

TPC Benchmark™ C

Full Disclosure Report for



PRIMERGY TX600 S3

**Using Microsoft SQL Server 2000
Enterprise Edition SP4**

**and Microsoft Windows Server 2003
Enterprise Edition with SP1**

October 28, 2005

First Edition

First Edition October 28, 2005

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

All performance data contained in this report were obtained in a rigorously controlled environment. Results obtained in other operating environments may vary significantly. We do not warrant or represent that a user can or will achieve similar performance expressed in transactions per minute (tpmC) or normalized price/performance (\$/tpmC). No warranty of system performance or price/performance is expressed or implied in this report.

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Preface

The Transaction Processing Performance Council (TPC), of which Fujitsu Siemens Computers GmbH is a member, is an organization of computer companies, dedicated to the development of objective, industry-wide performance metrics in the area of transaction processing. Fujitsu Siemens Computers GmbH is involved in this effort, participating on the council and utilizing TPC benchmarks in performance evaluation.

The TPC Benchmark™ C Standard Specification was developed by the Transaction Processing Performance Council. This benchmark exercises the system components necessary to perform tasks associated with that class of on-line transaction processing (OLTP) environments emphasizing a mixture of read-only and update intensive transactions. This is a complex OLTP application environment exercising a breadth of system components associated by such environments 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

This benchmark defines four on-line transactions and one deferred transaction, intended to emulate functions that are common to many OLTP applications. However, this benchmark does not reflect the entire range of OLTP requirements. 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, system 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.

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 subjected 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.

Summary

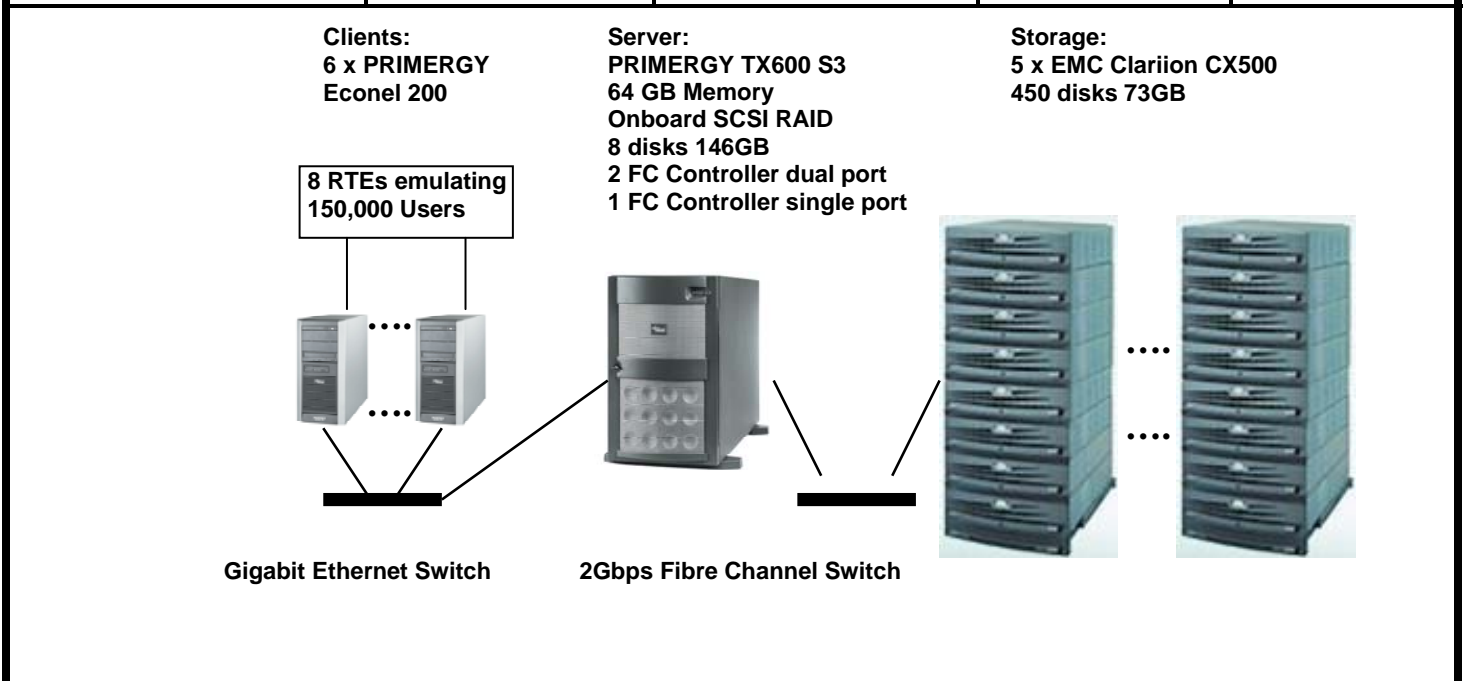
This report documents the TPC Benchmark™ C results achieved by the Fujitsu Siemens Computers GmbH using Microsoft SQL Server 2000 Enterprise Edition SP4 .

The TPC Benchmark™ C tests were run on a PRIMERGY TX600 S3 system using the Microsoft Windows Server 2003 Enterprise Edition SP1 operating system.

The results, summarized below, show the number of TPC Benchmark™ C transactions per minute (tpmC) and the price per tpmC (\$/tpmC).

Hardware	Software	Total System Cost	tpmC	\$/tpmC	Availability Date
Fujitsu Siemens Computers GmbH PRIMERGY TX600 S3	Microsoft SQL Server 2000 Enterprise Edition SP4 Microsoft Windows Server 2003 Enterprise Edition SP1	\$ 1,075,304 USD	188,761	\$ 5.70 USD	April 27, 2006

Total System Cost	TPC-C Throughput	Price/Performance	Availability Date	
\$1,075,304 USD	188,761 tpmC	\$5.70/tpmC	April 27, 2006	
Processors	Database Manager	Operating System	Other Software	Number of Users
Server: 4 x Dual-Core Intel® Xeon™ Processor 7041 Clients: 6 x 2 Intel® Xeon™ 3.4GHz with 2MB SLC	Microsoft SQL Server 2000 Enterprise Edition SP4	Microsoft Windows Server 2003 Enterprise Edition SP1	Microsoft Windows 2003 Server w/ IIS 6.0 and COM+ Microsoft Visual C++	150,000



System Components	Server		Each Client	
Processors	4	Dual-Core Intel® Xeon™ Processor 7041 (3.0GHz 2x 2MB Cache)	2	Intel® Xeon™ 3.4GHz with 2MB Cache
Memory	64	GB	2048	MB
Disk Controllers	3 1	PCI Fibre Channel Onboard SCSI RAID Controller	1	Onboard SCSI Controller
Disk Drives	1 450 8	36GB SCSI 73GB FC 146GB SCSI	1	72 GB
Total Storage		30,143 GB		



PRIMERGY TX600 S3

C/S with 6 PRIMERGY Econel 200

TPC-C REV 5.4

**Report Date
November 1, 2005**

Description	Part Number	Third Party	Unit Price	Qty.	Extended Price	3yr Maint. Price
		Brand Pricing				
PRIMERGY PY TX600S3f/X 3.0 4M/4G	S26361-K989-V738		9,312 \$	1	9,312 \$	
VRM Modules for Processor, xX600S3	S26361-F3124-E800		455 \$	3	1,366 \$	
XEON MP 3.0GHz/2x2MB, 800MHz FSB	S26361-F3124-E304		4,647 \$	3	13,942 \$	
8GB 2x4GB DDR2-400 PC2-3200 rg d ECC	S26361-F3072-E624		6,024 \$	8	48,194 \$	
Memory Board TX/RX600 S3	S26361-F3125-E800		136 \$	3	409 \$	
CD-RW \ DVD ATAPI slimline	S26361-F3123-E1		67 \$	1	67 \$	
HDD U320 36GB 15k hot plug 3.5" M	S26361-F3121-E536		191 \$	1	191 \$	
HDD U320 146GB 15k hot plug 3.5" M	S26361-F3121-E514		559 \$	8	4,471 \$	
BBU onboard RAID Controller xX600	S26361-F3128-E20		193 \$	1	193 \$	
FC Ctrl 2Gbit/s QLA2340 MMF LC	S26361-F3097-E1		959 \$	1	959 \$	
Cable powercord	S26361-F3151-E100		26 \$	1	26 \$	
KBPC SX USA standard keyboard	S26381-K397-E110		11 \$	1	11 \$	
Monitor CRT 17" SCENICVIEW B772-1	S26361-K909-V150		152 \$	1	152 \$	
Standard-LAN 10 Base T 5m	T26139-Y2425-M5		5 \$	1	5 \$	
FC Switch 2Gb/s, 16 Ports, ZO, 2-Switch FABRIC	D:FCSW-16P2G3850		9,408 \$	1	9,408 \$	
FC Kabel MMF 5m, Connector LC-LC	D:FCKAB-MM-C05L		73 \$	15	1,098 \$	
Enhanced Plus, Phone: 24x7 On-Site: 24x7, 4h (Sev-1) resp. Prepay Billing (Warranty Uplift)	PYT600-U004361-0NA		1,575 \$	1		1,575 \$
Server Hardware Subtotal					89,804 \$	
Clariion Bundle consisting of						
2 x RAID controller with 2048 MB read/write cache each,						
2 FC ports per controller 2 Gb/s each						
2 power supplies, 2 power distributors, 2 power cables (US),						
2 x battery-backed emergency power supplies,						
6 x 19" chassis, 4 height units each, 6 x fan unit with 3 fans,						
90 x 73 GB/15k drives, hot-swappable						
Navisphere Management Suite – Departmental License						
Navisphere Agent Kit						
3 years (total) maintenance for hard- and software (7x24, 4h)						
TP 3y OS Svc,4h Rec,7x24	D:R3CX500-90X73F		177,000 \$	5	885,000 \$	
	included		0 \$	5		0 \$
Storage Subtotal					885,000 \$	0 \$
Maint. Server + Storage						1,575 \$
PRIMERGY PY Eco200s X/3.4/2M 1G	S26361-K970-V274		1,620 \$	6	9,718 \$	
Xeon DP 3.4GHz 2MB 800MHz	S26361-F3099-E834		681 \$	6	4,088 \$	
1GB 2x512MB DDR333 PC2700 rg ECC	S26361-F3127-E523		247 \$	6	1,480 \$	
CD-ROM ATAPI	SNP:SY-F2240E1-A		19 \$	6	114 \$	
Eth Ctrl 1x1 Gbit PCI32 PRO/1000GT Cu	S26361-F3142-E1		28 \$	6	166 \$	
Standard-LAN 10 Base T 5m	T26139-Y2425-M5		5 \$	6	31 \$	
HDD U320 73GB 10k non hot plug 3.5"	S26361-F2824-E173		204 \$	6	1,221 \$	
Cable powercord (USA), 1.8m, grey	T26139-Y1742-E10		3 \$	6	21 \$	
Monitor CRT 17" SCENICVIEW B772-1	S26361-K909-V150		152 \$	6	911 \$	
KBPC SX USA standard keyboard	S26381-K397-E110		11 \$	6	66 \$	
36 MONTHS,IN WARR,ENHANCED,SERVER ECONOMY,7x24x365,4h	FPC58-0799-01		391 \$	6		2,346 \$
Client Hardware Subtotal					17,815 \$	2,346 \$
Microsoft Windows 2003 Server, Enterprise Edition	P72-00264		2,334 \$	1	2,334 \$	
MS SQL-Server 2000 Ent.Edit. Per Proc Lic.	810-00846		16,541 \$	4	66,164 \$	
Server Software Subtotal					68,498 \$	
Microsoft Windows Server 2003, Standard Edition	P73-00295		719 \$	6	4,314 \$	
Microsoft Visual C++ Standard	254-00170		109 \$	1	109 \$	
Client Software Subtotal					4,423 \$	
Microsoft Problem Resolution Service (1 incident)				2		245 \$
NETGEAR GS108 8-Port Copper Gigabit Switch (2 spares)	435286		90 \$	3	270 \$	
QLA2342-E-SP (2 spares)	9655-F14191-0295		1,332 \$	4	5,328 \$	
User Connectivity Subtotal					5,598 \$	
Total					1,071,138 \$	4,166 \$

1=FUJITSU Computer Systems Corporation, 2= Microsoft, 3=www.cdw.com, 4=www.pcnation.com

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 section 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.

3 -Year Cost of Ownership: \$ 1,075,304
 tpmC Rating: 188,761
 \$ / tpmC: 5.70

Note: The benchmark results and test methodology were audited by Francois Raab of InfoSizing (www.sizing.com)

Numerical Quantities Summary

MQTh, computed Maximum Qualified Throughput

188,761 tpmC

Response Times (in seconds)	90th percentile	Average	Maximum
- New-Order	0.45	0.29	5.65
- Payment	0.39	0.23	4.07
- Order-Status	0.41	0.26	5.58
- Delivery (interactive portion)	0.11	0.11	1.91
- Delivery (deferred portion)	0.35	0.20	1.91
- Stock-Level	1.28	0.94	4.20
- Menu	0.11	0.11	1.92
- Response and menu time delay added for emulated components	0.1 seconds		

Transaction Mix, in percent of total transactions

- New-Order	44.96 %
- Payment	43.01 %
- Order-Status	4.01 %
- Delivery	4.01 %
- Stock-Level	4.01 %

Keying/Think Times (in seconds)

	Minimum	Average	Maximum
- New-Order	18.00/0.000	18.02/12.05	18.89/120.51
- Payment	3.00/0.000	3.02/12.05	3.90/120.61
- Order-Status	2.00/0.000	2.02/10.05	2.90/100.62
- Delivery (interactive)	2.00/0.000	2.02/ 5.06	2.87/ 50.51
- Stock-Level	2.00/0.000	2.02/ 5.05	2.80/ 50.51

Test Duration and Checkpointing

- Ramp-up time	42 minutes
- Measurement interval	120 minutes
- Number of checkpoints	4
- Checkpoint interval	30 minutes
- Transactions during measurement interval (all types)	52,398,718

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Introduction

This is the Full Disclosure Report for the TPC Benchmark™ C running on the Fujitsu Siemens Computers system PRIMERGY TX600 S3. It meets the requirements of the TPC Benchmark™ C Standard Revision 5.4.

System Overview	<i>This report documents the compliance of the Fujitsu Siemens Computers GmbH TPC Benchmark™ C tests using Microsoft SQL Server 2000 Enterprise Edition SP4 Relational Database Management System.</i>
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The TPC Benchmark™ C tests were carried out on a PRIMERGY TX600 S3. The PRIMERGY TX600 S3 holds up to **4x** Dual-Core Intel® Xeon™ Processor 7041 (3.0GHz 2x 2MB **Cache**). The Intel® Xeon™ Processor family with the Intel® NetBurst™ micro-architecture uses Hyper-Threading Technology to provide additional performance and application scalability to multi-processor servers. Hyper-Threading Technology enables multi-threaded software to execute tasks in parallel within each processor. The system was equipped with **64** GB of ECC DDR2 RAM memory. 2 PCI slots were used for dual channel fibre channel controller cards and 1 PCI slot was used for a single channel fibre channel controller card.

The client machines were 6 PRIMERGY Econel 200 with 2 **Intel® Xeon™ 3.4GHz**. They all included 2048 MB ECC DDR2 RAM memory, onboard ethernet adapter and one additional ethernet adapter card.

The server operating system was Microsoft Windows Server 2003 Enterprise Edition SP1 . The client operating system was Microsoft Windows Server 2003 Standard Edition.

Full Disclosure	<i>From Clause 8.1 of the TPC Benchmark™ C Standard Specification:</i> The intent of this disclosure is for a customer to be able to replicate the results of this benchmark given the appropriate documentation and products.
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Fujitsu Siemens Computers believes that this full disclosure report meets the stated intention. Fujitsu Siemens Computers has strived to maintain the integrity of the Specification by adhering not only to the letter of the specification, but also to its spirit.

Report Format	<i>The format of this document follows Clause 8 of the TPC Benchmark™ C specification (TPC Benchmark™ C Standard Specification, Revision 5.4, Transaction Processing Performance Council) which describes the full disclosure report requirements for the test.</i>
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Each section of this report begins with the specification requirement printed in *italic type*. It is followed by plain type text that explains how the test complies with the requirement. Sections which require extensive listings reference appropriate appendices.

Report organization:

- General Items
- Clause 1 Related Items - Logical Database Design
- Clause 2 Related Items - Transaction and Terminal Profiles
- Clause 3 Related Items - Transaction and System Properties
- Clause 4 Related Items - Scaling and Database Population
- Clause 5 Related Items - Performance Metrics and Response Time
- Clause 6 Related Items - SUT, Driver, and Communication Definition
- Clause 7 Related Items - Pricing
- Clause 8 Related Items – Audit
- Appendix A – Application Source Code
- Appendix B – Database Details
- Appendix C – Tunable Parameters and Options
- Appendix D – Space Calculation
- Appendix E – Price Quotation
- Appendix F – Attestation Letter

Additional Copies	<p><i>Additional copies of this report are available upon request from Fujitsu Siemens Computers GmbH:</i></p> <p><i>Fujitsu Siemens Computers ES PS QF 1 PRIMERGY Server Performance Lab Mr. Mielke Heinz-Nixdorf-Ring 1 33106 Paderborn Germany</i></p>
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1. General Items

1.1 Application Code	<i>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 and output functions. [Clause 8.1.1.4]</i>
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The source code of the application program is provided in Appendix A – Application Source Code.

1.2 Benchmark Sponsor	<i>A statement identifying the benchmark sponsor(s) and other participating companies must be provided. [Clause 8.1.1.5]</i>
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This benchmark was sponsored and executed by Fujitsu Siemens Computers GmbH.
The benchmark was developed and engineered by Fujitsu Siemens Computers GmbH and Microsoft Corporation.
Testing took place at Fujitsu Siemens Computers PRIMERGY benchmark laboratories in Paderborn, Germany.

1.3 Parameter Settings	<i>Settings must be provided for all customer-tunable parameters and options which have been changed from the defaults found in actual products, including but not limited to:</i> <ul style="list-style-type: none">• <i>Database tuning options.</i>• <i>Recovery/commit options.</i>• <i>Consistency/locking options.</i>• <i>Operating system and application configuration parameters.</i> <i>[Clause 8.1.1.6]</i>
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The significant parameters and system configuration files are provided in Appendix C – Tunable Parameters and Options.

1.4 Configuration Diagrams	<i>Diagrams of both measured and priced configurations must be provided, accompanied by a description of the differences. This includes, but is not limited to:</i> <ul style="list-style-type: none">• <i>Number and type of processors.</i>• <i>Size of allocated memory, and any specific mapping/partitioning of memory unique to the test.</i>• <i>Number and type of disk units (and controllers, if applicable).</i>• <i>Number of channels or bus connections to disk units, including their protocol type.</i>• <i>Number of LAN (e.g., Ethernet) connections, including routers, workstations, terminals, etc., that were physically used in the test or are incorporated into the pricing structure (see Clause 8.1.8).</i>• <i>Type and the run-time execution location of software components (e.g., DBMS, client processes, transaction monitors, software drivers, etc.).</i> <i>[Clause 8.1.1.7]</i>
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The only difference between the measured and priced configuration are 405 disks (see tables and diagrams below).

Table 1: SUT Configuration PRIMERGY TX600 S3

4	Dual-Core Intel® Xeon™ Processor 7041 (3.0GHz 2x 2MB Cache)
64	GB memory
1	Onboard SCSI RAID controller
3	PCI fibre channel controllers
0	disks 9 GB measured
0	disks 18 GB measured
406	disks 36 GB measured
45	disks 72 GB measured
8	disks 146 GB measured
0	disks 9 GB priced
0	disks 18 GB priced
1	disks 36 GB priced
450	disks 72 GB priced
8	disks 146 GB priced
2	Onboard network adapters

Table 2: Client Configuration PRIMERGY Econel 200

2	Intel® Xeon™ 3.4GHz with 2MB Second Level Cache
2048	MB memory
1	Onboard SCSI controller
1	disk 72 GB
1	Onboard network adapter
1	network adapter card

The benchmarked and priced system configurations are shown in Figure 1 and Figure 2 in accordance with Clause 8.1.1.7.

Figure 1: Benchmark System Configuration PRIMERGY TX600 S3

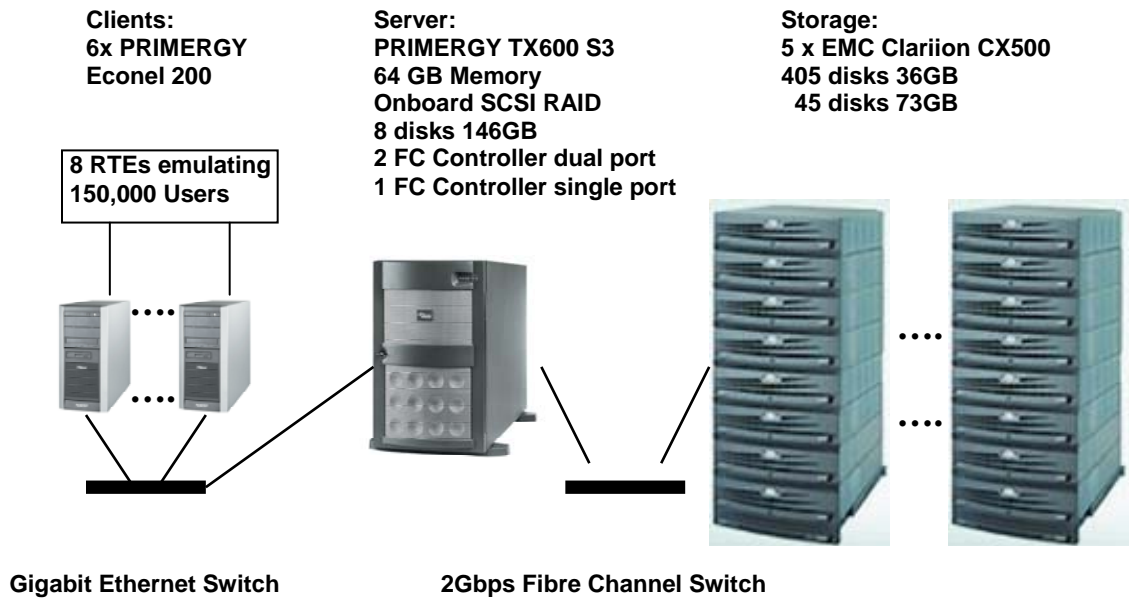
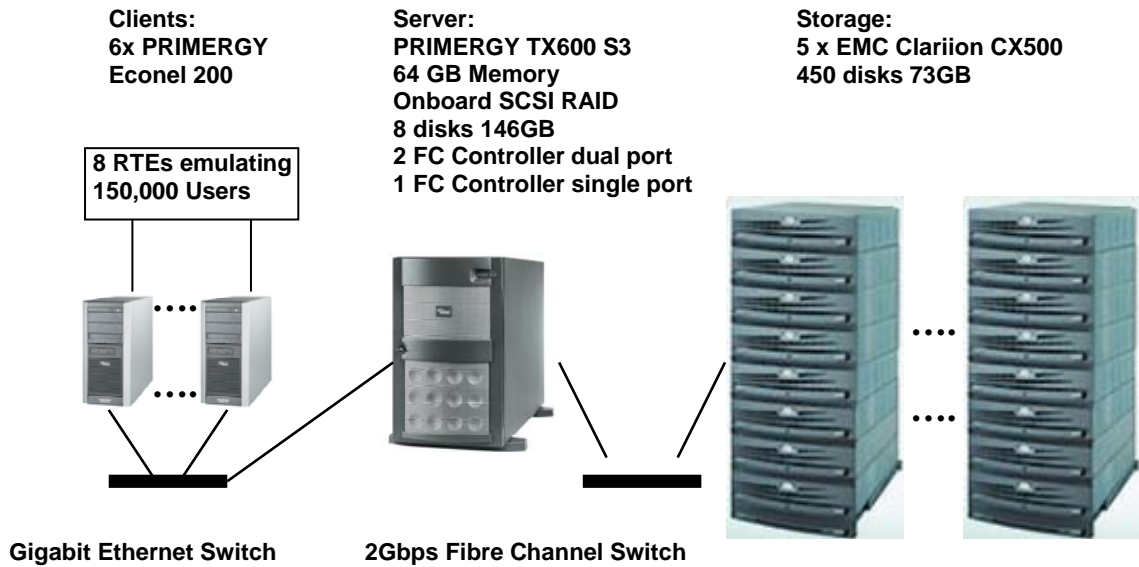


Figure 2: Priced System Configuration PRIMERGY TX600 S3



2. Clause 1 Related Items - Logical Database Design

2.1 Table Definitions	<i>Listings must be provided for all table definition statements and all other statements used to set-up the database. [Clause 8.1.2.1]</i>
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The programs that defined, created, and populated the Microsoft SQL Server 2000 Enterprise Edition SP4 database for this TPC benchmark™ C are listed in Appendix B – Database Details.

2.2 Physical Organization of Database	<i>The physical organization of tables and indices, within the database, must be disclosed. [Clause 8.1.2.2]</i>
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Table 3: Physical Organization of the Database

Controller	Channel 0	Channel 1	RAID	Drive
Onboard RAID	0-0 1-0 2-0 3-0 4-0	1-1 2-1 3-1 4-1	RAID 0, RAID 0+1	C:, L:
Fibre Channel	CX500-1 LUN0 CX500-2 LUN2	CX500-1 LUN1 CX500-2 LUN3	RAID 0 RAID 0	M:,N:, O:,P:
Fibre Channel	CX500-3 LUN4 CX500-4 LUN6	CX500-3 LUN5 CX500-4 LUN7	RAID 0 RAID 0	Q:,R: S:,T:
Fibre Channel	CX500-5 LUN8 CX500-5 LUN9		RAID 0 RAID 0	U:, V:

The onboard RAID controller was configured with write cache disabled. Write cache was enabled on the log drives and disabled on the data drives. Disk types measured were 36GB FC 15000 rpm and 146GB SCSI 15000 rpm.

Space was allocated to Microsoft SQL Server 2000 Enterprise Edition SP4 on SUT disks according to the data in section 5.2. The size of the datafile on each disk drive was calculated to provide even distribution on load across the disk drives. The Windows Disk Manager was used to create raw devices for data/log and NTFS partitions for dump devices. For further information see Figure 4 in 5.2 (Distribution of Tables and Log). No attempt was made to alter the default physical organization of the database tables and indices chosen by Microsoft SQL Server 2000 Enterprise Edition SP4 .

2.3 Insert and Delete Operations	<i>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 restriction 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 maximum key value for these new rows. [Clause 8.1.2.3]</i>
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There were no restrictions on insert and delete operations to any tables.

2.4 Database Partitioning	<i>While there are a few restrictions placed upon horizontal or vertical partitioning of tables and rows in the TPC benchmark™ C (see Clause 1.6), any such partitioning must be disclosed. [Clause 8.1.2.4]</i>
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There was no partitioning used in this implementation.

2.5 Replication of Tables	<i>Replication of tables, if used, must be disclosed (see Clause 1.4.6). [Clause 8.1.2.5]</i>
--------------------------------------	---

Replication of tables was not used in this implementation.

2.6 Additional and/or Duplicated Attributes	<i>Additional and/or duplicated attributes in any table must be disclosed along with a statement on the impact on performance (see Clause 1.4.7). [Clause 8.1.2.6]</i>
--	--

No additional and/or duplicated attributes were used.

3. Clause 2 Related Items - Transaction and Terminal Profiles

3.1 Random Number Generator	<i>The method of verification for the random number generation must be described. [Clause 8.1.3.1]</i>
--	--

The random number generation was done in Microsoft BenchCraft, which was audited independently.

3.2 Input/Output Screen Layout	<i>The actual layouts of the terminal input/output screens must be disclosed. [Clause 8.1.3.2]</i>
---	--

The screen layout corresponded exactly to those of the TPC-C Standard Specification (specified in Clause 2.4.3, 2.5.3, 2.6.3, 2.7.3, and 2.8.3).

3.3 Configured Terminal Features	<i>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). [Clause 8.1.3.3]</i>
---	---

All of the requirements in clause 2.2.2.4. are supported. This was verified by manually exercising each specification on a PRIMERGY R450.

3.4 Presentation Managers or Intelligent Terminals	<i>Any usage of presentation managers or intelligent terminals must be explained. [Clause 8.1.3.4]</i>
---	--

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 application is listed in Appendix A – Application Source Code.

3.5 Transaction Statistics	<i>The numerical quantities which are required are listed in the following table. [Clause 8.1.3.5 to 8.1.3.11]</i>
---------------------------------------	--

Table 4: Transaction Statistics

	Statistics	Percentage
New-Order	Home order-lines	99.00%
	Remote order-lines	1.00%
	Rolled back transactions	1.00%
	Average items per order	10.00
Payment	Home transactions	85.01%
	Remote transactions	14.99%
	Non-primary key access	60.01%
Order-Status	Non-primary key access	60.06
Delivery	Skipped transactions	0
Transaction Mix	New-Order	44.96 %
	Payment	43.01 %
	Order-Status	4.01 %
	Delivery	4.01 %
	Stock-Level	4.01 %

3.6 Queueing Mechanism	<i>The queuing mechanism used to defer the execution of the Delivery transaction must be disclosed. [Clause 8.1.12]</i>
-----------------------------------	---

Deferred deliveries are queued by making an entry in an array within the client application process (tpcc.dll). The queued delivery transactions are processed and logged asynchronously by background threads within the application.

The source code is listed in Appendix A – Application Source Code.

4. Clause 3 Related Items - Transaction and System Properties

ACID Tests	<i>The results of the ACID tests must 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. [Clause 8.1.4.1]</i>
-------------------	--

All ACID tests were performed successfully. The following sections describe the requirements of each of the tests as described in Clause 3 and the approach used to satisfy them.

All ACID tests were performed on the PRIMERGY TX600 S3 system using the fully scaled database, except for the test of durable media failure. This durability test was performed on 1500 warehouses of the database. This test would also pass on a fully scaled database.

4.1 Atomicity	<i>The system under test must guarantee that 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. [Clause 3.2.1]</i>
----------------------	--

Commit Transaction	Perform the Payment transaction for a randomly selected warehouse, district, and customer (by customer number as specified in Clause 2.5.1.2) and verify that the records in the CUSTOMER, DISTRICT, and WAREHOUSE tables have been changed appropriately. [Clause 3.2.2.1]
---------------------------	---

The following steps demonstrated atomicity for completed (COMMIT) transactions:

- A row was randomly selected from the warehouse, district and customer table.
- the current balance was noted.
- A payment transaction was executed with the above identifiers and a known amount.
- The transaction was committed.
- It was verified, that the rows contain the correct updated balances.

Rollback Transaction	Perform the Payment transaction for a randomly selected warehouse, district, and customer (by customer number as specified in Clause 2.5.1.2) and substitute a ROLLBACK of the transaction for the COMMIT of the transaction. Verify that the records in the CUSTOMER, DISTRICT, and WAREHOUSE tables have NOT been changed. [Clause 3.2.2.2]
-----------------------------	---

The following steps demonstrated atomicity for aborted (ROLLBACK) transactions:

- A row was randomly selected from the warehouse, district and customer table.
- the current balance was noted.
- A payment transaction was executed with the above identifiers and a known amount.
- The transaction was rolled back.
- It was verified, that the rows contain the original balances.

4.2 Consistency	<i>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. [Clause 3.3.1]</i>
------------------------	--

Consistency conditions 1 - 4 were tested by issuing queries to the database. The results of the queries verified that the database was consistent for all these tests. The tests were performed before and after the performance run on the same database that was used for the benchmark.

4.3 Isolation	<i>Operations of concurrent transactions must yield results which are indistinguishable from the results which would be obtained by forcing each transaction to be serially executed to completion in some order.</i>
--------------------------	---

We ran all of the seven isolation tests as described in clause 3.4.2.1 to 3.4.2.7 and additionally the two phantom protection tests. The tests were executed using shell scripts to issue queries to the database. The results of the queries verified that the required isolation had been met.

4.4 Durability	<p><i>The tested system must guarantee durability: the ability to preserve the effects of committed transactions and insure database consistency after recovery from any one of the failures listed in Clause 3.5.3. [Clause 3.5]</i></p> <p><i>List of single failures</i></p> <ol style="list-style-type: none"> <i>1 Permanent irrecoverable failure of any single durable medium containing TPC-C database tables or recovery log data</i> <i>2 Instantaneous interruption (system crash / system hang) in processing which requires system reboot to recover</i> <i>3 Failure of all or part of memory (loss of contents).</i>
	<p><i>[Clause 3.5.3]</i></p> <p><i>The intent of these tests is to demonstrate that all transactions whose output messages have been received at the terminal or RTE have in fact been committed in spite of any single failure from the list in Clause 3.5.3 and that all consistency conditions are still met after the database is recovered.</i></p> <p><i>It is required that the system crash test(s) and the loss of memory test(s) described in Clause 3.5.3.2 and 3.5.3.3 be performed under full terminal load and a fully scaled database. The durable media failure test(s) described in Clause 3.5.3.1 may be performed on a subset of the SUT configuration and database. For the SUT subset, all multiple hardware components, such as processors and disk / controllers in the full SUT configuration, must be represented by the greater of 10% of the configuration or two of each of the multiple hardware components. The database must be scaled to at least 10% of the fully scaled database, with a minimum of two warehouses. ... Furthermore, the standard driving mechanism must be used in this test. The test sponsor must state that to the best of their knowledge, a fully scaled test would also pass all durability tests. [Clause 3.5.4]</i></p>

The full hardware configuration of the SUT (in accordance with Clause 3.5.4) and the same test procedure was used during all durability tests, except the test for loss of log and data.

The failure of all or part of memory test and the system crash test were combined and performed under full load and by using a fully scaled database.

- The current count of the total number of orders was determined by summing up the D_NEXT_O_ID fields of all rows in the DISTRICT table.
- A test was started under full load and ramp up about 10 min.
- After additional 5 min we powered of the server to emulate the loss of memory. After server system reboot, SQL-Server was started with flag -T3428 to recover the database tpcc. After completion, we computed the sum of D_NEXT_O_ID from district. Client and RTE systems were interrupted and evaluation started on the RTE. The difference of all D_NEXT_O_ID between RTE an server was in the permitted scope.

The durable media failure test for loss of log and data disk was performed with all disks of the database, but only 1500 warehouses under the load of 15000 users. We used one RTE and two client systems. To the best of the test sponsor's knowledge, a fully loaded and fully scaled database would also pass this durability test.

- The database was backed up.
- The current count of the total number of orders was determined by summing up the D_NEXT_O_ID fields of all rows in the DISTRICT table before the test.
- A test was started with 15000 users and ramp up about 6 min.
- After 8 min in steady state we pulled off one of the log disks. As we use hardware-mirrored diskpairs with the SCSI-controller, execution continued.
- After additional 5 min we pulled of one of the data disks.
- SQL-Server recognized the loss of a device. We dumped the transaction log and removed the database with dropdevice. Then we shut down SQL-Server and the system.
- We replaced the disk and made it online.
- We restarted SQL-Server, no tpcc database and none of its devices were present. We recreated the database, loaded dump and load transaction log
- After completion, we computed the sum of D_NEXT_O_ID from district.
- Client and RTE systems were interrupted and evaluation started on the RTE. The difference of all D_NEXT_O_ID between RTE an server was in the permitted scope.

5. Clause 4 Related Items - Scaling and Database Population

5.1 Initial Cardinality of Tables	<i>The cardinality (e.g., the number of rows) of each table, as it existed at the start of the benchmark run (see Clause 4.2), must be disclosed. If the database was over-scaled and inactive rows of the WAREHOUSE table were deleted (see Clause 4.2.2), the cardinality of the WAREHOUSE table as initially configured and the number of rows deleted must be disclosed. [Clause 8.1.5.1]</i>
--	---

The database for the PRIMERGY TX600 S3 system was scaled for 15,000 warehouses. The performance run used 15,000 warehouses. In accordance with Clause 4.2, the following number of records were loaded in the specified tables:

Table 5: Number of Rows

Table	Number of Records
Warehouse	15,000
District	150,000
Customer	450,000,000
History	450,000,003
Order	450,000,007
New-Order	135,000,000
Order-Line	2,147,483,647
Stock	1,500,000,000
Item	100,000
Deleted Warehouses	0

The following constant values were used during the database build and benchmark test for the NURand function:

Table 6: C_LAST value

Constant C	Value
C_LAST (build)	123
C_LAST (run)	233

**5.2
Distribution of Tables and
Log**

The distribution of tables and logs across all media must be explicitly depicted for the tested and priced systems. [Clause 8.1.5.2]

Table 7: Logical Organization of the Database

Disk	Controller	Disktype	RAID Configuration	Drive Letter	Size MB	Filegroup or Filesystem
0	Onboard SCSI	1 x 36 GB	RAID 0	System C:	32000	NTFS
1	Onboard SCSI	8 x 146 GB	RAID 1	L:	280000	Log
2	LUN0	45 x 36 GB	RAID 0	n/a ,M:	86000 48000 480000	cs1, misc1, backup1a
3	LUN1	45 x 36 GB	RAID 0	n/a, N:	86000 48000 480000	cs2, misc2, backup2a
4	LUN2	45 x 36 GB	RAID 0	n/a, O:	86000 48000 480000	cs3, misc3, backup3a
5	LUN3	45 x 36 GB	RAID 0	n/a, P:	86000 48000 480000	cs4, misc4, backup4a
6	LUN4	45 x 36 GB	RAID 0	n/a, Q:	86000 48000 480000	cs5, misc5, backup5a
7	LUN5	45 x 36 GB	RAID 0	n/a, R:	86000 48000 480000	cs6, misc6, backup1b
8	LUN6	45 x 36 GB	RAID 0	n/a, S:	86000 48000 480000	cs7, misc7, backup2b
9	LUN7	45 x 36 GB	RAID 0	n/a, T:	86000 48000 480000	cs8, misc8, backup3b
10	LUN8	45 x 36 GB	RAID 0	n/a, U:	86000 48000 480000	cs9, misc9, backup4b
11	LUN9	45 x 73 GB	RAID 0	n/a, V:	86000 48000 480000	cs10, misc10, backup5b

5.3 Database Model, Interface, and Access Language	<p><i>A statement must be provided that describes:</i></p> <ol style="list-style-type: none"> 1. <i>The data model implemented by the DBMS used (e.g., relational, network, hierarchical)</i> 2. <i>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 transactions. 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.</i> <p><i>[Clause 8.1.5.3]</i></p>
---	---

Microsoft SQL Server 2000 Enterprise Edition SP4 is a Relational DataBase Management System. The interface used was Microsoft SQL Server 2000 Enterprise Edition SP4 stored procedures accessed with Remote Procedure Calls embedded in C code.

5.4 Database Partitions/Replications Mapping	<p><i>The mapping of database partitions/replications must be explicitly described. [Clause 8.1.5.4]</i></p>
---	--

There was no partitioning and/or replication used in this implementation.

5.5 60 day space Calculation	<p><i>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 (see Clause 4.2.3). [Clause 8.1.5.5]</i></p>
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Calculations of space requirements in the priced configurations for the 60-day period are provided in Appendix D – Space Calculation.

6. Clause 5 Related Items - Performance Metrics and Response Time

6.1 Measured tpmC	<i>Measured tpmC must be reported. [Clause 8.1.6.1]</i>
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During the 120 minutes measurement period on the PRIMERGY TX600 S3 the throughput measured was 188,761 tpmC.

6.2 Response Times	<i>Ninetieth percentile, maximum and average response times must be reported for all transaction types as well as for the Menu response time. [Clause 8.1.6.2]</i>
-------------------------------	--

Table 8: Response Times

Type	Average	Maximum	90 Percentile
New-Order	0.29	5.65	0.45
Payment	0.23	4.07	0.39
Order-Status	0.26	5.58	0.41
Interactive Delivery	0.11	1.91	0.11
Deferred Delivery	0.20	1.91	0.35
Stock-Level	0.94	4.20	1.28
Menu	0.11	1.92	0.11

6.3 Keying and Think Times	<i>The minimum, the average, and the maximum keying and think times must be reported for each transaction type. [Clause 8.1.6.3]</i>
---------------------------------------	--

Table 9: Keying Times

Keying Times			
Type	Average	Maximum	Minimum
New-Order	18.02	18.89	18.00
Payment	3.02	3.90	3.00
Order-Status	2.02	2.90	2.00
Delivery	2.02	2.87	2.00
Stock-Level	2.02	2.80	2.00

Table 10: Think Times

Think Times			
Type	Average	Maximum	Minimum
New-Order	12.05	120.51	0.000
Payment	12.05	120.61	0.000
Order-Status	10.05	100.62	0.000
Delivery	5.06	50.51	0.000
Stock-Level	5.05	50.51	0.000

6.4 Graphs

Response Time frequency distribution curves (see Clause 5.6.1) must be reported for each transaction type. [Clause 8.1.6.4]

The performance curve for response times versus throughput (see Clause 5.6.2) must be reported for the New-Order transaction. [Clause 8.1.6.5]

Think Time frequency distribution curves (see Clause 5.6.3) must be reported for each transaction type. [Clause 8.1.6.6]

A graph of throughput versus elapsed time (see Clause 5.6.5) must be reported for the New-Order transaction. [Clause 8.1.6.8]

Figure 3: New-Order Response Time Distribution

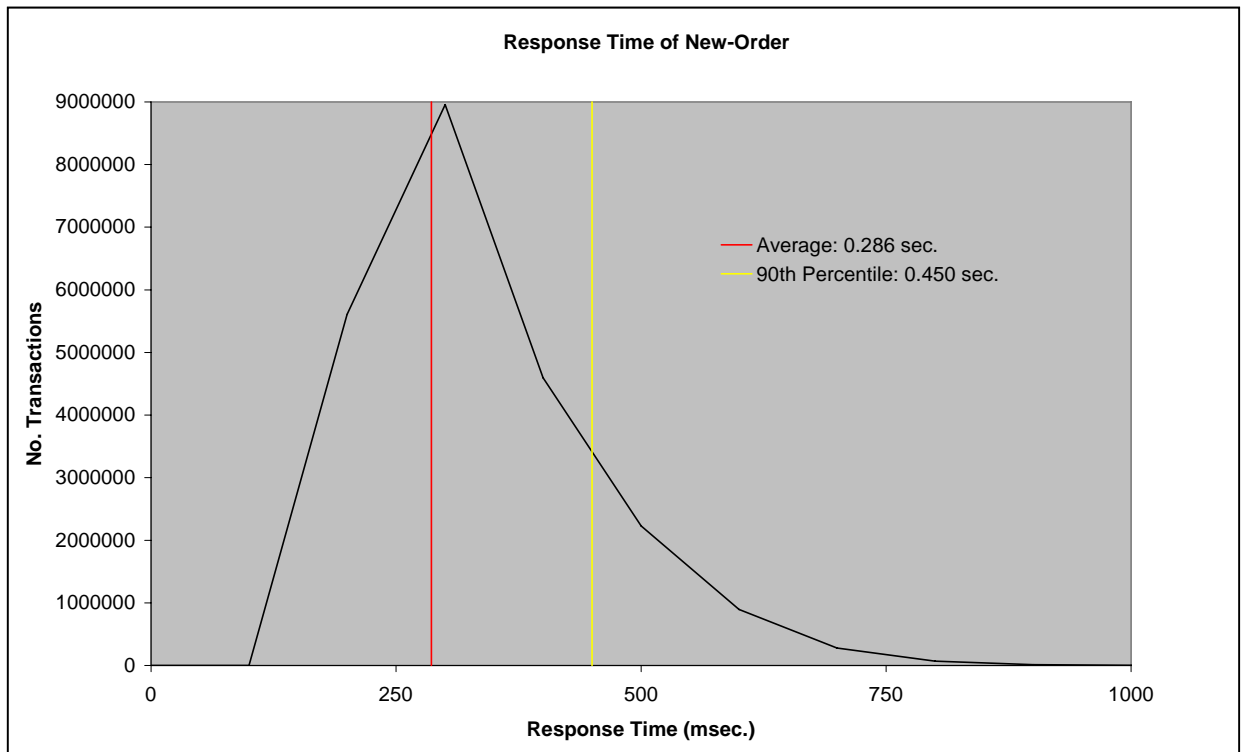


Figure 4: Payment Response Time Distribution

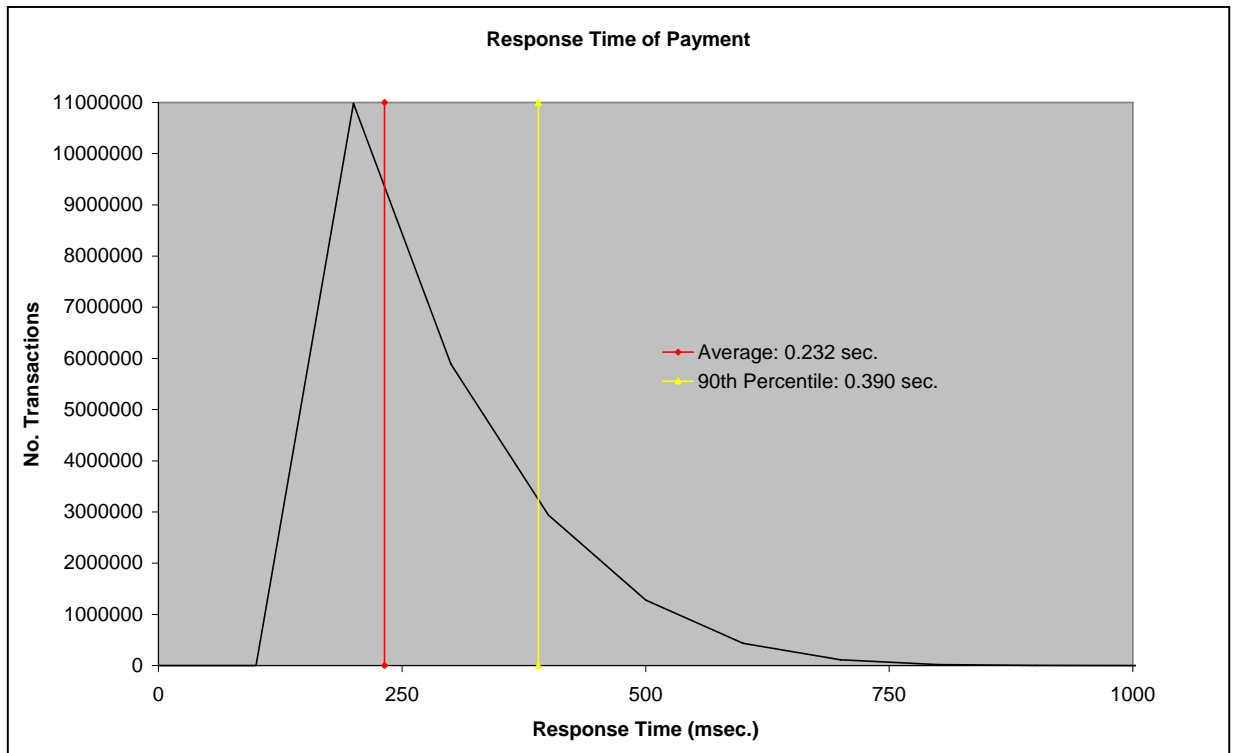


Figure 5: Order-Status Response Time Distribution

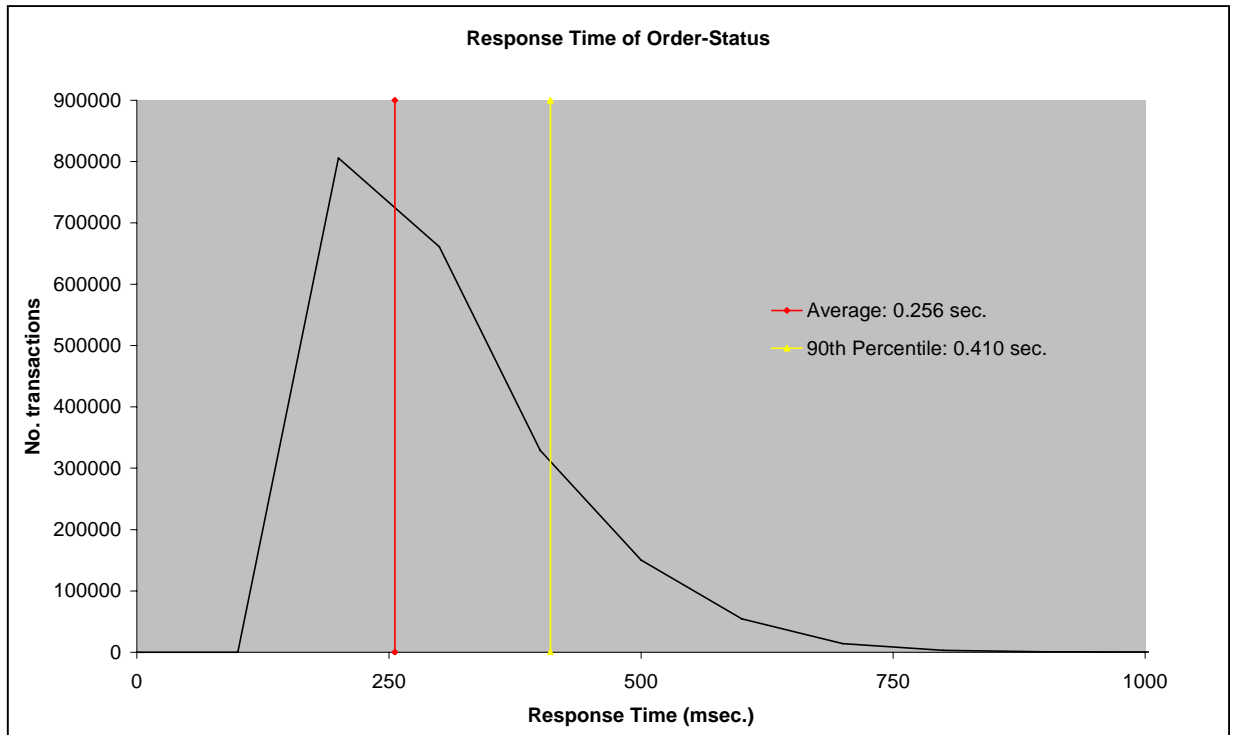


Figure 6: Delivery Response Time Distribution

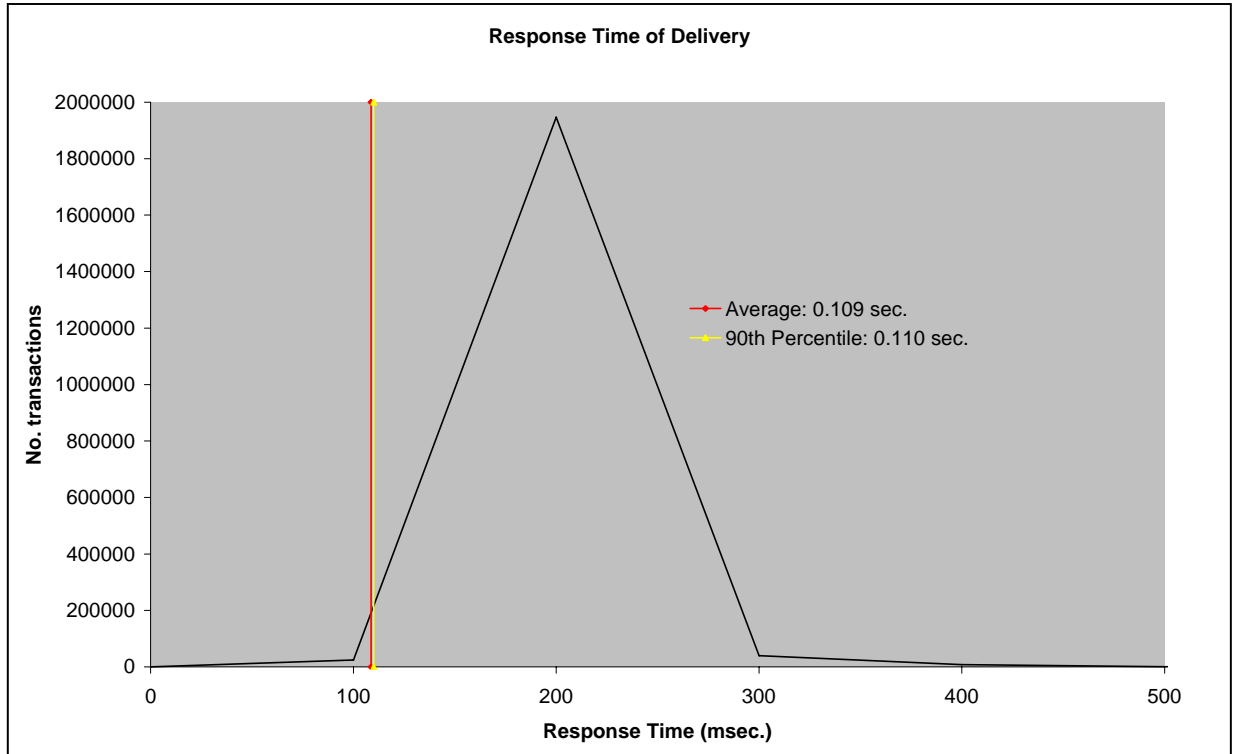


Figure 7: Stock-Level Response Time Distribution

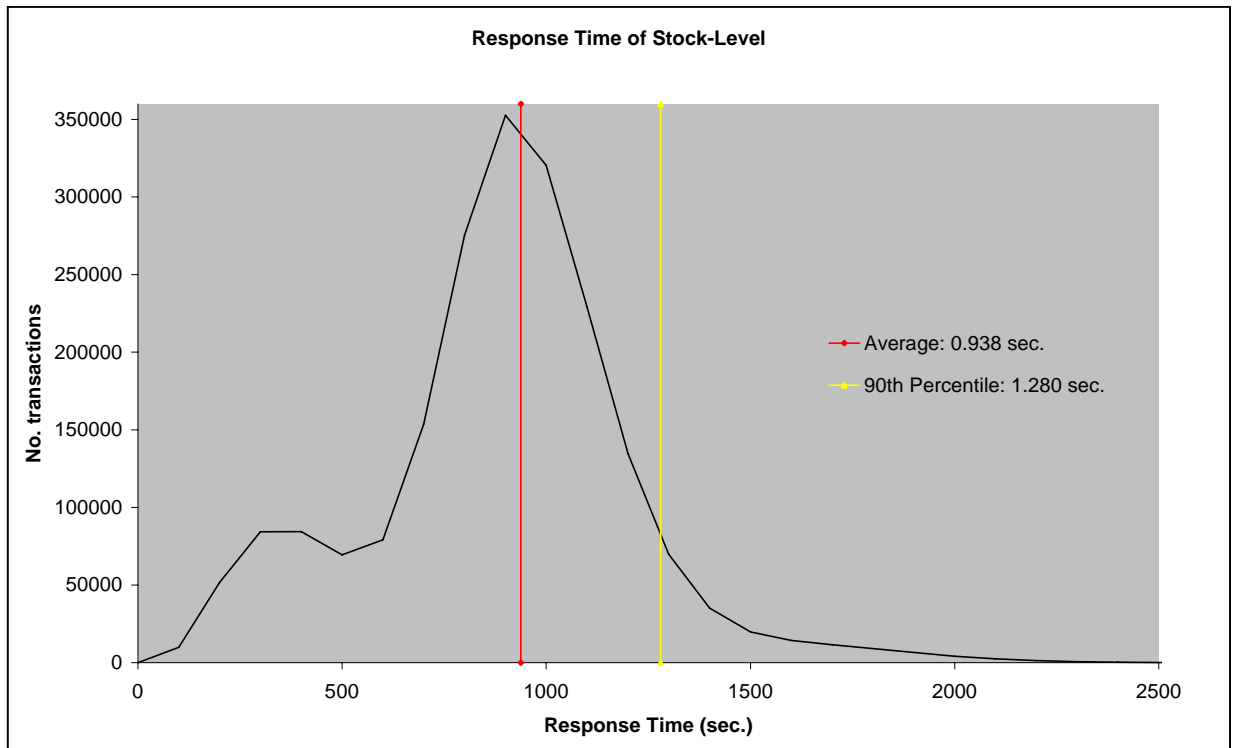


Figure 8: Response Time versus Throughput

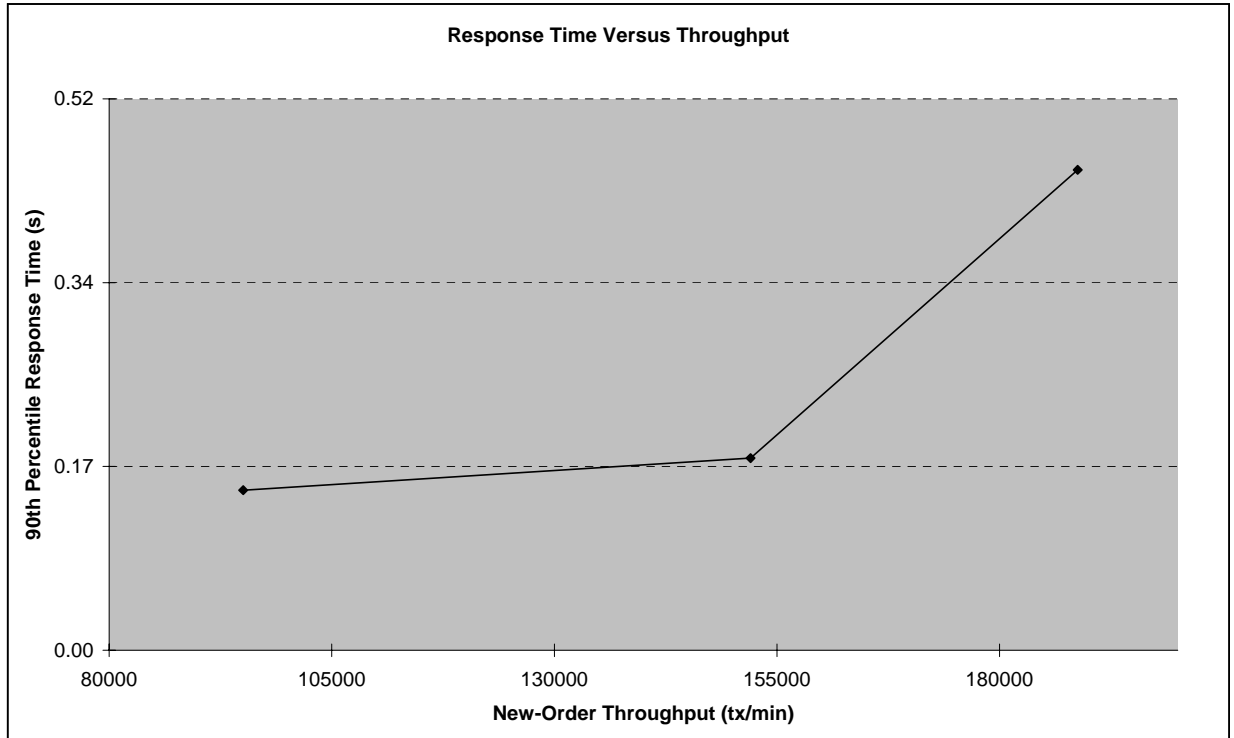


Figure 9: New-Order Think Time Distribution

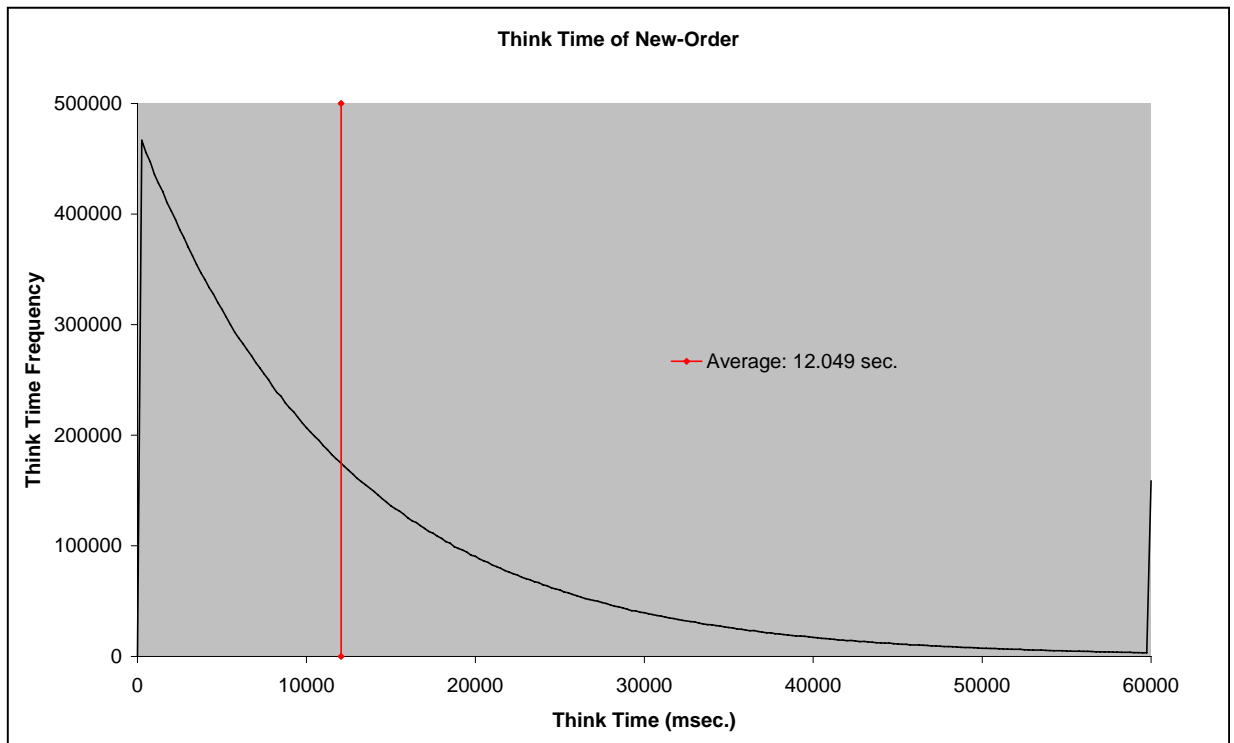
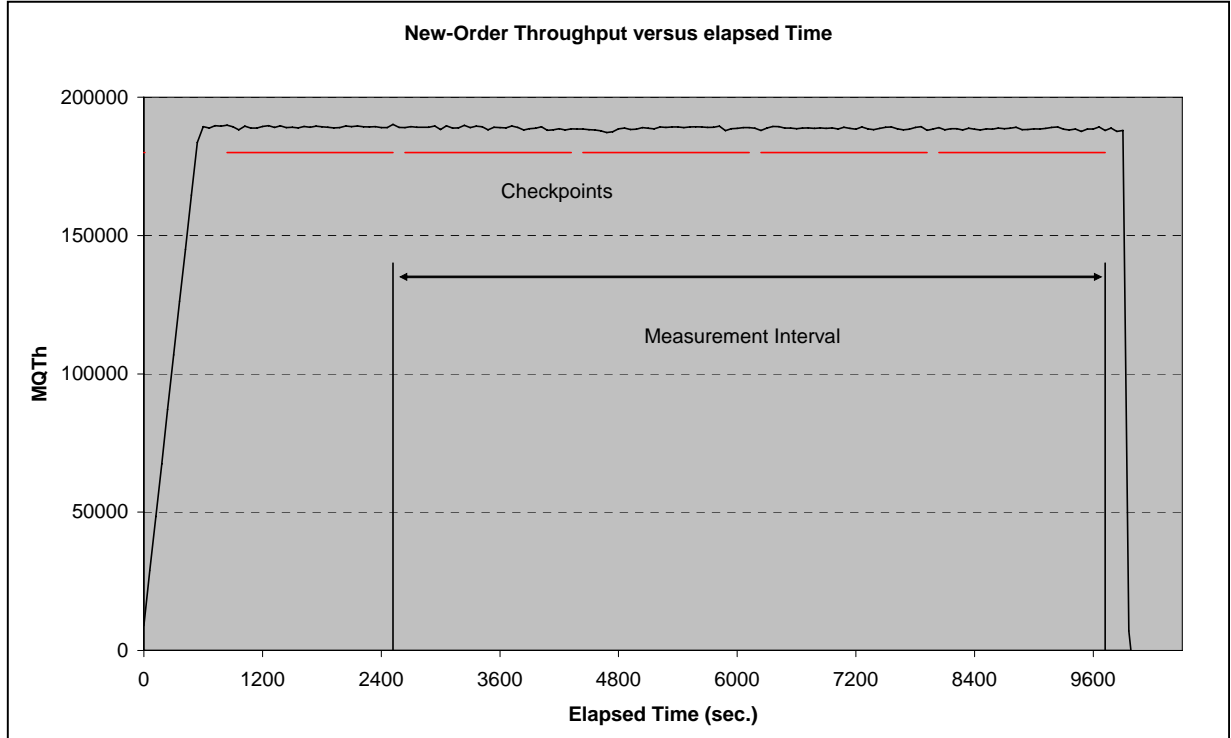


Figure 10: Throughput versus elapsed Time



**6.5
Steady State
Determination**

The method used to determine that the SUT had reached a steady state prior to commencing the measurement interval (see Clause 5.5) must be described. [Clause 8.1.6.9]

In all test runs, steady state was achieved before the measurement period began. Steady state was determined to occur based on a visual inspection of tpmC versus time (see graph in section 6.4).

The graph in section 6.4 illustrates that the measurement period was within the steady state period for the run. One checkpoint occurred before and four during the measurement period.

**6.6
Work Performed**

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. [Clause 8.1.6.10]

The RTE generated the required input data to choose a transaction from the menu. This data was timestamped and captured in RTE log files before being transmitted. There was one log file for each user. The input screen for the requested transaction was returned and it was also captured and timestamped in the RTE log files. The difference between these two timestamps was the menu response time.

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 and captured in RTE log files. The return of the screen with the required response data was timestamped and captured in the RTE log files. 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 Internet Information Server running on the client machines through Ethernet LANs. Internet Information Server handled all screen I/O as well as all requests to the database on the server. Internet Information Server communicated with the database server over COM+ which was used as transaction monitor.

All database operations like update, select, delete and insert are performed by one of the TPC-C back end programs. The TPC-C backend program commits the transaction after all the corresponding operations are done.

Modified database buffers are migrated to disk a least-recently-used basis independent of transaction commits. In addition, every block modification is protected by log records. Asynchronously the log buffers are flushed to a log file on disk either when the transaction is committed or when the log buffer's fill state reaches it's limit. The log buffer's always flushed by a commit before it become full.

To perform checkpoints at specific intervals, we wrote a script to schedule multiple checkpoints at specific intervals. By setting the trace flag #3502, SQL Server logged the checkpoint beginning and ending time in the ERRORLOG file. The checkpoint script was started manually after the RTE had all users logged in and sending transactions.

At each checkpoint, Microsoft SQL Server wrote to disk all memory pages that had been updated but not yet physically written to disk. Upon completion of the checkpoint, Microsoft SQL Server wrote a special record to the recovery log to indicate that all disk operations had been satisfied to this point.

6.7 Duration of Checkpoints	<i>The start time and duration in seconds of at least the four (4) longest checkpoints during the MeasurementInterval must be disclosed (see Clause 5.5.2.2 (2)). [Clause 8.1.6.11]</i>
--	---

There was one checkpoint before measurement and four checkpoints during measurement. Starttime and duration of these four checkpoints is listed in the following table:

Table 11: Duration of Checkpoints

Measurement		duration	
Start =	End =	minutes	seconds
10:41:00	12:41:00	120	7200
4 Checkpoints		duration	
Start =	End =	minutes	seconds
10:42:28	11:10:28	28.00	1680
11:12:27	11:40:27	28.00	1680
11:42:26	12:10:26	28.00	1680
12:12:25	12:40:25	28.00	1680

6.8 Duration of Measurement	<i>A statement of the duration of the measurement interval for the reported Maximum Qualified Throughput (tpmC) must be included. [Clause 8.1.6.12]</i>
--	---

The measurement interval of the PRIMERGY TX600 S3 system test was 120 minutes.

6.9 Regulation of Transaction Mix	<i>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. [Clause 8.1.6.13]</i>
--	--

The transaction mix was regulated by weighted distribution. The chosen weights meet the required minimum percentages of the mix which are described in Clause 5.2.3 of the Standard Specifications. No adjustments were made by the RTE.

**6.10
Transaction Mix**

The percentage of the total mix for each transaction type must be disclosed. [Clause 8.1.6.14]

Table 12: Transaction Mix

	Percentage
New-Order	44.96 %
Payment	43.01 %
Order-Status	4.01 %
Delivery	4.01 %
Stock-Level	4.01 %

**6.11
Transaction Statistics**

The percentage of New-Order transactions rolled back as a result of invalid item number must be disclosed. [Clause 8.1.6.15]

The average number of order-lines entered per New-Order transaction must be disclosed. [Clause 8.1.6.16]

The percentage of remote order-lines entered per New-Order transaction must be disclosed. [Clause 8.1.6.17]

The percentage of remote Payment transactions must be disclosed. [Clause 8.1.6.18]

The percentage of customer selections by customer last name in the Payment and Order-Status transactions must be disclosed. [Clause 8.1.6.19]

The percentage of Delivery transactions skipped due to there being fewer than necessary orders in the New-Order table must be disclosed. [Clause 8.1.6.20]

The numerical quantities which are required in Clause 8.1.6.15 to 8.1.6.20 are already listed in a table above (see section 3.5).

**6.12
Checkpoint Statistics**

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. [Clause 8.1.6.21]

The numerical quantities which are required in Clause 8.1.6.21 are already listed above (see section 6.7).

7. Clause 6 Related Items - SUT, Driver, and Communication Definition

7.1 RTE Inputs	<i>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. [Clause 8.1.7.1]</i>
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Microsoft Benchcraft was used as the RTE to emulate the terminals. The input parameters are shown in Appendic C – Tunable Parameters and Options .

7.2 Lost Connections	<i>The number of terminal connections lost during the Measurement Interval must be disclosed (see Clause 6.6.2). [Clause 8.1.7.3]</i>
---------------------------------	---

There were no lost connections during measurement interval.

7.3 Functionality and Performance of Emulated Components	<i>It must be demonstrated that the functionality and performance of the components being emulated in the Driver System are equivalent to that of the priced system. The results of the test described in Clause 6.6.3.4 must be disclosed. [Clause 8.1.7.3]</i>
---	--

The Driver System consist PRIMERGY R450. This driver was attached to the client machine through a 100 Mbps ethernet LAN and switch. Since this is exactly the same connectivity as configured in the priced system, no component was emulated. Therefore, the test described in Clause 6.6.3.4 was not required.

7.4 Functional Diagrams of the Benchmarked and Proposed Configuration	<i>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 software and hardware functionality being performed on the Driver System, and its interface to the SUT must be disclosed (see Clause 6.6.3.6). [Clause 8.1.7.4]</i>
--	--

Figure 1 and Figure 2 in section 1.4 show the functional diagrams of the benchmark configuration and the priced configuration.

7.5 Network Configurations of the Tested and Proposed Services	<i>The network configurations of both the tested services and the proposed (target) services which 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 (see Clause 6.6.4). [Clause 8.1.7.5]</i>
---	---

Figure 1 and Figure 2 in section 1.4 show the network setup of both configurations. The driver replaces the workstations.

In both configurations 1 x 1Gbps ethernet LAN with switch was used to connect the server with the 6 clients and 100Mbs LAN with switch to connect the RTE systems or 150,000 workstations to the clients.

7.6 Network Bandwidth	<i>The bandwidth of the network(s) used in the tested / priced configuration must be disclosed. [Clause 8.1.7.6]</i>
----------------------------------	--

The ethernet used in the local area network (LAN) between the emulated user system and the front-end system complies with the IEEE 802.3 standard. Its bandwidth is 100 Mbps. Between front-end and SUT the bandwidth is 1 Gbps.

7.7 Operator Intervention	<i>If the configuration requires operator intervention (see Clause 6.6.6), the mechanism and the frequency of this intervention must be disclosed. [Clause 8.1.7.7]</i>
--------------------------------------	---

The PRIMERGY TX600 S3 requires no operator intervention to sustain the reported throughput.

8. Clause 7 Related Items - Pricing

8.1 System Pricing	<p><i>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 date. 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(s) and effective date(s) of price(s) must also be reported. [Clause 8.1.8.1]</i></p> <p><i>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. [Clause 8.1.8.2]</i></p>
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The details of the hardware and software are reported in the summary in front of this report. Additional quotation letters can be found in Appendix E – Price Quotations.

8.2 Availability Dates	<p><i>The committed delivery date for general availability (availability date) of products used in the price calculations must be reported. When the priced system includes 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. This single date must be reported on the first page of the Executive Summary. All availability dates, whether for individual components or for the SUT as a whole, must be disclosed to a precision of one day. [Clause 8.1.8.3]</i></p>
-----------------------------------	---

All hardware and software components used in the price calculations of the PRIMERGY TX600 S3 system will be generally available as of April 27, 2006.

8.3 Throughput and Price/Performance	<p><i>A statement of the measured tpmC, as well as the respective calculations for 3-year pricing, price/performance (price/tpmC), and the availability date must be included. [Clause 8.1.8.4]</i></p>
---	---

PRIMERGY TX600 S3 system was measured at 188,761 tpmC with Microsoft SQL Server 2000 Enterprise Edition SP4 with a 3-year system price of \$ 1,075,304. The respective price/performance for the PRIMERGY TX600 S3 is \$ 5.70/tpmC. The priced PRIMERGY TX600 S3 will be available as of April 27, 2006.

8.4 Country Specific Pricing	<p><i>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 [Clause 8.1.8.5]</i></p>
---	--

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

**8.5
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.*

[Clause 8.1.8.6]

The component pricing based on usage is shown below:

- One Microsoft SQL Server 2000 Enterprise Edition SP4
- One Microsoft Windows Server 2003 Enterprise Edition SP1
- 6 Microsoft Windows Server 2003 Standard Edition
- One Microsoft Visual C++

9. Clause 8 Related Items - Audit

9.1 Auditor	<p><i>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.</i></p> <p><i>A review of the pricing model is required to ensure that all components required are priced (see Clause 9.2.8). The auditor is not required to review the final Full Disclosure Report or the final pricing prior to issuing the attestation letter. [Clause 8.1.9]</i></p>
------------------------	---

The benchmark test of the PRIMERGY TX600 S3 system with Microsoft SQL Server 2000 Enterprise Edition SP4 was independently audited by:

Francois Raab, TPC certified auditors of Infosizing.
The attestation letter is included in Appendix F.

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

Transaction Processing Performance Council
c/o Shanley Public Relations
777 North First Street, Suite 6000
San Jose, CA 95112-6311

or

Fujitsu Siemens Computers
ES PS QF 1
PRIMERGY Server Performance Lab
Mr. Mielke
Heinz-Nixdorf-Ring 1
33106 Paderborn
Germany

Appendix A - Application Source Code

```
LIBRARY TPCC.DLL

EXPORTS

    GetExtensionVersion @1
    HttpExtensionProc @2
    TerminateExtension @3

/* FILE: TPCC.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 ISAPI TPCC.DLL, defines structures and
functions used in the isapi tpcc.dll.
 *
 */

//VERSION RESOURCE DEFINES
#define _APS_NEXT_RESOURCE_VALUE 101
#define _APS_NEXT_COMMAND_VALUE 40001
#define _APS_NEXT_CONTROL_VALUE 1000
#define _APS_NEXT_SYMED_VALUE 101

#define TP_MAX_RETRIES 50

//note that the welcome form must be processed first as terminal ids
assigned here, once the
//terminal id is assigned then the forms can be processed in any order.
#define WELCOME_FORM 1 //beginning form no
term id assigned, form id
#define MAIN_MENU_FORM 2 //term id
assigned main menu form id
#define NEW_ORDER_FORM 3 //new order
form id
#define PAYMENT_FORM 4 //payment form id
#define DELIVERY_FORM 5 //delivery
form id
#define ORDER_STATUS_FORM 6 //order status id
#define STOCK_LEVEL_FORM 7 //stock level form
id

//This macro is used to prevent the compiler error unused formal parameter
#define UNUSEDPARAM(x) (x = x)
```

```
//This structure defines the data necessary to keep distinct for each
terminal or client connection.
typedef struct _CLIENTDATA
{
    int iNextFree; //index of next free element
or -1 if this entry in use.
    int w_id; //warehouse id assigned at
welcome form
    int d_id; //district id assigned at
welcome form

    int iSyncId; //synchronization id
    int iTickCount; //time of last access;

    CTPCC_BASE *pTxn;
} CLIENTDATA, *PCLIENTDATA;

//This structure is used to define the operational interface for terminal id
support
typedef struct _TERM
{
    int iNumEntries; //total allocated
terminal array entries
    int iFreeList; //next available
terminal array element or -1 if none
    int iMasterSyncId; //synchronization id
    CLIENTDATA *pClientData; //pointer to allocated
client data
} TERM;

typedef TERM *PTERM; //pointer to terminal
structure type

enum WEBERROR
{
    NO_ERR,
    ERR_COMMAND_UNDEFINED,
    ERR_D_ID_INVALID,
    ERR_DELIVERY_CARRIER_ID_RANGE,
    ERR_DELIVERY_CARRIER_INVALID,
    ERR_DELIVERY_MISSING_OCD_KEY,
    ERR_DELIVERY_THREAD_FAILED,
    ERR_GETPROCADDR_FAILED,
    ERR_HTML_ILL_FORMED,
    ERR_INVALID_SYNC_CONNECTION,
    ERR_INVALID_TERMID,
    ERR_LOADDLL_FAILED,
    ERR_MAX_CONNECTIONS_EXCEEDED,
    ERR_MEM_ALLOC_FAILED,
    ERR_MISSING_REGISTRY_ENTRIES,
```

```

ERR_NEWORDER_CUSTOMER_INVALID,
ERR_NEWORDER_CUSTOMER_KEY,
ERR_NEWORDER_DISTRICT_INVALID,
ERR_NEWORDER_FORM_MISSING_DID,
ERR_NEWORDER_ITEMID_INVALID,
ERR_NEWORDER_ITEMID_RANGE,
ERR_NEWORDER_ITEMID_WITHOUT_SUPPW,
ERR_NEWORDER_MISSING_IID_KEY,
ERR_NEWORDER_MISSING_QTY_KEY,
ERR_NEWORDER_MISSING_SUPPW_KEY,
ERR_NEWORDER_NOITEMS_ENTERED,
ERR_NEWORDER_QTY_INVALID,
ERR_NEWORDER_QTY_RANGE,
ERR_NEWORDER_QTY_WITHOUT_SUPPW,
ERR_NEWORDER_SUPPW_INVALID,
ERR_NO_SERVER_SPECIFIED,
ERR_ORDERSTATUS_CID_AND_CLT,
ERR_ORDERSTATUS_CID_INVALID,
ERR_ORDERSTATUS_CLT_RANGE,
ERR_ORDERSTATUS_DID_INVALID,
ERR_ORDERSTATUS_MISSING_CID_CLT,
ERR_ORDERSTATUS_MISSING_CID_KEY,
ERR_ORDERSTATUS_MISSING_CLT_KEY,
ERR_ORDERSTATUS_MISSING_DID_KEY,
ERR_PAYMENT_CDI_INVALID,
ERR_PAYMENT_CID_AND_CLT,
ERR_PAYMENT_CUSTOMER_INVALID,
ERR_PAYMENT_CWI_INVALID,
ERR_PAYMENT_DISTRICT_INVALID,
ERR_PAYMENT_HAM_INVALID,
ERR_PAYMENT_HAM_RANGE,
ERR_PAYMENT_LAST_NAME_TO_LONG,
ERR_PAYMENT_MISSING_CDI_KEY,
ERR_PAYMENT_MISSING_CID_CLT,
ERR_PAYMENT_MISSING_CID_KEY,
ERR_PAYMENT_MISSING_CLT,
ERR_PAYMENT_MISSING_CLT_KEY,
ERR_PAYMENT_MISSING_CWI_KEY,
ERR_PAYMENT_MISSING_DID_KEY,
ERR_PAYMENT_MISSING_HAM_KEY,
ERR_STOCKLEVEL_MISSING_THRESHOLD_KEY,
ERR_STOCKLEVEL_THRESHOLD_INVALID,
ERR_STOCKLEVEL_THRESHOLD_RANGE,
ERR_VERSION_MISMATCH,
ERR_W_ID_INVALID
};

class CWEBCLNT_ERR : public CBaseErr
{
public:

    CWEBCLNT_ERR(WEBERROR Err)
    {
        m_Error = Err;
        m_szTextDetail = NULL;
    }
};

```

```

        m_SystemErr = 0;
        m_szErrorText = NULL;
    };

    CWEBCLNT_ERR(WEBERROR 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;
    };

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

    WEBERROR    m_Error;
    char        *m_szTextDetail;    //
    char        *m_szErrorText;
    DWORD       m_SystemErr;

    int ErrorType() {return ERR_TYPE_WEBDLL;};
    int ErrorNum() {return m_Error;};
    char *ErrorText();
};

//These constants have already been defined in engstut.h, but since we do
//not want to include it in the delisrv executable
#define    TXN_EVENT_START    2
#define    TXN_EVENT_STOP    4
#define    TXN_EVENT_WARNING    6    //used to record a warning into the log

//function prototypes

BOOL APIENTRY DllMain(HANDLE hModule, DWORD ul_reason_for_call, LPVOID
lpReserved);
void WriteMessageToEventLog(LPTSTR lpszMsg);
void ProcessQueryString(EXTENSION_CONTROL_BLOCK *pECB, int *pCmd, int
*pFormId, int *pTermId, int *pSyncId);
void WelcomeForm(EXTENSION_CONTROL_BLOCK *pECB, char *szBuffer);
void SubmitCmd(EXTENSION_CONTROL_BLOCK *pECB, char *szBuffer);
void BeginCmd(EXTENSION_CONTROL_BLOCK *pECB, int iFormId, int iTermId);
void ProcessCmd(EXTENSION_CONTROL_BLOCK *pECB, int iFormId, int iTermId);
void StatsCmd(EXTENSION_CONTROL_BLOCK *pECB, char *szBuffer);
void ErrorMessage(EXTENSION_CONTROL_BLOCK *pECB, int iError, int iErrorType,
char *szMsg, int iTermId);
void GetKeyValue(char **pQueryString, char *pKey, char *pValue, int iMax,
WEBERROR err);

```

```

int GetIntKeyValue(char **pQueryString, char *pKey, WEBERROR NoKeyErr,
WEBERROR NotIntErr);
void TermInit(void);
void TermDeleteAll(void);
int TermAdd(void);
void TermDelete(int id);
void ErrorForm(EXTENSION_CONTROL_BLOCK *pECB, int iType, int iErrorNum, int
iTermId, int iSyncId, char *szErrorText, char *szBuffer );
void MakeMainMenuForm(int iTermId, int iSyncId, char *szForm);
void MakeStockLevelForm(int iTermId, STOCK_LEVEL_DATA *pStockLevelData, BOOL
bInput, char *szForm);
void MakeNewOrderForm(int iTermId, NEW_ORDER_DATA *pNewOrderData, BOOL
bInput, char *szForm);
void MakePaymentForm(int iTermId, PAYMENT_DATA *pPaymentData, BOOL bInput,
char *szForm);
void MakeOrderStatusForm(int iTermId, ORDER_STATUS_DATA *pOrderStatusData,
BOOL bInput, char *szForm);
void MakeDeliveryForm(int iTermId, DELIVERY_DATA *pDeliveryData, BOOL
bInput, char *szForm);
void ProcessNewOrderForm(EXTENSION_CONTROL_BLOCK *pECB, int iTermId, char
*szBuffer);
void ProcessPaymentForm(EXTENSION_CONTROL_BLOCK *pECB, int iTermId, char
*szBuffer);
void ProcessOrderStatusForm(EXTENSION_CONTROL_BLOCK *pECB, int iTermId, char
*szBuffer);
void ProcessDeliveryForm(EXTENSION_CONTROL_BLOCK *pECB, int iTermId, char
*szBuffer);
void ProcessStockLevelForm(EXTENSION_CONTROL_BLOCK *pECB, int iTermId, char
*szBuffer);
void GetNewOrderData(LPSTR lpszQueryString, NEW_ORDER_DATA *pNewOrderData);
void GetPaymentData(LPSTR lpszQueryString, PAYMENT_DATA *pPaymentData);
void GetOrderStatusData(LPSTR lpszQueryString, ORDER_STATUS_DATA
*pOrderStatusData);
BOOL PostDeliveryInfo(long w_id, short o_carrier_id);
BOOL IsNumeric(char *ptr);
BOOL IsDecimal(char *ptr);
void DeliveryWorkerThread(void *ptr);

//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
#endif
#ifdef _WIN32
LANGUAGE LANG_ENGLISH, SUBLANG_ENGLISH_US
#pragma code_page(1252)
#endif // _WIN32

#ifdef _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
        RIGHTMARGIN, 179
    END
END

```

```

TOPMARGIN, 7
BOTTOMMARGIN, 88
END
#endif    // APSTUDIO_INVOKED

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

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

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

/* 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 definitions 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 "410"
#define INTERFACE_VERSION "4.10"

```

```

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

#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
* DWORDdul_reason_for_call reason for call
* LPVOID lpReserved reserved for future use
*
* RETURNS: BOOL FALSE errors occurred in
initialization

```

```

*           TRUE           DLL successfully
initialized
*/

BOOL WINAPI 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(&TermCriticalSection);

                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");
            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)
        {
            // for deferred delivery txns:
            hDoneEvent = CreateEvent( NULL, TRUE /* manual
reset */, FALSE /* initially not signalled */, NULL );

            InitializeCriticalSection(&DelBuffCriticalSection);
            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.log",
                Reg.szPath, Time.wYear % 100,
Time.wMonth, Time.wDay, Time.wHour, Time.wMinute );
            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)
                {
                    //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(&DelBuffCriticalSection);
            }

            DeleteCriticalSection(&TermCriticalSection);

            if (hLibInstanceTm != NULL)
                FreeLibrary( hLibInstanceTm );
            hLibInstanceTm = NULL;

            if (hLibInstanceDb != NULL)
                FreeLibrary( hLibInstanceDb );
            hLibInstanceDb = NULL;

            Sleep(500);
            break;

        default:

```

```

        }
        }
        catch (CBaseErr *e)
        {
            WriteMessageToEventLog( e->ErrorText() );
            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      *pVerpassed 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);
    lstrcpy(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      *pECBstructure pointer to passed
in internet
*               service
information.
*
* RETURNS:     DWORDHSE_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();
#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];
            sprintf( 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 );

    (*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
            (LPCSTR *)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)
            pTxn = pCTPCC_ODBC_new( Reg.szDbServer, Reg.szDbUser,
Reg.szDbPassword, szMyComputerName, Reg.szDbName, Reg.szSPPrefix );
        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
            //worker semaphore;
            while (TRUE)
            {
                // need to wait for multiple objects: program exit or
                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
                EnterCriticalSection(&DelBuffCriticalSection);
                delivery = *(pDelBuff+dwDelBuffBusyIndex);
                dwDelBuffFreeCount++;
                dwDelBuffBusyIndex++;
                if (dwDelBuffBusyIndex == dwDelBuffSize) // wrap-
                //around if at end of buffer
                    dwDelBuffBusyIndex = 0;

                LeaveCriticalSection(&DelBuffCriticalSection);

                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, "Error in Delivery Txn thread. %s", 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:
    delete pTxn;
    _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(&DelBuffCriticalSection);
    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(&DelBuffCriticalSection);

    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.
 */

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
4.51)</BIG></B> <BR> <BR>"

        "<font face=\"Courier New\"><PRE>"
        "Compiled: \"__DATE__\", \"__TIME__\" <BR>"
        "Source: \"__FILE__\" ( \"__TIMESTAMP__\" ) <BR>"
        "Interface: \" INTERFACE_VERSION \" <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>"
                "<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 );
        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 iTot;

    EnterCriticalSection(&TermCriticalSection);

    iTot = 0;
    for(i=0; i<Term.iNumEntries; i++)
    {
        if (Term.pClientData[i].iNextFree == -1)
            iTot++;
    }

    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>"
        , iTot );
}

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." },
        { 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." },
    }
}

```

<pre> { ERR_NEWORDER_CUSTOMER_INVALID, id invalid data type, range = 1 to 3000." }, { ERR_NEWORDER_CUSTOMER_KEY, Customer key \"CID*\". }, { ERR_NEWORDER_DISTRICT_INVALID, ID Invalid range 1 - 10." }, { ERR_NEWORDER_FORM_MISSING_DID, District key \"DID*\". }, { ERR_NEWORDER_ITEMID_INVALID, is wrong data type, must be numeric." }, { ERR_NEWORDER_ITEMID_RANGE, is out of range. Range = 1 to 999999." }, { ERR_NEWORDER_ITEMID_WITHOUT_SUPPW, field entered without a corresponding Supp.W." }, { ERR_NEWORDER_MISSING_IID_KEY, Item Id key \"IID*\". }, { ERR_NEWORDER_MISSING_QTY_KEY, Qty key \"Qty##*\". }, { ERR_NEWORDER_MISSING_SUPPW_KEY, Supp_W key \"SP##*\". }, { ERR_NEWORDER_NOITEMS_ENTERED, lines entered." }, { ERR_NEWORDER_QTY_INVALID, invalid must be numeric range 1 - 99." }, { ERR_NEWORDER_QTY_RANGE, Qty is out of range. Range = 1 to 99." }, { ERR_NEWORDER_QTY_WITHOUT_SUPPW, field entered without a corresponding Supp.W." }, { ERR_NEWORDER_SUPPW_INVALID, Supp_W invalid data type must be numeric." }, { ERR_NO_SERVER_SPECIFIED, specified." }, { ERR_ORDERSTATUS_CID_AND_CLT, Customer ID or Last Name may be entered, not both." }, { ERR_ORDERSTATUS_CID_INVALID, Customer ID invalid, range must be numeric 1 - 3000." }, { ERR_ORDERSTATUS_CLT_RANGE, Customer last name longer than 16 characters." }, { ERR_ORDERSTATUS_DID_INVALID, District invalid, value must be numeric 1 - 10." }, { ERR_ORDERSTATUS_MISSING_CID_CLT, Either Customer ID or Last Name must be entered." }, { ERR_ORDERSTATUS_MISSING_CID_KEY, missing Customer key \"CID*\". }, { ERR_ORDERSTATUS_MISSING_CLT_KEY, missing Customer Last Name key \"CLT*\". }, { ERR_ORDERSTATUS_MISSING_DID_KEY, missing District key \"DID*\". }, { ERR_PAYMENT_CDI_INVALID, district invalid must be numeric." }, { ERR_PAYMENT_CID_AND_CLT, Customer ID or Last Name may be entered, not both." }, { ERR_PAYMENT_CUSTOMER_INVALID, data type invalid, must be numeric." }, </pre>	<pre> "New Order customer ", "New Order missing ", "New Order District ", "New Order missing ", "New Order Item Id ", "New Order Item Id ", "New Order Item_Id ", "New Order missing ", "New Order Missing ", "New Order missing ", "New Order No order ", "New Order Qty ", "New Order Qty ", "New Order Qty ", "No Server name ", "Order Status Only ", "Order Status ", "Order Status ", "Order Status ", "Order Status ", "Order Status ", "Order Status ", "Payment Customer ", "Payment Only ", "Payment Customer ", </pre>	<pre> { ERR_PAYMENT_CWI_INVALID, Warehouse invalid, must be numeric." }, { ERR_PAYMENT_DISTRICT_INVALID, ID is invalid, must be 1 - 10." }, { ERR_PAYMENT_HAM_INVALID, invalid data type must be numeric." }, { ERR_PAYMENT_HAM_RANGE, Amount out of range, 0 - 9999.99." }, { ERR_PAYMENT_LAST_NAME_TO_LONG, last name longer than 16 characters." }, { ERR_PAYMENT_MISSING_CDI_KEY, Customer district key \"CDI*\". }, { ERR_PAYMENT_MISSING_CID_CLT, Customer ID or Last Name must be entered." }, { ERR_PAYMENT_MISSING_CID_KEY, Customer Key \"CID*\". }, { ERR_PAYMENT_MISSING_CLT_KEY, Customer Last Name key \"CLT*\". }, { ERR_PAYMENT_MISSING_CWI_KEY, Customer Warehouse key \"CWI*\". }, { ERR_PAYMENT_MISSING_DID_KEY, District Key \"DID*\". }, { ERR_PAYMENT_MISSING_HAM_KEY, Amount key \"HAM*\". }, { ERR_STOCKLEVEL_MISSING_THRESHOLD_KEY, missing Threshold key \"TT*\". }, { ERR_STOCKLEVEL_THRESHOLD_INVALID, Threshold value must be in the range = 1 - 99." }, { ERR_STOCKLEVEL_THRESHOLD_RANGE, Threshold out of range, range must be 1 - 99." }, { ERR_VERSION_MISMATCH, version field. RTE and Web Client are probably out of sync." }, { ERR_W_ID_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++; } </pre>	<pre> "Payment Customer ", "Payment District ", "Payment Amount ", "Payment ", "Payment Customer ", "Payment missing ", "Payment Either ", "Payment missing ", "Payment missing ", "Payment missing ", "Payment missing ", "Payment missing ", "Payment missing ", "Stock Level; ", "Stock Level; ", "Stock Level ", "Invalid ", "Invalid ", " ", </pre>
--	---	---	--

```

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
 *               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)
{
    DWORDi;
    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)
            {
                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=\"TERMINID\" 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=\"TERMINID\" VALUE=\"%d\">"
    "<INPUT TYPE=\"hidden\" NAME=\"SYNCID\" VALUE=\"%d\">"
    "<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);

  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> <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> <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=\"TERMINID\" 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 += sprintf(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*"
<INPUT NAME="Qty00*" SIZE=1><BR>"
" <INPUT NAME="SP01*" SIZE=4> <INPUT NAME="IID01*"
<INPUT NAME="Qty01*" SIZE=1><BR>"
" <INPUT NAME="SP02*" SIZE=4> <INPUT NAME="IID02*"
<INPUT NAME="Qty02*" SIZE=1><BR>"
" <INPUT NAME="SP03*" SIZE=4> <INPUT NAME="IID03*"
<INPUT NAME="Qty03*" SIZE=1><BR>"
" <INPUT NAME="SP04*" SIZE=4> <INPUT NAME="IID04*"
<INPUT NAME="Qty04*" SIZE=1><BR>"
" <INPUT NAME="SP05*" SIZE=4> <INPUT NAME="IID05*"
<INPUT NAME="Qty05*" SIZE=1><BR>"
" <INPUT NAME="SP06*" SIZE=4> <INPUT NAME="IID06*"
<INPUT NAME="Qty06*" SIZE=1><BR>"
" <INPUT NAME="SP07*" SIZE=4> <INPUT NAME="IID07*"
<INPUT NAME="Qty07*" SIZE=1><BR>"
" <INPUT NAME="SP08*" SIZE=4> <INPUT NAME="IID08*"
<INPUT NAME="Qty08*" SIZE=1><BR>"
" <INPUT NAME="SP09*" SIZE=4> <INPUT NAME="IID09*"
<INPUT NAME="Qty09*" SIZE=1><BR>"
" <INPUT NAME="SP10*" SIZE=4> <INPUT NAME="IID10*"
<INPUT NAME="Qty10*" SIZE=1><BR>"
" <INPUT NAME="SP11*" SIZE=4> <INPUT NAME="IID11*"
<INPUT NAME="Qty11*" SIZE=1><BR>"
" <INPUT NAME="SP12*" SIZE=4> <INPUT NAME="IID12*"
<INPUT NAME="Qty12*" SIZE=1><BR>"
" <INPUT NAME="SP13*" SIZE=4> <INPUT NAME="IID13*"
<INPUT NAME="Qty13*" SIZE=1><BR>"
" <INPUT NAME="SP14*" SIZE=4> <INPUT NAME="IID14*"
<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 += sprintf(szForm+c, "Warehouse: %6.6d District: %2.2d
Date: ",
pNewOrderData->w_id,
pNewOrderData->d_id);

if ( bValid )
{
c += sprintf(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 += sprintf(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>"
" 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 += sprintf(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
committed. Total: $%8.2f ",
            pNewOrderData->total_amount);
    else
        c += sprintf(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 = sprintf(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=\"TERMINID\" 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 += sprintf(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 += sprintf(szForm+c,
            "<BR> <BR>Warehouse: %6.6d
            " District: <INPUT NAME=\"DID*\"
            SIZE=1><BR> <BR> <BR> <BR> <BR>"
            "Customer: <INPUT NAME=\"CID*\" SIZE=4>"
            "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>"
            "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 += sprintf(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> <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=\"TERMINID\" 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>"
"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> <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=\"TERMINID\" 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> <BR> <BR> <BR> <BR> <BR>"
"<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> <BR> <BR> <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..\">"
        "</BODY></FORM></HTML>"
        , pDeliveryData->o_carrier_id,
        (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 *pECBpassed 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 *pECBpassed 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 *pECBpassed 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
*
* 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 *pECBpassed 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
 */

void GetPaymentData(LPSTR lpszQueryString, PAYMENT_DATA *pPaymentData)
{
    char szTmp[26];
    char *ptr = lpszQueryString;
    BOOL bCustIdBlank;

    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(pPaymentData->c_last) > LAST_NAME_LEN )
        throw new CWEBCLNT_ERR( ERR_PAYMENT_LAST_NAME_TO_LONG );
    strcpy(pPaymentData->c_last, szTmp);
}
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;

    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(pOrderStatusData->c_last) > LAST_NAME_LEN )
            throw new CWEBCLNT_ERR( ERR_ORDERSTATUS_CLT_RANGE );
        strcpy(pOrderStatusData->c_last, szTmp);
    }
    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
 *               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;
}

//{{{NO_DEPENDENCIES}}
// Microsoft Developer Studio generated include file.
// Used by tpcc.rc
//
#define IDD_DIALOG1                101

// Next default values for new objects
//
#ifdef APSTUDIO_INVOKED
#ifndef APSTUDIO_READONLY_SYMBOLS
#define _APS_NEXT_RESOURCE_VALUE    102
#define _APS_NEXT_COMMAND_VALUE    40001
#define _APS_NEXT_CONTROL_VALUE    1000
#define _APS_NEXT_SYMED_VALUE      101
#endif
#endif

/* 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;
    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 ( !strcmp(szTmp, szDBNames[ODBC]) )
            pReg->eDB_Protocol = ODBC;
        else if ( !strcmp(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 ( !strcmp(szTmp, szTxnMonNames[TUXEDO]) )
            pReg->eTxnMon = TUXEDO;
        else if ( !strcmp(szTmp, szTxnMonNames[ENCINA]) )
            pReg->eTxnMon = ENCINA;
        else if ( !strcmp(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';

```

```

RegCloseKey(hKey);

return FALSE;
}

/* 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
} TPCCREGISTRYDATA, *PTPCCREGISTRYDATA;

BOOL ReadTPCCRegistrySettings( TPCCREGISTRYDATA *pReg );

/* 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

#ifdef _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;

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_ERROR_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
allocation error //memory
#define ERR_TYPE_TPCC_ODBC       13
tpcc odbc txn module //error from
#define ERR_TYPE_TPCC_DBLIB      14
from tpcc dblib txn module //error
#define ERR_TYPE_DELISRV         15
server error //delivery
#define ERR_TYPE_TXNLOG          16
log error //txn
#define ERR_TYPE_BCCONN          17
//Benchcraft connection class
#define ERR_TYPE_TPCC_CONN       18
connection class //Benchcraft
#define ERR_TYPE_ENCINA          19
error //Encina
#define ERR_TYPE_COMPONENT        20
COM component //error from
#define ERR_TYPE_RTE             21
rte //Benchcraft
#define ERR_TYPE_AUTOMATION       22
//Benchcraft automation errors
#define ERR_TYPE_DRIVER           23
engine errors //Driver
#define ERR_TYPE_RTE_BASE         24
errors //Framework
#define ERR_BUF_OVERFLOW          25
overflow during receive //Buffer
#define ERR_TYPE_SOAP_HTTP        26
dll generated error //HTTP/SOAP
// TPC-W error types
#define ERR_TYPE_TPCW_CONN        50
connection class //Benchcraft
#define ERR_TYPE_TPCW_HTML        51
TpcHtml dll //error from
#define ERR_TYPE_TPCW_USER        52
TPC-W user class //error from
#define ERR_TYPE_TPCW_ENG_BASE    53
#define ERR_TYPE_TPCW_ENG_OS      54
#define ERR_TYPE_HTML_RESP        55
#define ERR_TYPE_TPCC_ODBC        56
#define ERR_TYPE_SCHANNEL         57
#define ERR_TYPE_THINK_LIST       58

#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:
    CBaseErr(LPCTSTR szLoc = NULL)
    {
        m_idMsg = GetLastError(); //take the error code
        immediately 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);
    }

    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 *ErrorText() = 0; // a string (i.e., human readable)
    representation of 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,
        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 *ErrorText(void);

};

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,
    };

    CSystemErr(Action eAction, LPCTSTR szLocation);
    CSystemErr(int iError, Action eAction, LPCTSTR szLocation);

    int      ErrorType() { return ERR_TYPE_OS;};
    char *ErrorText(void);
    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 *ErrorText() {return ERR_INS_MEMORY;}
};

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

    int ErrorType() {return ERR_BUF_OVERFLOW;}
    char *ErrorText() {return ERR_INS_BUF_OVERFLOW;}
};

/* 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 dblink, 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 /* SQLSMALLINT */   day;
    unsigned short /* SQLSMALLINT */   hour;
    unsigned short /* SQLSMALLINT */   minute;
    unsigned short /* SQLUSMALLINT */  second;
    unsigned long  /* SQLINTEGER */     fraction;
} TIMESTAMP_STRUCT;
#endif

// possible values for exec_status_code after transaction completes
enum EXEC_STATUS
{
    eOK,           // 0 "Transaction committed."
    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
    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;

```

```

/* 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:
    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;
};

/* 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 dblink 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
 *           - 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[] = "4.10.000";

const          iMaxRetries = 10;          // how many retries on deadlock
static        long iConnectionCount = 0; // number of current dblink connections

const int iErrOleDbProvider = 7312;
const char sErrTimeoutExpired[] = "Timeout expired";

BOOL WINAPI DllMain(HMODULE hModule, DWORD ul_reason_for_call, LPVOID
lpReserved)
{
    switch( ul_reason_for_call )
    {
        case DLL_PROCESS_ATTACH:
            DisableThreadLibraryCalls(hModule);
            dbinit(); // initialize dblink
            break;

        case DLL_PROCESS_DETACH:
            dbexit(); // close all dblink 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           *msgtxt      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 msgtxt, 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, msgtxt );
    }

    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[] =
    {
        { 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 (dbsqlxec(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 )
{
    // close db connection and deallocate resources
    dbcclose(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 *)
&m_txn.StockLevel.d_id); // @d_id tinyint
            dbrpcparam(m_dbproc, NULL, 0, SQLINT2, -1, -1, (BYTE *)
&m_txn.StockLevel.threshold); // @threshold 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_generic,
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))
            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);

            // 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, (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.minute =
daterec.minute;
        m_txn.OrderStatus.OL[i].ol_delivery_d.second =
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))
            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;
}

/* FILE: TPC_C_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;};
    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*
            eDbNextRow,           // error from dbnextrow
            eWrongRowCount,       // more or less rows returned than
            eWrongNumCols,        // more or less columns returned than
            eDbResults,           // error from dbresults
            eDbRpcExec,           // error from dbrpcexec
            eDbSetMaxProcs,       // error from dbsetmaxprocs
            eDbProcHandler        // error from either dbprocerrhandle or
        };

        routines
        {
            eDbNextRow,           // error from dbnextrow
            eWrongRowCount,       // more or less rows returned than
            eWrongNumCols,        // more or less columns returned than
            eDbResults,           // error from dbresults
            eDbRpcExec,           // error from dbrpcexec
            eDbSetMaxProcs,       // error from dbsetmaxprocs
            eDbProcHandler        // error from either dbprocerrhandle or
        };

        dbprocmsghandle
        {
            };

        CDLIBERR(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;
        };

        ~CDLIBERR()
        {
            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;};
        int ErrorNum() {return m_dberror;};
        char *ErrorText() {return m_dberrstr;};
};

```

```

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;};
        int ErrorNum() {return m_errno;};

        char *ErrorText();
};

class DllDecl CTPCC_DBLIB : public CTPCC_BASE
{
    private:
        // declare variables and private functions here...
        PDBPROCESS m_dbproc;
        CDLIBERR *m_DbLibErr; // not allocated until needed
        (maybe never)
        CSQLEERR *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( CDLIBERR::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);

```

```

/* 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 definitions 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 );
}

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 );
}

/*  FILE:      TPCCOM.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.
#ifdef 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;
    }

    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);

    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);

/* FILE:      METHODS.H
 *           Microsoft TPC-C Kit Ver. 4.20.000

```

```

 *           Copyright Microsoft, 1999
 *           All Rights Reserved
 *
 *           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;};

```

```

        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;
};

////////////////////////////////////
/
// 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;}
};

//{{NO_DEPENDENCIES}}
// Microsoft Developer Studio generated include file.
// Used by tpcc_com_all.rc
//
#define IDS_PROJNAME                100
#define IDR_TPCC                    101
#define IDR_NEWORDER                102
#define IDR_ORDERSTATUS             103
#define IDR_PAYMENT                 104
#define IDR_STOCKLEVEL              105

// Next default values for new objects
//
#ifdef APSTUDIO_INVOKED
#ifndef APSTUDIO_READONLY_SYMBOLS
#define _APS_NEXT_RESOURCE_VALUE    202

```

```

#define _APS_NEXT_COMMAND_VALUE          32768
#define _APS_NEXT_CONTROL_VALUE         201
#define _APS_NEXT_SYMED_VALUE           106
#endif
#endif

/*  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 definitions 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;

////////////////////////////////////
/
// 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");
        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 );
        }
        else if (dwReason == DLL_PROCESS_DETACH)
            _Module.Term();
    }
    catch (CBaseErr *e)
    {
        WriteMessageToEventLog(e->ErrorText());
        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." },
        { 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()
{
    if (m_pTxn)
        delete m_pTxn;
}

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
    {
        if (Reg.eDB_Protocol == ODBC)
    }
}

```

```

        m_pTxn = pCTPCC_ODBC_new( Reg.szDbServer, Reg.szDbUser,
Reg.szDbPassword, szMyComputerName, Reg.szDbName, Reg.szSPPrefix );
        else if (Reg.eDB_Protocol == DBLIB)
            m_pTxn = pCTPCC_DBLIB_new( Reg.szDbServer, Reg.szDbUser,
Reg.szDbPassword, szMyComputerName, Reg.szDbName );
    }
    catch (CBaseErr *e)
    {
        WriteMessageToEventLog(e->ErrorText());
        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,
            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);
        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.def : Declares the module parameters.

LIBRARY      "tpcc_com_all.dll"

EXPORTS
    DllCanUnloadNow      @1 PRIVATE
    DllGetClassObject    @2 PRIVATE
    DllRegisterServer    @3 PRIVATE
    DllUnregisterServer  @4 PRIVATE

#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 Aug 01 10:56:27 2003
*/
/* 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 "oidl.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] */

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

/*
 * FILE:      TPCC.IDL
 *           Microsoft TPC-C Kit Ver. 4.20.000
 *           Copyright Microsoft, 1999
 *           All Rights Reserved
 *
 *           not yet audited
 *
 * PURPOSE:   IDL source for TPCC.dll.  This file is processed by the MIDL
tool to
 *           produce the type library (TPCC.tlb) and marshalling
code.
 *
 * Change history:
 *       4.20.000 - first version
 */

interface TPCC;
interface NewOrder;

```

```

interface OrderStatus;
interface Payment;
interface StockLevel;

import "oidl.idl";
import "ocidl.idl";
import "..\tpcc_com_ps\src\tpcc_com_ps.idl";

[
    uuid(122A3117-2520-11D3-BA71-00C04FBFE08B),
    version(1.0),
    helpstring("TPC-C 1.0 Type Library")
]
library TPCCLib
{
    importlib("stdole32.tlb");
    importlib("stdole2.tlb");

    [
        uuid(122A3128-2520-11D3-BA71-00C04FBFE08B),
        helpstring("All Txns Class")
    ]
    coclass TPCC
    {
        [default] interface ITPCC;
    };

    [
        uuid(975BAABF-84A7-11D2-BA47-00C04FBFE08B),
        helpstring("NewOrder Class")
    ]
    coclass NewOrder
    {
        [default] interface ITPCC;
    };

    [
        uuid(266836AD-A50D-11D2-BA4E-00C04FBFE08B),
        helpstring("OrderStatus Class")
    ]
    coclass OrderStatus
    {
        [default] interface ITPCC;
    };

    [
        uuid(CD02F7EF-A4FA-11D2-BA4E-00C04FBFE08B),
        helpstring("Payment Class")
    ]
    coclass Payment
    {

```

```

        [default] interface ITPCC;
    };

    [
        uuid(2668369E-A50D-11D2-BA4E-00C04FBFE08B),
        helpstring("StockLevel Class")
    ]
    coclass StockLevel
    {
        [default] interface ITPCC;
    };
};

//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

#ifdef _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"

////////////////////////////////////
/
//
// String Table
//

STRINGTABLE DISCARDABLE
BEGIN
    IDS_PROJNAME        "tpcc_com_all"
END

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

#ifdef APSTUDIO_INVOKED
////////////////////////////////////
/
//
// Generated from the TEXTINCLUDE 3 resource.
//
1 TYPELIB "tpcc_com_all.tlb"

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

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'
            }
        }
    }
}

#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 Aug 01 10:56:27 2003
*/
/* Compiler settings for .\src\tpcc_com_all.idl:
    Oicf, Wl, 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
#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,0x71,0x00,0xC0,0x4F,0xBF,0xE0,0x8B)
;

MIDL_DEFINE_GUID(CLSID,
CLSID_NewOrder,0x975BAABF,0x84A7,0x11D2,0xBA,0x47,0x00,0xC0,0x4F,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, 0x00, 0xC0, 0x4F, 0xBF, 0xE0
, 0x8B);

#undef MIDL_DEFINE_GUID

#ifdef __cplusplus
}
#endif

#endif /* !defined(_M_IA64) && !defined(_M_AMD64)*/

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'
            }
        }
    }
}

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'
        }
    }
}

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'
            }
        }
    }
}

#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 Aug 01 10:56:14 2003
*/
/* Compiler settings for .\src\tpcc_com_ps.idl:
Oicf, Wl, 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;

#ifdef __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 ( STDMETHODCALLTYPE *NewOrder )(
        ITPCC * This,

```



```

    /* [in] */ VARIANT txn_in,
    /* [out] */ VARIANT *txn_out);

HRESULT ( STDMETHODCALLTYPE *Payment )(
    ITPCC * This,
    /* [in] */ VARIANT txn_in,
    /* [out] */ VARIANT *txn_out);

HRESULT ( STDMETHODCALLTYPE *Delivery )(
    ITPCC * This,
    /* [in] */ VARIANT txn_in,
    /* [out] */ VARIANT *txn_out);

HRESULT ( STDMETHODCALLTYPE *StockLevel )(
    ITPCC * This,
    /* [in] */ VARIANT txn_in,
    /* [out] */ VARIANT *txn_out);

HRESULT ( STDMETHODCALLTYPE *OrderStatus )(
    ITPCC * This,
    /* [in] */ VARIANT txn_in,
    /* [out] */ VARIANT *txn_out);

HRESULT ( STDMETHODCALLTYPE *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 STDMETHODCALLTYPE 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 STDMETHODCALLTYPE 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 STDMETHODCALLTYPE 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

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'
            }
        }
    }
}

/*****
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 */

LIBRARY      "tpcc_com_ps"

DESCRIPTION  'Proxy/Stub DLL'

EXPORTS
    DllGetClassObject      @1 PRIVATE
    DllCanUnloadNow        @2 PRIVATE
    GetProxyDllInfo        @3 PRIVATE
    DllRegisterServer      @4 PRIVATE
    DllUnregisterServer    @5 PRIVATE

#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 Aug 01 10:56:14 2003
*/
/* 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*/
#ifdef __REQUIRED_RPCNDR_H_VERSION__
#define __REQUIRED_RPCNDR_H_VERSION__ 440
#endif

```

```

#include "rpc.h"
#include "rpcndr.h"

#ifdef __RPCNDR_H_VERSION__
#error this stub requires an updated version of <rpcndr.h>
#endif // __RPCNDR_H_VERSION__

#ifdef COM_NO_WINDOWS_H
#include "windows.h"
#include "ole2.h"
#endif /*COM_NO_WINDOWS_H*/

#ifdef __tpcc_com_ps_h__
#define __tpcc_com_ps_h__

#ifdef defined(_MSC_VER) && (_MSC_VER >= 1020)
#pragma once
#endif

/* Forward Declarations */

#ifdef __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;

#ifdef __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 )(
        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

/* FILE: ITPCC.IDL
 * Microsoft TPC-C Kit Ver. 4.20.000
 * Copyright Microsoft, 1999
 * All Rights Reserved
 *
 * not yet audited
 *
 * PURPOSE: Defines the interface used by TPCC. This interface can be
implemented by C++ components.
 *
 * Change history:
 * 4.20.000 - first version
 */

// Forward declare all types defined
interface ITPCC;
import "oidl.idl";
import "ocidl.idl";

[
    object,
    oleautomation,
    uuid(FEEE6AA2-84B1-11d2-BA47-00C04FBFE08B),
    helpstring("ITPCC Interface"),
    pointer_default(unique)
]
interface ITPCC : IUnknown
{
    HRESULT _stdcall NewOrder
        (
            [in] VARIANT txn_in,
            [out] VARIANT *txn_out
        );

    HRESULT _stdcall Payment
        (
            [in] VARIANT txn_in,
            [out] VARIANT *txn_out
        );

    HRESULT _stdcall Delivery
        (
            [in] VARIANT txn_in,
            [out] VARIANT *txn_out
        );

    HRESULT _stdcall StockLevel
        (
            [in] VARIANT txn_in,

```

```

            [out] VARIANT *txn_out
        );

    HRESULT _stdcall OrderStatus
        (
            [in] VARIANT txn_in,
            [out] VARIANT *txn_out
        );

    HRESULT _stdcall CallSetComplete
        (
        );
}; // interface ITPCC

#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 Aug 01 10:56:14 2003
 */
/* Compiler settings for .\src\tpcc_com_ps.idl:
    Oicf, Wl, 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
#endif


```

```

#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_I_TPCC,0xFEE6AA2,0x84B1,0x11d2,0xBA,0x47,0x00,0xC0,0x4F,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 proxy stub code */

/* File created by MIDL compiler version 6.00.0347 */
/* at Fri Aug 01 10:56:14 2003
*/
/* 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_marshall] or [user_marshall] 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 */

/* 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 */
        0x9, /* FC_ULONG */
/* 8 */ 0x7, /* Corr desc: FC_USHORT */
        0x0, /* */
/* 10 */ NdrFcShort( 0xffff8 ), /* -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( 0xfffff2 ), /* Offset= -14 (312) */
/* 328 */ 0x8, /* FC_LONG */
    0x8, /* FC_LONG */
/* 330 */ 0x5c, /* FC_PAD */
    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( 0xffffffff6e ), /* 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( 0xffffffffd4 ), /* 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( 0xffffffff50 ), /* 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 */
    0x5b, /* FC_END */

/* 524 */
    0x11, 0x0, /* FC_RP */
/* 526 */ NdrFcShort( 0xffffffffe0 ), /* 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( 0xffffffff40 ), /* 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( 0xffffffffe0 ), /* 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 */
/* 602 */ 0x5c, /* FC_POINTER */
/* 604 */ 0x5b, /* FC_END */
/* 606 */ 0x11, 0x0, /* FC_RP */
/* 608 */ NdrFcShort( 0xffffffffd4 ), /* Offset= -44 (562) */
/* 610 */ 0x2f, /* FC_IP */
/* 612 */ 0x5a, /* FC_CONSTANT_IID */
/* 614 */ NdrFcLong( 0x2f ), /* 47 */
/* 616 */ NdrFcShort( 0x0 ), /* 0 */
/* 618 */ 0xc0, /* 192 */
/* 620 */ 0x0, /* 0 */
/* 622 */ 0x0, /* 0 */
/* 624 */ 0x0, /* 0 */
/* 626 */ 0x46, /* 70 */
/* 628 */ 0x1b, /* FC_CARRAY */
/* 630 */ 0x0, /* 0 */
/* 632 */ NdrFcShort( 0x1 ), /* 1 */
/* 634 */ 0x19, /* Corr desc: field pointer, FC_ULONG */
/* 636 */ 0x0, /* */
/* 638 */ NdrFcShort( 0x4 ), /* 4 */
/* 640 */ 0x1, /* FC_BYTE */
/* 642 */ 0x5b, /* FC_END */
/* 644 */ 0x1a, /* FC_BOGUS_STRUCT */
/* 646 */ 0x3, /* 3 */
/* 648 */ NdrFcShort( 0x10 ), /* 16 */
/* 650 */ NdrFcShort( 0x0 ), /* 0 */
/* 652 */ NdrFcShort( 0xa ), /* Offset= 10 (652) */
/* 654 */ 0x8, /* FC_LONG */
/* 656 */ 0x4c, /* FC_EMBEDDED_COMPLEX */
/* 658 */ 0x0, /* 0 */
/* 660 */ NdrFcShort( 0xffffffffd8 ), /* Offset= -40 (608) */
/* 662 */ 0x36, /* FC_POINTER */
/* 664 */ 0x5b, /* FC_END */
/* 666 */ 0x12, 0x0, /* FC_UP */
/* 668 */ NdrFcShort( 0xffffffffe4 ), /* Offset= -28 (626) */
/* 670 */ 0x1b, /* FC_CARRAY */
/* 672 */ 0x3, /* 3 */
/* 674 */ NdrFcShort( 0x4 ), /* 4 */
/* 676 */ 0x19, /* Corr desc: field pointer, FC_ULONG */
/* 678 */ 0x0, /* */
/* 680 */ NdrFcShort( 0x0 ), /* 0 */
/* 682 */

```

```

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 */
/* 676 */ NdrFcShort( 0x0 ), /* 0 */
/* 678 */ 0x12, 0x0, /* FC_UP */
/* 680 */ NdrFcShort( 0xffffffffd4 ), /* Offset= -44 (636) */
/* 682 */ 0x5b, /* FC_END */
/* 684 */ 0x8, /* FC_LONG */
/* 686 */ 0x5c, /* FC_PAD */
/* 688 */ 0x5b, /* FC_END */
/* 690 */ 0x1a, /* FC_BOGUS_STRUCT */
/* 692 */ 0x3, /* 3 */
/* 694 */ NdrFcShort( 0x8 ), /* 8 */
/* 696 */ NdrFcShort( 0x0 ), /* 0 */
/* 698 */ NdrFcShort( 0x6 ), /* Offset= 6 (698) */
/* 700 */ 0x8, /* FC_LONG */
/* 702 */ 0x36, /* FC_POINTER */
/* 704 */ 0x5c, /* FC_PAD */
/* 706 */ 0x5b, /* FC_END */
/* 708 */ 0x11, 0x0, /* FC_RP */
/* 710 */ NdrFcShort( 0xffffffffd4 ), /* Offset= -44 (656) */
/* 712 */ 0x1d, /* FC_SMFARRAY */
/* 714 */ 0x0, /* 0 */
/* 716 */ NdrFcShort( 0x8 ), /* 8 */
/* 718 */ 0x1, /* FC_BYTE */
/* 720 */ 0x5b, /* FC_END */
/* 722 */ 0x15, /* FC_STRUCT */
/* 724 */ 0x3, /* 3 */
/* 726 */ NdrFcShort( 0x10 ), /* 16 */
/* 728 */ 0x8, /* FC_LONG */
/* 730 */ 0x6, /* FC_SHORT */
/* 732 */ 0x6, /* FC_SHORT */
/* 734 */ 0x4c, /* FC_EMBEDDED_COMPLEX */
/* 736 */ 0x0, /* 0 */
/* 738 */ NdrFcShort( 0xfffffffff1 ), /* Offset= -15 (702) */
/* 740 */ 0x5b, /* FC_END */
/* 742 */ 0x1a, /* FC_BOGUS_STRUCT */
/* 744 */ 0x3, /* 3 */
/* 746 */ NdrFcShort( 0x18 ), /* 24 */
/* 748 */ NdrFcShort( 0x0 ), /* 0 */
/* 750 */ NdrFcShort( 0xa ), /* Offset= 10 (736) */
/* 752 */ 0x8, /* FC_LONG */

```

```

        0x36,      /* FC_POINTER */
/* 730 */ 0x4c,    /* FC_EMBEDDED_COMPLEX */
        0x0,      /* 0 */
/* 732 */ NdrFcShort( 0xffffffe8 ), /* Offset= -24 (708) */
/* 734 */ 0x5c,    /* FC_PAD */
        0x5b,     /* FC_END */
/* 736 */
        0x11, 0x0, /* FC_RP */
/* 738 */ NdrFcShort( 0xfffff0c ), /* 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( 0xffffffe8 ), /* Offset= -24 (740) */
/* 766 */
        0x5b,     /* FC_END */
/* 768 */
        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( 0xffffffe8 ), /* Offset= -24 (770) */
/* 796 */
        0x5b,     /* FC_END */
/* 798 */
        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 */
        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( 0xffffffe8 ), /* Offset= -24 (800) */
/* 826 */
        0x5b,     /* FC_END */
/* 828 */
        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( 0xffffffe8 ), /* 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( 0xfffd ), /* -40 */
/* 876 */ 0x4c, /* FC_EMBEDDED_COMPLEX */
0x0, /* 0 */
/* 878 */ NdrFcShort( 0xfffffee ), /* Offset= -18 (860) */
/* 880 */ 0x5c, /* FC_PAD */
0x5b, /* FC_END */
/* 882 */
0x1a, /* FC_BOGUS_STRUCT */
0x3, /* 3 */
/* 884 */ NdrFcShort( 0x28 ), /* 40 */
/* 886 */ NdrFcShort( 0xfffffee ), /* 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( 0xffffdf8 ), /* Offset= -520 (376) */
/* 898 */ 0x5c, /* FC_PAD */
0x5b, /* FC_END */
/* 900 */
0x12, 0x0, /* FC_UP */
/* 902 */ NdrFcShort( 0xffffef6 ), /* 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) */
/* 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( 0xffffffff4 ), /* 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( 0xfffffc18 ), /* Offset= -1000 (2) */
/* 1004 */
        0x11, 0x4, /* FC_RP [allocated_on_stack] */
/* 1006 */ NdrFcShort( 0x6 ), /* Offset= 6 (1012) */
/* 1008 */
        0x13, 0x0, /* FC_OP */
/* 1010 */ NdrFcShort( 0xfffffcdc ), /* Offset= -36 (974) */
/* 1012 */ 0xb4, /* FC_USER_MARSHAL */
        0x83, /* 131 */
/* 1014 */ NdrFcShort( 0x0 ), /* 0 */
/* 1016 */ NdrFcShort( 0x10 ), /* 16 */
/* 1018 */ NdrFcShort( 0x0 ), /* 0 */
/* 1020 */ NdrFcShort( 0xffffffff4 ), /* 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,{0x00,0x00,0x00,0x00,0x00,0x00,0x00,0x00}} */
/*
/* Object interface: IUnknown, ver. 0.0,
GUID={0x00000000,0x0000,0x0000,{0xc0,0x00,0x00,0x00,0x00,0x00,0x00,0x46}} */
/*
/* Object interface: ITPCC, ver. 0.0,
GUID={0xFEEE6AA2,0x84B1,0x11d2,{0xBA,0x47,0x00,0xC0,0x4F,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
};

```

```

static const MIDL_STUB_DESC Object_StubDesc =
{
    0,
    NdrOleAllocate,
    NdrOleFree,
    0,
    0,
    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)*/

```

Appendix B - Database Details

BACKUP.SQL

```
-----  
--  
-- File: BACKUP.SQL  
-- Microsoft TPC-C Benchmark Kit Ver. 4.51  
-- Copyright Microsoft, 2003  
--  
-----  
  
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 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  
  
declare @startdate datetime,  
        @enddate datetime  
  
select @startdate = getdate()  
select 'Start date:',  
       convert(varchar(30),@startdate, 21)  
  
dump database tpcc to tpccback6,  
                    tpccback7,  
                    tpccback8,  
                    tpccback9,  
                    tpccback10 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. 4.51  
-- Copyright Microsoft, 2003  
--  
-----  
  
use master  
go  
  
-----  
-- create backup devices  
-----  
exec sp_addumpdevice 'disk', 'tpccback1', 'M:\tpccback1.dmp'  
go  
exec sp_addumpdevice 'disk', 'tpccback2', 'N:\tpccback2.dmp'  
go  
exec sp_addumpdevice 'disk', 'tpccback3', 'O:\tpccback3.dmp'  
go  
exec sp_addumpdevice 'disk', 'tpccback4', 'P:\tpccback4.dmp'  
go  
exec sp_addumpdevice 'disk', 'tpccback5', 'Q:\tpccback5.dmp'  
go  
exec sp_addumpdevice 'disk', 'tpccback6', 'R:\tpccback6.dmp'  
go  
exec sp_addumpdevice 'disk', 'tpccback7', 'S:\tpccback7.dmp'  
go  
exec sp_addumpdevice 'disk', 'tpccback8', 'T:\tpccback8.dmp'  
go  
exec sp_addumpdevice 'disk', 'tpccback9', 'U:\tpccback9.dmp'  
go  
exec sp_addumpdevice 'disk', 'tpccback10', 'V:\tpccback10.dmp'  
go  
go
```

CREATEDB.SQL

```
-----  
--  
-- File: CREATEDB.SQL  
-- Microsoft TPC-C Benchmark Kit Ver. 4.51  
-- Copyright Microsoft, 2003  
--  
-----
```

```

-----
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

create table tpcc_timer
    (start_date char(30),
    end_date char(30))

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 = 50MB,
  FILEGROWTH = 0),
FILEGROUP MSSQL_cs_fg
( NAME = MSSQL_cs1,
  FILENAME = 'C:\jp\cs1\',
  SIZE = 85000MB,
  FILEGROWTH = 0),
( NAME = MSSQL_cs2,
  FILENAME = 'C:\jp\cs2\',
  SIZE = 85000MB,
  FILEGROWTH = 0),
( NAME = MSSQL_cs3,
  FILENAME = 'C:\jp\cs3\',
  SIZE = 85000MB,
  FILEGROWTH = 0),
( NAME = MSSQL_cs4,
  FILENAME = 'C:\jp\cs4\',
  SIZE = 85000MB,
  FILEGROWTH = 0),

```

```

( NAME = MSSQL_cs5,
  FILENAME = 'C:\jp\cs5\',
  SIZE = 85000MB,
  FILEGROWTH = 0),
( NAME = MSSQL_cs6,
  FILENAME = 'C:\jp\cs6\',
  SIZE = 85000MB,
  FILEGROWTH = 0),
( NAME = MSSQL_cs7,
  FILENAME = 'C:\jp\cs7\',
  SIZE = 85000MB,
  FILEGROWTH = 0),
( NAME = MSSQL_cs8,
  FILENAME = 'C:\jp\cs8\',
  SIZE = 85000MB,
  FILEGROWTH = 0),
( NAME = MSSQL_cs9,
  FILENAME = 'C:\jp\cs9\',
  SIZE = 85000MB,
  FILEGROWTH = 0),
( NAME = MSSQL_cs10,
  FILENAME = 'C:\jp\cs10\',
  SIZE = 85000MB,
  FILEGROWTH = 0),
FILEGROUP MSSQL_misc_fg
( NAME = MSSQL_misc1,
  FILENAME = 'C:\jp\misc1\',
  SIZE = 47000MB,
  FILEGROWTH = 0),
( NAME = MSSQL_misc2,
  FILENAME = 'C:\jp\misc2\',
  SIZE = 47000MB,
  FILEGROWTH = 0),
( NAME = MSSQL_misc3,
  FILENAME = 'C:\jp\misc3\',
  SIZE = 47000MB,
  FILEGROWTH = 0),
( NAME = MSSQL_misc4,
  FILENAME = 'C:\jp\misc4\',
  SIZE = 47000MB,
  FILEGROWTH = 0),
( NAME = MSSQL_misc5,
  FILENAME = 'C:\jp\misc5\',
  SIZE = 47000MB,
  FILEGROWTH = 0),
( NAME = MSSQL_misc6,
  FILENAME = 'C:\jp\misc6\',
  SIZE = 47000MB,
  FILEGROWTH = 0),
( NAME = MSSQL_misc7,
  FILENAME = 'C:\jp\misc7\',
  SIZE = 47000MB,
  FILEGROWTH = 0),
( NAME = MSSQL_misc8,
  FILENAME = 'C:\jp\misc8\',

```

```

        SIZE      = 47000MB,
        FILEGROWTH = 0),
(
    NAME      = MSSQL_misc9,
    FILENAME  = 'C:\jp\misc9\',
    SIZE      = 47000MB,
    FILEGROWTH = 0),
(
    NAME      = MSSQL_misc10,
    FILENAME  = 'C:\jp\misc10\',
    SIZE      = 47000MB,
    FILEGROWTH = 0)
LOG ON
(
    NAME      = MSSQL_tpcc_log,
    FILENAME  = 'L:',
    SIZE      = 250000MB,
    FILEGROWTH = 0)
COLLATE Latin1_General_BIN
go

```

```

-----
-- Store ending time
-----

```

```

update    tpcc_timer
set end_date = (select convert(char(30), getdate(), 21))
go

```

```

select 'Elapsed time (in seconds): ', datediff(second,(select
start_date from tpcc_timer),(select end_date from tpcc_timer))

```

```

-----
-- 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. 4.51
-- Copyright Microsoft, 2003
--
-- Sets database options for load
--
-----

```

```

use master
go

```

```

ALTER DATABASE tpcc SET RECOVERY BULK_LOGGED

```

```

go

```

```

ALTER DATABASE tpcc SET TORN_PAGE_DETECTION OFF
go

```

```

use tpcc
go

```

```

checkpoint
go

```

DBOPT2.SQL

```

-----
--
-- File:DBOPT2.SQL
-- Microsoft TPC-C Benchmark Kit Ver. 4.51
-- Copyright Microsoft, 2003
--
-- Sets database options after data 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
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', TRUE
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

```

```

EXEC sp_tableoption 'district', 'pintable',true
EXEC sp_tableoption 'warehouse', 'pintable',true
EXEC sp_tableoption 'new_order', 'pintable',true
EXEC sp_tableoption 'item', 'pintable',true
GO

```

REMOVEDB.SQL

```

-----
--
-- File: REMOVEDB.SQL
-- Microsoft TPC-C Benchmark Kit Ver. 4.51
-- Copyright Microsoft, 2003
--
-----

```

```

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'
exec sp_dropdevice 'tpccback8'
exec sp_dropdevice 'tpccback9'
exec sp_dropdevice 'tpccback10'
go

```

RESTORE.SQL

```

-----
--
-- File: RESTORE.SQL
-- Microsoft TPC-C Benchmark Kit Ver. 4.51
-- Copyright Microsoft, 2003
--
-----

```

```

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 with stats = 1
```

```
select    @enddate = getdate()
select    'End date: ',
          convert(varchar(30),@enddate, 21)
select    'Elapsed time (in seconds): ',
          datediff(second, @startdate, @enddate)
go
```

VERIFYTPCCLOAD.SQL

```
-----
--
-- File:VERIFYTPCCLOAD.SQL
-- Microsoft TPC-C Benchmark Kit Ver. 4.51
-- Copyright Microsoft, 2003
--
-- Performs series of TPCC database checks to
-- verify that database load completed correctly
--
-----
```

```
print ' '
select    convert(char(30), getdate(), 21)
print ' '
```

```
use tpcc
go
```

```
-----
-- Check rows per table
-----
```

```
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
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
```

```
-----
-- Check indices
-----
```

```
print '----- Index Check -----'
```

```
use tpcc
go
```

```
sp_helpindex    customer
go
```

```
sp_helpindex    stock
go
```

```
sp_helpindex    district
go
```

```
sp_helpindex    item
go
```

```
sp_helpindex    new_order
go
```

```
sp_helpindex    orders
go
```

```
sp_helpindex    order_line
go
```

```
sp_helpindex warehouse
go
```

IDXCUSCL.SQL

```
-----
--
-- File: IDXCUSCL.SQL
-- Microsoft TPC-C Benchmark Kit Ver. 4.51
-- Copyright Microsoft, 2003
--
-- Creates clustered index on customer table
-----

use tpcc
go

select 'do not create Creates clustered index on customer table'
go
```

IDXCUSNC.SQL

```
-----
--
-- File: IDXCUSNC.SQL
-- Microsoft TPC-C Benchmark Kit Ver. 4.51
-- Copyright Microsoft, 2003
--
-- 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. 4.51
-- Copyright Microsoft, 2003
--
-- Creates clustered index on district table
-----

use tpcc
go

select 'do not Creates clustered index on district table'
go
```

IDXITMCL.SQL

```
-----
--
-- File: IDXITMCL.SQL
-- Microsoft TPC-C Benchmark Kit Ver. 4.51
-- Copyright Microsoft, 2003
--
-- Creates clustered index on item table
-----

use tpcc
go

select 'do not Creates clustered index on item table'
go
```

IDXNODCL.SQL

```
-----  
--  
-- File:  IDXNODCL.SQL  
-- Microsoft TPC-C Benchmark Kit Ver. 4.51  
-- Copyright Microsoft, 2003  
--  
-- Creates clustered index on new_order table  
-----
```

```
use tpcc  
go  
  
select      'do not Creates clustered index on new_order table'  
go
```

IDXODLCL.SQL

```
-----  
--  
-- File:  IDXODLCL.SQL  
-- Microsoft TPC-C Benchmark Kit Ver. 4.51  
-- Copyright Microsoft, 2003  
--  
-- Creates clustered index on order_line table  
-----
```

```
use tpcc  
go  
  
select      'do not Creates clustered index on order_line table'  
go
```

IDXORDCL.SQL

```
-----  
--  
-- File:  IDXORDCL.SQL  
-- Microsoft TPC-C Benchmark Kit Ver. 4.51  
-- Copyright Microsoft, 2003  
--  
-- Creates clustered index on orders table  
-----
```

```
use tpcc  
go  
  
select      'do not Creates clustered index on orders table'  
go
```

IDXORDNC.SQL

```
-----  
--  
-- File:  IDXORDNC.SQL  
-- Microsoft TPC-C Benchmark Kit Ver. 4.51  
-- Copyright Microsoft, 2003  
--  
-- Creates non-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_ncl' )  
           drop index orders.orders_ncl  
  
create index orders_ncl on orders(o_w_id, o_d_id, o_c_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. 4.51  
-----
```



```

--          Copyright Microsoft, 2003          --
--          --
--          Creates clustered index on stock table
-----
use tpcc
go

select      'do not Creates clustered index on stock table'
go

```

IDXWARCL.SQL

```

-----
--          --
-- File:  IDXWARCL.SQL
--          Microsoft TPC-C Benchmark Kit Ver. 4.51
--          Copyright Microsoft, 2003
--          --
--          Creates clustered index on warehouse table
-----
use tpcc
go

select      'do not Creates clustered index on warehouse table'
go

```

TABLES.SQL

```

-----
--          --
-- File:  TABLES.SQL
--          Microsoft TPC-C Benchmark Kit Ver. 4.51
--          Copyright Microsoft, 2003
--          --
--          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_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),
    w_tax              numeric(4,4),
    w_ytd              numeric(12,2)
) on MSSQL_misc_fg
go

create table district
(
    d_id                tinyint,
    d_w_id              int,
    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),
    d_tax          numeric(4,4),
    d_ytd          numeric(12,2),
    d_next_o_id    int
) on MSSQL_misc_fg
go

```

```

create table customer
(
    c_id           int,
    c_d_id        tinyint,
    c_w_id        int,
    c_first       char(16),
    c_middle      char(2),
    c_last        char(16),
    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_discount    numeric(4,4),
    c_balance     numeric(12,2),
    c_ytd_payment numeric(12,2),
    c_payment_cnt smallint,
    c_delivery_cnt smallint,
    c_data        char(500)
) on MSSQL_cs_fg
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     numeric(6,2),
    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_entry_d    datetime,
    o_carrier_id tinyint,
    o_ol_cnt    tinyint,
    o_all_local  tinyint
) 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_supply_w_id int,
    ol_delivery_d datetime,
    ol_quantity  smallint,
    ol_amount    numeric(6,2),
    ol_dist_info char(24)
) on MSSQL_misc_fg
go

```

```

create table item
(
    i_id         int,
    i_im_id     int,
    i_name       char(24),
    i_price      numeric(5,2),
    i_data       char(50)
) on MSSQL_misc_fg
go

```

```

create table stock
(
    s_i_id      int,
    s_w_id      int,
    s_quantity  smallint,
    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),
    s_ytd       int,

```

```

        s_order_cnt          smallint,
        s_remote_cnt        smallint,
        s_data              char(50)
) on MSSQL_cs_fg
go

-----
--
-- File:  IDXCUSCL.SQL
-- Microsoft TPC-C Benchmark Kit Ver. 4.51
-- Copyright Microsoft, 2003
--
-- Creates clustered index on customer table
-----

use tpc
go

declare  @startdate datetime,
         @enddate  datetime

select  @startdate = getdate()
select  'Start date Creates clustered index on customer table:',
        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 Creates clustered index on customer table: ',
        convert(varchar(30),@enddate, 21)
select  'Elapsed time (in seconds): ',
        datediff(second, @startdate, @enddate)
go

-----
--
-- File:  IDXDISCL.SQL
-- Microsoft TPC-C Benchmark Kit Ver. 4.51
-- Copyright Microsoft, 2003
--
-- Creates clustered index on district table
-----

use tpc
go

declare  @startdate datetime,
         @enddate  datetime

```

```

select  @startdate = getdate()
select  'Start date Creates clustered index on district table:',
        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 Creates clustered index on district table: ',
        convert(varchar(30),@enddate, 21)
select  'Elapsed time (in seconds): ',
        datediff(second, @startdate, @enddate)
go

-----
--
-- File:  IDXHISCL.SQL
-- Microsoft TPC-C Benchmark Kit Ver. 4.51
-- Copyright Microsoft, 2003
--
-- 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 tpc
go

declare  @startdate datetime,
         @enddate  datetime

select  @startdate = getdate()
select  'Start date Creates clustered index on history table:',
        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 Creates clustered index on history table: ',
        convert(varchar(30),@enddate, 21)
select  'Elapsed time (in seconds): ',
        datediff(second, @startdate, @enddate)

```

```

go

-----
--
-- File:  IDXITMCL.SQL
-- Microsoft TPC-C Benchmark Kit Ver. 4.51
-- Copyright Microsoft, 2003
--
-- Creates clustered index on item table
-----

use tpcc
go

declare  @startdate datetime,
         @enddate  datetime

select  @startdate = getdate()
select  'Start date Creates clustered index on item table:',
        convert(varchar(30),@startdate, 21)

if exists ( select name from sysindexes where name = 'item_cl' )
        drop index item.item_cl

create unique clustered index item_cl on item(i_id)
        on MSSQL_misc_fg

select  @enddate = getdate()
select  'End date Creates clustered index on item table: ',
        convert(varchar(30),@enddate, 21)
select  'Elapsed time (in seconds): ',
        datediff(second, @startdate, @enddate)

go

-----
--
-- File:  IDXNODCL.SQL
-- Microsoft TPC-C Benchmark Kit Ver. 4.51
-- Copyright Microsoft, 2003
--
-- Creates clustered index on new_order table
-----

use tpcc
go

declare  @startdate datetime,
         @enddate  datetime

select  @startdate = getdate()
select  'Start date Creates clustered index on new_order table:',
        convert(varchar(30),@startdate, 21)

```

```

if exists ( select name from sysindexes where name = 'new_order_cl' )
        drop index new_order.new_order_cl

create unique clustered index new_order_cl on new_order(no_w_id,
no_d_id, no_o_id)
        on MSSQL_misc_fg

select  @enddate = getdate()
select  'End date Creates clustered index on new_order table: ',
        convert(varchar(30),@enddate, 21)
select  'Elapsed time (in seconds): ',
        datediff(second, @startdate, @enddate)

go

-----
--
-- File:  IDXODLCL.SQL
-- Microsoft TPC-C Benchmark Kit Ver. 4.51
-- Copyright Microsoft, 2003
--
-- Creates clustered index on order_line table
-----

use tpcc
go

declare  @startdate datetime,
         @enddate  datetime

select  @startdate = getdate()
select  'Start date Creates clustered index on order_line table:',
        convert(varchar(30),@startdate, 21)

if exists ( select name from sysindexes where name = 'order_line_cl' )
        drop index order_line.order_line_cl

create unique clustered index order_line_cl on order_line(ol_w_id,
ol_d_id, ol_o_id, ol_number)
        on MSSQL_misc_fg

select  @enddate = getdate()
select  'End date Creates clustered index on order_line table: ',
        convert(varchar(30),@enddate, 21)
select  'Elapsed time (in seconds): ',
        datediff(second, @startdate, @enddate)

go

-----
--
-- File:  IDXORDCL.SQL
-- Microsoft TPC-C Benchmark Kit Ver. 4.51
-- Copyright Microsoft, 2003
--
-- Creates clustered index on orders table
-----

```

```

use tpcc
go

declare  @startdate datetime,
         @enddate  datetime

select  @startdate = getdate()
select  'Start date Creates clustered index on orders table:',
        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 Creates clustered index on orders table: ',
        convert(varchar(30),@enddate, 21)
select  'Elapsed time (in seconds): ',
        datediff(second, @startdate, @enddate)
go

```

```

-----
--
-- File:  IDXSTKCL.SQL
-- Microsoft TPC-C Benchmark Kit Ver. 4.51
-- Copyright Microsoft, 2003
--
-- Creates clustered index on stock table
-----

```

```

use tpcc
go

declare  @startdate datetime,
         @enddate  datetime

select  @startdate = getdate()
select  'Start date Creates clustered index on stock table:',
        convert(varchar(30),@startdate, 21)

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 Creates clustered index on stock table: ',
        convert(varchar(30),@enddate, 21)
select  'Elapsed time (in seconds): ',
        datediff(second, @startdate, @enddate)
go

```

```

-----
--
-- File:  IDXWARCL.SQL
-- Microsoft TPC-C Benchmark Kit Ver. 4.51
-- Copyright Microsoft, 2003
--
-- Creates clustered index on warehouse table
-----

```

```

use tpcc
go

declare  @startdate datetime,
         @enddate  datetime

select  @startdate = getdate()
select  'Start date Creates clustered index on warehouse table:',
        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 Creates clustered index on warehouse table: ',
        convert(varchar(30),@enddate, 21)
select  'Elapsed time (in seconds): ',
        datediff(second, @startdate, @enddate)
go

```

DELIVERY.SQL

```

-----
--
-- File: DELIVERY.SQL
-- Microsoft TPC-C Benchmark Kit Ver. 4.51
-- Copyright Microsoft, 2003
--
-- Creates delivery stored procedure
--
-- Interface Level: 4.10.000
--
-----

```

```

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 numeric(12,2),
        @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 tran 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

-----
-- accumulate 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,
       @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 tran d

-----
-- return delivery data to client
-----
select @oid1,
       @oid2,
       @oid3,
       @oid4,
       @oid5,
       @oid6,
       @oid7,
       @oid8,
       @oid9,

```

```

@oid10
go

NEWORD.SQL
-----
--
-- File:NEWORD.SQL
-- Microsoft TPC-C Benchmark Kit Ver. 4.51 --
-- Copyright Microsoft, 2003
--
-- Creates neworder stored procedure --
--
-- Interface Level: 4.10.000 --
-----

use tpcc
go

if exists ( select name from sysobjects where name = 'tpcc_neworder' )
    drop procedure tpcc_neworder
go

create proc 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),
    @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 available 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
    whered_w_id = @w_id and
        d_id = @d_id
-----
-- process orderlines
-----

```

```

while (@li_no < @o_ol_cnt)
begin
    select @li_no = @li_no + 1
        when 12 then @ol_qty12
        when 13 then @ol_qty13
        when 14 then @ol_qty14
        when 15 then @ol_qty15
end

-----
-- 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
end

-----
-- get item data (no one updates item)
-----
select    @i_price = i_price,
        @i_name = i_name,
        @i_data = i_data
    from item WITH (tablock, repeatableread)
    where i_id = @li_id

-----
-- update stock values
-----
update    stock
    set    s_ytd = s_ytd + @li_qty,
        @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,
                @li_s_w_id,
                'dec 31, 1899',
                @li_qty,
                @i_price * @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,
                   @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,
                                       @o_entry_d,
                                       0,

```

```

                @o_ol_cnt,
                @o_all_local)

-----
-- 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)
        wherew_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

```

ORDSTAT.SQL

```

-----
--
-- File:ORDSTAT.SQL
-- Microsoft TPC-C Benchmark Kit Ver. 4.51
-- Copyright Microsoft, 2003
--
-- Creates order status stored procedure
--
-- Interface Level: 4.10.000
--

```

```

--
-----
use tpcc
go

if exists ( select name from sysobjects where name = 'tpcc_orderstatus'
)
    drop procedure    tpcc_orderstatus
go

create proc tpcc_orderstatus    @w_idint,
                                @d_idtinyint,
                                @c_idint,
                                @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,
        @cnt         smallint

begin tran 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
        orderby 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
              o_d_id    = @d_id and
              o_w_id    = @w_id
        orderby 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 tran 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. 4.51
-- Copyright Microsoft, 2003
--
-- Creates payment stored procedure
--
-- Interface Level: 4.10.000
--
-----

use tpcc
go

if exists (select name from sysobjects where name = 'tpcc_payment' )
drop procedure tpcc_payment
go

create proc 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

```

```

select @screen_data = ''

begin tran 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,
    @data = c_data,
    @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) +
           convert(char(4),@d_id) +
           convert(char(5),@w_id) +
           convert(char(19),@h_amount) +
           substring(@data, 1, 458)

-----
-- update customer info
-----
update customer
set c_data = @c_data
where c_id = @c_id and
      c_w_id = @c_w_id and
      c_d_id = @c_d_id

select @screen_data = substring (@c_data,1,200)
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 tran 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

```

STOCKLEV.SQL

```

-----
--
-- File: STOCKLEV.SQL
-- Microsoft TPC-C Benchmark Kit Ver. 4.51
-- Copyright Microsoft, 2003
--
-- Creates stock level stored procedure
--
-- Interface Level: 4.10.000
--
-----

use tpcc
go

if exists (select name from sysobjects where name = 'tpcc_stocklevel' )
drop procedure tpcc_stocklevel
go

```

```

create proc tpcc_stocklevel @w_id int,
                           @d_id tinyint,
                           @threshold 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 < @threshold

go

```

VERSION.SQL

```

-----
--
-- File: VERSION.SQL
-- Microsoft TPC-C Benchmark Kit Ver. 4.51
-- Copyright Microsoft, 2003
--
-- Returns version level of TPC-C stored procs
--
-- Always update the return value of this proc for
-- any interface changes or 'must have' bug fixes.
--
-- The value returned by this SP defines the
-- 'interface level', which must match between the
-- stored procs and the client code. The
-- interface level may be down rev from the
-- current kit. This indicates that the interface
-- hasn't changed since that version.
--
-- Interface Level: 4.10.000
--
-----

use tpcc

```

```

go

if exists ( select name from sysobjects where name = 'tpcc_version' )
    drop procedure tpcc_version
go

create proc tpcc_version
as
declare    @version  char(8)

begin
    select @version = '4.10.000'
    select @version as 'Version'
end

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)
            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("TPCCCLR:\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);
}

```

RANDOM.C

```

// File:      RANDOM.C
//           Microsoft TPC-C Kit Ver. 4.51
//           Copyright Microsoft, 1996, 1997, 1998, 1999, 2000,
//           2001, 2002, 2003
// 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
    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

//Original 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;
}

```

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[] =
"0123456789ABCDEFGHIJKLMNOPQRSTUVWXYZabcdefghijklmnopqrstuvwxyz";
    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++)
    {
        cc = chArray[RandomNumber(0, chArrayMax)];
        str[i] = cc;
    }
    str[len] = 0;

    return len;
}

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

```

```

// verify string is at least 8 chars in length
if ((x + y) <= 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 strlen(str);
}

//=====
//
// 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)
{

```

```

    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. 4.51
//           Copyright Microsoft, 1996, 1997, 1998, 1999, 2000,
2001, 2002, 2003
// 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
// 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 DEFLOADPACKSIZE 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 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
#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

HSTMTv_hstmt; // for SQL Server version
verification
HSTMTi_hstmt1;
HSTMTw_hstmt1;
HSTMTc_hstmt1, c_hstmt2;
HSTMTo_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,
                                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()
{
    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(1);

    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);
    }

    rc = bcp_bind(i_hdbc1, (BYTE *) &i_id, 0, SQL_VARLEN_DATA, NULL,
0, SQLINT4, 1);

```

```

    if (rc != SUCCEED)
        HandleErrorDBC(i_hdbc1);
    rc = bcp_bind(i_hdbc1, (BYTE *) &i_im_id, 0, SQL_VARLEN_DATA,
NULL, 0, SQLINT4, 2);
    if (rc != SUCCEED)
        HandleErrorDBC(i_hdbc1);
    rc = bcp_bind(i_hdbc1, (BYTE *) i_name, 0, I_NAME_LEN, NULL, 0,
0, 3);
    if (rc != SUCCEED)
        HandleErrorDBC(i_hdbc1);
    rc = bcp_bind(i_hdbc1, (BYTE *) &i_price, 0, SQL_VARLEN_DATA,
NULL, 0, SQLFLT8, 4);
    if (rc != SUCCEED)
        HandleErrorDBC(i_hdbc1);
    rc = bcp_bind(i_hdbc1, (BYTE *) i_data, 0, I_DATA_LEN, NULL, 0,
0, 5);
    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);

        MakeAlphaString(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()
{
    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 bcp_hints[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(bcp_hints, "tablock, order (w_id), ROWS_PER_BATCH =
%d", aptr->num_warehouses);
        rc = bcp_control(w_hdbc1, BCPHINTS, (void*) bcp_hints);
        if (rc != SUCCEED)
            HandleErrorDBC(w_hdbc1);
    }

    rc = bcp_bind(w_hdbc1, (BYTE *) &w_id, 0, SQL_VARLEN_DATA, NULL,
0, SQLINT4, 1);
    if (rc != SUCCEED)
        HandleErrorDBC(w_hdbc1);
    rc = bcp_bind(w_hdbc1, (BYTE *) w_name, 0, W_NAME_LEN, NULL, 0,
0, 2);
    if (rc != SUCCEED)
        HandleErrorDBC(w_hdbc1);
    rc = bcp_bind(w_hdbc1, (BYTE *) w_street_1, 0, ADDRESS_LEN, NULL,
0, 0, 3);
    if (rc != SUCCEED)
        HandleErrorDBC(w_hdbc1);
    rc = bcp_bind(w_hdbc1, (BYTE *) w_street_2, 0, ADDRESS_LEN, NULL,
0, 0, 4);
    if (rc != SUCCEED)
        HandleErrorDBC(w_hdbc1);
    rc = bcp_bind(w_hdbc1, (BYTE *) w_city, 0, ADDRESS_LEN, NULL, 0,
0, 5);
    if (rc != SUCCEED)
        HandleErrorDBC(w_hdbc1);
    rc = bcp_bind(w_hdbc1, (BYTE *) w_state, 0, STATE_LEN, NULL, 0,
0, 6);
    if (rc != SUCCEED)
        HandleErrorDBC(w_hdbc1);
    rc = bcp_bind(w_hdbc1, (BYTE *) w_zip, 0, ZIP_LEN, NULL, 0, 0,
7);
    if (rc != SUCCEED)
        HandleErrorDBC(w_hdbc1);
    rc = bcp_bind(w_hdbc1, (BYTE *) &w_tax, 0, SQL_VARLEN_DATA, NULL,
0, SQLFLT8, 8);
    if (rc != SUCCEED)
        HandleErrorDBC(w_hdbc1);
    rc = bcp_bind(w_hdbc1, (BYTE *) &w_ytd, 0, SQL_VARLEN_DATA, NULL,
0, SQLFLT8, 9);
    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++)
    {
        MakeAlphaString(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()
{
    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 bcp hint[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(bcp hint, "tablock, order (d_w_id, d_id),
ROWS_PER_BATCH = %u", (aptr->num_warehouses * 10));
    rc = bcp_control(w_hdbc1, BCPHINTS, (void*) bcp hint);
    if (rc != SUCCEED)
        HandleErrorDBC(w_hdbc1);
}

rc = bcp_bind(w_hdbc1, (BYTE *) &d_id, 0, SQL_VARLEN_DATA, NULL,
0, SQLINT2, 1);
if (rc != SUCCEED)
    HandleErrorDBC(w_hdbc1);
rc = bcp_bind(w_hdbc1, (BYTE *) &d_w_id, 0, SQL_VARLEN_DATA,
NULL, 0, SQLINT4, 2);
if (rc != SUCCEED)
    HandleErrorDBC(w_hdbc1);
rc = bcp_bind(w_hdbc1, (BYTE *) d_name, 0, D_NAME_LEN, NULL, 0,
0, 3);
if (rc != SUCCEED)
    HandleErrorDBC(w_hdbc1);
rc = bcp_bind(w_hdbc1, (BYTE *) d_street_1, 0, ADDRESS_LEN, NULL,
0, 0, 4);
if (rc != SUCCEED)
    HandleErrorDBC(w_hdbc1);
rc = bcp_bind(w_hdbc1, (BYTE *) d_street_2, 0, ADDRESS_LEN, NULL,
0, 0, 5);
if (rc != SUCCEED)
    HandleErrorDBC(w_hdbc1);
rc = bcp_bind(w_hdbc1, (BYTE *) d_city, 0, ADDRESS_LEN, NULL, 0,
0, 6);
if (rc != SUCCEED)
    HandleErrorDBC(w_hdbc1);

```

```

    rc = bcp_bind(w_hdbc1, (BYTE *) d_state, 0, STATE_LEN, NULL, 0,
0, 7);
    if (rc != SUCCEED)
        HandleErrorDBC(w_hdbc1);
    rc = bcp_bind(w_hdbc1, (BYTE *) d_zip, 0, ZIP_LEN, NULL, 0, 0,
8);
    if (rc != SUCCEED)
        HandleErrorDBC(w_hdbc1);
    rc = bcp_bind(w_hdbc1, (BYTE *) &d_tax, 0, SQL_VARLEN_DATA, NULL,
0, SQLFLT8, 9);
    if (rc != SUCCEED)
        HandleErrorDBC(w_hdbc1);
    rc = bcp_bind(w_hdbc1, (BYTE *) &d_ytd, 0, SQL_VARLEN_DATA, NULL,
0, SQLFLT8, 10);
    if (rc != SUCCEED)
        HandleErrorDBC(w_hdbc1);
    rc = bcp_bind(w_hdbc1, (BYTE *) &d_next_o_id, 0, SQL_VARLEN_DATA,
NULL, 0, SQLINT4, 11);
    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++)
        {
            MakeAlphaString(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()
{
    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 bcp_hint[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 != SUCCEEDED)
        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 != SUCCEEDED)
            HandleErrorDBC(w_hdbc1);
    }

    rc = bcp_bind(w_hdbc1, (BYTE *) &s_i_id, 0, SQL_VARLEN_DATA,
NULL, 0, SQLINT4, 1);
    if (rc != SUCCEEDED)
        HandleErrorDBC(w_hdbc1);
    rc = bcp_bind(w_hdbc1, (BYTE *) &s_w_id, 0, SQL_VARLEN_DATA,
NULL, 0, SQLINT4, 2);
    if (rc != SUCCEEDED)
        HandleErrorDBC(w_hdbc1);
    rc = bcp_bind(w_hdbc1, (BYTE *) &s_quantity, 0, SQL_VARLEN_DATA,
NULL, 0, SQLINT2, 3);
    if (rc != SUCCEEDED)
        HandleErrorDBC(w_hdbc1);
    rc = bcp_bind(w_hdbc1, (BYTE *) s_dist_01, 0, S_DIST_LEN, NULL,
0, 0, 4);
    if (rc != SUCCEEDED)
        HandleErrorDBC(w_hdbc1);
    rc = bcp_bind(w_hdbc1, (BYTE *) s_dist_02, 0, S_DIST_LEN, NULL,
0, 0, 5);
    if (rc != SUCCEEDED)
        HandleErrorDBC(w_hdbc1);
    rc = bcp_bind(w_hdbc1, (BYTE *) s_dist_03, 0, S_DIST_LEN, NULL,
0, 0, 6);
    if (rc != SUCCEEDED)
        HandleErrorDBC(w_hdbc1);
    rc = bcp_bind(w_hdbc1, (BYTE *) s_dist_04, 0, S_DIST_LEN, NULL,
0, 0, 7);
    if (rc != SUCCEEDED)
        HandleErrorDBC(w_hdbc1);
    rc = bcp_bind(w_hdbc1, (BYTE *) s_dist_05, 0, S_DIST_LEN, NULL,
0, 0, 8);
    if (rc != SUCCEEDED)
        HandleErrorDBC(w_hdbc1);
    rc = bcp_bind(w_hdbc1, (BYTE *) s_dist_06, 0, S_DIST_LEN, NULL,
0, 0, 9);
    if (rc != SUCCEEDED)
        HandleErrorDBC(w_hdbc1);
    rc = bcp_bind(w_hdbc1, (BYTE *) s_dist_07, 0, S_DIST_LEN, NULL,
0, 0, 10);
    if (rc != SUCCEEDED)
        HandleErrorDBC(w_hdbc1);
    rc = bcp_bind(w_hdbc1, (BYTE *) s_dist_08, 0, S_DIST_LEN, NULL,
0, 0, 11);
    if (rc != SUCCEEDED)
        HandleErrorDBC(w_hdbc1);

        rc = bcp_bind(w_hdbc1, (BYTE *) s_dist_09, 0, S_DIST_LEN, NULL,
0, 0, 12);
        if (rc != SUCCEEDED)
            HandleErrorDBC(w_hdbc1);
        rc = bcp_bind(w_hdbc1, (BYTE *) s_dist_10, 0, S_DIST_LEN, NULL,
0, 0, 13);
        if (rc != SUCCEEDED)
            HandleErrorDBC(w_hdbc1);
        rc = bcp_bind(w_hdbc1, (BYTE *) &s_ytd, 0, SQL_VARLEN_DATA, NULL,
0, SQLINT4, 14);
        if (rc != SUCCEEDED)
            HandleErrorDBC(w_hdbc1);
        rc = bcp_bind(w_hdbc1, (BYTE *) &s_order_cnt, 0, SQL_VARLEN_DATA,
NULL, 0, SQLINT2, 15);
        if (rc != SUCCEEDED)
            HandleErrorDBC(w_hdbc1);
        rc = bcp_bind(w_hdbc1, (BYTE *) &s_remote_cnt, 0,
SQL_VARLEN_DATA, NULL, 0, SQLINT2, 16);
        if (rc != SUCCEEDED)
            HandleErrorDBC(w_hdbc1);
        rc = bcp_bind(w_hdbc1, (BYTE *) s_data, 0, S_DATA_LEN, NULL, 0,
0, 17);
        if (rc != SUCCEEDED)
            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.
    // 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");

// 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);

            MakeAlphaString(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] = '0';
        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");
            MakeAlphaString(300, 500, C_DATA_LEN,
customer_buf[i].c_data);
    }
}

```

```

// Generate HISTORY data
MakeAlphaString(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;

    rc = bcp_bind(c_hdbc1, (BYTE *) &c_id, 0, SQL_VARLEN_DATA, NULL, 0,
SQLINT4, 1);
    if (rc != SUCCEED)
        HandleErrorDBC(c_hdbc1);
    rc = bcp_bind(c_hdbc1, (BYTE *) &c_d_id, 0, SQL_VARLEN_DATA, NULL,
0, SQLINT2, 2);
    if (rc != SUCCEED)
        HandleErrorDBC(c_hdbc1);
    rc = bcp_bind(c_hdbc1, (BYTE *) &c_w_id, 0, SQL_VARLEN_DATA,
NULL, 0, SQLINT4, 3);
    if (rc != SUCCEED)
        HandleErrorDBC(c_hdbc1);
    rc = bcp_bind(c_hdbc1, (BYTE *) c_first, 0, FIRST_NAME_LEN, NULL,
0, 0, 4);
    if (rc != SUCCEED)
        HandleErrorDBC(c_hdbc1);

```

```

    rc = bcp_bind(c_hdbc1, (BYTE *) c_middle, 0, MIDDLE_NAME_LEN, NULL,
0, 0, 5);
    if (rc != SUCCEED)
        HandleErrorDBC(c_hdbc1);
    rc = bcp_bind(c_hdbc1, (BYTE *) c_last, 0, LAST_NAME_LEN, NULL, 0,
0, 6);
    if (rc != SUCCEED)
        HandleErrorDBC(c_hdbc1);
    rc = bcp_bind(c_hdbc1, (BYTE *) c_street_1, 0, ADDRESS_LEN, NULL,
0, 0, 7);
    if (rc != SUCCEED)
        HandleErrorDBC(c_hdbc1);
    rc = bcp_bind(c_hdbc1, (BYTE *) c_street_2, 0, ADDRESS_LEN,
NULL,0,0, 8);
    if (rc != SUCCEED)
        HandleErrorDBC(c_hdbc1);
    rc = bcp_bind(c_hdbc1, (BYTE *) c_city, 0, ADDRESS_LEN, NULL, 0, 0,
9);
    if (rc != SUCCEED)
        HandleErrorDBC(c_hdbc1);
    rc = bcp_bind(c_hdbc1, (BYTE *) c_state, 0, STATE_LEN, NULL, 0, 0,
10);
    if (rc != SUCCEED)
        HandleErrorDBC(c_hdbc1);
    rc = bcp_bind(c_hdbc1, (BYTE *) c_zip, 0, ZIP_LEN, NULL, 0, 0, 11);
    if (rc != SUCCEED)
        HandleErrorDBC(c_hdbc1);
    rc = bcp_bind(c_hdbc1, (BYTE *) c_phone, 0, PHONE_LEN, NULL, 0, 0,
12);
    if (rc != SUCCEED)
        HandleErrorDBC(c_hdbc1);
    rc = bcp_bind(c_hdbc1, (BYTE *) &c_since, 0, C_SINCE_LEN, NULL,
0, SQLCHARACTER, 13);
    if (rc != SUCCEED)
        HandleErrorDBC(c_hdbc1);
    rc = bcp_bind(c_hdbc1, (BYTE *) c_credit, 0, CREDIT_LEN, NULL, 0,
0, 14);
    if (rc != SUCCEED)
        HandleErrorDBC(c_hdbc1);
    rc = bcp_bind(c_hdbc1, (BYTE *) &c_credit_lim, 0, SQL_VARLEN_DATA,
NULL, 0, SQLFLT8, 15);
    if (rc != SUCCEED)
        HandleErrorDBC(c_hdbc1);
    rc = bcp_bind(c_hdbc1, (BYTE *) &c_discount, 0, SQL_VARLEN_DATA,
NULL, 0, SQLFLT8, 16);
    if (rc != SUCCEED)
        HandleErrorDBC(c_hdbc1);
    rc = bcp_bind(c_hdbc1, (BYTE *) c_balance, 0, 5, NULL, 0,
SQLCHARACTER, 17);
    if (rc != SUCCEED)
        HandleErrorDBC(c_hdbc1);
    rc = bcp_bind(c_hdbc1, (BYTE *) &c_ytd_payment, 0, SQL_VARLEN_DATA,
NULL, 0, SQLFLT8, 18);
    if (rc != SUCCEED)
        HandleErrorDBC(c_hdbc1);

```

```

    rc = bcp_bind(c_hdbc1, (BYTE *) &c_payment_cnt, 0, SQL_VARLEN_DATA,
NULL, 0, SQLINT2, 19);
    if (rc != SUCCEED)
        HandleErrorDBC(c_hdbc1);
    rc = bcp_bind(c_hdbc1, (BYTE *) &c_delivery_cnt, 0, SQL_VARLEN_DATA,
NULL, 0, SQLINT2, 20);
    if (rc != SUCCEED)
        HandleErrorDBC(c_hdbc1);
    rc = bcp_bind(c_hdbc1, (BYTE *) c_data, 0, 500, NULL, 0, 0, 21);
    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)
{
    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;

    rc = bcp_bind(c_hdbc2, (BYTE *) &c_id, 0, SQL_VARLEN_DATA, NULL, 0,
SQLINT4, 1);
    if (rc != SUCCEED)
        HandleErrorDBC(c_hdbc2);
    rc = bcp_bind(c_hdbc2, (BYTE *) &c_d_id, 0, SQL_VARLEN_DATA, NULL,
0, SQLINT2, 2);
    if (rc != SUCCEED)
        HandleErrorDBC(c_hdbc2);
    rc = bcp_bind(c_hdbc2, (BYTE *) &c_w_id, 0, SQL_VARLEN_DATA,
NULL, 0, SQLINT4, 3);
    if (rc != SUCCEED)
        HandleErrorDBC(c_hdbc2);
    rc = bcp_bind(c_hdbc2, (BYTE *) &c_d_id, 0, SQL_VARLEN_DATA, NULL,
0, SQLINT2, 4);
    if (rc != SUCCEED)
        HandleErrorDBC(c_hdbc2);
    rc = bcp_bind(c_hdbc2, (BYTE *) &c_w_id, 0, SQL_VARLEN_DATA,
NULL, 0, SQLINT4, 5);
    if (rc != SUCCEED)
        HandleErrorDBC(c_hdbc2);
    rc = bcp_bind(c_hdbc2, (BYTE *) &h_date, 0, H_DATE_LEN, NULL, 0,
SQLCHARACTER, 6);
    if (rc != SUCCEED)
        HandleErrorDBC(c_hdbc2);
    rc = bcp_bind(c_hdbc2, (BYTE *) &h_amount, 0, SQL_VARLEN_DATA,
NULL, 0, SQLFLT8, 7);
    if (rc != SUCCEED)
        HandleErrorDBC(c_hdbc2);
    rc = bcp_bind(c_hdbc2, (BYTE *) h_data, 0, H_DATA_LEN, NULL, 0, 0,
8);
    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("idxordc1");
        BuildIndex("idxnodc1");
        BuildIndex("idxodlc1");
    }

    // 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), ROWS_PER_BATCH = %u", (aptr->num_warehouses * 30000));
    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++)
    {
        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_delivery_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_delivery_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
    rc = bcp_bind(o_hdbc1, (BYTE *) &o_id, 0, SQL_VARLEN_DATA, NULL, 0,
SQLINT4, 1);
    if (rc != SUCCEED)
        HandleErrorDBC(o_hdbc1);
    rc = bcp_bind(o_hdbc1, (BYTE *) &o_d_id, 0, SQL_VARLEN_DATA, NULL,
0, SQLINT2, 2);
    if (rc != SUCCEED)
        HandleErrorDBC(o_hdbc1);
    rc = bcp_bind(o_hdbc1, (BYTE *) &o_w_id, 0, SQL_VARLEN_DATA,
NULL, 0, SQLINT4, 3);
    if (rc != SUCCEED)
        HandleErrorDBC(o_hdbc1);
    rc = bcp_bind(o_hdbc1, (BYTE *) &o_c_id, 0, SQL_VARLEN_DATA, NULL,
0, SQLINT4, 4);
    if (rc != SUCCEED)
        HandleErrorDBC(o_hdbc1);
    rc = bcp_bind(o_hdbc1, (BYTE *) &o_entry_d, 0, O_ENTRY_D_LEN,
NULL, 0, SQLCHARACTER, 5);
    if (rc != SUCCEED)
        HandleErrorDBC(o_hdbc1);
    rc = bcp_bind(o_hdbc1, (BYTE *) &o_carrier_id, 0, SQL_VARLEN_DATA,
NULL, 0, SQLINT2, 6);
    if (rc != SUCCEED)
        HandleErrorDBC(o_hdbc1);
    rc = bcp_bind(o_hdbc1, (BYTE *) &o_ol_cnt, 0, SQL_VARLEN_DATA,
NULL, 0, SQLINT2, 7);
    if (rc != SUCCEED)
        HandleErrorDBC(o_hdbc1);
    rc = bcp_bind(o_hdbc1, (BYTE *) &o_all_local, 0, SQL_VARLEN_DATA,
NULL, 0, SQLINT2, 8);
    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("idxordc1");

        // 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
    rc = bcp_bind(o_hdbc2, (BYTE *) &o_id, 0, SQL_VARLEN_DATA, NULL, 0,
SQLINT4, 1);
    if (rc != SUCCEED)

```



```

        HandleErrorDBC(o_hdbc2);
    rc = bcp_bind(o_hdbc2, (BYTE *) &o_d_id, 0, SQL_VARLEN_DATA, NULL,
0, SQLINT2, 2);
    if (rc != SUCCEED)
        HandleErrorDBC(o_hdbc2);
    rc = bcp_bind(o_hdbc2, (BYTE *) &o_w_id, 0, SQL_VARLEN_DATA,
NULL, 0, SQLINT4, 3);
    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
    rc = bcp_bind(o_hdbc3, (BYTE *) &o_id, 0, SQL_VARLEN_DATA, NULL, 0,
SQLINT4, 1);
    if (rc != SUCCEED)
        HandleErrorDBC(o_hdbc3);
    rc = bcp_bind(o_hdbc3, (BYTE *) &o_d_id, 0, SQL_VARLEN_DATA, NULL,
0, SQLINT2, 2);
    if (rc != SUCCEED)
        HandleErrorDBC(o_hdbc3);
    rc = bcp_bind(o_hdbc3, (BYTE *) &o_w_id, 0, SQL_VARLEN_DATA,
NULL, 0, SQLINT4, 3);
    if (rc != SUCCEED)
        HandleErrorDBC(o_hdbc3);
    rc = bcp_bind(o_hdbc3, (BYTE *) &ol, 0, SQL_VARLEN_DATA, NULL, 0,
SQLFLT8, 4);
    if (rc != SUCCEED)
        HandleErrorDBC(o_hdbc3);
    rc = bcp_bind(o_hdbc3, (BYTE *) &ol_i_id, 0, SQL_VARLEN_DATA, NULL,
0, SQLINT4, 5);
    if (rc != SUCCEED)
        HandleErrorDBC(o_hdbc3);
    rc = bcp_bind(o_hdbc3, (BYTE *) &ol_supply_w_id, 0,
SQL_VARLEN_DATA, NULL, 0, SQLINT4, 6);
    if (rc != SUCCEED)
        HandleErrorDBC(o_hdbc3);
    rc = bcp_bind(o_hdbc3, (BYTE *) &ol_delivery_d, 0,
OL_DELIVERY_D_LEN, NULL, 0, SQLCHARACTER, 7);
    if (rc != SUCCEED)
        HandleErrorDBC(o_hdbc3);
    rc = bcp_bind(o_hdbc3, (BYTE *) &ol_quantity, 0, SQL_VARLEN_DATA,
NULL, 0, SQLINT2, 8);
    if (rc != SUCCEED)
        HandleErrorDBC(o_hdbc3);
    rc = bcp_bind(o_hdbc3, (BYTE *) &ol_amount, 0, SQL_VARLEN_DATA,
NULL, 0, SQLFLT8, 9);
    if (rc != SUCCEED)
        HandleErrorDBC(o_hdbc3);
    rc = bcp_bind(o_hdbc3, (BYTE *) ol_dist_info, 0, DIST_INFO_LEN,
NULL, 0, 0, 10);
    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].ol_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
(%d rows)\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;

    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 , &o_hdbc1);
    SQLAllocHandle(SQL_HANDLE_DBC, henv , &w_hdbc2);
    SQLAllocHandle(SQL_HANDLE_DBC, henv , &c_hdbc2);
    SQLAllocHandle(SQL_HANDLE_DBC, henv , &o_hdbc2);
    SQLAllocHandle(SQL_HANDLE_DBC, henv , &w_hdbc3);
    SQLAllocHandle(SQL_HANDLE_DBC, henv , &c_hdbc3);
    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(o_hdbc1, SQL_COPT_SS_BCP, (void *)SQL_BCP_ON,
SQL_IS_INTEGER );
    SQLSetConnectAttr(w_hdbc2, 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_hdbc2, SQL_COPT_SS_BCP, (void *)SQL_BCP_ON,
SQL_IS_INTEGER );
    SQLSetConnectAttr(w_hdbc3, SQL_COPT_SS_BCP, (void *)SQL_BCP_ON,
SQL_IS_INTEGER );
    SQLSetConnectAttr(c_hdbc3, 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],
                        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;
    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 TPCCCLR.<<<<\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;
}

```

Appendix C - Tunable Parameters and Options

This section discloses hardware information and the Microsoft Windows Server 2003 Enterprise Edition SP1 registry parameters used on the PRIMERGY TX600 S3 server system.

System Information report written at: 10/21/05 09:54:10
System Name: TWINS
[System Summary]

Item Value
OS Name Microsoft(R) Windows(R) Server 2003, Enterprise Edition
Version 5.2.3790 Service Pack 1 Build 3790
Other OS Description Not Available
OS Manufacturer Microsoft Corporation
System Name TWINS
System Manufacturer FUJITSU SIEMENS
System Model PRIMERGY TX600S3
System Type X86-based PC
Processor x86 Family 15 Model 4 Stepping 8 GenuineIntel ~2992 Mhz
Processor x86 Family 15 Model 4 Stepping 8 GenuineIntel ~2992 Mhz
Processor x86 Family 15 Model 4 Stepping 8 GenuineIntel ~2992 Mhz
Processor x86 Family 15 Model 4 Stepping 8 GenuineIntel ~2992 Mhz
Processor x86 Family 15 Model 4 Stepping 8 GenuineIntel ~2992 Mhz
Processor x86 Family 15 Model 4 Stepping 8 GenuineIntel ~2992 Mhz
Processor x86 Family 15 Model 4 Stepping 8 GenuineIntel ~2992 Mhz
Processor x86 Family 15 Model 4 Stepping 8 GenuineIntel ~2992 Mhz
Processor x86 Family 15 Model 4 Stepping 8 GenuineIntel ~2992 Mhz
Processor x86 Family 15 Model 4 Stepping 8 GenuineIntel ~2992 Mhz
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Processor x86 Family 15 Model 4 Stepping 8 GenuineIntel ~2992 Mhz
Processor x86 Family 15 Model 4 Stepping 8 GenuineIntel ~2992 Mhz
Processor x86 Family 15 Model 4 Stepping 8 GenuineIntel ~2992 Mhz
Processor x86 Family 15 Model 4 Stepping 8 GenuineIntel ~2992 Mhz
Processor x86 Family 15 Model 4 Stepping 8 GenuineIntel ~2992 Mhz
BIOS Version/Date Intel Corporation
SHW40.86B.D.05.01.0741.101120051641, 10/11/2005
SMBIOS Version 2.3
Windows Directory C:\WINDOWS
System Directory C:\WINDOWS\system32
Boot Device \Device\HarddiskVolume13
Locale United States
Hardware Abstraction Layer Version = "5.2.3790.1830
(srv03_spl_rtm.050324-1447)"
User Name TWINS\Administrator

Time Zone W. Europe Daylight Time
Total Physical Memory 65,529.08 MB
Available Physical Memory 3.27 GB
Total Virtual Memory 1.40 GB
Available Virtual Memory 1.28 GB
Page File Space 2.00 GB
Page File C:\pagefile.sys

[Hardware Resources]

[Conflicts/Sharing]

Resource Device
I/O Port 0x00000000-0x00000CF7 PCI bus
I/O Port 0x00000000-0x00000CF7 Direct memory access controller
Memory Address 0x64600000-0x656FFFFFF Intel(R) 6700PXH PCI Express-to-PCI Bridge A - 0329
Memory Address 0x64600000-0x656FFFFFF QLogic QLA23xx PCI Fibre Channel Adapter
Memory Address 0xFFC00000-0xFFDFFFFFF PCI bus
Memory Address 0xFFC00000-0xFFDFFFFFF Intel(R) 82802 Firmware Hub Device
Memory Address 0x64000000-0x640FFFFFF PCI standard PCI-to-PCI bridge
Memory Address 0x64000000-0x640FFFFFF Intel(R) 80332 PCI Express-to-PCI Bridge A - 0330
Memory Address 0x64000000-0x640FFFFFF MegaRAID PCI Express(TM) ROMB
I/O Port 0x00003000-0x00003FFF PCI standard PCI-to-PCI bridge
I/O Port 0x00003000-0x00003FFF Intel(R) 80332 PCI Express-to-PCI Bridge B - 0332
I/O Port 0x00003000-0x00003FFF QLogic QLA23xx PCI Fibre Channel Adapter
Memory Address 0x64300000-0x643FFFFFF Intel(R) 80332 PCI Express-to-PCI Bridge A - 0330
Memory Address 0x64300000-0x643FFFFFF MegaRAID PCI Express(TM) ROMB
IRQ 16 Intel(R) 82801EB USB Universal Host Controller - 24D2
IRQ 16 RADEON 7000 RADEON VE Family (Microsoft Corporation)
Memory Address 0x64200000-0x644FFFFFF PCI standard PCI-to-PCI bridge
Memory Address 0x64200000-0x644FFFFFF Intel(R) 80332 PCI Express-to-PCI Bridge B - 0332
Memory Address 0x64200000-0x644FFFFFF QLogic QLA23xx PCI Fibre Channel Adapter
Memory Address 0x50000000-0xFDFFFFFF PCI bus
Memory Address 0x50000000-0xFDFFFFFF RADEON 7000 RADEON VE Family (Microsoft Corporation)

Memory Address 0xA0000-0xBFFFF PCI bus	0x00003000-0x00003FFF	QLogic QLA23xx PCI Fibre Channel Adapter	OK
Memory Address 0xA0000-0xBFFFF RADEON 7000 RADEON VE Family (Microsoft Corporation)	0x00003400-0x000034FF	QLogic QLA23xx PCI Fibre Channel Adapter	OK
Memory Address 0x60000000-0x63FFFFFF PCI standard PCI-to-PCI bridge	0x00003C00-0x00003CFF	QLogic QLA23xx PCI Fibre Channel Adapter	OK
Memory Address 0x60000000-0x63FFFFFF Intel(R) 6700PXH PCI Express-to-PCI Bridge A - 0329	0x0000A060-0x0000A07F	Intel(R) 82801EB USB Universal Host Controller - 24D2	OK
Memory Address 0x64500000-0x667FFFFFF PCI standard PCI-to-PCI bridge	0x0000A040-0x0000A05F	Intel(R) 82801EB USB Universal Host Controller - 24D4	OK
Memory Address 0x64500000-0x667FFFFFF Intel(R) 6700PXH PCI Express-to-PCI Bridge B - 032A	0x0000A020-0x0000A03F	Intel(R) 82801EB USB Universal Host Controller - 24D7	OK
Memory Address 0x64500000-0x667FFFFFF Broadcom NetXtreme Gigabit Ethernet	0x00002000-0x000020FF	RADEON 7000 RADEON VE Family (Microsoft Corporation)	OK
I/O Port 0x00004000-0x00005FFF PCI standard PCI-to-PCI bridge	0x000003B0-0x000003BB	RADEON 7000 RADEON VE Family (Microsoft Corporation)	OK
I/O Port 0x00004000-0x00005FFF Intel(R) 6700PXH PCI Express-to-PCI Bridge A - 0329	0x000003C0-0x000003DF	RADEON 7000 RADEON VE Family (Microsoft Corporation)	OK
I/O Port 0x00004000-0x00005FFF QLogic QLA23xx PCI Fibre Channel Adapter	0x00000A79-0x00000A79	ISAPNP Read Data Port	OK
Memory Address 0xFFE00000-0xFFFFFFFF PCI bus	0x00000279-0x00000279	ISAPNP Read Data Port	OK
Memory Address 0xFFE00000-0xFFFFFFFF Intel(R) 82802 Firmware Hub Device	0x00000274-0x00000277	ISAPNP Read Data Port	OK
[DMA]	0x00000080-0x00000091	Direct memory access controller	OK
Resource Device Status	0x00000093-0x0000009F	Direct memory access controller	OK
Channel 4 Direct memory access controller OK	0x000000C0-0x000000DF	Direct memory access controller	OK
[Forced Hardware]	0x00000070-0x00000077	System CMOS/real time clock	OK
Device PNP Device ID	0x00000020-0x0000003D	Programmable interrupt controller	OK
[I/O]	0x000000A0-0x000000BD	Programmable interrupt controller	OK
Resource Device Status	0x000004D0-0x000004D1	Programmable interrupt controller	OK
0x00000000-0x00000CF7 PCI bus OK	0x000000F0-0x000000F0	Numeric data processor	OK
0x00000000-0x00000CF7 Direct memory access controller OK	0x00000040-0x00000043	System timer	OK
0x00000D00-0x0000FFFF PCI bus OK	0x00000050-0x00000053	System timer	OK
0x00009000-0x00009FFF PCI standard PCI-to-PCI bridge OK	0x00000061-0x00000061	System speaker	OK
0x00008000-0x00008FFF PCI standard PCI-to-PCI bridge OK	0x00000400-0x000004BF	Motherboard resources	OK
0x00007000-0x00007FFF PCI standard PCI-to-PCI bridge OK	0x00000092-0x00000092	Motherboard resources	OK
0x00006000-0x00006FFF PCI standard PCI-to-PCI bridge OK	0x00000800-0x0000087F	Motherboard resources	OK
0x00004000-0x00005FFF PCI standard PCI-to-PCI bridge OK	0x000003F0-0x000003F5	Motherboard resources	OK
0x00004000-0x00005FFF Intel(R) 6700PXH PCI Express-to-PCI Bridge A - 0329 OK	0x000003F7-0x000003F7	Motherboard resources	OK
0x00004000-0x00005FFF QLogic QLA23xx PCI Fibre Channel Adapter OK	0x00000880-0x00000883	Motherboard resources	OK
0x00004C00-0x00004CFF QLogic QLA23xx PCI Fibre Channel Adapter OK	0x00000CA2-0x00000CA3	Motherboard resources	OK
0x00003000-0x00003FFF PCI standard PCI-to-PCI bridge OK	0x00000CA4-0x00000CA5	Motherboard resources	OK
0x00003000-0x00003FFF Intel(R) 80332 PCI Express-to-PCI Bridge B - 0332 OK	0x00000060-0x00000060	Motherboard resources	OK
	0x00000064-0x00000064	Motherboard resources	OK
	0x00000CA6-0x00000CA6	Microsoft ACPI-Compliant Embedded Controller	OK
	0x00000CA7-0x00000CA7	Microsoft ACPI-Compliant Embedded Controller	OK
	0x0000A080-0x0000A08F	Intel(R) 82801EB Ultra ATA Storage Controllers	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
	0x0000A000-0x0000A01F	Intel(R) 82801EB SMBus Controller - 24D3	OK


```

[IRQs]
Resource Device Status
IRQ 9 Microsoft ACPI-Compliant System OK
IRQ 47 Intel(R) 6700PXH PCI Express-to-PCI Bridge A - 0329 OK
IRQ 24 QLogic QLA23xx PCI Fibre Channel Adapter OK
IRQ 25 QLogic QLA23xx PCI Fibre Channel Adapter OK
IRQ 48 Broadcom NetXtreme Gigabit Ethernet OK
IRQ 49 Broadcom NetXtreme Gigabit Ethernet #2 OK
IRQ 86 MegaRAID PCI Express(TM) ROMB OK
IRQ 100 QLogic QLA23xx PCI Fibre Channel Adapter OK
IRQ 101 QLogic QLA23xx PCI Fibre Channel Adapter OK
IRQ 102 QLogic QLA23xx PCI Fibre Channel Adapter OK
IRQ 16 Intel(R) 82801EB USB Universal Host Controller - 24D2 OK

IRQ 16 RADEON 7000 RADEON VE Family (Microsoft Corporation) OK
IRQ 19 Intel(R) 82801EB USB Universal Host Controller - 24D4 OK

IRQ 18 Intel(R) 82801EB USB Universal Host Controller - 24D7 OK

IRQ 23 Intel(R) 82801EB USB2 Enhanced Host Controller - 24DD OK

IRQ 8 System CMOS/real time clock OK
IRQ 13 Numeric data processor OK
IRQ 0 System timer OK
IRQ 14 Primary IDE Channel OK
IRQ 15 Secondary IDE Channel OK
IRQ 10 Intel(R) 82801EB SMBus Controller - 24D3 OK

[Memory]
Resource Device Status
0xA0000-0xBFFFF PCI bus OK
0xA0000-0xBFFFF RADEON 7000 RADEON VE Family (Microsoft Corporation) OK

0x40000000-0x4FFFFFFF PCI bus OK
0x50000000-0xFDFFFFFFFF PCI bus OK
0x50000000-0xFDFFFFFFFF RADEON 7000 RADEON VE Family (Microsoft Corporation) OK
0xFEC00000-0xFECEFFFFFF PCI bus OK
0xFED00000-0xFEDFFFFFFF PCI bus OK
0xFFC00000-0xFFDFFFFFFF PCI bus OK
0xFFC00000-0xFFDFFFFFFF Intel(R) 82802 Firmware Hub Device OK
0xFFE00000-0xFFFFFFFF PCI bus OK
0xFFE00000-0xFFFFFFFF Intel(R) 82802 Firmware Hub Device OK
0x69800000-0x6A7FFFFFFF PCI standard PCI-to-PCI bridge OK
0x58000000-0x59FFFFFFF PCI standard PCI-to-PCI bridge OK
0x68800000-0x697FFFFFFF PCI standard PCI-to-PCI bridge OK
0x5A000000-0x5BFFFFFFF PCI standard PCI-to-PCI bridge OK
0x67800000-0x687FFFFFFF PCI standard PCI-to-PCI bridge OK
0x5C000000-0x5DFFFFFFF PCI standard PCI-to-PCI bridge OK
0x66800000-0x677FFFFFFF PCI standard PCI-to-PCI bridge OK
0x5E000000-0x5FFFFFFF PCI standard PCI-to-PCI bridge OK
0x64500000-0x667FFFFFFF PCI standard PCI-to-PCI bridge OK

0x64500000-0x667FFFFFFF Intel(R) 6700PXH PCI Express-to-PCI Bridge B - 032A OK
0x64500000-0x667FFFFFFF Broadcom NetXtreme Gigabit Ethernet OK
0x60000000-0x63FFFFFFF PCI standard PCI-to-PCI bridge OK
0x60000000-0x63FFFFFFF Intel(R) 6700PXH PCI Express-to-PCI Bridge A - 0329 OK
0x65700000-0x65700FFF Intel(R) 6700PXH PCI Express-to-PCI Bridge A - 0329 OK
0x64600000-0x656FFFFFFF Intel(R) 6700PXH PCI Express-to-PCI Bridge A - 0329 OK
0x64600000-0x656FFFFFFF QLogic QLA23xx PCI Fibre Channel Adapter OK
0x64601000-0x64601FFF QLogic QLA23xx PCI Fibre Channel Adapter OK

0x64510000-0x6451FFFF Broadcom NetXtreme Gigabit Ethernet #2 OK

0x64200000-0x644FFFFFFF PCI standard PCI-to-PCI bridge OK
0x64200000-0x644FFFFFFF Intel(R) 80332 PCI Express-to-PCI Bridge B - 0332 OK
0x64200000-0x644FFFFFFF QLogic QLA23xx PCI Fibre Channel Adapter OK

0x64000000-0x640FFFFFFF PCI standard PCI-to-PCI bridge OK
0x64000000-0x640FFFFFFF Intel(R) 80332 PCI Express-to-PCI Bridge A - 0330 OK
0x64000000-0x640FFFFFFF MegaRAID PCI Express(TM) ROMB OK
0x64300000-0x643FFFFFFF Intel(R) 80332 PCI Express-to-PCI Bridge A - 0330 OK
0x64300000-0x643FFFFFFF MegaRAID PCI Express(TM) ROMB OK
0x64201000-0x64201FFF QLogic QLA23xx PCI Fibre Channel Adapter OK

0x64202000-0x64202FFF QLogic QLA23xx PCI Fibre Channel Adapter OK

0x6A800000-0x6A8003FF Intel(R) 82801EB USB2 Enhanced Host Controller - 24DD OK
0x64100000-0x6410FFFF RADEON 7000 RADEON VE Family (Microsoft Corporation) OK

[Components]

[Multimedia]

[Audio Codecs]
CODECManufacturer Description Status File Version Size
Creation Date
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 1:00 PM
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 1:00 PM

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c:\windows\system32\tsssoft32.acm      DSP GROUP, INC.      OK
C:\WINDOWS\system32\TSSOFT32.ACM      1.01 9.50 KB (9,728 bytes)
3/25/2003 1:00 PM
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 1:00 PM
c:\windows\system32\msg723.acm Microsoft Corporation      OK
C:\WINDOWS\system32\MSG723.ACM 5.2.3790.1830 120.00 KB (122,880
bytes) 4/1/2005 2:48 PM
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 1:00 PM
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 1:00 PM
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 1:00 PM
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 1:00 PM

```

[Video Codecs]

CODEC	Manufacturer	Description	Status	File Version	Size	Creation Date
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)		4/1/2005 2:49 PM
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)		3/25/2003 2:50 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)		3/25/2003 2:49 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 1:00 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 1:00 PM
c:\windows\system32\msh263.drv	Microsoft Corporation		OK			
		C:\WINDOWS\system32\MSH263.DRV		5.2.3790.1830		
				288.00 KB (294,912 bytes)		4/1/2005 2:48 PM
c:\windows\system32\msh261.drv	Microsoft Corporation		OK			
		C:\WINDOWS\system32\MSH261.DRV		5.2.3790.1830		
				184.00 KB (188,416 bytes)		4/1/2005 2:48 PM

[CD-ROM]

```

Item Value
DriveD:
Description      CD-ROM Drive

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```

Media Loaded      No
Media Type        CD-ROM
Name              TEAC DW-224E-A
Manufacturer      (Standard CD-ROM drives)
Status            OK
Transfer Rate     Not Available
SCSI Target ID   0
PNP Device ID     IDE\CDROMTEAC_DW-224E-
A_____1.4A____\5&2C3BA4B8&0&0.0.0
Driver            c:\windows\system32\drivers\cdrom.sys (5.2.3790.1830
(srv03_sp1_rtm.050324-1447), 51.00 KB (52,224 bytes), 3/25/2003 1:00
PM)

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[Sound Device]

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Item Value
[Display]
Item Value
Name RADEON 7000 RADEON VE Family (Microsoft Corporation)
PNP Device ID
PCI\VEN_1002&DEV_5159&SUBSYS_10671734&REV_00\4&1FE6A6B6&0&00F0
Adapter Type      Radeon 7000 (QY), ATI Technologies Inc. compatible
Adapter Description RADEON 7000 RADEON VE Family (Microsoft
Corporation)
Adapter RAM       16.00 MB (16,777,216 bytes)
Installed Drivers ati2dvag.dll
Driver Version    5.1.2600.0
INF File          atiixpag.inf (ati2mtag_RV100 section)
Color Planes     1
Color Table Entries 4294967296
Resolution 800 x 600 x 75 hertz
Bits/Pixel 32
Memory Address   0x50000000-0xFDFFFFFF
I/O Port        0x00002000-0x000020FF
Memory Address   0x64100000-0x6410FFFF
IRQ Channel      IRQ 16
I/O Port        0x000003B0-0x000003BB
I/O Port        0x000003C0-0x000003DF
Memory Address   0xA0000-0xBFFFF
Driver           c:\windows\system32\drivers\ati2mtag.sys (6.13.10.6153,
439.63 KB (450,176 bytes), 11/30/2004 3:59 PM)

```

[Infrared]

Item Value

[Input]

[Keyboard]

Item Value

Description USB Human Interface Device
Name Enhanced (101- or 102-key)
Layout 00000409
PNP Device ID USB\VID_0BF8&PID_1004&MI_00\6&2556823D&0&0000
Number of Function Keys 12
Driver c:\windows\system32\drivers\hidusb.sys (5.2.3790.0
(srv03_rtm.030324-2048), 11.50 KB (11,776 bytes), 3/25/2003 1:00 PM)

[Pointing Device]

Item Value
Hardware Type Logitech USB Wheel Mouse
Number of Buttons 3
Status OK
PNP Device ID USB\VID_046D&PID_C00E\5&609CA02&0&2
Power Management SupportedNo
Double Click Threshold 6
Handedness Right Handed Operation
Driver c:\windows\system32\drivers\hidusb.sys (5.2.3790.0
(srv03_rtm.030324-2048), 11.50 KB (11,776 bytes), 3/25/2003 1:00 PM)

[Modem]

Item Value

[Network]

[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 10/21/2005 9:33 AM
Index1
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 10/21/2005 9:33 AM

Index2
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_spl_rtm.050324-1447), 66.00 KB (67,584 bytes), 3/25/2003 1:00 PM)

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 10/21/2005 9:33 AM

Index3
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_spl_rtm.050324-1447), 61.00 KB (62,464 bytes), 3/25/2003 1:00 PM)

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 10/21/2005 9:33 AM

Index4
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\rasppoe.sys (5.2.3790.1830
(srv03_spl_rtm.050324-1447), 40.00 KB (40,960 bytes), 3/25/2003 1:00 PM)

Name [00000005] Direct Parallel

Adapter Type Not Available
Product Type Direct Parallel
Installed Yes
PNP Device ID ROOT\MS_PTMINIPORT\0000
Last Reset 10/21/2005 9:33 AM
Index5
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_spl_rtm.050324-1447), 19.50 KB (19,968 bytes), 3/25/2003 1:00
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 10/21/2005 9:33 AM
Index6
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_spl_rtm.050324-1447), 91.00 KB (93,184 bytes), 3/25/2003 1:00
PM)

Name [00000007] Broadcom NetXtreme Gigabit Ethernet
Adapter Type Ethernet 802.3
Product Type Broadcom NetXtreme Gigabit Ethernet
Installed Yes
PNP Device ID
PCI\VEN_14E4&DEV_1648&SUBSYS_10671734&REV_10\5&188E7AD5&0&100230

Last Reset 10/21/2005 9:33 AM
Index7
Service Name b57w2k
IP Address 129.103.181.65
IP Subnet 255.255.255.0
Default IP Gateway Not Available
DHCP Enabled No
DHCP Server Not Available
DHCP Lease Expires Not Available

DHCP Lease Obtained Not Available
MAC Address 00:0E:0C:42:A7:3C
Memory Address 0x64500000-0x667FFFFF
IRQ Channel IRQ 48
Driver c:\windows\system32\drivers\b57xp32.sys (8.22.1.0 built by:
WinDDK, 129.50 KB (132,608 bytes), 11/30/2004 9:03 AM)

Name [00000008] Broadcom NetXtreme Gigabit Ethernet
Adapter Type Ethernet 802.3
Product Type Broadcom NetXtreme Gigabit Ethernet
Installed Yes
PNP Device ID
PCI\VEN_14E4&DEV_1648&SUBSYS_10671734&REV_10\5&188E7AD5&0&110230

Last Reset 10/21/2005 9:33 AM
Index8
Service Name b57w2k
IP Address 129.103.191.65
IP Subnet 255.255.255.0
Default IP Gateway Not Available
DHCP Enabled No
DHCP Server Not Available
DHCP Lease Expires Not Available
DHCP Lease Obtained Not Available
MAC Address 00:0E:0C:42:A7:3D
Memory Address 0x64510000-0x6451FFFF
IRQ Channel IRQ 49
Driver c:\windows\system32\drivers\b57xp32.sys (8.22.1.0 built by:
WinDDK, 129.50 KB (132,608 bytes), 11/30/2004 9:03 AM)

[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
Supports Encryption Yes
Supports Expedited Data Yes
Supports Graceful Closing Yes
Supports Guaranteed Bandwidth No
Supports Multicasting No

Name MSAFD NetBIOS [\Device\NetBT_Tcpip_{9A78CFDE-C74C-4B80-ACAD-7AFA289CBB5F}] 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_{9A78CFDE-C74C-4B80-ACAD-7AFA289CBB5F}] 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_{AA7C6D0D-B47D-4C62-BCC9-8067707C6CA2}] 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_{AA7C6D0D-B47D-4C62-BCC9-8067707C6CA2}] 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_{FB54469B-47B4-4E34-A8D4-895E0DCE54B5}] 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_{FB54469B-47B4-4E34-A8D4-895E0DCE54B5}] 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_{4A0F88D8-29F3-4F60-A5E2-B907FBF4BC26}] 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_{4A0F88D8-29F3-4F60-A5E2-B907FBF4BC26}] 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
 [Parallel]
 Item Value
 [Storage]
 [Drives]
 Item Value
 DriveC:
 Description Local Fixed Disk
 Compressed No
 File System NTFS
 Size 34.24 GB (36,766,965,760 bytes)
 Free Space 26.11 GB (28,031,868,928 bytes)
 Volume Name
 Volume Serial Number 7057D314
 DriveD:
 Description CD-ROM Disc
 DriveE:
 Description Local Fixed Disk
 Compressed No
 File System NTFS
 Size 57.79 GB (62,051,479,552 bytes)
 Free Space 56.26 GB (60,409,147,392 bytes)
 Volume Name tmpdb
 Volume Serial Number 18CD6600
 DriveL:
 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
 DriveM:
 Description Local Fixed Disk
 Compressed No
 File System NTFS
 Size 469.11 GB (503,707,885,568 bytes)
 Free Space 243.58 GB (261,538,521,088 bytes)
 Volume Name backup1a
 Volume Serial Number 7453BFD8
 DriveN:
 Description Local Fixed Disk
 Compressed No

File System NTFS
 Size 469.11 GB (503,707,885,568 bytes)
 Free Space 243.58 GB (261,538,521,088 bytes)
 Volume Name backup2a
 Volume Serial Number B46330CF
 DriveO:
 Description Local Fixed Disk
 Compressed No
 File System NTFS
 Size 469.11 GB (503,707,885,568 bytes)
 Free Space 243.58 GB (261,538,521,088 bytes)
 Volume Name backup3a
 Volume Serial Number A476F19F
 DriveP:
 Description Local Fixed Disk
 Compressed No
 File System NTFS
 Size 469.11 GB (503,707,885,568 bytes)
 Free Space 243.58 GB (261,538,586,624 bytes)
 Volume Name backup4a
 Volume Serial Number 947FCF58
 DriveQ:
 Description Local Fixed Disk
 Compressed No
 File System NTFS
 Size 469.11 GB (503,707,885,568 bytes)
 Free Space 243.58 GB (261,538,586,624 bytes)
 Volume Name backup5a
 Volume Serial Number 7C899BA4
 DriveR:
 Description Local Fixed Disk
 Compressed No
 File System NTFS
 Size 469.11 GB (503,707,885,568 bytes)
 Free Space 243.58 GB (261,539,438,592 bytes)
 Volume Name backup1b
 Volume Serial Number 2891AC3A
 DriveS:
 Description Local Fixed Disk
 Compressed No
 File System NTFS
 Size 469.11 GB (503,707,885,568 bytes)
 Free Space 243.58 GB (261,539,504,128 bytes)
 Volume Name backup2b
 Volume Serial Number 6C9D5C71
 DriveT:
 Description Local Fixed Disk
 Compressed No
 File System NTFS

Size 469.11 GB (503,707,885,568 bytes)
Free Space 243.58 GB (261,539,504,128 bytes)
Volume Name backup3b
Volume Serial Number 60A5D5FB

DriveU:
Description Local Fixed Disk
Compressed No
File System NTFS
Size 469.11 GB (503,707,885,568 bytes)
Free Space 243.58 GB (261,539,504,128 bytes)
Volume Name backup4b
Volume Serial Number 68B386C2

DriveV:
Description Local Fixed Disk
Compressed No
File System NTFS
Size 469.11 GB (503,707,885,568 bytes)
Free Space 241.38 GB (259,178,790,912 bytes)
Volume Name backup5b
Volume Serial Number FCBB631E

[Disks]

Item Value
Description Disk drive
Manufacturer (Standard disk drives)
ModelDGC RAID 0 SCSI Disk Device
Bytes/Sector 512
Media Loaded Yes
Media Type Fixed hard disk
Partitions 3
SCSI Bus 0
SCSI Logical Unit 0
SCSI Port 2
SCSI Target ID 0
Sectors/Track 63
Size 600.00 GB (644,245,056,000 bytes)
Total Cylinders 78,325
Total Sectors 1,258,291,125
Total Tracks 19,972,875
Tracks/Cylinder 255
Partition Disk #0, Partition #0
Partition Size 599.98 GB (644,228,605,440 bytes)
Partition Starting Offset 8,225,280 bytes

Description Disk drive
Manufacturer (Standard disk drives)
ModelDGC RAID 0 SCSI Disk Device
Bytes/Sector 512
Media Loaded Yes
Media Type Fixed hard disk
Partitions 3
SCSI Bus 0

SCSI Logical Unit 0
SCSI Port 2
SCSI Target ID 1
Sectors/Track 63
Size 600.00 GB (644,245,056,000 bytes)
Total Cylinders 78,325
Total Sectors 1,258,291,125
Total Tracks 19,972,875
Tracks/Cylinder 255
Partition Disk #1, Partition #0
Partition Size 599.98 GB (644,228,605,440 bytes)
Partition Starting Offset 8,225,280 bytes

Description Disk drive
Manufacturer (Standard disk drives)
ModelDGC RAID 0 SCSI Disk Device
Bytes/Sector 512
Media Loaded Yes
Media Type Fixed hard disk
Partitions 3
SCSI Bus 0
SCSI Logical Unit 0
SCSI Port 3
SCSI Target ID 0
Sectors/Track 63
Size 600.00 GB (644,245,056,000 bytes)
Total Cylinders 78,325
Total Sectors 1,258,291,125
Total Tracks 19,972,875
Tracks/Cylinder 255
Partition Disk #2, Partition #0
Partition Size 599.98 GB (644,228,605,440 bytes)
Partition Starting Offset 8,225,280 bytes

Description Disk drive
Manufacturer (Standard disk drives)
ModelDGC RAID 0 SCSI Disk Device
Bytes/Sector 512
Media Loaded Yes
Media Type Fixed hard disk
Partitions 3
SCSI Bus 0
SCSI Logical Unit 0
SCSI Port 3
SCSI Target ID 1
Sectors/Track 63
Size 600.00 GB (644,245,056,000 bytes)
Total Cylinders 78,325
Total Sectors 1,258,291,125
Total Tracks 19,972,875
Tracks/Cylinder 255
Partition Disk #3, Partition #0
Partition Size 599.98 GB (644,228,605,440 bytes)
Partition Starting Offset 8,225,280 bytes

Description Disk drive
Manufacturer (Standard disk drives)
ModelDGC RAID 0 SCSI Disk Device
Bytes/Sector 512
Media Loaded Yes
Media Type Fixed hard disk
Partitions 3
SCSI Bus 0
SCSI Logical Unit 0
SCSI Port 6
SCSI Target ID 0
Sectors/Track 63
Size 600.00 GB (644,245,056,000 bytes)
Total Cylinders 78,325
Total Sectors 1,258,291,125
Total Tracks 19,972,875
Tracks/Cylinder 255
Partition Disk #8, Partition #0
Partition Size 599.98 GB (644,228,605,440 bytes)
Partition Starting Offset 8,225,280 bytes

Description Disk drive
Manufacturer (Standard disk drives)
ModelDGC RAID 0 SCSI Disk Device
Bytes/Sector 512
Media Loaded Yes
Media Type Fixed hard disk
Partitions 3
SCSI Bus 0
SCSI Logical Unit 0
SCSI Port 6
SCSI Target ID 1
Sectors/Track 63
Size 600.00 GB (644,245,056,000 bytes)
Total Cylinders 78,325
Total Sectors 1,258,291,125
Total Tracks 19,972,875
Tracks/Cylinder 255
Partition Disk #9, Partition #0
Partition Size 599.98 GB (644,228,605,440 bytes)
Partition Starting Offset 8,225,280 bytes

Description Disk drive
Manufacturer (Standard disk drives)
ModelDGC RAID 0 SCSI Disk Device
Bytes/Sector 512
Media Loaded Yes
Media Type Fixed hard disk
Partitions 3
SCSI Bus 0
SCSI Logical Unit 0
SCSI Port 4
SCSI Target ID 0
Sectors/Track 63
Size 600.00 GB (644,245,056,000 bytes)

Total Cylinders 78,325
Total Sectors 1,258,291,125
Total Tracks 19,972,875
Tracks/Cylinder 255
Partition Disk #4, Partition #0
Partition Size 599.98 GB (644,228,605,440 bytes)
Partition Starting Offset 8,225,280 bytes

Description Disk drive
Manufacturer (Standard disk drives)
ModelDGC RAID 0 SCSI Disk Device
Bytes/Sector 512
Media Loaded Yes
Media Type Fixed hard disk
Partitions 3
SCSI Bus 0
SCSI Logical Unit 0
SCSI Port 4
SCSI Target ID 1
Sectors/Track 63
Size 600.00 GB (644,245,056,000 bytes)
Total Cylinders 78,325
Total Sectors 1,258,291,125
Total Tracks 19,972,875
Tracks/Cylinder 255
Partition Disk #5, Partition #0
Partition Size 599.98 GB (644,228,605,440 bytes)
Partition Starting Offset 8,225,280 bytes

Description Disk drive
Manufacturer (Standard disk drives)
ModelDGC RAID 0 SCSI Disk Device
Bytes/Sector 512
Media Loaded Yes
Media Type Fixed hard disk
Partitions 3
SCSI Bus 0
SCSI Logical Unit 0
SCSI Port 5
SCSI Target ID 0
Sectors/Track 63
Size 600.00 GB (644,245,056,000 bytes)
Total Cylinders 78,325
Total Sectors 1,258,291,125
Total Tracks 19,972,875
Tracks/Cylinder 255
Partition Disk #6, Partition #0
Partition Size 599.98 GB (644,228,605,440 bytes)
Partition Starting Offset 8,225,280 bytes

Description Disk drive
Manufacturer (Standard disk drives)
ModelDGC RAID 0 SCSI Disk Device
Bytes/Sector 512
Media Loaded Yes

Media Type Fixed hard disk
Partitions 3
SCSI Bus 0
SCSI Logical Unit 0
SCSI Port 5
SCSI Target ID 1
Sectors/Track 63
Size 600.00 GB (644,245,056,000 bytes)
Total Cylinders 78,325
Total Sectors 1,258,291,125
Total Tracks 19,972,875
Tracks/Cylinder 255
Partition Disk #7, Partition #0
Partition Size 599.98 GB (644,228,605,440 bytes)
Partition Starting Offset 8,225,280 bytes

Description Disk drive
Manufacturer (Standard disk drives)
Model MEGARAID LD 0 MEGARAID SCSI Disk Device
Bytes/Sector 512
Media Loaded Yes
Media Type Fixed hard disk
Partitions 1
SCSI Bus 3
SCSI Logical Unit 0
SCSI Port 7
SCSI Target ID 0
Sectors/Track 63
Size 33.88 GB (36,380,413,440 bytes)
Total Cylinders 4,423
Total Sectors 71,055,495
Total Tracks 1,127,865
Tracks/Cylinder 255
Partition Disk #10, Partition #0
Partition Size 34.24 GB (36,766,969,344 bytes)
Partition Starting Offset 32,256 bytes

Description Disk drive
Manufacturer (Standard disk drives)
Model MEGARAID LD 1 MEGARAID SCSI Disk Device
Bytes/Sector 512
Media Loaded Yes
Media Type Fixed hard disk
Partitions 2
SCSI Bus 3
SCSI Logical Unit 0
SCSI Port 7
SCSI Target ID 1
Sectors/Track 63
Size 546.09 GB (586,355,535,360 bytes)
Total Cylinders 71,287
Total Sectors 1,145,225,655
Total Tracks 18,178,185
Tracks/Cylinder 255
Partition Disk #11, Partition #0

Partition Size 546.08 GB (586,347,310,080 bytes)
Partition Starting Offset 8,225,280 bytes

[SCSI]

Item Value
Name QLogic QLA23xx PCI Fibre Channel Adapter
Manufacturer QLogic
Status OK
PNP Device ID
PCI\VEN_1077&DEV_2312&SUBSYS_01011077&REV_02\5&392C329B&0&100030

I/O Port 0x00004C00-0x00004CFF
Memory Address 0x64600000-0x656FFFFFFF
IRQ Channel IRQ 24
Driver c:\windows\system32\drivers\ql2300.sys (8.2.3.11 (w32 VI),
456.92 KB (467,890 bytes), 4/1/2005 2:07 PM)

Name QLogic QLA23xx PCI Fibre Channel Adapter
Manufacturer QLogic
Status OK
PNP Device ID
PCI\VEN_1077&DEV_2312&SUBSYS_01011077&REV_02\5&392C329B&0&110030

I/O Port 0x00004000-0x00005FFF
Memory Address 0x64601000-0x64601FFF
IRQ Channel IRQ 25
Driver c:\windows\system32\drivers\ql2300.sys (8.2.3.11 (w32 VI),
456.92 KB (467,890 bytes), 4/1/2005 2:07 PM)

Name MegaRAID PCI Express(TM) ROMB
Manufacturer LSI Logic Corp.,
Status OK
PNP Device ID
PCI\VEN_1000&DEV_0408&SUBSYS_10651734&REV_07\5&203851D&0&700038

Memory Address 0x64000000-0x640FFFFFFF
Memory Address 0x64300000-0x643FFFFFFF
IRQ Channel IRQ 86
Driver c:\windows\system32\drivers\mraid35x.sys (6.45.2.32 built
by: WinDDK, 25.50 KB (26,112 bytes), 8/18/2005 11:26 AM)

Name QLogic QLA23xx PCI Fibre Channel Adapter
Manufacturer QLogic
Status OK
PNP Device ID
PCI\VEN_1077&DEV_2312&SUBSYS_01011077&REV_02\5&8AF1E42&0&300238

I/O Port 0x00003400-0x000034FF
Memory Address 0x64200000-0x644FFFFFFF
IRQ Channel IRQ 100
Driver c:\windows\system32\drivers\ql2300.sys (8.2.3.11 (w32 VI),
456.92 KB (467,890 bytes), 4/1/2005 2:07 PM)

Name QLogic QLA23xx PCI Fibre Channel Adapter

Manufacturer QLogic
Status OK
PNP Device ID
PCI\VEN_1077&DEV_2312&SUBSYS_01011077&REV_02\5&8AF1E42&0&310238

I/O Port 0x00003C00-0x00003CFF
Memory Address 0x64201000-0x64201FFF
IRQ Channel IRQ 101
Driver c:\windows\system32\drivers\ql2300.sys (8.2.3.11 (w32 VI),
456.92 KB (467,890 bytes), 4/1/2005 2:07 PM)

Name QLogic QLA23xx PCI Fibre Channel Adapter
Manufacturer QLogic
Status OK
PNP Device ID
PCI\VEN_1077&DEV_2312&SUBSYS_01001077&REV_02\5&8AF1E42&0&380238

I/O Port 0x00003000-0x00003FFF
Memory Address 0x64202000-0x64202FFF
IRQ Channel IRQ 102
Driver c:\windows\system32\drivers\ql2300.sys (8.2.3.11 (w32 VI),
456.92 KB (467,890 bytes), 4/1/2005 2:07 PM)

[IDE]

Item Value
Name Intel(R) 82801EB Ultra ATA Storage Controllers
Manufacturer Intel
Status OK
PNP Device ID
PCI\VEN_8086&DEV_24D1&SUBSYS_10671734&REV_02\3&1FCE7BBF&0&FA
I/O Port 0x0000A080-0x0000A08F
Driver c:\windows\system32\drivers\pciide.sys (5.2.3790.0
(srv03_rtm.030324-2048), 5.50 KB (5,632 bytes), 11/30/2004 8:56 AM)

Name Primary IDE Channel
Manufacturer (Standard IDE ATA/ATAPI controllers)
Status OK
PNP Device ID PCIIDE\IDECHANNEL\4&17334065&0&0
I/O Port 0x000001F0-0x000001F7
I/O Port 0x000003F6-0x000003F6
IRQ Channel IRQ 14
Driver c:\windows\system32\drivers\atapi.sys (5.2.3790.1830
(srv03_spl_rtm.050324-1447), 93.50 KB (95,744 bytes), 11/30/2004 8:56
AM)

Name Secondary IDE Channel
Manufacturer (Standard IDE ATA/ATAPI controllers)
Status OK
PNP Device ID PCIIDE\IDECHANNEL\4&17334065&0&1
I/O Port 0x00000170-0x00000177
I/O Port 0x00000376-0x00000376
IRQ Channel IRQ 15

Driver c:\windows\system32\drivers\atapi.sys (5.2.3790.1830
(srv03_spl_rtm.050324-1447), 93.50 KB (95,744 bytes), 11/30/2004 8:56
AM)

[Printing]

Name Driver Port Name Server Name

[Problem Devices]

Device PNP Device ID Error Code
Communications Port (COM1) ACPI\PNP0501\1 This device is disabled.
Communications Port (COM2) ACPI\PNP0501\2 This device is disabled.

[USB]

Device PNP Device ID
Intel(R) 82801EB USB Universal Host Controller - 24D2
PCI\VEN_8086&DEV_24D2&SUBSYS_10671734&REV_02\3&1FCE7BBF&0&E8
Intel(R) 82801EB USB Universal Host Controller - 24D4
PCI\VEN_8086&DEV_24D4&SUBSYS_10671734&REV_02\3&1FCE7BBF&0&E9
Intel(R) 82801EB USB Universal Host Controller - 24D7
PCI\VEN_8086&DEV_24D7&SUBSYS_10671734&REV_02\3&1FCE7BBF&0&EA
Intel(R) 82801EB USB2 Enhanced Host Controller - 24DD
PCI\VEN_8086&DEV_24DD&SUBSYS_10671734&REV_02\3&1FCE7BBF&0&EF

[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	Kernel Driver	Yes	Boot Running	OK Normal No Yes
acpiec	Microsoft Embedded Controller Driver	c:\windows\system32\drivers\acpiec.sys	Kernel Driver	Yes	Boot Running	OK Normal No Yes
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		
asynccmac	RAS Asynchronous Media Driver						
	c:\windows\system32\drivers\asynccmac.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		
ati2mtag	ati2mtag	c:\windows\system32\drivers\ati2mtag.sys		Kernel Driver			
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
b57w2k	Broadcom NetXtreme Gigabit Ethernet						
	c:\windows\system32\drivers\b57xp32.sys	Kernel Driver	Yes				
	Manual	Running	OK	Normal	No	Yes	
beep	Beep c:\windows\system32\drivers\beep.sys						
System	Running	OK	Normal	No	Yes		
cbidf2k	cbidf2k	c:\windows\system32\drivers\cbidf2k.sys		Kernel Driver			
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	Yes		
	Disabled	Running	OK	Normal	No	Yes	
cdrom	CD-ROM Driver	c:\windows\system32\drivers\cdrom.sys		Kernel Driver			
Driver	Yes	System	Running	OK	Normal	No	Yes
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		
cpqarray2	cpqarray2	Not Available	Kernel Driver	No	Disabled		
	Stopped	OK	Normal	No	No		
cpqcissm	cpqcissm	Not Available	Kernel Driver	No	Disabled		
	Stopped	OK	Normal	No	No		
cpqfcalm	cpqfcalm	Not Available	Kernel Driver	No	Disabled		
	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			
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			
Driver	Yes	Boot	Running	OK	Normal	No	Yes
dpti2o	dpti2o	Not Available	Kernel Driver	No	Disabled		
	Stopped	OK	Normal	No	No		
dspicifg	DsPciCfg	\\?\c:\windows\system32\drivers\dspicifg.sys		Kernel Driver	Yes	Auto	Running
	Kernel Driver	Yes	Auto	Running	OK	Normal	No
elxadjct	elxadjct	c:\windows\system32\drivers\elxadjct.sys		Kernel Driver			
Driver	No	Disabled	Stopped	OK	Normal	No	No
elxstor	elxstor	c:\windows\system32\drivers\elxstor.sys		Kernel Driver			
Driver	No	Disabled	Stopped	OK	Normal	No	No
em	em	\\?\c:\windows\system32\drivers\em.sys		Kernel Driver	No		
	Manual	Stopped	OK	Normal	No	No	
fastfat	Fastfat	c:\windows\system32\drivers\fastfat.sys		File System Driver			
	No	Disabled	Stopped	OK	Normal	No	No
fdc	Fdc	c:\windows\system32\drivers\fdc.sys		Kernel Driver			
	System	Stopped	OK	Ignore	No	No	
fips	Fips	c:\windows\system32\drivers\fips.sys		Kernel Driver	Yes		
	System	Running	OK	Normal	No	Yes	
flpydisk	Flpydisk	c:\windows\system32\drivers\flpydisk.sys		Kernel Driver			
Driver	No	System	Stopped	OK	Ignore	No	No
fltmgr	FltMgr	c:\windows\system32\drivers\fltmgr.sys		File System Driver	Yes	Boot	Running
	System Driver	Yes	Boot	Running	OK	Normal	No
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
hidusb	Microsoft HID Class Driver						
	c:\windows\system32\drivers\hidusb.sys	Kernel Driver	Yes				
	Manual	Running	OK	Ignore	No	Yes	
hpn	hpn	Not Available	Kernel Driver	No	Disabled	Stopped	OK
	Normal	No	No				
hpt3xx	hpt3xx	Not Available	Kernel Driver	No	Disabled		
	Stopped	OK	Normal	No	No		
http	HTTP c:\windows\system32\drivers\http.sys						
	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				
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	Yes	System	Running	OK	Normal	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	Yes	Manual	Running	OK	Normal	No	Yes		
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	Stopped	OK	Normal	No	No	Disabled		
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		
kbdhid	Keyboard HID Driver	c:\windows\system32\drivers\kbdhid.sys	Kernel Driver	Yes	System	Running	OK	Ignore	No	Yes		
ksecdd	KSecDD	c:\windows\system32\drivers\ksecdd.sys	Kernel Driver	Yes	Boot	Running	OK	Normal	No	Yes		
lp6nds35	lp6nds35	c:\windows\system32\drivers\lp6nds35.sys	Kernel Driver	Yes	Boot	Running	OK	Normal	No	Yes		
mmmd	mmmd	c:\windows\system32\drivers\mmdd.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		
mouhid	Mouse HID Driver	c:\windows\system32\drivers\mouhid.sys	Kernel Driver	Yes	Manual	Running	OK	Ignore	No	Yes		
mountmgr	Mount Point Manager	c:\windows\system32\drivers\mountmgr.sys	Kernel Driver	Yes	Boot	Running	OK	Normal	No	Yes		
mraid35x	mraid35x	c:\windows\system32\drivers\mraid35x.sys	Kernel Driver	Yes	Boot	Running	OK	Normal	No	Yes		
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		
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	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	No		
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	Stopped	OK	Normal	No	No	Disabled		
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	Stopped	OK	Ignore	No	No	Manual		
pdframe	PDFRAME	Not Available	Kernel Driver	No	Stopped	OK	Ignore	No	No	Manual		
pdreli	PDRELI	Not Available	Kernel Driver	No	Stopped	OK	Ignore	No	No	Manual		
pdrframe	PDRFRAME	Not Available	Kernel Driver	No	Stopped	OK	Ignore	No	No	Manual		

perc2perc2	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\rasppptp.sys	Kernel Driver	Yes						
	Manual	Running	OK	Normal	No	Yes			
processor	Processor Driver								
	c:\windows\system32\drivers\processr.sys	Kernel Driver	No						
	Manual	Stopped	OK	Normal	No	No			
ptilink	Direct Parallel Link Driver								
	c:\windows\system32\drivers\ptilink.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 STOR 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					
	Driver	Yes	Auto	Running	OK	Normal	No	Yes	
qlvika	qlvika	c:\windows\system32\drivers\qlvika.sys		Kernel Driver					
	Driver	No	Disabled	Stopped	OK	Normal	No	No	
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	RDP CDD								
	c:\windows\system32\drivers\rdpcdd.sys	Kernel Driver							
	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	No						
	Manual	Stopped	OK	Ignore	No	No			
redbook	Digital CD Audio Playback Filter Driver								
	c:\windows\system32\drivers\redbook.sys	Kernel Driver	Yes						
	System	Running	OK	Normal	No	Yes			
secdrv	Secdrv								
	c:\windows\system32\drivers\secdrv.sys	Kernel Driver							
	Driver	No	Manual	Stopped	OK	Normal	No	No	
serenum	Serenum Filter Driver								
	c:\windows\system32\drivers\serenum.sys	Kernel Driver	No						
	Manual	Stopped	OK	Normal	No	No			
serial	Serial port driver								
	c:\windows\system32\drivers\serial.sys	Kernel Driver	No	Manual	Stopped	OK	Ignore	No	No
sfloppy	Sfloppy								
	c:\windows\system32\drivers\sfloppy.sys	Kernel Driver							
	Driver	No	System	Stopped	OK	Ignore	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			
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								
	c:\windows\system32\drivers\symmpi.sys	Kernel Driver							
	Driver	Yes	Boot	Running	OK	Normal	No	Yes	
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				
sysdrv	Sysdrv								
	c:\windows\system32\drivers\sysdrv.sys	Kernel Driver							
	Driver	Yes	Auto	Running	OK	Normal	No	Yes	
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							
	Driver	No	Manual	Stopped	OK	Ignore	No	No	
tdtcp	TDTCP								
	c:\windows\system32\drivers\tdtcp.sys	Kernel Driver	No						
	Manual	Stopped	OK	Ignore	No	No			
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			

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usbccgp Microsoft USB Generic Parent Driver
c:\windows\system32\drivers\usbccgp.sys Kernel Driver Yes
Manual Running OK Normal No Yes
usbhci Microsoft USB 2.0 Enhanced Host Controller Miniport Driver
c:\windows\system32\drivers\usbhci.sys Kernel Driver Yes
Manual Running OK Normal No Yes
usbhub Microsoft USB Standard Hub Driver
c:\windows\system32\drivers\usbhub.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 Yes
Manual Running OK Normal No Yes
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 WDCANot 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

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[Signed Drivers]

Device Name	Signed	Device Class	Driver Version	Driver Date
Microsoft System Management BIOS Driver	Yes	SYSTEM	5.2.3790.1830	10/1/2002
Microcode Update Device	No	SYSTEM	5.2.3790.0	10/1/2002
Plug and Play Software Device Enumerator	No	SYSTEM	5.2.3790.0	10/1/2002
Terminal Server Mouse Driver	No	SYSTEM	5.2.3790.0	10/1/2002
Terminal Server Keyboard Driver	No	SYSTEM	5.2.3790.0	10/1/2002
Terminal Server Device Redirector	No	SYSTEM	5.2.3790.0	10/1/2002
Direct Parallel	No	NET	5.2.3790.0	10/1/2002

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WAN Miniport (PPTP) No NET 5.2.3790.0 10/1/2002 Microsoft
netrasa.inf Not Available ROOT\MS_PPTPMINIPOINT\0000
WAN Miniport (PPPOE) No NET 5.2.3790.0 10/1/2002 Microsoft
netrasa.inf Not Available ROOT\MS_PPPOEMINIPOINT\0000
WAN Miniport (IP) No NET 5.2.3790.0 10/1/2002 Microsoft
netrasa.inf Not Available ROOT\MS_NDISWANIP\0000
WAN Miniport (L2TP) No NET 5.2.3790.0 10/1/2002 Microsoft
netrasa.inf Not Available ROOT\MS_L2TPMINIPOINT\0000
Video Codecs No MEDIA5.2.3790.0 10/1/2002 (Standard system
devices) wave.inf Not Available ROOT\MEDIA\MS_MMVID
Legacy Video Capture Devices No MEDIA5.2.3790.0 10/1/2002
(Standard system devices) wave.inf Not Available
ROOT\MEDIA\MS_MMVCD
Media Control Devices No MEDIA5.2.3790.0 10/1/2002 (Standard
system devices) wave.inf Not Available ROOT\MEDIA\MS_MMMCI
Legacy Audio Drivers No MEDIA5.2.3790.0 10/1/2002 (Standard system
devices) wave.inf Not Available ROOT\MEDIA\MS_MMDRV
Audio Codecs No MEDIA5.2.3790.0 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
ROOT\LEGACY_WANARP\0000
volsnap Not Available LEGACYDRIVER Not Available Not Available
ROOT\LEGACY_VOLSNAP\0000
VGA Display Controller. Not Available LEGACYDRIVER Not Available
Not Available Not Available Not Available
ROOT\LEGACY_VGASAVE\0000
TCP/IP Protocol Driver Not Available LEGACYDRIVER Not Available
Not Available Not Available Not Available
ROOT\LEGACY_TCPIP\0000
Sysdrv Not Available LEGACYDRIVER Not Available Not Available
Not Available Not Available Not Available
ROOT\LEGACY_SYSDRV\0000
symmpi Not Available LEGACYDRIVER Not Available Not Available
Not Available Not Available Not Available
ROOT\LEGACY_SYMMPI\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
ROOT\LEGACY_RASACD\0000
qlldirect 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
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
ROOT\LEGACY_NETBT\0000

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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
 Available Not Available Not Available Not Available Not Available
 ROOT\LEGACY_NDISTAPI\0000

NDIS System Driver Not Available LEGACYDRIVER Not Available Not Available
 Available Not Available Not Available Not Available
 ROOT\LEGACY_NDIS\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
 Available Not Available Not Available Not Available
 ROOT\LEGACY_MNMDD\0000

lp6nds35 Not Available LEGACYDRIVER Not Available Not Available
 Not Available Not Available Not Available
 ROOT\LEGACY_LP6NDS35\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
 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

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
 Available Not Available Not Available Not Available
 ROOT\LEGACY_FIPS\0000

em Not Available LEGACYDRIVER Not Available Not Available Not Available
 Available Not Available Not Available Not Available
 ROOT\LEGACY_EM\0000

DsPciCfg Not Available LEGACYDRIVER Not Available Not Available
 Not Available Not Available Not Available
 ROOT\LEGACY_DSPCICFG\0000

dmload Not Available LEGACYDRIVER Not Available 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

BEEP Not Available LEGACYDRIVER Not Available Not Available Not Available
 Available Not Available Not Available Not Available
 ROOT\LEGACY_BEEP\0000

AFD Networking Support Environment Not Available LEGACYDRIVER Not Available
 Available Not Available Not Available Not Available
 ROOT\LEGACY_AFD\0000

Generic volume No VOLUME 5.2.3790.1830 10/1/2002 Microsoft
 volume.inf Not Available

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 THBB86B5200

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 volume.inf Not Available
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 FF432A00

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 volume.inf Not Available
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 TH7547547000

Generic volume No VOLUME 5.2.3790.1830 10/1/2002 Microsoft
 volume.inf Not Available
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 THBB86B5200

Generic volume No VOLUME 5.2.3790.1830 10/1/2002 Microsoft
 volume.inf Not Available
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Generic volume No VOLUME 5.2.3790.1830 10/1/2002 Microsoft
 volume.inf Not Available
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Generic volume No VOLUME 5.2.3790.1830 10/1/2002 Microsoft
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 volume.inf Not Available
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 TH7547547000

Generic volume No VOLUME 5.2.3790.1830 10/1/2002 Microsoft
 volume.inf Not Available
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Generic volume No VOLUME 5.2.3790.1830 10/1/2002 Microsoft
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Generic volume No VOLUME 5.2.3790.1830 10/1/2002 Microsoft
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Generic volume No VOLUME 5.2.3790.1830 10/1/2002 Microsoft
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Generic volume No VOLUME 5.2.3790.1830 10/1/2002 Microsoft
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 THBB86B5200

Generic volume No VOLUME 5.2.3790.1830 10/1/2002 Microsoft
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Generic volume No VOLUME 5.2.3790.1830 10/1/2002 Microsoft
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 12767E00

Generic volume No VOLUME 5.2.3790.1830 10/1/2002 Microsoft
 volume.inf Not Available
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 B6E00

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Generic volume No VOLUME 5.2.3790.1830 10/1/2002 Microsoft
 volume.inf Not Available
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Generic volume No VOLUME 5.2.3790.1830 10/1/2002 Microsoft
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Generic volume No VOLUME 5.2.3790.1830 10/1/2002 Microsoft
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Generic volume No VOLUME 5.2.3790.1830 10/1/2002 Microsoft
 volume.inf Not Available

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Generic volume No VOLUME 5.2.3790.1830 10/1/2002 Microsoft
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Generic volume No VOLUME 5.2.3790.1830 10/1/2002 Microsoft
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Generic volume No VOLUME 5.2.3790.1830 10/1/2002 Microsoft
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Generic volume No VOLUME 5.2.3790.1830 10/1/2002 Microsoft
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 THBB86B5200

Generic volume No VOLUME 5.2.3790.1830 10/1/2002 Microsoft
 volume.inf Not Available
 STORAGE\VOLUME\1&30A96598&0&SIGNATURE5A1E5DC9OFFSET7E0000LENGTH14
 FF432A00

Volume Manager No SYSTEM 5.2.3790.0 10/1/2002 (Standard system
 devices) machine.inf Not Available ROOT\FTDISK\0000

Logical Disk Manager No SYSTEM 5.2.3790.0 10/1/2002 (Standard
 system devices) machine.inf Not Available ROOT\DMIO\0000

ACPI Fixed Feature Button No SYSTEM 5.2.3790.0 10/1/2002
 (Standard system devices) machine.inf Not Available
 ACPI\FIXEDBUTTON\2&DABA3FF&0

Intel(R) 82801EB SMBus Controller - 24D3 No SYSTEM 6.1.0.1008
 6/9/2004 Intelich5core.inf Not Available
 PCI\VEN_8086&DEV_24D3&SUBSYS_10671734&REV_02\3&1FCE7BBF&0&FB

Secondary IDE Channel No HDC 5.2.3790.0 10/1/2002 (Standard IDE
 ATA/ATAPI controllers) mshdc.inf Not Available
 PCIIDE\IDECHANNEL\4&17334065&0&1

CD-ROM Drive No CDROM 5.2.3790.0 10/1/2002 (Standard CD-ROM drives)
 cdrom.inf Not Available IDE\CDROMTEAC_DW-224E-
 A_____1.4A____\5&2C3BA4B8&0&0.0.0

Primary IDE Channel No HDC 5.2.3790.0 10/1/2002 (Standard IDE
 ATA/ATAPI controllers) mshdc.inf Not Available
 PCIIDE\IDECHANNEL\4&17334065&0&0

Intel(R) 82801EB Ultra ATA Storage Controllers No HDC 5.1.0.1009
 3/25/2004 Intelich5ide.inf Not Available
 PCI\VEN_8086&DEV_24D1&SUBSYS_10671734&REV_02\3&1FCE7BBF&0&FA

Microsoft ACPI-Compliant Embedded Controller No SYSTEM
 5.2.3790.0 10/1/2002 Microsoft acpi.inf Not Available
 ACPI\PNP0C09\4&2745F95E&0

Motherboard resources No SYSTEM 5.2.3790.0 10/1/2002
 (Standard system devices) machine.inf Not Available
 ACPI\PNP0C02\2

Communications Port No PORTS 5.2.3790.0 10/1/2002 (Standard port
 types) msports.inf Not Available ACPI\PNP0501\2

Communications Port No PORTS 5.2.3790.0 10/1/2002 (Standard port
 types) msports.inf Not Available ACPI\PNP0501\1

Motherboard resources	No	SYSTEM	5.2.3790.0	10/1/2002	HID-compliant consumer control device	No	HIDCLASS	5.2.3790.0
(Standard system devices)	machine.inf	Not Available			10/1/2002 Microsoft hidserv.inf	Not Available		
ACPI\PNP0C02\1					HID\VID_0BF8&PID_1004&MI_01&COL03\7&32796E3&0&0002			
Intel(R) 82802 Firmware Hub Device	No	SYSTEM	5.2.3790.1830		HID-compliant consumer control device	No	HIDCLASS	5.2.3790.0
10/1/2002 Intelmachine.inf	Not Available				10/1/2002 Microsoft hidserv.inf	Not Available		
ACPI\INT0800\4&2745F95E&0					HID\VID_0BF8&PID_1004&MI_01&COL02\7&32796E3&0&0001			
System speaker	No	SYSTEM	5.2.3790.0	10/1/2002	HID-compliant device	No	HIDCLASS	5.2.3790.0
(Standard system devices)	machine.inf	Not Available			10/1/2002 (Standard system devices) input.inf	Not Available		
ACPI\PNP0800\4&2745F95E&0					HID\VID_0BF8&PID_1004&MI_01&COL01\7&32796E3&0&0000			
System timer	No	SYSTEM	5.2.3790.0	10/1/2002	USB Human Interface Device	No	HIDCLASS	5.2.3790.0
(Standard system devices)	machine.inf	Not Available			(Standard system devices) input.inf	Not Available		
ACPI\PNP0100\4&2745F95E&0					USB\VID_0BF8&PID_1004&MI_01\6&2556823D&0&0001			
Numeric data processor	No	SYSTEM	5.2.3790.0	10/1/2002	HID Keyboard Device	No	KEYBOARD	5.2.3790.0
(Standard system devices)	machine.inf	Not Available			5.2.3790.0 10/1/2002 (Standard keyboards) keyboard.inf	Not Available		
ACPI\PNP0C04\4&2745F95E&0					HID\VID_0BF8&PID_1004&MI_00\7&2630CD46&0&0000			
Programmable interrupt controller	No	SYSTEM	5.2.3790.0		USB Human Interface Device	No	HIDCLASS	5.2.3790.0
10/1/2002 (Standard system devices)	machine.inf	Not Available			(Standard system devices) input.inf	Not Available		
ACPI\PNP0000\4&2745F95E&0					USB\VID_0BF8&PID_1004&MI_00\6&2556823D&0&0000			
System CMOS/real time clock	No	SYSTEM	5.2.3790.0	10/1/2002	USB Composite Device	No	USB	5.2.3790.0
(Standard system devices)	machine.inf	Not Available			10/1/2002 (Standard USB Host Controller) usb.inf	Not Available		
ACPI\PNP0B00\4&2745F95E&0					USB\VID_0BF8&PID_1004&MI_00\6&2556823D&0&0000			
Direct memory access controller	No	SYSTEM	5.2.3790.0	10/1/2002	USB Root Hub	No	USB	5.2.3790.0
(Standard system devices)	machine.inf	Not Available			5.2.3790.0 10/1/2002 (Standard USB Host Controller) usbport.inf	Not Available		
ACPI\PNP0200\4&2745F95E&0					USB\ROOT_HUB\4&22A05AF8&0			
ISAPNP Read Data Port	No	SYSTEM	5.2.3790.0	10/1/2002	Intel(R) 82801EB USB Universal Host Controller - 24D7	No	USB	
(Standard system devices)	machine.inf	Not Available			5.1.0.1009 4/1/2004 Intelich5usb.inf	Not Available		
ISAPNP\READDATAPORT\0					PCI\VEN_8086&DEV_24D7&SUBSYS_10671734&REV_02\3&1FCE7BBF&0&EA			
Intel(R) 82801EB LPC Interface Controller - 24D0	No	SYSTEM			USB Root Hub	No	USB	5.2.3790.0
6.1.0.1008 6/9/2004 Intelich5core.inf	Not Available				5.2.3790.0 10/1/2002 (Standard USB Host Controller) usbport.inf	Not Available		
PCI\VEN_8086&DEV_24D0&SUBSYS_00000000&REV_02\3&1FCE7BBF&0&F8					USB\ROOT_HUB\4&37429F36&0			
Default Monitor	No	MONITOR	5.1.2001.0	6/6/2001	Intel(R) 82801EB USB Universal Host Controller - 24D4	No	USB	
(Standard monitor types)	monitor.inf	Not Available			5.1.0.1009 4/1/2004 Intelich5usb.inf	Not Available		
DISPLAY\DEFAULT_MONITOR\5&18D00900&0&10000000&11&00					PCI\VEN_8086&DEV_24D4&SUBSYS_10671734&REV_02\3&1FCE7BBF&0&E9			
Default Monitor	No	MONITOR	5.1.2001.0	6/6/2001	USB Root Hub	No	USB	5.2.3790.0
(Standard monitor types)	monitor.inf	Not Available			5.2.3790.0 10/1/2002 (Standard USB Host Controller) usbport.inf	Not Available		
DISPLAY\DEFAULT_MONITOR\5&18D00900&0&10000001&11&00					USB\ROOT_HUB\4&13EF8B31&0			
RADEON 7000 RADEON VE Family (Microsoft Corporation)	No	DISPLAY			Intel(R) 82801EB USB Universal Host Controller - 24D2	No	USB	
6.13.10.6153 8/8/2002 ATI Technologies Inc.	atiixpag.inf	Not Available			5.1.0.1009 4/1/2004 Intelich5usb.inf	Not Available		
PCI\VEN_1002&DEV_5159&SUBSYS_10671734&REV_00\4&1FE6A6B6&0&00F0					PCI\VEN_8086&DEV_24D2&SUBSYS_10671734&REV_02\3&1FCE7BBF&0&E8			
Intel(R) 82801 PCI Bridge - 244E	No	SYSTEM	6.0.0.1013	4/1/2004	PCI standard host CPU bridge	No	SYSTEM	5.2.3790.0
Intelich6core.inf	Not Available				(Standard system devices) machine.inf	Not Available		
PCI\VEN_8086&DEV_244E&SUBSYS_00000000&REV_C2\3&1FCE7BBF&0&F0					PCI\VEN_8086&DEV_261E&SUBSYS_00000000&REV_10\3&1FCE7BBF&0&9F			
Generic USB Hub	No	USB	5.2.3790.0	10/1/2002	PCI standard host CPU bridge	No	SYSTEM	5.2.3790.0
(Generic USB Hub)	usb.inf	Not Available			(Standard system devices) machine.inf	Not Available		
USB\VID_0424&PID_A700\5&17B28EF3&0&3					PCI\VEN_8086&DEV_261C&SUBSYS_00000000&REV_10\3&1FCE7BBF&0&9D			
USB Root Hub	No	USB	5.2.3790.0	10/1/2002	PCI standard host CPU bridge	No	SYSTEM	5.2.3790.0
(Standard USB Host Controller) usbport.inf	Not Available				(Standard system devices) machine.inf	Not Available		
USB\ROOT_HUB20\4&118B9A59&0					PCI\VEN_8086&DEV_261D&SUBSYS_00000000&REV_10\3&1FCE7BBF&0&9E			
Intel(R) 82801EB USB2 Enhanced Host Controller - 24DD	No	USB			PCI standard host CPU bridge	No	SYSTEM	5.2.3790.0
5.1.0.1009 4/1/2004 Intelich5usb.inf	Not Available				(Standard system devices) machine.inf	Not Available		
PCI\VEN_8086&DEV_24DD&SUBSYS_10671734&REV_02\3&1FCE7BBF&0&EF					PCI\VEN_8086&DEV_261C&SUBSYS_00000000&REV_10\3&1FCE7BBF&0&9D			
Logitech USB Wheel Mouse	No	MOUSE	5.2.3790.0	10/1/2002	Logitech msmouse.inf	Not Available		
HID\VID_046D&PID_C00E\6&1425B37E&0&0000					PCI standard host CPU bridge	No	SYSTEM	5.2.3790.0
Logitech USB Wheel Mouse	No	HIDCLASS	5.2.3790.0	10/1/2002	(Standard system devices) machine.inf	Not Available		
input.inf	Not Available				USB\VID_046D&PID_C00E\5&609CA02&0&2			
USB\VID_046D&PID_C00E\5&609CA02&0&2					PCI\VEN_8086&DEV_261A&SUBSYS_00000000&REV_10\3&1FCE7BBF&0&9B			

PCI standard RAM Controller	No	SYSTEM	5.2.3790.0	10/1/2002	(Standard system devices) machine.inf	Not Available
					PCI\VEN_8086&DEV_2627&SUBSYS_10671734&REV_10\3&1FCE7BBF&0&4F	
PCI standard RAM Controller	No	SYSTEM	5.2.3790.0	10/1/2002	(Standard system devices) machine.inf	Not Available
					PCI\VEN_8086&DEV_2626&SUBSYS_10671734&REV_10\3&1FCE7BBF&0&4E	
PCI standard RAM Controller	No	SYSTEM	5.2.3790.0	10/1/2002	(Standard system devices) machine.inf	Not Available
					PCI\VEN_8086&DEV_2625&SUBSYS_10671734&REV_10\3&1FCE7BBF&0&4D	
PCI standard RAM Controller	No	SYSTEM	5.2.3790.0	10/1/2002	(Standard system devices) machine.inf	Not Available
					PCI\VEN_8086&DEV_2624&SUBSYS_10671734&REV_10\3&1FCE7BBF&0&4C	
PCI standard RAM Controller	No	SYSTEM	5.2.3790.0	10/1/2002	(Standard system devices) machine.inf	Not Available
					PCI\VEN_8086&DEV_2623&SUBSYS_10671734&REV_10\3&1FCE7BBF&0&4B	
PCI standard RAM Controller	No	SYSTEM	5.2.3790.0	10/1/2002	(Standard system devices) machine.inf	Not Available
					PCI\VEN_8086&DEV_2622&SUBSYS_10671734&REV_10\3&1FCE7BBF&0&4A	
PCI standard RAM Controller	No	SYSTEM	5.2.3790.0	10/1/2002	(Standard system devices) machine.inf	Not Available
					PCI\VEN_8086&DEV_2621&SUBSYS_10671734&REV_10\3&1FCE7BBF&0&49	
PCI standard RAM Controller	No	SYSTEM	5.2.3790.0	10/1/2002	(Standard system devices) machine.inf	Not Available
					PCI\VEN_8086&DEV_2620&SUBSYS_10671734&REV_10\3&1FCE7BBF&0&48	
PCI standard host CPU bridge	No	SYSTEM	5.2.3790.0	10/1/2002	(Standard system devices) machine.inf	Not Available
					PCI\VEN_8086&DEV_260C&SUBSYS_00000000&REV_10\3&1FCE7BBF&0&40	
QLOGIC PSEUDO LUN	No	SYSTEM	9.0.0.13	4/8/2004	QLogic Corp oem4.inf	Not Available
					SCSI\PROCESSOR&VEN_QLOGIC&PROD_PSEUDO_LUN&REV_\6&28EA7AB&0&07F0	
Disk drive No	DISKDRIVE		5.2.3790.0	10/1/2002	(Standard disk drives) disk.inf	Not Available
					SCSI\DISK&VEN_DGC&PROD_RAID_0&REV_0207\6&28EA7AB&0&010	
Disk drive No	DISKDRIVE		5.2.3790.0	10/1/2002	(Standard disk drives) disk.inf	Not Available
					SCSI\DISK&VEN_DGC&PROD_RAID_0&REV_0207\6&28EA7AB&0&000	
QLogic QLA23xx PCI Fibre Channel Adapter	No	SCSIADAPTER	8.2.3.11	7/25/2003	QLogic oem1.inf	Not Available
					PCI\VEN_1077&DEV_2312&SUBSYS_01001077&REV_02\5&8AF1E42&0&380238	
QLOGIC PSEUDO LUN	No	SYSTEM	8.2.3.11	7/25/2003	QLogic Corp oem2.inf	Not Available
					SCSI\PROCESSOR&VEN_QLOGIC&PROD_PSEUDO_LUN&REV_\6&814AAA1&0&07F0	
Disk drive No	DISKDRIVE		5.2.3790.0	10/1/2002	(Standard disk drives) disk.inf	Not Available
					SCSI\DISK&VEN_DGC&PROD_RAID_0&REV_0207\6&814AAA1&0&010	
Disk drive No	DISKDRIVE		5.2.3790.0	10/1/2002	(Standard disk drives) disk.inf	Not Available
					SCSI\DISK&VEN_DGC&PROD_RAID_0&REV_0207\6&814AAA1&0&000	
QLogic QLA23xx PCI Fibre Channel Adapter	No	SCSIADAPTER	8.2.3.11	7/25/2003	QLogic oem1.inf	Not Available
					PCI\VEN_1077&DEV_2312&SUBSYS_01011077&REV_02\5&8AF1E42&0&310238	
QLOGIC PSEUDO LUN	No	SYSTEM	8.2.3.11	7/25/2003	QLogic Corp oem2.inf	Not Available
					SCSI\PROCESSOR&VEN_QLOGIC&PROD_PSEUDO_LUN&REV_\6&2BA898B4&0&07F0	
Disk drive No	DISKDRIVE		5.2.3790.0	10/1/2002	(Standard disk drives) disk.inf	Not Available
					SCSI\DISK&VEN_DGC&PROD_RAID_0&REV_0207\6&2BA898B4&0&010	
Disk drive No	DISKDRIVE		5.2.3790.0	10/1/2002	(Standard disk drives) disk.inf	Not Available
					SCSI\DISK&VEN_DGC&PROD_RAID_0&REV_0207\6&2BA898B4&0&000	
QLogic QLA23xx PCI Fibre Channel Adapter	No	SCSIADAPTER	8.2.3.11	7/25/2003	QLogic oem1.inf	Not Available
					PCI\VEN_1077&DEV_2312&SUBSYS_01011077&REV_02\5&8AF1E42&0&300238	
Intel(R) 80332 PCI Express-to-PCI Bridge B - 0332	No	SYSTEM	6.2.0.1002	5/27/2004	Intele7520.inf	Not Available
					PCI\VEN_8086&DEV_0332&SUBSYS_00000000&REV_07\4&3463CAB2&0&0238	
Disk drive No	DISKDRIVE		5.2.3790.0	10/1/2002	(Standard disk drives) disk.inf	Not Available
					SCSI\DISK&VEN_MEGARAID&PROD_LD_1_MEGARAID&REV_\6&166521F2&0&310	
Disk drive No	DISKDRIVE		5.2.3790.0	10/1/2002	(Standard disk drives) disk.inf	Not Available
					SCSI\DISK&VEN_MEGARAID&PROD_LD_0_MEGARAID&REV_\6&166521F2&0&300	
RAID Virtual Device	No	SYSTEM	5.2.3790.1830	10/1/2002	American Megatrends, Inc. scsdev.inf	Not Available
					SCSI\OTHER&VEN___RAID&PROD_DUMMYDEVICE&REV_0000\6&166521F2&0&2390	
HP SAF-TE SCSI Processor Device	No	SYSTEM	5.2.3790.1830	10/1/2002	HP scsdev.inf	Not Available
					SCSI\PROCESSOR&VEN_SDR&PROD_GEM318P&REV_1\6&166521F2&0&180	
HP SAF-TE SCSI Processor Device	No	SYSTEM	5.2.3790.1830	10/1/2002	HP scsdev.inf	Not Available
					SCSI\PROCESSOR&VEN_SDR&PROD_GEM318P&REV_1\6&166521F2&0&080	
MegaRAID PCI Express(TM) ROMB	No	SCSIADAPTER	6.45.2.32	8/2/2004	LSI Logic Corp., oem17.inf	Not Available
					PCI\VEN_1000&DEV_0408&SUBSYS_10651734&REV_07\5&203851D&0&700038	
Intel(R) 80332 PCI Express-to-PCI Bridge A - 0330	No	SYSTEM	6.2.0.1002	5/27/2004	Intele7520.inf	Not Available
					PCI\VEN_8086&DEV_0330&SUBSYS_00000000&REV_07\4&3463CAB2&0&0038	
PCI standard PCI-to-PCI bridge	No	SYSTEM	5.2.3790.0	10/1/2002	(Standard system devices) machine.inf	Not Available
					PCI\VEN_8086&DEV_2607&SUBSYS_00000000&REV_10\3&1FCE7BBF&0&38	
Broadcom NetXtreme Gigabit Ethernet	No	NET	8.22.1.0	3/17/2005	Broadcom oem9.inf	Not Available
					PCI\VEN_14E4&DEV_1648&SUBSYS_10671734&REV_10\5&188E7AD5&0&110230	
Broadcom NetXtreme Gigabit Ethernet	No	NET	8.22.1.0	3/17/2005	Broadcom oem9.inf	Not Available
					PCI\VEN_14E4&DEV_1648&SUBSYS_10671734&REV_10\5&188E7AD5&0&100230	

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Intel(R) 6700PXH PCI Express-to-PCI Bridge B - 032A No SYSTEM
6.2.0.1002 5/27/2004 Intele7520.inf Not Available
PCI\VEN_8086&DEV_032A&SUBSYS_00000000&REV_09\4&2AD2C2B4&0&0230
QLOGIC PSEUDO LUN No SYSTEM 8.2.3.11 7/25/2003 QLogic Corp
oem2.inf Not Available
SCSI\PROCESSOR&VEN_QLOGIC&PROD_PSEUDO_LUN&REV_\6&2BFCBC7&0&07F0

Disk drive No DISKDRIVE 5.2.3790.0 10/1/2002 (Standard disk drives)
disk.inf Not Available
SCSI\DISK&VEN_DGC&PROD_RAID_0&REV_0207\6&2BFCBC7&0&010

Disk drive No DISKDRIVE 5.2.3790.0 10/1/2002 (Standard disk drives)
disk.inf Not Available
SCSI\DISK&VEN_DGC&PROD_RAID_0&REV_0207\6&2BFCBC7&0&000

QLogic QLA23xx PCI Fibre Channel Adapter No SCSIADAPTER 8.2.3.11
7/25/2003 QLogic oem1.inf Not Available
PCI\VEN_1077&DEV_2312&SUBSYS_01011077&REV_02\5&392C329B&0&110030

QLOGIC PSEUDO LUN No SYSTEM 8.2.3.11 7/25/2003 QLogic Corp
oem2.inf Not Available
SCSI\PROCESSOR&VEN_QLOGIC&PROD_PSEUDO_LUN&REV_\6&16B292CF&0&07F0

Disk drive No DISKDRIVE 5.2.3790.0 10/1/2002 (Standard disk drives)
disk.inf Not Available
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Disk drive No DISKDRIVE 5.2.3790.0 10/1/2002 (Standard disk drives)
disk.inf Not Available
SCSI\DISK&VEN_DGC&PROD_RAID_0&REV_0207\6&16B292CF&0&000

QLogic QLA23xx PCI Fibre Channel Adapter No SCSIADAPTER 8.2.3.11
7/25/2003 QLogic oem1.inf Not Available
PCI\VEN_1077&DEV_2312&SUBSYS_01011077&REV_02\5&392C329B&0&100030

Intel(R) 6700PXH PCI Express-to-PCI Bridge A - 0329 No SYSTEM
6.2.0.1002 5/27/2004 Intele7520.inf Not Available
PCI\VEN_8086&DEV_0329&SUBSYS_00000000&REV_09\4&2AD2C2B4&0&0030
PCI standard PCI-to-PCI bridge No SYSTEM 5.2.3790.0 10/1/2002
(Standard system devices) machine.inf Not Available
PCI\VEN_8086&DEV_2606&SUBSYS_00000000&REV_10\3&1FCE7BBF&0&030
PCI standard PCI-to-PCI bridge No SYSTEM 5.2.3790.0 10/1/2002
(Standard system devices) machine.inf Not Available
PCI\VEN_8086&DEV_2605&SUBSYS_00000000&REV_10\3&1FCE7BBF&0&028
PCI standard PCI-to-PCI bridge No SYSTEM 5.2.3790.0 10/1/2002
(Standard system devices) machine.inf Not Available
PCI\VEN_8086&DEV_2604&SUBSYS_00000000&REV_10\3&1FCE7BBF&0&020
PCI standard PCI-to-PCI bridge No SYSTEM 5.2.3790.0 10/1/2002
(Standard system devices) machine.inf Not Available
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PCI standard PCI-to-PCI bridge No SYSTEM 5.2.3790.0 10/1/2002
(Standard system devices) machine.inf Not Available
PCI\VEN_8086&DEV_2608&SUBSYS_00000000&REV_10\3&1FCE7BBF&0&010
PCI standard PCI-to-PCI bridge No SYSTEM 5.2.3790.0 10/1/2002
(Standard system devices) machine.inf Not Available
PCI\VEN_8086&DEV_2601&SUBSYS_00000000&REV_10\3&1FCE7BBF&0&008
PCI standard host CPU bridge No SYSTEM 5.2.3790.0 10/1/2002
(Standard system devices) machine.inf Not Available
PCI\VEN_8086&DEV_2600&SUBSYS_00000000&REV_10\3&1FCE7BBF&0&000

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PCI bus No SYSTEM 5.2.3790.0 10/1/2002 (Standard system
devices) machine.inf Not Available ACPI\PNPOA03\F0
Intel Processor No PROCESSOR 5.2.3790.1830 10/1/2002 Intelcpu.inf
Not Available ACPI\GENUINEINTEL_-_X86_FAMILY_15_MODEL_4\15
Intel Processor No PROCESSOR 5.2.3790.1830 10/1/2002 Intelcpu.inf
Not Available ACPI\GENUINEINTEL_-_X86_FAMILY_15_MODEL_4\14
Intel Processor No PROCESSOR 5.2.3790.1830 10/1/2002 Intelcpu.inf
Not Available ACPI\GENUINEINTEL_-_X86_FAMILY_15_MODEL_4\13
Intel Processor No PROCESSOR 5.2.3790.1830 10/1/2002 Intelcpu.inf
Not Available ACPI\GENUINEINTEL_-_X86_FAMILY_15_MODEL_4\12
Intel Processor No PROCESSOR 5.2.3790.1830 10/1/2002 Intelcpu.inf
Not Available ACPI\GENUINEINTEL_-_X86_FAMILY_15_MODEL_4\11
Intel Processor No PROCESSOR 5.2.3790.1830 10/1/2002 Intelcpu.inf
Not Available ACPI\GENUINEINTEL_-_X86_FAMILY_15_MODEL_4\10
Intel Processor No PROCESSOR 5.2.3790.1830 10/1/2002 Intelcpu.inf
Not Available ACPI\GENUINEINTEL_-_X86_FAMILY_15_MODEL_4\9
Intel Processor No PROCESSOR 5.2.3790.1830 10/1/2002 Intelcpu.inf
Not Available ACPI\GENUINEINTEL_-_X86_FAMILY_15_MODEL_4\8
Intel Processor No PROCESSOR 5.2.3790.1830 10/1/2002 Intelcpu.inf
Not Available ACPI\GENUINEINTEL_-_X86_FAMILY_15_MODEL_4\7
Intel Processor No PROCESSOR 5.2.3790.1830 10/1/2002 Intelcpu.inf
Not Available ACPI\GENUINEINTEL_-_X86_FAMILY_15_MODEL_4\6
Intel Processor No PROCESSOR 5.2.3790.1830 10/1/2002 Intelcpu.inf
Not Available ACPI\GENUINEINTEL_-_X86_FAMILY_15_MODEL_4\5
Intel Processor No PROCESSOR 5.2.3790.1830 10/1/2002 Intelcpu.inf
Not Available ACPI\GENUINEINTEL_-_X86_FAMILY_15_MODEL_4\4
Intel Processor No PROCESSOR 5.2.3790.1830 10/1/2002 Intelcpu.inf
Not Available ACPI\GENUINEINTEL_-_X86_FAMILY_15_MODEL_4\3
Intel Processor No PROCESSOR 5.2.3790.1830 10/1/2002 Intelcpu.inf
Not Available ACPI\GENUINEINTEL_-_X86_FAMILY_15_MODEL_4\2
Intel Processor No PROCESSOR 5.2.3790.1830 10/1/2002 Intelcpu.inf
Not Available ACPI\GENUINEINTEL_-_X86_FAMILY_15_MODEL_4\1
Intel Processor No PROCESSOR 5.2.3790.1830 10/1/2002 Intelcpu.inf
Not Available ACPI\GENUINEINTEL_-_X86_FAMILY_15_MODEL_4\0
Microsoft ACPI-Compliant System No SYSTEM 5.2.3790.0 10/1/2002
Microsoft acpi.inf Not Available ACPI_HAL\PNPOC08\0
ACPI Multiprocessor PC No 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>
NUMBER_OF_PROCESSORS 16 <SYSTEM>
OS Windows_NT <SYSTEM>
Path
%SystemRoot%\system32;%SystemRoot%;%SystemRoot%\System32\Wbem;C:\
Program Files\Microsoft SQL Server\MSSQL\BINN;C:\Program
Files\Microsoft SQL Server\80\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 4 Stepping 8, GenuineIntel
<SYSTEM>
PROCESSOR_LEVEL 15      <SYSTEM>
PROCESSOR_REVISION 0408 <SYSTEM>
TEMP %SystemRoot%\TEMP      <SYSTEM>
TMP %SystemRoot%\TEMP      <SYSTEM>
windir %SystemRoot%      <SYSTEM>
FP_NO_HOST_CHECK NO      <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 TWINS\Administrator
TMP %USERPROFILE%\Local Settings\Temp TWINS\Administrator

```

[Print Jobs]

Document	Size	Owner	Notify	Status	Time Submitted	Start Time
		Until Time Elapsed	Time	Pages Printed	Job ID	Priority
Type	Name	Parameters	Driver	Print Processor	Host	Print Queue
						Data

[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	4	8	0	1413120
Available	Not Available	Not Available	Not Available	Not Available	Not Available	Not Available
smss.exe	9:35 AM	Not Available	876	11	204800	1413120
csrss.exe	10/21/2005 9:35 AM	Not Available	1004	13	Not Available	Not Available
winlogon.exe	c:\windows\system32\winlogon.exe	1413120	10/21/2005 9:35 AM	5.2.3790.1830	1076	13
(srv03_spl_rtm.050324-1447)		497.00 KB (508,928 bytes)	4/1/2005 2:48 PM			
services.exe	c:\windows\system32\services.exe	1413120	10/21/2005 9:35 AM	5.2.3790.1830	1152	9
(srv03_spl_rtm.050324-1447)		107.50 KB (110,080 bytes)	3/25/2003 1:00 PM			

```

lsass.exe c:\windows\system32\lsass.exe 1180 9 204800 1413120
10/21/2005 9:35 AM 5.2.3790.0 (srv03_rtm.030324-2048) 13.00 KB
(13,312 bytes) 3/25/2003 1:00 PM
svchost.exe c:\windows\system32\svchost.exe 1380 8 204800
1413120 10/21/2005 9:35 AM 5.2.3790.1830
(srv03_spl_rtm.050324-1447) 14.00 KB (14,336 bytes) 4/1/2005 2:48
PM
svchost.exe Not Available 1496 8 Not Available Not Available
10/21/2005 9:35 AM Not Available Not Available Not Available

svchost.exe Not Available 1588 8 Not Available Not Available
10/21/2005 9:35 AM Not Available Not Available Not Available

svchost.exe c:\windows\system32\svchost.exe 1640 8 204800
1413120 10/21/2005 9:35 AM 5.2.3790.1830
(srv03_spl_rtm.050324-1447) 14.00 KB (14,336 bytes) 4/1/2005 2:48
PM
explorer.exe c:\windows\explorer.exe 1896 8 204800 1413120
10/21/2005 9:52 AM 6.00.3790.1830 (srv03_spl_rtm.050324-1447)
1.00 MB (1,050,624 bytes) 4/1/2005 2:49 PM
wmiprvse.exe Not Available 636 8 Not Available Not Available
10/21/2005 9:52 AM Not Available Not Available Not Available

helpctr.exe c:\windows\pchealth\helpctr\binaries\helpctr.exe
1856 8 204800 1413120 10/21/2005 9:53 AM 5.2.3790.1830
(srv03_spl_rtm.050324-1447) 778.00 KB (796,672 bytes) 4/1/2005 2:49
PM
wmiprvse.exe Not Available 448 8 Not Available Not Available
10/21/2005 9:53 AM Not Available Not Available Not Available

helpsvc.exe c:\windows\pchealth\helpctr\binaries\helpsvc.exe 484
8 204800 1413120 10/21/2005 9:53 AM 5.2.3790.1830
(srv03_spl_rtm.050324-1447) 745.00 KB (762,880 bytes) 4/1/2005 2:49
PM
regedit.exe c:\windows\regedit.exe 1388 8 204800 1413120
10/21/2005 9:53 AM 5.2.3790.1830 (srv03_spl_rtm.050324-1447)
144.00 KB (147,456 bytes) 3/24/2005 7:44 PM

```

[Loaded Modules]

Name	Version	Size	File Date	Manufacturer	Path
winlogon	5.2.3790.1830	(srv03_spl_rtm.050324-1447)	497.00 KB (508,928 bytes)	4/1/2005 2:48 PM	Microsoft Corporation
ntdll	5.2.3790.1830	(srv03_spl_rtm.050324-1447)	748.50 KB (766,464 bytes)	3/25/2003 1:00 PM	Microsoft Corporation
kernel32	5.2.3790.1830	(srv03_spl_rtm.050324-1447)	1,014.00 KB (1,038,336 bytes)	4/1/2005 2:49 PM	Microsoft Corporation
advapi32	5.2.3790.1830	(srv03_spl_rtm.050324-1447)	605.50 KB (620,032 bytes)	3/25/2003 1:00 PM	Microsoft Corporation

```

rpcrt4      5.2.3790.1830 (srv03_spl_rtm.050324-1447) 627.00 KB (642,048
bytes)      4/1/2005 2:48 PM      Microsoft Corporation
           c:\windows\system32\rpcrt4.dll
crypt32     5.131.3790.1830 (srv03_spl_rtm.050324-1447) 582.00 KB
(595,968 bytes) 4/1/2005 2:49 PM      Microsoft Corporation
           c:\windows\system32\crypt32.dll
msasn1      5.2.3790.1830 (srv03_spl_rtm.050324-1447) 56.50 KB (57,856
bytes)      4/1/2005 2:48 PM      Microsoft Corporation
           c:\windows\system32\msasn1.dll
msvcrt      7.0.3790.1830 (srv03_spl_rtm.050324-1447) 340.50 KB (348,672
bytes)      4/1/2005 2:48 PM      Microsoft Corporation
           c:\windows\system32\msvcrt.dll
user32      5.2.3790.1830 (srv03_spl_rtm.050324-1447) 574.50 KB (588,288
bytes)      4/1/2005 2:48 PM      Microsoft Corporation
           c:\windows\system32\user32.dll
gdi325.2.3790.1830 (srv03_spl_rtm.050324-1447) 273.00 KB (279,552
bytes)      4/1/2005 2:49 PM      Microsoft Corporation
           c:\windows\system32\gdi32.dll
nddeapi     5.2.3790.0 (srv03_rtm.030324-2048) 16.00 KB (16,384 bytes)
3/25/2003 1:00 PM      Microsoft Corporation
           c:\windows\system32\nddeapi.dll
profmap     5.2.3790.1830 (srv03_spl_rtm.050324-1447) 22.50 KB (23,040
bytes)      4/1/2005 2:48 PM      Microsoft Corporation
           c:\windows\system32\profmap.dll
netapi32    5.2.3790.1830 (srv03_spl_rtm.050324-1447) 341.50 KB (349,696
bytes)      4/1/2005 2:48 PM      Microsoft Corporation
           c:\windows\system32\netapi32.dll
userenv     5.2.3790.1830 (srv03_spl_rtm.050324-1447) 771.00 KB (789,504
bytes)      3/25/2003 1:00 PM      Microsoft Corporation
           c:\windows\system32\userenv.dll
psapi5.2.3790.1830 (srv03_spl_rtm.050324-1447) 20.00 KB (20,480 bytes)
4/1/2005 2:48 PM      Microsoft Corporation
           c:\windows\system32\psapi.dll
regapi      5.2.3790.1830 (srv03_spl_rtm.050324-1447) 55.00 KB (56,320
bytes)      4/1/2005 2:48 PM      Microsoft Corporation
           c:\windows\system32\regapi.dll
secur32     5.2.3790.1830 (srv03_spl_rtm.050324-1447) 64.00 KB (65,536
bytes)      4/1/2005 2:48 PM      Microsoft Corporation
           c:\windows\system32\secur32.dll
setupapi    5.2.3790.1830 (srv03_spl_rtm.050324-1447) 1.03 MB (1,079,808
bytes)      3/25/2003 1:00 PM      Microsoft Corporation
           c:\windows\system32\setupapi.dll
version     5.2.3790.1830 (srv03_spl_rtm.050324-1447) 18.00 KB (18,432
bytes)      4/1/2005 2:48 PM      Microsoft Corporation
           c:\windows\system32\version.dll
winsta      5.2.3790.1830 (srv03_spl_rtm.050324-1447) 54.50 KB (55,808
bytes)      4/1/2005 2:48 PM      Microsoft Corporation
           c:\windows\system32\winsta.dll
ws2_32      5.2.3790.1830 (srv03_spl_rtm.050324-1447) 82.00 KB (83,968
bytes)      4/1/2005 2:48 PM      Microsoft Corporation
           c:\windows\system32\ws2_32.dll
ws2help     5.2.3790.1830 (srv03_spl_rtm.050324-1447) 19.50 KB (19,968
bytes)      4/1/2005 2:48 PM      Microsoft Corporation
           c:\windows\system32\ws2help.dll

msgina      5.2.3790.1830 (srv03_spl_rtm.050324-1447) 1.16 MB (1,211,904
bytes)      4/1/2005 2:48 PM      Microsoft Corporation
           c:\windows\system32\msgina.dll
shsvcs      6.00.3790.1830 (srv03_spl_rtm.050324-1447) 131.50 KB
(134,656 bytes) 4/1/2005 2:48 PM      Microsoft Corporation
           c:\windows\system32\shsvcs.dll
shlwapi     6.00.3790.1830 (srv03_spl_rtm.050324-1447) 313.50 KB
(321,024 bytes) 4/1/2005 2:48 PM      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 1:00 PM      Microsoft Corporation
           c:\windows\system32\sfc.dll
sfc_os      5.2.3790.1830 (srv03_spl_rtm.050324-1447) 138.00 KB (141,312
bytes)      4/1/2005 2:48 PM      Microsoft Corporation
           c:\windows\system32\sfc_os.dll
wintrust    5.131.3790.1830 (srv03_spl_rtm.050324-1447) 162.00 KB
(165,888 bytes) 4/1/2005 2:48 PM      Microsoft Corporation
           c:\windows\system32\wintrust.dll
imagehlp   5.2.3790.1830 (srv03_spl_rtm.050324-1447) 145.50 KB (148,992
bytes)      3/25/2003 1:00 PM      Microsoft Corporation
           c:\windows\system32\imagehlp.dll
ole325.2.3790.1830 (srv03_spl_rtm.050324-1447) 1.19 MB (1,245,184
bytes)      4/1/2005 2:48 PM      Microsoft Corporation
           c:\windows\system32\ole32.dll
comctl32    6.0 (srv03_spl_rtm.050324-1447) 1.00 MB (1,051,136 bytes)
3/24/2005 8:41 PM      Microsoft Corporation
           c:\windows\winsxs\x86_microsoft.windows.common-
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 1:00 PM      Microsoft Corporation
           c:\windows\system32\winscard.dll
wtsapi32    5.2.3790.1830 (srv03_spl_rtm.050324-1447) 19.00 KB (19,456
bytes)      4/1/2005 2:48 PM      Microsoft Corporation
           c:\windows\system32\wtsapi32.dll
sxs         5.2.3790.1830 (srv03_spl_rtm.050324-1447) 743.50 KB (761,344
bytes)      4/1/2005 2:48 PM      Microsoft Corporation
           c:\windows\system32\sxs.dll
shell32     6.00.3790.1830 (srv03_spl_rtm.050324-1447) 7.99 MB
(8,379,392 bytes) 4/1/2005 2:48 PM      Microsoft Corporation
           c:\windows\system32\shell32.dll
wldap32     5.2.3790.1830 (srv03_spl_rtm.050324-1447) 174.50 KB (178,688
bytes)      4/1/2005 2:48 PM      Microsoft Corporation
           c:\windows\system32\wldap32.dll
rsaenh      5.2.3790.1830 (srv03_spl_rtm.050324-1447) 183.98 KB (188,392
bytes)      4/1/2005 2:48 PM      Microsoft Corporation
           c:\windows\system32\rsaenh.dll
cscdll      5.2.3790.1830 (srv03_spl_rtm.050324-1447) 100.00 KB (102,400
bytes)      4/1/2005 2:49 PM      Microsoft Corporation
           c:\windows\system32\cscdll.dll
dimsntfy    5.2.3790.1830 (srv03_spl_rtm.050324-1447) 19.00 KB (19,456
bytes)      4/1/2005 2:52 PM      Microsoft Corporation
           c:\windows\system32\dimsntfy.dll
wlnotify    5.2.3790.1830 (srv03_spl_rtm.050324-1447) 94.50 KB (96,768
bytes)      4/1/2005 2:48 PM      Microsoft Corporation
           c:\windows\system32\wlnotify.dll

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mpr 5.2.3790.0 (srv03_rtm.030324-2048) 56.00 KB (57,344 bytes)
3/25/2003 1:00 PM Microsoft Corporation
c:\windows\system32\mpr.dll
oleaut32 5.2.3790.1830 543.00 KB (556,032 bytes) 3/25/2003 1:00 PM
Microsoft Corporation c:\windows\system32\oleaut32.dll
winmm5.2.3790.1830 (srv03_spl_rtm.050324-1447) 172.50 KB (176,640
bytes) 4/1/2005 2:48 PM Microsoft Corporation
c:\windows\system32\winmm.dll
winspool 5.2.3790.1830 (srv03_spl_rtm.050324-1447) 147.00 KB (150,528
bytes) 3/25/2003 1:00 PM Microsoft Corporation
c:\windows\system32\winspool.drv
comctl32 5.82 (srv03_spl_rtm.050324-1447) 585.00 KB (599,040
bytes) 3/24/2005 8:41 PM Microsoft Corporation
c:\windows\winsxs\x86_microsoft.windows.common-
controls_6595b64144ccf1df_5.82.3790.1830_x-ww_lb6f474a\comctl32.dll
uxtheme 6.00.3790.1830 (srv03_spl_rtm.050324-1447) 202.00 KB
(206,848 bytes) 4/1/2005 2:48 PM Microsoft Corporation
c:\windows\system32\uxtheme.dll
samlib 5.2.3790.1830 (srv03_spl_rtm.050324-1447) 46.50 KB (47,616
bytes) 3/25/2003 1:00 PM Microsoft Corporation
c:\windows\system32\samlib.dll
cscui5.2.3790.1830 (srv03_spl_rtm.050324-1447) 319.50 KB (327,168
bytes) 4/1/2005 2:49 PM Microsoft Corporation
c:\windows\system32\cscui.dll
clbcatq 2001.12.4720.1830 (srv03_spl_rtm.050324-1447) 502.50 KB
(514,560 bytes) 4/1/2005 2:49 PM 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 1:00 PM Microsoft Corporation
c:\windows\system32\comres.dll
ntmarta 5.2.3790.1830 (srv03_spl_rtm.050324-1447) 120.50 KB (123,392
bytes) 4/1/2005 2:48 PM Microsoft Corporation
c:\windows\system32\ntmarta.dll
xpsp2res 5.2.3790.1830 (srv03_spl_rtm.050324-1447) 2.76 MB (2,897,920
bytes) 4/1/2005 2:52 PM Microsoft Corporation
c:\windows\system32\xpsp2res.dll
services 5.2.3790.1830 (srv03_spl_rtm.050324-1447) 107.50 KB (110,080
bytes) 3/25/2003 1:00 PM Microsoft Corporation
c:\windows\system32\services.exe
ncobjapi 5.2.3790.1830 (srv03_spl_rtm.050324-1447) 36.00 KB (36,864
bytes) 4/1/2005 2:48 PM Microsoft Corporation
c:\windows\system32\ncobjapi.dll
msvcpc60 6.05.2144.0 388.00 KB (397,312 bytes) 3/25/2003 1:00 PM
Microsoft Corporation c:\windows\system32\msvcpc60.dll
scesrv 5.2.3790.1830 (srv03_spl_rtm.050324-1447) 327.00 KB (334,848
bytes) 4/1/2005 2:48 PM Microsoft Corporation
c:\windows\system32\scesrv.dll
authz 5.2.3790.1830 (srv03_spl_rtm.050324-1447) 66.50 KB (68,096 bytes)
4/1/2005 2:49 PM Microsoft Corporation
c:\windows\system32\authz.dll
umpnpgmr 5.2.3790.1830 (srv03_spl_rtm.050324-1447) 126.50 KB (129,536
bytes) 4/1/2005 2:48 PM Microsoft Corporation
c:\windows\system32\umpnpgmr.dll

eventlog 5.2.3790.1830 (srv03_spl_rtm.050324-1447) 67.50 KB (69,120
bytes) 4/1/2005 2:49 PM Microsoft Corporation
c:\windows\system32\eventlog.dll
lsass5.2.3790.0 (srv03_rtm.030324-2048) 13.00 KB (13,312 bytes)
3/25/2003 1:00 PM Microsoft Corporation
c:\windows\system32\lsass.exe
lsasrv 5.2.3790.1830 (srv03_spl_rtm.050324-1447) 803.00 KB (822,272
bytes) 3/25/2003 1:00 PM Microsoft Corporation
c:\windows\system32\lsasrv.dll
ntdsapi 5.2.3790.1830 (srv03_spl_rtm.050324-1447) 71.00 KB (72,704
bytes) 4/1/2005 2:48 PM Microsoft Corporation
c:\windows\system32\ntdsapi.dll
dnsapi 5.2.3790.1830 (srv03_spl_rtm.050324-1447) 153.50 KB (157,184
bytes) 4/1/2005 2:49 PM Microsoft Corporation
c:\windows\system32\dnsapi.dll
samsrv 5.2.3790.1830 (srv03_spl_rtm.050324-1447) 450.50 KB (461,312
bytes) 3/25/2003 1:00 PM Microsoft Corporation
c:\windows\system32\samsrv.dll
cryptdll 5.2.3790.1830 (srv03_spl_rtm.050324-1447) 32.00 KB (32,768
bytes) 4/1/2005 2:49 PM 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 1:00 PM Microsoft Corporation
c:\windows\system32\msprivs.dll
kerberos 5.2.3790.1830 (srv03_spl_rtm.050324-1447) 340.50 KB (348,672
bytes) 4/1/2005 2:49 PM Microsoft Corporation
c:\windows\system32\kerberos.dll
msvl0 5.2.3790.1830 (srv03_spl_rtm.050324-1447) 141.00 KB (144,384
bytes) 4/1/2005 2:48 PM Microsoft Corporation
c:\windows\system32\msvl0.dll
iphlpapi 5.2.3790.1830 (srv03_spl_rtm.050324-1447) 92.50 KB (94,720
bytes) 4/1/2005 2:49 PM Microsoft Corporation
c:\windows\system32\iphlpapi.dll
netlogon 5.2.3790.1830 (srv03_spl_rtm.050324-1447) 409.50 KB (419,328
bytes) 4/1/2005 2:48 PM Microsoft Corporation
c:\windows\system32\netlogon.dll
w32time 5.2.3790.1830 (srv03_spl_rtm.050324-1447) 222.00 KB (227,328
bytes) 4/1/2005 2:48 PM Microsoft Corporation
c:\windows\system32\w32time.dll
schannel 5.2.3790.1830 (srv03_spl_rtm.050324-1447) 141.00 KB (144,384
bytes) 4/1/2005 2:48 PM Microsoft Corporation
c:\windows\system32\schannel.dll
wdigest 5.2.3790.1830 (srv03_spl_rtm.050324-1447) 74.00 KB (75,776
bytes) 4/1/2005 2:48 PM Microsoft Corporation
c:\windows\system32\wdigest.dll
rassfm 5.2.3790.1830 (srv03_spl_rtm.050324-1447) 23.00 KB (23,552
bytes) 4/1/2005 2:49 PM Microsoft Corporation
c:\windows\system32\rassfm.dll
kdcsvc 5.2.3790.1830 (srv03_spl_rtm.050324-1447) 213.50 KB (218,624
bytes) 4/1/2005 2:49 PM Microsoft Corporation
c:\windows\system32\kdcsvc.dll
ntdsa 5.2.3790.1830 (srv03_spl_rtm.050324-1447) 1.45 MB (1,516,032
bytes) 4/1/2005 2:48 PM Microsoft Corporation
c:\windows\system32\ntdsa.dll

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esent 5.2.3790.1830 (srv03_sp1_rtm.050324-1447) 1,022.50 KB (1,047,040
bytes) 4/1/2005 2:49 PM Microsoft Corporation
c:\windows\system32\esent.dll
ntdsatq 5.2.3790.1830 (srv03_sp1_rtm.050324-1447) 29.50 KB (30,208
bytes) 4/1/2005 2:48 PM Microsoft Corporation
c:\windows\system32\ntdsatq.dll
mswsock 5.2.3790.1830 (srv03_sp1_rtm.050324-1447) 250.50 KB (256,512
bytes) 4/1/2005 2:48 PM Microsoft Corporation
c:\windows\system32\mswsock.dll
scecli 5.2.3790.1830 (srv03_sp1_rtm.050324-1447) 186.50 KB (190,976
bytes) 4/1/2005 2:48 PM Microsoft Corporation
c:\windows\system32\scecli.dll
ws03res 5.2.3790.1830 (srv03_sp1_rtm.050324-1447) 793.50 KB (812,544
bytes) 4/1/2005 2:52 PM Microsoft Corporation
c:\windows\system32\ws03res.dll
pstorsvc 5.2.3790.0 (srv03_rtm.030324-2048) 24.00 KB (24,576 bytes)
3/25/2003 1:00 PM Microsoft Corporation
c:\windows\system32\pstorsvc.dll
psbase 5.2.3790.1830 (srv03_sp1_rtm.050324-1447) 84.00 KB (86,016
bytes) 4/1/2005 2:48 PM Microsoft Corporation
c:\windows\system32\psbase.dll
hnetcfg 5.2.3790.1830 (srv03_sp1_rtm.050324-1447) 343.50 KB (351,744
bytes) 4/1/2005 2:49 PM 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 1:00 PM Microsoft Corporation
c:\windows\system32\wshtcpip.dll
dssenh 5.2.3790.1830 (srv03_sp1_rtm.050324-1447) 139.98 KB (143,336
bytes) 4/1/2005 2:49 PM Microsoft Corporation
c:\windows\system32\dssenh.dll
svchost 5.2.3790.1830 (srv03_sp1_rtm.050324-1447) 14.00 KB (14,336
bytes) 4/1/2005 2:48 PM Microsoft Corporation
c:\windows\system32\svchost.exe
rpcss 5.2.3790.1830 (srv03_sp1_rtm.050324-1447) 406.00 KB (415,744
bytes) 4/1/2005 2:48 PM Microsoft Corporation
c:\windows\system32\rpcss.dll
wkssvc 5.2.3790.1830 (srv03_sp1_rtm.050324-1447) 130.00 KB (133,120
bytes) 3/25/2003 1:00 PM Microsoft Corporation
c:\windows\system32\wkssvc.dll
wiarpc 5.2.3790.1830 (srv03_sp1_rtm.050324-1447) 32.50 KB (33,280
bytes) 4/1/2005 2:48 PM Microsoft Corporation
c:\windows\system32\wiarpc.dll
es 2001.12.4720.1830 (srv03_sp1_rtm.050324-1447) 233.00 KB (238,592
bytes) 4/1/2005 2:49 PM Microsoft Corporation
c:\windows\system32\es.dll
srvsvc 5.2.3790.1830 (srv03_sp1_rtm.050324-1447) 93.50 KB (95,744
bytes) 3/25/2003 1:00 PM Microsoft Corporation
c:\windows\system32\srvsvc.dll
hidserv 5.2.3790.1830 (srv03_sp1_rtm.050324-1447) 21.50 KB (22,016
bytes) 4/1/2005 2:49 PM Microsoft Corporation
c:\windows\system32\hidserv.dll
hid 5.2.3790.1830 (srv03_sp1_rtm.050324-1447) 18.50 KB (18,944 bytes)
4/1/2005 2:49 PM Microsoft Corporation
c:\windows\system32\hid.dll

sens 5.2.3790.1830 (srv03_sp1_rtm.050324-1447) 36.50 KB (37,376 bytes)
4/1/2005 2:48 PM Microsoft Corporation
c:\windows\system32\sens.dll
actxprxy 6.00.3790.1830 (srv03_sp1_rtm.050324-1447) 96.50 KB
(98,816 bytes) 4/1/2005 2:49 PM Microsoft Corporation
c:\windows\system32\actxprxy.dll
netman 5.2.3790.1830 (srv03_sp1_rtm.050324-1447) 258.50 KB (264,704
bytes) 4/1/2005 2:48 PM Microsoft Corporation
c:\windows\system32\netman.dll
mprapi 5.2.3790.1830 (srv03_sp1_rtm.050324-1447) 89.00 KB (91,136
bytes) 4/1/2005 2:48 PM Microsoft Corporation
c:\windows\system32\mprapi.dll
activeds 5.2.3790.1830 (srv03_sp1_rtm.050324-1447) 194.00 KB (198,656
bytes) 4/1/2005 2:49 PM Microsoft Corporation
c:\windows\system32\activeds.dll
adslrpc 5.2.3790.1830 (srv03_sp1_rtm.050324-1447) 146.00 KB (149,504
bytes) 4/1/2005 2:49 PM Microsoft Corporation
c:\windows\system32\adslrpc.dll
credui 5.2.3790.1830 (srv03_sp1_rtm.050324-1447) 162.00 KB (165,888
bytes) 4/1/2005 2:49 PM Microsoft Corporation
c:\windows\system32\credui.dll
atl 3.05.2283 83.00 KB (84,992 bytes) 3/25/2003 1:00 PM
Microsoft Corporation c:\windows\system32\atl.dll
rtutils 5.2.3790.1830 (srv03_sp1_rtm.050324-1447) 34.50 KB (35,328
bytes) 4/1/2005 2:48 PM Microsoft Corporation
c:\windows\system32\rtutils.dll
netshell 5.2.3790.1830 (srv03_sp1_rtm.050324-1447) 1.73 MB (1,812,992
bytes) 4/1/2005 2:48 PM Microsoft Corporation
c:\windows\system32\netshell.dll
clusapi 5.2.3790.1830 (srv03_sp1_rtm.050324-1447) 60.00 KB (61,440
bytes) 4/1/2005 2:49 PM 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 1:00 PM 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 1:00 PM Microsoft Corporation
c:\windows\system32\rasman.dll
tapi32 5.2.3790.1830 (srv03_sp1_rtm.050324-1447) 179.50 KB (183,808
bytes) 4/1/2005 2:48 PM Microsoft Corporation
c:\windows\system32\tapi32.dll
wininet 6.00.3790.1830 (srv03_sp1_rtm.050324-1447) 646.00 KB
(661,504 bytes) 4/1/2005 2:48 PM Microsoft Corporation
c:\windows\system32\wininet.dll
wzcsapi 5.2.3790.1830 (srv03_sp1_rtm.050324-1447) 41.00 KB (41,984
bytes) 4/1/2005 2:48 PM Microsoft Corporation
c:\windows\system32\wzcsapi.dll
wzcsvc 5.2.3790.1830 (srv03_sp1_rtm.050324-1447) 364.50 KB (373,248
bytes) 4/1/2005 2:48 PM 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 1:00 PM Microsoft Corporation
c:\windows\system32\wmi.dll

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dhcpcsvc  5.2.3790.1830 (srv03_spl_rtm.050324-1447) 113.50 KB (116,224
bytes)    3/25/2003 1:00 PM Microsoft Corporation
c:\windows\system32\dhcpcsvc.dll
netcfgx  5.2.3790.1830 (srv03_spl_rtm.050324-1447) 763.00 KB (781,312
bytes)    4/1/2005 2:48 PM Microsoft Corporation
c:\windows\system32\netcfgx.dll
winipsec 5.2.3790.1830 (srv03_spl_rtm.050324-1447) 35.50 KB (36,352
bytes)    4/1/2005 2:48 PM Microsoft Corporation
c:\windows\system32\winipsec.dll
wbemprox 5.2.3790.1830 (srv03_spl_rtm.050324-1447) 20.50 KB (20,992
bytes)    4/1/2005 2:49 PM Microsoft Corporation
c:\windows\system32\wbem\wbemprox.dll
wbemcomn 5.2.3790.1830 (srv03_spl_rtm.050324-1447) 221.00 KB (226,304
bytes)    4/1/2005 2:49 PM Microsoft Corporation
c:\windows\system32\wbem\wbemcomn.dll
wmisvc  5.2.3790.1830 (srv03_spl_rtm.050324-1447) 140.00 KB (143,360
bytes)    4/1/2005 2:49 PM Microsoft Corporation
c:\windows\system32\wbem\wmisvc.dll
vssapi  5.2.3790.1830 (srv03_spl_rtm.050324-1447) 548.00 KB (561,152
bytes)    4/1/2005 2:48 PM Microsoft Corporation
c:\windows\system32\vssapi.dll
wbemcore 5.2.3790.1830 (srv03_spl_rtm.050324-1447) 497.50 KB (509,440
bytes)    4/1/2005 2:49 PM Microsoft Corporation
c:\windows\system32\wbem\wbemcore.dll
esscli  5.2.3790.1830 (srv03_spl_rtm.050324-1447) 250.00 KB (256,000
bytes)    4/1/2005 2:49 PM Microsoft Corporation
c:\windows\system32\wbem\esscli.dll
fastprox 5.2.3790.1830 (srv03_spl_rtm.050324-1447) 471.00 KB (482,304
bytes)    4/1/2005 2:49 PM Microsoft Corporation
c:\windows\system32\wbem\fastprox.dll
wbemsvc  5.2.3790.0 (srv03_rtm.030324-2048) 42.50 KB (43,520 bytes)
11/30/2004 8:09 AM Microsoft Corporation
c:\windows\system32\wbem\wbemsvc.dll
wmiutils 5.2.3790.1830 (srv03_spl_rtm.050324-1447) 93.50 KB (95,744
bytes)    4/1/2005 2:49 PM Microsoft Corporation
c:\windows\system32\wbem\wmiutils.dll
comsvcs 2001.12.4720.1830 (srv03_spl_rtm.050324-1447) 1.19 MB
(1,248,256 bytes) 4/1/2005 2:49 PM Microsoft Corporation
c:\windows\system32\comsvcs.dll
repdrvfs 5.2.3790.1830 (srv03_spl_rtm.050324-1447) 172.50 KB (176,640
bytes)    4/1/2005 2:49 PM Microsoft Corporation
c:\windows\system32\wbem\repdrvfs.dll
wmiprvsd 5.2.3790.1830 (srv03_spl_rtm.050324-1447) 404.00 KB (413,696
bytes)    4/1/2005 2:49 PM Microsoft Corporation
c:\windows\system32\wbem\wmiprvsd.dll
wbemess  5.2.3790.1830 (srv03_spl_rtm.050324-1447) 271.50 KB (278,016
bytes)    4/1/2005 2:49 PM Microsoft Corporation
c:\windows\system32\wbem\wbemess.dll
ncprov  5.2.3790.1830 (srv03_spl_rtm.050324-1447) 46.50 KB (47,616
bytes)    4/1/2005 2:49 PM Microsoft Corporation
c:\windows\system32\wbem\ncprov.dll
wbemcons 5.2.3790.1830 (srv03_spl_rtm.050324-1447) 45.50 KB (46,592
bytes)    4/1/2005 2:49 PM Microsoft Corporation
c:\windows\system32\wbem\wbemcons.dll

rasdlg   5.2.3790.1830 (srv03_spl_rtm.050324-1447) 663.00 KB (678,912
bytes)    3/25/2003 1:00 PM Microsoft Corporation
c:\windows\system32\rasdlg.dll
rasadhlp 5.2.3790.1830 (srv03_spl_rtm.050324-1447) 7.50 KB (7,680
bytes)    4/1/2005 2:48 PM Microsoft Corporation
c:\windows\system32\rasadhlp.dll
pchsvc  5.2.3790.1830 (srv03_spl_rtm.050324-1447) 39.00 KB (39,936
bytes)    4/1/2005 2:49 PM Microsoft Corporation
c:\windows\pchealth\helpctr\binaries\pchsvc.dll
explorer 6.00.3790.1830 (srv03_spl_rtm.050324-1447) 1.00 MB
(1,050,624 bytes) 4/1/2005 2:49 PM Microsoft Corporation
c:\windows\explorer.exe
browseui 6.00.3790.1830 (srv03_spl_rtm.050324-1447) 1,009.00 KB
(1,033,216 bytes) 4/1/2005 2:49 PM Microsoft Corporation
c:\windows\system32\browseui.dll
shdocvw  6.00.3790.1830 (srv03_spl_rtm.050324-1447) 1.43 MB
(1,502,720 bytes) 4/1/2005 2:48 PM Microsoft Corporation
c:\windows\system32\shdocvw.dll
cryptui  5.131.3790.1830 (srv03_spl_rtm.050324-1447) 496.50 KB
(508,416 bytes) 4/1/2005 2:49 PM Microsoft Corporation
c:\windows\system32\cryptui.dll
apphelp  5.2.3790.1830 (srv03_spl_rtm.050324-1447) 146.50 KB (150,016
bytes)    4/1/2005 2:49 PM Microsoft Corporation
c:\windows\system32\apphelp.dll
themeui  6.00.3790.1830 (srv03_spl_rtm.050324-1447) 377.50 KB
(386,560 bytes) 4/1/2005 2:48 PM 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 1:00 PM Microsoft Corporation
c:\windows\system32\msimg32.dll
linkinfo 5.2.3790.1830 (srv03_spl_rtm.050324-1447) 19.00 KB (19,456
bytes)    4/1/2005 2:49 PM Microsoft Corporation
c:\windows\system32\linkinfo.dll
ntshrui  6.00.3790.1830 (srv03_spl_rtm.050324-1447) 140.00 KB
(143,360 bytes) 4/1/2005 2:48 PM Microsoft Corporation
c:\windows\system32\ntshrui.dll
urlmon  6.00.3790.1830 (srv03_spl_rtm.050324-1447) 673.00 KB
(689,152 bytes) 4/1/2005 2:48 PM Microsoft Corporation
c:\windows\system32\urlmon.dll
webcheck 6.00.3790.1830 (srv03_spl_rtm.050324-1447) 272.50 KB
(279,040 bytes) 4/1/2005 2:48 PM Microsoft Corporation
c:\windows\system32\webcheck.dll
wsock32  5.2.3790.0 (srv03_rtm.030324-2048) 22.00 KB (22,528 bytes)
3/25/2003 1:00 PM Microsoft Corporation
c:\windows\system32\wsock32.dll
stobject 5.2.3790.1830 (srv03_spl_rtm.050324-1447) 120.50 KB (123,392
bytes)    4/1/2005 2:48 PM Microsoft Corporation
c:\windows\system32\stobject.dll
batmeter 6.00.3790.1830 (srv03_spl_rtm.050324-1447) 31.50 KB
(32,256 bytes) 4/1/2005 2:49 PM Microsoft Corporation
c:\windows\system32\batmeter.dll
powrprof 6.00.3790.1830 (srv03_spl_rtm.050324-1447) 16.50 KB
(16,896 bytes) 4/1/2005 2:48 PM Microsoft Corporation
c:\windows\system32\powrprof.dll

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browselc 6.00.3790.0 (srv03_rtm.030324-2048) 62.00 KB (63,488 bytes)
3/25/2003 1:00 PM Microsoft Corporation
c:\windows\system32\browselc.dll
shdoclc 6.00.3790.0 (srv03_rtm.030324-2048) 588.50 KB (602,624
bytes) 3/25/2003 1:00 PM Microsoft Corporation
c:\windows\system32\shdoclc.dll
drprov 5.2.3790.1830 (srv03_spl_rtm.050324-1447) 14.00 KB (14,336
bytes) 4/1/2005 2:49 PM Microsoft Corporation
c:\windows\system32\drprov.dll
ntlanman 5.2.3790.1830 (srv03_spl_rtm.050324-1447) 43.50 KB (44,544
bytes) 4/1/2005 2:48 PM 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 1:00 PM Microsoft Corporation
c:\windows\system32\netui0.dll
netuil 5.2.3790.0 (srv03_rtm.030324-2048) 184.00 KB (188,416
bytes) 3/25/2003 1:00 PM Microsoft Corporation
c:\windows\system32\netuil.dll
davclnt 5.2.3790.0 (srv03_rtm.030324-2048) 23.50 KB (24,064 bytes)
3/25/2003 1:00 PM Microsoft Corporation
c:\windows\system32\davclnt.dll
helpctr 5.2.3790.1830 (srv03_spl_rtm.050324-1447) 778.00 KB (796,672
bytes) 4/1/2005 2:49 PM Microsoft Corporation
c:\windows\pchealth\helpctr\binaries\helpctr.exe
hcappres 5.2.3790.0 (srv03_rtm.030324-2048) 6.50 KB (6,656 bytes)
11/30/2004 8:12 AM Microsoft Corporation
c:\windows\pchealth\helpctr\binaries\hcappres.dll
itss 5.2.3790.1830 (srv03_spl_rtm.050324-1447) 133.50 KB (136,704
bytes) 4/1/2005 2:49 PM Microsoft Corporation
c:\windows\system32\itss.dll
msxml3 8.70.1104.0 1.06 MB (1,107,456 bytes) 4/1/2005 2:48 PM
Microsoft Corporation c:\windows\system32\msxml3.dll
pchshell 5.2.3790.1830 (srv03_spl_rtm.050324-1447) 104.50 KB (107,008
bytes) 4/1/2005 2:49 PM Microsoft Corporation
c:\windows\pchealth\helpctr\binaries\pchshell.dll
mlang 6.00.3790.1830 (srv03_spl_rtm.050324-1447) 577.50 KB (591,360
bytes) 4/1/2005 2:49 PM Microsoft Corporation
c:\windows\system32\mlang.dll
mshtml 6.00.3790.1830 (srv03_spl_rtm.050324-1447) 2.96 MB
(3,108,864 bytes) 4/1/2005 2:48 PM Microsoft Corporation
c:\windows\system32\mshtml.dll
msls31 3.10.349.0 142.00 KB (145,408 bytes) 4/1/2005 2:48 PM
Microsoft Corporation c:\windows\system32\msls31.dll
msimtf 5.2.3790.1830 (srv03_spl_rtm.050324-1447) 156.00 KB (159,744
bytes) 4/1/2005 2:48 PM Microsoft Corporation
c:\windows\system32\msimtf.dll
msctf 5.2.3790.1830 (srv03_spl_rtm.050324-1447) 311.00 KB (318,464
bytes) 4/1/2005 2:48 PM Microsoft Corporation
c:\windows\system32\msctf.dll
jscript 5.6.0.8827 448.00 KB (458,752 bytes) 4/1/2005 2:49 PM
Microsoft Corporation c:\windows\system32\jscript.dll
imm32 5.2.3790.1830 (srv03_spl_rtm.050324-1447) 108.00 KB (110,592
bytes) 4/1/2005 2:49 PM Microsoft Corporation
c:\windows\system32\imm32.dll

mshtml 6.00.3790.1830 (srv03_spl_rtm.050324-1447) 454.50 KB
(465,408 bytes) 4/1/2005 2:48 PM Microsoft Corporation
c:\windows\system32\mshtml.dll
vbscript 5.6.0.8827 392.00 KB (401,408 bytes) 4/1/2005 2:48 PM
Microsoft Corporation c:\windows\system32\vbscript.dll
msinfo 5.2.3790.1830 (srv03_spl_rtm.050324-1447) 376.00 KB (385,024
bytes) 4/1/2005 2:49 PM Microsoft Corporation
c:\windows\pchealth\helpctr\binaries\msinfo.dll
mfc42u 6.06.8063.0 1.11 MB (1,163,776 bytes) 4/1/2005 2:49 PM
Microsoft Corporation c:\windows\system32\mfc42u.dll
odbc32 3.526.1830.0 (srv03_spl_rtm.050324-1447) 240.00 KB (245,760
bytes) 4/1/2005 2:48 PM Microsoft Corporation
c:\windows\system32\odbc32.dll
comdlg32 6.00.3790.1830 (srv03_spl_rtm.050324-1447) 274.50 KB
(281,088 bytes) 3/25/2003 1:00 PM Microsoft Corporation
c:\windows\system32\comdlg32.dll
odbcint 3.526.1830.0 (srv03_spl_rtm.050324-1447) 92.00 KB (94,208
bytes) 4/1/2005 2:48 PM Microsoft Corporation
c:\windows\system32\odbcint.dll
riched32 5.2.3790.0 (srv03_rtm.030324-2048) 3.50 KB (3,584 bytes)
3/25/2003 1:00 PM Microsoft Corporation
c:\windows\system32\riched32.dll
riched20 5.31.23.1224 439.00 KB (449,536 bytes) 4/1/2005 2:48 PM
Microsoft Corporation c:\windows\system32\riched20.dll
audiodev 5.2.3790.3700 (srv03_spl_rtm.050324-1447) 470.00 KB (481,280
bytes) 4/1/2005 2:52 PM Microsoft Corporation
c:\windows\system32\audiodev.dll
wmvcore 10.00.00.3700 (srv03_spl_rtm.050324-1447) 2.21 MB (2,314,240
bytes) 4/1/2005 2:48 PM Microsoft Corporation
c:\windows\system32\wmvcore.dll
wmasf10.00.00.3700 (srv03_spl_rtm.050324-1447) 220.50 KB (225,792
bytes) 4/1/2005 2:48 PM Microsoft Corporation
c:\windows\system32\wmasf.dll
helpsvc 5.2.3790.1830 (srv03_spl_rtm.050324-1447) 745.00 KB (762,880
bytes) 4/1/2005 2:49 PM Microsoft Corporation
c:\windows\pchealth\helpctr\binaries\helpsvc.exe
regedit 5.2.3790.1830 (srv03_spl_rtm.050324-1447) 144.00 KB (147,456
bytes) 3/24/2005 7:44 PM Microsoft Corporation
c:\windows\regedit.exe
aclui 5.2.3790.1830 (srv03_spl_rtm.050324-1447) 117.50 KB (120,320
bytes) 4/1/2005 2:49 PM Microsoft Corporation
c:\windows\system32\aclui.dll
ulib 5.2.3790.1830 (srv03_spl_rtm.050324-1447) 271.00 KB (277,504
bytes) 3/25/2003 1:00 PM Microsoft Corporation
c:\windows\system32\ulib.dll
clb 5.2.3790.0 (srv03_rtm.030324-2048) 11.50 KB (11,776 bytes)
3/25/2003 1:00 PM Microsoft Corporation
c:\windows\system32\clb.dll

[Services]

Display Name Name State Start Mode Service Type Path Error Control
Start Name Tag ID

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```

Application Experience Lookup Service AeLookupSvc Stopped
Manual Share Process c:\windows\system32\svchost.exe -k
netsvcs Normal LocalSystem 0
Alerter Alerter Stopped Manual Share Process
c:\windows\system32\svchost.exe -k localservec 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
Windows Audio AudioSrv Stopped Disabled Share Process
c:\windows\system32\svchost.exe -k netsvcs Normal
LocalSystem 0
Background Intelligent Transfer Service BITS Stopped Disabled
Share Process c:\windows\system32\svchost.exe -k netsvcs
Normal LocalSystem 0
Computer Browser Browser Stopped Disabled 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
COM+ System Application COMSysApp Stopped Manual Own Process
c:\windows\system32\dlh\host.exe /processid:{02d4b3f1-fd88-11d1-
960d-00805fc79235} Normal LocalSystem 0
Cryptographic Services CryptSvc Stopped Manual 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 Manual 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 Stopped Manual Share Process
c:\windows\system32\svchost.exe -k netsvcs Normal
LocalSystem 0
DNS Client Dnscache Stopped Manual Share Process
c:\windows\system32\svchost.exe -k networkservice Normal NT
AUTHORITY\NetworkService 0
Error Reporting Service ERSvc Stopped Disabled 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
Mylex Global Array Manager Server gamscm Stopped Manual Own
Process system32\gamserver\gamscm.exe Normal LocalSystem 0
Help and Support helpsvc Running Manual Share Process
c:\windows\system32\svchost.exe -k netsvcs Normal
LocalSystem 0
HID Input Service HidServ Running Auto 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\ismserver.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 localservec 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 mmmsrvc Stopped Disabled Own
Process c:\windows\system32\mmmsrvc.exe Normal LocalSystem 0
Distributed Transaction Coordinator MSDTC Stopped Manual Own
Process c:\windows\system32\msdtc.exe Normal NT
AUTHORITY\NetworkService 0
Windows Installer MSIServer Stopped Manual Share Process
c:\windows\system32\msiexec.exe /v Normal LocalSystem 0
Microsoft Search MSSEARCH Stopped Manual Share Process
"c:\program files\common files\system\mssearch\bin\mssearch.exe"
Normal LocalSystem 0
MSSQLSERVER MSSQLSERVER Stopped Manual Own Process
c:\progra~1\microso~1\mssql\bin\sqlservr.exe Normal
LocalSystem 0
MSSQLServerADHelper MSSQLServerADHelper Stopped Manual Own
Process c:\program files\microsoft sql
server\80\tools\bin\sqladhlp.exe Normal LocalSystem 0

```

Network DDE	NetDDE	Stopped	Manual	Share Process						Resultant Set of Policy Provider	RSOPProv	Stopped	Manual						
	c:\windows\system32\netdde.exe	Normal	LocalSystem	0						Share Process	c:\windows\system32\rsopprov.exe	Normal							
Network DDE	DSDM	NetDDEdsdm	Stopped	Manual	Share Process					LocalSystem	0								
	c:\windows\system32\netdde.exe	Normal	LocalSystem	0						Special Administration Console Helper	sacsvr	Stopped	Manual						
Net Logon	Netlogon	Stopped	Manual	Share Process						Share Process	c:\windows\system32\svchost.exe -k netsvcs	Normal	LocalSystem	0					
	c:\windows\system32\lsass.exe	Normal	LocalSystem	0						Security Accounts Manager SamSs	Stopped	Manual	Share Process						
Network Connections	Netman	Running	Manual	Share Process						c:\windows\system32\lsass.exe	Normal	LocalSystem	0						
	c:\windows\system32\svchost.exe -k netsvcs	Normal	LocalSystem	0						Smart Card SCardSvr	Stopped	Manual	Share Process						
Network Location Awareness (NLA)	Nla	Running	Manual	Share Process						c:\windows\system32\scardsvr.exe	Ignore	NT							
Process	c:\windows\system32\svchost.exe -k netsvcs	Normal	LocalSystem	0						AUTHORITY\LocalService	0								
File Replication	NtFrs	Stopped	Manual	Own Process						Task Scheduler Schedule	Stopped	Manual	Share Process						
	c:\windows\system32\ntfrs.exe	Ignore	LocalSystem	0						c:\windows\system32\svchost.exe -k netsvcs	Normal								
NT LM Security Support Provider	NtLmSsp	Stopped	Manual	Share Process						LocalSystem	0								
Process	c:\windows\system32\lsass.exe	Normal	LocalSystem	0						Secondary Logon seclogon	Stopped	Disabled	Share Process						
										c:\windows\system32\svchost.exe -k netsvcs	Ignore								
										LocalSystem	0								
Removable Storage	NtmsSvc	Stopped	Manual	Share Process						System Event Notification SENS	Running	Auto	Share Process						
	c:\windows\system32\svchost.exe -k netsvcs	Normal	LocalSystem	0						c:\windows\system32\svchost.exe -k netsvcs	Normal								
Plug and Play	PlugPlay	Running	Auto	Share Process						LocalSystem	0								
	c:\windows\system32\services.exe	Normal	LocalSystem	0						Windows Firewall/Internet Connection Sharing (ICS)	SharedAccess								
										Stopped	Disabled	Share Process							
IPSEC Services	PolicyAgent	Stopped	Disabled	Share Process						c:\windows\system32\svchost.exe -k netsvcs	Normal								
	c:\windows\system32\lsass.exe	Normal	LocalSystem	0						LocalSystem	0								
ONC/RPC Portmapper	portmap	Stopped	Manual	Own Process						Shell Hardware Detection	ShellHWDetection	Running	Auto	Share Process					
	c:\program files\qlogic corporation\sansurfer\portmap.exe	Normal	LocalSystem	0						Process	c:\windows\system32\svchost.exe -k netsvcs	Ignore							
										LocalSystem	0								
Protected Storage	ProtectedStorage	Running	Auto	Share Process						Print Spooler Spooler	Stopped	Disabled	Own Process						
	c:\windows\system32\lsass.exe	Normal	LocalSystem	0						c:\windows\system32\spoolsv.exe	Normal	LocalSystem	0						
QLogic Management Suite	Java Agent	QLManagementAgentJava	Stopped							SpySer	SpySer	Stopped	Manual	Own Process					
	Manual	Own Process								system32\gamserv\spyserv.exe	Normal	LocalSystem	0						
	c:\progra~1\qlogic~1\sansur~1\qlremote.exe	Normal	LocalSystem	0						SQLSERVERAGENT	SQLSERVERAGENT	Stopped	Manual	Own Process					
										c:\program files\microsoft sql server\mssql\binn\sqlagent.exe -i	mssqlserver	Normal	LocalSystem	0					
Remote Access Auto Connection Manager	RasAuto	Stopped	Manual							Windows Image Acquisition (WIA)	stisvc	Stopped	Disabled	Share Process					
	Share Process	c:\windows\system32\svchost.exe -k netsvcs	Normal	LocalSystem	0					Process	c:\windows\system32\svchost.exe -k imgsvc	Normal	NT						
Remote Access Connection Manager	RasMan	Stopped	Manual							AUTHORITY\LocalService	0								
	Share Process	c:\windows\system32\svchost.exe -k netsvcs	Normal	LocalSystem	0					Microsoft Software Shadow Copy Provider	swprv	Stopped	Manual	Own Process					
										Process	c:\windows\system32\svchost.exe -k swprv	Normal							
										LocalSystem	0								
Remote Desktop Help Session Manager	RDSessMgr	Stopped	Manual	Own Process						Performance Logs and Alerts	SysmonLog	Stopped	Manual	Own Process					
	Process	c:\windows\system32\sessmgr.exe	Normal	LocalSystem	0					Process	c:\windows\system32\smlogsvc.exe	Normal	NT						
										Authority\NetworkService	0								
Routing and Remote Access	RemoteAccess	Stopped	Disabled	Share Process						Telephony Tapisrv	Stopped	Manual	Share Process						
	Process	c:\windows\system32\svchost.exe -k netsvcs	Normal	LocalSystem	0					c:\windows\system32\svchost.exe -k tapisrv	Normal								
										LocalSystem	0								
Remote Registry	RemoteRegistry	Stopped	Disabled	Share Process						Terminal Services	TermService	Stopped	Disabled	Share Process					
	c:\windows\system32\svchost.exe -k regsvc	Normal	NT							c:\windows\system32\svchost.exe -k termsvcs	Normal								
										LocalSystem	0								
AUTHORITY\LocalService	0									Themes	Themes	Stopped	Disabled	Share Process					
Remote Procedure Call (RPC) Locator	RpcLocator	Stopped	Manual	Own Process						c:\windows\system32\svchost.exe -k netsvcs	Normal								
	Process	c:\windows\system32\locator.exe	Normal	NT						LocalSystem	0								
										AUTHORITY\NetworkService	0								
Remote Procedure Call (RPC)	RpcSsRunning	Auto	Share Process							Telnet	TlntSvr	Stopped	Disabled	Own Process					
	c:\windows\system32\svchost.exe -k rpcss	Normal	NT							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
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 LocalSystem 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 Stopped Disabled 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 Manual
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\wmiaprv.exe Normal LocalSystem
0
Automatic Updates wuauclt 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
Microsoft SQL Server All Users:Microsoft SQL Server All Users
Microsoft SQL Server - Switch All Users:Microsoft SQL Server - Switch
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 TWINS\Administrator:Accessories TWINS\Administrator
Accessories\Accessibility TWINS\Administrator:Accessories\Accessibility
TWINS\Administrator
Accessories\Entertainment TWINS\Administrator:Accessories\Entertainment
TWINS\Administrator
Administrative Tools TWINS\Administrator:Administrative Tools
TWINS\Administrator
QLogic Corporation TWINS\Administrator:QLogic Corporation
TWINS\Administrator
QLogic Corporation\SANblade Control VIX TWINS\Administrator:QLogic
Corporation\SANblade Control VIX TWINS\Administrator
QLogic Management Suite TWINS\Administrator:QLogic Management Suite
TWINS\Administrator
Startup TWINS\Administrator:Startup TWINS\Administrator

```

[Startup Programs]

```

Program Command User Name Location
desktop desktop.ini NT AUTHORITY\SYSTEM Startup
desktop desktop.ini TWINS\Administrator Startup
desktop desktop.ini .DEFAULT Startup
desktop desktop.ini All Users Common Startup
KernelFaultCheck %systemroot%\system32\dumprep 0 -k All Users
HKLM\SOFTWARE\Microsoft\Windows\CurrentVersion\Run

```

[OLE Registration]

```

Object Local Server
Sound (OLE2) sndrec32.exe

```

Media Clip mplay32.exe
 Video Clip mplay32.exe /avi
 MIDI Sequence mplay32.exe /mid
 SoundNot Available
 Media ClipNot Available
 WordPad Document "%programfiles%\windows
 nt\accessories\wordpad.exe"
 Windows Media Services DRM Storage object 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
 Version 6.0.3790.1830
 Build63790.1830
 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 2:00:00 PM	C:\WINDOWS\system32 Microsoft Corporation
browseic.dll	6.0.3790.0	62 KB	3/25/2003 2:00:00 PM	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
iecontlc.dll	<File Missing>	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
ieexplore.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 2:00:00 PM	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 2:00:00 PM	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
mshtml.ed.dll	6.0.3790.1830	455 KB	3/24/2005 6:07:26 PM	C:\WINDOWS\system32 Microsoft Corporation
mshtmlr.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 2:00:00 PM	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 2:00:00 PM	C:\WINDOWS\system32 Microsoft Corporation

```

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 2:00:00 PM 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
ProxyDisabled
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

```

```

Key Name:
HKEY_LOCAL_MACHINE\SYSTEM\CurrentControlSet\Control\Class\{4D36E972-
E325-11CE-BFC1-08002bE10318}\0007
Class Name:      <NO CLASS>
Last Write Time: 9/30/2005 - 10:27 AM
Value 0
Name:            TxPacketDescCnt
Type:            REG_SZ
Data:            1200
Value 1
Name:            RxStdDescCnt
Type:            REG_SZ
Data:            1200
Value 2
Name:            RxCoalescingTicks
Type:            REG_SZ
Data:            1500
Value 3
Name:            TxCoalescingTicks
Type:            REG_SZ
Data:            1500
Value 4
Name:            RxMaxCoalescedFrames

```


Type:	REG_SZ	Type:	REG_SZ
Data:	330	Data:	0
Value 5		Value 16	
Name:	TxMaxCoalescedFrames	Name:	WireSpeed
Type:	REG_SZ	Type:	REG_SZ
Data:	330	Data:	1
Value 6		Value 17	
Name:	Characteristics	Name:	InfPath
Type:	REG_DWORD	Type:	REG_SZ
Data:	0x84	Data:	oem9.inf
Value 7		Value 18	
Name:	BusType	Name:	InfSection
Type:	REG_SZ	Type:	REG_SZ
Data:	5	Data:	BCM5704.XpInst
Value 8		Value 19	
Name:	ComponentId	Name:	InfSectionExt
Type:	REG_SZ	Type:	REG_SZ
Data:	pci\ven_14e4&dev_1648	Data:	.NTx86
Value 9		Value 20	
Name:	Enable8021p	Name:	ProviderName
Type:	REG_SZ	Type:	REG_SZ
Data:	0	Data:	Broadcom
Value 10		Value 21	
Name:	FlowControlCap	Name:	DriverDateData
Type:	REG_SZ	Type:	REG_BINARY
Data:	2147483648	Data:	00 c0 1d 43 84 2a c5 01 - .Ã.C.*Å.
Value 11		Value 22	
Name:	LargeSendOffload	Name:	DriverDate
Type:	REG_SZ	Type:	REG_SZ
Data:	1	Data:	3-17-2005
Value 12		Value 23	
Name:	RequestedMediaType	Name:	DriverVersion
Type:	REG_SZ	Type:	REG_SZ
Data:	0	Data:	8.22.1.0
Value 13		Value 24	
Name:	RxMtu	Name:	MatchingDeviceId
Type:	REG_SZ	Type:	REG_SZ
Data:	1500	Data:	pci\ven_14e4&dev_1648
Value 14		Value 25	
Name:	TaskOffloadCap	Name:	DriverDesc
Type:	REG_SZ	Type:	REG_SZ
Data:	63	Data:	Broadcom NetXtreme Gigabit Ethernet
Value 15		Value 26	
Name:	WakeUpModeCap		

Name: NetCfgInstanceId
Type: REG_SZ
Data: {AA7C6D0D-B47D-4C62-BCC9-8067707C6CA2}

Value 27
Name: PnPCapabilities
Type: REG_DWORD
Data: 0x38

Key Name:
HKEY_LOCAL_MACHINE\SYSTEM\CurrentControlSet\Control\Class\{4D36E972-E325-11CE-BFC1-08002BE10318}\0007\Linkage
Class Name: <NO CLASS>
Last Write Time: 8/18/2005 - 9:55 AM

Value 0
Name: RootDevice
Type: REG_MULTI_SZ
Data: {AA7C6D0D-B47D-4C62-BCC9-8067707C6CA2}

Value 1
Name: UpperBind
Type: REG_MULTI_SZ
Data: RasPppoe
Ndisuio
Tcpip

Value 2
Name: Export
Type: REG_MULTI_SZ
Data: \Device\{AA7C6D0D-B47D-4C62-BCC9-8067707C6CA2}

Key Name:
HKEY_LOCAL_MACHINE\SYSTEM\CurrentControlSet\Control\Class\{4D36E972-E325-11CE-BFC1-08002BE10318}\0007\Ndi
Class Name: <NO CLASS>
Last Write Time: 8/18/2005 - 9:55 AM

Value 0
Name: Service
Type: REG_SZ
Data: b57w2k

Key Name:
HKEY_LOCAL_MACHINE\SYSTEM\CurrentControlSet\Control\Class\{4D36E972-E325-11CE-BFC1-08002BE10318}\0007\Ndi\Interfaces
Class Name: <NO CLASS>
Last Write Time: 8/18/2005 - 9:55 AM

Value 0
Name: UpperRange
Type: REG_SZ
Data: ndis5

Value 1

Name: LowerRange
Type: REG_SZ
Data: ethernet

Key Name:
HKEY_LOCAL_MACHINE\SYSTEM\CurrentControlSet\Control\Class\{4D36E972-E325-11CE-BFC1-08002BE10318}\0007\Ndi\Params
Class Name: <NO CLASS>
Last Write Time: 8/18/2005 - 9:55 AM

Key Name:
HKEY_LOCAL_MACHINE\SYSTEM\CurrentControlSet\Control\Class\{4D36E972-E325-11CE-BFC1-08002BE10318}\0007\Ndi\Params\Enable8021p
Class Name: <NO CLASS>
Last Write Time: 8/18/2005 - 9:55 AM

Value 0
Name: ParamDesc
Type: REG_SZ
Data: 802.1p QOS

Value 1
Name: default
Type: REG_SZ
Data: 0

Value 2
Name: type
Type: REG_SZ
Data: enum

Key Name:
HKEY_LOCAL_MACHINE\SYSTEM\CurrentControlSet\Control\Class\{4D36E972-E325-11CE-BFC1-08002BE10318}\0007\Ndi\Params\Enable8021p\enum
Class Name: <NO CLASS>
Last Write Time: 8/18/2005 - 9:55 AM

Value 0
Name: 0
Type: REG_SZ
Data: Disable

Value 1
Name: 1
Type: REG_SZ
Data: Enable

Key Name:
HKEY_LOCAL_MACHINE\SYSTEM\CurrentControlSet\Control\Class\{4D36E972-E325-11CE-BFC1-08002BE10318}\0007\Ndi\Params\FlowControlCap
Class Name: <NO CLASS>
Last Write Time: 8/18/2005 - 9:55 AM

Value 0
Name: ParamDesc

Type: REG_SZ
Data: Flow Control

Value 1
Name: default
Type: REG_SZ
Data: 2147483648

Value 2
Name: type
Type: REG_SZ
Data: enum

Key Name:
HKEY_LOCAL_MACHINE\SYSTEM\CurrentControlSet\Control\Class\{4D36E972-E325-11CE-BFC1-08002bE10318}\0007\Ndi\Params\FlowControlCap\enum
Class Name: <NO CLASS>
Last Write Time: 8/18/2005 - 9:55 AM

Value 0
Name: 0
Type: REG_SZ
Data: Disable

Value 1
Name: 1
Type: REG_SZ
Data: Rx PAUSE

Value 2
Name: 2
Type: REG_SZ
Data: Tx PAUSE

Value 3
Name: 3
Type: REG_SZ
Data: Rx/Tx PAUSE

Value 4
Name: 2147483648
Type: REG_SZ
Data: Auto

Key Name:
HKEY_LOCAL_MACHINE\SYSTEM\CurrentControlSet\Control\Class\{4D36E972-E325-11CE-BFC1-08002bE10318}\0007\Ndi\Params\LargeSendOffload
Class Name: <NO CLASS>
Last Write Time: 8/18/2005 - 9:55 AM

Value 0
Name: ParamDesc
Type: REG_SZ
Data: Large Send Offload

Value 1
Name: default
Type: REG_SZ
Data: 1

Value 2
Name: type
Type: REG_SZ
Data: enum

Key Name:
HKEY_LOCAL_MACHINE\SYSTEM\CurrentControlSet\Control\Class\{4D36E972-E325-11CE-BFC1-08002bE10318}\0007\Ndi\Params\LargeSendOffload\enum
Class Name: <NO CLASS>
Last Write Time: 8/18/2005 - 9:55 AM

Value 0
Name: 0
Type: REG_SZ
Data: Disable

Value 1
Name: 1
Type: REG_SZ
Data: Enable

Key Name:
HKEY_LOCAL_MACHINE\SYSTEM\CurrentControlSet\Control\Class\{4D36E972-E325-11CE-BFC1-08002bE10318}\0007\Ndi\Params\NetworkAddress
Class Name: <NO CLASS>
Last Write Time: 8/18/2005 - 9:55 AM

Value 0
Name: ParamDesc
Type: REG_SZ
Data: Locally Administered Address

Value 1
Name: Default
Type: REG_SZ
Data:

Value 2
Name: type
Type: REG_SZ
Data: edit

Value 3
Name: LimitText
Type: REG_SZ
Data: 12

Value 4
Name: UpperCase
Type: REG_SZ

Data: 1
Value 5
Name: optional
Type: REG_SZ
Data: 1

Key Name:
HKEY_LOCAL_MACHINE\SYSTEM\CurrentControlSet\Control\Class\{4D36E972-E325-11CE-BFC1-08002bE10318}\0007\Ndi\Params\RequestedMediaType
Class Name: <NO CLASS>
Last Write Time: 8/18/2005 - 9:55 AM

Value 0
Name: ParamDesc
Type: REG_SZ
Data: Speed & Duplex

Value 1
Name: default
Type: REG_SZ
Data: 0

Value 2
Name: type
Type: REG_SZ
Data: enum

Key Name:
HKEY_LOCAL_MACHINE\SYSTEM\CurrentControlSet\Control\Class\{4D36E972-E325-11CE-BFC1-08002bE10318}\0007\Ndi\Params\RequestedMediaType\enum
Class Name: <NO CLASS>
Last Write Time: 8/18/2005 - 9:55 AM

Value 0
Name: 0
Type: REG_SZ
Data: Auto

Value 1
Name: 3
Type: REG_SZ
Data: 10 Mb Half

Value 2
Name: 4
Type: REG_SZ
Data: 10 Mb Full

Value 3
Name: 5
Type: REG_SZ
Data: 100 Mb Half

Value 4

Name: 6
Type: REG_SZ
Data: 100 Mb Full

Key Name:
HKEY_LOCAL_MACHINE\SYSTEM\CurrentControlSet\Control\Class\{4D36E972-E325-11CE-BFC1-08002bE10318}\0007\Ndi\Params\RxDma
Class Name: <NO CLASS>
Last Write Time: 8/18/2005 - 9:55 AM

Value 0
Name: ParamDesc
Type: REG_SZ
Data: Jumbo Mtu

Value 1
Name: default
Type: REG_SZ
Data: 1500

Value 2
Name: type
Type: REG_SZ
Data: dword

Value 3
Name: min
Type: REG_SZ
Data: 1500

Value 4
Name: max
Type: REG_SZ
Data: 9000

Value 5
Name: step
Type: REG_SZ
Data: 500

Value 6
Name: base
Type: REG_SZ
Data: 10

Key Name:
HKEY_LOCAL_MACHINE\SYSTEM\CurrentControlSet\Control\Class\{4D36E972-E325-11CE-BFC1-08002bE10318}\0007\Ndi\Params\TaskOffloadCap
Class Name: <NO CLASS>
Last Write Time: 8/18/2005 - 9:55 AM

Value 0
Name: ParamDesc
Type: REG_SZ
Data: Checksum Offload

Value 1
 Name: default
 Type: REG_SZ
 Data: 63

Value 2
 Name: type
 Type: REG_SZ
 Data: enum

Key Name:
 HKEY_LOCAL_MACHINE\SYSTEM\CurrentControlSet\Control\Class\{4D36E972-E325-11CE-BFC1-08002bE10318}\0007\Ndi\Params\TaskOffloadCap\enum
 Class Name: <NO CLASS>
 Last Write Time: 8/18/2005 - 9:55 AM

Value 0
 Name: 0
 Type: REG_SZ
 Data: None

Value 1
 Name: 42
 Type: REG_SZ
 Data: Rx TCP/IP Checksum

Value 2
 Name: 21
 Type: REG_SZ
 Data: Tx TCP/IP Checksum

Value 3
 Name: 63
 Type: REG_SZ
 Data: Tx/Rx TCP/IP Checksum

Key Name:
 HKEY_LOCAL_MACHINE\SYSTEM\CurrentControlSet\Control\Class\{4D36E972-E325-11CE-BFC1-08002bE10318}\0007\Ndi\Params\WakeUpModeCap
 Class Name: <NO CLASS>
 Last Write Time: 8/18/2005 - 9:55 AM

Value 0
 Name: ParamDesc
 Type: REG_SZ
 Data: Wake Up Capabilities

Value 1
 Name: default
 Type: REG_SZ
 Data: 3

Value 2
 Name: type

Type: REG_SZ
 Data: enum

Key Name:
 HKEY_LOCAL_MACHINE\SYSTEM\CurrentControlSet\Control\Class\{4D36E972-E325-11CE-BFC1-08002bE10318}\0007\Ndi\Params\WakeUpModeCap\enum
 Class Name: <NO CLASS>
 Last Write Time: 8/18/2005 - 9:55 AM

Value 0
 Name: 0
 Type: REG_SZ
 Data: None

Value 1
 Name: 1
 Type: REG_SZ
 Data: Magic Packet

Value 2
 Name: 2
 Type: REG_SZ
 Data: Wake Up Frame

Value 3
 Name: 3
 Type: REG_SZ
 Data: Both

Key Name:
 HKEY_LOCAL_MACHINE\SYSTEM\CurrentControlSet\Control\Class\{4D36E972-E325-11CE-BFC1-08002bE10318}\0007\Ndi\Params\WireSpeed
 Class Name: <NO CLASS>
 Last Write Time: 8/18/2005 - 9:55 AM

Value 0
 Name: ParamDesc
 Type: REG_SZ
 Data: Ethernet@WireSpeed

Value 1
 Name: default
 Type: REG_SZ
 Data: 1

Value 2
 Name: type
 Type: REG_SZ
 Data: enum

Key Name:
 HKEY_LOCAL_MACHINE\SYSTEM\CurrentControlSet\Control\Class\{4D36E972-E325-11CE-BFC1-08002bE10318}\0007\Ndi\Params\WireSpeed\enum
 Class Name: <NO CLASS>

Last Write Time: 8/18/2005 - 9:55 AM

Value 0
Name: 0
Type: REG_SZ
Data: Disable

Value 1
Name: 1
Type: REG_SZ
Data: Enable

Key Name:
HKEY_LOCAL_MACHINE\SYSTEM\CurrentControlSet\Control\Class\{4D36E972-E325-11CE-BFC1-08002bE10318}\0008

Class Name: <NO CLASS>
Last Write Time: 10/4/2005 - 12:33 PM

Value 0
Name: TxPacketDescCnt
Type: REG_SZ
Data: 1200

Value 1
Name: RxStdDescCnt
Type: REG_SZ
Data: 1200

Value 2
Name: RxCoalescingTicks
Type: REG_SZ
Data: 1500

Value 3
Name: TxCoalescingTicks
Type: REG_SZ
Data: 1500

Value 4
Name: RxMaxCoalescedFrames
Type: REG_SZ
Data: 330

Value 5
Name: TxMaxCoalescedFrames
Type: REG_SZ
Data: 330

Value 6
Name: Characteristics
Type: REG_DWORD
Data: 0x84

Value 7
Name: BusType
Type: REG_SZ

Data: 5

Value 8
Name: ComponentId
Type: REG_SZ
Data: pci\ven_14e4&dev_1648

Value 9
Name: Enable8021p
Type: REG_SZ
Data: 0

Value 10
Name: FlowControlCap
Type: REG_SZ
Data: 2147483648

Value 11
Name: LargeSendOffload
Type: REG_SZ
Data: 1

Value 12
Name: RequestedMediaType
Type: REG_SZ
Data: 0

Value 13
Name: RxMtu
Type: REG_SZ
Data: 1500

Value 14
Name: TaskOffloadCap
Type: REG_SZ
Data: 63

Value 15
Name: WakeUpModeCap
Type: REG_SZ
Data: 3

Value 16
Name: WireSpeed
Type: REG_SZ
Data: 1

Value 17
Name: InfPath
Type: REG_SZ
Data: oem9.inf

Value 18
Name: InfSection
Type: REG_SZ

Data: BCM5704.XpInst

Value 19
 Name: InfSectionExt
 Type: REG_SZ
 Data: .NTx86

Value 20
 Name: ProviderName
 Type: REG_SZ
 Data: Broadcom

Value 21
 Name: DriverDateData
 Type: REG_BINARY
 Data: 00 c0 1d 43 84 2a c5 01 - .Ã.C.*Ã.

Value 22
 Name: DriverDate
 Type: REG_SZ
 Data: 3-17-2005

Value 23
 Name: DriverVersion
 Type: REG_SZ
 Data: 8.22.1.0

Value 24
 Name: MatchingDeviceId
 Type: REG_SZ
 Data: pci\ven_14e4&dev_1648

Value 25
 Name: DriverDesc
 Type: REG_SZ
 Data: Broadcom NetXtreme Gigabit Ethernet

Value 26
 Name: NetCfgInstanceId
 Type: REG_SZ
 Data: {9A78CFDE-C74C-4B80-ACAD-7AFA289CBB5F}

Value 27
 Name: PnPCapabilities
 Type: REG_DWORD
 Data: 0x38

Key Name:
 HKEY_LOCAL_MACHINE\SYSTEM\CurrentControlSet\Control\Class\{4D36E972-E325-11CE-BFC1-08002bE10318}\0008\Linkage
 Class Name: <NO CLASS>
 Last Write Time: 8/18/2005 - 9:55 AM
 Value 0

Name: RootDevice
 Type: REG_MULTI_SZ
 Data: {9A78CFDE-C74C-4B80-ACAD-7AFA289CBB5F}

Value 1
 Name: UpperBind
 Type: REG_MULTI_SZ
 Data: RasPppoe
 Ndisuio
 Tcipip

Value 2
 Name: Export
 Type: REG_MULTI_SZ
 Data: \Device\{9A78CFDE-C74C-4B80-ACAD-7AFA289CBB5F}

Key Name:
 HKEY_LOCAL_MACHINE\SYSTEM\CurrentControlSet\Control\Class\{4D36E972-E325-11CE-BFC1-08002bE10318}\0008\Ndi
 Class Name: <NO CLASS>
 Last Write Time: 8/18/2005 - 9:55 AM
 Value 0
 Name: Service
 Type: REG_SZ
 Data: b57w2k

Key Name:
 HKEY_LOCAL_MACHINE\SYSTEM\CurrentControlSet\Control\Class\{4D36E972-E325-11CE-BFC1-08002bE10318}\0008\Ndi\Interfaces
 Class Name: <NO CLASS>
 Last Write Time: 8/18/2005 - 9:55 AM
 Value 0
 Name: UpperRange
 Type: REG_SZ
 Data: ndis5

Value 1
 Name: LowerRange
 Type: REG_SZ
 Data: ethernet

Key Name:
 HKEY_LOCAL_MACHINE\SYSTEM\CurrentControlSet\Control\Class\{4D36E972-E325-11CE-BFC1-08002bE10318}\0008\Ndi\Params
 Class Name: <NO CLASS>
 Last Write Time: 8/18/2005 - 9:55 AM

Key Name:
 HKEY_LOCAL_MACHINE\SYSTEM\CurrentControlSet\Control\Class\{4D36E972-E325-11CE-BFC1-08002bE10318}\0008\Ndi\Params\Enable8021p
 Class Name: <NO CLASS>
 Last Write Time: 8/18/2005 - 9:55 AM

Value 0
Name: ParamDesc
Type: REG_SZ
Data: 802.lp QOS

Value 1
Name: default
Type: REG_SZ
Data: 0

Value 2
Name: type
Type: REG_SZ
Data: enum

Key Name:
HKEY_LOCAL_MACHINE\SYSTEM\CurrentControlSet\Control\Class\{4D36E972-E325-11CE-BFC1-08002bE10318}\0008\Ndi\Params\Enable8021p\enum
Class Name: <NO CLASS>
Last Write Time: 8/18/2005 - 9:55 AM

Value 0
Name: 0
Type: REG_SZ
Data: Disable

Value 1
Name: 1
Type: REG_SZ
Data: Enable

Key Name:
HKEY_LOCAL_MACHINE\SYSTEM\CurrentControlSet\Control\Class\{4D36E972-E325-11CE-BFC1-08002bE10318}\0008\Ndi\Params\FlowControlCap
Class Name: <NO CLASS>
Last Write Time: 8/18/2005 - 9:55 AM

Value 0
Name: ParamDesc
Type: REG_SZ
Data: Flow Control

Value 1
Name: default
Type: REG_SZ
Data: 2147483648

Value 2
Name: type
Type: REG_SZ
Data: enum

Key Name:
HKEY_LOCAL_MACHINE\SYSTEM\CurrentControlSet\Control\Class\{4D36E972-E325-11CE-BFC1-08002bE10318}\0008\Ndi\Params\FlowControlCap\enum
Class Name: <NO CLASS>
Last Write Time: 8/18/2005 - 9:55 AM

Value 0
Name: 0
Type: REG_SZ
Data: Disable

Value 1
Name: 1
Type: REG_SZ
Data: Rx PAUSE

Value 2
Name: 2
Type: REG_SZ
Data: Tx PAUSE

Value 3
Name: 3
Type: REG_SZ
Data: Rx/Tx PAUSE

Value 4
Name: 2147483648
Type: REG_SZ
Data: Auto

Key Name:
HKEY_LOCAL_MACHINE\SYSTEM\CurrentControlSet\Control\Class\{4D36E972-E325-11CE-BFC1-08002bE10318}\0008\Ndi\Params\LargeSendOffload
Class Name: <NO CLASS>
Last Write Time: 8/18/2005 - 9:55 AM

Value 0
Name: ParamDesc
Type: REG_SZ
Data: Large Send Offload

Value 1
Name: default
Type: REG_SZ
Data: 1

Value 2
Name: type
Type: REG_SZ
Data: enum

Key Name:
HKEY_LOCAL_MACHINE\SYSTEM\CurrentControlSet\Control\Class\{4D36E972-E325-11CE-BFC1-08002bE10318}\0008\Ndi\Params\LargeSendOffload\enum

Class Name: <NO CLASS>
Last Write Time: 8/18/2005 - 9:55 AM
Value 0
Name: 0
Type: REG_SZ
Data: Disable

Value 1
Name: 1
Type: REG_SZ
Data: Enable

Key Name:
HKEY_LOCAL_MACHINE\SYSTEM\CurrentControlSet\Control\Class\{4D36E972-E325-11CE-BFC1-08002bE10318}\0008\Ndi\Params\NetworkAddress

Class Name: <NO CLASS>
Last Write Time: 8/18/2005 - 9:55 AM

Value 0
Name: ParamDesc
Type: REG_SZ
Data: Locally Administered Address

Value 1
Name: Default
Type: REG_SZ
Data:

Value 2
Name: type
Type: REG_SZ
Data: edit

Value 3
Name: LimitText
Type: REG_SZ
Data: 12

Value 4
Name: UpperCase
Type: REG_SZ
Data: 1

Value 5
Name: optional
Type: REG_SZ
Data: 1

Key Name:
HKEY_LOCAL_MACHINE\SYSTEM\CurrentControlSet\Control\Class\{4D36E972-E325-11CE-BFC1-08002bE10318}\0008\Ndi\Params\RequestedMediaType

Class Name: <NO CLASS>
Last Write Time: 8/18/2005 - 9:55 AM
Value 0

Name: ParamDesc
Type: REG_SZ
Data: Speed & Duplex

Value 1
Name: default
Type: REG_SZ
Data: 0

Value 2
Name: type
Type: REG_SZ
Data: enum

Key Name:
HKEY_LOCAL_MACHINE\SYSTEM\CurrentControlSet\Control\Class\{4D36E972-E325-11CE-BFC1-08002bE10318}\0008\Ndi\Params\RequestedMediaType\enum

Class Name: <NO CLASS>
Last Write Time: 8/18/2005 - 9:55 AM

Value 0
Name: 0
Type: REG_SZ
Data: Auto

Value 1
Name: 3
Type: REG_SZ
Data: 10 Mb Half

Value 2
Name: 4
Type: REG_SZ
Data: 10 Mb Full

Value 3
Name: 5
Type: REG_SZ
Data: 100 Mb Half

Value 4
Name: 6
Type: REG_SZ
Data: 100 Mb Full

Key Name:
HKEY_LOCAL_MACHINE\SYSTEM\CurrentControlSet\Control\Class\{4D36E972-E325-11CE-BFC1-08002bE10318}\0008\Ndi\Params\RxDtu

Class Name: <NO CLASS>
Last Write Time: 8/18/2005 - 9:55 AM

Value 0
Name: ParamDesc
Type: REG_SZ
Data: Jumbo Mtu

Value 1
Name: default
Type: REG_SZ
Data: 1500

Value 2
Name: type
Type: REG_SZ
Data: dword

Value 3
Name: min
Type: REG_SZ
Data: 1500

Value 4
Name: max
Type: REG_SZ
Data: 9000

Value 5
Name: step
Type: REG_SZ
Data: 500

Value 6
Name: base
Type: REG_SZ
Data: 10

Key Name:
HKEY_LOCAL_MACHINE\SYSTEM\CurrentControlSet\Control\Class\{4D36E972-E325-11CE-BFC1-08002BE10318}\0008\Ndi\Params\TaskOffloadCap
Class Name: <NO CLASS>
Last Write Time: 8/18/2005 - 9:55 AM

Value 0
Name: ParamDesc
Type: REG_SZ
Data: Checksum Offload

Value 1
Name: default
Type: REG_SZ
Data: 63

Value 2
Name: type
Type: REG_SZ
Data: enum

Key Name:
HKEY_LOCAL_MACHINE\SYSTEM\CurrentControlSet\Control\Class\{4D36E972-E325-11CE-BFC1-08002BE10318}\0008\Ndi\Params\TaskOffloadCap\enum
Class Name: <NO CLASS>
Last Write Time: 8/18/2005 - 9:55 AM

Value 0
Name: 0
Type: REG_SZ
Data: None

Value 1
Name: 42
Type: REG_SZ
Data: Rx TCP/IP Checksum

Value 2
Name: 21
Type: REG_SZ
Data: Tx TCP/IP Checksum

Value 3
Name: 63
Type: REG_SZ
Data: Tx/Rx TCP/IP Checksum

Key Name:
HKEY_LOCAL_MACHINE\SYSTEM\CurrentControlSet\Control\Class\{4D36E972-E325-11CE-BFC1-08002BE10318}\0008\Ndi\Params\WakeUpModeCap
Class Name: <NO CLASS>
Last Write Time: 8/18/2005 - 9:55 AM

Value 0
Name: ParamDesc
Type: REG_SZ
Data: Wake Up Capabilities

Value 1
Name: default
Type: REG_SZ
Data: 3

Value 2
Name: type
Type: REG_SZ
Data: enum

Key Name:
HKEY_LOCAL_MACHINE\SYSTEM\CurrentControlSet\Control\Class\{4D36E972-E325-11CE-BFC1-08002BE10318}\0008\Ndi\Params\WakeUpModeCap\enum
Class Name: <NO CLASS>
Last Write Time: 8/18/2005 - 9:55 AM

Value 0
Name: 0
Type: REG_SZ

Data: None
Value 1
Name: 1
Type: REG_SZ
Data: Magic Packet

Value 2
Name: 2
Type: REG_SZ
Data: Wake Up Frame

Value 3
Name: 3
Type: REG_SZ
Data: Both

Key Name:
HKEY_LOCAL_MACHINE\SYSTEM\CurrentControlSet\Control\Class\{4D36E972-E325-11CE-BFC1-08002bE10318}\0008\Ndi\Params\WireSpeed
Class Name: <NO CLASS>
Last Write Time: 8/18/2005 - 9:55 AM
Value 0
Name: ParamDesc
Type: REG_SZ
Data: Ethernet@WireSpeed

Value 1
Name: default
Type: REG_SZ
Data: 1

Value 2
Name: type
Type: REG_SZ
Data: enum

Key Name:
HKEY_LOCAL_MACHINE\SYSTEM\CurrentControlSet\Control\Class\{4D36E972-E325-11CE-BFC1-08002bE10318}\0008\Ndi\Params\WireSpeed\enum
Class Name: <NO CLASS>
Last Write Time: 8/18/2005 - 9:55 AM
Value 0
Name: 0
Type: REG_SZ
Data: Disable

Value 1
Name: 1
Type: REG_SZ
Data: Enable

Key Name:
HKEY_LOCAL_MACHINE\SYSTEM\CurrentControlSet\Services\ql2300
Class Name: <NO CLASS>
Last Write Time: 10/21/2005 - 9:33 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: ImagePath
Type: REG_EXPAND_SZ
Data: system32\DRIVERS\ql2300.sys

Value 6
Name: DisplayName
Type: REG_SZ
Data: QLogic Fibre Channel STOR Miniport Driver (w32 IP)

Key Name:
HKEY_LOCAL_MACHINE\SYSTEM\CurrentControlSet\Services\ql2300\Parameters
Class Name: <NO CLASS>
Last Write Time: 10/5/2005 - 8:30 AM
Value 0
Name: NumberOfRequests
Type: REG_DWORD
Data: 0xfa

Value 1
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: 10/4/2005 - 2:01 PM

Value 0
Name: DriverParameters
Type: REG_SZ
Data: UseSameNN=0

Value 1
Name: MaximumSGList
Type: REG_DWORD
Data: 0x41

Value 2
Name: NumberOfRequests
Type: REG_DWORD
Data: 0x96

Value 3
Name: BusType
Type: REG_DWORD
Data: 0x6

Value 4
Name: DriverParameter
Type: REG_SZ
Data: qd=250

Value 5
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: 11/30/2004 - 4:57 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: 10/21/2005 - 9:33 AM

Value 0
Name: 0
Type: REG_SZ

Data:
PCI\VEN_1077&DEV_2312&SUBSYS_01011077&REV_02\5&392c329b&0&100030

Value 1
Name: Count
Type: REG_DWORD
Data: 0x5

Value 2
Name: NextInstance
Type: REG_DWORD
Data: 0x5

Value 3
Name: 1
Type: REG_SZ
Data: PCI\VEN_1077&DEV_2312&SUBSYS_01011077&REV_02\5&392c329b&0&110030

Value 4
Name: 2
Type: REG_SZ
Data: PCI\VEN_1077&DEV_2312&SUBSYS_01011077&REV_02\5&8af1e42&0&300238

Value 5
Name: 3
Type: REG_SZ
Data: PCI\VEN_1077&DEV_2312&SUBSYS_01011077&REV_02\5&8af1e42&0&310238

Value 6
Name: 4
Type: REG_SZ
Data: PCI\VEN_1077&DEV_2312&SUBSYS_01001077&REV_02\5&8af1e42&0&380238

Key Name:
HKEY_LOCAL_MACHINE\SYSTEM\CurrentControlSet\Services\qldirect
Class Name: <NO CLASS>
Last Write Time: 10/21/2005 - 9:33 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

Key Name:
HKEY_LOCAL_MACHINE\SYSTEM\CurrentControlSet\Services\qldirect\Parameters

Class Name: <NO CLASS>
Last Write Time: 12/6/2004 - 8:54 AM

Value 0
Name: SRBLISTSIZ
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\Enums
Class Name: <NO CLASS>
Last Write Time: 10/21/2005 - 9:33 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

Key Name:
HKEY_LOCAL_MACHINE\SYSTEM\CurrentControlSet\Control\Session Manager\I/O System

Class Name: <NO CLASS>
Last Write Time: 12/1/2004 - 11:52 AM

Value 0
Name: CountOperations
Type: REG_DWORD
Data: 0

Key Name:
HKEY_LOCAL_MACHINE\SYSTEM\CurrentControlSet\Control\Session Manager\Memory Management

Class Name: <NO CLASS>
Last Write Time: 10/18/2005 - 3:43 PM

Value 0
Name: ClearPageFileAtShutdown
Type: REG_DWORD
Data: 0

Value 1
Name: DisablePagingExecutive
Type: REG_DWORD
Data: 0

Value 2
Name: LargeSystemCache
Type: REG_DWORD
Data: 0

Value 3
Name: NonPagedPoolQuota
Type: REG_DWORD
Data: 0

Value 4
Name: NonPagedPoolSize
Type: REG_DWORD
Data: 0

Value 5
 Name: PagedPoolQuota
 Type: REG_DWORD
 Data: 0

Value 6
 Name: PagedPoolSize
 Type: REG_DWORD
 Data: 0

Value 7
 Name: SecondLevelDataCache
 Type: REG_DWORD
 Data: 0

Value 8
 Name: SystemPages
 Type: REG_DWORD
 Data: 0xc3000

Value 9
 Name: PagingFiles
 Type: REG_MULTI_SZ
 Data: C:\pagefile.sys 2046 4092

Value 10
 Name: PhysicalAddressExtension
 Type: REG_DWORD
 Data: 0x1

Value 11
 Name: WriteWatch
 Type: REG_DWORD
 Data: 0x1

Value 12
 Name: SessionViewSize
 Type: REG_DWORD
 Data: 0x30

Value 13
 Name: SessionPoolSize
 Type: REG_DWORD
 Data: 0x4

Value 14
 Name: DontVerifyRandomDrivers
 Type: REG_DWORD
 Data: 0x1

Key Name:
 HKEY_LOCAL_MACHINE\SYSTEM\CurrentControlSet\Control\Session
 Manager\Memory Management\PrefetchParameters
 Class Name: <NO CLASS>

Last Write Time: 10/18/2005 - 3:45 PM

Value 0
 Name: VideoInitTime
 Type: REG_DWORD
 Data: 0x474

Value 1
 Name: EnablePrefetcher
 Type: REG_DWORD
 Data: 0x2

Value 2
 Name: AppLaunchMaxNumPages
 Type: REG_DWORD
 Data: 0xfa0

Value 3
 Name: AppLaunchMaxNumSections
 Type: REG_DWORD
 Data: 0xaa

Value 4
 Name: AppLaunchTimerPeriod
 Type: REG_BINARY
 Data: 80 69 67 ff ff ff ff ff - .igÿÿÿÿÿÿ

Value 5
 Name: BootMaxNumPages
 Type: REG_DWORD
 Data: 0x1f400

Value 6
 Name: BootMaxNumSections
 Type: REG_DWORD
 Data: 0xff0

Value 7
 Name: BootTimerPeriod
 Type: REG_BINARY
 Data: 00 f2 d8 f8 ff ff ff ff - .ðøÿÿÿÿÿÿ

Value 8
 Name: MaxNumActiveTraces
 Type: REG_DWORD
 Data: 0x8

Value 9
 Name: MaxNumSavedTraces
 Type: REG_DWORD
 Data: 0x8

Value 10
 Name: RootDirPath

Type: REG_SZ
Data: Prefetch

Value 11
Name: HostingAppList
Type: REG_SZ
Data: DLLHOST.EXE, MMC.EXE, RUNDLL32.EXE

Key Name: HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Windows
NT\CurrentVersion\Image File Execution Options\sqlservr.exe
Class Name: <NO CLASS>
Last Write Time: 4/11/2005 - 8:00 AM
Value 0
Name: UseLargePages
Type: REG_DWORD
Data: 0x1

This section discloses hardware information and the Windows 2000 registry parameters used on the PRIMERGY Econel 200 client systems.

System Information report written at: 10/21/05 09:37:24
System Name: ECO201
[System Summary]

Item Value
OS Name Microsoft(R) Windows(R) Server 2003, Standard Edition
Version 5.2.3790 Build 3790
OS Manufacturer Microsoft Corporation
System Name ECO201
System Manufacturer FUJITSU SIEMENS
System Model PRIMERGY Econel200
System Type X86-based PC
Processor x86 Family 15 Model 4 Stepping 3 GenuineIntel ~3399 Mhz
Processor x86 Family 15 Model 4 Stepping 3 GenuineIntel ~3400 Mhz
Processor x86 Family 15 Model 4 Stepping 3 GenuineIntel ~3400 Mhz
Processor x86 Family 15 Model 4 Stepping 3 GenuineIntel ~3400 Mhz
BIOS Version/Date FSC 08.10.Rev.0600.2020, 4/22/2005
SMBIOS Version 2.3
Windows Directory C:\WINDOWS
System Directory C:\WINDOWS\system32
Boot Device \Device\HarddiskVolume1
Locale United States
Hardware Abstraction Layer Version = "5.2.3790.0 (srv03_rtm.030324-2048)"
User Name ECO201\Administrator
Time Zone W. Europe Daylight Time
Total Physical Memory 2,048.00 MB
Available Physical Memory 1.75 GB
Total Virtual Memory 5.85 GB
Available Virtual Memory 5.51 GB

Page File Space 3.86 GB
Page File C:\pagefile.sys

[Hardware Resources]

[Conflicts/Sharing]

Resource Device
I/O Port 0x00000000-0x00000CF7 PCI bus
I/O Port 0x00000000-0x00000CF7 Direct memory access controller

IRQ 16 PCI standard PCI-to-PCI bridge
IRQ 16 PCI standard PCI-to-PCI bridge
IRQ 16 Standard Universal PCI to USB Host Controller

Memory Address 0xA0000-0xBFFFF PCI bus
Memory Address 0xA0000-0xBFFFF RAGE XL PCI Family (Microsoft Corporation)

I/O Port 0x0000D000-0x0000DFFF PCI standard PCI-to-PCI bridge
I/O Port 0x0000D000-0x0000DFFF LSI Logic PCI-X Ultra320 SCSI Host Adapter

[DMA]

Resource Device Status
Channel 4 Direct memory access controller OK
Channel 2 Standard floppy disk controller OK

[Forced Hardware]

Device PNP Device ID

[I/O]

Resource Device Status
0x00000000-0x00000CF7 PCI bus OK
0x00000000-0x00000CF7 Direct memory access controller OK
0x0000D000-0x0000FFFF PCI bus OK
0x0000B000-0x0000BFFF PCI standard PCI-to-PCI bridge OK
0x0000C000-0x0000CFFF PCI standard PCI-to-PCI bridge OK
0x0000D000-0x0000DFFF PCI standard PCI-to-PCI bridge OK
0x0000D000-0x0000DFFF LSI Logic PCI-X Ultra320 SCSI Host Adapter
OK
0x0000DC00-0x0000DC1F Intel(R) PRO/1000 XT Server Adapter OK
0x0000A880-0x0000A89F Standard Universal PCI to USB Host Controller
OK
0x0000AC00-0x0000AC1F Standard Universal PCI to USB Host Controller
OK
0x0000E000-0x0000E0FF RAGE XL PCI Family (Microsoft Corporation)
OK

```

0x000003B0-0x000003BB RAGE XL PCI Family (Microsoft Corporation)
OK
0x000003C0-0x000003DF RAGE XL PCI Family (Microsoft Corporation)
OK
0x00000A79-0x00000A79 ISAPNP Read Data Port OK
0x00000279-0x00000279 ISAPNP Read Data Port OK
0x00000274-0x00000277 ISAPNP Read Data Port OK
0x00000020-0x00000021 Programmable interrupt controller OK
0x000000A0-0x000000A1 Programmable interrupt controller OK
0x00000081-0x00000083 Direct memory access controller OK
0x00000087-0x00000087 Direct memory access controller OK
0x00000089-0x0000008B Direct memory access controller OK
0x0000008F-0x0000008F Direct memory access controller OK
0x000000C0-0x000000DF Direct memory access controller OK
0x00000040-0x00000043 System timer OK
0x00000070-0x00000071 System CMOS/real time clock OK
0x00000061-0x00000061 System speaker OK
0x000000F0-0x000000FF Numeric data processor OK
0x000003F0-0x000003F5 Standard floppy disk controller OK
0x000003F7-0x000003F7 Standard floppy disk controller OK
0x00000680-0x000006FF Motherboard resources OK
0x00000290-0x00000297 Motherboard resources OK
0x00000010-0x0000001F Motherboard resources OK
0x00000022-0x0000003F Motherboard resources OK
0x00000044-0x0000005F Motherboard resources OK
0x00000062-0x00000063 Motherboard resources OK
0x00000065-0x0000006F Motherboard resources OK
0x00000072-0x0000007F Motherboard resources OK
0x00000080-0x00000080 Motherboard resources OK
0x00000084-0x00000086 Motherboard resources OK
0x00000088-0x00000088 Motherboard resources OK
0x0000008C-0x0000008E Motherboard resources OK
0x00000090-0x0000009F Motherboard resources OK
0x000000A2-0x000000BF Motherboard resources OK
0x000000E0-0x000000EF Motherboard resources OK
0x000004D0-0x000004D1 Motherboard resources OK
0x00000800-0x0000087F Motherboard resources OK
0x00000480-0x000004BF Motherboard resources 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
0x0000FC00-0x0000FC0F 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
0x00000400-0x0000041F Intel(R) 6300ESB SMBus Controller - 25A4 OK

```

[IRQs]

```

Resource Device Status
IRQ 9 Microsoft ACPI-Compliant System OK

```

```

IRQ 16 PCI standard PCI-to-PCI bridge OK
IRQ 16 PCI standard PCI-to-PCI bridge OK
IRQ 16 Standard Universal PCI to USB Host Controller OK
IRQ 24 Intel(R) PRO/1000 XT Server Adapter OK
IRQ 27 LSI Logic PCI-X Ultra320 SCSI Host Adapter OK
IRQ 19 Standard Universal PCI to USB Host Controller OK
IRQ 23 Standard Enhanced PCI to USB Host Controller OK
IRQ 17 RAGE XL PCI Family (Microsoft Corporation) OK
IRQ 21 Broadcom NetXtreme Gigabit Ethernet OK
IRQ 0 System timer OK
IRQ 8 System CMOS/real time clock OK
IRQ 13 Numeric data processor OK
IRQ 6 Standard floppy disk controller OK
IRQ 1 Standard 101/102-Key or Microsoft Natural PS/2 Keyboard OK
IRQ 12 Microsoft PS/2 Mouse OK
IRQ 15 Secondary IDE Channel OK
IRQ 11 Intel(R) 6300ESB SMBus Controller - 25A4 OK

```

[Memory]

```

Resource Device Status
0xA0000-0xBFFFF PCI bus OK
0xA0000-0xBFFFF RAGE XL PCI Family (Microsoft Corporation) OK
0x80000000-0xFFFFFFFF PCI bus OK
0xF9E00000-0xF9FFFFFF PCI standard PCI-to-PCI bridge OK
0xF9FE0000-0xF9FFFFFF Intel(R) PRO/1000 XT Server Adapter OK
0xF9FC0000-0xF9FDFFFF Intel(R) PRO/1000 XT Server Adapter OK
0xF9F80000-0xF9F9FFFF LSI Logic PCI-X Ultra320 SCSI Host Adapter
OK
0xF9F60000-0xF9F7FFFF LSI Logic PCI-X Ultra320 SCSI Host Adapter
OK
0xF9DFF800-0xF9DFF80F Intel(R) 6300ESB Watchdog Timer - 25AB OK
0xF9DFFC00-0xF9DFFFFF Standard Enhanced PCI to USB Host Controller
OK
0xFA000000-0xFAFFFFFF RAGE XL PCI Family (Microsoft Corporation)
OK
0xFBFFE000-0xFBFFFFFF RAGE XL PCI Family (Microsoft Corporation)
OK
0xFBFE0000-0xFBFFFFFF Broadcom NetXtreme Gigabit Ethernet OK
0xFEC10000-0xFEC1FFFF Motherboard resources OK
0xFED20000-0xFED8FFFF Motherboard resources OK
0xFFB00000-0xFFBFFFFFF Motherboard resources OK
0xFEC00000-0xFEC0FFFF Motherboard resources OK
0xFEE00000-0xFEE0FFFF Motherboard resources OK
0xFFEFC000-0xFFEFFFFFF Standard Dual Channel PCI IDE Controller OK

0xE0000000-0xEFFFFFFF Motherboard resources OK
0x0000-0x9FFFF System board OK
0xC0000-0xDFFFF System board OK
0xE0000-0xFFFFF System board OK
0x100000-0x7FFFFFFF System board OK
0xFFFF00000-0xFFFFFFFF System board OK

```

[Components]

[Multimedia]

[Audio Codecs]

CODEC	Manufacturer	Description	Status	File Version	Size
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 1:00 PM					
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 1:00 PM					
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 1:00 PM					
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 1:00 PM					
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 1:00 PM					
c:\windows\system32\msg723.acm	Microsoft Corporation	OK			
C:\WINDOWS\system32\MSG723.ACM 4.4.4000 116.00 KB (118,784 bytes) 6/23/2005 3:13 PM					
c:\windows\system32\tsssoft32.acm	DSP GROUP, INC.	OK			
C:\WINDOWS\system32\TSSOFT32.ACM 1.01 9.50 KB (9,728 bytes) 3/25/2003 1:00 PM					
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 1:00 PM					
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 1:00 PM					

[Video Codecs]

CODEC	Manufacturer	Description	Status	File Version	Size
c:\windows\system32\msh261.drv	Microsoft Corporation	OK			
C:\WINDOWS\system32\MSH261.DRV 4.4.4000 180.00 KB (184,320 bytes) 6/23/2005 3:13 PM					
c:\windows\system32\iyuv_32.dll	Microsoft Corporation	OK			
C:\WINDOWS\system32\IYUV_32.DLL 5.2.3790.0 (srv03_rtm.030324-2048) 45.00 KB (46,080 bytes) 3/25/2003 2:49 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) 3/25/2003 2:49 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 1:00 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 1:00 PM					
c:\windows\system32\msh263.drv	Microsoft Corporation	OK			
C:\WINDOWS\system32\MSH263.DRV 4.4.4000 284.00 KB (290,816 bytes) 3/25/2003 2:46 AM					
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) 3/25/2003 2:50 AM					

[CD-ROM]

Item	Value
DriveD:	
Description	CD-ROM Drive
Media Loaded	No
Media Type	CD-ROM
Name	HL-DT-ST DVD-ROM GDR8163B
Manufacturer	(Standard CD-ROM drives)
Status	OK
Transfer Rate	Not Available
SCSI Target ID	0
PNP Device ID	IDE\CDROMHL-DT-ST_DVD-ROM_GDR8163B_0F21_5&A4A0CE7&0&0.0.0
Driver	c:\windows\system32\drivers\cdrom.sys (5.2.3790.0 (srv03_rtm.030324-2048), 49.50 KB (50,688 bytes), 3/25/2003 1:00 PM)

[Sound Device]

Item	Value
Name	RAGE XL PCI Family (Microsoft Corporation)
PNP Device ID	PCI\VEN_1002&DEV_4752&SUBSYS_10731734&REV_27\4&3ABFD0AC&0&18F0
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 75 hertz	
Bits/Pixel	32	
Memory Address	0xFA000000-0xFAFFFFFF	
I/O Port	0x0000E000-0x0000E0FF	
Memory Address	0xFBFFE000-0xFBFFFFFF	
IRQ Channel	IRQ 17	

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), 6/23/2005 5:04 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 00000407
PNP Device ID ACPI\PNP0303\4&322E6CAA&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 (5.2.3790.0
(srv03_rtm.030324-2048), 68.50 KB (70,144 bytes), 3/25/2003 1:00 PM)

[Pointing Device]

Item Value
Hardware Type Microsoft PS/2 Mouse
Number of Buttons 3
Status OK
PNP Device ID ACPI\PNP0F03\4&322E6CAA&0
Power Management SupportedNo
Double Click Threshold 6
Handedness Right Handed Operation
IRQ Channel IRQ 12
Driver c:\windows\system32\drivers\i8042prt.sys (5.2.3790.0
(srv03_rtm.030324-2048), 68.50 KB (70,144 bytes), 3/25/2003 1:00 PM)

[Modem]

Item Value

[Network]

[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 10/21/2005 9:30 AM
Index1
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 10/21/2005 9:30 AM
Index2
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 (5.2.3790.0
(srv03_rtm.030324-2048), 77.00 KB (78,848 bytes), 3/25/2003 1:00 PM)

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 10/21/2005 9:30 AM
Index3
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 (5.2.3790.0
(srv03_rtm.030324-2048), 70.50 KB (72,192 bytes), 3/25/2003 1:00 PM)

Name [00000004] WAN Miniport (PPPOE)

Adapter Type Wide Area Network (WAN)
Product Type WAN Miniport (PPPOE)
Installed Yes
PNP Device ID ROOT\MS_PPPOEMINIPOINT\0000
Last Reset 10/21/2005 9:30 AM
Index4
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\rasppoe.sys (5.2.3790.0
(srv03_rtm.030324-2048), 38.00 KB (38,912 bytes), 3/25/2003 1:00 PM)

Name [00000005] Direct Parallel
Adapter Type Not Available
Product Type Direct Parallel
Installed Yes
PNP Device ID ROOT\MS_PTIMINIPOINT\0000
Last Reset 10/21/2005 9:30 AM
Index5
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 (5.2.3790.0
(srv03_rtm.030324-2048), 18.50 KB (18,944 bytes), 3/25/2003 1:00 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 10/21/2005 9:30 AM
Index6
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 (5.2.3790.0
(srv03_rtm.030324-2048), 96.50 KB (98,816 bytes), 3/25/2003 1:00 PM)

Name [00000007] Broadcom NetXtreme Gigabit Ethernet
Adapter Type Ethernet 802.3
Product Type Broadcom NetXtreme Gigabit Ethernet
Installed Yes
PNP Device ID
PCI\VEN_14E4&DEV_1653&SUBSYS_10731734&REV_03\4&3ABFD0AC&0&20F0
Last Reset 10/21/2005 9:30 AM
Index7
Service Name b57w2k
IP Address 129.103.11.1
IP Subnet 255.255.255.0
Default IP Gateway Not Available
DHCP Enabled No
DHCP Server Not Available
DHCP Lease Expires Not Available
DHCP Lease Obtained Not Available
MAC Address 00:11:D8:92:95:DF
Memory Address 0xFBFE0000-0xFBFEFFFF
IRQ Channel IRQ 21
Driver c:\windows\system32\drivers\b57xp32.sys (8.22.1.0 built by:
WinDDK, 129.50 KB (132,608 bytes), 6/28/2005 9:05 AM)

Name [00000008] Intel(R) PRO/100 Server Adapter
Adapter Type Not Available
Product Type Intel(R) PRO/100 Server Adapter
Installed Yes
PNP Device ID
PCI\VEN_8086&DEV_1229&SUBSYS_10518086&REV_0D\4&3ABFD0AC&0&10F0
Last Reset 10/21/2005 9:30 AM
Index8
Service Name E100B
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\e100b325.sys (6.6.8.1 built by:
WinDDK, 138.50 KB (141,824 bytes), 7/8/2005 9:54 AM)

Name [00000009] Intel(R) PRO/1000 XT Server Adapter
Adapter Type Ethernet 802.3
Product Type Intel(R) PRO/1000 XT Server Adapter
Installed Yes
PNP Device ID
PCI\VEN_8086&DEV_1008&SUBSYS_11078086&REV_02\4&C82EE10&0&08E0
Last Reset 10/21/2005 9:30 AM
Index9
Service Name E1000
IP Address 129.103.191.201
IP Subnet 255.255.255.0
Default IP Gateway Not Available

DHCP Enabled No
DHCP Server Not Available
DHCP Lease Expires Not Available
DHCP Lease Obtained Not Available
MAC Address 00:02:B3:9D:6F:BC
Memory Address 0xF9FE0000-0xF9FFFFFF
Memory Address 0xF9FC0000-0xF9FDFFFF
I/O Port 0x0000DC00-0x0000DC1F
IRQ Channel IRQ 24
Driver c:\windows\system32\drivers\e1000325.sys (6.3.6.31 built by:
WinDDK, 99.00 KB (101,376 bytes), 10/4/2005 12:00 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

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_{47B73AC8-F869-45F5-B7C0-3068082119AF}] 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_{47B73AC8-F869-45F5-B7C0-3068082119AF}] 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_{4839FE28-FB47-40BD-B595-2B0CE0244B77}] 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_{4839FE28-FB47-40BD-B595-2B0CE0244B77}] 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_{1D7AD0FA-442E-48E7-B5AC-C41014913730}] 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_{1D7AD0FA-442E-48E7-B5AC-C41014913730}] 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_{085108C6-0CC6-464B-97E4-105984385794}] 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_{085108C6-0CC6-464B-97E4-105984385794}] 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

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]

Name MSAFD NetBIOS [\Device\NetBT_Tcpip_{3495E8E9-75FA-43DA-9564-4813660803FD}] 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

Item Value
 [Parallel]
 Item Value
 [Storage]
 [Drives]
 Item Value
 DriveA:
 Description 3 1/2 Inch Floppy Drive
 DriveC:
 Description Local Fixed Disk
 Compressed No
 File System NTFS
 Size 68.35 GB (73,394,139,136 bytes)
 Free Space 62.70 GB (67,323,629,568 bytes)
 Volume Name
 Volume Serial Number 88DC7412

Name MSAFD NetBIOS [\Device\NetBT_Tcpip_{3495E8E9-75FA-43DA-9564-4813660803FD}] 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

DriveD:
 Description CD-ROM Disc
 [Disks]
 Item Value
 Description Disk drive
 Manufacturer (Standard disk drives)
 Model SEAGATE ST373207LW 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 2
 SCSI Target ID 0
 Sectors/Track 63
 Size 68.36 GB (73,402,398,720 bytes)
 Total Cylinders 8,924
 Total Sectors 143,364,060
 Total Tracks 2,275,620
 Tracks/Cylinder 255
 Partition Disk #0, Partition #0
 Partition Size 68.35 GB (73,394,141,184 bytes)
 Partition Starting Offset 32,256 bytes

[SCSI]

Item Value
 Name LSI Logic PCI-X Ultra320 SCSI Host Adapter
 Manufacturer LSI Logic Inc.
 Status OK
 PNP Device ID
 PCI\VEN_1000&DEV_0030&SUBSYS_71301000&REV_C1\4&C82EE10&0&10E0
 I/O Port 0x0000D000-0x0000DFFF
 Memory Address 0xF9F80000-0xF9F9FFFF
 Memory Address 0xF9F60000-0xF9F7FFFF
 IRQ Channel IRQ 27
 Driver c:\windows\system32\drivers\symmpi.sys (1.08.18.00
 (NT.021001-2000), 25.88 KB (26,496 bytes), 3/25/2003 1:00 PM)

[IDE]

Item Value
 Name Standard Dual Channel PCI IDE Controller
 Manufacturer (Standard IDE ATA/ATAPI controllers)
 Status OK
 PNP Device ID
 PCI\VEN_8086&DEV_25A2&SUBSYS_10731734&REV_02\3&267A616A&0&F9
 I/O Port 0x0000FC00-0x0000FC0F
 Memory Address 0xFFEFC00-0xFFEFFFFF
 Driver c:\windows\system32\drivers\pciide.sys (5.2.3790.0
 (srv03_rtm.030324-2048), 5.50 KB (5,632 bytes), 3/25/2003 1:00 PM)

Name Primary IDE Channel
 Manufacturer (Standard IDE ATA/ATAPI controllers)
 Status OK
 PNP Device ID PCIIDE\IDECHANNEL\4&1341516B&0&0
 I/O Port 0x000001F0-0x000001F7
 I/O Port 0x000003F6-0x000003F6
 Driver c:\windows\system32\drivers\atapi.sys (5.2.3790.0
 (srv03_rtm.030324-2048), 89.00 KB (91,136 bytes), 3/25/2003 1:00 PM)

Name Secondary IDE Channel
 Manufacturer (Standard IDE ATA/ATAPI controllers)

Status OK
 PNP Device ID PCIIDE\IDECHANNEL\4&1341516B&0&1
 I/O Port 0x00000170-0x00000177
 I/O Port 0x00000376-0x00000376
 IRQ Channel IRQ 15
 Driver c:\windows\system32\drivers\atapi.sys (5.2.3790.0
 (srv03_rtm.030324-2048), 89.00 KB (91,136 bytes), 3/25/2003 1:00 PM)

[Printing]

Name Driver Port Name Server Name

[Problem Devices]

Device PNP Device ID Error Code
 Intel(R) PRO/100 Server Adapter
 PCI\VEN_8086&DEV_1229&SUBSYS_10518086&REV_0D\4&3ABFD0AC&0&10F0
 This device is disabled.

[USB]

Device PNP Device ID
 Standard Universal PCI to USB Host Controller
 PCI\VEN_8086&DEV_25A9&SUBSYS_10731734&REV_02\3&267A616A&0&E8
 USB Root Hub USB\ROOT_HUB\4&2F395637&0
 Standard Universal PCI to USB Host Controller
 PCI\VEN_8086&DEV_25AA&SUBSYS_10731734&REV_02\3&267A616A&0&E9
 USB Root Hub USB\ROOT_HUB\4&23D4EDE4&0
 Standard Enhanced PCI to USB Host Controller
 PCI\VEN_8086&DEV_25AD&SUBSYS_10731734&REV_02\3&267A616A&0&EF
 USB Root Hub USB\ROOT_HUB2\4&14086318&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	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	Auto	
	Running	OK	Normal	No	Yes	

imapiCD-Burning Filter Driver	c:\windows\system32\drivers\imapi.sys	Kernel Driver	No	System	Stopped	OK	Normal	No	No
intelide	IntelIde	Not Available	Kernel Driver	No	Disabled	Stopped	OK	Normal	No
interruptaffinityfilter	Interrupt Affinity Filter	c:\windows\system32\drivers\intfltr.sys	Kernel Driver	Yes	Boot Running	OK	Normal	No	Yes
ipfilterdriver	IP Traffic Filter Driver	c:\windows\system32\drivers\ipfltdrv.sys	Kernel Driver	No	Manual	Stopped	OK	Normal	No
ipinip	IP in IP Tunnel Driver	c:\windows\system32\drivers\ipinip.sys	Kernel Driver	No	Manual	Stopped	OK	Normal	No
ipnat	IP Network Address Translator	c:\windows\system32\drivers\ipnat.sys	Kernel Driver	No	Manual	Stopped	OK	Normal	No
ipsec	IPSEC driver	c:\windows\system32\drivers\ipsec.sys	Kernel Driver	Yes	System	Running	OK	Normal	No
ipsraidn	ipsraidn	Not Available	Kernel Driver	No	Disabled	Stopped	OK	Normal	No
irenum	IR Enumerator Service	c:\windows\system32\drivers\irenum.sys	Kernel Driver	No	Manual	Stopped	OK	Normal	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
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
mmdd	mmdd	c:\windows\system32\drivers\mmdd.sys	Kernel Driver	Yes	System	Running	OK	Ignore	No
modem	Modem	c:\windows\system32\drivers\modem.sys	Kernel Driver	No	Manual	Stopped	OK	Ignore	No
mouclass	Mouse Class Driver	c:\windows\system32\drivers\mouclass.sys	Kernel Driver	Yes	System	Running	OK	Normal	No
mountmgr	Mount Point Manager	c:\windows\system32\drivers\mountmgr.sys	Kernel Driver	Yes	Boot Running	OK	Normal	No	Yes
mrraid3x	mrraid3x	Not Available	Kernel Driver	No	Disabled	Stopped	OK	Normal	No
mrxdav	WebDav Client Redirector	c:\windows\system32\drivers\mrxdav.sys	File System Driver	No	Manual	Stopped	OK	Normal	No
mrxsm	MRXSMB	c:\windows\system32\drivers\mrxsm.sys	File System Driver	Yes	System	Running	OK	Normal	No
msfs	Msfs	c:\windows\system32\drivers\msfs.sys	File System Driver	Yes	System	Running	OK	Normal	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
ndisuio	NDIS Usermode I/O Protocol	c:\windows\system32\drivers\ndisuio.sys	Kernel Driver	No	Manual	Stopped	OK	Normal	No
ndiswan	Remote Access NDIS WAN Driver	c:\windows\system32\drivers\ndiswan.sys	Kernel Driver	Yes	Manual	Running	OK	Normal	No
ndproxy	NDIS Proxy	c:\windows\system32\drivers\ndproxy.sys	Kernel Driver	Yes	Manual	Running	OK	Normal	No
netbios	NetBIOS Interface	c:\windows\system32\drivers\netbios.sys	File System Driver	Yes	System	Running	OK	Normal	No
netbt	NetBios over Tcpip	c:\windows\system32\drivers\netbt.sys	Kernel Driver	Yes	System	Running	OK	Normal	No
nfrd960	nfrd960	Not Available	Kernel Driver	No	Disabled	Stopped	OK	Normal	No
npfs	Npfs	c:\windows\system32\drivers\npfs.sys	File System Driver	Yes	System	Running	OK	Normal	No
ntfs	Ntfs	c:\windows\system32\drivers\ntfs.sys	File System Driver	Yes	Disabled	Running	OK	Normal	No
null	Null	c:\windows\system32\drivers\null.sys	Kernel Driver	Yes	System	Running	OK	Normal	No
parport	Parport	c:\windows\system32\drivers\parport.sys	Kernel Driver	No	Manual	Stopped	OK	Ignore	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
pdcomp	PDCOMP	Not Available	Kernel Driver	No	Manual	Stopped	OK	Ignore	No
pdframe	PDFRAME	Not Available	Kernel Driver	No	Manual	Stopped	OK	Ignore	No
pdreli	PDRELI	Not Available	Kernel Driver	No	Manual	Stopped	OK	Ignore	No
pdrframe	PDRFRAME	Not Available	Kernel Driver	No	Manual	Stopped	OK	Ignore	No
perc2	perc2	Not Available	Kernel Driver	No	Disabled	Stopped	OK	Normal	No
perc2hib	perc2hib	Not Available	Kernel Driver	No	Disabled	Stopped	OK	Normal	No
pptp	Miniport (PPTP)	c:\windows\system32\drivers\rasppptp.sys	Kernel Driver	Yes	Manual	Running	OK	Normal	No
processor	Processor Driver	c:\windows\system32\drivers\processr.sys	Kernel Driver	Yes	Manual	Running	OK	Normal	No

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ptilink Direct Parallel Link Driver
  c:\windows\system32\drivers\ptilink.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 ql2300 c:\windows\system32\drivers\ql2300.sys Kernel
Driver Yes Boot 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 No
Manual Stopped OK Ignore No No
redbook Digital CD Audio Playback Filter Driver
  c:\windows\system32\drivers\redbook.sys Kernel Driver Yes
System Running OK Normal No Yes
secdrv Secdrv c:\windows\system32\drivers\secdrv.sys Kernel
Driver No Manual Stopped OK Normal No No
serial Serial c:\windows\system32\drivers\serial.sys Kernel
Driver No Auto Stopped OK Ignore No No
sfloppy Sfloppy c:\windows\system32\drivers\sfloppy.sys Kernel
Driver No System Stopped OK Ignore 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

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 c:\windows\system32\drivers\symmpi.sys Kernel
Driver Yes Boot Running OK Normal No Yes
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 No
Manual Stopped OK Ignore No No
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
ultraultra 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 Yes
Manual Running OK Normal No Yes
usbhub USB2 Enabled Hub c:\windows\system32\drivers\usbhub.sys
Kernel Driver Yes Manual Running OK Normal No Yes
usbuhci Microsoft USB Universal Host Controller Miniport Driver
  c:\windows\system32\drivers\usbuhci.sys Kernel Driver Yes
Manual Running OK Normal No Yes
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 WDICANot Available Kernel Driver No Manual Stopped OK
Ignore No No

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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		
Not Available	Not Available	Not Available	Not Available	Not Available	Not Available
Available	Not Available	Not Available	Not Available	HTREE\ROOT\0	
ACPI Multiprocessor PC	No	COMPUTER	5.2.3790.0	10/1/2002	
(Standard computers)	hal.inf	Not Available	ROOT\ACPI_HAL\0000		
Microsoft ACPI-Compliant System	No	SYSTEM	5.2.3790.0	10/1/2002	
Microsoft acpi.inf	Not Available	ACPI_HAL\PNP0C08\0			
Processor No	PROCESSOR	5.2.3790.0	10/1/2002	(Standard processor types)	cpu.inf
Not Available	Not Available	ACPI\GENUINEINTEL_X86_FAMILY_15_MODEL_4_0			
Processor No	PROCESSOR	5.2.3790.0	10/1/2002	(Standard processor types)	cpu.inf
Not Available	Not Available	ACPI\GENUINEINTEL_X86_FAMILY_15_MODEL_4_1			
Processor No	PROCESSOR	5.2.3790.0	10/1/2002	(Standard processor types)	cpu.inf
Not Available	Not Available	ACPI\GENUINEINTEL_X86_FAMILY_15_MODEL_4_2			
Processor No	PROCESSOR	5.2.3790.0	10/1/2002	(Standard processor types)	cpu.inf
Not Available	Not Available	ACPI\GENUINEINTEL_X86_FAMILY_15_MODEL_4_3			
PCI bus No	SYSTEM	5.2.3790.0	10/1/2002	(Standard system devices)	machine.inf
Not Available	Not Available	ACPI\PNP0A03\0			
PCI standard host CPU bridge	No	SYSTEM	5.2.3790.0	10/1/2002	
(Standard system devices)	machine.inf	Not Available			
PCI\VEN_8086&DEV_3592&SUBSYS_00000000&REV_0C\3&267A616A&0&00					
Intel(R) E7320 Error Reporting Registers - 3593	No	SYSTEM	6.2.0.1002	5/27/2004	Intel
oeml.inf	Not Available				
PCI\VEN_8086&DEV_3593&SUBSYS_10731734&REV_0C\3&267A616A&0&01					
PCI standard PCI-to-PCI bridge No	SYSTEM	5.2.3790.0	10/1/2002	(Standard system devices)	machine.inf
Not Available	Not Available	PCI\VEN_8086&DEV_3595&SUBSYS_00000000&REV_0C\3&267A616A&0&10			
PCI standard PCI-to-PCI bridge No	SYSTEM	5.2.3790.0	10/1/2002	(Standard system devices)	machine.inf
Not Available	Not Available	PCI\VEN_8086&DEV_3596&SUBSYS_00000000&REV_0C\3&267A616A&0&18			
PCI standard PCI-to-PCI bridge No	SYSTEM	5.2.3790.0	10/1/2002	(Standard system devices)	machine.inf
Not Available	Not Available	PCI\VEN_8086&DEV_25AE&SUBSYS_00000000&REV_02\3&267A616A&0&E0			
Intel(R) PRO/1000 XT Server Adapter No	NET	6.3.6.31	10/1/2002		
Intelnetel1000.inf	Not Available				
PCI\VEN_8086&DEV_1008&SUBSYS_11078086&REV_02\4&C82EE10&0&08E0					
LSI Logic PCI-X Ultra320 SCSI Host Adapter	No	SCSIADAPTER	5.2.3790.0	10/1/2002	LSI Logic Inc.
pnpscsi.inf	Not Available				
PCI\VEN_1000&DEV_0030&SUBSYS_71301000&REV_C1\4&C82EE10&0&10E0					
Disk drive No	DISKDRIVE	5.2.3790.0	10/1/2002	(Standard disk drives)	disk.inf
Not Available	Not Available				
SCSI\DISK&VEN_SEAGATE&PROD_ST373207LW&REV_7806\5&2C9C9BC&0&000					

Standard Universal PCI to USB Host Controller	No	USB	5.2.3790.0	10/1/2002	(Standard USB Host Controller)	usbport.inf	Not Available	PCI\VEN_8086&DEV_25A9&SUBSYS_10731734&REV_02\3&267A616A&0&E8
USB Root Hub	No	USB	5.2.3790.0	10/1/2002	(Standard USB Host Controller)	usbport.inf	Not Available	USB\ROOT_HUB\4&2F395637&0
Standard Universal PCI to USB Host Controller	No	USB	5.2.3790.0	10/1/2002	(Standard USB Host Controller)	usbport.inf	Not Available	PCI\VEN_8086&DEV_25AA&SUBSYS_10731734&REV_02\3&267A616A&0&E9
USB Root Hub	No	USB	5.2.3790.0	10/1/2002	(Standard USB Host Controller)	usbport.inf	Not Available	USB\ROOT_HUB\4&23D4EDE4&0
Intel(R) 6300ESB Watchdog Timer - 25AB	No	SYSTEM	6.1.0.1008	6/9/2004	Intel	oem0.inf	Not Available	PCI\VEN_8086&DEV_25AB&SUBSYS_10731734&REV_02\3&267A616A&0&EC
Intel(R) 6300ESB I/O Advanced Programmable Interrupt Controller - 25AC	No	SYSTEM	6.1.0.1008	6/9/2004	Intel	oem0.inf	Not Available	PCI\VEN_8086&DEV_25AC&SUBSYS_10731734&REV_02\3&267A616A&0&ED
Standard Enhanced PCI to USB Host Controller	No	USB	5.2.3790.0	10/1/2002	(Standard USB Host Controller)	usbport.inf	Not Available	PCI\VEN_8086&DEV_25AD&SUBSYS_10731734&REV_02\3&267A616A&0&EF
USB Root Hub	No	USB	5.2.3790.0	10/1/2002	(Standard USB Host Controller)	usbport.inf	Not Available	USB\ROOT_HUB2\4&14086318&0
Intel(R) 82801DB PCI Bridge - 244E	No	SYSTEM	5.2.3790.0	10/1/2002	Intel	machine.inf	Not Available	PCI\VEN_8086&DEV_244E&SUBSYS_00000000&REV_0A\3&267A616A&0&F0
Intel(R) PRO/100 Server Adapter	No	NET	6.6.8.1	10/1/2002	Intel	net557.inf	Not Available	PCI\VEN_8086&DEV_1229&SUBSYS_10518086&REV_0D\4&3ABFD0AC&0&10F0
RAGE XL PCI Family (Microsoft Corporation)	No	DISPLAY	5.10.2600.6014	8/8/2001	ATI Technologies Inc.	atiixpad.inf	Not Available	PCI\VEN_1002&DEV_4752&SUBSYS_10731734&REV_27\4&3ABFD0AC&0&18F0
Default Monitor	No	MONITOR	5.1.2001.0	6/6/2001	(Standard monitor types)	monitor.inf	Not Available	DISPLAY\DEFAULT_MONITOR\5&BA89E71&0&80000000&04&03
Broadcom NetXtreme Gigabit Ethernet	No	NET	8.22.1.0	3/17/2005	Broadcom	oem5.inf	Not Available	PCI\VEN_14E4&DEV_1653&SUBSYS_10731734&REV_03\4&3ABFD0AC&0&20F0
PCI standard ISA bridge	No	SYSTEM	5.2.3790.0	10/1/2002	(Standard system devices)	machine.inf	Not Available	PCI\VEN_8086&DEV_25A1&SUBSYS_00000000&REV_02\3&267A616A&0&F8
ISAPNP Read Data Port	No	SYSTEM	5.2.3790.0	10/1/2002	(Standard system devices)	machine.inf	Not Available	ISAPNP\READDATA\PORT\0
Programmable interrupt controller	No	SYSTEM	5.2.3790.0	10/1/2002	(Standard system devices)	machine.inf	Not Available	ACPI\PNP0000\4&322E6CAA&0
Direct memory access controller	No	SYSTEM	5.2.3790.0	10/1/2002	(Standard system devices)	machine.inf	Not Available	ACPI\PNP0200\4&322E6CAA&0

System timer	No	SYSTEM	5.2.3790.0	10/1/2002	(Standard system devices) machine.inf	Not Available	ACPI\PNP0100\4&322E6CAA&0	ACPI Fixed Feature Button	No	SYSTEM	5.2.3790.0	10/1/2002	(Standard system devices) machine.inf	Not Available	ACPI\FIXEDBUTTON\2&DABA3FF&0
System CMOS/real time clock	No	SYSTEM	5.2.3790.0	10/1/2002	(Standard system devices) machine.inf	Not Available	ACPI\PNP0B00\4&322E6CAA&0	Logical Disk Manager	No	SYSTEM	5.2.3790.0	10/1/2002	(Standard system devices) machine.inf	Not Available	ROOT\DMIO\0000
System speaker	No	SYSTEM	5.2.3790.0	10/1/2002	(Standard system devices) machine.inf	Not Available	ACPI\PNP0800\4&322E6CAA&0	Volume Manager	No	SYSTEM	5.2.3790.0	10/1/2002	(Standard system devices) machine.inf	Not Available	ROOT\FTDISK\0000
Numeric data processor	No	SYSTEM	5.2.3790.0	10/1/2002	(Standard system devices) machine.inf	Not Available	ACPI\PNP0C04\4&322E6CAA&0	Generic volume	No	VOLUME	5.2.3790.0	10/1/2002	Microsoft volume.inf	Not Available	STORAGE\VOLUME\1&30A96598&0&SIGNATURED1B4D1B4OFFSET7E00LENGTH1116
Standard floppy disk controller	No	FDC	5.2.3790.0	10/1/2002	(Standard floppy disk controllers) fdc.inf	Not Available	ACPI\PNP0700\4&322E6CAA&0	AlB800							
Floppy disk drive	No	FLOPPYDISK	5.2.3790.0	10/1/2002	(Standard floppy disk drives) flpydisk.inf	Not Available	FDC\GENERIC_FLOPPY_DRIVE\5&1E77B43A&0&0	AFD Networking Support Environment	Not Available	LEGACYDRIVER	Not Available	Not Available	Not Available	Not Available	Not Available
Motherboard resources	No	SYSTEM	5.2.3790.0	10/1/2002	(Standard system devices) machine.inf	Not Available	ACPI\PNP0C02\2E	Beep	Not Available	LEGACYDRIVER	Not Available	Not Available	Not Available	Not Available	Not Available
Motherboard resources	No	SYSTEM	5.2.3790.0	10/1/2002	(Standard system devices) machine.inf	Not Available	ACPI\PNP0C02\10	CRC Disk Filter Driver	Not Available	LEGACYDRIVER	Not Available	Not Available	Not Available	Not Available	Not Available
Motherboard resources	No	SYSTEM	5.2.3790.0	10/1/2002	(Standard system devices) machine.inf	Not Available	ACPI\PNP0C02\0	dmboot	Not Available	LEGACYDRIVER	Not Available	Not Available	Not Available	Not Available	Not Available
Standard 101/102-Key or Microsoft Natural PS/2 Keyboard	No	KEYBOARD	5.2.3790.0	10/1/2002	(Standard keyboards) keyboard.inf	Not Available	ACPI\PNP0303\4&322E6CAA&0	dmload	Not Available	LEGACYDRIVER	Not Available	Not Available	Not Available	Not Available	Not Available
Microsoft PS/2 Mouse	No	MOUSE	5.2.3790.0	10/1/2002	Microsoft mouse.inf	Not Available	ACPI\PNP0F03\4&322E6CAA&0	Fips	Not Available	LEGACYDRIVER	Not Available	Not Available	Not Available	Not Available	Not Available
Standard Dual Channel PCI IDE Controller	No	HDC	5.2.3790.0	10/1/2002	(Standard IDE ATA/ATAPI controllers) mshdc.inf	Not Available	PCI\VEN_8086&DEV_25A2&SUBSYS_10731734&REV_02\3&267A616A&0&F9	Generic Packet Classifier	Not Available	LEGACYDRIVER	Not Available	Not Available	Not Available	Not Available	Not Available
Primary IDE Channel	No	HDC	5.2.3790.0	10/1/2002	(Standard IDE ATA/ATAPI controllers) mshdc.inf	Not Available	PCIIDE\IDECHANNEL\4&1341516B&0&0	HTTP	Not Available	LEGACYDRIVER	Not Available	Not Available	Not Available	Not Available	Not Available
Secondary IDE Channel	No	HDC	5.2.3790.0	10/1/2002	(Standard IDE ATA/ATAPI controllers) mshdc.inf	Not Available	PCIIDE\IDECHANNEL\4&1341516B&0&1	IPSEC driver	Not Available	LEGACYDRIVER	Not Available	Not Available	Not Available	Not Available	Not Available
CD-ROM Drive	No	CDROM	5.2.3790.0	10/1/2002	(Standard CD-ROM drives) cdrom.inf	Not Available	IDE\CDROMHL-DT-ST_DVD-ROM_GDR8163B_____0F21_____5&A4A0CE7&0&0.0.0	IPSEC driver	Not Available	LEGACYDRIVER	Not Available	Not Available	Not Available	Not Available	Not Available
Intel(R) 6300ESB SMBus Controller	- 25A4	No	SYSTEM	6.1.0.1008	6/9/2004	Intel\oem0.inf	Not Available	ksecdd	Not Available	LEGACYDRIVER	Not Available	Not Available	Not Available	Not Available	Not Available
Motherboard resources	No	SYSTEM	5.2.3790.0	10/1/2002	(Standard system devices) machine.inf	Not Available	ACPI\PNP0C02\11	mountmgr	Not Available	LEGACYDRIVER	Not Available	Not Available	Not Available	Not Available	Not Available
System board	No	SYSTEM	5.2.3790.0	10/1/2002	(Standard system devices) machine.inf	Not Available	ACPI\PNP0C01\1	NDIS System Driver	Not Available	LEGACYDRIVER	Not Available	Not Available	Not Available	Not Available	Not Available
ACPI Power Button	No	SYSTEM	5.2.3790.0	10/1/2002	(Standard system devices) machine.inf	Not Available	ACPI\PNP0C0C\AA	Remote Access NDIS TAPI Driver	Not Available	LEGACYDRIVER	Not Available	Not Available	Not Available	Not Available	Not Available

```

NetBios over Tcpip Not Available LEGACYDRIVER Not Available Not
Available Not Available Not Available Not Available
  ROOT\LEGACY_NETBT\0000
Null Not Available LEGACYDRIVER Not Available Not Available Not
Available Not Available Not Available ROOT\LEGACY_NULL\0000
Partition Manager Not Available LEGACYDRIVER Not Available Not
Available Not Available Not Available Not Available
  ROOT\LEGACY_PARTMGR\0000
ql2300 Not Available LEGACYDRIVER Not Available Not Available
Not Available Not Available Not Available
  ROOT\LEGACY_QL2300\0000
Remote Access Auto Connection Driver Not Available LEGACYDRIVER Not
Available Not Available Not Available Not Available
  ROOT\LEGACY_RASACD\0000
RDPCCDD Not Available LEGACYDRIVER Not Available Not Available
Not Available Not Available Not Available
  ROOT\LEGACY_RDPCCDD\0000
TCP/IP Protocol Driver Not Available LEGACYDRIVER Not Available
Not Available Not Available Not Available Not Available
  ROOT\LEGACY_TCPIP\0000
VGA Display Controller. Not Available LEGACYDRIVER Not Available
Not Available Not Available Not Available Not Available
  ROOT\LEGACY_VGASAVE\0000
volsnap Not Available LEGACYDRIVER Not Available Not Available
Not Available Not Available Not Available
  ROOT\LEGACY_VOLSAP\0000
Remote Access IP ARP Driver Not Available LEGACYDRIVER Not
Available Not Available Not Available Not Available
  ROOT\LEGACY_WANARP\0000
Audio Codecs No MEDIA5.2.3790.0 10/1/2002 (Standard system
devices) wave.inf Not Available ROOT\MEDIA\MS_MMCM
Legacy Audio Drivers No MEDIA5.2.3790.0 10/1/2002 (Standard system
devices) wave.inf Not Available ROOT\MEDIA\MS_MMDRV
Media Control Devices No MEDIA5.2.3790.0 10/1/2002 (Standard
system devices) wave.inf Not Available ROOT\MEDIA\MS_MMMCI
Legacy Video Capture Devices No MEDIA5.2.3790.0 10/1/2002
(Standard system devices) wave.inf Not Available
  ROOT\MEDIA\MS_MMVCD
Video Codecs No MEDIA5.2.3790.0 10/1/2002 (Standard system
devices) wave.inf Not Available ROOT\MEDIA\MS_MMVID
WAN Miniport (L2TP) No NET 5.2.3790.0 10/1/2002 Microsoft
netrasa.inf Not Available ROOT\MS_L2TPMINIPORT\0000
WAN Miniport (IP) No NET 5.2.3790.0 10/1/2002 Microsoft
netrasa.inf Not Available ROOT\MS_NDISWANIP\0000
WAN Miniport (PPPOE) No NET 5.2.3790.0 10/1/2002 Microsoft
netrasa.inf Not Available ROOT\MS_PPPOEMINIPORT\0000
WAN Miniport (PPTP) No NET 5.2.3790.0 10/1/2002 Microsoft
netrasa.inf Not Available ROOT\MS_PPTPMINIPORT\0000
Direct Parallel No NET 5.2.3790.0 10/1/2002 Microsoft netrasa.inf
Not Available ROOT\MS_PTMINIPORT\0000
Terminal Server Device Redirector No SYSTEM 5.2.3790.0
10/1/2002 (Standard system devices) machine.inf Not Available
  ROOT\RDPDR\0000

```

```

Terminal Server Keyboard Driver No SYSTEM 5.2.3790.0 10/1/2002
(Standard system devices) machine.inf Not Available
  ROOT\RDP_KBD\0000
Terminal Server Mouse Driver No SYSTEM 5.2.3790.0 10/1/2002
(Standard system devices) machine.inf Not Available
  ROOT\RDP_MOU\0000
Plug and Play Software Device Enumerator No SYSTEM 5.2.3790.0
10/1/2002 (Standard system devices) machine.inf Not Available
  ROOT\SYSTEM\0000
Microcode Update Device No SYSTEM 5.2.3790.0 10/1/2002
(Standard system devices) machine.inf Not Available
  ROOT\SYSTEM\0001

```

[Environment Variables]

```

Variable Value User Name
ComSpec %SystemRoot%\system32\cmd.exe <SYSTEM>
Path
  %SystemRoot%\system32;%SystemRoot%;%SystemRoot%\System32\Wbem;C:\
Program Files\Microsoft SQL Server\80\Tools\BINN <SYSTEM>
windir %SystemRoot% <SYSTEM>
OS Windows_NT <SYSTEM>
PROCESSOR_ARCHITECTURE x86 <SYSTEM>
PROCESSOR_LEVEL 15 <SYSTEM>
PROCESSOR_IDENTIFIER x86 Family 15 Model 4 Stepping 3, GenuineIntel
<SYSTEM>
PROCESSOR_REVISION 0403 <SYSTEM>
NUMBER_OF_PROCESSORS 4 <SYSTEM>
ClusterLog C:\WINDOWS\Cluster\cluster.log <SYSTEM>
PATHEXT .COM;.EXE;.BAT;.CMD;.VBS;.VBE;.JS;.JSE;.WSF;.WSH <SYSTEM>

TEMP %SystemRoot%\TEMP <SYSTEM>
TMP %SystemRoot%\TEMP <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 ECO201\Administrator
TMP %USERPROFILE%\Local Settings\Temp ECO201\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
system	Available	Not Available	4	8	0	1413120	Not Available	Not Available	Not Available
smss.exe	Not Available	344	11	204800	1413120	10/21/2005 9:31 AM	Not Available	Not Available	Not Available
9:31 AM	Not Available	Not Available	Not Available	Not Available	Not Available	Not Available	Not Available	Not Available	Not Available
csrss.exe	Not Available	540	13	Not Available	Not Available	10/21/2005 9:31 AM	Not Available	Not Available	Not Available
winlogon.exe	c:\windows\system32\winlogon.exe	564	13	204800	1413120	10/21/2005 9:31 AM	5.2.3790.0 (srv03_rtm.030324-2048)	536.50 KB (549,376 bytes)	3/25/2003 1:00 PM
services.exe	c:\windows\system32\services.exe	608	9	204800	1413120	10/21/2005 9:31 AM	5.2.3790.0 (srv03_rtm.030324-2048)	102.00 KB (104,448 bytes)	3/25/2003 1:00 PM
lsass.exe	c:\windows\system32\lsass.exe	620	9	204800	1413120	10/21/2005 9:31 AM	5.2.3790.0 (srv03_rtm.030324-2048)	13.00 KB (13,312 bytes)	3/25/2003 1:00 PM
svchost.exe	c:\windows\system32\svchost.exe	788	8	204800	1413120	10/21/2005 9:31 AM	5.2.3790.0 (srv03_rtm.030324-2048)	13.00 KB (13,312 bytes)	3/25/2003 1:00 PM
svchost.exe	c:\windows\system32\svchost.exe	836	8	204800	1413120	10/21/2005 9:31 AM	5.2.3790.0 (srv03_rtm.030324-2048)	13.00 KB (13,312 bytes)	3/25/2003 1:00 PM
svchost.exe	Not Available	952	8	Not Available	Not Available	10/21/2005 9:31 AM	Not Available	Not Available	Not Available
svchost.exe	c:\windows\system32\svchost.exe	988	8	204800	1413120	10/21/2005 9:31 AM	5.2.3790.0 (srv03_rtm.030324-2048)	13.00 KB (13,312 bytes)	3/25/2003 1:00 PM
msdtc.exe	Not Available	1056	8	Not Available	Not Available	10/21/2005 9:31 AM	Not Available	Not Available	Not Available
inetinfo.exe	c:\windows\system32\inet_srv\inetinfo.exe	1256	8	204800	1413120	10/21/2005 9:31 AM	6.0.3790.0 (srv03_rtm.030324-2048)	13.00 KB (13,312 bytes)	6/28/2005 12:21 PM
svchost.exe	c:\windows\system32\svchost.exe	1460	8	204800	1413120	10/21/2005 9:31 AM	5.2.3790.0 (srv03_rtm.030324-2048)	13.00 KB (13,312 bytes)	3/25/2003 1:00 PM
wmiprvse.exe	Not Available	1656	8	Not Available	Not Available	10/21/2005 9:32 AM	Not Available	Not Available	Not Available
explorer.exe	c:\windows\explorer.exe	1872	8	204800	1413120	10/21/2005 9:35 AM	6.00.3790.0 (srv03_rtm.030324-2048)	1,008.50 KB (1,032,704 bytes)	3/25/2003 1:00 PM
ctfmon.exe	c:\windows\system32\ctfmon.exe	1956	8	204800	1413120	10/21/2005 9:35 AM	5.2.3790.0 (srv03_rtm.030324-2048)	13.50 KB (13,824 bytes)	3/25/2003 1:00 PM

helpctr.exe	c:\windows\pchealth\helpctr\binaries\helpctr.exe	504	8	204800	1413120	10/21/2005 9:36 AM	5.2.3790.0 (srv03_rtm.030324-2048)	764.00 KB (782,336 bytes)	6/23/2005 3:13 PM
wmiprvse.exe	Not Available	184	8	Not Available	Not Available	10/21/2005 9:36 AM	Not Available	Not Available	Not Available
helpsvc.exe	c:\windows\pchealth\helpctr\binaries\helpsvc.exe	936	8	204800	1413120	10/21/2005 9:36 AM	5.2.3790.0 (srv03_rtm.030324-2048)	720.00 KB (737,280 bytes)	6/23/2005 3:13 PM

[Loaded Modules]

Name	Version	Size	File Date	Manufacturer	Path
winlogon	5.2.3790.0 (srv03_rtm.030324-2048)	536.50 KB (549,376 bytes)	3/25/2003 1:00 PM	Microsoft Corporation	c:\windows\system32\winlogon.exe
ntdll	5.2.3790.0 (srv03_rtm.030324-2048)	722.50 KB (739,840 bytes)	3/25/2003 1:00 PM	Microsoft Corporation	c:\windows\system32\ntdll.dll
kernel32	5.2.3790.0 (srv03_rtm.030324-2048)	965.00 KB (988,160 bytes)	3/25/2003 1:00 PM	Microsoft Corporation	c:\windows\system32\kernel32.dll
msvcrt	7.0.3790.0 (srv03_rtm.030324-2048)	319.50 KB (327,168 bytes)	3/25/2003 1:00 PM	Microsoft Corporation	c:\windows\system32\msvcrt.dll
advapi32	5.2.3790.0 (srv03_rtm.030324-2048)	559.50 KB (572,928 bytes)	3/25/2003 1:00 PM	Microsoft Corporation	c:\windows\system32\advapi32.dll
rpcrt4	5.2.3790.0 (srv03_rtm.030324-2048)	643.50 KB (658,944 bytes)	3/25/2003 1:00 PM	Microsoft Corporation	c:\windows\system32\rpcrt4.dll
user32	5.2.3790.0 (srv03_rtm.030324-2048)	562.00 KB (575,488 bytes)	3/25/2003 1:00 PM	Microsoft Corporation	c:\windows\system32\user32.dll
gdi32	5.2.3790.0 (srv03_rtm.030324-2048)	263.00 KB (269,312 bytes)	3/25/2003 1:00 PM	Microsoft Corporation	c:\windows\system32\gdi32.dll
userenv	5.2.3790.0 (srv03_rtm.030324-2048)	732.50 KB (750,080 bytes)	3/25/2003 1:00 PM	Microsoft Corporation	c:\windows\system32\userenv.dll
nddeapi	5.2.3790.0 (srv03_rtm.030324-2048)	16.00 KB (16,384 bytes)	3/25/2003 1:00 PM	Microsoft Corporation	c:\windows\system32\nddeapi.dll
crypt32	5.131.3790.0 (srv03_rtm.030324-2048)	598.00 KB (612,352 bytes)	3/25/2003 1:00 PM	Microsoft Corporation	c:\windows\system32\crypt32.dll
msasn1	5.2.3790.0 (srv03_rtm.030324-2048)	58.00 KB (59,392 bytes)	3/25/2003 1:00 PM	Microsoft Corporation	c:\windows\system32\msasn1.dll
secur32	5.2.3790.0 (srv03_rtm.030324-2048)	63.00 KB (64,512 bytes)	3/25/2003 1:00 PM	Microsoft Corporation	c:\windows\system32\secur32.dll

winsta	5.2.3790.0 (srv03_rtm.030324-2048)	51.00 KB (52,224 bytes)	winscard	5.2.3790.0 (srv03_rtm.030324-2048)	98.50 KB (100,864 bytes)
	3/25/2003 1:00 PM Microsoft Corporation			3/25/2003 1:00 PM Microsoft Corporation	
	c:\windows\system32\winsta.dll			c:\windows\system32\winscard.dll	
netapi32	5.2.3790.0 (srv03_rtm.030324-2048)	317.00 KB (324,608 bytes)	wtsapi32	5.2.3790.0 (srv03_rtm.030324-2048)	17.50 KB (17,920 bytes)
	3/25/2003 1:00 PM Microsoft Corporation			3/25/2003 1:00 PM Microsoft Corporation	
	c:\windows\system32\netapi32.dll			c:\windows\system32\wtsapi32.dll	
profmap	5.2.3790.0 (srv03_rtm.030324-2048)	22.00 KB (22,528 bytes)	sxs	5.2.3790.0 (srv03_rtm.030324-2048)	733.00 KB (750,592 bytes)
	3/25/2003 1:00 PM Microsoft Corporation			3/25/2003 1:00 PM Microsoft Corporation	
	c:\windows\system32\profmap.dll			c:\windows\system32\sxs.dll	
regapi	5.2.3790.0 (srv03_rtm.030324-2048)	48.50 KB (49,664 bytes)	winmm	5.2.3790.0 (srv03_rtm.030324-2048)	166.00 KB (169,984 bytes)
	3/25/2003 1:00 PM Microsoft Corporation			3/25/2003 1:00 PM Microsoft Corporation	
	c:\windows\system32\regapi.dll			c:\windows\system32\winmm.dll	
ws2_32	5.2.3790.0 (srv03_rtm.030324-2048)	87.50 KB (89,600 bytes)	shell32	6.00.3790.0 (srv03_rtm.030324-2048)	7.79 MB (8,166,400 bytes)
	3/25/2003 1:00 PM Microsoft Corporation			3/25/2003 1:00 PM Microsoft Corporation	
	c:\windows\system32\ws2_32.dll			c:\windows\system32\shell32.dll	
ws2help	5.2.3790.0 (srv03_rtm.030324-2048)	19.50 KB (19,968 bytes)	wldap32	5.2.3790.0 (srv03_rtm.030324-2048)	158.00 KB (161,792 bytes)
	3/25/2003 1:00 PM Microsoft Corporation			3/25/2003 1:00 PM Microsoft Corporation	
	c:\windows\system32\ws2help.dll			c:\windows\system32\wldap32.dll	
psapi	5.2.3790.0 (srv03_rtm.030324-2048)	21.50 KB (22,016 bytes)	rsaenh	5.2.3790.0 (srv03_rtm.030324-2048)	176.83 KB (181,072 bytes)
	3/25/2003 1:00 PM Microsoft Corporation			3/25/2003 1:00 PM Microsoft Corporation	
	c:\windows\system32\psapi.dll			c:\windows\system32\rsaenh.dll	
version	5.2.3790.0 (srv03_rtm.030324-2048)	17.00 KB (17,408 bytes)	cscdll	5.2.3790.0 (srv03_rtm.030324-2048)	99.00 KB (101,376 bytes)
	3/25/2003 1:00 PM Microsoft Corporation			3/25/2003 1:00 PM Microsoft Corporation	
	c:\windows\system32\version.dll			c:\windows\system32\cscdll.dll	
setupapi	5.2.3790.0 (srv03_rtm.030324-2048)	1,014.50 KB (1,038,848 bytes)	wlnotify	5.2.3790.0 (srv03_rtm.030324-2048)	87.50 KB (89,600 bytes)
	3/25/2003 1:00 PM Microsoft Corporation			3/25/2003 1:00 PM Microsoft Corporation	
	c:\windows\system32\setupapi.dll			c:\windows\system32\wlnotify.dll	
msgina	5.2.3790.0 (srv03_rtm.030324-2048)	1.14 MB (1,191,936 bytes)	winspool	5.2.3790.0 (srv03_rtm.030324-2048)	140.00 KB (143,360 bytes)
	3/25/2003 1:00 PM Microsoft Corporation			3/25/2003 1:00 PM Microsoft Corporation	
	c:\windows\system32\msgina.dll			c:\windows\system32\winspool.drv	
shsvcs	6.00.3790.0 (srv03_rtm.030324-2048)	121.50 KB (124,416 bytes)	mpr	5.2.3790.0 (srv03_rtm.030324-2048)	56.00 KB (57,344 bytes)
	3/25/2003 1:00 PM Microsoft Corporation			3/25/2003 1:00 PM Microsoft Corporation	
	c:\windows\system32\shsvcs.dll			c:\windows\system32\mpr.dll	
shlwapi	6.00.3790.0 (srv03_rtm.030324-2048)	281.00 KB (287,744 bytes)	comctl32	5.82 (srv03_rtm.030324-2048)	561.00 KB (574,464 bytes)
	3/25/2003 1:00 PM Microsoft Corporation			6/23/2005 5:00 PM Microsoft Corporation	
	c:\windows\system32\shlwapi.dll			c:\windows\winsxs\x86_microsoft.windows.common-controls_6595b64144ccf1df_5.82.0.0_x-ww_8a69ba05\comctl32.dll	
sfc	5.2.3790.0 (srv03_rtm.030324-2048)	4.50 KB (4,608 bytes)	uxtheme	6.00.3790.0 (srv03_rtm.030324-2048)	196.00 KB (200,704 bytes)
	3/25/2003 1:00 PM Microsoft Corporation			3/25/2003 1:00 PM Microsoft Corporation	
	c:\windows\system32\sfc.dll			c:\windows\system32\uxtheme.dll	
sfc_os	5.2.3790.0 (srv03_rtm.030324-2048)	133.00 KB (136,192 bytes)	samlib	5.2.3790.0 (srv03_rtm.030324-2048)	49.00 KB (50,176 bytes)
	3/25/2003 1:00 PM Microsoft Corporation			3/25/2003 1:00 PM Microsoft Corporation	
	c:\windows\system32\sfc_os.dll			c:\windows\system32\samlib.dll	
wintrust	5.131.3790.0 (srv03_rtm.030324-2048)	161.50 KB (165,376 bytes)	cscui	5.2.3790.0 (srv03_rtm.030324-2048)	305.00 KB (312,320 bytes)
	3/25/2003 1:00 PM Microsoft Corporation			3/25/2003 1:00 PM Microsoft Corporation	
	c:\windows\system32\wintrust.dll			c:\windows\system32\cscui.dll	
ole32	5.2.3790.0 (srv03_rtm.030324-2048)	1.13 MB (1,187,328 bytes)	oleaut32	5.2.3790.0 (srv03_rtm.030324-2048)	486.00 KB (497,664 bytes)
	3/25/2003 1:00 PM Microsoft Corporation			3/25/2003 1:00 PM Microsoft Corporation	
	c:\windows\system32\ole32.dll			c:\windows\system32\oleaut32.dll	
imagehlp	5.2.3790.0 (srv03_rtm.030324-2048)	142.50 KB (145,920 bytes)	clbcatq	2001.12.4720.0 (srv03_rtm.030324-2048)	481.00 KB (492,544 bytes)
	3/25/2003 1:00 PM Microsoft Corporation			6/23/2005 3:10 PM Microsoft Corporation	
	c:\windows\system32\imagehlp.dll			c:\windows\system32\clbcatq.dll	
comctl32	6.0 (srv03_rtm.030324-2048)	907.00 KB (928,768 bytes)	comres	2001.12.4720.0 (srv03_rtm.030324-2048)	778.00 KB (796,672 bytes)
	6/23/2005 5:00 PM Microsoft Corporation			3/25/2003 1:00 PM Microsoft Corporation	
	c:\windows\winsxs\x86_microsoft.windows.common-controls_6595b64144ccf1df_6.0.100.0_x-ww_8417450b\comctl32.dll			c:\windows\system32\comres.dll	

ntmarta	5.2.3790.0 (srv03_rtm.030324-2048)	114.00 KB (116,736 bytes)	3/25/2003 1:00 PM	Microsoft Corporation	c:\windows\system32\ntmarta.dll
services	5.2.3790.0 (srv03_rtm.030324-2048)	102.00 KB (104,448 bytes)	3/25/2003 1:00 PM	Microsoft Corporation	c:\windows\system32\services.exe
scesrv	5.2.3790.0 (srv03_rtm.030324-2048)	316.50 KB (324,096 bytes)	3/25/2003 1:00 PM	Microsoft Corporation	c:\windows\system32\scesrv.dll
authz	5.2.3790.0 (srv03_rtm.030324-2048)	67.00 KB (68,608 bytes)	3/25/2003 1:00 PM	Microsoft Corporation	c:\windows\system32\authz.dll
umpnpgmgr	5.2.3790.0 (srv03_rtm.030324-2048)	121.50 KB (124,416 bytes)	3/25/2003 1:00 PM	Microsoft Corporation	c:\windows\system32\umpnpgmgr.dll
ncobjapi	5.2.3790.0 (srv03_rtm.030324-2048)	34.50 KB (35,328 bytes)	3/25/2003 1:00 PM	Microsoft Corporation	c:\windows\system32\ncobjapi.dll
msvcp60	6.05.2144.0	388.00 KB (397,312 bytes)	3/25/2003 1:00 PM	Microsoft Corporation	c:\windows\system32\msvcp60.dll
eventlog	5.2.3790.0 (srv03_rtm.030324-2048)	60.50 KB (61,952 bytes)	3/25/2003 1:00 PM	Microsoft Corporation	c:\windows\system32\eventlog.dll
lsass	5.2.3790.0 (srv03_rtm.030324-2048)	13.00 KB (13,312 bytes)	3/25/2003 1:00 PM	Microsoft Corporation	c:\windows\system32\lsass.exe
lsasrv	5.2.3790.0 (srv03_rtm.030324-2048)	780.50 KB (799,232 bytes)	3/25/2003 1:00 PM	Microsoft Corporation	c:\windows\system32\lsasrv.dll
samsrv	5.2.3790.0 (srv03_rtm.030324-2048)	452.00 KB (462,848 bytes)	3/25/2003 1:00 PM	Microsoft Corporation	c:\windows\system32\samsrv.dll
cryptdll	5.2.3790.0 (srv03_rtm.030324-2048)	34.00 KB (34,816 bytes)	3/25/2003 1:00 PM	Microsoft Corporation	c:\windows\system32\cryptdll.dll
dnsapi	5.2.3790.0 (srv03_rtm.030324-2048)	147.50 KB (151,040 bytes)	3/25/2003 1:00 PM	Microsoft Corporation	c:\windows\system32\dnsapi.dll
ntdsapi	5.2.3790.0 (srv03_rtm.030324-2048)	76.00 KB (77,824 bytes)	3/25/2003 1:00 PM	Microsoft Corporation	c:\windows\system32\ntdsapi.dll
msprivs	5.2.3790.0 (srv03_rtm.030324-2048)	46.50 KB (47,616 bytes)	3/25/2003 1:00 PM	Microsoft Corporation	c:\windows\system32\msprivs.dll
kerberos	5.2.3790.0 (srv03_rtm.030324-2048)	332.50 KB (340,480 bytes)	3/25/2003 1:00 PM	Microsoft Corporation	c:\windows\system32\kerberos.dll
msv1_0	5.2.3790.0 (srv03_rtm.030324-2048)	127.00 KB (130,048 bytes)	3/25/2003 1:00 PM	Microsoft Corporation	c:\windows\system32\msv1_0.dll
netlogon	5.2.3790.0 (srv03_rtm.030324-2048)	409.00 KB (418,816 bytes)	3/25/2003 1:00 PM	Microsoft Corporation	c:\windows\system32\netlogon.dll
w32time	5.2.3790.0 (srv03_rtm.030324-2048)	216.00 KB (221,184 bytes)	3/25/2003 1:00 PM	Microsoft Corporation	c:\windows\system32\w32time.dll
iphlpapi	5.2.3790.0 (srv03_rtm.030324-2048)	82.50 KB (84,480 bytes)	3/25/2003 1:00 PM	Microsoft Corporation	c:\windows\system32\iphlpapi.dll
schannel	5.2.3790.0 (srv03_rtm.030324-2048)	149.50 KB (153,088 bytes)	3/25/2003 1:00 PM	Microsoft Corporation	c:\windows\system32\schannel.dll
wdigest	5.2.3790.0 (srv03_rtm.030324-2048)	61.00 KB (62,464 bytes)	3/25/2003 1:00 PM	Microsoft Corporation	c:\windows\system32\wdigest.dll
rassfm	5.2.3790.0 (srv03_rtm.030324-2048)	20.50 KB (20,992 bytes)	3/25/2003 1:00 PM	Microsoft Corporation	c:\windows\system32\rassfm.dll
kdcsvc	5.2.3790.0 (srv03_rtm.030324-2048)	221.00 KB (226,304 bytes)	3/25/2003 1:00 PM	Microsoft Corporation	c:\windows\system32\kdcsvc.dll
ntdsa	5.2.3790.0 (srv03_rtm.030324-2048)	1.45 MB (1,520,640 bytes)	3/25/2003 1:00 PM	Microsoft Corporation	c:\windows\system32\ntdsa.dll
ntdsatq	5.2.3790.0 (srv03_rtm.030324-2048)	32.00 KB (32,768 bytes)	3/25/2003 1:00 PM	Microsoft Corporation	c:\windows\system32\ntdsatq.dll
mwssock	5.2.3790.0 (srv03_rtm.030324-2048)	254.00 KB (260,096 bytes)	3/25/2003 1:00 PM	Microsoft Corporation	c:\windows\system32\mwssock.dll
esent	5.2.3790.0 (srv03_rtm.030324-2048)	1.01 MB (1,056,256 bytes)	3/25/2003 1:00 PM	Microsoft Corporation	c:\windows\system32\esent.dll
scecli	5.2.3790.0 (srv03_rtm.030324-2048)	179.50 KB (183,808 bytes)	3/25/2003 1:00 PM	Microsoft Corporation	c:\windows\system32\scecli.dll
wshtcpip	5.2.3790.0 (srv03_rtm.030324-2048)	18.00 KB (18,432 bytes)	3/25/2003 1:00 PM	Microsoft Corporation	c:\windows\system32\wshtcpip.dll
pstorsvc	5.2.3790.0 (srv03_rtm.030324-2048)	24.00 KB (24,576 bytes)	3/25/2003 1:00 PM	Microsoft Corporation	c:\windows\system32\pstorsvc.dll
psbase	5.2.3790.0 (srv03_rtm.030324-2048)	81.00 KB (82,944 bytes)	3/25/2003 1:00 PM	Microsoft Corporation	c:\windows\system32\psbase.dll
w3ssl	6.0.3790.0 (srv03_rtm.030324-2048)	15.00 KB (15,360 bytes)	3/25/2003 1:00 PM	Microsoft Corporation	c:\windows\system32\w3ssl.dll
strmfilt	6.0.3790.0 (srv03_rtm.030324-2048)	70.50 KB (72,192 bytes)	3/25/2003 1:00 PM	Microsoft Corporation	c:\windows\system32\strmfilt.dll
httpapi	5.2.3790.0 (srv03_rtm.030324-2048)	26.50 KB (27,136 bytes)	3/25/2003 1:00 PM	Microsoft Corporation	c:\windows\system32\httpapi.dll
dssenh	5.2.3790.0 (srv03_rtm.030324-2048)	131.33 KB (134,480 bytes)	3/25/2003 1:00 PM	Microsoft Corporation	c:\windows\system32\dssenh.dll


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svchost 5.2.3790.0 (srv03_rtm.030324-2048) 13.00 KB (13,312 bytes)
3/25/2003 1:00 PM Microsoft Corporation
c:\windows\system32\svchost.exe
rpcss 5.2.3790.0 (srv03_rtm.030324-2048) 276.50 KB (283,136 bytes)
3/25/2003 1:00 PM Microsoft Corporation
c:\windows\system32\rpcss.dll
termsrv 5.2.3790.0 (srv03_rtm.030324-2048) 216.50 KB (221,696
bytes) 6/23/2005 3:10 PM Microsoft Corporation
c:\windows\system32\termsrv.dll
icaapi 5.2.3790.0 (srv03_rtm.030324-2048) 10.50 KB (10,752 bytes)
6/23/2005 3:10 PM Microsoft Corporation
c:\windows\system32\icaapi.dll
mstlsapi 5.2.3790.0 (srv03_rtm.030324-2048) 104.50 KB (107,008
bytes) 3/25/2003 1:00 PM Microsoft Corporation
c:\windows\system32\mstlsapi.dll
activeds 5.2.3790.0 (srv03_rtm.030324-2048) 189.00 KB (193,536
bytes) 3/25/2003 1:00 PM Microsoft Corporation
c:\windows\system32\activeds.dll
adslrpc 5.2.3790.0 (srv03_rtm.030324-2048) 142.50 KB (145,920
bytes) 3/25/2003 1:00 PM Microsoft Corporation
c:\windows\system32\adslrpc.dll
credui 5.2.3790.0 (srv03_rtm.030324-2048) 159.00 KB (162,816
bytes) 3/25/2003 1:00 PM Microsoft Corporation
c:\windows\system32\credui.dll
atl 3.05.2283 83.00 KB (84,992 bytes) 3/25/2003 1:00 PM
Microsoft Corporation c:\windows\system32\atl.dll
wkssvc 5.2.3790.0 (srv03_rtm.030324-2048) 125.00 KB (128,000
bytes) 3/25/2003 1:00 PM Microsoft Corporation
c:\windows\system32\wkssvc.dll
wiarpc 5.2.3790.0 (srv03_rtm.030324-2048) 30.00 KB (30,720 bytes)
3/25/2003 1:00 PM Microsoft Corporation
c:\windows\system32\wiarpc.dll
es 2001.12.4720.0 (srv03_rtm.030324-2048) 221.50 KB (226,816
bytes) 3/25/2003 1:00 PM Microsoft Corporation
c:\windows\system32\es.dll
srvsvc 5.2.3790.0 (srv03_rtm.030324-2048) 89.00 KB (91,136 bytes)
3/25/2003 1:00 PM Microsoft Corporation
c:\windows\system32\srvsvc.dll
seclogon 5.2.3790.0 (srv03_rtm.030324-2048) 16.50 KB (16,896 bytes)
3/25/2003 1:00 PM Microsoft Corporation
c:\windows\system32\seclogon.dll
sens 5.2.3790.0 (srv03_rtm.030324-2048) 35.50 KB (36,352 bytes)
3/25/2003 1:00 PM Microsoft Corporation
c:\windows\system32\sens.dll
wmisvc 5.2.3790.0 (srv03_rtm.030324-2048) 131.00 KB (134,144
bytes) 6/23/2005 3:10 PM Microsoft Corporation
c:\windows\system32\wbem\wmisvc.dll
vssapi 5.2.3790.0 (srv03_rtm.030324-2048) 528.00 KB (540,672
bytes) 3/25/2003 1:00 PM Microsoft Corporation
c:\windows\system32\vssapi.dll
comsvcs 2001.12.4720.0 (srv03_rtm.030324-2048) 1.14 MB (1,199,616
bytes) 6/23/2005 3:10 PM Microsoft Corporation
c:\windows\system32\comsvcs.dll
wbemcore 5.2.3790.0 (srv03_rtm.030324-2048) 457.00 KB (467,968
bytes) 6/23/2005 3:10 PM Microsoft Corporation
c:\windows\system32\wbem\wbemcore.dll
esscli 5.2.3790.0 (srv03_rtm.030324-2048) 235.50 KB (241,152
bytes) 6/23/2005 3:10 PM Microsoft Corporation
c:\windows\system32\wbem\esscli.dll
wbemcomn 5.2.3790.0 (srv03_rtm.030324-2048) 211.50 KB (216,576
bytes) 3/25/2003 1:00 PM Microsoft Corporation
c:\windows\system32\wbem\wbemcomn.dll
fastprox 5.2.3790.0 (srv03_rtm.030324-2048) 443.00 KB (453,632
bytes) 6/23/2005 3:10 PM Microsoft Corporation
c:\windows\system32\wbem\fastprox.dll
wmiutils 5.2.3790.0 (srv03_rtm.030324-2048) 90.50 KB (92,672 bytes)
6/23/2005 3:10 PM Microsoft Corporation
c:\windows\system32\wbem\wmiutils.dll
repdrvfs 5.2.3790.0 (srv03_rtm.030324-2048) 165.00 KB (168,960
bytes) 6/23/2005 3:10 PM Microsoft Corporation
c:\windows\system32\wbem\repdrvfs.dll
wmiprvsd 5.2.3790.0 (srv03_rtm.030324-2048) 405.50 KB (415,232
bytes) 6/23/2005 3:10 PM Microsoft Corporation
c:\windows\system32\wbem\wmiprvsd.dll
wbemess 5.2.3790.0 (srv03_rtm.030324-2048) 256.50 KB (262,656
bytes) 6/23/2005 3:10 PM Microsoft Corporation
c:\windows\system32\wbem\wbemess.dll
ncprov 5.2.3790.0 (srv03_rtm.030324-2048) 43.00 KB (44,032 bytes)
6/23/2005 3:10 PM Microsoft Corporation
c:\windows\system32\wbem\ncprov.dll
wbemsvc 5.2.3790.0 (srv03_rtm.030324-2048) 42.50 KB (43,520 bytes)
6/23/2005 3:10 PM Microsoft Corporation
c:\windows\system32\wbem\wbemsvc.dll
wbemcons 5.2.3790.0 (srv03_rtm.030324-2048) 69.00 KB (70,656 bytes)
6/23/2005 3:10 PM Microsoft Corporation
c:\windows\system32\wbem\wbemcons.dll
actxprxy 6.00.3790.0 (srv03_rtm.030324-2048) 95.00 KB (97,280 bytes)
3/25/2003 1:00 PM Microsoft Corporation
c:\windows\system32\actxprxy.dll
netman 5.2.3790.0 (srv03_rtm.030324-2048) 209.00 KB (214,016
bytes) 3/25/2003 1:00 PM Microsoft Corporation
c:\windows\system32\netman.dll
mprapi 5.2.3790.0 (srv03_rtm.030324-2048) 81.00 KB (82,944 bytes)
3/25/2003 1:00 PM Microsoft Corporation
c:\windows\system32\mprapi.dll
rtutils 5.2.3790.0 (srv03_rtm.030324-2048) 32.00 KB (32,768 bytes)
3/25/2003 1:00 PM Microsoft Corporation
c:\windows\system32\rtutils.dll
rasapi32 5.2.3790.0 (srv03_rtm.030324-2048) 227.50 KB (232,960
bytes) 3/25/2003 1:00 PM Microsoft Corporation
c:\windows\system32\rasapi32.dll
rasman 5.2.3790.0 (srv03_rtm.030324-2048) 56.50 KB (57,856 bytes)
3/25/2003 1:00 PM Microsoft Corporation
c:\windows\system32\rasman.dll
tapi32 5.2.3790.0 (srv03_rtm.030324-2048) 175.00 KB (179,200
bytes) 3/25/2003 1:00 PM Microsoft Corporation
c:\windows\system32\tapi32.dll

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wzcsvc 5.2.3790.0 (srv03_rtm.030324-2048) 272.50 KB (279,040
bytes) 3/25/2003 1:15 PM 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 1:00 PM Microsoft Corporation
c:\windows\system32\wmi.dll
dhcpcsvc 5.2.3790.0 (srv03_rtm.030324-2048) 101.50 KB (103,936
bytes) 3/25/2003 1:00 PM Microsoft Corporation
c:\windows\system32\dhcpcsvc.dll
wzcsapi 5.2.3790.0 (srv03_rtm.030324-2048) 24.50 KB (25,088 bytes)
3/25/2003 1:15 PM Microsoft Corporation
c:\windows\system32\wzcsapi.dll
netshell 5.2.3790.0 (srv03_rtm.030324-2048) 1.67 MB (1,747,456
bytes) 3/25/2003 1:00 PM Microsoft Corporation
c:\windows\system32\netshell.dll
clusapi 5.2.3790.0 (srv03_rtm.030324-2048) 56.00 KB (57,344 bytes)
3/25/2003 1:00 PM Microsoft Corporation
c:\windows\system32\clusapi.dll
netcfgx 5.2.3790.0 (srv03_rtm.030324-2048) 726.00 KB (743,424
bytes) 3/25/2003 1:00 PM Microsoft Corporation
c:\windows\system32\netcfgx.dll
winipsec 5.2.3790.0 (srv03_rtm.030324-2048) 34.50 KB (35,328 bytes)
3/25/2003 1:00 PM Microsoft Corporation
c:\windows\system32\winipsec.dll
hnetcfg 5.2.3790.0 (srv03_rtm.030324-2048) 243.50 KB (249,344
bytes) 3/25/2003 1:00 PM Microsoft Corporation
c:\windows\system32\hnetcfg.dll
wininet 6.0.3790.0 (srv03_rtm.030324-2048) 609.00 KB (623,616
bytes) 3/25/2003 1:00 PM Microsoft Corporation
c:\windows\system32\wininet.dll
wbemprox 5.2.3790.0 (srv03_rtm.030324-2048) 17.50 KB (17,920 bytes)
6/23/2005 3:10 PM Microsoft Corporation
c:\windows\system32\wbem\wbemprox.dll
rasdlg 5.2.3790.0 (srv03_rtm.030324-2048) 642.00 KB (657,408
bytes) 3/25/2003 1:00 PM Microsoft Corporation
c:\windows\system32\rasdlg.dll
rasadhlp 5.2.3790.0 (srv03_rtm.030324-2048) 6.50 KB (6,656 bytes)
3/25/2003 1:00 PM Microsoft Corporation
c:\windows\system32\rasadhlp.dll
pchsvc 5.2.3790.0 (srv03_rtm.030324-2048) 31.50 KB (32,256 bytes)
6/23/2005 3:13 PM Microsoft Corporation
c:\windows\pchealth\helpctr\binaries\pchsvc.dll
inetinfo 6.0.3790.0 (srv03_rtm.030324-2048) 13.00 KB (13,312 bytes)
6/28/2005 12:21 PM Microsoft Corporation
c:\windows\system32\inetsrv\inetinfo.exe
iisutil 6.0.3790.0 (srv03_rtm.030324-2048) 177.00 KB (181,248
bytes) 6/28/2005 12:21 PM Microsoft Corporation
c:\windows\system32\inetsrv\iisutil.dll
rpcref 6.0.3790.0 (srv03_rtm.030324-2048) 4.00 KB (4,096 bytes)
6/28/2005 12:20 PM Microsoft Corporation
c:\windows\system32\inetsrv\rpcref.dll
iisrtl 6.0.3790.0 (srv03_rtm.030324-2048) 129.00 KB (132,096
bytes) 6/28/2005 12:21 PM Microsoft Corporation
c:\windows\system32\iisrtl.dll
iisadmin 6.0.3790.0 (srv03_rtm.030324-2048) 18.50 KB (18,944 bytes)
6/28/2005 12:20 PM Microsoft Corporation
c:\windows\system32\inetsrv\iisadmin.dll
coadmin 6.0.3790.0 (srv03_rtm.030324-2048) 48.50 KB (49,664 bytes)
6/28/2005 12:21 PM Microsoft Corporation
c:\windows\system32\inetsrv\coadmin.dll
admwprox 6.0.3790.0 (srv03_rtm.030324-2048) 44.00 KB (45,056 bytes)
6/28/2005 12:21 PM Microsoft Corporation
c:\windows\system32\admwprox.dll
iiscfg 6.0.3790.0 (srv03_rtm.030324-2048) 1.06 MB (1,116,160
bytes) 6/28/2005 12:20 PM Microsoft Corporation
c:\windows\system32\inetsrv\iiscfg.dll
metadata 6.0.3790.0 (srv03_rtm.030324-2048) 218.50 KB (223,744
bytes) 6/28/2005 12:21 PM Microsoft Corporation
c:\windows\system32\inetsrv\metadata.dll
msxml3 8.40.9419.0 1.28 MB (1,337,344 bytes) 3/25/2003 1:00 PM
Microsoft Corporation c:\windows\system32\msxml3.dll
svcext 6.0.3790.0 (srv03_rtm.030324-2048) 41.50 KB (42,496 bytes)
6/28/2005 12:21 PM Microsoft Corporation
c:\windows\system32\inetsrv\svcext.dll
security 5.2.3790.0 (srv03_rtm.030324-2048) 5.50 KB (5,632 bytes)
3/25/2003 1:00 PM Microsoft Corporation
c:\windows\system32\security.dll
iismap 6.0.3790.0 (srv03_rtm.030324-2048) 55.00 KB (56,320 bytes)
6/28/2005 12:21 PM Microsoft Corporation
c:\windows\system32\iismap.dll
wamreg 6.0.3790.0 (srv03_rtm.030324-2048) 52.00 KB (53,248 bytes)
6/28/2005 12:21 PM Microsoft Corporation
c:\windows\system32\inetsrv\wamreg.dll
iisw3adm 6.0.3790.0 (srv03_rtm.030324-2048) 199.50 KB (204,288
bytes) 6/28/2005 12:21 PM Microsoft Corporation
c:\windows\system32\inetsrv\iisw3adm.dll
w3cache 6.0.3790.0 (srv03_rtm.030324-2048) 21.00 KB (21,504 bytes)
6/28/2005 12:21 PM Microsoft Corporation
c:\windows\system32\inetsrv\w3cache.dll
w3tp 6.0.3790.0 (srv03_rtm.030324-2048) 12.50 KB (12,800 bytes)
6/28/2005 12:21 PM Microsoft Corporation
c:\windows\system32\inetsrv\w3tp.dll
lonsint 6.0.3790.0 (srv03_rtm.030324-2048) 11.50 KB (11,776 bytes)
6/28/2005 12:20 PM Microsoft Corporation
c:\windows\system32\inetsrv\lonsint.dll
explorer 6.0.3790.0 (srv03_rtm.030324-2048) 1,008.50 KB (1,032,704
bytes) 3/25/2003 1:00 PM Microsoft Corporation
c:\windows\explorer.exe
browseui 6.0.3790.0 (srv03_rtm.030324-2048) 1.01 MB (1,057,280
bytes) 3/25/2003 1:00 PM Microsoft Corporation
c:\windows\system32\browseui.dll
shdocvw 6.0.3790.0 (srv03_rtm.030324-2048) 1.33 MB (1,393,664
bytes) 3/25/2003 1:00 PM Microsoft Corporation
c:\windows\system32\shdocvw.dll
apphelp 5.2.3790.0 (srv03_rtm.030324-2048) 122.00 KB (124,928
bytes) 3/25/2003 1:00 PM Microsoft Corporation
c:\windows\system32\apphelp.dll

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themeui 6.00.3790.0 (srv03_rtm.030324-2048) 360.50 KB (369,152
bytes) 3/25/2003 1:00 PM 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 1:00 PM Microsoft Corporation
c:\windows\system32\msimg32.dll
msutb5.2.3790.0 (srv03_rtm.030324-2048) 180.00 KB (184,320 bytes)
3/25/2003 1:00 PM Microsoft Corporation
c:\windows\system32\msutb.dll
msctf5.2.3790.0 (srv03_rtm.030324-2048) 287.00 KB (293,888 bytes)
3/25/2003 1:00 PM Microsoft Corporation
c:\windows\system32\msctf.dll
linkinfo 5.2.3790.0 (srv03_rtm.030324-2048) 16.50 KB (16,896 bytes)
3/25/2003 1:00 PM Microsoft Corporation
c:\windows\system32\linkinfo.dll
ntshrui 6.00.3790.0 (srv03_rtm.030324-2048) 136.00 KB (139,264
bytes) 3/25/2003 1:00 PM Microsoft Corporation
c:\windows\system32\ntshrui.dll
urlmon 6.00.3790.0 (srv03_rtm.030324-2048) 501.50 KB (513,536
bytes) 3/25/2003 1:00 PM Microsoft Corporation
c:\windows\system32\urlmon.dll
webcheck 6.00.3790.0 (srv03_rtm.030324-2048) 261.50 KB (267,776
bytes) 3/25/2003 1:00 PM Microsoft Corporation
c:\windows\system32\webcheck.dll
wsock32 5.2.3790.0 (srv03_rtm.030324-2048) 22.00 KB (22,528 bytes)
3/25/2003 1:00 PM Microsoft Corporation
c:\windows\system32\wsock32.dll
stobject 5.2.3790.0 (srv03_rtm.030324-2048) 117.50 KB (120,320
bytes) 3/25/2003 1:00 PM Microsoft Corporation
c:\windows\system32\stobject.dll
batmeter 6.00.3790.0 (srv03_rtm.030324-2048) 28.50 KB (29,184 bytes)
3/25/2003 1:00 PM Microsoft Corporation
c:\windows\system32\batmeter.dll
powrprof 6.00.3790.0 (srv03_rtm.030324-2048) 14.50 KB (14,848 bytes)
3/25/2003 1:00 PM Microsoft Corporation
c:\windows\system32\powrprof.dll
printui 5.2.3790.0 (srv03_rtm.030324-2048) 536.50 KB (549,376
bytes) 3/25/2003 1:00 PM Microsoft Corporation
c:\windows\system32\printui.dll
cfgmgr32 5.2.3790.0 (srv03_rtm.030324-2048) 17.50 KB (17,920 bytes)
3/25/2003 1:00 PM Microsoft Corporation
c:\windows\system32\cfgmgr32.dll
browsecl 6.00.3790.0 (srv03_rtm.030324-2048) 62.00 KB (63,488 bytes)
3/25/2003 1:00 PM Microsoft Corporation
c:\windows\system32\browsecl.dll
shdoclc 6.00.3790.0 (srv03_rtm.030324-2048) 588.50 KB (602,624
bytes) 3/25/2003 1:00 PM Microsoft Corporation
c:\windows\system32\shdoclc.dll
drprov 5.2.3790.0 (srv03_rtm.030324-2048) 12.50 KB (12,800 bytes)
3/25/2003 1:00 PM Microsoft Corporation
c:\windows\system32\drprov.dll
ntlanman 5.2.3790.0 (srv03_rtm.030324-2048) 41.00 KB (41,984 bytes)
3/25/2003 1:00 PM 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 1:00 PM Microsoft Corporation
c:\windows\system32\netui0.dll
netuil 5.2.3790.0 (srv03_rtm.030324-2048) 184.00 KB (188,416
bytes) 3/25/2003 1:00 PM Microsoft Corporation
c:\windows\system32\netuil.dll
davclnt 5.2.3790.0 (srv03_rtm.030324-2048) 23.50 KB (24,064 bytes)
3/25/2003 1:00 PM Microsoft Corporation
c:\windows\system32\davclnt.dll
ctfmon 5.2.3790.0 (srv03_rtm.030324-2048) 13.50 KB (13,824 bytes)
3/25/2003 1:00 PM Microsoft Corporation
c:\windows\system32\ctfmon.exe
helpctr 5.2.3790.0 (srv03_rtm.030324-2048) 764.00 KB (782,336
bytes) 6/23/2005 3:13 PM Microsoft Corporation
c:\windows\pchealth\helpctr\binaries\helpctr.exe
hcappres 5.2.3790.0 (srv03_rtm.030324-2048) 6.50 KB (6,656 bytes)
6/23/2005 3:13 PM Microsoft Corporation
c:\windows\pchealth\helpctr\binaries\hcappres.dll
itss 5.2.3790.0 (srv03_rtm.030324-2048) 119.50 KB (122,368 bytes)
3/25/2003 1:00 PM Microsoft Corporation
c:\windows\system32\itss.dll
pchshell 5.2.3790.0 (srv03_rtm.030324-2048) 100.50 KB (102,912
bytes) 6/23/2005 3:13 PM Microsoft Corporation
c:\windows\pchealth\helpctr\binaries\pchshell.dll
mlang 6.00.3790.0 (srv03_rtm.030324-2048) 570.00 KB (583,680 bytes)
3/25/2003 1:00 PM Microsoft Corporation
c:\windows\system32\mlang.dll
mshtml 6.00.3790.0 (srv03_rtm.030324-2048) 2.78 MB (2,916,352
bytes) 3/25/2003 1:00 PM Microsoft Corporation
c:\windows\system32\mshtml.dll
msimtf 5.2.3790.0 (srv03_rtm.030324-2048) 149.00 KB (152,576
bytes) 3/25/2003 1:00 PM Microsoft Corporation
c:\windows\system32\msimtf.dll
jscript 5.6.0.8515 436.00 KB (446,464 bytes) 3/25/2003 1:00 PM
Microsoft Corporation c:\windows\system32\jscript.dll
msls31 3.10.349.0 147.00 KB (150,528 bytes) 3/25/2003 1:00 PM
Microsoft Corporation c:\windows\system32\msls31.dll
imm32 5.2.3790.0 (srv03_rtm.030324-2048) 105.50 KB (108,032 bytes)
3/25/2003 1:00 PM Microsoft Corporation
c:\windows\system32\imm32.dll
mshtml 6.00.3790.0 (srv03_rtm.030324-2048) 443.50 KB (454,144
bytes) 3/25/2003 1:00 PM Microsoft Corporation
c:\windows\system32\mshtml.dll
vbscript 5.6.0.8515 404.00 KB (413,696 bytes) 3/25/2003 1:00 PM
Microsoft Corporation c:\windows\system32\vbscript.dll
mfc42 6.05.3014.0 960.00 KB (983,040 bytes) 3/25/2003 1:00 PM
Microsoft Corporation c:\windows\system32\mfc42.dll
msinfo 5.2.3790.0 (srv03_rtm.030324-2048) 358.50 KB (367,104
bytes) 6/23/2005 3:13 PM Microsoft Corporation
c:\windows\pchealth\helpctr\binaries\msinfo.dll
mfc42u 6.05.3014.0 960.00 KB (983,040 bytes) 3/25/2003 1:00 PM
Microsoft Corporation c:\windows\system32\mfc42u.dll
comdlg32 6.00.3790.0 (srv03_rtm.030324-2048) 261.00 KB (267,264
bytes) 3/25/2003 1:00 PM Microsoft Corporation
c:\windows\system32\comdlg32.dll

```

```

riched32 5.2.3790.0 (srv03_rtm.030324-2048) 3.50 KB (3,584 bytes)
3/25/2003 1:00 PM Microsoft Corporation
c:\windows\system32\riched32.dll
riched20 5.31.23.1218 406.00 KB (415,744 bytes) 3/25/2003 1:00 PM
Microsoft Corporation c:\windows\system32\riched20.dll
helpsvc 5.2.3790.0 (srv03_rtm.030324-2048) 720.00 KB (737,280
bytes) 6/23/2005 3:13 PM Microsoft Corporation
c:\windows\pchealth\helpctr\binaries\helpsvc.exe

```

[Services]

Display Name	Name	State	Start Mode	Service Type	Path	Error Control
Alerter	Alerter	Running	Auto	Share Process	c:\windows\system32\svchost.exe -k localSERVICE	Normal NT
AUTHORITY\LocalService		0				
Application Layer Gateway Service	ALG	Stopped	Manual	Own	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
Windows Audio	AudioSrv	Stopped	Manual	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	Stopped	Manual	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
COM+ System Application	COMSysApp	Stopped	Manual	Own Process	c:\windows\system32\dlhhost.exe /processid:{02d4b3f1-fd88-11d1-960d-00805fc79235}	Normal LocalSystem 0
Cryptographic Services	CryptSvc	Stopped	Manual	Share Process	c:\windows\system32\svchost.exe -k netsvcs	Normal LocalSystem 0
Distributed File System	Dfs	Stopped	Manual	Own Process	c:\windows\system32\dfssvc.exe	Normal LocalSystem 0
DHCP Client	Dhcp	Stopped	Manual	Share Process	c:\windows\system32\svchost.exe -k networkservice	Normal NT
AUTHORITY\NetworkService		0				
Logical Disk Manager	Administrative Service	Stopped	Manual	Share Process	c:\windows\system32\dmadmin.exe /com	Normal LocalSystem 0
Logical Disk Manager	dmserver	Stopped	Manual	Share Process	c:\windows\system32\svchost.exe -k netsvcs	Normal LocalSystem 0
DNS Client	Dnscache	Stopped	Manual	Share Process	c:\windows\system32\svchost.exe -k networkservice	Normal NT
AUTHORITY\NetworkService		0				

Error Reporting Service	ERSvc	Stopped	Manual	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	Manual	Share Process	c:\windows\system32\svchost.exe -k netsvcs	Normal LocalSystem 0
Help and Support	helpsvc	Running	Manual	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	Running	Manual	Share Process	c:\windows\system32\lsass.exe	Normal LocalSystem 0
IIS Admin Service	IISADMIN	Running	Manual	Share Process	c:\windows\system32\inetrv\inetinfo.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				
Windows Installer	MSIServer	Stopped	Manual	Share Process	c:\windows\system32\msiexec.exe /v	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						Security Accounts Manager	SamSsRunning	Auto	Share Process						
c:\windows\system32\netdde.exe		Normal	LocalSystem	0						c:\windows\system32\lsass.exe	Normal	LocalSystem	0						
Net Logon Netlogon	Stopped	Manual	Share Process							Smart Card SCardSvr	Stopped	Manual	Share Process						
c:\windows\system32\lsass.exe		Normal	LocalSystem	0						c:\windows\system32\scardsvr.exe		Ignore	NT						
Network Connections	Netman	Running	Manual	Share Process						AUTHORITY\LocalService	0								
c:\windows\system32\svchost.exe	-k netsvcs		Normal							Task Scheduler	Schedule	Stopped	Manual	Share Process					
LocalSystem	0									c:\windows\system32\svchost.exe	-k netsvcs		Normal						
Network Location Awareness (NLA)	Nla	Running	Manual	Share						LocalSystem	0								
Process	c:\windows\system32\svchost.exe	-k netsvcs		Normal						Secondary Logon	seclogon	Running	Auto	Share Process					
LocalSystem	0									c:\windows\system32\svchost.exe	-k netsvcs		Ignore						
File Replication	NtFrs	Stopped	Manual	Own Process						LocalSystem	0								
c:\windows\system32\ntfrs.exe		Ignore	LocalSystem	0						System Event Notification	SENS	Running	Auto	Share Process					
NT LM Security Support Provider	NtLmSsp	Stopped	Manual	Share						c:\windows\system32\svchost.exe	-k netsvcs		Normal						
Process	c:\windows\system32\lsass.exe		Normal	LocalSystem	0					LocalSystem	0								
Removable Storage	NtmsSvc	Stopped	Manual	Share Process						Internet Connection Firewall (ICF) / Internet Connection Sharing (ICS)									
c:\windows\system32\svchost.exe	-k netsvcs		Normal							SharedAccess	Stopped	Disabled	Share Process						
LocalSystem	0									c:\windows\system32\svchost.exe	-k netsvcs		Normal						
Plug and Play	PlugPlay	Running	Auto	Share Process						LocalSystem	0								
c:\windows\system32\services.exe			Normal	LocalSystem	0					Shell Hardware Detection	ShellHWDetection		Running	Auto	Share				
IPSEC Services	PolicyAgent	Stopped	Manual	Share Process						Process	c:\windows\system32\svchost.exe	-k netsvcs		Ignore					
c:\windows\system32\lsass.exe		Normal	LocalSystem	0						LocalSystem	0								
Protected Storage	ProtectedStorage	Running	Auto	Share Process						Print Spooler	Spooler	Stopped	Disabled	Own Process					
c:\windows\system32\lsass.exe		Normal	LocalSystem	0						c:\windows\system32\spoolsv.exe		Normal	LocalSystem	0					
Remote Access Auto Connection Manager	RasAuto	Stopped	Manual							Windows Image Acquisition (WIA)	stisvc	Stopped	Disabled	Share					
Share Process	c:\windows\system32\svchost.exe	-k netsvcs								Process	c:\windows\system32\svchost.exe	-k imgsvc	Normal	NT					
Normal	LocalSystem	0								AUTHORITY\LocalService	0								
Remote Access Connection Manager	RasMan	Stopped	Manual							Microsoft Software Shadow Copy Provider	swprv	Stopped	Manual	Own					
Share Process	c:\windows\system32\svchost.exe	-k netsvcs								Process	c:\windows\system32\svchost.exe	-k swprv	Normal						
Normal	LocalSystem	0								LocalSystem	0								
Remote Desktop Help Session Manager	RDSessMgr	Stopped	Manual	Own						Performance Logs and Alerts	SysmonLog	Stopped	Manual	Own					
Process	c:\windows\system32\sessmgr.exe		Normal	LocalSystem	0					Process	c:\windows\system32\smlogsvc.exe		Normal	NT					
Routing and Remote Access	RemoteAccess	Stopped	Disabled	Share						Authority\NetworkService	0								
Process	c:\windows\system32\svchost.exe	-k netsvcs		Normal						Telephony	TapiSrv	Stopped	Manual	Share Process					
LocalSystem	0									c:\windows\system32\svchost.exe	-k tapisrv		Normal						
Remote Registry	RemoteRegistry	Stopped	Manual	Share Process						LocalSystem	0								
c:\windows\system32\svchost.exe	-k regsvc		Normal	NT						Terminal Services	TermService	Running	Manual	Share Process					
AUTHORITY\LocalService	0									c:\windows\system32\svchost.exe	-k termsvc		Normal						
Remote Command Service	RMSYS	Stopped	Manual	Own Process						LocalSystem	0								
c:\program files\benchcraft\rsys.exe		Normal	.\tpcc	0						Themes	Themes	Stopped	Disabled	Share Process					
Remote Procedure Call (RPC) Locator	RpcLocator	Stopped	Manual	Own						c:\windows\system32\svchost.exe	-k netsvcs		Normal						
Process	c:\windows\system32\locator.exe		Normal	NT						LocalSystem	0								
AUTHORITY\NetworkService	0									Telnet	TlntSvr	Stopped	Disabled	Own Process					
Remote Procedure Call (RPC)	RpcSsRunning	Auto	Share Process							c:\windows\system32\tlntsvr.exe		Normal	NT						
c:\windows\system32\svchost	-k rpcss		Normal	LocalSystem	0					AUTHORITY\LocalService	0								
Resultant Set of Policy Provider	RSOPProv	Stopped	Manual							Distributed Link Tracking Server	TrkSvr	Stopped	Disabled						
Share Process	c:\windows\system32\rsopprov.exe		Normal							Share Process	c:\windows\system32\svchost.exe	-k netsvcs							
LocalSystem	0									Normal	LocalSystem	0							
Special Administration Console Helper	sacsrv	Stopped	Manual							Distributed Link Tracking Client	TrkWks	Stopped	Manual						
Share Process	c:\windows\system32\svchost.exe	-k netsvcs								Share Process	c:\windows\system32\svchost.exe	-k netsvcs							
Normal	LocalSystem	0								Normal	LocalSystem	0							
Terminal Services Session Directory	Tssdis	Stopped	Disabled	Own						Process	c:\windows\system32\tssdis.exe		Normal	LocalSystem	0				
Process	c:\windows\system32\tssdis.exe		Normal	LocalSystem	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 LocalSystem 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 Stopped Manual Share Process
c:\windows\system32\svchost.exe -k netsvcs Normal
LocalSystem 0
World Wide Web Publishing Service W3SVCRunning Auto Share Process
c:\windows\system32\svchost.exe -k iissvcs Normal
LocalSystem 0
WebClient WebClient Stopped Disabled Share Process
c:\windows\system32\svchost.exe -k localser 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\wmiaprv.exe Normal LocalSystem
0
Automatic Updates wuauerv Stopped Disabled Share Process
c:\windows\system32\svchost.exe -k netsvcs Normal
LocalSystem 0
Wireless Configuration WZCSVC 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
Microsoft SQL Server All Users:Microsoft SQL Server 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 ECO201\Administrator:Accessories
ECO201\Administrator
Accessories\Accessibility
ECO201\Administrator:Accessories\Accessibility
ECO201\Administrator
Accessories\Entertainment
ECO201\Administrator:Accessories\Entertainment
ECO201\Administrator
Administrative Tools ECO201\Administrator:Administrative Tools
ECO201\Administrator
QLogic Corporation ECO201\Administrator:QLogic Corporation
ECO201\Administrator
QLogic Corporation\SANblade Control VIX ECO201\Administrator:QLogic
Corporation\SANblade Control VIX ECO201\Administrator
Startup ECO201\Administrator:Startup ECO201\Administrator

```

[Startup Programs]

```

Program Command User Name Location
desktop desktop.ini NT AUTHORITY\SYSTEM Startup
CTFMON.EXE c:\windows\system32\ctfmon.exe NT AUTHORITY\SYSTEM HKU\S-1-
5-18\SOFTWARE\Microsoft\Windows\CurrentVersion\Run
CTFMON.EXE c:\windows\system32\ctfmon.exe NT AUTHORITY\LOCAL SERVICE
HKU\S-1-5-19\SOFTWARE\Microsoft\Windows\CurrentVersion\Run
CTFMON.EXE c:\windows\system32\ctfmon.exe NT AUTHORITY\NETWORK SERVICE
HKU\S-1-5-20\SOFTWARE\Microsoft\Windows\CurrentVersion\Run
desktop desktop.ini ECO201\Administrator Startup
CTFMON.EXE c:\windows\system32\ctfmon.exe ECO201\Administrator HKU\S-1-
5-21-2109885818-934095084-1666581103-
500\SOFTWARE\Microsoft\Windows\CurrentVersion\Run
desktop desktop.ini .DEFAULT Startup
CTFMON.EXE c:\windows\system32\ctfmon.exe .DEFAULT
HKU\DEFAULT\SOFTWARE\Microsoft\Windows\CurrentVersion\Run
desktop desktop.ini All Users Common Startup
Shortcut to taskmgr c:\windows\system32\taskmgr.exe 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
 SoundNot Available
 Media ClipNot Available
 WordPad Document "%programfiles%\windows
 nt\accessories\wordpad.exe"
 Windows Media Services DRM Storage object 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
 Version 6.0.3790.0
 Build63790
 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	6.0.3790.0	95 KB	3/25/2003 2:00:00 PM	C:\WINDOWS\system32 Microsoft Corporation
advpack.dll	6.0.3790.0	94 KB	3/25/2003 2:00:00 PM	C:\WINDOWS\system32 Microsoft Corporation
asctrls.ocx	6.0.3790.0	90 KB	3/25/2003 2:00:00 PM	C:\WINDOWS\system32 Microsoft Corporation
browsecl.dll	6.0.3790.0	62 KB	3/25/2003 2:00:00 PM	C:\WINDOWS\system32 Microsoft Corporation
browseui.dll	6.0.3790.0	1,033 KB	3/25/2003 2:00:00 PM	C:\WINDOWS\system32 Microsoft Corporation
cdfview.dll	6.0.3790.0	144 KB	3/25/2003 2:00:00 PM	C:\WINDOWS\system32 Microsoft Corporation
comctl32.dll	5.82.3790.0	561 KB	3/25/2003 2:00:00 PM	C:\WINDOWS\system32 Microsoft Corporation
dxtrans.dll	6.3.3790.0	198 KB	3/25/2003 2:00:00 PM	C:\WINDOWS\system32 Microsoft Corporation
dxtmsft.dll	6.3.3790.0	344 KB	3/25/2003 2:00:00 PM	C:\WINDOWS\system32 Microsoft Corporation

iecont.dll	<File Missing>	Not Available	Not Available	Not Available
iecontl.c.dll	<File Missing>	Not Available	Not Available	Not Available
iedkcs32.dll	16.0.3790.0	300 KB	3/25/2003 2:00:00 PM	C:\WINDOWS\system32 Microsoft Corporation
iepeers.dll	6.0.3790.0	230 KB	3/25/2003 2:00:00 PM	C:\WINDOWS\system32 Microsoft Corporation
iesetup.dll	6.0.3790.0	59 KB	3/25/2003 2:00:00 PM	C:\WINDOWS\system32 Microsoft Corporation
ieuinit.inf	Not Available	20 KB	3/25/2003 2:00:00 PM	C:\WINDOWS\system32 Not Available
ieexplore.exe	6.0.3790.0	90 KB	3/25/2003 2:00:00 PM	C:\Program Files\Internet Explorer Microsoft Corporation
imgutil.dll	5.2.3790.0	35 KB	3/25/2003 2:00:00 PM	C:\WINDOWS\system32 Microsoft Corporation
inetctl.cpl	6.0.3790.0	303 KB	3/25/2003 2:00:00 PM	C:\WINDOWS\system32 Microsoft Corporation
inetctl.c.dll	6.0.3790.0	109 KB	3/25/2003 2:00:00 PM	C:\WINDOWS\system32 Microsoft Corporation
inseng.dll	6.0.3790.0	72 KB	3/25/2003 2:00:00 PM	C:\WINDOWS\system32 Microsoft Corporation
mlang.dll	6.0.3790.0	570 KB	3/25/2003 2:00:00 PM	C:\WINDOWS\system32 Microsoft Corporation
msencode.dll	2002.10.4.0	112 KB	3/25/2003 2:00:00 PM	C:\WINDOWS\system32 Not Available
mshta.exe	6.0.3790.0	26 KB	3/25/2003 2:00:00 PM	C:\WINDOWS\system32 Microsoft Corporation
mshtml.dll	6.0.3790.0	2,848 KB	3/25/2003 2:00:00 PM	C:\WINDOWS\system32 Microsoft Corporation
mshtml.tlb	6.0.3790.0	1,319 KB	3/25/2003 2:00:00 PM	C:\WINDOWS\system32 Microsoft Corporation
mshtml.ed.dll	6.0.3790.0	444 KB	3/25/2003 2:00:00 PM	C:\WINDOWS\system32 Microsoft Corporation
mshtmlr.dll	6.0.3790.0	55 KB	3/25/2003 2:00:00 PM	C:\WINDOWS\system32 Microsoft Corporation
msident.dll	6.0.3790.0	47 KB	3/25/2003 2:00:00 PM	C:\WINDOWS\system32 Microsoft Corporation
msidntld.dll	6.0.3790.0	15 KB	3/25/2003 2:00:00 PM	C:\WINDOWS\system32 Microsoft Corporation
msieftp.dll	6.0.3790.0	230 KB	3/25/2003 2:00:00 PM	C:\WINDOWS\system32 Microsoft Corporation
msrating.dll	6.0.3790.0	132 KB	3/25/2003 2:00:00 PM	C:\WINDOWS\system32 Microsoft Corporation
mstime.dll	6.0.3790.0	491 KB	3/25/2003 2:00:00 PM	C:\WINDOWS\system32 Microsoft Corporation
occache.dll	6.0.3790.0	89 KB	3/25/2003 2:00:00 PM	C:\WINDOWS\system32 Microsoft Corporation
proctexe.ocx	6.3.3790.0	78 KB	3/25/2003 2:00:00 PM	C:\WINDOWS\system32 Intel Corporation
sendmail.dll	6.0.3790.0	52 KB	3/25/2003 2:00:00 PM	C:\WINDOWS\system32 Microsoft Corporation
shdoclc.dll	6.0.3790.0	589 KB	3/25/2003 2:00:00 PM	C:\WINDOWS\system32 Microsoft Corporation

```

shdocvw.dll      6.0.3790.0 1,361 KB   3/25/2003 2:00:00 PM
C:\WINDOWS\system32 Microsoft Corporation
shfolder.dll    6.0.3790.0 23 KB 3/25/2003 2:00:00 PM
C:\WINDOWS\system32 Microsoft Corporation
shlwapi.dll     6.0.3790.0 281 KB    3/25/2003 2:00:00 PM
C:\WINDOWS\system32 Microsoft Corporation
tdc.ocx        1.3.0.3130 58 KB 3/25/2003 2:00:00 PM C:\WINDOWS\system32
Microsoft Corporation
url.dll        6.0.3790.0 36 KB 3/25/2003 2:00:00 PM C:\WINDOWS\system32
Microsoft Corporation
urlmon.dll     6.0.3790.0 502 KB    3/25/2003 2:00:00 PM
C:\WINDOWS\system32 Microsoft Corporation
webcheck.dll   6.0.3790.0 262 KB    3/25/2003 2:00:00 PM
C:\WINDOWS\system32 Microsoft Corporation
wininet.dll    6.0.3790.0 609 KB    3/25/2003 2:00:00 PM
C:\WINDOWS\system32 Microsoft Corporation

```

[Connectivity]

```

Item Value
Connection Preference      Never dial

```

LAN Settings

```

AutoConfigProxy Not Available
AutoProxyDetectMode Disabled
AutoConfigURL
ProxyDisabled
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\NetworkService\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   Medium-low
Trusted sites    Medium
Internet         High
Restricted sites High

```

```

Key Name:
HKEY_LOCAL_MACHINE\SYSTEM\CurrentControlSet\Control\Class\{4D36E972-
E325-11CE-BFC1-08002bE10318}\0007
Class Name:      <NO CLASS>
Last Write Time: 8/25/2005 - 12:03 PM
Value 0

```

```

Name: TxPacketDescCnt
Type: REG_SZ
Data: 1200

```

```

Value 1
Name: RxStdDescCnt
Type: REG_SZ
Data: 1200

```

```

Value 2
Name: RxCoalescingTicks
Type: REG_SZ
Data: 1500

```

```

Value 3
Name: TxCoalescingTicks
Type: REG_SZ
Data: 1500

```

```

Value 4
Name: RxMaxCoalescedFrames
Type: REG_SZ

```


Data:	330	Data:	1
Value 5		Value 16	
Name:	TxMaxCoalescedFrames	Name:	WolSpeed
Type:	REG_SZ	Type:	REG_SZ
Data:	330	Data:	2
Value 6		Value 17	
Name:	Characteristics	Name:	InfPath
Type:	REG_DWORD	Type:	REG_SZ
Data:	0x84	Data:	oem5.inf
Value 7		Value 18	
Name:	BusType	Name:	InfSection
Type:	REG_SZ	Type:	REG_SZ
Data:	5	Data:	BCM5705.XpInst
Value 8		Value 19	
Name:	ComponentId	Name:	InfSectionExt
Type:	REG_SZ	Type:	REG_SZ
Data:	pci\ven_14e4&dev_1653	Data:	.NTx86
Value 9		Value 20	
Name:	Enable8021p	Name:	ProviderName
Type:	REG_SZ	Type:	REG_SZ
Data:	0	Data:	Broadcom
Value 10		Value 21	
Name:	FlowControlCap	Name:	DriverDateData
Type:	REG_SZ	Type:	REG_BINARY
Data:	0	Data:	00 c0 1d 43 84 2a c5 01 - .Ã.C.*Ã.
Value 11		Value 22	
Name:	LargeSendOffload	Name:	DriverDate
Type:	REG_SZ	Type:	REG_SZ
Data:	1	Data:	3-17-2005
Value 12		Value 23	
Name:	RequestedMediaType	Name:	DriverVersion
Type:	REG_SZ	Type:	REG_SZ
Data:	6	Data:	8.22.1.0
Value 13		Value 24	
Name:	TaskOffloadCap	Name:	MatchingDeviceId
Type:	REG_SZ	Type:	REG_SZ
Data:	63	Data:	pci\ven_14e4&dev_1653
Value 14		Value 25	
Name:	WakeUpModeCap	Name:	DriverDesc
Type:	REG_SZ	Type:	REG_SZ
Data:	0	Data:	Broadcom NetXtreme Gigabit Ethernet
Value 15		Value 26	
Name:	WireSpeed	Name:	NetCfgInstanceId
Type:	REG_SZ		

Type: REG_SZ
Data: {1D7AD0FA-442E-48E7-B5AC-C41014913730}

Value 27

Name: PnPCapabilities
Type: REG_DWORD
Data: 0x38

Key Name:

HKEY_LOCAL_MACHINE\SYSTEM\CurrentControlSet\Control\Class\{4D36E972-E325-11CE-BFC1-08002bE10318}\0007\Linkage

Class Name: <NO CLASS>
Last Write Time: 6/24/2005 - 12:16 PM

Value 0

Name: RootDevice
Type: REG_MULTI_SZ
Data: {1D7AD0FA-442E-48E7-B5AC-C41014913730}

Value 1

Name: UpperBind
Type: REG_MULTI_SZ
Data: RasPppoe
Ndisuio
Tcpiip

Value 2

Name: Export
Type: REG_MULTI_SZ
Data: \Device\{1D7AD0FA-442E-48E7-B5AC-C41014913730}

Key Name:

HKEY_LOCAL_MACHINE\SYSTEM\CurrentControlSet\Control\Class\{4D36E972-E325-11CE-BFC1-08002bE10318}\0007\Ndi

Class Name: <NO CLASS>
Last Write Time: 6/24/2005 - 12:16 PM

Value 0

Name: Service
Type: REG_SZ
Data: b57w2k

Key Name:

HKEY_LOCAL_MACHINE\SYSTEM\CurrentControlSet\Control\Class\{4D36E972-E325-11CE-BFC1-08002bE10318}\0007\Ndi\Interfaces

Class Name: <NO CLASS>
Last Write Time: 6/24/2005 - 12:16 PM

Value 0

Name: UpperRange
Type: REG_SZ
Data: ndis5

Value 1

Name: LowerRange

Type: REG_SZ
Data: ethernet

Key Name:

HKEY_LOCAL_MACHINE\SYSTEM\CurrentControlSet\Control\Class\{4D36E972-E325-11CE-BFC1-08002bE10318}\0007\Ndi\Params

Class Name: <NO CLASS>
Last Write Time: 6/24/2005 - 12:16 PM

Key Name:

HKEY_LOCAL_MACHINE\SYSTEM\CurrentControlSet\Control\Class\{4D36E972-E325-11CE-BFC1-08002bE10318}\0007\Ndi\Params\Enable8021p

Class Name: <NO CLASS>
Last Write Time: 6/24/2005 - 12:16 PM

Value 0

Name: ParamDesc
Type: REG_SZ
Data: 802.1p QOS

Value 1

Name: default
Type: REG_SZ
Data: 0

Value 2

Name: type
Type: REG_SZ
Data: enum

Key Name:

HKEY_LOCAL_MACHINE\SYSTEM\CurrentControlSet\Control\Class\{4D36E972-E325-11CE-BFC1-08002bE10318}\0007\Ndi\Params\Enable8021p\enum

Class Name: <NO CLASS>
Last Write Time: 6/24/2005 - 12:16 PM

Value 0

Name: 0
Type: REG_SZ
Data: Disable

Value 1

Name: 1
Type: REG_SZ
Data: Enable

Key Name:

HKEY_LOCAL_MACHINE\SYSTEM\CurrentControlSet\Control\Class\{4D36E972-E325-11CE-BFC1-08002bE10318}\0007\Ndi\Params\FlowControlCap

Class Name: <NO CLASS>
Last Write Time: 6/24/2005 - 12:16 PM

Value 0

Name: ParamDesc
Type: REG_SZ

Data: Flow Control
Value 1
Name: default
Type: REG_SZ
Data: 2147483648

Value 2
Name: type
Type: REG_SZ
Data: enum

Key Name:
HKEY_LOCAL_MACHINE\SYSTEM\CurrentControlSet\Control\Class\{4D36E972-E325-11CE-BFC1-08002BE10318}\0007\Ndi\Params\FlowControlCap\enum
Class Name: <NO CLASS>
Last Write Time: 6/24/2005 - 12:16 PM

Value 0
Name: 0
Type: REG_SZ
Data: Disable

Value 1
Name: 1
Type: REG_SZ
Data: Rx PAUSE

Value 2
Name: 2
Type: REG_SZ
Data: Tx PAUSE

Value 3
Name: 3
Type: REG_SZ
Data: Rx/Tx PAUSE

Value 4
Name: 2147483648
Type: REG_SZ
Data: Auto

Key Name:
HKEY_LOCAL_MACHINE\SYSTEM\CurrentControlSet\Control\Class\{4D36E972-E325-11CE-BFC1-08002BE10318}\0007\Ndi\Params\LargeSendOffload
Class Name: <NO CLASS>
Last Write Time: 6/24/2005 - 12:16 PM

Value 0
Name: ParamDesc
Type: REG_SZ
Data: Large Send Offload

Value 1

Name: default
Type: REG_SZ
Data: 1

Value 2
Name: type
Type: REG_SZ
Data: enum

Key Name:
HKEY_LOCAL_MACHINE\SYSTEM\CurrentControlSet\Control\Class\{4D36E972-E325-11CE-BFC1-08002BE10318}\0007\Ndi\Params\LargeSendOffload\enum
Class Name: <NO CLASS>
Last Write Time: 6/24/2005 - 12:16 PM

Value 0
Name: 0
Type: REG_SZ
Data: Disable

Value 1
Name: 1
Type: REG_SZ
Data: Enable

Key Name:
HKEY_LOCAL_MACHINE\SYSTEM\CurrentControlSet\Control\Class\{4D36E972-E325-11CE-BFC1-08002BE10318}\0007\Ndi\Params\NetworkAddress
Class Name: <NO CLASS>
Last Write Time: 6/24/2005 - 12:16 PM

Value 0
Name: ParamDesc
Type: REG_SZ
Data: Locally Administered Address

Value 1
Name: Default
Type: REG_SZ

Value 2
Name: type
Type: REG_SZ
Data: edit

Value 3
Name: LimitText
Type: REG_SZ
Data: 12

Value 4
Name: UpperCase
Type: REG_SZ
Data: 1

Value 5
Name: optional
Type: REG_SZ
Data: 1

Key Name:
HKEY_LOCAL_MACHINE\SYSTEM\CurrentControlSet\Control\Class\{4D36E972-E325-11CE-BFC1-08002bE10318}\0007\Ndi\Params\RequestedMediaType
Class Name: <NO CLASS>
Last Write Time: 6/24/2005 - 12:16 PM

Value 0
Name: ParamDesc
Type: REG_SZ
Data: Speed & Duplex

Value 1
Name: default
Type: REG_SZ
Data: 0

Value 2
Name: type
Type: REG_SZ
Data: enum

Key Name:
HKEY_LOCAL_MACHINE\SYSTEM\CurrentControlSet\Control\Class\{4D36E972-E325-11CE-BFC1-08002bE10318}\0007\Ndi\Params\RequestedMediaType\enum
Class Name: <NO CLASS>
Last Write Time: 6/24/2005 - 12:16 PM

Value 0
Name: 0
Type: REG_SZ
Data: Auto

Value 1
Name: 3
Type: REG_SZ
Data: 10 Mb Half

Value 2
Name: 4
Type: REG_SZ
Data: 10 Mb Full

Value 3
Name: 5
Type: REG_SZ
Data: 100 Mb Half

Value 4
Name: 6

Type: REG_SZ
Data: 100 Mb Full

Key Name:
HKEY_LOCAL_MACHINE\SYSTEM\CurrentControlSet\Control\Class\{4D36E972-E325-11CE-BFC1-08002bE10318}\0007\Ndi\Params\TaskOffloadCap
Class Name: <NO CLASS>
Last Write Time: 6/24/2005 - 12:16 PM

Value 0
Name: ParamDesc
Type: REG_SZ
Data: Checksum Offload

Value 1
Name: default
Type: REG_SZ
Data: 63

Value 2
Name: type
Type: REG_SZ
Data: enum

Key Name:
HKEY_LOCAL_MACHINE\SYSTEM\CurrentControlSet\Control\Class\{4D36E972-E325-11CE-BFC1-08002bE10318}\0007\Ndi\Params\TaskOffloadCap\enum
Class Name: <NO CLASS>
Last Write Time: 6/24/2005 - 12:16 PM

Value 0
Name: 0
Type: REG_SZ
Data: None

Value 1
Name: 42
Type: REG_SZ
Data: Rx TCP/IP Checksum

Value 2
Name: 21
Type: REG_SZ
Data: Tx TCP/IP Checksum

Value 3
Name: 63
Type: REG_SZ
Data: Tx/Rx TCP/IP Checksum

Key Name:
HKEY_LOCAL_MACHINE\SYSTEM\CurrentControlSet\Control\Class\{4D36E972-E325-11CE-BFC1-08002bE10318}\0007\Ndi\Params\WakeUpModeCap
Class Name: <NO CLASS>

Last Write Time: 6/24/2005 - 12:16 PM

Value 0
Name: ParamDesc
Type: REG_SZ
Data: Wake Up Capabilities

Value 1
Name: default
Type: REG_SZ
Data: 3

Value 2
Name: type
Type: REG_SZ
Data: enum

Key Name:
HKEY_LOCAL_MACHINE\SYSTEM\CurrentControlSet\Control\Class\{4D36E972-E325-11CE-BFC1-08002bE10318}\0007\Ndi\Params\WakeUpModeCap\enum
Class Name: <NO CLASS>
Last Write Time: 6/24/2005 - 12:16 PM

Value 0
Name: 0
Type: REG_SZ
Data: None

Value 1
Name: 1
Type: REG_SZ
Data: Magic Packet

Value 2
Name: 2
Type: REG_SZ
Data: Wake Up Frame

Value 3
Name: 3
Type: REG_SZ
Data: Both

Key Name:
HKEY_LOCAL_MACHINE\SYSTEM\CurrentControlSet\Control\Class\{4D36E972-E325-11CE-BFC1-08002bE10318}\0007\Ndi\Params\WireSpeed
Class Name: <NO CLASS>
Last Write Time: 6/24/2005 - 12:16 PM

Value 0
Name: ParamDesc
Type: REG_SZ
Data: Ethernet@WireSpeed

Value 1
Name: default

Type: REG_SZ
Data: 1

Value 2
Name: type
Type: REG_SZ
Data: enum

Key Name:
HKEY_LOCAL_MACHINE\SYSTEM\CurrentControlSet\Control\Class\{4D36E972-E325-11CE-BFC1-08002bE10318}\0007\Ndi\Params\WireSpeed\enum
Class Name: <NO CLASS>
Last Write Time: 6/24/2005 - 12:16 PM

Value 0
Name: 0
Type: REG_SZ
Data: Disable

Value 1
Name: 1
Type: REG_SZ
Data: Enable

Key Name:
HKEY_LOCAL_MACHINE\SYSTEM\CurrentControlSet\Control\Class\{4D36E972-E325-11CE-BFC1-08002bE10318}\0007\Ndi\Params\WolSpeed
Class Name: <NO CLASS>
Last Write Time: 6/24/2005 - 12:16 PM

Value 0
Name: ParamDesc
Type: REG_SZ
Data: WOL Speed

Value 1
Name: default
Type: REG_SZ
Data: 0

Value 2
Name: type
Type: REG_SZ
Data: enum

Key Name:
HKEY_LOCAL_MACHINE\SYSTEM\CurrentControlSet\Control\Class\{4D36E972-E325-11CE-BFC1-08002bE10318}\0007\Ndi\Params\WolSpeed\enum
Class Name: <NO CLASS>
Last Write Time: 6/24/2005 - 12:16 PM

Value 0
Name: 0
Type: REG_SZ
Data: Auto

Value 1
Name: 1
Type: REG_SZ
Data: 10 Mb

Value 2
Name: 2
Type: REG_SZ
Data: 100 Mb

Key Name:
HKEY_LOCAL_MACHINE\SYSTEM\CurrentControlSet\Services\InetInfo
Class Name: <NO CLASS>
Last Write Time: 6/28/2005 - 12:21 PM

Key Name:
HKEY_LOCAL_MACHINE\SYSTEM\CurrentControlSet\Services\InetInfo\Parameters
Class Name: <NO CLASS>
Last Write Time: 8/31/2005 - 7:53 AM

Value 0
Name: ListenBackLog
Type: REG_DWORD
Data: 0xfa0

Value 1
Name: PoolThreadLimit
Type: REG_DWORD
Data: 0x800

Value 2
Name: MaxPoolThreads
Type: REG_DWORD
Data: 0x1000

Value 3
Name: ThreadTimeout
Type: REG_DWORD
Data: 0x15180

Key Name:
HKEY_LOCAL_MACHINE\SYSTEM\CurrentControlSet\Services\InetInfo\Performance
Class Name: <NO CLASS>
Last Write Time: 8/29/2005 - 8:54 AM

Value 0
Name: Library
Type: REG_SZ
Data: infoctrs.dll

Value 1
Name: Open

Type: REG_SZ
Data: OpenINFOPerformanceData

Value 2
Name: Close
Type: REG_SZ
Data: CloseINFOPerformanceData

Value 3
Name: Collect
Type: REG_SZ
Data: CollectINFOPerformanceData

Value 4
Name: PerfIniFile
Type: REG_SZ
Data: infoctrs.ini

Value 5
Name: Last Counter
Type: REG_DWORD
Data: 0x9a6

Value 6
Name: Last Help
Type: REG_DWORD
Data: 0x9a7

Value 7
Name: First Counter
Type: REG_DWORD
Data: 0x966

Value 8
Name: First Help
Type: REG_DWORD
Data: 0x967

Value 9
Name: Object List
Type: REG_SZ
Data: 2406

Value 10
Name: Library Validation Code
Type: REG_BINARY

Data: 00000000 00 ce 5a 14 cb 7b c5 01 - 00 20 00 00 00 00 00 00 .Î.Ë{Å..
.....

Value 11
Name: WbemAdapFileSignature
Type: REG_BINARY

00000000 4c c3 d3 e7 44 ca 56 e0 - f3 e8 a0 14 52 26 fb 0f
LÃçDÈVãóê .R&û.

Value 12
Name: WbemAdapFileTime
Type: REG_BINARY
Data: 26 d5 bf 13 cb 7b c5 01 - &.È{Å.

Value 13
Name: WbemAdapFileSize
Type: REG_DWORD
Data: 0x2000

Value 14
Name: WbemAdapStatus
Type: REG_DWORD
Data: 0

Value 15
Name: 2003
Type: REG_QWORD
Data: ba 55 bb 8c 66 ac c5 01 - °U».f-Å.

Key Name:
HKEY_LOCAL_MACHINE\SYSTEM\CurrentControlSet\Services\HTTP
Class Name: <NO CLASS>
Last Write Time: 10/21/2005 - 9:30 AM
Value 0
Name: DisplayName
Type: REG_SZ
Data: HTTP

Value 1
Name: Description
Type: REG_SZ
Data: This service implements the hypertext transfer protocol (HTTP). If this service is disabled, any services that explicitly depend on it will fail to start.

Value 2
Name: ErrorControl
Type: REG_DWORD
Data: 0x1

Value 3
Name: ImagePath
Type: REG_EXPAND_SZ
Data: System32\Drivers\HTTP.sys

Value 4
Name: Start

Type: REG_DWORD
Data: 0x3

Value 5
Name: Type
Type: REG_DWORD
Data: 0x1

Key Name:
HKEY_LOCAL_MACHINE\SYSTEM\CurrentControlSet\Services\HTTP\Parameters
Class Name: <NO CLASS>
Last Write Time: 10/21/2005 - 9:31 AM

Value 0
Name: DisableServerHeader
Type: REG_DWORD
Data: 0x1

Value 1
Name: MaxConnections
Type: REG_DWORD
Data: 0x186a0

Value 2
Name: UriEnableCache
Type: REG_DWORD
Data: 0

Value 3
Name: UriScavengerPeriod
Type: REG_DWORD
Data: 0x2a30

Key Name:
HKEY_LOCAL_MACHINE\SYSTEM\CurrentControlSet\Services\HTTP\Parameters\SslBindingInfo
Class Name: <NO CLASS>
Last Write Time: 6/28/2005 - 12:23 PM

Key Name:
HKEY_LOCAL_MACHINE\SYSTEM\CurrentControlSet\Services\HTTP\Parameters\UrlAclInfo
Class Name: <NO CLASS>
Last Write Time: 6/28/2005 - 12:23 PM

Key Name:
HKEY_LOCAL_MACHINE\SYSTEM\CurrentControlSet\Services\HTTP\Parameters\Synchronize
Class Name: <NO CLASS>
Last Write Time: 10/21/2005 - 9:31 AM

Key Name:
HKEY_LOCAL_MACHINE\SYSTEM\CurrentControlSet\Services\HTTP\Security
Class Name: <NO CLASS>

```

Last Write Time: 6/23/2005 - 5:02 PM
Value 0
  Name: Security
  Type: REG_BINARY
  Data:
00000000 01 00 14 80 a4 00 00 00 - b0 00 00 00 14 00 00 00
.....°.....
00000010 30 00 00 00 02 00 1c 00 - 01 00 00 00 02 80 14 00
0.....
00000020 ff 01 0f 00 01 01 00 00 - 00 00 00 01 00 00 00 00
ÿ.....
00000030 02 00 74 00 05 00 00 00 - 00 00 14 00 fd 01 02 00
..t.....ÿ...
00000040 01 01 00 00 00 00 00 05 - 12 00 00 00 00 00 18 00
.....
00000050 ff 01 0f 00 01 02 00 00 - 00 00 00 05 20 00 00 00
ÿ.....
00000060 20 02 00 00 00 00 14 00 - 8d 01 02 00 01 01 00 00
.....
00000070 00 00 00 05 0b 00 00 00 - 00 00 18 00 fd 01 02 00
.....ÿ...
00000080 01 02 00 00 00 00 00 05 - 20 00 00 00 23 02 00 00 .....
...#...
00000090 00 00 14 00 10 00 00 00 - 01 01 00 00 00 00 00 05
.....
000000a0 04 00 00 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 .....

```

```

Key Name:
HKEY_LOCAL_MACHINE\SYSTEM\CurrentControlSet\Services\HTTP\Enum
Class Name: <NO CLASS>
Last Write Time: 10/21/2005 - 9:30 AM
Value 0
  Name: 0
  Type: REG_SZ
  Data: Root\LEGACY_HTTP\0000
Value 1
  Name: Count
  Type: REG_DWORD
  Data: 0x1
Value 2
  Name: NextInstance
  Type: REG_DWORD
  Data: 0x1

```

```

Key Name:
HKEY_LOCAL_MACHINE\SYSTEM\CurrentControlSet\Services\W3SVC
Class Name: <NO CLASS>
Last Write Time: 10/21/2005 - 9:30 AM
Value 0

```

```

Name: Type
Type: REG_DWORD
Data: 0x20
Value 1
  Name: Start
  Type: REG_DWORD
  Data: 0x2
Value 2
  Name: ErrorControl
  Type: REG_DWORD
  Data: 0x1
Value 3
  Name: ImagePath
  Type: REG_EXPAND_SZ
  Data: %SystemRoot%\System32\svchost.exe -k iissvcs
Value 4
  Name: DisplayName
  Type: REG_SZ
  Data: World Wide Web Publishing Service
Value 5
  Name: DependOnService
  Type: REG_MULTI_SZ
  Data: RPCSS
  HTTPFilter
  IISADMIN
Value 6
  Name: DependOnGroup
  Type: REG_MULTI_SZ
  Data:
Value 7
  Name: ObjectName
  Type: REG_SZ
  Data: LocalSystem
Value 8
  Name: Description
  Type: REG_SZ
  Data: Provides Web connectivity and administration through
the Internet Information Services Manager
Value 9
  Name: FailureActions
  Type: REG_BINARY
  Data:
00000000 80 51 01 00 00 00 00 00 - 00 00 00 00 03 00 00 00
.Q.....
00000010 14 00 00 00 01 00 00 00 - 01 00 00 00 01 00 00 00
.....

```


01 00 00 00 01 00 00 00 - 01 00 00 00

.....

Key Name:
 HKEY_LOCAL_MACHINE\SYSTEM\CurrentControlSet\Services\W3SVC\Parameters
 Class Name: <NO CLASS>
 Last Write Time: 8/31/2005 - 7:55 AM
 Value 0
 Name: MajorVersion
 Type: REG_DWORD
 Data: 0x6

Value 1
 Name: MinorVersion
 Type: REG_DWORD
 Data: 0

Value 2
 Name: InstallPath
 Type: REG_SZ
 Data: C:\WINDOWS\system32\inetsrv

Value 3
 Name: AccessDeniedMessage
 Type: REG_SZ
 Data: Error: Access is Denied.

Value 4
 Name: ServiceDll
 Type: REG_EXPAND_SZ
 Data: C:\WINDOWS\system32\inetsrv\iisw3adm.dll

Value 5
 Name: AcceptExOutstanding
 Type: REG_DWORD
 Data: 0x28

Key Name:
 HKEY_LOCAL_MACHINE\SYSTEM\CurrentControlSet\Services\W3SVC\Parameters\ADCLaunch
 Class Name: <NO CLASS>
 Last Write Time: 6/28/2005 - 12:21 PM

Key Name:
 HKEY_LOCAL_MACHINE\SYSTEM\CurrentControlSet\Services\W3SVC\Parameters\ADCLaunch\AdvancedDataFactory
 Class Name: <NO CLASS>
 Last Write Time: 6/28/2005 - 12:21 PM

Key Name:
 HKEY_LOCAL_MACHINE\SYSTEM\CurrentControlSet\Services\W3SVC\Parameters\ADCLaunch\RDSServer.DataFactory
 Class Name: <NO CLASS>
 Last Write Time: 6/28/2005 - 12:21 PM

Key Name:
 HKEY_LOCAL_MACHINE\SYSTEM\CurrentControlSet\Services\W3SVC\Parameters\Virtual Roots
 Class Name: <NO CLASS>
 Last Write Time: 7/4/2005 - 1:46 PM
 Value 0
 Name: /
 Type: REG_SZ
 Data: C:\inetpub\wwwroot,,205

Key Name:
 HKEY_LOCAL_MACHINE\SYSTEM\CurrentControlSet\Services\W3SVC\Performance
 Class Name: <NO CLASS>
 Last Write Time: 7/1/2005 - 11:57 AM
 Value 0
 Name: Library
 Type: REG_SZ
 Data: C:\WINDOWS\system32\inetsrv\w3ctrs.dll

Value 1
 Name: Open
 Type: REG_SZ
 Data: OpenW3PerformanceData

Value 2
 Name: Close
 Type: REG_SZ
 Data: CloseW3PerformanceData

Value 3
 Name: Collect
 Type: REG_SZ
 Data: CollectW3PerformanceData

Value 4
 Name: PerfIniFile
 Type: REG_SZ
 Data: w3ctrs.ini

Value 5
 Name: Last Counter
 Type: REG_DWORD
 Data: 0xa9e

Value 6
 Name: Last Help
 Type: REG_DWORD
 Data: 0xa9f

Value 7
 Name: First Counter
 Type: REG_DWORD
 Data: 0x9a8

```

Value 8
  Name:      First Help
  Type:      REG_DWORD
  Data:      0x9a9

Value 9
  Name:      Object List
  Type:      REG_SZ
  Data:      2472 2646

Value 10
  Name:      Library Validation Code
  Type:      REG_BINARY
  Data:      00000000 00 55 ee 17 cb 7b c5 01 - 00 5e 00 00 00 00 00 00
.Ui.Ë{Å..^.....

Value 11
  Name:      WbemAdapFileSignature
  Type:      REG_BINARY
  Data:      00000000 39 e3 6c 2c b4 be 59 f5 - 17 7c c4 d5 2f dc f7 1a
9äl,'¼Yö. |ÄÖ/Ü+.

Value 12
  Name:      WbemAdapFileTime
  Type:      REG_BINARY
  Data:      f0 f6 8e 17 cb 7b c5 01 -
                öö..Ë{Å.

Value 13
  Name:      WbemAdapFileSize
  Type:      REG_DWORD
  Data:      0x5e00

Value 14
  Name:      WbemAdapStatus
  Type:      REG_DWORD
  Data:      0

Key Name:
HKEY_LOCAL_MACHINE\SYSTEM\CurrentControlSet\Services\W3SVC\Security
Class Name: <NO CLASS>
Last Write Time: 6/28/2005 - 12:21 PM
Value 0
  Name:      Security
  Type:      REG_BINARY
  Data:      00000000 01 00 14 80 90 00 00 00 - 9c 00 00 00 14 00 00 00
.....

```

```

00000010 30 00 00 00 02 00 1c 00 - 01 00 00 00 02 80 14 00
0.....
00000020 ff 01 0f 00 01 01 00 00 - 00 00 00 01 00 00 00 00
ÿ.....
00000030 02 00 60 00 04 00 00 00 - 00 00 14 00 fd 01 02 00
..`.....ÿ...
00000040 01 01 00 00 00 00 00 05 - 12 00 00 00 00 00 18 00
.....
00000050 ff 01 0f 00 01 02 00 00 - 00 00 00 05 20 00 00 00
ÿ.....
00000060 20 02 00 00 00 00 14 00 - 8d 01 02 00 01 01 00 00
.....
00000070 00 00 00 05 0b 00 00 00 - 00 00 18 00 fd 01 02 00
.....ÿ...
00000080 01 02 00 00 00 00 05 - 20 00 00 00 23 02 00 00
...#...
00000090 01 01 00 00 00 00 05 - 12 00 00 00 01 01 00 00
.....
00 00 00 05 12 00 00 00 -
                .....

```

```

Key Name:
HKEY_LOCAL_MACHINE\SYSTEM\CurrentControlSet\Services\W3SVC\Enum
Class Name: <NO CLASS>
Last Write Time: 10/21/2005 - 9:30 AM
Value 0
  Name:      0
  Type:      REG_SZ
  Data:      Root\LEGACY_W3SVC\0000

Value 1
  Name:      Count
  Type:      REG_DWORD
  Data:      0x1

Value 2
  Name:      NextInstance
  Type:      REG_DWORD
  Data:      0x1

Key Name:
HKEY_LOCAL_MACHINE\SYSTEM\CurrentControlSet\Services\Tcpip
Class Name: <NO CLASS>
Last Write Time: 10/21/2005 - 9:30 AM
Value 0
  Name:      Type
  Type:      REG_DWORD
  Data:      0x1

Value 1
  Name:      Start
  Type:      REG_DWORD
  Data:      0x1

```

Value 2	Name: ErrorControl	Type: REG_DWORD	Data: 0x1	Type: REG_MULTI_SZ	Data: "{47B73AC8-F869-45F5-B7C0-3068082119AF}" "{4839FE28-FB47-40BD-B595-2B0CE0244B77}" "{1D7AD0FA-442E-48E7-B5AC-C41014913730}" "NdisWanIp"
Value 3	Name: Tag	Type: REG_DWORD	Data: 0x4	Value 2	Name: Export
Value 4	Name: ImagePath	Type: REG_EXPAND_SZ	Data: system32\DRIVERS\tcpip.sys	Type: REG_MULTI_SZ	Data: \Device\Tcpip_{47B73AC8-F869-45F5-B7C0-3068082119AF} \Device\Tcpip_{4839FE28-FB47-40BD-B595-2B0CE0244B77} \Device\Tcpip_{1D7AD0FA-442E-48E7-B5AC-C41014913730} \Device\Tcpip_{085108C6-0CC6-464B-97E4-105984385794} \Device\Tcpip_{3495E8E9-75FA-43DA-9564-4813660803FD}
Value 5	Name: DisplayName	Type: REG_SZ	Data: TCP/IP Protocol Driver	Key Name: HKEY_LOCAL_MACHINE\SYSTEM\CurrentControlSet\Services\Tcpip\Parameters	Class Name: <NO CLASS>
Value 6	Name: Group	Type: REG_SZ	Data: PNP_TDI	Last Write Time: 10/4/2005 - 12:21 PM	Value 0
Value 7	Name: DependOnService	Type: REG_MULTI_SZ	Data: IPsec	Name: NV Hostname	Type: REG_SZ
Value 8	Name: DependOnGroup	Type: REG_MULTI_SZ	Data:	Data: eco201	Value 1
Value 9	Name: Description	Type: REG_SZ	Data: TCP/IP Protocol Driver	Name: DataBasePath	Type: REG_EXPAND_SZ
Key Name: HKEY_LOCAL_MACHINE\SYSTEM\CurrentControlSet\Services\Tcpip\Linkage	Class Name: <NO CLASS>	Last Write Time: 10/4/2005 - 12:00 PM	Value 0	Name: NameServer	Type: REG_SZ
Value 0	Name: Bind	Type: REG_MULTI_SZ	Data: \Device\{47B73AC8-F869-45F5-B7C0-3068082119AF} \Device\{4839FE28-FB47-40BD-B595-2B0CE0244B77} \Device\{1D7AD0FA-442E-48E7-B5AC-C41014913730} \Device\NdisWanIp	Data: %SystemRoot%\System32\drivers\etc	Value 2
Value 1	Name: Route	Data:	Value 3	Name: ForwardBroadcasts	Type: REG_DWORD
			Value 4	Data: 0	Value 4
			Name: IPEnableRouter	Type: REG_DWORD	Data: 0
			Value 5	Name: Domain	Type: REG_SZ
			Data:	Value 6	Name: Hostname
			Value 6	Type: REG_SZ	Data: eco201
			Data:		

Value 7
 Name: SearchList
 Type: REG_SZ
 Data:

Value 8
 Name: UseDomainNameDevolution
 Type: REG_DWORD
 Data: 0

Value 9
 Name: EnableICMPRedirect
 Type: REG_DWORD
 Data: 0x1

Value 10
 Name: DeadGWDetectDefault
 Type: REG_DWORD
 Data: 0x1

Value 11
 Name: DontAddDefaultGatewayDefault
 Type: REG_DWORD
 Data: 0

Value 12
 Name: EnableSecurityFilters
 Type: REG_DWORD
 Data: 0

Value 13
 Name: ReservedPorts
 Type: REG_MULTI_SZ
 Data: 3343-3343

Value 14
 Name: MaxUserPort
 Type: REG_DWORD
 Data: 0xffff

Key Name:
 HKEY_LOCAL_MACHINE\SYSTEM\CurrentControlSet\Services\Tcpip\Parameters\Adapters
 Class Name: <NO CLASS>
 Last Write Time: 10/4/2005 - 12:00 PM

Key Name:
 HKEY_LOCAL_MACHINE\SYSTEM\CurrentControlSet\Services\Tcpip\Parameters\Adapters\NdisWanIp
 Class Name: <NO CLASS>
 Last Write Time: 6/23/2005 - 3:10 PM

Value 0
 Name: LLInterface
 Type: REG_SZ

Data: WANARP

Value 1
 Name: IpConfig
 Type: REG_MULTI_SZ
 Data: Tcpip\Parameters\Interfaces\{085108C6-0CC6-464B-97E4-105984385794}
 Tcpip\Parameters\Interfaces\{3495E8E9-75FA-43DA-9564-4813660803FD}

Value 2
 Name: NumInterfaces
 Type: REG_DWORD
 Data: 0x2

Value 3
 Name: IpInterfaces
 Type: REG_BINARY
 Data:
 00000000 c6 08 51 08 c6 0c 4b 46 - 97 e4 10 59 84 38 57 94
 Æ.Q.Æ.KF.ä.Y.8W.
 00000010 e9 e8 95 34 fa 75 da 43 - 95 64 48 13 66 08 03 fd
 éè.4úúÜC.dH.f..ý

Key Name:
 HKEY_LOCAL_MACHINE\SYSTEM\CurrentControlSet\Services\Tcpip\Parameters\Adapters\{1D7AD0FA-442E-48E7-B5AC-C41014913730}
 Class Name: <NO CLASS>
 Last Write Time: 6/24/2005 - 12:16 PM

Value 0
 Name: LLInterface
 Type: REG_SZ
 Data:

Value 1
 Name: IpConfig
 Type: REG_MULTI_SZ
 Data: Tcpip\Parameters\Interfaces\{1D7AD0FA-442E-48E7-B5AC-C41014913730}

Key Name:
 HKEY_LOCAL_MACHINE\SYSTEM\CurrentControlSet\Services\Tcpip\Parameters\Adapters\{47B73AC8-F869-45F5-B7C0-3068082119AF}
 Class Name: <NO CLASS>
 Last Write Time: 10/4/2005 - 12:00 PM

Value 0
 Name: LLInterface
 Type: REG_SZ
 Data:

Value 1
 Name: IpConfig

Type: REG_MULTI_SZ
Data: Tcpip\Parameters\Interfaces\{47B73AC8-F869-45F5-B7C0-3068082119AF}

Key Name:
HKEY_LOCAL_MACHINE\SYSTEM\CurrentControlSet\Services\Tcpip\Parameters\Adapters\{4839FE28-FB47-40BD-B595-2B0CE0244B77}
Class Name: <NO CLASS>
Last Write Time: 7/8/2005 - 9:54 AM
Value 0
Name: LLInterface
Type: REG_SZ
Data:

Value 1
Name: IpConfig
Type: REG_MULTI_SZ
Data: Tcpip\Parameters\Interfaces\{4839FE28-FB47-40BD-B595-2B0CE0244B77}

Key Name:
HKEY_LOCAL_MACHINE\SYSTEM\CurrentControlSet\Services\Tcpip\Parameters\DNSRegisteredAdapters
Class Name: <NO CLASS>
Last Write Time: 6/23/2005 - 3:09 PM

Key Name:
HKEY_LOCAL_MACHINE\SYSTEM\CurrentControlSet\Services\Tcpip\Parameters\Interfaces
Class Name: <NO CLASS>
Last Write Time: 10/4/2005 - 12:00 PM

Key Name:
HKEY_LOCAL_MACHINE\SYSTEM\CurrentControlSet\Services\Tcpip\Parameters\Interfaces\{085108C6-0CC6-464B-97E4-105984385794}
Class Name: <NO CLASS>
Last Write Time: 6/23/2005 - 3:10 PM
Value 0
Name: UseZeroBroadcast
Type: REG_DWORD
Data: 0

Value 1
Name: EnabledDHCP
Type: REG_DWORD
Data: 0

Value 2
Name: IPAddress
Type: REG_MULTI_SZ
Data: 0.0.0.0

Value 3

Name: SubnetMask
Type: REG_MULTI_SZ
Data: 0.0.0.0

Value 4
Name: DefaultGateway
Type: REG_MULTI_SZ
Data:

Value 5
Name: EnableDeadGWDetect
Type: REG_DWORD
Data: 0x1

Value 6
Name: DontAddDefaultGateway
Type: REG_DWORD
Data: 0

Key Name:
HKEY_LOCAL_MACHINE\SYSTEM\CurrentControlSet\Services\Tcpip\Parameters\Interfaces\{1D7AD0FA-442E-48E7-B5AC-C41014913730}
Class Name: <NO CLASS>
Last Write Time: 7/11/2005 - 1:28 PM

Value 0
Name: UseZeroBroadcast
Type: REG_DWORD
Data: 0

Value 1
Name: EnableDeadGWDetect
Type: REG_DWORD
Data: 0x1

Value 2
Name: EnabledDHCP
Type: REG_DWORD
Data: 0

Value 3
Name: IPAddress
Type: REG_MULTI_SZ
Data: 129.103.11.1

Value 4
Name: SubnetMask
Type: REG_MULTI_SZ
Data: 255.255.255.0

Value 5
Name: DefaultGateway
Type: REG_MULTI_SZ
Data:

Value 6
Name: DefaultGatewayMetric
Type: REG_MULTI_SZ
Data:

Value 7
Name: NameServer
Type: REG_SZ
Data:

Value 8
Name: Domain
Type: REG_SZ
Data:

Value 9
Name: RegistrationEnabled
Type: REG_DWORD
Data: 0x1

Value 10
Name: RegisterAdapterName
Type: REG_DWORD
Data: 0

Value 11
Name: TCPAllowedPorts
Type: REG_MULTI_SZ
Data: 0

Value 12
Name: UDPAllowedPorts
Type: REG_MULTI_SZ
Data: 0

Value 13
Name: RawIPAllowedProtocols
Type: REG_MULTI_SZ
Data: 0

Value 14
Name: NTEContextList
Type: REG_MULTI_SZ
Data: 0x00000002

Value 15
Name: DhcpClassIdBin
Type: REG_BINARY
Data:

Value 16
Name: DhcpServer
Type: REG_SZ
Data: 255.255.255.255

Value 17
Name: Lease
Type: REG_DWORD
Data: 0xe10

Value 18
Name: LeaseObtainedTime
Type: REG_DWORD
Data: 0x42bbe08d

Value 19
Name: T1
Type: REG_DWORD
Data: 0x42bbe795

Value 20
Name: T2
Type: REG_DWORD
Data: 0x42bbecdb

Value 21
Name: LeaseTerminatesTime
Type: REG_DWORD
Data: 0x42bbe9d

Value 22
Name: IPAutoconfigurationAddress
Type: REG_SZ
Data: 0.0.0.0

Value 23
Name: IPAutoconfigurationMask
Type: REG_SZ
Data: 255.255.0.0

Value 24
Name: IPAutoconfigurationSeed
Type: REG_DWORD
Data: 0

Value 25
Name: AddressType
Type: REG_DWORD
Data: 0

Key Name:
HKEY_LOCAL_MACHINE\SYSTEM\CurrentControlSet\Services\Tcpip\Parameters\I
nterfaces\{3495E8E9-75FA-43DA-9564-4813660803FD}
Class Name: <NO CLASS>
Last Write Time: 6/23/2005 - 3:10 PM
Value 0
Name: UseZeroBroadcast
Type: REG_DWORD
Data: 0

		Data:	129.103.191.201
Value 1	EnabledDHCP	Name:	
	REG_DWORD	Type:	
	0	Data:	
Value 2	IPAddress	Name:	
	REG_MULTI_SZ	Type:	
	0.0.0.0	Data:	
Value 3	SubnetMask	Name:	
	REG_MULTI_SZ	Type:	
	0.0.0.0	Data:	
Value 4	DefaultGateway	Name:	
	REG_MULTI_SZ	Type:	
		Data:	
Value 5	EnableDeadGWDetect	Name:	
	REG_DWORD	Type:	
	0x1	Data:	
Value 6	DontAddDefaultGateway	Name:	
	REG_DWORD	Type:	
	0	Data:	
Value 7		Name:	
		Type:	
		Data:	
Value 8		Name:	
		Type:	
		Data:	
Value 9		Name:	
		Type:	
		Data:	
Value 10		Name:	
		Type:	
		Data:	
Value 11		Name:	
		Type:	
		Data:	
Value 12		Name:	
		Type:	
		Data:	
Value 13		Name:	
		Type:	
		Data:	
Value 14		Name:	
		Type:	
		Data:	

Key Name:
HKEY_LOCAL_MACHINE\SYSTEM\CurrentControlSet\Services\Tcpip\Parameters\Interfaces\{47B73AC8-F869-45F5-B7C0-3068082119AF}
Class Name: <NO CLASS>
Last Write Time: 10/21/2005 - 9:31 AM

Data: 0x00000003

Type: REG_DWORD
Data: 0x1

Key Name:
HKEY_LOCAL_MACHINE\SYSTEM\CurrentControlSet\Services\Tcpip\Parameters\Interfaces\{4839FE28-FB47-40BD-B595-2B0CE0244B77}

Class Name: <NO CLASS>
Last Write Time: 10/21/2005 - 9:29 AM

Value 0
Name: UseZeroBroadcast
Type: REG_DWORD
Data: 0

Value 1
Name: EnableDeadGWDetect
Type: REG_DWORD
Data: 0x1

Value 2
Name: EnableDHCP
Type: REG_DWORD
Data: 0

Value 3
Name: IPAddress
Type: REG_MULTI_SZ
Data: 129.103.181.11

Value 4
Name: SubnetMask
Type: REG_MULTI_SZ
Data: 255.255.255.0

Value 5
Name: DefaultGateway
Type: REG_MULTI_SZ
Data:

Value 6
Name: DefaultGatewayMetric
Type: REG_MULTI_SZ
Data:

Value 7
Name: NameServer
Type: REG_SZ
Data:

Value 8
Name: Domain
Type: REG_SZ
Data:

Value 9
Name: RegistrationEnabled

Value 10
Name: RegisterAdapterName
Type: REG_DWORD
Data: 0

Value 11
Name: TCPAllowedPorts
Type: REG_MULTI_SZ
Data: 0

Value 12
Name: UDPAllowedPorts
Type: REG_MULTI_SZ
Data: 0

Value 13
Name: RawIPAllowedProtocols
Type: REG_MULTI_SZ
Data: 0

Value 14
Name: NTEContextList
Type: REG_MULTI_SZ
Data:

Key Name:
HKEY_LOCAL_MACHINE\SYSTEM\CurrentControlSet\Services\Tcpip\Parameters\PersistentRoutes
Class Name: <NO CLASS>
Last Write Time: 6/23/2005 - 3:09 PM

Key Name:
HKEY_LOCAL_MACHINE\SYSTEM\CurrentControlSet\Services\Tcpip\Parameters\Winsock
Class Name: <NO CLASS>
Last Write Time: 6/23/2005 - 3:09 PM
Value 0
Name: UseDelayedAcceptance
Type: REG_DWORD
Data: 0

Value 1
Name: HelperDllName
Type: REG_EXPAND_SZ
Data: %SystemRoot%\System32\wshtcpip.dll

Value 2
Name: MaxSockAddrLength
Type: REG_DWORD
Data: 0x10


```

Value 3
  Name:      MinSockAddrLength
  Type:      REG_DWORD
  Data:      0x10

Value 4
  Name:      Mapping
  Type:      REG_BINARY
  Data:
00000000  0b 00 00 00 03 00 00 00 - 02 00 00 00 01 00 00 00
.....
00000010  06 00 00 00 02 00 00 00 - 01 00 00 00 00 00 00 00
.....
00000020  02 00 00 00 00 00 00 00 - 06 00 00 00 00 00 00 00
.....
00000030  00 00 00 00 06 00 00 00 - 00 00 00 00 01 00 00 00
.....
00000040  06 00 00 00 02 00 00 00 - 02 00 00 00 11 00 00 00
.....
00000050  02 00 00 00 02 00 00 00 - 00 00 00 00 02 00 00 00
.....
00000060  00 00 00 00 11 00 00 00 - 00 00 00 00 00 00 00 00
.....
00000070  11 00 00 00 00 00 00 00 - 02 00 00 00 11 00 00 00
.....
02 00 00 00 03 00 00 00 - 00 00 00 00
.....

```

```

Key Name:
HKEY_LOCAL_MACHINE\SYSTEM\CurrentControlSet\Services\Tcpip\Performance
Class Name: <NO CLASS>
Last Write Time: 7/1/2005 - 11:57 AM
Value 0
  Name:      Close
  Type:      REG_SZ
  Data:      CloseTcpIpPerformanceData

Value 1
  Name:      Collect
  Type:      REG_SZ
  Data:      CollectTcpIpPerformanceData

Value 2
  Name:      Library
  Type:      REG_SZ
  Data:      Perfctrs.dll

Value 3
  Name:      Open
  Type:      REG_SZ
  Data:      OpenTcpIpPerformanceData

Value 4
  Name:      Object List
  Type:      REG_SZ

```

```

Data:      502 510 546 548 582 638 658 1530 1532 1534

Value 5
  Name:      WbemAdapFileSignature
  Type:      REG_BINARY
  Data:
00000000  9f 01 f7 4a 3e 46 2d db - 63 34 23 99 76 bb 17 17 ..+J>F-
Ûc4#.v>..

Value 6
  Name:      WbemAdapFileTime
  Type:      REG_BINARY
  Data:
00 60 a9 0f c6 f2 c2 01 - .`©.ÆðÃ.

Value 7
  Name:      WbemAdapFileSize
  Type:      REG_DWORD
  Data:      0xaa00

Value 8
  Name:      WbemAdapStatus
  Type:      REG_DWORD
  Data:      0

```

```

Key Name:
HKEY_LOCAL_MACHINE\SYSTEM\CurrentControlSet\Services\Tcpip\Security
Class Name: <NO CLASS>
Last Write Time: 6/23/2005 - 3:09 PM
Value 0
  Name:      Security
  Type:      REG_BINARY
  Data:
00000000  01 00 14 80 90 00 00 00 - 9c 00 00 00 14 00 00 00
.....
00000010  30 00 00 00 02 00 1c 00 - 01 00 00 00 02 80 14 00
0.....
00000020  ff 01 0f 00 01 01 00 00 - 00 00 00 01 00 00 00 00
ÿ.....
00000030  02 00 60 00 04 00 00 00 - 00 00 14 00 fd 01 02 00
..`.....ÿ...
00000040  01 01 00 00 00 00 00 05 - 12 00 00 00 00 00 18 00
.....
00000050  ff 01 0f 00 01 02 00 00 - 00 00 00 05 20 00 00 00
ÿ.....
00000060  20 02 00 00 00 00 14 00 - 8d 01 02 00 01 01 00 00
.....
00000070  00 00 00 05 0b 00 00 00 - 00 00 18 00 fd 01 02 00
.....ÿ...
00000080  01 02 00 00 00 00 00 05 - 20 00 00 00 23 02 00 00
...#...
00000090  01 01 00 00 00 00 00 05 - 12 00 00 00 01 01 00 00
.....

```

00 00 00 05 12 00 00 00 -

.....

Type: REG_DWORD
Data: 0x1

Key Name:
HKEY_LOCAL_MACHINE\SYSTEM\CurrentControlSet\Services\Tcpip\ServiceProvi
der

Class Name: <NO CLASS>
Last Write Time: 6/23/2005 - 3:09 PM

Value 0
Name: Class
Type: REG_DWORD
Data: 0x8

Value 1
Name: DnsPriority
Type: REG_DWORD
Data: 0x7d0

Value 2
Name: HostsPriority
Type: REG_DWORD
Data: 0x1f4

Value 3
Name: LocalPriority
Type: REG_DWORD
Data: 0x1f3

Value 4
Name: ProviderPath
Type: REG_EXPAND_SZ
Data: %SystemRoot%\System32\wsock32.dll

Value 5
Name: NetbtPriority
Type: REG_DWORD
Data: 0x7d1

Value 6
Name: Name
Type: REG_SZ
Data: TCP/IP

Key Name:
HKEY_LOCAL_MACHINE\SYSTEM\CurrentControlSet\Services\Tcpip\Enum

Class Name: <NO CLASS>
Last Write Time: 10/21/2005 - 9:30 AM

Value 0
Name: 0
Type: REG_SZ
Data: Root\LEGACY_TCPIP\0000

Value 1
Name: Count

Value 2
Name: NextInstance
Type: REG_DWORD
Data: 0x1

Key Name: HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\TPCC
Class Name: <NO CLASS>
Last Write Time: 10/11/2005 - 1:15 PM

Value 0
Name: Path
Type: REG_SZ
Data: C:\Inetpub\wwwroot\

Value 1
Name: NumberOfDeliveryThreads
Type: REG_DWORD
Data: 0x8

Value 2
Name: MaxConnections
Type: REG_DWORD
Data: 0x7918

Value 3
Name: MaxPendingDeliveries
Type: REG_DWORD
Data: 0xc1c

Value 4
Name: DB_Protocol
Type: REG_SZ
Data: DBLIB

Value 5
Name: TxnMonitor
Type: REG_SZ
Data: COM

Value 6
Name: DbServer
Type: REG_SZ
Data: twins.x

Value 7
Name: DbName
Type: REG_SZ
Data: tpcc

Value 8
Name: DbUser
Type: REG_SZ

```
Data: sa
Value 9
Name: DbPassword
Type: REG_SZ
Data:
Value 10
Name: COM_SinglePool
Type: REG_SZ
Data: YES
MetaBase.xml
<?xml version="1.0" ?>
- <configuration xmlns="urn:microsoft-catalog:XML_Metabase_V54_0">
- <MBProperty>
  <IIS_Global Location="." BINSchemaTimeStamp="4830601ecb7bc501"
ChangeNumber="2965" HistoryMajorVersion="376"
SessionKey="49634b62980000004c0000004000000010200000168000000a400007fe
5e1976bcc33396dfdd31ffff80adbaba4a8d2ea248b131314071a3e642bb8569d530936
8d54ad0898a295059793b8bd90508b140b43772d4e56f87274a78d45004600ddaa82d3b
82c46034c4fb5f85a5162e259ea371db93011a8b149ff91aed0b788a63f3b2919fc6d2e
96076c892b7c2911644889556d64ea799a06efa6cdeacc6c"
XMLSchemaTimeStamp="a292621ecb7bc501" />
  <IIS_ROOT Location="/"
AdminACL="49634462f0000000a40000004000000062c0ae5fdb6391c4d3e05e3b97c41
839f33206b433b9124fda79852e97bfa6c838424ea0db0ac2d9e5d4aad118f06865a991
655a0c6d6af8ec6f33b8ccc73ef7fdaf0737db238fd812f0de387864d1470252d9a678
9cb52a64ea975c01ae107949dec3592ecc0119d985ae509354cdf13b6e8bd44a16b4914
619d5f86eba9811547b63e6493cb38a7aaa7cce18f6080227a6cb1907682d56cdd8378e
b10892f87cc6d191b7f50b029e5bd39300631d4075ab6af518641169d609fc312c07573
d357b108e41b59d262285834da4e884558c071179839bbd342284ddcf259955941201b7
8a933be07" />
  <IISComputer Location="/LM" EnableEditWhileRunning="0"
EnableHistory="1" MaxBandwidth="4294967295" MaxHistoryFiles="10" />
  <IISConfigObject Location="/LM/IISADMIN" />
  <IISConfigObject Location="/LM/IISADMIN/EXTENSIONS" />
  - <IISConfigObject Location="/LM/IISADMIN/EXTENSIONS/DCOMCLSIDS">
  <Custom Name="MD_IISADMIN_EXTENSIONS" ID="1028" Value="{61738644-
F196-11D0-9953-00C04FD919C1}" Type="MULTISZ"
UserType="IIS_MD_UT_SERVER" Attributes="NO_ATTRIBUTES" />
  </IISConfigObject>
  - <IISConfigObject Location="/LM/IISADMIN/PROPERTYREGISTRATION">
  <Custom Name="MD_METADATA_ID_REGISTRATION" ID="1030" Value="0-
65535;Microsoft Reserved 65536-524288;Microsoft IIS Admin Objects
Reserved" Type="MULTISZ" UserType="IIS_MD_UT_SERVER"
Attributes="INHERIT" />
  </IISConfigObject>
  <IISLogModules Location="/LM/Logging"
AdminACL="49634462a000000580000004000000062c0ae5fdb6391c467e05e3b43c41
839f33206b433b9124fda79c92e92bfa6c8384242a0f90ac6d9e5d7aad118f068659a91
655a2c6f7efc06c4f33b8dcd73ea5fdaf07649b038fd802d29e30e864d1151202d9a478
```

```
bc576f92161a74be7d204c0a3528b18219471f85874f3ed1896205c6e474c2a3a3c13f
e3f1f619dba06313075062238361fdb70c20db07d044393b78497219dcbcc2" />
  <IISCustomLogModule Location="/LM/Logging/Custom Logging"
LogCustomPropertyServicesString="W3SVC MSFTPSVC SMTSPVC NNTSPVC" />
  <IISCustomLogModule Location="/LM/Logging/Custom Logging/Date"
LogCustomPropertyDataType="6" LogCustomPropertyHeader="date"
LogCustomPropertyID="4013" LogCustomPropertyMask="1"
LogCustomPropertyName="Date" LogCustomPropertyNodeID="1" />
  <IISCustomLogModule Location="/LM/Logging/Custom Logging/Extended
Properties" LogCustomPropertyDataType="6" LogCustomPropertyID="4013"
LogCustomPropertyName="Extended Properties" LogCustomPropertyNodeID="3"
/>
  <IISCustomLogModule Location="/LM/Logging/Custom Logging/Extended
Properties/Bytes Received" LogCustomPropertyDataType="3"
LogCustomPropertyHeader="cs-bytes" LogCustomPropertyMask="8192"
LogCustomPropertyName="Bytes Received" LogCustomPropertyNodeID="17" />
  <IISCustomLogModule Location="/LM/Logging/Custom Logging/Extended
Properties/Bytes Sent" LogCustomPropertyDataType="3"
LogCustomPropertyHeader="sc-bytes" LogCustomPropertyMask="4096"
LogCustomPropertyName="Bytes Sent" LogCustomPropertyNodeID="16" />
  <IISCustomLogModule Location="/LM/Logging/Custom Logging/Extended
Properties/Client IP Address" LogCustomPropertyDataType="6"
LogCustomPropertyHeader="c-ip" LogCustomPropertyMask="4"
LogCustomPropertyName="Client IP Address" LogCustomPropertyNodeID="5"
/>
  <IISCustomLogModule Location="/LM/Logging/Custom Logging/Extended
Properties/Cookie" LogCustomPropertyDataType="6"
LogCustomPropertyHeader="cs(Cookie)" LogCustomPropertyMask="131072"
LogCustomPropertyName="Cookie" LogCustomPropertyNodeID="22" />
  <IISCustomLogModule Location="/LM/Logging/Custom Logging/Extended
Properties/Host" LogCustomPropertyDataType="6"
LogCustomPropertyHeader="cs-host" LogCustomPropertyMask="1048576"
LogCustomPropertyName="Host" LogCustomPropertyNodeID="20" />
  <IISCustomLogModule Location="/LM/Logging/Custom Logging/Extended
Properties/Method" LogCustomPropertyDataType="6"
LogCustomPropertyHeader="cs-method" LogCustomPropertyMask="128"
LogCustomPropertyName="Method" LogCustomPropertyNodeID="11" />
  <IISCustomLogModule Location="/LM/Logging/Custom Logging/Extended
Properties/Protocol Status" LogCustomPropertyDataType="3"
LogCustomPropertyHeader="sc-status" LogCustomPropertyMask="1024"
LogCustomPropertyName="Protocol Status" LogCustomPropertyNodeID="14" />
  <IISCustomLogModule Location="/LM/Logging/Custom Logging/Extended
Properties/Protocol Substatus" LogCustomPropertyDataType="3"
LogCustomPropertyHeader="sc-substatus" LogCustomPropertyMask="2097152"
LogCustomPropertyName="Protocol Substatus" LogCustomPropertyNodeID="32"
/>
  <IISCustomLogModule Location="/LM/Logging/Custom Logging/Extended
Properties/Protocol Version" LogCustomPropertyDataType="6"
LogCustomPropertyHeader="cs-version" LogCustomPropertyMask="524288"
LogCustomPropertyName="Protocol Version" LogCustomPropertyNodeID="19"
/>
  <IISCustomLogModule Location="/LM/Logging/Custom Logging/Extended
Properties/Referer" LogCustomPropertyDataType="6"
LogCustomPropertyHeader="cs(Referer)" LogCustomPropertyMask="262144"
LogCustomPropertyName="Referer" LogCustomPropertyNodeID="23" />
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```

<IISCustomLogModule Location="/LM/Logging/Custom Logging/Extended
Properties/Server IP" LogCustomPropertyDataType="6"
LogCustomPropertyHeader="s-ip" LogCustomPropertyMask="64"
LogCustomPropertyName="Server IP Address" LogCustomPropertyNodeID="9"
/>
<IISCustomLogModule Location="/LM/Logging/Custom Logging/Extended
Properties/Server Name" LogCustomPropertyDataType="6"
LogCustomPropertyHeader="s-computername" LogCustomPropertyMask="32"
LogCustomPropertyName="Server Name" LogCustomPropertyNodeID="8" />
<IISCustomLogModule Location="/LM/Logging/Custom Logging/Extended
Properties/Server Port" LogCustomPropertyDataType="3"
LogCustomPropertyHeader="s-port" LogCustomPropertyMask="32768"
LogCustomPropertyName="Server Port" LogCustomPropertyNodeID="10" />
<IISCustomLogModule Location="/LM/Logging/Custom Logging/Extended
Properties/Service Name" LogCustomPropertyDataType="6"
LogCustomPropertyHeader="s-sitename" LogCustomPropertyMask="16"
LogCustomPropertyName="Service Name" LogCustomPropertyNodeID="7" />
<IISCustomLogModule Location="/LM/Logging/Custom Logging/Extended
Properties/Time Taken" LogCustomPropertyDataType="3"
LogCustomPropertyHeader="time-taken" LogCustomPropertyMask="16384"
LogCustomPropertyName="Time Taken" LogCustomPropertyNodeID="18" />
<IISCustomLogModule Location="/LM/Logging/Custom Logging/Extended
Properties/URI Query" LogCustomPropertyDataType="6"
LogCustomPropertyHeader="cs-uri-query" LogCustomPropertyMask="512"
LogCustomPropertyName="URI Query" LogCustomPropertyNodeID="13" />
<IISCustomLogModule Location="/LM/Logging/Custom Logging/Extended
Properties/URI Stem" LogCustomPropertyDataType="6"
LogCustomPropertyHeader="cs-uri-stem" LogCustomPropertyMask="256"
LogCustomPropertyName="URI Stem" LogCustomPropertyNodeID="12" />
<IISCustomLogModule Location="/LM/Logging/Custom Logging/Extended
Properties/User Agent" LogCustomPropertyDataType="6"
LogCustomPropertyHeader="cs(User-Agent)" LogCustomPropertyMask="65536"
LogCustomPropertyName="User Agent" LogCustomPropertyNodeID="21" />
<IISCustomLogModule Location="/LM/Logging/Custom Logging/Extended
Properties/User Name" LogCustomPropertyDataType="6"
LogCustomPropertyHeader="cs-username" LogCustomPropertyMask="8"
LogCustomPropertyName="User Name" LogCustomPropertyNodeID="6" />
<IISCustomLogModule Location="/LM/Logging/Custom Logging/Extended
Properties/Win32 Status" LogCustomPropertyDataType="3"
LogCustomPropertyHeader="sc-win32-status" LogCustomPropertyMask="2048"
LogCustomPropertyName="Win32 Status" LogCustomPropertyNodeID="15" />
<IISCustomLogModule Location="/LM/Logging/Custom Logging/Time"
LogCustomPropertyDataType="6" LogCustomPropertyHeader="time"
LogCustomPropertyID="4013" LogCustomPropertyMask="2"
LogCustomPropertyName="Time" LogCustomPropertyNodeID="2" />
<IISLogModule Location="/LM/Logging/Microsoft IIS Log File Format"
LogModuleId="{FF160657-DE82-11CF-BC0A-00AA006111E0}"
LogModuleUiId="{31DCAB87-BB3E-11d0-9299-00C04FB6678B}" />
<IISLogModule Location="/LM/Logging/NCSA Common Log File Format"
LogModuleId="{FF16065F-DE82-11CF-BC0A-00AA006111E0}"
LogModuleUiId="{31DCAB85-BB3E-11d0-9299-00C04FB6678B}" />
<IISLogModule Location="/LM/Logging/ODBC Logging"
LogModuleId="{FF16065B-DE82-11CF-BC0A-00AA006111E0}"
LogModuleUiId="{31DCAB86-BB3E-11d0-9299-00C04FB6678B}" />

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<IISLogModule Location="/LM/Logging/W3C Extended Log File Format"
LogModuleId="{FF160663-DE82-11CF-BC0A-00AA006111E0}"
LogModuleUiId="{31DCAB88-BB3E-11d0-9299-00C04FB6678B}" />
<IISMimeMap Location="/LM/MimeMap" MimeMap=" .asx,video/x-ms-asf
.xml,text/xml .tsv,text/tab-separated-values .ra,audio/x-pn-realaudio
.sv4crc,application/x-sv4crc .spc,application/x-pkcs7-certificates
.pmc,application/x-perfmon .lit,application/x-ms-reader
.crd,application/x-mscardfile .isp,application/x-internet-signup
.wmlsc,application/vnd.wap.wmlscriptc .vst,application/vnd.visio
.ttf,application/octet-stream .pfm,application/octet-stream
.csv,application/octet-stream .aaf,application/octet-stream
.hta,application/hta .323,text/h323 .mhtml,message/rfc822
.midi,audio/mid .p7r,application/x-pkcs7-certreqresp
.mny,application/x-msmoney .clp,application/x-msclip
.vsd,application/vnd.visio .lpk,application/octet-stream
.bin,application/octet-stream .x,application/directx .wvx,video/x-ms-
wvx .vcf,text/x-vcard .htc,text/x-component .htt,text/webviewhtml
.h,text/plain .mht,message/rfc822 .mid,audio/mid .p7b,application/x-
pkcs7-certificates .gz,application/x-gzip .dvi,application/x-dvi
.cpio,application/x-cpio .vdx,application/vnd.visio
.xlm,application/vnd.ms-excel .fdf,application/vnd.fdf
.setreg,application/set-registration-initiation
.eps,application/postscript .p7s,application/pkcs7-signature
.toc,application/octet-stream .mdp,application/octet-stream
.ics,application/octet-stream .chm,application/octet-stream
.asi,application/octet-stream .afm,application/octet-stream
.evy,application/envoy .wmp,video/x-ms-wmp .qt,video/quicktime
.mpv2,video/mpeg .xslt,text/xml .etx,text/x-setext .png,image/png
.cod,image/cis-cod .snd,audio/basic .au,audio/basic .man,application/x-
troff-man .qtl,application/x-quicktimeplayer .pmw,application/x-perfmon
.class,application/x-java-applet .iii,application/x-iphone
.csh,application/x-csh .z,application/x-compress
.vtx,application/vnd.visio .vsw,application/vnd.visio
.wps,application/vnd.ms-works .ps,application/postscript
.p7c,application/pkcs7-mime .thn,application/octet-stream
.dot,application/msword .doc,application/msword .sgml,text/sgml
.nws,message/rfc822 .pbm,image/x-portable-bitmap .ief,image/ief
.wav,audio/wav .texi,application/x-texinfo .mvb,application/x-
msmediaview .hdf,application/x-hdf .vsx,application/vnd.visio
.psm,application/octet-stream .java,application/octet-stream
.eot,application/octet-stream .jar,application/java-archive
.mpeg,video/mpeg .xsf,text/xml .map,text/plain .uls,text/iuls
.rf,image/vnd.rn-realfash .m3u,audio/x-mpegurl .wma,audio/x-ms-wma
.aifc,audio/aiff .mdb,application/x-msaccess .stl,application/vnd.ms-
pki.stl .setpay,application/set-payment-initiation
.prm,application/octet-stream .mix,application/octet-stream
.lzh,application/octet-stream .hhk,application/octet-stream .xaf,x-
world/x-vrml .flr,x-world/x-vrml .IVF,video/x-ivf .cnf,text/plain
.asm,text/plain .tiff,image/tiff .wax,audio/x-ms-wax .ms,application/x-
troff-ms .tcl,application/x-tcl .shar,application/x-shar
.sh,application/x-sh .nc,application/x-netcdf .hlp,application/winhlp
.oda,application/oda .pfb,application/octet-stream
.fla,application/octet-stream .wm,video/x-ms-wm .rgb,image/x-rgb
.ppm,image/x-portable-pixmap .ram,audio/x-pn-realaudio
.sit,application/x-stuffit .dir,application/x-director

```

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.mpp,application/vnd.ms-project .xla,application/vnd.ms-excel
.ssm,application/streamingmedia .axs,application/olescript
.ods,application/oleobject .psp,application/octet-stream
.jpb,application/octet-stream .wrz,x-world/x-vrml .mlv,video/mpeg
.mno,text/xml .cmx,image/x-cmx .jpeg,image/jpeg .dib,image/bmp
.rmi,audio/mid .aiff,audio/aiff .wmd,application/x-ms-wmd
.wri,application/x-mswrite .pub,application/x-mspublisher
.ins,application/x-internet-signup .wks,application/vnd.ms-works
.xls,application/vnd.ms-excel .ai,application/postscript
.crl,application/pkix-crl .qxd,application/octet-stream
.dwp,application/octet-stream .xof,x-world/x-vrml .wmv,video/x-ms-wmv
.nsc,video/x-ms-asf .mpa,video/mpeg .pnm,image/x-portable-anymap
.rpm,audio/x-pn-realaudio-plugin .aif,audio/x-aiff .me,application/x-
troff-me .pml,application/x-perfmon .trm,application/x-msterminal
.ml3,application/x-msmediaview .js,application/x-javascript
.dxr,application/x-director .xlt,application/vnd.ms-excel
.xlc,application/vnd.ms-excel .p10,application/pkcs10
.smi,application/octet-stream .sea,application/octet-stream
.hqx,application/mac-binhex40 .spl,application/futuresplash
.movie,video/x-sgi-movie .lsf,video/x-la-asf .txt,text/plain
.jfif,image/jpeg .jpe,image/jpeg .zip,application/x-zip-compressed
.wmf,application/x-msmetafile .ml4,application/x-msmediaview
.latex,application/x-latex .wcm,application/vnd.ms-works
.hhp,application/octet-stream .aca,application/octet-stream
.jcz,application/liquidmotion .wrl,x-world/x-vrml .wmx,video/x-ms-wmx
.asr,video/x-ms-asf .lsx,video/x-la-asf .xsl,text/xml .html,text/html
.tif,image/tiff .der,application/x-x509-ca-cert .pfx,application/x-
pkcs12 .p12,application/x-pkcs12 .cur,application/octet-stream
.hdml,text/x-hdml .htm,text/html .xbm,image/x-bitmap .jpg,image/jpeg
.texinfo,application/x-texinfo .xlw,application/vnd.ms-excel
.rm,application/vnd.rn-realmedia .pdf,application/pdf
.rar,application/octet-stream .psd,application/octet-stream
.inf,application/octet-stream .emz,application/octet-stream
.dsp,application/octet-stream .jck,application/liquidmotion
.mpe,video/mpeg .mp2,video/mpeg .sct,text/scriptlet .ras,image/x-cmu-
raster .swf,application/x-shockwave-flash .wmz,application/x-ms-wmz
.gtar,application/x-gtar .dcr,application/x-director
.pps,application/vnd.ms-powerpoint .p7m,application/pkcs7-mime
.xsn,application/octet-stream .ocx,application/octet-stream
.mov,video/quicktime .wmls,text/vnd.wap.wmlscript .cpp,text/plain
.c,text/plain .bas,text/plain .css,text/css .art,image/x-jg
.mp3,audio/mpeg .t,application/x-troff .roff,application/x-troff
.tar,application/x-tar .hhc,application/x-oleobject .scd,application/x-
msschedule .pko,application/vnd.ms-pki.pko .sst,application/vnd.ms-
pki.certstore .ppt,application/vnd.ms-powerpoint
.u32,application/octet-stream .pcx,application/octet-stream
.msi,application/octet-stream .exe,application/octet-stream
.asd,application/octet-stream .fif,application/fractals .mpg,video/mpeg
.wml,text/xml .xdr,text/plain .vcs,text/plain .hxt,text/html
.eml,message/rfc822 .xpm,image/x-xpixmap .ico,image/x-icon
.gif,image/gif .dwf,drawing/x-dwf .src,application/x-wais-source
.tr,application/x-troff .pmr,application/x-perfmon .pma,application/x-
perfmon .dll,application/x-msdownload .bcpio,application/x-bcpio
.wmlc,application/vnd.wap.wmlc .wdb,application/vnd.ms-works
.pot,application/vnd.ms-powerpoint .rtf,application/rtf
.prf,application/pics-rules .snp,application/octet-stream
.cab,application/octet-stream .avi,video/x-msvideo .asf,video/x-ms-asf
.dtd,text/xml .wml,text/vnd.wap.wml .vbs,text/vbscript
.rtx,text/richtext .dlm,text/dlm .xwd,image/x-xwindowdump .pgm,image/x-
portable-graymap .wbmp,image/vnd.wap.wbmp .bmp,image/bmp
.crt,application/x-x509-ca-cert .ustar,application/x-ustar
.tex,application/x-tex .sv4cpio,application/x-sv4cpio
.tgz,application/x-compressed .cdf,application/x-cdf
.vss,application/vnd.visio .cat,application/vnd.ms-pki.seccat
.prx,application/octet-stream .pcz,application/octet-stream
.acx,application/internet-property-stream" />
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AccessRead | AccessWrite | AccessScript" AllowKeepAlive="TRUE"
AnonymousUserName="IUSR_ECO201"
AnonymousUserPass="496344627000000220000004000000062c0ae5f9463a04428e0
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AppAllowClientDebug="FALSE" AppAllowDebugging="FALSE"
AppPoolId="DefaultAppPool" ApplicationDependencies="Active Server
Pages;ASP Internet Data Connector;HTTPODBC Server Side Includes;SSINC
WebDAV;WEBDAV" AspAllowOutOfProcComponents="TRUE"
AspAllowSessionState="TRUE" AspAppServiceFlags="0"
AspBufferingLimit="4194304" AspBufferingOn="TRUE"
AspCalcLineNumber="TRUE" AspCodepage="0"
AspDiskTemplateCacheDirectory="%windir%\system32\inetsrv\ASP Compiled
Templates" AspEnableApplicationRestart="TRUE"
AspEnableAspHtmlFallback="FALSE" AspEnableChunkedEncoding="TRUE"
AspEnableParentPaths="FALSE" AspEnableTypeLibCache="TRUE"
AspErrorsToNTLog="FALSE" AspExceptionCatchEnable="TRUE"
AspExecuteInMTA="0" AspKeepSessionIDSecure="0" AspLCID="2048"
AspLogErrorRequests="TRUE" AspMaxDiskTemplateCacheFiles="2000"
AspMaxRequestEntityAllowed="204800" AspProcessorThreadMax="25"
AspQueueConnectionTestTime="3" AspQueueTimeout="4294967295"
AspRequestQueueMax="3000" AspRunOnEndAnonymously="TRUE"
AspScriptEngineCacheMax="250" AspScriptErrorMessage="An error occurred
on the server when processing the URL. Please contact the system
administrator." AspScriptErrorSentToBrowser="TRUE"
AspScriptFileCacheSize="500" AspScriptLanguage="VBScript"
AspScriptTimeout="90" AspSessionMax="4294967295" AspSessionTimeout="20"
AspTrackThreadingModel="FALSE" AuthChangeURL="/iisadmpwd/achg.asp"
AuthExpiredURL="/iisadmpwd/aexp.asp"
AuthExpiredUnsecureURL="/iisadmpwd/aexp3.asp" AuthFlags="AuthAnonymous
| AuthNTLM" AuthNotifyPwdExpURL="/iisadmpwd/annot.asp"
AuthNotifyPwdExpUnsecureURL="/iisadmpwd/annot3.asp" CGITimeout="300"
CacheISAPI="TRUE" CentralBinaryLoggingEnabled="FALSE"
ConnectionTimeout="1200" ContentIndexed="TRUE"
DefaultDoc="Default.htm,Default.asp,index.htm"
DirBrowseFlags="EnableDirBrowsing | DirBrowseShowDate |
DirBrowseShowTime | DirBrowseShowSize | DirBrowseShowExtension |
DirBrowseShowLongDate | EnableDefaultDoc" DownlevelAdminInstance="1"
HttpErrors="400,* ,FILE,C:\WINDOWS\help\iisHelp\common\400.htm
401,1,FILE,C:\WINDOWS\help\iisHelp\common\401-1.htm
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401,3,FILE,C:\WINDOWS\help\iisHelp\common\401-3.htm

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500,19,FILE,C:\WINDOWS\help\iisHelp\common\500.htm"
IIs5IsolationModeEnabled="FALSE"
InProcessIsapiApps="C:\WINDOWS\system32\inetrv\httpext.dll
C:\WINDOWS\system32\inetrv\httpodbc.dll
C:\WINDOWS\system32\inetrv\ssinc.dll C:\WINDOWS\system32\msw3prt.dll"
LogExtFileFlags="LogExtFileDate | LogExtFileHost | LogExtFileTime |
LogExtFileClientIp | LogExtFileUserName | LogExtFileSiteName |
LogExtFileComputerName | LogExtFileServerIp | LogExtFileMethod |
LogExtFileUriStem | LogExtFileUriQuery | LogExtFileHttpStatus |
LogExtFileWin32Status | LogExtFileServerPort | LogExtFileUserAgent |
LogExtFileHttpSubStatus"
LogFileDirectory="C:\WINDOWS\system32\LogFiles"
LogFileLocaltimeRollover="FALSE" LogFilePeriod="1"
LogFileTruncateSize="20971520" LogInUTF8="FALSE"
LogOdbcDataSource="HTTPLOG"
LogOdbcPassword="49634462600000012000000400000062c0ae5fa963e7443fe032
3b68c47f39f3320100591a573d209c08f2d7e04ab661c8635de05be40af21bd9953f559
436494d85af5807ab5f18071a9995c9e62c0aad994c2da4eeba184a429b01e4f1ee24db
```

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1a52a2ad777b" LogOdbcTableName="InternetLog"
LogOdbcUser="InternetAdmin" LogPluginClsid="{FF160663-DE82-11CF-
BC0A-00AA06d111E0}" LogType="0" MaxConnections="4294967295"
MaxGlobalBandwidth="4294967295" MinFileBytesPerSec="240"
PasswordChangeFlags="AuthChangeDisable | AuthAdvNotifyDisable"
ScriptMaps=".asa,C:\WINDOWS\system32\inetrv\asp.dll,5,GET,HEAD,POST,TR
ACE .asp,C:\WINDOWS\system32\inetrv\asp.dll,5,GET,HEAD,POST,TRACE
.cdx,C:\WINDOWS\system32\inetrv\asp.dll,5,GET,HEAD,POST,TRACE
.cer,C:\WINDOWS\system32\inetrv\asp.dll,5,GET,HEAD,POST,TRACE
.idc,C:\WINDOWS\system32\inetrv\httpodbc.dll,5,GET,POST
.shtm,C:\WINDOWS\system32\inetrv\ssinc.dll,5,GET,POST
.shtml,C:\WINDOWS\system32\inetrv\ssinc.dll,5,GET,POST
.stm,C:\WINDOWS\system32\inetrv\ssinc.dll,5,GET,POST"
WAMUserName="IWAM_ECO201"
WAMUserPass="49634462700000022000000400000062c0ae5f8863da441ce02e3b3a
c479399d323b408b9444f8a798f2ef2bfe2c83842670072006100f09dbef8ccc4adb4a
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96d8dcbe3ed294832b5e5805827b4796b2e1a9a5"
WebSvcExtRestrictionList="0,*.*.dll,0,*.*.exe
1,C:\INETPUB\WWWROOT\tpcc.dll,0,TPCC,TPCC
0,C:\WINDOWS\system32\inetrv\ssinc.dll,0,SSINC,Server Side Includes
0,C:\WINDOWS\system32\inetrv\asp.dll,0,ASP,Active Server Pages
0,C:\WINDOWS\system32\inetrv\httpodbc.dll,0,HTTPODBC,Internet Data
Connector 0,C:\WINDOWS\system32\inetrv\httpext.dll,0,WEBDAV,WebDAV">
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Type="DWORD" UserType="IIS_MD_UT_FILE" Attributes="NO_ATTRIBUTES" />
<Custom Name="UnknownName_2166" ID="2166" Value="1" Type="DWORD"
UserType="IIS_MD_UT_SERVER" Attributes="NO_ATTRIBUTES" />
<Custom Name="UnknownName_9202" ID="9202" Value="4294967295"
Type="DWORD" UserType="IIS_MD_UT_SERVER" Attributes="NO_ATTRIBUTES" />
</IISWebService>
<IISWebServer Location="/LM/W3SVC/1" AppPoolId="DefaultAppPool"
DefaultDoc="Default.htm,Default.asp,index.htm,iisstart.htm" LogType="0"
ServerAutoStart="TRUE" ServerBindings=":80:" ServerComment="Default Web
Site" ServerSize="1" />
<IISFilters Location="/LM/W3SVC/1/Filters"
AdminACL="49634462f0000000a4000000400000062c0ae5f5db6391c4d3e05e3b97c41
839f33206b433b9124fda79852e97bfa6c838424ea0d90ac2d9e5d4aad118f06865a991
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9cb52a64ea975c01ae107949dec3592ecc0119d985ae509354cdf13b6e8bd44a16b4914
619d5f86eba9811547b63e6493cb38a7aaa7ccl18f6080227a6cb1907682d56cdd8378e
b10892f87cc6d191b7f50b0906f4a0531b3afelacc590d3943bf44cdc56e938d5f9ab32
bceca843f65d89c193d03f7fee7a2b61ed131f6f90dc82239677919a66392e97b8d2b74
3b56a9d0" />
<IISCertMapper Location="/LM/W3SVC/1/IISCertMapper" />
<IISWebVirtualDir Location="/LM/W3SVC/1/ROOT"
AccessFlags="AccessExecute | AccessRead | AccessWrite | AccessScript"
AppFriendlyName="Default Application" AppIsolated="2"
AppPoolId="DefaultAppPool" AppRoot="/LM/W3SVC/1/ROOT"
AuthFlags="AuthAnonymous | AuthNTLM" Path="c:\inetpub\wwwroot" />
<IISApplicationPools Location="/LM/W3SVC/AppPools"
AdminACL="49634462f0000000a4000000400000062c0ae5f5db6391c4d3e05e3b97c41
839f33206b433b9124fda79852e97bfa6c838424ea0d20ac2d9e5d4aad118f06865a991
655a0c6d6afcc8c6f33b8ccc73ef7fdaf0737db238fd812f0de38e864d1470252d9a678
9cb52a64ea975c01ae107949dec3592ecc0119d985ae509354cdf13b6e8bd44a16b4914
```

```
619d5f86eba9811547b63e6493cb38a7aaa7cce18f6080227a6cb1907682d56cdd8378e
b10892f87cc6d191b7f50b0128e4375841b98e1ff2a7a93638b9ecc74ad6086683a32e7
fbc13cfc761a45b3a1697a8baf0513034c73419147233b87f2bf10b9b378ec1b66841ba
064b43f9f" AppPoolIdentityType="0" AppPoolQueueLength="20000"
CPULimit="0" CPUResetInterval="5" DisallowOverlappingRotation="FALSE"
DisallowRotationOnConfigChange="FALSE" IdleTimeout="30"
LoadBalancerCapabilities="2" LogEventOnRecycle="0" MaxProcesses="1"
OrphanWorkerProcess="FALSE" PeriodicRestartMemory="0"
PeriodicRestartPrivateMemory="0" PeriodicRestartRequests="0"
PeriodicRestartTime="0" PingInterval="30" PingResponseTime="90"
PingingEnabled="FALSE" RapidFailProtection="FALSE"
RapidFailProtectionInterval="5" RapidFailProtectionMaxCrashes="5"
SMPAffinitized="TRUE" SMPProcessorAffinityMask="3"
ShutdownTimeLimit="90" StartupTimeLimit="90" />
<IISApplicationPool Location="/LM/W3SVC/AppPools/DefaultAppPool"
AppPoolIdentityType="0" SMPAffinitized="TRUE"
SMPProcessorAffinityMask="3" />
<IISFilters Location="/LM/W3SVC/Filters"
AdminACL="49634462f0000000a40000004000000062c0ae5fdb6391c4d3e05e3b97c41
839f33206b433b9124fda79852e97bfa6c838424ea0d90ac2d9e5d4aad118f06865a991
655a0c6d6afc8cc6f33b8ccc73ef7fdaf0737db238fd812f0de385864d1470252d9a678
9cb52a64ea975c01ae107949dec3592ecc0119d985ae509354cdf13b6e8bd44a16b4914
619d5f86eba9811547b63e6493cb38a7aaa7cce18f6080227a6cb1907682d56cdd8378e
b10892f87cc6d191b7f50b0906f4a0531b3afelacc590d3943bf44cdc56e938d5f9ab32
bceca843f65d89c193d03f7fee7a2b61ed131f6f90dc82239677919a66392e97b8d2b74
3b56a9d05" FilterLoadOrder="" />
<IISFilter Location="/LM/W3SVC/Filters/Compression" />
<IISCompressionScheme
Location="/LM/W3SVC/Filters/Compression/deflate"
HcCompressionDll="%windir%\system32\inetsrv\gzip.dll" HcCreateFlags="0"
HcDoDynamicCompression="TRUE" HcDoOnDemandCompression="TRUE"
HcDoStaticCompression="FALSE" HcDynamicCompressionLevel="0"
HcFileExtensions="htm html txt" HcOnDemandCompLevel="10" HcPriority="1"
HcScriptFileExtensions="asp dll exe" />
<IISCompressionScheme Location="/LM/W3SVC/Filters/Compression/gzip"
HcCompressionDll="%windir%\system32\inetsrv\gzip.dll" HcCreateFlags="1"
HcDoDynamicCompression="TRUE" HcDoOnDemandCompression="TRUE"
HcDoStaticCompression="TRUE" HcDynamicCompressionLevel="0"
HcFileExtensions="htm html txt" HcOnDemandCompLevel="10" HcPriority="1"
HcScriptFileExtensions="asp dll exe" />
<IISCompressionSchemes
Location="/LM/W3SVC/Filters/Compression/Parameters"
HcCacheControlHeader="max-age=86400" HcCompressionBufferSize="8192"
HcCompressionDirectory="%windir%\IIS Temporary Compressed Files"
HcDoDiskSpaceLimiting="FALSE" HcDoDynamicCompression="FALSE"
HcDoOnDemandCompression="TRUE" HcDoStaticCompression="FALSE"
HcExpiresHeader="Wed, 01 Jan 1997 12:00:00 GMT"
HcFilesDeletedPerDiskFree="256" HcIoBufferSize="8192"
HcMaxDiskSpaceUsage="100000000" HcMaxQueueLength="1000"
HcMinFileSizeForComp="1" HcNoCompressionForHttp10="TRUE"
HcNoCompressionForProxies="TRUE" HcNoCompressionForRange="FALSE"
HcSendCacheHeaders="FALSE" />
<IISWebInfo Location="/LM/W3SVC/Info"
AdminACL="49634462a0000000580000004000000062c0ae5fdb6391c467e05e3b43c41
839f33206b433b9124fda79c92e92bfa6c8384242a0f90ac6d9e5d7aad118f068659a91
```

```
655a2c6f7efc06c4f33b8dcd73ea5fdaf07649b038fd802d29e30e864d1151202d9a478
bcb576f92161a74be7d204c0a3528b18219471f85874f3ed1896205c6e474c2a3a3c13f
e3f1f619dba06313075062238361fdb70c20db07d044393b78497219dcbcc2"
CustomErrorDescriptions="400,0,Bad Request,,0 401,1,Unauthorized,Logon
failed,1 401,2,Unauthorized,Logon failed due to server configuration,1
401,3,Unauthorized,Unauthorized due to ACL on resource,1
401,4,Unauthorized,Authorization failed by filter,1
401,5,Unauthorized,Authorization failed by ISAPI/CGI app,1
401,7,Unauthorized,Denied due to URL Authorization policy,0
403,1,Forbidden,Execute access denied,0 403,2,Forbidden,Read access
denied,0 403,3,Forbidden,Write access denied,0 403,4,Forbidden,SSL
required,0 403,5,Forbidden,SSL28 required,0 403,6,Forbidden,IP address
rejected,0 403,7,Forbidden,Client certificate required,0
403,8,Forbidden,Site access denied,0 403,9,Forbidden,Too many users,0
403,10,Forbidden,Invalid Configuration,0 403,11,Forbidden,Password
Change,0 403,12,Forbidden,Mapper Denied Access,0
403,13,Forbidden,Client certificate revoked,0
403,14,Forbidden,Directory Listing Denied,0 403,15,Forbidden,Client
Access Licenses Exceeded,0 403,16,Forbidden,Client certificate
untrusted or ill-formed,0 403,17,Forbidden,Client certificate has
expired or is not yet valid,0 403,18,Forbidden,Cannot execute request
from this application pool,0 403,19,Forbidden,CGI Access denied,0
403,20,Forbidden,Passport Login failed,0 404,0,Not Found,,0 404,2,Not
Found,Denied due to Lockdown Policy,0 404,3,Not Found,Denied due to
MIMEMAP Policy,0 405,0,Method Not Allowed,,0 406,0,Not Acceptable,,0
407,0,Proxy Authentication Required,,1 412,0,Precondition Failed,,0
414,0,Request-URI Too Long,,0 415,0,Unsupported Media Type,,0
500,0,Internal Server Error,,0 500,12,Internal Server Error,Application
restarting,0 500,13,Internal Server Error,Server too busy,0
500,15,Internal Server Error,Direct requests for GLOBAL.ASA forbidden,0
500,16,Internal Server Error,UNC Access Error,0 500,17,Internal Server
Error,URL Authorization store not found,0 500,18,Internal Server
Error,URL Authorization store cannot be opened,0 500,19,Internal Server
Error,Bad file metadata,0 500,100,Internal Server Error,ASP error,0
501,0,Not Implemented,,0 502,0,Bad Gateway,,1" LogModuleList="NCSA
Common Log File Format,Microsoft IIS Log File Format,W3C Extended Log
File Format,ODBC Logging" MD_SERVER_CAPABILITIES="129983"
MD_SERVER_PLATFORM="1" MajorIISVersionNumber="6"
MinorIISVersionNumber="0" />
<IISConfigObject Location="/LM/W3SVC/Info/Templates" />
<IISWebServer Location="/LM/W3SVC/Info/Templates/Public Web Site"
ServerComment="Allows all users to browse static and dynamic content."
/>
<IISWebVirtualDir Location="/LM/W3SVC/Info/Templates/Public Web
Site/Root" AccessFlags="AccessRead | AccessScript"
AuthFlags="AuthAnonymous" IPSecurity="" />
<IISWebServer Location="/LM/W3SVC/Info/Templates/Secure Web Site"
ServerComment="Allows users with a Windows account to view static and
dynamic content." />
<IISWebVirtualDir Location="/LM/W3SVC/Info/Templates/Secure Web
Site/Root" AccessFlags="AccessRead | AccessScript" AuthFlags="AuthBasic
| AuthNTLM | AuthMD5" IPSecurity="" />
</MBProperty>
</configuration>
```

Component Services Configuration:
COM+ Component TPCC.AllTXns Settings:

Enable object pooling
Minimum pool size 105
Maximum pool size 105
Creation timeout 60,000
Enable object construction
Enable just in time activation
Concurrency required

**This section discloses the RTE parameters used on the
PRIMERGY R450 system.**

Profile: RX600S3_15000_HTML_all
File Path: E:\TX600S3_TPCC\RX600S3_15000_HTML_all.xml
Version: 0

Number of Engines: 24

Name: DRIVER01
Description: R450RT1 HTML - 1a
Directory: c:\BATCH_cl1a.log
Machine: r450rt1
Parameter Set: HTML 01
Index: 0
Seed: 11063
Configured Users: 6250
Pipe Name: DRIVER1952500
Connect Rate: 705
Start Rate: 700
Max. Concurrency: -1
Concurrency Rate: 10
CLIENT_NURAND: 233
CPU: 0
Additional Options:

Name: DRIVER02
Description: R450RT1 HTML - 1b
Directory: c:\BATCH_cl1b.log
Machine: r450rt1
Parameter Set: HTML 01
Index: 100000000
Seed: 11063
Configured Users: 6250
Pipe Name: DRIVER21038093
Connect Rate: 705
Start Rate: 700
Max. Concurrency: -1
Concurrency Rate: 10
CLIENT_NURAND: 233

CPU: 1
Additional Options:

Name: DRIVER03
Description: R450RT1 HTML - 1c
Directory: c:\BATCH_cl1c.log
Machine: r450rt1
Parameter Set: HTML 01
Index: 200000000
Seed: 11063
Configured Users: 6250
Pipe Name: DRIVER31121796
Connect Rate: 705
Start Rate: 700
Max. Concurrency: -1
Concurrency Rate: 10
CLIENT_NURAND: 233
CPU: 2
Additional Options:

Name: DRIVER04
Description: R450RT1 HTML - 1d
Directory: c:\BATCH_cl1d.log
Machine: r450rt1
Parameter Set: HTML 01
Index: 300000000
Seed: 11063
Configured Users: 6250
Pipe Name: DRIVER46400781
Connect Rate: 705
Start Rate: 700
Max. Concurrency: -1
Concurrency Rate: 10
CLIENT_NURAND: 233
CPU: 3
Additional Options:

Name: DRIVER05
Description: R450RT2 HTML - 2a
Directory: c:\BATCH_cl2a.log
Machine: r450rt2
Parameter Set: HTML 01
Index: 400000000
Seed: 11063
Configured Users: 6250
Pipe Name: DRIVER513100187
Connect Rate: 705
Start Rate: 700
Max. Concurrency: -1
Concurrency Rate: 10
CLIENT_NURAND: 233
CPU: 0
Additional Options:

Name: DRIVER06

Description: R450RT2 HTML - 2b
Directory: c:\BATCH_cl2b.log
Machine: r450rt2
Parameter Set: HTML 01
Index: 500000000
Seed: 11063
Configured Users: 6250
Pipe Name: DRIVER613143734
Connect Rate: 705
Start Rate: 700
Max. Concurrency: -1
Concurrency Rate: 10
CLIENT_NURAND: 233
CPU: 1
Additional Options:

Name: DRIVER07
Description: R450RT2 HTML - 2c
Directory: c:\BATCH_cl2c.log
Machine: r450rt2
Parameter Set: HTML 01
Index: 600000000
Seed: 11063
Configured Users: 6250
Pipe Name: DRIVER713187437
Connect Rate: 705
Start Rate: 700
Max. Concurrency: -1
Concurrency Rate: 10
CLIENT_NURAND: 233
CPU: 2
Additional Options:

Name: DRIVER08
Description: R450RT2 HTML - 2d
Directory: c:\BATCH_cl2d.log
Machine: r450rt2
Parameter Set: HTML 01
Index: 700000000
Seed: 11063
Configured Users: 6250
Pipe Name: DRIVER813220296
Connect Rate: 705
Start Rate: 700
Max. Concurrency: -1
Concurrency Rate: 10
CLIENT_NURAND: 233
CPU: 3
Additional Options:

Name: DRIVER09
Description: C200CL1 HTML - 3a
Directory: c:\BATCH_cl3a.log
Machine: c200cl1
Parameter Set: HTML 01

Index: 800000000
Seed: 11063
Configured Users: 6250
Pipe Name: DRIVER913489703
Connect Rate: 705
Start Rate: 700
Max. Concurrency: -1
Concurrency Rate: 10
CLIENT_NURAND: 233
CPU: 0
Additional Options:

Name: DRIVER10
Description: C200CL1 HTML - 3b
Directory: c:\BATCH_cl3b.log
Machine: c200cl1
Parameter Set: HTML 01
Index: 900000000
Seed: 11063
Configured Users: 6250
Pipe Name: DRIVER1013546625
Connect Rate: 705
Start Rate: 700
Max. Concurrency: -1
Concurrency Rate: 10
CLIENT_NURAND: 233
CPU: 1
Additional Options:

Name: DRIVER11
Description: C200CL2 HTML - 4a
Directory: c:\BATCH_cl4a.log
Machine: c200cl2
Parameter Set: HTML 01
Index: 1000000000
Seed: 11063
Configured Users: 6250
Pipe Name: DRIVER1113580468
Connect Rate: 705
Start Rate: 700
Max. Concurrency: -1
Concurrency Rate: 10
CLIENT_NURAND: 233
CPU: 0
Additional Options:

Name: DRIVER12
Description: C200CL2 HTML - 4b
Directory: c:\BATCH_cl4b.log
Machine: c200cl2
Parameter Set: HTML 01
Index: 1100000000
Seed: 11063
Configured Users: 6250
Pipe Name: DRIVER1213614421

Connect Rate: 705
Start Rate: 700
Max. Concurrency: -1
Concurrency Rate: 10
CLIENT_NURAND: 233
CPU: 1
Additional Options:

Name: DRIVER13
Description: C200CL3 HTML - 5a
Directory: c:\BATCH_cl15a.log
Machine: c200cl3
Parameter Set: HTML 01
Index: 1200000000
Seed: 11063
Configured Users: 6250
Pipe Name: DRIVER1313642984
Connect Rate: 705
Start Rate: 700
Max. Concurrency: -1
Concurrency Rate: 10
CLIENT_NURAND: 233
CPU: 0
Additional Options:

Name: DRIVER14
Description: C200CL3 HTML - 5b
Directory: c:\BATCH_cl15b.log
Machine: c200cl3
Parameter Set: HTML 01
Index: 1300000000
Seed: 11063
Configured Users: 6250
Pipe Name: DRIVER1413676984
Connect Rate: 705
Start Rate: 700
Max. Concurrency: -1
Concurrency Rate: 10
CLIENT_NURAND: 233
CPU: 1
Additional Options:

Name: DRIVER15
Description: C200CL4 HTML - 6a
Directory: c:\BATCH_cl16a.log
Machine: c200cl4
Parameter Set: HTML 01
Index: 1400000000
Seed: 11063
Configured Users: 6250
Pipe Name: DRIVER1513704703
Connect Rate: 705
Start Rate: 700
Max. Concurrency: -1
Concurrency Rate: 10

CLIENT_NURAND: 233
CPU: 0
Additional Options:

Name: DRIVER16
Description: C200CL4 HTML - 6b
Directory: c:\BATCH_cl16b.log
Machine: c200cl4
Parameter Set: HTML 01
Index: 1500000000
Seed: 11063
Configured Users: 6250
Pipe Name: DRIVER1613761078
Connect Rate: 705
Start Rate: 700
Max. Concurrency: -1
Concurrency Rate: 10
CLIENT_NURAND: 233
CPU: 1
Additional Options:

Name: DRIVER17
Description: R450RT3 HTML - 3a
Directory: c:\BATCH_cl3a.log
Machine: r450rt3
Parameter Set: HTML 01
Index: 1600000000
Seed: 11063
Configured Users: 6250
Pipe Name: DRIVER17180051875
Connect Rate: 705
Start Rate: 700
Max. Concurrency: -1
Concurrency Rate: 10
CLIENT_NURAND: 233
CPU: 0
Additional Options:

Name: DRIVER18
Description: R450RT3 HTML - 3b
Directory: c:\BATCH_cl3b.log
Machine: r450rt3
Parameter Set: HTML 01
Index: 1700000000
Seed: 11063
Configured Users: 6250
Pipe Name: DRIVER18180092828
Connect Rate: 705
Start Rate: 700
Max. Concurrency: -1
Concurrency Rate: 10
CLIENT_NURAND: 233
CPU: 1
Additional Options:

Name: DRIVER19
Description: R450RT3 HTML - 3c
Directory: c:\BATCH_cl3c.log
Machine: r450rt3
Parameter Set: HTML 01
Index: 1800000000
Seed: 11063
Configured Users: 6250
Pipe Name: DRIVER19180124468
Connect Rate: 705
Start Rate: 700
Max. Concurrency: -1
Concurrency Rate: 10
CLIENT_NURAND: 233
CPU: 2
Additional Options:

Name: DRIVER20
Description: R450RT3 HTML - 3d
Directory: c:\BATCH_cl3d.log
Machine: r450rt3
Parameter Set: HTML 01
Index: 1900000000
Seed: 11063
Configured Users: 6250
Pipe Name: DRIVER20180147921
Connect Rate: 705
Start Rate: 700
Max. Concurrency: -1
Concurrency Rate: 10
CLIENT_NURAND: 233
CPU: 3
Additional Options:

Name: DRIVER21
Description: R450RT4 HTML - 4a
Directory: c:\BATCH_cl4a.log
Machine: r450rt4
Parameter Set: HTML 01
Index: 2000000000
Seed: 11063
Configured Users: 6250
Pipe Name: DRIVER211215285390
Connect Rate: 705
Start Rate: 700
Max. Concurrency: -1
Concurrency Rate: 10
CLIENT_NURAND: 233
CPU: 0
Additional Options:

Name: DRIVER22
Description: R450RT4 HTML - 4b
Directory: c:\BATCH_cl4b.log
Machine: r450rt4

Parameter Set: HTML 01
Index: 2100000000
Seed: 11063
Configured Users: 6250
Pipe Name: DRIVER221215333750
Connect Rate: 705
Start Rate: 700
Max. Concurrency: -1
Concurrency Rate: 10
CLIENT_NURAND: 233
CPU: 1
Additional Options:

Name: DRIVER23
Description: R450RT4 HTML - 4c
Directory: c:\BATCH_cl4c.log
Machine: r450rt4
Parameter Set: HTML 01
Index: 2120000000
Seed: 11063
Configured Users: 6250
Pipe Name: DRIVER231215370843
Connect Rate: 705
Start Rate: 700
Max. Concurrency: -1
Concurrency Rate: 10
CLIENT_NURAND: 233
CPU: 2
Additional Options:

Name: DRIVER24
Description: R450RT4 HTML - 4d
Directory: c:\BATCH_cl4d.log
Machine: r450rt4
Parameter Set: HTML 01
Index: 2140000000
Seed: 11063
Configured Users: 6250
Pipe Name: DRIVER241215449593
Connect Rate: 705
Start Rate: 700
Max. Concurrency: -1
Concurrency Rate: 10
CLIENT_NURAND: 233
CPU: 3
Additional Options:

Number of User groups: 24

Driver Engine: DRIVER01
IIS Server: eco201.1
SQL Server: twins.x
Database: tpcc
User: sa
Protocol: HTML

w_id Range: 1 - 625
w_id Min Warehouse: 1
w_id Max Warehouse: 15000
Scale: Normal
User Count: 6250
District id: 1
Scale Down: No

Driver Engine: DRIVER02
IIS Server: eco201.1
SQL Server: twins.x
Database: tpcc
User: sa
Protocol: HTML
w_id Range: 626 - 1250
w_id Min Warehouse: 1
w_id Max Warehouse: 15000
Scale: Normal
User Count: 6250
District id: 1
Scale Down: No

Driver Engine: DRIVER03
IIS Server: eco202.1
SQL Server: twins.x
Database: tpcc
User: sa
Protocol: HTML
w_id Range: 1251 - 1875
w_id Min Warehouse: 1
w_id Max Warehouse: 15000
Scale: Normal
User Count: 6250
District id: 1
Scale Down: No

Driver Engine: DRIVER04
IIS Server: eco202.1
SQL Server: twins.x
Database: tpcc
User: sa
Protocol: HTML
w_id Range: 1876 - 2500
w_id Min Warehouse: 1
w_id Max Warehouse: 15000
Scale: Normal
User Count: 6250
District id: 1
Scale Down: No

Driver Engine: DRIVER05
IIS Server: eco202.1
SQL Server: twins.x
Database: tpcc
User: sa

Protocol: HTML
w_id Range: 2501 - 3125
w_id Min Warehouse: 1
w_id Max Warehouse: 15000
Scale: Normal
User Count: 6250
District id: 1
Scale Down: No

Driver Engine: DRIVER06
IIS Server: eco202.1
SQL Server: twins.x
Database: tpcc
User: sa
Protocol: HTML
w_id Range: 3126 - 3750
w_id Min Warehouse: 1
w_id Max Warehouse: 15000
Scale: Normal
User Count: 6250
District id: 1
Scale Down: No

Driver Engine: DRIVER07
IIS Server: eco205.1
SQL Server: twins.x
Database: tpcc
User: sa
Protocol: HTML
w_id Range: 3751 - 4375
w_id Min Warehouse: 1
w_id Max Warehouse: 15000
Scale: Normal
User Count: 6250
District id: 1
Scale Down: No

Driver Engine: DRIVER08
IIS Server: eco205.1
SQL Server: twins.x
Database: tpcc
User: sa
Protocol: HTML
w_id Range: 4376 - 5000
w_id Min Warehouse: 1
w_id Max Warehouse: 15000
Scale: Normal
User Count: 6250
District id: 1
Scale Down: No

Driver Engine: DRIVER09
IIS Server: eco203.1
SQL Server: twins.x
Database: tpcc

User: sa
Protocol: HTML
w_id Range: 5001 - 5625
w_id Min Warehouse: 1
w_id Max Warehouse: 15000
Scale: Normal
User Count: 6250
District id: 1
Scale Down: No

Driver Engine: DRIVER10
IIS Server: eco203.1
SQL Server: twins.x
Database: tpcc
User: sa
Protocol: HTML
w_id Range: 5626 - 6250
w_id Min Warehouse: 1
w_id Max Warehouse: 15000
Scale: Normal
User Count: 6250
District id: 1
Scale Down: No

Driver Engine: DRIVER11
IIS Server: eco203.1
SQL Server: twins.x
Database: tpcc
User: sa
Protocol: HTML
w_id Range: 6251 - 6875
w_id Min Warehouse: 1
w_id Max Warehouse: 15000
Scale: Normal
User Count: 6250
District id: 1
Scale Down: No

Driver Engine: DRIVER12
IIS Server: eco203.1
SQL Server: twins.x
Database: tpcc
User: sa
Protocol: HTML
w_id Range: 6876 - 7500
w_id Min Warehouse: 1
w_id Max Warehouse: 15000
Scale: Normal
User Count: 6250
District id: 1
Scale Down: No

Driver Engine: DRIVER13
IIS Server: eco204.1
SQL Server: twins.x

Database: tpcc
User: sa
Protocol: HTML
w_id Range: 7501 - 8125
w_id Min Warehouse: 1
w_id Max Warehouse: 15000
Scale: Normal
User Count: 6250
District id: 1
Scale Down: No

Driver Engine: DRIVER14
IIS Server: eco204.1
SQL Server: twins.x
Database: tpcc
User: sa
Protocol: HTML
w_id Range: 8126 - 8750
w_id Min Warehouse: 1
w_id Max Warehouse: 15000
Scale: Normal
User Count: 6250
District id: 1
Scale Down: No

Driver Engine: DRIVER15
IIS Server: eco204.1
SQL Server: twins.x
Database: tpcc
User: sa
Protocol: HTML
w_id Range: 8751 - 9375
w_id Min Warehouse: 1
w_id Max Warehouse: 15000
Scale: Normal
User Count: 6250
District id: 1
Scale Down: No

Driver Engine: DRIVER16
IIS Server: eco204.1
SQL Server: twins.x
Database: tpcc
User: sa
Protocol: HTML
w_id Range: 9376 - 10000
w_id Min Warehouse: 1
w_id Max Warehouse: 15000
Scale: Normal
User Count: 6250
District id: 1
Scale Down: No

Driver Engine: DRIVER17
IIS Server: eco205.1

SQL Server: twins.x
Database: tpcc
User: sa
Protocol: HTML
w_id Range: 10001 - 10625
w_id Min Warehouse: 1
w_id Max Warehouse: 15000
Scale: Normal
User Count: 6250
District id: 1
Scale Down: No

Driver Engine: DRIVER18
IIS Server: eco205.1
SQL Server: twins.x
Database: tpcc
User: sa
Protocol: HTML
w_id Range: 10626 - 11250
w_id Min Warehouse: 1
w_id Max Warehouse: 15000
Scale: Normal
User Count: 6250
District id: 1
Scale Down: No

Driver Engine: DRIVER19
IIS Server: eco206.1
SQL Server: twins.x
Database: tpcc
User: sa
Protocol: HTML
w_id Range: 11251 - 11875
w_id Min Warehouse: 1
w_id Max Warehouse: 15000
Scale: Normal
User Count: 6250
District id: 1
Scale Down: No

Driver Engine: DRIVER20
IIS Server: eco206.1
SQL Server: twins.x
Database: tpcc
User: sa
Protocol: HTML
w_id Range: 11876 - 12500
w_id Min Warehouse: 1
w_id Max Warehouse: 15000
Scale: Normal
User Count: 6250
District id: 1
Scale Down: No

Driver Engine: DRIVER21

IIS Server: eco206.1
SQL Server: twins.x
Database: tpcc
User: sa
Protocol: HTML
w_id Range: 12501 - 13125
w_id Min Warehouse: 1
w_id Max Warehouse: 15000
Scale: Normal
User Count: 6250
District id: 1
Scale Down: No

Driver Engine: DRIVER22
IIS Server: eco206.1
SQL Server: twins.x
Database: tpcc
User: sa
Protocol: HTML
w_id Range: 13126 - 13750
w_id Min Warehouse: 1
w_id Max Warehouse: 15000
Scale: Normal
User Count: 6250
District id: 1
Scale Down: No

Driver Engine: DRIVER23
IIS Server: eco201.1
SQL Server: twins.x
Database: tpcc
User: sa
Protocol: HTML
w_id Range: 13751 - 14375
w_id Min Warehouse: 1
w_id Max Warehouse: 15000
Scale: Normal
User Count: 6250
District id: 1
Scale Down: No

Driver Engine: DRIVER24
IIS Server: eco201.1
SQL Server: twins.x
Database: tpcc
User: sa
Protocol: HTML
w_id Range: 14376 - 15000
w_id Min Warehouse: 1
w_id Max Warehouse: 15000
Scale: Normal
User Count: 6250
District id: 1
Scale Down: No

Number of Parameter Sets: 3

HTML 01		HTML Web Eco201	Test01	Txn	Think	Key	RT	RT	Menu
		Weight	Time	Time	Time	Delay	Fence		
Delay									
	New Order	44.93	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	4.02	5.05	2.01	0.10				
20.00	0.10								
	Order Status	4.02	10.05	2.01	0.10				
5.00	0.10								
Batch									
Batch with 2H run weights									
		Txn	Think	Key	RT	RT	Menu		
		Weight	Time	Time	Delay	Fence			
Delay									
	New Order	44.92	0.00	0.00	0.00				
5.00	0.00								
	Payment	43.02	0.00	0.00	0.00				
5.00	0.00								
	Delivery	4.02	0.00	0.00	0.00				
5.00	0.00								
	Stock Level	4.02	0.00	0.00	0.00				
20.00	0.00								
	Order Status	4.02	0.00	0.00	0.00				
5.00	0.00								
~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	0.00								
	Payment	10.00	12.05	3.01	0.10				
5.00	0.00								
	Delivery	1.00	5.05	2.01	0.10				
5.00	0.00								
	Stock Level	1.00	5.05	2.01	0.10				
20.00	0.00								
	Order Status	1.00	10.05	2.01	0.10				
5.00	0.00								

This section discloses the Microsoft SQL Server 2000 Enterprise Edition SP4 parameters used on the PRIMERGY TX600 S3 server system.

Microsoft SQL Server 2000 SP4 hotfix:

Fix: Not All Memory is Available When AWE is Enabled on a Computer Running 32-bit Version of SQL Server 2000 SP4 (899761) has been installed.

Microsoft SQL Server 2000 SP4 Startup Parameters:

```
sqlservr -c -x -T3502 -T8744
```

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
- T3502 Prints a message to the SQL Server log at start and end of each checkpoint
- T8744 Disable pre-fetch

```
1> 2> 3> 4> 5> 6> 7> 8> 9> 10> 11> 12> -----
-----
--
--
--      File:      VERSION.SQL
--
--      Microsoft TPC-C Benchmark Kit Ver. 4.51
--
--      Copyright Microsoft, 2003
--
--
--      - Extracts current version of SQL Server
--
-----
use master
1> 2> 3> 4> 5>
SELECT      CONVERT(char(20), SERVERPROPERTY('ProductVersion')),
            CONVERT(char(20), SERVERPROPERTY('ProductLevel')),
            CONVERT(char(29), SERVERPROPERTY('Edition'))
-----
-
8.00.2040          SP4          Enterprise Edition
```

```
(1 row affected)
1> 2> 3>
SELECT CONVERT(char(30), getdate(), 21)
```

```
-----
2005-10-14 09:57:07.607
```

```
(1 row affected)
1> 2> 3> 4> 5>
```

```
1> 2> 3> 4> 5> 6> 7> 8> 9> 10> 11> 12> 13> 14>
```

```
-----
--
-- File: CONFIG.SQL
--
-- Microsoft TPC-C Benchmark Kit Ver. 4.51
--
-- Copyright Microsoft, 2003
--
-- - Collects SQL Server configuration parameters
--
-----
```

```
PRINT ' '
SELECT convert(char(30), getdate(), 21)
PRINT ' '
-----
```

```
2005-10-14 09:57:07.933
```

```
(1 row affected)
```

```
1> 2> 3> Configuration option 'show advanced options' changed from 1 to 1. Run the RECONFIGURE statement to install.
```

```
sp_configure 'show advanced',1
1> 2> 3>
reconfigure with override
1> 2> 3>
sp_configure
name                minimum    maximum
config_value run_value
-----
affinity mask       -2147483648 2147483647
65535                65535
```

```
allow updates              0          1
0                          0
awe enabled                 0          1
1                          1
c2 audit mode              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
default full-text language 0          2147483647
1033                        1033
default language           0          9999
0                          0
fill factor (%)            0          100
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          32
1                          1
max server memory (MB)      4          2147483647
64100                        64100
max text repl size (B)     0          2147483647
65536                        65536
max worker threads         32         32767
690                          690
media retention             0          365
0                          0
min memory per query (KB)   512        2147483647
1024                          1024
min server memory (MB)     0          2147483647
0                          0
nested triggers            0          1
1                          1
network packet size (B)    512        32767
4096                          4096
open objects                0          2147483647
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
112                          112
remote access               0          1
1                          1
```


remote login timeout (s)	0	2147483647
20 20		
remote proc trans	0	1
0 0		
remote query timeout (s)	0	2147483647
600 600		
scan for startup procs	0	1
0 0		
set working set size	0	1
0 0		
show advanced options	0	1
1 1		
two digit year cutoff	1753	9999
2049 2049		
user connections	0	32767
0 0		
user options	0	32767
0 0		

1>

Appendix D – Space Calculation

TPC-C 60-Day Space Requirements						
Note : Numbers are in KBytes unless otherwise specified						
Warehouses	15,000	tpmC	188,761	tpmC/W	12.58	
Table	Rows	Data	Index	5% Space	8H Space	Total Space
Warehouse	15,000	1,624	88	86		1,798
District	150,000	16,904	120	851		17,875
Item	100,000	9,528	104	482		10,114
New-order	135,000,000	2,405,352	6,128		1,200,000	3,611,480
History	450,000,000	26,865,672	104,312		5,430,273	32,400,257
Orders	450,000,000	14,693,880	7,167,904		4,401,762	26,263,546
Customer	450,000,000	327,272,728	20,423,624	17,384,818		365,081,170
Order-line	2,147,483,647	299,999,208	709,952		60,546,306	361,255,466
Stock	1,500,000,000	480,000,000	1,016,416	24,050,821		505,067,237
Totals		1,151,264,896	29,428,648	41,437,057	71,578,341	1,293,708,942
Segment	LogDev Cnt.	Seg. Size	Needed	Overhead		Not Needed
misc	10	481,280,000	427,796,141	4,277,961		49,205,897
customer/stock	10	870,400,000	878,849,890	8,788,499		(17,238,389)
Totals		1,351,680,000	1,306,646,032	13,066,460		31,967,508
Dynamic space	341,558,760	Sum of Data for Order, Order-Line and History				
Static space	893,638,301	Data + Index + 5% Space + Overhead - Dynamic space				
Free space	84,515,431	Total Seg. Size - Dynamic Space - Static Space - Not Needed				
Daily growth	68,771,171	(Dynamic space/W * 62.5)* tpmC				
Daily spread	(18,641,326)	Free space - 1.5 * Daily growth (zero if negative)				
60 day (KB)	5,019,908,579	Static space + 60 (daily growth + daily spread)				
60 day (GB)	4,787.36	60-day space in GB (excludes OS, Paging and RDBMS Logs)				
Log size (MB)	250,000	Total size of log file				
% Log used	55.5603	% of log file used during entire run				
Total N-O Txn	30127872	Total count of N-O transactions during entire run				
Log per N-O txn	4.7210	KB of log per New-Order transaction				
8 Hour Log (GB)	407.93	8 hours of log in GB (excluding space for redundancy)				
Space Usage	GB needed	Disk Type	#disks	GB usable	GB priced	
60 Day DB	4,787.36	36GB (meas)	450	13,890.55		
		73GB (priced)	450	29,017.40	29,017.40	
8 Hour Log (RAID1)	407.93	147GB	8	546.09	1,092.19	
System	8.00	36GB	1	34.24	34.24	
total space	5,203.29					30,143.83

Appendix E - Price Quotations

Microsoft Corporation
 One Microsoft Way
 Redmond, WA 98052-6399

Tel 425 882 8080
 Fax 425 936 7329
<http://www.microsoft.com/>

Microsoft

October 12, 2005

Fujitsu Siemens Computers
 Detlev Seidel
 Heinz Nixdorf Ring 1
 Paderborn, 33106
 Mr. Seidel:

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
810-00846	SQL Server 2000 Enterprise Edition <i>Per Processor Licensing</i> Discount Schedule: Open Program - Level C Unit Price reflects a 17% discount from the retail unit price of \$19,999.	\$16,541	4	\$66,164
P73-00295	Windows Server 2003, Standard Edition <i>Server License Only - No CALs</i> Discount Schedule: Open Program - No Level Unit Price reflects a 28% discount from the retail unit price of \$999.	\$719	6	\$4,314
P72-00264	Windows Server 2003, Enterprise Edition <i>Server License Only - No CALs</i> Discount Schedule: Open Program - No Level Unit Price reflects a 42% discount from the retail unit price of \$3,999.	\$2,334	1	\$2,334
254-00170	Visual C++ Standard Edition Discount Schedule: No Discounts Applied	\$109	1	\$109
	Microsoft Problem Resolution Services <i>Professional Support</i> (1 incident)	\$245	1	\$245

All products are currently orderable through Microsoft's normal distribution channels.
 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: PCdese0512101336.

Please include this Reference ID in any correspondence regarding this price quote.

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3	NETGEAR GS108 8-Port Copper Gigabit Switch	435286	Same Day	\$89.65	\$268.95
				Sub-Total	\$268.95


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ServiceNet 1 Year Replacement Warranty
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Appendix F - Attestation Letter

Benchmark Sponsor: Mr. Wolfgang Mielke
Fujitsu Siemens Computers
Heinz-Nixdorf-Ring 1
D-33106 Paderborn, Germany

October 26, 2005

I remotely verified the TPC Benchmark™ C performance of the following Client/Server configuration:

Platform: **Fujitsu Siemens PRIMERGY TX600 S3**
 Operating system: **Microsoft Windows Server 2003 Enterprise Edition SP1**
 Database Manager: **Microsoft SQL Server 2000 Enterprise Edition SP4**
 Transaction Manager: **Microsoft COM+**

The results were:

CPU's Speed	Memory	Disks	NewOrder 90% Response Time	tpmC
Server: Fujitsu Siemens PRIMERGY TX600 S3				
4 x Dual-Core Intel Xeon Processor 7041 (3.0 GHz)	64 GB Main (2 x 2M Cache per processor)	450 x 73 GB 8 x 146 GB 1 x 36 GB	0.45 Seconds	188,761.4
Six (6) Clients: PRIMERGY Econel 200 (Specification for each)				
2 x Intel Xeon (3.4 GHz)	2048 MB Main Cache: 2 MB SLC	1 x 72 GB	n/a	n/a

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

- The database records were the proper size

- The database was properly scaled and populated
- The required ACID properties were met
- The transactions were correctly implemented
- Input data was generated according to the specified percentages
- The transaction cycle times included the required keying and think times
- The reported response times were correctly measured.
- All 90% response times were under the specified maximums
- At least 90% of all delivery transactions met the 80 Second completion time limit
- The reported measurement interval was 120 minutes (7200 seconds)
- The reported measurement interval was representative of steady state conditions
- Four checkpoints were taken during the reported measurement interval
- The repeatability of the measured performance was verified
- The 60 day storage requirement was correctly computed
- The system pricing was verified for major components and maintenance

Additional Audit Notes:

The measured system included (45) 76 GB disks drives and (405) 36 GB disk drives that were substituted by (405) 76 GB disks, in the priced configuration. Based on the specifications of these disks and on I/O data collected during testing, it is my opinion that this substitution does not have a material effect on the reported performance.

Respectfully Yours,



François Raab, President