edcaeb3bfc3}
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:53 PM
Value 0
  Name:            ThreadingModel
  Type:            REG_SZ
  Data:            Both

Value 1
  Name:            Assembly
  Type:            REG_SZ
  Data:            Microsoft.VisualStudio.Design,
Version=2.0.0.0, Culture=neutral,
PublicKeyToken=b03f5f7f11d50a3a

Value 2
  Name:            Class
  Type:            REG_SZ
  Data:
Microsoft.VisualStudio.Design.Serialization.ResXGloba
lObjectProvider

Value 3
  Name:            InprocServer32
  Type:            REG_SZ
```


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```
  Data:            C:\WINDOWS\system32\mscoree.dll

Value 4
  Name:            <NO NAME>
  Type:            REG_SZ
  Data:
Microsoft.VisualStudio.Design.Serialization.ResXGloba
lObjectProvider


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\CLSID\{15d5e750-72dc-466c-a1b9-
222fbb0c58c0}
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:53 PM
Value 0
  Name:            ThreadingModel
  Type:            REG_SZ
  Data:            Apartment

Value 1
  Name:            InprocServer32
  Type:            REG_SZ
  Data:            C:\Program Files\Microsoft SQL
Server\90\Tools\Binn\VSShell\Common7\Tools\VDT\vdt80.
dll

Value 2
  Name:            <NO NAME>
  Type:            REG_SZ
  Data:            CQryAutoColumn Class


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\CLSID\{15d5e750-72dc-466c-a1b9-
222fbb0c58c0}\Programmable
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:53 PM
Value 0
  Name:            <NO NAME>
  Type:            REG_SZ
  Data:


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\CLSID\{15d5e750-72dc-466c-a1b9-
222fbb0c58c0}\TypeLib
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:53 PM
Value 0
  Name:            <NO NAME>
  Type:            REG_SZ
  Data:            {8d7902be-835f-42b9-aff4-
222660d45ea4}


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\CLSID\{163968a9-0a82-4a6c-b369-
a452477f26a5}
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:53 PM
Value 0
  Name:            <NO NAME>
  Type:            REG_SZ
  Data:            StreamWrapper Class

Value 1
  Name:            InprocServer32
  Type:            REG_SZ
  Data:            C:\Program Files\Microsoft SQL
Server\90\Tools\Binn\VSShell\Common7\Tools\VDT\vdt80.
dll

Value 2
  Name:            ThreadingModel
  Type:            REG_SZ
  Data:            Apartment


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\CLSID\{163968a9-0a82-4a6c-b369-
a452477f26a5}\Programmable
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:53 PM
Value 0
  Name:            <NO NAME>
  Type:            REG_SZ
  Data:


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\CLSID\{1a5c7e00-a12e-4cb3-9cd2-
30597f5f1d8e}
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:53 PM
Value 0
  Name:            <NO NAME>
  Type:            REG_SZ
  Data:            CQryAutoColsCollection Class

Value 1
  Name:            InprocServer32
  Type:            REG_SZ
  Data:            C:\Program Files\Microsoft SQL
Server\90\Tools\Binn\VSShell\Common7\Tools\VDT\vdt80.
dll

Value 2
  Name:            ThreadingModel
  Type:            REG_SZ
  Data:            Apartment


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\CLSID\{1a5c7e00-a12e-4cb3-9cd2-
30597f5f1d8e}\Programmable
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:53 PM
Value 0
  Name:            <NO NAME>
  Type:            REG_SZ
  Data:


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\CLSID\{1a5c7e00-a12e-4cb3-9cd2-
30597f5f1d8e}\TypeLib
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:53 PM
Value 0
  Name:            <NO NAME>
  Type:            REG_SZ
  Data:            {8d7902be-835f-42b9-aff4-
222660d45ea4}


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\CLSID\{22C4B999-18DD-4E61-AF4A-
8C3292CCC926}
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:53 PM
Value 0
  Name:            <NO NAME>
  Type:            REG_SZ
  Data:
Microsoft.DataWarehouse.Project.AnalysisServicesBuild
PropertyPage

Value 1
  Name:            InprocServer32
  Type:            REG_SZ
  Data:            mscoree.dll

Value 2
  Name:            ThreadingModel
  Type:            REG_SZ
  Data:            Both

Value 3
  Name:            Class
  Type:            REG_SZ
  Data:
Microsoft.AnalysisServices.Project.AnalysisServicesBu
ildPropertyPage

Value 4
  Name:            Assembly
  Type:            REG_SZ
  Data:
Microsoft.AnalysisServices.Project,
Version=9.00.242.00, Culture=neutral,
PublicKeyToken=89845dcd8080cc91

Value 5
  Name:            RuntimeVersion
  Type:            REG_SZ
  Data:            v1.1.4322
```


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```
Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\CLSID\{232ce68f-32bb-48c9-9808-
0e1d6e71c57b}
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:53 PM
Value 0
  Name:            <NO NAME>
  Type:            REG_SZ
  Data:
Microsoft.VisualStudio.CommonIDE.ResourceLoader.Resou
rceLoader.8.0

Value 1
  Name:            InprocServer32
  Type:            REG_SZ
  Data:            C:\WINDOWS\system32\mscoree.dll

Value 2
  Name:            ThreadingModel
  Type:            REG_SZ
  Data:            Both

Value 3
  Name:            Class
  Type:            REG_SZ
  Data:
Microsoft.VisualStudio.CommonIDE.ResourceLoader.Resou
rceLoader

Value 4
  Name:            Assembly
  Type:            REG_SZ
  Data:            Microsoft.VisualStudio.CommonIDE,
Version=8.0.0.0, Culture=Neutral,
PublicKeyToken=b03f5f7f11d50a3a

Value 5
  Name:            CodeBase
  Type:            REG_SZ
  Data:            file:///C:\Program Files\Microsoft
SQL
Server\90\Tools\Binn\VSShell\Common7\IDE\Microsoft.Vi
sualStudio.CommonIDE.dll


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\CLSID\{232ce68f-32bb-48c9-9808-
0e1d6e71c57b}\InprocServer32
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:53 PM

Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\CLSID\{232ce68f-32bb-48c9-9808-
0e1d6e71c57b}\InprocServer32\8.0.0.0
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:53 PM
Value 0
  Name:            Class
  Type:            REG_SZ
  Data:
Microsoft.VisualStudio.CommonIDE.ResourceLoader

Value 1
  Name:            Assembly
  Type:            REG_SZ
  Data:            Microsoft.VisualStudio.CommonIDE,
Version=8.0.0.0, Culture=Neutral,
PublicKeyToken=b03f5f7f11d50a3a

Value 2
  Name:            CodeBase
  Type:            REG_SZ
  Data:            file:///C:\Program Files\Microsoft
SQL
Server\90\Tools\Binn\VSShell\Common7\IDE\Microsoft.Vi
sualStudio.CommonIDE.dll


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\CLSID\{232ce68f-32bb-48c9-9808-
0e1d6e71c57b}\ProgId
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:53 PM
Value 0
  Name:            <NO NAME>
  Type:            REG_SZ
  Data:
Microsoft.VisualStudio.CommonIDE.ResourceLoader.Resou
rceLoader.8.0


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\CLSID\{261A5572-C649-11d0-A8DF-
00A0C921A4D2}
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:53 PM
Value 0
  Name:            InprocServer32
  Type:            REG_SZ
  Data:            C:\Program Files\Microsoft SQL
Server\90\Tools\Binn\VSShell\Common7\IDE\msenv.dll

Value 1
  Name:            <NO NAME>
  Type:            REG_SZ
  Data:            VsMethodTipWindow class


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\CLSID\{26f2a656-27cd-436a-89e3-
3d4616811281}
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:53 PM
Value 0
  Name:            ThreadingModel
  Type:            REG_SZ
  Data:            Both

Value 1
  Name:            Assembly
  Type:            REG_SZ
  Data:            Microsoft.VisualStudio.Design,
Version=2.0.0.0, Culture=neutral,
PublicKeyToken=b03f5f7f11d50a3a

Value 2
  Name:            Class
  Type:            REG_SZ
  Data:
Microsoft.VisualStudio.Design.Serialization.LicXFileG
enerator

Value 3
  Name:            InprocServer32
  Type:            REG_SZ
  Data:            C:\WINDOWS\system32\mscoree.dll

Value 4
  Name:            <NO NAME>
  Type:            REG_SZ
  Data:
Microsoft.VisualStudio.Design.Serialization.LicXFileG
enerator


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\CLSID\{31A81214-5A9F-4532-ACD0-
3204A9AB5D08}
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:53 PM
Value 0
  Name:            <NO NAME>
  Type:            REG_SZ
  Data:            VsTextSpanSet Class

Value 1
  Name:            InprocServer32
  Type:            REG_SZ
  Data:            C:\Program Files\Microsoft SQL
Server\90\Tools\Binn\VSShell\Common7\IDE\msenv.dll


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\CLSID\{374fc192-9ebd-4954-a0f7-
26221439a1c2}
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:53 PM
Value 0
  Name:            <NO NAME>
  Type:            REG_SZ
  Data:            TrackSelection Class

Value 1
  Name:            InprocServer32
  Type:            REG_SZ
  Data:            C:\Program Files\Microsoft SQL
Server\90\Tools\Binn\VSShell\Common7\Tools\VDT\vdt80.
dll

Value 2
```


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```
  Name:            ThreadingModel
  Type:            REG_SZ
  Data:            Apartment


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\CLSID\{39F4B568-7166-42b3-87E6-
6B856864AE55}
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:53 PM
Value 0
  Name:            InprocServer32
  Type:            REG_SZ
  Data:            C:\Program Files\Microsoft SQL
Server\90\Tools\Binn\VSShell\Common7\IDE\msenv.dll

Value 1
  Name:            <NO NAME>
  Type:            REG_SZ
  Data:            VsIntellisenseLangTip Class


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\CLSID\{3c1f59c6-69cf-11d2-aa7c-
00c04f990343}
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:53 PM
Value 0
  Name:            <NO NAME>
  Type:            REG_SZ
  Data:            VsUserContext Module

Value 1
  Name:            InprocServer32
  Type:            REG_SZ
  Data:            C:\Program Files\Microsoft SQL
Server\90\Tools\Binn\VSShell\Common7\IDE\msenv.dll


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\CLSID\{3e77fa94-526f-4233-bf81-
b2b0329a62b9}
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:53 PM
Value 0
  Name:            InprocServer32
  Type:            REG_SZ
  Data:            C:\Program Files\Microsoft SQL
Server\90\Tools\Binn\VSShell\Common7\IDE\msenv.dll

Value 1
  Name:            <NO NAME>
  Type:            REG_SZ
  Data:            VsTextBufferCoordinator Class


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\CLSID\{3e94c4f7-3bcb-4810-8f3d-
ba993731443b}
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:53 PM
Value 0
  Name:            <NO NAME>
  Type:            REG_SZ
  Data:            MSVDTDDGridCtrl8 Object

Value 1
  Name:            InprocServer32
  Type:            REG_SZ
  Data:            C:\Program Files\Microsoft SQL
Server\90\Tools\Binn\VSShell\Common7\Tools\VDT\vdt80.
dll

Value 2
  Name:            ThreadingModel
  Type:            REG_SZ
  Data:            Apartment


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\CLSID\{3e94c4f7-3bcb-4810-8f3d-
ba993731443b}\ControlMDTPrivate
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:53 PM
Value 0
  Name:            <NO NAME>
  Type:            REG_SZ
  Data:


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\CLSID\{3e94c4f7-3bcb-4810-8f3d-
ba993731443b}\MiscStatus
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:53 PM
Value 0
  Name:            <NO NAME>
  Type:            REG_SZ
  Data:            0


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\CLSID\{3e94c4f7-3bcb-4810-8f3d-
ba993731443b}\MiscStatus\1
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:53 PM
Value 0
  Name:            <NO NAME>
  Type:            REG_SZ
  Data:            131473


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\CLSID\{3e94c4f7-3bcb-4810-8f3d-
ba993731443b}\ToolboxBitmap32
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:53 PM
Value 0
  Name:            <NO NAME>
  Type:            REG_SZ
  Data:            C:\Program Files\Microsoft SQL
Server\90\Tools\Binn\VSShell\Common7\Tools\VDT\vdt80.
dll, 1


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\CLSID\{3e94c4f7-3bcb-4810-8f3d-
ba993731443b}\Version
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:53 PM
Value 0
  Name:            <NO NAME>
  Type:            REG_SZ
  Data:            8.0


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\CLSID\{4187fbf6-7e80-44d0-bc1f-
0e33d6254098}
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:53 PM
Value 0
  Name:            ThreadingModel
  Type:            REG_SZ
  Data:            Both

Value 1
  Name:            Assembly
  Type:            REG_SZ
  Data:            Microsoft.VisualStudio.Design,
Version=2.0.0.0, Culture=neutral,
PublicKeyToken=b03f5f7f11d50a3a

Value 2
  Name:            Class
  Type:            REG_SZ
  Data:
Microsoft.VisualStudio.Design.Serialization.ResXFileG
enerator

Value 3
  Name:            InprocServer32
  Type:            REG_SZ
  Data:            C:\WINDOWS\system32\mscoree.dll

Value 4
  Name:            <NO NAME>
  Type:            REG_SZ
  Data:
Microsoft.VisualStudio.Design.Serialization.ResXFileG
enerator


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\CLSID\{452807CC-9BFA-11d0-8C3F-
00C04FC2AAE2}
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:53 PM
```


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```
Value 0
  Name:            InprocServer32
  Type:            REG_SZ
  Data:            C:\Program Files\Microsoft SQL
Server\90\Tools\Binn\VSShell\Common7\IDE\msenv.dll

Value 1
  Name:            <NO NAME>
  Type:            REG_SZ
  Data:            VsDropdownBar Class


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\CLSID\{4921502a-feb9-4960-8f27-
9833942b3de7}
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:53 PM
Value 0
  Name:            <NO NAME>
  Type:            REG_SZ
  Data:            CQryAutoParameterCollection Class

Value 1
  Name:            InprocServer32
  Type:            REG_SZ
  Data:            C:\Program Files\Microsoft SQL
Server\90\Tools\Binn\VSShell\Common7\Tools\VDT\vdt80.
dll

Value 2
  Name:            ThreadingModel
  Type:            REG_SZ
  Data:            Apartment


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\CLSID\{4921502a-feb9-4960-8f27-
9833942b3de7}\Programmable
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:53 PM
Value 0
  Name:            <NO NAME>
  Type:            REG_SZ
  Data:


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\CLSID\{4921502a-feb9-4960-8f27-
9833942b3de7}\TypeLib
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:53 PM
Value 0
  Name:            <NO NAME>
  Type:            REG_SZ
  Data:            {8d7902be-835f-42b9-aff4-
222660d45ea4}


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\CLSID\{4970C2BC-AF33-4a73-A34F-
18B0584C40E4}
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:53 PM
Value 0
  Name:            <NO NAME>
  Type:            REG_SZ
  Data:            VsExpansionManager class

Value 1
  Name:            InprocServer32
  Type:            REG_SZ
  Data:            C:\Program Files\Microsoft SQL
Server\90\Tools\Binn\VSShell\Common7\IDE\msenv.dll


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\CLSID\{4FF9DEF4-8922-4D02-9379-
3FFA64D1D639}
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:53 PM
Value 0
  Name:            <NO NAME>
  Type:            REG_SZ
  Data:            CLSID_SDMProgramProvider

Value 1
  Name:            InprocServer32
  Type:            REG_SZ
  Data:            C:\Program Files\Microsoft SQL
Server\90\Tools\Binn\VSShell\Common7\Packages\Debugge
r\vsdebug.dll

Value 2
  Name:            ThreadingModel
  Type:            REG_SZ
  Data:            Apartment


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\CLSID\{5130C7AB-85BB-11d3-B363-
00C04F611E41}
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:53 PM
Value 0
  Name:            InprocServer32
  Type:            REG_SZ
  Data:            C:\Program Files\Microsoft SQL
Server\90\Tools\Binn\VSShell\Common7\IDE\msenv.dll

Value 1
  Name:            <NO NAME>
  Type:            REG_SZ
  Data:            VsLocalUserData Class


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\CLSID\{53544C4D-0989-400e-ACFF-
B66008BF29C4}
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:53 PM
Value 0
  Name:            ThreadingModel
  Type:            REG_SZ
  Data:            Both

Value 1
  Name:            InprocServer32
  Type:            REG_SZ
  Data:            C:\Program Files\Microsoft SQL
Server\90\Tools\Binn\VSShell\Common7\IDE\VS
SCC\msemp.dll

Value 2
  Name:            <NO NAME>
  Type:            REG_SZ
  Data:            VSEE Versioning WEC Factory


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\CLSID\{53544C4D-2692-4ae7-A9A0-
A39CAC56607A}
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:53 PM
Value 0
  Name:            ThreadingModel
  Type:            REG_SZ
  Data:            Both

Value 1
  Name:            InprocServer32
  Type:            REG_SZ
  Data:            C:\Program Files\Microsoft SQL
Server\90\Tools\Binn\VSShell\Common7\IDE\VS
SCC\msemp.dll

Value 2
  Name:            <NO NAME>
  Type:            REG_SZ
  Data:            VSEE Versioning Enlistment Manager
Proxy Data Source


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\CLSID\{53544C4D-CFBF-404e-9E37-
19C8BB80F6E3}
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:53 PM
Value 0
  Name:            ThreadingModel
  Type:            REG_SZ
  Data:            Both

Value 1
  Name:            InprocServer32
  Type:            REG_SZ
  Data:            C:\Program Files\Microsoft SQL
Server\90\Tools\Binn\VSShell\Common7\IDE\VS
SCC\VssProvider.dll

Value 2
```


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```
  Name:            <NO NAME>
  Type:            REG_SZ
  Data:            VAPI Scheme Parser Msss


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\CLSID\{5a303e2f-b50c-4f84-a3e1-
dbeafdabd6a9}
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:53 PM
Value 0
  Name:            <NO NAME>
  Type:            REG_SZ
  Data:            CQryAutoParameter Class

Value 1
  Name:            InprocServer32
  Type:            REG_SZ
  Data:            C:\Program Files\Microsoft SQL
Server\90\Tools\Binn\VSShell\Common7\Tools\VDT\vdt80.
dll

Value 2
  Name:            ThreadingModel
  Type:            REG_SZ
  Data:            Apartment


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\CLSID\{5a303e2f-b50c-4f84-a3e1-
dbeafdabd6a9}\Programmable
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:53 PM
Value 0
  Name:            <NO NAME>
  Type:            REG_SZ
  Data:


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\CLSID\{5a303e2f-b50c-4f84-a3e1-
dbeafdabd6a9}\TypeLib
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:53 PM
Value 0
  Name:            <NO NAME>
  Type:            REG_SZ
  Data:            {8d7902be-835f-42b9-aff4-
222660d45ea4}


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\CLSID\{5A46C6DE-1FE4-43b8-8E1E-
598AE65F184A}
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:53 PM
Value 0
  Name:            InprocServer32
  Type:            REG_SZ
  Data:            C:\Program Files\Microsoft SQL
Server\90\Tools\Binn\VSShell\Common7\IDE\msenv.dll

Value 1
  Name:            <NO NAME>
  Type:            REG_SZ
  Data:            VsSmartTagTipWindow class


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\CLSID\{5CEB3CEF-F536-428B-A798-
D1A31C67167C}
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:53 PM
Value 0
  Name:            ThreadingModel
  Type:            REG_SZ
  Data:            Apartment

Value 1
  Name:            InprocServer32
  Type:            REG_SZ
  Data:            C:\Program Files\Microsoft SQL
Server\90\Tools\Binn\VSShell\Common7\Packages\Debugge
r\vsdebug.dll

Value 2
  Name:            <NO NAME>
  Type:            REG_SZ
  Data:            VSDebugFindSourcePage


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\CLSID\{5EB7D9F7-AF21-400E-A2C4-
7FD6396F8641}
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:53 PM
Value 0
  Name:            <NO NAME>
  Type:            REG_SZ
  Data:            Session Debug Manager

Value 1
  Name:            InprocServer32
  Type:            REG_SZ
  Data:            C:\Program Files\Microsoft SQL
Server\90\Tools\Binn\VSShell\Common7\Packages\Debugge
r\vsdebug.dll

Value 2
  Name:            ThreadingModel
  Type:            REG_SZ
  Data:            Apartment


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\CLSID\{6114C8A2-0CE9-11d1-8BD9-
00A0C90F26F7}
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:53 PM
Value 0
  Name:            <NO NAME>
  Type:            REG_SZ
  Data:            VS COM References Dialog

Value 1
  Name:            InprocServer32
  Type:            REG_SZ
  Data:            C:\Program Files\Microsoft SQL
Server\90\Tools\Binn\VSShell\Common7\IDE\msenv.dll


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\CLSID\{63954172-BC86-11d2-B2CF-
00C04FB17608}
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:53 PM
Value 0
  Name:            InprocServer32
  Type:            REG_SZ
  Data:            C:\Program Files\Microsoft SQL
Server\90\Tools\Binn\VSShell\Common7\IDE\msenv.dll

Value 1
  Name:            <NO NAME>
  Type:            REG_SZ
  Data:            VisualStudio Solution
Configurations Property Page


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\CLSID\{64cc4181-1a6d-40a1-b911-
d710932e570d}
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:53 PM
Value 0
  Name:            <NO NAME>
  Type:            REG_SZ
  Data:            MDT OleUndoManager Class

Value 1
  Name:            InprocServer32
  Type:            REG_SZ
  Data:            C:\Program Files\Microsoft SQL
Server\90\Tools\Binn\VSShell\Common7\Tools\VDT\vdt80.
dll

Value 2
  Name:            ThreadingModel
  Type:            REG_SZ
  Data:            Apartment


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\CLSID\{66B88230-2363-4992-B740-
B0450A6F51CA}
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:53 PM
Value 0
  Name:            <NO NAME>
```


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```
  Type:            REG_SZ
  Data:            VsTextImage Class

Value 1
  Name:            InprocServer32
  Type:            REG_SZ
  Data:            C:\Program Files\Microsoft SQL
Server\90\Tools\Binn\VSShell\Common7\IDE\msenv.dll


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\CLSID\{6A1A6EB8-B7E8-413e-81F5-
D39D3FD574EB}
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:53 PM
Value 0
  Name:            <NO NAME>
  Type:            REG_SZ
  Data:
Microsoft.VisualStudio.CommonIDE.PrimeCLR

Value 1
  Name:            InprocServer32
  Type:            REG_SZ
  Data:            C:\WINDOWS\system32\mscoree.dll

Value 2
  Name:            ThreadingModel
  Type:            REG_SZ
  Data:            Both

Value 3
  Name:            Class
  Type:            REG_SZ
  Data:
Microsoft.VisualStudio.CommonIDE.PrimeCLR

Value 4
  Name:            Assembly
  Type:            REG_SZ
  Data:            Microsoft.VisualStudio.CommonIDE,
Version=8.0.0.0, Culture=Neutral,
PublicKeyToken=b03f5f7f11d50a3a

Value 5
  Name:            CodeBase
  Type:            REG_SZ
  Data:            file:///C:\Program Files\Microsoft
SQL
Server\90\Tools\Binn\VSShell\Common7\IDE\Microsoft.Vi
sualStudio.CommonIDE.dll


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\CLSID\{6C3B3FFA-D43C-4793-9742-
F7938619E81F}
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:53 PM
Value 0
  Name:            <NO NAME>
  Type:            REG_SZ
  Data:
Microsoft.DataTransformationServices.Project.DtsGener
alPropertyPage

Value 1
  Name:            InprocServer32
  Type:            REG_SZ
  Data:            mscoree.dll

Value 2
  Name:            ThreadingModel
  Type:            REG_SZ
  Data:            Both

Value 3
  Name:            Class
  Type:            REG_SZ
  Data:
Microsoft.DataTransformationServices.Project.DtsGener
alPropertyPage

Value 4
  Name:            Assembly
  Type:            REG_SZ
  Data:
Microsoft.DataTransformationServices.VsIntegration

Value 5
  Name:            RuntimeVersion
  Type:            REG_SZ
  Data:            v1.1.4322


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\CLSID\{6E87CFAD-6C05-4adf-9CD7-
3B7943875B7C}
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:53 PM
Value 0
  Name:            <NO NAME>
  Type:            REG_SZ
  Data:            Visual Studio Common IDE Package

Value 1
  Name:            InprocServer32
  Type:            REG_SZ
  Data:            C:\WINDOWS\system32\mscoree.dll

Value 2
  Name:            Class
  Type:            REG_SZ
  Data:
Microsoft.VisualStudio.CommonIDE.CommonIDEPackage

Value 3
  Name:            Assembly
  Type:            REG_SZ
  Data:            Microsoft.VisualStudio.CommonIDE,
Version=8.0.0.0, Culture=Neutral,
PublicKeyToken=b03f5f7f11d50a3a

Value 4
  Name:            CodeBase
  Type:            REG_SZ
  Data:            file:///C:\Program Files\Microsoft
SQL
Server\90\Tools\Binn\VSShell\Common7\IDE\Microsoft.Vi
sualStudio.CommonIDE.dll


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\CLSID\{6eaad443-3795-4f98-a983-
e83a573b4e12}
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:53 PM
Value 0
  Name:            <NO NAME>
  Type:            REG_SZ
  Data:            AUtoDataSource Class

Value 1
  Name:            InprocServer32
  Type:            REG_SZ
  Data:            C:\Program Files\Microsoft SQL
Server\90\Tools\Binn\VSShell\Common7\Tools\VDT\vdt80.
dll

Value 2
  Name:            ThreadingModel
  Type:            REG_SZ
  Data:            Apartment


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\CLSID\{6eaad443-3795-4f98-a983-
e83a573b4e12}\Programmable
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:53 PM
Value 0
  Name:            <NO NAME>
  Type:            REG_SZ
  Data:


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\CLSID\{6eaad443-3795-4f98-a983-
e83a573b4e12}\TypeLib
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:53 PM
Value 0
  Name:            <NO NAME>
  Type:            REG_SZ
  Data:            {8d7902be-835f-42b9-aff4-
222660d45ea4}


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\CLSID\{7af30a6f-4154-46e6-8db7-
889c3a4a3223}
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:53 PM
```


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```
Value 0
  Name:            <NO NAME>
  Type:            REG_SZ
  Data:
Microsoft.VisualStudio.Shell.PrimeCLR

Value 1
  Name:            InprocServer32
  Type:            REG_SZ
  Data:            C:\WINDOWS\system32\mscoree.dll

Value 2
  Name:            Class
  Type:            REG_SZ
  Data:
Microsoft.VisualStudio.Shell.PrimeCLR

Value 3
  Name:            Assembly
  Type:            REG_SZ
  Data:            Microsoft.VisualStudio,
Version=2.0.0.0, Culture=neutral,
PublicKeyToken=b03f5f7f11d50a3a

Value 4
  Name:            ThreadingModel
  Type:            REG_SZ
  Data:            Both


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\CLSID\{82307E90-2108-4BEE-8F8C-
DE3E0CE941A2}
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:53 PM
Value 0
  Name:            <NO NAME>
  Type:            REG_SZ
  Data:
Microsoft.DataWarehouse.Project.DebugPropertyPage

Value 1
  Name:            InprocServer32
  Type:            REG_SZ
  Data:            mscoree.dll

Value 2
  Name:            ThreadingModel
  Type:            REG_SZ
  Data:            Both

Value 3
  Name:            Class
  Type:            REG_SZ
  Data:
Microsoft.DataWarehouse.Project.DebugPropertyPage

Value 4
  Name:            Assembly
  Type:            REG_SZ
  Data:
Microsoft.AnalysisServices.Project,
Version=9.00.242.00, Culture=neutral,
PublicKeyToken=89845dcd8080cc91

Value 5
  Name:            RuntimeVersion
  Type:            REG_SZ
  Data:            v1.1.4322


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\CLSID\{87569308-4813-40A0-9CD0-
D7A30838CA3F}
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:53 PM
Value 0
  Name:            <NO NAME>
  Type:            REG_SZ
  Data:            Microsoft.XmlEditor.Package


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\CLSID\{87569308-4813-40A0-9CD0-
D7A30838CA3F}\Implemented Categories
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:53 PM

Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\CLSID\{87569308-4813-40A0-9CD0-
D7A30838CA3F}\Implemented Categories\{62C8FE65-4EBB-
45E7-B440-6E39B2CDBF29}
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:53 PM
Value 0
  Name:            <NO NAME>
  Type:            REG_SZ
  Data:


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\CLSID\{87569308-4813-40A0-9CD0-
D7A30838CA3F}\InprocServer32
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:53 PM
Value 0
  Name:            <NO NAME>
  Type:            REG_SZ
  Data:            C:\WINDOWS\system32\mscoree.dll

Value 1
  Name:            ThreadingModel
  Type:            REG_SZ
  Data:            Both

Value 2
  Name:            Class
  Type:            REG_SZ
  Data:            Microsoft.XmlEditor.Package

Value 3
  Name:            Assembly
  Type:            REG_SZ
  Data:            Microsoft.XmlEditor,
Version=2.0.0.0, Culture=neutral,
PublicKeyToken=b03f5f7f11d50a3a

Value 4
  Name:            RuntimeVersion
  Type:            REG_SZ
  Data:            2.0.0.0

Value 5
  Name:            CodeBase
  Type:            REG_SZ
  Data:            C:\Program Files\Microsoft SQL
Server\90\Tools\Binn\VSShell\Common7\IDE\Xml\Microsof
t.XmlEditor.dll


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\CLSID\{87569308-4813-40A0-9CD0-
D7A30838CA3F}\InprocServer32\2.0.0.0
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:53 PM
Value 0
  Name:            Class
  Type:            REG_SZ
  Data:            Microsoft.XmlEditor.Package

Value 1
  Name:            Assembly
  Type:            REG_SZ
  Data:            Microsoft.XmlEditor,
Version=2.0.0.0, Culture=neutral,
PublicKeyToken=b03f5f7f11d50a3a

Value 2
  Name:            RuntimeVersion
  Type:            REG_SZ
  Data:            2.0.0.0

Value 3
  Name:            CodeBase
  Type:            REG_SZ
  Data:            C:\Program Files\Microsoft SQL
Server\90\Tools\Binn\VSShell\Common7\IDE\Xml\Microsof
t.XmlEditor.dll


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\CLSID\{87569308-4813-40A0-9CD0-
D7A30838CA3F}\ProgId
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:53 PM
Value 0
  Name:            <NO NAME>
  Type:            REG_SZ
  Data:            Microsoft.XmlEditor.Package
```


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```
Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\CLSID\{8B217746-717D-11CE-AB5B-
D41203C10000}
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:53 PM
Value 0
  Name:            InprocServer32
  Type:            REG_SZ
  Data:            C:\Program Files\Microsoft SQL
Server\90\Tools\Binn\VSShell\Common7\IDE\vstlbinf.dll

Value 1
  Name:            <NO NAME>
  Type:            REG_SZ
  Data:            CLSID_TypeLibInfo


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\CLSID\{8B217752-717D-11CE-AB5B-
D41203C10000}
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:53 PM
Value 0
  Name:            InprocServer32
  Type:            REG_SZ
  Data:            C:\Program Files\Microsoft SQL
Server\90\Tools\Binn\VSShell\Common7\IDE\vstlbinf.dll

Value 1
  Name:            <NO NAME>
  Type:            REG_SZ
  Data:            CLSID_SearchHelper


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\CLSID\{8B21775E-717D-11CE-AB5B-
D41203C10000}
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:53 PM
Value 0
  Name:            InprocServer32
  Type:            REG_SZ
  Data:            C:\Program Files\Microsoft SQL
Server\90\Tools\Binn\VSShell\Common7\IDE\vstlbinf.dll

Value 1
  Name:            <NO NAME>
  Type:            REG_SZ
  Data:            CLSID_TLIApplication


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\CLSID\{8E7B96A8-E33D-11d0-A6D5-
00C04FB67F6A}
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:53 PM
Value 0
  Name:            InprocServer32
  Type:            REG_SZ
  Data:            C:\Program Files\Microsoft SQL
Server\90\Tools\Binn\VSShell\Common7\IDE\msenv.dll

Value 1
  Name:            <NO NAME>
  Type:            REG_SZ
  Data:            VsTextBuffer Class


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\CLSID\{99913F1F-1EE3-11D1-8A6E-
00C04f682E21}
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:53 PM
Value 0
  Name:            InprocServer32
  Type:            REG_SZ
  Data:            C:\Program Files\Microsoft SQL
Server\90\Tools\Binn\VSShell\Common7\IDE\msenv.dll

Value 1
  Name:            <NO NAME>
  Type:            REG_SZ
  Data:            VisualStudio Solution
VsCfgProviderEventsHelper


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\CLSID\{99D8D806-9FD7-4e15-9E76-
487F2104666E}
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:53 PM
Value 0
  Name:            <NO NAME>
  Type:            REG_SZ
  Data:            ADO .NET Root Object Enumerator
class

Value 1
  Name:            InprocServer32
  Type:            REG_SZ
  Data:            mscoree.dll

Value 2
  Name:            ThreadingModel
  Type:            REG_SZ
  Data:            Both

Value 3
  Name:            Assembly
  Type:            REG_SZ
  Data:            Microsoft.VisualStudio.Data,
Version=8.0.1200.0, Culture=Neutral,
PublicKeyToken=b03f5f7f11d50a3a

Value 4
  Name:            Class
  Type:            REG_SZ
  Data:
Microsoft.VisualStudio.Data.AdoDotNet.AdoDotNetRootOb
jectEnumerator


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\CLSID\{9ACDE3B7-0F9B-4c36-8E9E-
2DBDE37F65B7}
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:53 PM
Value 0
  Name:            <NO NAME>
  Type:            REG_SZ
  Data:            Managed Data Tools Class Activator
Class

Value 1
  Name:            InprocServer32
  Type:            REG_SZ
  Data:            mscoree.dll

Value 2
  Name:            ThreadingModel
  Type:            REG_SZ
  Data:            Both

Value 3
  Name:            Assembly
  Type:            REG_SZ
  Data:            Microsoft.VisualStudio.DataTools,
Version=8.0.0.0, Culture=neutral,
PublicKeyToken=b03f5f7f11d50a3a

Value 4
  Name:            Class
  Type:            REG_SZ
  Data:
Microsoft.VisualStudio.DataTools.DTClassActivator


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\CLSID\{9B6AB22E-916A-11d2-8914-
0000F87579D2}
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:53 PM
Value 0
  Name:            InprocServer32
  Type:            REG_SZ
  Data:            C:\Program Files\Microsoft SQL
Server\90\Tools\Binn\VSShell\Common7\IDE\msenv.dll

Value 1
  Name:            <NO NAME>
  Type:            REG_SZ
  Data:            VsHiddenTextLayer Class


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\CLSID\{9e1a60ac-2c3b-45cc-9466-
82ceb2bd3518}
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:53 PM
Value 0
```


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```
  Name:            <NO NAME>
  Type:            REG_SZ
  Data:            Microsoft Visual Database Tools
Database Designer V8.0

Value 1
  Name:            InprocServer32
  Type:            REG_SZ
  Data:            C:\Program Files\Microsoft SQL
Server\90\Tools\Binn\VSShell\Common7\Tools\VDT\vdt80.
dll


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\CLSID\{9e1a60ac-2c3b-45cc-9466-
82ceb2bd3518}\AuxUserType
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:53 PM
Value 0
  Name:            <NO NAME>
  Type:            REG_SZ
  Data:


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\CLSID\{9e1a60ac-2c3b-45cc-9466-
82ceb2bd3518}\AuxUserType\2
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:53 PM
Value 0
  Name:            <NO NAME>
  Type:            REG_SZ
  Data:            MSVDTDB Designer 8.0


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\CLSID\{9e1a60ac-2c3b-45cc-9466-
82ceb2bd3518}\AuxUserType\3
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:53 PM
Value 0
  Name:            <NO NAME>
  Type:            REG_SZ
  Data:            Microsoft Visual Database Tools
Database Designer V8.0


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\CLSID\{9e1a60ac-2c3b-45cc-9466-
82ceb2bd3518}\MiscStatus
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:53 PM
Value 0
  Name:            <NO NAME>
  Type:            REG_SZ
  Data:            131072


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\CLSID\{9EEA02EB-4328-456b-B1B3-
83EC5A942C16}
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:53 PM
Value 0
  Name:            <NO NAME>
  Type:            REG_SZ
  Data:            ADO .NET Object Enumerator class

Value 1
  Name:            InprocServer32
  Type:            REG_SZ
  Data:            mscoree.dll

Value 2
  Name:            ThreadingModel
  Type:            REG_SZ
  Data:            Both

Value 3
  Name:            Assembly
  Type:            REG_SZ
  Data:            Microsoft.VisualStudio.Data,
Version=8.0.0.0, Culture=Neutral,
PublicKeyToken=b03f5f7f11d50a3a

Value 4
  Name:            Class
  Type:            REG_SZ
  Data:
Microsoft.VisualStudio.Data.AdoDotNet.AdoDotNetObject
Enumerator


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\CLSID\{9F842E53-E27B-426f-AE69-
8F075770C6F3}
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:53 PM
Value 0
  Name:            <NO NAME>
  Type:            REG_SZ
  Data:            VsFinder Class

Value 1
  Name:            InprocServer32
  Type:            REG_SZ
  Data:            C:\Program Files\Microsoft SQL
Server\90\Tools\Binn\VSShell\Common7\IDE\msenv.dll


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\CLSID\{A353805B-8A96-479b-83EB-
2EA3F69A674C}
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:53 PM
Value 0
  Name:            ThreadingModel
  Type:            REG_SZ
  Data:            Both

Value 1
  Name:            InprocServer32
  Type:            REG_SZ
  Data:            C:\Program Files\Microsoft SQL
Server\90\Tools\Binn\VSShell\Common7\Packages\Compsvc
spkg.dll

Value 2
  Name:            <NO NAME>
  Type:            REG_SZ
  Data:            Primary Interop Assembly Wrapper
Tool (8.0)


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\CLSID\{A49C22CE-454A-11d3-8A7D-
00C04F682E21}
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:53 PM
Value 0
  Name:            InprocServer32
  Type:            REG_SZ
  Data:            C:\Program Files\Microsoft SQL
Server\90\Tools\Binn\VSShell\Common7\IDE\msenv.dll

Value 1
  Name:            <NO NAME>
  Type:            REG_SZ
  Data:            VisualStudio Startup Project
Property Page


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\CLSID\{a4e8b5aa-c736-41d9-af4d-
fa49e2a7c36f}
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:53 PM
Value 0
  Name:            <NO NAME>
  Type:            REG_SZ
  Data:            Microsoft Visual Database Tools
Database Designer V8.0 Table Designer Column Property
Page

Value 1
  Name:            InprocServer32
  Type:            REG_SZ
  Data:            C:\Program Files\Microsoft SQL
Server\90\Tools\Binn\VSShell\Common7\Tools\VDT\vdt80.
dll


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\CLSID\{ac929c9f-903b-4904-84e3-
eefe47439d49}
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:53 PM
Value 0
```


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```
  Name:            ThreadingModel
  Type:            REG_SZ
  Data:            Apartment

Value 1
  Name:            InprocServer32
  Type:            REG_SZ
  Data:            C:\Program Files\Microsoft SQL
Server\90\Tools\Binn\VSShell\Common7\Tools\VDT\vdt80.
dll

Value 2
  Name:            <NO NAME>
  Type:            REG_SZ
  Data:            DSRefWrapper Class


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\CLSID\{ac929c9f-903b-4904-84e3-
eefe47439d49}\Programmable
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:53 PM
Value 0
  Name:            <NO NAME>
  Type:            REG_SZ
  Data:


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\CLSID\{B2715971-D02C-11d2-AFB4-
00105A9991EF}
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:53 PM
Value 0
  Name:            InprocServer32
  Type:            REG_SZ
  Data:            C:\Program Files\Microsoft SQL
Server\90\Tools\Binn\VSShell\Common7\IDE\msenv.dll

Value 1
  Name:            <NO NAME>
  Type:            REG_SZ
  Data:            VsDefaultButtonBarImages Class


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\CLSID\{BC5955D5-AA0D-11d0-A8C5-
00A0C921A4D2}
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:53 PM
Value 0
  Name:            InprocServer32
  Type:            REG_SZ
  Data:            C:\Program Files\Microsoft SQL
Server\90\Tools\Binn\VSShell\Common7\IDE\msenv.dll

Value 1
  Name:            <NO NAME>
  Type:            REG_SZ
  Data:            VsTaskList Class


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\CLSID\{c080bc37-eb1c-466c-8ae0-
42756f9e6e92}
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:53 PM
Value 0
  Name:            <NO NAME>
  Type:            REG_SZ
  Data:            CQryAuto Class

Value 1
  Name:            InprocServer32
  Type:            REG_SZ
  Data:            C:\Program Files\Microsoft SQL
Server\90\Tools\Binn\VSShell\Common7\Tools\VDT\vdt80.
dll

Value 2
  Name:            ThreadingModel
  Type:            REG_SZ
  Data:            Apartment


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\CLSID\{c080bc37-eb1c-466c-8ae0-
42756f9e6e92}\Programmable
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:53 PM
Value 0
  Name:            <NO NAME>
  Type:            REG_SZ
  Data:


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\CLSID\{C28C4281-6E29-41AB-A120-
9B6336BAC906}
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:53 PM
Value 0
  Name:            <NO NAME>
  Type:            REG_SZ
  Data:
Microsoft.VisualStudio.CommonIDE.TemplateWizard.Wizar
d.8.0

Value 1
  Name:            InprocServer32
  Type:            REG_SZ
  Data:            C:\WINDOWS\system32\mscoree.dll

Value 2
  Name:            ThreadingModel
  Type:            REG_SZ
  Data:            Both

Value 3
  Name:            Class
  Type:            REG_SZ
  Data:
Microsoft.VisualStudio.CommonIDE.TemplateWizard.Wizar
d

Value 4
  Name:            Assembly
  Type:            REG_SZ
  Data:            Microsoft.VisualStudio.CommonIDE,
Version=8.0.0.0, Culture=Neutral,
PublicKeyToken=b03f5f7f11d50a3a

Value 5
  Name:            CodeBase
  Type:            REG_SZ
  Data:            file:///C:\Program Files\Microsoft
SQL
Server\90\Tools\Binn\VSShell\Common7\IDE\Microsoft.Vi
sualStudio.CommonIDE.dll


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\CLSID\{C28C4281-6E29-41AB-A120-
9B6336BAC906}\InprocServer32
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:53 PM

Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\CLSID\{C28C4281-6E29-41AB-A120-
9B6336BAC906}\InprocServer32\8.0.0.0
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:53 PM
Value 0
  Name:            Class
  Type:            REG_SZ
  Data:
Microsoft.VisualStudio.CommonIDE.TemplateWizard.Wizar
d

Value 1
  Name:            Assembly
  Type:            REG_SZ
  Data:            Microsoft.VisualStudio.CommonIDE,
Version=8.0.0.0, Culture=Neutral,
PublicKeyToken=b03f5f7f11d50a3a

Value 2
  Name:            CodeBase
  Type:            REG_SZ
  Data:            file:///C:\Program Files\Microsoft
SQL
Server\90\Tools\Binn\VSShell\Common7\IDE\Microsoft.Vi
sualStudio.CommonIDE.dll


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\CLSID\{C28C4281-6E29-41AB-A120-
9B6336BAC906}\ProgId
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:53 PM
```


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```
Value 0
  Name:            <NO NAME>
  Type:            REG_SZ
  Data:
Microsoft.VisualStudio.CommonIDE.TemplateWizard.Wizar
d.8.0


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\CLSID\{C70DDCC1-E6F5-40A3-A414-
FF30A68B5EE7}
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:53 PM
Value 0
  Name:            <NO NAME>
  Type:            REG_SZ
  Data:
Microsoft.DataWarehouse.Project.DataSourceInfoPropert
yPage

Value 1
  Name:            InprocServer32
  Type:            REG_SZ
  Data:            mscoree.dll

Value 2
  Name:            ThreadingModel
  Type:            REG_SZ
  Data:            Both

Value 3
  Name:            Class
  Type:            REG_SZ
  Data:
Microsoft.DataWarehouse.Project.DataSourceInfoPropert
yPage

Value 4
  Name:            Assembly
  Type:            REG_SZ
  Data:
Microsoft.AnalysisServices.Project,
Version=9.00.242.00, Culture=neutral,
PublicKeyToken=89845dcd8080cc91

Value 5
  Name:            RuntimeVersion
  Type:            REG_SZ
  Data:            v1.1.4322


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\CLSID\{c77981ec-ba19-3348-878f-
6f88745a251e}
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:53 PM
Value 0
  Name:            ThreadingModel
  Type:            REG_SZ
  Data:            Both

Value 1
  Name:            Assembly
  Type:            REG_SZ
  Data:            Microsoft.VisualStudio.Design,
Version=2.0.0.0, Culture=neutral,
PublicKeyToken=b03f5f7f11d50a3a

Value 2
  Name:            Class
  Type:            REG_SZ
  Data:
Microsoft.VisualStudio.Design.Serialization.ResXFileC
odeGenerator

Value 3
  Name:            InprocServer32
  Type:            REG_SZ
  Data:            C:\WINDOWS\system32\mscoree.dll

Value 4
  Name:            <NO NAME>
  Type:            REG_SZ
  Data:
Microsoft.VisualStudio.Design.Serialization.ResXFileC
odeGenerator


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\CLSID\{C964830F-91A0-11D0-B14C-
0000F8041356}
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:53 PM
Value 0
  Name:            <NO NAME>
  Type:            REG_SZ
  Data:            OleUndoManager Class

Value 1
  Name:            InprocServer32
  Type:            REG_SZ
  Data:            C:\Program Files\Microsoft SQL
Server\90\Tools\Binn\VSShell\Common7\IDE\msenv.dll


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\CLSID\{cab2b658-026a-11d3-8a62-
00c04f682e21}
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:53 PM
Value 0
  Name:            InprocServer32
  Type:            REG_SZ
  Data:            C:\Program Files\Microsoft SQL
Server\90\Tools\Binn\VSShell\Common7\IDE\msenv.dll

Value 1
  Name:            <NO NAME>
  Type:            REG_SZ
  Data:            VisualStudio Signing Options
Property Page


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\CLSID\{D3395FBA-8DE5-4E56-B82C-
D4357588CD52}
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:53 PM
Value 0
  Name:            <NO NAME>
  Type:            REG_SZ
  Data:
Microsoft.AnalysisServices.Project.AnalysisServicesDe
ploymentPropertyPage

Value 1
  Name:            InprocServer32
  Type:            REG_SZ
  Data:            mscoree.dll

Value 2
  Name:            ThreadingModel
  Type:            REG_SZ
  Data:            Both

Value 3
  Name:            Class
  Type:            REG_SZ
  Data:
Microsoft.AnalysisServices.Project.AnalysisServicesDe
ploymentPropertyPage

Value 4
  Name:            Assembly
  Type:            REG_SZ
  Data:
Microsoft.AnalysisServices.Project,
Version=9.00.242.00, Culture=neutral,
PublicKeyToken=89845dcd8080cc91

Value 5
  Name:            RuntimeVersion
  Type:            REG_SZ
  Data:            v1.1.4322


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\CLSID\{D42D21CE-A94A-47f2-A2DA-
ACE133020BCD}
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:53 PM
Value 0
  Name:            <NO NAME>
  Type:            REG_SZ
  Data:            Data Source Reference Builder
class

Value 1
  Name:            InprocServer32
  Type:            REG_SZ
  Data:            mscoree.dll

Value 2
```


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```
  Name:            ThreadingModel
  Type:            REG_SZ
  Data:            Both

Value 3
  Name:            Assembly
  Type:            REG_SZ
  Data:            Microsoft.VisualStudio.Data,
Version=8.0.0.0, Culture=Neutral,
PublicKeyToken=b03f5f7f11d50a3a

Value 4
  Name:            Class
  Type:            REG_SZ
  Data:
Microsoft.VisualStudio.Data.DSRefBuilder


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\CLSID\{d5474961-c90b-4d5d-a433-
45768b3d0444}
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:53 PM
Value 0
  Name:            ThreadingModel
  Type:            REG_SZ
  Data:            Apartment

Value 1
  Name:            InprocServer32
  Type:            REG_SZ
  Data:            C:\Program Files\Microsoft SQL
Server\90\Tools\Binn\VSShell\Common7\Tools\VDT\vdt80.
dll

Value 2
  Name:            <NO NAME>
  Type:            REG_SZ
  Data:            MSDTHostCtrl Class


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\CLSID\{d5474961-c90b-4d5d-a433-
45768b3d0444}\Control
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:53 PM
Value 0
  Name:            <NO NAME>
  Type:            REG_SZ
  Data:


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\CLSID\{d5474961-c90b-4d5d-a433-
45768b3d0444}\Insertable
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:53 PM
Value 0
  Name:            <NO NAME>
  Type:            REG_SZ
  Data:


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\CLSID\{d5474961-c90b-4d5d-a433-
45768b3d0444}\MiscStatus
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:53 PM
Value 0
  Name:            <NO NAME>
  Type:            REG_SZ
  Data:            0


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\CLSID\{d5474961-c90b-4d5d-a433-
45768b3d0444}\MiscStatus\1
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:53 PM
Value 0
  Name:            <NO NAME>
  Type:            REG_SZ
  Data:            131473


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\CLSID\{d5474961-c90b-4d5d-a433-
45768b3d0444}\Programmable
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:53 PM
Value 0
  Name:            <NO NAME>
  Type:            REG_SZ
  Data:


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\CLSID\{d5474961-c90b-4d5d-a433-
45768b3d0444}\ToolboxBitmap32
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:53 PM
Value 0
  Name:            <NO NAME>
  Type:            REG_SZ
  Data:            C:\Program Files\Microsoft SQL
Server\90\Tools\Binn\VSShell\Common7\Tools\VDT\vdt80.
dll, 1


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\CLSID\{d5474961-c90b-4d5d-a433-
45768b3d0444}\Version
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:53 PM
Value 0
  Name:            <NO NAME>
  Type:            REG_SZ
  Data:            8.0


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\CLSID\{D6513A91-ACC8-11d2-8919-
0000F87579D2}
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:53 PM
Value 0
  Name:            InprocServer32
  Type:            REG_SZ
  Data:            C:\Program Files\Microsoft SQL
Server\90\Tools\Binn\VSShell\Common7\IDE\msenv.dll

Value 1
  Name:            <NO NAME>
  Type:            REG_SZ
  Data:            VsTextLineStorage Class


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\CLSID\{D8CB03CB-A124-4E7F-9EB2-
788F351367A2}
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:53 PM
Value 0
  Name:            <NO NAME>
  Type:            REG_SZ
  Data:            SqlToolsVSHlpFactory Class

Value 1
  Name:            InprocServer32
  Type:            REG_SZ
  Data:            C:\Program Files\Microsoft SQL
Server\90\Tools\Binn\VSShell\Common7\IDE\SqlToolsVSNa
tiveHelpers.dll

Value 2
  Name:            ThreadingModel
  Type:            REG_SZ
  Data:            Apartment


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\CLSID\{df4b6a92-088f-4963-b2a4-
3da796218782}
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:53 PM
Value 0
  Name:            <NO NAME>
  Type:            REG_SZ
  Data:            CQryAutoDSCollection Class

Value 1
  Name:            InprocServer32
  Type:            REG_SZ
  Data:            C:\Program Files\Microsoft SQL
Server\90\Tools\Binn\VSShell\Common7\Tools\VDT\vdt80.
dll

Value 2
```


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```
  Name:            ThreadingModel
  Type:            REG_SZ
  Data:            Apartment


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\CLSID\{df4b6a92-088f-4963-b2a4-
3da796218782}\Programmable
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:53 PM
Value 0
  Name:            <NO NAME>
  Type:            REG_SZ
  Data:


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\CLSID\{df4b6a92-088f-4963-b2a4-
3da796218782}\TypeLib
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:53 PM
Value 0
  Name:            <NO NAME>
  Type:            REG_SZ
  Data:            {8d7902be-835f-42b9-aff4-
222660d45ea4}


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\CLSID\{e05a0ac9-7fb7-481e-b5bb-
08e1e35b211d}
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:53 PM
Value 0
  Name:            ThreadingModel
  Type:            REG_SZ
  Data:            Apartment

Value 1
  Name:            InprocServer32
  Type:            REG_SZ
  Data:            C:\Program Files\Microsoft SQL
Server\90\Tools\Binn\VSShell\Common7\Tools\VDT\vdt80.
dll

Value 2
  Name:            <NO NAME>
  Type:            REG_SZ
  Data:            Primer Class


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\CLSID\{e05a0ac9-7fb7-481e-b5bb-
08e1e35b211d}\Programmable
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:53 PM
Value 0
  Name:            <NO NAME>
  Type:            REG_SZ
  Data:


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\CLSID\{e09ee6ac-fef0-41ae-9f77-
3c394da49849}
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:53 PM
Value 0
  Name:            InprocServer32
  Type:            REG_SZ
  Data:            C:\Program Files\Microsoft SQL
Server\90\Tools\Binn\VSShell\Common7\Tools\VDT\vdt80.
dll

Value 1
  Name:            <NO NAME>
  Type:            REG_SZ
  Data:            Microsoft Visual Database Tools
DSRef Object


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\CLSID\{e0d7b2ab-9988-4444-80b5-
4a0900582d87}
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:53 PM
Value 0
  Name:            <NO NAME>
  Type:            REG_SZ
  Data:            Microsoft Visual Database Tools
Query Designer V8.0

Value 1
  Name:            InprocServer32
  Type:            REG_SZ
  Data:            C:\Program Files\Microsoft SQL
Server\90\Tools\Binn\VSShell\Common7\Tools\VDT\vdt80.
dll


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\CLSID\{e0d7b2ab-9988-4444-80b5-
4a0900582d87}\AuxUserType
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:53 PM
Value 0
  Name:            <NO NAME>
  Type:            REG_SZ
  Data:


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\CLSID\{e0d7b2ab-9988-4444-80b5-
4a0900582d87}\AuxUserType\2
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:53 PM
Value 0
  Name:            <NO NAME>
  Type:            REG_SZ
  Data:            MS VDT Query V8.0


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\CLSID\{e0d7b2ab-9988-4444-80b5-
4a0900582d87}\AuxUserType\3
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:53 PM
Value 0
  Name:            <NO NAME>
  Type:            REG_SZ
  Data:            Microsoft Visual Database Tools
Query Designer V8.0


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\CLSID\{e0d7b2ab-9988-4444-80b5-
4a0900582d87}\DataFormats
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:53 PM
Value 0
  Name:            <NO NAME>
  Type:            REG_SZ
  Data:


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\CLSID\{e0d7b2ab-9988-4444-80b5-
4a0900582d87}\DataFormats\GetSet
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:53 PM
Value 0
  Name:            <NO NAME>
  Type:            REG_SZ
  Data:


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\CLSID\{e0d7b2ab-9988-4444-80b5-
4a0900582d87}\DataFormats\GetSet\0
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:53 PM
Value 0
  Name:            <NO NAME>
  Type:            REG_SZ
  Data:            3,1,32,1


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\CLSID\{e0d7b2ab-9988-4444-80b5-
4a0900582d87}\DataFormats\GetSet\2
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:53 PM
Value 0
  Name:            <NO NAME>
  Type:            REG_SZ
  Data:            Embed Source,1,8,3
```


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```
Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\CLSID\{e0d7b2ab-9988-4444-80b5-
4a0900582d87}\DefaultIcon
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:53 PM
Value 0
  Name:            <NO NAME>
  Type:            REG_SZ
  Data:            progman.exe,2


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\CLSID\{e0d7b2ab-9988-4444-80b5-
4a0900582d87}\MiscStatus
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:53 PM
Value 0
  Name:            <NO NAME>
  Type:            REG_SZ
  Data:            131072


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\CLSID\{e0d7b2ab-9988-4444-80b5-
4a0900582d87}\Verb
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:53 PM
Value 0
  Name:            <NO NAME>
  Type:            REG_SZ
  Data:


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\CLSID\{e0d7b2ab-9988-4444-80b5-
4a0900582d87}\Verb\0
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:53 PM
Value 0
  Name:            <NO NAME>
  Type:            REG_SZ
  Data:            &Play,0,2


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\CLSID\{EE9E0A9A-BAF8-11D2-B2CF-
00C04FB17608}
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:53 PM
Value 0
  Name:            InprocServer32
  Type:            REG_SZ
  Data:            C:\Program Files\Microsoft SQL
Server\90\Tools\Binn\VSShell\Common7\IDE\msenv.dll

Value 1
  Name:            <NO NAME>
  Type:            REG_SZ
  Data:            VisualStudio Build Dependencies
Property Page


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\CLSID\{F2073DB0-75B9-43ae-8681-
0962C0CD4BE2}
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:53 PM
Value 0
  Name:            InprocServer32
  Type:            REG_SZ
  Data:            C:\Program Files\Microsoft SQL
Server\90\Tools\Binn\VSShell\Common7\IDE\msenv.dll

Value 1
  Name:            <NO NAME>
  Type:            REG_SZ
  Data:            VsIntellisenseCompletor Class


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\CLSID\{F35401F2-251E-4A6A-B199-
D0E40AD57861}
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:53 PM
Value 0
  Name:            <NO NAME>
  Type:            REG_SZ
  Data:
Microsoft.DataTransformationServices.Project.DataTran
sformationsDeploymentUtilityPropertyPage

Value 1
  Name:            InprocServer32
  Type:            REG_SZ
  Data:            mscoree.dll

Value 2
  Name:            ThreadingModel
  Type:            REG_SZ
  Data:            Both

Value 3
  Name:            Class
  Type:            REG_SZ
  Data:
Microsoft.DataTransformationServices.Project.DataTran
sformationsDeploymentUtilityPropertyPage

Value 4
  Name:            Assembly
  Type:            REG_SZ
  Data:
Microsoft.DataTransformationServices.VsIntegration

Value 5
  Name:            RuntimeVersion
  Type:            REG_SZ
  Data:            v1.1.4322


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\CLSID\{F5E7E718-1401-11d1-883B-
0000F87579D2}
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:53 PM
Value 0
  Name:            InprocServer32
  Type:            REG_SZ
  Data:            C:\Program Files\Microsoft SQL
Server\90\Tools\Binn\VSShell\Common7\IDE\msenv.dll


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\CLSID\{F5E7E719-1401-11d1-883B-
0000F87579D2}
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:53 PM
Value 0
  Name:            InprocServer32
  Type:            REG_SZ
  Data:            C:\Program Files\Microsoft SQL
Server\90\Tools\Binn\VSShell\Common7\IDE\msenv.dll

Value 1
  Name:            <NO NAME>
  Type:            REG_SZ
  Data:            CodeWindow Class


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\CLSID\{F5E7E71A-1401-11d1-883B-
0000F87579D2}
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:53 PM
Value 0
  Name:            InprocServer32
  Type:            REG_SZ
  Data:            C:\Program Files\Microsoft SQL
Server\90\Tools\Binn\VSShell\Common7\IDE\msenv.dll


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\CLSID\{F5E7E71D-1401-11d1-883B-
0000F87579D2}
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:53 PM
Value 0
  Name:            InprocServer32
  Type:            REG_SZ
  Data:            C:\Program Files\Microsoft SQL
Server\90\Tools\Binn\VSShell\Common7\IDE\msenv.dll


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
```


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```
Server\90\Tools\Shell\CLSID\{F5E7E71E-1401-11d1-883B-
0000F87579D2}
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:53 PM
Value 0
  Name:            InprocServer32
  Type:            REG_SZ
  Data:            C:\Program Files\Microsoft SQL
Server\90\Tools\Binn\VSShell\Common7\IDE\msenv.dll


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\CLSID\{F5E7E71F-1401-11d1-883B-
0000F87579D2}
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:53 PM
Value 0
  Name:            InprocServer32
  Type:            REG_SZ
  Data:            C:\Program Files\Microsoft SQL
Server\90\Tools\Binn\VSShell\Common7\IDE\msenv.dll


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\CLSID\{f6819a78-a205-47b5-be1c-
675b3c7f0b8e}
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:53 PM
Value 0
  Name:            <NO NAME>
  Type:            REG_SZ
  Data:
Microsoft.XmlEditor.XmlLanguageService


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\CLSID\{f6819a78-a205-47b5-be1c-
675b3c7f0b8e}\Implemented Categories
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:53 PM

Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\CLSID\{f6819a78-a205-47b5-be1c-
675b3c7f0b8e}\Implemented Categories\{62C8FE65-4EBB-
45E7-B440-6E39B2CDBF29}
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:53 PM
Value 0
  Name:            <NO NAME>
  Type:            REG_SZ
  Data:


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\CLSID\{f6819a78-a205-47b5-be1c-
675b3c7f0b8e}\InprocServer32
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:53 PM
Value 0
  Name:            <NO NAME>
  Type:            REG_SZ
  Data:            C:\WINDOWS\system32\mscoree.dll

Value 1
  Name:            ThreadingModel
  Type:            REG_SZ
  Data:            Both

Value 2
  Name:            Class
  Type:            REG_SZ
  Data:
Microsoft.XmlEditor.XmlLanguageService

Value 3
  Name:            Assembly
  Type:            REG_SZ
  Data:            Microsoft.XmlEditor,
Version=2.0.0.0, Culture=neutral,
PublicKeyToken=b03f5f7f11d50a3a

Value 4
  Name:            CodeBase
  Type:            REG_SZ
  Data:            C:\Program Files\Microsoft SQL
Server\90\Tools\Binn\VSShell\Common7\IDE\Xml\Microsof
t.XmlEditor.dll

Value 5
  Name:            RuntimeVersion
  Type:            REG_SZ
  Data:            2.0.0.0


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\CLSID\{f6819a78-a205-47b5-be1c-
675b3c7f0b8e}\InprocServer32\2.0.0.0
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:53 PM
Value 0
  Name:            Class
  Type:            REG_SZ
  Data:
Microsoft.XmlEditor.XmlLanguageService

Value 1
  Name:            Assembly
  Type:            REG_SZ
  Data:            Microsoft.XmlEditor,
Version=2.0.0.0, Culture=neutral,
PublicKeyToken=b03f5f7f11d50a3a

Value 2
  Name:            RuntimeVersion
  Type:            REG_SZ
  Data:            2.0.0.0

Value 3
  Name:            CodeBase
  Type:            REG_SZ
  Data:            C:\Program Files\Microsoft SQL
Server\90\Tools\Binn\VSShell\Common7\IDE\Xml\Microsof
t.XmlEditor.dll


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\CLSID\{f6819a78-a205-47b5-be1c-
675b3c7f0b8e}\ProgId
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:53 PM
Value 0
  Name:            <NO NAME>
  Type:            REG_SZ
  Data:
Microsoft.XmlEditor.XmlLanguageService


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\CLSID\{F74C5077-D848-4630-80C9-
B00E68A1CA0C}
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:53 PM
Value 0
  Name:            <NO NAME>
  Type:            REG_SZ
  Data:            Visual Studio VsSettings Package

Value 1
  Name:            InprocServer32
  Type:            REG_SZ
  Data:            C:\WINDOWS\system32\mscoree.dll

Value 2
  Name:            Class
  Type:            REG_SZ
  Data:
Microsoft.VisualStudio.CommonIDE.VsSettings.VsSetting
sPackage

Value 3
  Name:            Assembly
  Type:            REG_SZ
  Data:            Microsoft.VisualStudio.CommonIDE,
Version=8.0.0.0, Culture=Neutral,
PublicKeyToken=b03f5f7f11d50a3a

Value 4
  Name:            CodeBase
  Type:            REG_SZ
  Data:            file:///C:\Program Files\Microsoft
SQL
Server\90\Tools\Binn\VSShell\Common7\IDE\Microsoft.Vi
sualStudio.CommonIDE.dll


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\ComponentPickerPages
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:53 PM
```


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```
Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\ComponentPickerPages\SQL Server
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:53 PM
Value 0
  Name:            Sort
  Type:            REG_DWORD
  Data:            0x15

Value 1
  Name:            Page
  Type:            REG_SZ
  Data:            {BBA3635A-F590-4397-9036-
E826053E25AD}

Value 2
  Name:            Package
  Type:            REG_SZ
  Data:            {588205e0-66e0-11d3-8600-
00c04f6123b3}

Value 3
  Name:            <NO NAME>
  Type:            REG_SZ
  Data:            #3100


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\DataProviders
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:53 PM

Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\DataProviders\{7F041D59-D76A-
44ed-9AA2-FBF6B0548B80}
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:53 PM
Value 0
  Name:            <NO NAME>
  Type:            REG_SZ
  Data:            .NET Framework Data Provider for
OLE DB

Value 1
  Name:            DisplayName
  Type:            REG_SZ
  Data:            DataProvider_OleDB, SR,
Microsoft.Data.ConnectionUI.Dialog, Version=8.0.0.0,
Culture=Neutral, PublicKeyToken=b03f5f7f11d50a3a

Value 2
  Name:            ShortDisplayName
  Type:            REG_SZ
  Data:            DataProvider_OleDB_Short, SR,
Microsoft.Data.ConnectionUI.Dialog, Version=8.0.0.0,
Culture=Neutral, PublicKeyToken=b03f5f7f11d50a3a

Value 3
  Name:            Description
  Type:            REG_SZ
  Data:            DataProvider_OleDB_Description,
SR, Microsoft.Data.ConnectionUI.Dialog,
Version=8.0.0.0, Culture=Neutral,
PublicKeyToken=b03f5f7f11d50a3a

Value 4
  Name:            Technology
  Type:            REG_SZ
  Data:            {77AB9A9D-78B9-4ba7-91AC-
873F5338F1D2}

Value 5
  Name:            FactoryService
  Type:            REG_SZ
  Data:            {8CB5F787-2D74-459e-88D6-
39E20A4D9454}

Value 6
  Name:            InvariantName
  Type:            REG_SZ
  Data:            System.Data.OleDb


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\DataProviders\{7F041D59-D76A-
44ed-9AA2-FBF6B0548B80}\Specialization
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:53 PM

Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\DataProviders\{7F041D59-D76A-
44ed-9AA2-
FBF6B0548B80}\Specialization\Microsoft.Jet.OLEDB.4.0
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:53 PM
Value 0
  Name:            DataSource
  Type:            REG_SZ
  Data:            {466CE797-67A4-4495-B75C-
A3FD282E7FC3}


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\DataProviders\{7F041D59-D76A-
44ed-9AA2-
FBF6B0548B80}\Specialization\Microsoft.Jet.OLEDB.4.0\
DataConnectionProperties
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:53 PM
Value 0
  Name:            <NO NAME>
  Type:            REG_SZ
  Data:
Microsoft.Data.ConnectionUI.OleDBAccessConnectionProp
erties, Microsoft.Data.ConnectionUI.Dialog,
Version=8.0.0.0, Culture=Neutral,
PublicKeyToken=b03f5f7f11d50a3a

Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\DataProviders\{7F041D59-D76A-
44ed-9AA2-
FBF6B0548B80}\Specialization\Microsoft.Jet.OLEDB.4.0\
DataConnectionUIControl
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:53 PM
Value 0
  Name:            <NO NAME>
  Type:            REG_SZ
  Data:
Microsoft.Data.ConnectionUI.AccessConnectionUIControl
, Microsoft.Data.ConnectionUI.Dialog,
Version=8.0.0.0, Culture=Neutral,
PublicKeyToken=b03f5f7f11d50a3a


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\DataProviders\{7F041D59-D76A-
44ed-9AA2-
FBF6B0548B80}\Specialization\Microsoft.Jet.OLEDB.4.0\
DataSourceInformation
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:53 PM
Value 0
  Name:            <NO NAME>
  Type:            REG_SZ
  Data:
Microsoft.VisualStudio.DataTools.Providers.OleDB.OleD
BJetDataSourceInformation,
Microsoft.VisualStudio.DataTools, Version=8.0.0.0,
Culture=Neutral, PublicKeyToken=b03f5f7f11d50a3a


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\DataProviders\{7F041D59-D76A-
44ed-9AA2-FBF6B0548B80}\Specialization\MSDAORA.1
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:53 PM
Value 0
  Name:            DataSource
  Type:            REG_SZ
  Data:            {E5E86CD6-6454-4fdd-910F-
DC5DFC73EB45}


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\DataProviders\{7F041D59-D76A-
44ed-9AA2-
FBF6B0548B80}\Specialization\MSDAORA.1\DataConnection
Properties
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:53 PM
Value 0
  Name:            <NO NAME>
  Type:            REG_SZ
  Data:
Microsoft.Data.ConnectionUI.OleDBOracleConnectionProp
erties, Microsoft.Data.ConnectionUI.Dialog,
```


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```
Version=8.0.0.0, Culture=Neutral,
PublicKeyToken=b03f5f7f11d50a3a


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\DataProviders\{7F041D59-D76A-
44ed-9AA2-
FBF6B0548B80}\Specialization\MSDAORA.1\DataConnection
UIControl
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:53 PM
Value 0
  Name:            <NO NAME>
  Type:            REG_SZ
  Data:
Microsoft.Data.ConnectionUI.OracleConnectionUIControl
, Microsoft.Data.ConnectionUI.Dialog,
Version=8.0.0.0, Culture=Neutral,
PublicKeyToken=b03f5f7f11d50a3a


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\DataProviders\{7F041D59-D76A-
44ed-9AA2-
FBF6B0548B80}\Specialization\MSDAORA.1\DataSourceInfo
rmation
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:53 PM
Value 0
  Name:            <NO NAME>
  Type:            REG_SZ
  Data:
Microsoft.VisualStudio.DataTools.Providers.OleDB.OleD
BOracleDataSourceInformation,
Microsoft.VisualStudio.DataTools, Version=8.0.0.0,
Culture=Neutral, PublicKeyToken=b03f5f7f11d50a3a


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\DataProviders\{7F041D59-D76A-
44ed-9AA2-FBF6B0548B80}\Specialization\SQLNCLI.1
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:53 PM
Value 0
  Name:            DataSource
  Type:            REG_SZ
  Data:            {067EA0D9-BA62-43f7-9106-
34930C60C528}


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\DataProviders\{7F041D59-D76A-
44ed-9AA2-
FBF6B0548B80}\Specialization\SQLNCLI.1\DataConnection
Properties
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:53 PM
Value 0
  Name:            <NO NAME>
  Type:            REG_SZ
  Data:
Microsoft.Data.ConnectionUI.OleDBSqlConnectionPropert
ies, Microsoft.Data.ConnectionUI.Dialog,
Version=8.0.1200.0, Culture=Neutral,
PublicKeyToken=b03f5f7f11d50a3a


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\DataProviders\{7F041D59-D76A-
44ed-9AA2-
FBF6B0548B80}\Specialization\SQLNCLI.1\DataConnection
UIControl
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:53 PM
Value 0
  Name:            <NO NAME>
  Type:            REG_SZ
  Data:
Microsoft.Data.ConnectionUI.SqlConnectionUIControl,
Microsoft.Data.ConnectionUI.Dialog,
Version=8.0.1200.0, Culture=Neutral,
PublicKeyToken=b03f5f7f11d50a3a


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\DataProviders\{7F041D59-D76A-
44ed-9AA2-
FBF6B0548B80}\Specialization\SQLNCLI.1\DataSourceInfo
rmation
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:53 PM
Value 0
  Name:            <NO NAME>
  Type:            REG_SZ
  Data:
Microsoft.VisualStudio.DataTools.Providers.OleDB.OleD
BSqlDataSourceInformation,
Microsoft.VisualStudio.DataTools, Version=8.0.1200.0,
Culture=Neutral, PublicKeyToken=b03f5f7f11d50a3a


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\DataProviders\{7F041D59-D76A-
44ed-9AA2-FBF6B0548B80}\Specialization\SQLOLEDB.1
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:53 PM
Value 0
  Name:            DataSource
  Type:            REG_SZ
  Data:            {067EA0D9-BA62-43f7-9106-
34930C60C528}


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\DataProviders\{7F041D59-D76A-
44ed-9AA2-
FBF6B0548B80}\Specialization\SQLOLEDB.1\DataConnectio
nProperties
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:53 PM
Value 0
  Name:            <NO NAME>
  Type:            REG_SZ
  Data:
Microsoft.Data.ConnectionUI.OleDBSqlConnectionPropert
ies, Microsoft.Data.ConnectionUI.Dialog,
Version=8.0.0.0, Culture=Neutral,
PublicKeyToken=b03f5f7f11d50a3a


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\DataProviders\{7F041D59-D76A-
44ed-9AA2-
FBF6B0548B80}\Specialization\SQLOLEDB.1\DataConnectio
nUIControl
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:53 PM
Value 0
  Name:            <NO NAME>
  Type:            REG_SZ
  Data:
Microsoft.Data.ConnectionUI.SqlConnectionUIControl,
Microsoft.Data.ConnectionUI.Dialog, Version=8.0.0.0,
Culture=Neutral, PublicKeyToken=b03f5f7f11d50a3a


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\DataProviders\{7F041D59-D76A-
44ed-9AA2-
FBF6B0548B80}\Specialization\SQLOLEDB.1\DataSourceInf
ormation
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:53 PM
Value 0
  Name:            <NO NAME>
  Type:            REG_SZ
  Data:
Microsoft.VisualStudio.DataTools.Providers.OleDB.OleD
BSqlDataSourceInformation,
Microsoft.VisualStudio.DataTools, Version=8.0.0.0,
Culture=Neutral, PublicKeyToken=b03f5f7f11d50a3a


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\DataProviders\{7F041D59-D76A-
44ed-9AA2-FBF6B0548B80}\Specialization\VFPOLEDB.1
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:53 PM

Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\DataProviders\{7F041D59-D76A-
44ed-9AA2-
FBF6B0548B80}\Specialization\VFPOLEDB.1\DataSourceInf
ormation
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:53 PM
Value 0
```


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```
  Name:            <NO NAME>
  Type:            REG_SZ
  Data:
Microsoft.VisualStudio.DataTools.Providers.OleDB.OleD
BFoxDataSourceInformation,
Microsoft.VisualStudio.DataTools, Version=8.0.0.0,
Culture=Neutral, PublicKeyToken=b03f5f7f11d50a3a


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\DataProviders\{7F041D59-D76A-
44ed-9AA2-FBF6B0548B80}\SupportedObjects
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:53 PM

Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\DataProviders\{7F041D59-D76A-
44ed-9AA2-
FBF6B0548B80}\SupportedObjects\DataConnectionProperti
es
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:53 PM
Value 0
  Name:            <NO NAME>
  Type:            REG_SZ
  Data:


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\DataProviders\{7F041D59-D76A-
44ed-9AA2-
FBF6B0548B80}\SupportedObjects\DataConnectionSupport
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:53 PM
Value 0
  Name:            <NO NAME>
  Type:            REG_SZ
  Data:


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\DataProviders\{7F041D59-D76A-
44ed-9AA2-
FBF6B0548B80}\SupportedObjects\DataConnectionUIContro
l
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:53 PM
Value 0
  Name:            <NO NAME>
  Type:            REG_SZ
  Data:


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\DataProviders\{7F041D59-D76A-
44ed-9AA2-
FBF6B0548B80}\SupportedObjects\DataObjectSupport
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:53 PM
Value 0
  Name:            <NO NAME>
  Type:            REG_SZ
  Data:


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\DataProviders\{7F041D59-D76A-
44ed-9AA2-
FBF6B0548B80}\SupportedObjects\DataSourceSpecializer
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:53 PM
Value 0
  Name:            <NO NAME>
  Type:            REG_SZ
  Data:


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\DataProviders\{8F5C5018-AE09-
42cf-B2CC-2CCCC7CFC2BB}
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:53 PM
Value 0
  Name:            <NO NAME>
  Type:            REG_SZ
  Data:            .NET Framework Data Provider for
Oracle

Value 1
  Name:            DisplayName
  Type:            REG_SZ
  Data:            DataProvider_Oracle, SR,
Microsoft.Data.ConnectionUI.Dialog, Version=8.0.0.0,
Culture=Neutral, PublicKeyToken=b03f5f7f11d50a3a

Value 2
  Name:            ShortDisplayName
  Type:            REG_SZ
  Data:            DataProvider_Oracle_Short, SR,
Microsoft.Data.ConnectionUI.Dialog, Version=8.0.0.0,
Culture=Neutral, PublicKeyToken=b03f5f7f11d50a3a

Value 3
  Name:            Description
  Type:            REG_SZ
  Data:            DataProvider_Oracle_Description,
SR, Microsoft.Data.ConnectionUI.Dialog,
Version=8.0.0.0, Culture=Neutral,
PublicKeyToken=b03f5f7f11d50a3a

Value 4
  Name:            Technology
  Type:            REG_SZ
  Data:            {77AB9A9D-78B9-4ba7-91AC-
873F5338F1D2}

Value 5
  Name:            FactoryService
  Type:            REG_SZ
  Data:            {F638BEE1-DC22-4401-8A4A-
6DB0B13C196C}

Value 6
  Name:            InvariantName
  Type:            REG_SZ
  Data:            System.Data.OracleClient


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\DataProviders\{8F5C5018-AE09-
42cf-B2CC-2CCCC7CFC2BB}\SupportedObjects
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:53 PM

Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\DataProviders\{8F5C5018-AE09-
42cf-B2CC-
2CCCC7CFC2BB}\SupportedObjects\DataConnectionPromptDi
alog
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:53 PM
Value 0
  Name:            <NO NAME>
  Type:            REG_SZ
  Data:


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\DataProviders\{8F5C5018-AE09-
42cf-B2CC-
2CCCC7CFC2BB}\SupportedObjects\DataConnectionProperti
es
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:53 PM
Value 0
  Name:            <NO NAME>
  Type:            REG_SZ
  Data:


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\DataProviders\{8F5C5018-AE09-
42cf-B2CC-
2CCCC7CFC2BB}\SupportedObjects\DataConnectionSupport
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:53 PM
Value 0
  Name:            <NO NAME>
  Type:            REG_SZ
  Data:


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\DataProviders\{8F5C5018-AE09-
42cf-B2CC-
2CCCC7CFC2BB}\SupportedObjects\DataConnectionUIContro
l
```


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```
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:53 PM
Value 0
  Name:            <NO NAME>
  Type:            REG_SZ
  Data:


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\DataProviders\{8F5C5018-AE09-
42cf-B2CC-
2CCCC7CFC2BB}\SupportedObjects\DataObjectSupport
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:53 PM
Value 0
  Name:            <NO NAME>
  Type:            REG_SZ
  Data:


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\DataProviders\{8F5C5018-AE09-
42cf-B2CC-
2CCCC7CFC2BB}\SupportedObjects\DataSourceSpecializer
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:53 PM
Value 0
  Name:            <NO NAME>
  Type:            REG_SZ
  Data:


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\DataProviders\{91510608-8809-
4020-8897-FBA057E22D54}
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:53 PM
Value 0
  Name:            <NO NAME>
  Type:            REG_SZ
  Data:            .NET Framework Data Provider for
SQL Server

Value 1
  Name:            DisplayName
  Type:            REG_SZ
  Data:            DataProvider_Sql, SR,
Microsoft.Data.ConnectionUI.Dialog, Version=8.0.0.0,
Culture=Neutral, PublicKeyToken=b03f5f7f11d50a3a

Value 2
  Name:            ShortDisplayName
  Type:            REG_SZ
  Data:            DataProvider_Sql_Short, SR,
Microsoft.Data.ConnectionUI.Dialog, Version=8.0.0.0,
Culture=Neutral, PublicKeyToken=b03f5f7f11d50a3a

Value 3
  Name:            Description
  Type:            REG_SZ
  Data:            DataProvider_Sql_Description, SR,
Microsoft.Data.ConnectionUI.Dialog, Version=8.0.0.0,
Culture=Neutral, PublicKeyToken=b03f5f7f11d50a3a

Value 4
  Name:            Technology
  Type:            REG_SZ
  Data:            {77AB9A9D-78B9-4ba7-91AC-
873F5338F1D2}

Value 5
  Name:            FactoryService
  Type:            REG_SZ
  Data:            {FCD3F3E8-69AC-42d5-905E-
2E131905E708}

Value 6
  Name:            InvariantName
  Type:            REG_SZ
  Data:            System.Data.SqlClient


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\DataProviders\{91510608-8809-
4020-8897-FBA057E22D54}\SupportedObjects
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:53 PM

Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\DataProviders\{91510608-8809-
4020-8897-
FBA057E22D54}\SupportedObjects\DataConnectionPromptDi
alog
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:53 PM
Value 0
  Name:            <NO NAME>
  Type:            REG_SZ
  Data:


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\DataProviders\{91510608-8809-
4020-8897-
FBA057E22D54}\SupportedObjects\DataConnectionProperti
es
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:53 PM
Value 0
  Name:            <NO NAME>
  Type:            REG_SZ
  Data:


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\DataProviders\{91510608-8809-
4020-8897-
FBA057E22D54}\SupportedObjects\DataConnectionSupport
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:53 PM
Value 0
  Name:            <NO NAME>
  Type:            REG_SZ
  Data:


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\DataProviders\{91510608-8809-
4020-8897-
FBA057E22D54}\SupportedObjects\DataConnectionUIContro
l
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:53 PM
Value 0
  Name:            <NO NAME>
  Type:            REG_SZ
  Data:


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\DataProviders\{91510608-8809-
4020-8897-
FBA057E22D54}\SupportedObjects\DataObjectSupport
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:53 PM
Value 0
  Name:            <NO NAME>
  Type:            REG_SZ
  Data:


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\DataProviders\{91510608-8809-
4020-8897-
FBA057E22D54}\SupportedObjects\DataSourceSpecializer
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:53 PM
Value 0
  Name:            <NO NAME>
  Type:            REG_SZ
  Data:


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\DataProviders\{C3D4F4CE-2C48-
4381-B4D6-34FA50C51C86}
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:53 PM
Value 0
  Name:            <NO NAME>
  Type:            REG_SZ
  Data:            .NET Framework Data Provider for
ODBC

Value 1
  Name:            DisplayName
  Type:            REG_SZ
```


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```
  Data:            DataProvider_Odbc, SR,
Microsoft.Data.ConnectionUI.Dialog, Version=8.0.0.0,
Culture=Neutral, PublicKeyToken=b03f5f7f11d50a3a

Value 2
  Name:            ShortDisplayName
  Type:            REG_SZ
  Data:            DataProvider_Odbc_Short, SR,
Microsoft.Data.ConnectionUI.Dialog, Version=8.0.0.0,
Culture=Neutral, PublicKeyToken=b03f5f7f11d50a3a

Value 3
  Name:            Description
  Type:            REG_SZ
  Data:            DataProvider_Odbc_Description, SR,
Microsoft.Data.ConnectionUI.Dialog, Version=8.0.0.0,
Culture=Neutral, PublicKeyToken=b03f5f7f11d50a3a

Value 4
  Name:            Technology
  Type:            REG_SZ
  Data:            {77AB9A9D-78B9-4ba7-91AC-
873F5338F1D2}

Value 5
  Name:            FactoryService
  Type:            REG_SZ
  Data:            {06D0BE35-FA3A-4ef6-81B9-
3EDBB68EF982}

Value 6
  Name:            InvariantName
  Type:            REG_SZ
  Data:            System.Data.Odbc


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\DataProviders\{C3D4F4CE-2C48-
4381-B4D6-34FA50C51C86}\SupportedObjects
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:53 PM

Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\DataProviders\{C3D4F4CE-2C48-
4381-B4D6-
34FA50C51C86}\SupportedObjects\DataConnectionPromptDi
alog
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:53 PM
Value 0
  Name:            <NO NAME>
  Type:            REG_SZ
  Data:


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\DataProviders\{C3D4F4CE-2C48-
4381-B4D6-
34FA50C51C86}\SupportedObjects\DataConnectionProperti
es
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:53 PM
Value 0
  Name:            <NO NAME>
  Type:            REG_SZ
  Data:


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\DataProviders\{C3D4F4CE-2C48-
4381-B4D6-
34FA50C51C86}\SupportedObjects\DataConnectionSupport
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:53 PM
Value 0
  Name:            <NO NAME>
  Type:            REG_SZ
  Data:


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\DataProviders\{C3D4F4CE-2C48-
4381-B4D6-
34FA50C51C86}\SupportedObjects\DataConnectionUIContro
l
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:53 PM
Value 0
  Name:            <NO NAME>
  Type:            REG_SZ
  Data:


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\DataProviders\{C3D4F4CE-2C48-
4381-B4D6-
34FA50C51C86}\SupportedObjects\DataObjectSupport
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:53 PM
Value 0
  Name:            <NO NAME>
  Type:            REG_SZ
  Data:


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\DataProviders\{C3D4F4CE-2C48-
4381-B4D6-
34FA50C51C86}\SupportedObjects\DataSourceSpecializer
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:53 PM
Value 0
  Name:            <NO NAME>
  Type:            REG_SZ
  Data:


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\DataSources
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:53 PM

Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\DataSources\{067EA0D9-BA62-
43f7-9106-34930C60C528}
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:53 PM
Value 0
  Name:            <NO NAME>
  Type:            REG_SZ
  Data:            Microsoft SQL Server

Value 1
  Name:            DefaultProvider
  Type:            REG_SZ
  Data:            {91510608-8809-4020-8897-
FBA057E22D54}


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\DataSources\{067EA0D9-BA62-
43f7-9106-34930C60C528}\SupportingProviders
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:53 PM

Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\DataSources\{067EA0D9-BA62-
43f7-9106-
34930C60C528}\SupportingProviders\{7F041D59-D76A-
44ed-9AA2-FBF6B0548B80}
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:53 PM
Value 0
  Name:            Description
  Type:            REG_SZ
  Data:
DataProvider_OleDB_SqlDataSource_Description, SR,
Microsoft.Data.ConnectionUI.Dialog,
Version=8.0.1200.0, Culture=Neutral,
PublicKeyToken=b03f5f7f11d50a3a

Value 1
  Name:            SpecializedProvider
  Type:            REG_SZ
  Data:            SQLOLEDB.1


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\DataSources\{067EA0D9-BA62-
43f7-9106-
34930C60C528}\SupportingProviders\{91510608-8809-
4020-8897-FBA057E22D54}
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:53 PM
Value 0
```


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```
  Name:            DisplayName
  Type:            REG_SZ
  Data:            DataSource_MicrosoftSqlServer, SR,
Microsoft.Data.ConnectionUI.Dialog,
Version=8.0.1200.0, Culture=Neutral,
PublicKeyToken=b03f5f7f11d50a3a

Value 1
  Name:            Description
  Type:            REG_SZ
  Data:
DataProvider_Sql_DataSource_Description, SR,
Microsoft.Data.ConnectionUI.Dialog,
Version=8.0.1200.0, Culture=Neutral,
PublicKeyToken=b03f5f7f11d50a3a


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\DataSources\{42568F9E-354A-
4c76-9916-3225D8C8E750}
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:53 PM
Value 0
  Name:            <NO NAME>
  Type:            REG_SZ
  Data:            ODBC Data Source


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\DataSources\{42568F9E-354A-
4c76-9916-3225D8C8E750}\SupportingProviders
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:53 PM

Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\DataSources\{42568F9E-354A-
4c76-9916-
3225D8C8E750}\SupportingProviders\{C3D4F4CE-2C48-
4381-B4D6-34FA50C51C86}
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:53 PM
Value 0
  Name:            DisplayName
  Type:            REG_SZ
  Data:            DataSource_MicrosoftOdbcDsn, SR,
Microsoft.Data.ConnectionUI.Dialog,
Version=8.0.1200.0, Culture=Neutral,
PublicKeyToken=b03f5f7f11d50a3a

Value 1
  Name:            Description
  Type:            REG_SZ
  Data:
DataProvider_Odbc_DataSource_Description, SR,
Microsoft.Data.ConnectionUI.Dialog,
Version=8.0.1200.0, Culture=Neutral,
PublicKeyToken=b03f5f7f11d50a3a


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\DataSources\{466CE797-67A4-
4495-B75C-A3FD282E7FC3}
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:53 PM
Value 0
  Name:            <NO NAME>
  Type:            REG_SZ
  Data:            Microsoft Access Database File

Value 1
  Name:            DefaultProvider
  Type:            REG_SZ
  Data:            {7F041D59-D76A-44ed-9AA2-
FBF6B0548B80}


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\DataSources\{466CE797-67A4-
4495-B75C-A3FD282E7FC3}\SupportingProviders
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:53 PM

Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\DataSources\{466CE797-67A4-
4495-B75C-
A3FD282E7FC3}\SupportingProviders\{7F041D59-D76A-
44ed-9AA2-FBF6B0548B80}
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:53 PM
Value 0
  Name:            DisplayName
  Type:            REG_SZ
  Data:            DataSource_MicrosoftAccess, SR,
Microsoft.Data.ConnectionUI.Dialog,
Version=8.0.1200.0, Culture=Neutral,
PublicKeyToken=b03f5f7f11d50a3a

Value 1
  Name:            Description
  Type:            REG_SZ
  Data:
DataProvider_OleDB_AccessDataSource_Description, SR,
Microsoft.Data.ConnectionUI.Dialog,
Version=8.0.1200.0, Culture=Neutral,
PublicKeyToken=b03f5f7f11d50a3a

Value 2
  Name:            SpecializedProvider
  Type:            REG_SZ
  Data:            Microsoft.Jet.OLEDB.4.0


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\DataSources\{485C80D5-BC85-
46db-9E6D-4238A0AD7B6B}
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:53 PM
Value 0
  Name:            <NO NAME>
  Type:            REG_SZ
  Data:            Microsoft SQL Server Database File

Value 1
  Name:            DefaultProvider
  Type:            REG_SZ
  Data:            {91510608-8809-4020-8897-
FBA057E22D54}


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\DataSources\{485C80D5-BC85-
46db-9E6D-4238A0AD7B6B}\SupportingProviders
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:53 PM

Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\DataSources\{485C80D5-BC85-
46db-9E6D-
4238A0AD7B6B}\SupportingProviders\{91510608-8809-
4020-8897-FBA057E22D54}
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:53 PM
Value 0
  Name:            DisplayName
  Type:            REG_SZ
  Data:            DataSource_MicrosoftSqlServerFile,
SR, Microsoft.Data.ConnectionUI.Dialog,
Version=8.0.1200.0, Culture=Neutral,
PublicKeyToken=b03f5f7f11d50a3a

Value 1
  Name:            Description
  Type:            REG_SZ
  Data:
DataProvider_Sql_FileDataSource_Description, SR,
Microsoft.Data.ConnectionUI.Dialog,
Version=8.0.1200.0, Culture=Neutral,
PublicKeyToken=b03f5f7f11d50a3a


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\DataSources\{E5E86CD6-6454-
4fdd-910F-DC5DFC73EB45}
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:53 PM
Value 0
  Name:            <NO NAME>
  Type:            REG_SZ
  Data:            Oracle Database

Value 1
  Name:            DefaultProvider
  Type:            REG_SZ
  Data:            {8F5C5018-AE09-42cf-B2CC-
2CCCC7CFC2BB}
```


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```
Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\DataSources\{E5E86CD6-6454-
4fdd-910F-DC5DFC73EB45}\SupportingProviders
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:53 PM

Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\DataSources\{E5E86CD6-6454-
4fdd-910F-
DC5DFC73EB45}\SupportingProviders\{7F041D59-D76A-
44ed-9AA2-FBF6B0548B80}
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:53 PM
Value 0
  Name:            Description
  Type:            REG_SZ
  Data:
DataProvider_OleDB_OracleDataSource_Description, SR,
Microsoft.Data.ConnectionUI.Dialog,
Version=8.0.1200.0, Culture=Neutral,
PublicKeyToken=b03f5f7f11d50a3a

Value 1
  Name:            SpecializedProvider
  Type:            REG_SZ
  Data:            MSDAORA.1


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\DataSources\{E5E86CD6-6454-
4fdd-910F-
DC5DFC73EB45}\SupportingProviders\{8F5C5018-AE09-
42cf-B2CC-2CCCC7CFC2BB}
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:53 PM
Value 0
  Name:            DisplayName
  Type:            REG_SZ
  Data:            DataSource_Oracle, SR,
Microsoft.Data.ConnectionUI.Dialog,
Version=8.0.1200.0, Culture=Neutral,
PublicKeyToken=b03f5f7f11d50a3a

Value 1
  Name:            Description
  Type:            REG_SZ
  Data:
DataProvider_Oracle_DataSource_Description, SR,
Microsoft.Data.ConnectionUI.Dialog,
Version=8.0.1200.0, Culture=Neutral,
PublicKeyToken=b03f5f7f11d50a3a


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\Debugger
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:53 PM
Value 0
  Name:            AspProcessNames
  Type:            REG_SZ
  Data:
inetinfo.exe;mtx.exe;dllhost.exe;w3wp.exe


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\Designers
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:53 PM

Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\Designers\Metadata
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:53 PM

Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\Designers\Metadata\System.Colle
ctions.Specialized.NameValueCollection, System,
Version=2.0.0.0, Culture=neutral,
PublicKeyToken=b77a5c561934e089
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:53 PM
Value 0
  Name:
Microsoft.VisualStudio.Configuration.AppSettingsReade
rMetadata, Microsoft.VisualStudio.Configuration,
Version=2.0.0.0, Culture=neutral,
PublicKeyToken=b03f5f7f11d50a3a
  Type:            REG_DWORD
  Data:            0x1


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\Designers\Metadata\System.Confi
guration.AppSettingsReader, System, Version=2.0.0.0,
Culture=neutral, PublicKeyToken=b77a5c561934e089
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:53 PM
Value 0
  Name:
Microsoft.VisualStudio.Configuration.AppSettingsReade
rMetadata, Microsoft.VisualStudio.Configuration,
Version=2.0.0.0, Culture=neutral,
PublicKeyToken=b03f5f7f11d50a3a
  Type:            REG_DWORD
  Data:            0x1


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\Designers\Metadata\System.Confi
guration.Install.Installer,
System.Configuration.Install, Version=2.0.0.0,
Culture=neutral, PublicKeyToken=b03f5f7f11d50a3a
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:53 PM
Value 0
  Name:
Microsoft.VisualStudio.Configuration.InstallerMetadat
a, Microsoft.VisualStudio.Configuration,
Version=2.0.0.0, Culture=neutral,
PublicKeyToken=b03f5f7f11d50a3a
  Type:            REG_DWORD
  Data:            0x1


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\Designers\Metadata\System.Diagn
ostics.EventLog, System, Version=2.0.0.0,
Culture=neutral, PublicKeyToken=b77a5c561934e089
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:53 PM
Value 0
  Name:
Microsoft.VisualStudio.Configuration.EventLogMetadata
, Microsoft.VisualStudio.Configuration,
Version=2.0.0.0, Culture=neutral,
PublicKeyToken=b03f5f7f11d50a3a
  Type:            REG_DWORD
  Data:            0x1


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\Designers\Metadata\System.Diagn
ostics.PerformanceCounter, System, Version=2.0.0.0,
Culture=neutral, PublicKeyToken=b77a5c561934e089
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:53 PM
Value 0
  Name:
Microsoft.VisualStudio.Configuration.PerformanceCount
erMetadata, Microsoft.VisualStudio.Configuration,
Version=2.0.0.0, Culture=neutral,
PublicKeyToken=b03f5f7f11d50a3a
  Type:            REG_DWORD
  Data:            0x1


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\Designers\Metadata\System.Messa
ging.MessageQueue, System.Messaging, Version=2.0.0.0,
Culture=neutral, PublicKeyToken=b03f5f7f11d50a3a
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:53 PM
Value 0
  Name:
Microsoft.VisualStudio.Configuration.MessageQueueMeta
data, Microsoft.VisualStudio.Configuration,
Version=2.0.0.0, Culture=neutral,
PublicKeyToken=b03f5f7f11d50a3a
  Type:            REG_DWORD
  Data:            0x1


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\Designers\Metadata\System.Servi
ceProcess.ServiceBase, System.ServiceProcess,
```


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```
Version=2.0.0.0, Culture=neutral,
PublicKeyToken=b03f5f7f11d50a3a
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:53 PM
Value 0
  Name:
Microsoft.VisualStudio.Configuration.ServiceBaseMetad
ata, Microsoft.VisualStudio.Configuration,
Version=2.0.0.0, Culture=neutral,
PublicKeyToken=b03f5f7f11d50a3a
  Type:            REG_DWORD
  Data:            0x1


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\Editors
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:53 PM

Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\Editors\{0F88EB3F-6E08-411a-
8391-18B1A663DD7D}
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:53 PM
Value 0
  Name:            <NO NAME>
  Type:            REG_SZ
  Data:            SQL Mobile Script Editor With
Encoding

Value 1
  Name:            Package
  Type:            REG_SZ
  Data:            {4058755A-8FBE-41C7-BC99-
3DBF5C74BA62}

Value 2
  Name:            DisplayName
  Type:            REG_SZ
  Data:            #10

Value 3
  Name:            ExcludeDefTextEditor
  Type:            REG_DWORD
  Data:            0x1

Value 4
  Name:            AcceptBinaryFiles
  Type:            REG_DWORD
  Data:            0

Value 5
  Name:            LinkedEditorGuid
  Type:            REG_SZ
  Data:            {C5B506FB-13BA-4381-3A48-
41275C4CA2B5}


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\Editors\{0F88EB3F-6E08-411a-
8391-18B1A663DD7D}\Extensions
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:53 PM
Value 0
  Name:            sqlce
  Type:            REG_DWORD
  Data:            0x32

Value 1
  Name:            *
  Type:            REG_DWORD
  Data:            0x19


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\Editors\{0F88EB3F-6E08-411a-
8391-18B1A663DD7D}\LogicalViews
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:53 PM
Value 0
  Name:            {7651a703-06e5-11d1-8ebd-
00a0c90f26ea}
  Type:            REG_SZ
  Data:


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\Editors\{14A63023-F03C-4d14-
8E8F-9D1E2D9325D0}
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:53 PM
Value 0
  Name:            <NO NAME>
  Type:            REG_SZ
  Data:            MDX Script Editor with encoding

Value 1
  Name:            Package
  Type:            REG_SZ
  Data:            {4058755A-8FBE-41C7-BC99-
3DBF5C74BA62}

Value 2
  Name:            DisplayName
  Type:            REG_SZ
  Data:            #8

Value 3
  Name:            ExcludeDefTextEditor
  Type:            REG_DWORD
  Data:            0x1

Value 4
  Name:            AcceptBinaryFiles
  Type:            REG_DWORD
  Data:            0

Value 5
  Name:            LinkedEditorGuid
  Type:            REG_SZ
  Data:            {1CEAF4C2-677D-456a-9BED-
1AC73B989127}


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\Editors\{14A63023-F03C-4d14-
8E8F-9D1E2D9325D0}\Extensions
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:53 PM
Value 0
  Name:            mdx
  Type:            REG_DWORD
  Data:            0x32

Value 1
  Name:            *
  Type:            REG_DWORD
  Data:            0x15


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\Editors\{14A63023-F03C-4d14-
8E8F-9D1E2D9325D0}\LogicalViews
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:53 PM
Value 0
  Name:            {7651a703-06e5-11d1-8ebd-
00a0c90f26ea}
  Type:            REG_SZ
  Data:


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\Editors\{1CEAF4C2-677D-456a-
9BED-1AC73B989127}
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:53 PM
Value 0
  Name:            <NO NAME>
  Type:            REG_SZ
  Data:            MDX Script Editor

Value 1
  Name:            Package
  Type:            REG_SZ
  Data:            {4058755A-8FBE-41C7-BC99-
3DBF5C74BA62}

Value 2
  Name:            DisplayName
  Type:            REG_SZ
  Data:            #2

Value 3
  Name:            ExcludeDefTextEditor
  Type:            REG_DWORD
  Data:            0x1

Value 4
  Name:            AcceptBinaryFiles
```


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```
  Type:            REG_DWORD
  Data:            0


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\Editors\{1CEAF4C2-677D-456a-
9BED-1AC73B989127}\Extensions
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:53 PM
Value 0
  Name:            mdx
  Type:            REG_DWORD
  Data:            0x33

Value 1
  Name:            *
  Type:            REG_DWORD
  Data:            0x16


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\Editors\{1CEAF4C2-677D-456a-
9BED-1AC73B989127}\LogicalViews
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:53 PM
Value 0
  Name:            {7651a703-06e5-11d1-8ebd-
00a0c90f26ea}
  Type:            REG_SZ
  Data:


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\Editors\{412B8852-4F21-413B-
9B47-0C9751D3EBFB}
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:53 PM
Value 0
  Name:            <NO NAME>
  Type:            REG_SZ
  Data:            Microsoft XML Editor With Encoding

Value 1
  Name:            Package
  Type:            REG_SZ
  Data:            {87569308-4813-40a0-9cd0-
d7a30838ca3f}

Value 2
  Name:            LinkedEditorGuid
  Type:            REG_SZ
  Data:            {fa3cd31e-987b-443a-9b81-
186104e8dac1}

Value 3
  Name:            DisplayName
  Type:            REG_SZ
  Data:            #202


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\Editors\{412B8852-4F21-413B-
9B47-0C9751D3EBFB}\Extensions
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:53 PM
Value 0
  Name:            *
  Type:            REG_DWORD
  Data:            0x1f

Value 1
  Name:            xml
  Type:            REG_DWORD
  Data:            0x29

Value 2
  Name:            xsl
  Type:            REG_DWORD
  Data:            0x29

Value 3
  Name:            xslt
  Type:            REG_DWORD
  Data:            0x29

Value 4
  Name:            xdr
  Type:            REG_DWORD
  Data:            0x29

Value 5
  Name:            dtd
  Type:            REG_DWORD
  Data:            0x29

Value 6
  Name:            config
  Type:            REG_DWORD
  Data:            0x1f

Value 7
  Name:            vssettings
  Type:            REG_DWORD
  Data:            0x1f

Value 8
  Name:            wsdl
  Type:            REG_DWORD
  Data:            0x1f

Value 9
  Name:            browser
  Type:            REG_DWORD
  Data:            0x1f

Value 10
  Name:            sitemap
  Type:            REG_DWORD
  Data:            0x1f

Value 11
  Name:            addin
  Type:            REG_DWORD
  Data:            0x1f

Value 12
  Name:            vstemplate
  Type:            REG_DWORD
  Data:            0x1f


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\Editors\{412B8852-4F21-413B-
9B47-0C9751D3EBFB}\LogicalViews
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:53 PM
Value 0
  Name:            {7651a700-06e5-11d1-8ebd-
00a0c90f26ea}
  Type:            REG_SZ
  Data:

Value 1
  Name:            {7651a701-06e5-11d1-8ebd-
00a0c90f26ea}
  Type:            REG_SZ
  Data:

Value 2
  Name:            {7651a702-06e5-11d1-8ebd-
00a0c90f26ea}
  Type:            REG_SZ
  Data:            Form

Value 3
  Name:            {7651a703-06e5-11d1-8ebd-
00a0c90f26ea}
  Type:            REG_SZ
  Data:

Value 4
  Name:            {1FCA900B-EDAF-48DD-AF13-
10C8289B8F04}
  Type:            REG_SZ
  Data:            DataGrid


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\Editors\{74946834-37a0-11d2-
a273-00c04f8ef4ff}
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:53 PM
Value 0
  Name:            <NO NAME>
  Type:            REG_SZ
  Data:            VSEditorFactory

Value 1
  Name:            DisplayName
  Type:            REG_SZ
  Data:            #1000

Value 2
```


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```
  Name:            Package
  Type:            REG_SZ
  Data:            {68939055-38e0-4d17-92cb-
8909710d8178}


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\Editors\{74946834-37a0-11d2-
a273-00c04f8ef4ff}\LogicalViews
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:53 PM
Value 0
  Name:            {7651a702-06e5-11d1-8ebd-
00a0c90f26ea}
  Type:            REG_SZ
  Data:


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\Editors\{7A94C22A-CEC2-4aff-
B648-4C416370FC77}
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:53 PM
Value 0
  Name:            <NO NAME>
  Type:            REG_SZ
  Data:            XMLA Script Editor with Encoding

Value 1
  Name:            Package
  Type:            REG_SZ
  Data:            {4058755A-8FBE-41C7-BC99-
3DBF5C74BA62}

Value 2
  Name:            DisplayName
  Type:            REG_SZ
  Data:            #9

Value 3
  Name:            ExcludeDefTextEditor
  Type:            REG_DWORD
  Data:            0x1

Value 4
  Name:            AcceptBinaryFiles
  Type:            REG_DWORD
  Data:            0

Value 5
  Name:            LinkedEditorGuid
  Type:            REG_SZ
  Data:            {B7DF28AE-C9A1-4263-A498-
9897B98336A1}


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\Editors\{7A94C22A-CEC2-4aff-
B648-4C416370FC77}\Extensions
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:53 PM
Value 0
  Name:            xmla
  Type:            REG_DWORD
  Data:            0x32

Value 1
  Name:            xml
  Type:            REG_DWORD
  Data:            0x1d

Value 2
  Name:            *
  Type:            REG_DWORD
  Data:            0x17


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\Editors\{7A94C22A-CEC2-4aff-
B648-4C416370FC77}\LogicalViews
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:53 PM
Value 0
  Name:            {7651a703-06e5-11d1-8ebd-
00a0c90f26ea}
  Type:            REG_SZ
  Data:


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\Editors\{8B382828-6202-11d1-
8870-0000F87579D2}
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:53 PM
Value 0
  Name:            <NO NAME>
  Type:            REG_SZ
  Data:            Source Code (Text) Editor

Value 1
  Name:            DisplayName
  Type:            REG_SZ
  Data:            #13792

Value 2
  Name:            Package
  Type:            REG_SZ
  Data:            {F5E7E720-1401-11d1-883B-
0000F87579D2}

Value 3
  Name:            ExcludeInFileExtnMapping
  Type:            REG_DWORD
  Data:            0x1

Value 4
  Name:            EditorTrustLevel
  Type:            REG_DWORD
  Data:            0x1


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\Editors\{8B382828-6202-11d1-
8870-0000F87579D2}\Extensions
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:53 PM
Value 0
  Name:            *
  Type:            REG_DWORD
  Data:            0x1e

Value 1
  Name:            txt
  Type:            REG_DWORD
  Data:            0x28

Value 2
  Name:            doc
  Type:            REG_DWORD
  Data:            0x17

Value 3
  Name:            rtf
  Type:            REG_DWORD
  Data:            0x17


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\Editors\{8B382828-6202-11d1-
8870-0000F87579D2}\LogicalViews
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:53 PM
Value 0
  Name:            {7651a700-06e5-11d1-8ebd-
00a0c90f26ea}
  Type:            REG_SZ
  Data:

Value 1
  Name:            {7651a701-06e5-11d1-8ebd-
00a0c90f26ea}
  Type:            REG_SZ
  Data:

Value 2
  Name:            {7651a703-06e5-11d1-8ebd-
00a0c90f26ea}
  Type:            REG_SZ
  Data:


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\Editors\{A8AE89ED-34A0-489e-
8A98-AEE7CEDEA6B7}
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:53 PM
Value 0
  Name:            <NO NAME>
  Type:            REG_SZ
  Data:            DMX Script Editor
```


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```
Value 1
  Name:            Package
  Type:            REG_SZ
  Data:            {4058755A-8FBE-41C7-BC99-
3DBF5C74BA62}

Value 2
  Name:            DisplayName
  Type:            REG_SZ
  Data:            #11

Value 3
  Name:            ExcludeDefTextEditor
  Type:            REG_DWORD
  Data:            0x1

Value 4
  Name:            AcceptBinaryFiles
  Type:            REG_DWORD
  Data:            0


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\Editors\{A8AE89ED-34A0-489e-
8A98-AEE7CEDEA6B7}\Extensions
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:53 PM
Value 0
  Name:            dmx
  Type:            REG_DWORD
  Data:            0x32

Value 1
  Name:            *
  Type:            REG_DWORD
  Data:            0x14


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\Editors\{A8AE89ED-34A0-489e-
8A98-AEE7CEDEA6B7}\LogicalViews
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:53 PM
Value 0
  Name:            {7651a703-06e5-11d1-8ebd-
00a0c90f26ea}
  Type:            REG_SZ
  Data:


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\Editors\{B5A506EB-11BE-4782-
9A18-21265C2CA0B4}
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:53 PM
Value 0
  Name:            <NO NAME>
  Type:            REG_SZ
  Data:            SQL Script Editor
```

```
Value 1
  Name:            Package
  Type:            REG_SZ
  Data:            {4058755A-8FBE-41C7-BC99-
3DBF5C74BA62}

Value 2
  Name:            DisplayName
  Type:            REG_SZ
  Data:            #1

Value 3
  Name:            ExcludeDefTextEditor
  Type:            REG_DWORD
  Data:            0x1

Value 4
  Name:            AcceptBinaryFiles
  Type:            REG_DWORD
  Data:            0


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\Editors\{B5A506EB-11BE-4782-
9A18-21265C2CA0B4}\Extensions
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:53 PM
Value 0
  Name:            sql
  Type:            REG_DWORD
  Data:            0x33

Value 1
  Name:            *
  Type:            REG_DWORD
  Data:            0x14


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\Editors\{B5A506EB-11BE-4782-
9A18-21265C2CA0B4}\LogicalViews
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:53 PM
Value 0
  Name:            {7651a703-06e5-11d1-8ebd-
00a0c90f26ea}
  Type:            REG_SZ
  Data:


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\Editors\{B7DF28AE-C9A1-4263-
A498-9897B98336A1}
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:53 PM
Value 0
  Name:            <NO NAME>
  Type:            REG_SZ
  Data:            XMLA Script Editor
```

```
Value 1
  Name:            Package
  Type:            REG_SZ
  Data:            {4058755A-8FBE-41C7-BC99-
3DBF5C74BA62}

Value 2
  Name:            DisplayName
  Type:            REG_SZ
  Data:            #4

Value 3
  Name:            ExcludeDefTextEditor
  Type:            REG_DWORD
  Data:            0x1

Value 4
  Name:            AcceptBinaryFiles
  Type:            REG_DWORD
  Data:            0


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\Editors\{B7DF28AE-C9A1-4263-
A498-9897B98336A1}\Extensions
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:53 PM
Value 0
  Name:            xmla
  Type:            REG_DWORD
  Data:            0x33

Value 1
  Name:            xml
  Type:            REG_DWORD
  Data:            0x1e

Value 2
  Name:            *
  Type:            REG_DWORD
  Data:            0x18


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\Editors\{B7DF28AE-C9A1-4263-
A498-9897B98336A1}\LogicalViews
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:53 PM
Value 0
  Name:            {7651a703-06e5-11d1-8ebd-
00a0c90f26ea}
  Type:            REG_SZ
  Data:


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\Editors\{BD41288B-959E-41BC-
9A56-1D1F232059D2}
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:53 PM
```


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```
Value 0
  Name:            <NO NAME>
  Type:            REG_SZ
  Data:            ShowPlan Editor

Value 1
  Name:            Package
  Type:            REG_SZ
  Data:            {4058755A-8FBE-41C7-BC99-
3DBF5C74BA62}

Value 2
  Name:            DisplayName
  Type:            REG_SZ
  Data:            #13

Value 3
  Name:            ExcludeDefTextEditor
  Type:            REG_DWORD
  Data:            0x1

Value 4
  Name:            AcceptBinaryFiles
  Type:            REG_DWORD
  Data:            0


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\Editors\{BD41288B-959E-41BC-
9A56-1D1F232059D2}\Extensions
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:53 PM
Value 0
  Name:            sqlplan
  Type:            REG_DWORD
  Data:            0x32


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\Editors\{C1D6FA53-CCC1-4029-
A3E8-942345F173D0}
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:53 PM
Value 0
  Name:            <NO NAME>
  Type:            REG_SZ
  Data:            Deadlock Editor

Value 1
  Name:            Package
  Type:            REG_SZ
  Data:            {4058755A-8FBE-41C7-BC99-
3DBF5C74BA62}

Value 2
  Name:            DisplayName
  Type:            REG_SZ
  Data:            #6

Value 3
  Name:            ExcludeDefTextEditor
  Type:            REG_DWORD
  Data:            0x1

Value 4
  Name:            AcceptBinaryFiles
  Type:            REG_DWORD
  Data:            0


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\Editors\{C1D6FA53-CCC1-4029-
A3E8-942345F173D0}\Extensions
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:53 PM
Value 0
  Name:            xdl
  Type:            REG_DWORD
  Data:            0x32


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\Editors\{C5B506FB-13BA-4381-
3A48-41275C4CA2B5}
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:53 PM
Value 0
  Name:            <NO NAME>
  Type:            REG_SZ
  Data:            SQL Mobile Script Editor

Value 1
  Name:            Package
  Type:            REG_SZ
  Data:            {4058755A-8FBE-41C7-BC99-
3DBF5C74BA62}

Value 2
  Name:            DisplayName
  Type:            REG_SZ
  Data:            #5

Value 3
  Name:            ExcludeDefTextEditor
  Type:            REG_DWORD
  Data:            0x1

Value 4
  Name:            AcceptBinaryFiles
  Type:            REG_DWORD
  Data:            0


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\Editors\{C5B506FB-13BA-4381-
3A48-41275C4CA2B5}\Extensions
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:53 PM
Value 0
  Name:            sqlce
  Type:            REG_DWORD
  Data:            0x33

Value 1
  Name:            *
  Type:            REG_DWORD
  Data:            0x1a


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\Editors\{C5B506FB-13BA-4381-
3A48-41275C4CA2B5}\LogicalViews
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:53 PM
Value 0
  Name:            {7651a703-06e5-11d1-8ebd-
00a0c90f26ea}
  Type:            REG_SZ
  Data:


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\Editors\{C76E46D4-B7D7-42b8-
9726-A98D8045B179}
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:53 PM
Value 0
  Name:            <NO NAME>
  Type:            REG_SZ
  Data:            SQL Script Editor With Encoding

Value 1
  Name:            Package
  Type:            REG_SZ
  Data:            {4058755A-8FBE-41C7-BC99-
3DBF5C74BA62}

Value 2
  Name:            DisplayName
  Type:            REG_SZ
  Data:            #7

Value 3
  Name:            ExcludeDefTextEditor
  Type:            REG_DWORD
  Data:            0x1

Value 4
  Name:            AcceptBinaryFiles
  Type:            REG_DWORD
  Data:            0

Value 5
  Name:            LinkedEditorGuid
  Type:            REG_SZ
  Data:            {B5A506EB-11BE-4782-9A18-
21265C2CA0B4}


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
```


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```
Server\90\Tools\Shell\Editors\{C76E46D4-B7D7-42b8-
9726-A98D8045B179}\Extensions
Class Name:         <NO CLASS>
Last Write Time:    7/19/2005 - 4:53 PM
Value 0
  Name:             sql
  Type:             REG_DWORD
  Data:             0x32

Value 1
  Name:             *
  Type:             REG_DWORD
  Data:             0x13


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\Editors\{C76E46D4-B7D7-42b8-
9726-A98D8045B179}\LogicalViews
Class Name:         <NO CLASS>
Last Write Time:    7/19/2005 - 4:53 PM
Value 0
  Name:             {7651a703-06e5-11d1-8ebd-
00a0c90f26ea}
  Type:             REG_SZ
  Data:


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\Editors\{C7747503-0E24-4fbe-
BE4B-94180C3947D7}
Class Name:         <NO CLASS>
Last Write Time:    7/19/2005 - 4:53 PM
Value 0
  Name:             <NO NAME>
  Type:             REG_SZ
  Data:             Source Code (Text) Editor with
Encoding

Value 1
  Name:             DisplayName
  Type:             REG_SZ
  Data:             #13190

Value 2
  Name:             Package
  Type:             REG_SZ
  Data:             {F5E7E720-1401-11d1-883B-
0000F87579D2}

Value 3
  Name:             EditorTrustLevel
  Type:             REG_DWORD
  Data:             0x1

Value 4
  Name:             LinkedEditorGuid
  Type:             REG_SZ
  Data:             {8B382828-6202-11d1-8870-
0000F87579D2}
```

```
Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\Editors\{C7747503-0E24-4fbe-
BE4B-94180C3947D7}\Extensions
Class Name:         <NO CLASS>
Last Write Time:    7/19/2005 - 4:53 PM
Value 0
  Name:             *
  Type:             REG_DWORD
  Data:             0x1d

Value 1
  Name:             txt
  Type:             REG_DWORD
  Data:             0x27

Value 2
  Name:             doc
  Type:             REG_DWORD
  Data:             0x16

Value 3
  Name:             rtf
  Type:             REG_DWORD
  Data:             0x16


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\Editors\{C7747503-0E24-4fbe-
BE4B-94180C3947D7}\LogicalViews
Class Name:         <NO CLASS>
Last Write Time:    7/19/2005 - 4:53 PM
Value 0
  Name:             {7651a700-06e5-11d1-8ebd-
00a0c90f26ea}
  Type:             REG_SZ
  Data:

Value 1
  Name:             {7651a701-06e5-11d1-8ebd-
00a0c90f26ea}
  Type:             REG_SZ
  Data:

Value 2
  Name:             {7651a703-06e5-11d1-8ebd-
00a0c90f26ea}
  Type:             REG_SZ
  Data:


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\Editors\{CC84AFBD-DA02-46F4-
8623-9F07E5569EDB}
Class Name:         <NO CLASS>
Last Write Time:    7/19/2005 - 4:53 PM
Value 0
  Name:             <NO NAME>
  Type:             REG_SZ
  Data:             Data Warehouse Designer
```

```
Value 1
  Name:             AcceptBinaryFiles
  Type:             REG_DWORD
  Data:             0

Value 2
  Name:             DisplayName
  Type:             REG_SZ
  Data:             DataWarehouse Designer

Value 3
  Name:             ExcludeDefTextEditor
  Type:             REG_DWORD
  Data:             0x1

Value 4
  Name:             Package
  Type:             REG_SZ
  Data:             {4a0c6509-bf90-43da-abee-
0aba3a8527f1}


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\Editors\{CC84AFBD-DA02-46F4-
8623-9F07E5569EDB}\DWExtensions
Class Name:         <NO CLASS>
Last Write Time:    7/19/2005 - 4:53 PM
Value 0
  Name:             cube
  Type:             REG_SZ
  Data:

Value 1
  Name:             dim
  Type:             REG_SZ
  Data:

Value 2
  Name:             dmm
  Type:             REG_SZ
  Data:

Value 3
  Name:             ds
  Type:             REG_SZ
  Data:

Value 4
  Name:             dsv
  Type:             REG_SZ
  Data:

Value 5
  Name:             partitions
  Type:             REG_SZ
  Data:

Value 6
  Name:             database
  Type:             REG_SZ
  Data:
```


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```
Value 7
  Name:            role
  Type:            REG_SZ
  Data:

Value 8
  Name:            dtsx
  Type:            REG_SZ
  Data:


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\Editors\{CC84AFBD-DA02-46F4-
8623-9F07E5569EDB}\Extensions
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:53 PM
Value 0
  Name:            cube
  Type:            REG_DWORD
  Data:            0x28

Value 1
  Name:            dim
  Type:            REG_DWORD
  Data:            0x28

Value 2
  Name:            dmm
  Type:            REG_DWORD
  Data:            0x28

Value 3
  Name:            ds
  Type:            REG_DWORD
  Data:            0x28

Value 4
  Name:            dsv
  Type:            REG_DWORD
  Data:            0x28

Value 5
  Name:            partitions
  Type:            REG_DWORD
  Data:            0x28

Value 6
  Name:            database
  Type:            REG_DWORD
  Data:            0x28

Value 7
  Name:            role
  Type:            REG_DWORD
  Data:            0x28

Value 8
  Name:            dtsx
  Type:            REG_DWORD
  Data:            0x28


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\Editors\{CC84AFBD-DA02-46F4-
8623-9F07E5569EDB}\LogicalViews
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:53 PM
Value 0
  Name:            {7651a700-06e5-11d1-8ebd-
00a0c90f26ea}
  Type:            REG_SZ
  Data:

Value 1
  Name:            {7651a701-06e5-11d1-8ebd-
00a0c90f26ea}
  Type:            REG_SZ
  Data:            XML

Value 2
  Name:            {7651a702-06e5-11d1-8ebd-
00a0c90f26ea}
  Type:            REG_SZ
  Data:


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\Editors\{CC84AFBD-DA02-46F4-
8623-9F07E5569EDB}\OpenWithEntries
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:53 PM
Value 0
  Name:            {7651a701-06e5-11d1-8ebd-
00a0c90f26ea}
  Type:            REG_SZ
  Data:            #2001

Value 1
  Name:            {7651a702-06e5-11d1-8ebd-
00a0c90f26ea}
  Type:            REG_SZ
  Data:            #2002


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\Editors\{CFF630F8-2DB3-44ba-
9FC9-6489665DE5B8}
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:53 PM
Value 0
  Name:            <NO NAME>
  Type:            REG_SZ
  Data:            Object Browser

Value 1
  Name:            DisplayName
  Type:            REG_SZ
  Data:            #13103

Value 2
  Name:            Package
  Type:            REG_SZ
  Data:            {DA9FB551-C724-11d0-AE1F-
00A0C90FFFC3}

Value 3
  Name:            EditorTrustLevel
  Type:            REG_DWORD
  Data:            0x1


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\Editors\{CFF630F8-2DB3-44ba-
9FC9-6489665DE5B8}\Extensions
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:53 PM
Value 0
  Name:            olb
  Type:            REG_DWORD
  Data:            0x17

Value 1
  Name:            tlb
  Type:            REG_DWORD
  Data:            0x17

Value 2
  Name:            dll
  Type:            REG_DWORD
  Data:            0x5

Value 3
  Name:            exe
  Type:            REG_DWORD
  Data:            0x5

Value 4
  Name:            ocx
  Type:            REG_DWORD
  Data:            0x5


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\Editors\{F52E35C3-1150-4ed7-
B0D9-5DBBF66D9F34}
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:53 PM
Value 0
  Name:            <NO NAME>
  Type:            REG_SZ
  Data:            DMX Script Editor with encoding

Value 1
  Name:            Package
  Type:            REG_SZ
  Data:            {4058755A-8FBE-41C7-BC99-
3DBF5C74BA62}

Value 2
  Name:            DisplayName
  Type:            REG_SZ
  Data:            #12
```


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```
Value 3
  Name:            ExcludeDefTextEditor
  Type:            REG_DWORD
  Data:            0x1

Value 4
  Name:            AcceptBinaryFiles
  Type:            REG_DWORD
  Data:            0

Value 5
  Name:            LinkedEditorGuid
  Type:            REG_SZ
  Data:            {A8AE89ED-34A0-489e-8A98-
AEE7CEDEA6B7}


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\Editors\{F52E35C3-1150-4ed7-
B0D9-5DBBF66D9F34}\Extensions
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:53 PM
Value 0
  Name:            dmx
  Type:            REG_DWORD
  Data:            0x31

Value 1
  Name:            *
  Type:            REG_DWORD
  Data:            0x13


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\Editors\{F52E35C3-1150-4ed7-
B0D9-5DBBF66D9F34}\LogicalViews
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:53 PM
Value 0
  Name:            {7651a703-06e5-11d1-8ebd-
00a0c90f26ea}
  Type:            REG_SZ
  Data:


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\Editors\{fa3cd31e-987b-443a-
9b81-186104e8dac1}
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:53 PM
Value 0
  Name:            <NO NAME>
  Type:            REG_SZ
  Data:            Microsoft XML Editor

Value 1
  Name:            Package
  Type:            REG_SZ
  Data:            {87569308-4813-40a0-9cd0-
d7a30838ca3f}

Value 2
  Name:            DisplayName
  Type:            REG_SZ
  Data:            #201


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\Editors\{fa3cd31e-987b-443a-
9b81-186104e8dac1}\Extensions
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:53 PM
Value 0
  Name:            *
  Type:            REG_DWORD
  Data:            0x20

Value 1
  Name:            xml
  Type:            REG_DWORD
  Data:            0x2a

Value 2
  Name:            xsl
  Type:            REG_DWORD
  Data:            0x2a

Value 3
  Name:            xslt
  Type:            REG_DWORD
  Data:            0x2a

Value 4
  Name:            xdr
  Type:            REG_DWORD
  Data:            0x2a

Value 5
  Name:            dtd
  Type:            REG_DWORD
  Data:            0x2a

Value 6
  Name:            config
  Type:            REG_DWORD
  Data:            0x20

Value 7
  Name:            vssettings
  Type:            REG_DWORD
  Data:            0x20

Value 8
  Name:            wsdl
  Type:            REG_DWORD
  Data:            0x20

Value 9
  Name:            browser
  Type:            REG_DWORD
  Data:            0x20

Value 10
  Name:            sitemap
  Type:            REG_DWORD
  Data:            0x20

Value 11
  Name:            addin
  Type:            REG_DWORD
  Data:            0x20

Value 12
  Name:            vstemplate
  Type:            REG_DWORD
  Data:            0x20


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\Editors\{fa3cd31e-987b-443a-
9b81-186104e8dac1}\LogicalViews
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:53 PM
Value 0
  Name:            {7651a700-06e5-11d1-8ebd-
00a0c90f26ea}
  Type:            REG_SZ
  Data:

Value 1
  Name:            {7651a701-06e5-11d1-8ebd-
00a0c90f26ea}
  Type:            REG_SZ
  Data:

Value 2
  Name:            {7651a702-06e5-11d1-8ebd-
00a0c90f26ea}
  Type:            REG_SZ
  Data:            Form

Value 3
  Name:            {7651a703-06e5-11d1-8ebd-
00a0c90f26ea}
  Type:            REG_SZ
  Data:

Value 4
  Name:            {1FCA900B-EDAF-48DD-AF13-
10C8289B8F04}
  Type:            REG_SZ
  Data:            DataGrid


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\FindAndReplace
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:53 PM

Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\FindAndReplace\FindScopeString
Class Name:        <NO CLASS>
```


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```
Last Write Time:   7/19/2005 - 4:53 PM
Value 0
  Name:            Package
  Type:            REG_SZ
  Data:            {DA9FB551-C724-11D0-AE1F-
00A0C90FFFC3}

Value 1
  Name:            FindScopeStringID
  Type:            REG_SZ
  Data:            13813


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\FindAndReplace\TrackChanges
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:53 PM
Value 0
  Name:            TrackReplaceChangesUpperLimit
  Type:            REG_SZ
  Data:            1000


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\FontAndColors
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:53 PM

Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\FontAndColors\All Text Tool
Windows
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:53 PM
Value 0
  Name:            Package
  Type:            REG_SZ
  Data:            {F5E7E71D-1401-11D1-883B-
0000F87579D2}

Value 1
  Name:            Category
  Type:            REG_SZ
  Data:            {C34C709B-C855-459e-B38C-
3021F162D3B1}

Value 2
  Name:            HideInDialog
  Type:            REG_DWORD
  Data:            0x1


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\FontAndColors\AllDebuggerVarWnd
s
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:53 PM
Value 0
  Name:            HideInDialog
  Type:            REG_DWORD
  Data:            0x1

Value 1
  Name:            Package
  Type:            REG_SZ
  Data:            {3B70A4AE-BB91-4ABE-A05C-
C4DE07B9763E}

Value 2
  Name:            Category
  Type:            REG_SZ
  Data:            {35B25E75-AB53-4C5D-80EA-
6682EBB2BBBD}

Value 3
  Name:            NameID
  Type:            REG_DWORD
  Data:            0x326


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\FontAndColors\Autos
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:53 PM
Value 0
  Name:            HideInDialog
  Type:            REG_DWORD
  Data:            0x1

Value 1
  Name:            NameID
  Type:            REG_DWORD
  Data:            0x321

Value 2
  Name:            Category
  Type:            REG_SZ
  Data:            {A7EE6BEE-D0AA-4B2F-AD9D-
748276A725F6}

Value 3
  Name:            Package
  Type:            REG_SZ
  Data:            {3B70A4AE-BB91-4ABE-A05C-
C4DE07B9763E}


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\FontAndColors\Business
Intelligence Data Viewers
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:53 PM
Value 0
  Name:            Package
  Type:            REG_SZ
  Data:            {96B36E93-F71C-4160-A4EA-
26AE801D2F63}

Value 1
  Name:            Category
  Type:            REG_SZ
  Data:            {45E05167-BEFE-482d-8B9B-
0C329EC847DF}

Value 2
  Name:            HideInDialog
  Type:            REG_DWORD
  Data:            0x1


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\FontAndColors\CallStack
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:53 PM
Value 0
  Name:            HideInDialog
  Type:            REG_DWORD
  Data:            0x1

Value 1
  Name:            NameID
  Type:            REG_DWORD
  Data:            0x323

Value 2
  Name:            Category
  Type:            REG_SZ
  Data:            {FD2219AF-EBF8-4116-A801-
3B503C48DFF0}

Value 3
  Name:            Package
  Type:            REG_SZ
  Data:            {3B70A4AE-BB91-4ABE-A05C-
C4DE07B9763E}


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\FontAndColors\Command Window
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:53 PM
Value 0
  Name:            Package
  Type:            REG_SZ
  Data:            {F5E7E71D-1401-11D1-883B-
0000F87579D2}

Value 1
  Name:            Category
  Type:            REG_SZ
  Data:            {EE1BE240-4E81-4beb-8EEA-
54322B6B1BF5}

Value 2
  Name:            NameID
  Type:            REG_DWORD
  Data:            0x38d2

Value 3
  Name:            ToolWindowPackage
  Type:            REG_SZ
```


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```
  Data:            {DA9FB551-C724-11d0-AE1F-
00A0C90FFFC3}

Value 4
  Name:            HideInDialog
  Type:            REG_DWORD
  Data:            0x1


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\FontAndColors\Data Warehouse
Designer
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:53 PM
Value 0
  Name:            Package
  Type:            REG_SZ
  Data:            {4A0C6509-BF90-43da-ABEE-
0ABA3A8527F1}

Value 1
  Name:            Category
  Type:            REG_SZ
  Data:            {34F54DB8-3D69-4d94-ABD5-
BA1D717AB8BE}


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\FontAndColors\Database Designer
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:53 PM
Value 0
  Name:            Package
  Type:            REG_SZ
  Data:            {ADF95D98-9094-4B7B-874A-
D94844D05DCE}

Value 1
  Name:            Category
  Type:            REG_SZ
  Data:            {4C889E8A-2BBB-4DC8-AE21-
B1E4799D7631}


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\FontAndColors\DataTips
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:53 PM
Value 0
  Name:            HideInDialog
  Type:            REG_DWORD
  Data:            0x1

Value 1
  Name:            Category
  Type:            REG_SZ
  Data:            {F7B7B222-E186-48DF-A5EE-
174E8129891B}

Value 2
  Name:            Package
  Type:            REG_SZ
  Data:            {3B70A4AE-BB91-4ABE-A05C-
C4DE07B9763E}

Value 3
  Name:            NameID
  Type:            REG_DWORD
  Data:            0x325


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\FontAndColors\Dialogs and Tool
Windows
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:53 PM
Value 0
  Name:            Package
  Type:            REG_SZ
  Data:            {FD9DC8E3-2FFC-446D-8C50-
99CA4A3D2D1C}

Value 1
  Name:            Category
  Type:            REG_SZ
  Data:            {1F987C00-E7C4-4869-8A17-
23FD602268B0}

Value 2
  Name:            HideInDialog
  Type:            REG_DWORD
  Data:            0x1


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\FontAndColors\Disassembly
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:53 PM
Value 0
  Name:            HideInDialog
  Type:            REG_DWORD
  Data:            0x1

Value 1
  Name:            NameID
  Type:            REG_DWORD
  Data:            0x4

Value 2
  Name:            Category
  Type:            REG_SZ
  Data:            {9E632E6E-D786-4F9A-8D3E-
B9398836C784}

Value 3
  Name:            ToolWindowPackage
  Type:            REG_SZ
  Data:            {C9DD4A57-47FB-11D2-83E7-
00C04F9902C1}

Value 4
  Name:            Package
  Type:            REG_SZ
  Data:            {F5E7E71D-1401-11D1-883B-
0000F87579D2}


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\FontAndColors\Find Results
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:53 PM
Value 0
  Name:            Package
  Type:            REG_SZ
  Data:            {F5E7E71D-1401-11D1-883B-
0000F87579D2}

Value 1
  Name:            Category
  Type:            REG_SZ
  Data:            {5C48B2CB-0366-4fbf-9786-
0BB37E945687}

Value 2
  Name:            NameID
  Type:            REG_DWORD
  Data:            0x38d1

Value 3
  Name:            ToolWindowPackage
  Type:            REG_SZ
  Data:            {DA9FB551-C724-11d0-AE1F-
00A0C90FFFC3}


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\FontAndColors\Find
Results\IncludedItemsFromEditorCategory
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:53 PM
Value 0
  Name:            Current List Location
  Type:            REG_DWORD
  Data:            0


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\FontAndColors\GridSQLResults
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:53 PM
Value 0
  Name:            Category
  Type:            REG_SZ
  Data:            {E6784B78-8552-41d7-9630-
D1FDEE0DD8E2}

Value 1
  Name:            Package
  Type:            REG_SZ
  Data:            {F30396AD-50FE-4ae2-9A98-
DC5078302C5E}
```


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```
Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\FontAndColors\Immediate Window
Class Name:         <NO CLASS>
Last Write Time:    7/19/2005 - 4:53 PM
Value 0
  Name:             Package
  Type:             REG_SZ
  Data:             {F5E7E71D-1401-11D1-883B-
0000F87579D2}

Value 1
  Name:             Category
  Type:             REG_SZ
  Data:             {6BB65C5A-2F31-4bde-9F48-
8A38DC0C63E7}

Value 2
  Name:             NameID
  Type:             REG_DWORD
  Data:             0x38d4

Value 3
  Name:             ToolWindowPackage
  Type:             REG_SZ
  Data:             {DA9FB551-C724-11d0-AE1F-
00A0C90FFFC3}

Value 4
  Name:             HideInDialog
  Type:             REG_DWORD
  Data:             0x1


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\FontAndColors\Locals
Class Name:         <NO CLASS>
Last Write Time:    7/19/2005 - 4:53 PM
Value 0
  Name:             HideInDialog
  Type:             REG_DWORD
  Data:             0x1

Value 1
  Name:             NameID
  Type:             REG_DWORD
  Data:             0x322

Value 2
  Name:             Category
  Type:             REG_SZ
  Data:             {8259ACED-490A-41B3-A0FB-
64C842CCDC80}

Value 3
  Name:             Package
  Type:             REG_SZ
  Data:             {3B70A4AE-BB91-4ABE-A05C-
C4DE07B9763E}

Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\FontAndColors\Memory
Class Name:         <NO CLASS>
Last Write Time:    7/19/2005 - 4:53 PM
Value 0
  Name:             HideInDialog
  Type:             REG_DWORD
  Data:             0x1

Value 1
  Name:             NameID
  Type:             REG_DWORD
  Data:             0x99

Value 2
  Name:             Category
  Type:             REG_SZ
  Data:             {CE2ECED5-C21C-464C-9B45-
15E10E9F9EF9}

Value 3
  Name:             ToolWindowPackage
  Type:             REG_SZ
  Data:             {C9DD4A57-47FB-11D2-83E7-
00C04F9902C1}

Value 4
  Name:             Package
  Type:             REG_SZ
  Data:             {F5E7E71D-1401-11D1-883B-
0000F87579D2}


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\FontAndColors\Output Window
Class Name:         <NO CLASS>
Last Write Time:    7/19/2005 - 4:53 PM
Value 0
  Name:             Package
  Type:             REG_SZ
  Data:             {F5E7E71D-1401-11D1-883B-
0000F87579D2}

Value 1
  Name:             Category
  Type:             REG_SZ
  Data:             {9973EFDF-317D-431c-8BC1-
5E88CBFD4F7F}

Value 2
  Name:             NameID
  Type:             REG_DWORD
  Data:             0x38d0

Value 3
  Name:             ToolWindowPackage
  Type:             REG_SZ
  Data:             {DA9FB551-C724-11d0-AE1F-
00A0C90FFFC3}

Value 4
  Name:             HideInDialog
  Type:             REG_DWORD
  Data:             0x1


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\FontAndColors\Output
Window\IncludedItemsFromEditorCategory
Class Name:         <NO CLASS>
Last Write Time:    7/19/2005 - 4:53 PM
Value 0
  Name:             Current List Location
  Type:             REG_DWORD
  Data:             0


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\FontAndColors\Printer
Class Name:         <NO CLASS>
Last Write Time:    7/19/2005 - 4:53 PM
Value 0
  Name:             Package
  Type:             REG_SZ
  Data:             {F5E7E71D-1401-11D1-883B-
0000F87579D2}

Value 1
  Name:             Category
  Type:             REG_SZ
  Data:             {47724E70-AF55-48fb-A928-
BB161C1D0C05}


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\FontAndColors\Query/View
Designer
Class Name:         <NO CLASS>
Last Write Time:    7/19/2005 - 4:53 PM
Value 0
  Name:             Package
  Type:             REG_SZ
  Data:             {1F2EEAC2-DCF7-4B90-9412-
2CE752DE5FEB}

Value 1
  Name:             Category
  Type:             REG_SZ
  Data:             {5B50CEC1-B3AB-4CC3-BE1E-
44AF4A07B2AF}


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\FontAndColors\Registers
Class Name:         <NO CLASS>
Last Write Time:    7/19/2005 - 4:53 PM
Value 0
  Name:             HideInDialog
  Type:             REG_DWORD
```


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```
  Data:            0x1

Value 1
  Name:            NameID
  Type:            REG_DWORD
  Data:            0x1360

Value 2
  Name:            Category
  Type:            REG_SZ
  Data:            {40660F54-80FA-4375-89A3-
8D06AA954EBA}

Value 3
  Name:            ToolWindowPackage
  Type:            REG_SZ
  Data:            {C9DD4A57-47FB-11D2-83E7-
00C04F9902C1}

Value 4
  Name:            Package
  Type:            REG_SZ
  Data:            {F5E7E71D-1401-11D1-883B-
0000F87579D2}


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\FontAndColors\SqlExecutionPlan
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:53 PM
Value 0
  Name:            Category
  Type:            REG_SZ
  Data:            {90A03679-39CF-450f-A9E9-
91DAADF17F38}

Value 1
  Name:            Package
  Type:            REG_SZ
  Data:            {F30396AD-50FE-4ae2-9A98-
DC5078302C5E}


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\FontAndColors\Statement
Completion
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:53 PM
Value 0
  Name:            Package
  Type:            REG_SZ
  Data:            {F5E7E71D-1401-11D1-883B-
0000F87579D2}

Value 1
  Name:            Category
  Type:            REG_SZ
  Data:            {C1614BB1-734F-4a31-BD42-
5AE6275E16D2}

Value 2
  Name:            HideInDialog
  Type:            REG_DWORD
  Data:            0x1


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\FontAndColors\Text Editor
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:53 PM
Value 0
  Name:            Package
  Type:            REG_SZ
  Data:            {F5E7E71D-1401-11D1-883B-
0000F87579D2}

Value 1
  Name:            Category
  Type:            REG_SZ
  Data:            {A27B4E24-A735-4d1d-B8E7-
9716E1E3D8E0}


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\FontAndColors\TextSQLResults
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:53 PM
Value 0
  Name:            Category
  Type:            REG_SZ
  Data:            {AD3737CA-26A1-47cb-A143-
0EB0ECBC7FC9}

Value 1
  Name:            Package
  Type:            REG_SZ
  Data:            {F30396AD-50FE-4ae2-9A98-
DC5078302C5E}


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\FontAndColors\Threads
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:53 PM
Value 0
  Name:            HideInDialog
  Type:            REG_DWORD
  Data:            0x1

Value 1
  Name:            NameID
  Type:            REG_DWORD
  Data:            0x324

Value 2
  Name:            Category
  Type:            REG_SZ
  Data:            {BB8FE807-A186-404A-81FA-
D20B908CA93B}

Value 3
  Name:            Package
  Type:            REG_SZ
  Data:            {3B70A4AE-BB91-4ABE-A05C-
C4DE07B9763E}


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\FontAndColors\ToolTips
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:53 PM
Value 0
  Name:            Package
  Type:            REG_SZ
  Data:            {F5E7E71D-1401-11D1-883B-
0000F87579D2}

Value 1
  Name:            Category
  Type:            REG_SZ
  Data:            {A9A5637F-B2A8-422e-8FB5-
DFB4625F0111}


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\FontAndColors\Watch
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:53 PM
Value 0
  Name:            HideInDialog
  Type:            REG_DWORD
  Data:            0x1

Value 1
  Name:            NameID
  Type:            REG_DWORD
  Data:            0x320

Value 2
  Name:            Category
  Type:            REG_SZ
  Data:            {358463D0-D084-400F-997E-
A34FC570BC72}

Value 3
  Name:            Package
  Type:            REG_SZ
  Data:            {3B70A4AE-BB91-4ABE-A05C-
C4DE07B9763E}


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\Generators
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:53 PM

Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\Generators\{164b10b9-b200-11d0-
8c61-00a0c91e29d5}
Class Name:        <NO CLASS>
```


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```
Last Write Time:   7/19/2005 - 4:53 PM

Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\Generators\{164b10b9-b200-11d0-
8c61-00a0c91e29d5}\ResXFileCodeGenerator
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:53 PM
Value 0
  Name:            GeneratesDesignTimeSource
  Type:            REG_DWORD
  Data:            0x1

Value 1
  Name:            CLSID
  Type:            REG_SZ
  Data:            {c77981ec-ba19-3348-878f-
6f88745a251e}

Value 2
  Name:            <NO NAME>
  Type:            REG_SZ
  Data:            Microsoft ResX File Code Generator


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\Generators\{164b10b9-b200-11d0-
8c61-00a0c91e29d5}\VbMyResourcesResXFileCodeGenerator
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:53 PM
Value 0
  Name:            <NO NAME>
  Type:            REG_SZ
  Data:            Microsoft Visual Basic Primary
My.Resources ResX File Code Generator

Value 1
  Name:            CLSID
  Type:            REG_SZ
  Data:            {0452cd78-e6bf-4d67-848b-
994dce92a503}

Value 2
  Name:            GeneratesDesignTimeSource
  Type:            REG_DWORD
  Data:            0x1


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\Generators\{e6fdf8b0-f3d1-11d4-
8576-0002a516ece8}
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:53 PM

Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\Generators\{e6fdf8b0-f3d1-11d4-
8576-0002a516ece8}\ResXFileCodeGenerator
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:53 PM
Value 0
  Name:            <NO NAME>
  Type:            REG_SZ
  Data:            Microsoft ResX File Code Generator

Value 1
  Name:            CLSID
  Type:            REG_SZ
  Data:            {c77981ec-ba19-3348-878f-
6f88745a251e}

Value 2
  Name:            GeneratesDesignTimeSource
  Type:            REG_DWORD
  Data:            0x1


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\Generators\{fae04ec1-301f-11d3-
bf4b-00c04f79efbc}
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:53 PM

Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\Generators\{fae04ec1-301f-11d3-
bf4b-00c04f79efbc}\ResXFileCodeGenerator
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:53 PM
Value 0
  Name:            <NO NAME>
  Type:            REG_SZ
  Data:            Microsoft ResX File Code Generator

Value 1
  Name:            CLSID
  Type:            REG_SZ
  Data:            {c77981ec-ba19-3348-878f-
6f88745a251e}

Value 2
  Name:            GeneratesDesignTimeSource
  Type:            REG_DWORD
  Data:            0x1


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\GlobalObjectProviders
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:53 PM
Value 0
  Name:            {0dfbe0f3-bc01-3308-a764-
9edcaeb3bfc3}
  Type:            REG_SZ
  Data:
Microsoft.VisualStudio.Design.Serialization.ResXGloba
lObjectProvider


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\HandleInComingCall
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:53 PM

Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\HandleInComingCall\{0000010E-
0000-0000-C000-000000000046}
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:53 PM
Value 0
  Name:            <NO NAME>
  Type:            REG_SZ
  Data:            IDataObject


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\HandleInComingCall\{00000116-
0000-0000-C000-000000000046}
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:53 PM
Value 0
  Name:            <NO NAME>
  Type:            REG_SZ
  Data:            IOleInPlaceFrame


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\HandleInComingCall\{00000135-
0000-0000-C000-000000000046}
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:53 PM
Value 0
  Name:            <NO NAME>
  Type:            REG_SZ
  Data:            IInterfaceFromWindowProp


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\HandleInComingCall\{00020404-
0000-0000-C000-000000000046}
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:53 PM
Value 0
  Name:            <NO NAME>
  Type:            REG_SZ
  Data:            IEnumVARIANT


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\HandleInComingCall\{037EDD0F-
8551-4F7F-8CA0-04D9E29F532D}
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:53 PM
Value 0
  Name:            <NO NAME>
  Type:            REG_SZ
  Data:            IDebugDocumentPositionOffset2
```


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```
Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\HandleInComingCall\{0751E85E-
3BE0-47B1-8108-D1A105BE2AE9}
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:53 PM
Value 0
  Name:            <NO NAME>
  Type:            REG_SZ
  Data:            IDebugAutoAttachCallback2


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\HandleInComingCall\{12C1180E-
C257-4485-9800-AF484B699713}
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:53 PM
Value 0
  Name:            <NO NAME>
  Type:            REG_SZ
  Data:            IDebugCoreServer3


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\HandleInComingCall\{17BF8FA3-
4C5A-49A3-B2F8-5942E1EA287E}
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:53 PM
Value 0
  Name:            <NO NAME>
  Type:            REG_SZ
  Data:            IDebugCoreServer2


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\HandleInComingCall\{1EDE3B4B-
35E7-4B97-8133-02845D600174}
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:53 PM
Value 0
  Name:            <NO NAME>
  Type:            REG_SZ
  Data:            IDebugFunctionPosition2


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\HandleInComingCall\{2EA4C00D-
7156-4F8E-B990-FB4271147617}
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:53 PM
Value 0
  Name:            <NO NAME>
  Type:            REG_SZ
  Data:            IDebugJIT2


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\HandleInComingCall\{302F0F55-
1EDE-4777-9B38-115E1F229D56}
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:53 PM
Value 0
  Name:            <NO NAME>
  Type:            REG_SZ
  Data:            IDebugDefaultPort2


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\HandleInComingCall\{3050F1FF-
98B5-11CF-BB82-00AA00BDCE0B}
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:53 PM
Value 0
  Name:            <NO NAME>
  Type:            REG_SZ
  Data:            IHTMLElement


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\HandleInComingCall\{3050F21F-
98B5-11CF-BB82-00AA00BDCE0B}
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:53 PM
Value 0
  Name:            <NO NAME>
  Type:            REG_SZ
  Data:            IHTMLElementCollection


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\HandleInComingCall\{332c4425-
26cb-11d0-b483-00c04fd90119}
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:53 PM
Value 0
  Name:            <NO NAME>
  Type:            REG_SZ
  Data:            IHTMLDocument2


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\HandleInComingCall\{33EC72E3-
002F-4966-B91C-5CE2F7BA5124}
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:53 PM
Value 0
  Name:            <NO NAME>
  Type:            REG_SZ
  Data:            IDebugDocumentTextEvents2


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\HandleInComingCall\{43286FEA-
6997-4543-803E-60A20C473DE5}
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:53 PM
Value 0
  Name:            <NO NAME>
  Type:            REG_SZ
  Data:            IDebugProcess2


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\HandleInComingCall\{5C18A5FE-
7150-4E66-8246-27BFB0E7BFD9}
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:53 PM
Value 0
  Name:            <NO NAME>
  Type:            REG_SZ
  Data:            IDebugBreakpointRequest3


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\HandleInComingCall\{6015FD18-
8257-4DF3-AC42-F074DEDD4CBD}
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:53 PM
Value 0
  Name:            <NO NAME>
  Type:            REG_SZ
  Data:            IDebugBreakpointRequest2


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\HandleInComingCall\{618736e0-
3c3d-11cf-810c-00aa00389b71}
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:53 PM
Value 0
  Name:            <NO NAME>
  Type:            REG_SZ
  Data:            IAccessible


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\HandleInComingCall\{69D172EF-
F2C4-44E1-89F7-C86231E706E9}
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:53 PM
Value 0
  Name:            <NO NAME>
  Type:            REG_SZ
  Data:            IDebugProgram2


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\HandleInComingCall\{6D5140C1-
7436-11CE-8034-00AA006009FA}
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:53 PM
Value 0
  Name:            <NO NAME>
```


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```
  Type:            REG_SZ
  Data:            IServiceProvider


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\HandleInComingCall\{79293CC8-
D9D9-43F5-97AD-0BCC5A688776}
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:53 PM
Value 0
  Name:            <NO NAME>
  Type:            REG_SZ
  Data:            IDebugPort2


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\HandleInComingCall\{7C2AAE9E-
6178-4A88-8904-B57169B655EA}
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:53 PM
Value 0
  Name:            <NO NAME>
  Type:            REG_SZ
  Data:            IPrivateSession


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\HandleInComingCall\{8195CA66-
1B46-44fb-9E02-DA6BD7C7A68C}
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:53 PM
Value 0
  Name:            <NO NAME>
  Type:            REG_SZ
  Data:            IVsHelpAppidInfo


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\HandleInComingCall\{8948300F-
8BD5-4728-A1D8-83D172295A9D}
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:53 PM
Value 0
  Name:            <NO NAME>
  Type:            REG_SZ
  Data:            IDebugSession2


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\HandleInComingCall\{8D36BEB8-
9BFE-47DD-A11B-7BA1DE18E449}
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:53 PM
Value 0
  Name:            <NO NAME>
  Type:            REG_SZ
  Data:            IDebugPortRequest2


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\HandleInComingCall\{9C1B8A40-
7C24-11d3-8E6E-005004775AC2}
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:53 PM
Value 0
  Name:            <NO NAME>
  Type:            REG_SZ
  Data:            IVsSccDlgControl


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\HandleInComingCall\{A96ABCCC-
C55B-44E4-8977-CD815EA33A58}
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:53 PM
Value 0
  Name:            <NO NAME>
  Type:            REG_SZ
  Data:            ISessionNotifySink2_V7


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\HandleInComingCall\{ADE2EEB9-
FC85-4F5B-B5D9-D431B4AAC31A}
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:53 PM
Value 0
  Name:            <NO NAME>
  Type:            REG_SZ
  Data:            IDebugEventCallback2


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\HandleInComingCall\{B196B284-
BAB4-101A-B69C-00AA00341D07}
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:53 PM
Value 0
  Name:            <NO NAME>
  Type:            REG_SZ
  Data:            IConnectionPointContainer


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\HandleInComingCall\{B196B286-
BAB4-101A-B69C-00AA00341D07}
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:53 PM
Value 0
  Name:            <NO NAME>
  Type:            REG_SZ
  Data:            IConnectionPoint


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\HandleInComingCall\{B2F73449-
98EA-4866-90A0-425837FC5E23}
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:53 PM
Value 0
  Name:            <NO NAME>
  Type:            REG_SZ
  Data:            IDebugIDEJIT2


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\HandleInComingCall\{B9B0983A-
364C-4866-873F-D5ED190138FB}
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:53 PM
Value 0
  Name:            <NO NAME>
  Type:            REG_SZ
  Data:            IVsHelpOwner


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\HandleInComingCall\{BB7BE481-
DA8F-4B9E-89CB-0A8DDE6BC5D7}
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:53 PM
Value 0
  Name:            <NO NAME>
  Type:            REG_SZ
  Data:            IEEHostServices


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\HandleInComingCall\{BDDE0EEE-
3B8D-4C82-B529-33F16B42832E}
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:53 PM
Value 0
  Name:            <NO NAME>
  Type:            REG_SZ
  Data:            IDebugDocumentPosition2


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\HandleInComingCall\{C43CC2F3-
90AF-4E93-9112-DFB8B36749B5}
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:53 PM
Value 0
  Name:            <NO NAME>
  Type:            REG_SZ
  Data:            INotifySink2


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\HandleInComingCall\{D78A277B-
79AB-4FBD-99AE-FD4A770D6D6A}
Class Name:        <NO CLASS>
```


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```
Last Write Time:   7/19/2005 - 4:53 PM
Value 0
  Name:            <NO NAME>
  Type:            REG_SZ
  Data:            IDebugCausalityEventCallback2


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\HandleInComingCall\{F239E580-
DB73-11D0-938A-00A0C9034910}
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:53 PM
Value 0
  Name:            <NO NAME>
  Type:            REG_SZ
  Data:            ISqlDebugEvent


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\HandleInComingCall\{F239E584-
DB73-11D0-938A-00A0C9034910}
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:53 PM
Value 0
  Name:            <NO NAME>
  Type:            REG_SZ
  Data:            ISqlDebugEvent2


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\Help
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:53 PM
Value 0
  Name:            ExternalCLSID
  Type:            REG_SZ
  Data:            {639F725F-1B2D-4831-A9FD-
874847682010}

Value 1
  Name:            RegToken
  Type:            REG_SZ
  Data:            SQLServerBooksOnline.9.0

Value 2
  Name:            CurrentChannel
  Type:            REG_SZ
  Data:            SQLHowDoI90

Value 3
  Name:            AskAQuestionUrl
  Type:            REG_SZ
  Data:
http://go.microsoft.com/fwlink/?LinkId=34176

Value 4
  Name:            CheckQuestionStatusUrl
  Type:            REG_SZ
  Data:
http://go.microsoft.com/fwlink/?LinkId=34177

Value 5
  Name:            SendFeedbackUrl
  Type:            REG_SZ
  Data:
http://go.microsoft.com/fwlink/?LinkId=34178

Value 6
  Name:            DeveloperCenter
  Type:            REG_SZ
  Data:
http://go.microsoft.com/fwlink/?LinkId=36645

Value 7
  Name:            TechSupport
  Type:            REG_SZ
  Data:
http://go.microsoft.com/fwlink/?LinkId=16419

Value 8
  Name:            CodeWiseProductVersFilter
  Type:            REG_SZ
  Data:            kbsqlserv90

Value 9
  Name:            CheckHelpInstalled
  Type:            REG_SZ
  Data:            9.0


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\Help\0x0409
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:53 PM
Value 0
  Name:            Collection
  Type:            REG_SZ
  Data:            {555864C2-A0A2-4433-9515-
8B78FF404FE4}


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\Help\0x0409\{555864C2-A0A2-
4433-9515-8B78FF404FE4}
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:53 PM
Value 0
  Name:            FileName
  Type:            REG_SZ
  Data:            ms-help://MS.SQLCC.v9

Value 1
  Name:            <NO NAME>
  Type:            REG_SZ
  Data:            SQL Server Books Online


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\Help\0x0409\{555864C2-A0A2-
4433-9515-8B78FF404FE4}\Registration
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:53 PM
Value 0
  Name:            RegisteredPID
  Type:            REG_SZ
  Data:

Value 1
  Name:            RegisteredOrganization
  Type:            REG_SZ
  Data:            HP

Value 2
  Name:            RegisteredName
  Type:            REG_SZ
  Data:            Database Performance


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\Help\0x0409\{A3F6F5AD-483E-
482f-9780-88C856B6678B}
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:53 PM
Value 0
  Name:            FileName
  Type:            REG_SZ
  Data:            ms-help://MS.SQLSVR.v9.en

Value 1
  Name:            <NO NAME>
  Type:            REG_SZ
  Data:            SQL Server Books Online

Value 2
  Name:            VS_Docs
  Type:            REG_SZ
  Data:            9.0


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\Help\VisibleFilters
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:53 PM
Value 0
  Name:            SQLFilter90
  Type:            REG_DWORD
  Data:            0x1


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\Help\VisiblePages
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:53 PM
Value 0
  Name:            SQLHowDoI90
  Type:            REG_DWORD
  Data:            0x1

Value 1
  Name:            SQLAdminHowDoI90
```


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```
  Type:            REG_DWORD
  Data:            0x1

Value 2
  Name:            SQLBIHowDoI90
  Type:            REG_DWORD
  Data:            0x1

Value 3
  Name:            SQLDevHowDoI90
  Type:            REG_DWORD
  Data:            0x1

Value 4
  Name:            SQLMobileHowDoI90
  Type:            REG_DWORD
  Data:            0x1

Value 5
  Name:            SQLNSHowDoI90
  Type:            REG_DWORD
  Data:            0x1

Value 6
  Name:            SQLRSHowDoI90
  Type:            REG_DWORD
  Data:            0x1


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\InstalledProducts
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:53 PM

Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\InstalledProducts\Analysis
Services Designer
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:53 PM
Value 0
  Name:            Package
  Type:            REG_SZ
  Data:            {EABA99F3-7341-4105-8A3F-
1C4F3955C4FC}

Value 1
  Name:            UseInterface
  Type:            REG_DWORD
  Data:            0x1


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\InstalledProducts\Microsoft SQL
Server Management Studio
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:53 PM
Value 0
  Name:            <NO NAME>
  Type:            REG_SZ
  Data:            Microsoft SQL Server Management
Studio

Value 1
  Name:            DefaultProductAttribute
  Type:            REG_SZ
  Data:            SQLServer

Value 2
  Name:            Package
  Type:            REG_SZ
  Data:            {C3507EB2-B615-4870-BCDB-
10990EED0CC4}

Value 3
  Name:            UseInterface
  Type:            REG_DWORD
  Data:            0


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\InstalledProducts\SQL Server
Integration Services
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:53 PM
Value 0
  Name:            Package
  Type:            REG_SZ
  Data:            {96B36E93-F71C-4160-A4EA-
26AE801D2F63}

Value 1
  Name:            UseInterface
  Type:            REG_DWORD
  Data:            0x1


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\KeyBindingTables
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:53 PM

Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\KeyBindingTables\{1CEAF4C2-
677D-456a-9BED-1AC73B989127}
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:53 PM
Value 0
  Name:            <NO NAME>
  Type:            REG_SZ
  Data:            #2

Value 1
  Name:            Package
  Type:            REG_SZ
  Data:            {4058755A-8FBE-41C7-BC99-
3DBF5C74BA62}

Value 2
  Name:            AllowNavKeyBinding
  Type:            REG_DWORD
  Data:            0


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\KeyBindingTables\{4194fee5-
6777-419f-a5fc-47a536df1bdb}
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:53 PM
Value 0
  Name:            Package
  Type:            REG_SZ
  Data:            {d6c919aa-1217-41e2-a13b-
9b92e1866305}

Value 1
  Name:            AllowNavKeyBinding
  Type:            REG_DWORD
  Data:            0

Value 2
  Name:            <NO NAME>
  Type:            REG_SZ
  Data:            #316


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\KeyBindingTables\{5efc7975-
14bc-11cf-9b2b-00AA00573819}
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:53 PM
Value 0
  Name:            <NO NAME>
  Type:            REG_SZ
  Data:            #13021

Value 1
  Name:            AllowNavKeyBinding
  Type:            REG_DWORD
  Data:            0

Value 2
  Name:            Package
  Type:            REG_SZ
  Data:            {DA9FB551-C724-11D0-AE1F-
00A0C90FFFC3}


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\KeyBindingTables\{8B382828-
6202-11d1-8870-0000F87579D2}
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:53 PM
Value 0
  Name:            <NO NAME>
  Type:            REG_SZ
  Data:            #13022

Value 1
  Name:            AllowNavKeyBinding
```


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```
  Type:            REG_DWORD
  Data:            0x1

Value 2
  Name:            Package
  Type:            REG_SZ
  Data:            {DA9FB551-C724-11D0-AE1F-
00A0C90FFFC3}


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\KeyBindingTables\{A8AE89ED-
34A0-489e-8A98-AEE7CEDEA6B7}
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:53 PM
Value 0
  Name:            <NO NAME>
  Type:            REG_SZ
  Data:            #11

Value 1
  Name:            Package
  Type:            REG_SZ
  Data:            {4058755A-8FBE-41C7-BC99-
3DBF5C74BA62}

Value 2
  Name:            AllowNavKeyBinding
  Type:            REG_DWORD
  Data:            0


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\KeyBindingTables\{b2c40b32-
3a37-4ca9-97b9-fa44248b69ff}
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:53 PM
Value 0
  Name:            Package
  Type:            REG_SZ
  Data:            {d6c919aa-1217-41e2-a13b-
9b92e1866305}

Value 1
  Name:            AllowNavKeyBinding
  Type:            REG_DWORD
  Data:            0

Value 2
  Name:            <NO NAME>
  Type:            REG_SZ
  Data:            #313


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\KeyBindingTables\{B5A506EB-
11BE-4782-9A18-21265C2CA0B4}
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:53 PM
Value 0
  Name:            <NO NAME>
  Type:            REG_SZ
  Data:            #1

Value 1
  Name:            Package
  Type:            REG_SZ
  Data:            {4058755A-8FBE-41C7-BC99-
3DBF5C74BA62}

Value 2
  Name:            AllowNavKeyBinding
  Type:            REG_DWORD
  Data:            0


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\KeyBindingTables\{B7DF28AE-
C9A1-4263-A498-9897B98336A1}
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:53 PM
Value 0
  Name:            <NO NAME>
  Type:            REG_SZ
  Data:            #4

Value 1
  Name:            Package
  Type:            REG_SZ
  Data:            {4058755A-8FBE-41C7-BC99-
3DBF5C74BA62}

Value 2
  Name:            AllowNavKeyBinding
  Type:            REG_DWORD
  Data:            0


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\KeyBindingTables\{b968e165-
98e0-41f0-8fbe-a8ed1d246a90}
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:53 PM
Value 0
  Name:            Package
  Type:            REG_SZ
  Data:            {d6c919aa-1217-41e2-a13b-
9b92e1866305}

Value 1
  Name:            AllowNavKeyBinding
  Type:            REG_DWORD
  Data:            0

Value 2
  Name:            <NO NAME>
  Type:            REG_SZ
  Data:            #314


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\KeyBindingTables\{C5B506FB-
13BA-4381-3A48-41275C4CA2B5}
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:53 PM
Value 0
  Name:            <NO NAME>
  Type:            REG_SZ
  Data:            #5

Value 1
  Name:            Package
  Type:            REG_SZ
  Data:            {4058755A-8FBE-41C7-BC99-
3DBF5C74BA62}

Value 2
  Name:            AllowNavKeyBinding
  Type:            REG_DWORD
  Data:            0


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\KeyBindingTables\{cff78a9b-
78a3-45a3-9142-0267afc261fa}
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:53 PM
Value 0
  Name:            Package
  Type:            REG_SZ
  Data:            {d6c919aa-1217-41e2-a13b-
9b92e1866305}

Value 1
  Name:            AllowNavKeyBinding
  Type:            REG_DWORD
  Data:            0

Value 2
  Name:            <NO NAME>
  Type:            REG_SZ
  Data:            #315


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\KeyBindingTables\{e8b06f41-
6d01-11d2-aa7d-00c04f990343}
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:53 PM
Value 0
  Name:            <NO NAME>
  Type:            REG_SZ
  Data:            #1001

Value 1
  Name:            AllowNavKeyBinding
  Type:            REG_DWORD
  Data:            0x1

Value 2
```


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```
  Name:            Package
  Type:            REG_SZ
  Data:            {e8b06f41-6d01-11d2-aa7d-
00c04f990343}


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\Languages
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:53 PM

Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\Languages\CodeExpansions
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:53 PM
Value 0
  Name:            Perf
  Type:            REG_DWORD
  Data:            0


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\Languages\CodeExpansions\XML
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:53 PM
Value 0
  Name:            <NO NAME>
  Type:            REG_SZ
  Data:            {f6819a78-a205-47b5-be1c-
675b3c7f0b8e}

Value 1
  Name:            ShowRoots
  Type:            REG_DWORD
  Data:            0

Value 2
  Name:            Package
  Type:            REG_SZ
  Data:            {87569308-4813-40a0-9cd0-
d7a30838ca3f}

Value 3
  Name:            DisplayName
  Type:            REG_SZ
  Data:            #200

Value 4
  Name:            LangStringID
  Type:            REG_SZ
  Data:            xml

Value 5
  Name:            IndexPath
  Type:            REG_SZ
  Data:
%InstallRoot%\xml\ExpansionsIndex.xml


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\Languages\CodeExpansions\XML\Pa
ths
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:53 PM
Value 0
  Name:            Microsoft XML
  Type:            REG_SZ
  Data:
%InstallRoot%\xml\%LCID%\Expansions\;%MyDocs%\Code
Snippets\XML\My Xml Snippets\


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\Languages\File Extensions
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:53 PM

Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\Languages\File
Extensions\.addin
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:53 PM
Value 0
  Name:            <NO NAME>
  Type:            REG_SZ
  Data:            {f6819a78-a205-47b5-be1c-
675b3c7f0b8e}

Value 1
  Name:            Name
  Type:            REG_SZ
  Data:            Add-in definition file


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\Languages\File
Extensions\.browser
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:53 PM
Value 0
  Name:            <NO NAME>
  Type:            REG_SZ
  Data:            {f6819a78-a205-47b5-be1c-
675b3c7f0b8e}

Value 1
  Name:            Name
  Type:            REG_SZ
  Data:            Browser Capabilities File


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\Languages\File
Extensions\.config
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:53 PM
Value 0
  Name:            <NO NAME>
  Type:            REG_SZ
  Data:            {f6819a78-a205-47b5-be1c-
675b3c7f0b8e}

Value 1
  Name:            Name
  Type:            REG_SZ
  Data:            .NET Configuration File


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\Languages\File Extensions\.cube
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:53 PM
Value 0
  Name:            <NO NAME>
  Type:            REG_SZ
  Data:            {B1AABE06-845A-4c56-9144-
AA6FDB7D390D}


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\Languages\File
Extensions\.database
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:53 PM
Value 0
  Name:            <NO NAME>
  Type:            REG_SZ
  Data:            {B1AABE06-845A-4c56-9144-
AA6FDB7D390D}


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\Languages\File Extensions\.dim
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:53 PM
Value 0
  Name:            <NO NAME>
  Type:            REG_SZ
  Data:            {B1AABE06-845A-4c56-9144-
AA6FDB7D390D}


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\Languages\File Extensions\.dmm
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:53 PM
Value 0
  Name:            <NO NAME>
  Type:            REG_SZ
  Data:            {B1AABE06-845A-4c56-9144-
AA6FDB7D390D}


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\Languages\File Extensions\.dmx
```


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```
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:53 PM
Value 0
  Name:            <NO NAME>
  Type:            REG_SZ
  Data:            {2D6FF84D-C3F6-48a0-9C7B-
96F4958E92E8}

Value 1
  Name:            Name
  Type:            REG_SZ
  Data:            DMX Language


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\Languages\File Extensions\.ds
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:53 PM
Value 0
  Name:            <NO NAME>
  Type:            REG_SZ
  Data:            {B1AABE06-845A-4c56-9144-
AA6FDB7D390D}


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\Languages\File Extensions\.dsv
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:53 PM
Value 0
  Name:            <NO NAME>
  Type:            REG_SZ
  Data:            {B1AABE06-845A-4c56-9144-
AA6FDB7D390D}


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\Languages\File Extensions\.dtd
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:53 PM
Value 0
  Name:            <NO NAME>
  Type:            REG_SZ
  Data:            {f6819a78-a205-47b5-be1c-
675b3c7f0b8e}

Value 1
  Name:            Name
  Type:            REG_SZ
  Data:            XML Document Type Definition


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\Languages\File Extensions\.dtsx
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:53 PM
Value 0
  Name:            <NO NAME>
  Type:            REG_SZ
  Data:            {B1AABE06-845A-4c56-9144-
AA6FDB7D390D}


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\Languages\File Extensions\.mdx
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:53 PM
Value 0
  Name:            <NO NAME>
  Type:            REG_SZ
  Data:            {2D6FF84D-C3F6-48a0-9C7B-
96F4958E92E8}

Value 1
  Name:            Name
  Type:            REG_SZ
  Data:            MDX Language


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\Languages\File
Extensions\.partitions
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:53 PM
Value 0
  Name:            <NO NAME>
  Type:            REG_SZ
  Data:            {B1AABE06-845A-4c56-9144-
AA6FDB7D390D}


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\Languages\File Extensions\.role
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:53 PM
Value 0
  Name:            <NO NAME>
  Type:            REG_SZ
  Data:            {B1AABE06-845A-4c56-9144-
AA6FDB7D390D}


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\Languages\File
Extensions\.sitemap
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:53 PM
Value 0
  Name:            <NO NAME>
  Type:            REG_SZ
  Data:            {f6819a78-a205-47b5-be1c-
675b3c7f0b8e}

Value 1
  Name:            Name
  Type:            REG_SZ
  Data:            ASP website map


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\Languages\File Extensions\.sql
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:53 PM
Value 0
  Name:            <NO NAME>
  Type:            REG_SZ
  Data:            {9EAD5E55-B4C2-4d9f-A5E7-
24CD72F9B2AC}

Value 1
  Name:            Name
  Type:            REG_SZ
  Data:            SQL


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\Languages\File
Extensions\.sqlce
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:53 PM
Value 0
  Name:            <NO NAME>
  Type:            REG_SZ
  Data:            {0D93BB4F-4FBC-49ee-BF10-
A0AB762B866E}

Value 1
  Name:            Name
  Type:            REG_SZ
  Data:            SQL CE


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\Languages\File
Extensions\.vssettings
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:53 PM
Value 0
  Name:            <NO NAME>
  Type:            REG_SZ
  Data:            {f6819a78-a205-47b5-be1c-
675b3c7f0b8e}

Value 1
  Name:            Name
  Type:            REG_SZ
  Data:            Visual Studio User Settings


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\Languages\File
Extensions\.vstemplate
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:53 PM
Value 0
  Name:            <NO NAME>
  Type:            REG_SZ
```


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```
  Data:            {f6819a78-a205-47b5-be1c-
675b3c7f0b8e}

Value 1
  Name:            Name
  Type:            REG_SZ
  Data:            Template wizard file


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\Languages\File Extensions\.wsdl
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:53 PM
Value 0
  Name:            <NO NAME>
  Type:            REG_SZ
  Data:            {f6819a78-a205-47b5-be1c-
675b3c7f0b8e}

Value 1
  Name:            Name
  Type:            REG_SZ
  Data:            Web Service Description Language


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\Languages\File Extensions\.xdl
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:53 PM
Value 0
  Name:            <NO NAME>
  Type:            REG_SZ
  Data:            {B1AABE06-845A-4c56-9144-
AA6FDB7D390D}

Value 1
  Name:            Name
  Type:            REG_SZ
  Data:            Deadlock


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\Languages\File Extensions\.xdr
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:53 PM
Value 0
  Name:            <NO NAME>
  Type:            REG_SZ
  Data:            {f6819a78-a205-47b5-be1c-
675b3c7f0b8e}

Value 1
  Name:            Name
  Type:            REG_SZ
  Data:            XML Data Reduced Schema


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\Languages\File Extensions\.xml
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:53 PM
Value 0
  Name:            <NO NAME>
  Type:            REG_SZ
  Data:            {f6819a78-a205-47b5-be1c-
675b3c7f0b8e}

Value 1
  Name:            Name
  Type:            REG_SZ
  Data:            Xml File


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\Languages\File Extensions\.xmla
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:53 PM
Value 0
  Name:            <NO NAME>
  Type:            REG_SZ
  Data:            {B1AABE06-845A-4c56-9144-
AA6FDB7D390D}

Value 1
  Name:            Name
  Type:            REG_SZ
  Data:            XMLA


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\Languages\File Extensions\.xsl
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:53 PM
Value 0
  Name:            <NO NAME>
  Type:            REG_SZ
  Data:            {f6819a78-a205-47b5-be1c-
675b3c7f0b8e}

Value 1
  Name:            Name
  Type:            REG_SZ
  Data:            Xsl File


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\Languages\File Extensions\.xslt
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:53 PM
Value 0
  Name:            <NO NAME>
  Type:            REG_SZ
  Data:            {f6819a78-a205-47b5-be1c-
675b3c7f0b8e}

Value 1
  Name:            Name
  Type:            REG_SZ
  Data:            Xsl File


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\Languages\Language Services
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:53 PM

Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\Languages\Language
Services\Disassembly
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:53 PM
Value 0
  Name:            <NO NAME>
  Type:            REG_SZ
  Data:            {C16FB7C4-9F84-11D2-8405-
00C04F9902C1}

Value 1
  Name:            Package
  Type:            REG_SZ
  Data:            {C9DD4A57-47FB-11D2-83E7-
00C04F9902C1}

Value 2
  Name:            LangResID
  Type:            REG_DWORD
  Data:            0x4

Value 3
  Name:            ShowCompletion
  Type:            REG_DWORD
  Data:            0

Value 4
  Name:            ShowSmartIndent
  Type:            REG_DWORD
  Data:            0

Value 5
  Name:            NotALanguage
  Type:            REG_DWORD
  Data:            0x1


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\Languages\Language Services\ENC
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:53 PM
Value 0
  Name:            <NO NAME>
  Type:            REG_SZ
  Data:            {75058B12-F5A9-4B1C-9161-
9B3754D7488F}

Value 1
  Name:            Package
  Type:            REG_SZ
  Data:            {C9DD4A57-47FB-11D2-83E7-
00C04F9902C1}
```


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```
Value 2
  Name:            LangResID
  Type:            REG_DWORD
  Data:            0x138d

Value 3
  Name:            ShowCompletion
  Type:            REG_DWORD
  Data:            0

Value 4
  Name:            ShowSmartIndent
  Type:            REG_DWORD
  Data:            0

Value 5
  Name:            NotALanguage
  Type:            REG_DWORD
  Data:            0x1


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\Languages\Language Services\MDX
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:53 PM
Value 0
  Name:            <NO NAME>
  Type:            REG_SZ
  Data:            {2D6FF84D-C3F6-48a0-9C7B-
96F4958E92E8}

Value 1
  Name:            LangResID
  Type:            REG_DWORD
  Data:            0

Value 2
  Name:            Package
  Type:            REG_SZ
  Data:            {E444C1DD-7C8E-4126-81C8-
392C63BFEBE3}

Value 3
  Name:            ShowCompletion
  Type:            REG_DWORD
  Data:            0

Value 4
  Name:            ShowSmartIndent
  Type:            REG_DWORD
  Data:            0

Value 5
  Name:            RequestStockColors
  Type:            REG_DWORD
  Data:            0

Value 6
  Name:            ShowHotURLs
  Type:            REG_DWORD
  Data:            0

Value 7
  Name:            Default to Non Hot URLs
  Type:            REG_DWORD
  Data:            0

Value 8
  Name:            DefaultToInsertSpaces
  Type:            REG_DWORD
  Data:            0

Value 9
  Name:            ShowDropdownBarOption
  Type:            REG_DWORD
  Data:            0

Value 10
  Name:            Single Code Window Only
  Type:            REG_DWORD
  Data:            0x1

Value 11
  Name:            EnableAdvancedMembersOption
  Type:            REG_DWORD
  Data:            0

Value 12
  Name:            Support CF_HTML
  Type:            REG_DWORD
  Data:            0

Value 13
  Name:            NotALanguage
  Type:            REG_DWORD
  Data:            0x1


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\Languages\Language
Services\MDX\Debugger Languages
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:53 PM

Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\Languages\Language
Services\MDX\EditorToolsOptions
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:53 PM

Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\Languages\Language
Services\Memory
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:53 PM
Value 0
  Name:            <NO NAME>
  Type:            REG_SZ
  Data:            {DF38847E-CC19-11D2-8ADA-
00C04F79E479}

Value 1
  Name:            Package
  Type:            REG_SZ
  Data:            {C9DD4A57-47FB-11D2-83E7-
00C04F9902C1}

Value 2
  Name:            LangResID
  Type:            REG_DWORD
  Data:            0x99

Value 3
  Name:            ShowCompletion
  Type:            REG_DWORD
  Data:            0

Value 4
  Name:            ShowSmartIndent
  Type:            REG_DWORD
  Data:            0

Value 5
  Name:            NotALanguage
  Type:            REG_DWORD
  Data:            0x1


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\Languages\Language
Services\Register
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:53 PM
Value 0
  Name:            <NO NAME>
  Type:            REG_SZ
  Data:            {13F6A341-59C0-11D3-994C-
00C04F68FDAF}

Value 1
  Name:            Package
  Type:            REG_SZ
  Data:            {C9DD4A57-47FB-11D2-83E7-
00C04F9902C1}

Value 2
  Name:            LangResID
  Type:            REG_DWORD
  Data:            0x1360

Value 3
  Name:            ShowCompletion
  Type:            REG_DWORD
  Data:            0

Value 4
  Name:            ShowSmartIndent
  Type:            REG_DWORD
  Data:            0

Value 5
  Name:            NotALanguage
  Type:            REG_DWORD
```


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```
  Data:            0x1


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\Languages\Language Services\SQL
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:53 PM
Value 0
  Name:            <NO NAME>
  Type:            REG_SZ
  Data:            {9EAD5E55-B4C2-4d9f-A5E7-
24CD72F9B2AC}

Value 1
  Name:            EnableAdvancedMembersOption
  Type:            REG_DWORD
  Data:            0

Value 2
  Name:            LangResID
  Type:            REG_DWORD
  Data:            0

Value 3
  Name:            Package
  Type:            REG_SZ
  Data:            {E444C1DD-7C8E-4126-81C8-
392C63BFEBE3}

Value 4
  Name:            RequestStockColors
  Type:            REG_DWORD
  Data:            0

Value 5
  Name:            ShowCompletion
  Type:            REG_DWORD
  Data:            0

Value 6
  Name:            ShowSmartIndent
  Type:            REG_DWORD
  Data:            0x1

Value 7
  Name:            Single Code Window Only
  Type:            REG_DWORD
  Data:            0x1

Value 8
  Name:            HideAdvancedMembersByDefault
  Type:            REG_DWORD
  Data:            0x1

Value 9
  Name:            NotALanguage
  Type:            REG_DWORD
  Data:            0x1


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\Languages\Language
Services\SQL\Debugger Languages
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:53 PM

Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\Languages\Language
Services\SQL\EditorToolsOptions
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:53 PM

Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\Languages\Language
Services\SQLCE
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:53 PM
Value 0
  Name:            <NO NAME>
  Type:            REG_SZ
  Data:            {0D93BB4F-4FBC-49ee-BF10-
A0AB762B866E}

Value 1
  Name:            EnableAdvancedMembersOption
  Type:            REG_DWORD
  Data:            0

Value 2
  Name:            LangResID
  Type:            REG_DWORD
  Data:            0

Value 3
  Name:            Package
  Type:            REG_SZ
  Data:            {E444C1DD-7C8E-4126-81C8-
392C63BFEBE3}

Value 4
  Name:            RequestStockColors
  Type:            REG_DWORD
  Data:            0

Value 5
  Name:            ShowCompletion
  Type:            REG_DWORD
  Data:            0

Value 6
  Name:            ShowSmartIndent
  Type:            REG_DWORD
  Data:            0x1

Value 7
  Name:            Single Code Window Only
  Type:            REG_DWORD
  Data:            0x1

Value 8
  Name:            HideAdvancedMembersByDefault
  Type:            REG_DWORD
  Data:            0x1

Value 9
  Name:            NotALanguage
  Type:            REG_DWORD
  Data:            0x1


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\Languages\Language
Services\SQLCE\Debugger Languages
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:53 PM

Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\Languages\Language
Services\SQLCE\EditorToolsOptions
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:53 PM

Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\Languages\Language Services\XML
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:53 PM
Value 0
  Name:            <NO NAME>
  Type:            REG_SZ
  Data:            {f6819a78-a205-47b5-be1c-
675b3c7f0b8e}

Value 1
  Name:            Package
  Type:            REG_SZ
  Data:            {87569308-4813-40a0-9cd0-
d7a30838ca3f}

Value 2
  Name:            LangResId
  Type:            REG_DWORD
  Data:            0

Value 3
  Name:            RequestStockColors
  Type:            REG_DWORD
  Data:            0

Value 4
  Name:            QuickInfo
  Type:            REG_DWORD
  Data:            0x1

Value 5
  Name:            CodeSenseDelay
  Type:            REG_DWORD
  Data:            0x1f4

Value 6
  Name:            CodeSenseFastOnLineChange
  Type:            REG_DWORD
  Data:            0x1
```


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```
Value 7
  Name:            MatchBraces
  Type:            REG_DWORD
  Data:            0x1

Value 8
  Name:            MatchBracesAtCaret
  Type:            REG_DWORD
  Data:            0

Value 9
  Name:            ShowCompletion
  Type:            REG_DWORD
  Data:            0x1

Value 10
  Name:            ShowMatchingBrace
  Type:            REG_DWORD
  Data:            0x1

Value 11
  Name:            SortMemberList
  Type:            REG_DWORD
  Data:            0x1

Value 12
  Name:            MaxErrorMessages
  Type:            REG_DWORD
  Data:            0x64

Value 13
  Name:            DefaultSchemaDir
  Type:            REG_SZ
  Data:            %VsInstallDir%\xml\Schemas

Value 14
  Name:            ShowSmartIndent
  Type:            REG_DWORD
  Data:            0x1


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\Languages\Language
Services\XML\EditorToolsOptions
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:53 PM

Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\Languages\Language
Services\XML\EditorToolsOptions\Formatting
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:53 PM
Value 0
  Name:            <NO NAME>
  Type:            REG_SZ
  Data:            #204

Value 1
  Name:            Package
  Type:            REG_SZ
  Data:            {87569308-4813-40a0-9cd0-
d7a30838ca3f}

Value 2
  Name:            Page
  Type:            REG_SZ
  Data:            {6d677434-2ccb-4e82-b67b-
1b4839cdba81}


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\Languages\Language
Services\XML\EditorToolsOptions\Miscellaneous
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:53 PM
Value 0
  Name:            <NO NAME>
  Type:            REG_SZ
  Data:            #203

Value 1
  Name:            Package
  Type:            REG_SZ
  Data:            {87569308-4813-40a0-9cd0-
d7a30838ca3f}

Value 2
  Name:            Page
  Type:            REG_SZ
  Data:            {4E1CDE49-B840-4826-8CC6-
8FB80D7EF455}


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\Languages\Language
Services\XMLA
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:53 PM
Value 0
  Name:            <NO NAME>
  Type:            REG_SZ
  Data:            {B1AABE06-845A-4c56-9144-
AA6FDB7D390D}

Value 1
  Name:            LangResID
  Type:            REG_DWORD
  Data:            0

Value 2
  Name:            Package
  Type:            REG_SZ
  Data:            {E444C1DD-7C8E-4126-81C8-
392C63BFEBE3}

Value 3
  Name:            ShowCompletion
  Type:            REG_DWORD
  Data:            0

Value 4
  Name:            ShowSmartIndent
  Type:            REG_DWORD
  Data:            0

Value 5
  Name:            RequestStockColors
  Type:            REG_DWORD
  Data:            0

Value 6
  Name:            ShowHotURLs
  Type:            REG_DWORD
  Data:            0

Value 7
  Name:            Default to Non Hot URLs
  Type:            REG_DWORD
  Data:            0

Value 8
  Name:            DefaultToInsertSpaces
  Type:            REG_DWORD
  Data:            0

Value 9
  Name:            ShowDropdownBarOption
  Type:            REG_DWORD
  Data:            0

Value 10
  Name:            Single Code Window Only
  Type:            REG_DWORD
  Data:            0x1

Value 11
  Name:            EnableAdvancedMembersOption
  Type:            REG_DWORD
  Data:            0

Value 12
  Name:            Support CF_HTML
  Type:            REG_DWORD
  Data:            0

Value 13
  Name:            NotALanguage
  Type:            REG_DWORD
  Data:            0x1


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\Languages\Language
Services\XMLA\Debugger Languages
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:53 PM

Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\Languages\Language
Services\XMLA\EditorToolsOptions
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:53 PM
```


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```
Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\Menus
Class Name:         <NO CLASS>
Last Write Time:    7/19/2005 - 4:53 PM
Value 0
  Name:             {4a0c6509-bf90-43da-abee-
0aba3a8527f1}
  Type:             REG_SZ
  Data:             ,1000, 1

Value 1
  Name:             {96B36E93-F71C-4160-A4EA-
26AE801D2F63}
  Type:             REG_SZ
  Data:             ,1000, 1

Value 2
  Name:             {F30396AD-50FE-4ae2-9A98-
DC5078302C5E}
  Type:             REG_SZ
  Data:             ,1000,1

Value 3
  Name:             {d6c919aa-1217-41e2-a13b-
9b92e1866305}
  Type:             REG_SZ
  Data:             , 541, 32

Value 4
  Name:             {A4B8E50B-6DC3-400d-97CD-
732ADD1F3140}
  Type:             REG_SZ
  Data:             ,1000,1

Value 5
  Name:             {C3507EB2-B615-4870-BCDB-
10990EED0CC4}
  Type:             REG_SZ
  Data:             ,1000,1

Value 6
  Name:             {4058755A-8FBE-41C7-BC99-
3DBF5C74BA62}
  Type:             REG_SZ
  Data:             ,1000,1

Value 7
  Name:             {6E87CFAD-6C05-4adf-9CD7-
3B7943875B7C}
  Type:             REG_SZ
  Data:             ,101,1

Value 8
  Name:             {44E07B02-29A5-11D3-B882-
00C04F79F802}
  Type:             REG_SZ
  Data:             ,1000,1

Value 9
  Name:             {7494682b-37a0-11d2-a273-
00c04f8ef4ff}
  Type:             REG_SZ
  Data:             , 1, 1

Value 10
  Name:             {87569308-4813-40a0-9cd0-
d7a30838ca3f}
  Type:             REG_SZ
  Data:             ,1001,1

Value 11
  Name:             {AA8EB8CD-7A51-11D0-92C3-
00A0C9138C45}
  Type:             REG_SZ
  Data:             ,1,6

Value 12
  Name:             {C9DD4A57-47FB-11D2-83E7-
00C04F9902C1}
  Type:             REG_SZ
  Data:             , 1000, 1


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\NewProjectTemplates
Class Name:         <NO CLASS>
Last Write Time:    7/19/2005 - 4:53 PM

Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\NewProjectTemplates\TemplateDir
s
Class Name:         <NO CLASS>
Last Write Time:    7/19/2005 - 4:53 PM

Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\NewProjectTemplates\TemplateDir
s\{C3507EB2-B615-4870-BCDB-10990EED0CC4}
Class Name:         <NO CLASS>
Last Write Time:    7/19/2005 - 4:53 PM

Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\NewProjectTemplates\TemplateDir
s\{C3507EB2-B615-4870-BCDB-10990EED0CC4}\1
Class Name:         <NO CLASS>
Last Write Time:    7/19/2005 - 4:53 PM
Value 0
  Name:             <NO NAME>
  Type:             REG_SZ
  Data:             #7

Value 1
  Name:             TemplatesDir
  Type:             REG_SZ
  Data:             C:\Program Files\Microsoft SQL
Server\90\Tools\Binn\VSShell\Common7\IDE\SQLWorkbench
Projects

Value 2
  Name:             SortPriority
  Type:             REG_DWORD
  Data:             0x3e8

Value 3
  Name:             NewProjectDialogOnly
  Type:             REG_DWORD
  Data:             0


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\Object Libraries
Class Name:         <NO CLASS>
Last Write Time:    7/19/2005 - 4:53 PM

Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\Object Libraries\{18E32C04-
58BA-4a1e-80DE-1C291634166A}
Class Name:         <NO CLASS>
Last Write Time:    7/19/2005 - 4:53 PM
Value 0
  Name:             Package
  Type:             REG_SZ
  Data:             SQL_Tools90

Value 1
  Name:             Page
  Type:             REG_SZ
  Data:             COM


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\Object Libraries\{18E32C04-
58BA-4a1e-80DE-1C291634166A}\Filters
Class Name:         <NO CLASS>
Last Write Time:    7/19/2005 - 4:53 PM

Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\Object Libraries\{18E32C04-
58BA-4a1e-80DE-1C291634166A}\Filters\1
Class Name:         <NO CLASS>
Last Write Time:    7/19/2005 - 4:53 PM
Value 0
  Name:             <NO NAME>
  Type:             REG_SZ
  Data:             #14303

Value 1
  Name:             FileFilter
  Type:             REG_SZ
  Data:             *.olb;*.tlb;*.dll

Value 2
  Name:             Priority
  Type:             REG_DWORD
  Data:             0xc8


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
```


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```
Server\90\Tools\Shell\Object Libraries\{18E32C04-
58BA-4a1e-80DE-1C291634166A}\Filters\2
Class Name:         <NO CLASS>
Last Write Time:    7/19/2005 - 4:53 PM
Value 0
  Name:             <NO NAME>
  Type:             REG_SZ
  Data:             #14304

Value 1
  Name:             FileFilter
  Type:             REG_SZ
  Data:             *.dll;*.exe

Value 2
  Name:             Priority
  Type:             REG_DWORD
  Data:             0xc8


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\Object Libraries\{18E32C04-
58BA-4a1e-80DE-1C291634166A}\Filters\3
Class Name:         <NO CLASS>
Last Write Time:    7/19/2005 - 4:53 PM
Value 0
  Name:             <NO NAME>
  Type:             REG_SZ
  Data:             #14305

Value 1
  Name:             FileFilter
  Type:             REG_SZ
  Data:             *.ocx

Value 2
  Name:             Priority
  Type:             REG_DWORD
  Data:             0xc8


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\Object Libraries\{1EC72FD7-
C820-4273-9A21-777A5C522E03}
Class Name:         <NO CLASS>
Last Write Time:    7/19/2005 - 4:53 PM
Value 0
  Name:             Page
  Type:             REG_SZ
  Data:             COM+

Value 1
  Name:             Package
  Type:             REG_SZ
  Data:


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\Object Libraries\{1EC72FD7-
C820-4273-9A21-777A5C522E03}\Filters
Class Name:         <NO CLASS>
Last Write Time:    7/19/2005 - 4:53 PM

Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\Object Libraries\{1EC72FD7-
C820-4273-9A21-777A5C522E03}\Filters\1
Class Name:         <NO CLASS>
Last Write Time:    7/19/2005 - 4:53 PM
Value 0
  Name:             Priority
  Type:             REG_DWORD
  Data:             0x64

Value 1
  Name:             FileFilter
  Type:             REG_SZ
  Data:             *.dll;*.exe


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\OutputWindow
Class Name:         <NO CLASS>
Last Write Time:    7/19/2005 - 4:53 PM

Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\OutputWindow\{1BD8A850-02D1-
11d1-BEE7-00A0C913D1F8}
Class Name:         <NO CLASS>
Last Write Time:    7/19/2005 - 4:53 PM
Value 0
  Name:             <NO NAME>
  Type:             REG_SZ
  Data:             #14102

Value 1
  Name:             InitiallyInvisible
  Type:             REG_DWORD
  Data:             0x1

Value 2
  Name:             Package
  Type:             REG_SZ
  Data:             {DA9FB551-C724-11d0-AE1F-
00A0C90FFFC3}


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\OutputWindow\{2032b126-7c8d-
48ad-8026-0e0348004fc0}
Class Name:         <NO CLASS>
Last Write Time:    7/19/2005 - 4:53 PM
Value 0
  Name:             <NO NAME>
  Type:             REG_SZ
  Data:             #14321

Value 1
  Name:             InitiallyInvisible
  Type:             REG_DWORD
  Data:             0x1

Value 2
  Name:             Package
  Type:             REG_SZ
  Data:             {DA9FB551-C724-11d0-AE1F-
00A0C90FFFC3}


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\OutputWindow\{CBF36220-3F6F-
11d1-8631-006008184050}
Class Name:         <NO CLASS>
Last Write Time:    7/19/2005 - 4:53 PM
Value 0
  Name:             Package
  Type:             REG_SZ
  Data:             {AA8EB8CD-7A51-11D0-92C3-
00A0C9138C45}

Value 1
  Name:             InitiallyInvisible
  Type:             REG_DWORD
  Data:             0x1

Value 2
  Name:             <NO NAME>
  Type:             REG_SZ
  Data:             #508


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\OutputWindow\{FC076020-078A-
11D1-A7DF-00A0C9110051}
Class Name:         <NO CLASS>
Last Write Time:    7/19/2005 - 4:53 PM
Value 0
  Name:             <NO NAME>
  Type:             REG_SZ
  Data:             #66

Value 1
  Name:             Name
  Type:             REG_SZ
  Data:             Debug

Value 2
  Name:             Package
  Type:             REG_SZ
  Data:             {C9DD4A57-47FB-11D2-83E7-
00C04F9902C1}

Value 3
  Name:             InitiallyInvisible
  Type:             REG_DWORD
  Data:             0x1


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\Packages
```


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```
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:53 PM

Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\Packages\{0B680757-2C29-4531-
80FA-535A5178AA98}
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:53 PM
Value 0
  Name:            <NO NAME>
  Type:            REG_SZ
  Data:            Visual Studio Code Snippets
Package

Value 1
  Name:            InprocServer32
  Type:            REG_SZ
  Data:            C:\Program Files\Microsoft SQL
Server\90\Tools\Binn\VSShell\Common7\IDE\msenv.dll


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\Packages\{1D76B2E0-F11B-11d2-
AFC3-00105A9991EF}
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:53 PM
Value 0
  Name:            <NO NAME>
  Type:            REG_SZ
  Data:            Undo Package

Value 1
  Name:            InprocServer32
  Type:            REG_SZ
  Data:            C:\Program Files\Microsoft SQL
Server\90\Tools\Binn\VSShell\Common7\IDE\msenv.dll


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\Packages\{1D76B2E0-F11B-11d2-
AFC3-00105A9991EF}\SatelliteDll
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:53 PM
Value 0
  Name:            DllName
  Type:            REG_SZ
  Data:            msenvui.dll

Value 1
  Name:            Path
  Type:            REG_SZ
  Data:            C:\Program Files\Microsoft SQL
Server\90\Tools\Binn\VSShell\Common7\IDE\


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\Packages\{21af45b0-ffa5-11d0-
b63f-00a0c922e851}
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:53 PM
Value 0
  Name:            InprocServer32
  Type:            REG_SZ
  Data:            C:\Program Files\Microsoft SQL
Server\90\Tools\Binn\VSShell\Common7\IDE\msenv.dll

Value 1
  Name:            <NO NAME>
  Type:            REG_SZ
  Data:            Class Outline Package


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\Packages\{21af45b0-ffa5-11d0-
b63f-00a0c922e851}\SatelliteDll
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:53 PM
Value 0
  Name:            Path
  Type:            REG_SZ
  Data:            C:\Program Files\Microsoft SQL
Server\90\Tools\Binn\VSShell\Common7\IDE\

Value 1
  Name:            DllName
  Type:            REG_SZ
  Data:            msenvui.dll


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\Packages\{220A4C17-7E7C-4663-
BBCC-5E607C6543CD}
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:53 PM
Value 0
  Name:            <NO NAME>
  Type:            REG_SZ
  Data:            Visual Database Tools Package

Value 1
  Name:            InprocServer32
  Type:            REG_SZ
  Data:            C:\Program Files\Microsoft SQL
Server\90\Tools\Binn\VSShell\Common7\Tools\VDT\vdt80p
.dll


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\Packages\{220A4C17-7E7C-4663-
BBCC-5E607C6543CD}\Automation
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:53 PM
Value 0
  Name:            DataService
  Type:            REG_SZ
  Data:

Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\Packages\{220A4C17-7E7C-4663-
BBCC-5E607C6543CD}\SatelliteDll
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:53 PM
Value 0
  Name:            Path
  Type:            REG_SZ
  Data:            C:\Program Files\Microsoft SQL
Server\90\Tools\Binn\VSShell\Common7\Tools\VDT\

Value 1
  Name:            DllName
  Type:            REG_SZ
  Data:            vdt80pui.dll


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\Packages\{282BD676-8B5B-11D0-
8A34-00A0C91E2ACD}
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:53 PM
Value 0
  Name:            InprocServer32
  Type:            REG_SZ
  Data:            C:\Program Files\Microsoft SQL
Server\90\Tools\Binn\VSShell\Common7\IDE\vssln.dll

Value 1
  Name:            <NO NAME>
  Type:            REG_SZ
  Data:            Solution Build Package


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\Packages\{282BD676-8B5B-11D0-
8A34-00A0C91E2ACD}\ExData
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:53 PM
Value 0
  Name:            {64AC2454-BD18-11d1-87B5-
00A0C91E2A46}
  Type:            REG_SZ
  Data:            {43B36B80-BE04-11d1-B546-
00A0C90F26F7}


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\Packages\{282BD676-8B5B-11D0-
8A34-00A0C91E2ACD}\SatelliteDll
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:53 PM
Value 0
  Name:            Path
  Type:            REG_SZ
  Data:            C:\Program Files\Microsoft SQL
Server\90\Tools\Binn\VSShell\Common7\IDE\

Value 1
```


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```
  Name:            DllName
  Type:            REG_SZ
  Data:            vsslnui.dll


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\Packages\{4058755A-8FBE-41C7-
BC99-3DBF5C74BA62}
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:53 PM
Value 0
  Name:            <NO NAME>
  Type:            REG_SZ
  Data:            Microsoft SQL Server Editors
Package

Value 1
  Name:            InprocServer32
  Type:            REG_SZ
  Data:            C:\WINDOWS\system32\mscoree.dll

Value 2
  Name:            Class
  Type:            REG_SZ
  Data:
Microsoft.SqlServer.Management.UI.VSIntegration.Edito
rs.EditorFactoryPackage

Value 3
  Name:            Assembly
  Type:            REG_SZ
  Data:            SQLEditors, Version=9.00.242.00,
Culture=neutral, PublicKeyToken=89845dcd8080cc91

Value 4
  Name:            ThreadingModel
  Type:            REG_SZ
  Data:            Both

Value 5
  Name:            CompanyName
  Type:            REG_SZ
  Data:            Microsoft

Value 6
  Name:            ProductName
  Type:            REG_SZ
  Data:            Microsoft SQL Server Management
Studio

Value 7
  Name:            ProductVersion
  Type:            REG_SZ
  Data:            9.0

Value 8
  Name:            MinEdition
  Type:            REG_SZ
  Data:            professional

Value 9
  Name:            ID
  Type:            REG_DWORD
  Data:            0x1

Value 10
  Name:            Preload
  Type:            REG_DWORD
  Data:            0


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\Packages\{4058755A-8FBE-41C7-
BC99-3DBF5C74BA62}\SatelliteDll
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:53 PM
Value 0
  Name:            DllName
  Type:            REG_SZ
  Data:            SQLEditors.rll

Value 1
  Name:            Path
  Type:            REG_SZ
  Data:            C:\Program Files\Microsoft SQL
Server\90\Tools\Binn\VSShell\Common7\IDE\


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\Packages\{44E07B02-29A5-11D3-
B882-00C04F79F802}
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:53 PM
Value 0
  Name:            <NO NAME>
  Type:            REG_SZ
  Data:            Visual Studio Commands Definition
Package

Value 1
  Name:            InprocServer32
  Type:            REG_SZ
  Data:            C:\Program Files\Microsoft SQL
Server\90\Tools\Binn\VSShell\Common7\IDE\cmddef.dll


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\Packages\{44E07B02-29A5-11D3-
B882-00C04F79F802}\SatelliteDll
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:53 PM
Value 0
  Name:            DllName
  Type:            REG_SZ
  Data:            cmddefui.dll

Value 1
  Name:            Path
  Type:            REG_SZ
  Data:            C:\Program Files\Microsoft SQL
Server\90\Tools\Binn\VSShell\Common7\IDE\


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\Packages\{4a0c6509-bf90-43da-
abee-0aba3a8527f1}
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:53 PM
Value 0
  Name:            <NO NAME>
  Type:            REG_SZ
  Data:            DataWarehouse VSIntegration layer

Value 1
  Name:            InprocServer32
  Type:            REG_SZ
  Data:            mscoree.dll

Value 2
  Name:            ThreadingModel
  Type:            REG_SZ
  Data:            Both

Value 3
  Name:            Class
  Type:            REG_SZ
  Data:
Microsoft.DataWarehouse.VsIntegration.Shell.DWDesigne
rPackage

Value 4
  Name:            Assembly
  Type:            REG_SZ
  Data:
Microsoft.DataWarehouse.VsIntegration,
Version=9.00.242.00, Culture=neutral,
PublicKeyToken=89845dcd8080cc91

Value 5
  Name:            RuntimeVersion
  Type:            REG_SZ
  Data:            v1.1.4322

Value 6
  Name:            CompanyName
  Type:            REG_SZ
  Data:            Microsoft Corporation

Value 7
  Name:            ProductName
  Type:            REG_SZ
  Data:            DataWarehouse VSIntegration layer

Value 8
  Name:            ProductVersion
  Type:            REG_SZ
  Data:            9.0

Value 9
  Name:            MinEdition
  Type:            REG_SZ
  Data:            Standard

Value 10
```


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```
  Name:            ID
  Type:            REG_DWORD
  Data:            0x1


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\Packages\{4a0c6509-bf90-43da-
abee-0aba3a8527f1}\DWProjects
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:53 PM

Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\Packages\{4a0c6509-bf90-43da-
abee-0aba3a8527f1}\DWProjects\asproj
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:53 PM
Value 0
  Name:            <NO NAME>
  Type:            REG_SZ
  Data:            Analysis Services Project

Value 1
  Name:            DocumentObject
  Type:            REG_SZ
  Data:
Microsoft.DataWarehouse.VsIntegration.Designer.Serial
ization.TextBufferDocumentObject,
Microsoft.DataWarehouse.VsIntegration,
PublicKeyToken=89845dcd8080cc91

Value 2
  Name:            Project
  Type:            REG_SZ
  Data:            {d2abab84-bf74-430a-b69e-
9dc6d40dda17}

Value 3
  Name:            ProjectManager
  Type:            REG_SZ
  Data:
Microsoft.AnalysisServices.Project.AnalysisServicesPr
ojectManager, Microsoft.AnalysisServices.Project,
PublicKeyToken=89845dcd8080cc91

Value 4
  Name:            MasterTemplate
  Type:            REG_SZ
  Data:            C:\Program Files\Microsoft SQL
Server\90\Tools\Binn\VSShell\Common7\IDE\Business
Intelligence Projects\AnalysisServicesProject.dwproj


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\Packages\{4a0c6509-bf90-43da-
abee-0aba3a8527f1}\DWProjects\asproj\1
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:53 PM
Value 0
  Name:            <NO NAME>
  Type:            REG_SZ
  Data:            Analysis Services Project

Value 1
  Name:            DocumentObject
  Type:            REG_SZ
  Data:
Microsoft.AnalysisServices.Project.ComponentModel.Dat
abaseOnlineDocumentObject,
Microsoft.AnalysisServices.Project,
PublicKeyToken=89845dcd8080cc91

Value 2
  Name:            Project
  Type:            REG_SZ
  Data:            {d2abab84-bf74-430a-b69e-
9dc6d40dda17}

Value 3
  Name:            ProjectManager
  Type:            REG_SZ
  Data:
Microsoft.AnalysisServices.Project.OnlineAnalysisServ
icesProjectManager,
Microsoft.AnalysisServices.Project,
PublicKeyToken=89845dcd8080cc91


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\Packages\{4a0c6509-bf90-43da-
abee-0aba3a8527f1}\DWProjects\dtproj
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:53 PM
Value 0
  Name:            <NO NAME>
  Type:            REG_SZ
  Data:            Data Transformations Project

Value 1
  Name:            DocumentObject
  Type:            REG_SZ
  Data:
Microsoft.DataWarehouse.VsIntegration.Designer.Serial
ization.TextBufferDocumentObject,
Microsoft.DataWarehouse.VsIntegration

Value 2
  Name:            Project
  Type:            REG_SZ
  Data:            {d183a3d8-5fd8-494b-b014-
37f57b35e655}

Value 3
  Name:            ProjectManager
  Type:            REG_SZ
  Data:
Microsoft.DataTransformationServices.Project.DataTran
sformationsProjectManager,
Microsoft.DataTransformationServices.VsIntegration

Value 4
  Name:            MasterTemplate
  Type:            REG_SZ
  Data:            C:\Program Files\Microsoft SQL
Server\90\Tools\Binn\VSShell\Common7\IDE\Business
Intelligence
Projects\DataTransformationsProject.dtproj


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\Packages\{4a0c6509-bf90-43da-
abee-0aba3a8527f1}\DWProjects\dtproj\1
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:53 PM
Value 0
  Name:            <NO NAME>
  Type:            REG_SZ
  Data:            Data Transformations Project

Value 1
  Name:            DocumentObject
  Type:            REG_SZ
  Data:
Microsoft.DataTransformationServices.Project.OnlineDt
sProjectDocumentObject,
Microsoft.DataTransformationServices.VsIntegration

Value 2
  Name:            Project
  Type:            REG_SZ
  Data:            {d183a3d8-5fd8-494b-b014-
37f57b35e655}

Value 3
  Name:            ProjectManager
  Type:            REG_SZ
  Data:
Microsoft.DataTransformationServices.Project.OnlineDa
taTransformationsProjectManager,
Microsoft.DataTransformationServices.VsIntegration


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\Packages\{4a0c6509-bf90-43da-
abee-0aba3a8527f1}\DWProjects\dwproj
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:53 PM
Value 0
  Name:            <NO NAME>
  Type:            REG_SZ
  Data:            Analysis Services Project

Value 1
  Name:            DocumentObject
  Type:            REG_SZ
  Data:
Microsoft.DataWarehouse.VsIntegration.Designer.Serial
ization.TextBufferDocumentObject,
Microsoft.DataWarehouse.VsIntegration,
PublicKeyToken=89845dcd8080cc91

Value 2
  Name:            Project
  Type:            REG_SZ
```


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```
  Data:            {d2abab84-bf74-430a-b69e-
9dc6d40dda17}

Value 3
  Name:            ProjectManager
  Type:            REG_SZ
  Data:
Microsoft.AnalysisServices.Project.AnalysisServicesPr
ojectManager, Microsoft.AnalysisServices.Project,
PublicKeyToken=89845dcd8080cc91

Value 4
  Name:            MasterTemplate
  Type:            REG_SZ
  Data:            C:\Program Files\Microsoft SQL
Server\90\Tools\Binn\VSShell\Common7\IDE\Business
Intelligence Projects\AnalysisServicesProject.dwproj


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\Packages\{4a0c6509-bf90-43da-
abee-0aba3a8527f1}\DWProjects\dwproj\1
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:53 PM
Value 0
  Name:            <NO NAME>
  Type:            REG_SZ
  Data:            Analysis Services Project

Value 1
  Name:            DocumentObject
  Type:            REG_SZ
  Data:
Microsoft.AnalysisServices.Project.ComponentModel.Dat
abaseOnlineDocumentObject,
Microsoft.AnalysisServices.Project,
PublicKeyToken=89845dcd8080cc91

Value 2
  Name:            Project
  Type:            REG_SZ
  Data:            {d2abab84-bf74-430a-b69e-
9dc6d40dda17}

Value 3
  Name:            ProjectManager
  Type:            REG_SZ
  Data:
Microsoft.AnalysisServices.Project.OnlineAnalysisServ
icesProjectManager,
Microsoft.AnalysisServices.Project,
PublicKeyToken=89845dcd8080cc91


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\Packages\{4a0c6509-bf90-43da-
abee-0aba3a8527f1}\DWProjects\dwproj\2
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:53 PM
Value 0
  Name:            <NO NAME>
  Type:            REG_SZ
  Data:            Analysis Services Project

Value 1
  Name:            DocumentObject
  Type:            REG_SZ
  Data:
Microsoft.DataWarehouse.VsIntegration.Designer.Serial
ization.ComponentDocumentObject,
Microsoft.DataWarehouse.VsIntegration,
PublicKeyToken=89845dcd8080cc91

Value 2
  Name:            Project
  Type:            REG_SZ
  Data:            {d2abab84-bf74-430a-b69e-
9dc6d40dda17}

Value 3
  Name:            ProjectManager
  Type:            REG_SZ
  Data:
Microsoft.AnalysisServices.Project.ViewersProject.Vie
wersProjectManager,
Microsoft.AnalysisServices.Project,
PublicKeyToken=89845dcd8080cc91


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\Packages\{4a0c6509-bf90-43da-
abee-0aba3a8527f1}\SatelliteDll
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:53 PM
Value 0
  Name:            DllName
  Type:            REG_SZ
  Data:
Microsoft.DataWarehouse.VsIntegration.rll

Value 1
  Name:            Path
  Type:            REG_SZ
  Data:            C:\Program Files\Microsoft SQL
Server\90\Tools\Binn\VSShell\Common7\IDE\


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\Packages\{4a0c6509-bf90-43da-
abee-0aba3a8527f1}\Settings
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:53 PM
Value 0
  Name:            <NO NAME>
  Type:            REG_SZ
  Data:            Data Warehouse Designer Settings


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\Packages\{4a0c6509-bf90-43da-
abee-0aba3a8527f1}\Settings\BI Solution
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:53 PM

Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\Packages\{4a0c6509-bf90-43da-
abee-0aba3a8527f1}\Settings\BI
Solution\ProjectTemplates
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:53 PM
Value 0
  Name:            Database
  Type:            REG_SZ
  Data:            C:\Program Files\Microsoft SQL
Server\90\Tools\Binn\VSShell\Common7\IDE\Business
Intelligence Wizards\Database\DatabaseProject.dbp

Value 1
  Name:            AnalysisServices
  Type:            REG_SZ
  Data:            C:\Program Files\Microsoft SQL
Server\90\Tools\Binn\VSShell\Common7\IDE\Business
Intelligence
Wizards\AnalysisServices\AnalysisServicesProject.dwpr
oj

Value 2
  Name:            Dts
  Type:            REG_SZ
  Data:            C:\Program Files\Microsoft SQL
Server\90\Tools\Binn\VSShell\Common7\IDE\Business
Intelligence
Wizards\DataTransformationServices\DataTransformation
sProject.dtproj

Value 3
  Name:            Reports
  Type:            REG_SZ
  Data:            C:\Program Files\Microsoft SQL
Server\90\Tools\Binn\VSShell\Common7\IDE\Business
Intelligence Wizards\Reports\ReportProject.vsz

Value 4
  Name:            CSharpAMOSproc
  Type:            REG_SZ
  Data:            C:\Program Files\Microsoft SQL
Server\90\Tools\Binn\VSShell\Common7\IDE\Business
Intelligence
Wizards\LanguageProjects\CSharp\CSharpDWWizards\AMOSt
oredProcedure.vsz

Value 5
  Name:            CSharpADOMDSproc
  Type:            REG_SZ
  Data:            C:\Program Files\Microsoft SQL
Server\90\Tools\Binn\VSShell\Common7\IDE\Business
Intelligence
Wizards\LanguageProjects\CSharp\CSharpDWWizards\ADOMD
StoredProcedure.vsz

Value 6
  Name:            CSharpWinApp
  Type:            REG_SZ
```


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```
  Data:            C:\Program Files\Microsoft SQL
Server\90\Tools\Binn\VSShell\Common7\IDE\Business
Intelligence
Wizards\LanguageProjects\CSharp\CSharpDWWizards\Windo
wsApplication.vsz

Value 7
  Name:            CSharpWebApp
  Type:            REG_SZ
  Data:            C:\Program Files\Microsoft SQL
Server\90\Tools\Binn\VSShell\Common7\IDE\Business
Intelligence
Wizards\LanguageProjects\CSharp\CSharpDWWizards\WebAp
plication.vsz

Value 8
  Name:            VBAMOSproc
  Type:            REG_SZ
  Data:            C:\Program Files\Microsoft SQL
Server\90\Tools\Binn\VSShell\Common7\IDE\Business
Intelligence
Wizards\LanguageProjects\VB\VBDWWizards\AMOStoredProc
edure.vsz

Value 9
  Name:            VBADOMDSproc
  Type:            REG_SZ
  Data:            C:\Program Files\Microsoft SQL
Server\90\Tools\Binn\VSShell\Common7\IDE\Business
Intelligence
Wizards\LanguageProjects\VB\VBDWWizards\ADOMDStoredPr
ocedure.vsz

Value 10
  Name:            VBWinApp
  Type:            REG_SZ
  Data:            C:\Program Files\Microsoft SQL
Server\90\Tools\Binn\VSShell\Common7\IDE\Business
Intelligence
Wizards\LanguageProjects\VB\VBDWWizards\WindowsApplic
ation.vsz

Value 11
  Name:            VBWebApp
  Type:            REG_SZ
  Data:            C:\Program Files\Microsoft SQL
Server\90\Tools\Binn\VSShell\Common7\IDE\Business
Intelligence
Wizards\LanguageProjects\VB\VBDWWizards\WebApplicatio
n.vsz

Value 12
  Name:            JSharpAMOSproc
  Type:            REG_SZ
  Data:            C:\Program Files\Microsoft SQL
Server\90\Tools\Binn\VSShell\Common7\IDE\Business
Intelligence
Wizards\LanguageProjects\JSharp\JSharpDWWizards\AMOSt
oredProcedure.vsz

Value 13
  Name:            JSharpADOMDSproc
  Type:            REG_SZ
  Data:            C:\Program Files\Microsoft SQL
Server\90\Tools\Binn\VSShell\Common7\IDE\Business
Intelligence
Wizards\LanguageProjects\JSharp\JSharpDWWizards\ADOMD
StoredProcedure.vsz


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\Packages\{4a0c6509-bf90-43da-
abee-0aba3a8527f1}\Settings\Debug
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:53 PM

Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\Packages\{4a0c6509-bf90-43da-
abee-0aba3a8527f1}\Settings\Debug\Options
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:53 PM
Value 0
  Name:            DelegateMessageFilter
  Type:            REG_SZ
  Data:            0


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\Packages\{4a0c6509-bf90-43da-
abee-0aba3a8527f1}\Settings\Designers
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:53 PM

Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\Packages\{4a0c6509-bf90-43da-
abee-0aba3a8527f1}\Settings\Designers\CommandUIGuids
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:53 PM
Value 0
  Name:            cube
  Type:            REG_SZ
  Data:            {B0575F10-2219-429c-A1D5-
C915D81D25BD}

Value 1
  Name:            database
  Type:            REG_SZ
  Data:            {706E2F7B-74D8-4c00-86C2-
41242A334F76}

Value 2
  Name:            dim
  Type:            REG_SZ
  Data:            {7E3E03ED-36CA-4626-885F-
6A531531CEA9}

Value 3
  Name:            dmm
  Type:            REG_SZ
  Data:            {F003262C-6FA5-4325-82EC-
246A95D34BAF}

Value 4
  Name:            ds
  Type:            REG_SZ
  Data:            {AED5C765-03BA-4c88-8CF2-
B43F71E27074}

Value 5
  Name:            dsv
  Type:            REG_SZ
  Data:            {8CB84D67-9C4B-4233-A1D1-
7D73C557031B}


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\Packages\{4a0c6509-bf90-43da-
abee-
0aba3a8527f1}\Settings\Designers\DataMiningViewers
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:53 PM

Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\Packages\{4a0c6509-bf90-43da-
abee-
0aba3a8527f1}\Settings\Designers\DataMiningViewers\Mi
crosoft_AssociationRules_Viewer
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:53 PM
Value 0
  Name:            Class
  Type:            REG_SZ
  Data:
Microsoft.AnalysisServices.Viewers.AssociationViewer

Value 1
  Name:            Assembly
  Type:            REG_SZ
  Data:
Microsoft.AnalysisServices.Viewers,
PublicKeyToken=89845dcd8080cc91

Value 2
  Name:            Algorithms
  Type:            REG_SZ
  Data:            Microsoft_Association_Rules

Value 3
  Name:            DisplayName
  Type:            REG_SZ
  Data:            Microsoft Association Rules Viewer


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\Packages\{4a0c6509-bf90-43da-
abee-
0aba3a8527f1}\Settings\Designers\DataMiningViewers\Mi
crosoft_Cluster_Viewer
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:53 PM
Value 0
  Name:            Class
```


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```
  Type:            REG_SZ
  Data:
Microsoft.AnalysisServices.Viewers.ClusterViewer

Value 1
  Name:            Assembly
  Type:            REG_SZ
  Data:
Microsoft.AnalysisServices.Viewers,
PublicKeyToken=89845dcd8080cc91

Value 2
  Name:            Algorithms
  Type:            REG_SZ
  Data:            Microsoft_Clustering

Value 3
  Name:            DisplayName
  Type:            REG_SZ
  Data:            Microsoft Cluster Viewer


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\Packages\{4a0c6509-bf90-43da-
abee-
0aba3a8527f1}\Settings\Designers\DataMiningViewers\Mi
crosoft_Content_Grid_Viewer
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:53 PM
Value 0
  Name:            Class
  Type:            REG_SZ
  Data:
Microsoft.AnalysisServices.Viewers.ContentGridViewer

Value 1
  Name:            Assembly
  Type:            REG_SZ
  Data:
Microsoft.AnalysisServices.Viewers,
PublicKeyToken=89845dcd8080cc91

Value 2
  Name:            Algorithms
  Type:            REG_SZ
  Data:            *

Value 3
  Name:            DisplayName
  Type:            REG_SZ
  Data:            Microsoft Mining Content Viewer


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\Packages\{4a0c6509-bf90-43da-
abee-
0aba3a8527f1}\Settings\Designers\DataMiningViewers\Mi
crosoft_NaiveBayesian_Viewer
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:53 PM
Value 0
  Name:            Class
  Type:            REG_SZ
  Data:
Microsoft.AnalysisServices.Viewers.NaiveBayesViewer

Value 1
  Name:            Assembly
  Type:            REG_SZ
  Data:
Microsoft.AnalysisServices.Viewers,
PublicKeyToken=89845dcd8080cc91

Value 2
  Name:            Algorithms
  Type:            REG_SZ
  Data:            Microsoft_Naive_Bayes

Value 3
  Name:            DisplayName
  Type:            REG_SZ
  Data:            Microsoft Naive Bayes Viewer


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\Packages\{4a0c6509-bf90-43da-
abee-
0aba3a8527f1}\Settings\Designers\DataMiningViewers\Mi
crosoft_NeuralNetwork_Viewer
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:53 PM
Value 0
  Name:            Class
  Type:            REG_SZ
  Data:
Microsoft.AnalysisServices.Viewers.NeuralNetViewer

Value 1
  Name:            Assembly
  Type:            REG_SZ
  Data:
Microsoft.AnalysisServices.Viewers,
PublicKeyToken=89845dcd8080cc91

Value 2
  Name:            Algorithms
  Type:            REG_SZ
  Data:            Microsoft_Neural_Network

Value 3
  Name:            DisplayName
  Type:            REG_SZ
  Data:            Microsoft Neural Network Viewer


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\Packages\{4a0c6509-bf90-43da-
abee-
0aba3a8527f1}\Settings\Designers\DataMiningViewers\Mi
crosoft_SequenceCluster_Viewer
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:53 PM
Value 0
  Name:            Class
  Type:            REG_SZ
  Data:
Microsoft.AnalysisServices.Viewers.SequenceClusterVie
wer

Value 1
  Name:            Assembly
  Type:            REG_SZ
  Data:
Microsoft.AnalysisServices.Viewers,
PublicKeyToken=89845dcd8080cc91

Value 2
  Name:            Algorithms
  Type:            REG_SZ
  Data:            Microsoft_Sequence_Clustering

Value 3
  Name:            DisplayName
  Type:            REG_SZ
  Data:            Microsoft Sequence Cluster Viewer


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\Packages\{4a0c6509-bf90-43da-
abee-
0aba3a8527f1}\Settings\Designers\DataMiningViewers\Mi
crosoft_TimeSeries_Viewer
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:53 PM
Value 0
  Name:            Class
  Type:            REG_SZ
  Data:
Microsoft.AnalysisServices.Viewers.TimeSeriesViewer

Value 1
  Name:            Assembly
  Type:            REG_SZ
  Data:
Microsoft.AnalysisServices.Viewers,
PublicKeyToken=89845dcd8080cc91

Value 2
  Name:            Algorithms
  Type:            REG_SZ
  Data:            Microsoft_Time_Series

Value 3
  Name:            DisplayName
  Type:            REG_SZ
  Data:            Microsoft Time Series Viewer


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\Packages\{4a0c6509-bf90-43da-
abee-
0aba3a8527f1}\Settings\Designers\DataMiningViewers\Mi
crosoft_Tree_Viewer
```


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```
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:53 PM
Value 0
  Name:            Class
  Type:            REG_SZ
  Data:
Microsoft.AnalysisServices.Viewers.TreeViewer

Value 1
  Name:            Assembly
  Type:            REG_SZ
  Data:
Microsoft.AnalysisServices.Viewers,
PublicKeyToken=89845dcd8080cc91

Value 2
  Name:            Algorithms
  Type:            REG_SZ
  Data:            Microsoft_Decision_Trees

Value 3
  Name:            DisplayName
  Type:            REG_SZ
  Data:            Microsoft Tree Viewer


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\Packages\{4a0c6509-bf90-43da-
abee-0aba3a8527f1}\Settings\Designers\Wizards
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:53 PM

Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\Packages\{4a0c6509-bf90-43da-
abee-
0aba3a8527f1}\Settings\Designers\Wizards\DefaultNames
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:53 PM
Value 0
  Name:
Microsoft.AnalysisServices.DataSourceView
  Type:            REG_SZ
  Data:            DataSourceView.dsv

Value 1
  Name:
Microsoft.AnalysisServices.DataSource
  Type:            REG_SZ
  Data:            DataSource.dsv

Value 2
  Name:
Microsoft.AnalysisServices.Dimension
  Type:            REG_SZ
  Data:            Dimension.dim

Value 3
  Name:            Microsoft.AnalysisServices.Cube
  Type:            REG_SZ
  Data:            Cube.cube

Value 4
  Name:
Microsoft.AnalysisServices.MiningStructure
  Type:            REG_SZ
  Data:            MiningModel.dmm

Value 5
  Name:            Microsoft.AnalysisServices.Role
  Type:            REG_SZ
  Data:            Role.role

Value 6
  Name:
Microsoft.AnalysisServices.Database
  Type:            REG_SZ
  Data:

Value 7
  Name:
Microsoft.AnalysisServices.Partition
  Type:            REG_SZ
  Data:

Value 8
  Name:
Microsoft.AnalysisServices.Aggregation
  Type:            REG_SZ
  Data:

Value 9
  Name:
Microsoft.AnalysisServices.BusinessIntelligence
  Type:            REG_SZ
  Data:

Value 10
  Name:
Microsoft.AnalysisServices.Wizards.NestedTableForm
  Type:            REG_SZ
  Data:

Value 11
  Name:
Microsoft.AnalysisServices.Wizards.SchemaGeneration
  Type:            REG_SZ
  Data:

Value 12
  Name:
Microsoft.AnalysisServices.Wizards.SchemaGenerationUI
  Type:            REG_SZ
  Data:

Value 13
  Name:
Microsoft.AnalysisServices.Wizards.LinkedObject
  Type:            REG_SZ
  Data:

Value 14
  Name:
Microsoft.AnalysisServices.Wizards.UsageBasedOptimiza
tion
  Type:            REG_SZ
  Data:

Value 15
  Name:
Microsoft.SqlServer.Dts.Runtime.Package
  Type:            REG_SZ
  Data:            Package.dtsx

Value 16
  Name:
Microsoft.SqlServer.Dts.Runtime.Package.Import
  Type:            REG_SZ
  Data:            Package.dtsx

Value 17
  Name:
Microsoft.SqlServer.Dts.Runtime.Package.Migrate
  Type:            REG_SZ
  Data:            Package.dtsx

Value 18
  Name:
Microsoft.SqlServer.Dts.Runtime.Package.Deploy
  Type:            REG_SZ
  Data:            DTSSetup.vdproj

Value 19
  Name:
Microsoft.SqlServer.Dts.Runtime.Configuration
  Type:            REG_SZ
  Data:            DTSConfiguration

Value 20
  Name:
Microsoft.DataTransformationServices.DataFlowUI.SCDWi
zardMetadata
  Type:            REG_SZ
  Data:            DtsLoadDimension


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\Packages\{4a0c6509-bf90-43da-
abee-
0aba3a8527f1}\Settings\Designers\Wizards\Mappings
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:53 PM
Value 0
  Name:
Microsoft.AnalysisServices.DataSourceView
  Type:            REG_SZ
  Data:            C:\Program Files\Microsoft SQL
Server\90\Tools\Binn\VSShell\Common7\IDE\ProjectItems
\DataSourceView.vsz

Value 1
  Name:
Microsoft.AnalysisServices.DataSource
  Type:            REG_SZ
  Data:            C:\Program Files\Microsoft SQL
Server\90\Tools\Binn\VSShell\Common7\IDE\ProjectItems
\DataSource.vsz
```


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```
Value 2
  Name:
Microsoft.AnalysisServices.Dimension
  Type:            REG_SZ
  Data:            C:\Program Files\Microsoft SQL
Server\90\Tools\Binn\VSShell\Common7\IDE\ProjectItems
\Dimension.vsz

Value 3
  Name:            Microsoft.AnalysisServices.Cube
  Type:            REG_SZ
  Data:            C:\Program Files\Microsoft SQL
Server\90\Tools\Binn\VSShell\Common7\IDE\ProjectItems
\Cube.vsz

Value 4
  Name:
Microsoft.AnalysisServices.MiningStructure
  Type:            REG_SZ
  Data:            C:\Program Files\Microsoft SQL
Server\90\Tools\Binn\VSShell\Common7\IDE\ProjectItems
\MiningModel.vsz

Value 5
  Name:            Microsoft.AnalysisServices.Role
  Type:            REG_SZ
  Data:            C:\Program Files\Microsoft SQL
Server\90\Tools\Binn\VSShell\Common7\IDE\ProjectItems
\Role.vsz

Value 6
  Name:
Microsoft.AnalysisServices.Database
  Type:            REG_SZ
  Data:            C:\Program Files\Microsoft SQL
Server\90\Tools\Binn\VSShell\Common7\IDE\ProjectItems
\DataWarehouse.vsz

Value 7
  Name:
Microsoft.AnalysisServices.Partition
  Type:            REG_SZ
  Data:            C:\Program Files\Microsoft SQL
Server\90\Tools\Binn\VSShell\Common7\IDE\ProjectItems
\Partition.vsz

Value 8
  Name:
Microsoft.AnalysisServices.Aggregation
  Type:            REG_SZ
  Data:            C:\Program Files\Microsoft SQL
Server\90\Tools\Binn\VSShell\Common7\IDE\ProjectItems
\Aggregation.vsz

Value 9
  Name:
Microsoft.AnalysisServices.BusinessIntelligence
  Type:            REG_SZ
  Data:            C:\Program Files\Microsoft SQL
Server\90\Tools\Binn\VSShell\Common7\IDE\ProjectItems
\BusinessIntelligence.vsz

Value 10
  Name:
Microsoft.AnalysisServices.Wizards.NestedTableForm
  Type:            REG_SZ
  Data:            C:\Program Files\Microsoft SQL
Server\90\Tools\Binn\VSShell\Common7\IDE\ProjectItems
\AddNestedTable.vsz

Value 11
  Name:
Microsoft.AnalysisServices.Wizards.SchemaGeneration
  Type:            REG_SZ
  Data:            C:\Program Files\Microsoft SQL
Server\90\Tools\Binn\VSShell\Common7\IDE\ProjectItems
\SchemaGeneration.vsz

Value 12
  Name:
Microsoft.AnalysisServices.Wizards.SchemaGenerationUI
  Type:            REG_SZ
  Data:            C:\Program Files\Microsoft SQL
Server\90\Tools\Binn\VSShell\Common7\IDE\ProjectItems
\SchemaGenerationUI.vsz

Value 13
  Name:
Microsoft.AnalysisServices.Wizards.LinkedObject
  Type:            REG_SZ
  Data:            C:\Program Files\Microsoft SQL
Server\90\Tools\Binn\VSShell\Common7\IDE\ProjectItems
\LinkedObject.vsz

Value 14
  Name:
Microsoft.AnalysisServices.Wizards.UsageBasedOptimiza
tion
  Type:            REG_SZ
  Data:            C:\Program Files\Microsoft SQL
Server\90\Tools\Binn\VSShell\Common7\IDE\ProjectItems
\UsageBasedOptimization.vsz

Value 15
  Name:
Microsoft.SqlServer.Dts.Runtime.Package
  Type:            REG_SZ
  Data:            C:\Program Files\Microsoft SQL
Server\90\Tools\Binn\VSShell\Common7\IDE\ProjectItems
\DtsPackage.vsz

Value 16
  Name:
Microsoft.SqlServer.Dts.Runtime.Package.Import
  Type:            REG_SZ
  Data:            C:\Program Files\Microsoft SQL
Server\90\Tools\Binn\VSShell\Common7\IDE\ProjectItems
\ImportPackage.vsz

Value 17
  Name:
Microsoft.SqlServer.Dts.Runtime.Package.Migrate
  Type:            REG_SZ
  Data:            C:\Program Files\Microsoft SQL
Server\90\Tools\Binn\VSShell\Common7\IDE\ProjectItems
\MigratePackage.vsz

Value 18
  Name:
Microsoft.SqlServer.Dts.Runtime.Package.Deploy
  Type:            REG_SZ
  Data:            C:\Program Files\Microsoft SQL
Server\90\Tools\Binn\VSShell\Common7\IDE\ProjectItems
\DtsDeployment.vsz

Value 19
  Name:
Microsoft.SqlServer.Dts.Runtime.Configuration
  Type:            REG_SZ
  Data:            C:\Program Files\Microsoft SQL
Server\90\Tools\Binn\VSShell\Common7\IDE\ProjectItems
\DtsConfiguration.vsz

Value 20
  Name:
Microsoft.DataTransformationServices.DataFlowUI.SCDWi
zardMetadata
  Type:            REG_SZ
  Data:            C:\Program Files\Microsoft SQL
Server\90\Tools\Binn\VSShell\Common7\IDE\ProjectItems
\DtsLoadDimension.vsz


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\Packages\{4a0c6509-bf90-43da-
abee-0aba3a8527f1}\Settings\FontsAndColors
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:53 PM

Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\Packages\{4a0c6509-bf90-43da-
abee-0aba3a8527f1}\Settings\FontsAndColors\{34F54DB8-
3D69-4d94-ABD5-BA1D717AB8BE}
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:53 PM
Value 0
  Name:            Category
  Type:            REG_SZ
  Data:            {34F54DB8-3D69-4d94-ABD5-
BA1D717AB8BE}

Value 1
  Name:            Name
  Type:            REG_SZ
  Data:            #501

Value 2
  Name:            FontFaceName
  Type:            REG_SZ
  Data:            #502

Value 3
  Name:            FontPointSize
  Type:            REG_SZ
```


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```
  Data:            #503

Value 4
  Name:            Flags
  Type:            REG_DWORD
  Data:            0x2


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\Packages\{4a0c6509-bf90-43da-
abee-0aba3a8527f1}\Settings\FontsAndColors\{34F54DB8-
3D69-4d94-ABD5-BA1D717AB8BE}\Text
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:53 PM
Value 0
  Name:            <NO NAME>
  Type:            REG_SZ
  Data:            Text

Value 1
  Name:            Index
  Type:            REG_DWORD
  Data:            0

Value 2
  Name:            Name
  Type:            REG_SZ
  Data:            Text

Value 3
  Name:            LocalizableName
  Type:            REG_SZ
  Data:            #508

Value 4
  Name:            Description
  Type:            REG_SZ
  Data:            #509

Value 5
  Name:            Foreground
  Type:            REG_DWORD
  Data:            0x2000000

Value 6
  Name:            Background
  Type:            REG_DWORD
  Data:            0x2000000

Value 7
  Name:            AutoForeground
  Type:            REG_DWORD
  Data:            0

Value 8
  Name:            AutoBackground
  Type:            REG_DWORD
  Data:            0xffffff

Value 9
  Name:            FontFlags
  Type:            REG_DWORD
  Data:            0

Value 10
  Name:            MarkerVisualStyle
  Type:            REG_DWORD
  Data:            0

Value 11
  Name:            LineStyle
  Type:            REG_DWORD
  Data:            0

Value 12
  Name:            Flags
  Type:            REG_DWORD
  Data:            0x3a


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\Packages\{4a0c6509-bf90-43da-
abee-0aba3a8527f1}\Settings\FontsAndColors\{45E05167-
BEFE-482d-8B9B-0C329EC847DF}
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:53 PM
Value 0
  Name:            Category
  Type:            REG_SZ
  Data:            {45E05167-BEFE-482d-8B9B-
0C329EC847DF}

Value 1
  Name:            Name
  Type:            REG_SZ
  Data:            #70

Value 2
  Name:            FontFaceName
  Type:            REG_SZ
  Data:            #71

Value 3
  Name:            FontPointSize
  Type:            REG_SZ
  Data:            #72

Value 4
  Name:            Flags
  Type:            REG_DWORD
  Data:            0x2


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\Packages\{4a0c6509-bf90-43da-
abee-0aba3a8527f1}\Settings\FontsAndColors\{45E05167-
BEFE-482d-8B9B-0C329EC847DF}\Text
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:53 PM
Value 0
  Name:            <NO NAME>
  Type:            REG_SZ
  Data:            Text

Value 1
  Name:            Index
  Type:            REG_DWORD
  Data:            0

Value 2
  Name:            Name
  Type:            REG_SZ
  Data:            Text

Value 3
  Name:            LocalizableName
  Type:            REG_SZ
  Data:            #80

Value 4
  Name:            Description
  Type:            REG_SZ
  Data:            #81

Value 5
  Name:            Foreground
  Type:            REG_DWORD
  Data:            0x2000000

Value 6
  Name:            Background
  Type:            REG_DWORD
  Data:            0x2000000

Value 7
  Name:            AutoForeground
  Type:            REG_DWORD
  Data:            0

Value 8
  Name:            AutoBackground
  Type:            REG_DWORD
  Data:            0xffffff

Value 9
  Name:            FontFlags
  Type:            REG_DWORD
  Data:            0

Value 10
  Name:            MarkerVisualStyle
  Type:            REG_DWORD
  Data:            0

Value 11
  Name:            LineStyle
  Type:            REG_DWORD
  Data:            0

Value 12
  Name:            Flags
  Type:            REG_DWORD
  Data:            0x3e
```


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```
Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\Packages\{4a0c6509-bf90-43da-
abee-0aba3a8527f1}\Settings\General
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:53 PM

Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\Packages\{4a0c6509-bf90-43da-
abee-0aba3a8527f1}\Settings\General\Locations
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:53 PM
Value 0
  Name:            LocalInstallationRoot
  Type:            REG_SZ
  Data:            C:\Program Files\Microsoft SQL
Server\90\Tools\Binn\VSShell\Common7\IDE\

Value 1
  Name:            TemplateInstallationRoot
  Type:            REG_SZ
  Data:            C:\Program Files\Microsoft SQL
Server\90\Tools\Binn\VSShell\Common7\IDE\


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\Packages\{4a0c6509-bf90-43da-
abee-0aba3a8527f1}\Settings\Serialization
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:53 PM

Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\Packages\{4a0c6509-bf90-43da-
abee-
0aba3a8527f1}\Settings\Serialization\SerializableComp
onents
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:53 PM
Value 0
  Name:            cube
  Type:            REG_SZ
  Data:            Microsoft.AnalysisServices.Cube,
Microsoft.AnalysisServices, Version=9.0.242.0,
Culture=neutral, PublicKeyToken=89845dcd8080cc91

Value 1
  Name:            dim
  Type:            REG_SZ
  Data:
Microsoft.AnalysisServices.Dimension,
Microsoft.AnalysisServices, Version=9.0.242.0,
Culture=neutral, PublicKeyToken=89845dcd8080cc91

Value 2
  Name:            dmm
  Type:            REG_SZ
  Data:
Microsoft.AnalysisServices.MiningStructure,
Microsoft.AnalysisServices, Version=9.0.242.0,
Culture=neutral, PublicKeyToken=89845dcd8080cc91

Value 3
  Name:            ds
  Type:            REG_SZ
  Data:
Microsoft.AnalysisServices.DataSource,
Microsoft.AnalysisServices, Version=9.0.242.0,
Culture=neutral, PublicKeyToken=89845dcd8080cc91

Value 4
  Name:            dsv
  Type:            REG_SZ
  Data:
Microsoft.AnalysisServices.DataSourceView,
Microsoft.AnalysisServices, Version=9.0.242.0,
Culture=neutral, PublicKeyToken=89845dcd8080cc91

Value 5
  Name:            partitions
  Type:            REG_SZ
  Data:
Microsoft.AnalysisServices.Project.ComponentModel.Par
titionsSet, Microsoft.AnalysisServices.Project,
PublicKeyToken=89845dcd8080cc91

Value 6
  Name:            database
  Type:            REG_SZ
  Data:
Microsoft.AnalysisServices.Database,
Microsoft.AnalysisServices, Version=9.0.242.0,
Culture=neutral, PublicKeyToken=89845dcd8080cc91

Value 7
  Name:            role
  Type:            REG_SZ
  Data:            Microsoft.AnalysisServices.Role,
Microsoft.AnalysisServices, Version=9.0.242.0,
Culture=neutral, PublicKeyToken=89845dcd8080cc91

Value 8
  Name:            dtsx
  Type:            REG_SZ
  Data:
Microsoft.DataTransformationServices.Design.Serializa
tion.PseudoPackage,
Microsoft.DataTransformationServices.Design


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\Packages\{4a0c6509-bf90-43da-
abee-
0aba3a8527f1}\Settings\Serialization\StandAloneDocume
nts
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:53 PM
Value 0
  Name:            dtsx
  Type:            REG_SZ
  Data:
Microsoft.DataWarehouse.VsIntegration.Designer.Serial
ization.TextBufferDocumentObject,
Microsoft.DataWarehouse.VsIntegration,
PublicKeyToken=89845dcd8080cc91


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\Packages\{4a0c6509-bf90-43da-
abee-0aba3a8527f1}\ToolBox
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:53 PM
Value 0
  Name:            Default Items
  Type:            REG_DWORD
  Data:            0x3


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\Packages\{4A791146-19E4-11D3-
B86B-00C04F79F802}
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:53 PM
Value 0
  Name:            <NO NAME>
  Type:            REG_SZ
  Data:            Visual Studio Help Package

Value 1
  Name:            InprocServer32
  Type:            REG_SZ
  Data:            C:\Program Files\Microsoft SQL
Server\90\Tools\Binn\VSShell\Common7\IDE\msenv.dll


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\Packages\{4A791146-19E4-11D3-
B86B-00C04F79F802}\Automation
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:53 PM
Value 0
  Name:            Help
  Type:            REG_SZ
  Data:

Value 1
  Name:            Help2
  Type:            REG_SZ
  Data:


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\Packages\{4A791146-19E4-11D3-
B86B-00C04F79F802}\SatelliteDll
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:53 PM
Value 0
  Name:            DllName
  Type:            REG_SZ
  Data:            msenvui.dll

Value 1
```


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```
  Name:            Path
  Type:            REG_SZ
  Data:            C:\Program Files\Microsoft SQL
Server\90\Tools\Binn\VSShell\Common7\IDE\


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\Packages\{4A9B7E50-AA16-11d0-
A8C5-00A0C921A4D2}
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:53 PM
Value 0
  Name:            <NO NAME>
  Type:            REG_SZ
  Data:            Visual Studio Task List Package

Value 1
  Name:            InprocServer32
  Type:            REG_SZ
  Data:            C:\Program Files\Microsoft SQL
Server\90\Tools\Binn\VSShell\Common7\IDE\msenv.dll


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\Packages\{4A9B7E50-AA16-11d0-
A8C5-00A0C921A4D2}\SatelliteDll
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:53 PM
Value 0
  Name:            DllName
  Type:            REG_SZ
  Data:            msenvui.dll

Value 1
  Name:            Path
  Type:            REG_SZ
  Data:            C:\Program Files\Microsoft SQL
Server\90\Tools\Binn\VSShell\Common7\IDE\


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\Packages\{53544C4D-B03D-4209-
A7D0-D9DD13A4019B}
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:53 PM
Value 0
  Name:            InprocServer32
  Type:            REG_SZ
  Data:            C:\Program Files\Microsoft SQL
Server\90\Tools\Binn\VSShell\Common7\IDE\VS
SCC\VssProviderStub.dll

Value 1
  Name:            <NO NAME>
  Type:            REG_SZ
  Data:            Visual SourceSafe Provider Stub
Package


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\Packages\{53544C4D-B03D-4209-
A7D0-D9DD13A4019B}\SatelliteDll
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:53 PM
Value 0
  Name:            Path
  Type:            REG_SZ
  Data:            C:\Program Files\Microsoft SQL
Server\90\Tools\Binn\VSShell\Common7\IDE\VS SCC\

Value 1
  Name:            DllName
  Type:            REG_SZ
  Data:            VssProviderStubui.dll


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\Packages\{53544C4D-E3F8-4AA0-
8195-8A8D16019423}
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:53 PM
Value 0
  Name:            InprocServer32
  Type:            REG_SZ
  Data:            C:\Program Files\Microsoft SQL
Server\90\Tools\Binn\VSShell\Common7\IDE\msenv.dll

Value 1
  Name:            <NO NAME>
  Type:            REG_SZ
  Data:            Visual Studio Source Control
Integration Package


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\Packages\{53544C4D-E3F8-4AA0-
8195-8A8D16019423}\SatelliteDll
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:53 PM
Value 0
  Name:            Path
  Type:            REG_SZ
  Data:            C:\Program Files\Microsoft SQL
Server\90\Tools\Binn\VSShell\Common7\IDE\

Value 1
  Name:            DllName
  Type:            REG_SZ
  Data:            msenvui.dll


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\Packages\{588205e0-66e0-11d3-
8600-00c04f6123b3}
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:53 PM
Value 0
  Name:            InprocServer32
  Type:            REG_SZ
  Data:            C:\Program Files\Microsoft SQL
Server\90\Tools\Binn\VSShell\Common7\Packages\Compsvc
spkg.dll

Value 1
  Name:            <NO NAME>
  Type:            REG_SZ
  Data:            Component Enumerator Package


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\Packages\{588205e0-66e0-11d3-
8600-00c04f6123b3}\SatelliteDll
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:53 PM
Value 0
  Name:            Path
  Type:            REG_SZ
  Data:            C:\Program Files\Microsoft SQL
Server\90\Tools\Binn\VSShell\Common7\Packages\

Value 1
  Name:            DllName
  Type:            REG_SZ
  Data:            compsvcspkgui.dll


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\Packages\{68939055-38e0-4d17-
92cb-8909710d8178}
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:53 PM
Value 0
  Name:            <NO NAME>
  Type:            REG_SZ
  Data:            Windows Forms Designer Hosting
Package

Value 1
  Name:            InprocServer32
  Type:            REG_SZ
  Data:            C:\WINDOWS\system32\mscoree.dll

Value 2
  Name:            Class
  Type:            REG_SZ
  Data:
Microsoft.VisualStudio.Design.VSDesignPackage

Value 3
  Name:            Assembly
  Type:            REG_SZ
  Data:            Microsoft.VisualStudio.Design,
Version=2.0.0.0, Culture=neutral,
PublicKeyToken=b03f5f7f11d50a3a

Value 4
  Name:            ID
  Type:            REG_DWORD
  Data:            0x64
```


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```
Value 5
  Name:            MinEdition
  Type:            REG_SZ
  Data:            Standard

Value 6
  Name:            ProductVersion
  Type:            REG_SZ
  Data:            1.0

Value 7
  Name:            ProductName
  Type:            REG_SZ
  Data:            VSDesignPackage

Value 8
  Name:            CompanyName
  Type:            REG_SZ
  Data:            Microsoft Corporation


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\Packages\{68939055-38e0-4d17-
92cb-8909710d8178}\SatelliteDll
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:53 PM
Value 0
  Name:            Path
  Type:            REG_SZ
  Data:            C:\Program Files\Microsoft SQL
Server\90\Tools\Binn\VSShell\Common7\IDE\

Value 1
  Name:            DllName
  Type:            REG_SZ
  Data:
Microsoft.VisualStudio.DesignUI.dll


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\Packages\{68939055-38e0-4d17-
92cb-8909710d8178}\Toolbox
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:53 PM
Value 0
  Name:            Default Items
  Type:            REG_DWORD
  Data:            0x1

Value 1
  Name:            NeedsCallbackAfterReset
  Type:            REG_DWORD
  Data:            0x1


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\Packages\{6E87CFAD-6C05-4adf-
9CD7-3B7943875B7C}
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:53 PM
Value 0
  Name:            <NO NAME>
  Type:            REG_SZ
  Data:            Visual Studio Common IDE Package

Value 1
  Name:            InprocServer32
  Type:            REG_SZ
  Data:            C:\WINDOWS\system32\mscoree.dll

Value 2
  Name:            Class
  Type:            REG_SZ
  Data:
Microsoft.VisualStudio.CommonIDE.CommonIDEPackage

Value 3
  Name:            Assembly
  Type:            REG_SZ
  Data:            Microsoft.VisualStudio.CommonIDE,
Version=8.0.0.0, Culture=Neutral,
PublicKeyToken=b03f5f7f11d50a3a

Value 4
  Name:            CodeBase
  Type:            REG_SZ
  Data:            file:///C:\Program Files\Microsoft
SQL
Server\90\Tools\Binn\VSShell\Common7\IDE\Microsoft.Vi
sualStudio.CommonIDE.dll


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\Packages\{6E87CFAD-6C05-4adf-
9CD7-3B7943875B7C}\SatelliteDll
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:53 PM
Value 0
  Name:            Path
  Type:            REG_SZ
  Data:            C:\Program Files\Microsoft SQL
Server\90\Tools\Binn\VSShell\Common7\IDE\

Value 1
  Name:            DllName
  Type:            REG_SZ
  Data:
Microsoft.VisualStudio.CommonIDEUI.dll


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\Packages\{7494682b-37a0-11d2-
a273-00c04f8ef4ff}
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:53 PM
Value 0
  Name:            <NO NAME>
  Type:            REG_SZ
  Data:            Windows Forms Designer Package

Value 1
  Name:            InprocServer32
  Type:            REG_SZ
  Data:            C:\WINDOWS\system32\mscoree.dll

Value 2
  Name:            Class
  Type:            REG_SZ
  Data:
Microsoft.VisualStudio.VSCorePackage

Value 3
  Name:            Assembly
  Type:            REG_SZ
  Data:            Microsoft.VisualStudio,
Version=2.0.0.0, Culture=neutral,
PublicKeyToken=b03f5f7f11d50a3a


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\Packages\{7494682b-37a0-11d2-
a273-00c04f8ef4ff}\SatelliteDll
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:53 PM
Value 0
  Name:            Path
  Type:            REG_SZ
  Data:            C:\Program Files\Microsoft SQL
Server\90\Tools\Binn\VSShell\Common7\IDE\

Value 1
  Name:            DllName
  Type:            REG_SZ
  Data:            Microsoft.VisualStudioUI.dll


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\Packages\{80c7728b-70a6-4528-
8669-73e02d1b9c41}
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:53 PM
Value 0
  Name:            CompanyName
  Type:            REG_SZ
  Data:            Microsoft Corporation

Value 1
  Name:            ProductName
  Type:            REG_SZ
  Data:            DesignerConfigurationPackage

Value 2
  Name:            ProductVersion
  Type:            REG_SZ
  Data:            1.0

Value 3
  Name:            MinEdition
  Type:            REG_SZ
  Data:            Standard
```


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```
Value 4
  Name:            ID
  Type:            REG_DWORD
  Data:            0x64

Value 5
  Name:            Assembly
  Type:            REG_SZ
  Data:
Microsoft.VisualStudio.Configuration,
Version=2.0.0.0, Culture=neutral,
PublicKeyToken=b03f5f7f11d50a3a

Value 6
  Name:            Class
  Type:            REG_SZ
  Data:
Microsoft.VisualStudio.Configuration.DesignerConfigur
ationPackage

Value 7
  Name:            InprocServer32
  Type:            REG_SZ
  Data:            C:\WINDOWS\system32\mscoree.dll

Value 8
  Name:            <NO NAME>
  Type:            REG_SZ
  Data:            Windows Forms Application
Configuration Package


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\Packages\{80c7728b-70a6-4528-
8669-73e02d1b9c41}\SatelliteDll
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:53 PM
Value 0
  Name:            DllName
  Type:            REG_SZ
  Data:
Microsoft.VisualStudio.ConfigurationUI.dll

Value 1
  Name:            Path
  Type:            REG_SZ
  Data:            C:\Program Files\Microsoft SQL
Server\90\Tools\Binn\VSShell\Common7\IDE\


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\Packages\{87569308-4813-40a0-
9cd0-d7a30838ca3f}
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:53 PM
Value 0
  Name:            <NO NAME>
  Type:            REG_SZ
  Data:            Visual Studio XML Editor Package

Value 1
  Name:            InprocServer32
  Type:            REG_SZ
  Data:            C:\WINDOWS\system32\mscoree.dll

Value 2
  Name:            Class
  Type:            REG_SZ
  Data:            Microsoft.XmlEditor.Package

Value 3
  Name:            Assembly
  Type:            REG_SZ
  Data:            Microsoft.XmlEditor,
Version=2.0.0.0, Culture=neutral,
PublicKeyToken=b03f5f7f11d50a3a

Value 4
  Name:            CodeBase
  Type:            REG_SZ
  Data:            C:\Program Files\Microsoft SQL
Server\90\Tools\Binn\VSShell\Common7\IDE\Xml\Microsof
t.XmlEditor.dll

Value 5
  Name:            ThreadingModel
  Type:            REG_SZ
  Data:            Both

Value 6
  Name:            CompanyName
  Type:            REG_SZ
  Data:            Microsoft Corporation

Value 7
  Name:            ProductName
  Type:            REG_SZ
  Data:            Microsoft XML Editor

Value 8
  Name:            ProductVersion
  Type:            REG_SZ
  Data:            1.0

Value 9
  Name:            MinEdition
  Type:            REG_SZ
  Data:            standard

Value 10
  Name:            ID
  Type:            REG_DWORD
  Data:            0x1


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\Packages\{87569308-4813-40a0-
9cd0-d7a30838ca3f}\Automation
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:53 PM
Value 0
  Name:            XmlProjects
  Type:            REG_SZ
  Data:


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\Packages\{87569308-4813-40a0-
9cd0-d7a30838ca3f}\SatelliteDll
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:53 PM
Value 0
  Name:            DllName
  Type:            REG_SZ
  Data:            Microsoft.XmlEditorUI.dll

Value 1
  Name:            Path
  Type:            REG_SZ
  Data:            C:\Program Files\Microsoft SQL
Server\90\Tools\Binn\VSShell\Common7\IDE\Xml\


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\Packages\{96B36E93-F71C-4160-
A4EA-26AE801D2F63}
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:53 PM
Value 0
  Name:            <NO NAME>
  Type:            REG_SZ
  Data:            Microsoft Data Transformation
Services Designer

Value 1
  Name:            InprocServer32
  Type:            REG_SZ
  Data:            mscoree.dll

Value 2
  Name:            ThreadingModel
  Type:            REG_SZ
  Data:            Both

Value 3
  Name:            Class
  Type:            REG_SZ
  Data:
Microsoft.DataTransformationServices.VsIntegration.Dt
sPackage

Value 4
  Name:            Assembly
  Type:            REG_SZ
  Data:
Microsoft.DataTransformationServices.VsIntegration

Value 5
  Name:            RuntimeVersion
  Type:            REG_SZ
  Data:            v1.1.4322

Value 6
  Name:            CompanyName
```


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```
  Type:            REG_SZ
  Data:            Microsoft

Value 7
  Name:            ProductName
  Type:            REG_SZ
  Data:            Microsoft SQL Server

Value 8
  Name:            ProductVersion
  Type:            REG_SZ
  Data:            9.0

Value 9
  Name:            MinEdition
  Type:            REG_SZ
  Data:            Standard

Value 10
  Name:            ID
  Type:            REG_DWORD
  Data:            0x1


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\Packages\{96B36E93-F71C-4160-
A4EA-26AE801D2F63}\SatelliteDll
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:53 PM
Value 0
  Name:            DllName
  Type:            REG_SZ
  Data:
Microsoft.DataTransformationServices.VsIntegration.rl
l

Value 1
  Name:            Path
  Type:            REG_SZ
  Data:            C:\Program Files\Microsoft SQL
Server\90\Tools\Binn\VSShell\Common7\IDE\


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\Packages\{96B36E93-F71C-4160-
A4EA-26AE801D2F63}\Toolbox
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:53 PM
Value 0
  Name:            Default Items
  Type:            REG_DWORD
  Data:            0x3


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\Packages\{A4B8E50B-6DC3-400d-
97CD-732ADD1F3140}
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:53 PM
Value 0
  Name:            <NO NAME>
  Type:            REG_SZ
  Data:            Microsoft SQL Server Object
Explorer

Value 1
  Name:            InprocServer32
  Type:            REG_SZ
  Data:            C:\WINDOWS\system32\mscoree.dll

Value 2
  Name:            Class
  Type:            REG_SZ
  Data:
Microsoft.SqlServer.Management.UI.VSIntegration.Objec
tExplorer.ObjectExplorerPackage

Value 3
  Name:            Assembly
  Type:            REG_SZ
  Data:            ObjectExplorer,
Version=9.00.242.00, Culture=neutral,
PublicKeyToken=89845dcd8080cc91

Value 4
  Name:            ThreadingModel
  Type:            REG_SZ
  Data:            Both

Value 5
  Name:            CompanyName
  Type:            REG_SZ
  Data:            Microsoft

Value 6
  Name:            ProductName
  Type:            REG_SZ
  Data:            Microsoft SQL Server Object
Explorer

Value 7
  Name:            ProductVersion
  Type:            REG_SZ
  Data:            9.0

Value 8
  Name:            MinEdition
  Type:            REG_SZ
  Data:            professional

Value 9
  Name:            ID
  Type:            REG_DWORD
  Data:            0x1

Value 10
  Name:            Preload
  Type:            REG_DWORD
  Data:            0


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\Packages\{A4B8E50B-6DC3-400d-
97CD-732ADD1F3140}\SatelliteDll
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:53 PM
Value 0
  Name:            DllName
  Type:            REG_SZ
  Data:            ObjectExplorer.rll

Value 1
  Name:            Path
  Type:            REG_SZ
  Data:            C:\Program Files\Microsoft SQL
Server\90\Tools\Binn\VSShell\Common7\IDE\


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\Packages\{AA8EB8CD-7A51-11D0-
92C3-00A0C9138C45}
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:53 PM
Value 0
  Name:            InprocServer32
  Type:            REG_SZ
  Data:            C:\Program Files\Microsoft SQL
Server\90\Tools\Binn\VSShell\Common7\IDE\VS
SCC\VssProvider.dll

Value 1
  Name:            <NO NAME>
  Type:            REG_SZ
  Data:            Visual SourceSafe Provider Package


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\Packages\{AA8EB8CD-7A51-11D0-
92C3-00A0C9138C45}\SatelliteDll
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:53 PM
Value 0
  Name:            Path
  Type:            REG_SZ
  Data:            C:\Program Files\Microsoft SQL
Server\90\Tools\Binn\VSShell\Common7\IDE\VS SCC\

Value 1
  Name:            DllName
  Type:            REG_SZ
  Data:            VssProviderui.dll


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\Packages\{C3507EB2-B615-4870-
BCDB-10990EED0CC4}
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:53 PM
Value 0
  Name:            <NO NAME>
  Type:            REG_SZ
```


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```
  Data:            Microsoft SQL Server Management
Studio Project Package

Value 1
  Name:            InprocServer32
  Type:            REG_SZ
  Data:            C:\WINDOWS\system32\mscoree.dll

Value 2
  Name:            Class
  Type:            REG_SZ
  Data:
Microsoft.SqlServer.Management.UI.VSIntegration.Proje
ct.SQLWorkbenchProjectPackage

Value 3
  Name:            Assembly
  Type:            REG_SZ
  Data:            SqlWorkbenchProject,
Version=9.00.242.00, Culture=neutral,
PublicKeyToken=89845dcd8080cc91

Value 4
  Name:            ThreadingModel
  Type:            REG_SZ
  Data:            Both

Value 5
  Name:            CompanyName
  Type:            REG_SZ
  Data:            Microsoft

Value 6
  Name:            ProductName
  Type:            REG_SZ
  Data:            Microsoft SQL Server Management
Studio

Value 7
  Name:            ProductVersion
  Type:            REG_SZ
  Data:            9.0

Value 8
  Name:            MinEdition
  Type:            REG_SZ
  Data:            professional

Value 9
  Name:            ID
  Type:            REG_DWORD
  Data:            0x1

Value 10
  Name:            Preload
  Type:            REG_DWORD
  Data:            0


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\Packages\{C3507EB2-B615-4870-
BCDB-10990EED0CC4}\SatelliteDll
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:53 PM
Value 0
  Name:            DllName
  Type:            REG_SZ
  Data:            SqlWorkbenchProject.rll

Value 1
  Name:            Path
  Type:            REG_SZ
  Data:            C:\Program Files\Microsoft SQL
Server\90\Tools\Binn\VSShell\Common7\IDE\


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\Packages\{C9DD4A57-47FB-11D2-
83E7-00C04F9902C1}
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:53 PM
Value 0
  Name:            <NO NAME>
  Type:            REG_SZ
  Data:            Visual Studio Debugger

Value 1
  Name:            InprocServer32
  Type:            REG_SZ
  Data:            C:\Program Files\Microsoft SQL
Server\90\Tools\Binn\VSShell\Common7\Packages\Debugge
r\vsdebug.dll

Value 2
  Name:            Preload
  Type:            REG_DWORD
  Data:            0


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\Packages\{C9DD4A57-47FB-11D2-
83E7-00C04F9902C1}\Automation
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:53 PM
Value 0
  Name:            Debugger
  Type:            REG_SZ
  Data:            Visual Studio Debugger


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\Packages\{C9DD4A57-47FB-11D2-
83E7-00C04F9902C1}\AutomationEvents
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:53 PM
Value 0
  Name:            DebuggerEvents
  Type:            REG_SZ
  Data:            Visual Studio Debugger Events


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\Packages\{C9DD4A57-47FB-11D2-
83E7-00C04F9902C1}\SatelliteDll
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:53 PM
Value 0
  Name:            DllName
  Type:            REG_SZ
  Data:            VSDebugUI.dll

Value 1
  Name:            Path
  Type:            REG_SZ
  Data:            C:\Program Files\Microsoft SQL
Server\90\Tools\Binn\VSShell\Common7\Packages\Debugge
r\


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\Packages\{d6c919aa-1217-41e2-
a13b-9b92e1866305}
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:53 PM
Value 0
  Name:            <NO NAME>
  Type:            REG_SZ
  Data:            Visual Studio Data Designers


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\Packages\{d6c919aa-1217-41e2-
a13b-9b92e1866305}\SatelliteDll
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:53 PM
Value 0
  Name:            Path
  Type:            REG_SZ
  Data:            C:\Program Files\Microsoft SQL
Server\90\Tools\Binn\VSShell\Common7\Tools\VDT\

Value 1
  Name:            DllName
  Type:            REG_SZ
  Data:            vdt80ui.dll


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\Packages\{DA9FB551-C724-11d0-
AE1F-00A0C90FFFC3}
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:53 PM
Value 0
  Name:            <NO NAME>
  Type:            REG_SZ
  Data:            Visual Studio Environment Package

Value 1
  Name:            InprocServer32
  Type:            REG_SZ
```


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```
  Data:            C:\Program Files\Microsoft SQL
Server\90\Tools\Binn\VSShell\Common7\IDE\msenv.dll


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\Packages\{DA9FB551-C724-11d0-
AE1F-00A0C90FFFC3}\SatelliteDll
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:53 PM
Value 0
  Name:            DllName
  Type:            REG_SZ
  Data:            msenvui.dll

Value 1
  Name:            Path
  Type:            REG_SZ
  Data:            C:\Program Files\Microsoft SQL
Server\90\Tools\Binn\VSShell\Common7\IDE\


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\Packages\{DA9FB551-C724-11d0-
AE1F-00A0C90FFFC3}\Toolbox
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:53 PM
Value 0
  Name:            Formats
  Type:            REG_SZ
  Data:            InPlaceMenuEditorMenu


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\Packages\{E1AA7737-69BE-43d0-
A425-E3097651E192}
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:53 PM
Value 0
  Name:            <NO NAME>
  Type:            REG_SZ
  Data:            Visual Studio Data Package

Value 1
  Name:            InprocServer32
  Type:            REG_SZ
  Data:            mscoree.dll

Value 2
  Name:            ThreadingModel
  Type:            REG_SZ
  Data:            Both

Value 3
  Name:            Assembly
  Type:            REG_SZ
  Data:            Microsoft.VisualStudio.DataTools,
Version=8.0.0.0, Culture=Neutral,
PublicKeyToken=b03f5f7f11d50a3a

Value 4
  Name:            Class
  Type:            REG_SZ
  Data:
Microsoft.VisualStudio.DataTools.DataPackage


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\Packages\{e444c1dd-7c8e-4126-
81c8-392c63bfebe3}
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:53 PM
Value 0
  Name:            <NO NAME>
  Type:            REG_SZ
  Data:            Language Package

Value 1
  Name:            InprocServer32
  Type:            REG_SZ
  Data:            C:\Program Files\Microsoft SQL
Server\90\Tools\Binn\VSShell\Common7\IDE\LanguagePack
age.dll

Value 2
  Name:            CompanyName
  Type:            REG_SZ
  Data:            microsoft corporation

Value 3
  Name:            ProductName
  Type:            REG_SZ
  Data:            language package

Value 4
  Name:            ProductVersion
  Type:            REG_SZ
  Data:            9.0

Value 5
  Name:            MinEdition
  Type:            REG_SZ
  Data:            standard

Value 6
  Name:            Preload
  Type:            REG_DWORD
  Data:            0

Value 7
  Name:            ID
  Type:            REG_DWORD
  Data:            0x65


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\Packages\{e444c1dd-7c8e-4126-
81c8-392c63bfebe3}\SatelliteDll
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:53 PM
Value 0
  Name:            DllName
  Type:            REG_SZ
  Data:            LanguagePackage.rll

Value 1
  Name:            Path
  Type:            REG_SZ
  Data:            C:\Program Files\Microsoft SQL
Server\90\Tools\Binn\VSShell\Common7\IDE\


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\Packages\{e8b06f41-6d01-11d2-
aa7d-00c04f990343}
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:53 PM
Value 0
  Name:            <NO NAME>
  Type:            REG_SZ
  Data:            Visual Studio Web Browser Package

Value 1
  Name:            InprocServer32
  Type:            REG_SZ
  Data:            C:\Program Files\Microsoft SQL
Server\90\Tools\Binn\VSShell\Common7\IDE\msenv.dll


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\Packages\{e8b06f41-6d01-11d2-
aa7d-00c04f990343}\SatelliteDll
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:53 PM
Value 0
  Name:            DllName
  Type:            REG_SZ
  Data:            msenvui.dll

Value 1
  Name:            Path
  Type:            REG_SZ
  Data:            C:\Program Files\Microsoft SQL
Server\90\Tools\Binn\VSShell\Common7\IDE\


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\Packages\{EABA99F3-7341-4105-
8A3F-1C4F3955C4FC}
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:53 PM
Value 0
  Name:            <NO NAME>
  Type:            REG_SZ
  Data:            Microsoft Analysis Services
Designer

Value 1
  Name:            InprocServer32
  Type:            REG_SZ
  Data:            mscoree.dll
```


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```
Value 2
  Name:            ThreadingModel
  Type:            REG_SZ
  Data:            Both

Value 3
  Name:            Class
  Type:            REG_SZ
  Data:
Microsoft.AnalysisServices.Project.AnalysisServicesPa
ckage

Value 4
  Name:            Assembly
  Type:            REG_SZ
  Data:
Microsoft.AnalysisServices.Project,
Version=9.00.242.00, Culture=neutral,
PublicKeyToken=89845dcd8080cc91

Value 5
  Name:            RuntimeVersion
  Type:            REG_SZ
  Data:            v1.1.4322

Value 6
  Name:            CompanyName
  Type:            REG_SZ
  Data:            Microsoft Corp

Value 7
  Name:            ProductName
  Type:            REG_SZ
  Data:            Microsoft Analysis Services
Designer

Value 8
  Name:            ProductVersion
  Type:            REG_SZ
  Data:            9.0

Value 9
  Name:            MinEdition
  Type:            REG_SZ
  Data:            Standard

Value 10
  Name:            ID
  Type:            REG_DWORD
  Data:            0x1


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\Packages\{EABA99F3-7341-4105-
8A3F-1C4F3955C4FC}\SatelliteDll
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:53 PM
Value 0
  Name:            DllName
  Type:            REG_SZ
  Data:
Microsoft.AnalysisServices.Project.rll


Value 1
  Name:            Path
  Type:            REG_SZ
  Data:            C:\Program Files\Microsoft SQL
Server\90\Tools\Binn\VSShell\Common7\IDE\


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\Packages\{ED8979BC-B02F-4da9-
A667-D3256C36220A}
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:53 PM
Value 0
  Name:            InprocServer32
  Type:            REG_SZ
  Data:            C:\Program Files\Microsoft SQL
Server\90\Tools\Binn\VSShell\Common7\IDE\compluslm.dl
l

Value 1
  Name:            Preload
  Type:            REG_DWORD
  Data:            0

Value 2
  Name:            <NO NAME>
  Type:            REG_SZ
  Data:            Visual Studio COM+ Library Manager
Package


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\Packages\{ED8979BC-B02F-4da9-
A667-D3256C36220A}\SatelliteDll
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:53 PM
Value 0
  Name:            Path
  Type:            REG_SZ
  Data:            C:\Program Files\Microsoft SQL
Server\90\Tools\Binn\VSShell\Common7\IDE\

Value 1
  Name:            DllName
  Type:            REG_SZ
  Data:            msenvui.dll


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\Packages\{EF828E39-70F5-4b8e-
A3A0-4C0ECD28A69A}
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:53 PM
Value 0
  Name:            <NO NAME>
  Type:            REG_SZ
  Data:            Visual Studio Database Tools
Designers


Value 1
  Name:            InprocServer32
  Type:            REG_SZ
  Data:            C:\Program Files\Microsoft SQL
Server\90\Tools\Binn\VSShell\Common7\Tools\VDT\vdt80.
dll


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\Packages\{EF828E39-70F5-4b8e-
A3A0-4C0ECD28A69A}\SatelliteDll
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:53 PM
Value 0
  Name:            DllName
  Type:            REG_SZ
  Data:            vdt80ui.dll

Value 1
  Name:            Path
  Type:            REG_SZ
  Data:            C:\Program Files\Microsoft SQL
Server\90\Tools\Binn\VSShell\Common7\Tools\VDT\


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\Packages\{F30396AD-50FE-4ae2-
9A98-DC5078302C5E}
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:53 PM
Value 0
  Name:            <NO NAME>
  Type:            REG_SZ
  Data:            Microsoft SQL Management Studio
Package

Value 1
  Name:            InprocServer32
  Type:            REG_SZ
  Data:            C:\WINDOWS\system32\mscoree.dll

Value 2
  Name:            Class
  Type:            REG_SZ
  Data:
Microsoft.SqlServer.Management.UI.VSIntegration.AppID
Package.AppIDPackage

Value 3
  Name:            Assembly
  Type:            REG_SZ
  Data:            AppIDPackage, Version=9.00.242.00,
Culture=neutral, PublicKeyToken=89845dcd8080cc91

Value 4
  Name:            ThreadingModel
  Type:            REG_SZ
  Data:            Both
```


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```
Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\Packages\{F30396AD-50FE-4ae2-
9A98-DC5078302C5E}\SatelliteDll
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:53 PM
Value 0
  Name:            DllName
  Type:            REG_SZ
  Data:            AppIDPackage.rll

Value 1
  Name:            Path
  Type:            REG_SZ
  Data:            C:\Program Files\Microsoft SQL
Server\90\Tools\Binn\VSShell\Common7\IDE\


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\Packages\{F5E7E720-1401-11d1-
883B-0000F87579D2}
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:53 PM
Value 0
  Name:            InprocServer32
  Type:            REG_SZ
  Data:            C:\Program Files\Microsoft SQL
Server\90\Tools\Binn\VSShell\Common7\IDE\msenv.dll

Value 1
  Name:            <NO NAME>
  Type:            REG_SZ
  Data:            Text Management Package


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\Packages\{F5E7E720-1401-11d1-
883B-0000F87579D2}\Automation
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:53 PM
Value 0
  Name:            TextEditor
  Type:            REG_SZ
  Data:


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\Packages\{F5E7E720-1401-11d1-
883B-0000F87579D2}\SatelliteDll
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:53 PM
Value 0
  Name:            Path
  Type:            REG_SZ
  Data:            C:\Program Files\Microsoft SQL
Server\90\Tools\Binn\VSShell\Common7\IDE\

Value 1
  Name:            DllName
  Type:            REG_SZ
  Data:            msenvui.dll


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\Packages\{F5E7E720-1401-11d1-
883B-0000F87579D2}\Toolbox
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:53 PM
Value 0
  Name:            Formats
  Type:            REG_SZ
  Data:            1,13,16,HTML
Format,MSDEVColumnSelect,MSDEVLineSelect


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\Packages\{F74C5077-D848-4630-
80C9-B00E68A1CA0C}
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:53 PM
Value 0
  Name:            <NO NAME>
  Type:            REG_SZ
  Data:            Visual Studio VsSettings Package

Value 1
  Name:            InprocServer32
  Type:            REG_SZ
  Data:            C:\WINDOWS\system32\mscoree.dll

Value 2
  Name:            Class
  Type:            REG_SZ
  Data:
Microsoft.VisualStudio.CommonIDE.VsSettings.VsSetting
sPackage

Value 3
  Name:            Assembly
  Type:            REG_SZ
  Data:            Microsoft.VisualStudio.CommonIDE,
Version=8.0.0.0, Culture=Neutral,
PublicKeyToken=b03f5f7f11d50a3a

Value 4
  Name:            CodeBase
  Type:            REG_SZ
  Data:            file:///C:\Program Files\Microsoft
SQL
Server\90\Tools\Binn\VSShell\Common7\IDE\Microsoft.Vi
sualStudio.CommonIDE.dll


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\Profile
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:53 PM
Value 0
  Name:            AppidSupportsProfiles
  Type:            REG_DWORD
  Data:            0x1


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\Projects
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:53 PM

Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\Projects\{1FCC92F3-F470-4421-
9501-1C6E970181CC}
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:53 PM
Value 0
  Name:            <NO NAME>
  Type:            REG_SZ
  Data:            SQL Server CE Project

Value 1
  Name:            DisplayName
  Type:            REG_SZ
  Data:            #14

Value 2
  Name:            Package
  Type:            REG_SZ
  Data:            {C3507EB2-B615-4870-BCDB-
10990EED0CC4}

Value 3
  Name:            ProjectTemplatesDir
  Type:            REG_SZ
  Data:            C:\Program Files\Microsoft SQL
Server\90\Tools\Binn\VSShell\Common7\IDE\SQLWorkbench
Projects

Value 4
  Name:            ItemTemplatesDir
  Type:            REG_SZ
  Data:            C:\Program Files\Microsoft SQL
Server\90\Tools\Binn\VSShell\Common7\IDE\SQLWorkbench
ProjectItems

Value 5
  Name:            DisplayProjectFileExtensions
  Type:            REG_SZ
  Data:            #15

Value 6
  Name:            PossibleProjectExtensions
  Type:            REG_SZ
  Data:            ssmsmobileproj

Value 7
  Name:            DefaultProjectExtension
  Type:            REG_SZ
  Data:            .ssmsmobileproj


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
```


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```
Server\90\Tools\Shell\Projects\{1FCC92F3-F470-4421-
9501-1C6E970181CC}\AddItemTemplates
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:53 PM

Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\Projects\{1FCC92F3-F470-4421-
9501-1C6E970181CC}\AddItemTemplates\TemplateDirs
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:53 PM

Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\Projects\{1FCC92F3-F470-4421-
9501-
1C6E970181CC}\AddItemTemplates\TemplateDirs\{C3507EB2
-B615-4870-BCDB-10990EED0CC4}
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:53 PM

Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\Projects\{1FCC92F3-F470-4421-
9501-
1C6E970181CC}\AddItemTemplates\TemplateDirs\{C3507EB2
-B615-4870-BCDB-10990EED0CC4}\1
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:53 PM
Value 0
  Name:            <NO NAME>
  Type:            REG_SZ
  Data:            #18

Value 1
  Name:            TemplatesDir
  Type:            REG_SZ
  Data:            C:\Program Files\Microsoft SQL
Server\90\Tools\Binn\VSShell\Common7\IDE\SQLWorkbench
ProjectItems

Value 2
  Name:            SortPriority
  Type:            REG_DWORD
  Data:            0x64


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\Projects\{1FCC92F3-F470-4421-
9501-
1C6E970181CC}\AddItemTemplates\TemplateDirs\{C3507EB2
-B615-4870-BCDB-10990EED0CC4}\1\{C3507EB2-B615-4870-
BCDB-10990EED0CC4}
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:53 PM

Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\Projects\{1FCC92F3-F470-4421-
9501-
1C6E970181CC}\AddItemTemplates\TemplateDirs\{C3507EB2
-B615-4870-BCDB-10990EED0CC4}\1\{C3507EB2-B615-4870-
BCDB-10990EED0CC4}\1
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:53 PM
Value 0
  Name:            <NO NAME>
  Type:            REG_SZ
  Data:            #7

Value 1
  Name:            TemplatesDir
  Type:            REG_SZ
  Data:            C:\Program Files\Microsoft SQL
Server\90\Tools\Binn\VSShell\Common7\IDE\SQLWorkbench
Projects

Value 2
  Name:            SortPriority
  Type:            REG_DWORD
  Data:            0x3e8


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\Projects\{1FCC92F3-F470-4421-
9501-1C6E970181CC}\Filters
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:53 PM

Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\Projects\{1FCC92F3-F470-4421-
9501-1C6E970181CC}\Filters\1
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:53 PM
Value 0
  Name:            <NO NAME>
  Type:            REG_SZ
  Data:            #16

Value 1
  Name:            CommonOpenFilesFilter
  Type:            REG_DWORD
  Data:            0x1

Value 2
  Name:            CommonFindFilesFilter
  Type:            REG_DWORD
  Data:            0

Value 3
  Name:            NotAddExistingItemFilter
  Type:            REG_DWORD
  Data:            0

Value 4
  Name:            FindInFilesFilter
  Type:            REG_DWORD
  Data:            0

Value 5
  Name:            NotOpenFileFilter
  Type:            REG_DWORD
  Data:            0


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\Projects\{1FCC92F3-F470-4421-
9501-1C6E970181CC}\Filters\2
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:53 PM
Value 0
  Name:            <NO NAME>
  Type:            REG_SZ
  Data:            #17

Value 1
  Name:            CommonOpenFilesFilter
  Type:            REG_DWORD
  Data:            0

Value 2
  Name:            CommonFindFilesFilter
  Type:            REG_DWORD
  Data:            0x1

Value 3
  Name:            NotAddExistingItemFilter
  Type:            REG_DWORD
  Data:            0x1

Value 4
  Name:            FindInFilesFilter
  Type:            REG_DWORD
  Data:            0

Value 5
  Name:            NotOpenFileFilter
  Type:            REG_DWORD
  Data:            0


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\Projects\{4F2E2C19-372F-40d8-
9FA7-9D2138C6997A}
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:53 PM
Value 0
  Name:            <NO NAME>
  Type:            REG_SZ
  Data:            SQL Server Project

Value 1
  Name:            DisplayName
  Type:            REG_SZ
  Data:            #2

Value 2
  Name:            Package
  Type:            REG_SZ
  Data:            {C3507EB2-B615-4870-BCDB-
10990EED0CC4}

Value 3
```


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```
  Name:            ProjectTemplatesDir
  Type:            REG_SZ
  Data:            C:\Program Files\Microsoft SQL
Server\90\Tools\Binn\VSShell\Common7\IDE\SQLWorkbench
Projects

Value 4
  Name:            ItemTemplatesDir
  Type:            REG_SZ
  Data:            C:\Program Files\Microsoft SQL
Server\90\Tools\Binn\VSShell\Common7\IDE\SQLWorkbench
ProjectItems

Value 5
  Name:            DisplayProjectFileExtensions
  Type:            REG_SZ
  Data:            #3

Value 6
  Name:            PossibleProjectExtensions
  Type:            REG_SZ
  Data:            ssmssqlproj

Value 7
  Name:            DefaultProjectExtension
  Type:            REG_SZ
  Data:            .ssmssqlproj


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\Projects\{4F2E2C19-372F-40d8-
9FA7-9D2138C6997A}\AddItemTemplates
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:53 PM

Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\Projects\{4F2E2C19-372F-40d8-
9FA7-9D2138C6997A}\AddItemTemplates\TemplateDirs
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:53 PM

Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\Projects\{4F2E2C19-372F-40d8-
9FA7-
9D2138C6997A}\AddItemTemplates\TemplateDirs\{C3507EB2
-B615-4870-BCDB-10990EED0CC4}
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:53 PM

Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\Projects\{4F2E2C19-372F-40d8-
9FA7-
9D2138C6997A}\AddItemTemplates\TemplateDirs\{C3507EB2
-B615-4870-BCDB-10990EED0CC4}\1
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:53 PM
Value 0
  Name:            <NO NAME>
  Type:            REG_SZ
  Data:            #6

Value 1
  Name:            TemplatesDir
  Type:            REG_SZ
  Data:            C:\Program Files\Microsoft SQL
Server\90\Tools\Binn\VSShell\Common7\IDE\SQLWorkbench
ProjectItems

Value 2
  Name:            SortPriority
  Type:            REG_DWORD
  Data:            0x64


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\Projects\{4F2E2C19-372F-40d8-
9FA7-
9D2138C6997A}\AddItemTemplates\TemplateDirs\{C3507EB2
-B615-4870-BCDB-10990EED0CC4}\1\{C3507EB2-B615-4870-
BCDB-10990EED0CC4}
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:53 PM

Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\Projects\{4F2E2C19-372F-40d8-
9FA7-
9D2138C6997A}\AddItemTemplates\TemplateDirs\{C3507EB2
-B615-4870-BCDB-10990EED0CC4}\1\{C3507EB2-B615-4870-
BCDB-10990EED0CC4}\1
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:53 PM
Value 0
  Name:            <NO NAME>
  Type:            REG_SZ
  Data:            #7

Value 1
  Name:            TemplatesDir
  Type:            REG_SZ
  Data:            C:\Program Files\Microsoft SQL
Server\90\Tools\Binn\VSShell\Common7\IDE\SQLWorkbench
Projects

Value 2
  Name:            SortPriority
  Type:            REG_DWORD
  Data:            0x3e8


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\Projects\{4F2E2C19-372F-40d8-
9FA7-9D2138C6997A}\Filters
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:53 PM

Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\Projects\{4F2E2C19-372F-40d8-
9FA7-9D2138C6997A}\Filters\1
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:53 PM
Value 0
  Name:            <NO NAME>
  Type:            REG_SZ
  Data:            #4

Value 1
  Name:            CommonOpenFilesFilter
  Type:            REG_DWORD
  Data:            0x1

Value 2
  Name:            CommonFindFilesFilter
  Type:            REG_DWORD
  Data:            0

Value 3
  Name:            NotAddExistingItemFilter
  Type:            REG_DWORD
  Data:            0

Value 4
  Name:            FindInFilesFilter
  Type:            REG_DWORD
  Data:            0

Value 5
  Name:            NotOpenFileFilter
  Type:            REG_DWORD
  Data:            0


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\Projects\{4F2E2C19-372F-40d8-
9FA7-9D2138C6997A}\Filters\2
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:53 PM
Value 0
  Name:            <NO NAME>
  Type:            REG_SZ
  Data:            #5

Value 1
  Name:            CommonOpenFilesFilter
  Type:            REG_DWORD
  Data:            0

Value 2
  Name:            CommonFindFilesFilter
  Type:            REG_DWORD
  Data:            0x1

Value 3
  Name:            NotAddExistingItemFilter
  Type:            REG_DWORD
  Data:            0x1

Value 4
  Name:            FindInFilesFilter
  Type:            REG_DWORD
  Data:            0
```


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```
Value 5
  Name:            NotOpenFileFilter
  Type:            REG_DWORD
  Data:            0


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\Projects\{4F2E2C19-372F-40d8-
9FA7-9D2138C6997A}\Filters\3
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:53 PM
Value 0
  Name:            <NO NAME>
  Type:            REG_SZ
  Data:            #19

Value 1
  Name:            CommonOpenFilesFilter
  Type:            REG_DWORD
  Data:            0x1

Value 2
  Name:            CommonFindFilesFilter
  Type:            REG_DWORD
  Data:            0

Value 3
  Name:            NotAddExistingItemFilter
  Type:            REG_DWORD
  Data:            0

Value 4
  Name:            FindInFilesFilter
  Type:            REG_DWORD
  Data:            0

Value 5
  Name:            NotOpenFileFilter
  Type:            REG_DWORD
  Data:            0


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\Projects\{4F2E2C19-372F-40d8-
9FA7-9D2138C6997A}\Filters\4
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:53 PM
Value 0
  Name:            <NO NAME>
  Type:            REG_SZ
  Data:            #20

Value 1
  Name:            CommonOpenFilesFilter
  Type:            REG_DWORD
  Data:            0

Value 2
  Name:            CommonFindFilesFilter
  Type:            REG_DWORD
  Data:            0x1

Value 3
  Name:            NotAddExistingItemFilter
  Type:            REG_DWORD
  Data:            0x1

Value 4
  Name:            FindInFilesFilter
  Type:            REG_DWORD
  Data:            0

Value 5
  Name:            NotOpenFileFilter
  Type:            REG_DWORD
  Data:            0


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\Projects\{4F2E2C19-372F-40d8-
9FA7-9D2138C6997A}\Filters\5
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:53 PM
Value 0
  Name:            <NO NAME>
  Type:            REG_SZ
  Data:            #21

Value 1
  Name:            CommonOpenFilesFilter
  Type:            REG_DWORD
  Data:            0x1

Value 2
  Name:            CommonFindFilesFilter
  Type:            REG_DWORD
  Data:            0

Value 3
  Name:            NotAddExistingItemFilter
  Type:            REG_DWORD
  Data:            0

Value 4
  Name:            FindInFilesFilter
  Type:            REG_DWORD
  Data:            0

Value 5
  Name:            NotOpenFileFilter
  Type:            REG_DWORD
  Data:            0


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\Projects\{4F2E2C19-372F-40d8-
9FA7-9D2138C6997A}\Filters\6
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:53 PM
Value 0
  Name:            <NO NAME>
  Type:            REG_SZ
  Data:            #22

Value 1
  Name:            CommonOpenFilesFilter
  Type:            REG_DWORD
  Data:            0

Value 2
  Name:            CommonFindFilesFilter
  Type:            REG_DWORD
  Data:            0x1

Value 3
  Name:            NotAddExistingItemFilter
  Type:            REG_DWORD
  Data:            0x1

Value 4
  Name:            FindInFilesFilter
  Type:            REG_DWORD
  Data:            0

Value 5
  Name:            NotOpenFileFilter
  Type:            REG_DWORD
  Data:            0


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\Projects\{54D695D8-3FC1-47a3-
8D60-959ECE458279}
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:53 PM
Value 0
  Name:            <NO NAME>
  Type:            REG_SZ
  Data:            Analysis Server Project

Value 1
  Name:            DisplayName
  Type:            REG_SZ
  Data:            #9

Value 2
  Name:            Package
  Type:            REG_SZ
  Data:            {C3507EB2-B615-4870-BCDB-
10990EED0CC4}

Value 3
  Name:            ProjectTemplatesDir
  Type:            REG_SZ
  Data:            C:\Program Files\Microsoft SQL
Server\90\Tools\Binn\VSShell\Common7\IDE\SQLWorkbench
Projects

Value 4
  Name:            ItemTemplatesDir
  Type:            REG_SZ
```


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```
  Data:            C:\Program Files\Microsoft SQL
Server\90\Tools\Binn\VSShell\Common7\IDE\SQLWorkbench
ProjectItems

Value 5
  Name:            DisplayProjectFileExtensions
  Type:            REG_SZ
  Data:            #10

Value 6
  Name:            PossibleProjectExtensions
  Type:            REG_SZ
  Data:            ssmsasproj

Value 7
  Name:            DefaultProjectExtension
  Type:            REG_SZ
  Data:            .ssmsasproj


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\Projects\{54D695D8-3FC1-47a3-
8D60-959ECE458279}\AddItemTemplates
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:53 PM

Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\Projects\{54D695D8-3FC1-47a3-
8D60-959ECE458279}\AddItemTemplates\TemplateDirs
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:53 PM

Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\Projects\{54D695D8-3FC1-47a3-
8D60-
959ECE458279}\AddItemTemplates\TemplateDirs\{C3507EB2
-B615-4870-BCDB-10990EED0CC4}
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:53 PM

Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\Projects\{54D695D8-3FC1-47a3-
8D60-
959ECE458279}\AddItemTemplates\TemplateDirs\{C3507EB2
-B615-4870-BCDB-10990EED0CC4}\1
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:53 PM
Value 0
  Name:            <NO NAME>
  Type:            REG_SZ
  Data:            #13

Value 1
  Name:            TemplatesDir
  Type:            REG_SZ
  Data:            C:\Program Files\Microsoft SQL
Server\90\Tools\Binn\VSShell\Common7\IDE\SQLWorkbench
ProjectItems

Value 2
  Name:            SortPriority
  Type:            REG_DWORD
  Data:            0x64


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\Projects\{54D695D8-3FC1-47a3-
8D60-
959ECE458279}\AddItemTemplates\TemplateDirs\{C3507EB2
-B615-4870-BCDB-10990EED0CC4}\1\{C3507EB2-B615-4870-
BCDB-10990EED0CC4}
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:53 PM

Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\Projects\{54D695D8-3FC1-47a3-
8D60-
959ECE458279}\AddItemTemplates\TemplateDirs\{C3507EB2
-B615-4870-BCDB-10990EED0CC4}\1\{C3507EB2-B615-4870-
BCDB-10990EED0CC4}\1
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:53 PM
Value 0
  Name:            <NO NAME>
  Type:            REG_SZ
  Data:            #7

Value 1
  Name:            TemplatesDir
  Type:            REG_SZ
  Data:            C:\Program Files\Microsoft SQL
Server\90\Tools\Binn\VSShell\Common7\IDE\SQLWorkbench
Projects

Value 2
  Name:            SortPriority
  Type:            REG_DWORD
  Data:            0x3e8


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\Projects\{54D695D8-3FC1-47a3-
8D60-959ECE458279}\Filters
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:53 PM

Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\Projects\{54D695D8-3FC1-47a3-
8D60-959ECE458279}\Filters\1
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:53 PM
Value 0
  Name:            <NO NAME>
  Type:            REG_SZ
  Data:            #11

Value 1
  Name:            CommonOpenFilesFilter
  Type:            REG_DWORD
  Data:            0x1

Value 2
  Name:            CommonFindFilesFilter
  Type:            REG_DWORD
  Data:            0

Value 3
  Name:            NotAddExistingItemFilter
  Type:            REG_DWORD
  Data:            0

Value 4
  Name:            FindInFilesFilter
  Type:            REG_DWORD
  Data:            0

Value 5
  Name:            NotOpenFileFilter
  Type:            REG_DWORD
  Data:            0


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\Projects\{54D695D8-3FC1-47a3-
8D60-959ECE458279}\Filters\2
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:53 PM
Value 0
  Name:            <NO NAME>
  Type:            REG_SZ
  Data:            #12

Value 1
  Name:            CommonOpenFilesFilter
  Type:            REG_DWORD
  Data:            0

Value 2
  Name:            CommonFindFilesFilter
  Type:            REG_DWORD
  Data:            0x1

Value 3
  Name:            NotAddExistingItemFilter
  Type:            REG_DWORD
  Data:            0x1

Value 4
  Name:            FindInFilesFilter
  Type:            REG_DWORD
  Data:            0

Value 5
  Name:            NotOpenFileFilter
  Type:            REG_DWORD
  Data:            0


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
```


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```
Server\90\Tools\Shell\Projects\{A2FE74E1-B743-11d0-
AE1A-00A0C90FFFC3}
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:53 PM
Value 0
  Name:            <NO NAME>
  Type:            REG_SZ
  Data:            Miscellaneous Files Project

Value 1
  Name:            Package
  Type:            REG_SZ
  Data:            {DA9FB551-C724-11d0-AE1F-
00A0C90FFFC3}

Value 2
  Name:            Language(VSTemplate)
  Type:            REG_SZ
  Data:            General


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\Projects\{A2FE74E1-B743-11d0-
AE1A-00A0C90FFFC3}\AddItemTemplates
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:53 PM

Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\Projects\{A2FE74E1-B743-11d0-
AE1A-00A0C90FFFC3}\AddItemTemplates\TemplateDirs
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:53 PM

Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\Projects\{A2FE74E1-B743-11d0-
AE1A-
00A0C90FFFC3}\AddItemTemplates\TemplateDirs\{C3507EB2
-B615-4870-BCDB-10990EED0CC4}
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:53 PM

Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\Projects\{A2FE74E1-B743-11d0-
AE1A-
00A0C90FFFC3}\AddItemTemplates\TemplateDirs\{C3507EB2
-B615-4870-BCDB-10990EED0CC4}\1
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:53 PM
Value 0
  Name:            <NO NAME>
  Type:            REG_SZ
  Data:            #8

Value 1
  Name:            TemplatesDir
  Type:            REG_SZ
  Data:            C:\Program Files\Microsoft SQL
Server\90\Tools\Binn\VSShell\Common7\IDE\SQLWorkbench
NewItems

Value 2
  Name:            SortPriority
  Type:            REG_DWORD
  Data:            0x64


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\Projects\{d183a3d8-5fd8-494b-
b014-37f57b35e655}
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:53 PM
Value 0
  Name:            <NO NAME>
  Type:            REG_SZ
  Data:            Data Transformations Project

Value 1
  Name:            DefaultProjectExtension
  Type:            REG_SZ
  Data:            .dtproj

Value 2
  Name:            DisplayName
  Type:            REG_SZ
  Data:            Data Transformations Project

Value 3
  Name:            ItemTemplatesDir
  Type:            REG_SZ
  Data:            C:\Program Files\Microsoft SQL
Server\90\Tools\Binn\VSShell\Common7\IDE\ProjectItems
\DataTransformationProject

Value 4
  Name:            Package
  Type:            REG_SZ
  Data:            {4a0c6509-bf90-43da-abee-
0aba3a8527f1}

Value 5
  Name:            PossibleProjectExtensions
  Type:            REG_SZ
  Data:            dtproj

Value 6
  Name:            ProjectTemplatesDir
  Type:            REG_SZ
  Data:            C:\Program Files\Microsoft SQL
Server\90\Tools\Binn\VSShell\Common7\IDE\Business
Intelligence Projects


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\Projects\{d183a3d8-5fd8-494b-
b014-37f57b35e655}\AddItemTemplates
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:53 PM

Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\Projects\{d183a3d8-5fd8-494b-
b014-37f57b35e655}\AddItemTemplates\TemplateDirs
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:53 PM

Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\Projects\{d183a3d8-5fd8-494b-
b014-
37f57b35e655}\AddItemTemplates\TemplateDirs\{4a0c6509
-bf90-43da-abee-0aba3a8527f1}
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:53 PM

Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\Projects\{d183a3d8-5fd8-494b-
b014-
37f57b35e655}\AddItemTemplates\TemplateDirs\{4a0c6509
-bf90-43da-abee-0aba3a8527f1}\1
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:53 PM
Value 0
  Name:            <NO NAME>
  Type:            REG_SZ
  Data:            Data Transformations Project

Value 1
  Name:            SortPriority
  Type:            REG_DWORD
  Data:            0x1

Value 2
  Name:            TemplatesDir
  Type:            REG_SZ
  Data:            C:\Program Files\Microsoft SQL
Server\90\Tools\Binn\VSShell\Common7\IDE\ProjectItems
\DataTransformationProject


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\Services
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:53 PM

Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\Services\{053a8de0-5a5e-362f-
8f1a-0fbfd70f8b36}
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:53 PM
Value 0
  Name:            <NO NAME>
  Type:            REG_SZ
  Data:            {68939055-38e0-4d17-92cb-
8909710d8178}

Value 1
  Name:            Name
  Type:            REG_SZ
  Data:            IDesignerOptionService
```


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```
Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\Services\{06a9c74b-5e32-4561-
be73-381b37869f4f}
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:53 PM
Value 0
  Name:            <NO NAME>
  Type:            REG_SZ
  Data:            {7494682b-37a0-11d2-a273-
00c04f8ef4ff}

Value 1
  Name:            Name
  Type:            REG_SZ
  Data:            IUIService


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\Services\{06D0BE35-FA3A-4ef6-
81B9-3EDBB68EF982}
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:53 PM
Value 0
  Name:            <NO NAME>
  Type:            REG_SZ
  Data:            {E1AA7737-69BE-43d0-A425-
E3097651E192}

Value 1
  Name:            Name
  Type:            REG_SZ
  Data:            ODBC Provider Object Factory


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\Services\{0A72ADF4-A4A2-449a-
B771-4C4332053602}
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:53 PM
Value 0
  Name:            <NO NAME>
  Type:            REG_SZ
  Data:            {96B36E93-F71C-4160-A4EA-
26AE801D2F63}

Value 1
  Name:            Name
  Type:            REG_SZ
  Data:            IDbmaintDesignerService


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\Services\{0C0CD5F0-0744-4bc7-
B800-553CABE7C6DA}
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:53 PM
Value 0
  Name:            <NO NAME>
  Type:            REG_SZ
  Data:            {4a0c6509-bf90-43da-abee-
0aba3a8527f1}

Value 1
  Name:            Name
  Type:            REG_SZ
  Data:            IDesignerDebuggingService


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\Services\{0c539790-12e4-11cf-
b661-00aa004cd6d8}
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:53 PM
Value 0
  Name:            <NO NAME>
  Type:            REG_SZ
  Data:            {F30396AD-50FE-4ae2-9A98-
DC5078302C5E}

Value 1
  Name:            Name
  Type:            REG_SZ
  Data:            SApplicationObject Service


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\Services\{0D93BB4F-4FBC-49ee-
BF10-A0AB762B866E}
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:53 PM
Value 0
  Name:            <NO NAME>
  Type:            REG_SZ
  Data:            {E444C1DD-7C8E-4126-81C8-
392C63BFEBE3}

Value 1
  Name:            Name
  Type:            REG_SZ
  Data:            SQL CE Service


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\Services\{12B43F9F-8550-4FFA-
850F-FE9D4D396C20}
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:53 PM
Value 0
  Name:            <NO NAME>
  Type:            REG_SZ
  Data:            {282BD676-8B5B-11D0-8A34-
00A0C91E2ACD}

Value 1
  Name:            Name
  Type:            REG_SZ
  Data:            Structured File I/O Service


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\Services\{13F6A341-59C0-11D3-
994C-00C04F68FDAF}
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:53 PM
Value 0
  Name:            <NO NAME>
  Type:            REG_SZ
  Data:            {C9DD4A57-47FB-11D2-83E7-
00C04F9902C1}

Value 1
  Name:            Name
  Type:            REG_SZ
  Data:            Register Language Service


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\Services\{1989FCAD-FEDB-4c03-
B71C-9B59E51F6A36}
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:53 PM
Value 0
  Name:            <NO NAME>
  Type:            REG_SZ
  Data:            {A4B8E50B-6DC3-400d-97CD-
732ADD1F3140}

Value 1
  Name:            Name
  Type:            REG_SZ
  Data:            Object Explorer Notification
Service


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\Services\{1AC64571-85CF-4234-
AA00-B57E907E326A}
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:53 PM
Value 0
  Name:            <NO NAME>
  Type:            REG_SZ
  Data:            {4A791146-19E4-11D3-B86B-
00C04F79F802}

Value 1
  Name:            Name
  Type:            REG_SZ
  Data:            SID_SVsThreadedWaitDialog


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\Services\{1F2EEAC2-DCF7-4B90-
9412-2CE752DE5FEB}
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:53 PM
Value 0
```


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```
  Name:            <NO NAME>
  Type:            REG_SZ
  Data:            {220A4C17-7E7C-4663-BBCC-
5E607C6543CD}

Value 1
  Name:            Name
  Type:            REG_SZ
  Data:            Query Designer font and colors
provider


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\Services\{218D0424-9C53-4EA1-
A679-A0AED59B0E4F}
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:53 PM
Value 0
  Name:            <NO NAME>
  Type:            REG_SZ
  Data:            {282BD676-8B5B-11D0-8A34-
00A0C91E2ACD}

Value 1
  Name:            Name
  Type:            REG_SZ
  Data:            HTML Converter


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\Services\{26E139FB-2DD3-49c1-
BE58-3F8DA45DBA3A}
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:53 PM
Value 0
  Name:            <NO NAME>
  Type:            REG_SZ
  Data:            {A4B8E50B-6DC3-400d-97CD-
732ADD1F3140}

Value 1
  Name:            Name
  Type:            REG_SZ
  Data:            Object Explorer Service


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\Services\{26EB4812-18FE-4A11-
BC23-7DC1C9B453A3}
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:53 PM
Value 0
  Name:            Name
  Type:            REG_SZ
  Data:            Web Config Runtime Bindings
Service

Value 1
  Name:            <NO NAME>
  Type:            REG_SZ
  Data:            {588205e0-66e0-11d3-8600-
00c04f6123b3}


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\Services\{2B3B3A2D-4E79-11d3-
9477-00C04F683646}
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:53 PM
Value 0
  Name:            <NO NAME>
  Type:            REG_SZ
  Data:            {282BD676-8B5B-11D0-8A34-
00A0C91E2ACD}

Value 1
  Name:            Name
  Type:            REG_SZ
  Data:            Group Selection Dialog


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\Services\{2D6FF84D-C3F6-48a0-
9C7B-96F4958E92E8}
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:53 PM
Value 0
  Name:            <NO NAME>
  Type:            REG_SZ
  Data:            {E444C1DD-7C8E-4126-81C8-
392C63BFEBE3}

Value 1
  Name:            Name
  Type:            REG_SZ
  Data:            MDX Language Service


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\Services\{31411192-a502-11d2-
bbca-00c04f8ec294}
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:53 PM
Value 0
  Name:            <NO NAME>
  Type:            REG_SZ
  Data:            {4A791146-19E4-11d3-B86B-
00C04F79F802}

Value 1
  Name:            Name
  Type:            REG_SZ
  Data:            SHxSession Service


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\Services\{31411218-a502-11d2-
bbca-00c04f8ec294}
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:53 PM
Value 0
  Name:            <NO NAME>
  Type:            REG_SZ
  Data:            {4A791146-19E4-11D3-B86B-
00C04F79F802}

Value 1
  Name:            Name
  Type:            REG_SZ
  Data:            SHxRegisterSession


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\Services\{33a24090-6565-11d3-
85fc-00c04f6123b3}
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:53 PM
Value 0
  Name:            Name
  Type:            REG_SZ
  Data:            SID_SCompEnumService

Value 1
  Name:            <NO NAME>
  Type:            REG_SZ
  Data:            {588205e0-66e0-11d3-8600-
00c04f6123b3}


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\Services\{39fd482d-c76c-4dd4-
9e06-fb7c52f69c8a}
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:53 PM
Value 0
  Name:            <NO NAME>
  Type:            REG_SZ
  Data:            {68939055-38e0-4d17-92cb-
8909710d8178}

Value 1
  Name:            Name
  Type:            REG_SZ
  Data:            GlobalObjectProviderFactory


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\Services\{3B0749FF-31E8-42d8-
9CD2-F612148D7BDC}
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:53 PM
Value 0
  Name:            <NO NAME>
  Type:            REG_SZ
  Data:            {F74C5077-D848-4630-80C9-
B00E68A1CA0C}

Value 1
  Name:            Name
```


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```
  Type:            REG_SZ
  Data:            SVsProfilesManagerUI


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\Services\{3B70A4AE-BB91-4ABE-
A05C-C4DE07B9763E}
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:53 PM
Value 0
  Name:            <NO NAME>
  Type:            REG_SZ
  Data:            {C9DD4A57-47FB-11D2-83E7-
00C04F9902C1}

Value 1
  Name:            Name
  Type:            REG_SZ
  Data:            Debugger Window Font and Color
Service


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\Services\{41AB5AA8-2511-4e96-
A682-C30B0292C2EF}
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:53 PM
Value 0
  Name:            <NO NAME>
  Type:            REG_SZ
  Data:            {EF828E39-70F5-4b8e-A3A0-
4C0ECD28A69A}

Value 1
  Name:            Name
  Type:            REG_SZ
  Data:            Data Tools Document Tool Factory
Provider


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\Services\{41F80783-4646-441e-
989E-7B127EE6F544}
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:53 PM
Value 0
  Name:            <NO NAME>
  Type:            REG_SZ
  Data:            {6E87CFAD-6C05-4adf-9CD7-
3B7943875B7C}

Value 1
  Name:            Name
  Type:            REG_SZ
  Data:            SVsOnlineHelpData service


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\Services\{44B05627-95C2-4CE8-
BDCD-4AA722785093}
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:53 PM
Value 0
  Name:            <NO NAME>
  Type:            REG_SZ
  Data:            {C9DD4A57-47FB-11D2-83E7-
00C04F9902C1}

Value 1
  Name:            Name
  Type:            REG_SZ
  Data:            Debugger Marker Service


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\Services\{4970C2BC-AF33-4a73-
A34F-18B0584C40E4}
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:53 PM
Value 0
  Name:            <NO NAME>
  Type:            REG_SZ
  Data:            {0B680757-2C29-4531-80FA-
535A5178AA98}

Value 1
  Name:            Name
  Type:            REG_SZ
  Data:            Expansion Manager


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\Services\{4A0C6509-BF90-43da-
ABEE-0ABA3A8527F1}
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:53 PM
Value 0
  Name:            <NO NAME>
  Type:            REG_SZ
  Data:            {4a0c6509-bf90-43da-abee-
0aba3a8527f1}

Value 1
  Name:            Name
  Type:            REG_SZ
  Data:            Datawarehouse Designer font and
colors provider


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\Services\{4A3116FC-942B-4692-
B9F4-344E08285712}
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:53 PM
Value 0
  Name:            Name
  Type:            REG_SZ
  Data:            App Config Runtime Bindings
Service

Value 1
  Name:            <NO NAME>
  Type:            REG_SZ
  Data:            {588205e0-66e0-11d3-8600-
00c04f6123b3}


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\Services\{4A647EAE-7167-4a0a-
9B0E-0B6F34D61E61}
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:53 PM
Value 0
  Name:            <NO NAME>
  Type:            REG_SZ
  Data:            {6E87CFAD-6C05-4adf-9CD7-
3B7943875B7C}

Value 1
  Name:            Name
  Type:            REG_SZ
  Data:            SVsSearchService service


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\Services\{4A791148-19E4-11d3-
B86B-00C04F79F802}
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:53 PM
Value 0
  Name:            <NO NAME>
  Type:            REG_SZ
  Data:            {4A791146-19E4-11d3-B86B-
00C04F79F802}

Value 1
  Name:            Name
  Type:            REG_SZ
  Data:            SVsHelp Service


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\Services\{4A81432B-BFCC-4832-
9BE9-15977DA82072}
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:53 PM
Value 0
  Name:            <NO NAME>
  Type:            REG_SZ
  Data:            {6E87CFAD-6C05-4adf-9CD7-
3B7943875B7C}

Value 1
  Name:            Name
  Type:            REG_SZ
  Data:            SVsHelpFavorites service
```


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```
Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\Services\{4bacd258-de64-4048-
bc4e-fedbef9acb76}
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:53 PM
Value 0
  Name:            <NO NAME>
  Type:            REG_SZ
  Data:            {7494682b-37a0-11d2-a273-
00c04f8ef4ff}

Value 1
  Name:            Name
  Type:            REG_SZ
  Data:            IToolboxService


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\Services\{4C9ADEBE-CD38-4647-
A9D8-D326CB1B683F}
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:53 PM
Value 0
  Name:            <NO NAME>
  Type:            REG_SZ
  Data:            {6E87CFAD-6C05-4adf-9CD7-
3B7943875B7C}

Value 1
  Name:            Name
  Type:            REG_SZ
  Data:            SVsHelpPage service


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\Services\{4E2E2126-C921-43a1-
86F0-81B6B30ABC95}
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:53 PM
Value 0
  Name:            <NO NAME>
  Type:            REG_SZ
  Data:            {4a0c6509-bf90-43da-abee-
0aba3a8527f1}

Value 1
  Name:            Name
  Type:            REG_SZ
  Data:            IErrorReportingService


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\Services\{4FEDAA4F-7C4E-4d4e-
AC6B-86F03BB7D200}
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:53 PM
Value 0
  Name:            <NO NAME>
  Type:            REG_SZ
  Data:            {4A791146-19E4-11d3-B86B-
00C04F79F802}

Value 1
  Name:            Name
  Type:            REG_SZ
  Data:            SVsHelpFirstTimeDialog Service


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\Services\{52F0DAB8-99A9-4aea-
A037-42581B7009D2}
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:53 PM
Value 0
  Name:            Name
  Type:            REG_SZ
  Data:            SID_SVsSmartOpenScope

Value 1
  Name:            <NO NAME>
  Type:            REG_SZ
  Data:            {588205e0-66e0-11d3-8600-
00c04f6123b3}


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\Services\{52F7BAC0-B47E-4d28-
83F7-B38C9A8AB52B}
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:53 PM
Value 0
  Name:            <NO NAME>
  Type:            REG_SZ
  Data:            {4a0c6509-bf90-43da-abee-
0aba3a8527f1}

Value 1
  Name:            Name
  Type:            REG_SZ
  Data:            IUserPromptService


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\Services\{53544C4D-0079-44FE-
826C-1B04B9E1598D}
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:53 PM
Value 0
  Name:            Name
  Type:            REG_SZ
  Data:            Dont Show Dialog Again Service

Value 1
  Name:            <NO NAME>
  Type:            REG_SZ
  Data:            {53544C4D-B03D-4209-A7D0-
D9DD13A4019B}


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\Services\{53544C4D-0308-11D1-
8D97-00AA00A3F593}
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:53 PM
Value 0
  Name:            Name
  Type:            REG_SZ
  Data:            Enlistment Manager Proxy Lookup
Service

Value 1
  Name:            <NO NAME>
  Type:            REG_SZ
  Data:            {AA8EB8CD-7A51-11D0-92C3-
00A0C9138C45}


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\Services\{53544C4D-0DCD-4242-
8CCB-3F1EADE6F489}
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:53 PM
Value 0
  Name:            Name
  Type:            REG_SZ
  Data:            VS External Dialog Munger Service

Value 1
  Name:            <NO NAME>
  Type:            REG_SZ
  Data:            {53544C4D-B03D-4209-A7D0-
D9DD13A4019B}


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\Services\{53544C4D-104B-4D82-
AD93-074816C1A0E5}
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:53 PM
Value 0
  Name:            Name
  Type:            REG_SZ
  Data:            SCC Tools Options Service

Value 1
  Name:            <NO NAME>
  Type:            REG_SZ
  Data:            {53544C4D-E3F8-4AA0-8195-
8A8D16019423}


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\Services\{53544C4D-1639-11D3-
A60D-005004775AB1}
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:53 PM
Value 0
```


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```
  Name:            Name
  Type:            REG_SZ
  Data:            TrackProjectDocuments Service

Value 1
  Name:            <NO NAME>
  Type:            REG_SZ
  Data:            {53544C4D-E3F8-4AA0-8195-
8A8D16019423}


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\Services\{53544C4D-1927-4320-
B9DA-13D2CB3EA93B}
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:53 PM
Value 0
  Name:            Name
  Type:            REG_SZ
  Data:            SVsSccManager Service

Value 1
  Name:            <NO NAME>
  Type:            REG_SZ
  Data:            {53544C4D-E3F8-4AA0-8195-
8A8D16019423}


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\Services\{53544C4D-1984-11D3-
A606-005004775AB1}
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:53 PM
Value 0
  Name:            Name
  Type:            REG_SZ
  Data:            QueryEditQuerySave Service

Value 1
  Name:            <NO NAME>
  Type:            REG_SZ
  Data:            {53544C4D-E3F8-4AA0-8195-
8A8D16019423}


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\Services\{53544C4D-35D0-4D26-
9789-9295A73E7A10}
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:53 PM
Value 0
  Name:            Name
  Type:            REG_SZ
  Data:            Private SccManager Service

Value 1
  Name:            <NO NAME>
  Type:            REG_SZ
  Data:            {AA8EB8CD-7A51-11D0-92C3-
00A0C9138C45}


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\Services\{53544C4D-A32A-4EAf-
A920-38799C8F27B8}
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:53 PM
Value 0
  Name:            Name
  Type:            REG_SZ
  Data:            SourceControl Automation Object
Factory

Value 1
  Name:            <NO NAME>
  Type:            REG_SZ
  Data:            {53544C4D-E3F8-4AA0-8195-
8A8D16019423}


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\Services\{53544C4D-B03D-4209-
A7D0-D9DD13A4019B}
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:53 PM
Value 0
  Name:            Name
  Type:            REG_SZ
  Data:            Microsoft Scc Providers Service

Value 1
  Name:            <NO NAME>
  Type:            REG_SZ
  Data:            {53544C4D-B03D-4209-A7D0-
D9DD13A4019B}


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\Services\{53544C4D-C1F3-4fa8-
BEA7-EA1A8FECFDD9}
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:53 PM
Value 0
  Name:            Name
  Type:            REG_SZ
  Data:            Visual Studio Register Source
Control Integration Provider Service

Value 1
  Name:            <NO NAME>
  Type:            REG_SZ
  Data:            {53544C4D-E3F8-4AA0-8195-
8A8D16019423}


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\Services\{599BCD9E-CAFA-43DF-
AA03-129C0004C2BD}
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:53 PM
Value 0
  Name:            <NO NAME>
  Type:            REG_SZ
  Data:            {4A9B7E50-AA16-11d0-A8C5-
00A0C921A4D2}

Value 1
  Name:            Name
  Type:            REG_SZ
  Data:            Error list


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\Services\{59ec0b12-b6e0-4ccb-
9e1a-d54362316bc1}
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:53 PM
Value 0
  Name:            <NO NAME>
  Type:            REG_SZ
  Data:            {4a0c6509-bf90-43da-abee-
0aba3a8527f1}

Value 1
  Name:            Name
  Type:            REG_SZ
  Data:            ISettingsService


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\Services\{5e819c22-a727-11d2-
aa82-00c04f990343}
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:53 PM
Value 0
  Name:            <NO NAME>
  Type:            REG_SZ
  Data:            {e8b06f41-6d01-11d2-aa7d-
00c04f990343}

Value 1
  Name:            Name
  Type:            REG_SZ
  Data:            SVsShellContext Service


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\Services\{62E4D05A-8BB5-4926-
AE03-70AC65E38D7A}
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:53 PM
Value 0
  Name:            <NO NAME>
  Type:            REG_SZ
  Data:            {4A791146-19E4-11D3-B86B-
00C04F79F802}

Value 1
  Name:            Name
```


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```
  Type:            REG_SZ
  Data:            SVsHelpBackgroundService service


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\Services\{654C847E-E6ED-4217-
9ABF-A6208631F73F}
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:53 PM
Value 0
  Name:            <NO NAME>
  Type:            REG_SZ
  Data:            {E1AA7737-69BE-43d0-A425-
E3097651E192}

Value 1
  Name:            Name
  Type:            REG_SZ
  Data:            DataConnectionFactory service


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\Services\{67287D05-E699-48f2-
A1B5-5437C0CA4BDB}
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:53 PM
Value 0
  Name:            <NO NAME>
  Type:            REG_SZ
  Data:            {4a0c6509-bf90-43da-abee-
0aba3a8527f1}

Value 1
  Name:            Name
  Type:            REG_SZ
  Data:            IDWDesignerService


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\Services\{676037E3-04BA-4324-
A2A5-D4508F61A706}
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:53 PM
Value 0
  Name:            <NO NAME>
  Type:            REG_SZ
  Data:            {6E87CFAD-6C05-4adf-9CD7-
3B7943875B7C}

Value 1
  Name:            Name
  Type:            REG_SZ
  Data:            SVsHelpOnlineF1Service service


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\Services\{699D5E17-9B22-466b-
ACFA-2E12CD64E249}
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:53 PM
Value 0
  Name:            Name
  Type:            REG_SZ
  Data:            SID_SVsComplusLibrary

Value 1
  Name:            <NO NAME>
  Type:            REG_SZ
  Data:            {ED8979BC-B02F-4da9-A667-
D3256C36220A}


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\Services\{69BD65B1-1C44-49c6-
B83A-FB0353334545}
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:53 PM
Value 0
  Name:            <NO NAME>
  Type:            REG_SZ
  Data:            {E1AA7737-69BE-43d0-A425-
E3097651E192}

Value 1
  Name:            Name
  Type:            REG_SZ
  Data:            DataSourceManager service


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\Services\{74946810-37a0-11d2-
a273-00c04f8ef4ff}
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:53 PM
Value 0
  Name:            <NO NAME>
  Type:            REG_SZ
  Data:            {7494682b-37a0-11d2-a273-
00c04f8ef4ff}

Value 1
  Name:            Name
  Type:            REG_SZ
  Data:            IVSMDPropertyBrowser


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\Services\{74946829-37a0-11d2-
a273-00c04f8ef4ff}
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:53 PM
Value 0
  Name:            <NO NAME>
  Type:            REG_SZ
  Data:            {68939055-38e0-4d17-92cb-
8909710d8178}

Value 1
  Name:            Name
  Type:            REG_SZ
  Data:            IVSMDDesignerService


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\Services\{75058B12-F5A9-4B1C-
9161-9B3754D7488F}
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:53 PM
Value 0
  Name:            <NO NAME>
  Type:            REG_SZ
  Data:            {C9DD4A57-47FB-11D2-83E7-
00C04F9902C1}

Value 1
  Name:            Name
  Type:            REG_SZ
  Data:            ENCStale Language Service


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\Services\{785633AC-9EE9-4e28-
A7E8-3089D7C23217}
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:53 PM
Value 0
  Name:            <NO NAME>
  Type:            REG_SZ
  Data:            {4a0c6509-bf90-43da-abee-
0aba3a8527f1}

Value 1
  Name:            Name
  Type:            REG_SZ
  Data:            IDataSourceDescriptorService


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\Services\{79eac9ee-baf9-11ce-
8c82-00aa004ba90b}
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:53 PM
Value 0
  Name:            <NO NAME>
  Type:            REG_SZ
  Data:            {e8b06f41-6d01-11d2-aa7d-
00c04f990343}

Value 1
  Name:            Name
  Type:            REG_SZ
  Data:            SInternetSecurityManager


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\Services\{7d960b16-7af8-11d0-
8e5e-00a0c911005a}
Class Name:        <NO CLASS>
```


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```
Last Write Time:   7/19/2005 - 4:53 PM
Value 0
  Name:            <NO NAME>
  Type:            REG_SZ
  Data:            {C9DD4A57-47FB-11D2-83E7-
00C04F9902C1}

Value 1
  Name:            Name
  Type:            REG_SZ
  Data:            IVsDebugger


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\Services\{80273892-C4C7-451d-
AB6B-B9A6DA2128A5}
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:53 PM
Value 0
  Name:            <NO NAME>
  Type:            REG_SZ
  Data:            {4a0c6509-bf90-43da-abee-
0aba3a8527f1}

Value 1
  Name:            Name
  Type:            REG_SZ
  Data:            IDWProjectManagerService


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\Services\{8394d9e8-d8fb-39b7-
a160-4c0dbe16e6fc}
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:53 PM
Value 0
  Name:            <NO NAME>
  Type:            REG_SZ
  Data:            {68939055-38e0-4d17-92cb-
8909710d8178}

Value 1
  Name:            Name
  Type:            REG_SZ
  Data:            DesignerOptionService


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\Services\{854d7ac0-bc3d-11d0-
b421-00a0c90f9dc4}
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:53 PM
Value 0
  Name:            <NO NAME>
  Type:            REG_SZ
  Data:            {4A791146-19E4-11d3-B86B-
00C04F79F802}

Value 1
  Name:            Name
  Type:            REG_SZ
  Data:            IVsHelpSystem Service


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\Services\{865F23D2-C266-4833-
96E8-F5B01476E018}
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:53 PM
Value 0
  Name:            <NO NAME>
  Type:            REG_SZ
  Data:            {EF828E39-70F5-4b8e-A3A0-
4C0ECD28A69A}

Value 1
  Name:            Name
  Type:            REG_SZ
  Data:            Data Tools Query Proxy Automation
Factory


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\Services\{8CB5F787-2D74-459e-
88D6-39E20A4D9454}
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:53 PM
Value 0
  Name:            <NO NAME>
  Type:            REG_SZ
  Data:            {E1AA7737-69BE-43d0-A425-
E3097651E192}

Value 1
  Name:            Name
  Type:            REG_SZ
  Data:            OLE DB Provider Object Factory


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\Services\{8ED9966C-102F-45b0-
8293-BB9F2463A6F2}
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:53 PM
Value 0
  Name:            Name
  Type:            REG_SZ
  Data:            SID_SVsSQLCLRReferences

Value 1
  Name:            <NO NAME>
  Type:            REG_SZ
  Data:            {588205e0-66e0-11d3-8600-
00c04f6123b3}


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\Services\{8ED9966C-102F-45b0-
8293-BB9F2463A6F2}\SQL .NET References
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:53 PM

Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\Services\{8ED9966C-102F-45b0-
8293-BB9F2463A6F2}\SQL .NET
References\CustomMarshalers.dll
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:53 PM
Value 0
  Name:            <NO NAME>
  Type:            REG_SZ
  Data:            CustomMarshalers


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\Services\{8ED9966C-102F-45b0-
8293-BB9F2463A6F2}\SQL .NET
References\Microsoft.VisualBasic.dll
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:53 PM
Value 0
  Name:            <NO NAME>
  Type:            REG_SZ
  Data:            Microsoft.VisualBasic


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\Services\{8ED9966C-102F-45b0-
8293-BB9F2463A6F2}\SQL .NET
References\Microsoft.VisualC.dll
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:53 PM
Value 0
  Name:            <NO NAME>
  Type:            REG_SZ
  Data:            Microsoft.VisualC


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\Services\{8ED9966C-102F-45b0-
8293-BB9F2463A6F2}\SQL .NET References\mscorlib.dll
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:53 PM
Value 0
  Name:            <NO NAME>
  Type:            REG_SZ
  Data:            mscorlib


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\Services\{8ED9966C-102F-45b0-
8293-BB9F2463A6F2}\SQL .NET
References\System.Data.dll
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:53 PM
Value 0
  Name:            <NO NAME>
```


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```
  Type:            REG_SZ
  Data:            System.Data


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\Services\{8ED9966C-102F-45b0-
8293-BB9F2463A6F2}\SQL .NET
References\System.Data.OracleClient.dll
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:53 PM
Value 0
  Name:            <NO NAME>
  Type:            REG_SZ
  Data:            System.Data.OracleClient


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\Services\{8ED9966C-102F-45b0-
8293-BB9F2463A6F2}\SQL .NET
References\System.Data.SqlXml.dll
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:53 PM
Value 0
  Name:            <NO NAME>
  Type:            REG_SZ
  Data:            System.Data.SqlXml


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\Services\{8ED9966C-102F-45b0-
8293-BB9F2463A6F2}\SQL .NET References\System.dll
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:53 PM
Value 0
  Name:            <NO NAME>
  Type:            REG_SZ
  Data:            System


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\Services\{8ED9966C-102F-45b0-
8293-BB9F2463A6F2}\SQL .NET
References\System.Security.dll
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:53 PM
Value 0
  Name:            <NO NAME>
  Type:            REG_SZ
  Data:            System.Security


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\Services\{8ED9966C-102F-45b0-
8293-BB9F2463A6F2}\SQL .NET
References\System.Transactions.dll
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:53 PM
Value 0
  Name:            <NO NAME>
  Type:            REG_SZ
  Data:            System.Transactions


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\Services\{8ED9966C-102F-45b0-
8293-BB9F2463A6F2}\SQL .NET
References\System.Web.Services.dll
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:53 PM
Value 0
  Name:            <NO NAME>
  Type:            REG_SZ
  Data:            System.Web.Services


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\Services\{8ED9966C-102F-45b0-
8293-BB9F2463A6F2}\SQL .NET References\System.Xml.dll
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:53 PM
Value 0
  Name:            <NO NAME>
  Type:            REG_SZ
  Data:            system.xml


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\Services\{910E8282-F867-11d0-
AB36-00A0C90F2713}
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:53 PM
Value 0
  Name:            <NO NAME>
  Type:            REG_SZ
  Data:            {282BD676-8B5B-11D0-8A34-
00A0C91E2ACD}

Value 1
  Name:            Name
  Type:            REG_SZ
  Data:            Solution Debugging Assistant


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\Services\{93E969D6-1AA0-455F-
B208-6ED3C82B5C58}
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:53 PM
Value 0
  Name:            <NO NAME>
  Type:            REG_SZ
  Data:            {282BD676-8B5B-11D0-8A34-
00A0C91E2ACD}

Value 1
  Name:            Name
  Type:            REG_SZ
  Data:            Solution Build Manager


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\Services\{9513E7A0-CFB7-4424-
BB7D-16DE3B6820B3}
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:53 PM
Value 0
  Name:            <NO NAME>
  Type:            REG_SZ
  Data:            {4a0c6509-bf90-43da-abee-
0aba3a8527f1}

Value 1
  Name:            Name
  Type:            REG_SZ
  Data:            IDataConnectionsService


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\Services\{961afe89-0cc9-3dba-
983f-e1416e158b08}
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:53 PM
Value 0
  Name:            <NO NAME>
  Type:            REG_SZ
  Data:            {68939055-38e0-4d17-92cb-
8909710d8178}

Value 1
  Name:            Name
  Type:            REG_SZ
  Data:            DesignSurfaceManager


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\Services\{96B36E93-F71C-4160-
A4EA-26AE801D2F63}
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:53 PM
Value 0
  Name:            <NO NAME>
  Type:            REG_SZ
  Data:            {96B36E93-F71C-4160-A4EA-
26AE801D2F63}

Value 1
  Name:            Name
  Type:            REG_SZ
  Data:            DTS Fonts And Colors Provider


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\Services\{97128F7E-2F73-47b1-
B244-82653ADD59B5}
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:53 PM
```


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```
Value 0
  Name:            <NO NAME>
  Type:            REG_SZ
  Data:            {4A791146-19E4-11d3-B86B-
00C04F79F802}

Value 1
  Name:            Name
  Type:            REG_SZ
  Data:            SVsContextWindowHelpService
Service


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\Services\{97BAE668-2CF2-4ed8-
A019-D279E3D74C80}
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:53 PM
Value 0
  Name:            Name
  Type:            REG_SZ
  Data:            SID_SVsStrongNameKeys

Value 1
  Name:            <NO NAME>
  Type:            REG_SZ
  Data:            {588205e0-66e0-11d3-8600-
00c04f6123b3}


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\Services\{9C1B8A40-7C24-11d3-
8E6E-005004775AC2}
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:53 PM
Value 0
  Name:            Name
  Type:            REG_SZ
  Data:            Team Dialog Controls GUIDs

Value 1
  Name:            <NO NAME>
  Type:            REG_SZ
  Data:            {AA8EB8CD-7A51-11D0-92C3-
00A0C9138C45}


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\Services\{9D21BCC5-2C63-4A61-
B055-2F3DF78EB30A}
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:53 PM
Value 0
  Name:            <NO NAME>
  Type:            REG_SZ
  Data:            {4A9B7E50-AA16-11d0-A8C5-
00A0C921A4D2}

Value 1
  Name:            Name
  Type:            REG_SZ
  Data:            Task list


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\Services\{9EAD5E55-B4C2-4d9f-
A5E7-24CD72F9B2AC}
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:53 PM
Value 0
  Name:            <NO NAME>
  Type:            REG_SZ
  Data:            {E444C1DD-7C8E-4126-81C8-
392C63BFEBE3}

Value 1
  Name:            Name
  Type:            REG_SZ
  Data:            SQL Service


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\Services\{9EC9BA55-B328-11d2-
9A98-00C04F79EFC3}
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:53 PM
Value 0
  Name:            <NO NAME>
  Type:            REG_SZ
  Data:            {e8b06f41-6d01-11d2-aa7d-
00c04f990343}

Value 1
  Name:            Name
  Type:            REG_SZ
  Data:            SVsWebPreview Service


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\Services\{A179EC84-21B0-4923-
B1CF-7032F2AD72FA}
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:53 PM
Value 0
  Name:            <NO NAME>
  Type:            REG_SZ
  Data:            {4058755A-8FBE-41C7-BC99-
3DBF5C74BA62}

Value 1
  Name:            Name
  Type:            REG_SZ
  Data:            SQL Marker Service


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\Services\{A3F718DE-392A-4f2d-
AA6E-7E858D08D6FD}
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:53 PM
Value 0
  Name:            <NO NAME>
  Type:            REG_SZ
  Data:            {4a0c6509-bf90-43da-abee-
0aba3a8527f1}

Value 1
  Name:            Name
  Type:            REG_SZ
  Data:            IGlobalWindowEventsService


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\Services\{A47EE51D-0283-4AEA-
9301-92F62C69028F}
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:53 PM
Value 0
  Name:            <NO NAME>
  Type:            REG_SZ
  Data:            {220A4C17-7E7C-4663-BBCC-
5E607C6543CD}

Value 1
  Name:            Name
  Type:            REG_SZ
  Data:            DBToolsOptionProvider


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\Services\{A60FCE08-2F9C-4676-
86F0-BCD4973FC702}
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:53 PM
Value 0
  Name:            <NO NAME>
  Type:            REG_SZ
  Data:            {6E87CFAD-6C05-4adf-9CD7-
3B7943875B7C}

Value 1
  Name:            Name
  Type:            REG_SZ
  Data:            SVsStartPageDownload


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\Services\{ADF95D98-9094-4B7B-
874A-D94844D05DCE}
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:53 PM
Value 0
  Name:            <NO NAME>
  Type:            REG_SZ
  Data:            {220A4C17-7E7C-4663-BBCC-
5E607C6543CD}

Value 1
  Name:            Name
```


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```
  Type:            REG_SZ
  Data:            Database Designer font and colors
provider


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\Services\{B1AABE06-845A-4c56-
9144-AA6FDB7D390D}
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:53 PM
Value 0
  Name:            <NO NAME>
  Type:            REG_SZ
  Data:            {E444C1DD-7C8E-4126-81C8-
392C63BFEBE3}

Value 1
  Name:            Name
  Type:            REG_SZ
  Data:            XMLA Service


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\Services\{B24BFD35-8C30-4b21-
A5B7-EBD09845BEAB}
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:53 PM
Value 0
  Name:            <NO NAME>
  Type:            REG_SZ
  Data:            {4a0c6509-bf90-43da-abee-
0aba3a8527f1}

Value 1
  Name:            Name
  Type:            REG_SZ
  Data:            IDesignerToolWindowService


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\Services\{BCD55999-B818-4240-
9528-3D96274477C9}
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:53 PM
Value 0
  Name:            <NO NAME>
  Type:            REG_SZ
  Data:            {E1AA7737-69BE-43d0-A425-
E3097651E192}

Value 1
  Name:            Name
  Type:            REG_SZ
  Data:            DataProviderManager service


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\Services\{BD71396F-39C6-4e3f-
BBA2-79CE33A8B302}
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:53 PM
Value 0
  Name:            Name
  Type:            REG_SZ
  Data:            SID_SVsAddWebReferenceDlg

Value 1
  Name:            <NO NAME>
  Type:            REG_SZ
  Data:            {588205e0-66e0-11d3-8600-
00c04f6123b3}


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\Services\{C16FB7C4-9F84-11D2-
8405-00C04F9902C1}
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:53 PM
Value 0
  Name:            <NO NAME>
  Type:            REG_SZ
  Data:            {C9DD4A57-47FB-11D2-83E7-
00C04F9902C1}

Value 1
  Name:            Name
  Type:            REG_SZ
  Data:            Disassembly Language Service


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\Services\{CA8A686A-0882-4e79-
BCA3-AF3F3AB3EB8A}
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:53 PM
Value 0
  Name:            <NO NAME>
  Type:            REG_SZ
  Data:            {4A791146-19E4-11d3-B86B-
00C04F79F802}

Value 1
  Name:            Name
  Type:            REG_SZ
  Data:            Integrated Help Service


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\Services\{D670F37D-D5A2-4c50-
93D6-87E6B1B22DA0}
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:53 PM
Value 0
  Name:            <NO NAME>
  Type:            REG_SZ
  Data:            {96B36E93-F71C-4160-A4EA-
26AE801D2F63}

Value 1
  Name:            Name
  Type:            REG_SZ
  Data:            IDtsDesignerService


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\Services\{D77E81FC-873E-4283-
A0F8-CF1CCE8CC42B}
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:53 PM
Value 0
  Name:            <NO NAME>
  Type:            REG_SZ
  Data:            {E1AA7737-69BE-43d0-A425-
E3097651E192}

Value 1
  Name:            Name
  Type:            REG_SZ
  Data:            DataConnectionDialogFactory
service


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\Services\{DF38847E-CC19-11D2-
8ADA-00C04F79E479}
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:53 PM
Value 0
  Name:            <NO NAME>
  Type:            REG_SZ
  Data:            {C9DD4A57-47FB-11D2-83E7-
00C04F9902C1}

Value 1
  Name:            Name
  Type:            REG_SZ
  Data:            Memory Language Service


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\Services\{E351DF41-0679-4731-
A36D-9F61612E1C00}
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:53 PM
Value 0
  Name:            <NO NAME>
  Type:            REG_SZ
  Data:            {4a0c6509-bf90-43da-abee-
0aba3a8527f1}

Value 1
  Name:            Name
  Type:            REG_SZ
  Data:            IEnvironmentService


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
```


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```
Server\90\Tools\Shell\Services\{e50c8d58-3c49-301c-
a498-c1b81c69a0f0}
Class Name:         <NO CLASS>
Last Write Time:    7/19/2005 - 4:53 PM
Value 0
  Name:             <NO NAME>
  Type:             REG_SZ
  Data:             {7494682b-37a0-11d2-a273-
00c04f8ef4ff}

Value 1
  Name:             Name
  Type:             REG_SZ
  Data:             IComponentDiscoveryService


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\Services\{E663F492-4589-4f60-
9CA5-022E59FA635B}
Class Name:         <NO CLASS>
Last Write Time:    7/19/2005 - 4:53 PM
Value 0
  Name:             <NO NAME>
  Type:             REG_SZ
  Data:             {EF828E39-70F5-4b8e-A3A0-
4C0ECD28A69A}

Value 1
  Name:             Name
  Type:             REG_SZ
  Data:             SQL Server Assembly support


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\Services\{E7A0D4E0-D0E4-4afa-
A8A1-DD4636073D98}
Class Name:         <NO CLASS>
Last Write Time:    7/19/2005 - 4:53 PM
Value 0
  Name:             <NO NAME>
  Type:             REG_SZ
  Data:             {E1AA7737-69BE-43d0-A425-
E3097651E192}

Value 1
  Name:             Name
  Type:             REG_SZ
  Data:             DataConnectionManager service


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\Services\{e8b06f3d-6d01-11d2-
aa7d-00c04f990343}
Class Name:         <NO CLASS>
Last Write Time:    7/19/2005 - 4:53 PM
Value 0
  Name:             <NO NAME>
  Type:             REG_SZ
  Data:             {e8b06f41-6d01-11d2-aa7d-
00c04f990343}

Value 1
  Name:             Name
  Type:             REG_SZ
  Data:             SVsWebURLMRU Service


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\Services\{e8b06f51-6d01-11d2-
aa7d-00c04f990343}
Class Name:         <NO CLASS>
Last Write Time:    7/19/2005 - 4:53 PM
Value 0
  Name:             <NO NAME>
  Type:             REG_SZ
  Data:             {e8b06f41-6d01-11d2-aa7d-
00c04f990343}

Value 1
  Name:             Name
  Type:             REG_SZ
  Data:             SVsWebBrowsingService


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\Services\{ED8979BC-B02F-4da9-
A667-D3256C36220A}
Class Name:         <NO CLASS>
Last Write Time:    7/19/2005 - 4:53 PM
Value 0
  Name:             Name
  Type:             REG_SZ
  Data:             CLSID_ComplusLibraryManagerPkg

Value 1
  Name:             <NO NAME>
  Type:             REG_SZ
  Data:             {ED8979BC-B02F-4da9-A667-
D3256C36220A}


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\Services\{ef902d46-ace1-3668-
adff-b323562e22f9}
Class Name:         <NO CLASS>
Last Write Time:    7/19/2005 - 4:53 PM
Value 0
  Name:             <NO NAME>
  Type:             REG_SZ
  Data:             {68939055-38e0-4d17-92cb-
8909710d8178}

Value 1
  Name:             Name
  Type:             REG_SZ
  Data:             IDesignerEventService


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\Services\{F1F2A506-C37B-475c-
9712-415F656649E0}
Class Name:         <NO CLASS>
Last Write Time:    7/19/2005 - 4:53 PM
Value 0
  Name:             <NO NAME>
  Type:             REG_SZ
  Data:             {220A4C17-7E7C-4663-BBCC-
5E607C6543CD}

Value 1
  Name:             Name
  Type:             REG_SZ
  Data:             Data Tool Sql Editor Class


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\Services\{F5E7E71D-1401-11d1-
883B-0000F87579D2}
Class Name:         <NO CLASS>
Last Write Time:    7/19/2005 - 4:53 PM
Value 0
  Name:             <NO NAME>
  Type:             REG_SZ
  Data:             {F5E7E720-1401-11d1-883B-
0000F87579D2}


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\Services\{F638BEE1-DC22-4401-
8A4A-6DB0B13C196C}
Class Name:         <NO CLASS>
Last Write Time:    7/19/2005 - 4:53 PM
Value 0
  Name:             <NO NAME>
  Type:             REG_SZ
  Data:             {E1AA7737-69BE-43d0-A425-
E3097651E192}

Value 1
  Name:             Name
  Type:             REG_SZ
  Data:             Oracle Provider Object Factory


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\Services\{F65478CC-96F1-4BA9-
9EF9-A575ACB96031}
Class Name:         <NO CLASS>
Last Write Time:    7/19/2005 - 4:53 PM
Value 0
  Name:             <NO NAME>
  Type:             REG_SZ
  Data:             {1D76B2E0-F11B-11d2-AFC3-
00105A9991EF}


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
```


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```
Server\90\Tools\Shell\Services\{f6819a78-a205-47b5-
be1c-675b3c7f0b8e}
Class Name:         <NO CLASS>
Last Write Time:    7/19/2005 - 4:53 PM
Value 0
  Name:             <NO NAME>
  Type:             REG_SZ
  Data:             {87569308-4813-40a0-9cd0-
d7a30838ca3f}

Value 1
  Name:             Name
  Type:             REG_SZ
  Data:             XML Language Service


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\Services\{fc43bf19-86fe-4255-
901e-15c8d236f3a4}
Class Name:         <NO CLASS>
Last Write Time:    7/19/2005 - 4:53 PM
Value 0
  Name:             <NO NAME>
  Type:             REG_SZ
  Data:             {68939055-38e0-4d17-92cb-
8909710d8178}

Value 1
  Name:             Name
  Type:             REG_SZ
  Data:             DynamicTypeService


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\Services\{FCD3F3E8-69AC-42d5-
905E-2E131905E708}
Class Name:         <NO CLASS>
Last Write Time:    7/19/2005 - 4:53 PM
Value 0
  Name:             <NO NAME>
  Type:             REG_SZ
  Data:             {E1AA7737-69BE-43d0-A425-
E3097651E192}

Value 1
  Name:             Name
  Type:             REG_SZ
  Data:             SQL Server Provider Object Factory


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\Setup
Class Name:         <NO CLASS>
Last Write Time:    7/19/2005 - 4:53 PM

Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\Setup\CSharpDW
Class Name:         <NO CLASS>
Last Write Time:    7/19/2005 - 4:53 PM
Value 0
  Name:             ProductDir
  Type:             REG_SZ
  Data:             C:\Program Files\Microsoft SQL
Server\90\Tools\Binn\VSShell\Common7\IDE\Business
Intelligence
Wizards\LanguageProjects\CSharp\CSharpDWWizards\


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\Setup\JSharpDW
Class Name:         <NO CLASS>
Last Write Time:    7/19/2005 - 4:53 PM
Value 0
  Name:             ProductDir
  Type:             REG_SZ
  Data:             C:\Program Files\Microsoft SQL
Server\90\Tools\Binn\VSShell\Common7\IDE\Business
Intelligence
Wizards\LanguageProjects\JSharp\JSharpDWWizards\


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\Setup\VBDW
Class Name:         <NO CLASS>
Last Write Time:    7/19/2005 - 4:53 PM
Value 0
  Name:             ProductDir
  Type:             REG_SZ
  Data:             C:\Program Files\Microsoft SQL
Server\90\Tools\Binn\VSShell\Common7\IDE\Business
Intelligence Wizards\LanguageProjects\VB\VBDWWizards\


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\Setup\VS
Class Name:         <NO CLASS>
Last Write Time:    7/19/2005 - 4:53 PM
Value 0
  Name:             ProductDir
  Type:             REG_SZ
  Data:             C:\Program Files\Microsoft SQL
Server\90\Tools\Binn\VSShell\


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\SetupTest
Class Name:         <NO CLASS>
Last Write Time:    7/19/2005 - 4:53 PM
Value 0
  Name:             AnalysisServicesOnline
  Type:             REG_DWORD
  Data:             0x1

Value 1
  Name:             DataTransformationServicesOnline
  Type:             REG_DWORD
  Data:             0x1


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\ShellFileAssociations
Class Name:         <NO CLASS>
Last Write Time:    7/19/2005 - 4:53 PM

Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\ShellFileAssociations\.config
Class Name:         <NO CLASS>
Last Write Time:    7/19/2005 - 4:53 PM
Value 0
  Name:             <NO NAME>
  Type:             REG_SZ
  Data:
%PROGID_APPIDNAME%.config.%PROGID_VERSION%


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\ShellFileAssociations\.dtd
Class Name:         <NO CLASS>
Last Write Time:    7/19/2005 - 4:53 PM
Value 0
  Name:             <NO NAME>
  Type:             REG_SZ
  Data:
%PROGID_APPIDNAME%.dtd.%PROGID_VERSION%


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\ShellFileAssociations\.snippet
Class Name:         <NO CLASS>
Last Write Time:    7/19/2005 - 4:53 PM
Value 0
  Name:             <NO NAME>
  Type:             REG_SZ
  Data:
%PROGID_APPIDNAME%.snippet.%PROGID_VERSION%


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\ShellFileAssociations\.vspscc
Class Name:         <NO CLASS>
Last Write Time:    7/19/2005 - 4:53 PM
Value 0
  Name:             <NO NAME>
  Type:             REG_SZ
  Data:
%PROGID_APPIDNAME%.vspscc.%PROGID_VERSION%


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\ShellFileAssociations\.vsscc
Class Name:         <NO CLASS>
Last Write Time:    7/19/2005 - 4:53 PM
Value 0
  Name:             <NO NAME>
  Type:             REG_SZ
```


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```
  Data:
%PROGID_APPIDNAME%.vsscc.%PROGID_VERSION%


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\ShellFileAssociations\.vssscc
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:53 PM
Value 0
  Name:            <NO NAME>
  Type:            REG_SZ
  Data:
%PROGID_APPIDNAME%.vssscc.%PROGID_VERSION%


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\ShellFileAssociations\.xdr
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:53 PM
Value 0
  Name:            <NO NAME>
  Type:            REG_SZ
  Data:
%PROGID_APPIDNAME%.xdr.%PROGID_VERSION%


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\ShellFileAssociations\.xslt
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:53 PM
Value 0
  Name:            <NO NAME>
  Type:            REG_SZ
  Data:
%PROGID_APPIDNAME%.xslt.%PROGID_VERSION%


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\SolutionPersistence
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:53 PM

Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\SolutionPersistence\AggregateGu
ids
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:53 PM
Value 0
  Name:            <NO NAME>
  Type:            REG_SZ
  Data:            {DA9FB551-C724-11d0-AE1F-
00A0C90FFFC3}


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\SolutionPersistence\DevStudioPr
ojDeps
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:53 PM
Value 0
  Name:            <NO NAME>
  Type:            REG_SZ
  Data:            {DA9FB551-C724-11d0-AE1F-
00A0C90FFFC3}


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\SolutionPersistence\Extensibili
tyAddIns
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:53 PM
Value 0
  Name:            <NO NAME>
  Type:            REG_SZ
  Data:            {DA9FB551-C724-11d0-AE1F-
00A0C90FFFC3}


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\SolutionPersistence\Extensibili
tyGlobals
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:53 PM
Value 0
  Name:            <NO NAME>
  Type:            REG_SZ
  Data:            {DA9FB551-C724-11d0-AE1F-
00A0C90FFFC3}


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\SolutionPersistence\FolderGloba
ls
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:53 PM
Value 0
  Name:            <NO NAME>
  Type:            REG_SZ
  Data:            {DA9FB551-C724-11d0-AE1F-
00A0C90FFFC3}


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\SolutionPersistence\FolderStart
upServices
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:53 PM
Value 0
  Name:            <NO NAME>
  Type:            REG_SZ
  Data:            {DA9FB551-C724-11d0-AE1F-
00A0C90FFFC3}


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\SolutionPersistence\NestedProje
cts
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:53 PM
Value 0
  Name:            <NO NAME>
  Type:            REG_SZ
  Data:            {DA9FB551-C724-11d0-AE1F-
00A0C90FFFC3}


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\SolutionPersistence\ProjectConf
iguration
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:53 PM
Value 0
  Name:            <NO NAME>
  Type:            REG_SZ
  Data:            {DA9FB551-C724-11d0-AE1F-
00A0C90FFFC3}


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\SolutionPersistence\ProjectConf
igurationPlatforms
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:53 PM
Value 0
  Name:            <NO NAME>
  Type:            REG_SZ
  Data:            {DA9FB551-C724-11d0-AE1F-
00A0C90FFFC3}


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\SolutionPersistence\ProjectDepe
ndencies
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:53 PM
Value 0
  Name:            <NO NAME>
  Type:            REG_SZ
  Data:            {DA9FB551-C724-11d0-AE1F-
00A0C90FFFC3}


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\SolutionPersistence\SolutionCon
figuration
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:53 PM
Value 0
  Name:            <NO NAME>
  Type:            REG_SZ
  Data:            {DA9FB551-C724-11d0-AE1F-
00A0C90FFFC3}
```


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```
Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\SolutionPersistence\SolutionCon
figurationPlatforms
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:53 PM
Value 0
  Name:            <NO NAME>
  Type:            REG_SZ
  Data:            {DA9FB551-C724-11d0-AE1F-
00A0C90FFFC3}


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\SolutionPersistence\SolutionIte
ms
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:53 PM
Value 0
  Name:            <NO NAME>
  Type:            REG_SZ
  Data:            {DA9FB551-C724-11d0-AE1F-
00A0C90FFFC3}


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\SolutionPersistence\SolutionPro
perties
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:53 PM
Value 0
  Name:            <NO NAME>
  Type:            REG_SZ
  Data:            {DA9FB551-C724-11d0-AE1F-
00A0C90FFFC3}


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\SolutionPersistence\SourceCodeC
ontrol
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:53 PM
Value 0
  Name:            <NO NAME>
  Type:            REG_SZ
  Data:            {AA8EB8CD-7A51-11D0-92C3-
00A0C9138C45}


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\SourceControlProviders
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:53 PM
Value 0
  Name:            <NO NAME>
  Type:            REG_SZ
  Data:            {53544C4D-FFD5-48A9-B04A-
0700CCD31070}


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\SourceControlProviders\{53544C4
D-FFD5-48A9-B04A-0700CCD31070}
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:53 PM
Value 0
  Name:            Service
  Type:            REG_SZ
  Data:            {53544C4D-B03D-4209-A7D0-
D9DD13A4019B}

Value 1
  Name:            <NO NAME>
  Type:            REG_SZ
  Data:            Microsoft MSSCCI Support Provider


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\SourceControlProviders\{53544C4
D-FFD5-48A9-B04A-0700CCD31070}\Name
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:53 PM
Value 0
  Name:            Package
  Type:            REG_SZ
  Data:            {53544C4D-B03D-4209-A7D0-
D9DD13A4019B}

Value 1
  Name:            <NO NAME>
  Type:            REG_SZ
  Data:            #101


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\SourceControlProviders\{53544C4
D-FFD5-48A9-B04A-0700CCD31070}\Packages
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:53 PM
Value 0
  Name:            MainPackage
  Type:            REG_SZ
  Data:            C:\Program Files\Microsoft SQL
Server\90\Tools\Binn\VSShell\Common7\IDE\VS
SCC\VssProvider.dll

Value 1
  Name:            StubPackage
  Type:            REG_SZ
  Data:            C:\Program Files\Microsoft SQL
Server\90\Tools\Binn\VSShell\Common7\IDE\VS
SCC\VssProviderStub.dll


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\SplashInfo
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:54 PM
Value 0
  Name:            SplashInfo
  Type:            REG_BINARY
  Data:
00000000   55 00 6e 00 6b 00 6e 00 - 6f 00 77 00 6e
00 20 00  U.n.k.n.o.w.n. .
00000010   55 00 73 00 65 00 72 00 - 20 00 4e 00 61
00 6d 00  U.s.e.r. .N.a.m.
00000020   65 00 00 00 00 00 00 00 - 00 00 00 00 00
00 00 00  e..............
00000030   00 00 00 00 00 00 00 00 - 00 00 00 00 00
00 00 00  ..............
00000040   00 00 00 00 00 00 00 00 - 00 00 00 00 00
00 00 00  ..............
00000050   00 00 00 00 00 00 00 00 - 00 00 00 00 00
00 00 00  ..............
00000060   00 00 00 00 00 00 00 00 - 00 00 48 00 50
00 00 00  ..........H.P...
00000070   00 00 00 00 00 00 00 00 - 00 00 00 00 00
00 00 00  ..............
00000080   00 00 00 00 00 00 00 00 - 00 00 00 00 00
00 00 00  ..............
00000090   00 00 00 00 00 00 00 00 - 00 00 00 00 00
00 00 00  ..............
000000a0   00 00 00 00 00 00 00 00 - 00 00 00 00 00
00 00 00  ..............
000000b0   00 00 00 00 00 00 00 00 - 00 00 00 00 00
00 00 00  ..............
000000c0   00 00 00 00 00 00 00 00 - 00 00 00 00 00
00 00 00  ..............
000000d0   00 00 00 00 54 00 68 00 - 69 00 73 00 20
00 70 00  ....T.h.i.s. .p.
000000e0   72 00 6f 00 64 00 75 00 - 63 00 74 00 20
00 69 00  r.o.d.u.c.t. .i.
000000f0   73 00 20 00 6c 00 69 00 - 63 00 65 00 6e
00 73 00  s. .l.i.c.e.n.s.
00000100   65 00 64 00 20 00 74 00 - 6f 00 3a 00 00
00 00 00  e.d. .t.o.:.....
00000110   00 00 00 00 00 00 00 00 - 00 00 00 00 00
00 00 00  ..............
00000120   00 00 00 00 00 00 00 00 - 00 00 00 00 00
00 00 00  ..............
00000130   00 00 00 00 00 00 00 00 - 00 00 00 00 00
00 00 00  ..............
00000140   00 00 00 00 00 00 00 00 - 00 00 00 00 00
00 00 00  ..............
00000150   00 00 00 00 00 00 00 00 - 00 00 00 00 00
00 00 00  ..............
00000160   00 00 00 00 00 00 00 00 - 00 00 00 00 00
00 00 00  ..............
00000170   00 00 00 00 00 00 00 00 - 00 00 00 00 00
00 00 00  ..............
00000180   00 00 00 00 00 00 00 00 - 00 00 00 00 00
00 00 00  ..............
00000190   00 00 00 00 00 00 00 00 - 00 00 00 00 00
00 00 00  ..............
000001a0   00 00 00 00 00 00 00 00 - 00 00 00 00 00
00 00 00  ..............
000001b0   00 00 00 00 00 00 00 00 - 00 00 00 00 00
00 00 00  ..............
000001c0   00 00 00 00 00 00 00 00 - 00 00 00 00 00
00 00 00  ..............
```


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```
000001d0   00 00 00 00 00 00 00 00 - 00 00 00 00 00
00 00 00  .............
000001e0   00 00 00 00 00 00 00 00 - 00 00 00 00 00
00 00 00  .............
000001f0   00 00 00 00 00 00 00 00 - 00 00 00 00 00
00 00 00  .............
00000200   00 00 00 00 00 00 00 00 - 00 00 00 00 00
00 00 00  .............
00000210   00 00 00 00 00 00 00 00 - 00 00 00 00 00
00 00 00  .............
00000220   00 00 00 00 00 00 00 00 - 00 00 00 00 00
00 00 00  .............
00000230   00 00 00 00 00 00 00 00 - 00 00 00 00 00
00 00 00  .............
00000240   00 00 00 00 00 00 00 00 - 00 00 00 00 00
00 00 00  .............
00000250   00 00 00 00 00 00 00 00 - 00 00 00 00 00
00 00 00  .............
00000260   00 00 00 00 00 00 00 00 - 00 00 00 00 00
00 00 00  .............
00000270   00 00 00 00 00 00 00 00 - 00 00 00 00 00
00 00 00  .............
00000280   00 00 00 00 00 00 00 00 - 00 00 00 00 00
00 00 00  .............
00000290   00 00 00 00 00 00 00 00 - 00 00 00 00 00
00 00 00  .............
000002a0   00 00 00 00 00 00 00 00 - 00 00 00 00 00
00 00 00  .............
000002b0   00 00 00 00 00 00 00 00 - 00 00 00 00 00
00 00 00  .............
000002c0   00 00 00 00 00 00 00 00 - 00 00 00 00 00
00 00 00  .............
000002d0   00 00 00 00 28 00 63 00 - 29 00 20 00 32
00 30 00  ....(.c.). .2.0.
000002e0   30 00 35 00 20 00 4d 00 - 69 00 63 00 72
00 6f 00  0.5. .M.i.c.r.o.
000002f0   73 00 6f 00 66 00 74 00 - 20 00 43 00 6f
00 72 00  s.o.f.t. .C.o.r.
00000300   70 00 6f 00 72 00 61 00 - 74 00 69 00 6f
00 6e 00  p.o.r.a.t.i.o.n.
00000310   2e 00 0a 00 41 00 6c 00 - 6c 00 20 00 72
00 69 00  ....A.l.l. .r.i.
00000320   67 00 68 00 74 00 73 00 - 20 00 72 00 65
00 73 00  g.h.t.s. .r.e.s.
00000330   65 00 72 00 76 00 65 00 - 64 00 2e 00 00
00 00 00  e.r.v.e.d.......
00000340   00 00 00 00 00 00 00 00 - 00 00 00 00 00
00 00 00  .............
00000350   00 00 00 00 00 00 00 00 - 00 00 00 00 00
00 00 00  .............
00000360   00 00 00 00 00 00 00 00 - 00 00 00 00 00
00 00 00  .............
00000370   00 00 00 00 00 00 00 00 - 00 00 00 00 00
00 00 00  .............
00000380   00 00 00 00 00 00 00 00 - 00 00 00 00 00
00 00 00  .............
00000390   00 00 00 00 00 00 00 00 - 00 00 00 00 00
00 00 00  .............
000003a0   00 00 00 00 00 00 00 00 - 00 00 00 00 00
00 00 00  .............
000003b0   00 00 00 00 00 00 00 00 - 00 00 00 00 00
00 00 00  .............
000003c0   00 00 00 00 00 00 00 00 - 00 00 00 00 00
00 00 00  .............
000003d0   00 00 00 00 00 00 00 00 - 00 00 00 00 00
00 00 00  .............
000003e0   00 00 00 00 00 00 00 00 - 00 00 00 00 00
00 00 00  .............
000003f0   00 00 00 00 00 00 00 00 - 00 00 00 00 00
00 00 00  .............
00000400   00 00 00 00 00 00 00 00 - 00 00 00 00 00
00 00 00  .............
00000410   00 00 00 00 00 00 00 00 - 00 00 00 00 00
00 00 00  .............
00000420   00 00 00 00 00 00 00 00 - 00 00 00 00 00
00 00 00  .............
00000430   00 00 00 00 00 00 00 00 - 00 00 00 00 00
00 00 00  .............
00000440   00 00 00 00 00 00 00 00 - 00 00 00 00 00
00 00 00  .............
00000450   00 00 00 00 00 00 00 00 - 00 00 00 00 00
00 00 00  .............
00000460   00 00 00 00 00 00 00 00 - 00 00 00 00 00
00 00 00  .............
00000470   00 00 00 00 00 00 00 00 - 00 00 00 00 00
00 00 00  .............
00000480   00 00 00 00 00 00 00 00 - 00 00 00 00 00
00 00 00  .............
00000490   00 00 00 00 00 00 00 00 - 00 00 00 00 00
00 00 00  .............
000004a0   00 00 00 00 00 00 00 00 - 00 00 00 00 00
00 00 00  .............
000004b0   00 00 00 00 00 00 00 00 - 00 00 00 00 00
00 00 00  .............
000004c0   00 00 00 00 00 00 00 00 - 00 00 00 00 00
00 00 00  .............
000004d0   00 00 00 00 4d 00 65 00 - 6d 00 62 00 65
00 72 00  ....M.e.m.b.e.r.
000004e0   20 00 6f 00 66 00 00 00 - 00 00 00 00 00
00 00 00   .o.f..........
000004f0   00 00 00 00 00 00 00 00 - 00 00 00 00 00
00 00 00  .............
00000500   00 00 00 00 00 00 00 00 - 00 00 00 00 00
00 00 00  .............
00000510   00 00 00 00 00 00 00 00 - 00 00 00 00 00
00 00 00  .............
00000520   00 00 00 00 00 00 00 00 - 00 00 00 00 00
00 00 00  .............
00000530   00 00 00 00 00 00 00 00 - 00 00 00 00 00
00 00 00  .............
00000540   00 00 00 00 00 00 00 00 - 00 00 00 00 00
00 00 00  .............
00000550   00 00 00 00 00 00 00 00 - 00 00 00 00 00
00 00 00  .............
00000560   00 00 00 00 00 00 00 00 - 00 00 00 00 00
00 00 00  .............
00000570   00 00 00 00 00 00 00 00 - 00 00 00 00 00
00 00 00  .............
00000580   00 00 00 00 00 00 00 00 - 00 00 00 00 00
00 00 00  .............
00000590   00 00 00 00 00 00 00 00 - 00 00 00 00 00
00 00 00  .............
000005a0   00 00 00 00 00 00 00 00 - 00 00 00 00 00
00 00 00  .............
000005b0   00 00 00 00 00 00 00 00 - 00 00 00 00 00
00 00 00  .............
000005c0   00 00 00 00 00 00 00 00 - 00 00 00 00 00
00 00 00  .............
000005d0   00 00 00 00 00 00 00 00 - 00 00 00 00 00
00 00 00  .............
000005e0   00 00 00 00 00 00 00 00 - 00 00 00 00 00
00 00 00  .............
000005f0   00 00 00 00 00 00 00 00 - 00 00 00 00 00
00 00 00  .............
00000600   00 00 00 00 00 00 00 00 - 00 00 00 00 00
00 00 00  .............
00000610   00 00 00 00 00 00 00 00 - 00 00 00 00 00
00 00 00  .............
00000620   00 00 00 00 00 00 00 00 - 00 00 00 00 00
00 00 00  .............
00000630   00 00 00 00 00 00 00 00 - 00 00 00 00 00
00 00 00  .............
00000640   00 00 00 00 00 00 00 00 - 00 00 00 00 00
00 00 00  .............
00000650   00 00 00 00 00 00 00 00 - 00 00 00 00 00
00 00 00  .............
00000660   00 00 00 00 00 00 00 00 - 00 00 00 00 00
00 00 00  .............
00000670   00 00 00 00 00 00 00 00 - 00 00 00 00 00
00 00 00  .............
00000680   00 00 00 00 00 00 00 00 - 00 00 00 00 00
00 00 00  .............
00000690   00 00 00 00 00 00 00 00 - 00 00 00 00 00
00 00 00  .............
000006a0   00 00 00 00 00 00 00 00 - 00 00 00 00 00
00 00 00  .............
000006b0   00 00 00 00 00 00 00 00 - 00 00 00 00 00
00 00 00  .............
000006c0   00 00 00 00 00 00 00 00 - 00 00 00 00 00
00 00 00  .............
000006d0   00 00 00 00 4d 00 69 00 - 63 00 72 00 6f
00 73 00  ....M.i.c.r.o.s.
000006e0   6f 00 66 00 74 00 20 00 - 53 00 51 00 4c
00 20 00  o.f.t. .S.Q.L. .
000006f0   53 00 65 00 72 00 76 00 - 65 00 72 00 20
00 4d 00  S.e.r.v.e.r. .M.
00000700   61 00 6e 00 61 00 67 00 - 65 00 6d 00 65
00 6e 00  a.n.a.g.e.m.e.n.
00000710   74 00 20 00 53 00 74 00 - 75 00 64 00 69
00 6f 00  t. .S.t.u.d.i.o.
00000720   00 00 00 00 00 00 00 00 - 00 00 00 00 00
00 00 00  .............
00000730   00 00 00 00 00 00 00 00 - 00 00 00 00 00
00 00 00  .............
00000740   00 00 00 00 00 00 00 00 - 00 00 00 00 00
00 00 00  .............
00000750   00 00 00 00 00 00 00 00 - 00 00 00 00 00
00 00 00  .............
00000760   00 00 00 00 00 00 00 00 - 00 00 00 00 00
00 00 00  .............
00000770   00 00 00 00 00 00 00 00 - 00 00 00 00 00
00 00 00  .............
00000780   00 00 00 00 00 00 00 00 - 00 00 00 00 00
00 00 00  .............
00000790   00 00 00 00 00 00 00 00 - 00 00 00 00 00
00 00 00  .............
```


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```
000007a0   00 00 00 00 00 00 00 00 - 00 00 00 00 00
00 00 00  ..............
000007b0   00 00 00 00 00 00 00 00 - 00 00 00 00 00
00 00 00  ..............
000007c0   00 00 00 00 00 00 00 00 - 00 00 00 00 00
00 00 00  ..............
000007d0   00 00 00 00 00 00 00 00 - 00 00 00 00 00
00 00 00  ..............
000007e0   00 00 00 00 00 00 00 00 - 00 00 00 00 00
00 00 00  ..............
000007f0   00 00 00 00 00 00 00 00 - 00 00 00 00 00
00 00 00  ..............
00000800   00 00 00 00 00 00 00 00 - 00 00 00 00 00
00 00 00  ..............
00000810   00 00 00 00 00 00 00 00 - 00 00 00 00 00
00 00 00  ..............
00000820   00 00 00 00 00 00 00 00 - 00 00 00 00 00
00 00 00  ..............
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00 55 00  t.e.d. .b.y. .U.
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00001910   00 00 00 00 00 00 00 00 - 00 00 00 00 00
00 00 00  .............
00001920   00 00 00 00 00 00 00 00 - 00 00 00 00 00
00 00 00  .............
00001930   00 00 00 00 00 00 00 00 - 00 00 00 00 00
00 00 00  .............
00001940   00 00 00 00 00 00 00 00 - 00 00 00 00 00
00 00 00  .............
00001950   00 00 00 00 00 00 00 00 - 00 00 00 00 00
00 00 00  .............
00001960   00 00 00 00 00 00 00 00 - 00 00 00 00 00
00 00 00  .............
00001970   00 00 00 00 00 00 00 00 - 00 00 00 00 00
00 00 00  .............
00001980   00 00 00 00 00 00 00 00 - 00 00 00 00 00
00 00 00  .............
00001990   00 00 00 00 00 00 00 00 - 00 00 00 00 00
00 00 00  .............
000019a0   00 00 00 00 00 00 00 00 - 00 00 00 00 00
00 00 00  .............
000019b0   00 00 00 00 00 00 00 00 - 00 00 00 00 00
00 00 00  .............
000019c0   00 00 00 00 00 00 00 00 - 00 00 00 00 00
00 00 00  .............
000019d0   00 00 00 00 00 00 00 00 - 00 00 00 00 00
00 00 00  .............
000019e0   00 00 00 00 00 00 00 00 - 00 00 00 00 00
00 00 00  .............
000019f0   00 00 00 00 00 00 00 00 - 00 00 00 00 00
00 00 00  .............
00001a00   00 00 00 00 00 00 00 00 - 00 00 00 00 00
00 00 00  .............
00001a10   00 00 00 00 00 00 00 00 - 00 00 00 00 00
00 00 00  .............
00001a20   00 00 00 00 00 00 00 00 - 00 00 00 00 00
00 00 00  .............
00001a30   00 00 00 00 00 00 00 00 - 00 00 00 00 00
00 00 00  .............
00001a40   00 00 00 00 00 00 00 00 - 00 00 00 00 00
00 00 00  .............
00001a50   00 00 00 00 00 00 00 00 - 00 00 00 00 00
00 00 00  .............
00001a60   00 00 00 00 00 00 00 00 - 00 00 00 00 00
00 00 00  .............
00001a70   00 00 00 00 00 00 00 00 - 00 00 00 00 00
00 00 00  .............
00001a80   00 00 00 00 00 00 00 00 - 00 00 00 00 00
00 00 00  .............
00001a90   00 00 00 00 00 00 00 00 - 00 00 00 00 00
00 00 00  .............
00001aa0   00 00 00 00 00 00 00 00 - 00 00 00 00 00
00 00 00  .............
00001ab0   00 00 00 00 00 00 00 00 - 00 00 00 00 00
00 00 00  .............
00001ac0   00 00 00 00 00 00 00 00 - 00 00 00 00 00
00 00 00  .............
00001ad0   00 00 00 00 00 00 00 00 - 00 00 00 00 00
00 00 00  .............
00001ae0   00 00 00 00 00 00 00 00 - 00 00 00 00 00
00 00 00  .............
00001af0   00 00 00 00 00 00 00 00 - 00 00 00 00 00
00 00 00  .............
```

```
00001b00   00 00 00 00 00 00 00 00 - 00 00 00 00 00
00 00 00  .............
00001b10   00 00 00 00 00 00 00 00 - 00 00 00 00 00
00 00 00  .............
00001b20   00 00 00 00 00 00 00 00 - 00 00 00 00 00
00 00 00  .............
00001b30   00 00 00 00 00 00 00 00 - 00 00 00 00 00
00 00 00  .............
00001b40   00 00 00 00 00 00 00 00 - 00 00 00 00 00
00 00 00  .............
00001b50   00 00 00 00 00 00 00 00 - 00 00 00 00 00
00 00 00  .............
00001b60   00 00 00 00 00 00 00 00 - 00 00 00 00 00
00 00 00  .............
00001b70   00 00 00 00 00 00 00 00 - 00 00 00 00 00
00 00 00  .............
00001b80   00 00 00 00 00 00 00 00 - 00 00 00 00 00
00 00 00  .............
00001b90   00 00 00 00 00 00 00 00 - 00 00 00 00 00
00 00 00  .............
00001ba0   00 00 00 00 00 00 00 00 - 00 00 00 00 00
00 00 00  .............
00001bb0   00 00 00 00 00 00 00 00 - 00 00 00 00 00
00 00 00  .............
00001bc0   00 00 00 00 00 00 00 00 - 00 00 00 00 00
00 00 00  .............
00001bd0   00 00 00 00 00 00 00 00 - 00 00 00 00 00
00 00 00  .............
00001be0   00 00 00 00 00 00 00 00 - 00 00 00 00 00
00 00 00  .............
00001bf0   00 00 00 00 00 00 00 00 - 00 00 00 00 00
00 00 00  .............
00001c00   00 00 00 00 00 00 00 00 - 00 00 00 00 00
00 00 00  .............
00001c10   00 00 00 00 00 00 00 00 - 00 00 00 00 00
00 00 00  .............
00001c20   00 00 00 00 00 00 00 00 - 00 00 00 00 00
00 00 00  .............
00001c30   00 00 00 00 00 00 00 00 - 00 00 00 00 00
00 00 00  .............
00001c40   00 00 00 00 00 00 00 00 - 00 00 00 00 00
00 00 00  .............
00001c50   00 00 00 00 00 00 00 00 - 00 00 00 00 00
00 00 00  .............
00001c60   00 00 00 00 00 00 00 00 - 00 00 00 00 00
00 00 00  .............
00001c70   00 00 00 00 00 00 00 00 - 00 00 00 00 00
00 00 00  .............
00001c80   00 00 00 00 00 00 00 00 - 00 00 00 00 00
00 00 00  .............
00001c90   00 00 00 00 00 00 00 00 - 00 00 00 00 00
00 00 00  .............
00 00 00 00 00 00 00 00 - 00 00 00 00
............


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\Text Editor
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:53 PM
```

```
Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\Text Editor\External Markers
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:53 PM

Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\Text Editor\External
Markers\{030EF597-983E-4DC8-BFE2-A57508256636}
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:53 PM
Value 0
  Name:            <NO NAME>
  Type:            REG_SZ
  Data:            Debugger Tracepoint Mapped Enabled
Marker

Value 1
  Name:            Service
  Type:            REG_SZ
  Data:            {44B05627-95C2-4CE8-BDCD-
4AA722785093}

Value 2
  Name:            DisplayName
  Type:            REG_SZ
  Data:            #271

Value 3
  Name:            Package
  Type:            REG_SZ
  Data:            {C9DD4A57-47FB-11D2-83E7-
00C04F9902C1}


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\Text Editor\External
Markers\{095C01F2-B8AB-4FBB-9404-6EFCD125E4F8}
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:53 PM
Value 0
  Name:            <NO NAME>
  Type:            REG_SZ
  Data:            Debugger Tracepoint Disabled
Marker

Value 1
  Name:            Service
  Type:            REG_SZ
  Data:            {44B05627-95C2-4CE8-BDCD-
4AA722785093}

Value 2
  Name:            DisplayName
  Type:            REG_SZ
  Data:            #248

Value 3
  Name:            Package
  Type:            REG_SZ
```


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```
  Data:            {C9DD4A57-47FB-11D2-83E7-
00C04F9902C1}


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\Text Editor\External
Markers\{1915461E-0F61-44C5-8F2C-9CE3CA05B2C1}
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:53 PM
Value 0
  Name:            <NO NAME>
  Type:            REG_SZ
  Data:            Debugger Tracepoint Mapped Error
Marker

Value 1
  Name:            Service
  Type:            REG_SZ
  Data:            {44B05627-95C2-4CE8-BDCD-
4AA722785093}

Value 2
  Name:            DisplayName
  Type:            REG_SZ
  Data:            #272

Value 3
  Name:            Package
  Type:            REG_SZ
  Data:            {C9DD4A57-47FB-11D2-83E7-
00C04F9902C1}


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\Text Editor\External
Markers\{1B7D8015-15FF-4EC9-9C8C-5B83499C8468}
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:53 PM
Value 0
  Name:            <NO NAME>
  Type:            REG_SZ
  Data:            Debugger Breakpoint Advanced
Disabled Marker

Value 1
  Name:            Service
  Type:            REG_SZ
  Data:            {44B05627-95C2-4CE8-BDCD-
4AA722785093}

Value 2
  Name:            DisplayName
  Type:            REG_SZ
  Data:            #263

Value 3
  Name:            Package
  Type:            REG_SZ
  Data:            {C9DD4A57-47FB-11D2-83E7-
00C04F9902C1}


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\Text Editor\External
Markers\{1E36D6FC-803F-4FD3-BD00-435A4EEF8911}
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:53 PM
Value 0
  Name:            <NO NAME>
  Type:            REG_SZ
  Data:            Debugger Breakpoint Advanced
Enabled Marker

Value 1
  Name:            Service
  Type:            REG_SZ
  Data:            {44B05627-95C2-4CE8-BDCD-
4AA722785093}

Value 2
  Name:            DisplayName
  Type:            REG_SZ
  Data:            #255

Value 3
  Name:            Package
  Type:            REG_SZ
  Data:            {C9DD4A57-47FB-11D2-83E7-
00C04F9902C1}


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\Text Editor\External
Markers\{1F66BCD8-0239-4A9B-A3F9-F51321D3368C}
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:53 PM
Value 0
  Name:            <NO NAME>
  Type:            REG_SZ
  Data:            Debugger Tracepoint Error Marker

Value 1
  Name:            Service
  Type:            REG_SZ
  Data:            {44B05627-95C2-4CE8-BDCD-
4AA722785093}

Value 2
  Name:            DisplayName
  Type:            REG_SZ
  Data:            #249

Value 3
  Name:            Package
  Type:            REG_SZ
  Data:            {C9DD4A57-47FB-11D2-83E7-
00C04F9902C1}


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\Text Editor\External
Markers\{2138B8A9-9D8F-4073-90AC-88678AC755A5}
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:53 PM
Value 0
  Name:            <NO NAME>
  Type:            REG_SZ
  Data:            Debugger Tracepoint Mapped Warning
Marker

Value 1
  Name:            Service
  Type:            REG_SZ
  Data:            {44B05627-95C2-4CE8-BDCD-
4AA722785093}

Value 2
  Name:            DisplayName
  Type:            REG_SZ
  Data:            #273

Value 3
  Name:            Package
  Type:            REG_SZ
  Data:            {C9DD4A57-47FB-11D2-83E7-
00C04F9902C1}


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\Text Editor\External
Markers\{237C7135-D8A7-48C4-832C-DF1FB8CEFD0E}
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:53 PM
Value 0
  Name:            <NO NAME>
  Type:            REG_SZ
  Data:            Debugger Tracepoint Advanced
Disabled Marker

Value 1
  Name:            Service
  Type:            REG_SZ
  Data:            {44B05627-95C2-4CE8-BDCD-
4AA722785093}

Value 2
  Name:            DisplayName
  Type:            REG_SZ
  Data:            #266

Value 3
  Name:            Package
  Type:            REG_SZ
  Data:            {C9DD4A57-47FB-11D2-83E7-
00C04F9902C1}


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\Text Editor\External
Markers\{2DAA2998-36A1-4B85-B8E9-4CDA438DDF8C}
Class Name:        <NO CLASS>
```


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```
Last Write Time:   7/19/2005 - 4:53 PM
Value 0
  Name:            <NO NAME>
  Type:            REG_SZ
  Data:            Debugger Tracepoint Advanced
Warning Marker

Value 1
  Name:            Service
  Type:            REG_SZ
  Data:            {44B05627-95C2-4CE8-BDCD-
4AA722785093}

Value 2
  Name:            DisplayName
  Type:            REG_SZ
  Data:            #269

Value 3
  Name:            Package
  Type:            REG_SZ
  Data:            {C9DD4A57-47FB-11D2-83E7-
00C04F9902C1}


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\Text Editor\External
Markers\{2FA576FC-EA49-49B0-93D6-85133168BA82}
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:53 PM
Value 0
  Name:            <NO NAME>
  Type:            REG_SZ
  Data:            Debugger Tracepoint Mapped
Disabled Marker

Value 1
  Name:            Service
  Type:            REG_SZ
  Data:            {44B05627-95C2-4CE8-BDCD-
4AA722785093}

Value 2
  Name:            DisplayName
  Type:            REG_SZ
  Data:            #270

Value 3
  Name:            Package
  Type:            REG_SZ
  Data:            {C9DD4A57-47FB-11D2-83E7-
00C04F9902C1}


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\Text Editor\External
Markers\{37469172-F83A-4BFA-864B-6900D34EA6F0}
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:53 PM
Value 0
  Name:            <NO NAME>
  Type:            REG_SZ
  Data:            Debugger Tracepoint Enabled Marker

Value 1
  Name:            Service
  Type:            REG_SZ
  Data:            {44B05627-95C2-4CE8-BDCD-
4AA722785093}

Value 2
  Name:            DisplayName
  Type:            REG_SZ
  Data:            #247

Value 3
  Name:            Package
  Type:            REG_SZ
  Data:            {C9DD4A57-47FB-11D2-83E7-
00C04F9902C1}


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\Text Editor\External
Markers\{387D9BB6-2845-46f3-AC93-55EDC2DE7282}
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:53 PM
Value 0
  Name:            <NO NAME>
  Type:            REG_SZ
  Data:            Template Parameter

Value 1
  Name:            DisplayName
  Type:            REG_SZ
  Data:            #1001

Value 2
  Name:            Package
  Type:            REG_SZ
  Data:            {4058755A-8FBE-41C7-BC99-
3DBF5C74BA62}

Value 3
  Name:            Service
  Type:            REG_SZ
  Data:            {A179EC84-21B0-4923-B1CF-
7032F2AD72FA}


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\Text Editor\External
Markers\{3DDBBA3A-4C4A-493B-BAD1-70E2B47B421C}
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:53 PM
Value 0
  Name:            <NO NAME>
  Type:            REG_SZ
  Data:            Debugger Breakpoint Advanced
Warning Marker

Value 1
  Name:            Service
  Type:            REG_SZ
  Data:            {44B05627-95C2-4CE8-BDCD-
4AA722785093}

Value 2
  Name:            DisplayName
  Type:            REG_SZ
  Data:            #265

Value 3
  Name:            Package
  Type:            REG_SZ
  Data:            {C9DD4A57-47FB-11D2-83E7-
00C04F9902C1}


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\Text Editor\External
Markers\{454B4B0E-829F-4e1a-9BB9-118AEF41F8D6}
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:53 PM
Value 0
  Name:            <NO NAME>
  Type:            REG_SZ
  Data:            Error Message

Value 1
  Name:            DisplayName
  Type:            REG_SZ
  Data:            #1000

Value 2
  Name:            Package
  Type:            REG_SZ
  Data:            {4058755A-8FBE-41C7-BC99-
3DBF5C74BA62}

Value 3
  Name:            Service
  Type:            REG_SZ
  Data:            {A179EC84-21B0-4923-B1CF-
7032F2AD72FA}


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\Text Editor\External
Markers\{546FAD73-6000-4138-BA73-9B4746C38324}
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:53 PM
Value 0
  Name:            <NO NAME>
  Type:            REG_SZ
  Data:            Debugger Breakpoint Mapped Warning
Marker

Value 1
  Name:            Service
  Type:            REG_SZ
  Data:            {44B05627-95C2-4CE8-BDCD-
4AA722785093}
```


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```
Value 2
  Name:            DisplayName
  Type:            REG_SZ
  Data:            #251

Value 3
  Name:            Package
  Type:            REG_SZ
  Data:            {C9DD4A57-47FB-11D2-83E7-
00C04F9902C1}


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\Text Editor\External
Markers\{554B4B0E-829F-4e1a-9BB9-118AEF41F8D6}
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:53 PM
Value 0
  Name:            <NO NAME>
  Type:            REG_SZ
  Data:

Value 1
  Name:            Package
  Type:            REG_SZ
  Data:            {4058755A-8FBE-41C7-BC99-
3DBF5C74BA62}

Value 2
  Name:            Service
  Type:            REG_SZ
  Data:            {A179EC84-21B0-4923-B1CF-
7032F2AD72FA}


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\Text Editor\External
Markers\{59E4355F-5663-45B8-B4F3-51ED22561DED}
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:53 PM
Value 0
  Name:            <NO NAME>
  Type:            REG_SZ
  Data:            Debugger Breakpoint Mapped
Disabled Marker

Value 1
  Name:            Service
  Type:            REG_SZ
  Data:            {44B05627-95C2-4CE8-BDCD-
4AA722785093}

Value 2
  Name:            DisplayName
  Type:            REG_SZ
  Data:            #201

Value 3
  Name:            Package
  Type:            REG_SZ
  Data:            {C9DD4A57-47FB-11D2-83E7-
00C04F9902C1}


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\Text Editor\External
Markers\{61DF72D6-D8F7-472E-A78D-4DDF06ED7391}
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:53 PM
Value 0
  Name:            <NO NAME>
  Type:            REG_SZ
  Data:            Debugger Breakpoint Mapped Error
Marker

Value 1
  Name:            Service
  Type:            REG_SZ
  Data:            {44B05627-95C2-4CE8-BDCD-
4AA722785093}

Value 2
  Name:            DisplayName
  Type:            REG_SZ
  Data:            #253

Value 3
  Name:            Package
  Type:            REG_SZ
  Data:            {C9DD4A57-47FB-11D2-83E7-
00C04F9902C1}


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\Text Editor\External
Markers\{69DA1285-D454-4DA1-AB7A-1039C71F3F80}
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:53 PM
Value 0
  Name:            <NO NAME>
  Type:            REG_SZ
  Data:            Debugger Breakpoint Advanced Error
Marker

Value 1
  Name:            Service
  Type:            REG_SZ
  Data:            {44B05627-95C2-4CE8-BDCD-
4AA722785093}

Value 2
  Name:            DisplayName
  Type:            REG_SZ
  Data:            #264

Value 3
  Name:            Package
  Type:            REG_SZ
  Data:            {C9DD4A57-47FB-11D2-83E7-
00C04F9902C1}


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\Text Editor\External
Markers\{6D799B25-7F32-4173-A4EB-521827D4AE4F}
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:53 PM
Value 0
  Name:            <NO NAME>
  Type:            REG_SZ
  Data:            Debugger Current Statement Marker

Value 1
  Name:            Service
  Type:            REG_SZ
  Data:            {44B05627-95C2-4CE8-BDCD-
4AA722785093}

Value 2
  Name:            DisplayName
  Type:            REG_SZ
  Data:            #199

Value 3
  Name:            Package
  Type:            REG_SZ
  Data:            {C9DD4A57-47FB-11D2-83E7-
00C04F9902C1}


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\Text Editor\External
Markers\{7E2ED083-0516-4366-A84E-3FECB4369799}
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:53 PM
Value 0
  Name:            <NO NAME>
  Type:            REG_SZ
  Data:            Debugger Breakpoint Disabled
Marker

Value 1
  Name:            Service
  Type:            REG_SZ
  Data:            {44B05627-95C2-4CE8-BDCD-
4AA722785093}

Value 2
  Name:            DisplayName
  Type:            REG_SZ
  Data:            #195

Value 3
  Name:            Package
  Type:            REG_SZ
  Data:            {C9DD4A57-47FB-11D2-83E7-
00C04F9902C1}


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
```


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```
Server\90\Tools\Shell\Text Editor\External
Markers\{9D00A12E-9336-4585-A4A6-27B87383312D}
Class Name:         <NO CLASS>
Last Write Time:    7/19/2005 - 4:53 PM
Value 0
  Name:             <NO NAME>
  Type:             REG_SZ
  Data:             Debugger Breakpoint Error Marker

Value 1
  Name:             Service
  Type:             REG_SZ
  Data:             {44B05627-95C2-4CE8-BDCD-
4AA722785093}

Value 2
  Name:             DisplayName
  Type:             REG_SZ
  Data:             #196

Value 3
  Name:             Package
  Type:             REG_SZ
  Data:             {C9DD4A57-47FB-11D2-83E7-
00C04F9902C1}


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\Text Editor\External
Markers\{9E96A88C-A98E-4711-B610-F2783EEFD731}
Class Name:         <NO CLASS>
Last Write Time:    7/19/2005 - 4:53 PM
Value 0
  Name:             <NO NAME>
  Type:             REG_SZ
  Data:             Debugger Tracepoint Advanced Error
Marker

Value 1
  Name:             Service
  Type:             REG_SZ
  Data:             {44B05627-95C2-4CE8-BDCD-
4AA722785093}

Value 2
  Name:             DisplayName
  Type:             REG_SZ
  Data:             #268

Value 3
  Name:             Package
  Type:             REG_SZ
  Data:             {C9DD4A57-47FB-11D2-83E7-
00C04F9902C1}


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\Text Editor\External
Markers\{A5998F84-BB45-4885-B552-0A9A6D98BE26}
Class Name:         <NO CLASS>
Last Write Time:    7/19/2005 - 4:53 PM
Value 0
  Name:             <NO NAME>
  Type:             REG_SZ
  Data:             Debugger Breakpoint Warning Marker

Value 1
  Name:             Service
  Type:             REG_SZ
  Data:             {44B05627-95C2-4CE8-BDCD-
4AA722785093}

Value 2
  Name:             DisplayName
  Type:             REG_SZ
  Data:             #197

Value 3
  Name:             Package
  Type:             REG_SZ
  Data:             {C9DD4A57-47FB-11D2-83E7-
00C04F9902C1}


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\Text Editor\External
Markers\{C362E2C6-C242-425D-95D4-9A52B27096A8}
Class Name:         <NO CLASS>
Last Write Time:    7/19/2005 - 4:53 PM
Value 0
  Name:             <NO NAME>
  Type:             REG_SZ
  Data:             Debugger Breakpoint Enabled Marker

Value 1
  Name:             Service
  Type:             REG_SZ
  Data:             {44B05627-95C2-4CE8-BDCD-
4AA722785093}

Value 2
  Name:             DisplayName
  Type:             REG_SZ
  Data:             #194

Value 3
  Name:             Package
  Type:             REG_SZ
  Data:             {C9DD4A57-47FB-11D2-83E7-
00C04F9902C1}


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\Text Editor\External
Markers\{CCB8B9D5-1643-4B41-8395-53C5B5ED5284}
Class Name:         <NO CLASS>
Last Write Time:    7/19/2005 - 4:53 PM
Value 0
  Name:             <NO NAME>
  Type:             REG_SZ
  Data:             Debugger Call Return Marker

Value 1
  Name:             Service
  Type:             REG_SZ
  Data:             {44B05627-95C2-4CE8-BDCD-
4AA722785093}

Value 2
  Name:             DisplayName
  Type:             REG_SZ
  Data:             #198

Value 3
  Name:             Package
  Type:             REG_SZ
  Data:             {C9DD4A57-47FB-11D2-83E7-
00C04F9902C1}


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\Text Editor\External
Markers\{E3AA0043-8E3E-4441-BDC5-79F72387E807}
Class Name:         <NO CLASS>
Last Write Time:    7/19/2005 - 4:53 PM
Value 0
  Name:             <NO NAME>
  Type:             REG_SZ
  Data:             Debugger Tracepoint Advanced
Enabled Marker

Value 1
  Name:             Service
  Type:             REG_SZ
  Data:             {44B05627-95C2-4CE8-BDCD-
4AA722785093}

Value 2
  Name:             DisplayName
  Type:             REG_SZ
  Data:             #267

Value 3
  Name:             Package
  Type:             REG_SZ
  Data:             {C9DD4A57-47FB-11D2-83E7-
00C04F9902C1}


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\Text Editor\External
Markers\{E52A924F-0A81-4CE0-B5A2-C4BAE0BF29E3}
Class Name:         <NO CLASS>
Last Write Time:    7/19/2005 - 4:53 PM
Value 0
  Name:             <NO NAME>
  Type:             REG_SZ
  Data:             Debugger Breakpoint Mapped Enabled
Marker

Value 1
  Name:             Service
  Type:             REG_SZ
```


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```
  Data:            {44B05627-95C2-4CE8-BDCD-
4AA722785093}

Value 2
  Name:            DisplayName
  Type:            REG_SZ
  Data:            #200

Value 3
  Name:            Package
  Type:            REG_SZ
  Data:            {C9DD4A57-47FB-11D2-83E7-
00C04F9902C1}


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\Text Editor\External
Markers\{F7218A30-4648-4994-8A38-2FAF8A992E4F}
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:53 PM
Value 0
  Name:            <NO NAME>
  Type:            REG_SZ
  Data:            Debugger Tracepoint Warning Marker

Value 1
  Name:            Service
  Type:            REG_SZ
  Data:            {44B05627-95C2-4CE8-BDCD-
4AA722785093}

Value 2
  Name:            DisplayName
  Type:            REG_SZ
  Data:            #250

Value 3
  Name:            Package
  Type:            REG_SZ
  Data:            {C9DD4A57-47FB-11D2-83E7-
00C04F9902C1}


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\ToolboxPages
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:53 PM

Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\ToolboxPages\Maintenance Tasks
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:53 PM
Value 0
  Name:            <NO NAME>
  Type:            REG_SZ
  Data:            #155

Value 1
  Name:            Package
  Type:            REG_SZ
  Data:            {4A0C6509-BF90-43da-ABEE-
0ABA3A8527F1}

Value 2
  Name:            Page
  Type:            REG_SZ
  Data:            {3B0C23E7-FCFB-4aa3-9457-
FABE6CC9A493}

Value 3
  Name:            Type
  Type:            REG_SZ
  Data:
Microsoft.DataTransformationServices.VsIntegration.Db
MaintToolboxPage,
Microsoft.DataTransformationServices.VsIntegration

Value 4
  Name:            PageName
  Type:            REG_SZ
  Data:            Maintenance Tasks


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\ToolboxPages\Microsoft.VisualSt
udio.Toolbox.VsToolboxPage
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:53 PM
Value 0
  Name:            <NO NAME>
  Type:            REG_SZ
  Data:            #1002

Value 1
  Name:            Package
  Type:            REG_SZ
  Data:            {7494682b-37a0-11d2-a273-
00c04f8ef4ff}

Value 2
  Name:            Page
  Type:            REG_SZ
  Data:            {74946839-37a0-11d2-a273-
00c04f8ef4ff}

Value 3
  Name:            DefaultTbx
  Type:            REG_DWORD
  Data:            0xa

Value 4
  Name:            HelpKeyword
  Type:            REG_SZ
  Data:            frameworkcomponents


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\ToolboxPages\Microsoft.VisualSt
udio.Toolbox.VsToolboxPage\VisibilityCmdUIContexts
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:53 PM
Value 0
  Name:            SQL_Tools90
  Type:            REG_SZ
  Data:            0


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\ToolsOptionsDefaults
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:53 PM

Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\ToolsOptionsDefaults\WebBrowser
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:53 PM
Value 0
  Name:            ExtEditor
  Type:            REG_SZ
  Data:            %SYSTEMROOT%\system32\notepad.exe

Value 1
  Name:            Flags
  Type:            REG_DWORD
  Data:            0x13

Value 2
  Name:            HomePage
  Type:            REG_SZ
  Data:
http://go.microsoft.com/fwlink/?linkid=32722

Value 3
  Name:            SearchPage
  Type:            REG_SZ
  Data:
http://go.microsoft.com/fwlink/?linkid=32722


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\ToolsOptionsPages
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:53 PM

Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\ToolsOptionsPages\Business
Intelligence Designers
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:53 PM
Value 0
  Name:            <NO NAME>
  Type:            REG_SZ
  Data:            #601

Value 1
  Name:            Package
  Type:            REG_SZ
  Data:            {4A0C6509-BF90-43da-ABEE-
0ABA3A8527F1}
```


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```
Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\ToolsOptionsPages\Business
Intelligence Designers\Data Transformation Designers
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:53 PM
Value 0
  Name:            <NO NAME>
  Type:            REG_SZ
  Data:            #612

Value 1
  Name:            Package
  Type:            REG_SZ
  Data:            {4A0C6509-BF90-43da-ABEE-
0ABA3A8527F1}


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\ToolsOptionsPages\Business
Intelligence Designers\Data Transformation
Designers\Auto Connect
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:53 PM
Value 0
  Name:            <NO NAME>
  Type:            REG_SZ
  Data:            #632

Value 1
  Name:            Package
  Type:            REG_SZ
  Data:            {4A0C6509-BF90-43da-ABEE-
0ABA3A8527F1}

Value 2
  Name:            Page
  Type:            REG_SZ
  Data:            {9AB657DD-C512-48e1-A79D-
BF1F128F1A70}

Value 3
  Name:            Type
  Type:            REG_SZ
  Data:
Microsoft.DataTransformationServices.Design.VsOptionP
ages.AutomaticConnectOptionPage,
Microsoft.DataTransformationServices.Design,
PublicKeyToken=89845dcd8080cc91

Value 4
  Name:            PageName
  Type:            REG_SZ
  Data:            Auto Connect


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\ToolsOptionsPages\Business
Intelligence Designers\Data Transformation
Designers\General
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:53 PM
Value 0
  Name:            <NO NAME>
  Type:            REG_SZ
  Data:            #631

Value 1
  Name:            Package
  Type:            REG_SZ
  Data:            {4A0C6509-BF90-43da-ABEE-
0ABA3A8527F1}

Value 2
  Name:            Page
  Type:            REG_SZ
  Data:            {87AF0C16-B4CE-474d-9D38-
3CC1DA78D560}

Value 3
  Name:            Type
  Type:            REG_SZ
  Data:
Microsoft.DataTransformationServices.Design.VsOptionP
ages.DTSSigningOptionPage,
Microsoft.DataTransformationServices.Design,
PublicKeyToken=89845dcd8080cc91

Value 4
  Name:            PageName
  Type:            REG_SZ
  Data:            General


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\ToolsOptionsPages\Business
Intelligence Designers\Data Transformation
Designers\Pipeline Auto Connect
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:53 PM
Value 0
  Name:            <NO NAME>
  Type:            REG_SZ
  Data:            #633

Value 1
  Name:            Package
  Type:            REG_SZ
  Data:            {4A0C6509-BF90-43da-ABEE-
0ABA3A8527F1}

Value 2
  Name:            Page
  Type:            REG_SZ
  Data:            {68867E08-D302-46da-BD12-
528F0319EE3F}

Value 3
  Name:            Type
  Type:            REG_SZ
  Data:
Microsoft.DataTransformationServices.Design.VsOptionP
ages.PipelineAutomaticConnectOptionPage,
Microsoft.DataTransformationServices.Design,
PublicKeyToken=89845dcd8080cc91

Value 4
  Name:            PageName
  Type:            REG_SZ
  Data:            Pipeline Auto Connect


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\ToolsOptionsPages\Business
Intelligence Designers\VisibilityCmdUIContexts
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:53 PM
Value 0
  Name:            SQL_Tools90
  Type:            REG_SZ
  Data:            0


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\ToolsOptionsPages\Debugger
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:53 PM
Value 0
  Name:            Sort
  Type:            REG_DWORD
  Data:            0x3c

Value 1
  Name:            <NO NAME>
  Type:            REG_SZ
  Data:            #5000

Value 2
  Name:            Package
  Type:            REG_SZ
  Data:            {C9DD4A57-47FB-11D2-83E7-
00C04F9902C1}


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\ToolsOptionsPages\Debugger\ENC
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:53 PM
Value 0
  Name:            <NO NAME>
  Type:            REG_SZ
  Data:            #5003

Value 1
  Name:            Package
  Type:            REG_SZ
  Data:            {C9DD4A57-47FB-11D2-83E7-
00C04F9902C1}

Value 2
  Name:            Page
  Type:            REG_SZ
```


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```
  Data:            {6C3ECAA6-3EFB-4B0D-9660-
2A3BA5B8440E}


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\ToolsOptionsPages\Debugger\ENC\
VisibilityCmdUIContexts
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:53 PM
Value 0
  Name:            {0E67F38A-CADD-4FE1-8E77-
E94B1DF90D1B}
  Type:            REG_SZ
  Data:            1


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\ToolsOptionsPages\Debugger\Gene
ral
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:53 PM
Value 0
  Name:            <NO NAME>
  Type:            REG_SZ
  Data:            #5001

Value 1
  Name:            Package
  Type:            REG_SZ
  Data:            {C9DD4A57-47FB-11D2-83E7-
00C04F9902C1}

Value 2
  Name:            Page
  Type:            REG_SZ
  Data:            {FA9EB535-C624-13D0-AE1F-
00A0190FF4C3}


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\ToolsOptionsPages\Debugger\JIT
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:53 PM
Value 0
  Name:            <NO NAME>
  Type:            REG_SZ
  Data:            #5036

Value 1
  Name:            Package
  Type:            REG_SZ
  Data:            {C9DD4A57-47FB-11D2-83E7-
00C04F9902C1}

Value 2
  Name:            Page
  Type:            REG_SZ
  Data:            {B9EFCAF2-9EAE-4022-9E39-
FA947666ADD9}


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\ToolsOptionsPages\Debugger\JIT\
VisibilityCmdUIContexts
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:53 PM
Value 0
  Name:            {CA99BB24-1434-44AD-8BF7-
E50615989FB3}
  Type:            REG_SZ
  Data:            1


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\ToolsOptionsPages\Debugger\Nati
ve
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:53 PM
Value 0
  Name:            <NO NAME>
  Type:            REG_SZ
  Data:            #5004

Value 1
  Name:            Package
  Type:            REG_SZ
  Data:            {C9DD4A57-47FB-11D2-83E7-
00C04F9902C1}

Value 2
  Name:            Page
  Type:            REG_SZ
  Data:            {3E08D829-6989-45C3-97DA-
F8BF3C49AEAB}


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\ToolsOptionsPages\Debugger\Nati
ve\VisibilityCmdUIContexts
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:53 PM
Value 0
  Name:            {8E1E81E7-55B6-4488-97B3-
813FD261C719}
  Type:            REG_SZ
  Data:            1

Value 1
  Name:            {3B476D35-A401-11D2-AAD4-
00C04F990171}
  Type:            REG_SZ
  Data:            1


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\ToolsOptionsPages\Debugger\Symb
ols
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:53 PM
Value 0
  Name:            <NO NAME>
  Type:            REG_SZ
  Data:            #5051

Value 1
  Name:            Package
  Type:            REG_SZ
  Data:            {C9DD4A57-47FB-11D2-83E7-
00C04F9902C1}

Value 2
  Name:            Page
  Type:            REG_SZ
  Data:            {1F5E080F-CBD2-459C-8267-
39FD83032166}


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\ToolsOptionsPages\Debugger\Visi
bilityCmdUIContexts
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:53 PM
Value 0
  Name:            {338492A6-3F51-407C-8DE5-
D25445BFFCDD}
  Type:            REG_SZ
  Data:            1


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\ToolsOptionsPages\Designers
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:53 PM
Value 0
  Name:            Package
  Type:            REG_SZ
  Data:            {4058755A-8FBE-41c7-BC99-
3DBF5C74BA62}

Value 1
  Name:            <NO NAME>
  Type:            REG_SZ
  Data:            #3122

Value 2
  Name:            Sort
  Type:            REG_DWORD
  Data:            0x32


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\ToolsOptionsPages\Designers\Ana
lysis Services Designers
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:53 PM
Value 0
  Name:            <NO NAME>
  Type:            REG_SZ
  Data:            #611
```


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```
Value 1
  Name:            Package
  Type:            REG_SZ
  Data:            {4A0C6509-BF90-43da-ABEE-
0ABA3A8527F1}


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\ToolsOptionsPages\Designers\Ana
lysis Services Designers\Data Mining Viewers
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:53 PM
Value 0
  Name:            <NO NAME>
  Type:            REG_SZ
  Data:            #622

Value 1
  Name:            Package
  Type:            REG_SZ
  Data:            {4A0C6509-BF90-43da-ABEE-
0ABA3A8527F1}

Value 2
  Name:            Page
  Type:            REG_SZ
  Data:            {462AD575-2E26-49ec-9883-
58FA0B9FFCFB}

Value 3
  Name:            Type
  Type:            REG_SZ
  Data:
Microsoft.AnalysisServices.Project.Design.DataMiningV
iewersOptionPage, Microsoft.AnalysisServices.Project,
PublicKeyToken=89845dcd8080cc91

Value 4
  Name:            PageName
  Type:            REG_SZ
  Data:            Data Mining Viewers


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\ToolsOptionsPages\Designers\Ana
lysis Services Designers\General
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:53 PM
Value 0
  Name:            <NO NAME>
  Type:            REG_SZ
  Data:            #621

Value 1
  Name:            Package
  Type:            REG_SZ
  Data:            {4A0C6509-BF90-43da-ABEE-
0ABA3A8527F1}

Value 2
  Name:            Page
  Type:            REG_SZ
  Data:            {F7FD30E6-BC59-411e-A889-
878D33644B54}

Value 3
  Name:            Type
  Type:            REG_SZ
  Data:
Microsoft.AnalysisServices.Project.Design.ReducedData
WarehouseOptionPage,
Microsoft.AnalysisServices.Project,
PublicKeyToken=89845dcd8080cc91

Value 4
  Name:            PageName
  Type:            REG_SZ
  Data:            General


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\ToolsOptionsPages\Designers\Mai
ntenancePlans
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:53 PM
Value 0
  Name:            <NO NAME>
  Type:            REG_SZ
  Data:            #154

Value 1
  Name:            Package
  Type:            REG_SZ
  Data:            {4A0C6509-BF90-43da-ABEE-
0ABA3A8527F1}

Value 2
  Name:            Page
  Type:            REG_SZ
  Data:            {9AB657DD-C512-48e1-A79D-
BF1F128F1A70}

Value 3
  Name:            Type
  Type:            REG_SZ
  Data:
Microsoft.DataTransformationServices.Design.VsOptionP
ages.AutomaticConnectOptionPage,
Microsoft.DataTransformationServices.Design,
PublicKeyToken=89845dcd8080cc91

Value 4
  Name:            PageName
  Type:            REG_SZ
  Data:            Auto Connect

Value 5
  Name:            Sort
  Type:            REG_DWORD
  Data:            0x14


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\ToolsOptionsPages\Designers\Tab
le Designer
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:53 PM
Value 0
  Name:            <NO NAME>
  Type:            REG_SZ
  Data:            #6227

Value 1
  Name:            Package
  Type:            REG_SZ
  Data:            {220A4C17-7E7C-4663-BBCC-
5E607C6543CD}

Value 2
  Name:            Page
  Type:            REG_SZ
  Data:            {89e05c19-4303-4204-9b99-
3f7650da8714}

Value 3
  Name:            Sort
  Type:            REG_DWORD
  Data:            0xa


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\ToolsOptionsPages\Environment
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:53 PM
Value 0
  Name:            <NO NAME>
  Type:            REG_SZ
  Data:            #13569

Value 1
  Name:            Package
  Type:            REG_SZ
  Data:            {DA9FB551-C724-11d0-AE1F-
00A0C90FFFC3}

Value 2
  Name:            Sort
  Type:            REG_DWORD
  Data:            0


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\ToolsOptionsPages\Environment\F
onts And Colors
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:53 PM
Value 0
  Name:            <NO NAME>
  Type:            REG_SZ
  Data:            #14104

Value 1
```


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```
  Name:            Page
  Type:            REG_SZ
  Data:            {57F6B7D2-1436-11d1-883C-
0000F87579D2}

Value 2
  Name:            Package
  Type:            REG_SZ
  Data:            {DA9FB551-C724-11d0-AE1F-
00A0C90FFFC3}

Value 3
  Name:            Sort
  Type:            REG_DWORD
  Data:            0x14


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\ToolsOptionsPages\Environment\H
elp
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:53 PM
Value 0
  Name:            <NO NAME>
  Type:            REG_SZ
  Data:            #1007

Value 1
  Name:            Package
  Type:            REG_SZ
  Data:            {4A791146-19E4-11d3-B86B-
00C04F79F802}


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\ToolsOptionsPages\Environment\H
elp\General
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:53 PM
Value 0
  Name:            <NO NAME>
  Type:            REG_SZ
  Data:            #1004

Value 1
  Name:            Package
  Type:            REG_SZ
  Data:            {4A791146-19E4-11d3-B86B-
00C04F79F802}

Value 2
  Name:            Page
  Type:            REG_SZ
  Data:            {73F6DD5C-437E-11d3-B88E-
00C04F79F802}


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\ToolsOptionsPages\Environment\H
elp\Online
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:53 PM
Value 0
  Name:            <NO NAME>
  Type:            REG_SZ
  Data:            #1005

Value 1
  Name:            Package
  Type:            REG_SZ
  Data:            {4A791146-19E4-11d3-B86B-
00C04F79F802}

Value 2
  Name:            Page
  Type:            REG_SZ
  Data:            {9284AE5A-6D41-47bc-AB90-
42550A0C6C40}


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\ToolsOptionsPages\Environment\S
QLEnvironmentKeyboard
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:53 PM
Value 0
  Name:            <NO NAME>
  Type:            REG_SZ
  Data:            #3121

Value 1
  Name:            Package
  Type:            REG_SZ
  Data:            {4058755A-8FBE-41c7-BC99-
3DBF5C74BA62}

Value 2
  Name:            Page
  Type:            REG_SZ
  Data:            {3D23B42C-CB9F-40c9-8A90-
F2FA32226EED}

Value 3
  Name:            Sort
  Type:            REG_DWORD
  Data:            0x1e


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\ToolsOptionsPages\Environment\S
QLEnvironmentOptions
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:53 PM
Value 0
  Name:            <NO NAME>
  Type:            REG_SZ
  Data:            #3113

Value 1
  Name:            Package
  Type:            REG_SZ
  Data:            {4058755A-8FBE-41c7-BC99-
3DBF5C74BA62}

Value 2
  Name:            Page
  Type:            REG_SZ
  Data:            {FDBFA9E2-F401-4324-9C52-
342E87B42A28}

Value 3
  Name:            Sort
  Type:            REG_DWORD
  Data:            0xa


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\ToolsOptionsPages\QueryExecutio
n
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:53 PM
Value 0
  Name:            <NO NAME>
  Type:            REG_SZ
  Data:            #3120

Value 1
  Name:            Package
  Type:            REG_SZ
  Data:            {4058755A-8FBE-41c7-BC99-
3DBF5C74BA62}

Value 2
  Name:            Sort
  Type:            REG_DWORD
  Data:            0x1e


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\ToolsOptionsPages\QueryExecutio
n\AnalysisServer
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:53 PM
Value 0
  Name:            <NO NAME>
  Type:            REG_SZ
  Data:            #3118

Value 1
  Name:            Package
  Type:            REG_SZ
  Data:            {4058755A-8FBE-41c7-BC99-
3DBF5C74BA62}

Value 2
  Name:            Sort
  Type:            REG_DWORD
  Data:            0x2


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
```


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```
Server\90\Tools\Shell\ToolsOptionsPages\QueryExecutio
n\AnalysisServer\AnalysisServicesExecutionGeneral
Class Name:         <NO CLASS>
Last Write Time:    7/19/2005 - 4:53 PM
Value 0
  Name:             <NO NAME>
  Type:             REG_SZ
  Data:             #3116

Value 1
  Name:             Package
  Type:             REG_SZ
  Data:             {4058755A-8FBE-41c7-BC99-
3DBF5C74BA62}

Value 2
  Name:             Page
  Type:             REG_SZ
  Data:             {746D01A9-A817-4b21-865F-
F98964C908AF}


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\ToolsOptionsPages\QueryExecutio
n\SqlServer
Class Name:         <NO CLASS>
Last Write Time:    7/19/2005 - 4:53 PM
Value 0
  Name:             <NO NAME>
  Type:             REG_SZ
  Data:             #3117

Value 1
  Name:             Package
  Type:             REG_SZ
  Data:             {4058755A-8FBE-41c7-BC99-
3DBF5C74BA62}

Value 2
  Name:             Sort
  Type:             REG_DWORD
  Data:             0x1


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\ToolsOptionsPages\QueryExecutio
n\SqlServer\SqlExecutionAdvanced
Class Name:         <NO CLASS>
Last Write Time:    7/19/2005 - 4:53 PM
Value 0
  Name:             <NO NAME>
  Type:             REG_SZ
  Data:             #3101

Value 1
  Name:             Package
  Type:             REG_SZ
  Data:             {4058755A-8FBE-41c7-BC99-
3DBF5C74BA62}

Value 2
  Name:             Page
  Type:             REG_SZ
  Data:             {0404C455-C6D6-4639-AE00-
2F451AECCF1E}

Value 3
  Name:             Sort
  Type:             REG_DWORD
  Data:             0x2


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\ToolsOptionsPages\QueryExecutio
n\SqlServer\SqlExecutionAnsi
Class Name:         <NO CLASS>
Last Write Time:    7/19/2005 - 4:53 PM
Value 0
  Name:             <NO NAME>
  Type:             REG_SZ
  Data:             #3104

Value 1
  Name:             Package
  Type:             REG_SZ
  Data:             {4058755A-8FBE-41c7-BC99-
3DBF5C74BA62}

Value 2
  Name:             Page
  Type:             REG_SZ
  Data:             {00E240FD-6BDD-49cc-9086-
51FC23E8E8EA}

Value 3
  Name:             Sort
  Type:             REG_DWORD
  Data:             0x3


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\ToolsOptionsPages\QueryExecutio
n\SqlServer\SqlExecutionGeneral
Class Name:         <NO CLASS>
Last Write Time:    7/19/2005 - 4:53 PM
Value 0
  Name:             <NO NAME>
  Type:             REG_SZ
  Data:             #3102

Value 1
  Name:             Package
  Type:             REG_SZ
  Data:             {4058755A-8FBE-41c7-BC99-
3DBF5C74BA62}

Value 2
  Name:             Page
  Type:             REG_SZ
  Data:             {DCA3AAC5-0AB0-425b-9047-
BA60CB152E5A}

Value 3
  Name:             Sort
  Type:             REG_DWORD
  Data:             0x1


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\ToolsOptionsPages\QueryResults
Class Name:         <NO CLASS>
Last Write Time:    7/19/2005 - 4:53 PM
Value 0
  Name:             <NO NAME>
  Type:             REG_SZ
  Data:             #3119

Value 1
  Name:             Package
  Type:             REG_SZ
  Data:             {4058755A-8FBE-41c7-BC99-
3DBF5C74BA62}

Value 2
  Name:             Sort
  Type:             REG_DWORD
  Data:             0x28


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\ToolsOptionsPages\QueryResults\
AnalysisServer
Class Name:         <NO CLASS>
Last Write Time:    7/19/2005 - 4:53 PM
Value 0
  Name:             <NO NAME>
  Type:             REG_SZ
  Data:             #3118

Value 1
  Name:             Package
  Type:             REG_SZ
  Data:             {4058755A-8FBE-41c7-BC99-
3DBF5C74BA62}

Value 2
  Name:             Sort
  Type:             REG_DWORD
  Data:             0x2


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\ToolsOptionsPages\QueryResults\
AnalysisServer\AnalysisServicesResulstsGeneral
Class Name:         <NO CLASS>
Last Write Time:    7/19/2005 - 4:53 PM
Value 0
  Name:             <NO NAME>
  Type:             REG_SZ
  Data:             #3116

Value 1
```


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```
  Name:            Package
  Type:            REG_SZ
  Data:            {4058755A-8FBE-41c7-BC99-
3DBF5C74BA62}

Value 2
  Name:            Page
  Type:            REG_SZ
  Data:            {8F93B1F7-FE0C-4dea-9B6A-
A2A03E8AB41D}


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\ToolsOptionsPages\QueryResults\
SqlServer
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:53 PM
Value 0
  Name:            <NO NAME>
  Type:            REG_SZ
  Data:            #3117

Value 1
  Name:            Package
  Type:            REG_SZ
  Data:            {4058755A-8FBE-41c7-BC99-
3DBF5C74BA62}

Value 2
  Name:            Sort
  Type:            REG_DWORD
  Data:            0x1


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\ToolsOptionsPages\QueryResults\
SqlServer\SQLResultsGeneral
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:53 PM
Value 0
  Name:            <NO NAME>
  Type:            REG_SZ
  Data:            #3116

Value 1
  Name:            Package
  Type:            REG_SZ
  Data:            {4058755A-8FBE-41c7-BC99-
3DBF5C74BA62}

Value 2
  Name:            Page
  Type:            REG_SZ
  Data:            {04D7F91F-3BAD-4499-A338-
154D17DA9828}

Value 3
  Name:            Sort
  Type:            REG_DWORD
  Data:            0x1


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\ToolsOptionsPages\QueryResults\
SqlServer\SQLResultsToGrid
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:53 PM
Value 0
  Name:            <NO NAME>
  Type:            REG_SZ
  Data:            #3111

Value 1
  Name:            Package
  Type:            REG_SZ
  Data:            {4058755A-8FBE-41c7-BC99-
3DBF5C74BA62}

Value 2
  Name:            Page
  Type:            REG_SZ
  Data:            {88F58CDF-51E0-413b-B479-
D4445D2BFAB7}

Value 3
  Name:            Sort
  Type:            REG_DWORD
  Data:            0x2


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\ToolsOptionsPages\QueryResults\
SqlServer\SQLResultsToText
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:53 PM
Value 0
  Name:            <NO NAME>
  Type:            REG_SZ
  Data:            #3112

Value 1
  Name:            Package
  Type:            REG_SZ
  Data:            {4058755A-8FBE-41c7-BC99-
3DBF5C74BA62}

Value 2
  Name:            Page
  Type:            REG_SZ
  Data:            {3A746056-82B8-4930-88E5-
70A10C797481}

Value 3
  Name:            Sort
  Type:            REG_DWORD
  Data:            0x3


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\ToolsOptionsPages\Source
Control
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:53 PM
Value 0
  Name:            Sort
  Type:            REG_DWORD
  Data:            0x1

Value 1
  Name:            Package
  Type:            REG_SZ
  Data:            {53544C4D-E3F8-4AA0-8195-
8A8D16019423}

Value 2
  Name:            <NO NAME>
  Type:            REG_SZ
  Data:            #5005


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\ToolsOptionsPages\Source
Control\Environment
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:53 PM
Value 0
  Name:            Sort
  Type:            REG_DWORD
  Data:            0x1

Value 1
  Name:            Package
  Type:            REG_SZ
  Data:            {AA8EB8CD-7A51-11D0-92C3-
00A0C9138C45}

Value 2
  Name:            Page
  Type:            REG_SZ
  Data:            {9C1B8A62-7C24-11d3-8E6E-
005004775AC2}

Value 3
  Name:            <NO NAME>
  Type:            REG_SZ
  Data:            #510


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\ToolsOptionsPages\Source
Control\Environment\VisibilityCmdUIContexts
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:53 PM
Value 0
  Name:            {53544C4D-FFD5-48A9-B04A-
0700CCD31070}
  Type:            REG_SZ
  Data:            1


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
```


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```
Server\90\Tools\Shell\ToolsOptionsPages\Source
Control\General
Class Name:         <NO CLASS>
Last Write Time:    7/19/2005 - 4:53 PM
Value 0
  Name:             Package
  Type:             REG_SZ
  Data:             {53544C4D-E3F8-4AA0-8195-
8A8D16019423}

Value 1
  Name:             Page
  Type:             REG_SZ
  Data:             {53544C4D-1D2D-44bd-8566-
4FC149E23AAF}

Value 2
  Name:             <NO NAME>
  Type:             REG_SZ
  Data:             #5006


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\ToolsOptionsPages\Source
Control\Visual SourceSafe
Class Name:         <NO CLASS>
Last Write Time:    7/19/2005 - 4:53 PM
Value 0
  Name:             Sort
  Type:             REG_DWORD
  Data:             0x2

Value 1
  Name:             Package
  Type:             REG_SZ
  Data:             {AA8EB8CD-7A51-11D0-92C3-
00A0C9138C45}

Value 2
  Name:             Page
  Type:             REG_SZ
  Data:             {9C1B8A63-7C24-11d3-8E6E-
005004775AC2}

Value 3
  Name:             <NO NAME>
  Type:             REG_SZ
  Data:             #511


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\ToolsOptionsPages\Source
Control\Visual SourceSafe\VisibilityCmdUIContexts
Class Name:         <NO CLASS>
Last Write Time:    7/19/2005 - 4:53 PM
Value 0
  Name:             {53544C4D-FFD5-48A9-B04A-
0700CCD31070}
  Type:             REG_SZ
  Data:             1


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\ToolsOptionsPages\Text Editor
Class Name:         <NO CLASS>
Last Write Time:    7/19/2005 - 4:53 PM
Value 0
  Name:             <NO NAME>
  Type:             REG_SZ
  Data:             #13022

Value 1
  Name:             Package
  Type:             REG_SZ
  Data:             {F5E7E720-1401-11d1-883B-
0000F87579D2}

Value 2
  Name:             Sort
  Type:             REG_DWORD
  Data:             0x14


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\ToolsOptionsPages\Text
Editor\File Extension
Class Name:         <NO CLASS>
Last Write Time:    7/19/2005 - 4:53 PM
Value 0
  Name:             <NO NAME>
  Type:             REG_SZ
  Data:             #14645

Value 1
  Name:             Page
  Type:             REG_SZ
  Data:             {AC11E8EB-15F8-432F-B13F-
4AB8F56DA235}

Value 2
  Name:             Package
  Type:             REG_SZ
  Data:             {F5E7E720-1401-11d1-883B-
0000F87579D2}

Value 3
  Name:             Sort
  Type:             REG_DWORD
  Data:             0


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\ToolWindows
Class Name:         <NO CLASS>
Last Write Time:    7/19/2005 - 4:53 PM

Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\ToolWindows\{0504FF91-9D61-
11D0-A794-00A0C9110051}
Class Name:         <NO CLASS>
Last Write Time:    7/19/2005 - 4:53 PM
Value 0
  Name:             <NO NAME>
  Type:             REG_SZ
  Data:             {C9DD4A57-47FB-11D2-83E7-
00C04F9902C1}

Value 1
  Name:             Name
  Type:             REG_SZ
  Data:             Call Stack


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\ToolWindows\{0504FF91-9D61-
11D0-A794-00A0C9110051}\Visibility
Class Name:         <NO CLASS>
Last Write Time:    7/19/2005 - 4:53 PM
Value 0
  Name:             {ADFC4E61-0397-11D1-9F4E-
00A0C911004F}
  Type:             REG_DWORD
  Data:             0


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\ToolWindows\{0AAE2B49-9969-
4e8f-88B6-4A43D4478548}
Class Name:         <NO CLASS>
Last Write Time:    7/19/2005 - 4:53 PM
Value 0
  Name:             <NO NAME>
  Type:             REG_SZ
  Data:             {F30396AD-50FE-4ae2-9A98-
DC5078302C5E}

Value 1
  Name:             Name
  Type:             REG_SZ
  Data:             Summary

Value 2
  Name:             Float
  Type:             REG_SZ
  Data:             10,10,500,500

Value 3
  Name:             Orientation
  Type:             REG_SZ
  Data:             Right

Value 4
  Name:             Style
  Type:             REG_SZ
  Data:             MDI


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\ToolWindows\{0F887920-C2B6-
11d2-9375-0080C747D9A0}
```


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```
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:53 PM
Value 0
  Name:            <NO NAME>
  Type:            REG_SZ
  Data:            {DA9FB551-C724-11d0-AE1F-
00A0C90FFFC3}

Value 1
  Name:            Name
  Type:            REG_SZ
  Data:            Find 1

Value 2
  Name:            Style
  Type:            REG_SZ
  Data:            Float

Value 3
  Name:            Window
  Type:            REG_SZ
  Data:            {0F887920-C2B6-11d2-9375-
0080C747D9A0}


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\ToolWindows\{0F887921-C2B6-
11d2-9375-0080C747D9A0}
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:53 PM
Value 0
  Name:            <NO NAME>
  Type:            REG_SZ
  Data:            {DA9FB551-C724-11d0-AE1F-
00A0C90FFFC3}

Value 1
  Name:            Name
  Type:            REG_SZ
  Data:            Find 2

Value 2
  Name:            Style
  Type:            REG_SZ
  Data:            Float

Value 3
  Name:            Window
  Type:            REG_SZ
  Data:            {0F887920-C2B6-11d2-9375-
0080C747D9A0}


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\ToolWindows\{25f7e850-ffa1-
11d0-b63f-00a0c922e851}
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:53 PM
Value 0
  Name:            <NO NAME>
  Type:            REG_SZ
  Data:            {21af45b0-ffa5-11d0-b63f-
00a0c922e851}


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\ToolWindows\{269A02DC-6AF8-
11D3-BDC4-00C04F688E50}
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:53 PM
Value 0
  Name:            <NO NAME>
  Type:            REG_SZ
  Data:            {DA9FB551-C724-11d0-AE1F-
00A0C90FFFC3}

Value 1
  Name:            Name
  Type:            REG_SZ
  Data:            Object Browser


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\ToolWindows\{28836128-FC2C-
11D2-A433-00C04F72D18A}
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:53 PM
Value 0
  Name:            <NO NAME>
  Type:            REG_SZ
  Data:            {DA9FB551-C724-11d0-AE1F-
00A0C90FFFC3}

Value 1
  Name:            Name
  Type:            REG_SZ
  Data:            Command window


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\ToolWindows\{2D7728C2-DE0A-
45b5-99AA-89B609DFDE73}
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:53 PM
Value 0
  Name:            <NO NAME>
  Type:            REG_SZ
  Data:            {DA9FB551-C724-11d0-AE1F-
00A0C90FFFC3}

Value 1
  Name:            Name
  Type:            REG_SZ
  Data:            Resource view


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\ToolWindows\{34E76E81-EE4A-
11D0-AE2E-00A0C90FFFC3}
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:53 PM
Value 0
  Name:            <NO NAME>
  Type:            REG_SZ
  Data:            {DA9FB551-C724-11d0-AE1F-
00A0C90FFFC3}

Value 1
  Name:            Name
  Type:            REG_SZ
  Data:            Output window


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\ToolWindows\{350F9856-A72B-
11D2-8AD0-00C04F79E479}
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:53 PM
Value 0
  Name:            <NO NAME>
  Type:            REG_SZ
  Data:            {C9DD4A57-47FB-11D2-83E7-
00C04F9902C1}

Value 1
  Name:            Name
  Type:            REG_SZ
  Data:            Memory


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\ToolWindows\{350F9856-A72B-
11D2-8AD0-00C04F79E479}\Visibility
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:53 PM
Value 0
  Name:            {ADFC4E61-0397-11D1-9F4E-
00A0C911004F}
  Type:            REG_DWORD
  Data:            0


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\ToolWindows\{37ABA9BE-445A-
11D3-9949-00C04F68FD0A}
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:53 PM
Value 0
  Name:            <NO NAME>
  Type:            REG_SZ
  Data:            {C9DD4A57-47FB-11D2-83E7-
00C04F9902C1}

Value 1
  Name:            Name
  Type:            REG_SZ
  Data:            Modules
```


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```
Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\ToolWindows\{37ABA9BE-445A-
11D3-9949-00C04F68FD0A}\Visibility
Class Name:         <NO CLASS>
Last Write Time:    7/19/2005 - 4:53 PM
Value 0
  Name:             {ADFC4E61-0397-11D1-9F4E-
00A0C911004F}
  Type:             REG_DWORD
  Data:             0


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\ToolWindows\{387cb18d-6153-
4156-9257-9ac3f9207bbe}
Class Name:         <NO CLASS>
Last Write Time:    7/19/2005 - 4:53 PM
Value 0
  Name:             <NO NAME>
  Type:             REG_SZ
  Data:             {DA9FB551-C724-11d0-AE1F-
00A0C90FFFC3}

Value 1
  Name:             Name
  Type:             REG_SZ
  Data:             Start Page

Value 2
  Name:             Style
  Type:             REG_SZ
  Data:             MDI

Value 3
  Name:             Float
  Type:             REG_SZ
  Data:             200, 200, 600, 500

Value 4
  Name:             Orientation
  Type:             REG_SZ
  Data:             B


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\ToolWindows\{38F39CDA-18C2-
421b-A178-51A670CD472E}
Class Name:         <NO CLASS>
Last Write Time:    7/19/2005 - 4:53 PM
Value 0
  Name:             <NO NAME>
  Type:             REG_SZ
  Data:             {4A0C6509-BF90-43da-ABEE-
0ABA3A8527F1}

Value 1
  Name:             Name
  Type:             REG_SZ
  Data:             Mining Legend

Value 2
  Name:             Style
  Type:             REG_SZ
  Data:             Tabbed

Value 3
  Name:             Float
  Type:             REG_SZ
  Data:             400,300,800,600

Value 4
  Name:             Orientation
  Type:             REG_SZ
  Data:             Bottom

Value 5
  Name:             Window
  Type:             REG_SZ
  Data:             {eefa5220-e298-11d0-8f78-
00a0c9110057}


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\ToolWindows\{3AE79031-E1BC-
11D0-8F78-00A0C9110057}
Class Name:         <NO CLASS>
Last Write Time:    7/19/2005 - 4:53 PM
Value 0
  Name:             <NO NAME>
  Type:             REG_SZ
  Data:             {DA9FB551-C724-11d0-AE1F-
00A0C90FFFC3}

Value 1
  Name:             Name
  Type:             REG_SZ
  Data:             Solution Explorer


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\ToolWindows\{3F0D873B-DC33-
4200-BCB2-A8CE5264F4B1}
Class Name:         <NO CLASS>
Last Write Time:    7/19/2005 - 4:53 PM
Value 0
  Name:             <NO NAME>
  Type:             REG_SZ
  Data:             {4A0C6509-BF90-43da-ABEE-
0ABA3A8527F1}

Value 1
  Name:             Name
  Type:             REG_SZ
  Data:             Mining Legend

Value 2
  Name:             Style
  Type:             REG_SZ
  Data:             Tabbed

Value 3
  Name:             Float
  Type:             REG_SZ
  Data:             400,300,800,600

Value 4
  Name:             Orientation
  Type:             REG_SZ
  Data:             Bottom

Value 5
  Name:             Window
  Type:             REG_SZ
  Data:             {eefa5220-e298-11d0-8f78-
00a0c9110057}


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\ToolWindows\{46C87F81-5A06-
43a8-9E25-85D33BAC49F8}
Class Name:         <NO CLASS>
Last Write Time:    7/19/2005 - 4:53 PM
Value 0
  Name:             <NO NAME>
  Type:             REG_SZ
  Data:             {4A791146-19E4-11d3-B86B-
00C04F79F802}

Value 1
  Name:             Name
  Type:             REG_SZ
  Data:             Help Search


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\ToolWindows\{4A18F9D0-B838-
11D0-93EB-00A0C90F2734}
Class Name:         <NO CLASS>
Last Write Time:    7/19/2005 - 4:53 PM
Value 0
  Name:             <NO NAME>
  Type:             REG_SZ
  Data:             {C9DD4A57-47FB-11D2-83E7-
00C04F9902C1}

Value 1
  Name:             Name
  Type:             REG_SZ
  Data:             Locals


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\ToolWindows\{4A18F9D0-B838-
11D0-93EB-00A0C90F2734}\Visibility
Class Name:         <NO CLASS>
Last Write Time:    7/19/2005 - 4:53 PM
Value 0
  Name:             {ADFC4E61-0397-11D1-9F4E-
00A0C911004F}
  Type:             REG_DWORD
  Data:             0
```


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```
Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\ToolWindows\{4A791147-19E4-
11D3-B86B-00C04F79F802}
Class Name:         <NO CLASS>
Last Write Time:    7/19/2005 - 4:53 PM
Value 0
  Name:             <NO NAME>
  Type:             REG_SZ
  Data:             {4A791146-19E4-11d3-B86B-
00C04F79F802}

Value 1
  Name:             Name
  Type:             REG_SZ
  Data:             Table of contents


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\ToolWindows\{4A9B7E51-AA16-
11D0-A8C5-00A0C921A4D2}
Class Name:         <NO CLASS>
Last Write Time:    7/19/2005 - 4:53 PM
Value 0
  Name:             <NO NAME>
  Type:             REG_SZ
  Data:             {4A9B7E50-AA16-11D0-A8C5-
00A0C921A4D2}


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\ToolWindows\{51C76317-9037-
4CF2-A20A-6206FD30B4A1}
Class Name:         <NO CLASS>
Last Write Time:    7/19/2005 - 4:53 PM
Value 0
  Name:             <NO NAME>
  Type:             REG_SZ
  Data:             {C9DD4A57-47FB-11D2-83E7-
00C04F9902C1}

Value 1
  Name:             Name
  Type:             REG_SZ
  Data:             Processes


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\ToolWindows\{51C76317-9037-
4CF2-A20A-6206FD30B4A1}\Visibility
Class Name:         <NO CLASS>
Last Write Time:    7/19/2005 - 4:53 PM
Value 0
  Name:             {ADFC4E61-0397-11D1-9F4E-
00A0C911004F}
  Type:             REG_DWORD
  Data:             0


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\ToolWindows\{53024D34-0EF5-
11d3-87E0-00C04F7971A5}
Class Name:         <NO CLASS>
Last Write Time:    7/19/2005 - 4:53 PM
Value 0
  Name:             <NO NAME>
  Type:             REG_SZ
  Data:             {DA9FB551-C724-11d0-AE1F-
00A0C90FFFC3}

Value 1
  Name:             Name
  Type:             REG_SZ
  Data:             Find symbol window

Value 2
  Name:             Style
  Type:             REG_SZ
  Data:             Float

Value 3
  Name:             Window
  Type:             REG_SZ
  Data:             {E830EC50-C2B5-11d2-9375-
0080C747D9A0}


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\ToolWindows\{53544C4D-5C18-
11d3-AB71-0050040AE094}
Class Name:         <NO CLASS>
Last Write Time:    7/19/2005 - 4:53 PM
Value 0
  Name:             Window
  Type:             REG_SZ
  Data:             {34E76E81-EE4A-11D0-AE2E-
00A0C90FFFC3}

Value 1
  Name:             Float
  Type:             REG_SZ
  Data:             100,100,450,300

Value 2
  Name:             Orientation
  Type:             REG_SZ
  Data:             Bottom

Value 3
  Name:             Style
  Type:             REG_SZ
  Data:             Tabbed

Value 4
  Name:             Name
  Type:             REG_SZ
  Data:             LocalChanges

Value 5
  Name:             <NO NAME>
  Type:             REG_SZ
  Data:             {AA8EB8CD-7A51-11D0-92C3-
00A0C9138C45}


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\ToolWindows\{5415EA3A-D813-
4948-B51E-562082CE0887}
Class Name:         <NO CLASS>
Last Write Time:    7/19/2005 - 4:53 PM
Value 0
  Name:             <NO NAME>
  Type:             REG_SZ
  Data:             {DA9FB551-C724-11d0-AE1F-
00A0C90FFFC3}

Value 1
  Name:             Float
  Type:             REG_SZ
  Data:             100,100,450,300

Value 2
  Name:             Name
  Type:             REG_SZ
  Data:             Call Browser

Value 3
  Name:             Orientation
  Type:             REG_SZ
  Data:             Left

Value 4
  Name:             Style
  Type:             REG_SZ
  Data:             Tabbed

Value 5
  Name:             Window
  Type:             REG_SZ
  Data:             {34E76E81-EE4A-11D0-AE2E-
00A0C90FFFC3}


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\ToolWindows\{562A81AF-9A3C-
4719-9900-0E1DE79ED292}
Class Name:         <NO CLASS>
Last Write Time:    7/19/2005 - 4:53 PM
Value 0
  Name:             <NO NAME>
  Type:             REG_SZ
  Data:             {4A0C6509-BF90-43da-ABEE-
0ABA3A8527F1}

Value 1
  Name:             Name
  Type:             REG_SZ
  Data:             Mining Legend

Value 2
```


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```
  Name:            Style
  Type:            REG_SZ
  Data:            Tabbed

Value 3
  Name:            Float
  Type:            REG_SZ
  Data:            400,300,800,600

Value 4
  Name:            Orientation
  Type:            REG_SZ
  Data:            Bottom

Value 5
  Name:            Window
  Type:            REG_SZ
  Data:            {eefa5220-e298-11d0-8f78-
00a0c9110057}


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\ToolWindows\{57DC5D59-11C2-
4955-A7B4-D7699D677E93}
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:53 PM
Value 0
  Name:            <NO NAME>
  Type:            REG_SZ
  Data:            {4A791146-19E4-11d3-B86B-
00C04F79F802}

Value 1
  Name:            Name
  Type:            REG_SZ
  Data:            Help Favorites


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\ToolWindows\{587B69DC-A87E-
42b6-B92A-714016B29C6D}
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:53 PM
Value 0
  Name:            <NO NAME>
  Type:            REG_SZ
  Data:            {96B36E93-F71C-4160-A4EA-
26AE801D2F63}

Value 1
  Name:            Name
  Type:            REG_SZ
  Data:            #90

Value 2
  Name:            Float
  Type:            REG_SZ
  Data:            100,100,450,300

Value 3
  Name:            Orientation
  Type:            REG_SZ
  Data:            Left

Value 4
  Name:            Style
  Type:            REG_SZ
  Data:            Tabbed

Value 5
  Name:            Window
  Type:            REG_SZ
  Data:            {B1E99781-AB81-11D0-B683-
00AA00A3EE26}

Value 6
  Name:            ToolWindowFactory
  Type:            REG_SZ
  Data:
Microsoft.DataTransformationServices.Design.VariableT
oolWindowFactory,
Microsoft.DataTransformationServices.Design


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\ToolWindows\{587B69DC-A87E-
42b6-B92A-714016B2FAFA}
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:53 PM
Value 0
  Name:            <NO NAME>
  Type:            REG_SZ
  Data:            {96B36E93-F71C-4160-A4EA-
26AE801D2F63}

Value 1
  Name:            Name
  Type:            REG_SZ
  Data:            #121

Value 2
  Name:            Float
  Type:            REG_SZ
  Data:            100,100,450,300

Value 3
  Name:            Orientation
  Type:            REG_SZ
  Data:            Left

Value 4
  Name:            Style
  Type:            REG_SZ
  Data:            Tabbed

Value 5
  Name:            Window
  Type:            REG_SZ
  Data:            {B1E99781-AB81-11D0-B683-
00AA00A3EE26}

Value 6
  Name:            ToolWindowFactory
  Type:            REG_SZ
  Data:
Microsoft.DataTransformationServices.Design.LogToolWi
ndowFactory,
Microsoft.DataTransformationServices.Design


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\ToolWindows\{588470CC-84F8-
4a57-9AC4-86BCA0625FF4}
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:53 PM
Value 0
  Name:            <NO NAME>
  Type:            REG_SZ
  Data:            {DA9FB551-C724-11d0-AE1F-
00A0C90FFFC3}

Value 1
  Name:            Name
  Type:            REG_SZ
  Data:            Code Definition Window

Value 2
  Name:            Orientation
  Type:            REG_SZ
  Data:            Left

Value 3
  Name:            Float
  Type:            REG_SZ
  Data:            100,100,450,300

Value 4
  Name:            Style
  Type:            REG_SZ
  Data:            Tabbed

Value 5
  Name:            Window
  Type:            REG_SZ
  Data:            {34E76E81-EE4A-11D0-AE2E-
00A0C90FFFC3}


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\ToolWindows\{5AA3576A-9A4C-
4bfe-BA07-6D149737FD9B}
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:53 PM
Value 0
  Name:            <NO NAME>
  Type:            REG_SZ
  Data:            {4A0C6509-BF90-43da-ABEE-
0ABA3A8527F1}

Value 1
  Name:            Name
  Type:            REG_SZ
  Data:            Explore Data
```


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```
Value 2
  Name:            Style
  Type:            REG_SZ
  Data:            MDI

Value 3
  Name:            Float
  Type:            REG_SZ
  Data:            100,500,200,400


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\ToolWindows\{66dba47c-61df-
11d2-aa79-00c04f990343}
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:53 PM
Value 0
  Name:            <NO NAME>
  Type:            REG_SZ
  Data:            {e8b06f41-6d01-11d2-aa7d-
00c04f990343}

Value 1
  Name:            Name
  Type:            REG_SZ
  Data:            Dynamic Help


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\ToolWindows\{68487888-204A-
11d3-87EB-00C04F7971A5}
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:53 PM
Value 0
  Name:            <NO NAME>
  Type:            REG_SZ
  Data:            {DA9FB551-C724-11d0-AE1F-
00A0C90FFFC3}

Value 1
  Name:            Name
  Type:            REG_SZ
  Data:            Find symbol results window

Value 2
  Name:            Style
  Type:            REG_SZ
  Data:            Float

Value 3
  Name:            Window
  Type:            REG_SZ
  Data:            {0F887920-C2B6-11d2-9375-
0080C747D9A0}


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\ToolWindows\{68D103B9-5B90-
4cd5-9DC8-CB64359B1FC2}
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:53 PM
Value 0
  Name:            <NO NAME>
  Type:            REG_SZ
  Data:            {4a0c6509-bf90-43da-abee-
0aba3a8527f1}

Value 1
  Name:            Name
  Type:            REG_SZ
  Data:            Data Visualizer

Value 2
  Name:            ToolWindowFactory
  Type:            REG_SZ
  Data:
Microsoft.DataTransformationServices.Design.Controls.
VisualizerHostControlFactory,
Microsoft.DataTransformationServices.Design


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\ToolWindows\{68D103B9-5B90-
4cd5-9DC8-CB64359B1FC2}\Visibility
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:53 PM

Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\ToolWindows\{6AF300FE-3221-
4cea-973F-78FE829EB940}
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:53 PM
Value 0
  Name:            <NO NAME>
  Type:            REG_SZ
  Data:            {4A0C6509-BF90-43da-ABEE-
0ABA3A8527F1}

Value 1
  Name:            Name
  Type:            REG_SZ
  Data:            Explore Data

Value 2
  Name:            Style
  Type:            REG_SZ
  Data:            MDI

Value 3
  Name:            Float
  Type:            REG_SZ
  Data:            100,500,200,400


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\ToolWindows\{6B8E94B5-0949-
4d9c-A81F-C1B9B744185C}
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:53 PM
Value 0
  Name:            <NO NAME>
  Type:            REG_SZ
  Data:            {DA9FB551-C724-11d0-AE1F-
00A0C90FFFC3}

Value 1
  Name:            Name
  Type:            REG_SZ
  Data:            Property Manager


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\ToolWindows\{6D52CEE1-A15C-
42fd-8D30-FAACC8D1DD02}
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:53 PM
Value 0
  Name:            <NO NAME>
  Type:            REG_SZ
  Data:            {4A0C6509-BF90-43da-ABEE-
0ABA3A8527F1}

Value 1
  Name:            Name
  Type:            REG_SZ
  Data:            Explore Data

Value 2
  Name:            Style
  Type:            REG_SZ
  Data:            MDI

Value 3
  Name:            Float
  Type:            REG_SZ
  Data:            100,500,200,400


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\ToolWindows\{73F6DD58-437E-
11d3-B88E-00C04F79F802}
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:53 PM
Value 0
  Name:            <NO NAME>
  Type:            REG_SZ
  Data:            {4A791146-19E4-11d3-B86B-
00C04F79F802}

Value 1
  Name:            Name
  Type:            REG_SZ
  Data:            Help index


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\ToolWindows\{73F6DD5B-437E-
11d3-B88E-00C04F79F802}
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:53 PM
```


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```
Value 0
  Name:            <NO NAME>
  Type:            REG_SZ
  Data:            {4A791146-19E4-11d3-B86B-
00C04F79F802}

Value 1
  Name:            Name
  Type:            REG_SZ
  Data:            Help Index Results


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\ToolWindows\{74946810-37a0-
11d2-a273-00c04f8ef4ff}
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:53 PM
Value 0
  Name:            <NO NAME>
  Type:            REG_SZ
  Data:            {7494682b-37a0-11d2-a273-
00c04f8ef4ff}

Value 1
  Name:            Name
  Type:            REG_SZ
  Data:
Microsoft.VisualStudio.Designer.Interfaces.IVSMDPrope
rtyBrowser


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\ToolWindows\{8186008D-937F-
47b9-AA24-73A410B59D9F}
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:53 PM
Value 0
  Name:            <NO NAME>
  Type:            REG_SZ
  Data:            {4A0C6509-BF90-43da-ABEE-
0ABA3A8527F1}

Value 1
  Name:            Name
  Type:            REG_SZ
  Data:            Explore Data

Value 2
  Name:            Style
  Type:            REG_SZ
  Data:            MDI

Value 3
  Name:            Float
  Type:            REG_SZ
  Data:            100,500,200,400


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\ToolWindows\{8CC2D4DE-B9AA-
4310-B76A-30EF60D1525D}
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:53 PM
Value 0
  Name:            <NO NAME>
  Type:            REG_SZ
  Data:            {A4B8E50B-6DC3-400d-97CD-
732ADD1F3140}

Value 1
  Name:            Name
  Type:            REG_SZ
  Data:            Current Activity

Value 2
  Name:            Float
  Type:            REG_SZ
  Data:            10,10,500,500

Value 3
  Name:            Orientation
  Type:            REG_SZ
  Data:            right

Value 4
  Name:            Style
  Type:            REG_SZ
  Data:            MDI


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\ToolWindows\{90243340-BD7A-
11D0-93EF-00A0C90F2734}
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:53 PM
Value 0
  Name:            <NO NAME>
  Type:            REG_SZ
  Data:            {C9DD4A57-47FB-11D2-83E7-
00C04F9902C1}

Value 1
  Name:            Name
  Type:            REG_SZ
  Data:            Watch


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\ToolWindows\{90243340-BD7A-
11D0-93EF-00A0C90F2734}\Visibility
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:53 PM
Value 0
  Name:            {ADFC4E61-0397-11D1-9F4E-
00A0C911004F}
  Type:            REG_DWORD
  Data:            0


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\ToolWindows\{95E98DB2-9966-
4171-8A11-B63A6781980D}
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:53 PM
Value 0
  Name:            <NO NAME>
  Type:            REG_SZ
  Data:            {4A0C6509-BF90-43da-ABEE-
0ABA3A8527F1}

Value 1
  Name:            Name
  Type:            REG_SZ
  Data:            Explore Data

Value 2
  Name:            Style
  Type:            REG_SZ
  Data:            MDI

Value 3
  Name:            Float
  Type:            REG_SZ
  Data:            100,500,200,400


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\ToolWindows\{996EBCCF-146A-
4491-8C2F-26A604113C2C}
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:53 PM
Value 0
  Name:            <NO NAME>
  Type:            REG_SZ
  Data:            {4a0c6509-bf90-43da-abee-
0aba3a8527f1}

Value 1
  Name:            Name
  Type:            REG_SZ
  Data:            Data Transformation Services
Progress Window


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\ToolWindows\{9E715445-7840-
4ecb-8EBB-AF46087E976A}
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:53 PM
Value 0
  Name:            <NO NAME>
  Type:            REG_SZ
  Data:            {4A0C6509-BF90-43da-ABEE-
0ABA3A8527F1}

Value 1
  Name:            Name
  Type:            REG_SZ
  Data:            Mining Legend
```


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```
Value 2
  Name:            Style
  Type:            REG_SZ
  Data:            Tabbed

Value 3
  Name:            Float
  Type:            REG_SZ
  Data:            400,300,800,600

Value 4
  Name:            Orientation
  Type:            REG_SZ
  Data:            Bottom

Value 5
  Name:            Window
  Type:            REG_SZ
  Data:            {eefa5220-e298-11d0-8f78-
00a0c9110057}


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\ToolWindows\{A0C5197D-0AC7-
4B63-97CD-8872A789D233}
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:53 PM
Value 0
  Name:            <NO NAME>
  Type:            REG_SZ
  Data:            {DA9FB551-C724-11d0-AE1F-
00A0C90FFFC3}

Value 1
  Name:            Name
  Type:            REG_SZ
  Data:            Bookmarks

Value 2
  Name:            Orientation
  Type:            REG_SZ
  Data:            Left

Value 3
  Name:            Float
  Type:            REG_SZ
  Data:            100,100,450,300

Value 4
  Name:            Style
  Type:            REG_SZ
  Data:            Tabbed

Value 5
  Name:            Window
  Type:            REG_SZ
  Data:            {34E76E81-EE4A-11D0-AE2E-
00A0C90FFFC3}


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\ToolWindows\{B1E99781-AB81-
11D0-B683-00AA00A3EE26}
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:53 PM
Value 0
  Name:            <NO NAME>
  Type:            REG_SZ
  Data:            {DA9FB551-C724-11d0-AE1F-
00A0C90FFFC3}

Value 1
  Name:            Name
  Type:            REG_SZ
  Data:            Toolbox


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\ToolWindows\{B900BE87-629A-
4b6b-8443-0EA2BD2C25A3}
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:53 PM
Value 0
  Name:            <NO NAME>
  Type:            REG_SZ
  Data:            {4A0C6509-BF90-43da-ABEE-
0ABA3A8527F1}

Value 1
  Name:            Name
  Type:            REG_SZ
  Data:            Explore Data

Value 2
  Name:            Style
  Type:            REG_SZ
  Data:            MDI

Value 3
  Name:            Float
  Type:            REG_SZ
  Data:            100,500,200,400


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\ToolWindows\{BE4D7042-BA3F-
11D2-840E-00C04F9902C1}
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:53 PM
Value 0
  Name:            <NO NAME>
  Type:            REG_SZ
  Data:            {C9DD4A57-47FB-11D2-83E7-
00C04F9902C1}

Value 1
  Name:            Name
  Type:            REG_SZ
  Data:            Breakpoints


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\ToolWindows\{BE4D7042-BA3F-
11D2-840E-00C04F9902C1}\Visibility
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:53 PM
Value 0
  Name:            {F1536EF8-92EC-443C-9ED7-
FDADF150DA82}
  Type:            REG_DWORD
  Data:            0


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\ToolWindows\{C32474AA-3924-
438c-B540-F2C0ECA23B71}
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:53 PM
Value 0
  Name:            <NO NAME>
  Type:            REG_SZ
  Data:            {4A0C6509-BF90-43da-ABEE-
0ABA3A8527F1}

Value 1
  Name:            Name
  Type:            REG_SZ
  Data:            Explore Data

Value 2
  Name:            Style
  Type:            REG_SZ
  Data:            MDI

Value 3
  Name:            Float
  Type:            REG_SZ
  Data:            100,500,200,400


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\ToolWindows\{C609F647-F1B1-
4bbc-92D0-04EDF0BC6FCF}
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:53 PM
Value 0
  Name:            <NO NAME>
  Type:            REG_SZ
  Data:            {A4B8E50B-6DC3-400d-97CD-
732ADD1F3140}

Value 1
  Name:            Name
  Type:            REG_SZ
  Data:            Registered Serversr

Value 2
  Name:            Float
  Type:            REG_SZ
  Data:            10,10,300,600
```


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```
Value 3
  Name:            Orientation
  Type:            REG_SZ
  Data:            Left

Value 4
  Name:            Style
  Type:            REG_SZ
  Data:            Tabbed


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\ToolWindows\{C9C0AE26-AA77-
11d2-B3F0-0000F87570EE}
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:53 PM
Value 0
  Name:            <NO NAME>
  Type:            REG_SZ
  Data:            {DA9FB551-C724-11d0-AE1F-
00A0C90FFFC3}

Value 1
  Name:            Name
  Type:            REG_SZ
  Data:            Class view


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\ToolWindows\{CA4B8FF5-BFC7-
11D2-9929-00C04F68FDAF}
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:53 PM
Value 0
  Name:            <NO NAME>
  Type:            REG_SZ
  Data:            {C9DD4A57-47FB-11D2-83E7-
00C04F9902C1}

Value 1
  Name:            Name
  Type:            REG_SZ
  Data:            Registers


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\ToolWindows\{CA4B8FF5-BFC7-
11D2-9929-00C04F68FDAF}\Visibility
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:53 PM
Value 0
  Name:            {ADFC4E61-0397-11D1-9F4E-
00A0C911004F}
  Type:            REG_DWORD
  Data:            0


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\ToolWindows\{CF2DDC32-8CAD-
11d2-9302-005345000000}
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:53 PM
Value 0
  Name:            <NO NAME>
  Type:            REG_SZ
  Data:            {DA9FB551-C724-11d0-AE1F-
00A0C90FFFC3}

Value 1
  Name:            Name
  Type:            REG_SZ
  Data:            FindReplace


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\ToolWindows\{CF577B8C-4134-
11D2-83E5-00C04F9902C1}
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:53 PM
Value 0
  Name:            <NO NAME>
  Type:            REG_SZ
  Data:            {C9DD4A57-47FB-11D2-83E7-
00C04F9902C1}

Value 1
  Name:            Name
  Type:            REG_SZ
  Data:            Disassembly


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\ToolWindows\{CF577B8C-4134-
11D2-83E5-00C04F9902C1}\Visibility
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:53 PM
Value 0
  Name:            {ADFC4E61-0397-11D1-9F4E-
00A0C911004F}
  Type:            REG_DWORD
  Data:            0


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\ToolWindows\{D114938F-591C-
46cf-A785-500A82D97410}
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:53 PM
Value 0
  Name:            <NO NAME>
  Type:            REG_SZ
  Data:            {A4B8E50B-6DC3-400d-97CD-
732ADD1F3140}

Value 1
  Name:            Name
  Type:            REG_SZ
  Data:            Sql Object Explorer


Value 2
  Name:            Float
  Type:            REG_SZ
  Data:            10,10,300,600

Value 3
  Name:            Orientation
  Type:            REG_SZ
  Data:            Left

Value 4
  Name:            Style
  Type:            REG_SZ
  Data:            Tabbed


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\ToolWindows\{D6C02B84-73BF-
440a-9E64-46A976FC4D04}
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:53 PM
Value 0
  Name:            <NO NAME>
  Type:            REG_SZ
  Data:            {4A0C6509-BF90-43da-ABEE-
0ABA3A8527F1}

Value 1
  Name:            Name
  Type:            REG_SZ
  Data:            Drill Through

Value 2
  Name:            Style
  Type:            REG_SZ
  Data:            Float

Value 3
  Name:            Float
  Type:            REG_SZ
  Data:            400,300,800,600


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\ToolWindows\{D78612C7-9962-
4B83-95D9-268046DAD23A}
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:53 PM
Value 0
  Name:            <NO NAME>
  Type:            REG_SZ
  Data:            {4A9B7E50-AA16-11D0-A8C5-
00A0C921A4D2}

Value 1
  Name:            Name
  Type:            REG_SZ
  Data:            Error List

Value 2
```


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```
  Name:            Float
  Type:            REG_SZ
  Data:            100,100,300,400

Value 3
  Name:            Orientation
  Type:            REG_SZ
  Data:            Left

Value 4
  Name:            Style
  Type:            REG_SZ
  Data:            Tabbed

Value 5
  Name:            Window
  Type:            REG_SZ
  Data:            {34E76E81-EE4A-11D0-AE2E-
00A0C90FFFC3}


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\ToolWindows\{DBE1F45C-8C9E-
4895-A674-C59BDBB89795}
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:53 PM
Value 0
  Name:            <NO NAME>
  Type:            REG_SZ
  Data:            {4A0C6509-BF90-43da-ABEE-
0ABA3A8527F1}

Value 1
  Name:            Name
  Type:            REG_SZ
  Data:            Explore Data

Value 2
  Name:            Style
  Type:            REG_SZ
  Data:            MDI

Value 3
  Name:            Float
  Type:            REG_SZ
  Data:            100,500,200,400


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\ToolWindows\{DE669173-599C-
43a3-BA18-D5277742F28E}
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:53 PM
Value 0
  Name:            <NO NAME>
  Type:            REG_SZ
  Data:            {4A0C6509-BF90-43da-ABEE-
0ABA3A8527F1}

Value 1
  Name:            Name
  Type:            REG_SZ
  Data:            Explore Data

Value 2
  Name:            Style
  Type:            REG_SZ
  Data:            MDI

Value 3
  Name:            Float
  Type:            REG_SZ
  Data:            100,500,200,400


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\ToolWindows\{DFD4FBD3-E1F8-
4706-A53C-7AD6C3388867}
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:53 PM
Value 0
  Name:            <NO NAME>
  Type:            REG_SZ
  Data:            {4A0C6509-BF90-43da-ABEE-
0ABA3A8527F1}

Value 1
  Name:            Name
  Type:            REG_SZ
  Data:            Explore Data

Value 2
  Name:            Style
  Type:            REG_SZ
  Data:            MDI

Value 3
  Name:            Float
  Type:            REG_SZ
  Data:            100,500,200,400


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\ToolWindows\{E01A3358-4577-
42a1-A4A2-4667F21E1C72}
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:53 PM
Value 0
  Name:            <NO NAME>
  Type:            REG_SZ
  Data:            {F30396AD-50FE-4ae2-9A98-
DC5078302C5E}

Value 1
  Name:            Name
  Type:            REG_SZ
  Data:            Template Browser


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\ToolWindows\{E62CE6A0-B439-
11D0-A79D-00A0C9110051}
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:53 PM
Value 0
  Name:            <NO NAME>
  Type:            REG_SZ
  Data:            {C9DD4A57-47FB-11D2-83E7-
00C04F9902C1}

Value 1
  Name:            Name
  Type:            REG_SZ
  Data:            Threads


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\ToolWindows\{E62CE6A0-B439-
11D0-A79D-00A0C9110051}\Visibility
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:53 PM
Value 0
  Name:            {ADFC4E61-0397-11D1-9F4E-
00A0C911004F}
  Type:            REG_DWORD
  Data:            0


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\ToolWindows\{E830EC50-C2B5-
11d2-9375-0080C747D9A0}
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:53 PM
Value 0
  Name:            <NO NAME>
  Type:            REG_SZ
  Data:            {DA9FB551-C724-11d0-AE1F-
00A0C90FFFC3}

Value 1
  Name:            Name
  Type:            REG_SZ
  Data:            Find in Files

Value 2
  Name:            Style
  Type:            REG_SZ
  Data:            Float

Value 3
  Name:            Window
  Type:            REG_SZ
  Data:            {E830EC50-C2B5-11d2-9375-
0080C747D9A0}


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\ToolWindows\{e8b06f52-6d01-
11d2-aa7d-00c04f990343}
Class Name:        <NO CLASS>
```


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```
Last Write Time:   7/19/2005 - 4:53 PM
Value 0
  Name:            <NO NAME>
  Type:            REG_SZ
  Data:            {e8b06f41-6d01-11d2-aa7d-
00c04f990343}

Value 1
  Name:            Name
  Type:            REG_SZ
  Data:            Web Browser Window

Value 2
  Name:            Style
  Type:            REG_SZ
  Data:            MDI

Value 3
  Name:            Float
  Type:            REG_SZ
  Data:            100, 100, 400, 400

Value 4
  Name:            DontForceCreate
  Type:            REG_DWORD
  Data:            0x1


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\ToolWindows\{e8b06f53-6d01-
11d2-aa7d-00c04f990343}
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:53 PM
Value 0
  Name:            <NO NAME>
  Type:            REG_SZ
  Data:            {e8b06f41-6d01-11d2-aa7d-
00c04f990343}

Value 1
  Name:            Name
  Type:            REG_SZ
  Data:            Web Browser Preview Window

Value 2
  Name:            Style
  Type:            REG_SZ
  Data:            MDI

Value 3
  Name:            Float
  Type:            REG_SZ
  Data:            100, 100, 400, 400


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\ToolWindows\{ECB7191A-597B-
41F5-9843-03A4CF275DDE}
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:53 PM
Value 0
  Name:            <NO NAME>
  Type:            REG_SZ
  Data:            {DA9FB551-C724-11d0-AE1F-
00A0C90FFFC3}

Value 1
  Name:            Name
  Type:            REG_SZ
  Data:            Immediate window


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\ToolWindows\{ECDD9EE0-AC6B-
11D0-89F9-00A0C9110055}
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:53 PM
Value 0
  Name:            <NO NAME>
  Type:            REG_SZ
  Data:            {C9DD4A57-47FB-11D2-83E7-
00C04F9902C1}

Value 1
  Name:            Name
  Type:            REG_SZ
  Data:            Running Documents


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\ToolWindows\{ECDD9EE0-AC6B-
11D0-89F9-00A0C9110055}\Visibility
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:53 PM
Value 0
  Name:            {ADFC4E61-0397-11D1-9F4E-
00A0C911004F}
  Type:            REG_DWORD
  Data:            0


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\ToolWindows\{EEFA5220-E298-
11D0-8F78-00A0C9110057}
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:53 PM
Value 0
  Name:            <NO NAME>
  Type:            REG_SZ
  Data:            {DA9FB551-C724-11d0-AE1F-
00A0C90FFFC3}

Value 1
  Name:            Name
  Type:            REG_SZ
  Data:            Properties window


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\ToolWindows\{EEFA5220-E298-
11D0-8F78-00A0C9110057}\Visibility
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:53 PM
Value 0
  Name:            {adfc4e66-0397-11d1-9f4e-
00a0c911004f}
  Type:            REG_DWORD
  Data:            0

Value 1
  Name:            {93694fa0-0397-11d1-9f4e-
00a0c911004f}
  Type:            REG_DWORD
  Data:            0

Value 2
  Name:            {9DA22B82-6211-11d2-9561-
00600818403B}
  Type:            REG_DWORD
  Data:            0


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\ToolWindows\{F2E84780-2AF1-
11D1-A7FA-00A0C9110051}
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:53 PM
Value 0
  Name:            <NO NAME>
  Type:            REG_SZ
  Data:            {C9DD4A57-47FB-11D2-83E7-
00C04F9902C1}

Value 1
  Name:            Name
  Type:            REG_SZ
  Data:            Autos


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\ToolWindows\{F2E84780-2AF1-
11D1-A7FA-00A0C9110051}\Visibility
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:53 PM
Value 0
  Name:            {ADFC4E61-0397-11D1-9F4E-
00A0C911004F}
  Type:            REG_DWORD
  Data:            0


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\ToolWindows\{F78BCC56-71F7-
4e7d-8215-F690CAE4F452}
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:53 PM
Value 0
  Name:            <NO NAME>
  Type:            REG_SZ
```


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```
  Data:            {DA9FB551-C724-11d0-AE1F-
00A0C90FFFC3}

Value 1
  Name:            Float
  Type:            REG_SZ
  Data:            100,100,450,300

Value 2
  Name:            Name
  Type:            REG_SZ
  Data:            Call Browser (secondary)

Value 3
  Name:            DontForceCreate
  Type:            REG_DWORD
  Data:            0x1


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\ToolWindows\{FC29E0C0-C1AB-
4B30-B5DF-24AA452B9661}
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:53 PM
Value 0
  Name:            <NO NAME>
  Type:            REG_SZ
  Data:            {C9DD4A57-47FB-11D2-83E7-
00C04F9902C1}

Value 1
  Name:            Name
  Type:            REG_SZ
  Data:            Console I/O


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\ToolWindows\{FC29E0C0-C1AB-
4B30-B5DF-24AA452B9661}\Visibility
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:53 PM
Value 0
  Name:            {F1536EF8-92EC-443C-9ED7-
FDADF150DA82}
  Type:            REG_DWORD
  Data:            0


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\UserSettings
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:53 PM

Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\UserSettings\Debugger
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:53 PM
Value 0
  Name:            <NO NAME>
  Type:            REG_SZ
  Data:            #5000

Value 1
  Name:            Category
  Type:            REG_SZ
  Data:            {EEDBF29A-5C8B-4E01-827C-
263382C18CFE}

Value 2
  Name:            Package
  Type:            REG_SZ
  Data:            {C9DD4A57-47FB-11D2-83E7-
00C04F9902C1}

Value 3
  Name:            AlternateParent
  Type:            REG_SZ
  Data:            AutomationProperties

Value 4
  Name:            Description
  Type:            REG_SZ
  Data:            #310


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\UserSettings\Environment_Group
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:53 PM
Value 0
  Name:            <NO NAME>
  Type:            REG_SZ
  Data:            #14869

Value 1
  Name:            Package
  Type:            REG_SZ
  Data:            {DA9FB551-C724-11d0-AE1F-
00A0C90FFFC3}

Value 2
  Name:            Description
  Type:            REG_SZ
  Data:            #15071


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\UserSettings\Environment_Group\
Environment_Aliases
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:53 PM
Value 0
  Name:            <NO NAME>
  Type:            REG_SZ
  Data:            #14589

Value 1
  Name:            Package
  Type:            REG_SZ
  Data:            {DA9FB551-C724-11d0-AE1F-
00A0C90FFFC3}

Value 2
  Name:            Category
  Type:            REG_SZ
  Data:            {AD334E74-368A-4c46-9AF8-
F53ABF0775F2}

Value 3
  Name:            SecurityLevel
  Type:            REG_DWORD
  Data:            0x2

Value 4
  Name:            Description
  Type:            REG_SZ
  Data:            #14877


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\UserSettings\Environment_Group\
Environment_CallBrowser
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:53 PM
Value 0
  Name:            <NO NAME>
  Type:            REG_SZ
  Data:            #14649

Value 1
  Name:            Package
  Type:            REG_SZ
  Data:            {DA9FB551-C724-11d0-AE1F-
00A0C90FFFC3}

Value 2
  Name:            Category
  Type:            REG_SZ
  Data:            {50B05A5D-9174-48eb-851A-
B1C616A0B43D}

Value 3
  Name:            Description
  Type:            REG_SZ
  Data:            #14885


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\UserSettings\Environment_Group\
Environment_ClassView
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:53 PM
Value 0
  Name:            <NO NAME>
  Type:            REG_SZ
  Data:            #14896

Value 1
  Name:            Package
  Type:            REG_SZ
```


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```
  Data:            {DA9FB551-C724-11d0-AE1F-
00A0C90FFFC3}

Value 2
  Name:            Category
  Type:            REG_SZ
  Data:            {40AF29AB-4C5B-412A-9CE8-
465C4FCFE41D}

Value 3
  Name:            Description
  Type:            REG_SZ
  Data:            #14884


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\UserSettings\Environment_Group\
Environment_CommandBars
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:53 PM
Value 0
  Name:            <NO NAME>
  Type:            REG_SZ
  Data:            #14534

Value 1
  Name:            Package
  Type:            REG_SZ
  Data:            {DA9FB551-C724-11d0-AE1F-
00A0C90FFFC3}

Value 2
  Name:            Category
  Type:            REG_SZ
  Data:            {B9D9C123-B500-4202-B887-
57C829CBD08F}

Value 3
  Name:            Description
  Type:            REG_SZ
  Data:            #14870

Value 4
  Name:            ImportPass
  Type:            REG_DWORD
  Data:            0

Value 5
  Name:            SecurityLevel
  Type:            REG_DWORD
  Data:            0x1


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\UserSettings\Environment_Group\
Environment_DefaultEditors
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:53 PM
Value 0
  Name:            <NO NAME>
  Type:            REG_SZ
  Data:            #14982

Value 1
  Name:            Package
  Type:            REG_SZ
  Data:            {DA9FB551-C724-11d0-AE1F-
00A0C90FFFC3}

Value 2
  Name:            Category
  Type:            REG_SZ
  Data:            {68161AEE-BCA8-4214-B2E4-
7875263E49C5}

Value 3
  Name:            Description
  Type:            REG_SZ
  Data:            #15067


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\UserSettings\Environment_Group\
Environment_ErrorList
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:53 PM
Value 0
  Name:            <NO NAME>
  Type:            REG_SZ
  Data:            #14745

Value 1
  Name:            Package
  Type:            REG_SZ
  Data:            {4A9B7E50-AA16-11d0-A8C5-
00A0C921A4D2}

Value 2
  Name:            Category
  Type:            REG_SZ
  Data:            {68897077-DF64-4628-9BD4-
025923684F2F}

Value 3
  Name:            Description
  Type:            REG_SZ
  Data:            #14879


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\UserSettings\Environment_Group\
Environment_Expansions
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:53 PM
Value 0
  Name:            <NO NAME>
  Type:            REG_SZ
  Data:            #14704

Value 1
  Name:            Package
  Type:            REG_SZ
  Data:            {F5E7E720-1401-11d1-883B-
0000F87579D2}

Value 2
  Name:            Category
  Type:            REG_SZ
  Data:            {0B9A10B2-C0D0-4a6a-8353-
115E9CACF34A}

Value 3
  Name:            ResourcePackage
  Type:            REG_SZ
  Data:            {DA9FB551-C724-11d0-AE1F-
00A0C90FFFC3}

Value 4
  Name:            Description
  Type:            REG_SZ
  Data:            #14886


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\UserSettings\Environment_Group\
Environment_ExternalTools
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:53 PM
Value 0
  Name:            <NO NAME>
  Type:            REG_SZ
  Data:            #14585

Value 1
  Name:            Package
  Type:            REG_SZ
  Data:            {DA9FB551-C724-11d0-AE1F-
00A0C90FFFC3}

Value 2
  Name:            Category
  Type:            REG_SZ
  Data:            {E8FAE9E8-FBA2-4474-B134-
AB0FFCFB291D}

Value 3
  Name:            Description
  Type:            REG_SZ
  Data:            #14874

Value 4
  Name:            SecurityLevel
  Type:            REG_DWORD
  Data:            0x2


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\UserSettings\Environment_Group\
Environment_FindSymbol
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:53 PM
Value 0
  Name:            <NO NAME>
```


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```
  Type:            REG_SZ
  Data:            #14858

Value 1
  Name:            Package
  Type:            REG_SZ
  Data:            {DA9FB551-C724-11d0-AE1F-
00A0C90FFFC3}

Value 2
  Name:            Category
  Type:            REG_SZ
  Data:            {C93260BC-0C07-484a-8188-
6F4763BD7FD4}

Value 3
  Name:            Description
  Type:            REG_SZ
  Data:            #14887


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\UserSettings\Environment_Group\
Environment_FontsAndColors
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:53 PM
Value 0
  Name:            <NO NAME>
  Type:            REG_SZ
  Data:            #14586

Value 1
  Name:            Package
  Type:            REG_SZ
  Data:            {DA9FB551-C724-11d0-AE1F-
00A0C90FFFC3}

Value 2
  Name:            Category
  Type:            REG_SZ
  Data:            {1EDA5DD4-927A-43a7-810E-
7FD247D0DA1D}

Value 3
  Name:            Description
  Type:            REG_SZ
  Data:            #14875

Value 4
  Name:            AlternateParent
  Type:            REG_SZ
  Data:            AutomationProperties\Environment


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\UserSettings\Environment_Group\
Environment_KeyBindings
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:53 PM
Value 0
  Name:            <NO NAME>
  Type:            REG_SZ
  Data:            #14568

Value 1
  Name:            Package
  Type:            REG_SZ
  Data:            {DA9FB551-C724-11d0-AE1F-
00A0C90FFFC3}

Value 2
  Name:            Category
  Type:            REG_SZ
  Data:            {F09035F1-80D2-4312-8EC4-
4D354A4BCB4C}

Value 3
  Name:            Description
  Type:            REG_SZ
  Data:            #14871

Value 4
  Name:            AlternateParent
  Type:            REG_SZ
  Data:            AutomationProperties\Environment

Value 5
  Name:            SecurityLevel
  Type:            REG_DWORD
  Data:            0x1


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\UserSettings\Environment_Group\
Environment_NewProjectDialogPreferredLanguage
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:53 PM
Value 0
  Name:            <NO NAME>
  Type:            REG_SZ
  Data:            #14701

Value 1
  Name:            Package
  Type:            REG_SZ
  Data:            {DA9FB551-C724-11d0-AE1F-
00A0C90FFFC3}

Value 2
  Name:            Category
  Type:            REG_SZ
  Data:            {77E22C0C-9F4A-4bfb-AD3A-
3F3F4711E9ED}

Value 3
  Name:            Description
  Type:            REG_SZ
  Data:            #14882


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\UserSettings\Environment_Group\
Environment_ObjectBrowser
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:53 PM
Value 0
  Name:            <NO NAME>
  Type:            REG_SZ
  Data:            #14897

Value 1
  Name:            Package
  Type:            REG_SZ
  Data:            {DA9FB551-C724-11d0-AE1F-
00A0C90FFFC3}

Value 2
  Name:            Category
  Type:            REG_SZ
  Data:            {D98D784D-88BF-4EBF-B039-
C146EC14F472}

Value 3
  Name:            Description
  Type:            REG_SZ
  Data:            #14883


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\UserSettings\Environment_Group\
Environment_OutputWindow
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:53 PM
Value 0
  Name:            <NO NAME>
  Type:            REG_SZ
  Data:            #14898

Value 1
  Name:            Package
  Type:            REG_SZ
  Data:            {DA9FB551-C724-11d0-AE1F-
00A0C90FFFC3}

Value 2
  Name:            Category
  Type:            REG_SZ
  Data:            {07C6CD04-100B-4f3e-BA93-
DD1363E8D8E3}

Value 3
  Name:            Description
  Type:            REG_SZ
  Data:            #14880


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\UserSettings\Environment_Group\
Environment_PropertiesWindow
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:53 PM
Value 0
```


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```
  Name:            <NO NAME>
  Type:            REG_SZ
  Data:            #1004

Value 1
  Name:            Package
  Type:            REG_SZ
  Data:            {7494682b-37a0-11d2-a273-
00c04f8ef4ff}

Value 2
  Name:            Category
  Type:            REG_SZ
  Data:            {731a3cc7-de5e-49ca-9115-
9a03e46624b0}

Value 3
  Name:            Description
  Type:            REG_SZ
  Data:            #1005


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\UserSettings\Environment_Group\
Environment_SimplifiedToolsOptions
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:53 PM
Value 0
  Name:            <NO NAME>
  Type:            REG_SZ
  Data:            #14605

Value 1
  Name:            Package
  Type:            REG_SZ
  Data:            {DA9FB551-C724-11d0-AE1F-
00A0C90FFFC3}

Value 2
  Name:            Category
  Type:            REG_SZ
  Data:            {13BEDEE6-9051-4809-B9E3-
2EEC749EB15A}

Value 3
  Name:            Description
  Type:            REG_SZ
  Data:            #14873


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\UserSettings\Environment_Group\
Environment_StartPage
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:53 PM
Value 0
  Name:            <NO NAME>
  Type:            REG_SZ
  Data:            #14524

Value 1
  Name:            Package
  Type:            REG_SZ
  Data:            {DA9FB551-C724-11d0-AE1F-
00A0C90FFFC3}

Value 2
  Name:            Category
  Type:            REG_SZ
  Data:            {255FE6D3-A0AE-4076-A509-
D581B2BE4F9E}

Value 3
  Name:            Description
  Type:            REG_SZ
  Data:            #14989


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\UserSettings\Environment_Group\
Environment_TaskList
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:53 PM
Value 0
  Name:            <NO NAME>
  Type:            REG_SZ
  Data:            #14557

Value 1
  Name:            Package
  Type:            REG_SZ
  Data:            {4A9B7E50-AA16-11d0-A8C5-
00A0C921A4D2}

Value 2
  Name:            Category
  Type:            REG_SZ
  Data:            {8EA81A4E-FDB5-4ee8-BD1A-
22ECBF73B7CD}

Value 3
  Name:            Description
  Type:            REG_SZ
  Data:            #14878


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\UserSettings\Environment_Group\
Environment_Toolbox
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:53 PM
Value 0
  Name:            <NO NAME>
  Type:            REG_SZ
  Data:            #13519

Value 1
  Name:            Package
  Type:            REG_SZ
  Data:            {DA9FB551-C724-11d0-AE1F-
00A0C90FFFC3}

Value 2
  Name:            Category
  Type:            REG_SZ
  Data:            {481999F2-7479-4e03-83D5-
BE808BA142DF}

Value 3
  Name:            Description
  Type:            REG_SZ
  Data:            #14881


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\UserSettings\Environment_Group\
Environment_UnifiedFind
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:53 PM
Value 0
  Name:            <NO NAME>
  Type:            REG_SZ
  Data:            #14570

Value 1
  Name:            Package
  Type:            REG_SZ
  Data:            {DA9FB551-C724-11d0-AE1F-
00A0C90FFFC3}

Value 2
  Name:            Category
  Type:            REG_SZ
  Data:            {DF00ADDF-C14C-4ffd-9325-
634FD605850B}

Value 3
  Name:            Description
  Type:            REG_SZ
  Data:            #14876


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\UserSettings\Environment_Group\
Environment_WindowLayout
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:53 PM
Value 0
  Name:            <NO NAME>
  Type:            REG_SZ
  Data:            #14533

Value 1
  Name:            Package
  Type:            REG_SZ
  Data:            {DA9FB551-C724-11d0-AE1F-
00A0C90FFFC3}

Value 2
  Name:            Category
  Type:            REG_SZ
  Data:            {eb4ba109-a9db-4445-bd09-
e7604bcdce84}
```


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```
Value 3
  Name:            Description
  Type:            REG_SZ
  Data:            #14872

Value 4
  Name:            ImportPass
  Type:            REG_DWORD
  Data:            0

Value 5
  Name:            SecurityLevel
  Type:            REG_DWORD
  Data:            0x1


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\UserSettings\Environment_Help
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:53 PM
Value 0
  Name:            <NO NAME>
  Type:            REG_SZ
  Data:            #3534

Value 1
  Name:            ResourcePackage
  Type:            REG_SZ
  Data:            {4A791146-19E4-11D3-B86B-
00C04F79F802}

Value 2
  Name:            Description
  Type:            REG_SZ
  Data:            #3539


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\UserSettings\Environment_Help\E
nvironment_Help_Favorites
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:53 PM
Value 0
  Name:            <NO NAME>
  Type:            REG_SZ
  Data:            #3533

Value 1
  Name:            Category
  Type:            REG_SZ
  Data:            {B63D51EF-4023-4f89-9DE3-
14E8EC36132F}

Value 2
  Name:            Package
  Type:            REG_SZ
  Data:            {4A791146-19E4-11D3-B86B-
00C04F79F802}

Value 3
  Name:            Description
  Type:            REG_SZ
  Data:            #3543

Value 4
  Name:            SensitivityLevel
  Type:            REG_DWORD
  Data:            0x1


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\UserSettings\Environment_Help\E
nvironment_Help_IndexFilter
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:53 PM
Value 0
  Name:            <NO NAME>
  Type:            REG_SZ
  Data:            #3531

Value 1
  Name:            Category
  Type:            REG_SZ
  Data:            {A69C6FF2-EC60-4fc8-BB7E-
F77AB60938B4}

Value 2
  Name:            Package
  Type:            REG_SZ
  Data:            {4A791146-19E4-11D3-B86B-
00C04F79F802}

Value 3
  Name:            Description
  Type:            REG_SZ
  Data:            #3541


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\UserSettings\Environment_Help\E
nvironment_Help_Options
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:53 PM
Value 0
  Name:            <NO NAME>
  Type:            REG_SZ
  Data:            #3530

Value 1
  Name:            Category
  Type:            REG_SZ
  Data:            {C7C72A03-D951-428f-9F0D-
D29D9E038FAA}

Value 2
  Name:            Package
  Type:            REG_SZ
  Data:            {4A791146-19E4-11D3-B86B-
00C04F79F802}

Value 3
  Name:            Description
  Type:            REG_SZ
  Data:            #3540

Value 4
  Name:            AlternateParent
  Type:            REG_SZ
  Data:            AutomationProperties\Environment


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\UserSettings\Environment_Help\E
nvironment_Help_SearchFilter
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:53 PM
Value 0
  Name:            <NO NAME>
  Type:            REG_SZ
  Data:            #3532

Value 1
  Name:            Category
  Type:            REG_SZ
  Data:            {C59B9E28-E89E-4028-A3EF-
50FA6DF01120}

Value 2
  Name:            Package
  Type:            REG_SZ
  Data:            {4A791146-19E4-11D3-B86B-
00C04F79F802}

Value 3
  Name:            Description
  Type:            REG_SZ
  Data:            #3542


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\UserSettings\XmlEditor
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:53 PM
Value 0
  Name:            <NO NAME>
  Type:            REG_SZ
  Data:            #205

Value 1
  Name:            AlternateParent
  Type:            REG_SZ
  Data:            AutomationProperties\TextEditor

Value 2
  Name:            Category
  Type:            REG_SZ
  Data:            {4E1CDE49-B840-4826-8CC6-
8FB80D7EF455}

Value 3
  Name:            Package
  Type:            REG_SZ
```


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```
  Data:            {87569308-4813-40a0-9cd0-
d7a30838ca3f}


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\ViewAdapters
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:53 PM
Value 0
  Name:
Microsoft.VisualStudio.OLE.Interop.IOleDocument,
Microsoft.VisualStudio.OLE.Interop,
Version=7.1.40304.0, Culture=neutral,
PublicKeyToken=b03f5f7f11d50a3a
  Type:            REG_SZ
  Data:
Microsoft.VisualStudio.Design.PassthroughWindowPane,
Microsoft.VisualStudio.Design, Version=2.0.0.0,
Culture=neutral, PublicKeyToken=b03f5f7f11d50a3a


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\VSProtocol
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:53 PM
Value 0
  Name:            DllName
  Type:            REG_SZ
  Data:            AppIDPackage.rll

Value 1
  Name:            Path
  Type:            REG_SZ
  Data:            C:\Program Files\Microsoft SQL
Server\90\Tools\Binn\VSShell\Common7\IDE\


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\WMAppCommand
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:53 PM
Value 0
  Name:            1
  Type:            REG_SZ
  Data:            {e8b06f44-6d01-11d2-aa7d-
00c04f990343}:201

Value 1
  Name:            2
  Type:            REG_SZ
  Data:            {e8b06f44-6d01-11d2-aa7d-
00c04f990343}:202

Value 2
  Name:            3
  Type:            REG_SZ
  Data:            {e8b06f44-6d01-11d2-aa7d-
00c04f990343}:204

Value 3
  Name:            4
  Type:            REG_SZ
  Data:            {e8b06f44-6d01-11d2-aa7d-
00c04f990343}:203

Value 4
  Name:            5
  Type:            REG_SZ
  Data:            {e8b06f44-6d01-11d2-aa7d-
00c04f990343}:206

Value 5
  Name:            6
  Type:            REG_SZ
  Data:            {4A79114a-19E4-11d3-B86B-
00C04F79F802}:282

Value 6
  Name:            7
  Type:            REG_SZ
  Data:            {e8b06f44-6d01-11d2-aa7d-
00c04f990343}:205


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\XmlDesigners
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:53 PM

Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\XmlDesigners\{07AC752B-D2B0-
4dcd-AD9C-237BF561A30A}
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:53 PM
Value 0
  Name:            <NO NAME>
  Type:            REG_SZ
  Data:            DataSet Designer

Value 1
  Name:            Namespace
  Type:            REG_SZ
  Data:            urn:schemas-microsoft-com:xml-
msdata

Value 2
  Name:            Editor
  Type:            REG_SZ
  Data:            07AC752B-D2B0-4dcd-AD9C-
237BF561A30A

Value 3
  Name:            LogicalView
  Type:            REG_SZ
  Data:            7651a702-06e5-11d1-8ebd-
00a0c90f26ea


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\XmlDesigners\{A66A99F2-AAF9-
4023-B242-B417640676EE}
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:53 PM
Value 0
  Name:            <NO NAME>
  Type:            REG_SZ
  Data:            XSD Designer

Value 1
  Name:            Namespace
  Type:            REG_SZ
  Data:            http://www.w3.org/2001/XMLSchema

Value 2
  Name:            Editor
  Type:            REG_SZ
  Data:            A66A99F2-AAF9-4023-B242-
B417640676EE

Value 3
  Name:            LogicalView
  Type:            REG_SZ
  Data:            7651a702-06e5-11d1-8ebd-
00a0c90f26ea


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shell\XmlDesigners\{FF4D6ACA-9352-
4A5F-821E-F4D6EBDCAB11}
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:53 PM
Value 0
  Name:            <NO NAME>
  Type:            REG_SZ
  Data:            RESX Designer

Value 1
  Name:            Extension
  Type:            REG_SZ
  Data:            resx

Value 2
  Name:            Editor
  Type:            REG_SZ
  Data:            FF4D6ACA-9352-4A5F-821E-
F4D6EBDCAB11

Value 3
  Name:            LogicalView
  Type:            REG_SZ
  Data:            00000000-0000-0000-0000-
000000000000


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shortcut
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:53 PM
```


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```
Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shortcut\AS Deployment Wizard
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:53 PM
Value 0
  Name:            1033
  Type:            REG_SZ
  Data:


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shortcut\AS MigrationWizard
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:53 PM
Value 0
  Name:            1033
  Type:            REG_SZ
  Data:


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shortcut\Books Online
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:53 PM
Value 0
  Name:            1033
  Type:            REG_SZ
  Data:


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shortcut\Business Intelligence
Workbench
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:53 PM
Value 0
  Name:            1033
  Type:            REG_SZ
  Data:


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shortcut\Database Tuning Advisor
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:53 PM
Value 0
  Name:            1033
  Type:            REG_SZ
  Data:


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shortcut\Instance Rename
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:53 PM
Value 0
  Name:            1033
  Type:            REG_SZ
  Data:


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shortcut\Notification Services
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:52 PM
Value 0
  Name:            1033
  Type:            REG_SZ
  Data:


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shortcut\Profiler
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:53 PM
Value 0
  Name:            1033
  Type:            REG_SZ
  Data:


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shortcut\Reporting Services
Configuration
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:53 PM
Value 0
  Name:            1033
  Type:            REG_SZ
  Data:


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shortcut\SQL Configuration Manager
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:51 PM
Value 0
  Name:            1033
  Type:            REG_SZ
  Data:


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shortcut\SQL Server Error and Usage
Reporting
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:51 PM
Value 0
  Name:            1033
  Type:            REG_SZ
  Data:


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shortcut\SQL Workbench
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:53 PM
Value 0
  Name:            1033
  Type:            REG_SZ
  Data:


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Tools\Shortcut\Surface Area Configuration
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:51 PM
Value 0
  Name:            1033
  Type:            REG_SZ
  Data:


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Uninstall Info
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:53 PM

Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Uninstall Info\{2373A92B-1C1C-4E71-B494-
5CA97F96AA19}
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:50 PM
Value 0
  Name:            Product
  Type:            REG_SZ
  Data:            SQL_Engine

Value 1
  Name:            SetupHive
  Type:            REG_SZ
  Data:            MSSQL.1

Value 2
  Name:            RemoveList
  Type:            REG_SZ
  Data:
SQL_Engine,SQL_Data_Files,SQL_Replication,SQL_FullTex
t,SQL_SharedTools

Value 3
  Name:            ModifyPath
  Type:            REG_SZ
  Data:            "C:\Program Files\Microsoft SQL
Server\90\Setup Bootstrap\setup.exe" /resumesetup
/productcode {2373A92B-1C1C-4E71-B494-5CA97F96AA19}
/I {2373A92B-1C1C-4E71-B494-5CA97F96AA19}

Value 4
  Name:            UninstallPath
  Type:            REG_SZ
```


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```
  Data:            "C:\Program Files\Microsoft SQL
Server\90\Setup Bootstrap\setup.exe" /resumesetup
/productcode {2373A92B-1C1C-4E71-B494-5CA97F96AA19}
/X {2373A92B-1C1C-4E71-B494-5CA97F96AA19}

Value 5
  Name:            Status
  Type:            REG_DWORD
  Data:            0


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Uninstall Info\{63A5DC0D-1EDD-4D69-8F31-
87FAEB1F7084}
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:52 PM
Value 0
  Name:            Product
  Type:            REG_SZ
  Data:            Notification_Services

Value 1
  Name:            SetupHive
  Type:            REG_SZ
  Data:            90\NS

Value 2
  Name:            RemoveList
  Type:            REG_SZ
  Data:
Notification_Services,NS_Engine,NS_Client

Value 3
  Name:            ModifyPath
  Type:            REG_SZ
  Data:            "C:\Program Files\Microsoft SQL
Server\90\Setup Bootstrap\setup.exe" /resumesetup
/productcode {63A5DC0D-1EDD-4D69-8F31-87FAEB1F7084}
/I {63A5DC0D-1EDD-4D69-8F31-87FAEB1F7084}

Value 4
  Name:            UninstallPath
  Type:            REG_SZ
  Data:            "C:\Program Files\Microsoft SQL
Server\90\Setup Bootstrap\setup.exe" /resumesetup
/productcode {63A5DC0D-1EDD-4D69-8F31-87FAEB1F7084}
/X {63A5DC0D-1EDD-4D69-8F31-87FAEB1F7084}

Value 5
  Name:            Status
  Type:            REG_DWORD
  Data:            0


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Uninstall Info\{90032DD0-ABEE-4424-AC1E-
B076BDD4E350}
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:53 PM
Value 0
  Name:            Product
  Type:            REG_SZ
  Data:            Client_Components

Value 1
  Name:            SetupHive
  Type:            REG_SZ
  Data:            90\Tools

Value 2
  Name:            RemoveList
  Type:            REG_SZ
  Data:
Client_Components,Connectivity,SQL_Tools90,SQL_Profil
er90,SQL_WarehouseDevWorkbench,SDK,SQLXML,Tools_Legac
y,SQL_Documentation,SQL_BooksOnline,SQL_SQLServerBook
sOnline,SQL_SQLServerMobileBooksOnline,SQL_DatabaseSa
mples,SQL_AdventureWorksSamples,SQL_AdventureWorksDWS
amples,SQL_AdventureWorksASSamples,SQL_Samples

Value 3
  Name:            ModifyPath
  Type:            REG_SZ
  Data:            "C:\Program Files\Microsoft SQL
Server\90\Setup Bootstrap\setup.exe" /resumesetup
/productcode {90032DD0-ABEE-4424-AC1E-B076BDD4E350}
/I {90032DD0-ABEE-4424-AC1E-B076BDD4E350}

Value 4
  Name:            UninstallPath
  Type:            REG_SZ
  Data:            "C:\Program Files\Microsoft SQL
Server\90\Setup Bootstrap\setup.exe" /resumesetup
/productcode {90032DD0-ABEE-4424-AC1E-B076BDD4E350}
/X {90032DD0-ABEE-4424-AC1E-B076BDD4E350}

Value 5
  Name:            Status
  Type:            REG_DWORD
  Data:            0


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Uninstall Info\{982DB00A-9C4E-436B-8707-
18E113BAA44C}
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:51 PM
Value 0
  Name:            Product
  Type:            REG_SZ
  Data:            Analysis_Server

Value 1
  Name:            SetupHive
  Type:            REG_SZ
  Data:            MSSQL.2

Value 2
  Name:            RemoveList
  Type:            REG_SZ
  Data:
Analysis_Server,AnalysisDataFiles,AnalysisSharedTools

Value 3
  Name:            ModifyPath
  Type:            REG_SZ
  Data:            "C:\Program Files\Microsoft SQL
Server\90\Setup Bootstrap\setup.exe" /resumesetup
/productcode {982DB00A-9C4E-436B-8707-18E113BAA44C}
/I {982DB00A-9C4E-436B-8707-18E113BAA44C}

Value 4
  Name:            UninstallPath
  Type:            REG_SZ
  Data:            "C:\Program Files\Microsoft SQL
Server\90\Setup Bootstrap\setup.exe" /resumesetup
/productcode {982DB00A-9C4E-436B-8707-18E113BAA44C}
/X {982DB00A-9C4E-436B-8707-18E113BAA44C}

Value 5
  Name:            Status
  Type:            REG_DWORD
  Data:            0


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\90\Uninstall Info\{E0A41F96-7231-4AE8-A654-
EEB34F935462}
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:49 PM
Value 0
  Name:            Product
  Type:            REG_SZ
  Data:            SQL_DTS

Value 1
  Name:            SetupHive
  Type:            REG_SZ
  Data:            90\DTS

Value 2
  Name:            RemoveList
  Type:            REG_SZ
  Data:            SQL_DTS

Value 3
  Name:            ModifyPath
  Type:            REG_SZ
  Data:            "C:\Program Files\Microsoft SQL
Server\90\Setup Bootstrap\setup.exe" /resumesetup
/productcode {E0A41F96-7231-4AE8-A654-EEB34F935462}
/I {E0A41F96-7231-4AE8-A654-EEB34F935462}

Value 4
  Name:            UninstallPath
  Type:            REG_SZ
  Data:            "C:\Program Files\Microsoft SQL
Server\90\Setup Bootstrap\setup.exe" /resumesetup
/productcode {E0A41F96-7231-4AE8-A654-EEB34F935462}
/X {E0A41F96-7231-4AE8-A654-EEB34F935462}

Value 5
  Name:            Status
  Type:            REG_DWORD
  Data:            0
```


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```
Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\ExceptionMessageBox
Class Name:         <NO CLASS>
Last Write Time:    7/19/2005 - 4:51 PM
Value 0
  Name:             ShowFeedbackButton
  Type:             REG_DWORD
  Data:             0x1


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\Instance Names
Class Name:         <NO CLASS>
Last Write Time:    7/19/2005 - 4:51 PM

Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\Instance Names\OLAP
Class Name:         <NO CLASS>
Last Write Time:    7/19/2005 - 4:51 PM
Value 0
  Name:             MSSQLSERVER
  Type:             REG_SZ
  Data:             MSSQL.2


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\Instance Names\SQL
Class Name:         <NO CLASS>
Last Write Time:    7/19/2005 - 4:51 PM
Value 0
  Name:             MSSQLSERVER
  Type:             REG_SZ
  Data:             MSSQL.1


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\MSSQL.1
Class Name:         <NO CLASS>
Last Write Time:    7/19/2005 - 4:50 PM
Value 0
  Name:             <NO NAME>
  Type:             REG_SZ
  Data:             MSSQLSERVER


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\MSSQL.1\CPE
Class Name:         <NO CLASS>
Last Write Time:    7/19/2005 - 4:50 PM
Value 0
  Name:             ErrorDumpDir
  Type:             REG_SZ
  Data:             C:\Program Files\Microsoft SQL
Server\MSSQL.1\MSSQL\LOG\

Value 1
  Name:             EnableErrorReporting
  Type:             REG_DWORD
  Data:             0

Value 2
  Name:             CustomerFeedback
  Type:             REG_DWORD
  Data:             0

Value 3
  Name:             TimeOfReporting
  Type:             REG_DWORD
  Data:             0x3c

Value 4
  Name:             CollectorParameters
  Type:             REG_SZ
  Data:             SQL MSSQL.1


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\MSSQL.1\MSSearch
Class Name:         <NO CLASS>
Last Write Time:    7/19/2005 - 4:50 PM

Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\MSSQL.1\MSSearch\CLSID
Class Name:         <NO CLASS>
Last Write Time:    7/19/2005 - 4:50 PM

Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\MSSQL.1\MSSearch\CLSID\{01C6B350-12C7-11CE-
BD31-00AA004BBB1F}
Class Name:         <NO CLASS>
Last Write Time:    7/19/2005 - 4:50 PM
Value 0
  Name:             <NO NAME>
  Type:             REG_SZ
  Data:             infosoft.dll


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\MSSQL.1\MSSearch\CLSID\{12CE94A0-DEFB-11D2-
B31D-00600893A857}
Class Name:         <NO CLASS>
Last Write Time:    7/19/2005 - 4:50 PM
Value 0
  Name:             <NO NAME>
  Type:             REG_SZ
  Data:             chsbrkr.dll


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\MSSQL.1\MSSearch\CLSID\{1305C72E-2073-452E-
A72D-667032B3B4FE}
Class Name:         <NO CLASS>
Last Write Time:    7/19/2005 - 4:50 PM

Value 0
  Name:             <NO NAME>
  Type:             REG_SZ
  Data:             msir5jp.dll


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\MSSQL.1\MSSearch\CLSID\{1680E7C3-9430-4A51-
9B82-1E7E7AEE5258}
Class Name:         <NO CLASS>
Last Write Time:    7/19/2005 - 4:50 PM
Value 0
  Name:             <NO NAME>
  Type:             REG_SZ
  Data:             chtbrkr.dll


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\MSSQL.1\MSSearch\CLSID\{16BC5CE4-2C78-4CB9-
80D5-386A68CC2B2D}
Class Name:         <NO CLASS>
Last Write Time:    7/19/2005 - 4:50 PM
Value 0
  Name:             <NO NAME>
  Type:             REG_SZ
  Data:             danlr.dll


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\MSSQL.1\MSSearch\CLSID\{173C97E2-AEBE-437C-
9445-01B237ABF2F6}
Class Name:         <NO CLASS>
Last Write Time:    7/19/2005 - 4:50 PM
Value 0
  Name:             <NO NAME>
  Type:             REG_SZ
  Data:             langwrbk.dll


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\MSSQL.1\MSSearch\CLSID\{188D6CC5-CB03-4C01-
912E-47D21295D77E}
Class Name:         <NO CLASS>
Last Write Time:    7/19/2005 - 4:50 PM
Value 0
  Name:             <NO NAME>
  Type:             REG_SZ
  Data:             langwrbk.dll


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\MSSQL.1\MSSearch\CLSID\{20036404-F1AF-11D2-
A57F-006052076F32}
Class Name:         <NO CLASS>
Last Write Time:    7/19/2005 - 4:50 PM
Value 0
  Name:             <NO NAME>
  Type:             REG_SZ
```


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```
  Data:            ruslr.dll


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\MSSQL.1\MSSearch\CLSID\{20036414-F1AF-11D2-
A57F-006052076F32}
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:50 PM
Value 0
  Name:            <NO NAME>
  Type:            REG_SZ
  Data:            ruslr.dll


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\MSSQL.1\MSSearch\CLSID\{23A9C1C3-3C7A-4D2C-
B894-4F286459DAD6}
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:50 PM
Value 0
  Name:            <NO NAME>
  Type:            REG_SZ
  Data:            trklr.dll


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\MSSQL.1\MSSearch\CLSID\{25B7FD48-5404-4BEB-
9D80-B6982AF404FD}
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:50 PM
Value 0
  Name:            <NO NAME>
  Type:            REG_SZ
  Data:            ptblr.dll


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\MSSQL.1\MSSearch\CLSID\{2A6EB050-7F1C-11CE-
BE57-00AA0051FE20}
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:50 PM
Value 0
  Name:            <NO NAME>
  Type:            REG_SZ
  Data:            infosoft.dll


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\MSSQL.1\MSSearch\CLSID\{41B9BE05-B3AF-460C-
BF0B-2CDD44A093B1}
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:50 PM
Value 0
  Name:            <NO NAME>
  Type:            REG_SZ
  Data:            xmlfilt.dll

Value 1
  Name:            ThreadingModel
  Type:            REG_SZ
  Data:            Both


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\MSSQL.1\MSSearch\CLSID\{52F1DEDC-C51B-11D2-
9A7C-00004F6888ED}
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:50 PM
Value 0
  Name:            <NO NAME>
  Type:            REG_SZ
  Data:            msfte.dll

Value 1
  Name:            ThreadingModel
  Type:            REG_SZ
  Data:            Both


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\MSSQL.1\MSSearch\CLSID\{5D5F3A69-620C-4952-
B067-4D0126BB6086}
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:50 PM
Value 0
  Name:            <NO NAME>
  Type:            REG_SZ
  Data:            ptslr.dll


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\MSSQL.1\MSSearch\CLSID\{66B37110-8BF2-11CE-
BE59-00AA0051FE20}
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:50 PM
Value 0
  Name:            <NO NAME>
  Type:            REG_SZ
  Data:            infosoft.dll


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\MSSQL.1\MSSearch\CLSID\{68C6D24E-77E0-11D5-
8528-00C04F68155C}
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:50 PM
Value 0
  Name:            <NO NAME>
  Type:            REG_SZ
  Data:            msfte.dll


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\MSSQL.1\MSSearch\CLSID\{6D36CE10-7F1C-11CE-
BE57-00AA0051FE20}
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:50 PM
Value 0
  Name:            <NO NAME>
  Type:            REG_SZ
  Data:            infosoft.dll


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\MSSQL.1\MSSearch\CLSID\{6DE705A5-6467-43DC-
9CE3-CCFE08B3F645}
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:50 PM
Value 0
  Name:            <NO NAME>
  Type:            REG_SZ
  Data:            nls400.dll


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\MSSQL.1\MSSearch\CLSID\{737FC9B5-BC66-4953-
B7DB-B79A72A592A5}
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:50 PM
Value 0
  Name:            <NO NAME>
  Type:            REG_SZ
  Data:            korwbrkr.dll


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\MSSQL.1\MSSearch\CLSID\{73D009FB-7D05-45AC-
94C2-EDD1029942D4}
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:50 PM
Value 0
  Name:            <NO NAME>
  Type:            REG_SZ
  Data:            langwrbk.dll


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\MSSQL.1\MSSearch\CLSID\{83BC7EF7-D27B-4950-
A743-0F8E5CA928F8}
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:50 PM
Value 0
  Name:            <NO NAME>
  Type:            REG_SZ
  Data:            danlr.dll


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\MSSQL.1\MSSearch\CLSID\{860D28D0-8BF4-11CE-
BE59-00AA0051FE20}
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:50 PM
Value 0
  Name:            <NO NAME>
```


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```
  Type:            REG_SZ
  Data:            infosoft.dll


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\MSSQL.1\MSSearch\CLSID\{8DF412D1-62C7-4667-
BBEC-38756576C21B}
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:50 PM
Value 0
  Name:            <NO NAME>
  Type:            REG_SZ
  Data:            trklr.dll


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\MSSQL.1\MSSearch\CLSID\{9478F640-7F1C-11CE-
BE57-00AA0051FE20}
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:50 PM
Value 0
  Name:            <NO NAME>
  Type:            REG_SZ
  Data:            infosoft.dll


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\MSSQL.1\MSSearch\CLSID\{95679344-48B8-42CD-
9B79-2F5784D70258}
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:50 PM
Value 0
  Name:            <NO NAME>
  Type:            REG_SZ
  Data:            langwrbk.dll


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\MSSQL.1\MSSearch\CLSID\{97E8EFC5-42DA-43ED-
9CEC-84FDE3620F1A}
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:50 PM
Value 0
  Name:            <NO NAME>
  Type:            REG_SZ
  Data:            korwbrkr.dll


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\MSSQL.1\MSSearch\CLSID\{9EA69E16-AD5E-43ED-
B90E-73D58771D3F6}
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:50 PM
Value 0
  Name:            <NO NAME>
  Type:            REG_SZ
  Data:            nls400.dll


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\MSSQL.1\MSSearch\CLSID\{A9FFAE02-D834-47B3-
8434-0D75DC0804BD}
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:50 PM
Value 0
  Name:            <NO NAME>
  Type:            REG_SZ
  Data:            msir5jp.dll


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\MSSQL.1\MSSearch\CLSID\{B0516FF0-7F1C-11CE-
BE57-00AA0051FE20}
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:50 PM
Value 0
  Name:            <NO NAME>
  Type:            REG_SZ
  Data:            infosoft.dll


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\MSSQL.1\MSSearch\CLSID\{B8713269-2D9D-4BF5-
BF40-2615D75723D8}
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:50 PM
Value 0
  Name:            <NO NAME>
  Type:            REG_SZ
  Data:            lrpolish.dll


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\MSSQL.1\MSSearch\CLSID\{C731071F-AC80-11D1-
8DF3-00C04FB6EF4F}
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:50 PM
Value 0
  Name:            <NO NAME>
  Type:            REG_SZ
  Data:            msfte.dll


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\MSSQL.1\MSSearch\CLSID\{C7310720-AC80-11D1-
8DF3-00C04FB6EF4F}
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:50 PM
Value 0
  Name:            <NO NAME>
  Type:            REG_SZ
  Data:            msfte.dll

Value 1
  Name:            ThreadingModel
  Type:            REG_SZ
  Data:            Both


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\MSSQL.1\MSSearch\CLSID\{CA665B09-4642-4C84-
A9B7-9B8F3CD7C3F6}
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:50 PM
Value 0
  Name:            <NO NAME>
  Type:            REG_SZ
  Data:            lrpolish.dll


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\MSSQL.1\MSSearch\CLSID\{CCA22CF4-59FE-11D1-
BBFF-00C04FB97FDA}
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:50 PM
Value 0
  Name:            <NO NAME>
  Type:            REG_SZ
  Data:            thawbrkr.dll


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\MSSQL.1\MSSearch\CLSID\{CEDC01C7-59FE-11D1-
BBFF-00C04FB97FDA}
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:50 PM
Value 0
  Name:            <NO NAME>
  Type:            REG_SZ
  Data:            thawbrkr.dll


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\MSSQL.1\MSSearch\CLSID\{D4171BC4-90BE-4F70-
8610-DAB1C17F063C}
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:50 PM
Value 0
  Name:            <NO NAME>
  Type:            REG_SZ
  Data:            ptslr.dll


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\MSSQL.1\MSSearch\CLSID\{D5FCDD7E-DBFF-473F-
BCCD-3AFD1890EA85}
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:50 PM
Value 0
  Name:            <NO NAME>
  Type:            REG_SZ
  Data:            ptblr.dll
```


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```
Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\MSSQL.1\MSSearch\CLSID\{D99F7670-7F1A-11CE-
BE57-00AA0051FE20}
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:50 PM
Value 0
  Name:            <NO NAME>
  Type:            REG_SZ
  Data:            infosoft.dll


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\MSSQL.1\MSSearch\CLSID\{E0CA5340-4534-11CF-
B952-00AA0051FE20}
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:50 PM
Value 0
  Name:            <NO NAME>
  Type:            REG_SZ
  Data:            nlhtml.dll

Value 1
  Name:            ThreadingModel
  Type:            REG_SZ
  Data:            Both


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\MSSQL.1\MSSearch\CLSID\{EEED4C20-7F1B-11CE-
BE57-00AA0051FE20}
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:50 PM
Value 0
  Name:            <NO NAME>
  Type:            REG_SZ
  Data:            infosoft.dll


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\MSSQL.1\MSSearch\CLSID\{F07F3920-7B8C-11CF-
9BE8-00AA004B9986}
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:50 PM
Value 0
  Name:            <NO NAME>
  Type:            REG_SZ
  Data:            offfilt.dll

Value 1
  Name:            ThreadingModel
  Type:            REG_SZ
  Data:            Both


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\MSSQL.1\MSSearch\CLSID\{FD86B5D0-12C6-11CE-
BD31-00AA004BBB1F}
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:50 PM
Value 0
  Name:            <NO NAME>
  Type:            REG_SZ
  Data:            infosoft.dll


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\MSSQL.1\MSSearch\Filters
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:50 PM

Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\MSSQL.1\MSSearch\Filters\.ascx
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:50 PM
Value 0
  Name:            <NO NAME>
  Type:            REG_SZ
  Data:            {E0CA5340-4534-11CF-B952-
00AA0051FE20}


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\MSSQL.1\MSSearch\Filters\.asm
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:50 PM
Value 0
  Name:            <NO NAME>
  Type:            REG_SZ
  Data:            {C7310720-AC80-11D1-8DF3-
00C04FB6EF4F}


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\MSSQL.1\MSSearch\Filters\.asp
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:50 PM
Value 0
  Name:            <NO NAME>
  Type:            REG_SZ
  Data:            {E0CA5340-4534-11CF-B952-
00AA0051FE20}


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\MSSQL.1\MSSearch\Filters\.aspx
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:50 PM
Value 0
  Name:            <NO NAME>
  Type:            REG_SZ
  Data:            {E0CA5340-4534-11CF-B952-
00AA0051FE20}


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\MSSQL.1\MSSearch\Filters\.bat
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:50 PM
Value 0
  Name:            <NO NAME>
  Type:            REG_SZ
  Data:            {C7310720-AC80-11D1-8DF3-
00C04FB6EF4F}


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\MSSQL.1\MSSearch\Filters\.c
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:50 PM
Value 0
  Name:            <NO NAME>
  Type:            REG_SZ
  Data:            {C7310720-AC80-11D1-8DF3-
00C04FB6EF4F}


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\MSSQL.1\MSSearch\Filters\.cmd
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:50 PM
Value 0
  Name:            <NO NAME>
  Type:            REG_SZ
  Data:            {C7310720-AC80-11D1-8DF3-
00C04FB6EF4F}


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\MSSQL.1\MSSearch\Filters\.cpp
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:50 PM
Value 0
  Name:            <NO NAME>
  Type:            REG_SZ
  Data:            {C7310720-AC80-11D1-8DF3-
00C04FB6EF4F}


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\MSSQL.1\MSSearch\Filters\.cxx
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:50 PM
Value 0
  Name:            <NO NAME>
  Type:            REG_SZ
  Data:            {C7310720-AC80-11D1-8DF3-
00C04FB6EF4F}


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\MSSQL.1\MSSearch\Filters\.def
```


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```
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:50 PM
Value 0
  Name:            <NO NAME>
  Type:            REG_SZ
  Data:            {C7310720-AC80-11D1-8DF3-
00C04FB6EF4F}


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\MSSQL.1\MSSearch\Filters\.dic
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:50 PM
Value 0
  Name:            <NO NAME>
  Type:            REG_SZ
  Data:            {C7310720-AC80-11D1-8DF3-
00C04FB6EF4F}


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\MSSQL.1\MSSearch\Filters\.doc
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:50 PM
Value 0
  Name:            <NO NAME>
  Type:            REG_SZ
  Data:            {F07F3920-7B8C-11CF-9BE8-
00AA004B9986}


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\MSSQL.1\MSSearch\Filters\.dot
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:50 PM
Value 0
  Name:            <NO NAME>
  Type:            REG_SZ
  Data:            {F07F3920-7B8C-11CF-9BE8-
00AA004B9986}


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\MSSQL.1\MSSearch\Filters\.h
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:50 PM
Value 0
  Name:            <NO NAME>
  Type:            REG_SZ
  Data:            {C7310720-AC80-11D1-8DF3-
00C04FB6EF4F}


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\MSSQL.1\MSSearch\Filters\.hhc
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:50 PM
Value 0
  Name:            <NO NAME>
  Type:            REG_SZ
  Data:            {E0CA5340-4534-11CF-B952-
00AA0051FE20}


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\MSSQL.1\MSSearch\Filters\.hpp
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:50 PM
Value 0
  Name:            <NO NAME>
  Type:            REG_SZ
  Data:            {C7310720-AC80-11D1-8DF3-
00C04FB6EF4F}


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\MSSQL.1\MSSearch\Filters\.htm
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:50 PM
Value 0
  Name:            <NO NAME>
  Type:            REG_SZ
  Data:            {E0CA5340-4534-11CF-B952-
00AA0051FE20}


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\MSSQL.1\MSSearch\Filters\.html
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:50 PM
Value 0
  Name:            <NO NAME>
  Type:            REG_SZ
  Data:            {E0CA5340-4534-11CF-B952-
00AA0051FE20}


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\MSSQL.1\MSSearch\Filters\.htw
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:50 PM
Value 0
  Name:            <NO NAME>
  Type:            REG_SZ
  Data:            {E0CA5340-4534-11CF-B952-
00AA0051FE20}


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\MSSQL.1\MSSearch\Filters\.htx
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:50 PM
Value 0
  Name:            <NO NAME>
  Type:            REG_SZ
  Data:            {E0CA5340-4534-11CF-B952-
00AA0051FE20}


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\MSSQL.1\MSSearch\Filters\.hxx
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:50 PM
Value 0
  Name:            <NO NAME>
  Type:            REG_SZ
  Data:            {C7310720-AC80-11D1-8DF3-
00C04FB6EF4F}


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\MSSQL.1\MSSearch\Filters\.ibq
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:50 PM
Value 0
  Name:            <NO NAME>
  Type:            REG_SZ
  Data:            {C7310720-AC80-11D1-8DF3-
00C04FB6EF4F}


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\MSSQL.1\MSSearch\Filters\.idl
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:50 PM
Value 0
  Name:            <NO NAME>
  Type:            REG_SZ
  Data:            {C7310720-AC80-11D1-8DF3-
00C04FB6EF4F}


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\MSSQL.1\MSSearch\Filters\.inc
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:50 PM
Value 0
  Name:            <NO NAME>
  Type:            REG_SZ
  Data:            {C7310720-AC80-11D1-8DF3-
00C04FB6EF4F}


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\MSSQL.1\MSSearch\Filters\.inf
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:50 PM
Value 0
  Name:            <NO NAME>
  Type:            REG_SZ
  Data:            {C7310720-AC80-11D1-8DF3-
00C04FB6EF4F}
```


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```
Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\MSSQL.1\MSSearch\Filters\.ini
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:50 PM
Value 0
  Name:            <NO NAME>
  Type:            REG_SZ
  Data:            {C7310720-AC80-11D1-8DF3-
00C04FB6EF4F}


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\MSSQL.1\MSSearch\Filters\.inx
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:50 PM
Value 0
  Name:            <NO NAME>
  Type:            REG_SZ
  Data:            {C7310720-AC80-11D1-8DF3-
00C04FB6EF4F}


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\MSSQL.1\MSSearch\Filters\.js
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:50 PM
Value 0
  Name:            <NO NAME>
  Type:            REG_SZ
  Data:            {C7310720-AC80-11D1-8DF3-
00C04FB6EF4F}


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\MSSQL.1\MSSearch\Filters\.log
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:50 PM
Value 0
  Name:            <NO NAME>
  Type:            REG_SZ
  Data:            {C7310720-AC80-11D1-8DF3-
00C04FB6EF4F}


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\MSSQL.1\MSSearch\Filters\.m3u
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:50 PM
Value 0
  Name:            <NO NAME>
  Type:            REG_SZ
  Data:            {C7310720-AC80-11D1-8DF3-
00C04FB6EF4F}


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\MSSQL.1\MSSearch\Filters\.mht
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:50 PM
Value 0
  Name:            <NO NAME>
  Type:            REG_SZ
  Data:            {C7310720-AC80-11D1-8DF3-
00C04FB6EF4F}


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\MSSQL.1\MSSearch\Filters\.obd
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:50 PM
Value 0
  Name:            <NO NAME>
  Type:            REG_SZ
  Data:            {F07F3920-7B8C-11CF-9BE8-
00AA004B9986}


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\MSSQL.1\MSSearch\Filters\.obt
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:50 PM
Value 0
  Name:            <NO NAME>
  Type:            REG_SZ
  Data:            {F07F3920-7B8C-11CF-9BE8-
00AA004B9986}


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\MSSQL.1\MSSearch\Filters\.odc
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:50 PM
Value 0
  Name:            <NO NAME>
  Type:            REG_SZ
  Data:            {E0CA5340-4534-11CF-B952-
00AA0051FE20}


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\MSSQL.1\MSSearch\Filters\.pl
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:50 PM
Value 0
  Name:            <NO NAME>
  Type:            REG_SZ
  Data:            {C7310720-AC80-11D1-8DF3-
00C04FB6EF4F}


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\MSSQL.1\MSSearch\Filters\.pot
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:50 PM
Value 0
  Name:            <NO NAME>
  Type:            REG_SZ
  Data:            {F07F3920-7B8C-11CF-9BE8-
00AA004B9986}


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\MSSQL.1\MSSearch\Filters\.ppt
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:50 PM
Value 0
  Name:            <NO NAME>
  Type:            REG_SZ
  Data:            {F07F3920-7B8C-11CF-9BE8-
00AA004B9986}


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\MSSQL.1\MSSearch\Filters\.rc
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:50 PM
Value 0
  Name:            <NO NAME>
  Type:            REG_SZ
  Data:            {C7310720-AC80-11D1-8DF3-
00C04FB6EF4F}


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\MSSQL.1\MSSearch\Filters\.reg
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:50 PM
Value 0
  Name:            <NO NAME>
  Type:            REG_SZ
  Data:            {C7310720-AC80-11D1-8DF3-
00C04FB6EF4F}


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\MSSQL.1\MSSearch\Filters\.rtf
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:50 PM
Value 0
  Name:            <NO NAME>
  Type:            REG_SZ
  Data:            {C7310720-AC80-11D1-8DF3-
00C04FB6EF4F}


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\MSSQL.1\MSSearch\Filters\.stm
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:50 PM
Value 0
```


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```
  Name:            <NO NAME>
  Type:            REG_SZ
  Data:            {E0CA5340-4534-11CF-B952-
00AA0051FE20}


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\MSSQL.1\MSSearch\Filters\.txt
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:50 PM
Value 0
  Name:            <NO NAME>
  Type:            REG_SZ
  Data:            {C7310720-AC80-11D1-8DF3-
00C04FB6EF4F}


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\MSSQL.1\MSSearch\Filters\.url
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:50 PM
Value 0
  Name:            <NO NAME>
  Type:            REG_SZ
  Data:            {C7310720-AC80-11D1-8DF3-
00C04FB6EF4F}


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\MSSQL.1\MSSearch\Filters\.vbs
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:50 PM
Value 0
  Name:            <NO NAME>
  Type:            REG_SZ
  Data:            {C7310720-AC80-11D1-8DF3-
00C04FB6EF4F}


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\MSSQL.1\MSSearch\Filters\.wtx
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:50 PM
Value 0
  Name:            <NO NAME>
  Type:            REG_SZ
  Data:            {C7310720-AC80-11D1-8DF3-
00C04FB6EF4F}


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\MSSQL.1\MSSearch\Filters\.xlb
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:50 PM
Value 0
  Name:            <NO NAME>
  Type:            REG_SZ
  Data:            {F07F3920-7B8C-11CF-9BE8-
00AA004B9986}


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\MSSQL.1\MSSearch\Filters\.xlc
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:50 PM
Value 0
  Name:            <NO NAME>
  Type:            REG_SZ
  Data:            {F07F3920-7B8C-11CF-9BE8-
00AA004B9986}


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\MSSQL.1\MSSearch\Filters\.xls
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:50 PM
Value 0
  Name:            <NO NAME>
  Type:            REG_SZ
  Data:            {F07F3920-7B8C-11CF-9BE8-
00AA004B9986}


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\MSSQL.1\MSSearch\Filters\.xlt
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:50 PM
Value 0
  Name:            <NO NAME>
  Type:            REG_SZ
  Data:            {F07F3920-7B8C-11CF-9BE8-
00AA004B9986}


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\MSSQL.1\MSSearch\Filters\.xml
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:50 PM
Value 0
  Name:            <NO NAME>
  Type:            REG_SZ
  Data:            {41B9BE05-B3AF-460C-BF0B-
2CDD44A093B1}


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\MSSQL.1\MSSearch\Filters\CLSID
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:50 PM

Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\MSSQL.1\MSSearch\Filters\CLSID\{00020810-0000-
0000-C000-000000000046}
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:50 PM
Value 0
  Name:            <NO NAME>
  Type:            REG_SZ
  Data:            {F07F3920-7B8C-11CF-9BE8-
00AA004B9986}


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\MSSQL.1\MSSearch\Filters\CLSID\{00020811-0000-
0000-C000-000000000046}
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:50 PM
Value 0
  Name:            <NO NAME>
  Type:            REG_SZ
  Data:            {F07F3920-7B8C-11CF-9BE8-
00AA004B9986}


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\MSSQL.1\MSSearch\Filters\CLSID\{00020820-0000-
0000-C000-000000000046}
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:50 PM
Value 0
  Name:            <NO NAME>
  Type:            REG_SZ
  Data:            {F07F3920-7B8C-11CF-9BE8-
00AA004B9986}


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\MSSQL.1\MSSearch\Filters\CLSID\{00020821-0000-
0000-C000-000000000046}
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:50 PM
Value 0
  Name:            <NO NAME>
  Type:            REG_SZ
  Data:            {F07F3920-7B8C-11CF-9BE8-
00AA004B9986}


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\MSSQL.1\MSSearch\Filters\CLSID\{00020900-0000-
0000-C000-000000000046}
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:50 PM
Value 0
  Name:            <NO NAME>
  Type:            REG_SZ
  Data:            {F07F3920-7B8C-11CF-9BE8-
00AA004B9986}


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
```


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```
Server\MSSQL.1\MSSearch\Filters\CLSID\{00020906-0000-
0000-C000-000000000046}
Class Name:         <NO CLASS>
Last Write Time:    7/19/2005 - 4:50 PM
Value 0
  Name:             <NO NAME>
  Type:             REG_SZ
  Data:             {F07F3920-7B8C-11CF-9BE8-
00AA004B9986}


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\MSSQL.1\MSSearch\Filters\CLSID\{25336920-03F9-
11CF-8FD0-00AA00686F13}
Class Name:         <NO CLASS>
Last Write Time:    7/19/2005 - 4:50 PM
Value 0
  Name:             <NO NAME>
  Type:             REG_SZ
  Data:             {E0CA5340-4534-11CF-B952-
00AA0051FE20}


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\MSSQL.1\MSSearch\Filters\CLSID\{59850400-6664-
101B-B21C-00AA004BA90B}
Class Name:         <NO CLASS>
Last Write Time:    7/19/2005 - 4:50 PM
Value 0
  Name:             <NO NAME>
  Type:             REG_SZ
  Data:             {F07F3920-7B8C-11CF-9BE8-
00AA004B9986}


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\MSSQL.1\MSSearch\Filters\CLSID\{5E941D80-BF96-
11CD-B579-08002B30BFEB}
Class Name:         <NO CLASS>
Last Write Time:    7/19/2005 - 4:50 PM
Value 0
  Name:             <NO NAME>
  Type:             REG_SZ
  Data:             {C7310720-AC80-11D1-8DF3-
00C04FB6EF4F}


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\MSSQL.1\MSSearch\Filters\CLSID\{64818D10-4F9B-
11CF-86EA-00AA00B929E8}
Class Name:         <NO CLASS>
Last Write Time:    7/19/2005 - 4:50 PM
Value 0
  Name:             <NO NAME>
  Type:             REG_SZ
  Data:             {F07F3920-7B8C-11CF-9BE8-
00AA004B9986}


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\MSSQL.1\MSSearch\Filters\CLSID\{64818D11-4F9B-
11CF-86EA-00AA00B929E8}
Class Name:         <NO CLASS>
Last Write Time:    7/19/2005 - 4:50 PM
Value 0
  Name:             <NO NAME>
  Type:             REG_SZ
  Data:             {F07F3920-7B8C-11CF-9BE8-
00AA004B9986}


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\MSSQL.1\MSSearch\Filters\CLSID\{7F73B8F6-C19C-
11D0-AA66-00C04FC2EDDC}
Class Name:         <NO CLASS>
Last Write Time:    7/19/2005 - 4:50 PM
Value 0
  Name:             <NO NAME>
  Type:             REG_SZ
  Data:             {E0CA5340-4534-11CF-B952-
00AA0051FE20}


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\MSSQL.1\MSSearch\Filters\CLSID\{87DB1ADA-AA39-
11D1-829F-00A0C906B239}
Class Name:         <NO CLASS>
Last Write Time:    7/19/2005 - 4:50 PM
Value 0
  Name:             <NO NAME>
  Type:             REG_SZ
  Data:             {C7310720-AC80-11D1-8DF3-
00C04FB6EF4F}


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\MSSQL.1\MSSearch\Filters\CLSID\{89BCB7A4-6119-
101A-BCB7-00DD010655AF}
Class Name:         <NO CLASS>
Last Write Time:    7/19/2005 - 4:50 PM
Value 0
  Name:             <NO NAME>
  Type:             REG_SZ
  Data:             {C7310720-AC80-11D1-8DF3-
00C04FB6EF4F}


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\MSSQL.1\MSSearch\Filters\CLSID\{8C9E8E1C-90F0-
11D1-BA0F-00A0C906B239}
Class Name:         <NO CLASS>
Last Write Time:    7/19/2005 - 4:50 PM
Value 0
  Name:             <NO NAME>
  Type:             REG_SZ
  Data:             {C7310720-AC80-11D1-8DF3-
00C04FB6EF4F}


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\MSSQL.1\MSSearch\Filters\CLSID\{95876EB0-90F0-
11D1-BA0F-00A0C906B239}
Class Name:         <NO CLASS>
Last Write Time:    7/19/2005 - 4:50 PM
Value 0
  Name:             <NO NAME>
  Type:             REG_SZ
  Data:             {C7310720-AC80-11D1-8DF3-
00C04FB6EF4F}


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\MSSQL.1\MSSearch\Filters\CLSID\{961C1130-89AD-
11CF-88A1-00AA004B9986}
Class Name:         <NO CLASS>
Last Write Time:    7/19/2005 - 4:50 PM
Value 0
  Name:             <NO NAME>
  Type:             REG_SZ
  Data:             {C7310720-AC80-11D1-8DF3-
00C04FB6EF4F}


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\MSSQL.1\MSSearch\Filters\CLSID\{9ED4692C-90F0-
11D1-BA0F-00A0C906B239}
Class Name:         <NO CLASS>
Last Write Time:    7/19/2005 - 4:50 PM
Value 0
  Name:             <NO NAME>
  Type:             REG_SZ
  Data:             {C7310720-AC80-11D1-8DF3-
00C04FB6EF4F}


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\MSSQL.1\MSSearch\Filters\CLSID\{BD70C020-2D24-
11D0-9110-00004C752752}
Class Name:         <NO CLASS>
Last Write Time:    7/19/2005 - 4:50 PM
Value 0
  Name:             <NO NAME>
  Type:             REG_SZ
  Data:             {E0CA5340-4534-11CF-B952-
00AA0051FE20}


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\MSSQL.1\MSSearch\Filters\CLSID\{EA7BAE70-FB3B-
11CD-A903-00AA00510EA3}
Class Name:         <NO CLASS>
Last Write Time:    7/19/2005 - 4:50 PM
Value 0
  Name:             <NO NAME>
  Type:             REG_SZ
```


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```
  Data:            {F07F3920-7B8C-11CF-9BE8-
00AA004B9986}


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\MSSQL.1\MSSearch\GlobalAdminBlob
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:51 PM
Value 0
  Name:            Blob0
  Type:            REG_BINARY
  Data:
00000000   00 00 00 80 60 02 00 00 - 05 00 15 00 46
00 54 00  ....`.......F.T.
00000010   45 00 5f 00 52 00 65 00 - 74 00 61 00 69
00 6c 00  E._.R.e.t.a.i.l.
00000020   54 00 72 00 61 00 63 00 - 69 00 6e 00 67
00 50 00  T.r.a.c.i.n.g.P.
00000030   61 00 74 00 68 00 00 00 - 08 00 37 00 43
00 3a 00  a.t.h.....7.C.:.
00000040   5c 00 50 00 72 00 6f 00 - 67 00 72 00 61
00 6d 00  \.P.r.o.g.r.a.m.
00000050   20 00 46 00 69 00 6c 00 - 65 00 73 00 5c
00 4d 00   .F.i.l.e.s.\.M.
00000060   69 00 63 00 72 00 6f 00 - 73 00 6f 00 66
00 74 00  i.c.r.o.s.o.f.t.
00000070   20 00 53 00 51 00 4c 00 - 20 00 53 00 65
00 72 00   .S.Q.L. .S.e.r.
00000080   76 00 65 00 72 00 5c 00 - 4d 00 53 00 53
00 51 00  v.e.r.\.M.S.S.Q.
00000090   4c 00 2e 00 31 00 5c 00 - 4d 00 53 00 53
00 51 00  L...1.\.M.S.S.Q.
000000a0   4c 00 5c 00 4c 00 4f 00 - 47 00 00 00 14
00 46 00  L.\.L.O.G.....F.
000000b0   54 00 45 00 5f 00 53 00 - 51 00 4c 00 44
00 75 00  T.E._.S.Q.L.D.u.
000000c0   6d 00 70 00 65 00 72 00 - 44 00 75 00 6d
00 70 00  m.p.e.r.D.u.m.p.
000000d0   44 00 69 00 72 00 00 00 - 08 00 37 00 43
00 3a 00  D.i.r.....7.C.:.
000000e0   5c 00 50 00 72 00 6f 00 - 67 00 72 00 61
00 6d 00  \.P.r.o.g.r.a.m.
000000f0   20 00 46 00 69 00 6c 00 - 65 00 73 00 5c
00 4d 00   .F.i.l.e.s.\.M.
00000100   69 00 63 00 72 00 6f 00 - 73 00 6f 00 66
00 74 00  i.c.r.o.s.o.f.t.
00000110   20 00 53 00 51 00 4c 00 - 20 00 53 00 65
00 72 00   .S.Q.L. .S.e.r.
00000120   76 00 65 00 72 00 5c 00 - 4d 00 53 00 53
00 51 00  v.e.r.\.M.S.S.Q.
00000130   4c 00 2e 00 31 00 5c 00 - 4d 00 53 00 53
00 51 00  L...1.\.M.S.S.Q.
00000140   4c 00 5c 00 4c 00 4f 00 - 47 00 00 00 12
00 46 00  L.\.L.O.G.....F.
00000150   54 00 45 00 5f 00 53 00 - 51 00 4c 00 44
00 75 00  T.E._.S.Q.L.D.u.
00000160   6d 00 70 00 65 00 72 00 - 46 00 6c 00 61
00 67 00  m.p.e.r.F.l.a.g.
00000170   73 00 00 00 08 00 06 00 - 30 00 78 00 30
00 38 00  s.......0.x.0.8.
00000180   30 00 30 00 00 00 15 00 - 46 00 54 00 45
00 5f 00  0.0.....F.T.E._.
00000190   53 00 51 00 4c 00 44 00 - 75 00 6d 00 70
00 65 00  S.Q.L.D.u.m.p.e.
000001a0   72 00 46 00 75 00 6c 00 - 6c 00 50 00 61
00 74 00  r.F.u.l.l.P.a.t.
000001b0   68 00 00 00 08 00 3d 00 - 43 00 3a 00 5c
00 50 00  h.....=.C.:.\.P.
000001c0   72 00 6f 00 67 00 72 00 - 61 00 6d 00 20
00 46 00  r.o.g.r.a.m. .F.
000001d0   69 00 6c 00 65 00 73 00 - 5c 00 4d 00 69
00 63 00  i.l.e.s.\.M.i.c.
000001e0   72 00 6f 00 73 00 6f 00 - 66 00 74 00 20
00 53 00  r.o.s.o.f.t. .S.
000001f0   51 00 4c 00 20 00 53 00 - 65 00 72 00 76
00 65 00  Q.L. .S.e.r.v.e.
00000200   72 00 5c 00 39 00 30 00 - 5c 00 53 00 68
00 61 00  r.\.9.0.\.S.h.a.
00000210   72 00 65 00 64 00 5c 00 - 73 00 71 00 6c
00 64 00  r.e.d.\.s.q.l.d.
00000220   75 00 6d 00 70 00 65 00 - 72 00 2e 00 65
00 78 00  u.m.p.e.r...e.x.
00000230   65 00 00 00 11 00 46 00 - 54 00 45 00 5f
00 45 00  e.....F.T.E._.E.
00000240   72 00 72 00 6f 00 72 00 - 43 00 6f 00 75
00 6e 00  r.r.o.r.C.o.u.n.
00000250   74 00 4d 00 61 00 78 00 - 00 00 13 00 00
00 00 00  t.M.a.x.........


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\MSSQL.1\MSSearch\Language
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:50 PM

Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\MSSQL.1\MSSearch\Language\chs
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:50 PM
Value 0
  Name:            NoiseFile
  Type:            REG_SZ
  Data:            C:\Program Files\Microsoft SQL
Server\MSSQL.1\MSSQL\FTData\noisechs.txt

Value 1
  Name:            TsaurusFile
  Type:            REG_SZ
  Data:            C:\Program Files\Microsoft SQL
Server\MSSQL.1\MSSQL\FTData\tschs.xml

Value 2
  Name:            Locale
  Type:            REG_DWORD
  Data:            0x804

Value 3
  Name:            WBreakerClass
  Type:            REG_SZ
  Data:            {12CE94A0-DEFB-11D2-B31D-
00600893A857}


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\MSSQL.1\MSSearch\Language\cht
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:50 PM
Value 0
  Name:            NoiseFile
  Type:            REG_SZ
  Data:            C:\Program Files\Microsoft SQL
Server\MSSQL.1\MSSQL\FTData\noisecht.txt

Value 1
  Name:            TsaurusFile
  Type:            REG_SZ
  Data:            C:\Program Files\Microsoft SQL
Server\MSSQL.1\MSSQL\FTData\tscht.xml

Value 2
  Name:            Locale
  Type:            REG_DWORD
  Data:            0x404

Value 3
  Name:            WBreakerClass
  Type:            REG_SZ
  Data:            {1680E7C3-9430-4A51-9B82-
1E7E7AEE5258}


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\MSSQL.1\MSSearch\Language\dan
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:50 PM
Value 0
  Name:            NoiseFile
  Type:            REG_SZ
  Data:            C:\Program Files\Microsoft SQL
Server\MSSQL.1\MSSQL\FTData\noisedan.txt

Value 1
  Name:            TsaurusFile
  Type:            REG_SZ
  Data:            C:\Program Files\Microsoft SQL
Server\MSSQL.1\MSSQL\FTData\tsdan.xml

Value 2
  Name:            Locale
  Type:            REG_DWORD
  Data:            0x406

Value 3
  Name:            WBreakerClass
  Type:            REG_SZ
  Data:            {16BC5CE4-2C78-4CB9-80D5-
386A68CC2B2D}

Value 4
  Name:            StemmerClass
  Type:            REG_SZ
  Data:            {83BC7EF7-D27B-4950-A743-
0F8E5CA928F8}
```


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```
Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\MSSQL.1\MSSearch\Language\deu
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:50 PM
Value 0
  Name:            NoiseFile
  Type:            REG_SZ
  Data:            C:\Program Files\Microsoft SQL
Server\MSSQL.1\MSSQL\FTData\noisedeu.txt

Value 1
  Name:            TsaurusFile
  Type:            REG_SZ
  Data:            C:\Program Files\Microsoft SQL
Server\MSSQL.1\MSSQL\FTData\tsdeu.xml

Value 2
  Name:            Locale
  Type:            REG_DWORD
  Data:            0x407

Value 3
  Name:            WBreakerClass
  Type:            REG_SZ
  Data:            {9EA69E16-AD5E-43ED-B90E-
73D58771D3F6}

Value 4
  Name:            StemmerClass
  Type:            REG_SZ
  Data:            {6DE705A5-6467-43DC-9CE3-
CCFE08B3F645}


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\MSSQL.1\MSSearch\Language\eng
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:50 PM
Value 0
  Name:            NoiseFile
  Type:            REG_SZ
  Data:            C:\Program Files\Microsoft SQL
Server\MSSQL.1\MSSQL\FTData\noiseeng.txt

Value 1
  Name:            TsaurusFile
  Type:            REG_SZ
  Data:            C:\Program Files\Microsoft SQL
Server\MSSQL.1\MSSQL\FTData\tseng.xml

Value 2
  Name:            StemmerClass
  Type:            REG_SZ
  Data:            {D99F7670-7F1A-11CE-BE57-
00AA0051FE20}

Value 3
  Name:            Locale
  Type:            REG_DWORD
  Data:            0x809

Value 4
  Name:            WBreakerClass
  Type:            REG_SZ
  Data:            {173C97E2-AEBE-437C-9445-
01B237ABF2F6}


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\MSSQL.1\MSSearch\Language\enu
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:50 PM
Value 0
  Name:            NoiseFile
  Type:            REG_SZ
  Data:            C:\Program Files\Microsoft SQL
Server\MSSQL.1\MSSQL\FTData\noiseenu.txt

Value 1
  Name:            TsaurusFile
  Type:            REG_SZ
  Data:            C:\Program Files\Microsoft SQL
Server\MSSQL.1\MSSQL\FTData\tsenu.xml

Value 2
  Name:            StemmerClass
  Type:            REG_SZ
  Data:            {EEED4C20-7F1B-11CE-BE57-
00AA0051FE20}

Value 3
  Name:            Locale
  Type:            REG_DWORD
  Data:            0x409

Value 4
  Name:            WBreakerClass
  Type:            REG_SZ
  Data:            {188D6CC5-CB03-4C01-912E-
47D21295D77E}


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\MSSQL.1\MSSearch\Language\esn
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:50 PM
Value 0
  Name:            NoiseFile
  Type:            REG_SZ
  Data:            C:\Program Files\Microsoft SQL
Server\MSSQL.1\MSSQL\FTData\noiseesn.txt

Value 1
  Name:            TsaurusFile
  Type:            REG_SZ
  Data:            C:\Program Files\Microsoft SQL
Server\MSSQL.1\MSSQL\FTData\tsesn.xml

Value 2
  Name:            StemmerClass
  Type:            REG_SZ
  Data:            {B0516FF0-7F1C-11CE-BE57-
00AA0051FE20}

Value 3
  Name:            Locale
  Type:            REG_DWORD
  Data:            0xc0a

Value 4
  Name:            WBreakerClass
  Type:            REG_SZ
  Data:            {73D009FB-7D05-45AC-94C2-
EDD1029942D4}


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\MSSQL.1\MSSearch\Language\fra
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:50 PM
Value 0
  Name:            NoiseFile
  Type:            REG_SZ
  Data:            C:\Program Files\Microsoft SQL
Server\MSSQL.1\MSSQL\FTData\noisefra.txt

Value 1
  Name:            TsaurusFile
  Type:            REG_SZ
  Data:            C:\Program Files\Microsoft SQL
Server\MSSQL.1\MSSQL\FTData\tsfra.xml

Value 2
  Name:            StemmerClass
  Type:            REG_SZ
  Data:            {2A6EB050-7F1C-11CE-BE57-
00AA0051FE20}

Value 3
  Name:            Locale
  Type:            REG_DWORD
  Data:            0x40c

Value 4
  Name:            WBreakerClass
  Type:            REG_SZ
  Data:            {95679344-48B8-42CD-9B79-
2F5784D70258}


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\MSSQL.1\MSSearch\Language\ita
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:50 PM
Value 0
  Name:            NoiseFile
  Type:            REG_SZ
  Data:            C:\Program Files\Microsoft SQL
Server\MSSQL.1\MSSQL\FTData\noiseita.txt

Value 1
```


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```
  Name:            TsaurusFile
  Type:            REG_SZ
  Data:            C:\Program Files\Microsoft SQL
Server\MSSQL.1\MSSQL\FTData\tsita.xml

Value 2
  Name:            Locale
  Type:            REG_DWORD
  Data:            0x410

Value 3
  Name:            WBreakerClass
  Type:            REG_SZ
  Data:            {FD86B5D0-12C6-11CE-BD31-
00AA004BBB1F}

Value 4
  Name:            StemmerClass
  Type:            REG_SZ
  Data:            {6D36CE10-7F1C-11CE-BE57-
00AA0051FE20}


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\MSSQL.1\MSSearch\Language\jpn
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:50 PM
Value 0
  Name:            NoiseFile
  Type:            REG_SZ
  Data:            C:\Program Files\Microsoft SQL
Server\MSSQL.1\MSSQL\FTData\noisejpn.txt

Value 1
  Name:            TsaurusFile
  Type:            REG_SZ
  Data:            C:\Program Files\Microsoft SQL
Server\MSSQL.1\MSSQL\FTData\tsjpn.xml

Value 2
  Name:            Locale
  Type:            REG_DWORD
  Data:            0x411

Value 3
  Name:            WBreakerClass
  Type:            REG_SZ
  Data:            {A9FFAE02-D834-47B3-8434-
0D75DC0804BD}

Value 4
  Name:            StemmerClass
  Type:            REG_SZ
  Data:            {1305C72E-2073-452E-A72D-
667032B3B4FE}


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\MSSQL.1\MSSearch\Language\kor
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:50 PM
Value 0
  Name:            NoiseFile
  Type:            REG_SZ
  Data:            C:\Program Files\Microsoft SQL
Server\MSSQL.1\MSSQL\FTData\noisekor.txt

Value 1
  Name:            TsaurusFile
  Type:            REG_SZ
  Data:            C:\Program Files\Microsoft SQL
Server\MSSQL.1\MSSQL\FTData\tskor.xml

Value 2
  Name:            Locale
  Type:            REG_DWORD
  Data:            0x412

Value 3
  Name:            WBreakerClass
  Type:            REG_SZ
  Data:            {737FC9B5-BC66-4953-B7DB-
B79A72A592A5}

Value 4
  Name:            StemmerClass
  Type:            REG_SZ
  Data:            {97E8EFC5-42DA-43ED-9CEC-
84FDE3620F1A}


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\MSSQL.1\MSSearch\Language\Neutral
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:50 PM
Value 0
  Name:            NoiseFile
  Type:            REG_SZ
  Data:            C:\Program Files\Microsoft SQL
Server\MSSQL.1\MSSQL\FTData\noiseneu.txt

Value 1
  Name:            TsaurusFile
  Type:            REG_SZ
  Data:            C:\Program Files\Microsoft SQL
Server\MSSQL.1\MSSQL\FTData\tsglobal.xml

Value 2
  Name:            Locale
  Type:            REG_DWORD
  Data:            0

Value 3
  Name:            WBreakerClass
  Type:            REG_SZ
  Data:            {C731071F-AC80-11D1-8DF3-
00C04FB6EF4F}


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\MSSQL.1\MSSearch\Language\nld
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:50 PM
Value 0
  Name:            NoiseFile
  Type:            REG_SZ
  Data:            C:\Program Files\Microsoft SQL
Server\MSSQL.1\MSSQL\FTData\noisenld.txt

Value 1
  Name:            TsaurusFile
  Type:            REG_SZ
  Data:            C:\Program Files\Microsoft SQL
Server\MSSQL.1\MSSQL\FTData\tsnld.xml

Value 2
  Name:            Locale
  Type:            REG_DWORD
  Data:            0x413

Value 3
  Name:            WBreakerClass
  Type:            REG_SZ
  Data:            {66B37110-8BF2-11CE-BE59-
00AA0051FE20}

Value 4
  Name:            StemmerClass
  Type:            REG_SZ
  Data:            {860D28D0-8BF4-11CE-BE59-
00AA0051FE20}


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\MSSQL.1\MSSearch\Language\plk
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:50 PM
Value 0
  Name:            NoiseFile
  Type:            REG_SZ
  Data:            C:\Program Files\Microsoft SQL
Server\MSSQL.1\MSSQL\FTData\noiseplk.txt

Value 1
  Name:            TsaurusFile
  Type:            REG_SZ
  Data:            C:\Program Files\Microsoft SQL
Server\MSSQL.1\MSSQL\FTData\tsplk.xml

Value 2
  Name:            Locale
  Type:            REG_DWORD
  Data:            0x415

Value 3
  Name:            WBreakerClass
  Type:            REG_SZ
  Data:            {CA665B09-4642-4C84-A9B7-
9B8F3CD7C3F6}

Value 4
  Name:            StemmerClass
  Type:            REG_SZ
```


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```
  Data:            {B8713269-2D9D-4BF5-BF40-
2615D75723D8}


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\MSSQL.1\MSSearch\Language\ptb
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:50 PM
Value 0
  Name:            NoiseFile
  Type:            REG_SZ
  Data:            C:\Program Files\Microsoft SQL
Server\MSSQL.1\MSSQL\FTData\noiseptb.txt

Value 1
  Name:            TsaurusFile
  Type:            REG_SZ
  Data:            C:\Program Files\Microsoft SQL
Server\MSSQL.1\MSSQL\FTData\tsptb.xml

Value 2
  Name:            Locale
  Type:            REG_DWORD
  Data:            0x416

Value 3
  Name:            WBreakerClass
  Type:            REG_SZ
  Data:            {25B7FD48-5404-4BEB-9D80-
B6982AF404FD}

Value 4
  Name:            StemmerClass
  Type:            REG_SZ
  Data:            {D5FCDD7E-DBFF-473F-BCCD-
3AFD1890EA85}


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\MSSQL.1\MSSearch\Language\pts
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:50 PM
Value 0
  Name:            NoiseFile
  Type:            REG_SZ
  Data:            C:\Program Files\Microsoft SQL
Server\MSSQL.1\MSSQL\FTData\noisepts.txt

Value 1
  Name:            TsaurusFile
  Type:            REG_SZ
  Data:            C:\Program Files\Microsoft SQL
Server\MSSQL.1\MSSQL\FTData\tspts.xml

Value 2
  Name:            Locale
  Type:            REG_DWORD
  Data:            0x816

Value 3
  Name:            WBreakerClass
  Type:            REG_SZ
  Data:            {5D5F3A69-620C-4952-B067-
4D0126BB6086}

Value 4
  Name:            StemmerClass
  Type:            REG_SZ
  Data:            {D4171BC4-90BE-4F70-8610-
DAB1C17F063C}


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\MSSQL.1\MSSearch\Language\rus
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:50 PM
Value 0
  Name:            NoiseFile
  Type:            REG_SZ
  Data:            C:\Program Files\Microsoft SQL
Server\MSSQL.1\MSSQL\FTData\noiserus.txt

Value 1
  Name:            TsaurusFile
  Type:            REG_SZ
  Data:            C:\Program Files\Microsoft SQL
Server\MSSQL.1\MSSQL\FTData\tsrus.xml

Value 2
  Name:            Locale
  Type:            REG_DWORD
  Data:            0x419

Value 3
  Name:            WBreakerClass
  Type:            REG_SZ
  Data:            {20036404-F1AF-11D2-A57F-
006052076F32}

Value 4
  Name:            StemmerClass
  Type:            REG_SZ
  Data:            {20036414-F1AF-11D2-A57F-
006052076F32}


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\MSSQL.1\MSSearch\Language\sve
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:50 PM
Value 0
  Name:            NoiseFile
  Type:            REG_SZ
  Data:            C:\Program Files\Microsoft SQL
Server\MSSQL.1\MSSQL\FTData\noisesve.txt

Value 1
  Name:            TsaurusFile
  Type:            REG_SZ
  Data:            C:\Program Files\Microsoft SQL
Server\MSSQL.1\MSSQL\FTData\tssve.xml

Value 2
  Name:            Locale
  Type:            REG_DWORD
  Data:            0x41d

Value 3
  Name:            WBreakerClass
  Type:            REG_SZ
  Data:            {01C6B350-12C7-11CE-BD31-
00AA004BBB1F}

Value 4
  Name:            StemmerClass
  Type:            REG_SZ
  Data:            {9478F640-7F1C-11CE-BE57-
00AA0051FE20}


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\MSSQL.1\MSSearch\Language\tha
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:50 PM
Value 0
  Name:            NoiseFile
  Type:            REG_SZ
  Data:            C:\Program Files\Microsoft SQL
Server\MSSQL.1\MSSQL\FTData\noisetha.txt

Value 1
  Name:            TsaurusFile
  Type:            REG_SZ
  Data:            C:\Program Files\Microsoft SQL
Server\MSSQL.1\MSSQL\FTData\tstha.xml

Value 2
  Name:            Locale
  Type:            REG_DWORD
  Data:            0x41e

Value 3
  Name:            WBreakerClass
  Type:            REG_SZ
  Data:            {CCA22CF4-59FE-11D1-BBFF-
00C04FB97FDA}

Value 4
  Name:            StemmerClass
  Type:            REG_SZ
  Data:            {CEDC01C7-59FE-11D1-BBFF-
00C04FB97FDA}


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\MSSQL.1\MSSearch\Language\trk
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:50 PM
Value 0
  Name:            NoiseFile
  Type:            REG_SZ
  Data:            C:\Program Files\Microsoft SQL
Server\MSSQL.1\MSSQL\FTData\noisetrk.txt
```


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```
Value 1
  Name:            TsaurusFile
  Type:            REG_SZ
  Data:            C:\Program Files\Microsoft SQL
Server\MSSQL.1\MSSQL\FTData\tstrk.xml

Value 2
  Name:            Locale
  Type:            REG_DWORD
  Data:            0x41f

Value 3
  Name:            WBreakerClass
  Type:            REG_SZ
  Data:            {8DF412D1-62C7-4667-BBEC-
38756576C21B}

Value 4
  Name:            StemmerClass
  Type:            REG_SZ
  Data:            {23A9C1C3-3C7A-4D2C-B894-
4F286459DAD6}


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\MSSQL.1\MSSearch\Language\zh-hk
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:50 PM
Value 0
  Name:            NoiseFile
  Type:            REG_SZ
  Data:            C:\Program Files\Microsoft SQL
Server\MSSQL.1\MSSQL\FTData\noisecht.txt

Value 1
  Name:            TsaurusFile
  Type:            REG_SZ
  Data:            C:\Program Files\Microsoft SQL
Server\MSSQL.1\MSSQL\FTData\tscht.xml

Value 2
  Name:            Locale
  Type:            REG_DWORD
  Data:            0xc04

Value 3
  Name:            WBreakerClass
  Type:            REG_SZ
  Data:            {1680E7C3-9430-4A51-9B82-
1E7E7AEE5258}


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\MSSQL.1\MSSearch\Language\zh-mo
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:50 PM
Value 0
  Name:            NoiseFile
  Type:            REG_SZ
  Data:            C:\Program Files\Microsoft SQL
Server\MSSQL.1\MSSQL\FTData\noisecht.txt

Value 1
  Name:            TsaurusFile
  Type:            REG_SZ
  Data:            C:\Program Files\Microsoft SQL
Server\MSSQL.1\MSSQL\FTData\tscht.xml

Value 2
  Name:            Locale
  Type:            REG_DWORD
  Data:            0x1404

Value 3
  Name:            WBreakerClass
  Type:            REG_SZ
  Data:            {1680E7C3-9430-4A51-9B82-
1E7E7AEE5258}


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\MSSQL.1\MSSearch\Language\zh-sg
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:50 PM
Value 0
  Name:            NoiseFile
  Type:            REG_SZ
  Data:            C:\Program Files\Microsoft SQL
Server\MSSQL.1\MSSQL\FTData\noisechs.txt

Value 1
  Name:            TsaurusFile
  Type:            REG_SZ
  Data:            C:\Program Files\Microsoft SQL
Server\MSSQL.1\MSSQL\FTData\tschs.xml

Value 2
  Name:            Locale
  Type:            REG_DWORD
  Data:            0x1004

Value 3
  Name:            WBreakerClass
  Type:            REG_SZ
  Data:            {12CE94A0-DEFB-11D2-B31D-
00600893A857}


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\MSSQL.1\MSSearch\Plugins
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:50 PM

Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\MSSQL.1\MSSearch\Plugins\MicrosoftIndexer
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:50 PM
Value 0
  Name:            <NO NAME>
  Type:            REG_SZ
  Data:            {68C6D24E-77E0-11D5-8528-
00C04F68155C}


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\MSSQL.1\MSSQLServer
Class Name:        <NO CLASS>
Last Write Time:   9/21/2005 - 1:26 PM
Value 0
  Name:            AuditLevel
  Type:            REG_DWORD
  Data:            0x2

Value 1
  Name:            DebugClassID
  Type:            REG_SZ
  Data:            {4A2DC947-842B-45E1-919F-
0A92402DF282}

Value 2
  Name:            DefaultLogin
  Type:            REG_SZ
  Data:            guest

Value 3
  Name:            LoginMode
  Type:            REG_DWORD
  Data:            0x2

Value 4
  Name:            Map_
  Type:            REG_SZ
  Data:            \

Value 5
  Name:            Map#
  Type:            REG_SZ
  Data:            -

Value 6
  Name:            Map$
  Type:            REG_SZ
  Data:

Value 7
  Name:            SetHostName
  Type:            REG_DWORD
  Data:            0

Value 8
  Name:            Tapeloadwaittime
  Type:            REG_DWORD
  Data:            0xffffffff

Value 9
  Name:            BackupDirectory
  Type:            REG_SZ
  Data:            C:\Program Files\Microsoft SQL
Server\MSSQL.1\MSSQL\Backup

Value 10
```


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```
  Name:            SysDb
  Type:            REG_DWORD
  Data:            0x1

Value 11
  Name:            FullTextDefaultPath
  Type:            REG_SZ
  Data:            C:\Program Files\Microsoft SQL
Server\MSSQL.1\MSSQL\FTData

Value 12
  Name:            uptime_pid
  Type:            REG_DWORD
  Data:            0x9e4

Value 13
  Name:            uptime_time_utc
  Type:            REG_BINARY
  Data:
20 01 bc 0d da be c5 01 -
.¼.Ú¾Å.


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\MSSQL.1\MSSQLServer\CurrentVersion
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:50 PM
Value 0
  Name:            Language
  Type:            REG_DWORD
  Data:            0x409

Value 1
  Name:            CurrentVersion
  Type:            REG_SZ
  Data:            9.00.1187.07

Value 2
  Name:            RegisteredOwner
  Type:            REG_SZ
  Data:

Value 3
  Name:            SerialNumber
  Type:            REG_SZ
  Data:


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\MSSQL.1\MSSQLServer\Parameters
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:50 PM
Value 0
  Name:            SQLArg0
  Type:            REG_SZ
  Data:            -dC:\Program Files\Microsoft SQL
Server\MSSQL.1\MSSQL\DATA\master.mdf

Value 1
  Name:            SQLArg1
  Type:            REG_SZ
  Data:            -eC:\Program Files\Microsoft SQL
Server\MSSQL.1\MSSQL\LOG\ERRORLOG

Value 2
  Name:            SQLArg2
  Type:            REG_SZ
  Data:            -lC:\Program Files\Microsoft SQL
Server\MSSQL.1\MSSQL\DATA\mastlog.ldf


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\MSSQL.1\MSSQLServer\SuperSocketNetLib
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:50 PM
Value 0
  Name:            ForceEncryption
  Type:            REG_DWORD
  Data:            0

Value 1
  Name:            HideInstance
  Type:            REG_DWORD
  Data:            0

Value 2
  Name:            Certificate
  Type:            REG_SZ
  Data:

Value 3
  Name:            DisplayName
  Type:            REG_SZ
  Data:            SQL Server Network Configuration


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\MSSQL.1\MSSQLServer\SuperSocketNetLib\AdminCon
nection
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:50 PM
Value 0
  Name:            DisplayName
  Type:            REG_SZ
  Data:            Dedicated Administrative
Connection


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\MSSQL.1\MSSQLServer\SuperSocketNetLib\AdminCon
nection\Tcp
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:50 PM
Value 0
  Name:            TcpDynamicPorts
  Type:            REG_SZ
  Data:            1434

Value 1
  Name:            DisplayName
  Type:            REG_SZ
  Data:            TCP/IP


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\MSSQL.1\MSSQLServer\SuperSocketNetLib\Np
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 5:15 PM
Value 0
  Name:            Enabled
  Type:            REG_DWORD
  Data:            0x1

Value 1
  Name:            LocalAccessOnly
  Type:            REG_DWORD
  Data:            0

Value 2
  Name:            PipeName
  Type:            REG_SZ
  Data:            \\.\pipe\sql\query

Value 3
  Name:            DisplayName
  Type:            REG_SZ
  Data:            Named Pipes


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\MSSQL.1\MSSQLServer\SuperSocketNetLib\Sm
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:50 PM
Value 0
  Name:            Enabled
  Type:            REG_DWORD
  Data:            0x1

Value 1
  Name:            DisplayName
  Type:            REG_SZ
  Data:            Shared Memory


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\MSSQL.1\MSSQLServer\SuperSocketNetLib\Tcp
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 5:15 PM
Value 0
  Name:            Enabled
  Type:            REG_DWORD
  Data:            0x1

Value 1
  Name:            ListenOnAllIPs
  Type:            REG_DWORD
  Data:            0x1

Value 2
  Name:            NoDelay
  Type:            REG_DWORD
```


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```
  Data:            0

Value 3
  Name:            KeepAlive
  Type:            REG_DWORD
  Data:            0x7530

Value 4
  Name:            DisplayName
  Type:            REG_SZ
  Data:            TCP/IP


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\MSSQL.1\MSSQLServer\SuperSocketNetLib\Tcp\IP1
Class Name:        <NO CLASS>
Last Write Time:   7/20/2005 - 10:05 AM
Value 0
  Name:            Enabled
  Type:            REG_DWORD
  Data:            0x1

Value 1
  Name:            Active
  Type:            REG_DWORD
  Data:            0x1

Value 2
  Name:            TcpPort
  Type:            REG_SZ
  Data:            1433

Value 3
  Name:            TcpDynamicPorts
  Type:            REG_SZ
  Data:

Value 4
  Name:            DisplayName
  Type:            REG_SZ
  Data:            Specific IP Address

Value 5
  Name:            IpAddress
  Type:            REG_SZ
  Data:            130.168.212.83


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\MSSQL.1\MSSQLServer\SuperSocketNetLib\Tcp\IP10
Class Name:        <NO CLASS>
Last Write Time:   7/20/2005 - 10:05 AM
Value 0
  Name:            Enabled
  Type:            REG_DWORD
  Data:            0x1

Value 1
  Name:            Active
  Type:            REG_DWORD
  Data:            0x1

Value 2
  Name:            TcpPort
  Type:            REG_SZ
  Data:            1433

Value 3
  Name:            TcpDynamicPorts
  Type:            REG_SZ
  Data:

Value 4
  Name:            DisplayName
  Type:            REG_SZ
  Data:            Specific IP Address

Value 5
  Name:            IpAddress
  Type:            REG_SZ
  Data:            127.0.0.1


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\MSSQL.1\MSSQLServer\SuperSocketNetLib\Tcp\IP2
Class Name:        <NO CLASS>
Last Write Time:   7/20/2005 - 10:05 AM
Value 0
  Name:            Enabled
  Type:            REG_DWORD
  Data:            0x1

Value 1
  Name:            Active
  Type:            REG_DWORD
  Data:            0x1

Value 2
  Name:            TcpPort
  Type:            REG_SZ
  Data:            1433

Value 3
  Name:            TcpDynamicPorts
  Type:            REG_SZ
  Data:

Value 4
  Name:            DisplayName
  Type:            REG_SZ
  Data:            Specific IP Address

Value 5
  Name:            IpAddress
  Type:            REG_SZ
  Data:            130.172.80.1


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\MSSQL.1\MSSQLServer\SuperSocketNetLib\Tcp\IP3
Class Name:        <NO CLASS>
Last Write Time:   7/20/2005 - 10:05 AM
Value 0
  Name:            Enabled
  Type:            REG_DWORD
  Data:            0x1

Value 1
  Name:            Active
  Type:            REG_DWORD
  Data:            0x1

Value 2
  Name:            TcpPort
  Type:            REG_SZ
  Data:            1433

Value 3
  Name:            TcpDynamicPorts
  Type:            REG_SZ
  Data:

Value 4
  Name:            DisplayName
  Type:            REG_SZ
  Data:            Specific IP Address

Value 5
  Name:            IpAddress
  Type:            REG_SZ
  Data:            130.103.212.83


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\MSSQL.1\MSSQLServer\SuperSocketNetLib\Tcp\IP4
Class Name:        <NO CLASS>
Last Write Time:   7/20/2005 - 10:05 AM
Value 0
  Name:            Enabled
  Type:            REG_DWORD
  Data:            0x1

Value 1
  Name:            Active
  Type:            REG_DWORD
  Data:            0x1

Value 2
  Name:            TcpPort
  Type:            REG_SZ
  Data:            1433

Value 3
  Name:            TcpDynamicPorts
  Type:            REG_SZ
  Data:

Value 4
  Name:            DisplayName
  Type:            REG_SZ
  Data:            Specific IP Address

Value 5
  Name:            IpAddress
```


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```
  Type:            REG_SZ
  Data:            130.168.212.82


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\MSSQL.1\MSSQLServer\SuperSocketNetLib\Tcp\IP5
Class Name:        <NO CLASS>
Last Write Time:   7/20/2005 - 10:05 AM
Value 0
  Name:            Enabled
  Type:            REG_DWORD
  Data:            0x1

Value 1
  Name:            Active
  Type:            REG_DWORD
  Data:            0x1

Value 2
  Name:            TcpPort
  Type:            REG_SZ
  Data:            1433

Value 3
  Name:            TcpDynamicPorts
  Type:            REG_SZ
  Data:

Value 4
  Name:            DisplayName
  Type:            REG_SZ
  Data:            Specific IP Address

Value 5
  Name:            IpAddress
  Type:            REG_SZ
  Data:            130.102.212.82


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\MSSQL.1\MSSQLServer\SuperSocketNetLib\Tcp\IP6
Class Name:        <NO CLASS>
Last Write Time:   7/20/2005 - 10:05 AM
Value 0
  Name:            Enabled
  Type:            REG_DWORD
  Data:            0x1

Value 1
  Name:            Active
  Type:            REG_DWORD
  Data:            0x1

Value 2
  Name:            TcpPort
  Type:            REG_SZ
  Data:            1433

Value 3
  Name:            TcpDynamicPorts
  Type:            REG_SZ
  Data:

Value 4
  Name:            DisplayName
  Type:            REG_SZ
  Data:            Specific IP Address

Value 5
  Name:            IpAddress
  Type:            REG_SZ
  Data:            130.168.212.81


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\MSSQL.1\MSSQLServer\SuperSocketNetLib\Tcp\IP7
Class Name:        <NO CLASS>
Last Write Time:   7/20/2005 - 10:05 AM
Value 0
  Name:            Enabled
  Type:            REG_DWORD
  Data:            0x1

Value 1
  Name:            Active
  Type:            REG_DWORD
  Data:            0x1

Value 2
  Name:            TcpPort
  Type:            REG_SZ
  Data:            1433

Value 3
  Name:            TcpDynamicPorts
  Type:            REG_SZ
  Data:

Value 4
  Name:            DisplayName
  Type:            REG_SZ
  Data:            Specific IP Address

Value 5
  Name:            IpAddress
  Type:            REG_SZ
  Data:            130.101.212.81


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\MSSQL.1\MSSQLServer\SuperSocketNetLib\Tcp\IP8
Class Name:        <NO CLASS>
Last Write Time:   7/20/2005 - 10:05 AM
Value 0
  Name:            Enabled
  Type:            REG_DWORD
  Data:            0x1

Value 1
  Name:            Active
  Type:            REG_DWORD
  Data:            0x1

Value 2
  Name:            TcpPort
  Type:            REG_SZ
  Data:            1433

Value 3
  Name:            TcpDynamicPorts
  Type:            REG_SZ
  Data:

Value 4
  Name:            DisplayName
  Type:            REG_SZ
  Data:            Specific IP Address

Value 5
  Name:            IpAddress
  Type:            REG_SZ
  Data:            130.168.212.80


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\MSSQL.1\MSSQLServer\SuperSocketNetLib\Tcp\IP9
Class Name:        <NO CLASS>
Last Write Time:   7/20/2005 - 10:06 AM
Value 0
  Name:            Enabled
  Type:            REG_DWORD
  Data:            0x1

Value 1
  Name:            Active
  Type:            REG_DWORD
  Data:            0x1

Value 2
  Name:            TcpPort
  Type:            REG_SZ
  Data:            1433

Value 3
  Name:            TcpDynamicPorts
  Type:            REG_SZ
  Data:

Value 4
  Name:            DisplayName
  Type:            REG_SZ
  Data:            Specific IP Address

Value 5
  Name:            IpAddress
  Type:            REG_SZ
  Data:            130.100.212.80


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\MSSQL.1\MSSQLServer\SuperSocketNetLib\Tcp\IPAl
l
Class Name:        <NO CLASS>
```


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```
Last Write Time:   7/20/2005 - 10:05 AM
Value 0
  Name:            TcpPort
  Type:            REG_SZ
  Data:            2001,2002,2003,2004

Value 1
  Name:            TcpDynamicPorts
  Type:            REG_SZ
  Data:

Value 2
  Name:            DisplayName
  Type:            REG_SZ
  Data:            Any IP Address


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\MSSQL.1\MSSQLServer\SuperSocketNetLib\Via
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:50 PM
Value 0
  Name:            Enabled
  Type:            REG_DWORD
  Data:            0

Value 1
  Name:            DefaultServerPort
  Type:            REG_SZ
  Data:            0:1433

Value 2
  Name:            ListenInfo
  Type:            REG_SZ
  Data:            0:1433

Value 3
  Name:            DisplayName
  Type:            REG_SZ
  Data:            VIA


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\MSSQL.1\Providers
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:50 PM
Value 0
  Name:            AllowInProcess
  Type:            REG_DWORD
  Data:            0x1


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\MSSQL.1\Providers\ADSDSOObject
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:50 PM
Value 0
  Name:            AllowInProcess
  Type:            REG_DWORD
  Data:            0x1


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\MSSQL.1\Providers\DB2OLEDB
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:50 PM
Value 0
  Name:            AllowInProcess
  Type:            REG_DWORD
  Data:            0x1


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\MSSQL.1\Providers\Microsoft.Jet.OLEDB.4.0
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:50 PM
Value 0
  Name:            AllowInProcess
  Type:            REG_DWORD
  Data:            0x1


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\MSSQL.1\Providers\MSDAORA
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:50 PM
Value 0
  Name:            AllowInProcess
  Type:            REG_DWORD
  Data:            0x1


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\MSSQL.1\Providers\MSDASQL
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:50 PM
Value 0
  Name:            AllowInProcess
  Type:            REG_DWORD
  Data:            0x1


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\MSSQL.1\Providers\MSIDXS
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:50 PM
Value 0
  Name:            AllowInProcess
  Type:            REG_DWORD
  Data:            0x1


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\MSSQL.1\Providers\MSQLImpProv
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:50 PM
Value 0
  Name:            AllowInProcess
  Type:            REG_DWORD
  Data:            0x1


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\MSSQL.1\Providers\MSSEARCHSQL
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:50 PM
Value 0
  Name:            AllowInProcess
  Type:            REG_DWORD
  Data:            0x1


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\MSSQL.1\Providers\SQLNCLI
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:50 PM
Value 0
  Name:            AllowInProcess
  Type:            REG_DWORD
  Data:            0x1

Value 1
  Name:            DisallowAdhocAccess
  Type:            REG_DWORD
  Data:            0


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\MSSQL.1\Providers\SQLOLEDB
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:50 PM
Value 0
  Name:            AllowInProcess
  Type:            REG_DWORD
  Data:            0x1

Value 1
  Name:            DisallowAdhocAccess
  Type:            REG_DWORD
  Data:            0


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\MSSQL.1\Replication
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:50 PM
Value 0
  Name:            IsInstalled
  Type:            REG_DWORD
  Data:            0x1

Value 1
  Name:            DistributionDB
  Type:            REG_SZ
  Data:
```


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```
Value 2
  Name:            WorkingDirectory
  Type:            REG_SZ
  Data:            C:\Program Files\Microsoft SQL
Server\MSSQL.1\MSSQL\REPLDATA


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\MSSQL.1\Setup
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:50 PM
Value 0
  Name:            Version
  Type:            REG_SZ
  Data:            9.00.1187.07

Value 1
  Name:            Language
  Type:            REG_DWORD
  Data:            0x409

Value 2
  Name:            Resume
  Type:            REG_DWORD
  Data:            0

Value 3
  Name:            ProductCode
  Type:            REG_SZ
  Data:            {2373A92B-1C1C-4E71-B494-
5CA97F96AA19}

Value 4
  Name:            SqlProgramDir
  Type:            REG_SZ
  Data:            C:\Program Files\Microsoft SQL
Server\

Value 5
  Name:            checksum
  Type:            REG_BINARY
  Data:
00000000   38 36 33 66 66 66 30 65 - 62 38 32 62 30
34 37 62  863fff0eb82b047b
00000010   31 30 35 31 36 38 32 31 - 30 30 63 63 36
36 33 66  1051682100cc663f
00000020   63 30 63 31 37 30 34 38 - 33 35 64 30 31
63 39 38  c0c1704835d01c98
00000030   33 33 65 33 39 34 38 64 - 65 62 62 31 63
63 62 30  33e3948debb1ccb0
00000040   61 39 66 34 33 65 35 35 - 36 38 37 61 39
61 39 36  a9f43e55687a9a96
00000050   33 35 33 36 65 36 35 34 - 37 34 39 62 36
62 36 38  3536e654749b6b68
00000060   31 32 63 64 61 62 39 39 - 61 32 63 34 63
38 33 64  12cdab99a2c4c83d
00000070   65 66 34 61 39 39 30 35 - 32 39 35 38 30
65 62 64  ef4a990529580ebd
00000080   34 30 61 35 66 32 62 35 - 66 39 32 32 38
63 39 65  40a5f2b5f9228c9e
00000090   38 32 39 39 64 36 35 38 - 61 63 34 65 63
61 36 39  8299d658ac4eca69
64 64 66 62 66 32 38 38 - 31 37 35 33 34 38 00
ddfbf288175348.

Value 6
  Name:            Edition
  Type:            REG_SZ
  Data:            Beta Edition

Value 7
  Name:            SqlCluster
  Type:            REG_DWORD
  Data:            0

Value 8
  Name:            FeatureList
  Type:            REG_SZ
  Data:            SQL_Engine=3 SQL_Data_Files=3
SQL_Replication=3 SQL_FullText=3 SQL_SharedTools=3

Value 9
  Name:            PatchLevel
  Type:            REG_SZ
  Data:            9.00.1187.07

Value 10
  Name:            Collation
  Type:            REG_SZ
  Data:            SQL_Latin1_General_CP437_BIN

Value 11
  Name:            FirstStart
  Type:            REG_DWORD
  Data:            0

Value 12
  Name:            SQLDataRoot
  Type:            REG_SZ
  Data:            C:\Program Files\Microsoft SQL
Server\MSSQL.1\MSSQL

Value 13
  Name:            SQLPath
  Type:            REG_SZ
  Data:            C:\Program Files\Microsoft SQL
Server\MSSQL.1\MSSQL

Value 14
  Name:            SQLBinRoot
  Type:            REG_SZ
  Data:            C:\Program Files\Microsoft SQL
Server\MSSQL.1\MSSQL\Binn


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\MSSQL.1\SQLServerAgent
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:51 PM
Value 0
  Name:            JobHistoryMaxRowsPerJob
  Type:            REG_DWORD
  Data:            0x64

Value 1
  Name:            SysAdminOnly
  Type:            REG_DWORD
  Data:            0x1

Value 2
  Name:            DownloadedMaxRows
  Type:            REG_DWORD
  Data:            0x64

Value 3
  Name:            ErrorLogFile
  Type:            REG_SZ
  Data:            C:\Program Files\Microsoft SQL
Server\MSSQL.1\MSSQL\LOG\SQLAGENT.OUT

Value 4
  Name:            ErrorLoggingLevel
  Type:            REG_DWORD
  Data:            0x3

Value 5
  Name:            JobHistoryMaxRows
  Type:            REG_DWORD
  Data:            0x3e8

Value 6
  Name:            MSXServerName
  Type:            REG_SZ
  Data:

Value 7
  Name:            NonAlertableErrors
  Type:            REG_SZ
  Data:            1204,4002

Value 8
  Name:            RestartServer
  Type:            REG_DWORD
  Data:            0x1

Value 9
  Name:            ServerHost
  Type:            REG_SZ
  Data:

Value 10
  Name:            WorkingDirectory
  Type:            REG_SZ
  Data:            C:\Program Files\Microsoft SQL
Server\MSSQL.1\MSSQL\JOBS\

Value 11
  Name:            AutoRegistryRefresh
  Type:            REG_DWORD
  Data:            0x1

Value 12
  Name:            LogTSQLStepErrors
  Type:            REG_DWORD
  Data:            0

Value 13
```


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```
  Name:           OemErrorLog
  Type:           REG_DWORD
  Data:           0

Value 14
  Name:           RegularMSXConnections
  Type:           REG_DWORD
  Data:           0

Value 15
  Name:           LoginTimeout
  Type:           REG_DWORD
  Data:           0x1e

Value 16
  Name:           TSQLRowBatchSize
  Type:           REG_DWORD
  Data:           0x32

Value 17
  Name:           TSQLWaitTime
  Type:           REG_DWORD
  Data:           0xa

Value 18
  Name:           EventLogPeekInterval
  Type:           REG_DWORD
  Data:           0x14

Value 19
  Name:           EventWMIPeekInterval
  Type:           REG_DWORD
  Data:           0x1e

Value 20
  Name:           EventWMILimit
  Type:           REG_DWORD
  Data:           0x5

Value 21
  Name:           PerformanceSamplingInterval
  Type:           REG_DWORD
  Data:           0x14

Value 22
  Name:           AssertPopupMask
  Type:           REG_DWORD
  Data:           0

Value 23
  Name:           AlertForwardingServer
  Type:           REG_SZ
  Data:

Value 24
  Name:           AlertForwardingSeverity
  Type:           REG_DWORD
  Data:           0x83

Value 25
  Name:           AlertForwardAlways
  Type:           REG_DWORD
  Data:           0

Value 26
  Name:           AlertFailSafeOperator
  Type:           REG_SZ
  Data:

Value 27
  Name:           AlertFailSafeEmailAddress
  Type:           REG_SZ
  Data:

Value 28
  Name:           AlertFailSafeNetSendAddress
  Type:           REG_SZ
  Data:

Value 29
  Name:           AlertFailSafePagerAddress
  Type:           REG_SZ
  Data:

Value 30
  Name:           AlertNotificationMethod
  Type:           REG_DWORD
  Data:           0

Value 31
  Name:           AlertPagerCCTemplate
  Type:           REG_SZ
  Data:

Value 32
  Name:           AlertPagerSendSubjectOnly
  Type:           REG_DWORD
  Data:           0

Value 33
  Name:           UseDatabaseMail
  Type:           REG_DWORD
  Data:           0

Value 34
  Name:           DatabaseMailProfile
  Type:           REG_SZ
  Data:

Value 35
  Name:
AllowDownloadedJobsToMatchProxyName
  Type:           REG_DWORD
  Data:           0

Value 36
  Name:           RestartSQLServer
  Type:           REG_DWORD
  Data:           0x1

Value 37
  Name:           MonitorAutoStart
  Type:           REG_DWORD
  Data:           0

Value 38
  Name:           JobShutdownTimeout
  Type:           REG_DWORD
  Data:           0xf

Value 39
  Name:           JobStartDelay
  Type:           REG_DWORD
  Data:           0

Value 40
  Name:           SkipVersionCheck
  Type:           REG_DWORD
  Data:           0

Value 41
  Name:           SkipScheduleCheck
  Type:           REG_DWORD
  Data:           0

Value 42
  Name:           ErrorMonitor
  Type:           REG_SZ
  Data:

Value 43
  Name:           CoreEngineMask
  Type:           REG_DWORD
  Data:           0x20

Value 44
  Name:           PingConnection
  Type:           REG_DWORD
  Data:           0x1

Value 45
  Name:           TraceMemory
  Type:           REG_DWORD
  Data:           0

Value 46
  Name:           TraceCritSecs
  Type:           REG_DWORD
  Data:           0

Value 47
  Name:           PersistentJMConnection
  Type:           REG_DWORD
  Data:           0

Value 48
  Name:           MaxCachedOperations
  Type:           REG_DWORD
  Data:           0

Value 49
  Name:           IdleCPUPercent
  Type:           REG_DWORD
  Data:           0xa

Value 50
  Name:           IdleCPUDuration
  Type:           REG_DWORD
  Data:           0x258
```


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```
Value 51
  Name:            MSXPollInterval
  Type:            REG_DWORD
  Data:            0x3c

Value 52
  Name:            ShowFailedMSXJobSQL
  Type:            REG_DWORD
  Data:            0

Value 53
  Name:            EventlogSweeping
  Type:            REG_DWORD
  Data:            0

Value 54
  Name:            MSXDownloadBatchSize
  Type:            REG_DWORD
  Data:            0x32

Value 55
  Name:            UseUserLocale
  Type:            REG_DWORD
  Data:            0

Value 56
  Name:            DWAllowHeadless
  Type:            REG_DWORD
  Data:            0x1

Value 57
  Name:            AlertEventSystem
  Type:            REG_DWORD
  Data:            0x1

Value 58
  Name:            AlertReplaceRuntimeTokens
  Type:            REG_DWORD
  Data:            0


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\MSSQL.1\SQLServerSCP
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:50 PM

Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\MSSQL.2
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:51 PM
Value 0
  Name:            <NO NAME>
  Type:            REG_SZ
  Data:            MSSQLSERVER


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\MSSQL.2\CPE
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:51 PM
Value 0
  Name:            CustomerFeedback
  Type:            REG_DWORD
  Data:            0

Value 1
  Name:            EnableErrorReporting
  Type:            REG_DWORD
  Data:            0

Value 2
  Name:            ErrorDumpDir
  Type:            REG_SZ
  Data:            C:\Program Files\Microsoft SQL
Server\MSSQL.2\OLAP\Log\

Value 3
  Name:            TimeOfReporting
  Type:            REG_DWORD
  Data:            0x78

Value 4
  Name:            CollectorParameters
  Type:            REG_SZ
  Data:            OLAP MSSQL.2


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\MSSQL.2\MSSQLServer
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:51 PM

Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\MSSQL.2\MSSQLServer\CurrentVersion
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:51 PM
Value 0
  Name:            CurrentVersion
  Type:            REG_SZ
  Data:            9.00.1187.07


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\MSSQL.2\Providers
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:51 PM

Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\MSSQL.2\Providers\MSOLAP
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:51 PM
Value 0
  Name:            AllowInProcess
  Type:            REG_DWORD
  Data:            0x1


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\MSSQL.2\Setup
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:51 PM
Value 0
  Name:            Version
  Type:            REG_SZ
  Data:            9.00.1187.07

Value 1
  Name:            Language
  Type:            REG_DWORD
  Data:            0x409

Value 2
  Name:            ProductCode
  Type:            REG_SZ
  Data:            {982DB00A-9C4E-436B-8707-
18E113BAA44C}

Value 3
  Name:            SqlProgramDir
  Type:            REG_SZ
  Data:            C:\Program Files\Microsoft SQL
Server\

Value 4
  Name:            checksum
  Type:            REG_BINARY
  Data:
00000000   38 36 33 66 66 66 30 65 - 62 38 32 62 30
34 37 62  863fff0eb82b047b
00000010   31 30 35 31 36 38 32 31 - 30 30 63 66 30
35 36 35  1051682100cf0565
00000020   37 37 39 39 34 63 37 32 - 63 66 33 64 38
63 32 36  77994c72cf3d8c26
00000030   30 38 38 64 39 63 38 39 - 64 38 32 31 32
39 64 33  088d9c89d82129d3
00000040   30 66 36 39 39 34 38 31 - 61 32 66 66 32
61 31 32  0f699481a2ff2a12
00000050   31 39 36 32 39 39 34 38 - 38 63 35 37 32
62 31 62  196299488c572b1b
00000060   34 38 37 63 30 35 38 61 - 38 66 39 37 65
30 32 35  487c058a8f97e025
00000070   38 65 31 39 35 30 32 35 - 61 36 65 64 30
64 33 62  8e195025a6ed0d3b
00000080   30 66 61 39 34 32 33 36 - 62 37 39 39 65
63 36 65  0fa94236b799ec6e
00000090   37 33 33 62 65 37 38 34 - 63 31 65 35 64
35 38 34  733be784c1e5d584
38 66 37 36 33 62 63 38 - 36 30 63 30 64 64 00
8f763bc860c0dd.

Value 5
  Name:            Edition
  Type:            REG_SZ
  Data:            Beta Edition

Value 6
  Name:            SqlCluster
  Type:            REG_DWORD
  Data:            0
```


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```
Value 7
  Name:            FeatureList
  Type:            REG_SZ
  Data:            Analysis_Server=3
AnalysisDataFiles=3 AnalysisSharedTools=3

Value 8
  Name:            SQLBinRoot
  Type:            REG_SZ
  Data:            C:\Program Files\Microsoft SQL
Server\MSSQL.2\OLAP\Bin

Value 9
  Name:            PatchLevel
  Type:            REG_SZ
  Data:            9.00.1187.07

Value 10
  Name:            DataDir
  Type:            REG_SZ
  Data:            C:\Program Files\Microsoft SQL
Server\


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\Services
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:52 PM

Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\Services\Analysis Server
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:51 PM
Value 0
  Name:            Name
  Type:            REG_SZ
  Data:            MSSQLServerOLAPService

Value 1
  Name:            LName
  Type:            REG_SZ
  Data:            MSOLAP$

Value 2
  Name:            Type
  Type:            REG_DWORD
  Data:            0x5


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\Services\Full Text
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:51 PM
Value 0
  Name:            LName
  Type:            REG_SZ
  Data:            msftesql$

Value 1
  Name:            Name
  Type:            REG_SZ
  Data:            msftesql


Value 2
  Name:            Type
  Type:            REG_DWORD
  Data:            0x3


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\Services\Notification Services
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:51 PM
Value 0
  Name:            LName
  Type:            REG_SZ
  Data:            NS$

Value 1
  Name:            Name
  Type:            REG_SZ
  Data:            NsService

Value 2
  Name:            Type
  Type:            REG_DWORD
  Data:            0x8


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\Services\NotificationServices
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:52 PM

Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\Services\NotificationServices\InstalledVersion
s
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:52 PM

Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\Services\NotificationServices\InstalledVersion
s\9.0.242
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:52 PM
Value 0
  Name:            DBServer
  Type:            REG_SZ
  Data:            ;Windows

Value 1
  Name:            Path
  Type:            REG_SZ
  Data:            C:\Program Files\Microsoft SQL
Server\90\NotificationServices\9.0.242\Bin\


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\Services\Report Server
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:51 PM
Value 0
  Name:            Name
  Type:            REG_SZ
  Data:            ReportServer

Value 1
  Name:            LName
  Type:            REG_SZ
  Data:            ReportServer$

Value 2
  Name:            Type
  Type:            REG_DWORD
  Data:            0x6


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\Services\SQL Agent
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:51 PM
Value 0
  Name:            Name
  Type:            REG_SZ
  Data:            SQLSERVERAGENT

Value 1
  Name:            LName
  Type:            REG_SZ
  Data:            SQLAgent$

Value 2
  Name:            Type
  Type:            REG_DWORD
  Data:            0x2


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\Services\SQL Browser
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:51 PM
Value 0
  Name:            LName
  Type:            REG_SZ
  Data:

Value 1
  Name:            Name
  Type:            REG_SZ
  Data:            SQLBrowser

Value 2
  Name:            Type
  Type:            REG_DWORD
  Data:            0x7
```


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```
Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\Services\SQL Server
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:51 PM
Value 0
  Name:            Name
  Type:            REG_SZ
  Data:            MSSQLServer

Value 1
  Name:            LName
  Type:            REG_SZ
  Data:            MSSQL$

Value 2
  Name:            Type
  Type:            REG_DWORD
  Data:            0x1


Key Name:
HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Microsoft SQL
Server\Services\SSIS Server
Class Name:        <NO CLASS>
Last Write Time:   7/19/2005 - 4:51 PM
Value 0
  Name:            LName
  Type:            REG_SZ
  Data:

Value 1
  Name:            Name
  Type:            REG_SZ
  Data:            MsDtsServer

Value 2
  Name:            Type
  Type:            REG_DWORD
  Data:            0x4
```

# System Summary

```
System Information report written at: 09/20/05
16:47:49
System Name: BL25P
[System Summary]

Item      Value
OS Name   Microsoft(R) Windows(R) Server 2003,
Enterprise Edition
Version   5.2.3790 Service Pack 1 Build 3790
OS Manufacturer     Microsoft Corporation
System Name         BL25P
System Manufacturer HP
System Model        ProLiant BL25p G1
System Type         X86-based PC
Processor x86 Family 15 Model 33 Stepping 2
AuthenticAMD ~2405 Mhz
Processor x86 Family 15 Model 33 Stepping 2
AuthenticAMD ~2405 Mhz
Processor x86 Family 15 Model 33 Stepping 2
AuthenticAMD ~2405 Mhz
Processor x86 Family 15 Model 33 Stepping 2
AuthenticAMD ~2405 Mhz
BIOS Version/Date   HP A02, 8/31/2005
SMBIOS Version      2.3
Windows Directory   C:\WINDOWS
System Directory    C:\WINDOWS\system32
Boot Device         \Device\HarddiskVolume1
Locale    United States
Hardware Abstraction Layer    Version =
"5.2.3790.1830 (srv03_sp1_rtm.050324-1447)"
User Name Not Available
Time Zone Central Daylight Time
Total Physical Memory         32,768.00 MB
Available Physical Memory     3.17 GB
Total Virtual Memory          1,007.96 MB
Available Virtual Memory      620.69 MB
Page File Space     1.50 GB
Page File C:\pagefile.sys

[Hardware Resources]



[Conflicts/Sharing]

Resource  Device
I/O Port 0x00000000-0x000003AF          PCI bus
I/O Port 0x00000000-0x000003AF          PCI bus
I/O Port 0x00000000-0x000003AF          Direct memory
access controller

I/O Port 0x000003C0-0x000003DF          PCI standard
PCI-to-PCI bridge
I/O Port 0x000003C0-0x000003DF          RAGE XL PCI
Family (Microsoft Corporation)

Memory Address 0xF7E00000-0xF7FFFFFF    PCI bus
Memory Address 0xF7E00000-0xF7FFFFFF    PCI standard
PCI-to-PCI bridge

I/O Port 0x00006000-0x00006FFF          PCI bus
I/O Port 0x00006000-0x00006FFF          PCI standard
PCI-to-PCI bridge
I/O Port 0x00006000-0x00006FFF          QLogic Fibre
Channel Adapter

I/O Port 0x00005000-0x00005FFF          PCI standard
PCI-to-PCI bridge
I/O Port 0x00005000-0x00005FFF          Smart Array
6i

I/O Port 0x000000A0-0x000000A1          Motherboard
resources
I/O Port 0x000000A0-0x000000A1          Programmable
interrupt controller

IRQ 19    Standard OpenHCD USB Host Controller

IRQ 19    Standard OpenHCD USB Host Controller

Memory Address 0xA0000-0xBFFFF          PCI bus
Memory Address 0xA0000-0xBFFFF          PCI standard
PCI-to-PCI bridge
Memory Address 0xA0000-0xBFFFF          RAGE XL PCI
Family (Microsoft Corporation)

I/O Port 0x000003B0-0x000003BB          PCI standard
PCI-to-PCI bridge
I/O Port 0x000003B0-0x000003BB          RAGE XL PCI
Family (Microsoft Corporation)

Memory Address 0xF5F00000-0xF7DFFFFF    PCI bus
Memory Address 0xF5F00000-0xF7DFFFFF    PCI standard
PCI-to-PCI bridge
Memory Address 0xF5F00000-0xF7DFFFFF    Base System
Device

I/O Port 0x00004000-0x00004FFF          PCI standard
PCI-to-PCI bridge
I/O Port 0x00004000-0x00004FFF          RAGE XL PCI
Family (Microsoft Corporation)

I/O Port 0x00000020-0x00000021          Motherboard
resources
I/O Port 0x00000020-0x00000021          Programmable
interrupt controller


[DMA]

Resource  Device    Status
Channel 7 Direct memory access controller         OK

Channel 2 Standard floppy disk controller         OK


[Forced Hardware]

Device    PNP Device ID

[I/O]

Resource  Device    Status
0x00000000-0x000003AF         PCI bus   OK
0x00000000-0x000003AF         PCI bus   OK
0x00000000-0x000003AF         Direct memory access
controller          OK
0x000003E0-0x00000FFF         PCI bus   OK
0x00004000-0x00004FFF         PCI standard PCI-to-PCI
bridge    OK
0x00004000-0x00004FFF         RAGE XL PCI Family
(Microsoft Corporation)       OK
0x000003B0-0x000003BB         PCI standard PCI-to-PCI
bridge    OK
0x000003B0-0x000003BB         RAGE XL PCI Family
(Microsoft Corporation)       OK
0x000003C0-0x000003DF         PCI standard PCI-to-PCI
bridge    OK
0x000003C0-0x000003DF         RAGE XL PCI Family
(Microsoft Corporation)       OK
```


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```
0x00004800-0x000048FF         Base System Device  OK

0x00004400-0x000044FF         Base System Device  OK

0x00000A79-0x00000A79         ISAPNP Read Data Port
          OK
0x00000279-0x00000279         ISAPNP Read Data Port
          OK
0x00000274-0x00000277         ISAPNP Read Data Port
          OK
0x00000020-0x00000021         Motherboard resources
          OK
0x00000020-0x00000021         Programmable interrupt
controller          OK
0x00000050-0x00000051         Motherboard resources
          OK
0x00000092-0x00000092         Motherboard resources
          OK
0x000000A0-0x000000A1         Motherboard resources
          OK
0x000000A0-0x000000A1         Programmable interrupt
controller          OK
0x000000F0-0x000000F1         Motherboard resources
          OK
0x00000230-0x00000233         Motherboard resources
          OK
0x00000260-0x00000267         Motherboard resources
          OK
0x000004D0-0x000004D1         Motherboard resources
          OK
0x00000800-0x0000081F         Motherboard resources
          OK
0x00000840-0x0000085F         Motherboard resources
          OK
0x00000900-0x00000903         Motherboard resources
          OK
0x00000904-0x00000907         Motherboard resources
          OK
0x00000908-0x0000090B         Motherboard resources
          OK
0x0000090C-0x0000092E         Motherboard resources
          OK
0x0000092F-0x0000092F         Motherboard resources
          OK
0x00000930-0x000009FF         Motherboard resources
          OK
0x00000C80-0x00000C87         Motherboard resources
          OK
0x00000CF9-0x00000CF9         Motherboard resources
          OK
0x000003F8-0x000003FF         Motherboard resources
          OK
0x00000040-0x00000043         System timer        OK

0x00000080-0x0000008F         Direct memory access
controller          OK
0x000000C0-0x000000DF         Direct memory access
controller          OK
0x00000061-0x00000061         System speaker      OK

0x00000060-0x00000060         Standard 101/102-Key or
Microsoft Natural PS/2 Keyboard         OK
0x00000064-0x00000064         Standard 101/102-Key or
Microsoft Natural PS/2 Keyboard         OK
0x0000002E-0x0000002F         Extended IO Bus     OK

0x00000220-0x00000223         Extended IO Bus     OK

0x00000240-0x0000025F         Extended IO Bus     OK

0x00000070-0x00000073         Extended IO Bus     OK

0x000002F8-0x000002FF         Communications Port
(COM2)     OK
0x000003F0-0x000003F5         Standard floppy disk
controller          OK
0x000003F7-0x000003F7         Standard floppy disk
controller          OK
0x00002000-0x0000200F         Standard Dual Channel
PCI IDE Controller  OK
0x000001F0-0x000001F7         Primary IDE Channel OK

0x000003F6-0x000003F6         Primary IDE Channel OK

0x00000170-0x00000177         Secondary IDE Channel
          OK
0x00000376-0x00000376         Secondary IDE Channel
          OK
0x00005000-0x00005FFF         PCI standard PCI-to-PCI
bridge    OK
0x00005000-0x00005FFF         Smart Array 6i      OK

0x00006000-0x00006FFF         PCI bus   OK
0x00006000-0x00006FFF         PCI standard PCI-to-PCI
bridge    OK
0x00006000-0x00006FFF         QLogic Fibre Channel
Adapter   OK
0x00006400-0x000064FF         QLogic Fibre Channel
Adapter   OK

[IRQs]

Resource  Device    Status
IRQ 9     Microsoft ACPI-Compliant System         OK

IRQ 19    Standard OpenHCD USB Host Controller    OK

IRQ 19    Standard OpenHCD USB Host Controller    OK

IRQ 7     Base System Device  OK
IRQ 10    Base System Device  OK
IRQ 0     System timer        OK
IRQ 1     Standard 101/102-Key or Microsoft Natural
PS/2 Keyboard       OK
IRQ 12    PS/2 Compatible Mouse         OK
IRQ 3     Communications Port (COM2)    OK
IRQ 6     Standard floppy disk controller         OK

IRQ 24    HP NC7782 Gigabit Server Adapter #5     OK

IRQ 25    HP NC7782 Gigabit Server Adapter #6     OK

IRQ 28    Smart Array 6i      OK
IRQ 32    HP NC7781 Gigabit Server Adapter        OK
IRQ 33    HP NC7781 Gigabit Server Adapter #2     OK

IRQ 36    QLogic Fibre Channel Adapter  OK
IRQ 37    QLogic Fibre Channel Adapter  OK

[Memory]

Resource  Device    Status
0xA0000-0xBFFFF     PCI bus   OK
0xA0000-0xBFFFF     PCI standard PCI-to-PCI bridge
          OK
0xA0000-0xBFFFF     RAGE XL PCI Family (Microsoft
Corporation)        OK
0xF5F00000-0xF7DFFFFF         PCI bus   OK
0xF5F00000-0xF7DFFFFF         PCI standard PCI-to-PCI
bridge    OK
0xF5F00000-0xF7DFFFFF         Base System Device  OK

0xF7BF0000-0xF7BF0FFF         Standard OpenHCD USB
Host Controller     OK
0xF7BE0000-0xF7BE0FFF         Standard OpenHCD USB
Host Controller     OK
0xF6000000-0xF6FFFFFF         RAGE XL PCI Family
(Microsoft Corporation)       OK
0xF5FF0000-0xF5FF0FFF         RAGE XL PCI Family
(Microsoft Corporation)       OK
0xF5FE0000-0xF5FE01FF         Base System Device  OK

0xF5FD0000-0xF5FD07FF         Base System Device  OK

0xF5FC0000-0xF5FC1FFF         Base System Device  OK

0xF7C00000-0xF7CFFFFF         PCI standard PCI-to-PCI
bridge    OK
0xF7CF0000-0xF7CFFFFF         HP NC7782 Gigabit
Server Adapter #5   OK
0xF7CE0000-0xF7CEFFFF         HP NC7782 Gigabit
Server Adapter #6   OK
0xF7D00000-0xF7DFFFFF         PCI standard PCI-to-PCI
bridge    OK
0xF7DF0000-0xF7DF1FFF         Smart Array 6i      OK

0xF7D80000-0xF7DBFFFF         Smart Array 6i      OK

0xF7E00000-0xF7FFFFFF         PCI bus   OK
0xF7E00000-0xF7FFFFFF         PCI standard PCI-to-PCI
bridge    OK
0xF7EF0000-0xF7EFFFFF         HP NC7781 Gigabit
Server Adapter      OK
0xF7EE0000-0xF7EEFFFF         HP NC7781 Gigabit
Server Adapter #2   OK
0xF7F00000-0xF7FFFFFF         PCI standard PCI-to-PCI
bridge    OK
0xF7FF0000-0xF7FF0FFF         QLogic Fibre Channel
Adapter   OK
0xF7FE0000-0xF7FE0FFF         QLogic Fibre Channel
Adapter   OK

[Components]



[Multimedia]
```


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```
[Audio Codecs]

CODEC     Manufacturer        Description
          Status    File      Version   Size
          Creation Date
c:\windows\system32\imaadp32.acm        Microsoft
Corporation                   OK
          C:\WINDOWS\system32\IMAADP32.ACM
          5.2.3790.0 (srv03_rtm.030324-2048)
          15.50 KB (15,872 bytes)       3/25/2003
6:00 AM
c:\windows\system32\msg711.acm          Microsoft
Corporation                   OK
          C:\WINDOWS\system32\MSG711.ACM
          5.2.3790.0 (srv03_rtm.030324-2048)
          10.00 KB (10,240 bytes)       3/25/2003
6:00 AM
c:\windows\system32\tssoft32.acm        DSP GROUP,
INC.                  OK
          C:\WINDOWS\system32\TSSOFT32.ACM
          1.01      9.50 KB (9,728 bytes)
          3/25/2003 6:00 AM
c:\windows\system32\sl_anet.acm         Sipro Lab
Telecom Inc.        Sipro Lab Telecom Audio Codec OK
          C:\WINDOWS\system32\SL_ANET.ACM
          3.02      84.00 KB (86,016 bytes)
          3/25/2003 6:00 AM
c:\windows\system32\msg723.acm          Microsoft
Corporation                   OK
          C:\WINDOWS\system32\MSG723.ACM
          5.2.3790.1830       120.00 KB (122,880
bytes)    5/17/2005 10:26 AM
c:\windows\system32\msgsm32.acm         Microsoft
Corporation                   OK
          C:\WINDOWS\system32\MSGSM32.ACM
          5.2.3790.0 (srv03_rtm.030324-2048)
          20.50 KB (20,992 bytes)       3/25/2003
6:00 AM
c:\windows\system32\l3codeca.acm        Fraunhofer
Institut Integrierte Schaltungen IIS    Fraunhofer
IIS MPEG Layer-3 Codec        OK
          C:\WINDOWS\system32\L3CODECA.ACM        1,
9, 0, 0305          284.00 KB (290,816 bytes)
          3/25/2003 6:00 AM
c:\windows\system32\msaud32.acm         Microsoft
Corporation         Windows Media Audio Codec     OK
          C:\WINDOWS\system32\MSAUD32.ACM
          8.00.00.4487        288.00 KB (294,912
bytes)    3/25/2003 6:00 AM
c:\windows\system32\msadp32.acm         Microsoft
Corporation                   OK
          C:\WINDOWS\system32\MSADP32.ACM
          5.2.3790.0 (srv03_rtm.030324-2048)
          14.50 KB (14,848 bytes)       3/25/2003
6:00 AM

[Video Codecs]

CODEC     Manufacturer        Description
          Status    File      Version   Size
          Creation Date
c:\windows\system32\tsbyuv.dll          Microsoft
Corporation                   OK
          C:\WINDOWS\system32\TSBYUV.DLL
          5.2.3790.0 (srv03_rtm.030324-2048)
          8.00 KB (8,192 bytes)         3/24/2003
7:50 PM
c:\windows\system32\msh261.drv          Microsoft
Corporation                   OK
          C:\WINDOWS\system32\MSH261.DRV
          5.2.3790.1830       184.00 KB (188,416
bytes)    5/17/2005 10:26 AM
c:\windows\system32\msyuv.dll Microsoft Corporation
                    OK
          C:\WINDOWS\system32\MSYUV.DLL 5.2.3790.0
(srv03_rtm.030324-2048)       16.50 KB (16,896 bytes)
          3/24/2003 7:49 PM
c:\windows\system32\msvidc32.dll        Microsoft
Corporation                   OK
          C:\WINDOWS\system32\MSVIDC32.DLL
          5.2.3790.0 (srv03_rtm.030324-2048)
          26.50 KB (27,136 bytes)       3/25/2003
6:00 AM
c:\windows\system32\msh263.drv          Microsoft
Corporation                   OK
          C:\WINDOWS\system32\MSH263.DRV
          5.2.3790.1830       288.00 KB (294,912
bytes)    5/17/2005 10:26 AM
c:\windows\system32\msrle32.dll         Microsoft
Corporation                   OK
          C:\WINDOWS\system32\MSRLE32.DLL
          5.2.3790.0 (srv03_rtm.030324-2048)
          10.50 KB (10,752 bytes)       3/25/2003
6:00 AM
c:\windows\system32\iyuv_32.dll         Microsoft
Corporation                   OK
          C:\WINDOWS\system32\IYUV_32.DLL
          5.2.3790.1830 (srv03_sp1_rtm.050324-1447)
          46.50 KB (47,616 bytes)       5/17/2005
10:26 AM

[CD-ROM]

Item      Value

[Sound Device]

Item      Value

[Display]

Item      Value
Name      RAGE XL PCI Family (Microsoft Corporation)

PNP Device ID
          PCI\VEN_1002&DEV_4752&SUBSYS_001E0E11&REV_2
7\4&12365AD0&0&1818
Adapter Type        ATI RAGE XL PCI (B41), ATI
Technologies Inc. compatible
Adapter Description RAGE XL PCI Family (Microsoft
Corporation)
Adapter RAM         8.00 MB (8,388,608 bytes)
Installed Drivers   ati2drad.dll
Driver Version      5.10.3663.6013
INF File  atiixpad.inf (ati2mpad section)
Color Planes        1
Color Table Entries 4294967296
Resolution          1024 x 768 x 60 hertz
Bits/Pixel          32
Memory Address      0xF6000000-0xF6FFFFFF
I/O Port  0x00004000-0x00004FFF
Memory Address      0xF5FF0000-0xF5FF0FFF
I/O Port  0x000003B0-0x000003BB
I/O Port  0x000003C0-0x000003DF
Memory Address      0xA0000-0xBFFFF
Driver    c:\windows\system32\drivers\ati2mpad.sys
(5.10.3663.6013, 335.38 KB (343,424 bytes),
10/27/2004 7:32 PM)

[Infrared]

Item      Value

[Input]



[Keyboard]

Item      Value
Description         Standard 101/102-Key or Microsoft
Natural PS/2 Keyboard
Name      Enhanced (101- or 102-key)
Layout    00000409
PNP Device ID       ACPI\PNP0303\4&1C7DEDE8&0
Number of Function Keys       12
I/O Port  0x00000060-0x00000060
I/O Port  0x00000064-0x00000064
IRQ Channel         IRQ 1
Driver    c:\windows\system32\drivers\i8042prt.sys
(5.2.3790.1830 (srv03_sp1_rtm.050324-1447), 54.50 KB
(55,808 bytes), 3/25/2003 6:00 AM)

[Pointing Device]

Item      Value
Hardware Type       PS/2 Compatible Mouse
Number of Buttons   2
Status    OK
PNP Device ID       ACPI\PNP0F13\4&1C7DEDE8&0
Power Management Supported    No
Double Click Threshold        6
Handedness          Right Handed Operation
IRQ Channel         IRQ 12
Driver    c:\windows\system32\drivers\i8042prt.sys
(5.2.3790.1830 (srv03_sp1_rtm.050324-1447), 54.50 KB
(55,808 bytes), 3/25/2003 6:00 AM)

[Modem]

Item      Value

[Network]
```


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```
[Adapter]

Item      Value
Name      [00000001] RAS Async Adapter
Adapter Type        Not Available
Product Type        RAS Async Adapter
Installed Yes
PNP Device ID       Not Available
Last Reset          9/20/2005 1:50 PM
Index     1
Service Name        AsyncMac
IP Address          Not Available
IP Subnet Not Available
Default IP Gateway  Not Available
DHCP Enabled        No
DHCP Server         Not Available
DHCP Lease Expires  Not Available
DHCP Lease Obtained Not Available
MAC Address         Not Available

Name      [00000002] WAN Miniport (L2TP)
Adapter Type        Not Available
Product Type        WAN Miniport (L2TP)
Installed Yes
PNP Device ID       ROOT\MS_L2TPMINIPORT\0000
Last Reset          9/20/2005 1:50 PM
Index     2
Service Name        Rasl2tp
IP Address          Not Available
IP Subnet Not Available
Default IP Gateway  Not Available
DHCP Enabled        No
DHCP Server         Not Available
DHCP Lease Expires  Not Available
DHCP Lease Obtained Not Available
MAC Address         Not Available
Driver    c:\windows\system32\drivers\rasl2tp.sys
(5.2.3790.1830 (srv03_sp1_rtm.050324-1447), 66.00 KB
(67,584 bytes), 3/25/2003 6:00 AM)

Name      [00000003] WAN Miniport (PPTP)
Adapter Type        Wide Area Network (WAN)
Product Type        WAN Miniport (PPTP)
Installed Yes
PNP Device ID       ROOT\MS_PPTPMINIPORT\0000
Last Reset          9/20/2005 1:50 PM
Index     3
Service Name        PptpMiniport
IP Address          Not Available
IP Subnet Not Available
Default IP Gateway  Not Available
DHCP Enabled        No
DHCP Server         Not Available
DHCP Lease Expires  Not Available
DHCP Lease Obtained Not Available
MAC Address         50:50:54:50:30:30
Driver    c:\windows\system32\drivers\raspptp.sys
(5.2.3790.1830 (srv03_sp1_rtm.050324-1447), 61.00 KB
(62,464 bytes), 3/25/2003 6:00 AM)

Name      [00000004] WAN Miniport (PPPOE)
Adapter Type        Wide Area Network (WAN)
Product Type        WAN Miniport (PPPOE)
Installed Yes
PNP Device ID       ROOT\MS_PPPOEMINIPORT\0000
Last Reset          9/20/2005 1:50 PM
Index     4
Service Name        RasPppoe
IP Address          Not Available
IP Subnet Not Available
Default IP Gateway  Not Available
DHCP Enabled        No
DHCP Server         Not Available
DHCP Lease Expires  Not Available
DHCP Lease Obtained Not Available
MAC Address         33:50:6F:45:30:30
Driver    c:\windows\system32\drivers\raspppoe.sys
(5.2.3790.1830 (srv03_sp1_rtm.050324-1447), 40.00 KB
(40,960 bytes), 3/25/2003 6:00 AM)

Name      [00000005] Direct Parallel
Adapter Type        Not Available
Product Type        Direct Parallel
Installed Yes
PNP Device ID       ROOT\MS_PTIMINIPORT\0000
Last Reset          9/20/2005 1:50 PM
Index     5
Service Name        Raspti
IP Address          Not Available
IP Subnet Not Available
Default IP Gateway  Not Available
DHCP Enabled        No
DHCP Server         Not Available
DHCP Lease Expires  Not Available
DHCP Lease Obtained Not Available
MAC Address         Not Available
Driver    c:\windows\system32\drivers\raspti.sys
(5.2.3790.1830 (srv03_sp1_rtm.050324-1447), 19.50 KB
(19,968 bytes), 3/25/2003 6:00 AM)

Name      [00000006] WAN Miniport (IP)
Adapter Type        Not Available
Product Type        WAN Miniport (IP)
Installed Yes
PNP Device ID       ROOT\MS_NDISWANIP\0000
Last Reset          9/20/2005 1:50 PM
Index     6
Service Name        NdisWan
IP Address          Not Available
IP Subnet Not Available
Default IP Gateway  Not Available
DHCP Enabled        No
DHCP Server         Not Available
DHCP Lease Expires  Not Available
DHCP Lease Obtained Not Available
MAC Address         Not Available
Driver    c:\windows\system32\drivers\ndiswan.sys
(5.2.3790.1830 (srv03_sp1_rtm.050324-1447), 91.00 KB
(93,184 bytes), 3/25/2003 6:00 AM)

Name      [00000007] HP NC7782 Gigabit Server Adapter

Adapter Type        Not Available
Product Type        HP NC7782 Gigabit Server Adapter

Installed Yes
PNP Device ID       Not Available
Last Reset          9/20/2005 1:50 PM
Index     7
Service Name        q57w2k
IP Address          Not Available
IP Subnet Not Available
Default IP Gateway  Not Available
DHCP Enabled        No
DHCP Server         Not Available
DHCP Lease Expires  Not Available
DHCP Lease Obtained Not Available
MAC Address         Not Available

Name      [00000008] HP NC7782 Gigabit Server Adapter

Adapter Type        Not Available
Product Type        HP NC7782 Gigabit Server Adapter

Installed Yes
PNP Device ID       Not Available
Last Reset          9/20/2005 1:50 PM
Index     8
Service Name        q57w2k
IP Address          Not Available
IP Subnet Not Available
Default IP Gateway  Not Available
DHCP Enabled        No
DHCP Server         Not Available
DHCP Lease Expires  Not Available
DHCP Lease Obtained Not Available
MAC Address         Not Available

Name      [00000009] HP NC7782 Gigabit Server Adapter

Adapter Type        Not Available
Product Type        HP NC7782 Gigabit Server Adapter

Installed Yes
PNP Device ID       Not Available
Last Reset          9/20/2005 1:50 PM
Index     9
Service Name        q57w2k
IP Address          Not Available
IP Subnet Not Available
Default IP Gateway  Not Available
DHCP Enabled        No
DHCP Server         Not Available
DHCP Lease Expires  Not Available
DHCP Lease Obtained Not Available
MAC Address         Not Available

Name      [00000010] HP NC7782 Gigabit Server Adapter

Adapter Type        Not Available
Product Type        HP NC7782 Gigabit Server Adapter

Installed Yes
PNP Device ID       Not Available
Last Reset          9/20/2005 1:50 PM
Index     10
```


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```
Service Name        q57w2k
IP Address          Not Available
IP Subnet Not Available
Default IP Gateway  Not Available
DHCP Enabled        No
DHCP Server         Not Available
DHCP Lease Expires  Not Available
DHCP Lease Obtained Not Available
MAC Address         Not Available

Name      [00000011] HP NC7782 Gigabit Server Adapter

Adapter Type        Ethernet 802.3
Product Type        HP NC7782 Gigabit Server Adapter

Installed Yes
PNP Device ID
          PCI\VEN_14E4&DEV_1648&SUBSYS_00D00E11&REV_1
0\4&82820FC&0&1038
Last Reset          9/20/2005 1:50 PM
Index     11
Service Name        q57w2k
IP Address          130.168.212.80, 130.100.212.80

IP Subnet 255.255.0.0, 255.255.0.0
Default IP Gateway  Not Available
DHCP Enabled        No
DHCP Server         Not Available
DHCP Lease Expires  Not Available
DHCP Lease Obtained Not Available
MAC Address         00:12:79:94:92:A2
Memory Address      0xF7CF0000-0xF7CFFFFF
IRQ Channel         IRQ 24
Driver    c:\windows\system32\drivers\q57xp32.sys
(7.80.0.0 built by: WinDDK, 185.88 KB (190,336
bytes), 1/10/2005 3:39 PM)

Name      [00000012] HP NC7782 Gigabit Server Adapter

Adapter Type        Ethernet 802.3
Product Type        HP NC7782 Gigabit Server Adapter

Installed Yes
PNP Device ID
          PCI\VEN_14E4&DEV_1648&SUBSYS_00D00E11&REV_1
0\4&82820FC&0&1138
Last Reset          9/20/2005 1:50 PM
Index     12
Service Name        q57w2k
IP Address          130.168.212.81, 130.101.212.81

IP Subnet 255.255.0.0, 255.255.0.0
Default IP Gateway  Not Available
DHCP Enabled        No
DHCP Server         Not Available
DHCP Lease Expires  Not Available
DHCP Lease Obtained Not Available
MAC Address         00:12:79:94:92:A1
Memory Address      0xF7CE0000-0xF7CEFFFF
IRQ Channel         IRQ 25
Driver    c:\windows\system32\drivers\q57xp32.sys
(7.80.0.0 built by: WinDDK, 185.88 KB (190,336
bytes), 1/10/2005 3:39 PM)

Name      [00000013] HP NC7781 Gigabit Server Adapter

Adapter Type        Ethernet 802.3
Product Type        HP NC7781 Gigabit Server Adapter

Installed Yes
PNP Device ID
          PCI\VEN_14E4&DEV_16C7&SUBSYS_00CB0E11&REV_1
0\4&25F4D2AC&0&0848
Last Reset          9/20/2005 1:50 PM
Index     13
Service Name        q57w2k
IP Address          130.168.212.82, 130.102.212.82

IP Subnet 255.255.0.0, 255.255.0.0
Default IP Gateway  Not Available
DHCP Enabled        No
DHCP Server         Not Available
DHCP Lease Expires  Not Available
DHCP Lease Obtained Not Available
MAC Address         00:12:79:94:41:05
Memory Address      0xF7EF0000-0xF7EFFFFF
IRQ Channel         IRQ 32
Driver    c:\windows\system32\drivers\q57xp32.sys
(7.80.0.0 built by: WinDDK, 185.88 KB (190,336
bytes), 1/10/2005 3:39 PM)

Name      [00000014] HP NC7781 Gigabit Server Adapter

Adapter Type        Ethernet 802.3
Product Type        HP NC7781 Gigabit Server Adapter

Installed Yes
PNP Device ID
          PCI\VEN_14E4&DEV_16C7&SUBSYS_00CB0E11&REV_1
0\4&25F4D2AC&0&1048
Last Reset          9/20/2005 1:50 PM
Index     14
Service Name        q57w2k
IP Address          130.168.212.83, 130.172.80.1,
130.103.212.83
IP Subnet 255.255.0.0, 255.255.0.0, 255.255.0.0
Default IP Gateway  Not Available
DHCP Enabled        No
DHCP Server         Not Available
DHCP Lease Expires  Not Available
DHCP Lease Obtained Not Available
MAC Address         00:12:79:94:41:01
Memory Address      0xF7EE0000-0xF7EEFFFF
IRQ Channel         IRQ 33
Driver    c:\windows\system32\drivers\q57xp32.sys
(7.80.0.0 built by: WinDDK, 185.88 KB (190,336
bytes), 1/10/2005 3:39 PM)

[Protocol]

Item      Value
Name      MSAFD Tcpip [TCP/IP]
Connectionless Service        No
Guarantees Delivery Yes
Guarantees Sequencing         Yes
Maximum Address Size          16 bytes
Maximum Message Size          0 bytes
Message Oriented    No
Minimum Address Size          16 bytes
Pseudo Stream Oriented        No
Supports Broadcasting         No
Supports Connect Data         No
Supports Disconnect Data      No
Supports Encryption No
Supports Expedited Data       Yes
Supports Graceful Closing     Yes
Supports Guaranteed Bandwidth No
Supports Multicasting         No

Name      MSAFD Tcpip [UDP/IP]
Connectionless Service        Yes
Guarantees Delivery No
Guarantees Sequencing         No
Maximum Address Size          16 bytes
Maximum Message Size          63.93 KB (65,467 bytes)

Message Oriented    Yes
Minimum Address Size          16 bytes
Pseudo Stream Oriented        No
Supports Broadcasting         Yes
Supports Connect Data         No
Supports Disconnect Data      No
Supports Encryption No
Supports Expedited Data       No
Supports Graceful Closing     No
Supports Guaranteed Bandwidth No
Supports Multicasting         Yes

Name      RSVP UDP Service Provider
Connectionless Service        Yes
Guarantees Delivery No
Guarantees Sequencing         No
Maximum Address Size          16 bytes
Maximum Message Size          63.93 KB (65,467 bytes)

Message Oriented    Yes
Minimum Address Size          16 bytes
Pseudo Stream Oriented        No
Supports Broadcasting         Yes
Supports Connect Data         No
Supports Disconnect Data      No
Supports Encryption Yes
Supports Expedited Data       No
Supports Graceful Closing     No
Supports Guaranteed Bandwidth No
Supports Multicasting         Yes

Name      RSVP TCP Service Provider
Connectionless Service        No
Guarantees Delivery Yes
Guarantees Sequencing         Yes
Maximum Address Size          16 bytes
Maximum Message Size          0 bytes
Message Oriented    No
Minimum Address Size          16 bytes
Pseudo Stream Oriented        No
Supports Broadcasting         No
Supports Connect Data         No
Supports Disconnect Data      No
```


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```
Supports Encryption Yes
Supports Expedited Data       Yes
Supports Graceful Closing     Yes
Supports Guaranteed Bandwidth No
Supports Multicasting         No

Name      MSAFD NetBIOS
[\Device\NetBT_Tcpip_{AB62638D-EB51-4D77-B785-
FC8F5682759F}] SEQPACKET 9
Connectionless Service        No
Guarantees Delivery Yes
Guarantees Sequencing         Yes
Maximum Address Size          20 bytes
Maximum Message Size          62.50 KB (64,000 bytes)

Message Oriented    Yes
Minimum Address Size          20 bytes
Pseudo Stream Oriented        No
Supports Broadcasting         No
Supports Connect Data         No
Supports Disconnect Data      No
Supports Encryption No
Supports Expedited Data       No
Supports Graceful Closing     No
Supports Guaranteed Bandwidth No
Supports Multicasting         No

Name      MSAFD NetBIOS
[\Device\NetBT_Tcpip_{AB62638D-EB51-4D77-B785-
FC8F5682759F}] DATAGRAM 9
Connectionless Service        Yes
Guarantees Delivery No
Guarantees Sequencing         No
Maximum Address Size          20 bytes
Maximum Message Size          62.50 KB (64,000 bytes)

Message Oriented    Yes
Minimum Address Size          20 bytes
Pseudo Stream Oriented        No
Supports Broadcasting         Yes
Supports Connect Data         No
Supports Disconnect Data      No
Supports Encryption No
Supports Expedited Data       No
Supports Graceful Closing     No
Supports Guaranteed Bandwidth No
Supports Multicasting         No

Name      MSAFD NetBIOS
[\Device\NetBT_Tcpip_{C35B7C74-4A39-43CD-BF8D-
1F73D6BF7EF6}] SEQPACKET 8
Connectionless Service        No
Guarantees Delivery Yes
Guarantees Sequencing         Yes
Maximum Address Size          20 bytes
Maximum Message Size          62.50 KB (64,000 bytes)

Message Oriented    Yes
Minimum Address Size          20 bytes
Pseudo Stream Oriented        No
Supports Broadcasting         No
Supports Connect Data         No
Supports Disconnect Data      No
```

```
Supports Encryption No
Supports Expedited Data       No
Supports Graceful Closing     No
Supports Guaranteed Bandwidth No
Supports Multicasting         No

Name      MSAFD NetBIOS
[\Device\NetBT_Tcpip_{C35B7C74-4A39-43CD-BF8D-
1F73D6BF7EF6}] DATAGRAM 8
Connectionless Service        Yes
Guarantees Delivery No
Guarantees Sequencing         No
Maximum Address Size          20 bytes
Maximum Message Size          62.50 KB (64,000 bytes)

Message Oriented    Yes
Minimum Address Size          20 bytes
Pseudo Stream Oriented        No
Supports Broadcasting         Yes
Supports Connect Data         No
Supports Disconnect Data      No
Supports Encryption No
Supports Expedited Data       No
Supports Graceful Closing     No
Supports Guaranteed Bandwidth No
Supports Multicasting         No

Name      MSAFD NetBIOS
[\Device\NetBT_Tcpip_{71A21C6D-CAAA-4925-9965-
3B8C18242C9E}] SEQPACKET 7
Connectionless Service        No
Guarantees Delivery Yes
Guarantees Sequencing         Yes
Maximum Address Size          20 bytes
Maximum Message Size          62.50 KB (64,000 bytes)

Message Oriented    Yes
Minimum Address Size          20 bytes
Pseudo Stream Oriented        No
Supports Broadcasting         No
Supports Connect Data         No
Supports Disconnect Data      No
Supports Encryption No
Supports Expedited Data       No
Supports Graceful Closing     No
Supports Guaranteed Bandwidth No
Supports Multicasting         No

Name      MSAFD NetBIOS
[\Device\NetBT_Tcpip_{71A21C6D-CAAA-4925-9965-
3B8C18242C9E}] DATAGRAM 7
Connectionless Service        Yes
Guarantees Delivery No
Guarantees Sequencing         No
Maximum Address Size          20 bytes
Maximum Message Size          62.50 KB (64,000 bytes)

Message Oriented    Yes
Minimum Address Size          20 bytes
Pseudo Stream Oriented        No
Supports Broadcasting         Yes
Supports Connect Data         No
Supports Disconnect Data      No
```

```
Supports Encryption No
Supports Expedited Data       No
Supports Graceful Closing     No
Supports Guaranteed Bandwidth No
Supports Multicasting         No

Name      MSAFD NetBIOS
[\Device\NetBT_Tcpip_{CFB25F86-BDEF-4FB7-9E14-
1A6AFD8697BC}] SEQPACKET 6
Connectionless Service        No
Guarantees Delivery Yes
Guarantees Sequencing         Yes
Maximum Address Size          20 bytes
Maximum Message Size          62.50 KB (64,000 bytes)

Message Oriented    Yes
Minimum Address Size          20 bytes
Pseudo Stream Oriented        No
Supports Broadcasting         No
Supports Connect Data         No
Supports Disconnect Data      No
Supports Encryption No
Supports Expedited Data       No
Supports Graceful Closing     No
Supports Guaranteed Bandwidth No
Supports Multicasting         No

Name      MSAFD NetBIOS
[\Device\NetBT_Tcpip_{CFB25F86-BDEF-4FB7-9E14-
1A6AFD8697BC}] DATAGRAM 6
Connectionless Service        Yes
Guarantees Delivery No
Guarantees Sequencing         No
Maximum Address Size          20 bytes
Maximum Message Size          62.50 KB (64,000 bytes)

Message Oriented    Yes
Minimum Address Size          20 bytes
Pseudo Stream Oriented        No
Supports Broadcasting         Yes
Supports Connect Data         No
Supports Disconnect Data      No
Supports Encryption No
Supports Expedited Data       No
Supports Graceful Closing     No
Supports Guaranteed Bandwidth No
Supports Multicasting         No

Name      MSAFD NetBIOS
[\Device\NetBT_Tcpip_{97D5E053-614E-48CE-82E7-
D724A7EE15E5}] SEQPACKET 5
Connectionless Service        No
Guarantees Delivery Yes
Guarantees Sequencing         Yes
Maximum Address Size          20 bytes
Maximum Message Size          62.50 KB (64,000 bytes)

Message Oriented    Yes
Minimum Address Size          20 bytes
Pseudo Stream Oriented        No
Supports Broadcasting         No
Supports Connect Data         No
Supports Disconnect Data      No
```


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```
Supports Encryption No
Supports Expedited Data       No
Supports Graceful Closing     No
Supports Guaranteed Bandwidth No
Supports Multicasting         No

Name      MSAFD NetBIOS
[\Device\NetBT_Tcpip_{97D5E053-614E-48CE-82E7-
D724A7EE15E5}] DATAGRAM 5
Connectionless Service        Yes
Guarantees Delivery No
Guarantees Sequencing         No
Maximum Address Size          20 bytes
Maximum Message Size          62.50 KB (64,000 bytes)

Message Oriented    Yes
Minimum Address Size          20 bytes
Pseudo Stream Oriented        No
Supports Broadcasting         Yes
Supports Connect Data         No
Supports Disconnect Data      No
Supports Encryption No
Supports Expedited Data       No
Supports Graceful Closing     No
Supports Guaranteed Bandwidth No
Supports Multicasting         No

Name      MSAFD NetBIOS
[\Device\NetBT_Tcpip_{77466E8F-1670-4929-876D-
874F8D89235D}] SEQPACKET 4
Connectionless Service        No
Guarantees Delivery Yes
Guarantees Sequencing         Yes
Maximum Address Size          20 bytes
Maximum Message Size          62.50 KB (64,000 bytes)

Message Oriented    Yes
Minimum Address Size          20 bytes
Pseudo Stream Oriented        No
Supports Broadcasting         No
Supports Connect Data         No
Supports Disconnect Data      No
Supports Encryption No
Supports Expedited Data       No
Supports Graceful Closing     No
Supports Guaranteed Bandwidth No
Supports Multicasting         No

Name      MSAFD NetBIOS
[\Device\NetBT_Tcpip_{77466E8F-1670-4929-876D-
874F8D89235D}] DATAGRAM 4
Connectionless Service        Yes
Guarantees Delivery No
Guarantees Sequencing         No
Maximum Address Size          20 bytes
Maximum Message Size          62.50 KB (64,000 bytes)

Message Oriented    Yes
Minimum Address Size          20 bytes
Pseudo Stream Oriented        No
Supports Broadcasting         Yes
Supports Connect Data         No
Supports Disconnect Data      No
```

```
Supports Encryption No
Supports Expedited Data       No
Supports Graceful Closing     No
Supports Guaranteed Bandwidth No
Supports Multicasting         No

Name      MSAFD NetBIOS
[\Device\NetBT_Tcpip_{CFD7B2C3-6CE2-4FE3-9B33-
A7A100DD95D0}] SEQPACKET 3
Connectionless Service        No
Guarantees Delivery Yes
Guarantees Sequencing         Yes
Maximum Address Size          20 bytes
Maximum Message Size          62.50 KB (64,000 bytes)

Message Oriented    Yes
Minimum Address Size          20 bytes
Pseudo Stream Oriented        No
Supports Broadcasting         No
Supports Connect Data         No
Supports Disconnect Data      No
Supports Encryption No
Supports Expedited Data       No
Supports Graceful Closing     No
Supports Guaranteed Bandwidth No
Supports Multicasting         No

Name      MSAFD NetBIOS
[\Device\NetBT_Tcpip_{CFD7B2C3-6CE2-4FE3-9B33-
A7A100DD95D0}] DATAGRAM 3
Connectionless Service        Yes
Guarantees Delivery No
Guarantees Sequencing         No
Maximum Address Size          20 bytes
Maximum Message Size          62.50 KB (64,000 bytes)

Message Oriented    Yes
Minimum Address Size          20 bytes
Pseudo Stream Oriented        No
Supports Broadcasting         Yes
Supports Connect Data         No
Supports Disconnect Data      No
Supports Encryption No
Supports Expedited Data       No
Supports Graceful Closing     No
Supports Guaranteed Bandwidth No
Supports Multicasting         No

Name      MSAFD NetBIOS
[\Device\NetBT_Tcpip_{F9E401AE-BE92-43F8-BC4E-
46066659CCAE}] SEQPACKET 0
Connectionless Service        No
Guarantees Delivery Yes
Guarantees Sequencing         Yes
Maximum Address Size          20 bytes
Maximum Message Size          62.50 KB (64,000 bytes)

Message Oriented    Yes
Minimum Address Size          20 bytes
Pseudo Stream Oriented        No
Supports Broadcasting         No
Supports Connect Data         No
Supports Disconnect Data      No
```

```
Supports Encryption No
Supports Expedited Data       No
Supports Graceful Closing     No
Supports Guaranteed Bandwidth No
Supports Multicasting         No

Name      MSAFD NetBIOS
[\Device\NetBT_Tcpip_{F9E401AE-BE92-43F8-BC4E-
46066659CCAE}] DATAGRAM 0
Connectionless Service        Yes
Guarantees Delivery No
Guarantees Sequencing         No
Maximum Address Size          20 bytes
Maximum Message Size          62.50 KB (64,000 bytes)

Message Oriented    Yes
Minimum Address Size          20 bytes
Pseudo Stream Oriented        No
Supports Broadcasting         Yes
Supports Connect Data         No
Supports Disconnect Data      No
Supports Encryption No
Supports Expedited Data       No
Supports Graceful Closing     No
Supports Guaranteed Bandwidth No
Supports Multicasting         No

Name      MSAFD NetBIOS
[\Device\NetBT_Tcpip_{E7BD8E98-3474-426C-B0D5-
F8AC97AA0122}] SEQPACKET 1
Connectionless Service        No
Guarantees Delivery Yes
Guarantees Sequencing         Yes
Maximum Address Size          20 bytes
Maximum Message Size          62.50 KB (64,000 bytes)

Message Oriented    Yes
Minimum Address Size          20 bytes
Pseudo Stream Oriented        No
Supports Broadcasting         No
Supports Connect Data         No
Supports Disconnect Data      No
Supports Encryption No
Supports Expedited Data       No
Supports Graceful Closing     No
Supports Guaranteed Bandwidth No
Supports Multicasting         No

Name      MSAFD NetBIOS
[\Device\NetBT_Tcpip_{E7BD8E98-3474-426C-B0D5-
F8AC97AA0122}] DATAGRAM 1
Connectionless Service        Yes
Guarantees Delivery No
Guarantees Sequencing         No
Maximum Address Size          20 bytes
Maximum Message Size          62.50 KB (64,000 bytes)

Message Oriented    Yes
Minimum Address Size          20 bytes
Pseudo Stream Oriented        No
Supports Broadcasting         Yes
Supports Connect Data         No
Supports Disconnect Data      No
```


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```
Supports Encryption No
Supports Expedited Data       No
Supports Graceful Closing     No
Supports Guaranteed Bandwidth No
Supports Multicasting         No

Name      MSAFD NetBIOS
[\Device\NetBT_Tcpip_{64FA8ADF-82DE-4970-AFCE-
D13714CBA3DF}] SEQPACKET 2
Connectionless Service        No
Guarantees Delivery Yes
Guarantees Sequencing         Yes
Maximum Address Size          20 bytes
Maximum Message Size          62.50 KB (64,000 bytes)

Message Oriented    Yes
Minimum Address Size          20 bytes
Pseudo Stream Oriented        No
Supports Broadcasting         No
Supports Connect Data         No
Supports Disconnect Data      No
Supports Encryption No
Supports Expedited Data       No
Supports Graceful Closing     No
Supports Guaranteed Bandwidth No
Supports Multicasting         No

Name      MSAFD NetBIOS
[\Device\NetBT_Tcpip_{64FA8ADF-82DE-4970-AFCE-
D13714CBA3DF}] DATAGRAM 2
Connectionless Service        Yes
Guarantees Delivery No
Guarantees Sequencing         No
Maximum Address Size          20 bytes
Maximum Message Size          62.50 KB (64,000 bytes)

Message Oriented    Yes
Minimum Address Size          20 bytes
Pseudo Stream Oriented        No
Supports Broadcasting         Yes
Supports Connect Data         No
Supports Disconnect Data      No
Supports Encryption No
Supports Expedited Data       No
Supports Graceful Closing     No
Supports Guaranteed Bandwidth No
Supports Multicasting         No

[WinSock]

Item      Value
File      c:\windows\system32\winsock.dll
Size      2.80 KB (2,864 bytes)
Version   3.10

File      c:\windows\system32\wsock32.dll
Size      22.00 KB (22,528 bytes)
Version   5.2.3790.0 (srv03_rtm.030324-2048)

[Ports]

[Serial]

Item      Value
Name      Communications Port (COM2)
Status    OK
PNP Device ID       ACPI\PNP0501\1
Maximum Input Buffer Size     0
Maximum Output Buffer Size    No
Settable Baud Rate  Yes
Settable Data Bits  Yes
Settable Flow Control         Yes
Settable Parity     Yes
Settable Parity Check         Yes
Settable Stop Bits  Yes
Settable RLSD       Yes
Supports RLSD       Yes
Supports 16 Bit Mode          No
Supports Special Characters   No
Baud Rate 9600
Bits/Byte 8
Stop Bits 1
Parity    None
Busy      No
Abort Read/Write on Error     No
Binary Mode Enabled Yes
Continue XMit on XOff         No
CTS Outflow Control No
Discard NULL Bytes  No
DSR Outflow Control 0
DSR Sensitivity     0
DTR Flow Control Type         Enable
EOF Character       0
Error Replace Character       0
Error Replacement Enabled     No
Event Character     0
Parity Check Enabled          No
RTS Flow Control Type         Enable
XOff Character      19
XOffXMit Threshold  512
XOn Character       17
XOnXMit Threshold   2048
XOnXOff InFlow Control        0
XOnXOff OutFlow Control       0
IRQ Channel         IRQ 3
I/O Port  0x000002F8-0x000002FF
Driver    c:\windows\system32\drivers\serial.sys
(5.2.3790.1830 (srv03_sp1_rtm.050324-1447), 64.00 KB
(65,536 bytes), 3/25/2003 6:00 AM)

[Parallel]

Item      Value

[Storage]



[Drives]

Item      Value
Drive     C:
Description         Local Fixed Disk
Compressed          No
File System         NTFS
Size      33.91 GB (36,410,552,320 bytes)
Free Space          23.33 GB (25,051,365,376 bytes)

Volume Name
Volume Serial Number          6C324BFF

Drive     E:
Description         Local Fixed Disk
Compressed          Not Available
File System         Not Available
Size      Not Available
Free Space          Not Available
Volume Name         Not Available
Volume Serial Number          Not Available

Drive     F:
Description         Local Fixed Disk
Compressed          Not Available
File System         Not Available
Size      Not Available
Free Space          Not Available
Volume Name         Not Available
Volume Serial Number          Not Available

Drive     G:
Description         Local Fixed Disk
Compressed          Not Available
File System         Not Available
Size      Not Available
Free Space          Not Available
Volume Name         Not Available
Volume Serial Number          Not Available

Drive     H:
Description         Local Fixed Disk
Compressed          Not Available
File System         Not Available
Size      Not Available
Free Space          Not Available
Volume Name         Not Available
Volume Serial Number          Not Available

Drive     I:
Description         Local Fixed Disk
Compressed          Not Available
File System         Not Available
Size      Not Available
Free Space          Not Available
Volume Name         Not Available
Volume Serial Number          Not Available

Drive     J:
Description         Local Fixed Disk
Compressed          Not Available
File System         Not Available
Size      Not Available
Free Space          Not Available
Volume Name         Not Available
Volume Serial Number          Not Available

Drive     K:
Description         Local Fixed Disk
```


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```
Compressed          Not Available
File System         Not Available
Size      Not Available
Free Space          Not Available
Volume Name         Not Available
Volume Serial Number          Not Available

Drive     L:
Description         Local Fixed Disk
Compressed          Not Available
File System         Not Available
Size      Not Available
Free Space          Not Available
Volume Name         Not Available
Volume Serial Number          Not Available

Drive     T:
Description         Local Fixed Disk
Compressed          No
File System         NTFS
Size      669.27 GB (718,625,828,864 bytes)
Free Space          484.05 GB (519,742,885,888 bytes)

Volume Name         Backup1
Volume Serial Number          6C3A022A

Drive     U:
Description         Local Fixed Disk
Compressed          No
File System         NTFS
Size      669.27 GB (718,625,828,864 bytes)
Free Space          484.86 GB (520,611,217,408 bytes)

Volume Name         Backup2
Volume Serial Number          404B9C1B

Drive     V:
Description         Local Fixed Disk
Compressed          No
File System         NTFS
Size      669.27 GB (718,625,828,864 bytes)
Free Space          484.86 GB (520,611,217,408 bytes)

Volume Name         Backup3
Volume Serial Number          D05D33EA

Drive     W:
Description         Local Fixed Disk
Compressed          No
File System         NTFS
Size      669.27 GB (718,625,828,864 bytes)
Free Space          484.86 GB (520,611,217,408 bytes)

Volume Name         Backup4
Volume Serial Number          9C7688E8

Drive     X:
Description         Local Fixed Disk
Compressed          No
File System         NTFS
Size      669.27 GB (718,625,828,864 bytes)
Free Space          484.86 GB (520,611,217,408 bytes)

Volume Name         Backup5
Volume Serial Number          408A9F84

Drive     Y:
Description         Local Fixed Disk
Compressed          No
File System         NTFS
Size      669.27 GB (718,625,828,864 bytes)
Free Space          484.86 GB (520,611,217,408 bytes)

Volume Name         Backup6
Volume Serial Number          4CA0B20A

Drive     Z:
Description         Local Fixed Disk
Compressed          No
File System         NTFS
Size      490.73 GB (526,918,873,088 bytes)
Free Space          398.47 GB (427,857,977,344 bytes)

Volume Name         Backup7
Volume Serial Number          68DD3DDB

[Disks]

Item      Value
Description         Disk drive
Manufacturer        (Standard disk drives)
Model     COMPAQ MSA1000 VOLUME SCSI Disk Device
Bytes/Sector        512
Media Loaded        Yes
Media Type          Fixed hard disk
Partitions          1
SCSI Bus  0
SCSI Logical Unit   1
SCSI Port 3
SCSI Target ID      0
Sectors/Track       63
Size      85.98 GB (92,320,542,720 bytes)
Total Cylinders     11,224
Total Sectors       180,313,560
Total Tracks        2,862,120
Tracks/Cylinder     255
Partition Disk #7, Partition #0
Partition Size      85.98 GB (92,319,776,768 bytes)

Partition Starting Offset     65,536 bytes

Description         Disk drive
Manufacturer        (Standard disk drives)
Model     COMPAQ MSA1000 VOLUME SCSI Disk Device
Bytes/Sector        512
Media Loaded        Yes
Media Type          Fixed hard disk
Partitions          1
SCSI Bus  0
SCSI Logical Unit   2
SCSI Port 3
SCSI Target ID      0
Sectors/Track       63
Size      669.27 GB (718,626,263,040 bytes)
Total Cylinders     87,368
Total Sectors       1,403,566,920
Total Tracks        22,278,840
Tracks/Cylinder     255
Partition Disk #8, Partition #0
Partition Size      669.27 GB (718,625,832,960 bytes)

Partition Starting Offset     65,536 bytes

Description         Disk drive
Manufacturer        (Standard disk drives)
Model     COMPAQ MSA1000 VOLUME SCSI Disk Device
Bytes/Sector        512
Media Loaded        Yes
Media Type          Fixed hard disk
Partitions          1
SCSI Bus  0
SCSI Logical Unit   1
SCSI Port 3
SCSI Target ID      1
Sectors/Track       63
Size      85.98 GB (92,320,542,720 bytes)
Total Cylinders     11,224
Total Sectors       180,313,560
Total Tracks        2,862,120
Tracks/Cylinder     255
Partition Disk #9, Partition #0
Partition Size      85.98 GB (92,319,776,768 bytes)

Partition Starting Offset     65,536 bytes

Description         Disk drive
Manufacturer        (Standard disk drives)
Model     COMPAQ MSA1000 VOLUME SCSI Disk Device
Bytes/Sector        512
Media Loaded        Yes
Media Type          Fixed hard disk
Partitions          1
SCSI Bus  0
SCSI Logical Unit   2
SCSI Port 3
SCSI Target ID      1
Sectors/Track       63
Size      669.27 GB (718,626,263,040 bytes)
Total Cylinders     87,368
Total Sectors       1,403,566,920
Total Tracks        22,278,840
Tracks/Cylinder     255
Partition Disk #10, Partition #0
Partition Size      669.27 GB (718,625,832,960 bytes)

Partition Starting Offset     65,536 bytes

Description         Disk drive
Manufacturer        (Standard disk drives)
Model     COMPAQ MSA1000 VOLUME SCSI Disk Device
Bytes/Sector        512
Media Loaded        Yes
Media Type          Fixed hard disk
Partitions          1
SCSI Bus  0
SCSI Logical Unit   1
SCSI Port 3
SCSI Target ID      2
Sectors/Track       63
```


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```
Size      85.98 GB (92,320,542,720 bytes)
Total Cylinders     11,224
Total Sectors       180,313,560
Total Tracks        2,862,120
Tracks/Cylinder     255
Partition Disk #11, Partition #0
Partition Size      85.98 GB (92,319,776,768 bytes)

Partition Starting Offset     65,536 bytes

Description         Disk drive
Manufacturer        (Standard disk drives)
Model     COMPAQ MSA1000 VOLUME SCSI Disk Device
Bytes/Sector        512
Media Loaded        Yes
Media Type          Fixed hard disk
Partitions          1
SCSI Bus  0
SCSI Logical Unit   2
SCSI Port 3
SCSI Target ID      2
Sectors/Track       63
Size      669.27 GB (718,626,263,040 bytes)
Total Cylinders     87,368
Total Sectors       1,403,566,920
Total Tracks        22,278,840
Tracks/Cylinder     255
Partition Disk #12, Partition #0
Partition Size      669.27 GB (718,625,832,960 bytes)

Partition Starting Offset     65,536 bytes

Description         Disk drive
Manufacturer        (Standard disk drives)
Model     COMPAQ MSA1000 VOLUME SCSI Disk Device
Bytes/Sector        512
Media Loaded        Yes
Media Type          Fixed hard disk
Partitions          1
SCSI Bus  0
SCSI Logical Unit   1
SCSI Port 3
SCSI Target ID      3
Sectors/Track       63
Size      443.06 GB (475,733,744,640 bytes)
Total Cylinders     57,838
Total Sectors       929,167,470
Total Tracks        14,748,690
Tracks/Cylinder     255
Partition Disk #13, Partition #0
Partition Size      443.06 GB (475,732,639,744 bytes)

Partition Starting Offset     65,536 bytes

Description         Disk drive
Manufacturer        (Standard disk drives)
Model     COMPAQ MSA1000 VOLUME SCSI Disk Device
Bytes/Sector        512
Media Loaded        Yes
Media Type          Fixed hard disk
Partitions          1
SCSI Bus  0
SCSI Logical Unit   2
SCSI Port 3
SCSI Target ID      3
Sectors/Track       63
Size      490.73 GB (526,919,662,080 bytes)
Total Cylinders     64,061
Total Sectors       1,029,139,965
Total Tracks        16,335,555
Tracks/Cylinder     255
Partition Disk #14, Partition #0
Partition Size      490.73 GB (526,918,877,184 bytes)

Partition Starting Offset     65,536 bytes

Description         Disk drive
Manufacturer        (Standard disk drives)
Model     COMPAQ MSA1000 VOLUME SCSI Disk Device
Bytes/Sector        512
Media Loaded        Yes
Media Type          Fixed hard disk
Partitions          1
SCSI Bus  0
SCSI Logical Unit   1
SCSI Port 2
SCSI Target ID      0
Sectors/Track       63
Size      85.98 GB (92,320,542,720 bytes)
Total Cylinders     11,224
Total Sectors       180,313,560
Total Tracks        2,862,120
Tracks/Cylinder     255
Partition Disk #0, Partition #0
Partition Size      85.98 GB (92,319,776,768 bytes)

Partition Starting Offset     65,536 bytes

Description         Disk drive
Manufacturer        (Standard disk drives)
Model     COMPAQ MSA1000 VOLUME SCSI Disk Device
Bytes/Sector        512
Media Loaded        Yes
Media Type          Fixed hard disk
Partitions          1
SCSI Bus  0
SCSI Logical Unit   2
SCSI Port 2
SCSI Target ID      0
Sectors/Track       63
Size      669.27 GB (718,626,263,040 bytes)
Total Cylinders     87,368
Total Sectors       1,403,566,920
Total Tracks        22,278,840
Tracks/Cylinder     255
Partition Disk #1, Partition #0
Partition Size      669.27 GB (718,625,832,960 bytes)

Partition Starting Offset     65,536 bytes

Description         Disk drive
Manufacturer        (Standard disk drives)
Model     COMPAQ MSA1000 VOLUME SCSI Disk Device
Bytes/Sector        512
Media Loaded        Yes
Media Type          Fixed hard disk
Partitions          1
SCSI Bus  0
SCSI Logical Unit   1
SCSI Port 2
SCSI Target ID      1
Sectors/Track       63
Size      85.98 GB (92,320,542,720 bytes)
Total Cylinders     11,224
Total Sectors       180,313,560
Total Tracks        2,862,120
Tracks/Cylinder     255
Partition Disk #2, Partition #0
Partition Size      85.98 GB (92,319,776,768 bytes)

Partition Starting Offset     65,536 bytes

Description         Disk drive
Manufacturer        (Standard disk drives)
Model     COMPAQ MSA1000 VOLUME SCSI Disk Device
Bytes/Sector        512
Media Loaded        Yes
Media Type          Fixed hard disk
Partitions          1
SCSI Bus  0
SCSI Logical Unit   2
SCSI Port 2
SCSI Target ID      1
Sectors/Track       63
Size      669.27 GB (718,626,263,040 bytes)
Total Cylinders     87,368
Total Sectors       1,403,566,920
Total Tracks        22,278,840
Tracks/Cylinder     255
Partition Disk #3, Partition #0
Partition Size      669.27 GB (718,625,832,960 bytes)

Partition Starting Offset     65,536 bytes

Description         Disk drive
Manufacturer        (Standard disk drives)
Model     COMPAQ MSA1000 VOLUME SCSI Disk Device
Bytes/Sector        512
Media Loaded        Yes
Media Type          Fixed hard disk
Partitions          1
SCSI Bus  0
SCSI Logical Unit   1
SCSI Port 2
SCSI Target ID      2
Sectors/Track       63
Size      85.98 GB (92,320,542,720 bytes)
Total Cylinders     11,224
Total Sectors       180,313,560
Total Tracks        2,862,120
Tracks/Cylinder     255
Partition Disk #4, Partition #0
Partition Size      85.98 GB (92,319,776,768 bytes)

Partition Starting Offset     65,536 bytes

Description         Disk drive
Manufacturer        (Standard disk drives)
Model     COMPAQ MSA1000 VOLUME SCSI Disk Device
```


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```
Bytes/Sector        512
Media Loaded        Yes
Media Type          Fixed hard disk
Partitions          1
SCSI Bus  0
SCSI Logical Unit   2
SCSI Port 2
SCSI Target ID      2
Sectors/Track       63
Size      669.27 GB (718,626,263,040 bytes)
Total Cylinders     87,368
Total Sectors       1,403,566,920
Total Tracks        22,278,840
Tracks/Cylinder     255
Partition Disk #5, Partition #0
Partition Size      669.27 GB (718,625,832,960 bytes)

Partition Starting Offset     65,536 bytes

Description         Disk drive
Manufacturer        (Standard disk drives)
Model     COMPAQ MSA1000 VOLUME SCSI Disk Device
Bytes/Sector        512
Media Loaded        Yes
Media Type          Fixed hard disk
Partitions          1
SCSI Bus  0
SCSI Logical Unit   1
SCSI Port 2
SCSI Target ID      3
Sectors/Track       63
Size      407.01 GB (437,025,576,960 bytes)
Total Cylinders     53,132
Total Sectors       853,565,580
Total Tracks        13,548,660
Tracks/Cylinder     255
Partition Disk #6, Partition #0
Partition Size      407.01 GB (437,025,505,280 bytes)

Partition Starting Offset     65,536 bytes

Description         Disk drive
Manufacturer        (Standard disk drives)
Model     HP LOGICAL VOLUME SCSI Disk Device
Bytes/Sector        512
Media Loaded        Yes
Media Type          Fixed hard disk
Partitions          1
SCSI Bus  0
SCSI Logical Unit   0
SCSI Port 4
SCSI Target ID      4
Sectors/Track       32
Size      33.91 GB (36,414,750,720 bytes)
Total Cylinders     8,716
Total Sectors       71,122,560
Total Tracks        2,222,580
Tracks/Cylinder     255
Partition Disk #15, Partition #0
Partition Size      33.91 GB (36,410,556,416 bytes)

Partition Starting Offset     16,384 bytes
```

```
[SCSI]

Item      Value
Name      Smart Array 6i
Manufacturer        Hewlett-Packard Company
Status    OK
PNP Device ID
          PCI\VEN_0E11&DEV_0046&SUBSYS_40910E11&REV_0
1\4&24B9E852&0&1040
Memory Address      0xF7DF0000-0xF7DF1FFF
I/O Port  0x00005000-0x00005FFF
Memory Address      0xF7D80000-0xF7DBFFFF
IRQ Channel         IRQ 28
Driver    c:\windows\system32\drivers\cpqcissm.sys
(5.50.0.32 Build 3, 24.47 KB (25,056 bytes),
10/27/2004 7:22 PM)

Name      QLogic Fibre Channel Adapter
Manufacturer        QLogic
Status    OK
PNP Device ID
          PCI\VEN_1077&DEV_2312&SUBSYS_01050E11&REV_0
2\4&9630B56&0&0850
I/O Port  0x00006000-0x00006FFF
Memory Address      0xF7FF0000-0xF7FF0FFF
IRQ Channel         IRQ 36
Driver    c:\windows\system32\drivers\ql2300.sys
(9.0.2.11 (w32 IP), 804.17 KB (823,465 bytes),
4/27/2005 2:21 PM)

Name      QLogic Fibre Channel Adapter
Manufacturer        QLogic
Status    OK
PNP Device ID
          PCI\VEN_1077&DEV_2312&SUBSYS_01050E11&REV_0
2\4&9630B56&0&0950
I/O Port  0x00006400-0x000064FF
Memory Address      0xF7FE0000-0xF7FE0FFF
IRQ Channel         IRQ 37
Driver    c:\windows\system32\drivers\ql2300.sys
(9.0.2.11 (w32 IP), 804.17 KB (823,465 bytes),
4/27/2005 2:21 PM)

[IDE]

Item      Value
Name      Standard Dual Channel PCI IDE Controller

Manufacturer        (Standard IDE ATA/ATAPI
controllers)
Status    OK
PNP Device ID
          PCI\VEN_1022&DEV_7469&SUBSYS_32040E11&REV_0
3\3&20FEA912&0&21
I/O Port  0x00002000-0x0000200F
Driver    c:\windows\system32\drivers\pciide.sys
(5.2.3790.0 (srv03_rtm.030324-2048), 5.50 KB (5,632
bytes), 3/25/2003 6:00 AM)

Name      Primary IDE Channel
Manufacturer        (Standard IDE ATA/ATAPI
controllers)
Status    OK
```

```
PNP Device ID       PCIIDE\IDECHANNEL\4&21637DBD&0&0

I/O Port  0x000001F0-0x000001F7
I/O Port  0x000003F6-0x000003F6
Driver    c:\windows\system32\drivers\atapi.sys
(5.2.3790.1830 (srv03_sp1_rtm.050324-1447), 93.50 KB
(95,744 bytes), 3/25/2003 6:00 AM)

Name      Secondary IDE Channel
Manufacturer        (Standard IDE ATA/ATAPI
controllers)
Status    OK
PNP Device ID       PCIIDE\IDECHANNEL\4&21637DBD&0&1

I/O Port  0x00000170-0x00000177
I/O Port  0x00000376-0x00000376
Driver    c:\windows\system32\drivers\atapi.sys
(5.2.3790.1830 (srv03_sp1_rtm.050324-1447), 93.50 KB
(95,744 bytes), 3/25/2003 6:00 AM)

[Printing]

Name      Driver    Port Name Server Name

[Problem Devices]

Device    PNP Device ID       Error Code
Base System Device
          PCI\VEN_0E11&DEV_B203&SUBSYS_B2060E11&REV_0
1\4&12365AD0&0&2018 This device is not configured
correctly.
Base System Device
          PCI\VEN_0E11&DEV_B204&SUBSYS_B2060E11&REV_0
1\4&12365AD0&0&2218 This device is not configured
correctly.

[USB]

Device    PNP Device ID
Standard OpenHCD USB Host Controller
          PCI\VEN_1022&DEV_7464&SUBSYS_32020E11&REV_0
B\4&12365AD0&0&0018
USB Root Hub        USB\ROOT_HUB\5&9B4CD91&0
Standard OpenHCD USB Host Controller
          PCI\VEN_1022&DEV_7464&SUBSYS_32020E11&REV_0
B\4&12365AD0&0&0118
USB Root Hub        USB\ROOT_HUB\5&194CD4CC&0

[Software Environment]



[System Drivers]

Name      Description         File      Type
          Started   Start Mode          State
          Status    Error Control       Accept Pause
          Accept Stop
abiosdsk  Abiosdsk  Not Available       Kernel Driver
          No        Disabled  Stopped   OK
          Ignore    No        No
acpi      Microsoft ACPI Driver
          c:\windows\system32\drivers\acpi.sys
```


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```
          Kernel Driver       Yes       Boot
          Running   OK        Normal    No        Yes

acpiec    ACPIEC
          c:\windows\system32\drivers\acpiec.sys
          Kernel Driver       No        Disabled
          Stopped   OK        Normal    No        No

adpu160m  adpu160m  Not Available       Kernel Driver
          No        Disabled  Stopped   OK
          Normal    No        No
adpu320   adpu320   Not Available       Kernel Driver
          No        Disabled  Stopped   OK
          Normal    No        No
afcnt     afcnt     Not Available       Kernel Driver
          No        Disabled  Stopped   OK
          Normal    No        No
afd       AFD Networking Support Environment
          c:\windows\system32\drivers\afd.sys
          Kernel Driver       Yes       System
          Running   OK        Normal    No        Yes

aha154x   Aha154x   Not Available       Kernel Driver
          No        Disabled  Stopped   OK
          Normal    No        No
aic78u2   aic78u2   Not Available       Kernel Driver
          No        Disabled  Stopped   OK
          Normal    No        No
aic78xx   aic78xx   Not Available       Kernel Driver
          No        Disabled  Stopped   OK
          Normal    No        No
aliide    AliIde    Not Available       Kernel Driver
          No        Disabled  Stopped   OK
          Normal    No        No
amdk8     AMD K8 Processor Driver
          c:\windows\system32\drivers\amdk8.sys
          Kernel Driver       No        Manual
          Stopped   OK        Normal    No        No

asyncmac  RAS Asynchronous Media Driver
          c:\windows\system32\drivers\asyncmac.sys
          Kernel Driver       No        Manual
          Stopped   OK        Normal    No        No

atapi     Standard IDE/ESDI Hard Disk Controller
          c:\windows\system32\drivers\atapi.sys
          Kernel Driver       Yes       Boot
          Running   OK        Normal    No        Yes

atdisk    Atdisk    Not Available       Kernel Driver
          No        Disabled  Stopped   OK
          Ignore    No        No
ati2mpad  ati2mpad
          c:\windows\system32\drivers\ati2mpad.sys
          Kernel Driver       Yes       Manual
          Running   OK        Ignore    No        Yes

atmarpc   ATM ARP Client Protocol
          c:\windows\system32\drivers\atmarpc.sys
          Kernel Driver       No        Manual
          Stopped   OK        Normal    No        No

audstub   Audio Stub Driver
          c:\windows\system32\drivers\audstub.sys
          Kernel Driver       Yes       Manual
          Running   OK        Normal    No        Yes

beep      Beep
          c:\windows\system32\drivers\beep.sys
          Kernel Driver       Yes       System
          Running   OK        Normal    No        Yes

cbidf2k   cbidf2k
          c:\windows\system32\drivers\cbidf2k.sys
          Kernel Driver       No        Disabled
          Stopped   OK        Normal    No        No

cd20xrnt  cd20xrnt  Not Available       Kernel Driver
          No        Disabled  Stopped   OK
          Normal    No        No
cdfs      Cdfs
          c:\windows\system32\drivers\cdfs.sys
          File System Driver  No        Disabled
          Stopped   OK        Normal    No        No

cdrom     CD-ROM Driver
          c:\windows\system32\drivers\cdrom.sys
          Kernel Driver       No        System
          Stopped   OK        Normal    No        No

changer   Changer   Not Available       Kernel Driver
          No        System    Stopped   OK
          Ignore    No        No
clusdisk  Cluster Disk Driver
          c:\windows\system32\drivers\clusdisk.sys
          Kernel Driver       No        Disabled
          Stopped   OK        Normal    No        No

cmdide    CmdIde    Not Available       Kernel Driver
          No        Disabled  Stopped   OK
          Normal    No        No
cpqarray  Cpqarray  Not Available       Kernel Driver
          No        Disabled  Stopped   OK
          Normal    No        No
cpqarry2  cpqarry2  Not Available       Kernel Driver
          No        Disabled  Stopped   OK
          Normal    No        No
cpqcissm  cpqcissm
          c:\windows\system32\drivers\cpqcissm.sys
          Kernel Driver       Yes       Boot
          Running   OK        Normal    No        Yes

cpqfcac   CPQFCAC
          c:\windows\system32\drivers\cpqfcac.sys
          Kernel Driver       Yes       Boot
          Running   OK        Normal    No        Yes

cpqfcalm  cpqfcalm  Not Available       Kernel Driver
          No        Disabled  Stopped   OK
          Normal    No        No
cpuspy    CpuSpy Driver
          \??\c:\windows\system32\drivers\cpuspy.sys
          Kernel Driver       No        Manual
          Stopped   OK        Normal    No        No

cqdetect  Compaq Hardware Detection Service
          c:\windows\system32\drivers\cqdetect.sys
          Kernel Driver       No        Manual
          Stopped   OK        Normal    No        No

crcdisk   CRC Disk Filter Driver
          c:\windows\system32\drivers\crcdisk.sys
          Kernel Driver       Yes       Boot
          Running   OK        Normal    No        Yes

dac960nt  dac960nt  Not Available       Kernel Driver
          No        Disabled  Stopped   OK
          Normal    No        No
dellcerc  dellcerc  Not Available       Kernel Driver
          No        Disabled  Stopped   OK
          Normal    No        No
dfsdriver DfsDriver
          c:\windows\system32\drivers\dfs.sys
          File System Driver  Yes       Boot
          Running   OK        Normal    No        Yes

disk      Disk Driver
          c:\windows\system32\drivers\disk.sys
          Kernel Driver       Yes       Boot
          Running   OK        Normal    No        Yes

dmboot    dmboot
          c:\windows\system32\drivers\dmboot.sys
          Kernel Driver       No        Disabled
          Stopped   OK        Normal    No        No

dmio      Logical Disk Manager Driver
          c:\windows\system32\drivers\dmio.sys
          Kernel Driver       Yes       Boot
          Running   OK        Normal    No        Yes

dmload    dmload
          c:\windows\system32\drivers\dmload.sys
          Kernel Driver       Yes       Boot
          Running   OK        Normal    No        Yes

dpti2o    dpti2o    Not Available       Kernel Driver
          No        Disabled  Stopped   OK
          Normal    No        No
fastfat   Fastfat
          c:\windows\system32\drivers\fastfat.sys
          File System Driver  No        Disabled
          Stopped   OK        Normal    No        No

fdc       Floppy Disk Controller Driver
          c:\windows\system32\drivers\fdc.sys
          Kernel Driver       Yes       Manual
          Running   OK        Normal    No        Yes

fips      Fips
          c:\windows\system32\drivers\fips.sys
          Kernel Driver       Yes       System
          Running   OK        Normal    No        Yes

flpydisk  Floppy Disk Driver
          c:\windows\system32\drivers\flpydisk.sys
          Kernel Driver       No        Manual
```


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```
          Stopped   OK        Normal    No        No

fltmgr    FltMgr
          c:\windows\system32\drivers\fltmgr.sys
          File System Driver  Yes       Boot
          Running   OK        Normal    No        Yes

ftdisk    Volume Manager Driver
          c:\windows\system32\drivers\ftdisk.sys
          Kernel Driver       Yes       Boot
          Running   OK        Normal    No        Yes

gpc       Generic Packet Classifier
          c:\windows\system32\drivers\msgpc.sys
          Kernel Driver       Yes       Manual
          Running   OK        Normal    No        Yes

hpn       hpn       Not Available       Kernel Driver
          No        Disabled  Stopped   OK
          Normal    No        No
hpqcissb  Smart Array Controllers Non-Miniport Bus
Driver    c:\windows\system32\drivers\hpqcissb.sys
          Kernel Driver       Yes       Boot
          Running   OK        Normal    No        Yes

hpqcissd  Smart Array Controllers Non-Miniport Disk
Driver    c:\windows\system32\drivers\hpqcissd.sys
          Kernel Driver       Yes       Boot
          Running   OK        Normal    No        Yes

hpt3xx    hpt3xx    Not Available       Kernel Driver
          No        Disabled  Stopped   OK
          Normal    No        No
http      HTTP
          c:\windows\system32\drivers\http.sys
          Kernel Driver       No        Manual
          Stopped   OK        Normal    No        No

i2omgmt   i2omgmt   Not Available       Kernel Driver
          No        System    Stopped   OK
          Normal    No        No
i2omp     i2omp     Not Available       Kernel Driver
          No        Disabled  Stopped   OK
          Normal    No        No
i8042prt  i8042 Keyboard and PS/2 Mouse Port Driver
          c:\windows\system32\drivers\i8042prt.sys
          Kernel Driver       Yes       System
          Running   OK        Normal    No        Yes

iirsp     iirsp     Not Available       Kernel Driver
          No        Disabled  Stopped   OK
          Normal    No        No
imapi     CD-Burning Filter Driver
          c:\windows\system32\drivers\imapi.sys
          Kernel Driver       No        System
          Stopped   OK        Normal    No        No

intelide  IntelIde
          c:\windows\system32\drivers\intelide.sys
          Kernel Driver       Yes       Boot
          Running   OK        Normal    No        Yes

intelppm  Intel Processor Driver
          c:\windows\system32\drivers\intelppm.sys
          Kernel Driver       No        Manual
          Stopped   OK        Normal    No        No

interruptaffinityfilter       Interrupt Affinity
Filter    c:\windows\system32\drivers\intfiltr.sys
          Kernel Driver       Yes       Boot
          Running   OK        Normal    No        Yes

ip6fw     IPv6 Windows Firewall Driver
          c:\windows\system32\drivers\ip6fw.sys
          Kernel Driver       No        Manual
          Stopped   OK        Normal    No        No

ipfilterdriver      IP Traffic Filter Driver
          c:\windows\system32\drivers\ipfltdrv.sys
          Kernel Driver       No        Manual
          Stopped   OK        Normal    No        No

ipinip    IP in IP Tunnel Driver
          c:\windows\system32\drivers\ipinip.sys
          Kernel Driver       No        Manual
          Stopped   OK        Normal    No        No

ipnat     IP Network Address Translator
          c:\windows\system32\drivers\ipnat.sys
          Kernel Driver       No        Manual
          Stopped   OK        Normal    No        No

ipsec     IPSEC driver
          c:\windows\system32\drivers\ipsec.sys
          Kernel Driver       Yes       System
          Running   OK        Normal    No        Yes

ipsraidn  ipsraidn  Not Available       Kernel Driver
          No        Disabled  Stopped   OK
          Normal    No        No
isapnp    PnP ISA/EISA Bus Driver
          c:\windows\system32\drivers\isapnp.sys
          Kernel Driver       Yes       Boot
          Running   OK        Critical  No        Yes

kbdclass  Keyboard Class Driver
          c:\windows\system32\drivers\kbdclass.sys
          Kernel Driver       Yes       System
          Running   OK        Normal    No        Yes

ksecdd    KSecDD
          c:\windows\system32\drivers\ksecdd.sys
          Kernel Driver       Yes       Boot
          Running   OK        Normal    No        Yes

lp6nds35  lp6nds35  Not Available       Kernel Driver
          No        Disabled  Stopped   OK
          Normal    No        No
mnmdd     mnmdd
          c:\windows\system32\drivers\mnmdd.sys
          Kernel Driver       Yes       System
          Running   OK        Ignore    No        Yes

modem     Modem
          c:\windows\system32\drivers\modem.sys
          Kernel Driver       No        Manual
          Stopped   OK        Ignore    No        No

mouclass  Mouse Class Driver
          c:\windows\system32\drivers\mouclass.sys
          Kernel Driver       Yes       System
          Running   OK        Normal    No        Yes

mountmgr  Mount Point Manager
          c:\windows\system32\drivers\mountmgr.sys
          Kernel Driver       Yes       Boot
          Running   OK        Normal    No        Yes

mraid35x  mraid35x  Not Available       Kernel Driver
          No        Disabled  Stopped   OK
          Normal    No        No
mrxdav    WebDav Client Redirector
          c:\windows\system32\drivers\mrxdav.sys
          File System Driver  No        Manual
          Stopped   OK        Normal    No        No

mrxsmb    MRXSMB
          c:\windows\system32\drivers\mrxsmb.sys
          File System Driver  Yes       System
          Running   OK        Normal    No        Yes

msfs      Msfs
          c:\windows\system32\drivers\msfs.sys
          File System Driver  Yes       System
          Running   OK        Normal    No        Yes

mssmbios  Microsoft System Management BIOS Driver
          c:\windows\system32\drivers\mssmbios.sys
          Kernel Driver       Yes       Manual
          Running   OK        Normal    No        Yes

multevent MultEvent Driver
          \??\c:\windows\system32\drivers\multeventdr
iver.sys  Kernel Driver       No        Manual
          Stopped   OK        Normal    No        No

mup       Mup
          c:\windows\system32\drivers\mup.sys
          File System Driver  Yes       Boot
          Running   OK        Normal    No        Yes

ndis      NDIS System Driver
          c:\windows\system32\drivers\ndis.sys
          Kernel Driver       Yes       Boot
          Running   OK        Normal    No        Yes

ndistapi  Remote Access NDIS TAPI Driver
          c:\windows\system32\drivers\ndistapi.sys
          Kernel Driver       Yes       Manual
          Running   OK        Normal    No        Yes

ndisuio   NDIS Usermode I/O Protocol
          c:\windows\system32\drivers\ndisuio.sys
          Kernel Driver       No        Manual
          Stopped   OK        Normal    No        No

ndiswan   Remote Access NDIS WAN Driver
          c:\windows\system32\drivers\ndiswan.sys
```


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```
          Kernel Driver       Yes       Manual
          Running   OK        Normal    No        Yes

ndproxy   NDIS Proxy
          c:\windows\system32\drivers\ndproxy.sys
          Kernel Driver       Yes       Manual
          Running   OK        Normal    No        Yes

netbios   NetBIOS Interface
          c:\windows\system32\drivers\netbios.sys
          File System Driver  Yes       System
          Running   OK        Normal    No        Yes

netbt     NetBios over Tcpip
          c:\windows\system32\drivers\netbt.sys
          Kernel Driver       Yes       System
          Running   OK        Normal    No        Yes

nfrd960   nfrd960   Not Available       Kernel Driver
          No        Disabled  Stopped   OK
          Normal    No        No
npfs      Npfs
          c:\windows\system32\drivers\npfs.sys
          File System Driver  Yes       System
          Running   OK        Normal    No        Yes

ntfs      Ntfs
          c:\windows\system32\drivers\ntfs.sys
          File System Driver  Yes       Disabled
          Running   OK        Normal    No        Yes

null      Null
          c:\windows\system32\drivers\null.sys
          Kernel Driver       Yes       System
          Running   OK        Normal    No        Yes

parport   Parport
          c:\windows\system32\drivers\parport.sys
          Kernel Driver       No        Manual
          Stopped   OK        Ignore    No        No

partmgr   Partition Manager
          c:\windows\system32\drivers\partmgr.sys
          Kernel Driver       Yes       Boot
          Running   OK        Normal    No        Yes

pci       PCI Bus Driver
          c:\windows\system32\drivers\pci.sys
          Kernel Driver       Yes       Boot
          Running   OK        Critical  No        Yes

pciide    PCIIde
          c:\windows\system32\drivers\pciide.sys
          Kernel Driver       Yes       Boot
          Running   OK        Normal    No        Yes

pcmcia    Pcmcia
          c:\windows\system32\drivers\pcmcia.sys
          Kernel Driver       No        Disabled
          Stopped   OK        Normal    No        No

pdcomp    PDCOMP    Not Available       Kernel Driver
          No        Manual    Stopped   OK
          Ignore    No        No
pdframe   PDFRAME   Not Available       Kernel Driver
          No        Manual    Stopped   OK
          Ignore    No        No
pdreli    PDRELI    Not Available       Kernel Driver
          No        Manual    Stopped   OK
          Ignore    No        No
pdrframe  PDRFRAME  Not Available       Kernel Driver
          No        Manual    Stopped   OK
          Ignore    No        No
perc2     perc2     Not Available       Kernel Driver
          No        Disabled  Stopped   OK
          Normal    No        No
perc2hib  perc2hib  Not Available       Kernel Driver
          No        Disabled  Stopped   OK
          Normal    No        No
pptpminiport        WAN Miniport (PPTP)
          c:\windows\system32\drivers\raspptp.sys
          Kernel Driver       Yes       Manual
          Running   OK        Normal    No        Yes

processor Processor Driver
          c:\windows\system32\drivers\processr.sys
          Kernel Driver       Yes       Manual
          Running   OK        Normal    No        Yes

ptilink   Direct Parallel Link Driver
          c:\windows\system32\drivers\ptilink.sys
          Kernel Driver       Yes       Manual
          Running   OK        Normal    No        Yes

q57w2k    HP NC7781 Gigabit Server Adapter
          c:\windows\system32\drivers\q57xp32.sys
          Kernel Driver       Yes       Manual
          Running   OK        Normal    No        Yes

ql1080    ql1080    Not Available       Kernel Driver
          No        Disabled  Stopped   OK
          Normal    No        No
ql10wnt   Ql10wnt   Not Available       Kernel Driver
          No        Disabled  Stopped   OK
          Normal    No        No
ql12160   ql12160   Not Available       Kernel Driver
          No        Disabled  Stopped   OK
          Normal    No        No
ql1240    ql1240    Not Available       Kernel Driver
          No        Disabled  Stopped   OK
          Normal    No        No
ql1280    ql1280    Not Available       Kernel Driver
          No        Disabled  Stopped   OK
          Normal    No        No
ql2100    ql2100    Not Available       Kernel Driver
          No        Disabled  Stopped   OK
          Normal    No        No
ql2200    ql2200    Not Available       Kernel Driver
          No        Disabled  Stopped   OK
          Normal    No        No
ql2300    QLogic Fibre Channel SCSI Miniport Driver
(w32 IP)  c:\windows\system32\drivers\ql2300.sys
          Kernel Driver       Yes       Boot
          Running   OK        Normal    No        Yes

qldirect  qldirect
          c:\windows\system32\drivers\qldirect.sys
          Kernel Driver       Yes       Auto
          Running   OK        Normal    No        Yes

rasacd    Remote Access Auto Connection Driver
          c:\windows\system32\drivers\rasacd.sys
          Kernel Driver       Yes       System
          Running   OK        Normal    No        Yes

rasl2tp   WAN Miniport (L2TP)
          c:\windows\system32\drivers\rasl2tp.sys
          Kernel Driver       Yes       Manual
          Running   OK        Normal    No        Yes

raspppoe  Remote Access PPPOE Driver
          c:\windows\system32\drivers\raspppoe.sys
          Kernel Driver       Yes       Manual
          Running   OK        Normal    No        Yes

raspti    Direct Parallel
          c:\windows\system32\drivers\raspti.sys
          Kernel Driver       Yes       Manual
          Running   OK        Normal    No        Yes

rdbss     Rdbss
          c:\windows\system32\drivers\rdbss.sys
          File System Driver  Yes       System
          Running   OK        Normal    No        Yes

rdpcdd    RDPCDD
          c:\windows\system32\drivers\rdpcdd.sys
          Kernel Driver       Yes       System
          Running   OK        Ignore    No        Yes

rdpdr     Terminal Server Device Redirector Driver
          c:\windows\system32\drivers\rdpdr.sys
          Kernel Driver       Yes       Manual
          Running   OK        Normal    No        Yes

rdpwd     RDPWD
          c:\windows\system32\drivers\rdpwd.sys
          Kernel Driver       Yes       Manual
          Running   OK        Ignore    No        Yes

redbook   Digital CD Audio Playback Filter Driver
          c:\windows\system32\drivers\redbook.sys
          Kernel Driver       No        System
          Stopped   OK        Normal    No        No

secdrv    Secdrv
          c:\windows\system32\drivers\secdrv.sys
          Kernel Driver       No        Manual
          Stopped   OK        Normal    No        No

serenum   Serenum Filter Driver
          c:\windows\system32\drivers\serenum.sys
          Kernel Driver       Yes       Manual
          Running   OK        Normal    No        Yes
```


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serial    Serial port driver
          c:\windows\system32\drivers\serial.sys
          Kernel Driver       Yes       System
          Running   OK        Ignore    No        Yes

sfloppy   High-Capacity Floppy Disk Drive
          c:\windows\system32\drivers\sfloppy.sys
          Kernel Driver       No        Manual
          Stopped   OK        Normal    No        No

simbad    Simbad    Not Available       Kernel Driver
          No        Disabled  Stopped   OK
          Normal    No        No
sparrow   Sparrow   Not Available       Kernel Driver
          No        Disabled  Stopped   OK
          Normal    No        No
srv       Srv
          c:\windows\system32\drivers\srv.sys
          File System Driver  Yes       Manual
          Running   OK        Normal    No        Yes

startdss  startdss
          c:\windows\system32\drivers\startdss.sys
          Kernel Driver       No        Disabled
          Stopped   OK        Normal    No        No

swenum    Software Bus Driver
          c:\windows\system32\drivers\swenum.sys
          Kernel Driver       Yes       Manual
          Running   OK        Normal    No        Yes

symc810   symc810   Not Available       Kernel Driver
          No        Disabled  Stopped   OK
          Normal    No        No
symc8xx   symc8xx   Not Available       Kernel Driver
          No        Disabled  Stopped   OK
          Normal    No        No
symmpi    symmpi    Not Available       Kernel Driver
          No        Disabled  Stopped   OK
          Normal    No        No
sym_hi    sym_hi    Not Available       Kernel Driver
          No        Disabled  Stopped   OK
          Normal    No        No
sym_u3    sym_u3    Not Available       Kernel Driver
          No        Disabled  Stopped   OK
          Normal    No        No
tcpip     TCP/IP Protocol Driver
          c:\windows\system32\drivers\tcpip.sys
          Kernel Driver       Yes       System
          Running   OK        Normal    No        Yes

tdpipe    TDPIPE
          c:\windows\system32\drivers\tdpipe.sys
          Kernel Driver       No        Manual
          Stopped   OK        Ignore    No        No

tdtcp     TDTCP
          c:\windows\system32\drivers\tdtcp.sys
          Kernel Driver       Yes       Manual
          Running   OK        Ignore    No        Yes

termdd    Terminal Device Driver
          c:\windows\system32\drivers\termdd.sys
          Kernel Driver       Yes       System
          Running   OK        Normal    No        Yes

toside    TosIde    Not Available       Kernel Driver
          No        Disabled  Stopped   OK
          Normal    No        No
udfs      Udfs
          c:\windows\system32\drivers\udfs.sys
          File System Driver  No        Disabled
          Stopped   OK        Normal    No        No

ultra     ultra     Not Available       Kernel Driver
          No        Disabled  Stopped   OK
          Normal    No        No
update    Microcode Update Driver
          c:\windows\system32\drivers\update.sys
          Kernel Driver       Yes       Manual
          Running   OK        Normal    No        Yes

usbehci   Microsoft USB 2.0 Enhanced Host Controller
Miniport Driver
          c:\windows\system32\drivers\usbehci.sys
          Kernel Driver       No        Manual
          Stopped   OK        Normal    No        No

usbhub    USB2 Enabled Hub
          c:\windows\system32\drivers\usbhub.sys
          Kernel Driver       Yes       Manual
          Running   OK        Normal    No        Yes

usbohci   Microsoft USB Open Host Controller Miniport
Driver    c:\windows\system32\drivers\usbohci.sys
          Kernel Driver       Yes       Manual
          Running   OK        Normal    No        Yes

usbstor   USB Mass Storage Driver
          c:\windows\system32\drivers\usbstor.sys
          Kernel Driver       No        Manual
          Stopped   OK        Normal    No        No

usbuhci   Microsoft USB Universal Host Controller
Miniport Driver
          c:\windows\system32\drivers\usbuhci.sys
          Kernel Driver       No        Manual
          Stopped   OK        Normal    No        No

vgasave   VGA Display Controller.
          c:\windows\system32\drivers\vga.sys
          Kernel Driver       Yes       System
          Running   OK        Ignore    No        Yes

viaide    ViaIde    Not Available       Kernel Driver
          No        Disabled  Stopped   OK
          Normal    No        No
volsnap   Storage volumes
          c:\windows\system32\drivers\volsnap.sys
          Kernel Driver       Yes       Boot
          Running   OK        Normal    No        Yes

wanarp    Remote Access IP ARP Driver
          c:\windows\system32\drivers\wanarp.sys
          Kernel Driver       Yes       Manual
          Running   OK        Normal    No        Yes

wdica     WDICA     Not Available       Kernel Driver
          No        Manual    Stopped   OK
          Ignore    No        No
wlbs      Network Load Balancing
          c:\windows\system32\drivers\wlbs.sys
          Kernel Driver       No        Manual
          Stopped   OK        Normal    No        No


[Signed Drivers]

Device Name         Signed    Device Class
          Driver Version      Driver Date
          Manufacturer        INF Name  Driver Name
          Device ID
Microsoft System Management BIOS Driver Yes
          SYSTEM    5.2.3790.1830       10/1/2002
          (Standard system devices)     machine.inf
          Not Available       ROOT\SYSTEM\0002
Microcode Update Device       Yes       SYSTEM
          5.2.3790.0          10/1/2002 (Standard
system devices)     machine.inf         Not Available
          ROOT\SYSTEM\0001
Plug and Play Software Device Enumerator          Yes
          SYSTEM    5.2.3790.0          10/1/2002
          (Standard system devices)     machine.inf
          Not Available       ROOT\SYSTEM\0000
Terminal Server Mouse Driver  Yes       SYSTEM
          5.2.3790.0          10/1/2002 (Standard
system devices)     machine.inf         Not Available
          ROOT\RDP_MOU\0000
Terminal Server Keyboard Driver         Yes
          SYSTEM    5.2.3790.0          10/1/2002
          (Standard system devices)     machine.inf
          Not Available       ROOT\RDP_KBD\0000
Terminal Server Device Redirector       Yes
          SYSTEM    5.2.3790.0          10/1/2002
          (Standard system devices)     machine.inf
          Not Available       ROOT\RDPDR\0000
Direct Parallel     Yes       NET       5.2.3790.0
          10/1/2002 Microsoft netrasa.inf         Not
Available ROOT\MS_PTIMINIPORT\0000
WAN Miniport (PPTP) Yes       NET       5.2.3790.0
          10/1/2002 Microsoft netrasa.inf         Not
Available ROOT\MS_PPTPMINIPORT\0000
WAN Miniport (PPPOE)          Yes       NET
          5.2.3790.0          10/1/2002 Microsoft
          netrasa.inf         Not Available
          ROOT\MS_PPPOEMINIPORT\0000
WAN Miniport (IP)   Yes       NET       5.2.3790.0
          10/1/2002 Microsoft netrasa.inf         Not
Available ROOT\MS_NDISWANIP\0000
WAN Miniport (L2TP) Yes       NET       5.2.3790.0
          10/1/2002 Microsoft netrasa.inf         Not
Available ROOT\MS_L2TPMINIPORT\0000
Video Codecs        Yes       MEDIA     5.2.3790.0
          10/1/2002 (Standard system devices)
          wave.inf  Not Available
          ROOT\MEDIA\MS_MMVID
Legacy Video Capture Devices  Yes       MEDIA
          5.2.3790.0          10/1/2002 (Standard
```


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```
system devices)     wave.inf  Not Available
          ROOT\MEDIA\MS_MMVCD
Media Control Devices          Yes       MEDIA
          5.2.3790.0           10/1/2002 (Standard
system devices)     wave.inf  Not Available
          ROOT\MEDIA\MS_MMMCI
Legacy Audio Drivers           Yes       MEDIA
          5.2.3790.0           10/1/2002 (Standard
system devices)     wave.inf  Not Available
          ROOT\MEDIA\MS_MMDRV
Audio Codecs        Yes       MEDIA     5.2.3790.0
          10/1/2002 (Standard system devices)
          wave.inf  Not Available
          ROOT\MEDIA\MS_MMACM
Remote Access IP ARP Driver    Not Available
          LEGACYDRIVER         Not Available       Not
Available Not Available        Not Available       Not
Available ROOT\LEGACY_WANARP\0000
volsnap   Not Available        LEGACYDRIVER        Not
Available Not Available        Not Available       Not
Available Not Available
          ROOT\LEGACY_VOLSNAP\0000
VGA Display Controller.        Not Available
          LEGACYDRIVER         Not Available       Not
Available Not Available        Not Available       Not
Available ROOT\LEGACY_VGASAVE\0000
TDTCP     Not Available        LEGACYDRIVER        Not
Available Not Available        Not Available       Not
Available Not Available        ROOT\LEGACY_TDTCP\0000

TDPIPE    Not Available        LEGACYDRIVER        Not
Available Not Available        Not Available       Not
Available Not Available        ROOT\LEGACY_TDPIPE\0000

TCP/IP Protocol Driver         Not Available
          LEGACYDRIVER         Not Available       Not
Available Not Available        Not Available       Not
Available ROOT\LEGACY_TCPIP\0000
startdss  Not Available        LEGACYDRIVER        Not
Available Not Available        Not Available       Not
Available Not Available
          ROOT\LEGACY_STARTDSS\0000
sacdrv    Not Available        LEGACYDRIVER        Not
Available Not Available        Not Available       Not
Available Not Available        ROOT\LEGACY_SACDRV\0000

RDPWD     Not Available        LEGACYDRIVER        Not
Available Not Available        Not Available       Not
Available Not Available        ROOT\LEGACY_RDPWD\0000

RDPCDD    Not Available        LEGACYDRIVER        Not
Available Not Available        Not Available       Not
Available Not Available        ROOT\LEGACY_RDPCDD\0000

Remote Access Auto Connection Driver    Not Available
          LEGACYDRIVER         Not Available       Not
Available Not Available        Not Available       Not
Available ROOT\LEGACY_RASACD\0000
qldirect  Not Available        LEGACYDRIVER        Not
Available Not Available        Not Available       Not
Available Not Available
          ROOT\LEGACY_QLDIRECT\0000
Partition Manager   Not Available       LEGACYDRIVER
          Not Available        Not Available       Not
Available Not Available        Not Available
          ROOT\LEGACY_PARTMGR\0000
Null      Not Available        LEGACYDRIVER        Not
Available Not Available        Not Available       Not
Available Not Available        ROOT\LEGACY_NULL\0000

NetBios over Tcpip  Not Available       LEGACYDRIVER
          Not Available        Not Available       Not
Available Not Available        Not Available
          ROOT\LEGACY_NETBT\0000
NDProxy   Not Available        LEGACYDRIVER        Not
Available Not Available        Not Available       Not
Available Not Available
          ROOT\LEGACY_NDPROXY\0000
NDIS Usermode I/O Protocol     Not Available
          LEGACYDRIVER         Not Available       Not
Available Not Available        Not Available       Not
Available ROOT\LEGACY_NDISUIO\0000
Remote Access NDIS TAPI Driver          Not Available
          LEGACYDRIVER         Not Available       Not
Available Not Available        Not Available       Not
Available ROOT\LEGACY_NDISTAPI\0000
NDIS System Driver  Not Available       LEGACYDRIVER
          Not Available        Not Available       Not
Available Not Available        Not Available
          ROOT\LEGACY_NDIS\0000
MultEvent Driver    Not Available       LEGACYDRIVER
          Not Available        Not Available       Not
Available Not Available        Not Available
          ROOT\LEGACY_MULTEVENT\0000
mountmgr  Not Available        LEGACYDRIVER        Not
Available Not Available        Not Available       Not
Available Not Available
          ROOT\LEGACY_MOUNTMGR\0000
mnmdd     Not Available        LEGACYDRIVER        Not
Available Not Available        Not Available       Not
Available Not Available        ROOT\LEGACY_MNMDD\0000

ksecdd    Not Available        LEGACYDRIVER        Not
Available Not Available        Not Available       Not
Available Not Available        ROOT\LEGACY_KSECDD\0000

IPSEC driver        Not Available       LEGACYDRIVER
          Not Available        Not Available       Not
Available Not Available        Not Available
          ROOT\LEGACY_IPSEC\0000
IntelIde  Not Available        LEGACYDRIVER        Not
Available Not Available        Not Available       Not
Available Not Available
          ROOT\LEGACY_INTELIDE\0000
Smart Array Controllers Non-Miniport Disk Driver  Not
Available LEGACYDRIVER         Not Available       Not
Available Not Available        Not Available       Not
Available ROOT\LEGACY_HPQCISSD\0000
Smart Array Controllers Non-Miniport Bus Driver   Not
Available LEGACYDRIVER         Not Available       Not
Available Not Available        Not Available       Not
Available ROOT\LEGACY_HPQCISSB\0000
Generic Packet Classifier      Not Available
          LEGACYDRIVER         Not Available       Not
Available Not Available        Not Available       Not
Available ROOT\LEGACY_GPC\0000
Fips      Not Available        LEGACYDRIVER        Not
Available Not Available        Not Available       Not
Available Not Available        ROOT\LEGACY_FIPS\0000

dmload    Not Available        LEGACYDRIVER        Not
Available Not Available        Not Available       Not
Available Not Available        ROOT\LEGACY_DMLOAD\0000

dmboot    Not Available        LEGACYDRIVER        Not
Available Not Available        Not Available       Not
Available Not Available        ROOT\LEGACY_DMBOOT\0000

CRC Disk Filter Driver         Not Available
          LEGACYDRIVER         Not Available       Not
Available Not Available        Not Available       Not
Available ROOT\LEGACY_CRCDISK\0000
Compaq Hardware Detection Service       Not Available
          LEGACYDRIVER         Not Available       Not
Available Not Available        Not Available       Not
Available ROOT\LEGACY_CQDETECT\0000
CpuSpy Driver       Not Available       LEGACYDRIVER
          Not Available        Not Available       Not
Available Not Available        Not Available
          ROOT\LEGACY_CPUSPY\0000
Beep      Not Available        LEGACYDRIVER        Not
Available Not Available        Not Available       Not
Available Not Available        ROOT\LEGACY_BEEP\0000

AFD Networking Support Environment      Not Available
          LEGACYDRIVER         Not Available       Not
Available Not Available        Not Available       Not
Available ROOT\LEGACY_AFD\0000
Generic volume      Yes        VOLUME    5.2.3790.1830
          10/1/2002 Microsoft volume.inf           Not
Available
          STORAGE\VOLUME\1&30A96598&0&SIGNATUREDCA371
73OFFSET10000LENGTH7AAED00000
Generic volume      Yes        VOLUME    5.2.3790.1830
          10/1/2002 Microsoft volume.inf           Not
Available
          STORAGE\VOLUME\1&30A96598&0&SIGNATUREDCA371
75OFFSET10000LENGTH6EC3E00000
Generic volume      Yes        VOLUME    5.2.3790.1830
          10/1/2002 Microsoft volume.inf           Not
Available
          STORAGE\VOLUME\1&30A96598&0&SIGNATURE836B5B
23OFFSET10000LENGTHA751700000
Generic volume      Yes        VOLUME    5.2.3790.1830
          10/1/2002 Microsoft volume.inf           Not
Available
          STORAGE\VOLUME\1&30A96598&0&SIGNATURE836B5B
22OFFSET10000LENGTH157EB00000
Generic volume      Yes        VOLUME    5.2.3790.1830
          10/1/2002 Microsoft volume.inf           Not
Available
          STORAGE\VOLUME\1&30A96598&0&SIGNATURE836B5B
21OFFSET10000LENGTHA751700000
Generic volume      Yes        VOLUME    5.2.3790.1830
          10/1/2002 Microsoft volume.inf           Not
Available
```


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```
        STORAGE\VOLUME\1&30A96598&0&SIGNATURE836B5B
20OFFSET10000LENGTH157EB00000
Generic volume      Yes       VOLUME    5.2.3790.1830
        10/1/2002 Microsoft volume.inf          Not
Available
        STORAGE\VOLUME\1&30A96598&0&SIGNATURE836B5B
3FOFFSET10000LENGTHA751700000
Generic volume      Yes       VOLUME    5.2.3790.1830
        10/1/2002 Microsoft volume.inf          Not
Available
        STORAGE\VOLUME\1&30A96598&0&SIGNATURE836B5B
3EOFFSET10000LENGTH157EB00000
Generic volume      Yes       VOLUME    5.2.3790.1830
        10/1/2002 Microsoft volume.inf          Not
Available
        STORAGE\VOLUME\1&30A96598&0&SIGNATURE395D7F
B6OFFSET10000LENGTH65C0C00000
Generic volume      Yes       VOLUME    5.2.3790.1830
        10/1/2002 Microsoft volume.inf          Not
Available
        STORAGE\VOLUME\1&30A96598&0&SIGNATURE836B5B
3DOFFSET10000LENGTHA751700000
Generic volume      Yes       VOLUME    5.2.3790.1830
        10/1/2002 Microsoft volume.inf          Not
Available
        STORAGE\VOLUME\1&30A96598&0&SIGNATURE836B5B
3COFFSET10000LENGTH157EB00000
Generic volume      Yes       VOLUME    5.2.3790.1830
        10/1/2002 Microsoft volume.inf          Not
Available
        STORAGE\VOLUME\1&30A96598&0&SIGNATURE836B5B
3AOFFSET10000LENGTHA751700000
Generic volume      Yes       VOLUME    5.2.3790.1830
        10/1/2002 Microsoft volume.inf          Not
Available
        STORAGE\VOLUME\1&30A96598&0&SIGNATURE836B5B
39OFFSET10000LENGTH157EB00000
Generic volume      Yes       VOLUME    5.2.3790.1830
        10/1/2002 Microsoft volume.inf          Not
Available
        STORAGE\VOLUME\1&30A96598&0&SIGNATURE836B5B
38OFFSET10000LENGTHA751700000
Generic volume      Yes       VOLUME    5.2.3790.1830
        10/1/2002 Microsoft volume.inf          Not
Available
        STORAGE\VOLUME\1&30A96598&0&SIGNATURE836B5B
37OFFSET10000LENGTH157EB00000
Generic volume      Yes       VOLUME    5.2.3790.0
        10/1/2002 Microsoft volume.inf          Not
Available
        STORAGE\VOLUME\1&30A96598&0&SIGNATURE263026
3OFFSET4000LENGTH87A3D0000
Volume Manager      Yes       SYSTEM    5.2.3790.0
        10/1/2002 (Standard system devices)
        machine.inf         Not Available
        ROOT\FTDISK\0000
Logical Disk Manager          Yes       SYSTEM
        5.2.3790.0          10/1/2002 (Standard
system devices)     machine.inf         Not Available
        ROOT\DMIO\0000
ACPI Fixed Feature Button     Yes       SYSTEM
        5.2.3790.0          10/1/2002 (Standard
system devices)     machine.inf         Not Available
        ACPI\FIXEDBUTTON\2&DABA3FF&0
AMD-8131 HyperTransport(tm) IOAPIC Controller     Yes
        SYSTEM    1.80.0.0  5/8/2002  AMD
        oem4.inf  Not Available
        PCI\VEN_1022&DEV_7451&SUBSYS_00000000&REV_0
1\3&33B859B7&0&51
QLOGIC PSEUDO LUN   Yes       SYSTEM    9.0.2.11
        3/8/2005  QLogic Corp         oem7.inf  Not
Available
        SCSI\PROCESSOR&VEN_QLOGIC&PROD_PSEUDO_LUN&R
EV_\5&1322F224&7&07F0
Disk drive          Yes       DISKDRIVE 5.2.3790.0
        10/1/2002 (Standard disk drives)
        disk.inf  Not Available
        SCSI\DISK&VEN_COMPAQ&PROD_MSA1000_VOLUME&RE
V_4.32\5&1322F224&7&032
Disk drive          Yes       DISKDRIVE 5.2.3790.0
        10/1/2002 (Standard disk drives)
        disk.inf  Not Available
        SCSI\DISK&VEN_COMPAQ&PROD_MSA1000_VOLUME&RE
V_4.32\5&1322F224&7&031
StorageWorks MSA1000          Yes       SYSTEM
        5.28.0.32 2/25/2005 Hewlett-Packard Company
        oem8.inf  Not Available
        SCSI\ARRAY&VEN_COMPAQ&PROD_MSA1000&REV_4.32
\5&1322F224&7&030
Disk drive          Yes       DISKDRIVE 5.2.3790.0
        10/1/2002 (Standard disk drives)
        disk.inf  Not Available
        SCSI\DISK&VEN_COMPAQ&PROD_MSA1000_VOLUME&RE
V_4.32\5&1322F224&7&022
Disk drive          Yes       DISKDRIVE 5.2.3790.0
        10/1/2002 (Standard disk drives)
        disk.inf  Not Available
        SCSI\DISK&VEN_COMPAQ&PROD_MSA1000_VOLUME&RE
V_4.32\5&1322F224&7&021
StorageWorks MSA1000          Yes       SYSTEM
        5.28.0.32 2/25/2005 Hewlett-Packard Company
        oem8.inf  Not Available
        SCSI\ARRAY&VEN_COMPAQ&PROD_MSA1000&REV_4.32
\5&1322F224&7&020
Disk drive          Yes       DISKDRIVE 5.2.3790.0
        10/1/2002 (Standard disk drives)
        disk.inf  Not Available
        SCSI\DISK&VEN_COMPAQ&PROD_MSA1000_VOLUME&RE
V_4.32\5&1322F224&7&012
Disk drive          Yes       DISKDRIVE 5.2.3790.0
        10/1/2002 (Standard disk drives)
        disk.inf  Not Available
        SCSI\DISK&VEN_COMPAQ&PROD_MSA1000_VOLUME&RE
V_4.32\5&1322F224&7&011
StorageWorks MSA1000          Yes       SYSTEM
        5.28.0.32 2/25/2005 Hewlett-Packard Company
        oem8.inf  Not Available
        SCSI\ARRAY&VEN_COMPAQ&PROD_MSA1000&REV_4.32
\5&1322F224&7&010
Disk drive          Yes       DISKDRIVE 5.2.3790.0
        10/1/2002 (Standard disk drives)
        disk.inf  Not Available
        SCSI\DISK&VEN_COMPAQ&PROD_MSA1000_VOLUME&RE
V_4.32\5&1322F224&7&002
Disk drive          Yes       DISKDRIVE 5.2.3790.0
        10/1/2002 (Standard disk drives)
        disk.inf  Not Available
        SCSI\DISK&VEN_COMPAQ&PROD_MSA1000_VOLUME&RE
V_4.32\5&1322F224&7&001
StorageWorks MSA1000          Yes       SYSTEM
        5.28.0.32 2/25/2005 Hewlett-Packard Company
        oem8.inf  Not Available
        SCSI\ARRAY&VEN_COMPAQ&PROD_MSA1000&REV_4.32
\5&1322F224&7&000
QLogic Fibre Channel Adapter  Yes       SCSIADAPTER
        9.0.2.11  3/8/2005  QLogic    oem6.inf  Not
Available
        PCI\VEN_1077&DEV_2312&SUBSYS_01050E11&REV_0
2\4&9630B56&0&0950
QLOGIC PSEUDO LUN   Yes       SYSTEM    9.0.2.11
        3/8/2005  QLogic Corp         oem7.inf  Not
Available
        SCSI\PROCESSOR&VEN_QLOGIC&PROD_PSEUDO_LUN&R
EV_\5&36249481&7&07F0
Disk drive          Yes       DISKDRIVE 5.2.3790.0
        10/1/2002 (Standard disk drives)
        disk.inf  Not Available
        SCSI\DISK&VEN_COMPAQ&PROD_MSA1000_VOLUME&RE
V_4.32\5&36249481&7&031
StorageWorks MSA1000          Yes       SYSTEM
        5.28.0.32 2/25/2005 Hewlett-Packard Company
        oem8.inf  Not Available
        SCSI\ARRAY&VEN_COMPAQ&PROD_MSA1000&REV_4.32
\5&36249481&7&030
Disk drive          Yes       DISKDRIVE 5.2.3790.0
        10/1/2002 (Standard disk drives)
        disk.inf  Not Available
        SCSI\DISK&VEN_COMPAQ&PROD_MSA1000_VOLUME&RE
V_4.32\5&36249481&7&022
Disk drive          Yes       DISKDRIVE 5.2.3790.0
        10/1/2002 (Standard disk drives)
        disk.inf  Not Available
        SCSI\DISK&VEN_COMPAQ&PROD_MSA1000_VOLUME&RE
V_4.32\5&36249481&7&021
StorageWorks MSA1000          Yes       SYSTEM
        5.28.0.32 2/25/2005 Hewlett-Packard Company
        oem8.inf  Not Available
        SCSI\ARRAY&VEN_COMPAQ&PROD_MSA1000&REV_4.32
\5&36249481&7&020
Disk drive          Yes       DISKDRIVE 5.2.3790.0
        10/1/2002 (Standard disk drives)
        disk.inf  Not Available
        SCSI\DISK&VEN_COMPAQ&PROD_MSA1000_VOLUME&RE
V_4.32\5&36249481&7&012
Disk drive          Yes       DISKDRIVE 5.2.3790.0
        10/1/2002 (Standard disk drives)
        disk.inf  Not Available
        SCSI\DISK&VEN_COMPAQ&PROD_MSA1000_VOLUME&RE
V_4.32\5&36249481&7&011
StorageWorks MSA1000          Yes       SYSTEM
        5.28.0.32 2/25/2005 Hewlett-Packard Company
        oem8.inf  Not Available
        SCSI\ARRAY&VEN_COMPAQ&PROD_MSA1000&REV_4.32
\5&36249481&7&010
Disk drive          Yes       DISKDRIVE 5.2.3790.0
        10/1/2002 (Standard disk drives)
        disk.inf  Not Available
```


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```
        SCSI\DISK&VEN_COMPAQ&PROD_MSA1000_VOLUME&RE
V_4.32\5&36249481&7&002
Disk drive          Yes       DISKDRIVE 5.2.3790.0
        10/1/2002 (Standard disk drives)
        disk.inf  Not Available
        SCSI\DISK&VEN_COMPAQ&PROD_MSA1000_VOLUME&RE
V_4.32\5&36249481&7&001
StorageWorks MSA1000          Yes       SYSTEM
        5.28.0.32 2/25/2005 Hewlett-Packard Company
        oem8.inf  Not Available
        SCSI\ARRAY&VEN_COMPAQ&PROD_MSA1000&REV_4.32
\5&36249481&7&000
QLogic Fibre Channel Adapter  Yes       SCSIADAPTER
        9.0.2.11  3/8/2005  QLogic    oem6.inf  Not
Available
        PCI\VEN_1077&DEV_2312&SUBSYS_01050E11&REV_0
2\4&9630B56&0&0850
PCI standard PCI-to-PCI bridge          Yes
        SYSTEM    5.2.3790.0          10/1/2002
        (Standard system devices)     machine.inf
        Not Available
        PCI\VEN_1022&DEV_7450&SUBSYS_00000000&REV_1
2\3&33B859B7&0&50
AMD-8131 HyperTransport(tm) IOAPIC Controller     Yes
        SYSTEM    1.80.0.0  5/8/2002  AMD
        oem4.inf  Not Available
        PCI\VEN_1022&DEV_7451&SUBSYS_00000000&REV_0
1\3&33B859B7&0&49
HP NC7781 Gigabit Server Adapter        Yes       NET
        7.80.0.0  6/19/2004 Hewlett-Packard Company
        oem1.inf  Not Available
        PCI\VEN_14E4&DEV_16C7&SUBSYS_00CB0E11&REV_1
0\4&25F4D2AC&0&1048
HP NC7781 Gigabit Server Adapter        Yes       NET
        7.80.0.0  6/19/2004 Hewlett-Packard Company
        oem1.inf  Not Available
        PCI\VEN_14E4&DEV_16C7&SUBSYS_00CB0E11&REV_1
0\4&25F4D2AC&0&0848
PCI standard PCI-to-PCI bridge          Yes
        SYSTEM    5.2.3790.0          10/1/2002
        (Standard system devices)     machine.inf
        Not Available
        PCI\VEN_1022&DEV_7450&SUBSYS_00000000&REV_1
2\3&33B859B7&0&48
PCI bus   Yes       SYSTEM    5.2.3790.0
        10/1/2002 (Standard system devices)
        machine.inf         Not Available
        ACPI\PNP0A03\8
AMD Miscellaneous Configuration         Yes
        SYSTEM    5.2.3790.1830       10/1/2002 AMD
        machine.inf         Not Available
        PCI\VEN_1022&DEV_1103&SUBSYS_00000000&REV_0
0\3&20FEA912&0&CB
AMD DRAM and HyperTransport(tm) Trace Mode
Configuration       Yes       SYSTEM    5.2.3790.1830
        10/1/2002 AMD       machine.inf         Not
Available
        PCI\VEN_1022&DEV_1102&SUBSYS_00000000&REV_0
0\3&20FEA912&0&CA
AMD Address Map Configuration Yes       SYSTEM
        5.2.3790.1830       10/1/2002 AMD
        machine.inf         Not Available
        PCI\VEN_1022&DEV_1101&SUBSYS_00000000&REV_0
0\3&20FEA912&0&C9
AMD HyperTransport(tm) Configuration    Yes
        SYSTEM    5.2.3790.1830       10/1/2002 AMD
        machine.inf         Not Available
        PCI\VEN_1022&DEV_1100&SUBSYS_00000000&REV_0
0\3&20FEA912&0&C8
AMD Miscellaneous Configuration         Yes
        SYSTEM    5.2.3790.1830       10/1/2002 AMD
        machine.inf         Not Available
        PCI\VEN_1022&DEV_1103&SUBSYS_00000000&REV_0
0\3&20FEA912&0&C3
AMD DRAM and HyperTransport(tm) Trace Mode
Configuration       Yes       SYSTEM    5.2.3790.1830
        10/1/2002 AMD       machine.inf         Not
Available
        PCI\VEN_1022&DEV_1102&SUBSYS_00000000&REV_0
0\3&20FEA912&0&C2
AMD Address Map Configuration Yes       SYSTEM
        5.2.3790.1830       10/1/2002 AMD
        machine.inf         Not Available
        PCI\VEN_1022&DEV_1101&SUBSYS_00000000&REV_0
0\3&20FEA912&0&C1
AMD HyperTransport(tm) Configuration    Yes
        SYSTEM    5.2.3790.1830       10/1/2002 AMD
        machine.inf         Not Available
        PCI\VEN_1022&DEV_1100&SUBSYS_00000000&REV_0
0\3&20FEA912&0&C0
AMD-8131 HyperTransport(tm) IOAPIC Controller     Yes
        SYSTEM    1.80.0.0  5/8/2002  AMD
        oem4.inf  Not Available
        PCI\VEN_1022&DEV_7451&SUBSYS_00000000&REV_0
1\3&20FEA912&0&41
Disk drive          Yes       DISKDRIVE 5.2.3790.0
        10/1/2002 (Standard disk drives)
        disk.inf  Not Available
        SCSI\DISK&VEN_HP&PROD_LOGICAL_VOLUME&REV_2.
36\5&27181525&0&040
Compaq Virtual LUN  Yes       SYSTEM    5.2.3790.0
        10/1/2002 Compaq    scsidev.inf         Not
Available
        SCSI\OTHER&VEN_COMPAQ&PROD_SCSI_COMMUNICATE
&REV_CISS\5&27181525&0&000
Smart Array 6i      Yes       SCSIADAPTER
        5.50.0.32 1/21/2004 Hewlett-Packard Company
        oem0.inf  Not Available
        PCI\VEN_0E11&DEV_0046&SUBSYS_40910E11&REV_0
1\4&24B9E852&0&1040
PCI standard PCI-to-PCI bridge          Yes
        SYSTEM    5.2.3790.0          10/1/2002
        (Standard system devices)     machine.inf
        Not Available
        PCI\VEN_1022&DEV_7450&SUBSYS_00000000&REV_1
2\3&20FEA912&0&40
AMD-8131 HyperTransport(tm) IOAPIC Controller     Yes
        SYSTEM    1.80.0.0  5/8/2002  AMD
        oem4.inf  Not Available
        PCI\VEN_1022&DEV_7451&SUBSYS_00000000&REV_0
1\3&20FEA912&0&39
HP NC7782 Gigabit Server Adapter        Yes       NET
        7.80.0.0  6/19/2004 Hewlett-Packard Company
        oem1.inf  Not Available
        PCI\VEN_14E4&DEV_1648&SUBSYS_00D00E11&REV_1
0\4&82820FC&0&1138
HP NC7782 Gigabit Server Adapter        Yes       NET
        7.80.0.0  6/19/2004 Hewlett-Packard Company
        oem1.inf  Not Available
        PCI\VEN_14E4&DEV_1648&SUBSYS_00D00E11&REV_1
0\4&82820FC&0&1038
PCI standard PCI-to-PCI bridge          Yes
        SYSTEM    5.2.3790.0          10/1/2002
        (Standard system devices)     machine.inf
        Not Available
        PCI\VEN_1022&DEV_7450&SUBSYS_00000000&REV_1
2\3&20FEA912&0&38
AMD-8111 System Management Controller   Yes
        SYSTEM    5.2.3790.0          10/1/2002 AMD
        machine.inf         Not Available
        PCI\VEN_1022&DEV_746B&SUBSYS_32050E11&REV_0
5\3&20FEA912&0&23
Secondary IDE Channel         Yes       HDC
        5.2.3790.0          10/1/2002 (Standard IDE
ATA/ATAPI controllers)        mshdc.inf Not Available
        PCIIDE\IDECHANNEL\4&21637DBD&0&1
Primary IDE Channel Yes       HDC       5.2.3790.0
        10/1/2002 (Standard IDE ATA/ATAPI
controllers)        mshdc.inf Not Available
        PCIIDE\IDECHANNEL\4&21637DBD&0&0
Standard Dual Channel PCI IDE Controller          Yes
        HDC       5.2.3790.0          10/1/2002
        (Standard IDE ATA/ATAPI controllers)
        mshdc.inf Not Available
        PCI\VEN_1022&DEV_7469&SUBSYS_32040E11&REV_0
3\3&20FEA912&0&21
Standard floppy disk controller         Yes       FDC
        5.2.3790.0          10/1/2002 (Standard
floppy disk controllers)      fdc.inf   Not Available
        ACPI\PNP0700\5&1C430410&0
Communications Port Yes       PORTS     5.2.3790.0
        10/1/2002 (Standard port types)
        msports.inf         Not Available
        ACPI\PNP0501\1
Extended IO Bus     Yes       SYSTEM    5.2.3790.0
        10/1/2002 (Standard system devices)
        machine.inf         Not Available
        ACPI\PNP0A06\4&1C7DEDE8&0
PS/2 Compatible Mouse         Yes       MOUSE
        5.2.3790.0          10/1/2002 Microsoft
        msmouse.inf         Not Available
        ACPI\PNP0F13\4&1C7DEDE8&0
Standard 101/102-Key or Microsoft Natural PS/2
Keyboard  Yes       KEYBOARD  5.2.3790.0
        10/1/2002 (Standard keyboards)
        keyboard.inf        Not Available
        ACPI\PNP0303\4&1C7DEDE8&0
System speaker      Yes       SYSTEM    5.2.3790.0
        10/1/2002 (Standard system devices)
        machine.inf         Not Available
        ACPI\PNP0800\4&1C7DEDE8&0
Direct memory access controller         Yes
        SYSTEM    5.2.3790.0          10/1/2002
        (Standard system devices)     machine.inf
        Not Available
        ACPI\PNP0200\4&1C7DEDE8&0
```


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```
System timer        Yes       SYSTEM    5.2.3790.0
          10/1/2002 (Standard system devices)
          machine.inf         Not Available
          ACPI\PNP0100\4&1C7DEDE8&0
Programmable interrupt controller       Yes
          SYSTEM    5.2.3790.0          10/1/2002
          (Standard system devices)     machine.inf
          Not Available
          ACPI\PNP0000\4&1C7DEDE8&0
Motherboard resources         Yes       SYSTEM
          5.2.3790.0          10/1/2002 (Standard
system devices)     machine.inf         Not Available
          ACPI\PNP0C02\0
ISAPNP Read Data Port         Yes       SYSTEM
          5.2.3790.0          10/1/2002 (Standard
system devices)     machine.inf         Not Available
          ISAPNP\READDATAPORT\0
PCI standard ISA bridge       Yes       SYSTEM
          5.2.3790.0          10/1/2002 (Standard
system devices)     machine.inf         Not Available
          PCI\VEN_1022&DEV_7468&SUBSYS_00000000&REV_0
5\3&20FEA912&0&20
Base System Device  Not Available       Not Available
          Not Available       Not Available       Not
Available Not Available       Not Available
          PCI\VEN_0E11&DEV_B204&SUBSYS_B2060E11&REV_0
1\4&12365AD0&0&2218
Base System Device  Not Available       Not Available
          Not Available       Not Available       Not
Available Not Available       Not Available
          PCI\VEN_0E11&DEV_B203&SUBSYS_B2060E11&REV_0
1\4&12365AD0&0&2018
Default Monitor     Yes       MONITOR   5.1.2001.0
          6/6/2001  (Standard monitor types)
          monitor.inf         Not Available
          DISPLAY\DEFAULT_MONITOR\5&38B1FFCB&0&800000
00&01&03
RAGE XL PCI Family (Microsoft Corporation)        Yes
          DISPLAY   5.10.2600.6014      8/8/2001  ATI
Technologies Inc.   atiixpad.inf        Not Available
          PCI\VEN_1002&DEV_4752&SUBSYS_001E0E11&REV_2
7\4&12365AD0&0&1818
USB Root Hub        Yes       USB       5.2.3790.0
          10/1/2002 (Standard USB Host Controller)
          usbport.inf         Not Available
          USB\ROOT_HUB\5&194CD4CC&0
Standard OpenHCD USB Host Controller    Yes       USB
          5.2.3790.0          10/1/2002 (Standard USB
Host Controller)    usbport.inf         Not Available
          PCI\VEN_1022&DEV_7464&SUBSYS_32020E11&REV_0
B\4&12365AD0&0&0118
USB Root Hub        Yes       USB       5.2.3790.0
          10/1/2002 (Standard USB Host Controller)
          usbport.inf         Not Available
          USB\ROOT_HUB\5&9B4CD91&0
Standard OpenHCD USB Host Controller    Yes       USB
          5.2.3790.0          10/1/2002 (Standard USB
Host Controller)    usbport.inf         Not Available
          PCI\VEN_1022&DEV_7464&SUBSYS_32020E11&REV_0
B\4&12365AD0&0&0018
PCI standard PCI-to-PCI bridge          Yes
          SYSTEM    5.2.3790.0          10/1/2002
          (Standard system devices)     machine.inf
          Not Available
          PCI\VEN_1022&DEV_7460&SUBSYS_00000000&REV_0
7\3&20FEA912&0&18
PCI bus   Yes       SYSTEM    5.2.3790.0
          10/1/2002 (Standard system devices)
          machine.inf         Not Available
          ACPI\PNP0A03\7
Processor Yes       PROCESSOR 5.2.3790.1830
          10/1/2002 (Standard processor types)
          cpu.inf   Not Available
          ACPI\AUTHENTICAMD_-
_X86_FAMILY_15_MODEL_33\_3
Processor Yes       PROCESSOR 5.2.3790.1830
          10/1/2002 (Standard processor types)
          cpu.inf   Not Available
          ACPI\AUTHENTICAMD_-
_X86_FAMILY_15_MODEL_33\_2
Processor Yes       PROCESSOR 5.2.3790.1830
          10/1/2002 (Standard processor types)
          cpu.inf   Not Available
          ACPI\AUTHENTICAMD_-
_X86_FAMILY_15_MODEL_33\_1
Processor Yes       PROCESSOR 5.2.3790.1830
          10/1/2002 (Standard processor types)
          cpu.inf   Not Available
          ACPI\AUTHENTICAMD_-
_X86_FAMILY_15_MODEL_33\_0
Microsoft ACPI-Compliant System         Yes
          SYSTEM    5.2.3790.0          10/1/2002
          Microsoft acpi.inf  Not Available
          ACPI_HAL\PNP0C08\0
ACPI Multiprocessor PC        Yes       COMPUTER
          5.2.3790.0          10/1/2002 (Standard
computers)          hal.inf   Not Available
          ROOT\ACPI_HAL\0000
Not Available       Not Available       Not Available
          Not Available       Not Available       Not
Available Not Available       Not Available
          HTREE\ROOT\0

[Environment Variables]

Variable  Value     User Name
ClusterLog          C:\WINDOWS\Cluster\cluster.log
          <SYSTEM>
ComSpec   %SystemRoot%\system32\cmd.exe <SYSTEM>
FP_NO_HOST_CHECK    NO        <SYSTEM>
NUMBER_OF_PROCESSORS          4         <SYSTEM>
OS        Windows_NT          <SYSTEM>
Path      C:\Program Files\Microsoft Visual Studio
8\Common7\IDE\PrivateAssemblies\;C:\Program
Files\Microsoft SQL
Server\90\Tools\Binn\VSShell\Common7\IDE\;C:\Program
Files\Microsoft SQL
Server\90\DTS\Binn\;%SystemRoot%\system32;%SystemRoot
%;%SystemRoot%\System32\Wbem;C:\Program
Files\Microsoft SQL
Server\MSSQL.1\MSSQL\Binn;C:\Program Files\Microsoft
SQL Server\90\Tools\binn\     <SYSTEM>
PATHEXT
          .COM;.EXE;.BAT;.CMD;.VBS;.VBE;.JS;.JSE;.WSF
;.WSH     <SYSTEM>
PROCESSOR_ARCHITECTURE        x86       <SYSTEM>
PROCESSOR_IDENTIFIER          x86 Family 15 Model 33
Stepping 2, AuthenticAMD      <SYSTEM>
PROCESSOR_LEVEL     15        <SYSTEM>
PROCESSOR_REVISION  2102      <SYSTEM>
TEMP      %SystemRoot%\TEMP   <SYSTEM>
TMP       %SystemRoot%\TEMP   <SYSTEM>
windir    %SystemRoot%        <SYSTEM>
lib       C:\Program Files\SQLXML 4.0\bin\
          <SYSTEM>
TEMP      %USERPROFILE%\Local Settings\Temp       NT
AUTHORITY\SYSTEM
TMP       %USERPROFILE%\Local Settings\Temp       NT
AUTHORITY\SYSTEM
TEMP      %USERPROFILE%\Local Settings\Temp       NT
AUTHORITY\LOCAL SERVICE
TMP       %USERPROFILE%\Local Settings\Temp       NT
AUTHORITY\LOCAL SERVICE
TEMP      %USERPROFILE%\Local Settings\Temp       NT
AUTHORITY\NETWORK SERVICE
TMP       %USERPROFILE%\Local Settings\Temp       NT
AUTHORITY\NETWORK SERVICE
TEMP      %USERPROFILE%\Local Settings\Temp
          BL25P\Administrator
TMP       %USERPROFILE%\Local Settings\Temp
          BL25P\Administrator

[Print Jobs]

Document  Size      Owner     Notify    Status
          Time Submitted      Start Time
          Until Time          Elapsed Time
          Pages Printed       Job ID    Priority
          Parameters          Driver    Print
Processor Host Print Queue    Data Type Name

[Network Connections]

Local Name          Remote Name         Type
          Status    User Name

[Running Tasks]

Name      Path      Process ID          Priority  Min
Working Set         Max Working Set     Start Time
          Version   Size      File Date
system idle process Not Available       0         0
          Not Available       Not Available       Not
Available Not Available       Not Available       Not
Available
system    Not Available       4         8         0
          1413120   Not Available       Not Available
          Not Available       Not Available
smss.exe  Not Available       1344      11
          204800    1413120   9/20/2005 1:51 PM   Not
Available Not Available       Not Available
csrss.exe c:\windows\system32\csrss.exe 1456      13
          204800    1413120   9/20/2005 1:51 PM
          5.2.3790.0 (srv03_rtm.030324-2048)
          4.00 KB (4,096 bytes)         3/25/2003
6:00 AM
winlogon.exe        c:\windows\system32\winlogon.exe
          1512      13        204800    1413120
          9/20/2005 1:51 PM   5.2.3790.1830
```


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```
(srv03_sp1_rtm.050324-1447)   497.00 KB (508,928
bytes)    5/17/2005 10:26 AM
services.exe        c:\windows\system32\services.exe
          1588      9         204800    1413120
          9/20/2005 1:51 PM   5.2.3790.1830
(srv03_sp1_rtm.050324-1447)   107.50 KB (110,080
bytes)    3/25/2003 6:00 AM
lsass.exe c:\windows\system32\lsass.exe 1600      9
          204800    1413120   9/20/2005 1:51 PM
          5.2.3790.0 (srv03_rtm.030324-2048)
          13.00 KB (13,312 bytes)       3/25/2003
6:00 AM
svchost.exe         c:\windows\system32\svchost.exe
          1804      8         204800    1413120
          9/20/2005 1:51 PM   5.2.3790.1830
(srv03_sp1_rtm.050324-1447)   14.00 KB (14,336 bytes)
          5/17/2005 10:26 AM
svchost.exe         c:\windows\system32\svchost.exe
          1920      8         204800    1413120
          9/20/2005 1:52 PM   5.2.3790.1830
(srv03_sp1_rtm.050324-1447)   14.00 KB (14,336 bytes)
          5/17/2005 10:26 AM
svchost.exe         c:\windows\system32\svchost.exe
          1976      8         204800    1413120
          9/20/2005 1:52 PM   5.2.3790.1830
(srv03_sp1_rtm.050324-1447)   14.00 KB (14,336 bytes)
          5/17/2005 10:26 AM
svchost.exe         c:\windows\system32\svchost.exe
          2012      8         204800    1413120
          9/20/2005 1:52 PM   5.2.3790.1830
(srv03_sp1_rtm.050324-1447)   14.00 KB (14,336 bytes)
          5/17/2005 10:26 AM
svchost.exe         c:\windows\system32\svchost.exe
          248       8         204800    1413120
          9/20/2005 1:52 PM   5.2.3790.1830
(srv03_sp1_rtm.050324-1447)   14.00 KB (14,336 bytes)
          5/17/2005 10:26 AM
msdtc.exe c:\windows\system32\msdtc.exe 1400      8
          204800    1413120   9/20/2005 1:52 PM
          2001.12.4720.1830 (srv03_sp1_rtm.050324-
1447)     6.00 KB (6,144 bytes)         5/17/2005
10:26 AM
svchost.exe         c:\windows\system32\svchost.exe
          1672      8         204800    1413120
          9/20/2005 1:52 PM   5.2.3790.1830
(srv03_sp1_rtm.050324-1447)   14.00 KB (14,336 bytes)
          5/17/2005 10:26 AM
msdtssrvr.exe       c:\program files\microsoft sql
server\90\dts\binn\msdtssrvr.exe        1908      8
          204800    1413120   9/20/2005 1:52 PM   Not
Available 186.71 KB (191,192 bytes)     5/24/2005
9:14 PM
msmdsrv.exe         c:\program files\microsoft sql
server\mssql.2\olap\bin\msmdsrv.exe     1756      8
          204800    1413120   9/20/2005 1:52 PM
          2000.090.1187.00    11.20 MB (11,745,496
bytes)    5/24/2005 9:15 PM
portmap.exe         c:\program files\qlogic
corporation\sansurfer\portmap.exe       692       8
          204800    1413120   9/20/2005 1:52 PM
          1.14.4    72.00 KB (73,728 bytes)
          5/5/2005 11:38 AM
sqlbrowser.exe      c:\program files\microsoft sql
server\90\shared\sqlbrowser.exe         916       8
          204800    1413120   9/20/2005 1:52 PM
          2000.090.1187.00    160.71 KB (164,568
bytes)    5/24/2005 9:16 PM
msftesql.exe        c:\program files\microsoft sql
server\mssql.1\mssql\binn\msftesql.exe  952       8
          204800    1413120   9/20/2005 1:52 PM
          12.0.5211.0         86.70 KB (88,784 bytes)
          4/11/2005 2:51 AM
qlremote.exe        c:\program files\qlogic
corporation\sansurfer\qlremote.exe      1064      8
          204800    1413120   9/20/2005 1:52 PM   Not
Available 336.00 KB (344,064 bytes)     5/5/2005
11:38 AM
svchost.exe         c:\windows\system32\svchost.exe
          816       8         204800    1413120
          9/20/2005 1:52 PM   5.2.3790.1830
(srv03_sp1_rtm.050324-1447)   14.00 KB (14,336 bytes)
          5/17/2005 10:26 AM
csrss.exe c:\windows\system32\csrss.exe 1156      13
          204800    1413120   9/20/2005 1:53 PM
          5.2.3790.0 (srv03_rtm.030324-2048)
          4.00 KB (4,096 bytes)         3/25/2003
6:00 AM
winlogon.exe        c:\windows\system32\winlogon.exe
          1252      13        204800    1413120
          9/20/2005 1:53 PM   5.2.3790.1830
(srv03_sp1_rtm.050324-1447)   497.00 KB (508,928
bytes)    5/17/2005 10:26 AM
rdpclip.exe         c:\windows\system32\rdpclip.exe
          592       8         204800    1413120
          9/20/2005 1:53 PM   5.2.3790.1830
(srv03_sp1_rtm.050324-1447)   68.00 KB (69,632 bytes)
          5/17/2005 10:26 AM
explorer.exe        c:\windows\explorer.exe       688
          8         204800    1413120   9/20/2005
1:53 PM   6.00.3790.1830 (srv03_sp1_rtm.050324-1447)
          1.00 MB (1,050,624 bytes)     5/17/2005
10:27 AM
taskmgr.exe         c:\windows\system32\taskmgr.exe
          424       13        204800    1413120
          9/20/2005 1:53 PM   5.2.3790.1830
(srv03_sp1_rtm.050324-1447)   164.50 KB (168,448
bytes)    5/17/2005 10:26 AM
wmiprvse.exe
          c:\windows\system32\wbem\wmiprvse.exe
          2388      8         204800    1413120
          9/20/2005 1:53 PM   5.2.3790.1830
(srv03_sp1_rtm.050324-1447)   203.00 KB (207,872
bytes)    5/17/2005 10:27 AM
logon.scr c:\windows\system32\logon.scr 416       4
          204800    1413120   9/20/2005 2:02 PM
          5.2.3790.1830 (srv03_sp1_rtm.050324-1447)
          497.50 KB (509,440 bytes)     5/17/2005
10:26 AM
cmd.exe   c:\windows\system32\cmd.exe   4016      8
          204800    1413120   9/20/2005 4:41 PM
          5.2.3790.1830 (srv03_sp1_rtm.050324-1447)
          379.00 KB (388,096 bytes)     3/25/2003
6:00 AM
sqlservr.exe        c:\program files\microsoft sql
server\mssql.1\mssql\binn\sqlservr.exe  3076      13
          204800    1413120   9/20/2005 4:41 PM
          2000.090.1258.65 built by najoshi from
NAJOSHI-BLD_S_yukon_stb_eng3  27.00 MB (28,307,456
bytes)    5/24/2005 9:17 PM
cmd.exe   c:\windows\system32\cmd.exe   3428      8
          204800    1413120   9/20/2005 4:41 PM
          5.2.3790.1830 (srv03_sp1_rtm.050324-1447)
          379.00 KB (388,096 bytes)     3/25/2003
6:00 AM
osql.exe  c:\program files\microsoft sql
server\90\tools\binn\osql.exe 3608      8
          204800    1413120   9/20/2005 4:42 PM
          2000.090.1187.00    47.71 KB (48,856 bytes)
          5/24/2005 9:15 PM
wmiprvse.exe
          c:\windows\system32\wbem\wmiprvse.exe
          2256      8         204800    1413120
          9/20/2005 4:42 PM   5.2.3790.1830
(srv03_sp1_rtm.050324-1447)   203.00 KB (207,872
bytes)    5/17/2005 10:27 AM

[Loaded Modules]

Name      Version   Size      File Date Manufacturer
          Path
csrss     5.2.3790.0 (srv03_rtm.030324-2048)
          4.00 KB (4,096 bytes)         3/25/2003
6:00 AM   Microsoft Corporation
          c:\windows\system32\csrss.exe
ntdll     5.2.3790.1830 (srv03_sp1_rtm.050324-1447)
          748.50 KB (766,464 bytes)     3/25/2003
6:00 AM   Microsoft Corporation
          c:\windows\system32\ntdll.dll
csrsrv    5.2.3790.1830 (srv03_sp1_rtm.050324-1447)
          33.00 KB (33,792 bytes)       5/17/2005
10:26 AM  Microsoft Corporation
          c:\windows\system32\csrsrv.dll
basesrv   5.2.3790.1830 (srv03_sp1_rtm.050324-1447)
          51.50 KB (52,736 bytes)       5/17/2005
10:26 AM  Microsoft Corporation
          c:\windows\system32\basesrv.dll
winsrv    5.2.3790.1830 (srv03_sp1_rtm.050324-1447)
          290.50 KB (297,472 bytes)     5/17/2005
10:26 AM  Microsoft Corporation
          c:\windows\system32\winsrv.dll
gdi32     5.2.3790.1830 (srv03_sp1_rtm.050324-1447)
          273.00 KB (279,552 bytes)     5/17/2005
10:26 AM  Microsoft Corporation
          c:\windows\system32\gdi32.dll
advapi32  5.2.3790.1830 (srv03_sp1_rtm.050324-1447)
          605.50 KB (620,032 bytes)     3/25/2003
6:00 AM   Microsoft Corporation
          c:\windows\system32\advapi32.dll
kernel32  5.2.3790.1830 (srv03_sp1_rtm.050324-1447)
          1,014.00 KB (1,038,336 bytes) 5/17/2005
10:26 AM  Microsoft Corporation
          c:\windows\system32\kernel32.dll
rpcrt4    5.2.3790.1830 (srv03_sp1_rtm.050324-1447)
          627.00 KB (642,048 bytes)     5/17/2005
10:26 AM  Microsoft Corporation
          c:\windows\system32\rpcrt4.dll
user32    5.2.3790.1830 (srv03_sp1_rtm.050324-1447)
          574.50 KB (588,288 bytes)     5/17/2005
```


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10:26 AM  Microsoft Corporation
          c:\windows\system32\user32.dll
sxs       5.2.3790.1830 (srv03_sp1_rtm.050324-1447)
          743.50 KB (761,344 bytes)     5/17/2005
10:26 AM  Microsoft Corporation
          c:\windows\system32\sxs.dll
winlogon  5.2.3790.1830 (srv03_sp1_rtm.050324-1447)
          497.00 KB (508,928 bytes)     5/17/2005
10:26 AM  Microsoft Corporation
          c:\windows\system32\winlogon.exe
crypt32   5.131.3790.1830 (srv03_sp1_rtm.050324-1447)
          582.00 KB (595,968 bytes)     5/17/2005
10:26 AM  Microsoft Corporation
          c:\windows\system32\crypt32.dll
msasn1    5.2.3790.1830 (srv03_sp1_rtm.050324-1447)
          56.50 KB (57,856 bytes)       5/17/2005
10:26 AM  Microsoft Corporation
          c:\windows\system32\msasn1.dll
msvcrt    7.0.3790.1830 (srv03_sp1_rtm.050324-1447)
          340.50 KB (348,672 bytes)     5/17/2005
10:26 AM  Microsoft Corporation
          c:\windows\system32\msvcrt.dll
nddeapi   5.2.3790.0 (srv03_rtm.030324-2048)
          16.00 KB (16,384 bytes)       3/25/2003
6:00 AM   Microsoft Corporation
          c:\windows\system32\nddeapi.dll
profmap   5.2.3790.1830 (srv03_sp1_rtm.050324-1447)
          22.50 KB (23,040 bytes)       5/17/2005
10:26 AM  Microsoft Corporation
          c:\windows\system32\profmap.dll
netapi32  5.2.3790.1830 (srv03_sp1_rtm.050324-1447)
          341.50 KB (349,696 bytes)     5/17/2005
10:26 AM  Microsoft Corporation
          c:\windows\system32\netapi32.dll
userenv   5.2.3790.1830 (srv03_sp1_rtm.050324-1447)
          771.00 KB (789,504 bytes)     3/25/2003
6:00 AM   Microsoft Corporation
          c:\windows\system32\userenv.dll
psapi     5.2.3790.1830 (srv03_sp1_rtm.050324-1447)
          20.00 KB (20,480 bytes)       5/17/2005
10:26 AM  Microsoft Corporation
          c:\windows\system32\psapi.dll
regapi    5.2.3790.1830 (srv03_sp1_rtm.050324-1447)
          55.00 KB (56,320 bytes)       5/17/2005
10:26 AM  Microsoft Corporation
          c:\windows\system32\regapi.dll
secur32   5.2.3790.1830 (srv03_sp1_rtm.050324-1447)
          64.00 KB (65,536 bytes)       5/17/2005
10:26 AM  Microsoft Corporation
          c:\windows\system32\secur32.dll
setupapi  5.2.3790.1830 (srv03_sp1_rtm.050324-1447)
          1.03 MB (1,079,808 bytes)     3/25/2003
6:00 AM   Microsoft Corporation
          c:\windows\system32\setupapi.dll
version   5.2.3790.1830 (srv03_sp1_rtm.050324-1447)
          18.00 KB (18,432 bytes)       5/17/2005
10:26 AM  Microsoft Corporation
          c:\windows\system32\version.dll
winsta    5.2.3790.1830 (srv03_sp1_rtm.050324-1447)
          54.50 KB (55,808 bytes)       5/17/2005
10:26 AM  Microsoft Corporation
          c:\windows\system32\winsta.dll
ws2_32    5.2.3790.1830 (srv03_sp1_rtm.050324-1447)
          82.00 KB (83,968 bytes)       5/17/2005
10:26 AM  Microsoft Corporation
          c:\windows\system32\ws2_32.dll
ws2help   5.2.3790.1830 (srv03_sp1_rtm.050324-1447)
          19.50 KB (19,968 bytes)       5/17/2005
10:26 AM  Microsoft Corporation
          c:\windows\system32\ws2help.dll
msgina    5.2.3790.1830 (srv03_sp1_rtm.050324-1447)
          1.16 MB (1,211,904 bytes)     5/17/2005
10:26 AM  Microsoft Corporation
          c:\windows\system32\msgina.dll
shsvcs    6.00.3790.1830 (srv03_sp1_rtm.050324-1447)
          131.50 KB (134,656 bytes)     5/17/2005
10:26 AM  Microsoft Corporation
          c:\windows\system32\shsvcs.dll
shlwapi   6.00.3790.1830 (srv03_sp1_rtm.050324-1447)
          313.50 KB (321,024 bytes)     5/17/2005
10:26 AM  Microsoft Corporation
          c:\windows\system32\shlwapi.dll
sfc       5.2.3790.0 (srv03_rtm.030324-2048)
          4.50 KB (4,608 bytes)         3/25/2003
6:00 AM   Microsoft Corporation
          c:\windows\system32\sfc.dll
sfc_os    5.2.3790.1830 (srv03_sp1_rtm.050324-1447)
          138.00 KB (141,312 bytes)     5/17/2005
10:26 AM  Microsoft Corporation
          c:\windows\system32\sfc_os.dll
wintrust  5.131.3790.1830 (srv03_sp1_rtm.050324-1447)
          162.00 KB (165,888 bytes)     5/17/2005
10:26 AM  Microsoft Corporation
          c:\windows\system32\wintrust.dll
imagehlp  5.2.3790.1830 (srv03_sp1_rtm.050324-1447)
          145.50 KB (148,992 bytes)     3/25/2003
6:00 AM   Microsoft Corporation
          c:\windows\system32\imagehlp.dll
ole32     5.2.3790.1830 (srv03_sp1_rtm.050324-1447)
          1.19 MB (1,245,184 bytes)     5/17/2005
10:26 AM  Microsoft Corporation
          c:\windows\system32\ole32.dll
comctl32  6.0 (srv03_sp1_rtm.050324-1447)
          1.00 MB (1,051,136 bytes)     3/24/2005
8:41 PM   Microsoft Corporation
          c:\windows\winsxs\x86_microsoft.windows.com
mon-controls_6595b64144ccf1df_6.0.3790.1830_x-
ww_7ae38ccf\comctl32.dll
winscard  5.2.3790.0 (srv03_rtm.030324-2048)
          98.50 KB (100,864 bytes)      3/25/2003
6:00 AM   Microsoft Corporation
          c:\windows\system32\winscard.dll
wtsapi32  5.2.3790.1830 (srv03_sp1_rtm.050324-1447)
          19.00 KB (19,456 bytes)       5/17/2005
10:26 AM  Microsoft Corporation
          c:\windows\system32\wtsapi32.dll
winmm     5.2.3790.1830 (srv03_sp1_rtm.050324-1447)
          172.50 KB (176,640 bytes)     5/17/2005
10:26 AM  Microsoft Corporation
          c:\windows\system32\winmm.dll
shell32   6.00.3790.1830 (srv03_sp1_rtm.050324-1447)
          7.99 MB (8,379,392 bytes)     5/17/2005
10:26 AM  Microsoft Corporation
          c:\windows\system32\shell32.dll
rsaenh    5.2.3790.1830 (srv03_sp1_rtm.050324-1447)
          183.98 KB (188,392 bytes)     5/17/2005
10:26 AM  Microsoft Corporation
          c:\windows\system32\rsaenh.dll
wldap32   5.2.3790.1830 (srv03_sp1_rtm.050324-1447)
          174.50 KB (178,688 bytes)     5/17/2005
10:26 AM  Microsoft Corporation
          c:\windows\system32\wldap32.dll
cscdll    5.2.3790.1830 (srv03_sp1_rtm.050324-1447)
          100.00 KB (102,400 bytes)     5/17/2005
10:26 AM  Microsoft Corporation
          c:\windows\system32\cscdll.dll
dimsntfy  5.2.3790.1830 (srv03_sp1_rtm.050324-1447)
          19.00 KB (19,456 bytes)       5/17/2005
10:29 AM  Microsoft Corporation
          c:\windows\system32\dimsntfy.dll
wlnotify  5.2.3790.1830 (srv03_sp1_rtm.050324-1447)
          94.50 KB (96,768 bytes)       5/17/2005
10:26 AM  Microsoft Corporation
          c:\windows\system32\wlnotify.dll
mpr       5.2.3790.0 (srv03_rtm.030324-2048)
          56.00 KB (57,344 bytes)       3/25/2003
6:00 AM   Microsoft Corporation
          c:\windows\system32\mpr.dll
oleaut32  5.2.3790.1830       543.00 KB (556,032
bytes)    3/25/2003 6:00 AM   Microsoft Corporation
          c:\windows\system32\oleaut32.dll
winspool  5.2.3790.1830 (srv03_sp1_rtm.050324-1447)
          147.00 KB (150,528 bytes)     3/25/2003
6:00 AM   Microsoft Corporation
          c:\windows\system32\winspool.drv
comctl32  5.82 (srv03_sp1_rtm.050324-1447)
          585.00 KB (599,040 bytes)     3/24/2005
8:41 PM   Microsoft Corporation
          c:\windows\winsxs\x86_microsoft.windows.com
mon-controls_6595b64144ccf1df_5.82.3790.1830_x-
ww_1b6f474a\comctl32.dll
uxtheme   6.00.3790.1830 (srv03_sp1_rtm.050324-1447)
          202.00 KB (206,848 bytes)     5/17/2005
10:26 AM  Microsoft Corporation
          c:\windows\system32\uxtheme.dll
clbcatq   2001.12.4720.1830 (srv03_sp1_rtm.050324-
1447)     502.50 KB (514,560 bytes)     5/17/2005
10:26 AM  Microsoft Corporation
          c:\windows\system32\clbcatq.dll
comres    2001.12.4720.0 (srv03_rtm.030324-2048)
          778.00 KB (796,672 bytes)     3/25/2003
6:00 AM   Microsoft Corporation
          c:\windows\system32\comres.dll
wbemprox  5.2.3790.1830 (srv03_sp1_rtm.050324-1447)
          20.50 KB (20,992 bytes)       5/17/2005
10:27 AM  Microsoft Corporation
          c:\windows\system32\wbem\wbemprox.dll
wbemcomn  5.2.3790.1830 (srv03_sp1_rtm.050324-1447)
          221.00 KB (226,304 bytes)     5/17/2005
10:27 AM  Microsoft Corporation
          c:\windows\system32\wbem\wbemcomn.dll
xpsp2res  5.2.3790.1830 (srv03_sp1_rtm.050324-1447)
          2.76 MB (2,897,920 bytes)     5/17/2005
10:29 AM  Microsoft Corporation
          c:\windows\system32\xpsp2res.dll
wbemsvc   5.2.3790.0 (srv03_rtm.030324-2048)
          42.50 KB (43,520 bytes)       1/10/2005
```


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12:11 AM  Microsoft Corporation
          c:\windows\system32\wbem\wbemsvc.dll
fastprox  5.2.3790.1830 (srv03_sp1_rtm.050324-1447)
          471.00 KB (482,304 bytes)     5/17/2005
10:27 AM  Microsoft Corporation
          c:\windows\system32\wbem\fastprox.dll
msvcp60   6.05.2144.0         388.00 KB (397,312
bytes)    3/25/2003 6:00 AM   Microsoft Corporation
          c:\windows\system32\msvcp60.dll
ntdsapi   5.2.3790.1830 (srv03_sp1_rtm.050324-1447)
          71.00 KB (72,704 bytes)       5/17/2005
10:26 AM  Microsoft Corporation
          c:\windows\system32\ntdsapi.dll
dnsapi    5.2.3790.1830 (srv03_sp1_rtm.050324-1447)
          153.50 KB (157,184 bytes)     5/17/2005
10:26 AM  Microsoft Corporation
          c:\windows\system32\dnsapi.dll
services  5.2.3790.1830 (srv03_sp1_rtm.050324-1447)
          107.50 KB (110,080 bytes)     3/25/2003
6:00 AM   Microsoft Corporation
          c:\windows\system32\services.exe
ncobjapi  5.2.3790.1830 (srv03_sp1_rtm.050324-1447)
          36.00 KB (36,864 bytes)       5/17/2005
10:26 AM  Microsoft Corporation
          c:\windows\system32\ncobjapi.dll
scesrv    5.2.3790.1830 (srv03_sp1_rtm.050324-1447)
          327.00 KB (334,848 bytes)     5/17/2005
10:26 AM  Microsoft Corporation
          c:\windows\system32\scesrv.dll
authz     5.2.3790.1830 (srv03_sp1_rtm.050324-1447)
          66.50 KB (68,096 bytes)       5/17/2005
10:26 AM  Microsoft Corporation
          c:\windows\system32\authz.dll
umpnpmgr  5.2.3790.1830 (srv03_sp1_rtm.050324-1447)
          126.50 KB (129,536 bytes)     5/17/2005
10:26 AM  Microsoft Corporation
          c:\windows\system32\umpnpmgr.dll
eventlog  5.2.3790.1830 (srv03_sp1_rtm.050324-1447)
          67.50 KB (69,120 bytes)       5/17/2005
10:26 AM  Microsoft Corporation
          c:\windows\system32\eventlog.dll
cabinet   5.2.3790.1830 (srv03_sp1_rtm.050324-1447)
          81.50 KB (83,456 bytes)       3/24/2005
7:35 PM   Microsoft Corporation
          c:\windows\system32\cabinet.dll
lsass     5.2.3790.0 (srv03_rtm.030324-2048)
          13.00 KB (13,312 bytes)       3/25/2003
6:00 AM   Microsoft Corporation
          c:\windows\system32\lsass.exe
lsasrv    5.2.3790.1830 (srv03_sp1_rtm.050324-1447)
          803.00 KB (822,272 bytes)     3/25/2003
6:00 AM   Microsoft Corporation
          c:\windows\system32\lsasrv.dll
samlib    5.2.3790.1830 (srv03_sp1_rtm.050324-1447)
          46.50 KB (47,616 bytes)       3/25/2003
6:00 AM   Microsoft Corporation
          c:\windows\system32\samlib.dll
samsrv    5.2.3790.1830 (srv03_sp1_rtm.050324-1447)
          450.50 KB (461,312 bytes)     3/25/2003
6:00 AM   Microsoft Corporation
          c:\windows\system32\samsrv.dll
cryptdll  5.2.3790.1830 (srv03_sp1_rtm.050324-1447)
          32.00 KB (32,768 bytes)       5/17/2005
10:26 AM  Microsoft Corporation
          c:\windows\system32\cryptdll.dll
msprivs   5.2.3790.0 (srv03_rtm.030324-2048)
          46.50 KB (47,616 bytes)       3/25/2003
6:00 AM   Microsoft Corporation
          c:\windows\system32\msprivs.dll
kerberos  5.2.3790.1830 (srv03_sp1_rtm.050324-1447)
          340.50 KB (348,672 bytes)     5/17/2005
10:26 AM  Microsoft Corporation
          c:\windows\system32\kerberos.dll
msv1_0    5.2.3790.1830 (srv03_sp1_rtm.050324-1447)
          141.00 KB (144,384 bytes)     5/17/2005
10:26 AM  Microsoft Corporation
          c:\windows\system32\msv1_0.dll
iphlpapi  5.2.3790.1830 (srv03_sp1_rtm.050324-1447)
          92.50 KB (94,720 bytes)       5/17/2005
10:26 AM  Microsoft Corporation
          c:\windows\system32\iphlpapi.dll
netlogon  5.2.3790.1830 (srv03_sp1_rtm.050324-1447)
          409.50 KB (419,328 bytes)     5/17/2005
10:26 AM  Microsoft Corporation
          c:\windows\system32\netlogon.dll
w32time   5.2.3790.1830 (srv03_sp1_rtm.050324-1447)
          222.00 KB (227,328 bytes)     5/17/2005
10:26 AM  Microsoft Corporation
          c:\windows\system32\w32time.dll
schannel  5.2.3790.1830 (srv03_sp1_rtm.050324-1447)
          141.00 KB (144,384 bytes)     5/17/2005
10:26 AM  Microsoft Corporation
          c:\windows\system32\schannel.dll
wdigest   5.2.3790.1830 (srv03_sp1_rtm.050324-1447)
          74.00 KB (75,776 bytes)       5/17/2005
10:26 AM  Microsoft Corporation
          c:\windows\system32\wdigest.dll
rassfm    5.2.3790.1830 (srv03_sp1_rtm.050324-1447)
          23.00 KB (23,552 bytes)       5/17/2005
10:27 AM  Microsoft Corporation
          c:\windows\system32\rassfm.dll
kdcsvc    5.2.3790.1830 (srv03_sp1_rtm.050324-1447)
          213.50 KB (218,624 bytes)     5/17/2005
10:26 AM  Microsoft Corporation
          c:\windows\system32\kdcsvc.dll
ntdsa     5.2.3790.1830 (srv03_sp1_rtm.050324-1447)
          1.45 MB (1,516,032 bytes)     5/17/2005
10:26 AM  Microsoft Corporation
          c:\windows\system32\ntdsa.dll
esent     5.2.3790.1830 (srv03_sp1_rtm.050324-1447)
          1,022.50 KB (1,047,040 bytes) 5/17/2005
10:26 AM  Microsoft Corporation
          c:\windows\system32\esent.dll
ntdsatq   5.2.3790.1830 (srv03_sp1_rtm.050324-1447)
          29.50 KB (30,208 bytes)       5/17/2005
10:26 AM  Microsoft Corporation
          c:\windows\system32\ntdsatq.dll
mswsock   5.2.3790.1830 (srv03_sp1_rtm.050324-1447)
          250.50 KB (256,512 bytes)     5/17/2005
10:26 AM  Microsoft Corporation
          c:\windows\system32\mswsock.dll
scecli    5.2.3790.1830 (srv03_sp1_rtm.050324-1447)
          186.50 KB (190,976 bytes)     5/17/2005
10:26 AM  Microsoft Corporation
          c:\windows\system32\scecli.dll
ws03res   5.2.3790.1830 (srv03_sp1_rtm.050324-1447)
          793.50 KB (812,544 bytes)     5/17/2005
10:29 AM  Microsoft Corporation
          c:\windows\system32\ws03res.dll
hnetcfg   5.2.3790.1830 (srv03_sp1_rtm.050324-1447)
          343.50 KB (351,744 bytes)     5/17/2005
10:26 AM  Microsoft Corporation
          c:\windows\system32\hnetcfg.dll
wshtcpip  5.2.3790.0 (srv03_rtm.030324-2048)
          18.00 KB (18,432 bytes)       3/25/2003
6:00 AM   Microsoft Corporation
          c:\windows\system32\wshtcpip.dll
ipsecsvc  5.2.3790.1830 (srv03_sp1_rtm.050324-1447)
          180.50 KB (184,832 bytes)     5/17/2005
10:26 AM  Microsoft Corporation
          c:\windows\system32\ipsecsvc.dll
oakley    5.2.3790.1830 (srv03_sp1_rtm.050324-1447)
          264.00 KB (270,336 bytes)     5/17/2005
10:26 AM  Microsoft Corporation
          c:\windows\system32\oakley.dll
winipsec  5.2.3790.1830 (srv03_sp1_rtm.050324-1447)
          35.50 KB (36,352 bytes)       5/17/2005
10:26 AM  Microsoft Corporation
          c:\windows\system32\winipsec.dll
pstorsvc  5.2.3790.0 (srv03_rtm.030324-2048)
          24.00 KB (24,576 bytes)       3/25/2003
6:00 AM   Microsoft Corporation
          c:\windows\system32\pstorsvc.dll
psbase    5.2.3790.1830 (srv03_sp1_rtm.050324-1447)
          84.00 KB (86,016 bytes)       5/17/2005
10:26 AM  Microsoft Corporation
          c:\windows\system32\psbase.dll
dssenh    5.2.3790.1830 (srv03_sp1_rtm.050324-1447)
          139.98 KB (143,336 bytes)     5/17/2005
10:26 AM  Microsoft Corporation
          c:\windows\system32\dssenh.dll
wlbsctrl  5.2.3790.1830 (srv03_sp1_rtm.050324-1447)
          82.00 KB (83,968 bytes)       5/17/2005
10:26 AM  Microsoft Corporation
          c:\windows\system32\wlbsctrl.dll
svchost   5.2.3790.1830 (srv03_sp1_rtm.050324-1447)
          14.00 KB (14,336 bytes)       5/17/2005
10:26 AM  Microsoft Corporation
          c:\windows\system32\svchost.exe
rpcss     5.2.3790.1830 (srv03_sp1_rtm.050324-1447)
          406.00 KB (415,744 bytes)     5/17/2005
10:26 AM  Microsoft Corporation
          c:\windows\system32\rpcss.dll
dnsrslvr  5.2.3790.1830 (srv03_sp1_rtm.050324-1447)
          44.50 KB (45,568 bytes)       5/17/2005
10:26 AM  Microsoft Corporation
          c:\windows\system32\dnsrslvr.dll
dhcpcsvc  5.2.3790.1830 (srv03_sp1_rtm.050324-1447)
          113.50 KB (116,224 bytes)     3/25/2003
6:00 AM   Microsoft Corporation
          c:\windows\system32\dhcpcsvc.dll
netman    5.2.3790.1830 (srv03_sp1_rtm.050324-1447)
          258.50 KB (264,704 bytes)     5/17/2005
10:26 AM  Microsoft Corporation
          c:\windows\system32\netman.dll
mprapi    5.2.3790.1830 (srv03_sp1_rtm.050324-1447)
          89.00 KB (91,136 bytes)       5/17/2005
```


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10:26 AM  Microsoft Corporation
          c:\windows\system32\mprapi.dll
activeds  5.2.3790.1830 (srv03_sp1_rtm.050324-1447)
          194.00 KB (198,656 bytes)     5/17/2005
10:27 AM  Microsoft Corporation
          c:\windows\system32\activeds.dll
adsldpc   5.2.3790.1830 (srv03_sp1_rtm.050324-1447)
          146.00 KB (149,504 bytes)     5/17/2005
10:26 AM  Microsoft Corporation
          c:\windows\system32\adsldpc.dll
credui    5.2.3790.1830 (srv03_sp1_rtm.050324-1447)
          162.00 KB (165,888 bytes)     5/17/2005
10:26 AM  Microsoft Corporation
          c:\windows\system32\credui.dll
atl       3.05.2283 83.00 KB (84,992 bytes)
          3/25/2003 6:00 AM   Microsoft Corporation
          c:\windows\system32\atl.dll
rtutils   5.2.3790.1830 (srv03_sp1_rtm.050324-1447)
          34.50 KB (35,328 bytes)       5/17/2005
10:26 AM  Microsoft Corporation
          c:\windows\system32\rtutils.dll
netshell  5.2.3790.1830 (srv03_sp1_rtm.050324-1447)
          1.73 MB (1,812,992 bytes)     5/17/2005
10:26 AM  Microsoft Corporation
          c:\windows\system32\netshell.dll
clusapi   5.2.3790.1830 (srv03_sp1_rtm.050324-1447)
          60.00 KB (61,440 bytes)       5/17/2005
10:26 AM  Microsoft Corporation
          c:\windows\system32\clusapi.dll
rasapi32  5.2.3790.1830 (srv03_sp1_rtm.050324-1447)
          239.50 KB (245,248 bytes)     3/25/2003
6:00 AM   Microsoft Corporation
          c:\windows\system32\rasapi32.dll
rasman    5.2.3790.1830 (srv03_sp1_rtm.050324-1447)
          61.50 KB (62,976 bytes)       3/25/2003
6:00 AM   Microsoft Corporation
          c:\windows\system32\rasman.dll
tapi32    5.2.3790.1830 (srv03_sp1_rtm.050324-1447)
          179.50 KB (183,808 bytes)     5/17/2005
10:26 AM  Microsoft Corporation
          c:\windows\system32\tapi32.dll
wininet   6.00.3790.1830 (srv03_sp1_rtm.050324-1447)
          646.00 KB (661,504 bytes)     5/17/2005
10:26 AM  Microsoft Corporation
          c:\windows\system32\wininet.dll
wzcsapi   5.2.3790.1830 (srv03_sp1_rtm.050324-1447)
          41.00 KB (41,984 bytes)       5/17/2005
10:26 AM  Microsoft Corporation
          c:\windows\system32\wzcsapi.dll
wzcsvc    5.2.3790.1830 (srv03_sp1_rtm.050324-1447)
          364.50 KB (373,248 bytes)     5/17/2005
10:26 AM  Microsoft Corporation
          c:\windows\system32\wzcsvc.dll
wmi       5.2.3790.0 (srv03_rtm.030324-2048)
          6.50 KB (6,656 bytes)         3/25/2003
6:00 AM   Microsoft Corporation
          c:\windows\system32\wmi.dll
ntmarta   5.2.3790.1830 (srv03_sp1_rtm.050324-1447)
          120.50 KB (123,392 bytes)     5/17/2005
10:26 AM  Microsoft Corporation
          c:\windows\system32\ntmarta.dll
lmhsvc    5.2.3790.1830 (srv03_sp1_rtm.050324-1447)
          19.50 KB (19,968 bytes)       3/25/2003
6:00 AM   Microsoft Corporation
          c:\windows\system32\lmhsvc.dll
winrnr    5.2.3790.1830 (srv03_sp1_rtm.050324-1447)
          17.00 KB (17,408 bytes)       5/17/2005
10:26 AM  Microsoft Corporation
          c:\windows\system32\winrnr.dll
rasadhlp  5.2.3790.1830 (srv03_sp1_rtm.050324-1447)
          7.50 KB (7,680 bytes)         5/17/2005
10:26 AM  Microsoft Corporation
          c:\windows\system32\rasadhlp.dll
wkssvc    5.2.3790.1830 (srv03_sp1_rtm.050324-1447)
          130.00 KB (133,120 bytes)     3/25/2003
6:00 AM   Microsoft Corporation
          c:\windows\system32\wkssvc.dll
wiarpc    5.2.3790.1830 (srv03_sp1_rtm.050324-1447)
          32.50 KB (33,280 bytes)       5/17/2005
10:26 AM  Microsoft Corporation
          c:\windows\system32\wiarpc.dll
aelupsvc  5.2.3790.1830 (srv03_sp1_rtm.050324-1447)
          26.00 KB (26,624 bytes)       5/17/2005
10:29 AM  Microsoft Corporation
          c:\windows\system32\aelupsvc.dll
apphelp   5.2.3790.1830 (srv03_sp1_rtm.050324-1447)
          146.50 KB (150,016 bytes)     5/17/2005
10:26 AM  Microsoft Corporation
          c:\windows\system32\apphelp.dll
cryptsvc  5.2.3790.1830 (srv03_sp1_rtm.050324-1447)
          55.50 KB (56,832 bytes)       5/17/2005
10:26 AM  Microsoft Corporation
          c:\windows\system32\cryptsvc.dll
certcli   5.2.3790.1830 (srv03_sp1_rtm.050324-1447)
          227.00 KB (232,448 bytes)     5/17/2005
10:26 AM  Microsoft Corporation
          c:\windows\system32\certcli.dll
vssapi    5.2.3790.1830 (srv03_sp1_rtm.050324-1447)
          548.00 KB (561,152 bytes)     5/17/2005
10:26 AM  Microsoft Corporation
          c:\windows\system32\vssapi.dll
dmserver  5.2.3790.1830 (srv03_sp1_rtm.050324-1447)
          25.50 KB (26,112 bytes)       5/17/2005
10:26 AM  Microsoft Corporation
          c:\windows\system32\dmserver.dll
es        2001.12.4720.1830 (srv03_sp1_rtm.050324-
1447)     233.00 KB (238,592 bytes)     5/17/2005
10:26 AM  Microsoft Corporation
          c:\windows\system32\es.dll
pchsvc    5.2.3790.1830 (srv03_sp1_rtm.050324-1447)
          39.00 KB (39,936 bytes)       5/17/2005
10:27 AM  Microsoft Corporation
          c:\windows\pchealth\helpctr\binaries\pchsvc
.dll
srvsvc    5.2.3790.1830 (srv03_sp1_rtm.050324-1447)
          93.50 KB (95,744 bytes)       3/25/2003
6:00 AM   Microsoft Corporation
          c:\windows\system32\srvsvc.dll
comsvcs   2001.12.4720.1830 (srv03_sp1_rtm.050324-
1447)     1.19 MB (1,248,256 bytes)     5/17/2005
10:26 AM  Microsoft Corporation
          c:\windows\system32\comsvcs.dll
sacsvr    5.2.3790.0 (srv03_rtm.030324-2048)
          12.00 KB (12,288 bytes)       3/25/2003
6:00 AM   Microsoft Corporation
          c:\windows\system32\sacsvr.dll
sens      5.2.3790.1830 (srv03_sp1_rtm.050324-1447)
          36.50 KB (37,376 bytes)       5/17/2005
10:26 AM  Microsoft Corporation
          c:\windows\system32\sens.dll
wmisvc    5.2.3790.1830 (srv03_sp1_rtm.050324-1447)
          140.00 KB (143,360 bytes)     5/17/2005
10:27 AM  Microsoft Corporation
          c:\windows\system32\wbem\wmisvc.dll
browser   5.2.3790.1830 (srv03_sp1_rtm.050324-1447)
          76.50 KB (78,336 bytes)       5/17/2005
10:26 AM  Microsoft Corporation
          c:\windows\system32\browser.dll
netrap    5.2.3790.0 (srv03_rtm.030324-2048)
          11.50 KB (11,776 bytes)       3/25/2003
6:00 AM   Microsoft Corporation
          c:\windows\system32\netrap.dll
wbemcore  5.2.3790.1830 (srv03_sp1_rtm.050324-1447)
          497.50 KB (509,440 bytes)     5/17/2005
10:27 AM  Microsoft Corporation
          c:\windows\system32\wbem\wbemcore.dll
esscli    5.2.3790.1830 (srv03_sp1_rtm.050324-1447)
          250.00 KB (256,000 bytes)     5/17/2005
10:27 AM  Microsoft Corporation
          c:\windows\system32\wbem\esscli.dll
wmiutils  5.2.3790.1830 (srv03_sp1_rtm.050324-1447)
          93.50 KB (95,744 bytes)       5/17/2005
10:27 AM  Microsoft Corporation
          c:\windows\system32\wbem\wmiutils.dll
repdrvfs  5.2.3790.1830 (srv03_sp1_rtm.050324-1447)
          172.50 KB (176,640 bytes)     5/17/2005
10:27 AM  Microsoft Corporation
          c:\windows\system32\wbem\repdrvfs.dll
wmiprvsd  5.2.3790.1830 (srv03_sp1_rtm.050324-1447)
          404.00 KB (413,696 bytes)     5/17/2005
10:27 AM  Microsoft Corporation
          c:\windows\system32\wbem\wmiprvsd.dll
wbemess   5.2.3790.1830 (srv03_sp1_rtm.050324-1447)
          271.50 KB (278,016 bytes)     5/17/2005
10:27 AM  Microsoft Corporation
          c:\windows\system32\wbem\wbemess.dll
rasdlg    5.2.3790.1830 (srv03_sp1_rtm.050324-1447)
          663.00 KB (678,912 bytes)     3/25/2003
6:00 AM   Microsoft Corporation
          c:\windows\system32\rasdlg.dll
ncprov    5.2.3790.1830 (srv03_sp1_rtm.050324-1447)
          46.50 KB (47,616 bytes)       5/17/2005
10:27 AM  Microsoft Corporation
          c:\windows\system32\wbem\ncprov.dll
ntlsapi   5.2.3790.0 (srv03_rtm.030324-2048)
          8.00 KB (8,192 bytes)         3/25/2003
6:00 AM   Microsoft Corporation
          c:\windows\system32\ntlsapi.dll
netcfgx   5.2.3790.1830 (srv03_sp1_rtm.050324-1447)
          763.00 KB (781,312 bytes)     5/17/2005
10:26 AM  Microsoft Corporation
          c:\windows\system32\netcfgx.dll
msdtc     2001.12.4720.1830 (srv03_sp1_rtm.050324-
1447)     6.00 KB (6,144 bytes)         5/17/2005
10:26 AM  Microsoft Corporation
          c:\windows\system32\msdtc.exe
msdtctm   2001.12.4720.1830 (srv03_sp1_rtm.050324-
1447)     984.50 KB (1,008,128 bytes)   5/17/2005
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10:26 AM  Microsoft Corporation
          c:\windows\system32\msdtctm.dll
msdtclog  2001.12.4720.1830 (srv03_sp1_rtm.050324-
1447)     73.50 KB (75,264 bytes)       5/17/2005
10:26 AM  Microsoft Corporation
          c:\windows\system32\msdtclog.dll
msdtcprx  2001.12.4720.1830 (srv03_sp1_rtm.050324-
1447)     455.50 KB (466,432 bytes)     5/17/2005
10:26 AM  Microsoft Corporation
          c:\windows\system32\msdtcprx.dll
mtxclu    2001.12.4720.1830 (srv03_sp1_rtm.050324-
1447)     77.00 KB (78,848 bytes)       5/17/2005
10:26 AM  Microsoft Corporation
          c:\windows\system32\mtxclu.dll
wsock32   5.2.3790.0 (srv03_rtm.030324-2048)
          22.00 KB (22,528 bytes)       3/25/2003
6:00 AM   Microsoft Corporation
          c:\windows\system32\wsock32.dll
xolehlp   2001.12.4720.1830 (srv03_sp1_rtm.050324-
1447)     10.50 KB (10,752 bytes)       5/17/2005
10:26 AM  Microsoft Corporation
          c:\windows\system32\xolehlp.dll
resutils  5.2.3790.1830 (srv03_sp1_rtm.050324-1447)
          63.50 KB (65,024 bytes)       5/17/2005
10:26 AM  Microsoft Corporation
          c:\windows\system32\resutils.dll
mtxoci    2001.12.4720.1830 (srv03_sp1_rtm.050324-
1447)     108.50 KB (111,104 bytes)     5/17/2005
10:26 AM  Microsoft Corporation
          c:\windows\system32\mtxoci.dll
ersvc     5.2.3790.1830 (srv03_sp1_rtm.050324-1447)
          24.00 KB (24,576 bytes)       5/17/2005
10:26 AM  Microsoft Corporation
          c:\windows\system32\ersvc.dll
MsDtsSrvr Not Available       186.71 KB (191,192
bytes)    5/24/2005 9:14 PM   Not Available
          c:\program files\microsoft sql
server\90\dts\binn\msdtssrvr.exe
mscoree   2.0.50215.312 (beta2PLUS.050215-3100)
          247.50 KB (253,440 bytes)     5/23/2005
4:19 AM   Microsoft Corporation
          c:\windows\system32\mscoree.dll
mscorwks  2.0.50215.312 (beta2PLUS.050215-3100)
          5.24 MB (5,490,176 bytes)     5/23/2005
4:22 AM   Microsoft Corporation
          c:\windows\microsoft.net\framework\v2.0.502
15\mscorwks.dll
msvcr80   8.00.50215.312      600.00 KB (614,400
bytes)    5/22/2005 11:47 PM  Microsoft Corporation
          c:\windows\microsoft.net\framework\v2.0.502
15\msvcr80.dll
mscorlib.ni         Not Available       10.50 MB
(11,010,048 bytes)  7/18/2005 3:11 PM   Not Available
          c:\windows\assembly\nativeimages_v2.0.50215
_32\mscorlib\b85942146e41c83d855963be51b6b4ca\mscorli
b.ni.dll
mscorsec  2.0.50215.312 (beta2PLUS.050215-3100)
          61.50 KB (62,976 bytes)       5/23/2005
12:19 AM  Microsoft Corporation
          c:\windows\microsoft.net\framework\v2.0.502
15\mscorsec.dll
softpub   5.131.3790.0 (srv03_rtm.030324-2048)
          6.00 KB (6,144 bytes)         3/25/2003
6:00 AM   Microsoft Corporation
          c:\windows\system32\softpub.dll
cryptnet  5.131.3790.1830 (srv03_sp1_rtm.050324-1447)
          61.00 KB (62,464 bytes)       5/17/2005
10:26 AM  Microsoft Corporation
          c:\windows\system32\cryptnet.dll
sensapi   5.2.3790.0 (srv03_rtm.030324-2048)
          6.00 KB (6,144 bytes)         3/25/2003
6:00 AM   Microsoft Corporation
          c:\windows\system32\sensapi.dll
winhttp   5.2.3790.1830 (srv03_sp1_rtm.050324-1447)
          353.00 KB (361,472 bytes)     3/24/2005
8:41 PM   Microsoft Corporation
          c:\windows\winsxs\x86_microsoft.windows.win
http_6595b64144ccf1df_5.1.3790.1830_x-
ww_74150efb\winhttp.dll
wshqos    5.2.3790.1830 (srv03_sp1_rtm.050324-1447)
          24.00 KB (24,576 bytes)       5/17/2005
10:26 AM  Microsoft Corporation
          c:\windows\system32\wshqos.dll
System.ServiceProcess.ni      Not Available
          224.00 KB (229,376 bytes)     7/19/2005
3:34 PM   Not Available
          c:\windows\assembly\nativeimages_v2.0.50215
_32\system.serviceproce#\fc753cbbbdd18537a03785c9768a
1307\system.serviceprocess.ni.dll
System.ni Not Available       7.08 MB (7,421,952
bytes)    7/18/2005 3:11 PM   Not Available
          c:\windows\assembly\nativeimages_v2.0.50215
_32\system\c8a6894e14e3bd3a820597d504ff9e92\system.ni
.dll
mscorjit  2.0.50215.312 (beta2PLUS.050215-3100)
          314.00 KB (321,536 bytes)     5/23/2005
4:19 AM   Microsoft Corporation
          c:\windows\microsoft.net\framework\v2.0.502
15\mscorjit.dll
microsoft.sqlserver.mgdsqldumper
          2000.090.1187.00    63.71 KB (65,240 bytes)
          7/19/2005 4:49 PM   Microsoft Corporation
          c:\windows\assembly\gac_32\microsoft.sqlser
ver.mgdsqldumper\9.0.242.0__89845dcd8080cc91\microsof
t.sqlserver.mgdsqldumper.dll
msvcr80   8.00.50215.312      600.00 KB (614,400
bytes)    5/22/2005 11:51 PM  Microsoft Corporation
          c:\windows\winsxs\x86_microsoft.vc80.crt_1f
c8b3b9a1e18e3b_8.0.50215.4664_x-
ww_b7afad15\msvcr80.dll
msvcm80   8.00.50215.312      472.00 KB (483,328
bytes)    5/22/2005 11:51 PM  Microsoft Corporation
          c:\windows\winsxs\x86_microsoft.vc80.crt_1f
c8b3b9a1e18e3b_8.0.50215.4664_x-
ww_b7afad15\msvcm80.dll
System.Configuration.ni       Not Available
          852.00 KB (872,448 bytes)     7/18/2005
3:12 PM   Not Available
          c:\windows\assembly\nativeimages_v2.0.50215
_32\system.configuration\e10af4342307133fb90b1ac28f75
5c75\system.configuration.ni.dll
System.Xml.ni       Not Available       5.61 MB
(5,877,760 bytes)   7/18/2005 3:13 PM   Not Available
          c:\windows\assembly\nativeimages_v2.0.50215
_32\system.xml\3bf12d8f29580332979189567ef6859e\syste
m.xml.ni.dll
Microsoft.SqlServer.DtsServer.Interop   Not Available
          14.21 KB (14,552 bytes)       5/24/2005
9:13 PM   Not Available       c:\program
files\microsoft sql
server\90\dts\binn\microsoft.sqlserver.dtsserver.inte
rop.dll
Microsoft.SqlServer.DTSRuntimeWrap.ni   Not Available
          372.00 KB (380,928 bytes)     7/19/2005
5:22 PM   Not Available
          c:\windows\assembly\nativeimages_v2.0.50215
_32\microsoft.sqlserver#\63b83fca20b68a369b6e99e5fa6e
7c99\microsoft.sqlserver.dtsruntimewrap.ni.dll
msmdsrv   2000.090.1187.00    11.20 MB (11,745,496
bytes)    5/24/2005 9:15 PM   Microsoft Corporation
          c:\program files\microsoft sql
server\mssql.2\olap\bin\msmdsrv.exe
msvcp80   8.00.50215.312      528.00 KB (540,672
bytes)    5/22/2005 11:51 PM  Microsoft Corporation
          c:\windows\winsxs\x86_microsoft.vc80.crt_1f
c8b3b9a1e18e3b_8.0.50215.4664_x-
ww_b7afad15\msvcp80.dll
pdh       5.2.3790.1830 (srv03_sp1_rtm.050324-1447)
          298.50 KB (305,664 bytes)     5/17/2005
10:26 AM  Microsoft Corporation
          c:\windows\system32\pdh.dll
comdlg32  6.00.3790.1830 (srv03_sp1_rtm.050324-1447)
          274.50 KB (281,088 bytes)     3/25/2003
6:00 AM   Microsoft Corporation
          c:\windows\system32\comdlg32.dll
odbc32    3.526.1830.0 (srv03_sp1_rtm.050324-1447)
          240.00 KB (245,760 bytes)     5/17/2005
10:26 AM  Microsoft Corporation
          c:\windows\system32\odbc32.dll
odbcbcp   2000.086.1830.00 (srv03_sp1_rtm.050324-
1447)     24.00 KB (24,576 bytes)       5/17/2005
10:26 AM  Microsoft Corporation
          c:\windows\system32\odbcbcp.dll
odbcint   3.526.1830.0 (srv03_sp1_rtm.050324-1447)
          92.00 KB (94,208 bytes)       5/17/2005
10:26 AM  Microsoft Corporation
          c:\windows\system32\odbcint.dll
xmlrw     2.00.3573.0 built by: (_sqlbld)
          162.71 KB (166,616 bytes)     5/24/2005
9:15 PM   Microsoft Corporation         c:\program
files\microsoft sql server\mssql.2\olap\bin\xmlrw.dll

xmlrwbin  2.00.3573.0 built by: (_sqlbld)
          116.71 KB (119,512 bytes)     5/24/2005
9:16 PM   Microsoft Corporation         c:\program
files\microsoft sql
server\mssql.2\olap\bin\xmlrwbin.dll
security  5.2.3790.0 (srv03_rtm.030324-2048)
          5.50 KB (5,632 bytes)         3/25/2003
6:00 AM   Microsoft Corporation
          c:\windows\system32\security.dll
mlang     6.00.3790.1830 (srv03_sp1_rtm.050324-1447)
          577.50 KB (591,360 bytes)     5/17/2005
10:26 AM  Microsoft Corporation
          c:\windows\system32\mlang.dll
sqlboot   2000.090.1187.00    41.21 KB (42,200 bytes)
          5/24/2005 9:14 PM   Microsoft Corporation
          c:\program files\microsoft sql
server\mssql.2\olap\bin\sqlboot.dll
```


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```
instapi   2000.090.1187.00    32.21 KB (32,984 bytes)
          5/24/2005 9:10 PM   Microsoft Corporation
          c:\program files\microsoft sql
server\90\shared\instapi.dll
msxml6    6.00.3833.2         1.25 MB (1,311,232
bytes)    5/6/2005 11:52 AM   Microsoft Corporation
          c:\windows\system32\msxml6.dll
msmdsrv   2000.090.1187.00    542.71 KB (555,736
bytes)    5/24/2005 9:17 PM   Microsoft Corporation
          c:\program files\microsoft sql
server\mssql.2\olap\bin\resources\1033\msmdsrv.rll

msmgdsrv  2000.090.1187.00    5.12 MB (5,370,072
bytes)    5/24/2005 9:15 PM   Microsoft Corporation
          c:\program files\microsoft sql
server\mssql.2\olap\bin\msmgdsrv.dll
msmgdsrv.ni         Not Available       2.96 MB
(3,108,864 bytes)   7/19/2005 5:05 PM   Not Available
          c:\windows\assembly\nativeimages_v2.0.50215
_32\msmgdsrv\f98478729381453f9a66d7be07c46bbb\msmgdsr
v.ni.dll
portmap   1.14.4    72.00 KB (73,728 bytes)
          5/5/2005 11:38 AM             c:\program
files\qlogic corporation\sansurfer\portmap.exe
sqlbrowser          2000.090.1187.00    160.71 KB
(164,568 bytes)     5/24/2005 9:16 PM   Microsoft
Corporation         c:\program files\microsoft sql
server\90\shared\sqlbrowser.exe
msmdlocal 2000.090.1187.00    11.95 MB (12,528,856
bytes)    5/24/2005 9:15 PM   Microsoft Corporation
          c:\program files\microsoft sql
server\90\shared\msmdlocal.dll
xmlrw     2.00.3573.0 built by: (_sqlbld)
          162.71 KB (166,616 bytes)     5/24/2005
9:15 PM   Microsoft Corporation         c:\program
files\common files\system\ole db\xmlrw.dll
xmlrwbin  2.00.3573.0 built by: (_sqlbld)
          116.71 KB (119,512 bytes)     5/24/2005
9:16 PM   Microsoft Corporation         c:\program
files\common files\system\ole db\xmlrwbin.dll
msmdsrv   2000.090.1187.00    542.71 KB (555,736
bytes)    5/24/2005 9:17 PM   Microsoft Corporation
          c:\program files\microsoft sql
server\90\shared\resources\1033\msmdsrv.rll
msftesql  12.0.5211.0         86.70 KB (88,784 bytes)
          4/11/2005 2:51 AM   Microsoft Corporation
          c:\program files\microsoft sql
server\mssql.1\mssql\binn\msftesql.exe
msfte     12.0.5211.0         2.30 MB (2,411,216
bytes)    4/11/2005 2:51 AM   Microsoft Corporation
          c:\program files\microsoft sql
server\mssql.1\mssql\binn\msfte.dll
dbghelp   6.4.0004.3 (vbl_core(jshay).041001-1326)
          966.21 KB (989,400 bytes)     5/24/2005
9:13 PM   Microsoft Corporation         c:\program
files\microsoft sql
server\mssql.1\mssql\binn\dbghelp.dll
msftepxy  12.0.5211.0         62.70 KB (64,208 bytes)
          4/11/2005 2:51 AM   Microsoft Corporation
          c:\program files\microsoft sql
server\mssql.1\mssql\binn\msftepxy.dll
qlremote  Not Available       336.00 KB (344,064
bytes)    5/5/2005 11:38 AM   Not Available
          c:\program files\qlogic
corporation\sansurfer\qlremote.exe
qlsdm     1.28.0.04 172.00 KB (176,128 bytes)
          5/5/2005 11:38 AM   QLogic Corporation
          c:\program files\qlogic
corporation\sansurfer\qlsdm.dll
qlfo      Not Available       108.00 KB (110,592
bytes)    5/5/2005 11:38 AM   Not Available
          c:\program files\qlogic
corporation\sansurfer\qlfo.dll
qlvipl    1.1       112.06 KB (114,749 bytes)
          5/5/2005 11:38 AM   QLogic Corporation
          c:\program files\qlogic
corporation\sansurfer\qlvipl.dll
termsrv   5.2.3790.1830 (srv03_sp1_rtm.050324-1447)
          239.00 KB (244,736 bytes)     5/17/2005
10:26 AM  Microsoft Corporation
          c:\windows\system32\termsrv.dll
icaapi    5.2.3790.1830 (srv03_sp1_rtm.050324-1447)
          12.50 KB (12,800 bytes)       5/17/2005
10:26 AM  Microsoft Corporation
          c:\windows\system32\icaapi.dll
mstlsapi  5.2.3790.1830 (srv03_sp1_rtm.050324-1447)
          116.00 KB (118,784 bytes)     5/17/2005
10:26 AM  Microsoft Corporation
          c:\windows\system32\mstlsapi.dll
rdpwsx    5.2.3790.1830 (srv03_sp1_rtm.050324-1447)
          101.63 KB (104,072 bytes)     5/17/2005
10:26 AM  Microsoft Corporation
          c:\windows\system32\rdpwsx.dll
rdpsnd    5.2.3790.0 (srv03_rtm.030324-2048)
          18.00 KB (18,432 bytes)       3/25/2003
6:00 AM   Microsoft Corporation
          c:\windows\system32\rdpsnd.dll
scredir   5.2.3790.1830 (srv03_sp1_rtm.050324-1447)
          28.00 KB (28,672 bytes)       5/17/2005
10:26 AM  Microsoft Corporation
          c:\windows\system32\scredir.dll
cscui     5.2.3790.1830 (srv03_sp1_rtm.050324-1447)
          319.50 KB (327,168 bytes)     5/17/2005
10:26 AM  Microsoft Corporation
          c:\windows\system32\cscui.dll
msacm32   5.2.3790.1830 (srv03_sp1_rtm.050324-1447)
          22.00 KB (22,528 bytes)       5/17/2005
10:26 AM  Microsoft Corporation
          c:\windows\system32\msacm32.drv
msacm32   5.2.3790.1830 (srv03_sp1_rtm.050324-1447)
          69.50 KB (71,168 bytes)       5/17/2005
10:26 AM  Microsoft Corporation
          c:\windows\system32\msacm32.dll
imaadp32  5.2.3790.0 (srv03_rtm.030324-2048)
          15.50 KB (15,872 bytes)       3/25/2003
6:00 AM   Microsoft Corporation
          c:\windows\system32\imaadp32.acm
msadp32   5.2.3790.0 (srv03_rtm.030324-2048)
          14.50 KB (14,848 bytes)       3/25/2003
6:00 AM   Microsoft Corporation
          c:\windows\system32\msadp32.acm
msg711    5.2.3790.0 (srv03_rtm.030324-2048)
          10.00 KB (10,240 bytes)       3/25/2003
6:00 AM   Microsoft Corporation
          c:\windows\system32\msg711.acm
msgsm32   5.2.3790.0 (srv03_rtm.030324-2048)
          20.50 KB (20,992 bytes)       3/25/2003
6:00 AM   Microsoft Corporation
          c:\windows\system32\msgsm32.acm
tssoft32  1.01      9.50 KB (9,728 bytes)
          3/25/2003 6:00 AM   DSP GROUP, INC.
          c:\windows\system32\tssoft32.acm
tsd32     1.03      16.50 KB (16,896 bytes)
          3/25/2003 6:00 AM   DSP GROUP, INC.
          c:\windows\system32\tsd32.dll
msg723    5.2.3790.1830       120.00 KB (122,880
bytes)    5/17/2005 10:26 AM  Microsoft Corporation
          c:\windows\system32\msg723.acm
msaud32   8.00.00.4487        288.00 KB (294,912
bytes)    3/25/2003 6:00 AM   Microsoft Corporation
          c:\windows\system32\msaud32.acm
sl_anet   3.02      84.00 KB (86,016 bytes)
          3/25/2003 6:00 AM   Sipro Lab Telecom Inc.
          c:\windows\system32\sl_anet.acm
l3codeca  1, 9, 0, 0305       284.00 KB (290,816
bytes)    3/25/2003 6:00 AM   Fraunhofer Institut
Integrierte Schaltungen IIS
          c:\windows\system32\l3codeca.acm
rdpclip   5.2.3790.1830 (srv03_sp1_rtm.050324-1447)
          68.00 KB (69,632 bytes)       5/17/2005
10:26 AM  Microsoft Corporation
          c:\windows\system32\rdpclip.exe
urlmon    6.00.3790.1830 (srv03_sp1_rtm.050324-1447)
          673.00 KB (689,152 bytes)     5/17/2005
10:26 AM  Microsoft Corporation
          c:\windows\system32\urlmon.dll
explorer  6.00.3790.1830 (srv03_sp1_rtm.050324-1447)
          1.00 MB (1,050,624 bytes)     5/17/2005
10:27 AM  Microsoft Corporation
          c:\windows\explorer.exe
browseui  6.00.3790.1830 (srv03_sp1_rtm.050324-1447)
          1,009.00 KB (1,033,216 bytes) 5/17/2005
10:26 AM  Microsoft Corporation
          c:\windows\system32\browseui.dll
shdocvw   6.00.3790.1830 (srv03_sp1_rtm.050324-1447)
          1.43 MB (1,502,720 bytes)     5/17/2005
10:26 AM  Microsoft Corporation
          c:\windows\system32\shdocvw.dll
cryptui   5.131.3790.1830 (srv03_sp1_rtm.050324-1447)
          496.50 KB (508,416 bytes)     5/17/2005
10:26 AM  Microsoft Corporation
          c:\windows\system32\cryptui.dll
themeui   6.00.3790.1830 (srv03_sp1_rtm.050324-1447)
          377.50 KB (386,560 bytes)     5/17/2005
10:26 AM  Microsoft Corporation
          c:\windows\system32\themeui.dll
msimg32   5.2.3790.0 (srv03_rtm.030324-2048)
          4.50 KB (4,608 bytes)         3/25/2003
6:00 AM   Microsoft Corporation
          c:\windows\system32\msimg32.dll
linkinfo  5.2.3790.1830 (srv03_sp1_rtm.050324-1447)
          19.00 KB (19,456 bytes)       5/17/2005
10:26 AM  Microsoft Corporation
          c:\windows\system32\linkinfo.dll
ntshrui   6.00.3790.1830 (srv03_sp1_rtm.050324-1447)
          140.00 KB (143,360 bytes)     5/17/2005
10:26 AM  Microsoft Corporation
          c:\windows\system32\ntshrui.dll
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msi         3.1.4000.1830       2.76 MB (2,890,240
bytes)      5/17/2005 10:26 AM  Microsoft Corporation
            c:\windows\system32\msi.dll
webcheck    6.00.3790.1830 (srv03_sp1_rtm.050324-1447)
            272.50 KB (279,040 bytes)     5/17/2005
10:26 AM    Microsoft Corporation
            c:\windows\system32\webcheck.dll
stobject    5.2.3790.1830 (srv03_sp1_rtm.050324-1447)
            120.50 KB (123,392 bytes)     5/17/2005
10:26 AM    Microsoft Corporation
            c:\windows\system32\stobject.dll
batmeter    6.00.3790.1830 (srv03_sp1_rtm.050324-1447)
            31.50 KB (32,256 bytes)       5/17/2005
10:26 AM    Microsoft Corporation
            c:\windows\system32\batmeter.dll
powrprof    6.00.3790.1830 (srv03_sp1_rtm.050324-1447)
            16.50 KB (16,896 bytes)       5/17/2005
10:26 AM    Microsoft Corporation
            c:\windows\system32\powrprof.dll
drprov      5.2.3790.1830 (srv03_sp1_rtm.050324-1447)
            14.00 KB (14,336 bytes)       5/17/2005
10:26 AM    Microsoft Corporation
            c:\windows\system32\drprov.dll
ntlanman    5.2.3790.1830 (srv03_sp1_rtm.050324-1447)
            43.50 KB (44,544 bytes)       5/17/2005
10:26 AM    Microsoft Corporation
            c:\windows\system32\ntlanman.dll
netui0      5.2.3790.0 (srv03_rtm.030324-2048)
            75.50 KB (77,312 bytes)       3/25/2003
6:00 AM     Microsoft Corporation
            c:\windows\system32\netui0.dll
netui1      5.2.3790.0 (srv03_rtm.030324-2048)
            184.00 KB (188,416 bytes)     3/25/2003
6:00 AM     Microsoft Corporation
            c:\windows\system32\netui1.dll
davclnt     5.2.3790.0 (srv03_rtm.030324-2048)
            23.50 KB (24,064 bytes)       3/25/2003
6:00 AM     Microsoft Corporation
            c:\windows\system32\davclnt.dll
browselc    6.00.3790.0 (srv03_rtm.030324-2048)
            62.00 KB (63,488 bytes)       3/25/2003
6:00 AM     Microsoft Corporation
            c:\windows\system32\browselc.dll
mydocs      6.00.3790.1830 (srv03_sp1_rtm.050324-1447)
            90.00 KB (92,160 bytes)       5/17/2005
10:26 AM    Microsoft Corporation
            c:\windows\system32\mydocs.dll
shdoclc     6.00.3790.0 (srv03_rtm.030324-2048)
            588.50 KB (602,624 bytes)     3/25/2003
6:00 AM     Microsoft Corporation
            c:\windows\system32\shdoclc.dll
zipfldr     6.00.3790.1830 (srv03_sp1_rtm.050324-1447)
            333.50 KB (341,504 bytes)     5/17/2005
10:26 AM    Microsoft Corporation
            c:\windows\system32\zipfldr.dll
actxprxy    6.00.3790.1830 (srv03_sp1_rtm.050324-1447)
            96.50 KB (98,816 bytes)       5/17/2005
10:27 AM    Microsoft Corporation
            c:\windows\system32\actxprxy.dll
taskmgr     5.2.3790.1830 (srv03_sp1_rtm.050324-1447)
            164.50 KB (168,448 bytes)     5/17/2005
10:26 AM    Microsoft Corporation
            c:\windows\system32\taskmgr.exe

vdmdbg      5.2.3790.0 (srv03_rtm.030324-2048)
            25.00 KB (25,600 bytes)       3/25/2003
6:00 AM     Microsoft Corporation
            c:\windows\system32\vdmdbg.dll
utildll     5.2.3790.1830 (srv03_sp1_rtm.050324-1447)
            28.50 KB (29,184 bytes)       5/17/2005
10:26 AM    Microsoft Corporation
            c:\windows\system32\utildll.dll
wmiprvse    5.2.3790.1830 (srv03_sp1_rtm.050324-1447)
            203.00 KB (207,872 bytes)     5/17/2005
10:27 AM    Microsoft Corporation
            c:\windows\system32\wbem\wmiprvse.exe
faultrep    5.2.3790.1830 (srv03_sp1_rtm.050324-1447)
            84.50 KB (86,528 bytes)       5/17/2005
10:26 AM    Microsoft Corporation
            c:\windows\system32\faultrep.dll
wmiprov     5.2.3790.1830 (srv03_sp1_rtm.050324-1447)
            141.00 KB (144,384 bytes)     5/17/2005
10:27 AM    Microsoft Corporation
            c:\windows\system32\wbem\wmiprov.dll
logon       5.2.3790.1830 (srv03_sp1_rtm.050324-1447)
            497.50 KB (509,440 bytes)     5/17/2005
10:26 AM    Microsoft Corporation
            c:\windows\system32\logon.scr
cmd         5.2.3790.1830 (srv03_sp1_rtm.050324-1447)
            379.00 KB (388,096 bytes)     3/25/2003
6:00 AM     Microsoft Corporation
            c:\windows\system32\cmd.exe
shimeng     5.2.3790.1830 (srv03_sp1_rtm.050324-1447)
            47.50 KB (48,640 bytes)       5/17/2005
10:26 AM    Microsoft Corporation
            c:\windows\system32\shimeng.dll
aclayers    5.2.3790.1830 (srv03_sp1_rtm.050324-1447)
            390.50 KB (399,872 bytes)     5/17/2005
10:27 AM    Microsoft Corporation
            c:\windows\apppatch\aclayers.dll
acgenral    5.2.3790.1830 (srv03_sp1_rtm.050324-1447)
            1.77 MB (1,859,584 bytes)     5/17/2005
10:27 AM    Microsoft Corporation
            c:\windows\apppatch\acgenral.dll
sqlservr    2000.090.1258.65 built by najoshi from
NAJOSHI-BLD_S_yukon_stb_eng3  27.00 MB (28,307,456
bytes)      5/24/2005 9:17 PM   Microsoft Corporation
            c:\program files\microsoft sql
server\mssql.1\mssql\binn\sqlservr.exe
opends60    2000.090.1187.00    18.21 KB (18,648 bytes)
            5/24/2005 9:14 PM   Microsoft Corporation
            c:\program files\microsoft sql
server\mssql.1\mssql\binn\opends60.dll
sqlevn70    2000.090.1187.00    1.54 MB (1,610,456
bytes)      5/24/2005 9:18 PM   Microsoft Corporation
            c:\program files\microsoft sql
server\mssql.1\mssql\binn\resources\1033\sqlevn70.rll

sqlos       2000.090.1187.00    13.21 KB (13,528 bytes)
            5/24/2005 9:16 PM   Microsoft Corporation
            c:\program files\microsoft sql
server\mssql.1\mssql\binn\sqlos.dll
sqlncli     2000.090.1187.00    2.15 MB (2,250,456
bytes)      5/24/2005 9:16 PM   Microsoft Corporation
            c:\windows\system32\sqlncli.dll

sqlnclir    2000.090.1187.00    200.21 KB (205,016
bytes)      5/24/2005 9:14 PM   Microsoft Corporation
            c:\windows\system32\sqlnclir.rll
osql        2000.090.1187.00    47.71 KB (48,856 bytes)
            5/24/2005 9:15 PM   Microsoft Corporation
            c:\program files\microsoft sql
server\90\tools\binn\osql.exe
osql        2000.090.1187.00    14.71 KB (15,064 bytes)
            5/24/2005 9:13 PM   Microsoft Corporation
            c:\program files\microsoft sql
server\90\tools\binn\resources\1033\osql.rll
cimwin32    5.2.3790.1830 (srv03_sp1_rtm.050324-1447)
            1.31 MB (1,372,160 bytes)     5/17/2005
10:27 AM    Microsoft Corporation
            c:\windows\system32\wbem\cimwin32.dll
framedyn    5.2.3790.1830 (srv03_sp1_rtm.050324-1447)
            174.50 KB (178,688 bytes)     5/17/2005
10:27 AM    Microsoft Corporation
            c:\windows\system32\wbem\framedyn.dll
cfgmgr32    5.2.3790.0 (srv03_rtm.030324-2048)
            17.50 KB (17,920 bytes)       3/25/2003
6:00 AM     Microsoft Corporation
            c:\windows\system32\cfgmgr32.dll
licwmi      5.2.3790.0 (srv03_rtm.030324-2048)
            58.50 KB (59,904 bytes)       1/10/2005
12:11 AM    Microsoft Corporation
            c:\windows\system32\licwmi.dll
licdll      5.2.3790.1830 (srv03_sp1_rtm.050324-1447)
            439.00 KB (449,536 bytes)     5/17/2005
10:26 AM    Microsoft Corporation
            c:\windows\system32\licdll.dll
ntevt       5.2.3790.1830 (srv03_sp1_rtm.050324-1447)
            230.50 KB (236,032 bytes)     5/17/2005
10:27 AM    Microsoft Corporation
            c:\windows\system32\wbem\ntevt.dll
provthrd    5.2.3790.1830 (srv03_sp1_rtm.050324-1447)
            188.00 KB (192,512 bytes)     5/17/2005
10:27 AM    Microsoft Corporation
            c:\windows\system32\wbem\provthrd.dll
msvcirt     7.0.3790.0 (srv03_rtm.030324-2048)
            50.00 KB (51,200 bytes)       3/25/2003
6:00 AM     Microsoft Corporation
            c:\windows\system32\msvcirt.dll
msinfo      5.2.3790.1830 (srv03_sp1_rtm.050324-1447)
            376.00 KB (385,024 bytes)     5/17/2005
10:27 AM    Microsoft Corporation
            c:\windows\pchealth\helpctr\binaries\msinfo
.dll
mfc42u      6.06.8063.0         1.11 MB (1,163,776
bytes)      5/17/2005 10:26 AM  Microsoft Corporation
            c:\windows\system32\mfc42u.dll
riched32    5.2.3790.0 (srv03_rtm.030324-2048)
            3.50 KB (3,584 bytes)         3/25/2003
6:00 AM     Microsoft Corporation
            c:\windows\system32\riched32.dll
riched20    5.31.23.1224        439.00 KB (449,536
bytes)      5/17/2005 10:26 AM  Microsoft Corporation
            c:\windows\system32\riched20.dll
tscfgwmi    5.2.3790.1830 (srv03_sp1_rtm.050324-1447)
            104.50 KB (107,008 bytes)     5/17/2005
10:26 AM    Microsoft Corporation
            c:\windows\system32\tscfgwmi.dll
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traffic   5.2.3790.1830 (srv03_sp1_rtm.050324-1447)
          33.00 KB (33,792 bytes)       5/17/2005
10:26 AM  Microsoft Corporation
          c:\windows\system32\traffic.dll
dskquota  5.2.3790.1830 (srv03_sp1_rtm.050324-1447)
          91.00 KB (93,184 bytes)       5/17/2005
10:26 AM  Microsoft Corporation
          c:\windows\system32\dskquota.dll
ieinfo5   6.00.3790.0 (srv03_rtm.030324-2048)
          95.00 KB (97,280 bytes)       1/10/2005
12:13 AM  Microsoft Corporation
          c:\progra~1\common~1\micros~1\msinfo\ieinfo
5.ocx
msratelc  6.00.3790.0 (srv03_rtm.030324-2048)
          59.00 KB (60,416 bytes)       3/25/2003
6:00 AM   Microsoft Corporation
          c:\windows\system32\msratelc.dll

[Services]

Display Name        Name      State     Start Mode
          Service Type        Path      Error Control
          Start Name          Tag ID
Application Experience Lookup Service   AeLookupSvc
          Running   Auto      Share Process
          c:\windows\system32\svchost.exe -k netsvcs
          Normal    LocalSystem         0
Alerter   Alerter   Stopped   Disabled  Share Process
          c:\windows\system32\svchost.exe -k
localservice        Normal    NT
AUTHORITY\LocalService        0
Application Layer Gateway Service       ALG
          Stopped   Manual    Own Process
          c:\windows\system32\alg.exe   Normal    NT
AUTHORITY\LocalService        0
Application Management        AppMgmt   Stopped
          Manual    Share Process
          c:\windows\system32\svchost.exe -k netsvcs
          Normal    LocalSystem         0
ASP.NET State Service         aspnet_state
          Stopped   Manual    Own Process
          c:\windows\microsoft.net\framework\v2.0.502
15\aspnet_state.exe Normal    NT
AUTHORITY\NetworkService      0
Windows Audio       AudioSrv  Stopped   Disabled
          Share Process
          c:\windows\system32\svchost.exe -k netsvcs
          Normal    LocalSystem         0
Background Intelligent Transfer Service BITS
          Stopped   Manual    Share Process
          c:\windows\system32\svchost.exe -k netsvcs
          Normal    LocalSystem         0
Computer Browser    Browser   Running   Auto
          Share Process
          c:\windows\system32\svchost.exe -k netsvcs
          Normal    LocalSystem         0
Indexing Service    CiSvc     Stopped   Disabled
          Share Process
          c:\windows\system32\cisvc.exe Normal
          LocalSystem         0
ClipBook  ClipSrv   Stopped   Disabled  Own Process
          c:\windows\system32\clipsrv.exe
          Normal    LocalSystem         0
.NET Runtime Optimization Service v2.0.50215_X86
          clr_optimization_v2.0.50215_32
          Stopped   Manual    Own Process
          c:\windows\microsoft.net\framework\v2.0.502
15\mscorsvw.exe     Ignore    LocalSystem         0

COM+ System Application       COMSysApp Stopped
          Manual    Own Process
          c:\windows\system32\dllhost.exe
/processid:{02d4b3f1-fd88-11d1-960d-00805fc79235}
          Normal    LocalSystem         0
Cryptographic Services        CryptSvc  Running
          Auto      Share Process
          c:\windows\system32\svchost.exe -k netsvcs
          Normal    LocalSystem         0
DCOM Server Process Launcher  DcomLaunch
          Running   Auto      Share Process
          c:\windows\system32\svchost.exe -k
dcomlaunch          Normal    LocalSystem         0

Distributed File System       Dfs       Stopped
          Disabled  Own Process
          c:\windows\system32\dfssvc.exe
          Normal    LocalSystem         0
DHCP Client         Dhcp      Stopped   Disabled
          Share Process
          c:\windows\system32\svchost.exe -k
networkservice      Normal    NT
AUTHORITY\NetworkService      0
Logical Disk Manager Administrative Service
          dmadmin   Stopped   Manual    Share Process
          c:\windows\system32\dmadmin.exe /com
          Normal    LocalSystem         0
Logical Disk Manager          dmserver  Running
          Auto      Share Process
          c:\windows\system32\svchost.exe -k netsvcs
          Normal    LocalSystem         0
DNS Client          Dnscache  Running   Auto
          Share Process
          c:\windows\system32\svchost.exe -k
networkservice      Normal    NT
AUTHORITY\NetworkService      0
Error Reporting Service       ERSvc     Running
          Auto      Share Process
          c:\windows\system32\svchost.exe -k winerr
          Ignore    LocalSystem         0
Event Log Eventlog  Running   Auto      Share Process
          c:\windows\system32\services.exe
          Normal    LocalSystem         0
COM+ Event System   EventSystem         Running
          Auto      Share Process
          c:\windows\system32\svchost.exe -k netsvcs
          Normal    LocalSystem         0
Help and Support    helpsvc   Running   Auto
          Share Process
          c:\windows\system32\svchost.exe -k netsvcs
          Normal    LocalSystem         0
Human Interface Device Access HidServ   Stopped
          Disabled  Share Process
          c:\windows\system32\svchost.exe -k netsvcs
          Normal    LocalSystem         0
HTTP SSL  HTTPFilter          Stopped   Manual
          Share Process
          c:\windows\system32\lsass.exe Normal
          LocalSystem         0
IMAPI CD-Burning COM Service  ImapiService
          Stopped   Disabled  Own Process
          c:\windows\system32\imapi.exe Normal
          LocalSystem         0
Intersite Messaging IsmServ   Stopped   Disabled  Own
Process   c:\windows\system32\ismserv.exe
          Normal    LocalSystem         0
Kerberos Key Distribution Center        kdc
          Stopped   Disabled  Share Process
          c:\windows\system32\lsass.exe Normal
          LocalSystem         0
Server    lanmanserver        Running   Auto
          Share Process
          c:\windows\system32\svchost.exe -k netsvcs
          Normal    LocalSystem         0
Workstation         lanmanworkstation   Running
          Auto      Share Process
          c:\windows\system32\svchost.exe -k netsvcs
          Normal    LocalSystem         0
License Logging     LicenseService      Stopped
          Disabled  Own Process
          c:\windows\system32\llssrv.exe
          Normal    NT AUTHORITY\NetworkService   0

TCP/IP NetBIOS Helper         LmHosts   Running
          Auto      Share Process
          c:\windows\system32\svchost.exe -k
localservice        Normal    NT
AUTHORITY\LocalService        0
Messenger Messenger Stopped   Disabled  Share Process
          c:\windows\system32\svchost.exe -k netsvcs
          Normal    LocalSystem         0
NetMeeting Remote Desktop Sharing       mnmsrvc
          Stopped   Disabled  Own Process
          c:\windows\system32\mnmsrvc.exe
          Normal    LocalSystem         0
Distributed Transaction Coordinator     MSDTC
          Running   Auto      Own Process
          c:\windows\system32\msdtc.exe Normal    NT
AUTHORITY\NetworkService      0
SQL Server Integration Services         MsDtsServer
          Running   Auto      Own Process
          "c:\program files\microsoft sql
server\90\dts\binn\msdtssrvr.exe"       Normal    NT
AUTHORITY\NETWORK SERVICE     0
msftesql  msftesql  Running   Auto      Own Process
          "c:\program files\microsoft sql
server\mssql.1\mssql\binn\msftesql.exe" -s:mssql.1 -
f:mssqlserver       Normal    LocalSystem         0

Windows Installer   MSIServer Stopped   Manual
          Share Process
          c:\windows\system32\msiexec.exe /v
          Normal    LocalSystem         0
SQL Server (MSSQLSERVER)      MSSQLSERVER
          Stopped   Manual    Own Process
          "c:\program files\microsoft sql
server\mssql.1\mssql\binn\sqlservr.exe" -smssqlserver
          Normal    LocalSystem         0
SQL Server Active Directory Helper
          MSSQLServerADHelper Stopped   Disabled  Own
```


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```
Process   "c:\program files\microsoft sql
server\90\shared\sqladhlp90.exe"        Normal    NT
AUTHORITY\NETWORK SERVICE     0
SQL Server Analysis Services (MSSQLSERVER)
          MSSQLServerOLAPService        Running
          Auto      Own Process         "c:\program
files\microsoft sql
server\mssql.2\olap\bin\msmdsrv.exe" -s "c:\program
files\microsoft sql server\mssql.2\olap\config"
          Normal    LocalSystem         0
Network DDE         NetDDE    Stopped   Disabled
          Share Process
          c:\windows\system32\netdde.exe
          Normal    LocalSystem         0
Network DDE DSDM    NetDDEdsdm          Stopped
          Disabled  Share Process
          c:\windows\system32\netdde.exe
          Normal    LocalSystem         0
Net Logon Netlogon  Stopped   Manual    Share Process
          c:\windows\system32\lsass.exe Normal
          LocalSystem         0
Network Connections Netman    Running   Manual
          Share Process
          c:\windows\system32\svchost.exe -k netsvcs
          Normal    LocalSystem         0
Network Location Awareness (NLA)        Nla
          Running   Manual    Share Process
          c:\windows\system32\svchost.exe -k netsvcs
          Normal    LocalSystem         0
File Replication    NtFrs     Stopped   Manual    Own
Process   c:\windows\system32\ntfrs.exe Ignore
          LocalSystem         0
NT LM Security Support Provider         NtLmSsp
          Running   Manual    Share Process
          c:\windows\system32\lsass.exe Normal
          LocalSystem         0
Removable Storage   NtmsSvc   Stopped   Manual
          Share Process
          c:\windows\system32\svchost.exe -k netsvcs
          Normal    LocalSystem         0
Office Source Engine          ose       Stopped
          Manual    Own Process         "c:\program
files\common files\microsoft shared\source
engine\ose.exe"     Normal    LocalSystem         0

Plug and Play       PlugPlay  Running   Auto
          Share Process
          c:\windows\system32\services.exe
          Normal    LocalSystem         0
IPSEC Services      PolicyAgent         Running
          Auto      Share Process
          c:\windows\system32\lsass.exe Normal
          LocalSystem         0
ONC/RPC Portmapper  portmap   Running   Auto      Own
Process   c:\program files\qlogic
corporation\sansurfer\portmap.exe       Normal
          LocalSystem         0
Protected Storage   ProtectedStorage    Running
          Auto      Share Process
          c:\windows\system32\lsass.exe Normal
          LocalSystem         0
QLogic Management Suite Java Agent
          QLManagementAgentJava         Running
          Auto      Own Process         c:\program
files\qlogic corporation\sansurfer\qlremote.exe
          Normal    LocalSystem         0
Remote Access Auto Connection Manager   RasAuto
          Stopped   Manual    Share Process
          c:\windows\system32\svchost.exe -k netsvcs
          Normal    LocalSystem         0
Remote Access Connection Manager        RasMan
          Stopped   Manual    Share Process
          c:\windows\system32\svchost.exe -k netsvcs
          Normal    LocalSystem         0
Remote Desktop Help Session Manager     RDSessMgr
          Stopped   Manual    Own Process
          c:\windows\system32\sessmgr.exe
          Normal    LocalSystem         0
Routing and Remote Access     RemoteAccess
          Stopped   Disabled  Share Process
          c:\windows\system32\svchost.exe -k netsvcs
          Normal    LocalSystem         0
Remote Registry     RemoteRegistry      Stopped
          Disabled  Share Process
          c:\windows\system32\svchost.exe -k regsvc
          Normal    NT AUTHORITY\LocalService     0

Remote Procedure Call (RPC) Locator     RpcLocator
          Stopped   Manual    Own Process
          c:\windows\system32\locator.exe
          Normal    NT AUTHORITY\NetworkService   0

Remote Procedure Call (RPC)   RpcSs     Running
          Auto      Share Process
          c:\windows\system32\svchost.exe -k rpcss
          Normal    NT Authority\NetworkService   0

Resultant Set of Policy Provider        RSoPProv
          Stopped   Manual    Share Process
          c:\windows\system32\rsopprov.exe
          Normal    LocalSystem         0
Special Administration Console Helper   sacsvr
          Running   Manual    Share Process
          c:\windows\system32\svchost.exe -k netsvcs
          Normal    LocalSystem         0
Security Accounts Manager     SamSs     Running
          Auto      Share Process
          c:\windows\system32\lsass.exe Normal
          LocalSystem         0
Smart Card          SCardSvr  Stopped   Manual
          Share Process
          c:\windows\system32\scardsvr.exe
          Ignore    NT AUTHORITY\LocalService     0

Task Scheduler      Schedule  Stopped   Disabled
          Share Process
          c:\windows\system32\svchost.exe -k netsvcs
          Normal    LocalSystem         0
Secondary Logon     seclogon  Stopped   Disabled
          Share Process
          c:\windows\system32\svchost.exe -k netsvcs
          Ignore    LocalSystem         0
System Event Notification     SENS      Running
          Auto      Share Process
          c:\windows\system32\svchost.exe -k netsvcs
          Normal    LocalSystem         0
Windows Firewall/Internet Connection Sharing (ICS)
          SharedAccess        Stopped   Disabled
          Share Process
          c:\windows\system32\svchost.exe -k netsvcs
          Normal    LocalSystem         0
Shell Hardware Detection      ShellHWDetection
          Running   Auto      Share Process
          c:\windows\system32\svchost.exe -k netsvcs
          Ignore    LocalSystem         0
Print Spooler       Spooler   Stopped   Disabled  Own
Process   c:\windows\system32\spoolsv.exe
          Normal    LocalSystem         0
SQL Server Browser  SQLBrowser          Running
          Auto      Own Process         "c:\program
files\microsoft sql server\90\shared\sqlbrowser.exe"
          Normal    LocalSystem         0
SQL Server Agent (MSSQLSERVER)
          SQLSERVERAGENT      Stopped   Manual    Own
Process   "c:\program files\microsoft sql
server\mssql.1\mssql\binn\sqlagent90.exe" -i
mssqlserver         Normal    LocalSystem         0

SQL Server VSS Writer         SQLWriter Stopped
          Disabled  Own Process         "c:\program
files\microsoft sql server\90\shared\sqlwriter.exe"
          Normal    LocalSystem         0
Windows Image Acquisition (WIA)         stisvc
          Stopped   Disabled  Share Process
          c:\windows\system32\svchost.exe -k imgsvc
          Normal    NT AUTHORITY\LocalService     0

Microsoft Software Shadow Copy Provider swprv
          Stopped   Manual    Own Process
          c:\windows\system32\svchost.exe -k swprv
          Normal    LocalSystem         0
Performance Logs and Alerts   SysmonLog Stopped
          Manual    Own Process
          c:\windows\system32\smlogsvc.exe
          Normal    NT Authority\NetworkService   0

Telephony TapiSrv   Stopped   Manual    Share Process
          c:\windows\system32\svchost.exe -k tapisrv
          Normal    LocalSystem         0
Terminal Services   TermService         Running
          Manual    Share Process
          c:\windows\system32\svchost.exe -k termsvcs
          Normal    LocalSystem         0
Themes    Themes    Stopped   Disabled  Share Process
          c:\windows\system32\svchost.exe -k netsvcs
          Normal    LocalSystem         0
Telnet    TlntSvr   Stopped   Disabled  Own Process
          c:\windows\system32\tlntsvr.exe
          Normal    NT AUTHORITY\LocalService     0

Distributed Link Tracking Server        TrkSvr
          Stopped   Disabled  Share Process
          c:\windows\system32\svchost.exe -k netsvcs
          Normal    LocalSystem         0
Distributed Link Tracking Client        TrkWks
          Stopped   Disabled  Share Process
          c:\windows\system32\svchost.exe -k netsvcs
          Normal    LocalSystem         0
```


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```
Terminal Services Session Directory     Tssdis
          Stopped   Disabled  Own Process
          c:\windows\system32\tssdis.exe
          Normal    LocalSystem         0
Windows User Mode Driver Framework      UMWdf
          Stopped   Manual    Own Process
          c:\windows\system32\wdfmgr.exe
          Normal    NT AUTHORITY\LocalService     0

Upload Manager      uploadmgr Stopped   Manual
          Share Process
          c:\windows\system32\svchost.exe -k netsvcs
          Normal    LocalSystem         0
Uninterruptible Power Supply  UPS       Stopped
          Manual    Own Process
          c:\windows\system32\ups.exe   Normal    NT
AUTHORITY\LocalService        0
Virtual Disk Service          vds       Stopped
          Manual    Own Process
          c:\windows\system32\vds.exe   Normal
          LocalSystem         0
Volume Shadow Copy  VSS       Stopped   Manual    Own
Process   c:\windows\system32\vssvc.exe Normal
          LocalSystem         0
Windows Time        W32Time   Running   Auto
          Share Process
          c:\windows\system32\svchost.exe -k
localservice        Normal    NT
AUTHORITY\LocalService        0
WebClient WebClient Stopped   Disabled  Share Process
          c:\windows\system32\svchost.exe -k
localservice        Normal    NT
AUTHORITY\LocalService        0
WinHTTP Web Proxy Auto-Discovery Service
          WinHttpAutoProxySvc Stopped   Manual
          Share Process
          c:\windows\system32\svchost.exe -k
localservice        Normal    NT
AUTHORITY\LocalService        0
Windows Management Instrumentation      winmgmt
          Running   Auto      Share Process
          c:\windows\system32\svchost.exe -k netsvcs
          Ignore    LocalSystem         0
Portable Media Serial Number Service    WmdmPmSN
          Stopped   Manual    Share Process
          c:\windows\system32\svchost.exe -k netsvcs
          Normal    LocalSystem         0
Windows Management Instrumentation Driver Extensions
          Wmi       Stopped   Manual    Share Process
          c:\windows\system32\svchost.exe -k netsvcs
          Normal    LocalSystem         0
WMI Performance Adapter       WmiApSrv  Stopped
          Manual    Own Process
          c:\windows\system32\wbem\wmiapsrv.exe
          Normal    LocalSystem         0
Automatic Updates   wuauserv  Stopped   Disabled
          Share Process
          c:\windows\system32\svchost.exe -k netsvcs
          Normal    LocalSystem         0
Wireless Configuration        WZCSVC    Stopped
          Disabled  Share Process
          c:\windows\system32\svchost.exe -k netsvcs
          Normal    LocalSystem         0
Network Provisioning Service  xmlprov   Stopped
          Manual    Share Process
          c:\windows\system32\svchost.exe -k netsvcs
          Normal    LocalSystem         0

[Program Groups]

Group Name          Name      User Name
Accessories         Default User:Accessories
          Default User
Accessories\Accessibility     Default
User:Accessories\Accessibility          Default User

Accessories\Entertainment     Default
User:Accessories\Entertainment          Default User

Startup   Default User:Startup          Default User

Accessories         All Users:Accessories         All
Users
Accessories\Accessibility     All
Users:Accessories\Accessibility         All Users
Accessories\Communications    All
Users:Accessories\Communications        All Users
Accessories\Entertainment     All
Users:Accessories\Entertainment         All Users
Accessories\System Tools      All
Users:Accessories\System Tools          All Users
Administrative Tools          All
Users:Administrative Tools    All Users
HP SAN Utilities    All Users:HP SAN Utilities    All
Users
HP System Tools     All Users:HP System Tools     All
Users
HP System Tools\HP Array Configuration Utility    All
Users:HP System Tools\HP Array Configuration Utility
          All Users
HP System Tools\HP Array Configuration Utility CLI
          All Users:HP System Tools\HP Array
Configuration Utility CLI     All Users
HP System Tools\HP Array Diagnostic Utility       All
Users:HP System Tools\HP Array Diagnostic Utility All
Users
Microsoft SQL Server 2005 CTP All Users:Microsoft SQL
Server 2005 CTP     All Users
Microsoft SQL Server 2005 CTP\Analysis Services   All
Users:Microsoft SQL Server 2005 CTP\Analysis Services
          All Users
Microsoft SQL Server 2005 CTP\Configuration Tools All
Users:Microsoft SQL Server 2005 CTP\Configuration
Tools     All Users
Microsoft SQL Server 2005 CTP\Documentation and
Tutorials All Users:Microsoft SQL Server 2005
CTP\Documentation and Tutorials         All Users
Microsoft SQL Server 2005 CTP\Documentation and
Tutorials\Tutorials All Users:Microsoft SQL Server
2005 CTP\Documentation and Tutorials\Tutorials    All
Users
Microsoft SQL Server 2005 CTP\Performance Tools   All
Users:Microsoft SQL Server 2005 CTP\Performance Tools
          All Users
Microsoft Visual Studio 2005 Beta 2     All
Users:Microsoft Visual Studio 2005 Beta 2         All
Users
QLogic Management Suite       All Users:QLogic
Management Suite    All Users
Startup   All Users:Startup   All Users
Accessories         NT AUTHORITY\SYSTEM:Accessories
          NT AUTHORITY\SYSTEM
Accessories\Accessibility     NT
AUTHORITY\SYSTEM:Accessories\Accessibility        NT
AUTHORITY\SYSTEM
Accessories\Entertainment     NT
AUTHORITY\SYSTEM:Accessories\Entertainment        NT
AUTHORITY\SYSTEM
Startup   NT AUTHORITY\SYSTEM:Startup   NT
AUTHORITY\SYSTEM
Accessories         BL25P\Administrator:Accessories
          BL25P\Administrator
Accessories\Accessibility
          BL25P\Administrator:Accessories\Accessibili
ty        BL25P\Administrator
Accessories\Entertainment
          BL25P\Administrator:Accessories\Entertainme
nt        BL25P\Administrator
Administrative Tools
          BL25P\Administrator:Administrative Tools
          BL25P\Administrator
HP SAN Utilities    BL25P\Administrator:HP SAN
Utilities BL25P\Administrator
Startup   BL25P\Administrator:Startup
          BL25P\Administrator

[Startup Programs]

Program   Command   User Name Location
desktop   desktop.ini         NT AUTHORITY\SYSTEM
          Startup
desktop   desktop.ini         BL25P\Administrator
          Startup
desktop   desktop.ini         .DEFAULT  Startup
desktop   desktop.ini         All Users Common
Startup

[OLE Registration]

Object    Local Server
Sound (OLE2)        sndrec32.exe
Media Clip          mplay32.exe
Video Clip          mplay32.exe /avi
MIDI Sequence       mplay32.exe /mid
Sound     Not Available
Media Clip          Not Available
WordPad Document    "%programfiles%\windows
nt\accessories\wordpad.exe"
Windows Media Services DRM Storage object         Not
Available
DDSContainerCtl Class         Not Available
Bitmap Image        mspaint.exe

[Windows Error Reporting]

Time      Type      Details
```


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```
3/29/2005 7:16 PM   Application Error   Faulting
application svchost.exe, version 5.2.3790.0, faulting
module rpcss.dll, version 5.2.3790.0, fault address
0x0002eb3c.&#x000d;&#x000a;
3/29/2005 5:07 PM   Application Error   Faulting
application svchost.exe, version 5.2.3790.0, faulting
module rpcss.dll, version 5.2.3790.0, fault address
0x0002eb3c.&#x000d;&#x000a;
3/29/2005 3:16 PM   Application Error   Faulting
application svchost.exe, version 5.2.3790.0, faulting
module rpcss.dll, version 5.2.3790.0, fault address
0x0002eb3c.&#x000d;&#x000a;
7/15/2005 3:27 PM   Application Hang    Hanging
application mmc.exe, version 5.2.3790.1830, hang
module hungapp, version 0.0.0.0, hang address
0x00000000.&#x000d;&#x000a;
7/15/2005 3:25 PM   Application Hang    Hanging
application mmc.exe, version 5.2.3790.1830, hang
module hungapp, version 0.0.0.0, hang address
0x00000000.&#x000d;&#x000a;
5/4/2005 1:10 PM    Application Hang    Hanging
application MSA.exe, version 1.0.0.1, hang module
hungapp, version 0.0.0.0, hang address
0x00000000.&#x000d;&#x000a;

[Internet Settings]



[Internet Explorer]

[ Following are sub-categories of this main category
]
[Summary]

Item      Value
Version   6.0.3790.1830
Build     63790.1830
Application Path    C:\Program Files\Internet
Explorer
Language  English (United States)
Active Printer      Not Available

Cipher Strength     128-bit
Content Advisor     Disabled
IEAK Install        No

[File Versions]

File      Version   Size      Date      Path
          Company
actxprxy.dll        6.0.3790.1830       97 KB
          3/24/2005 5:55:26 PM
          C:\WINDOWS\system32 Microsoft Corporation

advpack.dll         6.0.3790.1830       98 KB
          3/24/2005 5:55:28 PM
          C:\WINDOWS\system32 Microsoft Corporation

asctrls.ocx         6.0.3790.0          90 KB
          3/25/2003 7:00:00 AM
          C:\WINDOWS\system32 Microsoft Corporation

browselc.dll        6.0.3790.0          62 KB
          3/25/2003 7:00:00 AM
          C:\WINDOWS\system32 Microsoft Corporation

browseui.dll        6.0.3790.1830       1,009 KB
          3/24/2005 5:56:10 PM
          C:\WINDOWS\system32 Microsoft Corporation

cdfview.dll         6.0.3790.1830       149 KB
          3/24/2005 5:56:32 PM
          C:\WINDOWS\system32 Microsoft Corporation

comctl32.dll        5.82.3790.1830      585 KB
          3/24/2005 5:57:56 PM
          C:\WINDOWS\system32 Microsoft Corporation

dxtrans.dll         6.3.3790.1830       205 KB
          3/24/2005 6:00:58 PM
          C:\WINDOWS\system32 Microsoft Corporation

dxtmsft.dll         6.3.3790.1830       355 KB
          3/24/2005 6:00:58 PM
          C:\WINDOWS\system32 Microsoft Corporation

iecont.dll          <File Missing>      Not Available
          Not Available       Not Available       Not
Available
iecontlc.dll        <File Missing>      Not Available
          Not Available       Not Available       Not
Available
iedkcs32.dll        16.0.3790.1830      324 KB
          3/24/2005 6:04:58 PM
          C:\WINDOWS\system32 Microsoft Corporation

iepeers.dll         6.0.3790.1830       248 KB
          3/24/2005 6:04:58 PM
          C:\WINDOWS\system32 Microsoft Corporation

iesetup.dll         6.0.3790.1830       61 KB
          3/24/2005 6:04:58 PM
          C:\WINDOWS\system32 Microsoft Corporation

ieuinit.inf         Not Available       24 KB
          3/24/2005 6:04:58 PM
          C:\WINDOWS\system32 Not Available
iexplore.exe        6.0.3790.1830       92 KB
          3/24/2005 6:04:58 PM          C:\Program
Files\Internet Explorer       Microsoft Corporation

imgutil.dll         6.0.3790.1830       38 KB
          3/24/2005 6:05:04 PM
          C:\WINDOWS\system32 Microsoft Corporation

inetcpl.cpl         6.0.3790.1830       358 KB
          3/24/2005 6:05:06 PM
          C:\WINDOWS\system32 Microsoft Corporation

inetcplc.dll        6.0.3790.0          109 KB
          3/25/2003 7:00:00 AM
          C:\WINDOWS\system32 Microsoft Corporation

inseng.dll          6.0.3790.1830       94 KB
          3/24/2005 6:05:06 PM
          C:\WINDOWS\system32 Microsoft Corporation

mlang.dll 6.0.3790.1830       578 KB    3/24/2005
6:07:20 PM          C:\WINDOWS\system32 Microsoft
Corporation
msencode.dll        2002.10.4.0         112 KB
          3/25/2003 7:00:00 AM
          C:\WINDOWS\system32 ?????v??
mshta.exe 6.0.3790.1830       30 KB     3/24/2005
6:07:26 PM          C:\WINDOWS\system32 Microsoft
Corporation
mshtml.dll          6.0.3790.1830       3,036 KB
          3/24/2005 6:07:26 PM
          C:\WINDOWS\system32 Microsoft Corporation

mshtml.tlb          6.0.3790.1830       1,320 KB
          3/24/2005 6:07:26 PM
          C:\WINDOWS\system32 Microsoft Corporation

mshtmled.dll        6.0.3790.1830       455 KB
          3/24/2005 6:07:26 PM
          C:\WINDOWS\system32 Microsoft Corporation

mshtmler.dll        6.0.3790.1830       56 KB
          3/24/2005 6:07:26 PM
          C:\WINDOWS\system32 Microsoft Corporation

msident.dll         6.0.3790.1830       48 KB
          3/24/2005 6:07:28 PM
          C:\WINDOWS\system32 Microsoft Corporation

msidntld.dll        6.0.3790.0          15 KB
          3/25/2003 7:00:00 AM
          C:\WINDOWS\system32 Microsoft Corporation

msieftp.dll         6.0.3790.1830       244 KB
          3/24/2005 6:07:28 PM
          C:\WINDOWS\system32 Microsoft Corporation

msrating.dll        6.0.3790.1830       144 KB
          3/24/2005 6:07:36 PM
          C:\WINDOWS\system32 Microsoft Corporation

mstime.dll          6.0.3790.1830       523 KB
          3/24/2005 6:07:38 PM
          C:\WINDOWS\system32 Microsoft Corporation

occache.dll         6.0.3790.1830       94 KB
          3/24/2005 6:08:34 PM
          C:\WINDOWS\system32 Microsoft Corporation

proctexe.ocx        6.3.3790.1830       83 KB
          3/24/2005 6:12:26 PM
          C:\WINDOWS\system32 Intel Corporation
sendmail.dll        6.0.3790.1830       56 KB
          3/24/2005 6:13:36 PM
          C:\WINDOWS\system32 Microsoft Corporation

shdoclc.dll         6.0.3790.0          589 KB
          3/25/2003 7:00:00 AM
          C:\WINDOWS\system32 Microsoft Corporation
```


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```
shdocvw.dll         6.0.3790.1830       1,468 KB
          3/24/2005 6:13:36 PM
          C:\WINDOWS\system32 Microsoft Corporation

shfolder.dll        6.0.3790.1830       25 KB
          3/24/2005 6:13:36 PM
          C:\WINDOWS\system32 Microsoft Corporation

shlwapi.dll         6.0.3790.1830       314 KB
          3/24/2005 6:13:40 PM
          C:\WINDOWS\system32 Microsoft Corporation

tdc.ocx   1.3.0.3130          58 KB     3/25/2003
7:00:00 AM          C:\WINDOWS\system32 Microsoft
Corporation
url.dll   6.0.3790.1830       37 KB     3/24/2005
6:26:12 PM          C:\WINDOWS\system32 Microsoft
Corporation
urlmon.dll          6.0.3790.1830       673 KB
          3/24/2005 6:26:12 PM
          C:\WINDOWS\system32 Microsoft Corporation

webcheck.dll        6.0.3790.1830       273 KB
          3/24/2005 6:26:16 PM
          C:\WINDOWS\system32 Microsoft Corporation

wininet.dll         6.0.3790.1830       646 KB
          3/24/2005 6:26:18 PM
          C:\WINDOWS\system32 Microsoft Corporation


[Connectivity]

Item      Value
Connection Preference         Never dial

LAN Settings

AutoConfigProxy     wininet.dll
AutoProxyDetectMode Disabled
AutoConfigURL
Proxy     Disabled
ProxyServer
ProxyOverride

[Cache]

[ Following are sub-categories of this main category
]
[Summary]

Item      Value
Page Refresh Type   Automatic
Temporary Internet Files Folder         C:\Documents
and Settings\Administrator\Local Settings\Temporary
Internet Files
Total Disk Space    Not Available
Available Disk Space          Not Available
Maximum Cache Size  Not Available
Available Cache Size          Not Available

[List of Objects]

Program File        Status    CodeBase
No cached object information available


[Content]

[ Following are sub-categories of this main category
]
[Summary]

Item      Value
Content Advisor     Disabled

[Personal Certificates]

Issued To Issued By Validity  Signature Algorithm
No personal certificate information available


[Other People Certificates]

Issued To Issued By Validity  Signature Algorithm
No other people certificate information available


[Publishers]

Name
No publisher information available

[Security]

Zone      Security Level
My Computer         Custom
Local intranet      Custom
Trusted sites       Custom
Internet  Custom
Restricted sites    Custom
```

# Client Summary

```
System Information report written at: 09/20/05
16:49:33
System Name: BL9
[System Summary]

Item      Value
OS Name   Microsoft Windows 2000 Server
Version   5.0.2195 Service Pack 4 Build 2195
OS Manufacturer     Microsoft Corporation
System Name         BL9
System Manufacturer HP
System Model        ProLiant BL35p G1
System Type         X86-based PC
Processor x86 Family 15 Model 5 Stepping 10
AuthenticAMD ~2405 Mhz
Processor x86 Family 15 Model 5 Stepping 10
AuthenticAMD ~2405 Mhz
BIOS Version/Date   HP A03, 4/22/2005
SMBIOS Version      2.3
Windows Directory   C:\WINNT
System Directory    C:\WINNT\system32
Boot Device         \Device\Harddisk0\Partition1
Locale    United States
Hardware Abstraction Layer    Version =
"5.00.2195.6691"
User Name Not Available
Time Zone Central Daylight Time
Total Physical Memory         2,048.00 MB
Available Physical Memory     1.79 GB
Total Virtual Memory          5.85 GB
Available Virtual Memory      5.57 GB
Page File Space     3.85 GB
Page File C:\pagefile.sys

[Hardware Resources]


[Conflicts/Sharing]

Resource  Device
I/O Port 0x00000000-0x000003AF          PCI bus
I/O Port 0x00000000-0x000003AF          Direct memory
access controller

I/O Port 0x000003C0-0x000003DF          PCI bus
I/O Port 0x000003C0-0x000003DF          PCI standard
PCI-to-PCI bridge
I/O Port 0x000003C0-0x000003DF          ATI
Technologies Inc. RAGE XL PCI

Memory Address 0xF7F00000-0xF7FFFFFF    PCI bus
Memory Address 0xF7F00000-0xF7FFFFFF    PCI standard
PCI-to-PCI bridge

I/O Port 0x000000A0-0x000000A1          Motherboard
resources
I/O Port 0x000000A0-0x000000A1          Programmable
interrupt controller

IRQ 19    Standard OpenHCD USB Host Controller
IRQ 19    Standard OpenHCD USB Host Controller

Memory Address 0xA0000-0xBFFFF          PCI bus
Memory Address 0xA0000-0xBFFFF          PCI standard
PCI-to-PCI bridge
Memory Address 0xA0000-0xBFFFF          ATI
Technologies Inc. RAGE XL PCI

Memory Address 0xF5F00000-0xF7EFFFFF    PCI bus
Memory Address 0xF5F00000-0xF7EFFFFF    PCI standard
PCI-to-PCI bridge
Memory Address 0xF5F00000-0xF7EFFFFF    Base System
Device

I/O Port 0x000003B0-0x000003BB          PCI bus
I/O Port 0x000003B0-0x000003BB          PCI standard
PCI-to-PCI bridge
I/O Port 0x000003B0-0x000003BB          ATI
Technologies Inc. RAGE XL PCI
```


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```
I/O Port 0x00004000-0x00004FFF          PCI standard
PCI-to-PCI bridge
I/O Port 0x00004000-0x00004FFF          ATI
Technologies Inc. RAGE XL PCI

I/O Port 0x00000020-0x00000021          Motherboard
resources
I/O Port 0x00000020-0x00000021          Programmable
interrupt controller


[DMA]

Resource  Device    Status
DMA 7     Direct memory access controller         OK

DMA 2     Standard floppy disk controller         OK


[Forced Hardware]

Device    PNP Device ID

[I/O]

Resource  Device    Status
0x00000000-0x000003AF         PCI bus   OK
0x00000000-0x000003AF         Direct memory access
controller          OK
0x000003B0-0x000003BB         PCI bus   OK
0x000003B0-0x000003BB         PCI standard PCI-to-PCI
bridge    OK
0x000003B0-0x000003BB         ATI Technologies Inc.
RAGE XL PCI         OK
0x000003C0-0x000003DF         PCI bus   OK
0x000003C0-0x000003DF         PCI standard PCI-to-PCI
bridge    OK
0x000003C0-0x000003DF         ATI Technologies Inc.
RAGE XL PCI         OK
0x000003E0-0x00000FFF         PCI bus   OK
0x00001000-0x00004FFF         PCI bus   OK
0x00004000-0x00004FFF         PCI standard PCI-to-PCI
bridge    OK
0x00004000-0x00004FFF         ATI Technologies Inc.
RAGE XL PCI         OK
0x00004800-0x000048FF         Base System Device  OK

0x00004400-0x000044FF         Base System Device  OK

0x00000A79-0x00000A79         ISAPNP Read Data Port
          OK
0x00000279-0x00000279         ISAPNP Read Data Port
          OK
0x00000274-0x00000277         ISAPNP Read Data Port
          OK
0x00000020-0x00000021         Motherboard resources
          OK
0x00000020-0x00000021         Programmable interrupt
controller          OK
0x00000050-0x00000051         Motherboard resources
          OK
0x00000092-0x00000092         Motherboard resources
          OK
0x000000A0-0x000000A1         Motherboard resources
          OK
0x000000A0-0x000000A1         Programmable interrupt
controller          OK
0x000000F0-0x000000F1         Motherboard resources
          OK
0x00000230-0x00000233         Motherboard resources
          OK
0x00000260-0x00000267         Motherboard resources
          OK
0x000004D0-0x000004D1         Motherboard resources
          OK
0x00000800-0x0000081F         Motherboard resources
          OK
0x00000840-0x0000085F         Motherboard resources
          OK
0x00000900-0x00000903         Motherboard resources
          OK
0x00000904-0x00000907         Motherboard resources
          OK
0x00000908-0x0000090B         Motherboard resources
          OK
0x0000090C-0x0000092E         Motherboard resources
          OK
0x0000092F-0x0000092F         Motherboard resources
          OK
0x00000930-0x000009FF         Motherboard resources
          OK
0x00000C80-0x00000C87         Motherboard resources
          OK
0x00000CF9-0x00000CF9         Motherboard resources
          OK
0x00000040-0x00000043         System timer        OK

0x00000080-0x0000008F         Direct memory access
controller          OK
0x000000C0-0x000000DF         Direct memory access
controller          OK
0x00000061-0x00000061         System speaker      OK

0x00000060-0x00000060         Standard 101/102-Key or
Microsoft Natural PS/2 Keyboard         OK
0x00000064-0x00000064         Standard 101/102-Key or
Microsoft Natural PS/2 Keyboard         OK
0x0000002E-0x0000002F         Extended IO Bus     OK

0x00000220-0x00000223         Extended IO Bus     OK

0x00000240-0x0000025F         Extended IO Bus     OK

0x00000070-0x00000073         Extended IO Bus     OK

0x000002F8-0x000002FF         Communications Port
(COM2)    OK
0x000003F0-0x000003F5         Standard floppy disk
controller          OK
0x000003F7-0x000003F7         Standard floppy disk
controller          OK
0x00002000-0x0000200F         Standard Dual Channel
PCI IDE Controller  OK
0x000001F0-0x000001F7         Primary IDE Channel OK
0x000003F6-0x000003F6         Primary IDE Channel OK

0x00000170-0x00000177         Secondary IDE Channel
          OK
0x00000376-0x00000376         Secondary IDE Channel
          OK
0x00005000-0x0000FFFF         PCI bus   OK

[IRQs]

Resource  Device    Status
IRQ 9     Microsoft ACPI-Compliant System         OK

IRQ 19    Standard OpenHCD USB Host Controller    OK

IRQ 19    Standard OpenHCD USB Host Controller    OK

IRQ 5     Base System Device  OK
IRQ 7     Base System Device  OK
IRQ 0     System timer        OK
IRQ 1     Standard 101/102-Key or Microsoft Natural
PS/2 Keyboard       OK
IRQ 12    PS/2 Compatible Mouse         OK
IRQ 3     Communications Port (COM2)    OK
IRQ 6     Standard floppy disk controller         OK

IRQ 14    Primary IDE Channel OK
IRQ 24    HP NC7781 Gigabit Server Adapter        OK

IRQ 25    HP NC7781 Gigabit Server Adapter #2     OK


[Memory]

Resource  Device    Status
0xA0000-0xBFFFF     PCI bus   OK
0xA0000-0xBFFFF     PCI standard PCI-to-PCI bridge
          OK
0xA0000-0xBFFFF     ATI Technologies Inc. RAGE XL PCI
          OK
0xF5F00000-0xF7EFFFFF         PCI bus   OK
0xF5F00000-0xF7EFFFFF         PCI standard PCI-to-PCI
bridge    OK
0xF5F00000-0xF7EFFFFF         Base System Device  OK

0xF7EF0000-0xF7EF0FFF         Standard OpenHCD USB
Host Controller     OK
0xF7EE0000-0xF7EE0FFF         Standard OpenHCD USB
Host Controller     OK
0xF6000000-0xF6FFFFFF         ATI Technologies Inc.
RAGE XL PCI         OK
0xF5FF0000-0xF5FF0FFF         ATI Technologies Inc.
RAGE XL PCI         OK
0xF5FE0000-0xF5FE01FF         Base System Device  OK

0xF5FD0000-0xF5FD07FF         Base System Device  OK

0xF5FC0000-0xF5FC1FFF         Base System Device  OK

0xF7F00000-0xF7FFFFFF         PCI bus   OK
0xF7F00000-0xF7FFFFFF         PCI standard PCI-to-PCI
bridge    OK
```


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```
0xF7FF0000-0xF7FFFFFF         HP NC7781 Gigabit
Server Adapter      OK
0xF7FE0000-0xF7FEFFFF         HP NC7781 Gigabit
Server Adapter #2   OK

[Components]



[Multimedia]



[Audio Codecs]

CODEC     Manufacturer        Description
          Status    File      Version   Size
          Creation Date
c:\winnt\system32\iac25_32.ax Intel Corporation
          Indeo® audio software         OK
          C:\WINNT\system32\IAC25_32.AX 2.05.53
          195.00 KB (199,680 bytes)     12/31/1979
6:00 PM
c:\winnt\system32\msg723.acm  Microsoft Corporation
                    OK
          C:\WINNT\system32\MSG723.ACM  4.4.3385
          106.77 KB (109,328 bytes)     4/22/2005
12:33 AM
c:\winnt\system32\lhacm.acm   Microsoft Corporation
                    OK
          C:\WINNT\system32\LHACM.ACM   4.4.3385
          33.27 KB (34,064 bytes)       4/22/2005
12:33 AM
c:\winnt\system32\tssoft32.acm          DSP GROUP,
INC.                OK
          C:\WINNT\system32\TSSOFT32.ACM
          1.01      9.27 KB (9,488 bytes)
          12/31/1979 6:00 PM
c:\winnt\system32\msgsm32.acm Microsoft Corporation
                    OK
          C:\WINNT\system32\MSGSM32.ACM 5.00.2134.1
          22.27 KB (22,800 bytes)       12/31/1979
6:00 PM
c:\winnt\system32\msg711.acm  Microsoft Corporation
                    OK
          C:\WINNT\system32\MSG711.ACM  5.00.2134.1
          10.27 KB (10,512 bytes)       12/31/1979
6:00 PM
c:\winnt\system32\msadp32.acm Microsoft Corporation
                    OK
          C:\WINNT\system32\MSADP32.ACM 5.00.2134.1
          14.77 KB (15,120 bytes)       12/31/1979
6:00 PM
c:\winnt\system32\imaadp32.acm          Microsoft
Corporation                 OK
          C:\WINNT\system32\IMAADP32.ACM
          5.00.2195.6612      16.27 KB (16,656 bytes)
          8/30/2005 3:19 PM

[Video Codecs]
```

```
CODEC     Manufacturer        Description
          Status    File      Version   Size
          Creation Date
c:\winnt\system32\ir50_32.dll Intel Corporation
          Indeo® video 5.10   OK
          C:\WINNT\system32\IR50_32.DLL
          R.5.10.15.2.55      737.50 KB (755,200
bytes)    12/31/1979 6:00 PM
c:\winnt\system32\msh263.drv  Microsoft Corporation
                    OK
          C:\WINNT\system32\MSH263.DRV  4.4.3385
          252.27 KB (258,320 bytes)     4/22/2005
12:33 AM
c:\winnt\system32\msh261.drv  Microsoft Corporation
                    OK
          C:\WINNT\system32\MSH261.DRV  4.4.3385
          163.77 KB (167,696 bytes)     4/22/2005
12:33 AM
c:\winnt\system32\msvidc32.dll          Microsoft
Corporation                 OK
          C:\WINNT\system32\MSVIDC32.DLL
          5.00.2134.1         27.27 KB (27,920 bytes)
          12/31/1979 6:00 PM
c:\winnt\system32\ir32_32.dll Intel(R) Corporation
                    OK
          C:\WINNT\system32\IR32_32.DLL Not Available
          194.50 KB (199,168 bytes)     12/31/1979
6:00 PM
c:\winnt\system32\msrle32.dll Microsoft Corporation
                    OK
          C:\WINNT\system32\MSRLE32.DLL
          5.00.2195.6612      10.77 KB (11,024 bytes)
          8/30/2005 3:20 PM
c:\winnt\system32\iccvid.dll  Radius Inc.
          OK        C:\WINNT\system32\ICCVID.DLL
          1.10.0.6  108.00 KB (110,592 bytes)
          12/31/1979 6:00 PM

[CD-ROM]

Item      Value

[Sound Device]

Item      Value

[Display]

Item      Value
Name      ATI Technologies Inc. RAGE XL PCI
PNP Device ID
          PCI\VEN_1002&DEV_4752&SUBSYS_001E0E11&REV_2
7\4&12365AD0&0&1818
Adapter Type        ATI RAGE XL PCI, ATI Technologies
Inc. compatible
Adapter Description ATI Technologies Inc. RAGE XL PCI

Adapter RAM         8.00 MB (8,388,608 bytes)
Installed Drivers   atidrab.dll
Driver Version      5.00.2179.1
INF File  display.inf (atirage3 section)
Color Planes        1
Color Table Entries 65536
```

```
Resolution          800 x 600 x 60 hertz
Bits/Pixel          16
Memory Address      0xF6000000-0xF6FFFFFF
I/O Port  0x00004000-0x00004FFF
Memory Address      0xF5FF0000-0xF5FF0FFF
I/O Port  0x000003B0-0x000003BB
I/O Port  0x000003C0-0x000003DF
Memory Address      0xA0000-0xBFFFF
Driver    c:\winnt\system32\drivers\atimpab.sys
(5.00.2179.1, 69.95 KB (71,632 bytes), 4/21/2005 7:27
PM)

[Infrared]

Item      Value

[Input]



[Keyboard]

Item      Value
Description         Standard 101/102-Key or Microsoft
Natural PS/2 Keyboard
Name      Enhanced (101- or 102-key)
Layout    00000409
PNP Device ID       ACPI\PNP0303\4&1C7DEDE8&0
Number of Function Keys       12
I/O Port  0x00000060-0x00000060
I/O Port  0x00000064-0x00000064
IRQ Channel         IRQ 1
Driver    c:\winnt\system32\drivers\i8042prt.sys
(5.00.2195.6655, 45.89 KB (46,992 bytes), 12/31/1979
6:00 PM)

[Pointing Device]

Item      Value
Hardware Type       PS/2 Compatible Mouse
Number of Buttons   2
Status    OK
PNP Device ID       ACPI\PNP0F13\4&1C7DEDE8&0
Power Management Supported    No
Double Click Threshold        6
Handedness          Right Handed Operation
IRQ Channel         IRQ 12
Driver    c:\winnt\system32\drivers\i8042prt.sys
(5.00.2195.6655, 45.89 KB (46,992 bytes), 12/31/1979
6:00 PM)

[Modem]

Item      Value

[Network]



[Adapter]

Item      Value
```


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```
Name      [00000000] HP NC7781 Gigabit Server Adapter

Adapter Type        Ethernet 802.3
Product Type        HP NC7781 Gigabit Server Adapter

Installed Yes
PNP Device ID
         PCI\VEN_14E4&DEV_16C7&SUBSYS_00CB0E11&REV_1
0\4&358380CC&0&0838
Last Reset          9/20/2005 11:40 AM
Index     0
Service Name        q57w2k
IP Address          130.168.41.9, 130.100.41.9
IP Subnet 255.255.0.0, 255.255.0.0
Default IP Gateway  Not Available
DHCP Enabled        No
DHCP Server         Not Available
DHCP Lease Expires  Not Available
DHCP Lease Obtained Not Available
MAC Address         00:12:79:94:62:B2
Memory Address      0xF7FF0000-0xF7FFFFFF
IRQ Channel         IRQ 24
Driver    c:\winnt\system32\drivers\q57w2k.sys
(7.40.0.0, 111.38 KB (114,051 bytes), 12/31/1979 6:00
PM)

Name      [00000001] HP NC7781 Gigabit Server Adapter

Adapter Type        Ethernet 802.3
Product Type        HP NC7781 Gigabit Server Adapter

Installed Yes
PNP Device ID
         PCI\VEN_14E4&DEV_16C7&SUBSYS_00CB0E11&REV_1
0\4&358380CC&0&1038
Last Reset          9/20/2005 11:40 AM
Index     1
Service Name        q57w2k
IP Address          130.172.12.9
IP Subnet 255.255.0.0
Default IP Gateway  Not Available
DHCP Enabled        No
DHCP Server         Not Available
DHCP Lease Expires  Not Available
DHCP Lease Obtained Not Available
MAC Address         00:12:79:94:62:AC
Memory Address      0xF7FE0000-0xF7FEFFFF
IRQ Channel         IRQ 25
Driver    c:\winnt\system32\drivers\q57w2k.sys
(7.40.0.0, 111.38 KB (114,051 bytes), 12/31/1979 6:00
PM)

Name      [00000002] RAS Async Adapter
Adapter Type        Not Available
Product Type        RAS Async Adapter
Installed Yes
PNP Device ID       Not Available
Last Reset          9/20/2005 11:40 AM
Index     2
Service Name        AsyncMac
IP Address          Not Available
IP Subnet Not Available
Default IP Gateway  Not Available
DHCP Enabled        No
DHCP Server         Not Available
DHCP Lease Expires  Not Available
DHCP Lease Obtained Not Available
MAC Address         Not Available

Name      [00000003] WAN Miniport (L2TP)
Adapter Type        Not Available
Product Type        WAN Miniport (L2TP)
Installed Yes
PNP Device ID       ROOT\MS_L2TPMINIPORT\0000
Last Reset          9/20/2005 11:40 AM
Index     3
Service Name        Rasl2tp
IP Address          Not Available
IP Subnet Not Available
Default IP Gateway  Not Available
DHCP Enabled        No
DHCP Server         Not Available
DHCP Lease Expires  Not Available
DHCP Lease Obtained Not Available
MAC Address         Not Available
Driver    c:\winnt\system32\drivers\rasl2tp.sys
(5.00.2195.6655, 50.89 KB (52,112 bytes), 12/31/1979
6:00 PM)

Name      [00000004] WAN Miniport (PPTP)
Adapter Type        Wide Area Network (WAN)
Product Type        WAN Miniport (PPTP)
Installed Yes
PNP Device ID       ROOT\MS_PPTPMINIPORT\0000
Last Reset          9/20/2005 11:40 AM
Index     4
Service Name        PptpMiniport
IP Address          Not Available
IP Subnet Not Available
Default IP Gateway  Not Available
DHCP Enabled        No
DHCP Server         Not Available
DHCP Lease Expires  Not Available
DHCP Lease Obtained Not Available
MAC Address         50:50:54:50:30:30
Driver    c:\winnt\system32\drivers\raspptp.sys
(5.00.2195.6711, 47.33 KB (48,464 bytes), 12/31/1979
6:00 PM)

Name      [00000005] Direct Parallel
Adapter Type        Not Available
Product Type        Direct Parallel
Installed Yes
PNP Device ID       ROOT\MS_PTIMINIPORT\0000
Last Reset          9/20/2005 11:40 AM
Index     5
Service Name        Raspti
IP Address          Not Available
IP Subnet Not Available
Default IP Gateway  Not Available
DHCP Enabled        No
DHCP Server         Not Available
DHCP Lease Expires  Not Available
DHCP Lease Obtained Not Available
MAC Address         Not Available
Driver    c:\winnt\system32\drivers\raspti.sys
(5.00.2146.1, 16.48 KB (16,880 bytes), 12/31/1979
6:00 PM)

Name      [00000006] WAN Miniport (IP)
Adapter Type        Not Available
Product Type        WAN Miniport (IP)
Installed Yes
PNP Device ID       ROOT\MS_NDISWANIP\0000
Last Reset          9/20/2005 11:40 AM
Index     6
Service Name        NdisWan
IP Address          Not Available
IP Subnet Not Available
Default IP Gateway  Not Available
DHCP Enabled        No
DHCP Server         Not Available
DHCP Lease Expires  Not Available
DHCP Lease Obtained Not Available
MAC Address         Not Available
Driver    c:\winnt\system32\drivers\ndiswan.sys
(5.00.2195.6699, 91.17 KB (93,360 bytes), 12/31/1979
6:00 PM)

[Protocol]

Item      Value
Name      MSAFD Tcpip [TCP/IP]
Connectionless Service        No
Guarantees Delivery Yes
Guarantees Sequencing         Yes
Maximum Address Size          16 bytes
Maximum Message Size          0 bytes
Message Oriented    No
Minimum Address Size          16 bytes
Pseudo Stream Oriented        No
Supports Broadcasting         No
Supports Connect Data         No
Supports Disconnect Data      No
Supports Encryption No
Supports Expedited Data       Yes
Supports Graceful Closing     Yes
Supports Guaranteed Bandwidth No
Supports Multicasting         No

Name      MSAFD Tcpip [UDP/IP]
Connectionless Service        Yes
Guarantees Delivery No
Guarantees Sequencing         No
Maximum Address Size          16 bytes
Maximum Message Size          63.93 KB (65,467 bytes)

Message Oriented    Yes
Minimum Address Size          16 bytes
Pseudo Stream Oriented        No
Supports Broadcasting         Yes
Supports Connect Data         No
Supports Disconnect Data      No
Supports Encryption No
Supports Expedited Data       No
Supports Graceful Closing     No
Supports Guaranteed Bandwidth No
Supports Multicasting         Yes
```


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```
Name      RSVP UDP Service Provider
Connectionless Service        Yes
Guarantees Delivery No
Guarantees Sequencing         No
Maximum Address Size          16 bytes
Maximum Message Size          63.93 KB (65,467 bytes)

Message Oriented    Yes
Minimum Address Size          16 bytes
Pseudo Stream Oriented        No
Supports Broadcasting         Yes
Supports Connect Data         No
Supports Disconnect Data      No
Supports Encryption Yes
Supports Expedited Data       No
Supports Graceful Closing     No
Supports Guaranteed Bandwidth No
Supports Multicasting         Yes

Name      RSVP TCP Service Provider
Connectionless Service        No
Guarantees Delivery Yes
Guarantees Sequencing         Yes
Maximum Address Size          16 bytes
Maximum Message Size          0 bytes
Message Oriented    No
Minimum Address Size          16 bytes
Pseudo Stream Oriented        No
Supports Broadcasting         No
Supports Connect Data         No
Supports Disconnect Data      No
Supports Encryption Yes
Supports Expedited Data       Yes
Supports Graceful Closing     Yes
Supports Guaranteed Bandwidth No
Supports Multicasting         No

Name      MSAFD NetBIOS
[\Device\NetBT_Tcpip_{577FEA82-49C8-4DB9-BC71-
1B41BD90DFB5}] SEQPACKET 0
Connectionless Service        No
Guarantees Delivery Yes
Guarantees Sequencing         Yes
Maximum Address Size          20 bytes
Maximum Message Size          62.50 KB (64,000 bytes)

Message Oriented    Yes
Minimum Address Size          20 bytes
Pseudo Stream Oriented        No
Supports Broadcasting         No
Supports Connect Data         No
Supports Disconnect Data      No
Supports Encryption No
Supports Expedited Data       No
Supports Graceful Closing     No
Supports Guaranteed Bandwidth No
Supports Multicasting         No

Name      MSAFD NetBIOS
[\Device\NetBT_Tcpip_{577FEA82-49C8-4DB9-BC71-
1B41BD90DFB5}] DATAGRAM 0
Connectionless Service        Yes
Guarantees Delivery No
Guarantees Sequencing         No
Maximum Address Size          20 bytes
Maximum Message Size          62.50 KB (64,000 bytes)

Message Oriented    Yes
Minimum Address Size          20 bytes
Pseudo Stream Oriented        No
Supports Broadcasting         Yes
Supports Connect Data         No
Supports Disconnect Data      No
Supports Encryption No
Supports Expedited Data       No
Supports Graceful Closing     No
Supports Guaranteed Bandwidth No
Supports Multicasting         No

Name      MSAFD NetBIOS
[\Device\NetBT_Tcpip_{8040004A-5E18-41BB-98EB-
4E9BDB3AE397}] SEQPACKET 1
Connectionless Service        No
Guarantees Delivery Yes
Guarantees Sequencing         Yes
Maximum Address Size          20 bytes
Maximum Message Size          62.50 KB (64,000 bytes)

Message Oriented    Yes
Minimum Address Size          20 bytes
Pseudo Stream Oriented        No
Supports Broadcasting         No
Supports Connect Data         No
Supports Disconnect Data      No
Supports Encryption No
Supports Expedited Data       No
Supports Graceful Closing     No
Supports Guaranteed Bandwidth No
Supports Multicasting         No

Name      MSAFD NetBIOS
[\Device\NetBT_Tcpip_{8040004A-5E18-41BB-98EB-
4E9BDB3AE397}] DATAGRAM 1
Connectionless Service        Yes
Guarantees Delivery No
Guarantees Sequencing         No
Maximum Address Size          20 bytes
Maximum Message Size          62.50 KB (64,000 bytes)

Message Oriented    Yes
Minimum Address Size          20 bytes
Pseudo Stream Oriented        No
Supports Broadcasting         Yes
Supports Connect Data         No
Supports Disconnect Data      No
Supports Encryption No
Supports Expedited Data       No
Supports Graceful Closing     No
Supports Guaranteed Bandwidth No
Supports Multicasting         No

Name      MSAFD NetBIOS
[\Device\NetBT_Tcpip_{4D4F36E4-4D54-4382-BC49-
E2ACA5AF6E17}] SEQPACKET 2
Connectionless Service        No
Guarantees Delivery Yes
Guarantees Sequencing         Yes
Maximum Address Size          20 bytes
Maximum Message Size          62.50 KB (64,000 bytes)

Message Oriented    Yes
Minimum Address Size          20 bytes
Pseudo Stream Oriented        No
Supports Broadcasting         No
Supports Connect Data         No
Supports Disconnect Data      No
Supports Encryption No
Supports Expedited Data       No
Supports Graceful Closing     No
Supports Guaranteed Bandwidth No
Supports Multicasting         No

Name      MSAFD NetBIOS
[\Device\NetBT_Tcpip_{4D4F36E4-4D54-4382-BC49-
E2ACA5AF6E17}] DATAGRAM 2
Connectionless Service        Yes
Guarantees Delivery No
Guarantees Sequencing         No
Maximum Address Size          20 bytes
Maximum Message Size          62.50 KB (64,000 bytes)

Message Oriented    Yes
Minimum Address Size          20 bytes
Pseudo Stream Oriented        No
Supports Broadcasting         Yes
Supports Connect Data         No
Supports Disconnect Data      No
Supports Encryption No
Supports Expedited Data       No
Supports Graceful Closing     No
Supports Guaranteed Bandwidth No
Supports Multicasting         No

Name      MSAFD NetBIOS
[\Device\NetBT_Tcpip_{3C1AE3A9-4AAB-470A-81DC-
93A448114C14}] SEQPACKET 3
Connectionless Service        No
Guarantees Delivery Yes
Guarantees Sequencing         Yes
Maximum Address Size          20 bytes
Maximum Message Size          62.50 KB (64,000 bytes)

Message Oriented    Yes
Minimum Address Size          20 bytes
Pseudo Stream Oriented        No
Supports Broadcasting         No
Supports Connect Data         No
Supports Disconnect Data      No
Supports Encryption No
Supports Expedited Data       No
Supports Graceful Closing     No
Supports Guaranteed Bandwidth No
Supports Multicasting         No

Name      MSAFD NetBIOS
[\Device\NetBT_Tcpip_{3C1AE3A9-4AAB-470A-81DC-
93A448114C14}] DATAGRAM 3
Connectionless Service        Yes
```


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```
Guarantees Delivery No
Guarantees Sequencing         No
Maximum Address Size          20 bytes
Maximum Message Size          62.50 KB (64,000 bytes)

Message Oriented    Yes
Minimum Address Size          20 bytes
Pseudo Stream Oriented        No
Supports Broadcasting         Yes
Supports Connect Data         No
Supports Disconnect Data      No
Supports Encryption No
Supports Expedited Data       No
Supports Graceful Closing     No
Supports Guaranteed Bandwidth No
Supports Multicasting         No

[WinSock]

Item      Value
File      c:\winnt\system32\winsock.dll
Size      2.80 KB (2,864 bytes)
Version   3.10

File      c:\winnt\system32\wsock32.dll
Size      21.27 KB (21,776 bytes)
Version   5.00.2195.6603

[Ports]



[Serial]

Item      Value
Name      Communications Port (COM2)
Status    OK
PNP Device ID       ACPI\PNP0501\1
Maximum Input Buffer Size     0
Maximum Output Buffer Size    No
Settable Baud Rate  Yes
Settable Data Bits  Yes
Settable Flow Control         Yes
Settable Parity     Yes
Settable Parity Check         Yes
Settable Stop Bits  Yes
Settable RLSD       Yes
Supports RLSD       Yes
Supports 16 Bit Mode          No
Supports Special Characters   No
Baud Rate 9600
Bits/Byte 8
Stop Bits 1
Parity    None
Busy      No
Abort Read/Write on Error     No
Binary Mode Enabled Yes
Continue XMit on XOff         No
CTS Outflow Control No
Discard NULL Bytes  No
DSR Outflow Control 0
DSR Sensitivity     0
DTR Flow Control Type         Enable
EOF Character       0
Error Replace Character       0
Error Replacement Enabled     No
Event Character     0
Parity Check Enabled          No
RTS Flow Control Type         Enable
XOff Character      19
XOffXMit Threshold  512
XOn Character       17
XOnXMit Threshold   2048
XOnXOff InFlow Control        0
XOnXOff OutFlow Control       0
IRQ Channel         IRQ 3
I/O Port  0x000002F8-0x000002FF
Driver    c:\winnt\system32\drivers\serial.sys
(5.00.2195.6655, 61.27 KB (62,736 bytes), 12/31/1979
6:00 PM)

[Parallel]

Item      Value

[Storage]



[Drives]

Item      Value
Drive     C:
Description         Local Fixed Disk
Compressed          No
File System         NTFS
Size      55.88 GB (60,003,869,184 bytes)
Free Space          9.66 GB (10,367,108,096 bytes)

Volume Name
Volume Serial Number          9C8251F6

[Disks]

Item      Value
Description         Disk drive
Manufacturer        (Standard disk drives)
Model     FUJITSU MHT2060AS
Bytes/Sector        512
Media Loaded        Yes
Media Type          Fixed hard disk
Partitions          1
SCSI Bus  0
SCSI Logical Unit   0
SCSI Port 0
SCSI Target ID      0
Sectors/Track       63
Size      55.89 GB (60,011,642,880 bytes)
Total Cylinders     7,752
Total Sectors       117,210,240
Total Tracks        1,860,480
Tracks/Cylinder     240
Partition Disk #0, Partition #0
Partition Size      55.88 GB (60,003,869,184 bytes)

Partition Starting Offset     32,256 bytes
Description         Disk drive
Manufacturer        (Standard disk drives)
Model     FUJITSU MHT2060AS
Bytes/Sector        512
Media Loaded        Yes
Media Type          Fixed hard disk
Partitions          0
SCSI Bus  0
SCSI Logical Unit   0
SCSI Port 0
SCSI Target ID      1
Sectors/Track       63
Size      55.89 GB (60,011,642,880 bytes)
Total Cylinders     7,752
Total Sectors       117,210,240
Total Tracks        1,860,480
Tracks/Cylinder     240

[SCSI]

Item      Value

[IDE]

Item      Value
Name      Standard Dual Channel PCI IDE Controller

Manufacturer        (Standard IDE ATA/ATAPI
controllers)
Status    OK
PNP Device ID
          PCI\VEN_1022&DEV_7469&SUBSYS_32040E11&REV_0
3\3&20FEA912&0&21
I/O Port  0x00002000-0x0000200F
Driver    c:\winnt\system32\drivers\pciide.sys
(5.00.2195.6655, 3.02 KB (3,088 bytes), 12/31/1979
6:00 PM)

Name      Primary IDE Channel
Manufacturer        (Standard IDE ATA/ATAPI
controllers)
Status    OK
PNP Device ID       PCIIDE\IDECHANNEL\4&21637DBD&0&0

I/O Port  0x000001F0-0x000001F7
I/O Port  0x000003F6-0x000003F6
IRQ Channel         IRQ 14
Driver    c:\winnt\system32\drivers\atapi.sys
(5.00.2195.6699, 84.64 KB (86,672 bytes), 12/31/1979
6:00 PM)

Name      Secondary IDE Channel
Manufacturer        (Standard IDE ATA/ATAPI
controllers)
Status    OK
PNP Device ID       PCIIDE\IDECHANNEL\4&21637DBD&0&1

I/O Port  0x00000170-0x00000177
I/O Port  0x00000376-0x00000376
Driver    c:\winnt\system32\drivers\atapi.sys
(5.00.2195.6699, 84.64 KB (86,672 bytes), 12/31/1979
6:00 PM)
```


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```
[Printing]

Name      Driver    Port Name Server Name

[Problem Devices]

Device    PNP Device ID       Error Code
Base System Device
          PCI\VEN_0E11&DEV_B203&SUBSYS_B2060E11&REV_0
1\4&12365AD0&0&2018 This device is disabled because
the firmware of the device did not give it the
required resources.
Base System Device
          PCI\VEN_0E11&DEV_B204&SUBSYS_B2060E11&REV_0
1\4&12365AD0&0&2218 This device is disabled because
the firmware of the device did not give it the
required resources.
Other PCI Bridge Device
          PCI\VEN_1022&DEV_746B&SUBSYS_32050E11&REV_0
5\3&20FEA912&0&23   This device is disabled because
the firmware of the device did not give it the
required resources.
System Interrupt Controller
          PCI\VEN_1022&DEV_7451&SUBSYS_00000000&REV_0
1\3&33B859B7&0&39   This device is disabled because
the firmware of the device did not give it the
required resources.
System Interrupt Controller
          PCI\VEN_1022&DEV_7451&SUBSYS_00000000&REV_0
1\3&33B859B7&0&41   This device is disabled because
the firmware of the device did not give it the
required resources.

[USB]

Device    PNP Device ID
Standard OpenHCD USB Host Controller
          PCI\VEN_1022&DEV_7464&SUBSYS_32020E11&REV_0
B\4&12365AD0&0&0018
USB Root Hub        USB\ROOT_HUB\5&9B4CD91&0
Standard OpenHCD USB Host Controller
          PCI\VEN_1022&DEV_7464&SUBSYS_32020E11&REV_0
B\4&12365AD0&0&0118
USB Root Hub        USB\ROOT_HUB\5&194CD4CC&0

[Software Environment]



[System Drivers]

Name      Description         File      Type
          Started   Start Mode          State
          Status    Error Control       Accept Pause
          Accept Stop
abiosdsk  Abiosdsk  Not Available       Kernel Driver
          No        Disabled  Stopped   OK
          Ignore    No        No
abp480n5  abp480n5  Not Available       Kernel Driver
          No        Disabled  Stopped   OK
          Normal    No        No

acpi      Microsoft ACPI Driver
          c:\winnt\system32\drivers\acpi.sys
          Kernel Driver       Yes       Boot
          Running   OK        Normal    No        Yes

acpiec    ACPIEC
          c:\winnt\system32\drivers\acpiec.sys
          Kernel Driver       No        Disabled
          Stopped   OK        Normal    No        No

adpu160m  adpu160m
          c:\winnt\system32\drivers\adpu160m.sys
          Kernel Driver       Yes       Boot
          Running   OK        Normal    No        Yes

afd       AFD Networking Support Environment
          c:\winnt\system32\drivers\afd.sys
          Kernel Driver       Yes       Auto
          Running   OK        Normal    No        Yes

aha154x   Aha154x   Not Available       Kernel Driver
          No        Disabled  Stopped   OK
          Normal    No        No
aic116x   aic116x   Not Available       Kernel Driver
          No        Disabled  Stopped   OK
          Normal    No        No
aic78u2   aic78u2   Not Available       Kernel Driver
          No        Disabled  Stopped   OK
          Normal    No        No
aic78xx   aic78xx   Not Available       Kernel Driver
          No        Disabled  Stopped   OK
          Normal    No        No
alkernel  Altiris Kernel Driver
          c:\winnt\system32\drivers\alkernel.sys
          Kernel Driver       Yes       Manual
          Running   OK        Normal    No        Yes

ami0nt    ami0nt    Not Available       Kernel Driver
          No        Disabled  Stopped   OK
          Normal    No        No
amsint    amsint    Not Available       Kernel Driver
          No        Disabled  Stopped   OK
          Normal    No        No
asc       asc       Not Available       Kernel Driver
          No        Disabled  Stopped   OK
          Normal    No        No
asc3350p  asc3350p  Not Available       Kernel Driver
          No        Disabled  Stopped   OK
          Normal    No        No
asc3550   asc3550   Not Available       Kernel Driver
          No        Disabled  Stopped   OK
          Normal    No        No
asyncmac  RAS Asynchronous Media Driver
          c:\winnt\system32\drivers\asyncmac.sys
          Kernel Driver       No        Manual
          Stopped   OK        Normal    No        No

atapi     Standard IDE/ESDI Hard Disk Controller
          c:\winnt\system32\drivers\atapi.sys
          Kernel Driver       Yes       Boot
          Running   OK        Normal    No        Yes

atdisk    Atdisk    Not Available       Kernel Driver
          No        Disabled  Stopped   OK
          Ignore    No        No
atirage3  atirage3
          c:\winnt\system32\drivers\atimpab.sys
          Kernel Driver       Yes       Manual
          Running   OK        Ignore    No        Yes

atmarpc   ATM ARP Client Protocol
          c:\winnt\system32\drivers\atmarpc.sys
          Kernel Driver       No        Manual
          Stopped   OK        Normal    No        No

audstub   Audio Stub Driver
          c:\winnt\system32\drivers\audstub.sys
          Kernel Driver       Yes       Manual
          Running   OK        Normal    No        Yes

beep      Beep
          c:\winnt\system32\drivers\beep.sys
          Kernel Driver       Yes       System
          Running   OK        Normal    No        Yes

buslogic  BusLogic  Not Available       Kernel Driver
          No        Disabled  Stopped   OK
          Normal    No        No
cd20xrnt  cd20xrnt  Not Available       Kernel Driver
          No        Disabled  Stopped   OK
          Normal    No        No
cdaudio   Cdaudio
          c:\winnt\system32\drivers\cdaudio.sys
          Kernel Driver       No        System
          Stopped   OK        Ignore    No        No

cdfs      Cdfs
          c:\winnt\system32\drivers\cdfs.sys
          File System Driver  No        Disabled
          Stopped   OK        Normal    No        No

cdrom     CD-ROM Driver
          c:\winnt\system32\drivers\cdrom.sys
          Kernel Driver       No        System
          Stopped   OK        Normal    No        No

changer   Changer   Not Available       Kernel Driver
          No        System    Stopped   OK
          Ignore    No        No
cpqarray  Cpqarray  Not Available       Kernel Driver
          No        Disabled  Stopped   OK
          Normal    No        No
cpqarry2  cpqarry2
          c:\winnt\system32\drivers\cpqarry2.sys
          Kernel Driver       Yes       Boot
          Running   OK        Normal    No        Yes

cpqasm2   HP ProLiant iLO Advanced System Management
Controller
          c:\winnt\system32\drivers\cpqasm2.sys
          Kernel Driver       No        Manual
          Stopped   OK        Normal    No        No

cpqcissm  cpqcissm
          c:\winnt\system32\drivers\cpqcissm.sys
```


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          Kernel Driver       Yes       Boot
          Running   OK        Normal    No        Yes

cpqfcalm  cpqfcalm  Not Available       Kernel Driver
          No        Disabled  Stopped   OK
          Normal    No        No
cpqfws2e  cpqfws2e  Not Available       Kernel Driver
          No        Disabled  Stopped   OK
          Normal    No        No
cqdetect  Compaq Hardware Detection Service
          c:\winnt\system32\drivers\cqdetect.sys
          Kernel Driver       No        Manual
          Stopped   OK        Normal    No        No

dac960nt  dac960nt  Not Available       Kernel Driver
          No        Disabled  Stopped   OK
          Normal    No        No
deckzpsx  deckzpsx  Not Available       Kernel Driver
          No        Disabled  Stopped   OK
          Normal    No        No
dfsdriver DfsDriver c:\winnt\system32\drivers\dfs.sys
          File System Driver  Yes       Boot
          Running   OK        Normal    No        Yes

disk      Disk Driver
          c:\winnt\system32\drivers\disk.sys
          Kernel Driver       Yes       Boot
          Running   OK        Normal    No        Yes

diskperf  Diskperf
          c:\winnt\system32\drivers\diskperf.sys
          Kernel Driver       Yes       Boot
          Running   OK        Normal    No        Yes

dmboot    dmboot
          c:\winnt\system32\drivers\dmboot.sys
          Kernel Driver       No        Disabled
          Stopped   OK        Normal    No        No

dmio      Logical Disk Manager Driver
          c:\winnt\system32\drivers\dmio.sys
          Kernel Driver       Yes       Boot
          Running   OK        Normal    No        Yes

dmload    dmload
          c:\winnt\system32\drivers\dmload.sys
          Kernel Driver       Yes       Boot
          Running   OK        Normal    No        Yes

efs       EFS       c:\winnt\system32\drivers\efs.sys
          File System Driver  Yes       Disabled
          Running   OK        Normal    No        Yes

fastfat   Fastfat
          c:\winnt\system32\drivers\fastfat.sys
          File System Driver  No        Disabled
          Stopped   OK        Normal    No        No

fd16_700  Fd16_700  Not Available       Kernel Driver
          No        Disabled  Stopped   OK
          Normal    No        No
fdc       Floppy Disk Controller Driver
          c:\winnt\system32\drivers\fdc.sys
          Kernel Driver       Yes       Manual
          Running   OK        Normal    No        Yes

fips      Fips
          c:\winnt\system32\drivers\fips.sys
          Kernel Driver       Yes       Auto
          Running   OK        Normal    No        Yes

fireport  fireport  Not Available       Kernel Driver
          No        Disabled  Stopped   OK
          Normal    No        No
flashpnt  flashpnt  Not Available       Kernel Driver
          No        Disabled  Stopped   OK
          Normal    No        No
flpydisk  Flpydisk
          c:\winnt\system32\drivers\flpydisk.sys
          Kernel Driver       No        System
          Stopped   OK        Ignore    No        No

ftdisk    Volume Manager Driver
          c:\winnt\system32\drivers\ftdisk.sys
          Kernel Driver       Yes       Boot
          Running   OK        Normal    No        Yes

gpc       Generic Packet Classifier
          c:\winnt\system32\drivers\msgpc.sys
          Kernel Driver       Yes       Manual
          Running   OK        Normal    No        Yes

hidusb    Microsoft HID Class Driver
          c:\winnt\system32\drivers\hidusb.sys
          Kernel Driver       No        Auto
          Stopped   OK        Ignore    No        No

i8042prt  i8042 Keyboard and PS/2 Mouse Port Driver
          c:\winnt\system32\drivers\i8042prt.sys
          Kernel Driver       Yes       System
          Running   OK        Normal    No        Yes

ini910u   ini910u   Not Available       Kernel Driver
          No        Disabled  Stopped   OK
          Normal    No        No
intelide  IntelIde  Not Available       Kernel Driver
          No        Disabled  Stopped   OK
          Normal    No        No
ipfilterdriver      IP Traffic Filter Driver
          c:\winnt\system32\drivers\ipfltdrv.sys
          Kernel Driver       No        Manual
          Stopped   OK        Normal    No        No

ipinip    IP in IP Tunnel Driver
          c:\winnt\system32\drivers\ipinip.sys
          Kernel Driver       No        Manual
          Stopped   OK        Normal    No        No

ipnat     IP Network Address Translator
          c:\winnt\system32\drivers\ipnat.sys
          Kernel Driver       No        Manual
          Stopped   OK        Normal    No        No

ipsec     IPSEC driver
          c:\winnt\system32\drivers\ipsec.sys
          Kernel Driver       Yes       Manual
          Running   OK        Normal    No        Yes

ipsraidn  ipsraidn  Not Available       Kernel Driver
          No        Disabled  Stopped   OK
          Normal    No        No
irenum    IR Enumerator Service
          c:\winnt\system32\drivers\irenum.sys
          Kernel Driver       No        Manual
          Stopped   OK        Normal    No        No

isapnp    PnP ISA/EISA Bus Driver
          c:\winnt\system32\drivers\isapnp.sys
          Kernel Driver       Yes       Boot
          Running   OK        Critical  No        Yes

kbdclass  Keyboard Class Driver
          c:\winnt\system32\drivers\kbdclass.sys
          Kernel Driver       Yes       System
          Running   OK        Normal    No        Yes

kbdhid    Keyboard HID Driver
          c:\winnt\system32\drivers\kbdhid.sys
          Kernel Driver       No        System
          Stopped   OK        Ignore    No        No

ksecdd    KSecDD
          c:\winnt\system32\drivers\ksecdd.sys
          Kernel Driver       Yes       Boot
          Running   OK        Normal    No        Yes

lbrtfdc   lbrtfdc   Not Available       Kernel Driver
          No        System    Stopped   OK
          Ignore    No        No
lp6nds35  lp6nds35  Not Available       Kernel Driver
          No        Disabled  Stopped   OK
          Normal    No        No
lpxftr    lpxftr
          c:\winnt\system32\drivers\lpxftr.sys
          Kernel Driver       Yes       Boot
          Running   OK        Normal    No        Yes

lpxnds    lpxnds
          c:\winnt\system32\drivers\lpxnds.sys
          Kernel Driver       No        Disabled
          Stopped   OK        Normal    No        No

lsicsb6   lsicsb6
          c:\winnt\system32\drivers\lsicsb6.sys
          Kernel Driver       Yes       Boot
          Running   OK        Normal    No        Yes

megaide   megaide
          c:\winnt\system32\drivers\megaide.sys
          Kernel Driver       No        Disabled
          Stopped   OK        Normal    No        No

mnmdd     mnmdd
          c:\winnt\system32\drivers\mnmdd.sys
          Kernel Driver       Yes       System
          Running   OK        Ignore    No        Yes

modem     Modem
          c:\winnt\system32\drivers\modem.sys
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          Kernel Driver       No        Manual
          Stopped   OK        Ignore    No        No

mouclass  Mouse Class Driver
          c:\winnt\system32\drivers\mouclass.sys
          Kernel Driver       Yes       System
          Running   OK        Normal    No        Yes

mouhid    Mouse HID Driver
          c:\winnt\system32\drivers\mouhid.sys
          Kernel Driver       No        Manual
          Stopped   OK        Ignore    No        No

mountmgr  MountMgr
          c:\winnt\system32\drivers\mountmgr.sys
          Kernel Driver       Yes       Boot
          Running   OK        Normal    No        Yes

mraid35x  mraid35x  Not Available       Kernel Driver
          No        Disabled  Stopped   OK
          Normal    No        No
mrxsmb    MRXSMB
          c:\winnt\system32\drivers\mrxsmb.sys
          File System Driver  Yes       System
          Running   OK        Normal    No        Yes

msfs      Msfs
          c:\winnt\system32\drivers\msfs.sys
          File System Driver  Yes       System
          Running   OK        Normal    No        Yes

mskssrv   Microsoft Streaming Service Proxy
          c:\winnt\system32\drivers\mskssrv.sys
          Kernel Driver       No        Manual
          Stopped   OK        Normal    No        No

mspclock  Microsoft Streaming Clock Proxy
          c:\winnt\system32\drivers\mspclock.sys
          Kernel Driver       No        Manual
          Stopped   OK        Normal    No        No

mspqm     Microsoft Streaming Quality Manager Proxy
          c:\winnt\system32\drivers\mspqm.sys
          Kernel Driver       No        Manual
          Stopped   OK        Normal    No        No

mup       Mup       c:\winnt\system32\drivers\mup.sys
          File System Driver  Yes       Boot
          Running   OK        Normal    No        Yes

ncrc710   Ncrc710   Not Available       Kernel Driver
          No        Disabled  Stopped   OK
          Normal    No        No
ndis      NDIS System Driver
          c:\winnt\system32\drivers\ndis.sys
          Kernel Driver       Yes       Boot
          Running   OK        Normal    No        Yes

ndistapi  Remote Access NDIS TAPI Driver
          c:\winnt\system32\drivers\ndistapi.sys
          Kernel Driver       Yes       Manual
          Running   OK        Normal    No        Yes

ndisuio   NDIS Usermode I/O Protocol
          c:\winnt\system32\drivers\ndisuio.sys
          Kernel Driver       No        Manual
          Stopped   OK        Normal    No        No

ndiswan   Remote Access NDIS WAN Driver
          c:\winnt\system32\drivers\ndiswan.sys
          Kernel Driver       Yes       Manual
          Running   OK        Normal    No        Yes

ndproxy   NDIS Proxy
          c:\winnt\system32\drivers\ndproxy.sys
          Kernel Driver       Yes       Manual
          Running   OK        Normal    No        Yes

netbios   NetBIOS Interface
          c:\winnt\system32\drivers\netbios.sys
          File System Driver  Yes       System
          Running   OK        Normal    No        Yes

netbt     NetBios over Tcpip
          c:\winnt\system32\drivers\netbt.sys
          Kernel Driver       Yes       System
          Running   OK        Normal    No        Yes

netdetect NetDetect
          c:\winnt\system32\drivers\netdtect.sys
          Kernel Driver       No        Manual
          Stopped   OK        Normal    No        No

npfs      Npfs
          c:\winnt\system32\drivers\npfs.sys
          File System Driver  Yes       System
          Running   OK        Normal    No        Yes

ntfs      Ntfs
          c:\winnt\system32\drivers\ntfs.sys
          File System Driver  Yes       Disabled
          Running   OK        Normal    No        Yes

null      Null
          c:\winnt\system32\drivers\null.sys
          Kernel Driver       Yes       System
          Running   OK        Normal    No        Yes

nwlnkflt  IPX Traffic Filter Driver
          c:\winnt\system32\drivers\nwlnkflt.sys
          Kernel Driver       No        Manual
          Stopped   OK        Normal    No        No

nwlnkfwd  IPX Traffic Forwarder Driver
          c:\winnt\system32\drivers\nwlnkfwd.sys
          Kernel Driver       No        Manual
          Stopped   OK        Normal    No        No

openhci   Microsoft USB Open Host Controller Driver
          c:\winnt\system32\drivers\openhci.sys
          Kernel Driver       Yes       Manual
          Running   OK        Normal    No        Yes

parallel  Parallel
          c:\winnt\system32\drivers\parallel.sys
          Kernel Driver       No        Auto
          Stopped   OK        Ignore    No        No

parport   Parport
          c:\winnt\system32\drivers\parport.sys
          Kernel Driver       No        Auto
          Stopped   OK        Ignore    No        No

partmgr   PartMgr
          c:\winnt\system32\drivers\partmgr.sys
          Kernel Driver       Yes       Boot
          Running   OK        Normal    No        Yes

parvdm    ParVdm
          c:\winnt\system32\drivers\parvdm.sys
          Kernel Driver       No        Auto
          Stopped   OK        Ignore    No        No

pci       PCI Bus Driver
          c:\winnt\system32\drivers\pci.sys
          Kernel Driver       Yes       Boot
          Running   OK        Critical  No        Yes

pcidump   PCIDump   Not Available       Kernel Driver
          No        System    Stopped   OK
          Ignore    No        No
pciide    PCIIde
          c:\winnt\system32\drivers\pciide.sys
          Kernel Driver       Yes       Boot
          Running   OK        Normal    No        Yes

pcmcia    Pcmcia
          c:\winnt\system32\drivers\pcmcia.sys
          Kernel Driver       No        Disabled
          Stopped   OK        Normal    No        No

pdcomp    PDCOMP    Not Available       Kernel Driver
          No        Manual    Stopped   OK
          Ignore    No        No
pdframe   PDFRAME   Not Available       Kernel Driver
          No        Manual    Stopped   OK
          Ignore    No        No
pdreli    PDRELI    Not Available       Kernel Driver
          No        Manual    Stopped   OK
          Ignore    No        No
pdrframe  PDRFRAME  Not Available       Kernel Driver
          No        Manual    Stopped   OK
          Ignore    No        No
pptpminiport        WAN Miniport (PPTP)
          c:\winnt\system32\drivers\raspptp.sys
          Kernel Driver       Yes       Manual
          Running   OK        Normal    No        Yes

ptilink   Direct Parallel Link Driver
          c:\winnt\system32\drivers\ptilink.sys
          Kernel Driver       Yes       Manual
          Running   OK        Normal    No        Yes

q57w2k    HP NC7781 Gigabit Server Adapter
          c:\winnt\system32\drivers\q57w2k.sys
          Kernel Driver       Yes       Manual
          Running   OK        Normal    No        Yes
```


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ql1080    ql1080    Not Available       Kernel Driver
          No        Disabled  Stopped   OK
          Normal    No        No
ql10wnt   Ql10wnt   Not Available       Kernel Driver
          No        Disabled  Stopped   OK
          Normal    No        No
ql1240    ql1240    Not Available       Kernel Driver
          No        Disabled  Stopped   OK
          Normal    No        No
ql2100    ql2100    Not Available       Kernel Driver
          No        Disabled  Stopped   OK
          Normal    No        No
ql2300    ql2300
          c:\winnt\system32\drivers\ql2300.sys
          Kernel Driver       No        Disabled
          Stopped   OK        Normal    No        No

rasacd    Remote Access Auto Connection Driver
          c:\winnt\system32\drivers\rasacd.sys
          Kernel Driver       Yes       System
          Running   OK        Normal    No        Yes

rasl2tp   WAN Miniport (L2TP)
          c:\winnt\system32\drivers\rasl2tp.sys
          Kernel Driver       Yes       Manual
          Running   OK        Normal    No        Yes

raspti    Direct Parallel
          c:\winnt\system32\drivers\raspti.sys
          Kernel Driver       Yes       Manual
          Running   OK        Normal    No        Yes

rca       Microsoft Streaming Network Raw Channel
Access    c:\winnt\system32\drivers\rca.sys
          Kernel Driver       No        Manual
          Stopped   OK        Normal    No        No

rdbss     Rdbss
          c:\winnt\system32\drivers\rdbss.sys
          File System Driver  Yes       System
          Running   OK        Normal    No        Yes

rdpdr     Terminal Server Device Redirector Driver
          c:\winnt\system32\drivers\rdpdr.sys
          Kernel Driver       Yes       Manual
          Running   OK        Normal    No        Yes

rdpwd     RDPWD
          c:\winnt\system32\drivers\rdpwd.sys
          Kernel Driver       Yes       Manual
          Running   OK        Ignore    No        Yes

redbook   Digital CD Audio Playback Filter Driver
          c:\winnt\system32\drivers\redbook.sys
          Kernel Driver       No        System
          Stopped   OK        Normal    No        No

serenum   Serenum Filter Driver
          c:\winnt\system32\drivers\serenum.sys
          Kernel Driver       Yes       Manual
          Running   OK        Normal    No        Yes

serial    Serial port driver
          c:\winnt\system32\drivers\serial.sys
          Kernel Driver       Yes       System
          Running   OK        Ignore    No        Yes

sfloppy   High-Capacity Floppy Disk Drive
          c:\winnt\system32\drivers\sfloppy.sys
          Kernel Driver       No        Manual
          Stopped   OK        Normal    No        No

sglfb     sglfb     Not Available       Kernel Driver
          No        System    Stopped   OK
          Normal    No        No
simbad    Simbad    Not Available       Kernel Driver
          No        Disabled  Stopped   OK
          Normal    No        No
sparrow   Sparrow   Not Available       Kernel Driver
          No        Disabled  Stopped   OK
          Normal    No        No
spud      Special Purpose Utility Driver
          c:\winnt\system32\drivers\spud.sys
          Kernel Driver       Yes       Manual
          Running   OK        Normal    No        Yes

srv       Srv       c:\winnt\system32\drivers\srv.sys
          File System Driver  Yes       Manual
          Running   OK        Normal    No        Yes

swenum    Software Bus Driver
          c:\winnt\system32\drivers\swenum.sys
          Kernel Driver       Yes       Manual
          Running   OK        Normal    No        Yes

symc810   symc810
          c:\winnt\system32\drivers\symc810.sys
          Kernel Driver       Yes       Boot
          Running   OK        Normal    No        Yes

symc8xx   symc8xx
          c:\winnt\system32\drivers\symc8xx.sys
          Kernel Driver       Yes       Boot
          Running   OK        Normal    No        Yes

symmpi    symmpi
          c:\winnt\system32\drivers\symmpi.sys
          Kernel Driver       Yes       Boot
          Running   OK        Normal    No        Yes

sym_hi    sym_hi
          c:\winnt\system32\drivers\sym_hi.sys
          Kernel Driver       Yes       Boot
          Running   OK        Normal    No        Yes

sysmgmt   HP ProLiant System Management Interface
Driver    c:\winnt\system32\drivers\sysmgmt.sys
          Kernel Driver       No        Manual
          Stopped   OK        Normal    No        No

tcpip     TCP/IP Protocol Driver
          c:\winnt\system32\drivers\tcpip.sys
          Kernel Driver       Yes       System
          Running   OK        Normal    No        Yes

tdasync   TDASYNC
          c:\winnt\system32\drivers\tdasync.sys
          Kernel Driver       No        Manual
          Stopped   OK        Ignore    No        No

tdipx     TDIPX
          c:\winnt\system32\drivers\tdipx.sys
          Kernel Driver       No        Manual
          Stopped   OK        Ignore    No        No

tdnetb    TDNETB
          c:\winnt\system32\drivers\tdnetb.sys
          Kernel Driver       No        Manual
          Stopped   OK        Ignore    No        No

tdpipe    TDPIPE
          c:\winnt\system32\drivers\tdpipe.sys
          Kernel Driver       No        Manual
          Stopped   OK        Ignore    No        No

tdspx     TDSPX
          c:\winnt\system32\drivers\tdspx.sys
          Kernel Driver       No        Manual
          Stopped   OK        Ignore    No        No

tdtcp     TDTCP
          c:\winnt\system32\drivers\tdtcp.sys
          Kernel Driver       Yes       Manual
          Running   OK        Ignore    No        Yes

termdd    Terminal Device Driver
          c:\winnt\system32\drivers\termdd.sys
          Kernel Driver       Yes       Auto
          Running   OK        Normal    No        Yes

tga       tga       Not Available       Kernel Driver
          No        System    Stopped   OK
          Ignore    No        No
udfs      Udfs
          c:\winnt\system32\drivers\udfs.sys
          File System Driver  No        Disabled
          Stopped   OK        Normal    No        No

ultra66   ultra66   Not Available       Kernel Driver
          No        Disabled  Stopped   OK
          Normal    No        No
update    Microcode Update Driver
          c:\winnt\system32\drivers\update.sys
          Kernel Driver       Yes       Manual
          Running   OK        Normal    No        Yes

usbhub    Microsoft USB Standard Hub Driver
          c:\winnt\system32\drivers\usbhub.sys
          Kernel Driver       Yes       Manual
          Running   OK        Normal    No        Yes

usbstor   USB Mass Storage Driver
          c:\winnt\system32\drivers\usbstor.sys
          Kernel Driver       No        Manual
          Stopped   OK        Normal    No        No

vgasave   VgaSave   c:\winnt\system32\drivers\vga.sys
          Kernel Driver       Yes       System
```


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```
          Running   OK        Ignore    No        Yes

wanarp    Remote Access IP ARP Driver
          c:\winnt\system32\drivers\wanarp.sys
          Kernel Driver       Yes       Manual
          Running   OK        Normal    No        Yes

wdica     WDICA     Not Available       Kernel Driver
          No        Manual    Stopped   OK
          Ignore    No        No

[Signed Drivers]

Device Name         Signed    Device Class
          Driver Version      Driver Date
          Manufacturer        INF Name  Driver Name
          Device ID

[Environment Variables]

Variable  Value     User Name
ComSpec   %SystemRoot%\system32\cmd.exe <SYSTEM>
Os2LibPath          %SystemRoot%\system32\os2\dll;
          <SYSTEM>
Path
          %SystemRoot%\system32;%SystemRoot%;%SystemR
oot%\System32\Wbem;C:\Program Files\Microsoft SQL
Server\90\Tools\binn\         <SYSTEM>
windir    %SystemRoot%        <SYSTEM>
OS        Windows_NT          <SYSTEM>
PROCESSOR_ARCHITECTURE        x86       <SYSTEM>
PROCESSOR_LEVEL     15        <SYSTEM>
PROCESSOR_IDENTIFIER          x86 Family 15 Model 5
Stepping 10, AuthenticAMD     <SYSTEM>
PROCESSOR_REVISION  050a      <SYSTEM>
NUMBER_OF_PROCESSORS          2         <SYSTEM>
PATHEXT
          .COM;.EXE;.BAT;.CMD;.VBS;.VBE;.JS;.JSE;.WSF
;.WSH     <SYSTEM>
TEMP      %SystemRoot%\TEMP   <SYSTEM>
TMP       %SystemRoot%\TEMP   <SYSTEM>
lib       C:\Program Files\SQLXML 4.0\bin\
          <SYSTEM>
TEMP      %USERPROFILE%\Local Settings\Temp
          BL9\Administrator
TMP       %USERPROFILE%\Local Settings\Temp
          BL9\Administrator

[Print Jobs]

Document  Size      Owner     Notify    Status
          Time Submitted      Start Time
          Until Time          Elapsed Time
          Pages Printed       Job ID    Priority
          Parameters          Driver    Print
Processor Host Print Queue    Data Type Name

[Network Connections]

Local Name          Remote Name         Type
          Status    User Name

[Running Tasks]

Name      Path      Process ID          Priority  Min
Working Set         Max Working Set     Start Time
          Version   Size      File Date
system idle process Not Available       0         0
          Not Available       Not Available       Not
Available Not Available       Not Available       Not
Available
system    Not Available       8         8         0
          1413120   Not Available       Not Available
          Not Available       Not Available
smss.exe  c:\winnt\system32\smss.exe    180       11
          204800    1413120   9/20/2005 4:40 PM
          5.00.2195.6601      44.77 KB (45,840 bytes)
          12/31/1979 6:00 PM
csrss.exe c:\winnt\system32\csrss.exe   208       13
          204800    1413120   9/20/2005 4:40 PM
          5.00.2195.6601      5.27 KB (5,392 bytes)
          8/30/2005 3:19 PM
winlogon.exe        c:\winnt\system32\winlogon.exe
          204       13        204800    1413120
          9/20/2005 4:40 PM   5.00.2195.6714
          176.77 KB (181,008 bytes)     8/30/2005
3:20 PM
services.exe        c:\winnt\system32\services.exe
          260       9         204800    1413120
          9/20/2005 4:40 PM   5.00.2195.6700
          87.27 KB (89,360 bytes)       12/31/1979
6:00 PM
lsass.exe c:\winnt\system32\lsass.exe   272       9
          204800    1413120   9/20/2005 4:40 PM
          5.00.2195.6695      32.77 KB (33,552 bytes)
          12/31/1979 6:00 PM
termsrv.exe         c:\winnt\system32\termsrv.exe 384
          10        204800    1413120   9/20/2005
4:40 PM   5.00.2195.6696      139.27 KB (142,608
bytes)    8/30/2005 3:20 PM
svchost.exe         c:\winnt\system32\svchost.exe 500
          8         204800    1413120   9/20/2005
4:40 PM   5.00.2134.1         7.77 KB (7,952 bytes)
          12/31/1979 6:00 PM
spoolsv.exe         c:\winnt\system32\spoolsv.exe 528
          8         204800    1413120   9/20/2005
4:40 PM   5.00.2195.6659      44.27 KB (45,328 bytes)
          4/21/2005 7:25 PM
msdtc.exe c:\winnt\system32\msdtc.exe   556       8
          204800    1413120   9/20/2005 4:40 PM
          1999.9.3421.3       6.77 KB (6,928 bytes)
          4/21/2005 7:31 PM
aclient.exe         c:\altiris\aclient\aclient.exe
          688       8         204800    1413120
          9/20/2005 4:41 PM   6.1.401   4.63 MB
(4,857,932 bytes)   6/21/2004 1:17 PM
svchost.exe         c:\winnt\system32\svchost.exe 712
          8         204800    1413120   9/20/2005
4:41 PM   5.00.2134.1         7.77 KB (7,952 bytes)
          12/31/1979 6:00 PM
hidserv.exe         c:\winnt\system32\hidserv.exe 728
          8         204800    1413120   9/20/2005
4:41 PM   5.00.2195.6655      19.27 KB (19,728 bytes)
          8/30/2005 3:19 PM
llssrv.exe          c:\winnt\system32\llssrv.exe  760
          9         204800    1413120   9/20/2005
4:41 PM   5.00.2195.6697      81.77 KB (83,728 bytes)
          6/19/2003 12:05 PM
regsvc.exe          c:\winnt\system32\regsvc.exe  812
          8         204800    1413120   9/20/2005
4:41 PM   5.00.2195.6701      66.77 KB (68,368 bytes)
          8/30/2005 3:20 PM
mstask.exe          c:\winnt\system32\mstask.exe  828
          8         204800    1413120   9/20/2005
4:41 PM   4.71.2195.6704      116.77 KB (119,568
bytes)    8/30/2005 3:20 PM
tcpsvcs.exe         c:\winnt\system32\tcpsvcs.exe 940
          8         204800    1413120   9/20/2005
4:41 PM   5.00.2134.1         24.77 KB (25,360 bytes)
          12/31/1979 6:00 PM
winmgmt.exe
          c:\winnt\system32\wbem\winmgmt.exe      996
          8         204800    1413120   9/20/2005
4:41 PM   1.50.1085.0100      192.10 KB (196,706
bytes)    8/30/2005 3:20 PM
svchost.exe         c:\winnt\system32\svchost.exe
          1008      8         204800    1413120
          9/20/2005 4:41 PM   5.00.2134.1
          7.77 KB (7,952 bytes)         12/31/1979
6:00 PM
inetinfo.exe
          c:\winnt\system32\inetsrv\inetinfo.exe
          1020      8         204800    1413120
          9/20/2005 4:41 PM   5.00.0984 14.27 KB
(14,608 bytes)      8/30/2005 3:21 PM
dfssvc.exe          c:\winnt\system32\dfssvc.exe  460
          8         204800    1413120   9/20/2005
4:41 PM   5.00.2195.6664      88.77 KB (90,896 bytes)
          8/30/2005 3:19 PM
svchost.exe         c:\winnt\system32\svchost.exe
          1392      8         204800    1413120
          9/20/2005 4:41 PM   5.00.2134.1
          7.77 KB (7,952 bytes)         12/31/1979
6:00 PM

[Loaded Modules]

Name      Version   Size      File Date Manufacturer
          Path
smss      5.00.2195.6601      44.77 KB (45,840 bytes)
          12/31/1979 6:00 PM  Microsoft Corporation
          c:\winnt\system32\smss.exe
ntdll     5.00.2195.6685      480.27 KB (491,792
bytes)    12/31/1979 6:00 PM  Microsoft Corporation
          c:\winnt\system32\ntdll.dll
sfcfiles  5.00.2195.6717      948.27 KB (971,024
bytes)    8/30/2005 3:20 PM   Microsoft Corporation
          c:\winnt\system32\sfcfiles.dll
csrss     5.00.2195.6601      5.27 KB (5,392 bytes)
          8/30/2005 3:19 PM   Microsoft Corporation
          c:\winnt\system32\csrss.exe
csrsrv    5.00.2195.6601      34.27 KB (35,088 bytes)
          12/31/1979 6:00 PM  Microsoft Corporation
          c:\winnt\system32\csrsrv.dll
basesrv   5.00.2195.6706      41.27 KB (42,256 bytes)
          8/30/2005 3:19 PM   Microsoft Corporation
          c:\winnt\system32\basesrv.dll
```


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```
winsrv    5.00.2195.6699      246.77 KB (252,688
bytes)    11/30/1999 5:39 PM  Microsoft Corporation
          c:\winnt\system32\winsrv.dll
user32    5.00.2195.6688      393.77 KB (403,216
bytes)    8/30/2005 3:20 PM   Microsoft Corporation
          c:\winnt\system32\user32.dll
kernel32  5.00.2195.6688      725.77 KB (743,184
bytes)    12/31/1979 6:00 PM  Microsoft Corporation
          c:\winnt\system32\kernel32.dll
gdi32     5.00.2195.6660      228.27 KB (233,744
bytes)    8/30/2005 3:19 PM   Microsoft Corporation
          c:\winnt\system32\gdi32.dll
advapi32  5.00.2195.6710      378.27 KB (387,344
bytes)    12/31/1979 6:00 PM  Microsoft Corporation
          c:\winnt\system32\advapi32.dll
rpcrt4    5.00.2195.6701      443.77 KB (454,416
bytes)    8/30/2005 3:20 PM   Microsoft Corporation
          c:\winnt\system32\rpcrt4.dll
winlogon  5.00.2195.6714      176.77 KB (181,008
bytes)    8/30/2005 3:20 PM   Microsoft Corporation
          c:\winnt\system32\winlogon.exe
msvcrt    6.10.9844.0         280.05 KB (286,773
bytes)    6/19/2003 12:05 PM  Microsoft Corporation
          c:\winnt\system32\msvcrt.dll
userenv   5.00.2195.6711      380.77 KB (389,904
bytes)    8/30/2005 3:20 PM   Microsoft Corporation
          c:\winnt\system32\userenv.dll
nddeapi   5.00.2195.6661      15.77 KB (16,144 bytes)
          8/30/2005 3:20 PM   Microsoft Corporation
          c:\winnt\system32\nddeapi.dll
sfc       5.00.2195.6673      92.80 KB (95,024 bytes)
          8/30/2005 3:20 PM   Microsoft Corporation
          c:\winnt\system32\sfc.dll
secur32   5.00.2195.6695      47.77 KB (48,912 bytes)
          8/30/2005 3:20 PM   Microsoft Corporation
          c:\winnt\system32\secur32.dll
profmap   5.00.2195.6610      29.27 KB (29,968 bytes)
          8/30/2005 3:20 PM   Microsoft Corporation
          c:\winnt\system32\profmap.dll
netapi32  5.00.2195.6601      304.27 KB (311,568
bytes)    8/30/2005 3:20 PM   Microsoft Corporation
          c:\winnt\system32\netapi32.dll
netrap    5.00.2134.1         11.27 KB (11,536 bytes)
          12/31/1979 6:00 PM  Microsoft Corporation
          c:\winnt\system32\netrap.dll
samlib    5.00.2195.6666      48.77 KB (49,936 bytes)
          12/31/1979 6:00 PM  Microsoft Corporation
          c:\winnt\system32\samlib.dll
ws2_32    5.00.2195.6601      68.27 KB (69,904 bytes)
          8/30/2005 3:20 PM   Microsoft Corporation
          c:\winnt\system32\ws2_32.dll
ws2help   5.00.2134.1         17.77 KB (18,192 bytes)
          12/31/1979 6:00 PM  Microsoft Corporation
          c:\winnt\system32\ws2help.dll
wldap32   5.00.2195.6666      158.27 KB (162,064
bytes)    8/30/2005 3:20 PM   Microsoft Corporation
          c:\winnt\system32\wldap32.dll
dnsapi    5.00.2195.6680      131.77 KB (134,928
bytes)    8/30/2005 3:19 PM   Microsoft Corporation
          c:\winnt\system32\dnsapi.dll
wsock32   5.00.2195.6603      21.27 KB (21,776 bytes)
          8/30/2005 3:20 PM   Microsoft Corporation
          c:\winnt\system32\wsock32.dll

winsta    5.00.2195.6701      38.27 KB (39,184 bytes)
          8/30/2005 3:20 PM   Microsoft Corporation
          c:\winnt\system32\winsta.dll
winmm     5.00.2161.1         184.77 KB (189,200
bytes)    12/31/1979 6:00 PM  Microsoft Corporation
          c:\winnt\system32\winmm.dll
setupapi  5.00.2195.6622      556.77 KB (570,128
bytes)    12/31/1979 6:00 PM  Microsoft Corporation
          c:\winnt\system32\setupapi.dll
comctl32  5.81      537.77 KB (550,672 bytes)
          12/31/1979 6:00 PM  Microsoft Corporation
          c:\winnt\system32\comctl32.dll
msgina    5.00.2195.6669      326.27 KB (334,096
bytes)    8/30/2005 3:20 PM   Microsoft Corporation
          c:\winnt\system32\msgina.dll
shell32   5.00.3700.6705      2.27 MB (2,383,632
bytes)    8/30/2005 3:20 PM   Microsoft Corporation
          c:\winnt\system32\shell32.dll
shlwapi   5.00.3502.6601      282.77 KB (289,552
bytes)    8/30/2005 3:20 PM   Microsoft Corporation
          c:\winnt\system32\shlwapi.dll
wintrust  5.131.2195.6624     162.27 KB (166,160
bytes)    8/30/2005 3:20 PM   Microsoft Corporation
          c:\winnt\system32\wintrust.dll
crypt32   5.131.2195.6661     468.27 KB (479,504
bytes)    8/30/2005 3:19 PM   Microsoft Corporation
          c:\winnt\system32\crypt32.dll
msasn1    5.00.2195.6666      51.77 KB (53,008 bytes)
          12/31/1979 6:00 PM  Microsoft Corporation
          c:\winnt\system32\msasn1.dll
imagehlp  5.00.2195.6613      125.77 KB (128,784
bytes)    12/31/1979 6:00 PM  Microsoft Corporation
          c:\winnt\system32\imagehlp.dll
ole32     5.00.2195.6692      972.77 KB (996,112
bytes)    8/30/2005 3:20 PM   Microsoft Corporation
          c:\winnt\system32\ole32.dll
mscat32   5.131.2134.1        7.77 KB (7,952 bytes)
          12/31/1979 6:00 PM  Microsoft Corporation
          c:\winnt\system32\mscat32.dll
rsaenh    5.00.2195.6611      131.77 KB (134,928
bytes)    8/30/2005 3:20 PM   Microsoft Corporation
          c:\winnt\system32\rsaenh.dll
version   5.00.2195.6623      15.77 KB (16,144 bytes)
          8/30/2005 3:20 PM   Microsoft Corporation
          c:\winnt\system32\version.dll
lz32      5.00.2195.6611      9.77 KB (10,000 bytes)
          8/30/2005 3:19 PM   Microsoft Corporation
          c:\winnt\system32\lz32.dll
cscdll    5.00.2195.6713      98.77 KB (101,136
bytes)    8/30/2005 3:19 PM   Microsoft Corporation
          c:\winnt\system32\cscdll.dll
wlnotify  5.00.2195.6706      56.27 KB (57,616 bytes)
          8/30/2005 3:20 PM   Microsoft Corporation
          c:\winnt\system32\wlnotify.dll
certcli   5.00.2195.6619      132.27 KB (135,440
bytes)    8/30/2005 3:19 PM   Microsoft Corporation
          c:\winnt\system32\certcli.dll
atl       3.00.9435 73.06 KB (74,810 bytes)
          8/30/2005 3:19 PM   Microsoft Corporation
          c:\winnt\system32\atl.dll
winscard  5.00.2195.6609      77.27 KB (79,120 bytes)
          8/30/2005 3:20 PM   Microsoft Corporation
          c:\winnt\system32\winscard.dll

winspool  5.00.2195.6659      111.27 KB (113,936
bytes)    12/31/1979 6:00 PM  Microsoft Corporation
          c:\winnt\system32\winspool.drv
mpr       5.00.2195.6611      53.77 KB (55,056 bytes)
          8/30/2005 3:20 PM   Microsoft Corporation
          c:\winnt\system32\mpr.dll
msafd     5.00.2195.6602      106.27 KB (108,816
bytes)    8/30/2005 3:20 PM   Microsoft Corporation
          c:\winnt\system32\msafd.dll
wshtcpip  5.00.2195.6601      17.27 KB (17,680 bytes)
          8/30/2005 3:20 PM   Microsoft Corporation
          c:\winnt\system32\wshtcpip.dll
rnr20     5.00.2195.6603      35.77 KB (36,624 bytes)
          8/30/2005 3:20 PM   Microsoft Corporation
          c:\winnt\system32\rnr20.dll
iphlpapi  5.00.2195.6602      68.27 KB (69,904 bytes)
          8/30/2005 3:19 PM   Microsoft Corporation
          c:\winnt\system32\iphlpapi.dll
icmp      5.00.2134.1         7.27 KB (7,440 bytes)
          12/31/1979 6:00 PM  Microsoft Corporation
          c:\winnt\system32\icmp.dll
mprapi    5.00.2181.1         79.27 KB (81,168 bytes)
          12/31/1979 6:00 PM  Microsoft Corporation
          c:\winnt\system32\mprapi.dll
oleaut32  2.40.4522 612.27 KB (626,960 bytes)
          12/31/1979 6:00 PM  Microsoft Corporation
          c:\winnt\system32\oleaut32.dll
activeds  5.00.2195.6601      177.77 KB (182,032
bytes)    8/30/2005 3:19 PM   Microsoft Corporation
          c:\winnt\system32\activeds.dll
adsldpc   5.00.2195.6701      130.77 KB (133,904
bytes)    8/30/2005 3:19 PM   Microsoft Corporation
          c:\winnt\system32\adsldpc.dll
rtutils   5.00.2168.1         43.77 KB (44,816 bytes)
          12/31/1979 6:00 PM  Microsoft Corporation
          c:\winnt\system32\rtutils.dll
rasapi32  5.00.2195.6625      192.77 KB (197,392
bytes)    12/31/1979 6:00 PM  Microsoft Corporation
          c:\winnt\system32\rasapi32.dll
rasman    5.00.2195.6604      54.77 KB (56,080 bytes)
          12/31/1979 6:00 PM  Microsoft Corporation
          c:\winnt\system32\rasman.dll
tapi32    5.00.2195.6664      123.77 KB (126,736
bytes)    8/30/2005 3:20 PM   Microsoft Corporation
          c:\winnt\system32\tapi32.dll
dhcpcsvc  5.00.2195.6685      90.77 KB (92,944 bytes)
          12/31/1979 6:00 PM  Microsoft Corporation
          c:\winnt\system32\dhcpcsvc.dll
winrnr    5.00.2160.1         18.77 KB (19,216 bytes)
          12/31/1979 6:00 PM  Microsoft Corporation
          c:\winnt\system32\winrnr.dll
rasadhlp  5.00.2168.1         7.27 KB (7,440 bytes)
          12/31/1979 6:00 PM  Microsoft Corporation
          c:\winnt\system32\rasadhlp.dll
ntdsapi   5.00.2195.6666      56.27 KB (57,616 bytes)
          8/30/2005 3:20 PM   Microsoft Corporation
          c:\winnt\system32\ntdsapi.dll
msv1_0    5.00.2195.6680      114.77 KB (117,520
bytes)    12/31/1979 6:00 PM  Microsoft Corporation
          c:\winnt\system32\msv1_0.dll
cryptnet  5.131.2195.6601     42.27 KB (43,280 bytes)
          8/30/2005 3:19 PM   Microsoft Corporation
          c:\winnt\system32\cryptnet.dll
```


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```
wininet   5.00.3700.6713      455.77 KB (466,704
bytes)    8/30/2005 3:20 PM   Microsoft Corporation
          c:\winnt\system32\wininet.dll
services  5.00.2195.6700      87.27 KB (89,360 bytes)
          12/31/1979 6:00 PM  Microsoft Corporation
          c:\winnt\system32\services.exe
umpnpmgr  5.00.2182.1         86.27 KB (88,336 bytes)
          12/31/1979 6:00 PM  Microsoft Corporation
          c:\winnt\system32\umpnpmgr.dll
scesrv    5.00.2195.6704      248.77 KB (254,736
bytes)    8/30/2005 3:20 PM   Microsoft Corporation
          c:\winnt\system32\scesrv.dll
eventlog  5.00.2195.6716      46.77 KB (47,888 bytes)
          8/30/2005 3:19 PM   Microsoft Corporation
          c:\winnt\system32\eventlog.dll
dnsrslvr  5.00.2195.6663      90.27 KB (92,432 bytes)
          8/30/2005 3:19 PM   Microsoft Corporation
          c:\winnt\system32\dnsrslvr.dll
lmhsvc    5.00.2195.6601      9.77 KB (10,000 bytes)
          12/31/1979 6:00 PM  Microsoft Corporation
          c:\winnt\system32\lmhsvc.dll
dmserver  2195.6605.297.3     11.77 KB (12,048 bytes)
          8/30/2005 3:19 PM   VERITAS Software Corp.
          c:\winnt\system32\dmserver.dll
cfgmgr32  5.00.2134.1         16.77 KB (17,168 bytes)
          12/31/1979 6:00 PM  Microsoft Corporation
          c:\winnt\system32\cfgmgr32.dll
srvsvc    5.00.2195.6697      81.77 KB (83,728 bytes)
          12/31/1979 6:00 PM  Microsoft Corporation
          c:\winnt\system32\srvsvc.dll
wkssvc    5.00.2195.6692      95.77 KB (98,064 bytes)
          12/31/1979 6:00 PM  Microsoft Corporation
          c:\winnt\system32\wkssvc.dll
cryptdll  5.00.2195.6607      43.27 KB (44,304 bytes)
          8/30/2005 3:19 PM   Microsoft Corporation
          c:\winnt\system32\cryptdll.dll
cryptsvc  5.00.2195.6661      74.27 KB (76,048 bytes)
          8/30/2005 3:19 PM   Microsoft Corporation
          c:\winnt\system32\cryptsvc.dll
psbase    5.00.2195.6661      112.77 KB (115,472
bytes)    8/30/2005 3:20 PM   Microsoft Corporation
          c:\winnt\system32\psbase.dll
esent     6.1.3940.31         1.08 MB (1,135,376
bytes)    8/30/2005 3:19 PM   Microsoft Corporation
          c:\winnt\system32\esent.dll
seclogon  5.00.2195.6707      16.77 KB (17,168 bytes)
          8/30/2005 3:20 PM   Microsoft Corporation
          c:\winnt\system32\seclogon.dll
trkwks    5.00.2195.6623      88.27 KB (90,384 bytes)
          8/30/2005 3:20 PM   Microsoft Corporation
          c:\winnt\system32\trkwks.dll
alrsvc    5.00.2134.1         17.77 KB (18,192 bytes)
          12/31/1979 6:00 PM  Microsoft Corporation
          c:\winnt\system32\alrsvc.dll
browser   5.00.2195.6693      67.27 KB (68,880 bytes)
          8/30/2005 3:19 PM   Microsoft Corporation
          c:\winnt\system32\browser.dll
msgsvc    5.00.2195.6656      34.77 KB (35,600 bytes)
          12/31/1979 6:00 PM  Microsoft Corporation
          c:\winnt\system32\msgsvc.dll
mswsock   5.00.2195.6603      62.77 KB (64,272 bytes)
          8/30/2005 3:20 PM   Microsoft Corporation
          c:\winnt\system32\mswsock.dll

netevent  5.00.2170.1         191.00 KB (195,584
bytes)    12/31/1979 6:00 PM  Microsoft Corporation
          c:\winnt\system32\netevent.dll
wmicore   5.00.2195.6611      72.77 KB (74,512 bytes)
          8/30/2005 3:20 PM   Microsoft Corporation
          c:\winnt\system32\wmicore.dll
lsass     5.00.2195.6695      32.77 KB (33,552 bytes)
          12/31/1979 6:00 PM  Microsoft Corporation
          c:\winnt\system32\lsass.exe
lsasrv    5.00.2195.6695      506.77 KB (518,928
bytes)    12/31/1979 6:00 PM  Microsoft Corporation
          c:\winnt\system32\lsasrv.dll
samsrv    5.00.2195.6697      380.77 KB (389,904
bytes)    12/31/1979 6:00 PM  Microsoft Corporation
          c:\winnt\system32\samsrv.dll
msprivs   5.00.2195.6695      46.00 KB (47,104 bytes)
          8/30/2005 3:20 PM   Microsoft Corporation
          c:\winnt\system32\msprivs.dll
kerberos  5.00.2195.6666      207.77 KB (212,752
bytes)    8/30/2005 3:19 PM   Microsoft Corporation
          c:\winnt\system32\kerberos.dll
netlogon  5.00.2195.6695      363.27 KB (371,984
bytes)    8/30/2005 3:20 PM   Microsoft Corporation
          c:\winnt\system32\netlogon.dll
schannel  5.00.2195.6705      144.27 KB (147,728
bytes)    12/31/1979 6:00 PM  Microsoft Corporation
          c:\winnt\system32\schannel.dll
rsabase   5.00.2195.6619      129.27 KB (132,368
bytes)    6/19/2003 12:05 PM  Microsoft Corporation
          c:\winnt\system32\rsabase.dll
rassfm    5.00.2195.6604      21.27 KB (21,776 bytes)
          8/30/2005 3:20 PM   Microsoft Corporation
          c:\winnt\system32\rassfm.dll
sfmapi    5.00.2134.1         38.77 KB (39,696 bytes)
          12/31/1979 6:00 PM  Microsoft Corporation
          c:\winnt\system32\sfmapi.dll
kdcsvc    5.00.2195.6627      144.77 KB (148,240
bytes)    8/30/2005 3:19 PM   Microsoft Corporation
          c:\winnt\system32\kdcsvc.dll
ntdsa     5.00.2195.6697      1,016.27 KB (1,040,656
bytes)    8/30/2005 3:20 PM   Microsoft Corporation
          c:\winnt\system32\ntdsa.dll
ntdsatq   5.00.2195.6620      31.27 KB (32,016 bytes)
          8/30/2005 3:20 PM   Microsoft Corporation
          c:\winnt\system32\ntdsatq.dll
scecli    5.00.2195.6704      111.77 KB (114,448
bytes)    8/30/2005 3:20 PM   Microsoft Corporation
          c:\winnt\system32\scecli.dll
polagent  5.00.2195.6655      109.27 KB (111,888
bytes)    8/30/2005 3:20 PM   Microsoft Corporation
          c:\winnt\system32\polagent.dll
mfc42u    6.00.9586.0         988.05 KB (1,011,764
bytes)    8/30/2005 3:19 PM   Microsoft Corporation
          c:\winnt\system32\mfc42u.dll
oakley    5.00.2195.6662      435.77 KB (446,224
bytes)    8/30/2005 3:20 PM   Microsoft Corporation
          c:\winnt\system32\oakley.dll
dssenh    5.00.2195.6612      143.77 KB (147,216
bytes)    8/30/2005 3:20 PM   Microsoft Corporation
          c:\winnt\system32\dssenh.dll
termsrv   5.00.2195.6696      139.27 KB (142,608
bytes)    8/30/2005 3:20 PM   Microsoft Corporation
          c:\winnt\system32\termsrv.exe

regapi    5.00.2195.6602      35.27 KB (36,112 bytes)
          8/30/2005 3:20 PM   Microsoft Corporation
          c:\winnt\system32\regapi.dll
icaapi    5.00.2195.6654      122.77 KB (125,712
bytes)    8/30/2005 3:19 PM   Microsoft Corporation
          c:\winnt\system32\icaapi.dll
mstlsapi  5.00.2195.6659      25.77 KB (26,384 bytes)
          8/30/2005 3:20 PM   Microsoft Corporation
          c:\winnt\system32\mstlsapi.dll
ntlsapi   5.00.2195.6601      6.77 KB (6,928 bytes)
          12/31/1979 6:00 PM  Microsoft Corporation
          c:\winnt\system32\ntlsapi.dll
rdpwsx    5.00.2195.6697      97.90 KB (100,248
bytes)    8/30/2005 3:20 PM   Microsoft Corporation
          c:\winnt\system32\rdpwsx.dll
svchost   5.00.2134.1         7.77 KB (7,952 bytes)
          12/31/1979 6:00 PM  Microsoft Corporation
          c:\winnt\system32\svchost.exe
rpcss     5.00.2195.6702      233.77 KB (239,376
bytes)    8/30/2005 3:20 PM   Microsoft Corporation
          c:\winnt\system32\rpcss.dll
clbcatq   2000.2.3504.0       498.27 KB (510,224
bytes)    8/30/2005 3:19 PM   Microsoft Corporation
          c:\winnt\system32\clbcatq.dll
spoolsv   5.00.2195.6659      44.27 KB (45,328 bytes)
          4/21/2005 7:25 PM   Microsoft Corporation
          c:\winnt\system32\spoolsv.exe
spoolss   5.00.2195.6704      79.77 KB (81,680 bytes)
          4/21/2005 7:25 PM   Microsoft Corporation
          c:\winnt\system32\spoolss.dll
localspl  5.00.2195.6714      253.27 KB (259,344
bytes)    12/31/1979 6:00 PM  Microsoft Corporation
          c:\winnt\system32\localspl.dll
cnbjmon   5.00.2134.1         43.77 KB (44,816 bytes)
          11/30/1999 5:38 PM  Microsoft Corporation
          c:\winnt\system32\cnbjmon.dll
pjlmon    5.00.2165.1         12.77 KB (13,072 bytes)
          11/30/1999 5:39 PM  Microsoft Corporation
          c:\winnt\system32\pjlmon.dll
tcpmon    5.00.2195.6659      40.77 KB (41,744 bytes)
          8/30/2005 3:20 PM   Microsoft Corporation
          c:\winnt\system32\tcpmon.dll
usbmon    5.00.2195.6684      11.27 KB (11,536 bytes)
          8/30/2005 3:20 PM   Microsoft Corporation
          c:\winnt\system32\usbmon.dll
win32spl  5.00.2195.6681      94.77 KB (97,040 bytes)
          12/31/1979 6:00 PM  Microsoft Corporation
          c:\winnt\system32\win32spl.dll
inetpp    5.00.2195.6707      65.27 KB (66,832 bytes)
          8/30/2005 3:19 PM   Microsoft Corporation
          c:\winnt\system32\inetpp.dll
admwprox  5.00.0984 31.77 KB (32,528 bytes)
          4/21/2005 7:31 PM   Microsoft Corporation
          c:\winnt\system32\admwprox.dll
wmi       5.00.2191.1         6.27 KB (6,416 bytes)
          12/31/1979 6:00 PM  Microsoft Corporation
          c:\winnt\system32\wmi.dll
msdtc     1999.9.3421.3       6.77 KB (6,928 bytes)
          4/21/2005 7:31 PM   Microsoft Corporation
          c:\winnt\system32\msdtc.exe
msdtctm   2000.2.3504.0       1.08 MB (1,131,280
bytes)    8/30/2005 3:20 PM   Microsoft Corporation
          c:\winnt\system32\msdtctm.dll
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txfaux    2000.2.3504.0       388.27 KB (397,584
bytes)    8/30/2005 3:20 PM   Microsoft Corporation
          c:\winnt\system32\txfaux.dll
msdtcprx  2000.2.3504.0       690.77 KB (707,344
bytes)    8/30/2005 3:20 PM   Microsoft Corporation
          c:\winnt\system32\msdtcprx.dll
mtxclu    2000.2.3504.0       51.27 KB (52,496 bytes)
          8/30/2005 3:20 PM   Microsoft Corporation
          c:\winnt\system32\mtxclu.dll
msdtclog  2000.2.3504.0       86.77 KB (88,848 bytes)
          8/30/2005 3:20 PM   Microsoft Corporation
          c:\winnt\system32\msdtclog.dll
xolehlp   1999.9.3421.3       17.27 KB (17,680 bytes)
          4/21/2005 7:31 PM   Microsoft Corporation
          c:\winnt\system32\xolehlp.dll
msvcp50   5.00.7051 552.50 KB (565,760 bytes)
          12/31/1979 6:00 PM  Microsoft Corporation
          c:\winnt\system32\msvcp50.dll
clusapi   5.00.2195.6683      54.27 KB (55,568 bytes)
          8/30/2005 3:19 PM   Microsoft Corporation
          c:\winnt\system32\clusapi.dll
resutils  5.00.2195.6702      39.77 KB (40,720 bytes)
          8/30/2005 3:20 PM   Microsoft Corporation
          c:\winnt\system32\resutils.dll
mtxoci    2000.2.3504.0       103.27 KB (105,744
bytes)    8/30/2005 3:20 PM   Microsoft Corporation
          c:\winnt\system32\mtxoci.dll
aclient   6.1.401   4.63 MB (4,857,932 bytes)
          6/21/2004 1:17 PM   Altiris, Inc.
          c:\altiris\aclient\aclient.exe
comdlg32  5.00.3700.6693      235.77 KB (241,424
bytes)    12/31/1979 6:00 PM  Microsoft Corporation
          c:\winnt\system32\comdlg32.dll
riched32  5.00.2134.1         3.77 KB (3,856 bytes)
          12/31/1979 6:00 PM  Microsoft Corporation
          c:\winnt\system32\riched32.dll
riched20  5.30.23.1215        421.77 KB (431,888
bytes)    8/30/2005 3:20 PM   Microsoft Corporation
          c:\winnt\system32\riched20.dll
psapi     5.00.2134.1         28.27 KB (28,944 bytes)
          12/31/1979 6:00 PM  Microsoft Corporation
          c:\winnt\system32\psapi.dll
ntmarta   5.00.2195.6666      100.27 KB (102,672
bytes)    8/30/2005 3:20 PM   Microsoft Corporation
          c:\winnt\system32\ntmarta.dll
es        2000.2.3504.0       227.77 KB (233,232
bytes)    8/30/2005 3:19 PM   Microsoft Corporation
          c:\winnt\system32\es.dll
ntmssvc   5.00.2195.6655      391.77 KB (401,168
bytes)    8/30/2005 3:20 PM   Microsoft Corporation
          c:\winnt\system32\ntmssvc.dll
sens      5.00.2195.6627      37.27 KB (38,160 bytes)
          8/30/2005 3:20 PM   Microsoft Corporation
          c:\winnt\system32\sens.dll
rasmans   5.00.2195.6696      149.77 KB (153,360
bytes)    8/30/2005 3:20 PM   Microsoft Corporation
          c:\winnt\system32\rasmans.dll
netcfgx   5.00.2195.6604      534.77 KB (547,600
bytes)    8/30/2005 3:20 PM   Microsoft Corporation
          c:\winnt\system32\netcfgx.dll
rasdlg    5.00.2195.6625      516.77 KB (529,168
bytes)    12/31/1979 6:00 PM  Microsoft Corporation
          c:\winnt\system32\rasdlg.dll
rastapi   5.00.2195.6604      52.77 KB (54,032 bytes)
          12/31/1979 6:00 PM  Microsoft Corporation
          c:\winnt\system32\rastapi.dll
rasppp    5.00.2195.6626      194.27 KB (198,928
bytes)    8/30/2005 3:20 PM   Microsoft Corporation
          c:\winnt\system32\rasppp.dll
raschap   5.00.2195.6663      59.27 KB (60,688 bytes)
          8/30/2005 3:20 PM   Microsoft Corporation
          c:\winnt\system32\raschap.dll
rastls    5.00.2195.6680      98.27 KB (100,624
bytes)    8/30/2005 3:20 PM   Microsoft Corporation
          c:\winnt\system32\rastls.dll
cryptui   5.131.2195.6628     433.27 KB (443,664
bytes)    8/30/2005 3:19 PM   Microsoft Corporation
          c:\winnt\system32\cryptui.dll
ipbootp   5.00.2168.1         33.77 KB (34,576 bytes)
          12/31/1979 6:00 PM  Microsoft Corporation
          c:\winnt\system32\ipbootp.dll
ntmsdba   5.00.2195.6655      169.27 KB (173,328
bytes)    8/30/2005 3:20 PM   Microsoft Corporation
          c:\winnt\system32\ntmsdba.dll
comsvcs   2000.2.3504.0       1.38 MB (1,448,208
bytes)    8/30/2005 3:19 PM   Microsoft Corporation
          c:\winnt\system32\comsvcs.dll
hidserv   5.00.2195.6655      19.27 KB (19,728 bytes)
          8/30/2005 3:19 PM   Microsoft Corporation
          c:\winnt\system32\hidserv.exe
hid       5.00.2195.6655      17.77 KB (18,192 bytes)
          8/30/2005 3:19 PM   Microsoft Corporation
          c:\winnt\system32\hid.dll
llssrv    5.00.2195.6697      81.77 KB (83,728 bytes)
          6/19/2003 12:05 PM  Microsoft Corporation
          c:\winnt\system32\llssrv.exe
llsrpc    5.00.2195.6601      47.77 KB (48,912 bytes)
          12/31/1979 6:00 PM  Microsoft Corporation
          c:\winnt\system32\llsrpc.dll
regsvc    5.00.2195.6701      66.77 KB (68,368 bytes)
          8/30/2005 3:20 PM   Microsoft Corporation
          c:\winnt\system32\regsvc.exe
mstask    4.71.2195.6704      116.77 KB (119,568
bytes)    8/30/2005 3:20 PM   Microsoft Corporation
          c:\winnt\system32\mstask.exe
msidle    5.00.2920.0000      6.27 KB (6,416 bytes)
          12/31/1979 6:00 PM  Microsoft Corporation
          c:\winnt\system32\msidle.dll
tcpsvcs   5.00.2134.1         24.77 KB (25,360 bytes)
          12/31/1979 6:00 PM  Microsoft Corporation
          c:\winnt\system32\tcpsvcs.exe
simptcp   5.00.2134.1         19.27 KB (19,728 bytes)
          4/21/2005 7:31 PM   Microsoft Corporation
          c:\winnt\system32\simptcp.dll
winmgmt   1.50.1085.0100      192.10 KB (196,706
bytes)    8/30/2005 3:20 PM   Microsoft Corporation
          c:\winnt\system32\wbem\winmgmt.exe
wbemcomn  1.50.1085.0100      692.09 KB (708,696
bytes)    8/30/2005 3:20 PM   Microsoft Corporation
          c:\winnt\system32\wbem\wbemcomn.dll
wbemcore  1.50.1085.0100      632.09 KB (647,257
bytes)    8/30/2005 3:20 PM   Microsoft Corporation
          c:\winnt\system32\wbem\wbemcore.dll
fastprox  1.50.1085.0100      152.10 KB (155,749
bytes)    8/30/2005 3:20 PM   Microsoft Corporation
          c:\winnt\system32\wbem\fastprox.dll
wbemess   1.50.1085.0100      364.09 KB (372,825
bytes)    8/30/2005 3:20 PM   Microsoft Corporation
          c:\winnt\system32\wbem\wbemess.dll
wbemsvc   1.50.1085.0007      40.07 KB (41,036 bytes)
          8/30/2005 3:20 PM   Microsoft Corporation
          c:\winnt\system32\wbem\wbemsvc.dll
cimwin32  1.50.1085.0103      1.04 MB (1,089,637
bytes)    8/30/2005 3:20 PM   Microsoft Corporation
          c:\winnt\system32\wbem\cimwin32.dll
framedyn  1.50.1085.0076      164.07 KB (168,009
bytes)    8/30/2005 3:20 PM   Microsoft Corporation
          c:\winnt\system32\wbem\framedyn.dll
perfos    5.00.2155.1         21.27 KB (21,776 bytes)
          12/31/1979 6:00 PM  Microsoft Corporation
          c:\winnt\system32\perfos.dll
ntevt     1.50.1085.0072      192.06 KB (196,671
bytes)    8/30/2005 3:20 PM   Microsoft Corporation
          c:\winnt\system32\wbem\ntevt.dll
provthrd  1.50.1085.0000      68.07 KB (69,708 bytes)
          4/22/2005 12:33 AM  Microsoft Corporation
          c:\winnt\system32\wbem\provthrd.dll
wuauserv  5.4.3630.2554 built by: lab04_n
          9.00 KB (9,216 bytes)         8/30/2005
3:20 PM   Microsoft Corporation
          c:\winnt\system32\wuauserv.dll
wuaueng   5.4.3630.2554 built by: lab04_n
          188.00 KB (192,512 bytes)     8/30/2005
3:20 PM   Microsoft Corporation
          c:\winnt\system32\wuaueng.dll
advpack   5.00.3502.6601      86.77 KB (88,848 bytes)
          8/30/2005 3:19 PM   Microsoft Corporation
          c:\winnt\system32\advpack.dll
wtsapi32  5.00.2134.1         14.27 KB (14,608 bytes)
          12/31/1979 6:00 PM  Microsoft Corporation
          c:\winnt\system32\wtsapi32.dll
utildll   5.00.2195.6701      25.77 KB (26,384 bytes)
          8/30/2005 3:20 PM   Microsoft Corporation
          c:\winnt\system32\utildll.dll
winhttp   5.1.2600.1188 (xpsp2.030318-2132)
          303.50 KB (310,784 bytes)     8/30/2005
3:20 PM   Microsoft Corporation
          c:\winnt\system32\winhttp.dll
sensapi   5.00.2195.6627      7.27 KB (7,440 bytes)
          8/30/2005 3:20 PM   Microsoft Corporation
          c:\winnt\system32\sensapi.dll
inetinfo  5.00.0984 14.27 KB (14,608 bytes)
          8/30/2005 3:21 PM   Microsoft Corporation
          c:\winnt\system32\inetsrv\inetinfo.exe
iisrtl    5.00.0984 121.27 KB (124,176 bytes)
          8/30/2005 3:19 PM   Microsoft Corporation
          c:\winnt\system32\iisrtl.dll
rpcref    5.00.0984 4.27 KB (4,368 bytes)
          8/30/2005 3:21 PM   Microsoft Corporation
          c:\winnt\system32\inetsrv\rpcref.dll
iisadmin  5.00.0984 15.77 KB (16,144 bytes)
          8/30/2005 3:21 PM   Microsoft Corporation
          c:\winnt\system32\inetsrv\iisadmin.dll
coadmin   5.00.0984 39.77 KB (40,720 bytes)
          8/30/2005 3:20 PM   Microsoft Corporation
          c:\winnt\system32\inetsrv\coadmin.dll
nsepm     5.00.0984 43.27 KB (44,304 bytes)
          8/30/2005 3:21 PM   Microsoft Corporation
          c:\winnt\system32\inetsrv\nsepm.dll
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iismap    5.00.0984 56.27 KB (57,616 bytes)
          8/30/2005 3:19 PM   Microsoft Corporation
          c:\winnt\system32\iismap.dll
metadata  5.00.0984 68.77 KB (70,416 bytes)
          8/30/2005 3:21 PM   Microsoft Corporation
          c:\winnt\system32\inetsrv\metadata.dll
wamreg    5.00.0984 45.77 KB (46,864 bytes)
          8/30/2005 3:21 PM   Microsoft Corporation
          c:\winnt\system32\inetsrv\wamreg.dll
admexs    5.00.0984 27.77 KB (28,432 bytes)
          8/30/2005 3:20 PM   Microsoft Corporation
          c:\winnt\system32\inetsrv\admexs.dll
svcext    5.00.0984 39.77 KB (40,720 bytes)
          8/30/2005 3:21 PM   Microsoft Corporation
          c:\winnt\system32\inetsrv\svcext.dll
security  5.00.2154.1         5.77 KB (5,904 bytes)
          12/31/1979 6:00 PM  Microsoft Corporation
          c:\winnt\system32\security.dll
w3svc     5.00.0984 338.27 KB (346,384 bytes)
          8/30/2005 3:21 PM   Microsoft Corporation
          c:\winnt\system32\inetsrv\w3svc.dll
infocomm  5.00.0984 242.27 KB (248,080 bytes)
          8/30/2005 3:21 PM   Microsoft Corporation
          c:\winnt\system32\inetsrv\infocomm.dll
isatq     5.00.0984 61.27 KB (62,736 bytes)
          8/30/2005 3:21 PM   Microsoft Corporation
          c:\winnt\system32\inetsrv\isatq.dll
iisfecnv  5.00.0984 7.27 KB (7,440 bytes)
          5/23/2005 9:46 AM   Microsoft Corporation
          c:\winnt\system32\inetsrv\iisfecnv.dll
inetsloc  5.00.0984 20.27 KB (20,752 bytes)
          8/30/2005 3:19 PM   Microsoft Corporation
          c:\winnt\system32\inetsloc.dll
lonsint   5.00.0984 11.77 KB (12,048 bytes)
          8/30/2005 3:21 PM   Microsoft Corporation
          c:\winnt\system32\inetsrv\lonsint.dll
iscomlog  5.00.0984 24.27 KB (24,848 bytes)
          8/30/2005 3:21 PM   Microsoft Corporation
          c:\winnt\system32\inetsrv\iscomlog.dll
sspifilt  5.00.0984 42.77 KB (43,792 bytes)
          8/30/2005 3:21 PM   Microsoft Corporation
          c:\winnt\system32\inetsrv\sspifilt.dll
compfilt  5.00.0984 22.77 KB (23,312 bytes)
          8/30/2005 3:20 PM   Microsoft Corporation
          c:\winnt\system32\inetsrv\compfilt.dll
gzip      5.00.0984 30.27 KB (30,992 bytes)
          8/30/2005 3:20 PM   Microsoft Corporation
          c:\winnt\system32\inetsrv\gzip.dll
md5filt   5.00.0984 32.77 KB (33,552 bytes)
          8/30/2005 3:21 PM   Microsoft Corporation
          c:\winnt\system32\inetsrv\md5filt.dll
aspnet_filter       2.0.50215.312 (beta2PLUS.050215-
3100)     8.50 KB (8,704 bytes)         5/23/2005
12:36 AM  Microsoft Corporation
          c:\winnt\microsoft.net\framework\v2.0.50215
\aspnet_filter.dll
msvcr80   8.00.50215.312      600.00 KB (614,400
bytes)    5/22/2005 11:47 PM  Microsoft Corporation
          c:\winnt\microsoft.net\framework\v2.0.50215
\msvcr80.dll
httpext   5.00.0984 240.77 KB (246,544 bytes)
          8/30/2005 3:20 PM   Microsoft Corporation
          c:\winnt\system32\inetsrv\httpext.dll
wshnetbs  5.00.2134.1         7.77 KB (7,952 bytes)
          12/31/1979 6:00 PM  Microsoft Corporation
          c:\winnt\system32\wshnetbs.dll
iislog    5.00.0984 75.27 KB (77,072 bytes)
          8/30/2005 3:21 PM   Microsoft Corporation
          c:\winnt\system32\inetsrv\iislog.dll
dfssvc    5.00.2195.6664      88.77 KB (90,896 bytes)
          8/30/2005 3:19 PM   Microsoft Corporation
          c:\winnt\system32\dfssvc.exe
tapisrv   5.00.2195.6666      169.27 KB (173,328
bytes)    8/30/2005 3:20 PM   Microsoft Corporation
          c:\winnt\system32\tapisrv.dll
unimdm    5.00.2195.6601      199.27 KB (204,048
bytes)    8/30/2005 3:20 PM   Microsoft Corporation
          c:\winnt\system32\unimdm.tsp
uniplat   5.00.2195.6601      14.27 KB (14,608 bytes)
          8/30/2005 3:20 PM   Microsoft Corporation
          c:\winnt\system32\uniplat.dll
kmddsp    5.00.2150.1         17.77 KB (18,192 bytes)
          12/31/1979 6:00 PM  Microsoft Corporation
          c:\winnt\system32\kmddsp.tsp
ndptsp    5.00.2143.1         38.27 KB (39,184 bytes)
          12/31/1979 6:00 PM  Microsoft Corporation
          c:\winnt\system32\ndptsp.tsp
ipconf    5.00.2143.1         10.77 KB (11,024 bytes)
          12/31/1979 6:00 PM  Microsoft Corporation
          c:\winnt\system32\ipconf.tsp
h323      5.00.2195.6699      248.77 KB (254,736
bytes)    8/30/2005 3:19 PM   Microsoft Corporation
          c:\winnt\system32\h323.tsp

[Services]

Display Name        Name      State     Start Mode
          Service Type        Path      Error Control
          Start Name          Tag ID
Altiris Client Service        AClient   Running
          Auto      Own Process
          c:\altiris\aclient\aclient.exe -service
          Normal    LocalSystem         0
Alerter   Alerter   Running   Auto      Share Process
          c:\winnt\system32\services.exe
          Normal    LocalSystem         0
Application Management        AppMgmt   Stopped
          Manual    Share Process
          c:\winnt\system32\services.exe
          Normal    LocalSystem         0
ASP.NET State Service         aspnet_state
          Stopped   Manual    Own Process
          c:\winnt\microsoft.net\framework\v2.0.50215
\aspnet_state.exe   Normal    .\ASPNET  0
Background Intelligent Transfer Service BITS
          Stopped   Manual    Share Process
          c:\winnt\system32\svchost.exe -k bitsgroup
          Normal    LocalSystem         0
Computer Browser    Browser   Running   Auto
          Share Process
          c:\winnt\system32\services.exe
          Normal    LocalSystem         0
Indexing Service    cisvc     Stopped   Manual
          Share Process
          c:\winnt\system32\cisvc.exe   Normal
          LocalSystem         0
ClipBook  ClipSrv   Stopped   Manual    Own Process
          c:\winnt\system32\clipsrv.exe Normal
          LocalSystem         0
.NET Runtime Optimization Service v2.0.50215_X86
          clr_optimization_v2.0.50215_32
          Stopped   Manual    Own Process
          c:\winnt\microsoft.net\framework\v2.0.50215
\mscorsvw.exe       Ignore    LocalSystem         0

Distributed File System       Dfs       Running
          Auto      Own Process
          c:\winnt\system32\dfssvc.exe  Normal
          LocalSystem         0
DHCP Client         Dhcp      Running   Auto
          Share Process
          c:\winnt\system32\services.exe
          Normal    LocalSystem         0
Logical Disk Manager Administrative Service
          dmadmin   Stopped   Manual    Share Process
          c:\winnt\system32\dmadmin.exe /com
          Normal    LocalSystem         0
Logical Disk Manager          dmserver  Running
          Auto      Share Process
          c:\winnt\system32\services.exe
          Normal    LocalSystem         0
DNS Client          Dnscache  Running   Auto
          Share Process
          c:\winnt\system32\services.exe
          Normal    LocalSystem         0
Event Log Eventlog  Running   Auto      Share Process
          c:\winnt\system32\services.exe
          Normal    LocalSystem         0
COM+ Event System   EventSystem         Running
          Manual    Share Process
          c:\winnt\system32\svchost.exe -k netsvcs
          Normal    LocalSystem         0
Fax Service         Fax       Stopped   Manual    Own
Process   c:\winnt\system32\faxsvc.exe  Normal
          LocalSystem         0
HID Input Service   HidServ   Running   Auto      Own
Process   c:\winnt\system32\hidserv.exe Normal
          LocalSystem         0
IIS Admin Service   IISADMIN  Running   Auto
          Share Process
          c:\winnt\system32\inetsrv\inetinfo.exe
          Normal    LocalSystem         0
Intersite Messaging IsmServ   Stopped   Disabled  Own
Process   c:\winnt\system32\ismserv.exe Normal
          LocalSystem         0
Kerberos Key Distribution Center        kdc
          Stopped   Disabled  Share Process
          c:\winnt\system32\lsass.exe   Normal
          LocalSystem         0
Server    lanmanserver        Running   Auto
          Share Process
          c:\winnt\system32\services.exe
          Normal    LocalSystem         0
Workstation         lanmanworkstation   Running
          Auto      Share Process
          c:\winnt\system32\services.exe
          Normal    LocalSystem         0
License Logging Service       LicenseService
          Running   Auto      Own Process
```


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```
          c:\winnt\system32\llssrv.exe  Normal
          LocalSystem         0
TCP/IP NetBIOS Helper Service LmHosts   Running
          Auto      Share Process
          c:\winnt\system32\services.exe
          Normal    LocalSystem         0
Messenger Messenger Running   Auto      Share Process
          c:\winnt\system32\services.exe
          Normal    LocalSystem         0
NetMeeting Remote Desktop Sharing       mnmsrvc
          Stopped   Manual    Own Process
          c:\winnt\system32\mnmsrvc.exe Normal
          LocalSystem         0
Distributed Transaction Coordinator     MSDTC
          Running   Auto      Own Process
          c:\winnt\system32\msdtc.exe   Normal
          LocalSystem         0
Windows Installer   MSIServer Stopped   Manual
          Share Process
          c:\winnt\system32\msiexec.exe /v
          Normal    LocalSystem         0
Network DDE         NetDDE    Stopped   Manual
          Share Process
          c:\winnt\system32\netdde.exe  Normal
          LocalSystem         0
Network DDE DSDM    NetDDEdsdm          Stopped
          Manual    Share Process
          c:\winnt\system32\netdde.exe  Normal
          LocalSystem         0
Net Logon Netlogon  Stopped   Manual    Share Process
          c:\winnt\system32\lsass.exe   Normal
          LocalSystem         0
Network Connections Netman    Stopped   Manual
          Share Process
          c:\winnt\system32\svchost.exe -k netsvcs
          Normal    LocalSystem         0
File Replication    NtFrs     Stopped   Manual    Own
Process   c:\winnt\system32\ntfrs.exe   Ignore
          LocalSystem         0
NT LM Security Support Provider         NtLmSsp
          Stopped   Manual    Share Process
          c:\winnt\system32\lsass.exe   Normal
          LocalSystem         0
Removable Storage   NtmsSvc   Running   Auto
          Share Process
          c:\winnt\system32\svchost.exe -k netsvcs
          Normal    LocalSystem         0
Plug and Play       PlugPlay  Running   Auto
          Share Process
          c:\winnt\system32\services.exe
          Normal    LocalSystem         0
IPSEC Policy Agent  PolicyAgent         Running
          Auto      Share Process
          c:\winnt\system32\lsass.exe   Normal
          LocalSystem         0
Protected Storage   ProtectedStorage    Running
          Auto      Share Process
          c:\winnt\system32\services.exe
          Normal    LocalSystem         0
Remote Access Auto Connection Manager   RasAuto
          Stopped   Manual    Share Process
          c:\winnt\system32\svchost.exe -k netsvcs
          Normal    LocalSystem         0

Remote Access Connection Manager        RasMan
          Running   Manual    Share Process
          c:\winnt\system32\svchost.exe -k netsvcs
          Normal    LocalSystem         0
Routing and Remote Access     RemoteAccess
          Stopped   Disabled  Share Process
          c:\winnt\system32\svchost.exe -k netsvcs
          Normal    LocalSystem         0
Remote Registry Service       RemoteRegistry
          Running   Auto      Own Process
          c:\winnt\system32\regsvc.exe  Normal
          LocalSystem         0
Remote Procedure Call (RPC) Locator     RpcLocator
          Stopped   Manual    Own Process
          c:\winnt\system32\locator.exe Normal
          LocalSystem         0
Remote Procedure Call (RPC)   RpcSs      Running
          Auto      Share Process
          c:\winnt\system32\svchost -k rpcss
          Normal    LocalSystem         0
QoS RSVP  RSVP      Stopped   Manual    Own Process
          c:\winnt\system32\rsvp.exe -s Normal
          LocalSystem         0
Security Accounts Manager     SamSs     Running
          Auto      Share Process
          c:\winnt\system32\lsass.exe   Normal
          LocalSystem         0
Smart Card Helper   SCardDrv  Stopped   Manual
          Share Process
          c:\winnt\system32\scardsvr.exe
          Ignore    LocalSystem         0
Smart Card          SCardSvr  Stopped   Manual
          Share Process
          c:\winnt\system32\scardsvr.exe
          Ignore    LocalSystem         0
Task Scheduler      Schedule  Running   Auto
          Share Process
          c:\winnt\system32\mstask.exe  Normal
          LocalSystem         0
RunAs Service       seclogon  Running   Auto
          Share Process
          c:\winnt\system32\services.exe
          Ignore    LocalSystem         0
System Event Notification     SENS      Running
          Auto      Share Process
          c:\winnt\system32\svchost.exe -k netsvcs
          Normal    LocalSystem         0
Internet Connection Sharing   SharedAccess
          Stopped   Manual    Share Process
          c:\winnt\system32\svchost.exe -k netsvcs
          Normal    LocalSystem         0
Simple TCP/IP Services        SimpTcp   Running
          Auto      Share Process
          c:\winnt\system32\tcpsvcs.exe Normal
          LocalSystem         0
Print Spooler       Spooler   Running   Auto      Own
Process   c:\winnt\system32\spoolsv.exe Normal
          LocalSystem         0
HP ProLiant System Shutdown Service     sysdown
          Stopped   Auto      Own Process
          c:\winnt\system32\sysdown.exe Normal
          LocalSystem         0

Performance Logs and Alerts   SysmonLog Stopped
          Manual    Own Process
          c:\winnt\system32\smlogsvc.exe
          Normal    LocalSystem         0
Telephony TapiSrv   Running   Manual    Share Process
          c:\winnt\system32\svchost.exe -k tapisrv
          Normal    LocalSystem         0
Terminal Services   TermService         Running
          Auto      Own Process
          c:\winnt\system32\termsrv.exe Normal
          LocalSystem         0
Telnet    TlntSvr   Stopped   Manual    Own Process
          c:\winnt\system32\tlntsvr.exe Normal
          LocalSystem         0
Distributed Link Tracking Server        TrkSvr
          Stopped   Manual    Share Process
          c:\winnt\system32\services.exe
          Normal    LocalSystem         0
Distributed Link Tracking Client        TrkWks
          Running   Auto      Share Process
          c:\winnt\system32\services.exe
          Normal    LocalSystem         0
Uninterruptible Power Supply  UPS       Stopped
          Manual    Own Process
          c:\winnt\system32\ups.exe     Normal
          LocalSystem         0
Utility Manager     UtilMan   Stopped   Manual    Own
Process   c:\winnt\system32\utilman.exe Normal
          LocalSystem         0
Windows Time        W32Time   Stopped   Manual
          Share Process
          c:\winnt\system32\services.exe
          Normal    LocalSystem         0
World Wide Web Publishing Service       W3SVC
          Running   Auto      Share Process
          c:\winnt\system32\inetsrv\inetinfo.exe
          Normal    LocalSystem         0
Windows Management Instrumentation      WinMgmt
          Running   Auto      Own Process
          c:\winnt\system32\wbem\winmgmt.exe
          Ignore    LocalSystem         0
Windows Management Instrumentation Driver Extensions
          Wmi       Running   Manual    Share Process
          c:\winnt\system32\services.exe
          Normal    LocalSystem         0
Automatic Updates   wuauserv  Running   Auto
          Share Process
          c:\winnt\system32\svchost.exe -k wugroup
          Normal    LocalSystem         0
Wireless Configuration        WZCSVC    Stopped
          Manual    Share Process
          c:\winnt\system32\svchost.exe -k netsvcs
          Normal    LocalSystem         0

[Program Groups]

Group Name          Name      User Name
Accessories         Default User:Accessories
          Default User
Accessories\Accessibility     Default
User:Accessories\Accessibility          Default User
```


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```
Accessories\Entertainment     Default
User:Accessories\Entertainment          Default User

Accessories\System Tools      Default
User:Accessories\System Tools Default User
Startup   Default User:Startup          Default User

Accessories         All Users:Accessories         All
Users
Accessories\Communications    All
Users:Accessories\Communications        All Users
Accessories\Entertainment     All
Users:Accessories\Entertainment         All Users
Accessories\System Tools      All
Users:Accessories\System Tools          All Users
Administrative Tools          All
Users:Administrative Tools    All Users
Microsoft SQL Server 2005 CTP All Users:Microsoft SQL
Server 2005 CTP     All Users
Microsoft SQL Server 2005 CTP\Configuration Tools All
Users:Microsoft SQL Server 2005 CTP\Configuration
Tools     All Users
Microsoft SQL Server 2005 CTP\Documentation and
Tutorials All Users:Microsoft SQL Server 2005
CTP\Documentation and Tutorials         All Users
Microsoft SQL Server 2005 CTP\Documentation and
Tutorials\Tutorials All Users:Microsoft SQL Server
2005 CTP\Documentation and Tutorials\Tutorials    All
Users
Startup   All Users:Startup   All Users
Accessories         BL9\Administrator:Accessories
          BL9\Administrator
Accessories\Accessibility
          BL9\Administrator:Accessories\Accessibility
          BL9\Administrator
Accessories\Entertainment
          BL9\Administrator:Accessories\Entertainment
          BL9\Administrator
Accessories\System Tools
          BL9\Administrator:Accessories\System Tools
          BL9\Administrator
Administrative Tools
          BL9\Administrator:Administrative Tools
          BL9\Administrator
Startup   BL9\Administrator:Startup
          BL9\Administrator

[Startup Programs]

Program   Command   User Name Location
AClntUsr  c:\altiris\aclient\aclntusr.exe         All
Users
          HKLM\SOFTWARE\Microsoft\Windows\CurrentVers
ion\Run

[OLE Registration]

Object    Local Server
Sound (OLE2)        sndrec32.exe
Media Clip          mplay32.exe
Video Clip          mplay32.exe /avi
MIDI Sequence       mplay32.exe /mid
Sound     Not Available
Media Clip          Not Available
Image Document      "c:\program files\windows
nt\accessories\imagevue\kodakimg.exe"
WordPad Document    "%programfiles%\windows
nt\accessories\wordpad.exe"
Windows Media Services DRM Storage object         Not
Available
DDSContainerCtl Class         Not Available
Bitmap Image        mspaint.exe

[Windows Error Reporting]

Time      Type      Details

[Internet Settings]



[Internet Explorer]

[ Following are sub-categories of this main category
]
[Summary]

Item      Value
No summary information available

[File Versions]

File      Version   Size      Date      Path
          Company
advapi32.dll        5.0.2195.6710       378 KB
          6/19/2003 12:05:04 PM
          C:\WINNT\system32   Microsoft Corporation

advpack.dll         5.0.3502.6601       87 KB
          6/19/2003 12:05:04 PM
          C:\WINNT\system32   Microsoft Corporation

browselc.dll        5.0.3700.6661       35 KB
          6/19/2003 12:05:04 PM
          C:\WINNT\system32   Microsoft Corporation

browseui.dll        5.0.3700.6661       789 KB
          6/19/2003 12:05:04 PM
          C:\WINNT\system32   Microsoft Corporation

ckcnv.exe 5.0.2189.1          9 KB      12/7/1999
2:00:00 AM          C:\WINNT\system32   Microsoft
Corporation
comctl32.dll        5.81.3502.6601      538 KB
          6/19/2003 12:05:04 PM
          C:\WINNT\system32   Microsoft Corporation

crypt32.dll         5.131.2195.6661     468 KB
          6/19/2003 12:05:04 PM
          C:\WINNT\system32   Microsoft Corporation

enhsig.dll          <File Missing>      Not Available
          Not Available       Not Available       Not
Available
iemigrat.dll        <File Missing>      Not Available
          Not Available       Not Available       Not
Available
iesetup.dll         5.0.3502.6601       57 KB
          6/19/2003 12:05:04 PM
          C:\WINNT\system32   Microsoft Corporation

iexplore.exe        5.0.2920.0          59 KB
          12/7/1999 2:00:00 AM          C:\Program
Files\Internet Explorer       Microsoft Corporation

imagehlp.dll        5.0.2195.6613       126 KB
          6/19/2003 12:05:04 PM
          C:\WINNT\system32   Microsoft Corporation

imghelp.dll         <File Missing>      Not Available
          Not Available       Not Available       Not
Available
inseng.dll          5.0.3502.6601       72 KB
          6/19/2003 12:05:04 PM
          C:\WINNT\system32   Microsoft Corporation

jobexec.dll         5.0.0.1   47 KB     12/7/1999
2:00:00 AM          C:\WINNT\system32   Microsoft
Corporation
jscript.dll         5.1.0.8513          476 KB
          6/19/2003 12:05:04 PM
          C:\WINNT\system32   Microsoft Corporation

jsproxy.dll         5.0.2920.0          13 KB
          12/7/1999 2:00:00 AM
          C:\WINNT\system32   Microsoft Corporation

msaahtml.dll        <File Missing>      Not Available
          Not Available       Not Available       Not
Available
mshtml.dll          5.0.3700.6699       2,299 KB
          6/19/2003 12:05:04 PM
          C:\WINNT\system32   Microsoft Corporation

msoss.dll <File Missing>      Not Available       Not
Available Not Available       Not Available
msxml.dll 8.0.6730.0          502 KB    6/19/2003
12:05:04 PM         C:\WINNT\system32   Microsoft
Corporation
occache.dll         5.0.3502.6601       86 KB
          6/19/2003 12:05:04 PM
          C:\WINNT\system32   Microsoft Corporation

ole32.dll 5.0.2195.6692       973 KB    6/19/2003
12:05:04 PM         C:\WINNT\system32   Microsoft
Corporation
oleaut32.dll        2.40.4522.0         612 KB
          6/19/2003 12:05:04 PM
          C:\WINNT\system32   Microsoft Corporation

olepro32.dll        5.0.4522.0          160 KB
          6/19/2003 12:05:04 PM
          C:\WINNT\system32   Microsoft Corporation

rsabase.dll         5.0.2195.6619       129 KB
          6/19/2003 12:05:04 PM
```


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```
          C:\WINNT\system32   Microsoft Corporation

rsaenh.dll          5.0.2195.6611       132 KB
          6/19/2003 12:05:04 PM
          C:\WINNT\system32   Microsoft Corporation

rsapi32.dll         <File Missing>      Not Available
          Not Available       Not Available       Not
Available
rsasig.dll          <File Missing>      Not Available
          Not Available       Not Available       Not
Available
schannel.dll        5.1.2195.6705       144 KB
          6/19/2003 12:05:04 PM
          C:\WINNT\system32   Microsoft Corporation

shdoc401.dll        <File Missing>      Not Available
          Not Available       Not Available       Not
Available
shdocvw.dll         5.0.3700.6668       1,082 KB
          6/19/2003 12:05:04 PM
          C:\WINNT\system32   Microsoft Corporation

shell32.dll         5.0.3700.6705       2,328 KB
          6/19/2003 12:05:04 PM
          C:\WINNT\system32   Microsoft Corporation

shlwapi.dll         5.0.3502.6601       283 KB
          6/19/2003 12:05:04 PM
          C:\WINNT\system32   Microsoft Corporation

url.dll   5.0.3502.6601       82 KB     6/19/2003
12:05:04 PM         C:\WINNT\system32   Microsoft
Corporation
urlmon.dll          5.0.3700.6705       443 KB
          6/19/2003 12:05:04 PM
          C:\WINNT\system32   Microsoft Corporation

vbscript.dll        5.1.0.7426          428 KB
          6/19/2003 12:05:04 PM
          C:\WINNT\system32   Microsoft Corporation

webcheck.dll        5.0.3502.6601       252 KB
          6/19/2003 12:05:04 PM
          C:\WINNT\system32   Microsoft Corporation

win.com   5.0.2134.1          24 KB     12/7/1999
2:00:00 AM          C:\WINNT\system32   Microsoft
Corporation
wininet.dll         5.0.3700.6713       456 KB
          6/19/2003 12:05:04 PM
          C:\WINNT\system32   Microsoft Corporation

winsock.dll         3.10.0.103          3 KB
          12/7/1999 2:00:00 AM
          C:\WINNT\system32   Microsoft Corporation

wintrust.dll        5.131.2195.6624     162 KB
          6/19/2003 12:05:04 PM
          C:\WINNT\system32   Microsoft Corporation

wsock.vxd <File Missing>      Not Available       Not
Available Not Available       Not Available
```

```
wsock32.dll         5.0.2195.6603       21 KB
          6/19/2003 12:05:04 PM
          C:\WINNT\system32   Microsoft Corporation

wsock32n.dll        <File Missing>      Not Available
          Not Available       Not Available       Not
Available

[Connectivity]

Item      Value
Connection Preference         Never dial

LAN Settings

AutoConfigProxy     Not Available
AutoProxyDetectMode Enabled
AutoConfigURL
Proxy     Disabled
ProxyServer
ProxyOverride

[Cache]

[ Following are sub-categories of this main category
]
[Summary]

Item      Value
Page Refresh Type   Automatic
Temporary Internet Files Folder         C:\Documents
and Settings\Default User\Local Settings\Temporary
Internet Files
Total Disk Space    57224 MB
Available Disk Space          9886 MB
Maximum Cache Size  1788 MB
Available Cache Size          1788 MB

[List of Objects]

Program File        Status    CodeBase
No cached object information available


[Content]

[ Following are sub-categories of this main category
]
[Summary]

Item      Value
Content Advisor     Disabled

[Personal Certificates]

Issued To Issued By Validity  Signature Algorithm
No personal certificate information available


[Other People Certificates]

Issued To Issued By Validity  Signature Algorithm
No other people certificate information available


[Publishers]

Name
No publisher information available

[Security]

Zone      Security Level
```

# Microsoft SQL Server 2000 Installation Procedures

```
Microsoft SQL Server 2005 Installation Procedures
Type of installation: custom
During the custom installation, use the default
settings for all except the following two areas:
Services accounts:
SQL Server - local system account
SQL Server Agent - local system account
Set the sort order/collation as
SQL_Latin1_General_CP437_Bin
```

# Microsoft COM Component Configuration Parameters

```
The component services tool in Windows 2000
was used to change the queue settings for the
TPCC COM+ single queue component. The
single queue component was set to enable
object pooling, object construction, just in time
activation, and component supports events and
statistics. The min and max pool size for the
single queue component on each client was 56.
Delivery threads were set under the TPCC key
in the registry. The construction string was Dummy
String
```


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# *Appendix D: 60-Day Space*


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HP TPC-C FULL DISCLOSURE REPORT
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# TPC-C 60 Day Space Requirements

| | | | | | | |
|---|---|---|---|---|---|---|
| | **8,676** | | | | TpmC | **107,010.00** |
| | Rows | Data KB | Index KB | Extra 5% KB | 8hr Space | Total Space KB |
| | 8,676 | **928** | **16** | 47 | | 991 |
| | 96,760 | **9,640** | **40** | 484 | | 10164 |
| 2 | 2,280,000 | **189,294,552** | **11,810,752** | 10,055,265 | | 211160569 |
| 2 | 2,280,000 | **15,198,840** | **56,768** | | 3,317,348 | 15255608 |
| | 48,084,000 | **1,391,256** | **3,496** | 69,738 | | 1464490 |
| 2 | 2,280,000 | **8,498,944** | **19,384** | | 4,614,065 | 8518328 |
| 2,66 | 2,795,102 | **170,675,096** | **401,992** | | 37,233,346 | 171077088 |
| | 100,000 | **9,416** | **32** | 472 | | 9920 |
| 87,6 | 00,000 | **277,632,000** | **585,464** | 13,910,873 | | 292128337 |
| | | 662,710,672 | 12,877,944 | 24,036,880 | 45,164,759 | 699,625,496 |

| | MSSQL_misc_fg | MSSQL_cs_fg |
|---|---|---|
| | 991 | |
| | 10164 | |
| | | 211160569 |
| | 18572956 | |
| | 1464490 | |
| | 13132393 | |
| | 171077088 | |
| | 9920 | |
| | | 292128337 |
| | 204,268,002 | 503,288,906 |
| files= | **1** | **6** |
| size= | **58,067,200** | **11,264,000** |
| Total= | 58,067,200 | 67,584,000 |
| 8K blocks | 464,537,600 | 540,672,000 |
| | OK | OK |

| | MB | |
|---|---|---|
| | 189,817 | Sum of Data for Order, Orderline and History |
| | 493,411 | Sum of Data+Index+5%-Dynamic Space |
| | na | Total Allocated Spac - ( Dynamic + Static Space) |
| | 37,459 | (Dynamic Space/(W*62.5))*tpmc |
| | - | (Free Space -1.5*Daily Growth) Zero Assumed |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| MB | 2,740,973 | | | | | | |
| GB | 2,676.73 | GB | | | | | |
| | | | | | | | |
| | 416750.00 | MB | | | | | |
| rder | 6.05 | KB | | | | | |
| | 303,384 | MB | | | | | |
| | 296.2730 | GB | | | | | |
| | | | | | | | |
| | GB Needed | | Disks Measured | GB Priced | Disk Size | Formatted Size | |
| 3 | 2,676.73 | | 294 | 9972.48 | 36.4GB | 33.920 | |
| | | | | 0.00 | | | |
| | | | | 0.00 | | | |

| tpmC | 107,010.00 |
|---|---|

| | Data Before KB | Index Before KB | Data After KB | Index After KB | Data Grow KB | Index Grow KB | Total Grow KB | KB/New-Order | 8-Hr Growth KB | 8-Hr Growth MB |
|---|---|---|---|---|---|---|---|---|---|---|
| History | 15,198,840 | 56,768 | 16,640,368 | 114,056 | 1,441,528 | 57,288 | 1,498,816 | 0.0646 | 3,317,347.67 | 3,239.60 |
| Order | 8,498,944 | 19,384 | 10,564,616 | 38,400 | 2,065,672 | 19,016 | 2,084,688 | 0.0898 | 4,614,065.29 | 4,505.92 |
| Order-Line | 170,675,096 | 401,992 | 187,095,024 | 804,520 | 16,419,928 | 402,528 | 16,822,456 | 0.7249 | 37,233,346.36 | 36,360.69 |
| | | | | | | | | | | 44,106.21 |

| | sum(*) Before | sum(*) After | Num New-Order | Grow MB |
|---|---|---|---|---|
| d_next_o_id | 260,366,760 | 283,573,970 | 23,207,210 | 137072.18 |

| | Before MB | After MB | KB/New-Order | 8-Hr Growth MB | 8-Hr Growth GB |
|---|---|---|---|---|---|
| Log | 3757.95 | 140830.13 | 6.0482 | 303,383.51 | 296.27 |
| | | | 6,193.3595 | bytes | |

| 416750 | 0.90172875 | 33.792473 |
|---|---|---|

Database tpcc log used (%)


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# *Appendix E: Third Party Letters*


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Microsoft Corporation
One Microsoft Way
Redmond, WA 98052-6399

Tel 425 882 8080
Fax 425 936 7329
http://www.microsoft.com/

**Microsoft**

September 19, 2005

Hewlett-Packard Company
John Ellyson
20555 SH 249
MS 150402
Houston, TX 77040

Mr. Ellyson:

Here is the information you requested regarding pricing for several Microsoft products to be used in conjunction with your TPC-C benchmark testing.

All pricing shown is in US Dollars ($).

| Part Number | Description | Unit Price | Quantity | Price |
|---|---|---|---|---|
| 810-00845 | **SQL Server 2005 Enterprise (x86) Edition**<br>*Per Processor Licensing*<br>*Discount Schedule: Open Program - Level C*<br>*Unit Price reflects a 15% discount from the retail unit price of $23,424.* | $19,909 | 2 | $ 39,818 |
| P72-00264 | **Windows Server 2003, Enterprise Edition**<br>*Server License Only - No CALs*<br>*Discount Schedule: Open Program - No Level*<br>*Unit Price reflects a 42% discount from the retail unit price of $3,999.* | $2,334 | 1 | $719 |
| C11-00821 | **Windows 2000 Server**<br>*Server License Only - No CALs*<br>*Discount Schedule: No Level*<br>*Unit Price reflects a 8% discount from the retail unit price of $799.* | $738 | 4 | $2,952 |
| 254-00170 | **Visual C++ Standard Edition**<br>*Discount Schedule: No Discounts Applied* | $109 | 1 | $109 |
| | **Microsoft Problem Resolution Services**<br>*Professional Support*<br>*(1 incident)* | $245 | 1 | $245 |

Some products may not be currently orderable but will be available through Microsoft's normal distribution channels by November 8, 2005.

This quote is valid for the next 90 days.

If we can be of any further assistance, please contact Jamie Reding at (425) 703-0510 or jamiere@microsoft.com.

Reference ID: PCjoel0523053445.
Please include this Reference ID in any correspondence regarding this price quote.


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