UNISYS

TPC Benchmark™ C Full Disclosure Report

Unisys ES7000 Orion 540 Enterprise Server (32P)

using

Microsoft SQL Server 2000 Enterprise Edition

on

Microsoft Windows Server 2003, Datacenter Edition

First Edition
April 28, 2004

First Edition – April 2004

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Benchmark results are highly dependent upon workload, specific application requirements, and systems design and implementation. Relative system performance will vary as a result of these and other factors. Therefore, TPC 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.

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Printed in USA, April 2004.

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Overview

This report documents the methodology and results of the TPC Benchmark C (TPC-C) conducted on the Unisys Corporation ES7000 Orion 540 Enterprise Server (32P). The operating system on the server was Microsoft Windows Server 2003, Datacenter Edition. The DBMS used was Microsoft SQL Server 2000 Enterprise Edition. The operating system on the clients was Microsoft Windows 2003 Server. The clients ran Microsoft's Internet Information Server 6.0 (IIS) and COM+.

TPC Benchmark Metrics

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

Executive Summary

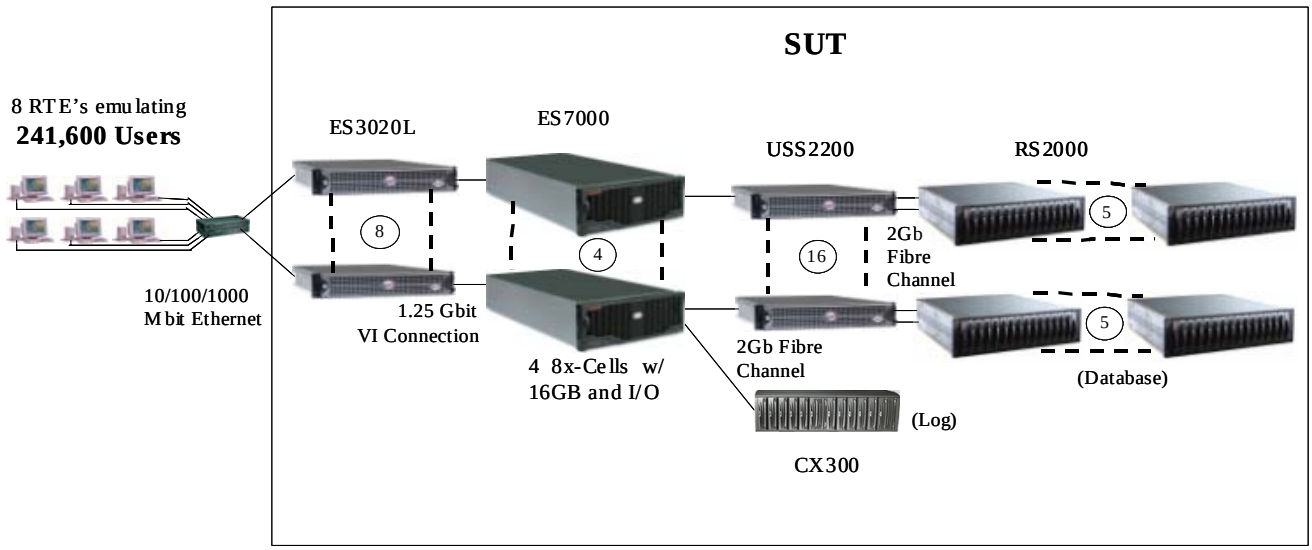
The following pages contain the executive summary results of the benchmark.

Auditor

Tom Sawyer of Performance Metrics, Inc. verified compliance with the relevant TPC specification, audited the benchmark configuration, environment, and methodology used to produce and validate the test results, along with the pricing model used to calculate the cost per tpmC.

UNISYS	ES7000 Orion 540 Enterprise Server		TPC-C Rev. 5.2 Report Date April 28, 2004
Total System Cost	**TPC-C Throughput**	**Price Performance**	**Availability Date**
$1,877,165	**304,148.50 tpmC**	**$6.18 / tpmC**	**April 28, 2004**

Processors	Database Manager	Operating System	Other Software	Number of Users
32 - Database 16 - Clients	Microsoft SQL Server 2000 Enterprise Edition	Microsoft Windows Server 2003, Datacenter Edition	Windows Server 2003 w/ IIS 6.0 and COM+ Microsoft Visual C++	**241,600**



Clients (each of 8)
ES3020L Server
2x 3.06GHz Intel® Xeon™
w/ 1MB L2 cache,
2 GB memory,
1x 18GB internal disk,
2 Inbuilt 10/100/1000Mb
Ethernet (1 used),
1 PCI VI controller

ES7000 Orion 540
Enterprise Server
32x 3.0GHz Intel® Xeon™ MP
w/ 4MB L3 cache,
64 GB memory,
1 internal disk controller,
1x 40GB internal disk,
17 PCI Fibre Channel controllers,
8 PCI VI controllers

Storage
USS2200/RS2000 & CX300
1092x 18GB + 12x 146GB
Hot-Pluggable,
External Fibre Channel disks,
18 FC RAID controllers

System Components	Server Quantity	Server Type	Clients (each of 8) Quantity	Clients (each of 8) Type
Processors	32	3.0GHz Intel® Xeon™ Processor MP, 4MB Lvl 3 Cache	2	3.06GHz Intel® Xeon™ Processor, 1MB Lvl 2 Cache
Memory	4	16 GB	4	512 MB
Disk Controllers	17 1	PCI Fibre Channel Inbuilt (boot media)	1	Inbuilt SCSI
Disk Drives	1092 12 1	18GB FC (17.1 GB useable) 146GB FC (133.7 GB useable) 40GB boot (37.3 GB useable)	1	18GB SCSI (16.9 GB useable)
Total Storage		19.0 TB		16.9 GB
Tape / CD-ROM	1	IDE CD-ROM	1	IDE CD-ROM
Terminals	1	Console Monitor	1	Console Monitor

UNISYS	ES7000 Orion 540 Enterprise Server	TPC-C Rev. 5.2 Report Date April 28, 2004

Description	Part No.	Third Party Brand	Third Party Price	Unit Price	Qty.	Extended Price	3 yr.Maint. Price
Server Hardware:							
SYS: ES7000-540, 32x 3.0GHz, 128MB Cch, 16GB Mem.	ES7540327-100		1	$349,220	1	$349,220	$27,192
Inbuilt Disk Controller, 1x 40GB Disk (boot media)	Included						
SYS MGT: Sentinel Management S/W and Media	SEN70002-MSV		1	$4,242	1	$4,242	$1,656
MEM: 16GB Memory, 1 GB DIMMs	RAM7500-16G		1	$9,500	3	$28,500	
CTRL: HBA, PCI, 2Gb Fibre Channel, 2-Port,	FC76222-P64		1	$2,850	17	$48,450	
CTRL: HBA, PCI, VI Connection, 1-Port & Cable	PCI10001-CXG		1	$755	8	$6,040	
I/F: Monitor, 15-inch Color, Kybrd, Mse & Cable	ES70003-UIF		1	$570	1	$570	
Server Software:							
O/S: Windows 2003 Srvr, Datacenter Edtn,32P, 1yr Lsub.	WND2332-TSP	2	1	$70,224	1	$70,224	
O/S: Windows 2003 Server, DC Lmtd Sbscrptn, 1yr.	DUS200332-TSP	2	1	$6,346	2	$12,692	
O/S: Windows 2003 Server DC Support, 24x7x4, 1yr.	GTS7524032-SSA	2	1	$17,168	3		$51,504
APP: Microsoft SQL Server 2000 Enterprise Edtn, 32P	DQL200332-LX	2	1	$425,600	1	$425,600	* Inc. below
SRVC: Microsoft Database Server Support Package*	PRO-PRORS-16U-01	2	2	$1,950	3		$5,850
				Server Subtotal		**$945,538**	**$86,202**
Storage Hardware:							
DISK: 1.5TB Pkg, 84x 18GB, 15Krpm, + 10% spares **	JBD201815-P84		1	$29,839	14	$417,746	Spared
DISK: 0.5 TB Pkg, 28x 18GB, 15Krpm, + 10% spares **	JBD201815-P28		1	$14,556	1	$14,556	Spared
DISK: 146GB, 10Krpm, 2Gb FC, + 10% Spares **	CXR14610-2GF		1	$2,508	14	$35,112	Spared
RCK: FC 2Gb Storage, Standard, Copper/Copper I/F	JBD2002-SA		1	$3,010	46	$138,460	$23,184
RCK: FC 2Gb Storage, Standard, Optical/Copper I/F	JBD2011-SA		1	$3,214	32	$102,848	$17,280
CTRL: Symmetric Disk Virt. 2x2GHz, 512MB Mem	RMM20103-ELS		1	$4,559	16	$72,944	$18,624
CTRL: USS, Fibre Channel HBA, 1-Port, 64-bit PCI	RMM20701-TAR		1	$1,805	48	$86,640	$21,888
APP: Unisys Storage Sentinel 2200 SDV Software	USS10300-SW		1	$5,472	1	$5,472	$4,068
APP: Storage Sentinel SDV SW, 20TB License	USS20320-LIC		1	$37,484	1	$37,484	
CBL: FC, Copper, HSDC2 Conn's, 0.3m	JBD20003-CCL		1	$54	46	$2,484	
CBL: FC, Optical, LC->LC Conn's, 10m + 10% Spares **	GCFAZLL10	3	3	$42	54	$2,268	Spared
RCK: Rack Mount Kit, Disk Enclosure	JBD2001-RMK		1	$190	78	$14,820	
CTRL: DPE: 2 RAID Cntrl, 1GB Cache ea., 0 Disk	CX300-DPE		1	$19,000	1	$19,000	$2,988
SYS MGT: Storage, Navisphere Agent	CXN600-WIN		1	$646	1	$646	$132
SYS MGT: Storage, Navisphere Manager	CX2002-DPE		1	$1,549	1	$1,549	$312
SYS MGT: Storage, Navisphere Manager	CX200-DAE		1	$7,695	1	$7,695	$1,524
SWTCH: Switch, 10/100/1000Mb Ethernet	GS516-T16		1	$2,850	1	$2,850	
CBL: Ethernet, Cat5e, RJ45 Conn's, 10ft + 10% Spares **	GCPO888910	3	3	$2	20	$40	Spared
SWTCH: Switch, 8-port KVM	SWC81-SXR		1	$1,520	3	$4,560	$3,456
CBL: Cable, KVM, 12 foot	CBL121-SWC		1	$143	24	$3,432	
KBD: Keyboard & Drawer, Rackmount	KBR28301-SXR		1	$333	2	$666	
MON: Display, Rackmount LCD	MON2145-LCD		1	$2,565	2	$5,130	
PWR: Distribution Strip, 9-Plug, 220V	SFR9-PWR		1	$162	27	$4,374	
CBL: Power, U.S. (Domestic), C20 - L6-20P	USE1936-LC6		1	$86	27	$2,322	
CAB: 36U x 19" x 41" Open Front Cabinet	HRT361941-OFT		1	$1,425	9	$12,825	
				Storage Subtotal		**$995,923**	**$93,456**
Client Hardware:							
SYS: ES3020L w/ 1x 3.0GHz Proc., 0MB Mem	ESL302021-306		1	$1,870	8	$14,960	$6,336
PROC:1x 3.0GHz Intel Xeon/1MB Cache	CPL3020302-1MB		1	$1,199	8	$9,592	
MEM: 2GB, 4x 512MB DIMMs DDR SDRAM	DIM3020042-2GB		1	$1,465	8	$11,720	
RCK: ESL2026 Disk Backpanel, 1x4	HBP3020101-51		1	$265	8	$2,120	
DISK: 18GB 15Krpm U320 3.5 Internal	HDP18115-DC4		1	$333	8	$2,664	
RCK: ES3020L Universal Rack Kit	ESL3020-VRL		1	$333	8	$2,664	
CTRL: HBA, PCI, VI Connection, 1-Port & Cable	PCI10001-CXG		1	$755	8	$6,040	
Client Software:							
O/S: Windows Server 2003, Standard Edition	P73-00295	2	2	$738	8	$5,904	* Inc. above
ACC: Visual C++ Standard	254-00170	2	2	$109	1	$109	* Inc. above
				Client Subtotal		**$55,773**	**$6,336**
				Total		**$1,997,234**	**$185,994**
Computer Resolutions Inc. 15% Large Volume Discount						($306,063)	

Notes:

1. 3rd Party Brand & Pricing: 1 = CRI Product Price, Unisys Maintenance Price
   2 = Microsoft 3 = GoCables
2. HW & SW maintenance figured at 24 x 7 w/ 4 hr. max. response time for spares.
3. ** = 10% spares added in place of onsite service.

Three Year Cost of Ownership: $1,877,165
tpmC Rating: 304,148.50
$ / tpmC: $6.18

Benchmark results and test methodology audited by Tom Sawyer of Performance Metrics, Inc.

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 assumption about past or future purchases are not permitted. All discounts reflect standard pricing policies for the listed components. For complete details, see the pricing sections of the TPC benchmarks 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.

Numerical Quantities Summary

MQTh, Computed Maximum Qualified Throughput: **304,148.50** **tpmC**

Response Times, in seconds

Transaction	90th %ile	Average	Maximum
New-Order	0.36	0.25	22.02
Payment	0.31	0.21	6.83
Order-Status	0.32	0.23	18.13
Delivery (interactive portion)	0.14	0.14	2.17
Delivery (deferred portion)	0.39	0.23	21.81
Stock-Level	1.20	0.75	22.27
Menu	0.14	0.14	2.22

Response time delay added for emulated components, in seconds

RT Response time	0.1
Menu Response time	0.1

Transaction Mix, in percent of total transactions

New Order	44.93%
Payment	43.02%
Order-Status	4.01%
Delivery (interactive portion)	4.01%
Stock-Level	4.01%

Keying / Think Time Times, in seconds

Transaction	Minimum	Average	Maximum
New Order	18.01 / 0.00	18.01 / 12.03	18.03 / 120.31
Payment	3.01 / 0.00	3.01 / 12.03	3.03 / 120.31
Order-Status	2.01 / 0.00	2.01 / 10.08	2.03 / 100.70
Delivery (interactive portion)	2.01 / 0.00	2.01 / 5.06	2.03 / 50.61
Stock-Level	2.01 / 0.00	2.01 / 5.06	2.03 / 50.61

Test Duration

Ramp up time	69 minutes
Measurement interval (M)	120 minutes
Transactions (all types) completed during measurement interval	81,224,786
Ramp-down time	15 minutes

Checkpointing:

Number of checkpoints	4
Checkpoint interval	30 minutes

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Preface

Document Structure

The TPC Benchmark C Standard Specification requires test sponsors to publish, submit to the TPC, and make available to the public, a full disclosure report for any result to be considered compliant with the specification. The required contents of the full disclosure report are specified in Clause 8.

This report is submitted to satisfy the specification's requirement for full disclosure. It documents the compliance of the benchmark implementation and execution reported for the Unisys ES7000 Orion 540 Enterprise Server (32P) using Microsoft SQL Server 2000 Enterprise Edition on Microsoft Windows Server 2003, Datacenter Edition.

TPC Benchmark C Overview

The Transaction Processing Performance Council (TPC) developed The TPC Benchmark™ C Standard Specification Revision 5.2. It is the intent of the TPC to develop a suite of benchmarks to measure the performance of computer systems executing a wide range of applications. Unisys and Microsoft Corporations are active participants in the TPC to define and develop such a suite of benchmarks.

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

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

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

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

0. General Items

0.1. Order and Titles

The order and titles of sections in the Test Sponsor's Full Disclosure report must correspond with the order and titles of sections from the TPC-C standard specification (i.e., this document). The intent is to make it as easy as possible for readers to compare and contrast material in different Full Disclosure reports. (8.1.1.1)

The order and titles of the sections in this report correspond with those from the TPC-C standard specification.

0.2. Executive Summary Statement

The TPC Executive Summary Statement must be included near the beginning of the Full Disclosure report. (8.1.1.2)

The TPC Executive Summary Statement is included near the beginning of this report.

0.3. Numerical Quantities Summary

The numerical quantities listed below must be summarized near the beginning of the Full Disclosure Report: (8.1.1.3)

- *Measurement interval in minutes,*
- *Number of checkpoints in the measurement interval,*
- *Checkpoint interval in minutes,*
- *Number of transactions (all types) completed within the measurement interval,*
- *Computed Maximum Qualified Throughput in tpmC,*
- *Ninetieth percentile, average and maximum response times for the New-Order, Payment, Order-Status, Stock-Level, Delivery (deferred and interactive) and Menu transactions,*
- *Time in seconds added to response time to compensate for delays associated with emulated components,*
- *Percentage of transaction mix for each transaction type.*

These numerical quantities are summarized near the beginning of this report.

0.4. Application Code Disclosure

The applicable 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. (8.1.1.4)

Appendix A contains the client application code used in this TPC-C benchmark. Appendix B contains the SQL stored procedures that implement the TPC-C transactions.

0.5. Benchmark Sponsor

A statement identifying the benchmark sponsor(s) and other participating companies must be provided. (8.1.1.5)

Unisys Corporation sponsored this TPC benchmark C. Microsoft and Unisys developed the benchmark test. The benchmark was conducted at Unisys, Mission Viejo, California.

0.6. Parameter Settings

Settings must be provided for all customer-tunable parameters and options which have been changed from the defaults found in actual products, including but not limited to: (8.1.1.6)

- *Data Base tuning options*
- *Recovery/commit options*
- *Consistency/locking options*
- *Operating system and application configuration parameters*

Appendix C contains the configuration and system parameters used in running these TPC-C tests. It also contains all the client and server OS and SQL Server tunable parameters.

0.7. Configuration Diagrams

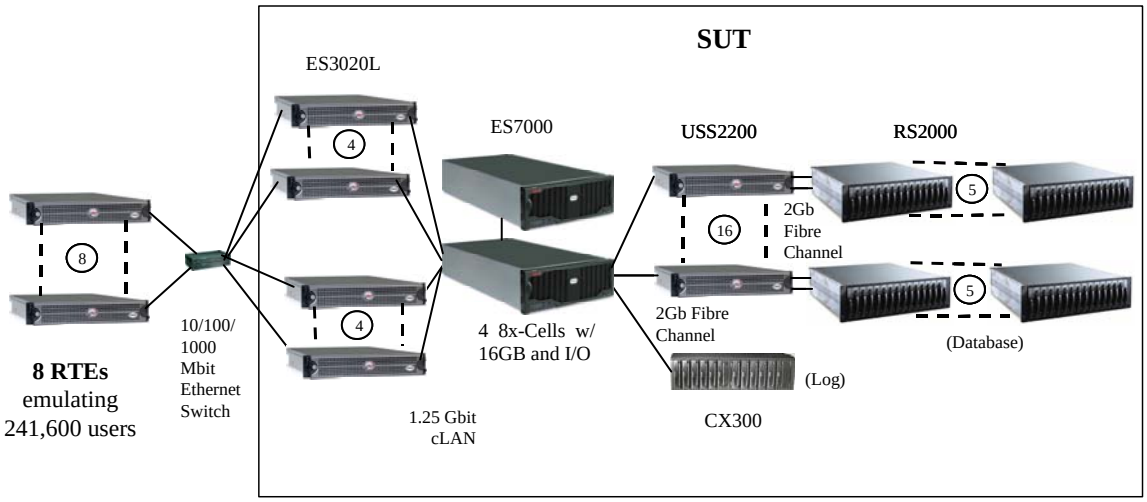
Diagrams of both measured and priced configurations must be provided, accompanied by a description of the differences. This includes, but is not limited to: (8.1.1.7)

- *Number and type of processors.*
- *Size of allocated memory, and any specific mapping/partitioning of memory unique to the test.*
- *Number and type of disk units (and controllers, if applicable).*
- *Number of channels or bus connections to disk units, including their protocol type.*
- *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).*
- *Type and the run-time execution location of software components (e.g., DBMS, client processes, transaction monitors, software drivers, etc.).*

The Remote Terminal Emulator (RTE) software used for these TPC-C tests is proprietary to Unisys. The benchmarked configuration of the RTE and Unisys ES7000 Orion 540 Enterprise Server (32P) is illustrated in Figure 0.1. Tables 4.3 and 4.5 contain a detailed explanation of the disk configuration.

There were eight ES3020L clients in the measured configuration. Four were older clients with dual 2.4GHz processors, 400MHz FSB, 2GB memory, and one 18 GB 10Krpm drive. Four were new clients with dual 3.06GHz processors, 533MHz FSB, 2GB memory, and one 18 GB 15Krpm drive. The pricing uses eight new ES3020L clients in the benchmark configuration, each with dual 3.06GHz processors, 533MHz FSB, 2GB memory and one 18 GB 15Krpm drive because the older measured clients are no longer orderable through Unisys. The priced configuration for the Unisys ES7000 Orion 540 Enterprise Server (32P) is shown in Figure 0.2.

Figure 0.1: Benchmarked Configuration



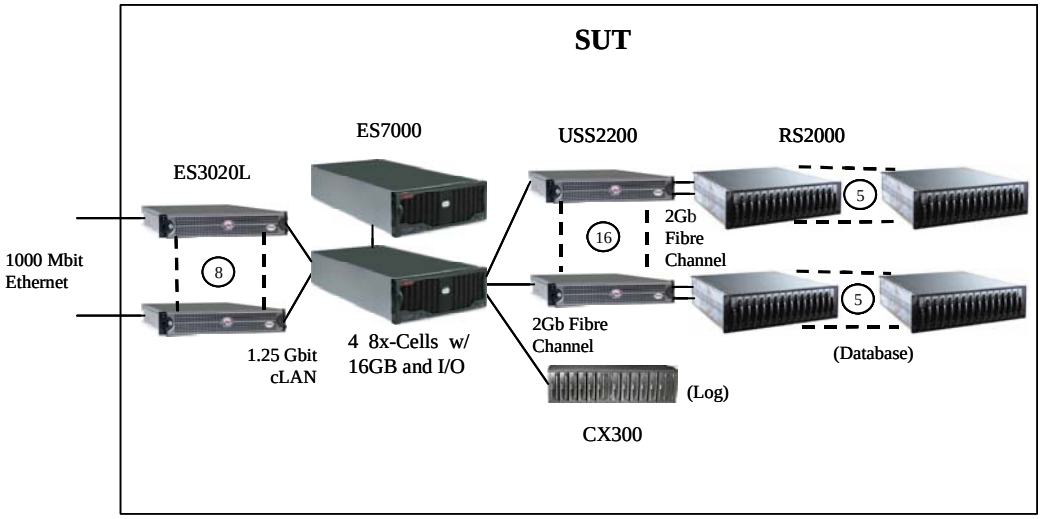
Clients (each of 4)
ES3020L Server
2x 3.06GHz Intel® Xeon™
w/ 1MB L2 cache,
2 GB memory,
1x 18GB internal disk,
2 Inbuilt 10/100/1000Mb
Ethernet (1 used),
1 PCI VI controller

Clients (each of 4)
ES3020L Server
2x 2.4GHz Intel® Xeon™
w/ 512KB L2 cache,
2 GB memory,
1x 18GB internal disk,
2 Inbuilt 10/100/1000Mb
Ethernet (1 used),
1 PCI VI controller

ES7000 Orion 540
Enterprise Server
32x 3.0GHz Intel® Xeon™ MP
w/ 4MB L3 cache,
64 GB memory,
1 internal disk controller,
1x 40GB internal disk,
17 PCI Fibre Channel controllers,
8 PCI VI controller

Storage
USS2200/RS2000 & CX300
1092x 18GB + 12x 146GB
Hot-Pluggable,
External Fibre Channel disks,
18 FC RAID controllers

Figure 0.2: Priced Configuration



Clients (each of 8)
ES3020L Server
2x 3.06GHz Intel® Xeon™
w/ 1MB L2 cache,
2 GB memory,
1x 18GB internal disk,
2 Inbuilt 10/100/1000Mb
Ethernet (1 used),
1 PCI VI controller

ES7000 Orion 540
Enterprise Server
32x 3.0GHz Intel® Xeon™ MP
w/ 4MB L3 cache,
64 GB memory,
1 internal disk controller,
1x 40GB internal disk,
17 PCI Fibre Channel controllers,
8 PCI VI controller

Storage
USS2200/RS2000 & CX300
1092x 18GB + 12x 146GB
Hot-Pluggable,
External Fibre Channel disks,
18 FC RAID controllers

1. Clause 1: Logical Database Design

1.1. Table Definitions

Listings must be provided for all table definition statements and all other statements used to setup the database. (8.1.2.1)

Appendix B contains the SQL definitions of all the required database files, filegroups, tables, indexes and stored procedures, plus a listing of the program used to load the database and establish the required initial populations of each table.

1.2. Physical Organization of the Database

The physical organization of tables and indices, within the database, must be disclosed. (8.1.2.2)

The disk space was allocated to SQL Server according to the data in Tables 4.3 and 4.5. The SQL definitions are contained in Appendix B.

1.3. Insert and/or Delete Operations

It must be ascertained that insert and/or delete operations to any of the tables can occur concurrently with the TPC-C transaction mix. Furthermore, any 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. (8.1.2.3)

There were no restrictions on insert and/or delete operations to any of the tables.

1.4. Partitioning

While there are few restrictions placed upon horizontal or vertical partitioning of tables and rows in the TPC-C benchmark (see Clause 1.6), any such partitioning must be disclosed. (8.1.2.4)

Partitioning was not used for any table in this implementation.

1.5. Replication, Duplication or Additions

Replication of tables, if used, must be disclosed (see Clause 1.4.6). (8.1.2.5).

Additional and/or duplicate attributes in any table must be disclosed along with a statement on the impact on performance (see Clause 1.4.7). (8.1.2.6)

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

2. Clause 2: Transaction & Terminal Profiles

2.1. Random Number Generation

The method of verification for the random number generation must be disclosed. (8.1.3.1)

The drivers used the Unisys RTE program. The initial population of the database was performed by the loader program from the Microsoft TPC-C toolkit (V4.51). Both the Unisys RTE program and the loader program from the Microsoft TPC-C toolkit (V4.51) were independently audited. Furthermore, the auditor sampled various initial and runtime distributions produced by this implementation to verify correctness.

2.2. Input/Output Screen Layout

The actual layout of the terminal input/output screens must be disclosed. (8.1.3.2)

The screen layouts are based on those in Clauses 2.4.3, 2.5.3, 2.6.3, 2.7.3, and 2.8.3 of the TPC Benchmark C Standard Specification. There are some minor differences in appearance due to the use of a web client implementation.

2.3. Priced Terminal Feature Verification

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

This was verified by the auditor.

2.4. Presentation Managers or Intelligent Terminal

Any usage of presentation managers or intelligent terminals must be explained. (8.1.3.4)

Application code running on the client implemented the TPC-C user interface. A listing of this code is included in Appendix A. No presentation manager was used on the client, as screen manipulation and data input/output was handled for each user by the Microsoft Internet Explorer web browser running on each user PC.

2.5. Transaction Statistics

The percentage of home and remote order-lines in the New-Order transactions must be disclosed. (8.1.3.5)

The percentage of New-Order transactions that were rolled back as a result of an unused item number must be disclosed. (8.1.3.6)

The number of items per order entered by New-Order transactions must be disclosed. (8.1.3.7)

The percentage of home and remote Payment transactions must be disclosed. (8.1.3.8)

The percentage of Payment and Order-Status transactions that used non-primary key (C_LAST) access to the database must be disclosed. (8.1.3.9)

The percentage of Delivery transactions that were skipped as a result of an insufficient number of rows in the NEW-ORDER table must be disclosed. (8.1.3.10)

The mix (i.e., percentages) of transaction types seen by the SUT must be disclosed. (8.1.3.11)

Table 5.4 in Section 5 contains all these statistics.

2.6. Queuing Mechanism of Delivery

The queuing mechanism used to defer execution of the Delivery transaction must be disclosed (8.1.3.12).

Deferred deliveries are queued by making an entry in an array within the application process (tpcc.dll) running on the client systems. Background threads within the application process asynchronously process the queued delivery transactions and log the results to a file upon completion.

3. Clause 3: Transaction & System Properties

3.1. Transaction System Properties (ACID)

The results of the ACID tests must be disclosed along with a description of how the ACID requirements were met. This includes disclosing which case was followed for the execution of Isolation Test 7. (8.1.4.1)

The TPC Benchmark C Standard Specification defines a set of transaction processing system properties that a system under test (SUT) must support during the execution of the benchmark. Those properties are Atomicity, Consistency, Isolation, and Durability (ACID).

This section defines each of these properties, describes the steps taken to ensure that they were present during the test and describes a series of tests done to demonstrate compliance with the specification. All ACID property tests were executed successfully.

3.2. Atomicity

The system under test must guarantee that data base 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.

3.2.1. Completed Transaction

Perform the Payment transaction for a randomly selected warehouse, district, and customer (by customer number) and verify that the records in the CUSTOMER, DISTRICT, and WAREHOUSE tables have been changed appropriately.

The balances from a randomly selected warehouse, district, and customer row were retrieved by customer number from a script. A Payment transaction was submitted with the same warehouse, district and customer identifiers for a known amount. After completion of the Payment transaction, the balances of the selected warehouse, district, and customer were again retrieved to verify that the changes had been made correctly.

3.2.2. Aborted Transactions

Perform the Payment transaction for a randomly selected warehouse, district, and customer (by customer number) 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.

The balances from a randomly selected warehouse, district, and customer row were retrieved by customer number from a script. A Payment transaction was submitted with the same warehouse, district and customer identifiers that issued a ROLLBACK command rather than a COMMIT. After the transaction completed, the balances of the selected warehouse, district, and customer were again retrieved to verify that no changes had been made to the database.

3.3. Consistency

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

The benchmark specification requires explicit demonstration of the following four consistency conditions:

1. The sum of the district balances in a warehouse is equal to the warehouse balance;
2. For each district, the next order id minus one is equal to maximum order id in the ORDER table and equal to the maximum new order id in the NEW ORDER table;
3. For each district, the maximum order id minus minimum order id in the ORDER table plus one equals the number of rows in the NEW-ORDER table for that district;
4. For each district, the sum of the order line counts in the ORDER table equals the number of rows in the ORDER-LINE table for that district;

In order to demonstrate this consistency, the following steps were taken:

1. Prior to the start of a benchmark run, the consistency of the database was verified by testing successfully conditions 1-4 described above with a script.
2. A run under full user load was executed for over 10 minutes with a checkpoint during the run.
3. After completion of that test, the consistency of the database was again verified by successfully testing using the same consistency script as in step 1.

3.4. Isolation

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

The benchmark specification defines seven required tests to be performed to demonstrate that required levels of transaction isolation are met. These tests, described in Clauses 3.4.2.1 - 3.4.2.7, were all performed from a script and verified by the auditor. In Isolation Test 7, Case A was observed. In addition, the phantom tests and stock level tests were executed and verified to be successful.

3.5. Durability

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

Three durability tests were executed to satisfy the requirements of the specification. The tests for loss of memory and instantaneous interruption were combined and performed with a fully scaled database with all emulated users. The loss of log and loss of data tests were performed on the same database with 25,180 emulated users. To the best of our knowledge, these tests prove that the fully scaled configuration used for the throughput test would also meet all durability tests.

3.5.1. Loss of Log Disk and Loss of Data Disk

The following steps were taken with only 25,180 emulated users to demonstrate durability in the case of loss of a log disk and loss of a data disk:

1. The database was backed up to extra space on a backup volume.
2. The D_NEXT_O_ID fields for all rows in the district table were summed up to determine the initial count of orders present in the database.
3. The RTE was started with 25,180 users. On the driver systems, committed and rolled back New-Order transactions were recorded in a “success” file.
4. After five minutes of running at steady state, a hot-pluggable log disk was removed from the disk cabinet, with no effect on the OS or SQL server.

5. After 5 additional minutes of operation, a hot-pluggable data disk was removed from the disk cabinet.
6. Windows Datacenter and SQL Server encountered IO errors due to the missing disk and recorded these errors in the system event log and SQL Server error log, respectively. The RTEs also recorded errors.
7. First, the RTEs and clients were stopped, and then SQL Server was used to backup the transaction log to the backup volume.
8. Next, scripts were executed to drop the database and all its files. Then, SQL Server was shutdown.
9. A data disk was inserted in the disk cabinet to replace the one removed. The RAID controller, via Storage Sentinel Manager, was used to recreate the stripe set containing the new data disk. (The missing log drive was not replaced.)
10. The SUT was restarted, SQL Server was then restarted, and a new (empty) database created as part of the restore database process. That process loaded the initial database into the new database, but did not perform any recovery. Next the transaction log was restored, followed by transaction recovery. The latter step restored all committed transactions to the database.
11. Consistency condition 3 of Clause 3.3.2.3 was executed to verify database consistency.
12. Step 2 was repeated to determine the total number of orders. This number was subtracted from the count obtained previously in Step 2 to determine the number of additional orders added to the database.
13. The contents of the "success" files on the drivers were sampled to verify that the records in the "success" file for committed New-Order transactions had corresponding records in the ORDER table. Moreover, the counts were matched with those obtained in step 12.

3.5.2. Instantaneous Interruption and Loss of Memory

Instantaneous interruption and loss of memory tests were combined because the loss of power erased the contents of memory. Removing the primary power to the System Under Test while the benchmark was executing induced this failure.

1. The D_NEXT_O_ID fields for all rows in the district table were summed up to determine the initial count of orders present in the database (count1).
2. On the driver systems, committed and rolled back New-Order transactions were recorded in a "success" file.
3. The benchmark was executed at full load with all emulated users for a minimum of 5 minutes.
4. The system's primary power was then turned off.
5. After transaction failures were noted by the RTEs, the RTEs and clients were shutdown.
6. Power was restored to the SUT, the system rebooted, SQL Server was restarted, and automatic database recovery was performed. The database recovery used the transaction log to reapply all committed transactions and rollback any (in progress) uncommitted transactions, so that the database disks were correct.
7. After recovery finished, Consistency Condition 3 of Clause 3.3.2.3 (no gaps in NO_O_ID) was executed to verify that the database was consistent.
8. Finally, step 1 was repeated to determine the total number of orders (count2). Count2 minus count1 was not less than the number of committed New-Order records in the "success" file from the drivers.
9. The contents of the "success" files on the drivers were sampled to verify that the records in the "success" file for committed New-Order transactions had corresponding records in the ORDER table.

4. Clause 4: Scaling & Database Population

4.1. Initial Cardinality of Tables

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. (8.1.5.1)

The TPC-C database for this test was configured with 24,160 warehouses. The cardinality of each table in the database is listed in Table 4.1

Table 4.1: Initial Cardinality of Database Table

Table	Occurrences
Warehouse	24,160
District	241,600
Customer	724,800,000
History	724,800,000
Order	724,800,000
New-Order	232,200,000
Order Line	7,247,980,181
Stock	2,416,000,000
Item	100,000

No rows of the warehouse table were inactive while executing the measurement runs.

4.2. Constant Values

The following values were used as the constant C input values to the NURand function during Build and Run time for this implementation.

Table 4.2: Constant C for NURand

Function	Value
C_LAST (Build)	123
C_LAST (Run)	208

4.3. Database Layout

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

Tables 4.3 and 4.5 list the distribution of the database over 1092 18GB disks and the transaction log over 6 mirrored pairs of 146GB disks for the benchmark configuration. In addition, there was one 40GB disk in the host server containing Windows Server 2003, Datacenter Edition and SQL Server 2000 code and the Master database plus the paging file. Unused-space partitions on the database drives were used for database backup. These partitions were not used during the measurements. The tested and priced disk configurations were identical, except for the changes noted in section 0.7.

4.4. DBMS: Data Model and DBMS Interface/Access Language

A statement must be provided that describes: (8.1.5.3)

1. *The data model implemented by the DBMS used (e.g., relational, network, hierarchical).*

2. *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.*

Microsoft SQL Server 2000 is a relational DBMS.

The client software interfaced to SQL Server through Stored Procedures invoked through ODBC calls embedded in the C application code.

4.5. DBMS Partitions/Replications

The mapping of database partitions/replications must be explicitly described. (8.1.5.4)

No table partitioning or replication was done.

4.6. DBMS Space Requirements

Details of the 60-day space computation along with proof that the database is configured to sustain 8 hours of growth for dynamic tables (Order, Order-line, and History) must be disclosed (see Clause 4.2.3) (8.1.5.5).

Appendix E lists the space requirements for the 60-day space as well as the logical log space for eight hours.

Table 4.3: Disk Rack Configuration

Disk Rack Configuration																	
Controller	HBA	Rack	Raid Level	ID 0	ID 1	ID 2	ID 3	ID 4	ID 5	ID 6	ID 7	ID 8	ID 9	ID 10	ID 11	ID 12	ID 13
USS1	0	1	0	18GB	18GB	18GB	18GB	18GB	18GB	18GB	18GB	18GB	18GB	18GB	18GB	18GB	18GB
USS1	0	2	0	18GB	18GB	18GB	18GB	18GB	18GB	18GB	18GB	18GB	18GB	18GB	18GB	18GB	18GB
USS1	0	3	0	18GB	18GB	18GB	18GB	18GB	18GB	18GB	18GB	18GB	18GB	18GB	18GB	18GB	18GB
USS1	1	4	0	18GB	18GB	18GB	18GB	18GB	18GB	18GB	18GB	18GB	18GB	18GB	18GB	18GB	18GB
USS1	1	5	0	18GB	18GB	18GB	18GB	18GB	18GB	18GB	18GB	18GB	18GB	18GB	18GB	18GB	18GB
USS2	0	6	0	18GB	18GB	18GB	18GB	18GB	18GB	18GB	18GB	18GB	18GB	18GB	18GB	18GB	18GB
USS2	0	7	0	18GB	18GB	18GB	18GB	18GB	18GB	18GB	18GB	18GB	18GB	18GB	18GB	18GB	18GB
USS2	0	8	0	18GB	18GB	18GB	18GB	18GB	18GB	18GB	18GB	18GB	18GB	18GB	18GB	18GB	18GB
USS2	1	9	0	18GB	18GB	18GB	18GB	18GB	18GB	18GB	18GB	18GB	18GB	18GB	18GB	18GB	18GB
USS2	1	10	0	18GB	18GB	18GB	18GB	18GB	18GB	18GB	18GB	18GB	18GB	18GB	18GB	18GB	18GB
USS3	0	11	0	18GB	18GB	18GB	18GB	18GB	18GB	18GB	18GB	18GB	18GB	18GB	18GB	18GB	18GB
USS3	0	12	0	18GB	18GB	18GB	18GB	18GB	18GB	18GB	18GB	18GB	18GB	18GB	18GB	18GB	18GB
USS3	0	13	0	18GB	18GB	18GB	18GB	18GB	18GB	18GB	18GB	18GB	18GB	18GB	18GB	18GB	18GB
USS3	1	14	0	18GB	18GB	18GB	18GB	18GB	18GB	18GB	18GB	18GB	18GB	18GB	18GB	18GB	18GB
USS3	1	15	0	18GB	18GB	18GB	18GB	18GB	18GB	18GB	18GB	18GB	18GB	18GB	18GB	18GB	18GB
USS4	0	16	0	18GB	18GB	18GB	18GB	18GB	18GB	18GB	18GB	18GB	18GB	18GB	18GB	18GB	18GB
USS4	0	17	0	18GB	18GB	18GB	18GB	18GB	18GB	18GB	18GB	18GB	18GB	18GB	18GB	18GB	18GB
USS4	0	18	0	18GB	18GB	18GB	18GB	18GB	18GB	18GB	18GB	18GB	18GB	18GB	18GB	18GB	18GB
USS4	1	19	0	18GB	18GB	18GB	18GB	18GB	18GB	18GB	18GB	18GB	18GB	18GB	18GB	18GB	18GB
USS4	1	20	0	18GB	18GB	18GB	18GB	18GB	18GB	18GB	18GB	18GB	18GB	18GB	18GB	18GB	18GB
USS5	0	21	0	18GB	18GB	18GB	18GB	18GB	18GB	18GB	18GB	18GB	18GB	18GB	18GB	18GB	18GB
USS5	0	22	0	18GB	18GB	18GB	18GB	18GB	18GB	18GB	18GB	18GB	18GB	18GB	18GB	18GB	18GB
USS5	0	23	0	18GB	18GB	18GB	18GB	18GB	18GB	18GB	18GB	18GB	18GB	18GB	18GB	18GB	18GB
USS5	1	24	0	18GB	18GB	18GB	18GB	18GB	18GB	18GB	18GB	18GB	18GB	18GB	18GB	18GB	18GB
USS5	1	25	0	18GB	18GB	18GB	18GB	18GB	18GB	18GB	18GB	18GB	18GB	18GB	18GB	18GB	18GB
USS6	0	26	0	18GB	18GB	18GB	18GB	18GB	18GB	18GB	18GB	18GB	18GB	18GB	18GB	18GB	18GB
USS6	0	27	0	18GB	18GB	18GB	18GB	18GB	18GB	18GB	18GB	18GB	18GB	18GB	18GB	18GB	18GB
USS6	0	28	0	18GB	18GB	18GB	18GB	18GB	18GB	18GB	18GB	18GB	18GB	18GB	18GB	18GB	18GB
USS6	1	29	0	18GB	18GB	18GB	18GB	18GB	18GB	18GB	18GB	18GB	18GB	18GB	18GB	18GB	18GB
USS6	1	30	0	18GB	18GB	18GB	18GB	18GB	18GB	18GB	18GB	18GB	18GB	18GB	18GB	18GB	18GB
USS7	0	31	0	18GB	18GB	18GB	18GB	18GB	18GB	18GB	18GB	18GB	18GB	18GB	18GB	18GB	18GB
USS7	0	32	0	18GB	18GB	18GB	18GB	18GB	18GB	18GB	18GB	18GB	18GB	18GB	18GB	18GB	18GB
USS7	0	33	0	18GB	18GB	18GB	18GB	18GB	18GB	18GB	18GB	18GB	18GB	18GB	18GB	18GB	18GB
USS7	1	34	0	18GB	18GB	18GB	18GB	18GB	18GB	18GB	18GB	18GB	18GB	18GB	18GB	18GB	18GB
USS7	1	35	0	18GB	18GB	18GB	18GB	18GB	18GB	18GB	18GB	18GB	18GB	18GB	18GB	18GB	18GB
USS8	0	36	0	18GB	18GB	18GB	18GB	18GB	18GB	18GB	18GB	18GB	18GB	18GB	18GB	18GB	18GB
USS8	0	37	0	18GB	18GB	18GB	18GB	18GB	18GB	18GB	18GB	18GB	18GB	18GB	18GB	18GB	18GB
USS8	0	38	0	18GB	18GB	18GB	18GB	18GB	18GB	18GB	18GB	18GB	18GB	18GB	18GB	18GB	18GB
USS8	1	39	0	18GB	18GB	18GB	18GB	18GB	18GB	18GB	18GB	18GB	18GB	18GB	18GB	18GB	18GB
USS8	1	40	0	18GB	18GB	18GB	18GB	18GB	18GB	18GB	18GB	18GB	18GB	18GB	18GB	18GB	18GB

Table 4.3: Disk Rack Configuration (cont)

Disk Rack Configuration																	
Controller	HBA	Rack	Raid Level	ID 0	ID 1	ID 2	ID 3	ID 4	ID 5	ID 6	ID 7	ID 8	ID 9	ID 10	ID 11	ID 12	ID 13
USS9	0	41	0	18GB	18GB	18GB	18GB	18GB	18GB	18GB	18GB	18GB	18GB	18GB	18GB	18GB	18GB
USS9	0	42	0	18GB	18GB	18GB	18GB	18GB	18GB	18GB	18GB	18GB	18GB	18GB	18GB	18GB	18GB
USS9	0	43	0	18GB	18GB	18GB	18GB	18GB	18GB	18GB	18GB	18GB	18GB	18GB	18GB	18GB	18GB
USS9	1	44	0	18GB	18GB	18GB	18GB	18GB	18GB	18GB	18GB	18GB	18GB	18GB	18GB	18GB	18GB
USS9	1	45	0	18GB	18GB	18GB	18GB	18GB	18GB	18GB	18GB	18GB	18GB	18GB	18GB	18GB	18GB
USS10	0	46	0	18GB	18GB	18GB	18GB	18GB	18GB	18GB	18GB	18GB	18GB	18GB	18GB	18GB	18GB
USS10	0	47	0	18GB	18GB	18GB	18GB	18GB	18GB	18GB	18GB	18GB	18GB	18GB	18GB	18GB	18GB
USS10	0	48	0	18GB	18GB	18GB	18GB	18GB	18GB	18GB	18GB	18GB	18GB	18GB	18GB	18GB	18GB
USS10	1	49	0	18GB	18GB	18GB	18GB	18GB	18GB	18GB	18GB	18GB	18GB	18GB	18GB	18GB	18GB
USS10	1	50	0	18GB	18GB	18GB	18GB	18GB	18GB	18GB	18GB	18GB	18GB	18GB	18GB	18GB	18GB
USS11	0	51	0	18GB	18GB	18GB	18GB	18GB	18GB	18GB	18GB	18GB	18GB	18GB	18GB	18GB	18GB
USS11	0	52	0	18GB	18GB	18GB	18GB	18GB	18GB	18GB	18GB	18GB	18GB	18GB	18GB	18GB	18GB
USS11	0	53	0	18GB	18GB	18GB	18GB	18GB	18GB	18GB	18GB	18GB	18GB	18GB	18GB	18GB	18GB
USS11	1	54	0	18GB	18GB	18GB	18GB	18GB	18GB	18GB	18GB	18GB	18GB	18GB	18GB	18GB	18GB
USS11	1	55	0	18GB	18GB	18GB	18GB	18GB	18GB	18GB	18GB	18GB	18GB	18GB	18GB	18GB	18GB
USS12	0	6	0	18GB	18GB	18GB	18GB	18GB	18GB	18GB	18GB	18GB	18GB	18GB	18GB	18GB	18GB
USS12	0	7	0	18GB	18GB	18GB	18GB	18GB	18GB	18GB	18GB	18GB	18GB	18GB	18GB	18GB	18GB
USS12	0	8	0	18GB	18GB	18GB	18GB	18GB	18GB	18GB	18GB	18GB	18GB	18GB	18GB	18GB	18GB
USS12	1	9	0	18GB	18GB	18GB	18GB	18GB	18GB	18GB	18GB	18GB	18GB	18GB	18GB	18GB	18GB
USS12	1	10	0	18GB	18GB	18GB	18GB	18GB	18GB	18GB	18GB	18GB	18GB	18GB	18GB	18GB	18GB
USS13	0	11	0	18GB	18GB	18GB	18GB	18GB	18GB	18GB	18GB	18GB	18GB	18GB	18GB	18GB	18GB
USS13	0	12	0	18GB	18GB	18GB	18GB	18GB	18GB	18GB	18GB	18GB	18GB	18GB	18GB	18GB	18GB
USS13	0	13	0	18GB	18GB	18GB	18GB	18GB	18GB	18GB	18GB	18GB	18GB	18GB	18GB	18GB	18GB
USS13	1	14	0	18GB	18GB	18GB	18GB	18GB	18GB	18GB	18GB	18GB	18GB	18GB	18GB	18GB	18GB
USS13	1	15	0	18GB	18GB	18GB	18GB	18GB	18GB	18GB	18GB	18GB	18GB	18GB	18GB	18GB	18GB
USS14	0	16	0	18GB	18GB	18GB	18GB	18GB	18GB	18GB	18GB	18GB	18GB	18GB	18GB	18GB	18GB
USS14	0	18	0	18GB	18GB	18GB	18GB	18GB	18GB	18GB	18GB	18GB	18GB	18GB	18GB	18GB	18GB
USS14	1	19	0	18GB	18GB	18GB	18GB	18GB	18GB	18GB	18GB	18GB	18GB	18GB	18GB	18GB	18GB
USS14	1	20	0	18GB	18GB	18GB	18GB	18GB	18GB	18GB	18GB	18GB	18GB	18GB	18GB	18GB	18GB
USS15	0	21	0	18GB	18GB	18GB	18GB	18GB	18GB	18GB	18GB	18GB	18GB	18GB	18GB	18GB	18GB
USS15	0	23	0	18GB	18GB	18GB	18GB	18GB	18GB	18GB	18GB	18GB	18GB	18GB	18GB	18GB	18GB
USS15	1	24	0	18GB	18GB	18GB	18GB	18GB	18GB	18GB	18GB	18GB	18GB	18GB	18GB	18GB	18GB
USS15	1	25	0	18GB	18GB	18GB	18GB	18GB	18GB	18GB	18GB	18GB	18GB	18GB	18GB	18GB	18GB
USS16	0	26	0	18GB	18GB	18GB	18GB	18GB	18GB	18GB	18GB	18GB	18GB	18GB	18GB	18GB	18GB
USS16	0	27	0	18GB	18GB	18GB	18GB	18GB	18GB	18GB	18GB	18GB	18GB	18GB	18GB	18GB	18GB
USS16	0	28	0	18GB	18GB	18GB	18GB	18GB	18GB	18GB	18GB	18GB	18GB	18GB	18GB	18GB	18GB
USS16	1	29	0	18GB	18GB	18GB	18GB	18GB	18GB	18GB	18GB	18GB	18GB	18GB	18GB	18GB	18GB
USS16	1	30	0	18GB	18GB	18GB	18GB	18GB	18GB	18GB	18GB	18GB	18GB	18GB	18GB	18GB	18GB
CX300	n/a	1	10	73GB	73GB	73GB	73GB	73GB	73GB	73GB	73GB	73GB	73GB	73GB	73GB	Empty	Empty

Table 4.4: ES7000 Server HBA-PCI Slot Map

8x3.0GHz Gallatin	16GB	Cell-3		Cell-2		16GB	8x3.0GHz Gallatin
		Bus-3-1-2		Bus-2-1-2			
			FC HBA – USS13		FC HBA – USS9		
		Bus-3-1-1		Bus-2-1-1			
			FC HBA – USS12		FC HBA – USS8		
		Bus-3-0-2	VI controller - 4	Bus-2-0-2	VI controller - 3		
			FC HBA – USS11		FC HBA – USS7		
		Bus-3-0-1		Bus-2-0-1			
			FC HBA – USS10		FC HBA – USS6		
		Bus-3-0-3		Bus-2-0-3			
			VI controller - 8		VI controller - 7		
8x3.0GHz Gallatin	16GB	Bus-1-1-2	FC HBA – LOG	Bus-0-1-2	FC HBA – USS14	16GB	8x3.0GHz Gallatin
			VI controller - 6		VI controller - 5		
		Bus-1-1-1		Bus-0-1-1			
			FC HBA – USS3		FC HBA – USS2		
		Bus-1-0-2	VI controller - 2	Bus-0-0-2	VI controller - 1		
			FC HBA – USS5		FC HBA – USS1		
		Bus-1-0-1		Bus-0-0-1			
			FC HBA – USS3		FC HBA – USS16		
		Bus-1-0-3		Bus-0-0-3	Uniscreen		
			FC HBA – USS15		CPH		
		Cell-1		Cell-0			

Table 4.5: Disk Management Configuration

Disk Management Configuration				
System Disks	Logical Disk#	Partition 1 Drive Letter	File System	
40 GB Disk	0	C: System	NTFS	Capacity=37.26GB
CD-ROM	CD-ROM 0	D:		

CX300	SP	Logical Disk#	Partition 1 Size=764.60 GB FS=Raw Junction Point
1	A,B	77	C:\BigDb\dbLogs\tpcclog1

Disk Management Configuration						
USS	HBA	Logical Disk#	Partition 1 Size=4.01GB FS=Raw Junction Point	Partition 2 Size=6.18GB FS=Raw Junction Point	Partition 3 Size=3.15GB FS=Raw Junction Point	Partition 4 Size=106.29GB FS=NTFS Junction Point
1	0	1	C:\BigDb\cabA\ord1	C:\BigDb\cabA\cs1	C:\BigDb\cabA\misc1	C:\BigDb\dbBackups\backupA1
	0	2	C:\BigDb\cabA\ord2	C:\BigDb\cabA\cs2	C:\BigDb\cabA\misc2	C:\BigDb\dbBackups\backupA2
	0	3	C:\BigDb\cabA\ord3	C:\BigDb\cabA\cs3	C:\BigDb\cabA\misc3	Unallocated
	0	4	C:\BigDb\cabA\ord4	C:\BigDb\cabA\cs4	C:\BigDb\cabA\misc4	Unallocated
	0	5	C:\BigDb\cabA\ord5	C:\BigDb\cabA\cs5	C:\BigDb\cabA\misc5	Unallocated
	0	6	C:\BigDb\cabA\ord6	C:\BigDb\cabA\cs6	C:\BigDb\cabA\misc6	Unallocated
	1	7	C:\BigDb\cabA\ord7	C:\BigDb\cabA\cs7	C:\BigDb\cabA\misc7	Unallocated
	1	8	C:\BigDb\cabA\ord8	C:\BigDb\cabA\cs8	C:\BigDb\cabA\misc8	Unallocated
	1	9	C:\BigDb\cabA\ord9	C:\BigDb\cabA\cs9	C:\BigDb\cabA\misc9	Unallocated
	1	10	C:\BigDb\cabA\ord10	C:\BigDb\cabA\cs10	C:\BigDb\cabA\misc10	Unallocated
2	0	11	C:\BigDb\cabB\ord1	C:\BigDb\cabB\cs1	C:\BigDb\cabB\misc1	C:\BigDb\dbBackups\backupB1
	0	12	C:\BigDb\cabB\ord2	C:\BigDb\cabB\cs2	C:\BigDb\cabB\misc2	C:\BigDb\dbBackups\backupB2
	0	13	C:\BigDb\cabB\ord3	C:\BigDb\cabB\cs3	C:\BigDb\cabB\misc3	Unallocated
	0	14	C:\BigDb\cabB\ord4	C:\BigDb\cabB\cs4	C:\BigDb\cabB\misc4	Unallocated
	0	15	C:\BigDb\cabB\ord5	C:\BigDb\cabB\cs5	C:\BigDb\cabB\misc5	Unallocated
	0	16	C:\BigDb\cabB\ord6	C:\BigDb\cabB\cs6	C:\BigDb\cabB\misc6	Unallocated
	1	17	C:\BigDb\cabB\ord7	C:\BigDb\cabB\cs7	C:\BigDb\cabB\misc7	Unallocated
	1	18	C:\BigDb\cabB\ord8	C:\BigDb\cabB\cs8	C:\BigDb\cabB\misc8	Unallocated
	1	19	C:\BigDb\cabB\ord9	C:\BigDb\cabB\cs9	C:\BigDb\cabB\misc9	Unallocated
	1	20	C:\BigDb\cabB\ord10	C:\BigDb\cabB\cs10	C:\BigDb\cabB\misc10	Unallocated
3	0	21	C:\BigDb\cabC\ord1	C:\BigDb\cabC\cs1	C:\BigDb\cabC\misc1	C:\BigDb\dbBackups\backupC1
	0	22	C:\BigDb\cabC\ord2	C:\BigDb\cabC\cs2	C:\BigDb\cabC\misc2	C:\BigDb\dbBackups\backupC2
	0	23	C:\BigDb\cabC\ord3	C:\BigDb\cabC\cs3	C:\BigDb\cabC\misc3	Unallocated
	0	24	C:\BigDb\cabC\ord4	C:\BigDb\cabC\cs4	C:\BigDb\cabC\misc4	Unallocated
	0	25	C:\BigDb\cabC\ord5	C:\BigDb\cabC\cs5	C:\BigDb\cabC\misc5	Unallocated
	0	26	C:\BigDb\cabC\ord6	C:\BigDb\cabC\cs6	C:\BigDb\cabC\misc6	Unallocated
	1	27	C:\BigDb\cabC\ord7	C:\BigDb\cabC\cs7	C:\BigDb\cabC\misc7	Unallocated
	1	28	C:\BigDb\cabC\ord8	C:\BigDb\cabC\cs8	C:\BigDb\cabC\misc8	Unallocated
	1	29	C:\BigDb\cabC\ord9	C:\BigDb\cabC\cs9	C:\BigDb\cabC\misc9	Unallocated
	1	30	C:\BigDb\cabC\ord10	C:\BigDb\cabC\cs10	C:\BigDb\cabC\misc10	Unallocated

Disk Management Configuration						
USS	HBA	Logical Disk#	Partition 1 Size=4.01GB FS=Raw Junction Point	Partition 2 Size=6.18GB FS=Raw Junction Point	Partition 3 Size=3.15GB FS=Raw Junction Point	Partition 4 Size=106.29GB FS=NTFS Junction Point
4	0	31	C:\BigDb\cabD\ord1	C:\BigDb\cabD\cs1	C:\BigDb\cabD\misc1	C:\BigDb\dbBackups\backupD1
	0	32	C:\BigDb\cabD\ord2	C:\BigDb\cabD\cs2	C:\BigDb\cabD\misc2	C:\BigDb\dbBackups\backupD2
	0	33	C:\BigDb\cabD\ord3	C:\BigDb\cabD\cs3	C:\BigDb\cabD\misc3	Unallocated
	0	34	C:\BigDb\cabD\ord4	C:\BigDb\cabD\cs4	C:\BigDb\cabD\misc4	Unallocated
	0	35	C:\BigDb\cabD\ord5	C:\BigDb\cabD\cs5	C:\BigDb\cabD\misc5	Unallocated
	0	36	C:\BigDb\cabD\ord6	C:\BigDb\cabD\cs6	C:\BigDb\cabD\misc6	Unallocated
	1	37	C:\BigDb\cabD\ord8	C:\BigDb\cabD\cs8	C:\BigDb\cabD\misc7	Unallocated
	1	38	C:\BigDb\cabD\ord9	C:\BigDb\cabD\cs9	C:\BigDb\cabD\misc8	Unallocated
	1	39	C:\BigDb\cabD\ord10	C:\BigDb\cabD\cs10	C:\BigDb\cabD\misc9	Unallocated
	1	40	C:\BigDb\cabD\ord12	C:\BigDb\cabD\cs12	C:\BigDb\cabD\misc10	Unallocated
5	0	41	C:\BigDb\cabE\ord1	C:\BigDb\cabE\cs1	C:\BigDb\cabE\misc1	C:\BigDb\dbBackups\backupE1
	0	42	C:\BigDb\cabE\ord2	C:\BigDb\cabE\cs2	C:\BigDb\cabE\misc2	C:\BigDb\dbBackups\backupE2
	0	43	C:\BigDb\cabE\ord3	C:\BigDb\cabE\cs3	C:\BigDb\cabE\misc3	Unallocated
	0	44	C:\BigDb\cabE\ord4	C:\BigDb\cabE\cs4	C:\BigDb\cabE\misc4	Unallocated
	0	45	C:\BigDb\cabE\ord5	C:\BigDb\cabE\cs5	C:\BigDb\cabE\misc5	Unallocated
	0	46	C:\BigDb\cabE\ord6	C:\BigDb\cabE\cs6	C:\BigDb\cabE\misc6	Unallocated
	1	47	C:\BigDb\cabE\ord7	C:\BigDb\cabE\cs7	C:\BigDb\cabE\misc7	Unallocated
	1	48	C:\BigDb\cabE\ord8	C:\BigDb\cabE\cs8	C:\BigDb\cabE\misc8	Unallocated
	1	49	C:\BigDb\cabE\ord9	C:\BigDb\cabE\cs9	C:\BigDb\cabE\misc9	Unallocated
	1	50	C:\BigDb\cabE\ord10	C:\BigDb\cabE\cs10	C:\BigDb\cabE\misc10	Unallocated
6	0	51	C:\BigDb\cabF\ord1	C:\BigDb\cabF\cs1	C:\BigDb\cabF\misc1	C:\BigDb\dbBackups\backupF1
	0	52	C:\BigDb\cabF\ord2	C:\BigDb\cabF\cs2	C:\BigDb\cabF\misc2	C:\BigDb\dbBackups\backupF2
	0	53	C:\BigDb\cabF\ord3	C:\BigDb\cabF\cs3	C:\BigDb\cabF\misc3	Unallocated
	0	54	C:\BigDb\cabF\ord4	C:\BigDb\cabF\cs4	C:\BigDb\cabF\misc4	Unallocated
	0	55	C:\BigDb\cabF\ord5	C:\BigDb\cabF\cs5	C:\BigDb\cabF\misc5	Unallocated
	0	56	C:\BigDb\cabF\ord6	C:\BigDb\cabF\cs6	C:\BigDb\cabF\misc6	Unallocated
	1	57	C:\BigDb\cabF\ord7	C:\BigDb\cabF\cs7	C:\BigDb\cabF\misc7	Unallocated
	1	58	C:\BigDb\cabF\ord8	C:\BigDb\cabF\cs8	C:\BigDb\cabF\misc8	Unallocated
	1	59	C:\BigDb\cabF\ord9	C:\BigDb\cabF\cs9	C:\BigDb\cabF\misc9	Unallocated
	1	60	C:\BigDb\cabF\ord10	C:\BigDb\cabF\cs10	C:\BigDb\cabF\misc10	Unallocated
7	0	61	C:\BigDb\cabG\ord1	C:\BigDb\cabG\cs1	C:\BigDb\cabG\misc1	C:\BigDb\dbBackups\backupG1
	0	62	C:\BigDb\cabG\ord2	C:\BigDb\cabG\cs2	C:\BigDb\cabG\misc2	C:\BigDb\dbBackups\backupG2
	0	63	C:\BigDb\cabG\ord3	C:\BigDb\cabG\cs3	C:\BigDb\cabG\misc3	Unallocated
	0	64	C:\BigDb\cabG\ord4	C:\BigDb\cabG\cs4	C:\BigDb\cabG\misc4	Unallocated
	0	65	C:\BigDb\cabG\ord5	C:\BigDb\cabG\cs5	C:\BigDb\cabG\misc5	Unallocated
	0	66	C:\BigDb\cabG\ord6	C:\BigDb\cabG\cs6	C:\BigDb\cabG\misc6	Unallocated
	1	67	C:\BigDb\cabG\ord7	C:\BigDb\cabG\cs7	C:\BigDb\cabG\misc7	Unallocated
	1	68	C:\BigDb\cabG\ord8	C:\BigDb\cabG\cs8	C:\BigDb\cabG\misc8	Unallocated
	1	69	C:\BigDb\cabG\ord9	C:\BigDb\cabG\cs9	C:\BigDb\cabG\misc9	Unallocated
	1	70	C:\BigDb\cabG\ord10	C:\BigDb\cabG\cs10	C:\BigDb\cabG\misc10	Unallocated
8	0	71	C:\BigDb\cabH\ord1	C:\BigDb\cabH\cs1	C:\BigDb\cabH\misc1	C:\BigDb\dbBackups\backupH1
	0	72	C:\BigDb\cabH\ord2	C:\BigDb\cabH\cs2	C:\BigDb\cabH\misc2	C:\BigDb\dbBackups\backupH2
	0	73	C:\BigDb\cabH\ord3	C:\BigDb\cabH\cs3	C:\BigDb\cabH\misc3	Unallocated
	0	74	C:\BigDb\cabH\ord4	C:\BigDb\cabH\cs4	C:\BigDb\cabH\misc4	Unallocated
	0	75	C:\BigDb\cabH\ord5	C:\BigDb\cabH\cs5	C:\BigDb\cabH\misc5	Unallocated
	0	76	C:\BigDb\cabH\ord6	C:\BigDb\cabH\cs6	C:\BigDb\cabH\misc6	Unallocated
	1	78	C:\BigDb\cabH\ord7	C:\BigDb\cabH\cs7	C:\BigDb\cabH\misc7	Unallocated
	1	79	C:\BigDb\cabH\ord8	C:\BigDb\cabH\cs8	C:\BigDb\cabH\misc8	Unallocated
	1	80	C:\BigDb\cabH\ord9	C:\BigDb\cabH\cs9	C:\BigDb\cabH\misc9	Unallocated
	1	81	C:\BigDb\cabH\ord10	C:\BigDb\cabH\cs10	C:\BigDb\cabH\misc10	Unallocated
9	0	82	C:\BigDb\cabI\ord1	C:\BigDb\cabI\cs1	C:\BigDb\cabI\misc1	C:\BigDb\dbBackups\backupI1
	0	83	C:\BigDb\cabI\ord2	C:\BigDb\cabI\cs2	C:\BigDb\cabI\misc2	C:\BigDb\dbBackups\backupI2
	0	84	C:\BigDb\cabI\ord3	C:\BigDb\cabI\cs3	C:\BigDb\cabI\misc3	Unallocated
	0	85	C:\BigDb\cabI\ord4	C:\BigDb\cabI\cs4	C:\BigDb\cabI\misc4	Unallocated
	0	86	C:\BigDb\cabI\ord5	C:\BigDb\cabI\cs5	C:\BigDb\cabI\misc5	Unallocated
	0	87	C:\BigDb\cabI\ord6	C:\BigDb\cabI\cs6	C:\BigDb\cabI\misc6	Unallocated
	1	88	C:\BigDb\cabI\ord7	C:\BigDb\cabI\cs7	C:\BigDb\cabI\misc7	Unallocated
	1	89	C:\BigDb\cabI\ord8	C:\BigDb\cabI\cs8	C:\BigDb\cabI\misc8	Unallocated
	1	90	C:\BigDb\cabI\ord9	C:\BigDb\cabI\cs9	C:\BigDb\cabI\misc9	Unallocated
	1	91	C:\BigDb\cabI\ord10	C:\BigDb\cabI\cs10	C:\BigDb\cabI\misc10	Unallocated

Table 4.5: Disk Management Configuration (Continued)

Disk Management Configuration						
USS	HBA	Logical Disk#	Partition 1 Size=4.01GB FS=Raw Junction Point	Partition 2 Size=6.18GB FS=Raw Junction Point	Partition 3 Size=3.15GB FS=Raw Junction Point	Partition 4 Size=106.29GB FS=NTFS Junction Point
10	0	92	C:\BigDb\cabJ\ord1	C:\BigDb\cabJ\cs1	C:\BigDb\cabJ\misc1	C:\BigDb\dbBackups\backupJ1
	0	93	C:\BigDb\cabJ\ord2	C:\BigDb\cabJ\cs2	C:\BigDb\cabJ\misc2	C:\BigDb\dbBackups\backupJ2
	0	94	C:\BigDb\cabJ\ord3	C:\BigDb\cabJ\cs3	C:\BigDb\cabJ\misc3	Unallocated
	0	95	C:\BigDb\cabJ\ord4	C:\BigDb\cabJ\cs4	C:\BigDb\cabJ\misc4	Unallocated
	0	96	C:\BigDb\cabJ\ord5	C:\BigDb\cabJ\cs5	C:\BigDb\cabJ\misc5	Unallocated
	0	97	C:\BigDb\cabJ\ord6	C:\BigDb\cabJ\cs6	C:\BigDb\cabJ\misc6	Unallocated
	1	98	C:\BigDb\cabJ\ord7	C:\BigDb\cabJ\cs7	C:\BigDb\cabJ\misc7	Unallocated
	1	99	C:\BigDb\cabJ\ord8	C:\BigDb\cabJ\cs8	C:\BigDb\cabJ\misc8	Unallocated
	1	100	C:\BigDb\cabJ\ord9	C:\BigDb\cabJ\cs9	C:\BigDb\cabJ\misc9	Unallocated
	1	101	C:\BigDb\cabJ\ord10	C:\BigDb\cabJ\cs10	C:\BigDb\cabJ\misc10	Unallocated
11	0	102	C:\BigDb\cabK\ord1	C:\BigDb\cabK\cs1	C:\BigDb\cabK\misc1	C:\BigDb\dbBackups\backupK1
	0	103	C:\BigDb\cabK\ord2	C:\BigDb\cabK\cs2	C:\BigDb\cabK\misc2	C:\BigDb\dbBackups\backupK2
	0	104	C:\BigDb\cabK\ord3	C:\BigDb\cabK\cs3	C:\BigDb\cabK\misc3	Unallocated
	0	105	C:\BigDb\cabK\ord4	C:\BigDb\cabK\cs4	C:\BigDb\cabK\misc4	Unallocated
	0	106	C:\BigDb\cabK\ord5	C:\BigDb\cabK\cs5	C:\BigDb\cabK\misc5	Unallocated
	0	107	C:\BigDb\cabK\ord6	C:\BigDb\cabK\cs6	C:\BigDb\cabK\misc6	Unallocated
	1	108	C:\BigDb\cabK\ord7	C:\BigDb\cabK\cs7	C:\BigDb\cabK\misc7	Unallocated
	1	109	C:\BigDb\cabK\ord8	C:\BigDb\cabK\cs8	C:\BigDb\cabK\misc8	Unallocated
	1	110	C:\BigDb\cabK\ord9	C:\BigDb\cabK\cs9	C:\BigDb\cabK\misc9	Unallocated
	1	111	C:\BigDb\cabK\ord10	C:\BigDb\cabK\cs10	C:\BigDb\cabK\misc10	Unallocated
12	0	112	C:\BigDb\cabL\ord1	C:\BigDb\cabL\cs1	C:\BigDb\cabL\misc1	C:\BigDb\dbBackups\backupL1
	0	113	C:\BigDb\cabL\ord2	C:\BigDb\cabL\cs2	C:\BigDb\cabL\misc2	C:\BigDb\dbBackups\backupL2
	0	114	C:\BigDb\cabL\ord3	C:\BigDb\cabL\cs3	C:\BigDb\cabL\misc3	Unallocated
	0	115	C:\BigDb\cabL\ord4	C:\BigDb\cabL\cs4	C:\BigDb\cabL\misc4	Unallocated
	0	116	C:\BigDb\cabL\ord5	C:\BigDb\cabL\cs5	C:\BigDb\cabL\misc5	Unallocated
	0	117	C:\BigDb\cabL\ord6	C:\BigDb\cabL\cs6	C:\BigDb\cabL\misc6	Unallocated
	1	118	C:\BigDb\cabL\ord7	C:\BigDb\cabL\cs7	C:\BigDb\cabL\misc7	Unallocated
	1	119	C:\BigDb\cabL\ord8	C:\BigDb\cabL\cs8	C:\BigDb\cabL\misc8	Unallocated
	1	120	C:\BigDb\cabL\ord9	C:\BigDb\cabL\cs9	C:\BigDb\cabL\misc9	Unallocated
	1	121	C:\BigDb\cabL\ord10	C:\BigDb\cabL\cs10	C:\BigDb\cabL\misc10	Unallocated
13	0	122	C:\BigDb\cabM\ord1	C:\BigDb\cabM\cs1	C:\BigDb\cabM\misc1	C:\BigDb\dbBackups\backupM1
	0	123	C:\BigDb\cabM\ord2	C:\BigDb\cabM\cs2	C:\BigDb\cabM\misc2	C:\BigDb\dbBackups\backupM2
	0	124	C:\BigDb\cabM\ord3	C:\BigDb\cabM\cs3	C:\BigDb\cabM\misc3	Unallocated
	0	125	C:\BigDb\cabM\ord4	C:\BigDb\cabM\cs4	C:\BigDb\cabM\misc4	Unallocated
	0	126	C:\BigDb\cabM\ord5	C:\BigDb\cabM\cs5	C:\BigDb\cabM\misc5	Unallocated
	0	127	C:\BigDb\cabM\ord6	C:\BigDb\cabM\cs6	C:\BigDb\cabM\misc6	Unallocated
	1	128	C:\BigDb\cabM\ord7	C:\BigDb\cabM\cs7	C:\BigDb\cabM\misc7	Unallocated
	1	129	C:\BigDb\cabM\ord8	C:\BigDb\cabM\cs8	C:\BigDb\cabM\misc8	Unallocated
	1	130	C:\BigDb\cabM\ord9	C:\BigDb\cabM\cs9	C:\BigDb\cabM\misc9	Unallocated
	1	131	C:\BigDb\cabM\ord10	C:\BigDb\cabM\cs10	C:\BigDb\cabM\misc10	Unallocated
14	0	132	C:\BigDb\cabA\ord11	C:\BigDb\cabA\cs11	C:\BigDb\cabA\misc11	Unallocated
	0	133	C:\BigDb\cabB\ord11	C:\BigDb\cabB\cs11	C:\BigDb\cabB\misc11	Unallocated
	0	134	C:\BigDb\cabC\ord11	C:\BigDb\cabC\cs11	C:\BigDb\cabC\misc11	Unallocated
	0	135	C:\BigDb\cabD\ord11	C:\BigDb\cabD\cs11	C:\BigDb\cabD\misc11	Unallocated
	1	136	C:\BigDb\cabE\ord11	C:\BigDb\cabE\cs11	C:\BigDb\cabE\misc11	Unallocated
	1	137	C:\BigDb\cabF\ord11	C:\BigDb\cabF\cs11	C:\BigDb\cabF\misc11	Unallocated
	1	138	C:\BigDb\cabG\ord11	C:\BigDb\cabG\cs11	C:\BigDb\cabG\misc11	Unallocated
	1	139	C:\BigDb\cabH\ord11	C:\BigDb\cabH\cs11	C:\BigDb\cabH\misc11	Unallocated
15	0	140	C:\BigDb\cabI\ord11	C:\BigDb\cabI\cs11	C:\BigDb\cabI\misc11	Unallocated
	0	141	C:\BigDb\cabJ\ord11	C:\BigDb\cabJ\cs11	C:\BigDb\cabJ\misc11	Unallocated
	0	142	C:\BigDb\cabK\ord11	C:\BigDb\cabK\cs11	C:\BigDb\cabK\misc11	Unallocated
	0	143	C:\BigDb\cabL\ord11	C:\BigDb\cabL\cs11	C:\BigDb\cabL\misc11	Unallocated
	1	144	C:\BigDb\cabM\ord11	C:\BigDb\cabM\cs11	C:\BigDb\cabM\misc11	Unallocated
	1	145	C:\BigDb\cabA\ord12	C:\BigDb\cabA\cs12	C:\BigDb\cabA\misc12	Unallocated
	1	146	C:\BigDb\cabB\ord12	C:\BigDb\cabB\cs12	C:\BigDb\cabB\misc12	Unallocated
	1	147	C:\BigDb\cabC\ord12	C:\BigDb\cabC\cs12	C:\BigDb\cabC\misc12	Unallocated
16	0	148	C:\BigDb\cabD\ord12	C:\BigDb\cabD\cs12	C:\BigDb\cabD\misc12	Unallocated
	0	149	C:\BigDb\cabE\ord12	C:\BigDb\cabE\cs12	C:\BigDb\cabE\misc12	Unallocated
	0	150	C:\BigDb\cabF\ord12	C:\BigDb\cabF\cs12	C:\BigDb\cabF\misc12	Unallocated
	0	151	C:\BigDb\cabG\ord12	C:\BigDb\cabG\cs12	C:\BigDb\cabG\misc12	Unallocated
	0	152	C:\BigDb\cabH\ord12	C:\BigDb\cabH\cs12	C:\BigDb\cabH\misc12	Unallocated
	0	153	C:\BigDb\cabI\ord12	C:\BigDb\cabI\cs12	C:\BigDb\cabI\misc12	Unallocated
	1	154	C:\BigDb\cabJ\ord12	C:\BigDb\cabJ\cs12	C:\BigDb\cabJ\misc12	Unallocated
	1	155	C:\BigDb\cabK\ord12	C:\BigDb\cabK\cs12	C:\BigDb\cabK\misc12	Unallocated
	1	156	C:\BigDb\cabL\ord12	C:\BigDb\cabL\cs12	C:\BigDb\cabL\misc12	Unallocated
	1	157	C:\BigDb\cabM\ord12	C:\BigDb\cabM\cs12	C:\BigDb\cabM\misc12	Unallocated

5. Clause 5: Performance Metrics & Response Time

5.1. Measured Throughput (tpmC)

Measured tpmC must be reported. (8.1.6.1)

The measured tpmC was 304,148.50

5.2. Response Times

Ninetieth percentile, maximum and average response times must be reported for all transaction types as well as for the Menu response time. (8.1.6.2)

Table 5.1: Response Time Data

Transaction	Average	Maximum	90th %ile
New-Order	0.25	22.02	0.36
Payment	0.21	6.83	0.31
Order Status	0.23	18.13	0.32
Delivery (interactive)	0.14	2.17	0.14
Delivery (deferred)	0.23	21.81	0.39
Stock-Level	0.75	22.27	1.20
Menu	0.14	2.22	0.14

5.3. Keying and Think Times

The minimum, the average, and the maximum keying and think times must be reported for each transaction type. (8.1.6.3)

Table 5.2: Keying Times

Transaction	Minimum	Average	Maximum
New-Order	18.01	18.01	18.03
Payment	3.01	3.01	3.03
Order Status	2.01	2.01	2.03
Delivery (interactive)	2.01	2.01	2.03
Stock-Level	2.01	2.01	2.03

Table 5.3: Think Times

Transaction	Minimum	Average	Maximum
New-Order	0.00	12.03	120.31
Payment	0.00	12.03	120.31
Order Status	0.00	10.08	100.70
Delivery (interactive)	0.00	5.06	50.61
Stock-Level	0.00	5.06	50.61

5.4. Response Time Frequency Distribution Curves

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

Figure 5.1: New Order Response Time Distribution

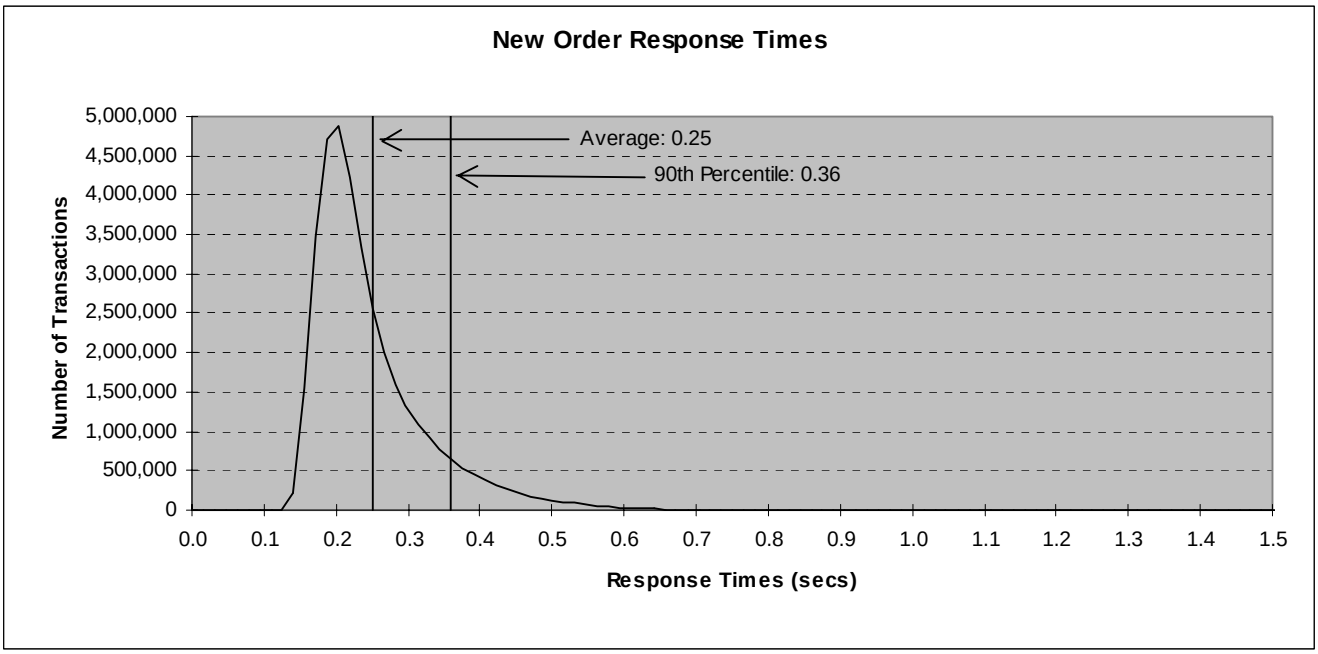


Figure 5.2: Payment Response Time Distribution

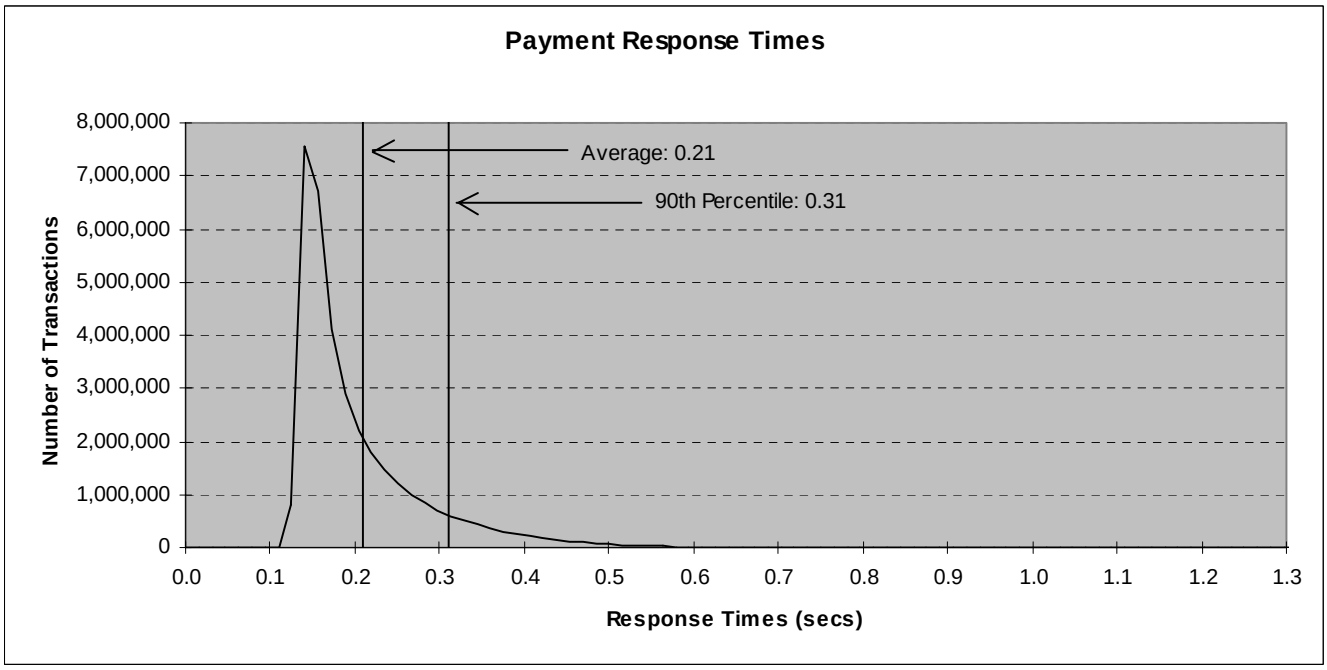


Figure 5.3: Order Status Response Time Distribution

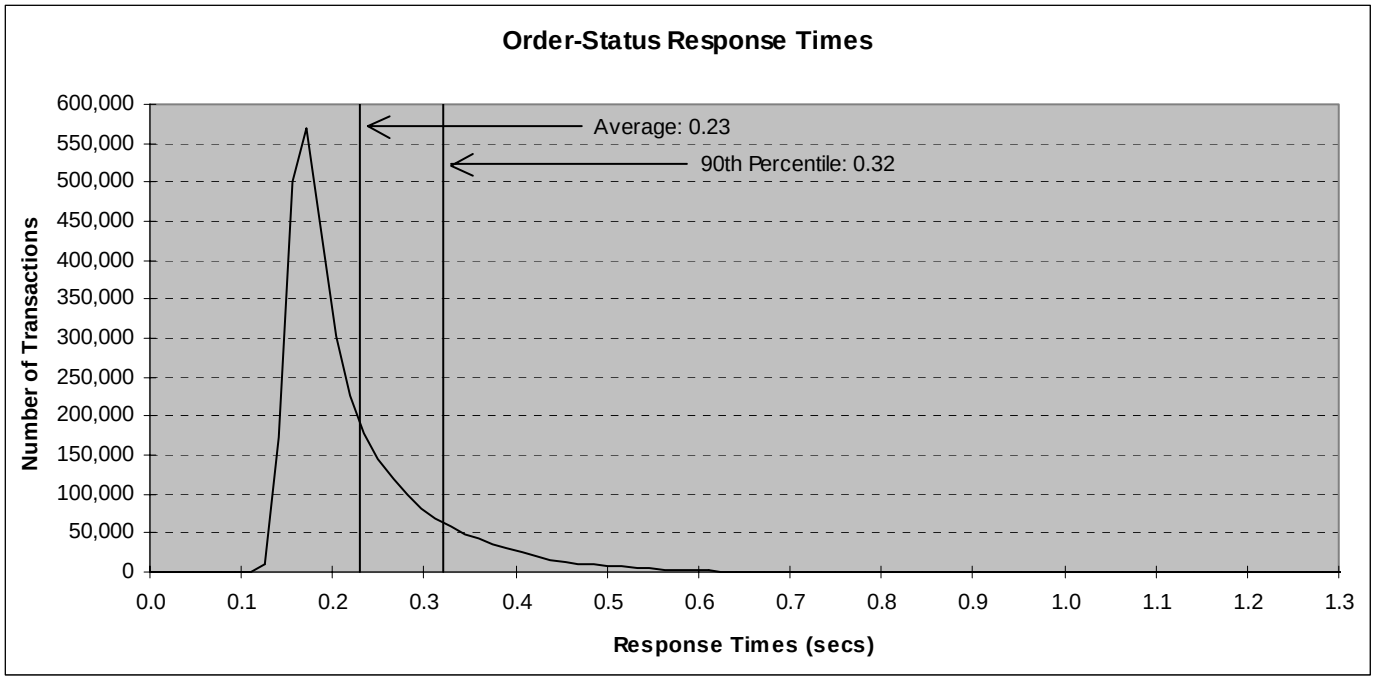


Figure 5.4: Delivery Response Time Distribution

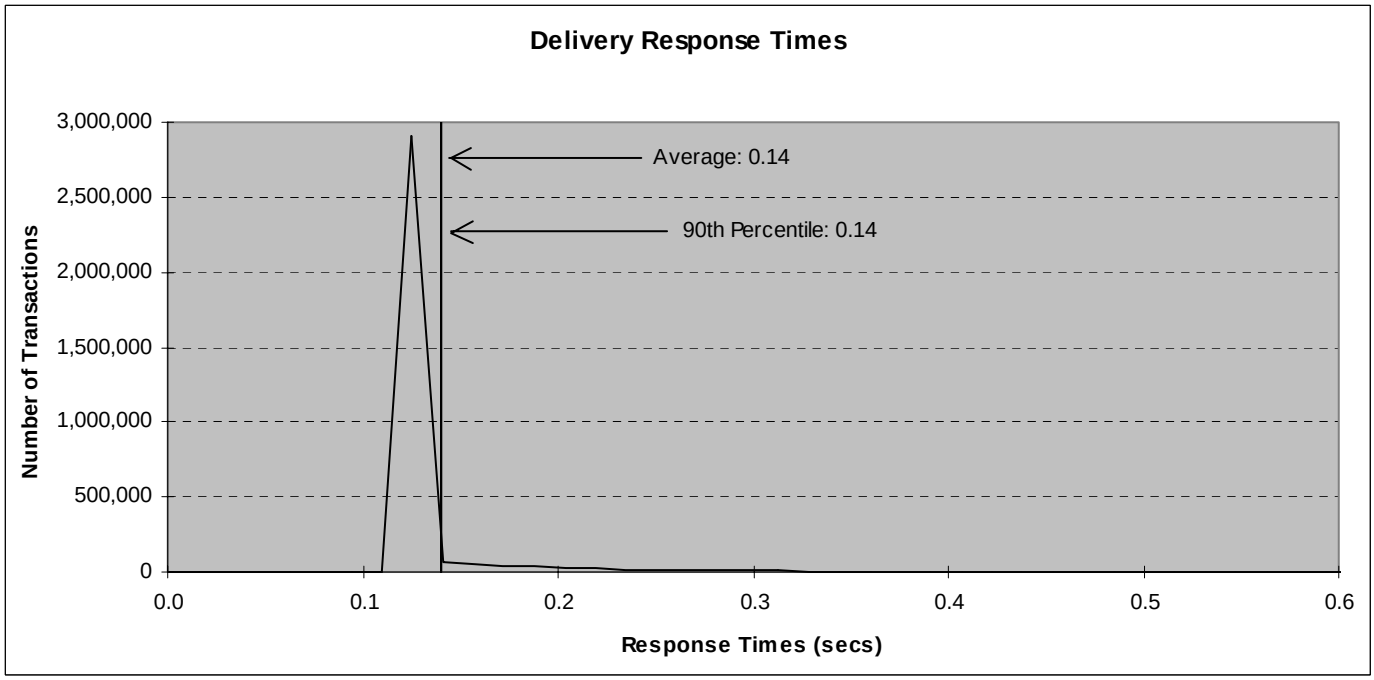
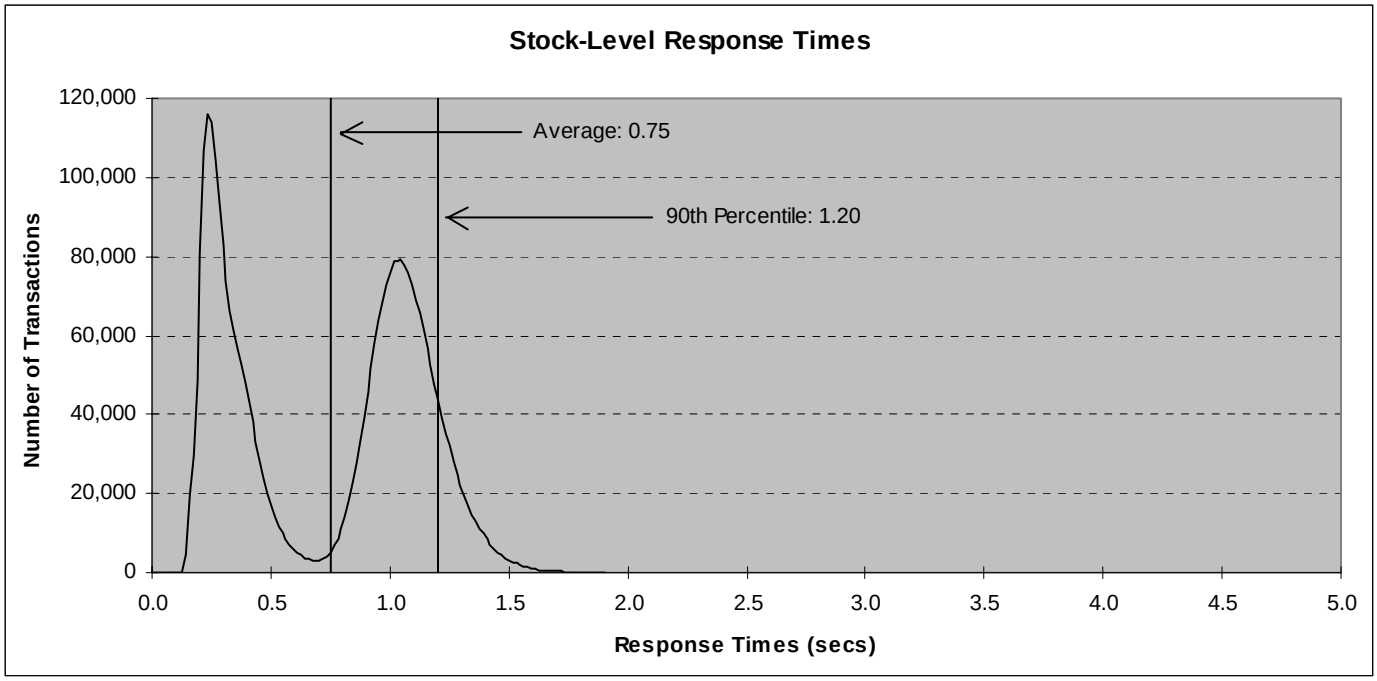


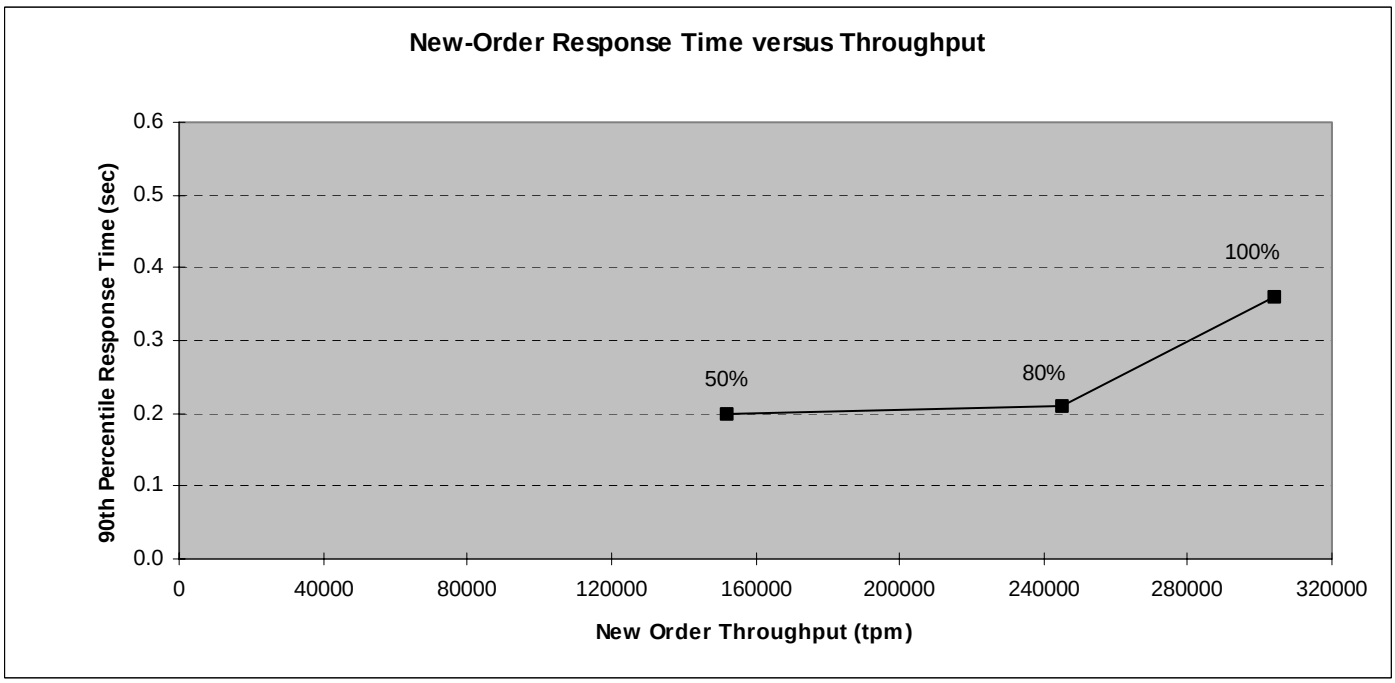
Figure 5.5: Stock Level Response Time Distribution



5.5. Response Time versus Throughput Performance Curve

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

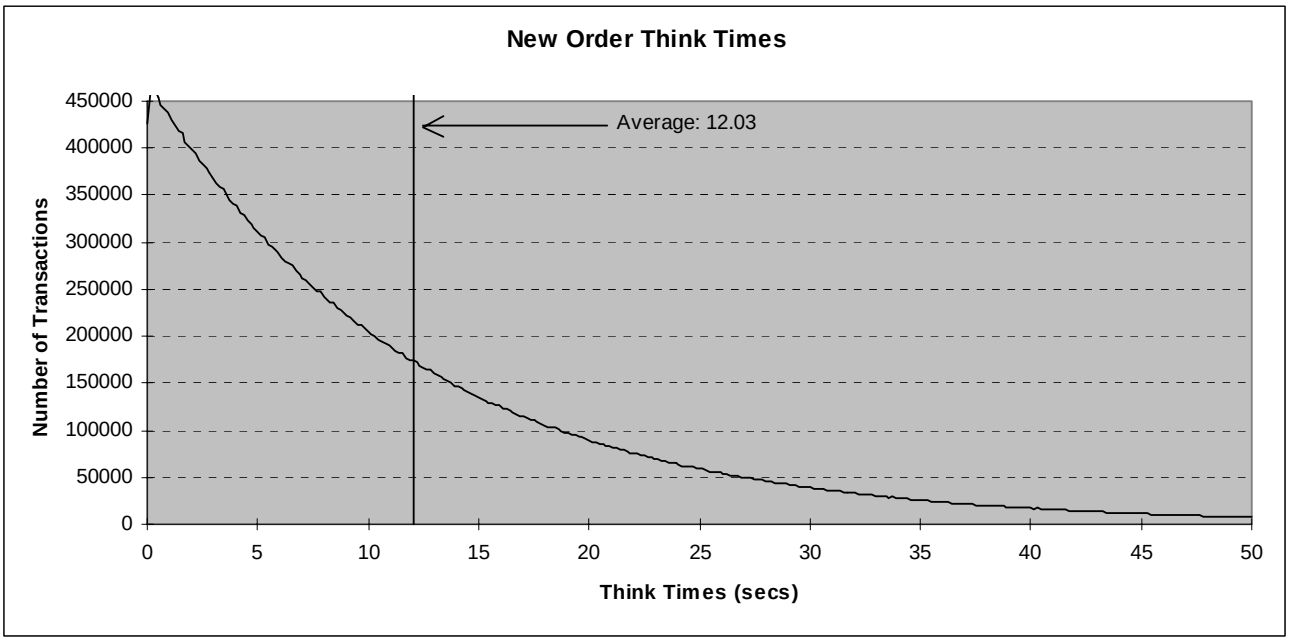
Figure 5.6: New Order Response Time versus Throughput



5.6. New Order Think Time Frequency Distribution Curve

Think Time frequency distribution curve (see Clause 5.6.3) must be reported for the New-Order transaction. (8.1.6.6)

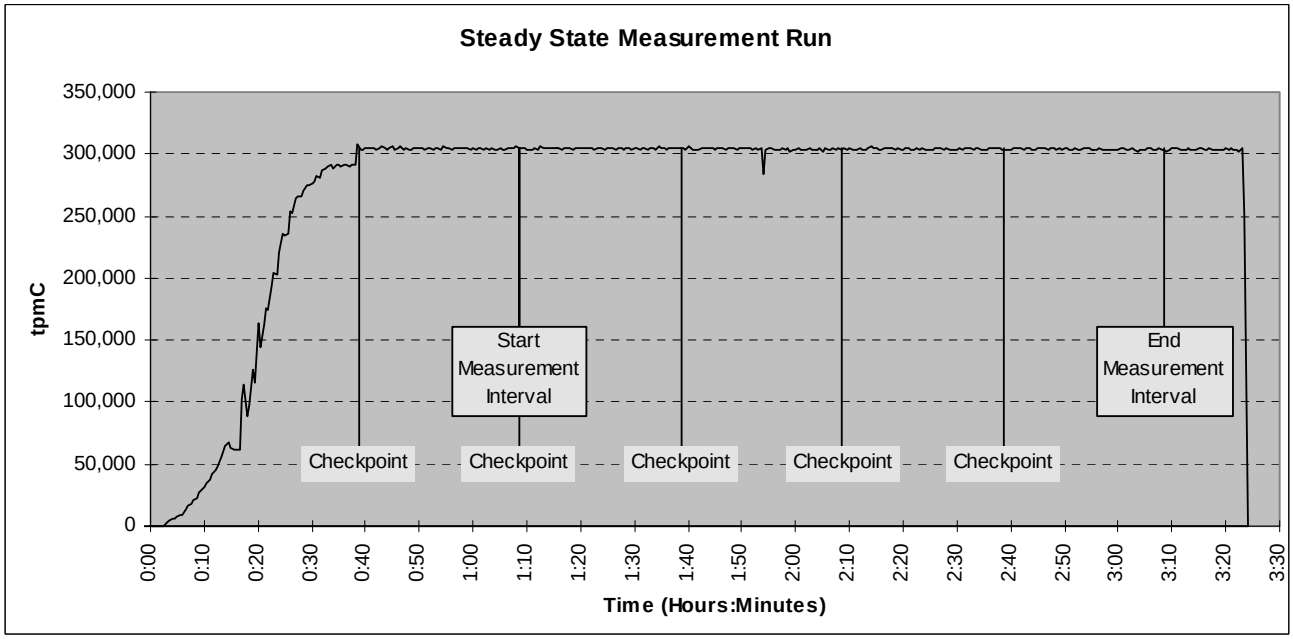
Figure 5.7: New Order Think Time Distribution



5.7. New-Order Throughput vs. Time

A graph of throughput versus elapsed time (Clause 5.6.4) must be reported for the New-Order transaction. (8.1.6.8)

Figure 5.8: Throughput (tpmC) versus Time



5.8. Determination of "Steady State"

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. (8.1.6.9)

The transaction throughput rate (tpmC) and response time were relatively constant after the initial 'ramp up' period. The throughput and response time behavior were determined by examining data reported for each 30-second interval over the duration of the benchmark. Ramp-up and steady state are discernible in the graph presented in Figure 5.8.

5.9. Work Performed During Steady State

A description of how the work normally performed during a sustained test (for example checkpointing, writing redo/undo log records, etc.) actually occurred during the measurement interval must be reported. (8.1.6.10)

The RTE selects a transaction type from the menu and prepares to request the appropriate blank form. A timestamp is taken before the form request is sent and after the response is returned. The difference between the two is saved off as the menu response time. The RTE then generates input data for the transaction to create a completed form and waits the appropriate key time. A timestamp is taken before the completed form is sent and after the response is returned. The difference between these two is saved off as the transaction response time. Both response times are padded with a 0.1 second delay per spec to account for the web browser delay. The appropriate transaction data and response times are logged and the RTE waits the required think time interval before repeating the process. Each RTE driver maintains its own log file. Log file contents are consolidated for the reports.

The RTE emulates web browsers (not terminals) in this client-server implementation. The RTE sends and receives HTML formatted data using HTTP through Ethernet LANs to a client application running on the client machine. The client application processes the request, sends the transaction to a COM+ component, waits for the transaction response, and returns an appropriately formatted HTML form back to the (emulated) web browser (RTE). When activated, the COM+ component calls a stored procedure on the data base server using Microsoft SQL Server ODBC, collects the response, and returns the result to the requestor.

To perform checkpoints at specific intervals, SQL Server's recovery interval was set to four times the desired checkpoint duration, and a utility was written to schedule checkpoints at parameter-specified intervals and record the start and end time of each checkpoint. The checkpoint script was started manually on one of the client machines after the RTE had all users logged in and sending transactions and a steady state had been achieved.

At each checkpoint, SQL Server wrote to disk all database pages in memory that had been updated but not yet physically written to the disk. Upon completion of the checkpoint, SQL Server also wrote records to the error log indicating that a checkpoint had completed.

5.10. Measurement Interval Duration

A statement of the duration of the measurement interval for the reported Maximum Qualified Throughput (tpmC) must be included. (8.1.6.12)

The measurement interval was 120 minutes.

5.11. Regulation of Transaction Mix

The method of regulation of the transaction mix (e.g. card decks or weighted random distribution) must be described. If weighted distribution is used and the RTE adjusts the weights associated with each transaction type, the maximum adjustments to the weight from the initial value must be disclosed. (8.1.6.13)

The RTE was given a weighed random distribution, which could not be adjusted during the run.

5.12. Transaction Statistics

The percentage of the total mix for each transaction type must be disclosed. (8.1.6.14)

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

The average number of order-lines entered per New-Order transaction must be disclosed. (8.1.6.16)

The percentage of remote order-lines entered per New-Order transaction must be disclosed. (8.1.6.17)

The percentage of remote Payment transactions must be disclosed. (8.1.6.18)

The percentage of customer selections by customer last name in the Payment and Order-Status transactions must be disclosed. (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. (8.1.6.20)

Table 5.4 shows this information.

Table 5.4: Transaction Statistics

Transaction Type	Statistic	Value
New Order	Rolled back transactions	1.00%
	Home warehouse	99.00%
	Remote warehouse	1.00%
	Average Items per Order	10.00
Payment	Home warehouse	85.00%
	Remote warehouse	15.00%
	Non-primary key access	60.01%
Order Status	Non-primary key access	59.98%
Delivery	Skipped transactions (Interactive)	0
	Skipped transaction counts (Deferred)	0
	Skipped District counts (Deferred)	0
Transaction Mix	New Order	44.93%
	Payment	43.02%
	Order-Status	4.01%
	Delivery	4.01%
	Stock-Level	4.01%

5.13. 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. (8.1.6.21)

There are four checkpoints in the measurement interval. The first checkpoint starts approximately 4 seconds into the measurement interval. The checkpoint interval is 30 minutes (from the start of one to the start of the next) and a checkpoint lasts approximately 29.8 minutes.

The start time and duration in seconds of at least the four (4) longest checkpoints during the Measurement Interval must be disclosed (see Clause 5.5.2.2 (2)). (8.1.6.11)

Table 5.5: Checkpoint Start Time and Duration

Item	Start	End	Duration
Measurement Interval	1:08:36	3:08:36	7200
1st Checkpoint	1:08:40	1:38:27	1787
2nd Checkpoint	1:38:40	2:08:27	1787
3rd Checkpoint	2:08:40	2:38:27	1787
4th Checkpoint	2:38:40	3:08:26	1786

6. Clause 6: SUT, Driver & Communications Definition

6.1. Remote Terminal Emulator (RTE) Description

The RTE input parameters, code fragments, functions, etc. used to generate each transaction input field must be disclosed. (8.1.7.1)

The RTE used is proprietary to Unisys. Appendix D contains the profile used as input to this RTE.

6.2. Loss of Terminal Connections

The number of terminal connections lost during the Measurement Interval must be disclosed (see Clause 6.6.2). (8.1.7.2)

One terminal connection was lost. It reconnected in one second.

6.3. Emulated Components

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. (8.1.7.3)

There were no emulated components in the benchmark configuration other than the emulated web browsers on the users' PCs.

6.4. Functional Diagrams

A complete functional diagram of both benchmark and the configuration of the proposed (target) system must be disclosed. A detailed list of all hardware and software functionality being performed on the Driver System and its interface to the SUT must be disclosed (see Clause 6.6.3.6). (8.1.7.4)

Section 0.7 describes and shows functional diagrams of the benchmarked and priced systems.

6.5. Network Configuration

The network configuration of both the tested and proposed (target) services which are being represented and a thorough explanation of exactly which parts are being replaced with the Driver System must be disclosed (see Clause 6.6.4). (8.1.7.5)

Figures 0.1 and 0.2 in Section 0.7 also diagram the network configurations of the benchmark and configured systems and represent the RTEs connected via LAN replacing the user PCs that are directly connected via LAN.

6.6. Network Bandwidth

The bandwidth of the network(s) used in the tested/priced configuration must be disclosed. (8.1.7.6)

Local area networks (LANs) are used in the priced and tested configurations. The database server contains eight VI 1.25 gigabit-per-second LAN adapters. Each was direct connected to a VI adapter in the eight clients. These LAN segments run at 1.25 gigabit-per-second in the priced and tested configurations. Each client also contains two 10/100/1000 megabit-per-second inbuilt LAN controllers of which one was used in the tested configuration. A 10/100/1000 megabit-per-second switch was used to connect the clients to RTE driver systems emulating web browsers in the tested configuration. The 10/100/1000 LAN connections between the clients and switches run at 1000 megabits-per-second in the priced and tested configurations.

6.7. Operator Intervention

If the configuration requires operator intervention (see Clause 6.6.6), the mechanism and the frequency of this intervention must be disclosed. (8.1.7.7)

No operator intervention was required to sustain eight hours of operation at the reported throughput.

7. Clause 7: Pricing

7.1. Pricing

A detailed list of hardware and software used in the priced system must be reported. Each separately orderable item must have vendor part number, description, and release/revision level, and either general availability status or committed delivery 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) must also be reported. (8.1.8.1)

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. (8.1.8.2)

System pricing should include subtotals for the following components: Server Hardware, Server Software, Client Hardware, Client Software, and Network Components used for terminal connection (see Clause 7.2.2.3). Clause 6.1 describes the Server and Client components. (8.1.8.7)

System pricing must include line item indication where non-sponsoring companies' brands are used. System pricing must also include line item indication of third party pricing. (8.1.8.8)

A detailed list of hardware and software components along with their part numbers and prices are given in the Executive Summary near the beginning of this document. Microsoft SQL Server 2000 Enterprise Edition software has been supplemented by Service Pack 3a and Microsoft Knowledge Base # KB821047, KB823980, and KB834628 fixes.

7.1.1. System Pricing

Each priced configuration consists of an integrated system package, additional options, and components. Prices for all products are U.S. list prices.

7.1.2. Maintenance Pricing

Three-year support pricing for Unisys Corporation products is based on standard new product warranty, upgraded to provide 24 hours/day, 7 days/week support with four hour maximum response for hardware spare parts.

Microsoft support pricing is based on 3 years of annual support costs.

Server disks are covered by Computer Resolutions, Inc.'s 3-year, return-to-factory warranty with seven-day maximum replenishment, and appropriate spares are included in the priced configuration.

7.1.3. Discounts

Computer Resolutions, Inc. provides a standard large volume cash discount for the client, server and storage components of the priced configuration.

7.2. Availability

The committed delivery date for general availability (availability date) of products used in the price calculation 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. (8.1.8.3)

The hardware, software and support/maintenance products priced in this benchmark are detailed on page vi.

All components will be available by the date shown on page v.

7.3. Measured tpmC, Pricing, Price/Performance, and Availability Date

A statement of the measured tpmC as well as the respective calculations for the 3-year pricing, price/performance (price/tpmC), and the availability date must be included. (8.1.8.4)

The measured tpmC, plus pricing calculations, price/performance, and availability are shown on pages v and vi.

7.4. Country-Specific Pricing

Additional Clause 7 related items might be included in the Full Disclosure Report for each country specific priced configuration. Country specific pricing is subject to Clause 7.1.7. (8.1.8.5)

None.

7.5. Usage Pricing

For any usage pricing, the sponsor must disclose: (8.1.8.6)

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

The component pricing based on usage is shown below:

- One (1) Microsoft Windows Server 2003, Datacenter Edition license, 32 processor
- One (1) Microsoft SQL Server 2000 Enterprise Edition license, 32 processor
- Eight (8) Microsoft Windows 2003 Server licenses
- One (1) Microsoft Visual C++ Standard license

8. Clause 8 : Full Disclosure Availability

8.1. Availability

The Full Disclosure Report must be readily available to the public at a reasonable charge, similar to charges for similar documents by that test sponsor. (8.2)

Copies of this Full Disclosure Report may be downloaded from the Transaction Processing Performance Council web site at www.tpc.org or obtained by contacting:

TPC Benchmark Administrator
Systems Analysis, Modeling & Measurement Group
Unisys Corporation, M/S 237
25725 Jeronimo Road
Mission Viejo, CA 92691
USA

9. *Clause 9 : Audit*

9.1. Auditor's Report

The auditor's name, address, phone number and a copy of the auditor's attestation letter indicating compliance must be included in the Full Disclosure Report. (8.1.9.1)

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 attestations letter. (8.1.9.2)

Tom Sawyer, a TPC certified auditor, audited this implementation of the TPC Benchmark C on the Unisys ES7000 Orion 540 Enterprise Server (32P) representating:

Performance Metrics, Inc.
137 Yankton St. Suite 101
Folsom, CA 95630

Phone: (916) 985-1131
Fax: (916) 985-1185
Email: Lorna@PerfMetrics.com

The attestation letter is shown on the next 2 pages.

PERFORMANCE METRICS INC.
TPC Certified Auditors

April 28, 2004

Jerrold Buggert
Director of Modeling and Measurement
Unisys Corporation
25725 Jeronimo Road
Mission Viejo, CA 92691

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

Platform:	Unisys ES7000 Orion 540 Enterprise Server
Database Manager:	Microsoft SQL Server 2000 Enterprise Edition
Operating System:	Microsoft Windows Server 2003, Datacenter Edition
Transaction Manager:	Microsoft COM+ (included in Windows 2003)

Server: Unisys ES7000 Orion 540 Enterprise Server				
CPU's	Memory	Disks	90% Response	TpmC
32 Intel Xeon MP @ 3.0 GHz	Main: 64 GB Cache: 4MB each	1092 @ 18GB 12 @ 146GB 1@40GB	**0.36 sec**	**304,148.50**
8 Clients: Unisys ES3020L Server				
2 Intel Xeon 4 @ 3.06 GHz 4 @ 2.4GHz	Main: 2 GB Cache: 1MB 2.4Cache: 512KB	1 @ 18GB	Na	Na

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

- The transactions were correctly implemented.
- The database was properly sized and populated.
- The database was properly scaled with 24,160 warehouses, all of which were active during the Measured Interval.

137 Yankton St. Suite 101, Folsom, CA 95630
(916) 985-1131 fax: (916) 985-1185 email: Lorna@PerfMetrics.com

- The ACID properties were successfully demonstrated.
- The durability data loss and log loss tests were performed on the fully scaled database with 25,180 users and 2,518 active warehouses, running at over 10% load.
- Input data was generated according to the specified percentages.
- Eight hours of mirrored log space was configured on the measured system.
- Eight hours of dynamic table growth space was configured on the measured system.
- The 60-day space calculation was verified. The measured configuration has sufficient storage to satisfy this requirement.
- Measurement cycle times included a 0.1 second menu and a 0.1 second response time delays for emulated Web browsers.
- There were 241,600 user contexts present on the system.
- Each emulated user started with a different random number seed.
- The NURand constants used for database load and at run time were 123 and 208 respectively.
- The steady state portion of the test was 2 hours (7200 seconds).
- One checkpoint was taken before the measured interval and after steady state was reached.
- Four checkpoints were taken during the measured interval.
- The system pricing was checked for major components and maintenance.

Auditor Notes:

There were eight ES3020L clients in the measured configuration. Four were older clients with dual 2.4GHz processors with 512KB cache, 400MHz FSB, 2GB memory, and one 18 GB 10Krpm drive. Four were new clients with dual 3.06GHz processors with 1MB cache, 533MHz FSB, 2GB memory, and one 18 GB 15Krpm drive. The pricing uses eight new ES3020L clients in the benchmark configuration, each with dual 3.06GHz processors, 533MHz FSB, 2GB memory and one 18 GB 15Krpm drive because the older measured clients are no longer orderable through Unisys. Performance and capacity of the substituted clients are the same or better than the measured clients. I believe that this substitution is compliant with current substitution rules - TAB Id 327.

Sincerely,

Tom Sawyer

Tom Sawyer
Auditor

137 Yankton St. Suite 101, Folsom, CA 95630
(916) 985-1131 fax: (916) 985-1185 email: Lorna@PerfMetrics.com

Appendix A - Client Source

tpcc.def

```
EXPORTS
   GetExtensionVersion
   HttpExtensionProc
```

tpcc.h

```
// tpcc.h
//
// Copyright Unisys, 2000

#include <time.h>

#define VERSIONINFO "--- 1.2.8 ---"

// TPCCHandler return codes
#define TPCCSEND 1
#define TPCCSENDEND 2
#define TPCCENDNOW 3

// TPCC Service return codes
#define SVC_BADITEMID 1
#define SVC_NOERROR 0
#define SVCERR_DEADLOCK -1
#define SVCERR_NOCUSTOMER -2
#define SVCERR_NOORDERS -3
#define SVCERR_DBLIB -4
#define SVCERR_EXCEPTION -5
#define SVCERR_DQFULL -6
#define SVCERR_DQSTART -7
#define SVCERR_ODBC -8

// Min/Max transaction data definitions
#define MIN_DId 1
#define MAX_DId 10
#define MIN_OL 5
#define MAX_OL 15
#define MIN_QUANTITY 1
#define MAX_QUANTITY 10
#define MIN_ITEM_ID 1
#define MAX_ITEM_ID 100000
#define MIN_CUST_ID 1
#define MAX_CUST_ID 3000
#define MIN_CARRIER 1
#define MAX_CARRIER 10
#define MIN_THRESHOLD 10
#define MAX_THRESHOLD 20

// pTPCC->iStatusId codes
#define INVALID_IID              1
#define STATUS_OK                0
#define ERR_CMD_UNKNOWN          -10
#define ERRTXT_CMD_UNKNOWN       "Unrecognized Command"
#define ERR_ALREADY_LOGGEDIN     -11
#define ERRTXT_ALREADY_LOGGEDIN  "Already Logged In"
#define ERR_TERMID               -12
#define ERRTXT_TERMID            "TermId or SyncId in Error"
#define ERR_FORM_UNKNOWN         -13
#define ERRTXT_FORM_UNKNOWN      "Unrecognized FormId"
#define ERR_WID_INVALID          -14
#define ERR_DID_INVALID          -15
#define ERR_MISSING_KEY          -16
#define ERR_NOT_NUMERIC          -17
#define ERR_THRESHOLD_RANGE      -18
#define ERR_EMBEDDED_EMPTY_OL    -19
#define ERR_QUANTITY_INVALID     -20
#define ERR_OL_INVALID           -21
#define ERR_OL_COUNT             -22
#define ERR_TM_INTERFACE         -23
#define ERR_SERVICE_RSLT         -24
#define ERR_INPUT_TOOLONG        -25
#define ERR_IDANDNAME_EMPTY      -26
#define ERR_IDANDNAME_ENTERED    -27
#define ERR_AMOUNT_BADFORM       -28
#define ERR_AMOUNT_INVALID       -29
#define ERR_CARRIER_INVALID      -30
#define ERR_TERM_ALLOC           -31

#define STATUS_LEN 30
#define NAME_LEN 16
#define ADDR_LEN 20
#define STATE_LEN 2
#define ZIP_LEN 9

#define CTEXT "Content-length: "
#define HTTPHdr "Content-type: text/html\r\nContent-length:     \r\n\r\n"

typedef struct
{
   unsigned short year;
   unsigned short month;
   unsigned short day;
   unsigned short hour;
   unsigned short minute;
   unsigned short second;
} DATEDETAILS;

typedef struct
{
#ifdef LONG_WID
   long ol_supply_w_id;
#else
   short ol_supply_w_id;
#endif
   long ol_i_id;
   char ol_i_name[25];
   short ol_quantity;
```

```
   char ol_brand_generic[2];
   double ol_i_price;
   double ol_amount;
   short ol_stock;
} OL_NEW_ORDER_DATA;

typedef struct
{
   bool bTPRslt;
   short iTPRslt;
#ifdef LONG_WID
   long w_id;
#else
   short w_id;
#endif
   short d_id;
   long        c_id;
   short o_ol_cnt;
   char c_last[NAME_LEN + 1];
   char c_credit[3];
   double c_discount;
   double w_tax;
   double d_tax;
   long o_id;
   short o_all_local;
   short o_commit_flag;
   DATEDETAILS o_entry_d;
   double total_amount;
   char execution_status[STATUS_LEN];
   OL_NEW_ORDER_DATA Ol[MAX_OL];
} NEW_ORDER_DATA;

typedef struct
{
   bool bTPRslt;
   short iTPRslt;
#ifdef LONG_WID
   long w_id;
#else
   short w_id;
#endif
   short d_id;
   long c_id;
   short c_d_id;
#ifdef LONG_WID
   long c_w_id;
#else
   short c_w_id;
#endif
   double h_amount;
   DATEDETAILS h_date;
   char w_street_1[ADDR_LEN + 1];
   char w_street_2[ADDR_LEN + 1];
   char w_city[ADDR_LEN + 1];
   char w_state[STATE_LEN + 1];
   char w_zip[ZIP_LEN + 1];
   char d_street_1[ADDR_LEN + 1];
   char d_street_2[ADDR_LEN + 1];
   char d_city[ADDR_LEN + 1];
   char d_state[STATE_LEN + 1];
   char d_zip[ZIP_LEN + 1];
   char c_first[NAME_LEN + 1];
   char c_middle[3];
   char c_last[NAME_LEN + 1];
   char c_street_1[ADDR_LEN + 1];
   char c_street_2[ADDR_LEN + 1];
   char c_city[ADDR_LEN + 1];
   char c_state[STATE_LEN + 1];
   char c_zip[ZIP_LEN + 1];
   char c_phone[17];
   DATEDETAILS c_since;
   char c_credit[3];
   double c_credit_lim;
   double c_discount;
   double c_balance;
   char c_data[200+1];
   char execution_status[STATUS_LEN];
} PAYMENT_DATA;

typedef struct
{
   long ol_i_id;
#ifdef LONG_WID
   long ol_supply_w_id;
#else
   short ol_supply_w_id;
#endif
   short ol_quantity;
   double ol_amount;
   DATEDETAILS ol_delivery_d;
} OL_ORDER_STATUS_DATA;

typedef struct
{
   bool bTPRslt;
   short iTPRslt;
#ifdef LONG_WID
   long w_id;
#else
   short w_id;
#endif
   short d_id;
   long c_id;
   char c_first[NAME_LEN + 1];
   short o_ol_cnt;
   char c_middle[3];
   char c_last[NAME_LEN + 1];
   double c_balance;
   long o_id;
   DATEDETAILS o_entry_d;
   short o_carrier_id;
   OL_ORDER_STATUS_DATA OlOrderStatusData[MAX_OL];
   char execution_status[STATUS_LEN];
} ORDER_STATUS_DATA;

typedef struct
{
   bool bTPRslt;
   short iTPRslt;
#ifdef LONG_WID
```

```
   long w_id;
#else
   short w_id;
#endif
   short o_carrier_id;
   long o_id[10];
   SYSTEMTIME QTime;                // time delivery was queued
   SYSTEMTIME EndTime;              // time delivery completed
} DELIVERY_DATA;

typedef struct
{
   bool bTPRslt;
   short iTPRslt;
#ifdef LONG_WID
   long w_id;
#else
   short w_id;
#endif
   short d_id;
   short thresh_hold;
   long low_stock;
   char execution_status[STATUS_LEN];
} STOCK_LEVEL_DATA;
```

tpcc.cpp

```
// tpcc.cpp
//
// Copyright Unisys, 1999
//

#include <windows.h>
#include <stdio.h>
#include <malloc.h>
#include <stdlib.h>
#include <string.h>
#include <winreg.h>
#include <httpext.h>

#include "..\tpccsvr\tpcc.h"
#include "tmon.h"
#include "diagio.h"
#include "term.h"
#include "delivery.h"
#include "tpcchandler.h"

#define EXTN_VERSION MAKELONG(HSE_VERSION_MINOR,HSE_VERSION_MAJOR)
#define TLS_NULL 0xFFFFFFFF
DWORD dwTlsInx;
CHAR * pTitle = "IIS TPCC COM DLL";
CRITICAL_SECTION csDllMain;

// Diagnostic logging settings
BOOL bSetEventLog = TRUE;
BOOL bSetConsole = FALSE;
UINT uSetDiagLevel = DIAG_INFO;

// TMon Interface Settings
INT iTMMaxMsg = 0;

// Term Interface Settings
INT iMaxTerms = 3000;

// Delivery Settings
long lSetDThreads = 8;
long lSetDQSize = DEFAULTDQSIZE;
char szSetPath[200] = "\\inetpub\\wwwroot\\";

static CHAR * szTPCCError =
   HTTPHdr "<HTML>"
   "<HEAD><TITLE>Welcome To TPC-C</TITLE></HEAD><BODY>"
   "<B>TPCC Extension Error (TPCC Array Not Allocated)</B><BR>"
   "</BODY></HTML>";

static CHAR * szTMInitError =
   HTTPHdr "<HTML>"
   "<HEAD><TITLE>Welcome To TPC-C</TITLE></HEAD><BODY>"
   "<B>TPCC Extension Error (TMInit Failed)</B><BR>"
   "</BODY></HTML>";
INT iHHdrLen = 0;
INT iCTextLen = 0;

BOOL ThreadAttach(TPCC_STATE * pTPCC,CHAR * pDiag);
VOID ThreadDetach(TPCC_STATE * pTPCC);
VOID SendResponse(EXTENSION_CONTROL_BLOCK * pECB,CHAR * pMsg,CHAR *
pWork);
BOOL ReadRegistry(VOID);

//=====================================================================
//
// Function name: DllMain
//
//=====================================================================
BOOL APIENTRY DllMain(HANDLE hInst, ULONG ul_reason_for_call,
                      LPVOID lpReserved)
{
   TPCC_STATE * pTPCC = NULL;
   CHAR szDiag[MAX_DIAG_SZ];
   UINT iTMMaxSz =0;
   switch(ul_reason_for_call)
   {
      case DLL_PROCESS_ATTACH:
         // Process initialization

         InitializeCriticalSection(&csDllMain);
         ReadRegistry();
         DiagIoInit(pTitle,bSetConsole,bSetEventLog,uSetDiagLevel);
         wsprintf(szDiag,
            "(%s) EventLog = %d, Console = %d, DiagLevel = %d\n"
            "MaxTerms = %d\n",
            VERSIONINFO,bSetEventLog,bSetConsole,uSetDiagLevel,iMaxTerms);
         DiagIoWrite(szDiag,DIAG_FORCE);
#ifdef LONG_WID
         DiagIoWrite("tpccdll - long w_id", DIAG_FORCE);
#endif
         dwTlsInx = TlsAlloc();
         if (dwTlsInx == TLS_NULL)
```

```
         {
            wsprintf(szDiag,"PAttach(%ld): Tls Alloc Failed (%ld)\n",
               GetCurrentThreadId(),GetLastError);
            DiagIoWrite(szDiag,DIAG_ERROR);
            return(FALSE);
         };
         if (TermInit(iMaxTerms))
            return(FALSE);
         iTMMaxSz = max(iTMMaxSz,sizeof(NEW_ORDER_DATA));
         iTMMaxSz = max(iTMMaxSz,sizeof(PAYMENT_DATA));
         iTMMaxSz = max(iTMMaxSz,sizeof(ORDER_STATUS_DATA));
         iTMMaxSz = max(iTMMaxSz,sizeof(DELIVERY_DATA));
         iTMMaxSz = max(iTMMaxSz,sizeof(STOCK_LEVEL_DATA));
         iTMMaxSz += 10;
         TMonInit(iTMMaxSz);
         if (DeliveryInit(lSetDThreads,lSetDQSize,szSetPath))
         {
            DeliveryTerm();
            return(FALSE);
         };
         iHHdrLen = strlen(HTTPHdr);
         iCTextLen = strlen(CTEXT);

         break;
      case DLL_THREAD_ATTACH:
         // Move ThreadAttach call to HttpExt since the DllMain call
         // for Thread Attach did not reliably come before the first
         // call to HttpExtProc.
         break;
               case DLL_THREAD_DETACH:
         ThreadDetach(pTPCC);
                        break;
               case DLL_PROCESS_DETACH:
         ThreadDetach(pTPCC);
         DeleteCriticalSection(&csDllMain);
         DeliveryTerm();
         TMonTerm();
         TermTerm();
         TlsFree(dwTlsInx);
         dwTlsInx = TLS_NULL;
         DiagIoTerm();
                        break;
       };
       return TRUE;
};   // DllMain

//=====================================================================
//
// Function name: ThreadAttach
//
// Result:
//    FALSE Thread state structure initialized
//    TRUE  Thread state structure initialization failure
//
//=====================================================================
BOOL ThreadAttach(TPCC_STATE * pTPCC,CHAR * pDiag)
{
   EnterCriticalSection(&csDllMain);
   __try
   {
      pTPCC = (TPCC_STATE *) calloc(1,sizeof(TPCC_STATE));
      if (pTPCC == NULL)
      {
         wsprintf(pDiag,"ThrAtt(%ld): pTPCC Alloc Failed (%ld)\n",
            GetCurrentThreadId(),GetLastError);
         DiagIoWrite(pDiag,DIAG_ERROR);
         return(TRUE);
      };

          char filename[64];
          long threadId;
          threadId = GetCurrentThreadId();
          sprintf(filename, "c:\\temp\\testing%ld.txt", threadId);
          pTPCC->fp = fopen(filename, "w");
          if (pTPCC->fp != NULL)
          {
                fprintf(pTPCC->fp, "Init %ld\n", threadId);
                fflush(pTPCC->fp);
          }

      TlsSetValue(dwTlsInx,pTPCC);
      pTPCC->tsTMon.pszErrTxt = pTPCC->ErrTxt;
      if (TMInit(&pTPCC->tsTMon))
      {
         wsprintf(pDiag,"ThrAtt(%ld): TMInit %s\n",
            GetCurrentThreadId(),pTPCC->ErrTxt);
         DiagIoWrite(pDiag,DIAG_ERROR);
         return(TRUE);
      };
   }
   __finally
   {
      LeaveCriticalSection(&csDllMain);
   };
   return(FALSE);
};   // ThreadAttach

//=====================================================================
//
// Function name: ThreadDetach
//
//=====================================================================
VOID ThreadDetach(TPCC_STATE * pTPCC)
{
   EnterCriticalSection(&csDllMain);
   __try
   {
      pTPCC = (TPCC_STATE *) TlsGetValue(dwTlsInx);
      if (pTPCC != NULL)
      {
         TMDone(&pTPCC->tsTMon);
                fclose(pTPCC->fp);
         free(pTPCC);
         pTPCC = NULL;
         TlsSetValue(dwTlsInx,pTPCC);
      };
   }
   __finally
   {
```

```
      LeaveCriticalSection(&csDllMain);
   };
};   // ThreadDetach

//=====================================================================
//
// Function name: GetExtensionVersion
//
//=====================================================================
BOOL WINAPI GetExtensionVersion(HSE_VERSION_INFO *pVersion)
{
   pVersion->dwExtensionVersion = EXTN_VERSION;
   strncpy(pVersion->lpszExtensionDesc,pTitle,HSE_MAX_EXT_DLL_NAME_LEN);
   return TRUE;
};   // GetExtensionVersion

//=====================================================================
//
// Function name: HttpExtensionProc
//
//
// Returns:
//    HSE_STATUS_SUCCESS               send msg, drop connection
//    HSE_STATUS_SUCCESS_AND_KEEP_CONN       send msg, keep connection
//
//=====================================================================
DWORD WINAPI HttpExtensionProc(EXTENSION_CONTROL_BLOCK * pECB)
{
   TPCC_STATE * pTPCC;
   //DWORD dwRslt = HSE_STATUS_SUCCESS;
   DWORD dwRslt = HSE_STATUS_SUCCESS_AND_KEEP_CONN;
   UINT uRslt;

   pTPCC = (TPCC_STATE *) TlsGetValue(dwTlsInx);
   if (pTPCC == NULL)
   {
      CHAR szWork[200];
      ThreadAttach(pTPCC,szWork);
      pTPCC = (TPCC_STATE *) TlsGetValue(dwTlsInx);
      if (pTPCC == NULL)
      {
         SendResponse(pECB,szTPCCError,szWork);
         goto HttpXit;
      };
   };
   if (pTPCC->tsTMon.pTxnData == NULL)
      SendResponse(pECB,szTMInitError,pTPCC->szHeader);
   TPCCClear(pTPCC);
   pTPCC->ConnID = pECB->ConnID;
   pTPCC->RecvMsg = pECB->lpszQueryString;
   uRslt = TPCCHandler(pTPCC);
   switch (uRslt)
   {
      case TPCCSEND:
         SendResponse(pECB,pTPCC->SendMsg,pTPCC->szHeader);
         dwRslt = HSE_STATUS_SUCCESS_AND_KEEP_CONN;
         break;
      case TPCCSENDEND:
         SendResponse(pECB,pTPCC->SendMsg,pTPCC->szHeader);
         break;
      case TPCCENDNOW:
      default:
         break;
   };   // switch (TPCCHandler result)

HttpXit:

      if (uRslt != TPCCSEND && pTPCC->fp)
      {
            fprintf(pTPCC->fp, "%ld %s (%ld,%ld) \n", pTPCC->iTermId,
pTPCC->ErrTxt, pTPCC->sWId, pTPCC->sDId);
            fflush(pTPCC->fp);
      }


      return(dwRslt);

};   // HttpExtensionProc

//=====================================================================
//
// Function name: SendResponse
//
//=====================================================================
VOID SendResponse(EXTENSION_CONTROL_BLOCK * pECB,CHAR * pMsg,CHAR * pWork)
{
   DWORD dwMsgBytes;
   DWORD dwDataBytes;
   CHAR * pCL;
   HSE_SEND_HEADER_EX_INFO HeaderExInfo;
   dwMsgBytes = strlen(pMsg);
   pCL=strstr(pMsg,CTEXT);
   dwDataBytes = dwMsgBytes - iHHdrLen;
   wsprintf(pWork,"%4ld",dwDataBytes);
   pCL += iCTextLen;
   strncpy(pCL,pWork,4);
   HeaderExInfo.pszHeader = pMsg;
   HeaderExInfo.cchHeader = dwMsgBytes;
   HeaderExInfo.pszStatus = "200 OK";
   HeaderExInfo.cchStatus = 6;
   HeaderExInfo.fKeepConn = TRUE;
   (*pECB->ServerSupportFunction)
      (pECB->ConnID,
      HSE_REQ_SEND_RESPONSE_HEADER_EX,
      &HeaderExInfo,
      NULL,
      NULL);
};   // SendResponse

//=====================================================================
//
// Function name: ReadRegistry
//
//    Sets global operational parameters from registry if they exist.
//    Otherwise, compiled in defaults apply.
//
// Result:
//    FALSE    Registry entry found
//    TRUE     Registry entry does not exist
//
```

```
//=====================================================================
BOOL ReadRegistry(VOID)
{
   HKEY hkTPCC;
   DWORD       dwMax;
   DWORD       dwRT;
   INT i;
   CHAR szValue[100];
   if (RegOpenKeyEx(HKEY_LOCAL_MACHINE,"SOFTWARE\\Unisys\\TPCC",0,
      KEY_READ, &hkTPCC) != ERROR_SUCCESS )
      return(TRUE);
   dwMax = sizeof(szValue);
   if (RegQueryValueEx(hkTPCC,"EVENTLOG",0,&dwRT,(BYTE *) &szValue,&dwMax)
      == ERROR_SUCCESS)
   {
      if (abs(atoi(szValue) == 0))
         bSetEventLog = FALSE;
      else
         bSetEventLog = TRUE;
   };
   dwMax = sizeof(szValue);
   if (RegQueryValueEx(hkTPCC,"CONSOLE",0,&dwRT,(BYTE *) &szValue,&dwMax)
      == ERROR_SUCCESS )
   {
      if (abs(atoi(szValue) == 0))
         bSetConsole = FALSE;
      else
         bSetConsole = TRUE;
   };
   dwMax = sizeof(szValue);
   if (RegQueryValueEx(hkTPCC,"DIAGLEVEL",0,&dwRT,(BYTE *)
&szValue,&dwMax)
      == ERROR_SUCCESS )
   {
      i = atoi(szValue);
      if (i < DIAG_FORCE)
         i = DIAG_FORCE;
      else
      if (i > DIAG_INFO)
         i = DIAG_INFO;
      uSetDiagLevel = i;
   };
   dwMax = sizeof(szValue);
   if (RegQueryValueEx(hkTPCC,"MAXTERMS",0,&dwRT,(BYTE *) &szValue,&dwMax)
      == ERROR_SUCCESS )
   {
      iMaxTerms = abs(atoi(szValue));
   };
   dwMax = sizeof(szValue);
   if (RegQueryValueEx(hkTPCC,"DELIVERYTHREADS",0,&dwRT,(BYTE *)
&szValue,&dwMax)
      == ERROR_SUCCESS )
   {
      lSetDThreads = abs(atoi(szValue));
   };
   dwMax = sizeof(szValue);
   if (RegQueryValueEx(hkTPCC,"DQSIZE",0,&dwRT,(BYTE *) &szValue,&dwMax)
      == ERROR_SUCCESS )
   {
      lSetDQSize = abs(atoi(szValue));
   };
   dwMax = sizeof(szValue);
   if (RegQueryValueEx(hkTPCC,"DQPATH",0,&dwRT,(BYTE *) &szValue,&dwMax)
      == ERROR_SUCCESS )
   {
      strcpy(szSetPath,szValue);
   };
   RegCloseKey(hkTPCC);
   return(FALSE);
};   // ReadRegistry
```

tpcchandler.h

```
// tpcchandler.h
//
// Copyright Unisys, 1999

#define MAX_MSG_SZ  5000

typedef struct
{
   LPVOID ConnID;                      // Active Connection Id
#ifdef LONG_WID
   LONG sWId;                          // TPCC WareHouse Id
#else
   SHORT sWId;                          // TPCC WareHouse Id
#endif
   SHORT sDId;                         // TPCC District Id
   INT  iSyncId;                       // TPCC Sync Id
   INT  iTermId;                       // TPCC Term Id
   UINT uFormId;                       // TPCC Form Id
   INT  iStatusId;                     // TPCC Status Id
   CHAR ErrTxt[500];                   // Error text
   CHAR szWork[200];                   // Thread work area
   CHAR szHeader[100];                 // HTTP work area
   CHAR * RecvMsg;                     // HTML message from ECB
   CHAR SendMsg[MAX_MSG_SZ];           // HTML work area
   TMON_STATE tsTMon;                  // TMon Interface
   FILE *fp;                                          // file for error
info
} TPCC_STATE;

BOOL TPCCClear(TPCC_STATE * pTPCC);
UINT TPCCHandler(TPCC_STATE * pTPCC);
```

tpcchandler.cpp

```
// tpcchandler.cpp
//
// Copyright Unisys, 1999
//
#include <windows.h>
#include <stdio.h>
#include <stdlib.h>
#include <string.h>
```

```
#include "..\tpccsvr\tpcc.h"
#include "tmon.h"
#include "diagio.h"
#include "delivery.h"
#include "tpcchandler.h"
#include "term.h"

#define INIT_RETRY      0

// pTPCC->iFormId - TPCC forms enumeration.
#define FORM_NULL        0
#define FORM_LOGON       1
#define FORM_MENU        2
#define FORM_NEWORDER    3
#define FORM_PAYMENT     4
#define FORM_DELIVERY    5
#define FORM_ORDERSTATUS 6
#define FORM_STOCKLEVEL  7
#define FORM_EXIT        8
#define FORM_MAX         9

// CMD= HTML Command Enumeration and Name
#define CMD_NULL              0
#define CMD_PROCESS           1
#define CMD_NEWORDER_FORM     2
#define CMD_PAYMENT_FORM      3
#define CMD_DELIVERY_FORM     4
#define CMD_ORDERSTATUS_FORM  5
#define CMD_STOCKLEVEL_FORM   6
#define CMD_EXIT              7
#define CMD_SUBMIT            8
#define CMD_MENU_FORM         9
#define CMD_MAX               10

static CHAR * szCmds[] =
{
   "Unknown",
   "Process",
   "..NewOrder..",
   "..Payment..",
   "..Delivery..",
   "..Order-Status..",
   "..Stock-Level..",
   "..Exit..",
   "Submit",
   "Menu"
};

static CHAR * szFormLogin =
   HTTPHdr "<HTML>"
   "<HEAD><TITLE>Welcome To TPC-C</TITLE></HEAD><BODY>"
   "Please Identify your Warehouse and District for this session.<BR>"
   "<FORM ACTION=\"tpcc.dll\" METHOD=\"GET\">"
   "<INPUT TYPE=\"hidden\" NAME=\"STATUSID\" VALUE=\"0\">"
   "<INPUT TYPE=\"hidden\" NAME=\"FORMID\" VALUE=\"1\">"
   "<INPUT TYPE=\"hidden\" NAME=\"TERMID\" VALUE=\"-2\">"
   "<INPUT TYPE=\"hidden\" NAME=\"SYNCID\" VALUE=\"0\">"
#ifdef LONG_WID
   "Warehouse ID <INPUT NAME=\"w_id\" SIZE=6><BR>"
#else
   "Warehouse ID <INPUT NAME=\"w_id\" SIZE=4><BR>"
#endif
   "District ID <INPUT NAME=\"d_id\" SIZE=2><BR>"
   "<HR>"
   "<INPUT TYPE=\"submit\" NAME=\"CMD\" VALUE=\"Submit\">"
   "</FORM>";

static CHAR * szMenuList =
   "<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..\">";

static CHAR * HTMLTrailer =
   "</BODY></HTML>";

static CHAR * TERMIDTOKEN = "TERMID=";
static CHAR * SYNCIDTOKEN = "SYNCID=";
static CHAR * FORMIDTOKEN = "FORMID=";
static CHAR * STATUSIDTOKEN = "STATUSID=";
static CHAR * CMDTOKEN = "CMD=";
static CHAR * NEWORDER_SERVICE = "NEWORDER";
static CHAR * PAYMENT_SERVICE = "PAYMENT";
static CHAR * ORDERSTATUS_SERVICE = "ORDERSTS";
static CHAR * DELIVERY_SERVICE = "DELIVERY";
static CHAR * STOCKLEVEL_SERVICE = "STOCKLVL";
static CHAR * ZIPPIC = "XXXXX-XXXX";

BOOL ProcessLogin(CHAR * pIn,CHAR * pOut,TPCC_STATE * pTPCC);
BOOL ProcessForm(CHAR * pIn,CHAR * pOut,TPCC_STATE * pTPCC);
BOOL ProcessNewOrder(CHAR * pIn,CHAR * pOut,TPCC_STATE * pTPCC);
BOOL ProcessPayment(CHAR * pIn,CHAR * pOut,TPCC_STATE * pTPCC);
BOOL ProcessDelivery(CHAR * pIn,CHAR * pOut,TPCC_STATE * pTPCC);
BOOL ProcessOrderStatus(CHAR * pIn,CHAR * pOut,TPCC_STATE * pTPCC);
BOOL ProcessStockLevel(CHAR * pIn,CHAR * pOut,TPCC_STATE * pTPCC);
VOID FormatLogin(CHAR * pMsg,CHAR * pAddText);
BOOL GetHidden(CHAR * pMsg,UINT * uFormId,INT * iSyncId,INT * iTermId);
BOOL GetCmd(CHAR * pMsg,CHAR * pWork,UINT uLen);
BOOL GetLongKey(LONG * lRslt,CHAR * pHTML,CHAR * pKey,TPCC_STATE * pTPCC);
BOOL GetIntKey(INT * iRslt,CHAR * pHTML,CHAR * pKey,TPCC_STATE * pTPCC);
BOOL GetShortKey(SHORT * sRslt,CHAR * pHTML,CHAR * pKey,TPCC_STATE *
pTPCC);
BOOL GetStringKey(CHAR * szRslt,CHAR * pHTML,CHAR * pKey,
                  TPCC_STATE * pTPCC,UINT uMax);
BOOL GetAmountKey(DOUBLE * dRslt,CHAR * pHTML,CHAR * pKey,
                  TPCC_STATE * pTPCC);
BOOL GetKeyValue(CHAR * pHTML,CHAR * pKey,CHAR * pValue,UINT uMax);
VOID FormatLogin(CHAR * pOut,CHAR * pAddText);
VOID FormatMenu(CHAR * pOut,TPCC_STATE * pTPCC);
VOID FormatNewOrder(CHAR * pOut,TPCC_STATE * pTPCC);
VOID FormatPayment(CHAR * pOut,TPCC_STATE * pTPCC);
VOID FormatDelivery(CHAR * pOut,TPCC_STATE * pTPCC);
VOID FormatOrderStatus(CHAR * pOut,TPCC_STATE * pTPCC);
VOID FormatStockLevel(CHAR * pOut,TPCC_STATE * pTPCC);
INT FormatFormHdr(CHAR * pOut,CHAR * pTitle,TPCC_STATE * pTPCC);
INT FormatRespHdr(CHAR * pOut,CHAR * pTitle,TPCC_STATE * pTPCC);
VOID FormatString(CHAR * pOut,CHAR * pPic,CHAR * pIn);
VOID UtilStrCpy(CHAR * pDest,CHAR * pSrc,INT n);
```

```
BOOL CheckNumeric(CHAR * pNum);
void WriteEventLog(char * pMsg,bool bError);

//=====================================================================
//
// Function name: TPCCClear
//
//=====================================================================
BOOL TPCCClear(TPCC_STATE * pTPCC)
{
   pTPCC->ConnID = 0;
   pTPCC->sWId = 0;
   pTPCC->sDId = 0;
   pTPCC->iSyncId = 0;
   pTPCC->iTermId = -2;
   pTPCC->uFormId = FORM_NULL;
   pTPCC->iStatusId = 0;
   strcpy(pTPCC->ErrTxt,"");
   return(FALSE);
};   // TPCCClear

//=====================================================================
//
// Function name: TPCCHandler
//
//=====================================================================
UINT TPCCHandler(TPCC_STATE * pTPCC)
{
   INT iSyncId;
   INT iTermId;
   UINT uCmdId;
   UINT uRslt = TPCCSENDEND;  // default error handling
   TERM_STATE * pTerm;

   pTPCC->iStatusId = STATUS_OK;
   if (GetHidden(pTPCC->RecvMsg,&pTPCC->uFormId,&iSyncId,&iTermId))
   {
      uRslt = TPCCSEND;
      FormatLogin(pTPCC->SendMsg,pTPCC->ErrTxt);
      goto HdlrXit;
   };
   if (iTermId > 0)
   {
      pTerm = TermGet(iTermId);
      if (pTerm == NULL)
      {
         uRslt = TPCCSEND;
         strcpy(pTPCC->ErrTxt,"Invalid Term Id");
         FormatLogin(pTPCC->SendMsg,pTPCC->ErrTxt);
         goto HdlrXit;
      };
      pTPCC->sWId = pTerm->sWId;
      pTPCC->sDId = pTerm->sDId;
      pTPCC->iSyncId = pTerm->iSyncId;
      pTPCC->iTermId = pTerm->iTermId;
   };
   uCmdId = GetCmd(pTPCC->RecvMsg,pTPCC->szWork,sizeof(pTPCC->szWork));
   // Except for Submit(log in), sWId must already be set
   if (pTPCC->sWId == 0 && uCmdId != CMD_SUBMIT)
   {
      strcpy(pTPCC->ErrTxt,"Must log in first!");
      FormatLogin(pTPCC->SendMsg,pTPCC->ErrTxt);
      uRslt = TPCCSEND;
      goto HdlrXit;
   };
   // Check for multiple log in attempts
   if (pTPCC->sWId != 0 && uCmdId == CMD_SUBMIT)
   {
      strcpy(pTPCC->ErrTxt,ERRTXT_ALREADY_LOGGEDIN);
      pTPCC->iStatusId = ERR_ALREADY_LOGGEDIN;
      FormatMenu(pTPCC->SendMsg,pTPCC);
      uRslt = TPCCSEND;
      goto HdlrXit;
   };
   // If not logging in, validate hidden fields
   if (uCmdId != CMD_SUBMIT)
   {
      if (iTermId != pTPCC->iTermId || iTermId != iSyncId)
      {
         wsprintf(pTPCC->ErrTxt,"%s: Received %ld, %ld (%ld)",
            ERRTXT_TERMID,iTermId,iSyncId,pTPCC->iTermId);
         pTPCC->iStatusId = ERR_TERMID;
         FormatMenu(pTPCC->SendMsg,pTPCC);
         goto HdlrXit;
      };
   };
   // Process the command
   switch (uCmdId)
   {
      case CMD_SUBMIT:
         ProcessLogin(pTPCC->RecvMsg,pTPCC->SendMsg,pTPCC);
         break;
      case CMD_MENU_FORM:
         FormatMenu(pTPCC->SendMsg,pTPCC);
         break;
      case CMD_PROCESS:
         ProcessForm(pTPCC->RecvMsg,pTPCC->SendMsg,pTPCC);
         break;
      case CMD_NEWORDER_FORM:
         FormatNewOrder(pTPCC->SendMsg,pTPCC);
         break;
      case CMD_PAYMENT_FORM:
         FormatPayment(pTPCC->SendMsg,pTPCC);
         break;
      case CMD_DELIVERY_FORM:
         FormatDelivery(pTPCC->SendMsg,pTPCC);
         break;
      case CMD_ORDERSTATUS_FORM:
         FormatOrderStatus(pTPCC->SendMsg,pTPCC);
         break;
      case CMD_STOCKLEVEL_FORM:
         FormatStockLevel(pTPCC->SendMsg,pTPCC);
         break;
      case CMD_EXIT:
         TermFree(pTPCC->iTermId);
         strcpy(pTPCC->ErrTxt,"Logged Off");
         FormatLogin(pTPCC->SendMsg,pTPCC->ErrTxt);
         goto HdlrXit;
      default:
         strcpy(pTPCC->ErrTxt,ERRTXT_CMD_UNKNOWN);
```

```
         pTPCC->iStatusId = ERR_CMD_UNKNOWN;
         if (pTPCC->sWId == 0)
            FormatLogin(pTPCC->SendMsg,pTPCC->ErrTxt);
         else
            FormatMenu(pTPCC->SendMsg,pTPCC);
         break;
   };   // switch (uCmdId)

   uRslt = TPCCSEND;

HdlrXit:

   return(uRslt);

};   // TPCCHandler

//=====================================================================
//
// Function name: ProcessLogin
//
//    ProcessLogin extracts WId and DId from the incoming form.  Assumes
//    log in has not previously completed (sWId == 0 already verified).
//
//    Result:
//       FALSE - log in successful, sWId and sDId set in pTPCC,
//               pOut contains menu.
//       TRUE - log in failed, pOut contains log in form with
//              error message.
//
//=====================================================================
BOOL ProcessLogin(CHAR * pIn,CHAR * pOut,TPCC_STATE * pTPCC)
{
#ifdef LONG_WID
   LONG sWId;
#else
   SHORT sWId;
#endif
   SHORT sDId;
   TERM_STATE * pTerm;

#ifdef LONG_WID
   if (GetLongKey(&sWId,pIn,"w_id",pTPCC))
#else
   if (GetShortKey(&sWId,pIn,"w_id",pTPCC))
#endif
   {
     FormatLogin(pOut,pTPCC->ErrTxt);
     return(TRUE);
   };
   if (sWId < 1)
   {
      wsprintf(pTPCC->ErrTxt,"Warehouse Id (%d) Invalid",sWId);
      pTPCC->iStatusId = ERR_WID_INVALID;
      FormatLogin(pOut,pTPCC->ErrTxt);
      return(TRUE);
   };
   if (GetShortKey(&sDId,pIn,"d_id",pTPCC))
   {
     FormatLogin(pOut,pTPCC->ErrTxt);
     return(TRUE);
   };
   if (sDId < MIN_DId || sDId > MAX_DId)
   {
      wsprintf(pTPCC->ErrTxt,"DId Out of Range(%ld,%ld) - %ld",
         MIN_DId,MAX_DId,sDId);
      pTPCC->iStatusId = ERR_DID_INVALID;
      FormatLogin(pOut,pTPCC->ErrTxt);
      return(TRUE);
   };
   pTerm = TermAlloc();
   if (pTerm == NULL)
   {
      wsprintf(pTPCC->ErrTxt,"Unable to Allocate Terminal Entry");
      pTPCC->iStatusId = ERR_TERM_ALLOC;
      FormatLogin(pOut,pTPCC->ErrTxt);
      return(TRUE);
   };
   pTerm->ConnID = pTPCC->ConnID;
   pTerm->iSyncId = pTerm->iTermId;
   pTerm->sWId = abs(sWId);
   pTerm->sDId = abs(sDId);
   pTPCC->iTermId = pTerm->iTermId;
   pTPCC->iSyncId = pTerm->iSyncId;
   pTPCC->sWId = pTerm->sWId;
   pTPCC->sDId = pTerm->sDId;
   FormatMenu(pOut,pTPCC);
   return(FALSE);
};   // ProcessLogin

//=====================================================================
//
// Function name: ProcessForm
//
//    ProcessForm uses pTPCC->uFormId to determine which form input is
//    present and ready for processing.  Actual processing is done by
//    the form specific routine.
//
//    Result:
//       FALSE - form processed, pOut contains response.
//       TRUE - error processing form input, pOut contains reason.
//
//=====================================================================
BOOL ProcessForm(CHAR * pIn,CHAR * pOut,TPCC_STATE * pTPCC)
{
   switch (pTPCC->uFormId )
   {
      case FORM_NEWORDER:
               return(ProcessNewOrder(pIn,pOut,pTPCC));
      case FORM_PAYMENT:
               return(ProcessPayment(pIn,pOut,pTPCC));
      case FORM_DELIVERY:
               return(ProcessDelivery(pIn,pOut,pTPCC));
      case FORM_ORDERSTATUS:
               return(ProcessOrderStatus(pIn,pOut,pTPCC));
      case FORM_STOCKLEVEL:
               return(ProcessStockLevel(pIn,pOut,pTPCC));
      default:
         wsprintf(pTPCC->ErrTxt,"%s (%ld)",
            ERRTXT_FORM_UNKNOWN,pTPCC->uFormId);
         pTPCC->iStatusId = ERR_FORM_UNKNOWN;
```

```
         FormatMenu(pOut,pTPCC);
         break;
      }
   return(TRUE);
};   // ProcessForm

//=====================================================================
//
// Function name: ProcessNewOrder
//
//    ProcessNewOrder extracts the input data fields from pIn, processes
//    the data, and returns a response in pOut.
//
//    Result:
//       FALSE - NewOrder processed successfully.
//       TRUE - NewOrder processing failed.
//
//=====================================================================
BOOL ProcessNewOrder(CHAR * pIn,CHAR * pOut,TPCC_STATE * pTPCC)
{
   NEW_ORDER_DATA * pnod;
   TMON_STATE * pTMon;
   CHAR szKey[20];
   CHAR * ptr;
   INT iInx;
   UINT u;
   UINT uLine;
   HRESULT hr;
   int iSize;
   int retCnt = 0;

   pTMon = &pTPCC->tsTMon;
   pnod = (NEW_ORDER_DATA *) pTMon->pTxnData;
   ZeroMemory(pnod,sizeof(NEW_ORDER_DATA));
   pnod->w_id = pTPCC->sWId;
   if (GetShortKey(&pnod->d_id,pIn,"DID*",pTPCC))
   {
     FormatMenu(pOut,pTPCC);
     return(TRUE);
   };
   if (pnod->d_id < MIN_DId || pnod->d_id > MAX_DId)
   {
      wsprintf(pTPCC->ErrTxt,"DId Out of Range(%ld,%ld) - %ld",
         MIN_DId,MAX_DId,pnod->d_id);
      pTPCC->iStatusId = ERR_DID_INVALID;
      FormatMenu(pOut,pTPCC);
      return(TRUE);
   };
   if (GetLongKey(&pnod->c_id,pIn,"CID*",pTPCC))
   {
     FormatMenu(pOut,pTPCC);
     return(TRUE);
   };
   pnod->o_ol_cnt = 0;
   ptr = pIn;
   for(u=0, uLine=0; u < MAX_OL; u++)
   {
      wsprintf(szKey,"SP%2.2d*",u);
      ptr = strstr(ptr,szKey);
#ifdef LONG_WID
      if (GetLongKey(&pnod->Ol[uLine].ol_supply_w_id,ptr,szKey,pTPCC))
#else
      if (GetShortKey(&pnod->Ol[uLine].ol_supply_w_id,ptr,szKey,pTPCC))
#endif
      {
         FormatMenu(pOut,pTPCC);
         return(TRUE);
      };
      wsprintf(szKey,"IID%2.2d*",u);
      if (GetLongKey(&pnod->Ol[uLine].ol_i_id,ptr,szKey,pTPCC))
      {
         FormatMenu(pOut,pTPCC);
         return(TRUE);
      };
      wsprintf(szKey,"Qty%2.2d*",u);
      if (GetShortKey(&pnod->Ol[uLine].ol_quantity,ptr,szKey,pTPCC))
      {
         FormatMenu(pOut,pTPCC);
         return(TRUE);
      };
      if (pnod->Ol[uLine].ol_i_id != 0)
      {
         if (pnod->Ol[uLine].ol_supply_w_id < 1)
         {
            wsprintf(pTPCC->ErrTxt,
               "Order Line %ld Contains Invalid WId %ld",
               u + 1,pnod->Ol[uLine].ol_supply_w_id);
            pTPCC->iStatusId = ERR_WID_INVALID;
            FormatMenu(pOut,pTPCC);
            return(TRUE);
         };
         if (pnod->Ol[uLine].ol_quantity < MIN_QUANTITY ||
             pnod->Ol[uLine].ol_quantity > MAX_QUANTITY)
         {
            wsprintf(pTPCC->ErrTxt,
               "Order Line %ld Contains Invalid Qty %d",
               u + 1,pnod->Ol[uLine].ol_quantity);
            pTPCC->iStatusId = ERR_QUANTITY_INVALID;
            FormatMenu(pOut,pTPCC);
            return(TRUE);
         };
         uLine++;
      }   // if (ol_i_id !=0)
      else
      {
         if (pnod->Ol[uLine].ol_supply_w_id != 0)
         {
            wsprintf(pTPCC->ErrTxt,
               "Order Line %ld WId Supplied with No Item",u + 1);
            pTPCC->iStatusId = ERR_OL_INVALID;
            FormatMenu(pOut,pTPCC);
            return(TRUE);
         };
         if (pnod->Ol[uLine].ol_quantity != 0)
         {
            wsprintf(pTPCC->ErrTxt,
               "Order Line %ld Qty Supplied with No Item",u + 1);
            pTPCC->iStatusId = ERR_OL_INVALID;
            FormatMenu(pOut,pTPCC);
            return(TRUE);
```

```
         };
      };   // empty order line
   };   // for (u < MAX_OL)
   pnod->o_ol_cnt = uLine;
   if (pnod->o_ol_cnt < MIN_OL)
   {
      wsprintf(pTPCC->ErrTxt,"Too Few Order Lines %d",pnod->o_ol_cnt);
      pTPCC->iStatusId = ERR_OL_COUNT;
      FormatMenu(pOut,pTPCC);
      return(TRUE);
   };
   iSize = pTMon->iSize;
   do
   {
      hr = pTMon->pIAllTxn->NewOrder(&iSize,(unsigned char**)&pTMon-
>pTxnData);
      if (retCnt > 0) Sleep(1000);
   }while ((FAILED(hr)) && (retCnt++ < INIT_RETRY));

   if (FAILED(hr))
   {
      pTPCC->iStatusId = ERR_TM_INTERFACE;
      wsprintf(pTPCC->ErrTxt,
         "COM Interface to NewOrder Call Failed, HRESULT %x",
         hr);
      FormatMenu(pOut,pTPCC);
      return(TRUE);
   };
   pnod = (NEW_ORDER_DATA *) pTMon->pTxnData;
   // Exclude invalid item id case
   if (pnod->bTPRslt && pnod->iTPRslt < SVC_NOERROR)
   {
      wsprintf(pTPCC->ErrTxt,
         "New Order Service Returned Error(%ld): %s",
         pnod->iTPRslt,pnod->execution_status);
      pTPCC->iStatusId = ERR_SERVICE_RSLT;
      FormatMenu(pOut,pTPCC);
      return(TRUE);
   };
   if (pnod->iTPRslt == SVC_BADITEMID)
      pTPCC->iStatusId = INVALID_IID;

   iInx = FormatRespHdr(pOut,"TPC-C New Order",pTPCC);
   if (!pnod->bTPRslt)
   {
      iInx += wsprintf(pOut + iInx,
         "<PRE>                                New Order<BR>"
#ifdef LONG_WID
         "Warehouse: %6.6d   District: %2.2d                        "
#else
         "Warehouse: %4.4d   District: %2.2d                        "
#endif
         "Date: %2.2d-%2.2d-%4.4d %2.2d:%2.2d:%2.2d <BR>"
         "Customer:  %4.4d   Name: %-16s   Credit: %-2s   ",
         pnod->w_id,pnod->d_id,
         pnod->o_entry_d.day,pnod->o_entry_d.month,
         pnod->o_entry_d.year,pnod->o_entry_d.hour,
         pnod->o_entry_d.minute,pnod->o_entry_d.second,
         pnod->c_id,pnod->c_last,pnod->c_credit);
      iInx += sprintf(pOut + iInx,
         "%%Disc: %5.2f            <BR>"
         "Order Number: %8.8d  Number of Lines: %2.2d        W_tax: %5.2f
D_tax: %5.2f  <BR><BR>"
         "  Supp_W   Item_Id  Item Name                 Qty  Stock  B/G
Price    Amount<BR>",
         pnod->c_discount * 100,pnod->o_id,pnod->o_ol_cnt,pnod->w_tax *
100,pnod->d_tax * 100);
      for (u = 0; u < (UINT) pnod->o_ol_cnt; u++)
      {
         iInx += sprintf(pOut + iInx,
#ifdef LONG_WID
            "  %6.6d   %6.6d   %-24s  %2.2d    %3.3d    %1.1s   $%6.2f
$%7.2f  <BR>",
#else
            "  %4.4d   %6.6d   %-24s  %2.2d    %3.3d    %1.1s   $%6.2f
$%7.2f  <BR>",
#endif
            pnod->Ol[u].ol_supply_w_id,pnod->Ol[u].ol_i_id,
            pnod->Ol[u].ol_i_name,pnod->Ol[u].ol_quantity,pnod-
>Ol[u].ol_stock,
            pnod->Ol[u].ol_brand_generic,pnod->Ol[u].ol_i_price,
            pnod->Ol[u].ol_amount);
      };
      for(; u < MAX_OL; u++)
      {
         strcat(pOut + iInx," <BR>");
         iInx += 5;
      };
      sprintf(pOut + iInx,
         "Execution Status: %24.24s                   Total:  $%8.2f  "
         "</PRE><HR><BR>%s</FORM>%s",
         pnod->execution_status,pnod->total_amount,
         szMenuList,HTMLTrailer);
   }   // !bTPRslt
   else
   {
      iInx += wsprintf(pOut + iInx,
         "<PRE>                                New Order<BR>"
#ifdef LONG_WID
         "Warehouse: %6.6d   District: %2.2d
Date:<BR>"
#else
         "Warehouse: %4.4d   District: %2.2d
Date:<BR>"
#endif
         "Customer:  %4.4d   Name: %-16s   Credit: %-2s   "
         "%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>",
         pnod->w_id,pnod->d_id,
         pnod->c_id,pnod->c_last,pnod->c_credit,
         pnod->o_id);
      for(u = 0; u < MAX_OL; u++)
      {
         strcat(pOut + iInx," <BR>");
         iInx += 5;
      };
      iInx += wsprintf(pOut + iInx,
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         "Execution Status: %24.24s                    Total:"
         "</PRE><HR><BR>%s</FORM>%s",
         pnod->execution_status,szMenuList,HTMLTrailer);
   };   // bTPRslt

   return(FALSE);

};   // ProcessNewOrder

//=====================================================================
//
// Function name: ProcessPayment
//
//    ProcessPayment extracts the input data fields from pIn, processes
//    the data, and returns a response in pOut.
//
//    Result:
//       FALSE - Payment processed successfully.
//       TRUE - Payment processing failed.
//
//=====================================================================
BOOL ProcessPayment(CHAR * pIn,CHAR * pOut,TPCC_STATE * pTPCC)
{
   PAYMENT_DATA * ppd;
   TMON_STATE * pTMon;
   CHAR szWork1[60];
   CHAR szZip1[20];
   CHAR szZip2[20];
   CHAR szZip3[20];
   INT iInx;
   HRESULT hr;
   int iSize;
   int retCnt = 0;

   pTMon = &pTPCC->tsTMon;
   ppd = (PAYMENT_DATA *) pTMon->pTxnData;
   ZeroMemory(ppd,sizeof(PAYMENT_DATA));
   ppd->w_id = pTPCC->sWId;
   // Get and validate DId
   if (GetShortKey(&ppd->d_id,pIn,"DID*",pTPCC))
   {
     FormatMenu(pOut,pTPCC);
     return(TRUE);
   };
   if (ppd->d_id < MIN_DId || ppd->d_id > MAX_DId)
   {
      wsprintf(pTPCC->ErrTxt,"DId Out of Range(%ld,%ld) - %ld",
         MIN_DId,MAX_DId,ppd->d_id);
      pTPCC->iStatusId = ERR_DID_INVALID;
      FormatMenu(pOut,pTPCC);
      return(TRUE);
   };
   // Get and validate customer Id and name
   if (GetLongKey(&ppd->c_id,pIn,"CID*",pTPCC))
   {
     FormatMenu(pOut,pTPCC);
     return(TRUE);
   };
   if (GetStringKey(ppd->c_last,pIn,"CLT*",pTPCC,NAME_LEN))
   {
     FormatMenu(pOut,pTPCC);
     return(TRUE);
   };
   if (ppd->c_id == 0 && ppd->c_last[0] == 0)
   {
      strcpy(pTPCC->ErrTxt,"Error - Customer Id and Name Empty");
      pTPCC->iStatusId = ERR_IDANDNAME_EMPTY;
      FormatMenu(pOut,pTPCC);
      return(TRUE);
   };
   if (ppd->c_id != 0 && ppd->c_last[0] != 0)
   {
      strcpy(pTPCC->ErrTxt,
         "Error - Specify Customer Id or Name, not Both");
      pTPCC->iStatusId = ERR_IDANDNAME_ENTERED;
      FormatMenu(pOut,pTPCC);
      return(TRUE);
   };
   // Get and validate customer DId
   if (GetShortKey(&ppd->c_d_id,pIn,"CDI*",pTPCC))
   {
     FormatMenu(pOut,pTPCC);
     return(TRUE);
   };
   if (ppd->c_d_id < MIN_DId || ppd->c_d_id > MAX_DId)
   {
      wsprintf(pTPCC->ErrTxt,"Cust DId Out of Range(%ld,%ld) - %ld",
         MIN_DId,MAX_DId,ppd->d_id);
      pTPCC->iStatusId = ERR_DID_INVALID;
      FormatMenu(pOut,pTPCC);
      return(TRUE);
   };
   // Get and validate customer WId
#ifdef LONG_WID
   if (GetLongKey(&ppd->c_w_id,pIn,"CWI*",pTPCC))
#else
   if (GetShortKey(&ppd->c_w_id,pIn,"CWI*",pTPCC))
#endif
   {
     FormatMenu(pOut,pTPCC);
     return(TRUE);
   };
   if (ppd->c_w_id < 1)
   {
      wsprintf(pTPCC->ErrTxt,
         "Payment Contains Invalid Customer WId %ld",
         ppd->c_w_id);
      pTPCC->iStatusId = ERR_WID_INVALID;
      FormatMenu(pOut,pTPCC);
      return(TRUE);
   };
   // Get and validate amount
   if (GetAmountKey(&ppd->h_amount,pIn,"HAM*",pTPCC))
   {
     FormatMenu(pOut,pTPCC);
     return(TRUE);
   };
   if (ppd->h_amount <= 0)
   {
      wsprintf(pTPCC->ErrTxt,
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         "Payment Amount Negative or Missing");
      pTPCC->iStatusId = ERR_AMOUNT_INVALID;
      FormatMenu(pOut,pTPCC);
      return(TRUE);
   };
   iSize = pTMon->iSize;
   do
   {
      hr = pTMon->pIAllTxn->Payment(&iSize,(unsigned char**)&pTMon-
>pTxnData);
      if (retCnt > 0) Sleep(1000);
   }while ((FAILED(hr)) && (retCnt++ < INIT_RETRY));

   if (FAILED(hr))
   {
      pTPCC->iStatusId = ERR_TM_INTERFACE;
      wsprintf(pTPCC->ErrTxt,
         "COM Interface to Payment Call Failed, HRESULT %x",
         hr);
      FormatMenu(pOut,pTPCC);
      return(TRUE);
   };
   ppd = (PAYMENT_DATA *) pTMon->pTxnData;
   if (ppd->bTPRslt)
   {
      wsprintf(pTPCC->ErrTxt,
         "Payment Service Returned Error(%ld): %s",
         ppd->iTPRslt,ppd->execution_status);
      pTPCC->iStatusId = ERR_SERVICE_RSLT;
      FormatMenu(pOut,pTPCC);
      return(TRUE);
   };
   iInx = FormatRespHdr(pOut,"TPC-C Payment",pTPCC);
   FormatString(szZip1,ZIPPIC,ppd->w_zip);
   FormatString(szZip2,ZIPPIC,ppd->d_zip);
   FormatString(szZip3,ZIPPIC,ppd->c_zip);
   FormatString(szWork1,"XXXXXX-XXX-XXX-XXXX",ppd->c_phone);
   iInx += wsprintf(pOut + iInx,
         "<PRE>                                    Payment<BR>"
      "Date: %2.2d-%2.2d-%4.4d %2.2d:%2.2d:%2.2d <BR><BR>"
#ifdef LONG_WID
      "Warehouse: %6.6d"
#else
      "Warehouse: %4.4d"
#endif
      "                        District: %2.2d<BR>"
      "%-20s                     %-20s<BR>"
      "%-20s                     %-20s<BR>"
      "%-20s %-2s %10.10s       %-20s %-2s %10.10s<BR><BR>"
#ifdef LONG_WID
      "Customer: %4.4d  Cust-Warehouse: %6.6d  Cust-District: %2.2d<BR>"
#else
      "Customer: %4.4d  Cust-Warehouse: %4.4d  Cust-District: %2.2d<BR>"
#endif
      "Name:   %-16s %-2s %-16s     Since:  %2.2d-%2.2d-%4.4d<BR>"
      "        %-20s                     Credit: %-2s<BR>"
      "        %-20s                     ",
          ppd->h_date.day,ppd->h_date.month,
      ppd->h_date.year,ppd->h_date.hour,
      ppd->h_date.minute,ppd->h_date.second,
      ppd->w_id,ppd->d_id,
      ppd->w_street_1,ppd->d_street_1,
      ppd->w_street_2,ppd->d_street_2,
      ppd->w_city,ppd->w_state,szZip1,ppd->d_city,ppd->d_state,szZip2,
      ppd->c_id,ppd->c_w_id,ppd->c_d_id,
      ppd->c_first,ppd->c_middle,ppd->c_last,
      ppd->c_since.day,ppd->c_since.month,ppd->c_since.year,
      ppd->c_street_1,ppd->c_credit,ppd->c_street_2);
   iInx += sprintf(pOut + iInx,"%%Disc:  %5.2f<BR>",ppd->c_discount *
100);
   iInx += wsprintf(pOut + iInx,
      "        %-20s %-2s %10.10s       Phone:  %-19.19s<BR><BR>",
      ppd->c_city,ppd->c_state,szZip3,szWork1);
   iInx += sprintf(pOut + iInx,
      "Amount Paid:          $%7.2f      New Cust Balance: $%14.2f<BR>"
      "Credit Limit:   $%13.2f<BR><BR>",
      ppd->h_amount,ppd->c_balance,ppd->c_credit_lim);
   if (ppd->c_credit[0] == 'B' && ppd->c_credit[1] == 'C')
   {
      wsprintf(pOut + iInx,
         "Cust-Data: %-50.50s<BR>           %-50.50s<BR>           "
         "%-50.50s<BR>           %-50.50s<BR>"
         "</PRE><HR><BR>%s</FORM>%s",
         ppd->c_data,(ppd->c_data + 50),(ppd->c_data + 100),(ppd->c_data +
150),
         szMenuList,HTMLTrailer);
   }
   else
   {
      wsprintf(pOut + iInx,
         "Cust-Data: <BR><BR><BR><BR>"
         "</PRE><HR><BR>%s</FORM>%s",
         szMenuList,HTMLTrailer);
   };

   return(FALSE);

};   // ProcessPayment

//=====================================================================
//
// Function name: ProcessDelivery
//
//    ProcessDelivery extracts the input data fields from pIn, processes
//    the data, and returns a response in pOut.
//
//    Result:
//       FALSE - Delivery processed successfully.
//       TRUE - Delivery processing failed.
//
//=====================================================================
BOOL ProcessDelivery(CHAR * pIn,CHAR * pOut,TPCC_STATE * pTPCC)
{
   DELIVERY_DATA * pdd;
   TMON_STATE * pTMon;
   INT iInx;

   pTMon = &pTPCC->tsTMon;
   pdd = (DELIVERY_DATA *) pTMon->pTxnData;
   ZeroMemory(pdd,sizeof(DELIVERY_DATA));
```

```
   pdd->w_id = pTPCC->sWId;
   // Get and validate carrier id
   if (GetShortKey(&pdd->o_carrier_id,pIn,"OCD*",pTPCC))
   {
     FormatMenu(pOut,pTPCC);
     return(TRUE);
   };
   if (pdd->o_carrier_id < MIN_CARRIER ||
       pdd->o_carrier_id > MAX_CARRIER)
   {
      wsprintf(pTPCC->ErrTxt,"Carrier Id Out of Range(%ld,%ld) - %ld",
         MIN_CARRIER,MAX_CARRIER,pdd->o_carrier_id);
      pTPCC->iStatusId = ERR_CARRIER_INVALID;
      FormatMenu(pOut,pTPCC);
      return(TRUE);
   };
   GetLocalTime(&pdd->QTime);
   DeliveryPost(pdd);
   if (pdd->bTPRslt)
   {
      wsprintf(pTPCC->ErrTxt,
         "Delivery Post Returned Error(%ld): Queue Request Failed",
         pdd->iTPRslt);
      pTPCC->iStatusId = ERR_SERVICE_RSLT;
      FormatMenu(pOut,pTPCC);
      return(TRUE);
   };
   iInx = FormatRespHdr(pOut,"TPC-C Delivery",pTPCC);
   iInx += wsprintf(pOut + iInx,
      "<PRE>                                  Delivery<BR>"
#ifdef LONG_WID
      "Warehouse: %6.6d<BR><BR>"
#else
      "Warehouse: %4.4d<BR><BR>"
#endif
      "Carrier Number: %2.2d<BR><BR>"
      "Execution Status: %25.25s<BR>"
      "</PRE><HR><BR>%s</FORM>%s",
      pdd->w_id,pdd->o_carrier_id,"Delivery has been queued.",
      szMenuList,HTMLTrailer);

   return(FALSE);

};   // ProcessDelivery

//=====================================================================
//
// Function name: ProcessOrderStatus
//
//    ProcessOrderStatus extracts the input data fields from pIn,
//    processes the data, and returns a response in pOut.
//
//    Result:
//       FALSE - OrderStatus processed successfully.
//       TRUE - OrderStatus processing failed.
//
//=====================================================================
BOOL ProcessOrderStatus(CHAR * pIn,CHAR * pOut,TPCC_STATE * pTPCC)
{
   ORDER_STATUS_DATA * posd;
   TMON_STATE * pTMon;
   INT i;
   INT iInx;
   HRESULT hr;
   int iSize;
   int retCnt = 0;

   pTMon = &pTPCC->tsTMon;
   posd = (ORDER_STATUS_DATA *) pTMon->pTxnData;
   ZeroMemory(posd,sizeof(ORDER_STATUS_DATA));
   posd->w_id = pTPCC->sWId;
   if (GetShortKey(&posd->d_id,pIn,"DID*",pTPCC))
   {
     FormatMenu(pOut,pTPCC);
     return(TRUE);
   };
   if (posd->d_id < MIN_DId || posd->d_id > MAX_DId)
   {
      wsprintf(pTPCC->ErrTxt,"DId Out of Range(%ld,%ld) - %ld",
         MIN_DId,MAX_DId,posd->d_id);
      pTPCC->iStatusId = ERR_DID_INVALID;
      FormatMenu(pOut,pTPCC);
      return(TRUE);
   };
   if (GetLongKey(&posd->c_id,pIn,"CID*",pTPCC))
   {
     FormatMenu(pOut,pTPCC);
     return(TRUE);
   };
   if (GetStringKey(posd->c_last,pIn,"CLT*",pTPCC,NAME_LEN))
   {
     FormatMenu(pOut,pTPCC);
     return(TRUE);
   };
   if (posd->c_id == 0 && posd->c_last[0] == 0)
   {
      strcpy(pTPCC->ErrTxt,"Error - Customer Id and Name Empty");
      pTPCC->iStatusId = ERR_IDANDNAME_EMPTY;
      FormatMenu(pOut,pTPCC);
      return(TRUE);
   };
   if (posd->c_id != 0 && posd->c_last[0] != 0)
   {
      strcpy(pTPCC->ErrTxt,
         "Error - Specify Customer Id or Name, not Both");
      pTPCC->iStatusId = ERR_IDANDNAME_ENTERED;
      FormatMenu(pOut,pTPCC);
      return(TRUE);
   };
   iSize = pTMon->iSize;
   do
   {
      hr = pTMon->pIAllTxn->OrderStatus(&iSize,(unsigned char**)&pTMon-
>pTxnData);
      if (retCnt > 0) Sleep(1000);
   }while ((FAILED(hr)) && (retCnt++ < INIT_RETRY));

   if (FAILED(hr))
   {
      pTPCC->iStatusId = ERR_TM_INTERFACE;
```

```
      wsprintf(pTPCC->ErrTxt,
         "COM Interface to OrderStatus Call Failed, HRESULT %x",hr);

      FormatMenu(pOut,pTPCC);
      return(TRUE);
   };
   posd = (ORDER_STATUS_DATA *) pTMon->pTxnData;
   if (posd->bTPRslt)
   {
      wsprintf(pTPCC->ErrTxt,
         "Order Status Service Returned Error(%ld): %s",
         posd->iTPRslt,posd->execution_status);
      pTPCC->iStatusId = ERR_SERVICE_RSLT;
      DiagIoWrite(pTPCC->ErrTxt, DIAG_FORCE);
      FormatMenu(pOut,pTPCC);
      return(TRUE);
   };
   iInx = FormatRespHdr(pOut,"TPC-C Order-Status",pTPCC);
   iInx += wsprintf(pOut + iInx,
      "<PRE>                                Order-Status<BR>"
#ifdef LONG_WID
      "Warehouse: %6.6d   District: %2.2d<BR>"
#else
      "Warehouse: %4.4d   District: %2.2d<BR>"
#endif
      "Customer: %4.4d   Name: %-16s %-2s %-16s<BR>",
      posd->w_id,posd->d_id,
      posd->c_id,posd->c_first,posd->c_middle,posd->c_last);
   iInx += sprintf(pOut + iInx,"Cust-Balance: $%9.2f<BR><BR>",posd-
>c_balance);
   iInx += wsprintf(pOut + iInx,
      "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>",
      posd->o_id,posd->o_entry_d.day,posd->o_entry_d.month,
      posd->o_entry_d.year,posd->o_entry_d.hour,
      posd->o_entry_d.minute,posd->o_entry_d.second,
      posd->o_carrier_id);
   for(i = 0; i < posd->o_ol_cnt; i++)
   {
      iInx += sprintf(pOut + iInx,
#ifdef LONG_WID
         "  %6.6d       %6.6d     %2.2d     $%8.2f      %2.2d-%2.2d-
%4.4d<BR>",
#else
         "  %4.4d       %6.6d     %2.2d     $%8.2f      %2.2d-%2.2d-
%4.4d<BR>",
#endif
         posd->OlOrderStatusData[i].ol_supply_w_id,
         posd->OlOrderStatusData[i].ol_i_id,
         posd->OlOrderStatusData[i].ol_quantity,
         posd->OlOrderStatusData[i].ol_amount,
         posd->OlOrderStatusData[i].ol_delivery_d.day,
         posd->OlOrderStatusData[i].ol_delivery_d.month,
         posd->OlOrderStatusData[i].ol_delivery_d.year);
   };
   wsprintf(pOut + iInx,
      "<BR></PRE><HR><BR>%s</FORM>%s",szMenuList,HTMLTrailer);
   return(FALSE);

};   // ProcessOrderStatus

//=====================================================================
//
// Function name: ProcessStockLevel
//
//    ProcessStockLevel extracts the input data fields from pIn,
//    processes the data, and returns a response in pOut.
//
//    Result:
//       FALSE - StockLevel processed successfully.
//       TRUE - StockLevel processing failed.
//
//=====================================================================
BOOL ProcessStockLevel(CHAR * pIn,CHAR * pOut,TPCC_STATE * pTPCC)
{
   STOCK_LEVEL_DATA * psld;
   TMON_STATE * pTMon;
   HRESULT hr;
   INT iInx;
   int iSize;
   int retCnt = 0;

   pTMon = &pTPCC->tsTMon;
   psld = (STOCK_LEVEL_DATA *) pTMon->pTxnData;
   ZeroMemory(psld,sizeof(STOCK_LEVEL_DATA));
   psld->w_id = pTPCC->sWId;
   psld->d_id = pTPCC->sDId;
   psld->low_stock = 0;
   psld->execution_status[0] = 0;
   if (GetShortKey(&psld->thresh_hold,pIn,"TT*",pTPCC))
   {
     FormatMenu(pOut,pTPCC);
     return(TRUE);
   };
   if (psld->thresh_hold < MIN_THRESHOLD ||
       psld->thresh_hold > MAX_THRESHOLD)
   {
      wsprintf(pTPCC->ErrTxt,"Threshold Out of Range(%ld,%ld) - %ld",
         MIN_THRESHOLD,MAX_THRESHOLD,psld->thresh_hold);
      pTPCC->iStatusId = ERR_THRESHOLD_RANGE;
      FormatMenu(pOut,pTPCC);
      return(TRUE);
   };
   iSize = pTMon->iSize;
   do
   {
      hr = pTMon->pIAllTxn->StockLevel(&iSize,(unsigned char**)&pTMon-
>pTxnData);
      if (retCnt > 0) Sleep(1000);
   }while ((FAILED(hr)) && (retCnt++ < INIT_RETRY));



   if (FAILED(hr))
   {
      pTPCC->iStatusId = ERR_TM_INTERFACE;
      wsprintf(pTPCC->ErrTxt,
```

```
         "COM Interface to StockLevel Call Failed, HRESULT %x",
         hr);
      FormatMenu(pOut,pTPCC);
      return(TRUE);
   };
   psld = (STOCK_LEVEL_DATA *) pTMon->pTxnData;
   if (psld->bTPRslt)
   {
      wsprintf(pTPCC->ErrTxt,
         "Stock Level Service Returned Error(%ld): %s",
         psld->iTPRslt,psld->execution_status);
      pTPCC->iStatusId = ERR_SERVICE_RSLT;
      FormatMenu(pOut,pTPCC);
      return(TRUE);
   };
   iInx = FormatRespHdr(pOut,"TPC-C Stock Level",pTPCC);
   wsprintf(pOut + iInx,
      "<PRE>                              Stock-Level<BR>"
#ifdef LONG_WID
      "Warehouse: %6.6d   District: %2.2d<BR><BR>"
#else
      "Warehouse: %4.4d   District: %2.2d<BR><BR>"
#endif
      "Stock Level Threshold: %2.2d<BR><BR>"
      "low stock: %3.3ld</PRE><BR><HR>"
      "%s</FORM>%s",
      pTPCC->sWId,pTPCC->sDId,psld->thresh_hold,psld->low_stock,
      szMenuList,HTMLTrailer);

   return(FALSE);

};   // ProcessStockLevel

//=====================================================================
//
// Function name: GetHidden
//
//=====================================================================
BOOL GetHidden(CHAR * pMsg,UINT * uFormId,INT * iSyncId,INT * iTermId)
{
   CHAR * pPtr;
   BOOL bRslt = TRUE;

   // Extract TERMID
   pPtr = strstr(pMsg,TERMIDTOKEN);
   if (pPtr == NULL)
      goto xit;
   pPtr += strlen(TERMIDTOKEN);
   *iTermId = atoi(pPtr);

   // Extract SYNCID
   pPtr = strstr(pMsg,SYNCIDTOKEN);
   if (pPtr == NULL)
      goto xit;
   pPtr += strlen(SYNCIDTOKEN);
   *iSyncId = atoi(pPtr);

   // Extract FORMID
   pPtr = strstr(pMsg,FORMIDTOKEN);
   if (pPtr == NULL)
      goto xit;
   pPtr += strlen(FORMIDTOKEN);
   *uFormId = abs(atoi(pPtr));

   bRslt = FALSE;

xit:

   return(bRslt);

};   // GetHidden

//=====================================================================
//
// Function name: GetCmd
//
//=====================================================================
BOOL GetCmd(CHAR * pMsg,CHAR * pWork,UINT uLen)
{
   UINT u;
   CHAR * ptr;
   CHAR * pUpd;

   // Check for CMD key
   if (!(ptr = strstr(pMsg,CMDTOKEN)))
      return(CMD_NULL);
   ptr += sizeof(CMDTOKEN);
   pUpd = pWork;
   while (*ptr && *ptr != '&')
      *pUpd++ = *ptr++;
   *pUpd = 0;

   // Convert command name into command index
   for(u=0; u < CMD_MAX; u++)
   {
      if (!strcmp(szCmds[u],pWork))
         return(u);
   };

   // Command string not found
   return(CMD_NULL);

};   // GetCmd

//=====================================================================
//
// Function name: GetLongKey
//
//=====================================================================
BOOL GetLongKey(LONG * lRslt,CHAR * pHTML,CHAR * pKey,TPCC_STATE * pTPCC)
{
   if (GetKeyValue(pHTML,pKey,pTPCC->szWork,sizeof(pTPCC->szWork)))
   {
      wsprintf(pTPCC->ErrTxt,"Error - Missing %s Key",pKey);
      pTPCC->iStatusId = ERR_MISSING_KEY;
      return(TRUE);
   };
   if (pTPCC->szWork[0] != 0 )
   {
      if (CheckNumeric(pTPCC->szWork))
```

```
      {
         wsprintf(pTPCC->ErrTxt,"Error - %s Value Not Numeric",pKey);
         pTPCC->iStatusId = ERR_NOT_NUMERIC;
         return(TRUE);
      };
   };
   *lRslt = atol(pTPCC->szWork);
   return(FALSE);
};   // GetLongKey

//=====================================================================
//
// Function name: GetIntKey
//
//=====================================================================
BOOL GetIntKey(INT * iRslt,CHAR * pHTML,CHAR * pKey,TPCC_STATE * pTPCC)
{
   if (GetKeyValue(pHTML,pKey,pTPCC->szWork,sizeof(pTPCC->szWork)))
   {
      wsprintf(pTPCC->ErrTxt,"Error - Missing %s Key",pKey);
      pTPCC->iStatusId = ERR_MISSING_KEY;
      return(TRUE);
   };
   if (pTPCC->szWork[0] != 0 )
   {
      if (CheckNumeric(pTPCC->szWork))
      {
         wsprintf(pTPCC->ErrTxt,"Error - %s Value Not Numeric",pKey);
         pTPCC->iStatusId = ERR_NOT_NUMERIC;
         return(TRUE);
      };
   };
   *iRslt = atoi(pTPCC->szWork);
   return(FALSE);
};   // GetIntKey

//=====================================================================
//
// Function name: GetShortKey
//
//=====================================================================
BOOL GetShortKey(SHORT * sRslt,CHAR * pHTML,CHAR * pKey,TPCC_STATE *
pTPCC)
{
   if (GetKeyValue(pHTML,pKey,pTPCC->szWork,sizeof(pTPCC->szWork)))
   {
      wsprintf(pTPCC->ErrTxt,"Error - Missing %s Key",pKey);
      pTPCC->iStatusId = ERR_MISSING_KEY;
      return(TRUE);
   };
   if (pTPCC->szWork[0] != 0 )
   {
      if (CheckNumeric(pTPCC->szWork))
      {
         wsprintf(pTPCC->ErrTxt,"Error - %s Value Not Numeric",pKey);
         pTPCC->iStatusId = ERR_NOT_NUMERIC;
         return(TRUE);
      };
   };
   *sRslt = (SHORT) atoi(pTPCC->szWork);
   return(FALSE);
};   // GetShortKey

//=====================================================================
//
// Function name: GetStringKey
//
//=====================================================================
BOOL GetStringKey(CHAR * szRslt,CHAR * pHTML,CHAR * pKey,
                  TPCC_STATE * pTPCC,UINT uMax)
{
   UINT uLen;
   if (GetKeyValue(pHTML,pKey,pTPCC->szWork,sizeof(pTPCC->szWork)))
   {
      wsprintf(pTPCC->ErrTxt,"Error - Missing %s Key",pKey);
      pTPCC->iStatusId = ERR_MISSING_KEY;
      return(TRUE);
   };
   uLen = strlen(pTPCC->szWork);
   if (uLen > uMax)
   {
      wsprintf(pTPCC->ErrTxt,
         "Error - %s Key Input (%ld) Too Long (%ld)"
         ,pKey,uLen,uMax);
      pTPCC->iStatusId = ERR_INPUT_TOOLONG;
      return(TRUE);
   };
   _strupr(pTPCC->szWork);
   strcpy(szRslt,pTPCC->szWork);
   return(FALSE);
};   // GetStringKey

//=====================================================================
//
// Function name: GetAmountKey
//
//=====================================================================
BOOL GetAmountKey(DOUBLE * dRslt,CHAR * pHTML,CHAR * pKey,
                  TPCC_STATE * pTPCC)
{
   CHAR * ptr;
   BOOL bInvalid = FALSE;

   if (GetKeyValue(pHTML,pKey,pTPCC->szWork,sizeof(pTPCC->szWork)))
   {
      wsprintf(pTPCC->ErrTxt,"Error - Missing %s Key",pKey);
      pTPCC->iStatusId = ERR_MISSING_KEY;
      return(TRUE);
   };
   ptr = pTPCC->szWork;
   while(*ptr)
   {
      if (*ptr == '.')
      {
         ptr++;
         if (!*ptr)
            break;
         if (*ptr < '0' || *ptr > '9')
         {
            bInvalid = TRUE;
```

```
            break;
         };
         ptr++;
         if (!*ptr)
            break;
         if (*ptr < '0' || *ptr > '9')
         {
            bInvalid = TRUE;
            break;
         };
         ptr++;
         if (*ptr)
         {
            bInvalid = TRUE;
            break;
         };
         break;
      }
      else
      if (*ptr < '0' || *ptr > '9')
      {
         bInvalid = TRUE;
         break;
      };
               ptr++;
       };   // while(!*ptr)

   if (!bInvalid)
      *dRslt = atof(pTPCC->szWork);
   else
   {
      wsprintf(pTPCC->ErrTxt,
         "Error - Invalid Amount Format (%s)",pTPCC->szWork);
      pTPCC->iStatusId = ERR_AMOUNT_BADFORM;
   };

   return(bInvalid);

};   // GetAmountKey

//=====================================================================
//
// Function name: GetKeyValue
//   This function parses an HTTP formatted string for specific key
//   values.  HTTP keys terminate with '='.  HTTP values terminate
//   with an '&' or '\0'.
//
//    Result:
//       FALSE - Key found, string value return in pValue
//       TRUE - Key not found
//
//=====================================================================
BOOL GetKeyValue(CHAR * pHTML,CHAR * pKey,CHAR * pValue,UINT uMax)
{
   CHAR * ptr;
   if (!(ptr=strstr(pHTML,pKey)))
      return(TRUE);
   if (!(ptr=strchr(ptr,'')))
      return(TRUE);
   ptr++;
   uMax--;
   while (*ptr && *ptr != '&' && uMax)
   {
      *pValue++ = *ptr++;
      uMax--;
   };
   *pValue = 0;
   return(FALSE);
};   // GetKeyValue

//=====================================================================
//
// Function name: FormatLogin
//
//=====================================================================
VOID FormatLogin(CHAR * pOut,CHAR * pAddText)
{
   wsprintf(pOut,"%s<BR>%s<BR>%s",szFormLogin,pAddText,HTMLTrailer);
};   // FormatLogin

//=====================================================================
//
// Function name: FormatMenu
//
//=====================================================================
VOID FormatMenu(CHAR * pOut,TPCC_STATE * pTPCC)
{
   wsprintf(pOut,
      "%s<HTML><HEAD><TITLE>TPC-C MainMenu</TITLE></HEAD><BODY>"
      "Select Desired Transaction.<BR><HR>"
      "<FORM ACTION=\"tpcc.dll\"METHOD=\"GET\">"
      "<INPUT TYPE=\"hidden\" NAME=\"STATUSID\" VALUE=\"%d\">"
      "<INPUT TYPE=\"hidden\" NAME=\"TERMID\" VALUE=\"%d\">"
      "<INPUT TYPE=\"hidden\" NAME=\"SYNCID\" VALUE=\"%d\">"
      "<INPUT TYPE=\"hidden\" NAME=\"FORMID\" VALUE=\"%d\">"
      "%s</FORM><BR>%s<BR>%s",
      HTTPHdr,pTPCC->iStatusId,pTPCC->iTermId,pTPCC->iSyncId,FORM_MENU,
      szMenuList,pTPCC->ErrTxt,HTMLTrailer);
};   // FormatMenu

//=====================================================================
//
// Function name: FormatNewOrder
//
//=====================================================================
VOID FormatNewOrder(CHAR * pOut,TPCC_STATE * pTPCC)
{
   INT iInx;
   pTPCC->uFormId = FORM_NEWORDER;
   iInx = FormatFormHdr(pOut,"TPC-C New Order",pTPCC);
   iInx += wsprintf(pOut + iInx,
      "<PRE>                                New Order<BR>"
#ifdef LONG_WID
      "Warehouse: %6.6d   District: <INPUT NAME=\"DID*\" SIZE=1>
Date:<BR>",
#else
      "Warehouse: %4.4d   District: <INPUT NAME=\"DID*\" SIZE=1>
Date:<BR>",
#endif
      pTPCC->sWId);
```

```
        strcpy(pOut + iInx,
      "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>"
#ifdef LONG_WID
      " <INPUT NAME=\"SP00*\" SIZE=6>  <INPUT NAME=\"IID00*\" SIZE=6>
<INPUT NAME=\"Qty00*\" SIZE=1><BR>"
      " <INPUT NAME=\"SP01*\" SIZE=6>  <INPUT NAME=\"IID01*\" SIZE=6>
<INPUT NAME=\"Qty01*\" SIZE=1><BR>"
      " <INPUT NAME=\"SP02*\" SIZE=6>  <INPUT NAME=\"IID02*\" SIZE=6>
<INPUT NAME=\"Qty02*\" SIZE=1><BR>"
      " <INPUT NAME=\"SP03*\" SIZE=6>  <INPUT NAME=\"IID03*\" SIZE=6>
<INPUT NAME=\"Qty03*\" SIZE=1><BR>"
      " <INPUT NAME=\"SP04*\" SIZE=6>  <INPUT NAME=\"IID04*\" SIZE=6>
<INPUT NAME=\"Qty04*\" SIZE=1><BR>"
      " <INPUT NAME=\"SP05*\" SIZE=6>  <INPUT NAME=\"IID05*\" SIZE=6>
<INPUT NAME=\"Qty05*\" SIZE=1><BR>"
      " <INPUT NAME=\"SP06*\" SIZE=6>  <INPUT NAME=\"IID06*\" SIZE=6>
<INPUT NAME=\"Qty06*\" SIZE=1><BR>"
      " <INPUT NAME=\"SP07*\" SIZE=6>  <INPUT NAME=\"IID07*\" SIZE=6>
<INPUT NAME=\"Qty07*\" SIZE=1><BR>"
      " <INPUT NAME=\"SP08*\" SIZE=6>  <INPUT NAME=\"IID08*\" SIZE=6>
<INPUT NAME=\"Qty08*\" SIZE=1><BR>"
      " <INPUT NAME=\"SP09*\" SIZE=6>  <INPUT NAME=\"IID09*\" SIZE=6>
<INPUT NAME=\"Qty09*\" SIZE=1><BR>"
      " <INPUT NAME=\"SP10*\" SIZE=6>  <INPUT NAME=\"IID10*\" SIZE=6>
<INPUT NAME=\"Qty10*\" SIZE=1><BR>"
      " <INPUT NAME=\"SP11*\" SIZE=6>  <INPUT NAME=\"IID11*\" SIZE=6>
<INPUT NAME=\"Qty11*\" SIZE=1><BR>"
      " <INPUT NAME=\"SP12*\" SIZE=6>  <INPUT NAME=\"IID12*\" SIZE=6>
<INPUT NAME=\"Qty12*\" SIZE=1><BR>"
      " <INPUT NAME=\"SP13*\" SIZE=6>  <INPUT NAME=\"IID13*\" SIZE=6>
<INPUT NAME=\"Qty13*\" SIZE=1><BR>"
      " <INPUT NAME=\"SP14*\" SIZE=6>  <INPUT NAME=\"IID14*\" SIZE=6>
<INPUT NAME=\"Qty14*\" SIZE=1><BR>"
#else
      " <INPUT NAME=\"SP00*\" SIZE=4>  <INPUT NAME=\"IID00*\" SIZE=6>
<INPUT NAME=\"Qty00*\" SIZE=1><BR>"
      " <INPUT NAME=\"SP01*\" SIZE=4>  <INPUT NAME=\"IID01*\" SIZE=6>
<INPUT NAME=\"Qty01*\" SIZE=1><BR>"
      " <INPUT NAME=\"SP02*\" SIZE=4>  <INPUT NAME=\"IID02*\" SIZE=6>
<INPUT NAME=\"Qty02*\" SIZE=1><BR>"
      " <INPUT NAME=\"SP03*\" SIZE=4>  <INPUT NAME=\"IID03*\" SIZE=6>
<INPUT NAME=\"Qty03*\" SIZE=1><BR>"
      " <INPUT NAME=\"SP04*\" SIZE=4>  <INPUT NAME=\"IID04*\" SIZE=6>
<INPUT NAME=\"Qty04*\" SIZE=1><BR>"
      " <INPUT NAME=\"SP05*\" SIZE=4>  <INPUT NAME=\"IID05*\" SIZE=6>
<INPUT NAME=\"Qty05*\" SIZE=1><BR>"
      " <INPUT NAME=\"SP06*\" SIZE=4>  <INPUT NAME=\"IID06*\" SIZE=6>
<INPUT NAME=\"Qty06*\" SIZE=1><BR>"
      " <INPUT NAME=\"SP07*\" SIZE=4>  <INPUT NAME=\"IID07*\" SIZE=6>
<INPUT NAME=\"Qty07*\" SIZE=1><BR>"
      " <INPUT NAME=\"SP08*\" SIZE=4>  <INPUT NAME=\"IID08*\" SIZE=6>
<INPUT NAME=\"Qty08*\" SIZE=1><BR>"
      " <INPUT NAME=\"SP09*\" SIZE=4>  <INPUT NAME=\"IID09*\" SIZE=6>
<INPUT NAME=\"Qty09*\" SIZE=1><BR>"
      " <INPUT NAME=\"SP10*\" SIZE=4>  <INPUT NAME=\"IID10*\" SIZE=6>
<INPUT NAME=\"Qty10*\" SIZE=1><BR>"
      " <INPUT NAME=\"SP11*\" SIZE=4>  <INPUT NAME=\"IID11*\" SIZE=6>
<INPUT NAME=\"Qty11*\" SIZE=1><BR>"
      " <INPUT NAME=\"SP12*\" SIZE=4>  <INPUT NAME=\"IID12*\" SIZE=6>
<INPUT NAME=\"Qty12*\" SIZE=1><BR>"
      " <INPUT NAME=\"SP13*\" SIZE=4>  <INPUT NAME=\"IID13*\" SIZE=6>
<INPUT NAME=\"Qty13*\" SIZE=1><BR>"
      " <INPUT NAME=\"SP14*\" SIZE=4>  <INPUT NAME=\"IID14*\" SIZE=6>
<INPUT NAME=\"Qty14*\" SIZE=1><BR>"
#endif
      "Execution Status:
Total:<BR><HR>"
      "<INPUT TYPE=\"submit\"NAME=\"CMD\" VALUE=\"Process\">"
      "<INPUT TYPE=\"submit\"NAME=\"CMD\" VALUE=\"Menu\">"
      "</FORM></BODY></HTML>");
};   // FormatNewOrder

//=====================================================================
//
// Function name: FormatPayment
//
//=====================================================================
VOID FormatPayment(CHAR * pOut,TPCC_STATE * pTPCC)
{
   INT iInx;
   pTPCC->uFormId = FORM_PAYMENT;
   iInx = FormatFormHdr(pOut,"TPC-C Payment",pTPCC);
   iInx += wsprintf(pOut + iInx,
      "<PRE>                                  Payment<BR>"
      "Date:<BR><BR>"
#ifdef LONG_WID
      "Warehouse: %6.6d",
#else
      "Warehouse: %4.4d",
#endif
      pTPCC->sWId);
   strcpy(pOut + iInx,
      "                          District: <INPUT NAME=\"DID*\"
SIZE=1><BR><BR><BR><BR><BR>"
      "Customer: <INPUT NAME=\"CID*\" SIZE=4>"
#ifdef LONG_WID
      "Cust-Warehouse: <INPUT NAME=\"CWI*\" SIZE=6>  "
#else
      "Cust-Warehouse: <INPUT NAME=\"CWI*\" SIZE=4>  "
#endif
      "Cust-District: <INPUT NAME=\"CDI*\" SIZE=1><BR>"
      "Name:                       <INPUT NAME=\"CLT*\" SIZE=16>
Since:<BR>"
      "                                                Credit:<BR>"
      "                                                Disc:<BR>"
      "                                                Phone:<BR><BR>"
      "Amount Paid:          $<INPUT NAME=\"HAM*\" SIZE=7>      New Cust
Balance:<BR>"
      "Credit Limit:<BR><BR>Cust-Data: <BR><BR><BR><BR></PRE><HR>"
      "<INPUT TYPE=\"submit\"NAME=\"CMD\" VALUE=\"Process\">"
      "<INPUT TYPE=\"submit\"NAME=\"CMD\" VALUE=\"Menu\">"
      "</FORM></BODY></HTML>");
};   // FormatPayment
```

```
//=====================================================================
//
// Function name: FormatDelivery
//
//=====================================================================
VOID FormatDelivery(CHAR * pOut,TPCC_STATE * pTPCC)
{
   INT iInx;
   pTPCC->uFormId = FORM_DELIVERY;
   iInx = FormatFormHdr(pOut,"TPC-C Delivery",pTPCC);
   wsprintf(pOut + iInx,
      "<PRE>                                  Delivery<BR>"
#ifdef LONG_WID
      "Warehouse: %6.6d<BR><BR>"
#else
      "Warehouse: %4.4d<BR><BR>"
#endif
      "Carrier Number: <INPUT NAME=\"OCD*\" SIZE=1><BR><BR>"
      "Execution Status:<BR></PRE><HR>"
      "<INPUT TYPE=\"submit\"NAME=\"CMD\" VALUE=\"Process\">"
      "<INPUT TYPE=\"submit\"NAME=\"CMD\" VALUE=\"Menu\">"
      "</FORM></BODY></HTML>",
      pTPCC->sWId);
};   // FormatDelivery

//=====================================================================
//
// Function name: FormatOrderStatus
//
//=====================================================================
VOID FormatOrderStatus(CHAR * pOut,TPCC_STATE * pTPCC)
{
   INT iInx;
   pTPCC->uFormId = FORM_ORDERSTATUS;
   iInx = FormatFormHdr(pOut,"TPC-C Order-Status",pTPCC);
   wsprintf(pOut + iInx,
      "<PRE>                                Order-Status<BR>"
#ifdef LONG_WID
      "Warehouse: %6.6d   "
#else
      "Warehouse: %4.4d   "
#endif
      "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></PRE><HR>"
      "<INPUT TYPE=\"submit\"NAME=\"CMD\" VALUE=\"Process\">"
      "<INPUT TYPE=\"submit\"NAME=\"CMD\" VALUE=\"Menu\">"
      "</FORM></BODY></HTML>",
      pTPCC->sWId);
};   // FormatOrderStatus

//=====================================================================
//
// Function name: FormatStockLevel
//
```

```
//=====================================================================
VOID FormatStockLevel(CHAR * pOut,TPCC_STATE * pTPCC)
{
   INT iInx;
   pTPCC->uFormId = FORM_STOCKLEVEL;
   iInx = FormatFormHdr(pOut,"TPC-C Stock Level",pTPCC);
   wsprintf(pOut + iInx,
      "<PRE>                                Stock-Level<BR>"
#ifdef LONG_WID
      "Warehouse: %6.6d   District: %2.2d<BR><BR>"
#else
      "Warehouse: %4.4d   District: %2.2d<BR><BR>"
#endif
      "Stock Level Threshold: <INPUT NAME=\"TT*\"SIZE=2><BR><BR>"
      "low stock:    <BR><HR>"
      "<INPUT TYPE=\"submit\"NAME=\"CMD\" VALUE=\"Process\">"
      "<INPUT TYPE=\"submit\"NAME=\"CMD\" VALUE=\"Menu\">"
      "</FORM></BODY></HTML>",
      pTPCC->sWId,pTPCC->sDId);
};   // FormatStockLevel

//=====================================================================
//
// Function name: FormatFormHdr
//
//=====================================================================
INT FormatFormHdr(CHAR * pOut,CHAR * pTitle,TPCC_STATE * pTPCC)
{
   return(wsprintf(pOut,
      "%s<HTML><HEAD><TITLE>%s</TITLE></HEAD>"
      "<FORM ACTION=\"tpcc.dll\" METHOD=\"GET\">"
      "<INPUT TYPE=\"hidden\" NAME=\"PI*\" VALUE=\"\">"
      "<INPUT TYPE=\"hidden\" NAME=\"STATUSID\" VALUE=\"0\">"
      "<INPUT TYPE=\"hidden\" NAME=\"FORMID\" VALUE=\"%d\">"
      "<INPUT TYPE=\"hidden\" NAME=\"TERMID\" VALUE=\"%d\">"
      "<INPUT TYPE=\"hidden\" NAME=\"SYNCID\" VALUE=\"%d\">",
      HTTPHdr,pTitle,pTPCC->uFormId,pTPCC->iTermId,pTPCC->iSyncId)
      );
};   // FormatFormHdr

//=====================================================================
//
// Function name: FormatRespHdr
//
//=====================================================================
INT FormatRespHdr(CHAR * pOut,CHAR * pTitle,TPCC_STATE * pTPCC)
{
   return(wsprintf(pOut,
      "%s<HTML><HEAD><TITLE>%s</TITLE></HEAD>"
      "<FORM ACTION=\"tpcc.dll\" METHOD=\"GET\">"
      "<INPUT TYPE=\"hidden\" NAME=\"STATUSID\" VALUE=\"%d\">"
      "<INPUT TYPE=\"hidden\" NAME=\"FORMID\" VALUE=\"%d\">"
      "<INPUT TYPE=\"hidden\" NAME=\"TERMID\" VALUE=\"%d\">"
      "<INPUT TYPE=\"hidden\" NAME=\"SYNCID\" VALUE=\"%d\">",
      HTTPHdr,pTitle,pTPCC->iStatusId,pTPCC->uFormId,
      pTPCC->iTermId,pTPCC->iSyncId)
      );
};   // FormatRespHdr

//=====================================================================
```

```
//
// Function name: FormatString
//
//    Encodes formatted string for HTML transmission.
//
//=========================================================================
VOID FormatString(CHAR * pOut,CHAR * pPic,CHAR * pIn)
{
   while(*pPic)
   {
      if (*pPic == 'X' )
      {
         if (*pIn)
            *pOut++ = *pIn++;
         else
            *pOut++ = ' ';
      }
      else
         *pOut++ = *pPic;
      pPic++;
   };
   *pOut = 0;
};   // FormatString

//=========================================================================
// FUNCTION: UtilStrCpy
//
//    Copies n characters from string pSrc to pDst and places a null
//    null character at the end of the destination string.  Unlike
//    strncpy this function ensures that the result string is always
//    null terminated.
//
//=========================================================================
VOID UtilStrCpy(CHAR * pDest,CHAR * pSrc,INT n)
{
   strncpy(pDest,pSrc,n);
   pDest[n] = '\0';
   return;
};   // UtilStrCpy

//=========================================================================
//
// Function name: CheckNumeric
//
//    Result
//       FALSE - string is all numeric
//       TRUE - sting contains non-numeric characters
//
//=========================================================================
BOOL CheckNumeric(CHAR * pNum)
{
   if (*pNum == 0 )
      return(TRUE);
   while (*pNum && isdigit(*pNum))
      pNum++;
   return(*pNum);
};   // CheckNumeric


//=========================================================================
```

```
//
// Function name: WriteEventLog
//
//=========================================================================
void WriteEventLog(char * pMsg,bool bError)
{
   WORD wType;
   char szHeader[100];
   char * pDMsgs[2];

   char *pProgId = "Testing";

   HANDLE hEventLog = NULL;
   if (bError)
      wType = EVENTLOG_ERROR_TYPE;
   else
      wType = EVENTLOG_INFORMATION_TYPE;
   hEventLog = RegisterEventSource(NULL,pProgId);
   wsprintf(szHeader,"%s (%ld)\n",pProgId,GetCurrentThreadId());
   pDMsgs[0] = szHeader;
   pDMsgs[1] = pMsg;
   if (hEventLog != NULL)
   {
      ReportEvent(hEventLog,           // event log handle
                  wType,               // event type
                  0,                   // category zero
                  0,                   // no event identifier
                  NULL,                // no user security identifier
                  2,                   // # of substitution strings
                  0,                   // no binary data
                  (LPCTSTR *) pDMsgs,  // address of string array
                  NULL);               // address of binary data
      DeregisterEventSource(hEventLog);
   };
   return;
};   // WriteEventLog
```

delivery.h

```
// delivery.h
//
// Copyright Unisys, 1999

#define DEFAULTDQSIZE 2000

bool DeliveryInit(long lSetThreads,long lSetQSize,char * pszPath);
void DeliveryTerm(void);
bool DeliveryPost(DELIVERY_DATA * pdd);
```

delivery.cpp

```
// delivery.cpp
//
// Copyright Unisys, 1999

#include <windows.h>
```

```
#include <stdio.h>
#include <time.h>
#include <sys\timeb.h>
#include <process.h>

#include "..\tpccsvr\tpcc.h"
#include "tmon.h"
#include "diagio.h"
#include "delivery.h"

CRITICAL_SECTION csDQRead;
CRITICAL_SECTION csDQWrite;
HANDLE hDQRead;
HANDLE hDQStart;
bool bDQStarted = FALSE;
bool bDQQuit = FALSE;
long lDeliveryThreads;
long lDQSize;
char szPath[200];
long lDeliveryActive = 0;
typedef struct
{
   bool bInUse;
   DELIVERY_DATA ddEntry;
} DELIVERY_QUEUE;
DELIVERY_QUEUE * pDQ;
long lDQNextWrite = 0;
long lDQNextRead = 0;

bool DoDQStart(void);
UINT WINAPI DoDelivery(void * Unused);
void CalculateElapsed(int * pElapsed,LPSYSTEMTIME lpBegin,
                         LPSYSTEMTIME lpEnd);

//=====================================================================
//
// Function name: DeliveryInit
//
//=====================================================================
bool DeliveryInit(long lSetThreads,long lSetQSize,char * pszPath)
{
   char szDiag[MAX_DIAG_SZ];

   lDeliveryThreads = lSetThreads;
   lDQSize = lSetQSize;
   if (lDQSize <= 0)
      lDQSize = DEFAULTDQSIZE;
   strcpy(szPath,pszPath);
   InitializeCriticalSection(&csDQRead);
   InitializeCriticalSection(&csDQWrite);
   hDQRead = CreateEvent(NULL,TRUE,FALSE,NULL);
   if (!hDQRead)
   {
      wsprintf(szDiag,"DeliveryInit: Create DQRead Event Failure (%ld)\n",
         GetLastError());
      DiagIoWrite(szDiag,DIAG_ERROR);
      return(TRUE);
   };
   pDQ = (DELIVERY_QUEUE *) calloc(lDQSize,sizeof(DELIVERY_QUEUE));
   if (pDQ == NULL)
   {
      DiagIoWrite("DeliveryInit: Allocate Delivery Queue
Failure\n",DIAG_ERROR);
      return(TRUE);
   };
   wsprintf(szDiag,
      "DeliveryInit: Threads = %ld, DQSize(entries) = %ld\n",
      lDeliveryThreads,lDQSize);
   DiagIoWrite(szDiag,DIAG_FORCE);
   return(FALSE);
};   // DeliveryInit

//=====================================================================
//
// Function name: DoDQStart
//
//=====================================================================
bool DoDQStart(void)
{
   UINT uThread;
   ULONG hThread;
   DWORD dwRslt;
   char szDiag[MAX_DIAG_SZ];
   void * Unused = NULL;
   int i;

   bDQStarted = TRUE;
   hDQStart = CreateEvent(NULL,TRUE,FALSE,NULL);
   if (!hDQStart)
   {
      wsprintf(szDiag,"DoDQStart: Create Event Failure (%ld)\n",
         GetLastError());
      DiagIoWrite(szDiag,DIAG_ERROR);
      return(TRUE);
   };
   for (i = 0; i < lDeliveryThreads; i++)
   {
      hThread =
         _beginthreadex(NULL,
                        0,
                        DoDelivery,
                        Unused,
                        0,
                        &uThread);
      if (hThread == 0)
      {
         wsprintf(szDiag,
            "DoDQStart: Begin Delivery Thread(%d) Failed(%ld)\n",
            i + 1,errno);
         DiagIoWrite(szDiag,DIAG_ERROR);
         return(TRUE);
      };
      dwRslt = WaitForSingleObject(hDQStart,60000);
      if (dwRslt == WAIT_TIMEOUT)
      {
         DiagIoWrite("DoDQStart: Wait Delivery Start Timed
Out\n",DIAG_ERROR);
         return(TRUE);
      };
      if (lDeliveryActive != (i + 1))
```

```
      {
         wsprintf(szDiag,
            "DoDQStart: Delivery Thread Initialization Failed(%ld)\n",
            i + 1);
         DiagIoWrite(szDiag,DIAG_ERROR);
         return(TRUE);
      };
      ResetEvent(hDQStart);
   };   // for (lDeliveryThreads)
   CloseHandle(hDQStart);
   return(FALSE);
};   // DoDQStart

//=========================================================================
//
// Function name: DeliveryTerm
//
//=========================================================================
void DeliveryTerm(void)
{
   int i = 0;
   bDQQuit = TRUE;
   while (i < 12 && lDeliveryActive > 0)
   {
      SetEvent(hDQRead);
      Sleep(5000);
      i++;
   };
   if (lDeliveryActive != 0)
   {
      CHAR szDiag[MAX_DIAG_SZ];
      wsprintf(szDiag,
         "DeliveryTerm: %ld DeliveryThreads still active\n",
         lDeliveryThreads);
      DiagIoWrite(szDiag,DIAG_ERROR);
   };
   free(pDQ);
   CloseHandle(hDQRead);
   DeleteCriticalSection(&csDQWrite);
   DeleteCriticalSection(&csDQRead);
   return;
};   // DeliveryTerm

//=========================================================================
//
// Function name: DeliveryPost
//
//=========================================================================
bool DeliveryPost(DELIVERY_DATA * pPost)
{
   DELIVERY_QUEUE * pDQSlot;
   DELIVERY_DATA * pddEntry;
   if (!bDQStarted)
   {
      if (DoDQStart())
      {
         pPost->bTPRslt = TRUE;
         pPost->iTPRslt = SVCERR_DQSTART;
         return(TRUE);
      };
   };
   __try
   {
      EnterCriticalSection(&csDQWrite);
      pDQSlot = &pDQ[lDQNextWrite];
      if (pDQSlot->bInUse)
      {
         char szDiag[MAX_DIAG_SZ];
         pPost->bTPRslt = TRUE;
         pPost->iTPRslt = SVCERR_DQFULL;
         wsprintf(szDiag,
            "Delivery Post: Queue Limit (%d) Exceeded\n",
            lDQSize);
         DiagIoWrite(szDiag,DIAG_ERROR);
         return(TRUE);
      };
      pddEntry = &pDQSlot->ddEntry;
      memcpy(pddEntry,pPost,sizeof(DELIVERY_DATA));
      pDQSlot->bInUse = TRUE;
      if (lDQNextWrite == lDQNextRead)
         SetEvent(hDQRead);
      lDQNextWrite++;
      if (lDQNextWrite == lDQSize)
         lDQNextWrite = 0;
   }
   __finally
   {
      LeaveCriticalSection(&csDQWrite);
   };
   pPost->bTPRslt = FALSE;
   pPost->iTPRslt = SVC_NOERROR;
   return(FALSE);
};   // DeliveryPost

//=========================================================================
//
// Function name: DoDelivery
//
//=========================================================================
UINT WINAPI DoDelivery(void * Unused)
{
   FILE *fpLog;
   char  szLogTitle[300];
   bool bFlush = FALSE;
   DELIVERY_QUEUE * pDQSlot;
   DELIVERY_DATA * pddEntry;
   DELIVERY_DATA * pdd;
   TMON_STATE tsState;
   TMON_STATE * pTMon;
   HRESULT hr;
   int iSize;
   long lMyId;
   char szTMErrTxt[500];
   char szDiag[MAX_DIAG_SZ];
   int iElapsed;
   int iInx;
   long lDQReport = 0;
   bool bDQReport = FALSE;
```

```
lMyId = InterlockedIncrement(&lDeliveryActive);
pTMon = &tsState;
pTMon->pIAllTxn = NULL;
pTMon->pTxnData = NULL;
pTMon->pszErrTxt = szTMErrTxt;
if (TMInit(pTMon))
{
   wsprintf(szDiag,"DoDelivery(%ld): TMInit %s\n",lMyId,szTMErrTxt);
   DiagIoWrite(szDiag,DIAG_ERROR);
   InterlockedDecrement(&lDeliveryActive);
   SetEvent(hDQStart);
   return(1);
};
wsprintf(szLogTitle,"%sdelilog%ld",szPath,lMyId);
fpLog = fopen(szLogTitle,"ab");
     if (!fpLog)
{
   wsprintf(szDiag,
      "DoDelivery(%ld): LogFile %s Open Failed (%ld)\n",
      lMyId,szLogTitle,GetLastError());
   DiagIoWrite(szDiag,DIAG_ERROR);
   InterlockedDecrement(&lDeliveryActive);
   SetEvent(hDQStart);
   return(1);
};
wsprintf(szDiag,"DoDelivery(%ld): Initialized\n",lMyId);
DiagIoWrite(szDiag,DIAG_FORCE);
SetEvent(hDQStart);

while (!bDQQuit)
{
   EnterCriticalSection(&csDQRead);
   WaitForSingleObject(hDQRead,INFINITE);
   if (bDQQuit)
   {
      LeaveCriticalSection(&csDQRead);
      break;
   };
   pDQSlot = &pDQ[lDQNextRead];
   if (!pDQSlot->bInUse)
   {
      wsprintf(szDiag,
         "DoDelivery(%ld): QSlot for Read Not InUse (%ld)\n",
      lMyId);
      DiagIoWrite(szDiag,DIAG_ERROR);
      LeaveCriticalSection(&csDQRead);
      break;
   };
   pddEntry = &pDQSlot->ddEntry;
   pdd = (DELIVERY_DATA *) pTMon->pTxnData;
   memcpy(pdd,pddEntry,sizeof(DELIVERY_DATA));
   EnterCriticalSection(&csDQWrite);
   pDQSlot->bInUse = FALSE;
   lDQNextRead++;
   if (lDQNextRead == lDQSize)
   {
      lDQNextRead = 0;
      bDQReport = TRUE;
      lDQReport = lDQNextWrite;
   };
      if (lDQNextRead == lDQNextWrite)
         ResetEvent(hDQRead);
      LeaveCriticalSection(&csDQWrite);
      LeaveCriticalSection(&csDQRead);
      // Process delivery transaction
      iSize = pTMon->iSize;
      hr = pTMon->pIAllTxn->Delivery(&iSize,(unsigned char**)&pTMon-
>pTxnData);
      if (FAILED(hr))
      {
         wsprintf(szDiag,
            "DoDelivery(%ld): COM Interface Call Failed HRESULT %x\n",
            lMyId,hr);
         DiagIoWrite(szDiag,DIAG_ERROR);
         break;
      };
      pdd = (DELIVERY_DATA *) pTMon->pTxnData;
      GetLocalTime(&pdd->EndTime);
      iElapsed = 9999999;
      if (!pdd->bTPRslt)
         CalculateElapsed(&iElapsed,&pdd->QTime,&pdd->EndTime);
      iInx =  wsprintf(szDiag,

"%4.4d/%2.2d/%2.2d,%2.2d:%2.2d:%2.2d:%3.3d,%2.2d:%2.2d:%2.2d:%3.3d,"
         "%d,%d,%d,%d,%d,%d,%d,%d,%d,%d,%d,%d,%d,%d,%d,%d\r\n",
         pdd->EndTime.wYear,pdd->EndTime.wMonth,pdd->EndTime.wDay,
         pdd->QTime.wHour,pdd->QTime.wMinute,
         pdd->QTime.wSecond,pdd->QTime.wMilliseconds,
         pdd->EndTime.wHour,pdd->EndTime.wMinute,
         pdd->EndTime.wSecond,pdd->EndTime.wMilliseconds,
         iElapsed,pdd->w_id,pdd->o_carrier_id,
         pdd->o_id[0],pdd->o_id[1],pdd->o_id[2],pdd->o_id[3],pdd->o_id[4],
         pdd->o_id[5],pdd->o_id[6],pdd->o_id[7],pdd->o_id[8],pdd->o_id[9]
);
      fwrite(szDiag,iInx,1,fpLog);
      if (bDQReport)
      {
         wsprintf(szDiag,"DoDelivery(%ld): DQDepth
%ld\n",lMyId,lDQReport);
         DiagIoWrite(szDiag,DIAG_FORCE);
         bDQReport = FALSE;
      };
   };   // while !bDQQuit

   if (fpLog)
      fclose(fpLog);
   TMDone(pTMon);
   InterlockedDecrement(&lDeliveryActive);
   wsprintf(szDiag,"DoDelivery(%ld): Shutdown\n",lMyId);
   DiagIoWrite(szDiag,DIAG_FORCE);
   return(0);
};   // DoDelivery

//=====================================================================
//
// Function name: CalculateElapsed (milliseconds)
//
//=====================================================================
void CalculateElapsed(int * pElapsed,LPSYSTEMTIME lpBegin,
                          LPSYSTEMTIME lpEnd)
```

```
{
   int tmBegin;
   int tmEnd;
   tmBegin = (lpBegin->wHour * 3600000) + (lpBegin->wMinute * 60000) +
      (lpBegin->wSecond * 1000) + lpBegin->wMilliseconds;
   tmEnd = (lpEnd->wHour * 3600000) + (lpEnd->wMinute * 60000) +
      (lpEnd->wSecond * 1000) + lpEnd->wMilliseconds;
   *pElapsed = tmEnd - tmBegin;
   // Check for day boundry, this will function for 24 hour period but
   // will fail over a 48 hours period.
   if (*pElapsed < 0)
      *pElapsed = *pElapsed + (24 * 60 * 60 * 1000);
   return;
};   // CalculateElapsed
```

term.h

```
// term.h
//
// Copyright Unisys, 1999

#include <sys\timeb.h>

#define TMILLI_TIMEOUT 3600000       // One hour

typedef struct
{
   BOOL bInUse;                        // In use flag
   INT iTermId;                        // TermId
   LPVOID ConnID;                      // Connection Id
   INT  iSyncId;                       // Sync Id
#ifdef LONG_WID
   LONG sWId;                          // TPCC WareHouse Id
#else
   SHORT sWId;
#endif
   SHORT sDId;                         // TPCC District Id
   struct _timeb tbLastAccess;         // Last activity timestamp
} TERM_STATE;

BOOL TermInit(INT iSetMaxTerm);
VOID TermTerm(VOID);
TERM_STATE * TermAlloc(VOID);
TERM_STATE * TermGet(INT iTermId);
BOOL TermFree(INT iTermId);
```

term.cpp

```
// term.cpp
//
// Copyright Unisys, 1999
//
#include <windows.h>
#include <stdio.h>
#include "diagio.h"
#include "timesupp.h"
#include "term.h"
TERM_STATE * pTArray;
INT iNextTerm = 0;
INT iMaxTerm = 0;
CRITICAL_SECTION csTerm;

VOID TermMaint(VOID);

//=====================================================================
//
// Function name: TermInit
//    Creates and initializes the first TERMINITIAL TArray entries.
//    Initializes critical section to control access to TArray.  Assumes
//    access to function is single threaded, no other threads will start
//    until this function completes and that function is called once
//    (DLL_PROCESS_ATTACH).
//
// Returns:
//    FALSE TArray allocated and initialized
//    TRUE  TArray allocation failure
//
//=====================================================================
BOOL TermInit(INT iSetMaxTerm)
{
   INT iTermId;
   CHAR szDiag[MAX_DIAG_SZ];
   if (pTArray != NULL)
   {
      wsprintf(szDiag,"TermInit(%ld): TArray Already Initialized\n",
         GetCurrentThreadId());
      DiagIoWrite(szDiag,DIAG_ERROR);
      return(TRUE);
   };
   InitializeCriticalSection(&csTerm);
   iMaxTerm = iSetMaxTerm;
   pTArray = (TERM_STATE *) malloc(sizeof(TERM_STATE) * (iMaxTerm + 1));
   if (pTArray == NULL)
   {
      wsprintf(szDiag,"TermInit(%ld): malloc failed (%ld)\n",
         GetCurrentThreadId(),GetLastError());
      DiagIoWrite(szDiag,DIAG_ERROR);
      return(TRUE);
   }
   for (iTermId = 1; iTermId <= iMaxTerm; iTermId++)
      TermFree(iTermId);
   iNextTerm = 1;
   return(FALSE);
};   // TermInit

//=====================================================================
//
// Function name: TermTerm
//    Frees TArray and deletes csTerm critical section.  Assumes access
//    to function is single threaded and no other threads are actively
//    accessing TArray entries (DLL_PROCESS_DETACH).
//
//=====================================================================
VOID TermTerm(VOID)
{
   DeleteCriticalSection(&csTerm);
   if (pTArray != NULL)
```

```
      free(pTArray);
   iNextTerm = 0;
   iMaxTerm =0;
};   // TermTerm

//=====================================================================
//
// Function name: TermAlloc
//    Allocates empty TArray.  Uses iNextTerm to start search.
//
// Returns:
//    > 0   TArray entry index (iTermId)
//    < 0   Empty TArray entry not available
//
//=====================================================================
TERM_STATE * TermAlloc(VOID)
{
   INT iTermId = -1;
   if (pTArray == NULL)
   {
      CHAR szDiag[MAX_DIAG_SZ];
      wsprintf(szDiag,"TermAlloc(%ld): Term Array Not Allocated\n",
         GetCurrentThreadId());
      DiagIoWrite(szDiag,DIAG_ERROR);
      return(NULL);
   };
   EnterCriticalSection(&csTerm);
   __try
   {
      while(iNextTerm <= iMaxTerm)
      {
         if (!pTArray[iNextTerm].bInUse)
         {
            pTArray[iNextTerm].bInUse = TRUE;
            _ftime(&pTArray[iNextTerm].tbLastAccess);
            iTermId = iNextTerm;
            iNextTerm++;
            break;
         };
         iNextTerm++;
      };   // while(iNextTerm <= iMaxTerm) (1st Try)
      if (iTermId <= 0)
      {
         // No entry found.  Perform maint and try again
         TermMaint();
         iNextTerm = 1;
         while(iNextTerm <= iMaxTerm)
         {
            if (!pTArray[iNextTerm].bInUse)
            {
               pTArray[iNextTerm].bInUse = TRUE;
               _ftime(&pTArray[iNextTerm].tbLastAccess);
               iTermId = iNextTerm;
               iNextTerm++;
               break;
            };
            iNextTerm++;
         };   // while(iNextTerm <= iMaxTerm) (2nd Try)
      };   // if (iTermId <= 0)
      if (iTermId <= 0)
         iNextTerm = 1;
   }
   __finally
   {
      LeaveCriticalSection(&csTerm);
   };

   if (iTermId > 0)
      return(&pTArray[iTermId]);
   else
      return(NULL);


};   // TermAlloc

//=====================================================================
//
// Function name: TermMaint
//    Clears entries whose last access time exceeds TMILLI_TIMEOUT.
//    Assumes caller has entered csTerm.
//
//=====================================================================
VOID TermMaint(VOID)
{
   INT iTermId;
   TMILLI tmElapsed;
   // Free entries that have timed out
   for (iTermId = 1; iTermId <= iMaxTerm; iTermId++)
   {
      if (pTArray[iTermId].bInUse)
      {
         tmElapsed = TimebElapsed(&pTArray[iTermId].tbLastAccess);
         if (tmElapsed > TMILLI_TIMEOUT)
            TermFree(iTermId);
      };
   };
};   // TermMaint

//=====================================================================
//
// Function name: TermGet
//    Returns pointer to TArray slot at iTermId.
//
// Returns:
//    FALSE TArray entry made available
//    TRUE  iTermId invalid.
//
//=====================================================================
TERM_STATE * TermGet(INT iTermId)
{
   TERM_STATE * pTerm;
   TMILLI tmElapsed;
   if (iTermId <= 0 || iTermId > iMaxTerm)
   {
      CHAR szDiag[MAX_DIAG_SZ];
      wsprintf(szDiag,"TermGet(%ld): Invalid TermId (%ld)\n",
         GetCurrentThreadId(),iTermId);
      DiagIoWrite(szDiag,DIAG_ERROR);
      return(NULL);
   };
```

```
   pTerm = &pTArray[iTermId];
   if (!pTerm->bInUse)
      return(NULL);
   tmElapsed = TimebElapsed(&pTerm->tbLastAccess);
   if (tmElapsed > TMILLI_TIMEOUT)
      return(NULL);   // Entry destined to be freed by maint
   _ftime(&pTArray[iTermId].tbLastAccess);
   return(&pTArray[iTermId]);
};   // TermGet

//=====================================================================
//
// Function name: TermFree
//    Initializes contents of TArray slot at iTermId.
//
// Returns:
//    FALSE TArray entry made available
//    TRUE  iTermId invalid.
//
//=====================================================================
BOOL TermFree(INT iTermId)
{
   TERM_STATE * pTerm;
   if (iTermId <= 0 || iTermId > iMaxTerm)
   {
      CHAR szDiag[MAX_DIAG_SZ];
      wsprintf(szDiag,"TermFree(%ld): Invalid TermId (%ld)\n",
         GetCurrentThreadId(),iTermId);
      DiagIoWrite(szDiag,DIAG_ERROR);
      return(TRUE);
   };
   pTerm = &pTArray[iTermId];
   pTerm->ConnID = 0;
   pTerm->sWId = 0;
   pTerm->sDId = 0;
   pTerm->iSyncId = 0;
   pTerm->iTermId = iTermId;
   TimebClear(&pTerm->tbLastAccess);
   pTerm->bInUse = FALSE;
   return(FALSE);
};   // TermFree
```

tmon.h

```
// tmon.h
//
// Copyright Unisys, 1999

#include "..\tpccproxy\tpccproxy.h"

typedef struct
{
   CHAR * pszErrTxt;                   // Error text
   INT iSize;
   ITPCC * pIAllTxn;
   CHAR * pTxnData;                    // TM buffer area
} TMON_STATE;

VOID TMonInit(INT iSetMaxMsg);
VOID TMonTerm(VOID);
BOOL TMInit(TMON_STATE * pTMon);
VOID TMDone(TMON_STATE * pTMon);
```

tmon.cpp

```
// tmon.cpp
//
// Copyright Unisys, 1999
//

// needed for CoinitializeEx
#define _WIN32_WINNT 0x0400

#include <windows.h>
#include <stdio.h>

#include "..\tpccproxy\tpccproxy_i.c"
#include "..\tpccsvr\tpccsvr_i.c"

#include "tmon.h"

INT iTMMaxSz;

//=====================================================================
//
// Function name: TMonInit
//
//=====================================================================
VOID TMonInit(INT iSetMaxMsg)
{
   iTMMaxSz = iSetMaxMsg;
};   // TMonInit


//=====================================================================
//
// Function name: TMonTerm
//
//=====================================================================
VOID TMonTerm(VOID)
{
};   // TMonTerm

//=====================================================================
//
// Function name: TMInit
//
//    Result:
//       FALSE    Initialization completed successfully
//       TRUE     Initialization failed
//
//=====================================================================
BOOL TMInit(TMON_STATE * pTMon)
{
   HRESULT hr = NULL;
   long lRet = 0;

   pTMon->pIAllTxn = NULL;
```

```
   pTMon->pTxnData = NULL;
   pTMon->iSize = 0;
   // Must have ErrTxt message area set before init
   if (pTMon->pszErrTxt == NULL)
      return(TRUE);

   hr = CoInitializeEx(NULL,COINIT_MULTITHREADED);
   if (FAILED(hr))
   {
      wsprintf(pTMon->pszErrTxt,"COM Initialize Failed, HRESULT %x\n",hr);
      return(TRUE);
   };

   hr = CoCreateInstance(CLSID_TPCC,NULL,CLSCTX_SERVER,IID_ITPCC,
      (void **)&pTMon->pIAllTxn);
   if (FAILED(hr))
   {
      wsprintf(pTMon->pszErrTxt,"COM Create Instance Failed, HRESULT
%x\n",hr);
      return(TRUE);
   };
   hr = (pTMon->pIAllTxn)->CallSetComplete();
   if (FAILED(hr))
   {
      wsprintf(pTMon->pszErrTxt,"COM Call SetComplete Failed, HRESULT
%x\n",hr);
      return(TRUE);
   };
   pTMon->pTxnData = (char *) CoTaskMemAlloc(iTMMaxSz);
   if (!(pTMon->pTxnData))
   {
      wsprintf(pTMon->pszErrTxt,"COM Allocate TxnData Failed\n");
      return(TRUE);
   };
   pTMon->iSize = iTMMaxSz;
   return(FALSE);
};   // TMInit

//=====================================================================
//
// Function name: TMDone
//
//=====================================================================
VOID TMDone(TMON_STATE * pTMon)
{
   CoTaskMemFree(pTMon->pTxnData);
   pTMon->pIAllTxn->Release();
   pTMon->pIAllTxn = NULL;
   CoUninitialize();
};   // TMDone
```

timesupp.c

```
// timesupp.c
//
// Copyright Unisys, 1997 1998 1999
//

#include <stdio.h>
#include "timesupp.h"

// These global variables are used for implementing hi resolution time
stamps
// based on the QueryPerformanceCounter() API.
// These variables should be initialized at startup by a single call to
// InitHiresTime().
struct _timeb tbInitialTimeb;
LARGE_INTEGER liInitialTickCount;
LARGE_INTEGER liTickFreq;
DOUBLE dTickSecs;                    // period of ticks in seconds
DOUBLE dTickMillisecs; // period of ticks in milliseconds
BOOL bHRT = FALSE;      // true => using HRT

//=====================================================================
//
// Function name: InitHiresTime
//
//=====================================================================
BOOL InitHiresTime(BOOL bOn)
{
    bHRT = bOn;
    if (bOn == FALSE)
        return(TRUE);

        //printf("InitHiresTime: Setup hi res timing using
QueryPerformanceFrequency() / QueryPerformanceCounter()\n");

        // Get performance counter tick frequency
        if(!QueryPerformanceFrequency(&liTickFreq))
        {
                //printf("InitHiresTime: QueryPerformanceFrequency
indicates no hi res timer supported\n");
                return(FALSE);
        }

        // Set tick period info
        dTickSecs     =       1.0    / (DOUBLE)liTickFreq.QuadPart;
        dTickMillisecs =      1000.0 / (DOUBLE)liTickFreq.QuadPart;

        // Establish initial time
        _ftime(&tbInitialTimeb);


        // Establish initial tick count associated with this initial time
        if(!QueryPerformanceCounter(&liInitialTickCount))
        {
                //printf("InitHiresTime: QueryPerformanceCounter call to
set initial tick count failed\n");
                return(FALSE);
        }

/*
        // Printout some info
        printf("InitHiresTime: tick frequency             : %I64d\n"
                        "InitHiresTime: tick period (secs)         :
%18.16f\n"
                        "InitHiresTime: tick period (milliseconds) :
%15.12f\n",
                         liTickFreq.QuadPart, dTickSecs, dTickMillisecs);
```

```
       printf("InitHiresTime: Initial _ftime             : %d secs %d
millisecs\n",
                              tbInitialTimeb.time,
tbInitialTimeb.millitm);

       printf("InitHiresTime: Initial tick count         :
%I64d\n",liInitialTickCount.QuadPart);
*/
       return(TRUE);

}//InitHiresTime

//=====================================================================
//
// Function name: TimebCopy
//    Structure contents copy of _timeb source to _timeb dest.
//
//=====================================================================
VOID TimebCopy(struct _timeb * p_tbDest, struct _timeb * p_tbSource)
{
   p_tbDest->time = p_tbSource->time;
   p_tbDest->millitm = p_tbSource->millitm;
   p_tbDest->dstflag = p_tbSource->dstflag;
   p_tbDest->timezone = p_tbSource->timezone;

};   // TimebCopy

//=====================================================================
//
// Function name: TimebDiff
//    Time difference in milliseconds between _timeb _t1 and _timeb _t2.
//
//=====================================================================
TMILLI TimebDiff(struct _timeb * p_tb1, struct _timeb * p_tb2)
{
   LONG lRslt;
   lRslt = ((p_tb2->time - p_tb1->time) * 1000) +
              (p_tb2->millitm - p_tb1->millitm);
   if (lRslt < 0)
      return(0);
   else
      return((TMILLI) lRslt);

};   // TimebDiff

//=====================================================================
//
// Function name: TimebElaspsed
//
//=====================================================================
TMILLI TimebElapsed(struct _timeb * p_tb1)
{
   struct _timeb _tb2;
   TimebStamp(&_tb2);

   return (TimebDiff(p_tb1,&_tb2));

};   // TimebElapsed
```

```
//=====================================================================
//
// Function name: TimebClear
//
//=====================================================================
VOID TimebClear(struct _timeb * p_tb1)
{
   p_tb1->time = 0;
   p_tb1->millitm = 0;

};   // TimebClear

//=====================================================================
//
// Function name: TimebToString
//    Converts timeb to yyyy:mm:dd,hh:mm:ss.sss format
//
//=====================================================================
CHAR * TimebToString(struct _timeb * p_tb1,CHAR * psz,BOOL bMillis)
{
   struct tm * ptm;
   INT iInx;
   ptm = localtime(&p_tb1->time);
   iInx = wsprintf(psz,"%4.4d/%2.2d/%2.2d,%2.2d:%2.2d:%2.2d",
      ptm->tm_year + 1900,ptm->tm_mon + 1,ptm->tm_mday,
      ptm->tm_hour,ptm->tm_min,ptm->tm_sec);
   if (bMillis)
      wsprintf(psz + iInx,".%3.3d",p_tb1->millitm);
   return(psz);
};   // TimebToString

//=====================================================================
//
// Function name: TimebFromString
//    Converts yyyy:mm:dd,hh:mm:ss.sss (TimebToString) format to timeb
//
//=====================================================================
BOOL TimebFromString(struct _timeb * p_tb1,CHAR * psz)
{
   struct tm tmTime;
   struct tm * ptm;
   UINT uLen;

   ptm = &tmTime;
   uLen = strlen(psz);
   if (uLen < (TIMEB_STRING_SZ - 4))   // millis are optional
   {
      p_tb1->time = 0;
      p_tb1->millitm = 0;
      return (TRUE);
   };
   // Clear fields that won't be set
   ptm->tm_wday = 0;
   ptm->tm_yday = 0;
   ptm->tm_isdst = -1;
   // Set tm struct fields from string
   ptm->tm_year = (atoi(psz)) - 1900;
   psz += 5;
   ptm->tm_mon = (atoi(psz)) - 1;
   psz += 3;
```

```
   ptm->tm_mday = atoi(psz);
   psz += 3;
   ptm->tm_hour = atoi(psz);
   psz += 3;
   ptm->tm_min = atoi(psz);
   psz +=3;
   ptm->tm_sec = atoi(psz);
   if (uLen >= TIMEB_STRING_SZ)   // Millis present
   {
      psz += 3;
      p_tb1->millitm = atoi(psz);
   }
   else
      p_tb1->millitm = 0;
   p_tb1->time = mktime(ptm);
   return(FALSE);
};   // TimebFromString

//=====================================================================
//
// Function name: TimebAddSecs
//
//=====================================================================
VOID TimebAddSecs(struct _timeb * p_tb1,INT iSeconds)
{
   p_tb1->time += iSeconds;
};   // TimebAddSecs

//=====================================================================
//
// Function name: TimebAddMillisecs
//
//=====================================================================
VOID TimebAddMillisecs(struct _timeb * p_tb, TMILLI tmMillisecs)
{
        time_t ttSecs;
        unsigned short utm;

        ttSecs = tmMillisecs / 1000;
        if(ttSecs)
        {
                utm = p_tb->millitm += (unsigned short) tmMillisecs -
(ttSecs * 1000);
        }
        else
        {
                utm = p_tb->millitm += (unsigned short) tmMillisecs;
        }

        if(utm > 999)
        {
                p_tb->millitm -= 1000;
                ttSecs++;
        }

        p_tb->time += ttSecs;


};//TimebAddMillisecs

//=====================================================================
//
// Function name: TimebSeed
//
//=====================================================================
ULONG TimebSeed(VOID)
{
   ULONG ulSeed;
   struct _timeb tb_1;
   _ftime(&tb_1);
   ulSeed = ((tb_1.time % TIMEBSEED_MOD) * TIMEBSEED_SHIFT) +
tb_1.millitm;
   return(ulSeed);
};   // TimebSeed

//=====================================================================
//
// Function name: TimebStamp
//
//             This functions generates a struct _timeb timestamp and
returns it
//             in *p_tb. It does this as follows:
//
//             1. Using the QueryPerformanceCounter(), calculates clock
ticks
//                    elapsed from liInitTickCount.
//             2. Converts this to a DOUBLE elapsed millisecs.
//             3. Rounds this to a TMILLI (ULONG) elapsed millisecs.
//             4. Gets a copy of tbInitialTimeb.
//             5. Add elapsed millisecs to this tbInitialTimeb and writes
this
//                    _timeb into *p_tb.
//
//=====================================================================
BOOL TimebStamp(struct _timeb * p_tb)
{
        LARGE_INTEGER liTickCount;
        TMILLI tmMillisecs;
        DOUBLE d1,d2;

   if (bHRT == FALSE)
   {
      _ftime(p_tb);
      return (TRUE);
   }

        if( !QueryPerformanceCounter(&liTickCount) )
      return(FALSE);

        d1 = (DOUBLE)(liTickCount.QuadPart -liInitialTickCount.QuadPart);

        d2 = dTickMillisecs * d1;

        d1 = d2 + 0.5;

        tmMillisecs = (TMILLI) d1;

        TimebCopy(p_tb, &tbInitialTimeb);
        TimebAddMillisecs(p_tb, tmMillisecs);
```

```
        return(TRUE);

}//TimebStamp
```

timesupp.h

```
// timesupp.h

#include <windows.h>
#include <time.h>
#include <sys\timeb.h>

#define TIMEBSEED_MOD 10000
#define TIMEBSEED_SHIFT 1000
#define TIMEB_STRING_SZ 23
#define TIMEB_STRING_DATESZ 10
#define TIMEB_STRING_TIMEOFFSET 11
#define TIMEB_STRING_TIMESZ 12

typedef ULONG TMILLI;
typedef ULONG TMICRO;

TMILLI TimebDiff(struct _timeb * p_tb1, struct _timeb * p_tb2);
VOID TimebCopy(struct _timeb * p_tbDest, struct _timeb * p_tbSource);
TMILLI TimebElapsed(struct _timeb * p_tb1);
VOID TimebClear(struct _timeb * p_tb1);
CHAR * TimebToString(struct _timeb * p_tb1,CHAR * psz,BOOL bMillis);
BOOL TimebFromString(struct _timeb * p_tb1,CHAR * psz);
VOID TimebAddSecs(struct _timeb * p_tb1,INT iSeconds);
ULONG TimebSeed(VOID);

BOOL InitHiresTime(BOOL bOn);
VOID TimebAddMillisecs(struct _timeb * p_tb, TMILLI tmMillisecs);
BOOL TimebStamp(struct _timeb * p_tb);
```

diagio.h

```
// diagio.h
//
// Copyright Unisys, 1999

// Environment variable defaults
#define DEFAULTDIAGLEVEL DIAG_INFO
#define DEFAULTEVENTLOG 0

#define DIAGNOSTICS TRUE
#define MAX_DIAG_SZ 2000

// Severity level of diagnostic report
#define DIAG_FORCE 1
#define DIAG_ERROR 2
#define DIAG_STATE 3
#define DIAG_INFO 4

VOID DiagIoInit(CHAR * pDiagId,BOOL bConsole,BOOL bEvent,UINT uLevel);
VOID DiagIoTerm(VOID);
VOID DiagIoWrite(CHAR * pDiagBuffer, UINT uSeverity);
```

diagio.cpp

```
// diagio.cpp
//
// Copyright Unisys, 1999
//
#include <windows.h>
#include <stdio.h>
#include "diagio.h"

CRITICAL_SECTION csDiagIo;
HANDLE hEventLog = NULL;
UINT uDiagLevel;
BOOL bEventLog;
BOOL bConsoleLog;
CHAR * pDiagHdr;
CHAR * pEventHost;
CHAR * pErrHdr =
   {"*** ERROR *** ERROR *** ERROR *** ERROR *** ERROR ***"};

INT WriteEventLog(CHAR * pDMsgs[],UINT uMsgCnt,UINT uSeverity);

//=====================================================================
//
// Function name: DiagIoInit
//
//=====================================================================
VOID DiagIoInit(CHAR * pDiagId,BOOL bConsole,BOOL bEvent,UINT uLevel)
{
   if (DIAGNOSTICS)
   {
      InitializeCriticalSection(&csDiagIo);

      uDiagLevel = uLevel;
      bEventLog = bEvent;
      bConsoleLog = bConsole;
      pEventHost = (CHAR *) malloc(10);
      strcpy(pEventHost,"");  // local host
      pDiagHdr = (CHAR *) malloc(strlen(pDiagId) + 1);
      strcpy(pDiagHdr,pDiagId);
      if (bEventLog)
      {
         hEventLog = RegisterEventSource(pEventHost,pDiagId);
         if (hEventLog == NULL)
         {
            bEventLog = FALSE;
            if (bConsoleLog)
               fprintf(stdout,
                  "%s: Event Log Register Failed (%ld)\n"
                  "Event Log Will NOT be Used\n",
                  pDiagHdr,GetLastError());
         }
         else
         {
            if (bConsoleLog)
               fprintf(stdout,"%s: Event Logging to LocalHost as %s\n",
                  pDiagHdr,pDiagHdr);
         };
      };   // if bEventLog
   };   // if Diagnostics
```

```
};   // DiagIoInit


//=====================================================================
//
// Function name: DiagIoTerm
//
//=====================================================================
VOID DiagIoTerm(VOID)
{
   if (DIAGNOSTICS)
   {
      DeleteCriticalSection(&csDiagIo);
      if (hEventLog != NULL)
         DeregisterEventSource(hEventLog);
      free(pDiagHdr);
      free(pEventHost);
   };
};   // DiagIoTerm

//=====================================================================
//
// Function name: DiagIoWrite
//
//=====================================================================
VOID DiagIoWrite(CHAR * pDiagBuffer, UINT uSeverity)
{
   CHAR * pDMsgs[3];
   UINT uMsgCnt = 0;
   INT iERslt = 0;
   if (DIAGNOSTICS)
   {
      if (uDiagLevel >= uSeverity)
      {
         EnterCriticalSection(&csDiagIo);
         __try
         {
            if (uSeverity == DIAG_ERROR)
            {
               pDMsgs[0] = pDiagHdr;
               pDMsgs[1] = pErrHdr;
               pDMsgs[2] = pDiagBuffer;
               uMsgCnt = 3;
            }
            else
            {
               pDMsgs[0] = pDiagHdr;
               pDMsgs[1] = pDiagBuffer;
               uMsgCnt = 2;
            };
            if (bEventLog)
               iERslt = WriteEventLog(pDMsgs,uMsgCnt,uSeverity);
            if (bConsoleLog)
            {
               if (uMsgCnt == 3)
                  fprintf(stdout,"\n%s:
%s\n%s",pDMsgs[0],pDMsgs[1],pDMsgs[2]);
               else
                  fprintf(stdout,"\n%s: %s",pDMsgs[0],pDMsgs[1]);
               if (iERslt != 0)
                  fprintf(stdout,
                     "EventLog Write Failed (%ld), No Longer in Use\n",
                     iERslt);
            };
         }
         __finally
         {
            LeaveCriticalSection(&csDiagIo);
         };
      };   // if uDiagLevel >= uSeverity
   };   // if Diagnostics
};   // DiagIoWrite

INT WriteEventLog(CHAR * pDMsgs[],UINT uMsgCnt,UINT uSeverity)
{
   WORD wType;
   WORD wCount;
   wCount = uMsgCnt;
   switch (uSeverity)
   {
      case DIAG_ERROR:
         wType = EVENTLOG_ERROR_TYPE;
         break;
      default:
         wType = EVENTLOG_INFORMATION_TYPE;
         break;
   };
   if (wType != 0)
   {
      if (!ReportEvent(hEventLog,           // event log handle
                       wType,               // event type
                       0,                   // category zero
                       uSeverity,           // no event identifier
                       NULL,                // no user security identifier
                       wCount,              // # of substitution strings
                       0,                   // no binary data
                       (LPCTSTR *) pDMsgs,  // address of string array
                       NULL))               // address of binary
      {
         DeregisterEventSource(hEventLog);
         hEventLog = NULL;
         bEventLog = FALSE;
         return(GetLastError());
      };   // ReportEvent failed
   };   // if wType != 0
   return(0);
};   // WriteEventLog
```

tpccproxy.def

```
LIBRARY      "tpcc_com_ps"

DESCRIPTION  'Proxy/Stub DLL'

EXPORTS
       DllGetClassObject       @1    PRIVATE
       DllCanUnloadNow         @2    PRIVATE
       DllRegisterServer             @3     PRIVATE
```

```
        DllUnregisterServer           @4      PRIVATE
```

tpccproxy.idl

```
// tpccproxy.idl
//
// Copyright Unisys, 1999
// Copyright Microsoft, 1999

// Forward declare all types defined
// Interface ITPCC;
import "oaidl.idl";
import "ocidl.idl";

   [
      object,
      uuid(FEEE6AA2-84B1-11d2-BA47-00C04FBFE08B),
      helpstring("ITPCC Interface"),
      pointer_default(unique)
   ]
   interface ITPCC : IUnknown
   {

         HRESULT _stdcall NewOrder
            (
               [in, out] int * iSize,
               [in, out, size_is(,*iSize)] char ** pTData
            );

         HRESULT _stdcall Payment
            (
               [in, out] int * iSize,
               [in, out, size_is(,*iSize)] char ** pTData
            );

         HRESULT _stdcall Delivery
            (
               [in] int * iSize,
               [in, out, size_is(,*iSize)] char ** pTData
            );

         HRESULT _stdcall StockLevel
            (
               [in, out] int* iSize,
               [in, out, size_is(,*iSize)] char ** pTData
            );

         HRESULT _stdcall OrderStatus
            (
               [in, out] int* iSize,
               [in, out, size_is(,*iSize)] char ** pTData
            );

         HRESULT _stdcall CallSetComplete
            (
            );

   };   // interface ITPCC
```

tpccsvr.def

```
; tpccsvr.def : Declares the module parameters.

LIBRARY      "tpcc_com_all.dll"

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

tpccsvr.idl

```
// tpccsvr.idl
//
// Copyright Unisys, 1999
// Copyright Microsoft, 1999

interface TPCC;

import "oaidl.idl";
import "ocidl.idl";
import "..\tpccproxy\tpccproxy.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;
       };

};
```

tpccsvr.h

```
// tpccsvr.h
//
// Copyright Unisys, 1999
```

```
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(int * iSize,UCHAR ** pTData);
      HRESULT __stdcall Payment(int * iSize,UCHAR ** pTData);
      HRESULT __stdcall Delivery(int * iSize,UCHAR ** pTData);
      HRESULT __stdcall StockLevel(  int* iSize, UCHAR ** pTData);
      HRESULT __stdcall OrderStatus(int* iSize, UCHAR ** pTData);
      HRESULT __stdcall CallSetComplete();

   // IObjectControl
      STDMETHODIMP_(BOOL) CanBePooled() {return m_bCanBePooled;}
      STDMETHODIMP Activate() {return S_OK;} // no transactions enlistment
      STDMETHODIMP_(void) Deactivate() {   }

   // IObjectConstruct
      STDMETHODIMP Construct(IDispatch * pUnk);

        // state
   private:
      bool m_bCanBePooled;
      long m_lRefId;
      int m_iMaxRetry;
      int m_iTryCount;
      bool m_bTPRslt;
      int m_iTPRslt;
      union
      {
         NEW_ORDER_DATA NOData;
         PAYMENT_DATA PYData;
         DELIVERY_DATA DLData;
         ORDER_STATUS_DATA OSData;
         STOCK_LEVEL_DATA SLData;
      } m_TData;
      SQLHDBC m_hdbc;
      SQLHSTMT m_hstmt;
      SQLHSTMT m_hstmtNewOrder;
      SQLHSTMT m_hstmtPayment;
      SQLHSTMT m_hstmtDelivery;
      SQLHSTMT m_hstmtOrderStatus;
      SQLHSTMT m_hstmtStockLevel;
      SQLHDESC m_descNewOrderCols1;
      SQLHDESC m_descNewOrderCols2;
      SQLHDESC m_descOrderStatusCols1;
      SQLHDESC m_descOrderStatusCols2;
      SQLUINTEGER m_BindOffset;
      SQLUINTEGER m_RowsFetched;
      int m_no_commit_flag;

      bool InitNOParams(void);
      bool InitPYParams(void);
      bool InitDLParams(void);
      bool InitOSParams(void);
      bool InitSLParams(void);
      bool CheckDBError(char * pSource);

};   // Class CTPCC_Common

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)
      COM_INTERFACE_ENTRY_CHAIN(CTPCC_Common)
   END_COM_MAP()
};   // Class CTPCC
```

tpccsvr.cpp

```
// tpccsvr.cpp
//
// Copyright Unisys, 1999
// Copyright Microsoft, 1999

#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>

#define DBNTWIN32
#include <sqltypes.h>
#include <sql.h>
#include <sqlext.h>
#include <odbcss.h>

#include "tpccproxy.h"
#include "tpcc.h"
```

```
#include "resource.h"
#include "tpccsvr_i.h"
#include "tpccsvr_i.c"
#include "tpccsvr.h"
#include "..\tpccproxy\tpccproxy_i.c"

CComModule _Module;

BEGIN_OBJECT_MAP(ObjectMap)
        OBJECT_ENTRY(CLSID_TPCC, CTPCC)
END_OBJECT_MAP()


char pProgId[100];
char * pPName = "TPCC Server";
int iInstance = 1;
char szServer[100]     = "hostname";
char szMyHost[MAX_COMPUTERNAME_LENGTH + 1];
char szUser[100]               = "sa";
char szPassword[100]   = "";
char szDatabase[100]   = "tpcc";
int iDeadlockRetry     = 5;

static SQLHENV henv = SQL_NULL_HENV;         // ODBC environment handle
long lCount = 0;
long lActive = 0;

bool ReadRegistry(VOID);
void WriteEventLog(char * pMsg,bool bError);

/////////////////////////////////////////////////////////////////////////
///
// DLL Entry Point

extern "C"
BOOL WINAPI DllMain(HINSTANCE hInst,ULONG ul_reason_for_call,LPVOID
lpReserved)
{
   char szDiag[300];
   DWORD dwCNSize = MAX_COMPUTERNAME_LENGTH;
   try
   {
      switch(ul_reason_for_call)
      {
         case DLL_PROCESS_ATTACH:
                        _Module.Init(ObjectMap,hInst);
                        DisableThreadLibraryCalls(hInst);
            wsprintf(pProgId,"%s%d",pPName,iInstance);
            if (ReadRegistry())
            {
               WriteEventLog("DllMain: Registry Key Not Present\n",TRUE);
               return(FALSE);
            };
            wsprintf(pProgId,"%s%d(%s)",pPName,iInstance,szServer);
            GetComputerName(szMyHost,&dwCNSize);
            szMyHost[dwCNSize] = 0;
            if (SQLAllocHandleStd(SQL_HANDLE_ENV,SQL_NULL_HANDLE,&henv) !=
SQL_SUCCESS)
            {
               wsprintf(szDiag,"DllMain(%s): Allocate Environment
Failed\n"
                  "ServerName=%s,DB=%s,User=%s,PW=%s,Retries=%d\n",

VERSIONINFO,szServer,szDatabase,szUser,szPassword,iDeadlockRetry);
               WriteEventLog(szDiag,FALSE);
               return FALSE;
            };
            wsprintf(szDiag,"DllMain(%s): Initialization Complete\n"
               "ServerName=%s,DB=%s,User=%s,PW=%s,Retries=%d\n",

VERSIONINFO,szServer,szDatabase,szUser,szPassword,iDeadlockRetry);
            WriteEventLog(szDiag,FALSE);
            break;

               case DLL_PROCESS_DETACH:
            WriteEventLog("DllMain: Closing down for Process
Detach\n",FALSE);
            if (henv != NULL)
               SQLFreeEnv(henv);
            _Module.Term();
            break;
      };   // switch ul_reason_for_call
   }
   catch (...)
   {
      wsprintf(szDiag,"DllMain: Unhandled exception during %s call\n",
         ul_reason_for_call == DLL_PROCESS_ATTACH ? "ATTACH" : "DETACH");
      WriteEventLog(szDiag,TRUE);
      return FALSE;
   };

#ifdef LONG_WID
   WriteEventLog("tpccsvr - long w_id", false);
#endif
   return TRUE;

};   // DllMain

STDAPI DllCanUnloadNow(void)
{
   return (_Module.GetLockCount()==0) ? S_OK : S_FALSE;
};

STDAPI DllGetClassObject(REFCLSID rclsid,REFIID riid,LPVOID* ppv)
{
   return _Module.GetClassObject(rclsid,riid,ppv);
};

STDAPI DllRegisterServer(void)
{
        // registers object, typelib and all interfaces in typelib
   return _Module.RegisterServer(TRUE);
};

STDAPI DllUnregisterServer(void)
{
   _Module.UnregisterServer();
   return S_OK;
};
```

```
inline void ReleaseInterface(IUnknown *pUnk)
{
   if (pUnk)
   {
      pUnk->Release();
      pUnk = NULL;
   };
};

CTPCC_Common::CTPCC_Common()
{
   char szDiag[300];
   Sleep(100);
   m_bCanBePooled = TRUE;
   m_iMaxRetry = iDeadlockRetry;
   m_lRefId = InterlockedIncrement(&lCount);
   InterlockedIncrement(&lActive);
   m_hdbc = SQL_NULL_HDBC;
   m_hstmt = SQL_NULL_HSTMT;
   m_hstmtNewOrder = SQL_NULL_HSTMT;
   m_hstmtPayment = SQL_NULL_HSTMT;
   m_hstmtDelivery = SQL_NULL_HSTMT;
   m_hstmtOrderStatus = SQL_NULL_HSTMT;
   m_hstmtStockLevel = SQL_NULL_HSTMT;
   m_descNewOrderCols1 = SQL_NULL_HDESC;
   m_descNewOrderCols2 = SQL_NULL_HDESC;
   m_descOrderStatusCols1 = SQL_NULL_HDESC;
   m_descOrderStatusCols2 = SQL_NULL_HDESC;
   wsprintf(szDiag,"CTPCC_Common: Initialized %ld\n",m_lRefId);
   WriteEventLog(szDiag,FALSE);
};

CTPCC_Common::~CTPCC_Common()
{
   char szDiag[300];
   SQLFreeHandle(SQL_HANDLE_STMT,m_hstmtNewOrder);
   SQLFreeHandle(SQL_HANDLE_STMT,m_hstmtPayment);
   SQLFreeHandle(SQL_HANDLE_STMT,m_hstmtDelivery);
   SQLFreeHandle(SQL_HANDLE_STMT,m_hstmtOrderStatus);
   SQLFreeHandle(SQL_HANDLE_STMT,m_hstmtStockLevel);
   SQLDisconnect(m_hdbc);
   SQLFreeHandle(SQL_HANDLE_DBC,m_hdbc);
   InterlockedDecrement(&lActive);
   wsprintf(szDiag,"~CTPCC_Common(%ld): Database closed\n",m_lRefId);
   WriteEventLog(szDiag,FALSE);
};

HRESULT CTPCC_Common::CallSetComplete()
{
   IObjectContext * pObjectContext = NULL;
   HRESULT hr = CoGetObjectContext( IID_IObjectContext, (void
**)&pObjectContext );
   pObjectContext->SetComplete();
   ReleaseInterface(pObjectContext);
   return hr;
};

bool CTPCC_Common::CheckDBError(char * pSource)
{
   RETCODE rc;
   SDWORD lNativeError;
   char szState[6];
   char szMsg[SQL_MAX_MESSAGE_LENGTH];
   char szTmp[7 * (SQL_MAX_MESSAGE_LENGTH + 2)];
   int iInx;
   int iMsgs = 0;
   bool bRslt = FALSE;
   iInx = wsprintf(szTmp,"%s",pSource);
   while (iMsgs < 6)
   {
      rc = SQLError(henv,m_hdbc,m_hstmt,(BYTE *) &szState,&lNativeError,
         (BYTE *) &szMsg,sizeof(szMsg),NULL);
      if (rc == SQL_NO_DATA)
         break;
      iMsgs++;
      // check for deadlock
      if (lNativeError == 1205)
      {
         iInx += wsprintf(szTmp + iInx,"Deadlock retry
(%d)\n",m_iTryCount);
         Sleep(10 * m_iTryCount);
         continue;
      };
      bRslt = TRUE;
      iInx += wsprintf(szTmp + iInx,"(%ld)%s\n",lNativeError,szMsg);
   };   // while iMsgs
   SQLFreeStmt(m_hstmt,SQL_CLOSE);
   WriteEventLog(szTmp,TRUE);
   return(bRslt);
};   // CheckDBError

STDMETHODIMP CTPCC_Common::Construct(IDispatch * pUnk)
{
   char szDiag[300];
   char szConnectStr[256];
   char szOutStr[1024];
   SQLSMALLINT iOutStrLen;
   char buffer[128];
   RETCODE rc;

   try
      {
      if (SQLAllocHandle(SQL_HANDLE_DBC,henv,&m_hdbc) != SQL_SUCCESS)
      {
         wsprintf(szDiag,"Construct(%ld): Allocate DBC Handle
failed\n",m_lRefId);
         CheckDBError(szDiag);
         return(E_FAIL);
      };
      if (SQLSetConnectOption(m_hdbc,SQL_PACKET_SIZE,4096) != SQL_SUCCESS)
      {
         wsprintf(szDiag,
            "Construct(%ld): Set Connection Packet Size failed\n",
            m_lRefId);
         CheckDBError(szDiag);
         return(E_FAIL);
      };
      wsprintf(szConnectStr,
```

```
         "DRIVER=SQL Server;SERVER=%s;UID=%s;PWD=%s;DATABASE=%s;WSID=%s-
%ld",
         szServer,szUser,szPassword,szDatabase,szMyHost,m_lRefId);
      rc = SQLDriverConnect(m_hdbc,NULL,(SQLCHAR * ) szConnectStr,
         sizeof(szConnectStr),(SQLCHAR * ) szOutStr, sizeof(szOutStr),
         &iOutStrLen,SQL_DRIVER_NOPROMPT);
      if (rc != SQL_SUCCESS && rc != SQL_SUCCESS_WITH_INFO)
      {
         wsprintf(szDiag,"Construct(%ld): Connect failed\n",m_lRefId);
         CheckDBError(szDiag);
         return(E_FAIL);
      };
      if (SQLAllocHandle(SQL_HANDLE_STMT,m_hdbc,&m_hstmt) != SQL_SUCCESS)
      {
         wsprintf(szDiag,"Construct(%ld): Allocate STMT Handle
failed\n",m_lRefId);
         CheckDBError(szDiag);
         return(E_FAIL);
      };

      strcpy(buffer,"set nocount on set XACT_ABORT ON");
      rc = SQLExecDirect(m_hstmt,(unsigned char *)buffer,SQL_NTS);
      if (rc != SQL_SUCCESS && rc != SQL_SUCCESS_WITH_INFO)
      {
         wsprintf(szDiag,"Construct(%ld): Set DB Options
failed\n",m_lRefId);
         CheckDBError(szDiag);
         return(E_FAIL);
      };
      SQLFreeHandle(SQL_HANDLE_STMT,m_hstmt);

      if (InitNOParams())
         return(E_FAIL);
      if (InitPYParams())
         return(E_FAIL);
      if (InitDLParams())
         return(E_FAIL);
      if (InitOSParams())
         return(E_FAIL);
      if (InitSLParams())
         return(E_FAIL);
        }
        catch (...)
        {
      wsprintf(szDiag,"Construct(%ld): Unhandled exception\n",m_lRefId);
      WriteEventLog(szDiag,TRUE);
               return(E_FAIL);
        };

   wsprintf(szDiag,"Construct(%ld): Db connection
initialized\n",m_lRefId);
   WriteEventLog(szDiag,FALSE);
        return(S_OK);
};   // Construct

//=====================================================================
// FUNCTION: UtilStrCpy
//
//    Copies n characters from string pSrc to pDst and places a null
//    null character at the end of the destination string.  Unlike
//    strncpy this function ensures that the result string is always
//    null terminated.
//
//=====================================================================
inline static void UtilStrCpy(char * pDest, const unsigned char * pSrc,
int n)
{
   strncpy(pDest,(char *)pSrc,n);
   pDest[n] = '\0';
   return;
};   // UtilStrCpy

bool CTPCC_Common::InitNOParams(void)
{
   char szDiag[300];
   int i;
   int j;
   if (SQLAllocHandle(SQL_HANDLE_STMT,m_hdbc,&m_hstmtNewOrder) !=
SQL_SUCCESS
      || SQLAllocHandle(SQL_HANDLE_DESC,m_hdbc,&m_descNewOrderCols1) !=
SQL_SUCCESS
      || SQLAllocHandle(SQL_HANDLE_DESC,m_hdbc,&m_descNewOrderCols2) !=
SQL_SUCCESS
      )
   {
      wsprintf(szDiag,"InitNOParams(%ld): Allocate Stmt Handles
failed\n",m_lRefId);
      CheckDBError(szDiag);
      return(TRUE);
   };

   m_hstmt = m_hstmtNewOrder;

   if (SQLSetStmtAttrW(m_hstmt,SQL_ATTR_APP_ROW_DESC,
      m_descNewOrderCols1,SQL_IS_POINTER ) != SQL_SUCCESS)
   {
      wsprintf(szDiag,"InitNOParams(%ld): SetStmtAttr NOCols1
failed\n",m_lRefId);
      CheckDBError(szDiag);
      return(TRUE);
   };

   i = 0;
#ifdef LONG_WID
   if
(SQLBindParameter(m_hstmt,++i,SQL_PARAM_INPUT,SQL_C_SLONG,SQL_INTEGER,
#else
   if
(SQLBindParameter(m_hstmt,++i,SQL_PARAM_INPUT,SQL_C_SSHORT,SQL_SMALLINT,
#endif
            0,0,&m_TData.NOData.w_id,0,NULL) != SQL_SUCCESS
      ||
SQLBindParameter(m_hstmt,++i,SQL_PARAM_INPUT,SQL_C_UTINYINT,SQL_TINYINT,
            0,0,&m_TData.NOData.d_id,0,NULL) != SQL_SUCCESS
      ||
SQLBindParameter(m_hstmt,++i,SQL_PARAM_INPUT,SQL_C_SLONG,SQL_INTEGER,
            0,0,&m_TData.NOData.c_id,0,NULL) != SQL_SUCCESS
      ||
SQLBindParameter(m_hstmt,++i,SQL_PARAM_INPUT,SQL_C_UTINYINT,SQL_TINYINT,
            0,0,&m_TData.NOData.o_ol_cnt,0,NULL) != SQL_SUCCESS
```

```
      ||
SQLBindParameter(m_hstmt,++i,SQL_PARAM_INPUT,SQL_C_UTINYINT,SQL_TINYINT,
            0,0,&m_TData.NOData.o_all_local,0,NULL) != SQL_SUCCESS
      )
   {
      wsprintf(szDiag,"InitNOParams(%ld): Bind Param failed\n",m_lRefId);
      CheckDBError(szDiag);
      return(TRUE);
   };

   for (j=0; j < MAX_OL; j++)
   {
      if
(SQLBindParameter(m_hstmt,++i,SQL_PARAM_INPUT,SQL_C_SLONG,SQL_INTEGER,
               0,0,&m_TData.NOData.Ol[j].ol_i_id,0,NULL) != SQL_SUCCESS
#ifdef LONG_WID
         ||
SQLBindParameter(m_hstmt,++i,SQL_PARAM_INPUT,SQL_C_SLONG,SQL_INTEGER,
#else
         ||
SQLBindParameter(m_hstmt,++i,SQL_PARAM_INPUT,SQL_C_SSHORT,SQL_SMALLINT,
#endif
               0,0,&m_TData.NOData.Ol[j].ol_supply_w_id,0,NULL) !=
SQL_SUCCESS
         ||
SQLBindParameter(m_hstmt,++i,SQL_PARAM_INPUT,SQL_C_SSHORT,SQL_SMALLINT,
               0,0,&m_TData.NOData.Ol[j].ol_quantity,0,NULL) !=
SQL_SUCCESS
         )
      {
         wsprintf(szDiag,"InitNOParams(%ld): Bind Param(%d)
failed\n",m_lRefId,j);
         CheckDBError(szDiag);
         return(TRUE);
      };
   };

       // set the bind offset pointer
   if (SQLSetStmtAttrW(m_hstmt,SQL_ATTR_ROW_BIND_OFFSET_PTR,
      &m_BindOffset,SQL_IS_POINTER ) != SQL_SUCCESS)
   {
      wsprintf(szDiag,"InitNOParams(%ld): SetStmtAttr BindOffset
failed\n",m_lRefId);
      CheckDBError(szDiag);
      return(TRUE);
   };

   i = 0;
   if (SQLBindCol(m_hstmt,++i,SQL_C_CHAR,&m_TData.NOData.Ol[0].ol_i_name,
            sizeof(m_TData.NOData.Ol[0].ol_i_name),NULL) != SQL_SUCCESS
      ||
SQLBindCol(m_hstmt,++i,SQL_C_SSHORT,&m_TData.NOData.Ol[0].ol_stock,
            0,NULL) != SQL_SUCCESS
      ||
SQLBindCol(m_hstmt,++i,SQL_C_CHAR,&m_TData.NOData.Ol[0].ol_brand_generic,
            sizeof(m_TData.NOData.Ol[0].ol_brand_generic),NULL) !=
SQL_SUCCESS
      ||
SQLBindCol(m_hstmt,++i,SQL_C_DOUBLE,&m_TData.NOData.Ol[0].ol_i_price,
            0,NULL) != SQL_SUCCESS
      ||
SQLBindCol(m_hstmt,++i,SQL_C_DOUBLE,&m_TData.NOData.Ol[0].ol_amount,
            0,NULL) != SQL_SUCCESS
      )
      {
         wsprintf(szDiag,"InitNOParams(%ld): Bind Col Ol
failed\n",m_lRefId);
         CheckDBError(szDiag);
         return(TRUE);
      };

       // associate the column bindings for the second result set
   if ( SQLSetStmtAttrW(m_hstmt,SQL_ATTR_APP_ROW_DESC,
      m_descNewOrderCols2,SQL_IS_POINTER ) != SQL_SUCCESS)
   {
      wsprintf(szDiag,"InitNOParams(%ld): SetStmtAttr NOCols2
failed\n",m_lRefId);
      CheckDBError(szDiag);
      return(TRUE);
   };

   i = 0;
   if (SQLBindCol(m_hstmt,++i,SQL_C_DOUBLE,&m_TData.NOData.w_tax,
            0,NULL) != SQL_SUCCESS
      || SQLBindCol(m_hstmt,++i,SQL_C_DOUBLE,&m_TData.NOData.d_tax,
            0,NULL) != SQL_SUCCESS
      || SQLBindCol(m_hstmt,++i,SQL_C_SLONG,&m_TData.NOData.o_id,
            0,NULL) != SQL_SUCCESS
      || SQLBindCol(m_hstmt,++i,SQL_C_CHAR,&m_TData.NOData.c_last,
            sizeof(m_TData.NOData.c_last),NULL) != SQL_SUCCESS
      || SQLBindCol(m_hstmt,++i,SQL_C_DOUBLE,&m_TData.NOData.c_discount,
            0,NULL) != SQL_SUCCESS
      || SQLBindCol(m_hstmt,++i,SQL_C_CHAR,&m_TData.NOData.c_credit,
            sizeof(m_TData.NOData.c_credit),NULL) != SQL_SUCCESS
      ||
SQLBindCol(m_hstmt,++i,SQL_C_TYPE_TIMESTAMP,&m_TData.NOData.o_entry_d,
            0,NULL) != SQL_SUCCESS
      || SQLBindCol(m_hstmt, ++i,SQL_C_SLONG,&m_no_commit_flag,
            0,NULL) != SQL_SUCCESS
      )
      {
         wsprintf(szDiag,"InitNOParams(%ld): Bind Col failed\n",m_lRefId);
         CheckDBError(szDiag);
         return(TRUE);
      };
   return(FALSE);
};   // InitNOParams

HRESULT CTPCC_Common::NewOrder(int * iSize,UCHAR ** pTData)
{
   NEW_ORDER_DATA * pnod;
   RETCODE rc;
   bool bRetry;
                              // 0         1         2
                              // 012345678901234567890123456789
   wchar_t szSqlTemplate[] = L"{call tpcc_neworder(?,?,?,?,?,"
                               L"?,?,?,?,?,?,?,?,?,?,?,?,?,?,?,?,"
                               L"?,?,?,?,?,?,?,?,?,?,?,?,?,?,?,?,"
                               L"?,?,?,?,?,?,?,?,?,?,?,?,?,?,?)}";
   int i;
```

```
   pnod = (NEW_ORDER_DATA *) *pTData;
   try
   {
      m_hstmt = m_hstmtNewOrder;
      m_bTPRslt = TRUE;
      m_iTPRslt = SVCERR_DEADLOCK;
      // associate the parameter and column bindings for this transaction
      if (SQLSetStmtAttrW(m_hstmt,SQL_ATTR_APP_ROW_DESC,
         m_descNewOrderCols1,SQL_IS_POINTER ) != SQL_SUCCESS)
      {
         char szDiag[100];
         wsprintf(szDiag,"NewOrder(%ld): SetStmtAttr NOCols1\n",m_lRefId);
         CheckDBError(szDiag);
         pnod->bTPRslt = TRUE;
         pnod->iTPRslt = SVCERR_ODBC;
         strcpy(pnod->execution_status,"Error, Bind NOCols1 Failed");
         return(S_OK);
      };
      // clip statement buffer based on number of parameters
           // fixed part is 29 chars and variable part is 6 chars per line
item
      i = 29 + pnod->o_ol_cnt * 6;
      wcscpy(&szSqlTemplate[i],L"}");
      // check whether any order lines are for a remote warehouse
      pnod->o_all_local = 1;
      for (i = 0; i < pnod->o_ol_cnt; i++)
      {
         if (pnod->Ol[i].ol_supply_w_id != pnod->w_id)
         {
            pnod->o_all_local = 0;
            break;
         };
      };
      memcpy(&m_TData.NOData,pnod,sizeof(NEW_ORDER_DATA));
      for (m_iTryCount = 1; m_iTryCount <= m_iMaxRetry; m_iTryCount++)
      {
         bRetry = FALSE;
         m_BindOffset = 0;
         rc = SQLExecDirectW(m_hstmt,(SQLWCHAR *) szSqlTemplate,SQL_NTS);
                        if (rc != SQL_SUCCESS && rc !=
SQL_SUCCESS_WITH_INFO)
         {
            char szDiag[100];
            wsprintf(szDiag,"NewOrder(%ld): Execute Direct\n",m_lRefId);
            if (CheckDBError(szDiag))
            {
               m_iTPRslt = SVCERR_ODBC;
               break;
            };
            continue;
         };
         // Get order line results
         m_TData.NOData.total_amount = 0;
         for (i = 0; i < m_TData.NOData.o_ol_cnt; i++)
         {
            // set the bind offset value...
            m_BindOffset = i * sizeof(m_TData.NOData.Ol[0]);
            if (SQLFetch(m_hstmt) == SQL_ERROR)
            {
               char szDiag[100];
               wsprintf(szDiag,"NewOrder(%ld): Fetch Ol%d\n",m_lRefId,(i +
1));
               if (CheckDBError(szDiag))
                  m_iTPRslt = SVCERR_ODBC;
               else
                  bRetry = TRUE;
               break;
            };
            // move to the next resultset
            if (SQLMoreResults(m_hstmt) == SQL_ERROR)
            {
               char szDiag[100];
               wsprintf(szDiag,"NewOrder(%ld): MoreResults
Ol%d\n",m_lRefId,(i + 1));
               if (CheckDBError(szDiag))
                  m_iTPRslt = SVCERR_ODBC;
               else
                  bRetry = TRUE;
               break;
            };
            m_TData.NOData.total_amount += m_TData.NOData.Ol[i].ol_amount;
         };   // for o_ol_cnt
         if (m_iTPRslt == SVCERR_ODBC)
            break;
         if (bRetry)
            continue;
         // associate the column bindings for the second result set
         if (SQLSetStmtAttrW(m_hstmt,SQL_ATTR_APP_ROW_DESC,
            m_descNewOrderCols2,SQL_IS_POINTER) != SQL_SUCCESS)
         {
            char szDiag[100];
            wsprintf(szDiag,"NewOrder(%ld): SetStmtAttr
NOCols2\n",m_lRefId);
            if (CheckDBError(szDiag))
            {
               m_iTPRslt = SVCERR_ODBC;
               break;
            };
            continue;
         };
         if (SQLFetch(m_hstmt) == SQL_ERROR)
         {
            char szDiag[100];
            wsprintf(szDiag,"NewOrder(%ld): Fetch\n",m_lRefId);
            if (CheckDBError(szDiag))
            {
               m_iTPRslt = SVCERR_ODBC;
               break;
            };
            continue;
         };
         SQLFreeStmt(m_hstmt,SQL_CLOSE);
         if (m_no_commit_flag == 1)
         {
            m_TData.NOData.total_amount *=
               ((1 + m_TData.NOData.w_tax + m_TData.NOData.d_tax) *
               (1 - m_TData.NOData.c_discount));
            m_bTPRslt = FALSE;
            m_iTPRslt = SVC_NOERROR;
```

```
         }
         else
            m_iTPRslt = SVC_BADITEMID;
         break;
      };   // for m_iMaxRetry
      memcpy(pnod,&m_TData.NOData,sizeof(NEW_ORDER_DATA));
      pnod->bTPRslt = m_bTPRslt;
      pnod->iTPRslt = m_iTPRslt;
      if (!m_bTPRslt)
      {
         strcpy(pnod->execution_status,"Transaction commited.");
         return(S_OK);
      };
      if (m_iTPRslt == SVC_BADITEMID)
      {
         strcpy(pnod->execution_status,"Item number is not valid.");
         return(S_OK);
      };
      if (m_iTPRslt == SVCERR_DEADLOCK)
         wsprintf(pnod->execution_status,"Hit retry
max(%d).",m_iMaxRetry);
      else
         strcpy(pnod->execution_status,"DBTranAbort, Check Input Data");
      return(S_OK);
   }
       catch (...)
       {
      char szDiag[300];
      wsprintf(szDiag,"NewOrder(%ld): Unhandled exception\n",m_lRefId);
               WriteEventLog(szDiag,TRUE);
               m_bCanBePooled = FALSE;
      pnod->bTPRslt = TRUE;
      pnod->iTPRslt = SVCERR_EXCEPTION;
      strcpy(pnod->execution_status,"Error, Unhandled exception");
               return(S_OK);
       };
};   // NewOrder

bool CTPCC_Common::InitPYParams(void)
{
   int i;
   char szDiag[300];
   if (SQLAllocHandle(SQL_HANDLE_STMT,m_hdbc,&m_hstmtPayment) !=
SQL_SUCCESS)
   {
      wsprintf(szDiag,"InitPYParams(%ld): Allocate Stmt Handle
failed\n",m_lRefId);
      CheckDBError(szDiag);
      return(TRUE);
   };
   m_hstmt = m_hstmtPayment;
   i = 0;
#ifdef LONG_WID
   if
(SQLBindParameter(m_hstmt,++i,SQL_PARAM_INPUT,SQL_C_SLONG,SQL_INTEGER,
            0,0,&m_TData.PYData.w_id,0,NULL) != SQL_SUCCESS
      ||
SQLBindParameter(m_hstmt,++i,SQL_PARAM_INPUT,SQL_C_SLONG,SQL_INTEGER,
#else
   if
(SQLBindParameter(m_hstmt,++i,SQL_PARAM_INPUT,SQL_C_SSHORT,SQL_SMALLINT,
            0,0,&m_TData.PYData.w_id,0,NULL) != SQL_SUCCESS
      ||
SQLBindParameter(m_hstmt,++i,SQL_PARAM_INPUT,SQL_C_SSHORT,SQL_SMALLINT,
#endif
            0,0,&m_TData.PYData.c_w_id,0,NULL) != SQL_SUCCESS
      ||
SQLBindParameter(m_hstmt,++i,SQL_PARAM_INPUT,SQL_C_DOUBLE,SQL_NUMERIC,
            6,2,&m_TData.PYData.h_amount,0,NULL) != SQL_SUCCESS
      ||
SQLBindParameter(m_hstmt,++i,SQL_PARAM_INPUT,SQL_C_UTINYINT,SQL_TINYINT,
            0,0,&m_TData.PYData.d_id, 0, NULL) != SQL_SUCCESS
      ||
SQLBindParameter(m_hstmt,++i,SQL_PARAM_INPUT,SQL_C_UTINYINT,SQL_TINYINT,
            0,0,&m_TData.PYData.c_d_id,0,NULL) != SQL_SUCCESS
      ||
SQLBindParameter(m_hstmt,++i,SQL_PARAM_INPUT,SQL_C_SLONG,SQL_INTEGER,
            0,0,&m_TData.PYData.c_id,0,NULL) != SQL_SUCCESS
      || SQLBindParameter(m_hstmt,++i,SQL_PARAM_INPUT,SQL_C_CHAR,SQL_CHAR,
            sizeof(m_TData.PYData.c_last),0,&m_TData.PYData.c_last,
            sizeof(m_TData.PYData.c_last), NULL) != SQL_SUCCESS
      )
      {
         wsprintf(szDiag,"InitPYParams(%ld): Bind Param
failed\n",m_lRefId);
         CheckDBError(szDiag);
         return(TRUE);
      };
   i = 0;
   if (SQLBindCol(m_hstmt,++i,SQL_C_SLONG,&m_TData.PYData.
            c_id,0,NULL) != SQL_SUCCESS
      || SQLBindCol(m_hstmt,++i,SQL_C_CHAR,&m_TData.PYData.c_last,
            sizeof(m_TData.PYData.c_last), NULL) != SQL_SUCCESS
      ||
SQLBindCol(m_hstmt,++i,SQL_C_TYPE_TIMESTAMP,&m_TData.PYData.h_date,
            0,NULL) != SQL_SUCCESS
      || SQLBindCol(m_hstmt,++i,SQL_C_CHAR,&m_TData.PYData.w_street_1,
            sizeof(m_TData.PYData.w_street_1), NULL) != SQL_SUCCESS
      || SQLBindCol(m_hstmt,++i,SQL_C_CHAR,&m_TData.PYData.w_street_2,
            sizeof(m_TData.PYData.w_street_2),NULL) != SQL_SUCCESS
      || SQLBindCol(m_hstmt,++i,SQL_C_CHAR,&m_TData.PYData.w_city,
            sizeof(m_TData.PYData.w_city),NULL) != SQL_SUCCESS
      || SQLBindCol(m_hstmt,++i,SQL_C_CHAR,&m_TData.PYData.w_state,
            sizeof(m_TData.PYData.w_state),NULL) != SQL_SUCCESS
      || SQLBindCol(m_hstmt,++i,SQL_C_CHAR,&m_TData.PYData.w_zip,
            sizeof(m_TData.PYData.w_zip),NULL) != SQL_SUCCESS
      || SQLBindCol(m_hstmt,++i,SQL_C_CHAR,&m_TData.PYData.d_street_1,
            sizeof(m_TData.PYData.d_street_1),NULL) != SQL_SUCCESS
      || SQLBindCol(m_hstmt,++i,SQL_C_CHAR,&m_TData.PYData.d_street_2,
            sizeof(m_TData.PYData.d_street_2),NULL) != SQL_SUCCESS
      || SQLBindCol(m_hstmt,++i,SQL_C_CHAR,&m_TData.PYData.d_city,
            sizeof(m_TData.PYData.d_city),NULL) != SQL_SUCCESS
      || SQLBindCol(m_hstmt,++i,SQL_C_CHAR,&m_TData.PYData.d_state,
            sizeof(m_TData.PYData.d_state),NULL) != SQL_SUCCESS
      || SQLBindCol(m_hstmt,++i,SQL_C_CHAR,&m_TData.PYData.d_zip,
            sizeof(m_TData.PYData.d_zip),NULL) != SQL_SUCCESS
      || SQLBindCol(m_hstmt,++i,SQL_C_CHAR,&m_TData.PYData.c_first,
            sizeof(m_TData.PYData.c_first),NULL) != SQL_SUCCESS
      || SQLBindCol(m_hstmt,++i,SQL_C_CHAR,&m_TData.PYData.c_middle,
```

```
            sizeof(m_TData.PYData.c_middle),NULL) != SQL_SUCCESS
      || SQLBindCol(m_hstmt,++i,SQL_C_CHAR,&m_TData.PYData.c_street_1,
            sizeof(m_TData.PYData.c_street_1),NULL) != SQL_SUCCESS
      || SQLBindCol(m_hstmt,++i,SQL_C_CHAR,&m_TData.PYData.c_street_2,
            sizeof(m_TData.PYData.c_street_2),NULL) != SQL_SUCCESS
      || SQLBindCol(m_hstmt,++i,SQL_C_CHAR,&m_TData.PYData.c_city,
            sizeof(m_TData.PYData.c_city),NULL) != SQL_SUCCESS
      || SQLBindCol(m_hstmt,++i,SQL_C_CHAR,&m_TData.PYData.c_state,
            sizeof(m_TData.PYData.c_state),NULL) != SQL_SUCCESS
      || SQLBindCol(m_hstmt,++i,SQL_C_CHAR,&m_TData.PYData.c_zip,
            sizeof(m_TData.PYData.c_zip),NULL) != SQL_SUCCESS
      || SQLBindCol(m_hstmt,++i,SQL_C_CHAR,&m_TData.PYData.c_phone,
            sizeof(m_TData.PYData.c_phone),NULL) != SQL_SUCCESS
      ||
SQLBindCol(m_hstmt,++i,SQL_C_TYPE_TIMESTAMP,&m_TData.PYData.c_since,
            0,NULL) != SQL_SUCCESS
      || SQLBindCol(m_hstmt,++i,SQL_C_CHAR,&m_TData.PYData.c_credit,
            sizeof(m_TData.PYData.c_credit),NULL) != SQL_SUCCESS
      || SQLBindCol(m_hstmt,++i,SQL_C_DOUBLE,&m_TData.PYData.c_credit_lim,
            0,NULL) != SQL_SUCCESS
      || SQLBindCol(m_hstmt,++i,SQL_C_DOUBLE,&m_TData.PYData.c_discount,
            0,NULL) != SQL_SUCCESS
      || SQLBindCol(m_hstmt,++i,SQL_C_DOUBLE,&m_TData.PYData.c_balance,
            0,NULL) != SQL_SUCCESS
      || SQLBindCol(m_hstmt,++i,SQL_C_CHAR,&m_TData.PYData.c_data,
            sizeof(m_TData.PYData.c_data),NULL) != SQL_SUCCESS
      )
      {
         wsprintf(szDiag,"InitPYParams(%ld): Bind Col failed\n",m_lRefId);
         CheckDBError(szDiag);
         return(TRUE);
      };
   return(FALSE);
};   // InitPYParams

HRESULT CTPCC_Common::Payment(int * iSize,UCHAR ** pTData)
{
   PAYMENT_DATA * ppd;
   RETCODE rc;
   ppd = (PAYMENT_DATA *) *pTData;
   try
   {
      m_hstmt = m_hstmtPayment;
      m_bTPRslt = TRUE;
      m_iTPRslt = SVCERR_DEADLOCK;
      if (ppd->c_id != 0)
         ppd->c_last[0] = 0;
      memcpy(&m_TData.PYData,ppd,sizeof(PAYMENT_DATA));
      for (m_iTryCount = 1; m_iTryCount <= m_iMaxRetry; m_iTryCount++)
      {
         rc = SQLExecDirectW(m_hstmt,(SQLWCHAR *)L"{call
tpcc_payment(?,?,?,?,?,?,?)}",SQL_NTS);
         if (rc != SQL_SUCCESS && rc != SQL_SUCCESS_WITH_INFO)
         {
            char szDiag[100];
            wsprintf(szDiag,"Payment(%ld): Execute Direct\n",m_lRefId);
            if (CheckDBError(szDiag))
            {
               m_iTPRslt = SVCERR_ODBC;
               break;
            };
            continue;
         };
         if (SQLFetch(m_hstmt) == SQL_ERROR)
         {
            char szDiag[100];
            wsprintf(szDiag,"Payment(%ld): Fetch\n",m_lRefId);
            if (CheckDBError(szDiag))
            {
               m_iTPRslt = SVCERR_ODBC;
               break;
            };
            continue;
         };
         SQLFreeStmt(m_hstmt,SQL_CLOSE);
         if (m_TData.PYData.c_id == 0)
            m_iTPRslt = SVCERR_NOCUSTOMER;
         else
         {
            m_bTPRslt = FALSE;
            m_iTPRslt = SVC_NOERROR;
         }
         break;
      };   // for m_iMaxRetry
      memcpy(ppd,&m_TData.PYData,sizeof(PAYMENT_DATA));
      ppd->bTPRslt = m_bTPRslt;
      ppd->iTPRslt = m_iTPRslt;
      if (!m_bTPRslt)
      {
         strcpy(ppd->execution_status,"Transaction commited.");
         return(S_OK);
      };
      if (m_iTPRslt == SVCERR_NOCUSTOMER)
      {
         strcpy(ppd->execution_status,"Invalid Customer id,name.");
         return(S_OK);
      };
      if (m_iTPRslt == SVCERR_DEADLOCK)
         wsprintf(ppd->execution_status,"Hit retry max(%d).",m_iMaxRetry);
      else
         strcpy(ppd->execution_status,"DBTranAbort, Check Input Data");
      return(S_OK);
   }
     catch (...)
     {
      char szDiag[300];
      wsprintf(szDiag,"Payment(%ld): Unhandled exception\n",m_lRefId);
               WriteEventLog(szDiag,TRUE);
               m_bCanBePooled = FALSE;
      ppd->bTPRslt = TRUE;
      ppd->iTPRslt = SVCERR_EXCEPTION;
      strcpy(ppd->execution_status,"Error, Unhandled exception");
               return(S_OK);
     };
};   // Payment

bool CTPCC_Common::InitDLParams(void)
{
   int i;
   char szDiag[300];
```

```
   if (SQLAllocHandle(SQL_HANDLE_STMT,m_hdbc,&m_hstmtDelivery) !=
SQL_SUCCESS)
   {
      wsprintf(szDiag,"InitDLParams(%ld): Allocate Stmt Handle
failed\n",m_lRefId);
      CheckDBError(szDiag);
      return(TRUE);
   };
   m_hstmt = m_hstmtDelivery;
   i = 0;
#ifdef LONG_WID
   if
(SQLBindParameter(m_hstmt,++i,SQL_PARAM_INPUT,SQL_C_SLONG,SQL_INTEGER,
#else
   if
(SQLBindParameter(m_hstmt,++i,SQL_PARAM_INPUT,SQL_C_SSHORT,SQL_SMALLINT,
#endif
            0,0,&m_TData.DLData.w_id, 0, NULL) != SQL_SUCCESS
      ||
SQLBindParameter(m_hstmt,++i,SQL_PARAM_INPUT,SQL_C_SSHORT,SQL_SMALLINT,
            0,0,&m_TData.DLData.o_carrier_id,0,NULL) != SQL_SUCCESS
      )
      {
         wsprintf(szDiag,"InitDLParams(%ld): Bind Param
failed\n",m_lRefId);
         CheckDBError(szDiag);
         return(TRUE);
      };
   for (i = 0; i < 10; i++)
   {
      if
(SQLBindCol(m_hstmt,(UWORD)(i+1),SQL_C_SLONG,&m_TData.DLData.o_id[i],
         0,NULL) != SQL_SUCCESS)
      {
         wsprintf(szDiag,"InitPYParams(%ld): Bind Col (%d)
failed\n",m_lRefId,(i+1));
         CheckDBError(szDiag);
         return(TRUE);
      };
   };
   return(FALSE);
};   // InitDLParams

HRESULT CTPCC_Common::Delivery(int * iSize,UCHAR ** pTData)
{
   DELIVERY_DATA * pdd;
   RETCODE rc;
   pdd = (DELIVERY_DATA *) *pTData;
   try
   {
      m_hstmt = m_hstmtDelivery;
      m_bTPRslt = TRUE;
      m_iTPRslt = SVCERR_DEADLOCK;
      memcpy(&m_TData.DLData,pdd,sizeof(DELIVERY_DATA));
      for (m_iTryCount = 1; m_iTryCount <= m_iMaxRetry; m_iTryCount++)
      {
         rc = SQLExecDirectW(m_hstmt,(SQLWCHAR *)L"{call
tpcc_delivery(?,?)}",SQL_NTS);
         if (rc != SQL_SUCCESS && rc != SQL_SUCCESS_WITH_INFO)
         {
            char szDiag[100];
            wsprintf(szDiag,"Delivery(%ld): Execute Direct\n",m_lRefId);
            if (CheckDBError(szDiag))
            {
               m_iTPRslt = SVCERR_ODBC;
               break;
            };
            continue;
         };
         if ( SQLFetch(m_hstmt) == SQL_ERROR )
         {
            char szDiag[100];
            wsprintf(szDiag,"Delivery(%ld): Fetch\n",m_lRefId);
            if (CheckDBError(szDiag))
            {
               m_iTPRslt = SVCERR_ODBC;
               break;
            };
            continue;
         };
         SQLFreeStmt(m_hstmt,SQL_CLOSE);
         m_bTPRslt = FALSE;
         m_iTPRslt = SVC_NOERROR;
         break;
      };   // for m_iMaxRetry
      memcpy(pdd,&m_TData.DLData,sizeof(DELIVERY_DATA));
      pdd->bTPRslt = m_bTPRslt;
      pdd->iTPRslt = m_iTPRslt;
      return(S_OK);
   }
      catch (...)
      {
      char szDiag[300];
      wsprintf(szDiag,"Delivery(%ld): Unhandled exception\n",m_lRefId);
               WriteEventLog(szDiag,TRUE);
               m_bCanBePooled = FALSE;
      pdd->bTPRslt = TRUE;
      pdd->iTPRslt = SVCERR_EXCEPTION;
               return(S_OK);
      };
};   // Delivery

bool CTPCC_Common::InitOSParams(void)
{
   char szDiag[300];
   int i;
   if (SQLAllocHandle(SQL_HANDLE_STMT,m_hdbc,&m_hstmtOrderStatus) !=
SQL_SUCCESS
      || SQLAllocHandle(SQL_HANDLE_DESC,m_hdbc,&m_descOrderStatusCols1) !=
SQL_SUCCESS
      || SQLAllocHandle(SQL_HANDLE_DESC,m_hdbc,&m_descOrderStatusCols2) !=
SQL_SUCCESS
      )
   {
      wsprintf(szDiag,"InitOSParams(%ld): Allocate Stmt Handles
failed\n",m_lRefId);
      CheckDBError(szDiag);
      return(TRUE);
   };
```

```
   m_hstmt = m_hstmtOrderStatus;

   if (SQLSetStmtAttrW(m_hstmt,SQL_ATTR_APP_ROW_DESC,
      m_descOrderStatusCols1,SQL_IS_POINTER) != SQL_SUCCESS)
   {
      wsprintf(szDiag,"InitOSParams(%ld): SetStmtAttr OSCols1
failed\n",m_lRefId);
      CheckDBError(szDiag);
      return(TRUE);
   };

   i = 0;
#ifdef LONG_WID
   if
(SQLBindParameter(m_hstmt,++i,SQL_PARAM_INPUT,SQL_C_SLONG,SQL_INTEGER,
#else
   if
(SQLBindParameter(m_hstmt,++i,SQL_PARAM_INPUT,SQL_C_SSHORT,SQL_SMALLINT,
#endif
            0,0,&m_TData.OSData.w_id,0,NULL) != SQL_SUCCESS
      ||
SQLBindParameter(m_hstmt,++i,SQL_PARAM_INPUT,SQL_C_UTINYINT,SQL_TINYINT,
            0,0,&m_TData.OSData.d_id,0,NULL) != SQL_SUCCESS
      ||
SQLBindParameter(m_hstmt,++i,SQL_PARAM_INPUT,SQL_C_SLONG,SQL_INTEGER,
            0,0,&m_TData.OSData.c_id,0,NULL) != SQL_SUCCESS
      || SQLBindParameter(m_hstmt,++i,SQL_PARAM_INPUT,SQL_C_CHAR,SQL_CHAR,
            sizeof(m_TData.OSData.c_last),0,&m_TData.OSData.c_last,
            sizeof(m_TData.OSData.c_last),NULL) != SQL_SUCCESS
      )
   {
      wsprintf(szDiag,"InitOSParams(%ld): Bind Param failed\n",m_lRefId);
      CheckDBError(szDiag);
      return(TRUE);
   };

   // configure block cursor
   if (SQLSetStmtAttrW(m_hstmt,SQL_ATTR_ROW_BIND_TYPE,
            (SQLPOINTER)sizeof(m_TData.OSData.OlOrderStatusData[0]),0) !=
SQL_SUCCESS
      || SQLSetStmtAttrW(m_hstmt,SQL_ATTR_ROWS_FETCHED_PTR,
            &m_RowsFetched,0) != SQL_SUCCESS
      )
   {
      wsprintf(szDiag,"InitOSParams(%ld): SetStmtAttr RowsFetched
failed\n",m_lRefId);
      CheckDBError(szDiag);
      return(TRUE);
   };

   i = 0;
#ifdef LONG_WID
   if (SQLBindCol(m_hstmt,++i,SQL_C_SLONG,
#else
   if (SQLBindCol(m_hstmt,++i,SQL_C_SSHORT,
#endif
            &m_TData.OSData.OlOrderStatusData[0].ol_supply_w_id, 0, NULL)
!= SQL_SUCCESS
      || SQLBindCol(m_hstmt,++i,SQL_C_SLONG,
            &m_TData.OSData.OlOrderStatusData[0].ol_i_id, 0, NULL) !=
SQL_SUCCESS
      || SQLBindCol(m_hstmt,++i,SQL_C_SSHORT,
            &m_TData.OSData.OlOrderStatusData[0].ol_quantity, 0, NULL) !=
SQL_SUCCESS
      || SQLBindCol(m_hstmt,++i,SQL_C_DOUBLE,
            &m_TData.OSData.OlOrderStatusData[0].ol_amount, 0, NULL) !=
SQL_SUCCESS
      || SQLBindCol(m_hstmt,++i,SQL_C_TYPE_TIMESTAMP,
            &m_TData.OSData.OlOrderStatusData[0].ol_delivery_d, 0, NULL)
!= SQL_SUCCESS
      )
      {
         wsprintf(szDiag,"InitOSParams(%ld): Bind Col Ol
failed\n",m_lRefId);
         CheckDBError(szDiag);
         return(TRUE);
      };

   if (SQLSetStmtAttrW(m_hstmt,SQL_ATTR_APP_ROW_DESC,
      m_descOrderStatusCols2,SQL_IS_POINTER) != SQL_SUCCESS)
   {
      wsprintf(szDiag,"InitOSParams(%ld): SetStmtAttr OSCols2
failed\n",m_lRefId);
      CheckDBError(szDiag);
      return(TRUE);
   };

   i = 0;
   if (SQLBindCol(m_hstmt,++i,SQL_C_SLONG,&m_TData.OSData.c_id,
            0,NULL) != SQL_SUCCESS
      || SQLBindCol(m_hstmt,++i,SQL_C_CHAR,&m_TData.OSData.c_last,
            sizeof(m_TData.OSData.c_last),NULL) != SQL_SUCCESS
      || SQLBindCol(m_hstmt,++i,SQL_C_CHAR,&m_TData.OSData.c_first,
            sizeof(m_TData.OSData.c_first),NULL) != SQL_SUCCESS
      || SQLBindCol(m_hstmt,++i,SQL_C_CHAR,&m_TData.OSData.c_middle,
            sizeof(m_TData.OSData.c_middle), NULL) != SQL_SUCCESS
      ||
SQLBindCol(m_hstmt,++i,SQL_C_TYPE_TIMESTAMP,&m_TData.OSData.o_entry_d,
            0,NULL) != SQL_SUCCESS
      || SQLBindCol(m_hstmt,++i,SQL_C_SSHORT,&m_TData.OSData.o_carrier_id,
            0,NULL) != SQL_SUCCESS
      || SQLBindCol(m_hstmt,++i,SQL_C_DOUBLE,&m_TData.OSData.c_balance,
            0,NULL) != SQL_SUCCESS
      || SQLBindCol(m_hstmt,++i,SQL_C_SLONG,&m_TData.OSData.o_id,
            0,NULL) != SQL_SUCCESS
      )
      {
         wsprintf(szDiag,"InitOSParams(%ld): Bind Col failed\n",m_lRefId);
         CheckDBError(szDiag);
         return(TRUE);
      };
   return(FALSE);
};   // InitOSParams

HRESULT CTPCC_Common::OrderStatus(int * iSize,UCHAR ** pTData)
{
   ORDER_STATUS_DATA * posd;
   RETCODE rc;
```

```
   posd = (ORDER_STATUS_DATA *) *pTData;
   try
   {
      m_hstmt = m_hstmtOrderStatus;
      m_bTPRslt = TRUE;
      m_iTPRslt = SVCERR_DEADLOCK;
      if (SQLSetStmtAttrW(m_hstmt,SQL_ATTR_APP_ROW_DESC,
         m_descOrderStatusCols1,SQL_IS_POINTER ) != SQL_SUCCESS)
      {
         char szDiag[100];
         wsprintf(szDiag,"OrderStatus(%ld): SetStmtAttr
OSCols1\n",m_lRefId);
         CheckDBError(szDiag);
         posd->bTPRslt = TRUE;
         posd->iTPRslt = SVCERR_ODBC;
         strcpy(posd->execution_status,"Error, SetStmt OSCols1");
         return(S_OK);
      };
      if (posd->c_id != 0)
                  posd->c_last[0] = 0;
      memcpy(&m_TData.OSData,posd,sizeof(ORDER_STATUS_DATA));
      for (m_iTryCount = 1; m_iTryCount <= m_iMaxRetry; m_iTryCount++)
      {
         // configure block cursor
         if
(SQLSetStmtAttrW(m_hstmt,SQL_ATTR_ROW_ARRAY_SIZE,(SQLPOINTER)1,0) !=
SQL_SUCCESS)
         {
            char szDiag[100];
            wsprintf(szDiag,"OrderStatus(%ld): SetStmtAttr
RowArraySize\n",m_lRefId);
            if (CheckDBError(szDiag))
            {
               m_iTPRslt = SVCERR_ODBC;
               break;
            };
            continue;
         };
         rc = SQLExecDirectW(m_hstmt,(SQLWCHAR*)L"{call
tpcc_orderstatus(?,?,?,?)}",SQL_NTS);
         if ( ((rc == SQL_SUCCESS_WITH_INFO) && (m_RowsFetched != 0)) ||
(rc == SQL_ERROR) )
         {
            char szDiag[100];
            wsprintf(szDiag,"OrderStatus(%ld): Execute
Direct\n",m_lRefId);
            if (CheckDBError(szDiag))
            {
               m_iTPRslt = SVCERR_ODBC;
               break;
            };
            continue;
         };
         // configure block cursor
         if (SQLSetStmtAttrW(m_hstmt,SQL_ATTR_ROW_ARRAY_SIZE,
            (SQLPOINTER)MAX_OL, 0) != SQL_SUCCESS)
         {
            char szDiag[100];
            wsprintf(szDiag,"OrderStatus(%ld): SetStmtAttr RowArraySize
MAX_OL\n",m_lRefId);
            if (CheckDBError(szDiag))
            {
               m_iTPRslt = SVCERR_ODBC;
               break;
            };
            continue;
         };
         rc = SQLFetchScroll(m_hstmt,SQL_FETCH_NEXT,0);
         if ( ((rc == SQL_SUCCESS_WITH_INFO) && (m_RowsFetched != 0)) ||
(rc == SQL_ERROR) )
         {
            char szDiag[100];
            wsprintf(szDiag,"OrderStatus(%ld): FetchScroll\n",m_lRefId);
            if (CheckDBError(szDiag))
            {
               m_iTPRslt = SVCERR_ODBC;
               break;
            };
            continue;
         };
         m_TData.OSData.o_ol_cnt = (short)m_RowsFetched;

         if (m_TData.OSData.o_ol_cnt != 0)
         {
            if
(SQLSetStmtAttrW(m_hstmt,SQL_ATTR_APP_ROW_DESC,m_descOrderStatusCols2,
               SQL_IS_POINTER) != SQL_SUCCESS)
            {
               char szDiag[100];
               wsprintf(szDiag,"OrderStatus(%ld): SetStmtAttr
OSCols2\n",m_lRefId);
               if (CheckDBError(szDiag))
               {
                  m_iTPRslt = SVCERR_ODBC;
                  break;
               };
               continue;
            };
            if (SQLMoreResults(m_hstmt) == SQL_ERROR)
            {
               char szDiag[100];
               wsprintf(szDiag,"OrderStatus(%ld):
MoreResults\n",m_lRefId);
               if (CheckDBError(szDiag))
               {
                  m_iTPRslt = SVCERR_ODBC;
                  break;
               };
               continue;
            };
            if (SQLFetch(m_hstmt) == SQL_ERROR)
            {
               char szDiag[100];
               wsprintf(szDiag,"OrderStatus(%ld): Fetch\n",m_lRefId);
               CheckDBError(szDiag);
               if (SQLSetStmtAttrW(m_hstmt,SQL_ATTR_APP_ROW_DESC,
                  m_descOrderStatusCols1,SQL_IS_POINTER ) != SQL_SUCCESS)
               {
                  char szDiag[100];
```

```
                  wsprintf(szDiag,"OrderStatus(%ld): SetStmtAttr (Fetch)
OSCols1\n",m_lRefId);
                  CheckDBError(szDiag);
                  posd->bTPRslt = TRUE;
                  posd->iTPRslt = SVCERR_ODBC;
                  strcpy(posd->execution_status,"Error, SetStmt Cols1
Fetch");
                  return(S_OK);
               };
               memcpy(&m_TData.OSData,posd,sizeof(ORDER_STATUS_DATA));
               Sleep(20);
               continue;
            };
         };   // order lines exist
         SQLFreeStmt(m_hstmt,SQL_CLOSE);
         if (m_TData.OSData.o_ol_cnt == 0)
            m_iTPRslt = SVCERR_NOORDERS;
         else
         if (m_TData.OSData.c_id == 0 && m_TData.OSData.c_last[0] == 0)
            m_iTPRslt = SVCERR_NOCUSTOMER;
         else
         {
            m_bTPRslt = FALSE;
            m_iTPRslt = SVC_NOERROR;
         };
         break;
      };   // for m_iMaxRetry
      memcpy(posd,&m_TData.OSData,sizeof(ORDER_STATUS_DATA));
      posd->bTPRslt = m_bTPRslt;
      posd->iTPRslt = m_iTPRslt;
      if (!m_bTPRslt)
      {
         strcpy(posd->execution_status,"Transaction commited.");
         return(S_OK);
      };
      if (m_iTPRslt == SVCERR_NOCUSTOMER)
      {
         strcpy(posd->execution_status,"Invalid Customer id,name.");
         return(S_OK);
      };
      if (m_iTPRslt == SVCERR_NOORDERS)
      {
         strcpy(posd->execution_status,"Customer has no orders.");
         return(S_OK);
      };
      if (m_iTPRslt == SVCERR_DEADLOCK)
         wsprintf(posd->execution_status,"Hit retry
max(%d).",m_iMaxRetry);
      else
         strcpy(posd->execution_status,"DBTranAbort, Check Input Data");
      return(S_OK);
   }
       catch (...)
       {
      char szDiag[300];
      wsprintf(szDiag,"OrderStatus(%ld): Unhandled exception\n",m_lRefId);
               WriteEventLog(szDiag,TRUE);
               m_bCanBePooled = FALSE;
      posd->bTPRslt = TRUE;
      posd->iTPRslt = SVCERR_EXCEPTION;
      strcpy(posd->execution_status,"Error, Unhandled exception");
               return(S_OK);
       };
};   // Orderstatus

bool CTPCC_Common::InitSLParams(void)
{
   char szDiag[300];
   int i = 0;
   if (SQLAllocHandle(SQL_HANDLE_STMT,m_hdbc,&m_hstmtStockLevel) !=
SQL_SUCCESS )
   {
      wsprintf(szDiag,"InitSLParams(%ld): Allocate Stmt Handle
failed\n",m_lRefId);
      CheckDBError(szDiag);
      return(TRUE);
   };
   m_hstmt = m_hstmtStockLevel;
#ifdef LONG_WID
   if
(SQLBindParameter(m_hstmt,++i,SQL_PARAM_INPUT,SQL_C_SLONG,SQL_INTEGER,
#else
   if
(SQLBindParameter(m_hstmt,++i,SQL_PARAM_INPUT,SQL_C_SSHORT,SQL_SMALLINT,
#endif
            0,0,&m_TData.SLData.w_id, 0, NULL) != SQL_SUCCESS
      ||
SQLBindParameter(m_hstmt,++i,SQL_PARAM_INPUT,SQL_C_UTINYINT,SQL_TINYINT,
            0,0,&m_TData.SLData.d_id, 0, NULL) != SQL_SUCCESS
      ||
SQLBindParameter(m_hstmt,++i,SQL_PARAM_INPUT,SQL_C_SSHORT,SQL_SMALLINT,
            0,0,&m_TData.SLData.thresh_hold, 0, NULL) != SQL_SUCCESS
      )
   {
      wsprintf(szDiag,"InitSLParams(%ld): Bind Param failed\n",m_lRefId);
      CheckDBError(szDiag);
      return(TRUE);
   };
   if (SQLBindCol(m_hstmt,1,SQL_C_SLONG,
      &m_TData.SLData.low_stock,0,NULL) != SQL_SUCCESS)
   {
      wsprintf(szDiag,"InitSLParams(%ld): Bind Column failed\n",m_lRefId);
      CheckDBError(szDiag);
      return(TRUE);
   };
   return(FALSE);
};   // InitSLParams

HRESULT CTPCC_Common::StockLevel(int * iSize,UCHAR ** pTData)
{
   STOCK_LEVEL_DATA * psld;
   RETCODE rc;
   psld = (STOCK_LEVEL_DATA *) *pTData;
   try
   {
      m_hstmt = m_hstmtStockLevel;
      m_bTPRslt = TRUE;
      m_iTPRslt = SVCERR_DEADLOCK;
      memcpy(&m_TData.SLData,psld,sizeof(STOCK_LEVEL_DATA));
      for (m_iTryCount = 1; m_iTryCount <= m_iMaxRetry; m_iTryCount++)
```

```
      {
         rc = SQLExecDirectW(m_hstmt,
            (SQLWCHAR*)L"{call tpcc_stocklevel(?,?,?)}",SQL_NTS);
         if (rc != SQL_SUCCESS && rc != SQL_SUCCESS_WITH_INFO)
         {
            char szDiag[100];
            wsprintf(szDiag,"StockLevel(%ld): Execute Direct\n",m_lRefId);
            if (CheckDBError(szDiag))
            {
               m_iTPRslt = SVCERR_ODBC;
               break;
            };
            continue;
         };
         if (SQLFetch(m_hstmt) == SQL_ERROR)
         {
            char szDiag[100];
            wsprintf(szDiag,"StockLevel(%ld): Fetch\n",m_lRefId);
            if (CheckDBError(szDiag))
            {
               m_iTPRslt = SVCERR_ODBC;
               break;
            };
            continue;
         };
                        SQLFreeStmt(m_hstmt,SQL_CLOSE);
         m_bTPRslt = FALSE;
         m_iTPRslt = SVC_NOERROR;
                        break;
      };   // for m_iMaxRetry
      memcpy(psld,&m_TData.SLData,sizeof(STOCK_LEVEL_DATA));
      psld->bTPRslt = m_bTPRslt;
      psld->iTPRslt = m_iTPRslt;
      if (!m_bTPRslt)
      {
         strcpy(psld->execution_status,"Transaction commited.");
         return(S_OK);
      };
      if (m_iTPRslt == SVCERR_DEADLOCK)
         wsprintf(psld->execution_status,"Hit retry
max(%d).",m_iMaxRetry);
      else
         strcpy(psld->execution_status,"DBTranAbort, Check Input Data");
      return(S_OK);
   }
       catch (...)
       {
      char szDiag[300];
      wsprintf(szDiag,"StockLevel(%ld): Unhandled exception\n",m_lRefId);
               WriteEventLog(szDiag,TRUE);
               m_bCanBePooled = FALSE;
      psld->bTPRslt = TRUE;
      psld->iTPRslt = SVCERR_EXCEPTION;
      strcpy(psld->execution_status,"Error, Unhandled exception");
               return(S_OK);
       };
};   // Stocklevel

//=====================================================================
//
// Function name: ReadRegistry
//
//    Sets global operational parameters from registry if they exist.
//    Otherwise, compiled in defaults apply.
//
// Result:
//    FALSE    Registry entry found
//    TRUE     Registry entry does not exist
//
//=====================================================================
bool ReadRegistry(VOID)
{
   HKEY hkTPCC;
   DWORD       dwMax;
   DWORD       dwRT;
   CHAR * pszEnvData;
   char szValue[100];
   if (RegOpenKeyEx(HKEY_LOCAL_MACHINE,"SOFTWARE\\Unisys\\TPCC",0,
      KEY_READ, &hkTPCC) != ERROR_SUCCESS )
      return(TRUE);
   dwMax = sizeof(szValue);
   if (RegQueryValueEx(hkTPCC,"SERVERNAME",0,&dwRT,(BYTE *)
&szValue,&dwMax)
      == ERROR_SUCCESS)
      strcpy(szServer,szValue);
   dwMax = sizeof(szValue);
   if (RegQueryValueEx(hkTPCC,"DATABASE",0,&dwRT,(BYTE *) &szValue,&dwMax)
      == ERROR_SUCCESS)
      strcpy(szDatabase,szValue);
   dwMax = sizeof(szValue);
   if (RegQueryValueEx(hkTPCC,"USER",0,&dwRT,(BYTE *) &szValue,&dwMax)
      == ERROR_SUCCESS)
      strcpy(szUser,szValue);
   dwMax = sizeof(szValue);
   if (RegQueryValueEx(hkTPCC,"PASSWORD",0,&dwRT,(BYTE *) &szValue,&dwMax)
      == ERROR_SUCCESS)
      strcpy(szPassword,szValue);
   dwMax = sizeof(szValue);
   if (RegQueryValueEx(hkTPCC,"MAXRETRY",0,&dwRT,(BYTE *) &szValue,&dwMax)
      == ERROR_SUCCESS )
      iDeadlockRetry = abs(atoi(szValue));
   RegCloseKey(hkTPCC);
   if ((pszEnvData = getenv("WEBINSTANCE")) != NULL)
      strcpy(szServer,pszEnvData);
   if ((pszEnvData = getenv("WEBDATABASE")) != NULL)
      strcpy(szDatabase,pszEnvData);
   if ((pszEnvData = getenv("WEBDRIVERNO")) != NULL)
      iInstance = abs(atoi(pszEnvData));

   return(FALSE);
};   // ReadRegistry

//=====================================================================
//
// Function name: WriteEventLog
//
//=====================================================================
void WriteEventLog(char * pMsg,bool bError)
{
   WORD wType;
```

```
   char szHeader[100];
   char * pDMsgs[2];
   HANDLE hEventLog = NULL;
   if (bError)
      wType = EVENTLOG_ERROR_TYPE;
   else
      wType = EVENTLOG_INFORMATION_TYPE;
   hEventLog = RegisterEventSource(NULL,pProgId);
   wsprintf(szHeader,"%s (%ld)\n",pProgId,GetCurrentThreadId());
   pDMsgs[0] = szHeader;
   pDMsgs[1] = pMsg;
   if (hEventLog != NULL)
   {
      ReportEvent(hEventLog,           // event log handle
                  wType,               // event type
                  0,                   // category zero
                  0,                   // no event identifier
                  NULL,                // no user security identifier
                  2,                   // # of substitution strings
                  0,                   // no binary data
                  (LPCTSTR *) pDMsgs,  // address of string array
                  NULL);               // address of binary data
      DeregisterEventSource(hEventLog);
   };
   return;
};   // WriteEventLog
```

Appendix B - Database Design

Build Scripts

BACKUP.SQL

```
declare @startdate datetime
declare @enddate datetime
select @startdate = getdate()
select 'Start date:', convert(varchar(30),@startdate,9)
backup database tpcc to
    DISK = 'C:\Bigdb\dbbackups\BackupA1\backupA1.dmp',
    DISK = 'C:\Bigdb\dbbackups\BackupB1\backupB1.dmp',
    DISK = 'C:\Bigdb\dbbackups\BackupC1\backupC1.dmp',
    DISK = 'C:\Bigdb\dbbackups\BackupD1\backupD1.dmp',
    DISK = 'C:\Bigdb\dbbackups\BackupE1\backupE1.dmp',
    DISK = 'C:\Bigdb\dbbackups\BackupF1\backupF1.dmp',
    DISK = 'C:\Bigdb\dbbackups\BackupG1\backupG1.dmp',
    DISK = 'C:\Bigdb\dbbackups\BackupH1\backupH1.dmp',
    DISK = 'C:\Bigdb\dbbackups\BackupI1\backupI1.dmp',
    DISK = 'C:\Bigdb\dbbackups\BackupJ1\backupJ1.dmp',
    DISK = 'C:\Bigdb\dbbackups\BackupK1\backupK1.dmp',
    DISK = 'C:\Bigdb\dbbackups\BackupL1\backupL1.dmp',
    DISK = 'C:\Bigdb\dbbackups\BackupM1\backupM1.dmp',
    DISK = 'C:\Bigdb\dbbackups\BackupA2\backupA2.dmp',
    DISK = 'C:\Bigdb\dbbackups\BackupB2\backupB2.dmp',
    DISK = 'C:\Bigdb\dbbackups\BackupC2\backupC2.dmp',
    DISK = 'C:\Bigdb\dbbackups\BackupD2\backupD2.dmp',
    DISK = 'C:\Bigdb\dbbackups\BackupE2\backupE2.dmp',
    DISK = 'C:\Bigdb\dbbackups\BackupF2\backupF2.dmp',
    DISK = 'C:\Bigdb\dbbackups\BackupG2\backupG2.dmp',
    DISK = 'C:\Bigdb\dbbackups\BackupH2\backupH2.dmp',
    DISK = 'C:\Bigdb\dbbackups\BackupI2\backupI2.dmp',
    DISK = 'C:\Bigdb\dbbackups\BackupJ2\backupJ2.dmp',
    DISK = 'C:\Bigdb\dbbackups\BackupK2\backupK2.dmp',
    DISK = 'C:\Bigdb\dbbackups\BackupL2\backupL2.dmp',
    DISK = 'C:\Bigdb\dbbackups\BackupM2\backupM2.dmp'
with format, stats = 1
```

CREATEDB.SQL

```
SET ANSI_NULL_DFLT_OFF ON
go
use master
go
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

update  tpcc_timer
  set   start_date     = (select convert(char(30), getdate(),9))
go
CREATE DATABASE tpcc
  ON PRIMARY
   (    NAME           = MSSQL_tpcc_root,
   FILENAME    = "C:\Bigdb\dbRoots\tpcc_root.mdf",
   SIZE        = 10MB,        FILEGROWTH     = 0),
FILEGROUP      MSSQL_misc_fg
(   NAME = MSSQL_miscA1,
    FILENAME = "C:\Bigdb\cabA\misc1\",
    SIZE     = 3210MB,   FILEGROWTH = 0),
(   NAME = MSSQL_miscA2,
    FILENAME = "C:\Bigdb\cabA\misc2\",
    SIZE     = 3210MB,   FILEGROWTH = 0),
(   NAME = MSSQL_miscA3,
    FILENAME = "C:\Bigdb\cabA\misc3\",
    SIZE     = 3210MB,   FILEGROWTH = 0),
(   NAME = MSSQL_miscA4,
    FILENAME = "C:\Bigdb\cabA\misc4\",
    SIZE     = 3210MB,   FILEGROWTH = 0),
(   NAME = MSSQL_miscA5,
    FILENAME = "C:\Bigdb\cabA\misc5\",
    SIZE     = 3210MB,   FILEGROWTH = 0),
(   NAME = MSSQL_miscA6,
    FILENAME = "C:\Bigdb\cabA\misc6\",
    SIZE     = 3210MB,   FILEGROWTH = 0),
(   NAME = MSSQL_miscA7,
    FILENAME = "C:\Bigdb\cabA\misc7\",
    SIZE     = 3210MB,   FILEGROWTH = 0),
(   NAME = MSSQL_miscA8,
    FILENAME = "C:\Bigdb\cabA\misc8\",
    SIZE     = 3210MB,   FILEGROWTH = 0),
(   NAME = MSSQL_miscA9,
    FILENAME = "C:\Bigdb\cabA\misc9\",
    SIZE     = 3210MB,   FILEGROWTH = 0),
(   NAME = MSSQL_miscA10,
    FILENAME = "C:\Bigdb\cabA\misc10\",
    SIZE     = 3210MB,   FILEGROWTH = 0),
(   NAME = MSSQL_miscA11,
    FILENAME = "C:\Bigdb\cabA\misc11\",
    SIZE     = 3210MB,   FILEGROWTH = 0),
(   NAME = MSSQL_miscA12,
    FILENAME = "C:\Bigdb\cabA\misc12\",
    SIZE     = 3210MB,   FILEGROWTH = 0),
(   NAME = MSSQL_miscB1,
    FILENAME = "C:\Bigdb\cabB\misc1\",
    SIZE     = 3210MB,   FILEGROWTH = 0),
(   NAME = MSSQL_miscB2,
    FILENAME = "C:\Bigdb\cabB\misc2\",
    SIZE     = 3210MB,   FILEGROWTH = 0),
(   NAME = MSSQL_miscB3,
```

```
    FILENAME = "C:\Bigdb\cabB\misc3\",
    SIZE     = 3210MB,   FILEGROWTH = 0),
(   NAME = MSSQL_miscB4,
    FILENAME = "C:\Bigdb\cabB\misc4\",
    SIZE     = 3210MB,   FILEGROWTH = 0),
(   NAME = MSSQL_miscB5,
    FILENAME = "C:\Bigdb\cabB\misc5\",
    SIZE     = 3210MB,   FILEGROWTH = 0),
(   NAME = MSSQL_miscB6,
    FILENAME = "C:\Bigdb\cabB\misc6\",
    SIZE     = 3210MB,   FILEGROWTH = 0),
(   NAME = MSSQL_miscB7,
    FILENAME = "C:\Bigdb\cabB\misc7\",
    SIZE     = 3210MB,   FILEGROWTH = 0),
(   NAME = MSSQL_miscB8,
    FILENAME = "C:\Bigdb\cabB\misc8\",
    SIZE     = 3210MB,   FILEGROWTH = 0),
(   NAME = MSSQL_miscB9,
    FILENAME = "C:\Bigdb\cabB\misc9\",
    SIZE     = 3210MB,   FILEGROWTH = 0),
(   NAME = MSSQL_miscB10,
    FILENAME = "C:\Bigdb\cabB\misc10\",
    SIZE     = 3210MB,   FILEGROWTH = 0),
(   NAME = MSSQL_miscB11,
    FILENAME = "C:\Bigdb\cabB\misc11\",
    SIZE     = 3210MB,   FILEGROWTH = 0),
(   NAME = MSSQL_miscB12,
    FILENAME = "C:\Bigdb\cabB\misc12\",
    SIZE     = 3210MB,   FILEGROWTH = 0),
(   NAME = MSSQL_miscC1,
    FILENAME = "C:\Bigdb\cabC\misc1\",
    SIZE     = 3210MB,   FILEGROWTH = 0),
(   NAME = MSSQL_miscC2,
    FILENAME = "C:\Bigdb\cabC\misc2\",
    SIZE     = 3210MB,   FILEGROWTH = 0),
(   NAME = MSSQL_miscC3,
    FILENAME = "C:\Bigdb\cabC\misc3\",
    SIZE     = 3210MB,   FILEGROWTH = 0),
(   NAME = MSSQL_miscC4,
    FILENAME = "C:\Bigdb\cabC\misc4\",
    SIZE     = 3210MB,   FILEGROWTH = 0),
(   NAME = MSSQL_miscC5,
    FILENAME = "C:\Bigdb\cabC\misc5\",
    SIZE     = 3210MB,   FILEGROWTH = 0),
(   NAME = MSSQL_miscC6,
    FILENAME = "C:\Bigdb\cabC\misc6\",
    SIZE     = 3210MB,   FILEGROWTH = 0),
(   NAME = MSSQL_miscC7,
    FILENAME = "C:\Bigdb\cabC\misc7\",
    SIZE     = 3210MB,   FILEGROWTH = 0),
(   NAME = MSSQL_miscC8,
    FILENAME = "C:\Bigdb\cabC\misc8\",
    SIZE     = 3210MB,   FILEGROWTH = 0),
(   NAME = MSSQL_miscC9,
    FILENAME = "C:\Bigdb\cabC\misc9\",
    SIZE     = 3210MB,   FILEGROWTH = 0),
(   NAME = MSSQL_miscC10,
    FILENAME = "C:\Bigdb\cabC\misc10\",
    SIZE     = 3210MB,   FILEGROWTH = 0),
(   NAME = MSSQL_miscC11,
    FILENAME = "C:\Bigdb\cabC\misc11\",
    SIZE     = 3210MB,   FILEGROWTH = 0),
(   NAME = MSSQL_miscC12,
    FILENAME = "C:\Bigdb\cabC\misc12\",
    SIZE     = 3210MB,   FILEGROWTH = 0),
(   NAME = MSSQL_miscD1,
    FILENAME = "C:\Bigdb\cabD\misc1\",
    SIZE     = 3210MB,   FILEGROWTH = 0),
(   NAME = MSSQL_miscD2,
    FILENAME = "C:\Bigdb\cabD\misc2\",
    SIZE     = 3210MB,   FILEGROWTH = 0),
(   NAME = MSSQL_miscD3,
    FILENAME = "C:\Bigdb\cabD\misc3\",
    SIZE     = 3210MB,   FILEGROWTH = 0),
(   NAME = MSSQL_miscD4,
    FILENAME = "C:\Bigdb\cabD\misc4\",
    SIZE     = 3210MB,   FILEGROWTH = 0),
(   NAME = MSSQL_miscD5,
    FILENAME = "C:\Bigdb\cabD\misc5\",
    SIZE     = 3210MB,   FILEGROWTH = 0),
(   NAME = MSSQL_miscD6,
    FILENAME = "C:\Bigdb\cabD\misc6\",
    SIZE     = 3210MB,   FILEGROWTH = 0),
(   NAME = MSSQL_miscD7,
    FILENAME = "C:\Bigdb\cabD\misc7\",
    SIZE     = 3210MB,   FILEGROWTH = 0),
(   NAME = MSSQL_miscD8,
    FILENAME = "C:\Bigdb\cabD\misc8\",
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(   NAME = MSSQL_ordM12,
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    SIZE     = 4090MB,   FILEGROWTH = 0)
 TO FILEGROUP MSSQL_ord_fg
go
update tpcc_timer
set     end_date       = (select convert(char(30), getdate(),9))
go
select "Elapsed time (in seconds): ", datediff(second,(select start_date
from tpcc_timer),(select end_date from tpcc_timer))
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                             --
--  Purpose:  Removes tpcc database and backup files
--                                                               --
-----------------------------------------------------------------

use master
go

--  remove any existing database and backup files

exec sp_dbremove tpcc, dropdev
go


-- No backup devices used for backup.  Used filenames instead.
go
```

RESTORE.SQL

```
declare @startdate datetime
declare @enddate datetime
select @startdate = getdate()
select 'Start date:', convert(varchar(30),@startdate,9)
restore database tpcc from
    DISK = "C:\Bigdb\dbbackups\backupA1\backupA1.dmp",
    DISK = "C:\Bigdb\dbbackups\backupB1\backupB1.dmp",
    DISK = "C:\Bigdb\dbbackups\backupC1\backupC1.dmp",
    DISK = "C:\Bigdb\dbbackups\backupD1\backupD1.dmp",
    DISK = "C:\Bigdb\dbbackups\backupE1\backupE1.dmp",
    DISK = "C:\Bigdb\dbbackups\backupF1\backupF1.dmp",
    DISK = "C:\Bigdb\dbbackups\backupG1\backupG1.dmp",
    DISK = "C:\Bigdb\dbbackups\backupH1\backupH1.dmp",
    DISK = "C:\Bigdb\dbbackups\backupI1\backupI1.dmp",
    DISK = "C:\Bigdb\dbbackups\backupJ1\backupJ1.dmp",
    DISK = "C:\Bigdb\dbbackups\backupK1\backupK1.dmp",
    DISK = "C:\Bigdb\dbbackups\backupL1\backupL1.dmp",
    DISK = "C:\Bigdb\dbbackups\backupM1\backupM1.dmp",
    DISK = "C:\Bigdb\dbbackups\backupA2\backupA2.dmp",
    DISK = "C:\Bigdb\dbbackups\backupB2\backupB2.dmp",
    DISK = "C:\Bigdb\dbbackups\backupC2\backupC2.dmp",
    DISK = "C:\Bigdb\dbbackups\backupD2\backupD2.dmp",
```

```
    DISK = "C:\Bigdb\dbbackups\backupE2\backupE2.dmp",
    DISK = "C:\Bigdb\dbbackups\backupF2\backupF2.dmp",
    DISK = "C:\Bigdb\dbbackups\backupG2\backupG2.dmp",
    DISK = "C:\Bigdb\dbbackups\BackupH2\backupH2.dmp",
    DISK = "C:\Bigdb\dbbackups\BackupI2\backupI2.dmp",
    DISK = "C:\Bigdb\dbbackups\BackupJ2\backupJ2.dmp",
    DISK = "C:\Bigdb\dbbackups\BackupK2\backupK2.dmp",
    DISK = "C:\Bigdb\dbbackups\BackupL2\backupL2.dmp",
    DISK = "C:\Bigdb\dbbackups\BackupM2\backupM2.dmp"
with replace, stats = 1
select @enddate = getdate()
select 'End date:', convert(varchar(30),@enddate,9)
select 'Elapsed time (in seconds):', datediff(second, @startdate,
@enddate)
go
use tpcc
EXEC sp_tableoption 'new_order','pintable',false
go
```

VERIFYTPCCLOAD

```
-----------------------------------------------------------------
--                                                             --
--      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   'CUSTOMER TABLE = (30,000 * No of warehouses)'
select  count_big(*)
from    customer
go

print   'HISTORY TABLE = (30,000 * No of warehouses)'
select  count_big(*)
from    history
go

print   'ORDERS TABLE = (30,000 * No of warehouses)'
select  count_big(*)
from    orders
go

print   'NEW_ORDER TABLE = (9,000 * No of warehouses)'
select  count_big(*)
from    new_order
go

print   'ORDER_LINE TABLE = (300,000 * No of warehouses + some change)'
select  count_big(*)
from    order_line
go

print   'STOCK TABLE = (100,000 * No of warehouses)'
select  count_big(*)
from    stock
go

print   'ITEM TABLE = 100,000'
select  count_big(*)
from    item
go

----------------
-- Check indices
----------------
print '--------------- Index Check ---------------'

use tpcc
go

sp_helpindex   warehouse
go

sp_helpindex   district
go

sp_helpindex   customer
go

sp_helpindex   history
go

sp_helpindex   orders
go

sp_helpindex   new_order
go
```

```
sp_helpindex   order_line
go

sp_helpindex   stock
go

sp_helpindex   item
go
```

Indexes and Tables

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

declare @startdate datetime
declare @enddate datetime
select @startdate = getdate()
select "Start date:", convert(varchar(30),@startdate,9)

if exists ( select name from sysindexes where name = 'customer_c1' )
        drop index customer.customer_c1

create unique clustered index customer_c1 on customer(c_w_id, c_d_id,
c_id)
        on MSSQL_cs_fg

select @enddate = getdate()
select "End date: ", convert(varchar(30),@enddate,9)
select "Elapsed time (in seconds): ", datediff(second, @startdate,
@enddate)

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
declare @enddate datetime
select @startdate = getdate()
select "Start date:", convert(varchar(30),@startdate,9)

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)
 with SORT_IN_TEMPDB
on MSSQL_cs_fg

select @enddate = getdate()
select "End date: ", convert(varchar(30),@enddate,9)
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

declare @startdate datetime
declare @enddate datetime
select @startdate = getdate()
select "Start date:", convert(varchar(30),@startdate,9)

if exists ( select name from sysindexes where name = 'district_c1' )
        drop index district.district_c1

create unique clustered index  district_c1 on district(d_w_id, d_id)
        with fillfactor=100 on MSSQL_misc_fg

select @enddate = getdate()
select "End date: ", convert(varchar(30),@enddate,9)
select "Elapsed time (in seconds): ", datediff(second, @startdate,
@enddate)

go
```

IDXHISCL.SQL

```
-----------------------------------------------------------------
--                                                               --
```

```
--  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 tpcc
go

declare @startdate datetime
declare @enddate datetime
select @startdate = getdate()
select 'Start date:', convert(varchar(30),@startdate,9)

if exists ( select name from sysindexes where name = 'history_c1' )
        drop index history.history_c1

create unique clustered index history_c1 on history(h_c_w_id, h_date,
h_c_d_id, h_c_id, h_amount)
on MSSQL_misc_fg

select @enddate = getdate()
select 'End date: ', convert(varchar(30),@enddate,9)
select 'Elapsed time (in seconds): ', datediff(second, @startdate,
@enddate)

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

declare @startdate datetime
declare @enddate datetime
select @startdate = getdate()
select "Start date:", convert(varchar(30),@startdate,9)

if exists ( select name from sysindexes where  name = 'item_c1' )
        drop index item.item_c1

create unique clustered index item_c1 on item(i_id)
        on MSSQL_misc_fg

select @enddate = getdate()
select "End date: ", convert(varchar(30),@enddate,9)
select "Elapsed time (in seconds): ", datediff(second, @startdate,
@enddate)

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

declare @startdate datetime
declare @enddate datetime
select @startdate = getdate()
select "Start date:", convert(varchar(30),@startdate,9)

if exists ( select name from sysindexes where  name = 'new_order_c1' )
        drop index new_order.new_order_c1

create unique clustered index new_order_c1 on new_order(no_w_id, no_d_id,
no_o_id)
with pad_index, fillfactor=90
        on MSSQL_ord_fg

select @enddate = getdate()
select "End date: ", convert(varchar(30),@enddate,9)
select "Elapsed time (in seconds): ", datediff(second, @startdate,
@enddate)

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

declare @startdate datetime
declare @enddate datetime
```

```
select @startdate = getdate()
select "Start date:", convert(varchar(30),@startdate,9)

if exists ( select name from sysindexes where  name = 'order_line_c1' )
        drop index order_line.order_line_c1

create unique clustered index order_line_c1 on order_line(ol_w_id,
ol_d_id, ol_o_id, ol_number)
        on MSSQL_ord_fg

select @enddate = getdate()
select "End date: ", convert(varchar(30),@enddate,9)
select "Elapsed time (in seconds): ", datediff(second, @startdate,
@enddate)

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

declare @startdate datetime
declare @enddate datetime
select @startdate = getdate()
select "Start date:", convert(varchar(30),@startdate,9)

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_ord_fg

select @enddate = getdate()
select "End date: ", convert(varchar(30),@enddate,9)
select "Elapsed time (in seconds): ", datediff(second, @startdate,
@enddate)

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
declare @enddate datetime
select @startdate = getdate()
select "Start date:", convert(varchar(30),@startdate,9)

--if exists ( select name from sysindexes where  name = 'orders_nc1' )
--      drop index orders.orders_nc1

--create index orders_nc1 on orders( o_w_id, o_d_id, o_c_id, o_id)
--      with pad_index, fillfactor=90,
--      SORT_IN_TEMPDB
--      on MSSQL_ord_fg

select @enddate = getdate()
select "End date: ", convert(varchar(30),@enddate,9)
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

declare @startdate datetime
declare @enddate datetime
select @startdate = getdate()
select "Start date:", convert(varchar(30),@startdate,9)

if exists ( select name from sysindexes where  name = 'stock_c1' )
        drop index stock.stock_c1

create unique clustered index stock_c1 on stock(s_i_id, s_w_id)
        on MSSQL_cs_fg

select @enddate = getdate()
select "End date: ", convert(varchar(30),@enddate,9)
select "Elapsed time (in seconds): ", datediff(second, @startdate,
@enddate)

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

declare @startdate datetime
declare @enddate datetime
select @startdate = getdate()
select "Start date:", convert(varchar(30),@startdate,9)

if exists ( select name from sysindexes where name = 'warehouse_c1' )
       drop index warehouse.warehouse_c1

create unique clustered index warehouse_c1 on warehouse(w_id)
       with fillfactor=100 on MSSQL_misc_fg

select @enddate = getdate()
select "End date: ", convert(varchar(30),@enddate,9)
select "Elapsed time (in seconds): ", datediff(second, @startdate,
@enddate)

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                          text
) on MSSQL_cs_fg
  textimage_on MSSQL_misc_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_ord_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_ord_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_ord_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
```

Stored Procedures

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

------------------------------------------------------------
--  accummulate lineitem amounts for this order into customer
------------------------------------------------------------
                        update  customer
                        set     c_balance      = c_balance + @total,
                                c_delivery_cnt = c_delivery_cnt + 1

                        where   c_w_id         = @w_id and
                                c_d_id         = @d_id and
                                c_id           = @c_id

                end

        select  @oid1 = case @d_id when  1  then @o_id else @oid1 end,
                @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 availible order id and update
--  plus initialize local variables
-----------------------------------------------------------
       update  district
       set     @d_tax       = d_tax,
               @o_id        = d_next_o_id,
               d_next_o_id  = d_next_o_id + 1,
               @o_entry_d   = getdate(),
               @li_no       = 0,
               @commit_flag = 1
       where   d_w_id       = @w_id and
               d_id         = @d_id

----------------------
--  process orderlines
----------------------
       while (@li_no < @o_ol_cnt)
       begin
               select @li_no = @li_no + 1
```

```
-----------------------------------------------
--  set i_id, s_w_id, and qty for this lineitem
-----------------------------------------------
               select  @li_id = case @li_no
                                when 1 then @i_id1
                                when 2 then @i_id2
                                when 3 then @i_id3
                                when 4 then @i_id4
                                when 5 then @i_id5
                                when 6 then @i_id6
                                when 7 then @i_id7
                                when 8 then @i_id8
                                when 9 then @i_id9
                                when 10 then @i_id10
                                when 11 then @i_id11
                                when 12 then @i_id12
                                when 13 then @i_id13
                                when 14 then @i_id14
                                when 15 then @i_id15
                        end,

                       @li_s_w_id = case @li_no
                                    when 1 then @s_w_id1
                                    when 2 then @s_w_id2
                                    when 3 then @s_w_id3
                                    when 4 then @s_w_id4
                                    when 5 then @s_w_id5
                                    when 6 then @s_w_id6
                                    when 7 then @s_w_id7
                                    when 8 then @s_w_id8
                                    when 9 then @s_w_id9
                                    when 10 then @s_w_id10
                                    when 11 then @s_w_id11
                                    when 12 then @s_w_id12
                                    when 13 then @s_w_id13
                                    when 14 then @s_w_id14
                                    when 15 then @s_w_id15
                                   end,

                       @li_qty = case  @li_no
                                     when 1 then @ol_qty1
                                     when 2 then @ol_qty2
                                     when 3 then @ol_qty3
                                     when 4 then @ol_qty4
                                     when 5 then @ol_qty5
                                     when 6 then @ol_qty6
                                     when 7 then @ol_qty7
                                     when 8 then @ol_qty8
                                     when 9 then @ol_qty9
                                     when 10 then @ol_qty10
                                     when 11 then @ol_qty11
                                     when 12 then @ol_qty12
                                     when 13 then @ol_qty13
                                     when 14 then @ol_qty14
                                     when 15 then @ol_qty15
                                end

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

-----------------------
--  update stock values
-----------------------
               update  stock
               set     s_ytd          = s_ytd + @li_qty,
                       @s_quantity    = s_quantity   = s_quantity -
@li_qty +
                                                case when (s_quantity -
@li_qty < 10) then 91 else 0 end,
                       s_order_cnt    = s_order_cnt + 1,
                       s_remote_cnt   = s_remote_cnt + case when
(@li_s_w_id = @w_id) then 0 else 1 end,
                       @s_data        = s_data,
                       @s_dist        = case @d_id
                                          when 1  then s_dist_01
                                          when 2  then s_dist_02
                                          when 3  then s_dist_03
                                          when 4  then s_dist_04
                                          when 5  then s_dist_05
                                          when 6  then s_dist_06
                                          when 7  then s_dist_07
                                          when 8  then s_dist_08
                                          when 9  then s_dist_09
                                          when 10 then s_dist_10
                                          end
               where   s_i_id         = @li_id and
                       s_w_id         = @li_s_w_id

-------------------------------------------------------------------
--  if there actually is a stock (and item) with these ids, go to work
-------------------------------------------------------------------
               if (@@rowcount > 0)
               begin

-----------------------------------------------------------
--  insert order_line data (using data from item and stock)
-----------------------------------------------------------
                       insert into order_line values(       @o_id,
                                                            @d_id,
                                                            @w_id,
                                                            @li_no,
                                                            @li_id,
                                                            @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)
        where   w_id    = @w_id

        if (@commit_flag = 1)
                commit transaction n
        else

------------------------------
--  all that work for nuthin!!!
------------------------------
                rollback transaction n

------------------------------
--  return order data to client
------------------------------
        select  @w_tax,
                @d_tax,
                @o_id,
                @c_last,
                @c_discount,
                @c_credit,
                @o_entry_d,
                @commit_flag
end

go
```

ORDSTAT.SQL

```
--  File:     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_id   int,
                              @d_id   tinyint,

                              @c_id   int,
                              @c_last char(16) = ''

as

declare @c_balance    numeric(12,2),
        @c_first      char(16),
        @c_middle     char(2),
        @o_id         int,
        @o_entry_d    datetime,
        @o_carrier_id smallint,
        @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
                order   by c_w_id, c_d_id, c_last, c_first

                set     rowcount 0
        end

        else

        begin
-----------------------------
--  get customer info if by id
-----------------------------
                select  @c_balance      = c_balance,
                        @c_first        = c_first,
                        @c_middle       = c_middle,
                        @c_last         = c_last
                from    customer WITH (repeatableread)
                where   c_id            = @c_id and
                        c_d_id          = @d_id and
                        c_w_id          = @w_id

                select  @cnt    = @@rowcount

        end

-----------------------
--  if no such customer
-----------------------
        if (@cnt = 0)
        begin
                raiserror('Customer not found',18,1)
                goto custnotfound
        end

------------------
--  get order info
------------------
        select  top 1 @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
        order   by o_id desc

-------------------------------------------
--  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),
        @c_data         char(42),
        @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
                set     c_data  = @c_data + substring(c_data,1,458),
                        @screen_data= @c_data + substring(c_data,1,158)

                where   c_id    = @c_id and
                        c_w_id  = @c_w_id and
                        c_d_id  = @c_d_id

--              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,
```

```
                                @threshhold    smallint
as

declare @o_id_low int,
        @o_id_high int

select  @o_id_low       = (d_next_o_id - 20),
        @o_id_high      = (d_next_o_id - 1)
from    district
where   d_w_id          = @w_id and
        d_id            = @d_id

select  count(distinct(s_i_id))
from    stock, order_line
where   ol_w_id         =  @w_id and
        ol_d_id         =  @d_id and
        ol_o_id         between @o_id_low and
                                @o_id_high and
        s_w_id          =  ol_w_id and
        s_i_id          =  ol_i_id and
        s_quantity      <  @threshhold

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
go
```

Loader Source

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

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

    exit(0);
}

 }
```

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

//Orginal code pgd 08/13/96

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

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

        upper++;

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


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


    return rand_num;
}
#endif

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

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

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

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

    return rand_num;
}
```

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

// blank padded strings in MakeAlphaString (strings.c)

// 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;
    }
       if ( len < z )
               memset(str+len, ' ', z - len);
       str[z] = 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 prercentage is valid
    if ((percent < 0) || (percent > 100))
    {
               printf("MakeOrigianlAlphaString: Invalid percentage: %d\n",
percent);
               exit(-1);
    }

    // verify string is at least 8 chars in length
    if ((x + 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 DEFLDPACKSIZE                       32768
#define LOADER_RES_FILE
        "C:\\MSTPCC.450\\SETUP\\LOGS\\load.out"
#define LOADER_LOG_PATH
        "C:\\MSTPCC.450\\SETUP\\LOGS\\"
#define LOADER_NURAND_C                             123
#define DEF_STARTING_WAREHOUSE              1
#define BUILD_INDEX                                 1       // build both
data and indexes
#define INDEX_ORDER                                 1       // build
indexes before load
#define SCALE_DOWN                                  0   // build a normal
scale database
#define INDEX_SCRIPT_PATH                   "scripts"

typedef struct
{
    char                            *server;
    char                            *database;
    char                            *user;
    char                            *password;
        BOOL                        tables_all;                 // set
if loading all tables
        BOOL                        table_item;                 // set
if loading ITEM table specifically
        BOOL                        table_warehouse;        // set if
loading WAREHOUSE, DISTRICT, and STOCK
        BOOL                        table_customer;             // set
if loading CUSTOMER and HISTORY
        BOOL                        table_orders;           // set if
loading NEW-ORDER, ORDERS, ORDER-LINE
    long                            num_warehouses;
    long                            batch;
    long                            verbose;
        long                        pack_size;
        char                        *loader_res_file;
        char                        *log_path;
        char                        *synch_servername;
        long                        case_sensitivity;
        long                        starting_warehouse;
        long                        build_index;
        long                        index_order;
        long                        scale_down;
        char                        *index_script_path;
} TPCCLDR_ARGS;

// String length constants
        #define SERVER_NAME_LEN             20
        #define DATABASE_NAME_LEN           20
        #define USER_NAME_LEN               20
        #define PASSWORD_LEN                20
        #define TABLE_NAME_LEN              20
        #define I_DATA_LEN                  50
        #define I_NAME_LEN                  24
        #define BRAND_LEN                    1
        #define LAST_NAME_LEN               16
        #define W_NAME_LEN                  10
        #define ADDRESS_LEN                 20
        #define STATE_LEN                    2
        #define ZIP_LEN                      9
        #define S_DIST_LEN                  24
        #define S_DATA_LEN                  50
        #define D_NAME_LEN                  10
        #define FIRST_NAME_LEN              16
        #define MIDDLE_NAME_LEN              2
        #define PHONE_LEN                   16
        #define CREDIT_LEN                   2
        #define C_DATA_LEN                 500
        #define H_DATA_LEN                  24
        #define DIST_INFO_LEN               24
        #define MAX_OL_NEW_ORDER_ITEMS      15
        #define MAX_OL_ORDER_STATUS_ITEMS   15
        #define STATUS_LEN                  25
        #define OL_DIST_INFO_LEN                  24
        #define C_SINCE_LEN                                 23
        #define H_DATE_LEN                                  23
        #define OL_DELIVERY_D_LEN                 23
        #define O_ENTRY_D_LEN               23


// Functions in random.c
void    seed();
long    irand();
double  drand();
void    WUCreate();
short   WURand();
long    RandomNumber(long lower, long upper);

// Functions in getargs.c;
void    GetArgsLoader();
void    GetArgsLoaderUsage();

// Functions in time.c
long    TimeNow();

// Functions in strings.c
void    MakeAddress();
void    LastName();
int     MakeAlphaString();
int     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
//=====================================================================

// added mutex around buildindex code to force index build to single
thread.
// added 1 minute delay before starting stock and customer bulk loads
// added bcp hint for stock
// blank padded strings in MakeAlphaString (strings.c)

// 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 CommitCustomer();
void CheckForCommit_Big();
void OpenConnections();
void BuildIndex();
void FormatDate ();

// Shared memory structures
typedef struct
{
        double                          ol;
    long                ol_i_id;
        long                            ol_supply_w_id;
    short               ol_quantity;
    double              ol_amount;
    char                ol_dist_info[DIST_INFO_LEN+1];
        char                            ol_delivery_d[OL_DELIVERY_D_LEN+1];
} ORDER_LINE_STRUCT;

typedef struct
{
    long                o_id;
    short               o_d_id;
        long                            o_w_id;
    long                o_c_id;
    short               o_carrier_id;
    short               o_ol_cnt;
    short               o_all_local;
        ORDER_LINE_STRUCT   o_ol[15];
} ORDERS_STRUCT;

typedef struct
{
    long                                c_id;
    short                               c_d_id;
        long                            c_w_id;
        char                            c_first[FIRST_NAME_LEN+1];
    char                                c_middle[MIDDLE_NAME_LEN+1];
    char                                c_last[LAST_NAME_LEN+1];
    char                                c_street_1[ADDRESS_LEN+1];
    char                                c_street_2[ADDRESS_LEN+1];
    char                                c_city[ADDRESS_LEN+1];
    char                                c_state[STATE_LEN+1];
    char                                c_zip[ZIP_LEN+1];
    char                                c_phone[PHONE_LEN+1];
    char                                c_credit[CREDIT_LEN+1];
    double                              c_credit_lim;
    double                              c_discount;
        char                            c_balance[6];
    double                              c_ytd_payment;
        short                           c_payment_cnt;
        short                           c_delivery_cnt;
        char                            c_data[C_DATA_LEN+1];
        double                          h_amount;
    char                                h_data[H_DATA_LEN+1];
} CUSTOMER_STRUCT;

typedef struct
{
        char                            c_last[LAST_NAME_LEN+1];
        char                            c_first[FIRST_NAME_LEN+1];
    long                                c_id;
} CUSTOMER_SORT_STRUCT;

typedef struct
{
    long                time_start;
} LOADER_TIME_STRUCT;
```

```
// Global variables
char    szLastError[300];

HENV    henv;

HDBC    v_hdbc;                                     // for SQL Server
version verification
HDBC    i_hdbc1;                                    // for ITEM table
HDBC    w_hdbc1;                                    // for WAREHOUSE,
DISTRICT, STOCK
HDBC    c_hdbc1;                                    // for CUSTOMER
HDBC    c_hdbc2;                                    // for HISTORY
HDBC    o_hdbc1;                                    // for ORDERS
HDBC    o_hdbc2;                                    // for NEW-ORDER

HDBC    o_hdbc3;                                    // for ORDER-LINE

HSTMT   v_hstmt;                                    // for SQL Server
version verification
HSTMT   i_hstmt1;
HSTMT   w_hstmt1;
HSTMT   c_hstmt1, c_hstmt2;
HSTMT   o_hstmt1, o_hstmt2, o_hstmt3;

int             total_db_errors;

ORDERS_STRUCT  orders_buf[ORDERS_PER_DISTRICT];
CUSTOMER_STRUCT        customer_buf[CUSTOMERS_PER_DISTRICT];
long                   orders_rows_loaded;
double                 new_order_rows_loaded;
double                 order_line_rows_loaded;
long                   history_rows_loaded;
long                   customer_rows_loaded;
double                 stock_rows_loaded;
long                   district_rows_loaded;
long                   item_rows_loaded;
long                   warehouse_rows_loaded;
long                   main_time_start;
long                   main_time_end;
long                   max_items;
long                   customers_per_district;
long                   orders_per_district;
long                   first_new_order;
long                   last_new_order;

TPCCLDR_ARGS    *aptr, args;
HANDLE    hIndexMutex;

//=====================================================================
//
// 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);

        printf("%s",buffer);
        fprintf(fLoader,"%s",buffer);

        main_time_start = (TimeNow() / MILLI);
        hIndexMutex = CreateMutex (NULL, FALSE, NULL);

        // 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    bcphint[128];
        char    err_log_path[256];

        // Seed with unique number
        seed(2);

        printf("Loading warehouse table...\n");

        // if build index before load...
        if ((aptr->build_index == 1) && (aptr->index_order == 1))
                BuildIndex("idxwarcl");

        InitString(w_name, W_NAME_LEN+1);
        InitAddress(w_street_1, w_street_2, w_city, w_state, w_zip);

        sprintf(name, "%s..%s", aptr->database, "warehouse");

        strcpy(err_log_path,aptr->log_path);
        strcat(err_log_path,"whouse.err");
        rc = bcp_init(w_hdbc1, name, NULL, err_log_path, DB_IN);

        if (rc != SUCCEED)
                HandleErrorDBC(w_hdbc1);

        if ((aptr->build_index == 1) && (aptr->index_order == 1))
        {
                sprintf(bcphint, "tablock, order (w_id), ROWS_PER_BATCH =
%d", aptr->num_warehouses);
                rc = bcp_control(w_hdbc1, BCPHINTS, (void*) bcphint);
                if (rc != SUCCEED)
                        HandleErrorDBC(w_hdbc1);
        }

        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   bcphint[128];
        char   err_log_path[256];

        // Seed with unique number
        seed(4);

        printf("Loading district table...\n");

        // build index before load
        if ((aptr->build_index == 1) && (aptr->index_order == 1))
                BuildIndex("idxdiscl");

        InitString(d_name, D_NAME_LEN+1);
        InitAddress(d_street_1, d_street_2, d_city, d_state, d_zip);
        sprintf(name, "%s..%s", aptr->database, "district");

        strcpy(err_log_path,aptr->log_path);
        strcat(err_log_path,"district.err");
        rc = bcp_init(w_hdbc1, name, NULL, err_log_path, DB_IN);
        if (rc != SUCCEED)
                HandleErrorDBC(w_hdbc1);

        if ((aptr->build_index == 1) && (aptr->index_order == 1))
        {
                sprintf(bcphint, "tablock, order (d_w_id, d_id),
ROWS_PER_BATCH = %u", (aptr->num_warehouses * 10));
                rc = bcp_control(w_hdbc1, BCPHINTS, (void*) bcphint);
                if (rc != SUCCEED)
                        HandleErrorDBC(w_hdbc1);
        }

        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    bcphint[128];
        char    err_log_path[256];

        // Seed with unique number
        seed(3);

        // if build index before load...
        if ((aptr->build_index == 1) && (aptr->index_order == 1))
                BuildIndex("idxstkcl");
        printf("Waiting 1 minute before stock load starts...\n");
        Sleep(60000);

        sprintf(name, "%s..%s", aptr->database, "stock");

        strcpy(err_log_path,aptr->log_path);
        strcat(err_log_path,"stock.err");
        rc = bcp_init(w_hdbc1, name, NULL, err_log_path, DB_IN);
        if (rc != SUCCEED)
                HandleErrorDBC(w_hdbc1);

        if ((aptr->build_index == 1) && (aptr->index_order == 1))
        {
                sprintf(bcphint, "tablock, order (s_i_id, s_w_id),
ROWS_PER_BATCH = %u", (aptr->num_warehouses * 100000));
                rc = bcp_control(w_hdbc1, BCPHINTS, (void*) bcphint);
                if (rc != SUCCEED)
                        HandleErrorDBC(w_hdbc1);
        }

        rc = bcp_bind(w_hdbc1, (BYTE *) &s_i_id, 0, SQL_VARLEN_DATA, NULL,
0, SQLINT4, 1);
        if (rc != SUCCEED)
                HandleErrorDBC(w_hdbc1);
        rc = bcp_bind(w_hdbc1, (BYTE *) &s_w_id, 0, SQL_VARLEN_DATA, NULL,
0, SQLINT4, 2);
        if (rc != SUCCEED)
                HandleErrorDBC(w_hdbc1);
        rc = bcp_bind(w_hdbc1, (BYTE *) &s_quantity, 0, SQL_VARLEN_DATA,
NULL, 0, SQLINT2, 3);
        if (rc != SUCCEED)
                HandleErrorDBC(w_hdbc1);
        rc = bcp_bind(w_hdbc1, (BYTE *) s_dist_01, 0, S_DIST_LEN, NULL, 0,
0, 4);
        if (rc != SUCCEED)
                HandleErrorDBC(w_hdbc1);
        rc = bcp_bind(w_hdbc1, (BYTE *) s_dist_02, 0, S_DIST_LEN, NULL, 0,
0, 5);
        if (rc != SUCCEED)
                HandleErrorDBC(w_hdbc1);
        rc = bcp_bind(w_hdbc1, (BYTE *) s_dist_03, 0, S_DIST_LEN, NULL, 0,
0, 6);
```

```
        if (rc != SUCCEED)
                HandleErrorDBC(w_hdbc1);
        rc = bcp_bind(w_hdbc1, (BYTE *) s_dist_04, 0, S_DIST_LEN, NULL, 0,
0, 7);
        if (rc != SUCCEED)
                HandleErrorDBC(w_hdbc1);
        rc = bcp_bind(w_hdbc1, (BYTE *) s_dist_05, 0, S_DIST_LEN, NULL, 0,
0, 8);
        if (rc != SUCCEED)
                HandleErrorDBC(w_hdbc1);
        rc = bcp_bind(w_hdbc1, (BYTE *) s_dist_06, 0, S_DIST_LEN, NULL, 0,
0, 9);
        if (rc != SUCCEED)
                HandleErrorDBC(w_hdbc1);
        rc = bcp_bind(w_hdbc1, (BYTE *) s_dist_07, 0, S_DIST_LEN, NULL, 0,
0, 10);
        if (rc != SUCCEED)
                HandleErrorDBC(w_hdbc1);
        rc = bcp_bind(w_hdbc1, (BYTE *) s_dist_08, 0, S_DIST_LEN, NULL, 0,
0, 11);
        if (rc != SUCCEED)
                HandleErrorDBC(w_hdbc1);
        rc = bcp_bind(w_hdbc1, (BYTE *) s_dist_09, 0, S_DIST_LEN, NULL, 0,
0, 12);
        if (rc != SUCCEED)
                HandleErrorDBC(w_hdbc1);
        rc = bcp_bind(w_hdbc1, (BYTE *) s_dist_10, 0, S_DIST_LEN, NULL, 0,
0, 13);
        if (rc != SUCCEED)
                HandleErrorDBC(w_hdbc1);
        rc = bcp_bind(w_hdbc1, (BYTE *) &s_ytd, 0, SQL_VARLEN_DATA, NULL,
0, SQLINT4, 14);
        if (rc != SUCCEED)
                HandleErrorDBC(w_hdbc1);
        rc = bcp_bind(w_hdbc1, (BYTE *) &s_order_cnt, 0, SQL_VARLEN_DATA,
NULL, 0, SQLINT2, 15);
        if (rc != SUCCEED)
                HandleErrorDBC(w_hdbc1);
        rc = bcp_bind(w_hdbc1, (BYTE *) &s_remote_cnt, 0, SQL_VARLEN_DATA,
NULL, 0, SQLINT2, 16);
        if (rc != SUCCEED)
                HandleErrorDBC(w_hdbc1);
        rc = bcp_bind(w_hdbc1, (BYTE *) s_data, 0, S_DATA_LEN, NULL, 0, 0,
17);
        if (rc != SUCCEED)
                HandleErrorDBC(w_hdbc1);

        s_ytd = s_order_cnt = s_remote_cnt = 0;

        time_start = (TimeNow() / MILLI);

        printf("...Loading stock table\n");

        for (s_i_id=1; s_i_id <= max_items; s_i_id++)
        {

                for (s_w_id = (long)aptr->starting_warehouse; s_w_id <=
aptr->num_warehouses; s_w_id++)
                {
                        s_quantity = (short)RandomNumber(10L,100L);
                        len = MakeAlphaString(24,24,S_DIST_LEN, s_dist_01);
                        len = MakeAlphaString(24,24,S_DIST_LEN, s_dist_02);
                        len = MakeAlphaString(24,24,S_DIST_LEN, s_dist_03);
                        len = MakeAlphaString(24,24,S_DIST_LEN, s_dist_04);
                        len = MakeAlphaString(24,24,S_DIST_LEN, s_dist_05);
                        len = MakeAlphaString(24,24,S_DIST_LEN, s_dist_06);
                        len = MakeAlphaString(24,24,S_DIST_LEN, s_dist_07);
                        len = MakeAlphaString(24,24,S_DIST_LEN, s_dist_08);
                        len = MakeAlphaString(24,24,S_DIST_LEN, s_dist_09);
                        len = MakeAlphaString(24,24,S_DIST_LEN, s_dist_10);

                        len = MakeOriginalAlphaString(26,50, S_DATA_LEN,
s_data,10);

                        rc = bcp_sendrow(w_hdbc1);
                        if (rc != SUCCEED)
                                HandleErrorDBC(w_hdbc1);

                        stock_rows_loaded++;
                        CheckForCommit_Big(w_hdbc1, w_hstmt1,
stock_rows_loaded, "stock", &time_start);
                }
        }

        rcint = bcp_done(w_hdbc1);
        if (rcint < 0)
                HandleErrorDBC(w_hdbc1);

        printf("Finished loading stock table.\n");

        SQLFreeStmt(w_hstmt1, SQL_DROP);
        SQLDisconnect(w_hdbc1);
        SQLFreeConnect(w_hdbc1);

        // if build index after load...
        if ((aptr->build_index == 1) && (aptr->index_order == 0))
                BuildIndex("idxstkcl");

        return;
}

//=====================================================================
//
// Function   : LoadCustomer
//
//=====================================================================
void LoadCustomer()
{
        LOADER_TIME_STRUCT      customer_time_start;
        LOADER_TIME_STRUCT      history_time_start;
        long                            w_id;
    short                       d_id;
        DWORD                           dwThreadID[MAX_CUSTOMER_THREADS];
        HANDLE                          hThread[MAX_CUSTOMER_THREADS];
        char                            name[20];
        RETCODE                         rc;
        DBINT                           rcint;
        char                            bcphint[128];
        char                            cmd[256];
```

```
        int                                     num_procs;
        char                                err_log_path_cust[256];
        char                                err_log_path_hist[256];

        // Seed with unique number
        seed(5);

        printf("Loading customer and history tables...\n");

        // if build index before load...
        if ((aptr->build_index == 1) && (aptr->index_order == 1))
        {
                BuildIndex("idxcuscl");
                 // check the number of processors on this system
                 // if 8 or more processors, then build index on History.
                 // 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
        printf("Waiting 1 minute before customer load starts...\n");
        Sleep(60000);
        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");
        sprintf(bcphint, "tablock, order (h_c_w_id, h_date, h_c_d_id,
h_c_id, h_amount), ROWS_PER_BATCH = %u", (aptr->num_warehouses * 30000));
//  Orginally added hint to help history index creation on 9/10/2001.
        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] = 'O';
                customer_buf[i].c_middle[1] = 'E';
                MakeAddress(customer_buf[i].c_street_1,
                                        customer_buf[i].c_street_2,
                                        customer_buf[i].c_city,
                                        customer_buf[i].c_state,
                                        customer_buf[i].c_zip);
                MakeNumberString(16, 16, PHONE_LEN,
customer_buf[i].c_phone);

                if (RandomNumber(1L, 100L) > 10)
                        customer_buf[i].c_credit[0] = 'G';
                else
                        customer_buf[i].c_credit[0] = 'B';
                customer_buf[i].c_credit[1] = 'C';
                customer_buf[i].c_credit_lim = 50000.0;
                customer_buf[i].c_discount = ((float) RandomNumber(0L,
5000L)) / 10000.0;
                strcpy(customer_buf[i].c_balance,"-10.0");
                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);
                CommitCustomer(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("idxordcl");
                        BuildIndex("idxnodcl");
                        BuildIndex("idxodlcl");
        }

        // initialize bulk copy
        sprintf(name, "%s..%s", aptr->database, "orders");

        rc = bcp_init(o_hdbc1, name, NULL, "logs\\orders.err", DB_IN);
        strcpy(err_log_path_ord,aptr->log_path);
        strcat(err_log_path_ord,"orders.err");
        rc = bcp_init(o_hdbc1, name, NULL, err_log_path_ord, DB_IN);
        if (rc != SUCCEED)
                HandleErrorDBC(o_hdbc1);

        if ((aptr->build_index == 1) && (aptr->index_order == 1))
        {
                sprintf(bcphint, "tablock, order (o_w_id, o_d_id, o_id),
ROWS_PER_BATCH = %u", (aptr->num_warehouses * 30000));
                rc = bcp_control(o_hdbc1, BCPHINTS, (void*) bcphint);
                if (rc != SUCCEED)
                        HandleErrorDBC(o_hdbc1);
        }

        sprintf(name, "%s..%s", aptr->database, "new_order");

        rc = bcp_init(o_hdbc2, name, NULL, "logs\\neword.err", DB_IN);
        strcpy(err_log_path_nord,aptr->log_path);
        strcat(err_log_path_nord,"neword.err");
        rc = bcp_init(o_hdbc2, name, NULL, err_log_path_nord, DB_IN);
        if (rc != SUCCEED)
                HandleErrorDBC(o_hdbc2);

        if ((aptr->build_index == 1) && (aptr->index_order == 1))
        {
                sprintf(bcphint, "tablock, order (no_w_id, no_d_id,
no_o_id), ROWS_PER_BATCH = %u", (aptr->num_warehouses * 9000));
                rc = bcp_control(o_hdbc2, BCPHINTS, (void*) bcphint);
                if (rc != SUCCEED)
                        HandleErrorDBC(o_hdbc2);
        }

        sprintf(name, "%s..%s", aptr->database, "order_line");

        rc = bcp_init(o_hdbc3, name, NULL, "logs\\ordline.err", DB_IN);
        strcpy(err_log_path_ordl,aptr->log_path);
        strcat(err_log_path_ordl,"ordline.err");
        rc = bcp_init(o_hdbc3, name, NULL, err_log_path_ordl, DB_IN);
```

```
        if (rc != SUCCEED)
                HandleErrorDBC(o_hdbc3);

    if ((aptr->build_index == 1) && (aptr->index_order == 1))
        {
                sprintf(bcphint, "tablock, order (ol_w_id, ol_d_id,
ol_o_id, ol_number), ROWS_PER_BATCH = %u", (aptr->num_warehouses *
300000));
                rc = bcp_control(o_hdbc3, BCPHINTS, (void*) bcphint);
                if (rc != SUCCEED)
                        HandleErrorDBC(o_hdbc3);
        }

        orders_rows_loaded      = 0;
        new_order_rows_loaded   = 0;
        order_line_rows_loaded  = 0;

        OrdersBufInit();

        orders_time_start.time_start = (TimeNow() / MILLI);
        new_order_time_start.time_start = (TimeNow() / MILLI);
        order_line_time_start.time_start = (TimeNow() / MILLI);

        for (w_id = (long)aptr->starting_warehouse; w_id <= aptr-
>num_warehouses; w_id++)
        {
                for (d_id = 1; d_id <= DISTRICT_PER_WAREHOUSE; d_id++)
                {

                        OrdersBufLoad(d_id, w_id);

                        // start parallel loading threads here...
                        // start Orders table thread
                        printf("...Loading Order Table for: d_id = %d, w_id
= %d\n", d_id, w_id);

                        hThread[0] = CreateThread(NULL,
                                                                        0,
(LPTHREAD_START_ROUTINE) LoadOrdersTable,
&orders_time_start,
                                                                        0,
&dwThreadID[0]);

                        if (hThread[0] == NULL)
                        {
                                printf("Error, failed in creating creating
thread = 0.\n");
                                exit(-1);
                        }

                        // start NewOrder table thread
                        printf("...Loading New-Order Table for: d_id = %d,
w_id = %d\n", d_id, w_id);

                        hThread[1] = CreateThread(NULL,
                                                                        0,
(LPTHREAD_START_ROUTINE) LoadNewOrderTable,
&new_order_time_start,
                                                                        0,
&dwThreadID[1]);

                        if (hThread[1] == NULL)
                        {
                                printf("Error, failed in creating creating
thread = 1.\n");
                                exit(-1);
                        }

                        // start Order-Line table thread
                        printf("...Loading Order-Line Table for: d_id = %d,
w_id = %d\n", d_id, w_id);

                        hThread[2] = CreateThread(NULL,
                                                                        0,
(LPTHREAD_START_ROUTINE) LoadOrderLineTable,
&order_line_time_start,
                                                                        0,
&dwThreadID[2]);

                        if (hThread[2] == NULL)
                        {
                                printf("Error, failed in creating creating
thread = 2.\n");
                                exit(-1);
                        }

                        WaitForSingleObject( hThread[0], INFINITE );
                        WaitForSingleObject( hThread[1], INFINITE );
                        WaitForSingleObject( hThread[2], INFINITE );

                        if (CloseHandle(hThread[0]) == FALSE)
                        {
                                printf("Error, failed in closing Orders
thread handle with errno: %d\n", GetLastError());
                        }

                        if (CloseHandle(hThread[1]) == FALSE)
                        {
                                printf("Error, failed in closing NewOrder
thread handle with errno: %d\n", GetLastError());
                        }

                        if (CloseHandle(hThread[2]) == FALSE)
                        {
                                printf("Error, failed in closing OrderLine
thread handle with errno: %d\n", GetLastError());
                        }
                }
        }
```

```
        printf("Finished loading orders.\n");

    return;
}

//=========================================================================
//
// Function   : OrdersBufInit
//
// Clears shared buffer for ORDERS, NEWORDER, and ORDERLINE
//
//=========================================================================
void OrdersBufInit()
{
        int     i;
        int             j;

        for (i=0;i<orders_per_district;i++)
        {
                orders_buf[i].o_id = 0;
                orders_buf[i].o_d_id = 0;
                orders_buf[i].o_w_id = 0;
                orders_buf[i].o_c_id = 0;
                orders_buf[i].o_carrier_id = 0;
                orders_buf[i].o_ol_cnt = 0;
                orders_buf[i].o_all_local = 0;

                for (j=0;j<=14;j++)
                {
                        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("idxordcl");

                // build non-clustered index
                if (aptr->build_index == 1)
                        BuildIndex("idxordnc");
        }
}

//=====================================================================
//
// Function   : LoadNewOrderTable
//
//=====================================================================
void LoadNewOrderTable(LOADER_TIME_STRUCT *new_order_time_start)
{
        long           i;
    long        o_id;
    short       o_d_id;
        long           o_w_id;
        RETCODE        rc;
        DBINT          rcint;

        // Bind NEW-ORDER data
    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;
//      DBINT   rcint;


    if ( !(rows_loaded % aptr->batch) )
    {
        /*      rcint = bcp_batch(hdbc);
                if (rcint < 0)
                        HandleErrorDBC(hdbc);
        */
                time_end = (TimeNow() / MILLI);
                time_diff = time_end - *time_start;

                printf("-> Loaded %ld rows into %s in %ld sec - Total = %d
(%.2f rps)\n",
                        aptr->batch,
                        table_name,
                                time_diff,
                        rows_loaded,
                                (float) aptr->batch / (time_diff ? time_diff
: 1L));

                *time_start = time_end;
    }

    return;
}
//=====================================================================
//
// Function   : CommitCustomer
//
//=====================================================================
void CommitCustomer(HDBC hdbc,
                                        HSTMT hstmt,
                                        long rows_loaded,
                                        char *table_name,
                                long *time_start)
{

        DBINT   rcint;


    if ( !(rows_loaded % (aptr->num_warehouses*15000)) )
    {
                rcint = bcp_batch(hdbc);
                if (rcint < 0)
                        HandleErrorDBC(hdbc);

    }

    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 , &c_hdbc2);
        SQLAllocHandle(SQL_HANDLE_DBC, henv , &o_hdbc1);
        SQLAllocHandle(SQL_HANDLE_DBC, henv , &o_hdbc2);
        SQLAllocHandle(SQL_HANDLE_DBC, henv , &o_hdbc3);

        SQLSetConnectAttr(i_hdbc1, SQL_COPT_SS_BCP, (void *)SQL_BCP_ON,
SQL_IS_INTEGER );
        SQLSetConnectAttr(w_hdbc1, SQL_COPT_SS_BCP, (void *)SQL_BCP_ON,
SQL_IS_INTEGER );
        SQLSetConnectAttr(c_hdbc1, SQL_COPT_SS_BCP, (void *)SQL_BCP_ON,
SQL_IS_INTEGER );
        SQLSetConnectAttr(c_hdbc2, SQL_COPT_SS_BCP, (void *)SQL_BCP_ON,
SQL_IS_INTEGER );
        SQLSetConnectAttr(o_hdbc1, SQL_COPT_SS_BCP, (void *)SQL_BCP_ON,
SQL_IS_INTEGER );
        SQLSetConnectAttr(o_hdbc2, SQL_COPT_SS_BCP, (void *)SQL_BCP_ON,
SQL_IS_INTEGER );
        SQLSetConnectAttr(o_hdbc3, SQL_COPT_SS_BCP, (void *)SQL_BCP_ON,
SQL_IS_INTEGER );

        // Open connections to SQL Server
        // Connection 1
        sprintf( szDriverString , "DRIVER={SQL
Server};SERVER=%s;UID=%s;PWD=%s;DATABASE=%s" ,
                                                aptr->server,
                                                aptr->user,
                                                aptr->password,
                                                aptr->database );

        rc = SQLSetConnectOption (i_hdbc1, SQL_PACKET_SIZE, aptr-
>pack_size);
        if (rc != SUCCEED)
                HandleErrorDBC(i_hdbc1);

        rc = SQLDriverConnect ( i_hdbc1,
                                                NULL,
                                                    (SQLCHAR*)&szDriverString[0]
,
                                                    SQL_NTS,

        (SQLCHAR*)&szDriverStringOut[0],
                                                    sizeof(szDriverStringOut),
                                                    &cbDriverStringOut,
                                                    SQL_DRIVER_NOPROMPT );
        if ( (rc != SUCCEED) &&
                (rc != SQL_SUCCESS_WITH_INFO) )
        {
                HandleErrorDBC(i_hdbc1);
                printf("TPC-C Loader aborted!\n");
                exit(9);
        }

        // Connection 2
        sprintf( szDriverString , "DRIVER={SQL
Server};SERVER=%s;UID=%s;PWD=%s;DATABASE=%s" ,
                                                aptr->server,
                                                aptr->user,
                                                aptr->password,
                                                aptr->database );

        rc = SQLSetConnectOption (w_hdbc1, SQL_PACKET_SIZE, aptr-
>pack_size);

        if (rc != SUCCEED)
                HandleErrorDBC(w_hdbc1);

        rc = SQLDriverConnect ( w_hdbc1,
                                                        NULL,

        (SQLCHAR*)&szDriverString[0] ,
                                                        SQL_NTS,

        (SQLCHAR*)&szDriverStringOut[0],

        sizeof(szDriverStringOut),
                                                        &cbDriverStringOut,
```

```
                                                        SQL_DRIVER_NOPROMPT
);
        if ( (rc != SUCCEED) &&
                 (rc != SQL_SUCCESS_WITH_INFO) )
        {
                HandleErrorDBC(w_hdbc1);
                printf("TPC-C Loader aborted!\n");
                exit(9);
        }

        // Connection 3
        sprintf( szDriverString , "DRIVER={SQL
Server};SERVER=%s;UID=%s;PWD=%s;DATABASE=%s" ,
                                                aptr->server,
                                                aptr->user,
                                                aptr->password,
                                                aptr->database );

        rc = SQLSetConnectOption (c_hdbc1, SQL_PACKET_SIZE, aptr-
>pack_size);
        if (rc != SUCCEED)
                HandleErrorDBC(c_hdbc1);

        rc = SQLDriverConnect ( c_hdbc1,
                                                        NULL,

        (SQLCHAR*)&szDriverString[0] ,
                                                        SQL_NTS,

        (SQLCHAR*)&szDriverStringOut[0],

        sizeof(szDriverStringOut),
                                                        &cbDriverStringOut,
                                                        SQL_DRIVER_NOPROMPT
);
        if ( (rc != SUCCEED) &&
                 (rc != SQL_SUCCESS_WITH_INFO) )
        {
                HandleErrorDBC(c_hdbc1);
                printf("TPC-C Loader aborted!\n");
                exit(9);
        }

        // Connection 4
        sprintf( szDriverString , "DRIVER={SQL
Server};SERVER=%s;UID=%s;PWD=%s;DATABASE=%s" ,
                                                aptr->server,
                                                aptr->user,
                                                aptr->password,
                                                aptr->database );

        rc = SQLSetConnectOption (c_hdbc2, SQL_PACKET_SIZE, aptr-
>pack_size);
        if (rc != SUCCEED)
                HandleErrorDBC(c_hdbc2);

        rc = SQLDriverConnect ( c_hdbc2,
                                                        NULL,

        (SQLCHAR*)&szDriverString[0] ,
                                                        SQL_NTS,

        (SQLCHAR*)&szDriverStringOut[0],

        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];
        WaitForSingleObject( hIndexMutex, INFINITE );
        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);
        Sleep(5000);
        ReleaseMutex( hIndexMutex);

}

//=====================================================================
//
// Function name: HandleErrorDBC
//
//=====================================================================
void HandleErrorDBC (SQLHDBC  hdbc1)
{

        SQLCHAR         SqlState[6], Msg[SQL_MAX_MESSAGE_LENGTH];
        SQLLEN          NativeError;
        SQLSMALLINT i, MsgLen;
        SQLRETURN   rc2;
        char            timebuf[128];
        char            datebuf[128];
        char            err_log_path[256];
        FILE            *fp1;

        i = 1;
        while (( rc2 = SQLGetDiagRec(SQL_HANDLE_DBC , hdbc1, i, SqlState ,
&NativeError,
                                Msg, sizeof(Msg) , &MsgLen )) !=
SQL_NO_DATA )
        {
                sprintf( szLastError , "%s" ,  Msg );

                _strtime(timebuf);
                _strdate(datebuf);

                printf( "[%s : %s] %s\n==>SQLState: %s\n" , datebuf,
timebuf, szLastError, SqlState);

                strcpy(err_log_path,aptr->log_path);
                strcat(err_log_path,"tpccldr.err");
                fp1 = fopen(err_log_path,"a+");
```

```
                if (fp1 == NULL)
                        printf("ERROR:  Unable to open errorlog file.\n");
                else
                {
                        fprintf(fp1, "[%s : %s] %s\nSQLState: %s\n" ,
datebuf, timebuf, szLastError, SqlState);
                        fclose(fp1);
                }

                i++;
        }
}

//=====================================================================
//
// Function   : HandleErrorSTMT
//
//=====================================================================
void HandleErrorSTMT (HSTMT  hstmt1)
{
        SQLCHAR        SqlState[6], Msg[SQL_MAX_MESSAGE_LENGTH];
        SQLLEN         NativeError;
        SQLSMALLINT i, MsgLen;
        SQLRETURN   rc2;
        char           timebuf[128];
        char           datebuf[128];
        char           err_log_path[256];
        FILE           *fp1;

        i = 1;
        while (( rc2 = SQLGetDiagRec(SQL_HANDLE_STMT , hstmt1, i, SqlState
, &NativeError,
                                Msg, sizeof(Msg) , &MsgLen )) !=
SQL_NO_DATA )
        {
                if (total_db_errors >= MAX_SQL_ERRORS)
                {
                        printf(">>>>> Maximum SQL errors of %d exceeded.
Terminating TPCCLDR.<<<<<\n",total_db_errors);
                        exit(9);
                }
                total_db_errors++;

                sprintf( szLastError , "%s" ,  Msg );

                _strtime(timebuf);
                _strdate(datebuf);

                printf( "[%s : %s] %s\nSQLState: %s\n" , datebuf, timebuf,
szLastError, SqlState);

                strcpy(err_log_path,aptr->log_path);
                strcat(err_log_path,"tpccldr.err");
                fp1 = fopen(err_log_path,"a+");
                if (fp1 == NULL)
                        printf("ERROR:  Unable to open errorlog file.\n");
                else
                {
                        fprintf(fp1, "[%s : %s] %s\nSQLState: %s\n" ,
datebuf, timebuf, szLastError, SqlState);
                        fclose(fp1);
                }

                i++;
        }
}

//=====================================================================
//
// Function   : FormatDate
//
//=====================================================================
void FormatDate ( char* szTimeCOutput )
{
        struct tm when;
        time_t now;

        time( &now );
        when  = *localtime( &now );

        mktime( &when );

        // odbc datetime format
        strftime( szTimeCOutput , 30 , "%Y-%m-%d %H:%M:%S.000", &when );

        return;
} }
```

Appendix C - Tunable Parameters

Microsoft SQL Server Startup Parameters

sqlservr -c -x –g300 -T3502 -T3428

Where:

- -c Start SQL Server independently of the Service Control Manager
- -x Disables the keeping of CPU time and cache hit ratio statistics
- -g300 Specifies the amount of virtual address space, in MB, SQL Server will leave available for memory allocations, excluding the buffer pool and thread stacks, such as dynamically-loaded DLLs, extended procedure calls, etc. If this option is not specified, SQL Server will use a value that is suitable for a wide range of runtime environments. Use of this option may be appropriate in 2GB (3GB Enterprise Edition) configurations in which the memory usage requirements of SQL Server are atypical and the virtual address space of the SQL Server process is totally in use. Incorrect use of this option can lead to conditions under which SQL Server may not start or may encounter runtime errors.
- -T3502 Writes a message to the SQL Server Errorlog showing the beginning and ending time of each checkpoint
- T3428 Use half of the memory available on the system during the recovery process to keep a hash table that enables recovery to proceed smoothly.

BOOT.INI

```
[boot loader]
timeout=30
default=multi(0)disk(0)rdisk(0)partition(1)\WINDOWS
[operating systems]
multi(0)disk(0)rdisk(0)partition(1)\WINDOWS="Windows Server 2003,
Datacenter" /fastdetect /pae /hb=0 /CLSTR=f7f6f5f4f3f2f1e0
```

Microsoft SQL Server Configuration Parameters

Sydbtune.ver

```
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'))

 -------------------- -------------------- -----------------------------
 8.00.857             SP3                  Enterprise Edition

(1 row affected)
1> 2> 3>
SELECT  CONVERT(char(30), getdate(), 21)

 ------------------------------
 2004-04-26 09:36:16.840

(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  ' '

 ------------------------------
 2004-04-26 09:36:17.263

(1 row affected)

1> 2> 3> DBCC execution completed. If DBCC printed error messages, contact
your system administrator.
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           -1
-1
 allow updates                                 0           1            1
1
 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            0
0
 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        63100
63100
 max text repl size (B)                        0  2147483647        65536
65536
 max worker threads                           32       32767          864
864
 media retention                               0         365            0
0
 min memory per query (KB)                   512  2147483647          512
512
 min server memory (MB)                        0  2147483647            0
0
 nested triggers                               0           1            0
0
 network packet size (B)                     512       65536         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          119
119
 remote access                                 0           1            0
0
 remote login timeout (s)                      0  2147483647           20
20
 remote proc trans                             0           1            0
0
 remote query timeout (s)                      0  2147483647          600
600
 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>
```

Storage Configuration Information

Log DPE-Cache Configuration

```
SP Read Cache State                 Disabled
SP Write Cache State                Enabled
Cache Page size:                    16
Write Cache Mirrored:               YES
Low Watermark:                      15
High Watermark:                     85
SPA Cache pages:                    30245
SPB Cache pages:                    0
Unassigned Cache Pages:             0
Read Hit Ratio:                     N/A
Write Hit Ratio:                    0
Prct Dirty Cache Pages =            0
Prct Cache Pages Owned =            0
SPA Read Cache State                Disabled
SPB Read Cache State                Disabled
SPA Write Cache State               Enabled
SPB Write Cache State               Enabled
System Buffer (spA):                454 MB
System Buffer (spB):                454 MB
SPS Test Day:                       Saturday
SPS Test Time:                      18:00
SPA Physical Memory Size =          1022
SPB Physical Memory Size =          1022
Physical memory size of Front-End = Switch not supported
Physical memory size of Back-End =  Switch not supported
SPA Free Memory Size =              0
SPB Free Memory Size =              0
Free Memory Size of Front-End =     Switch not supported
Free Memory Size of Back-End =      Switch not supported
SPA Read Cache Size =               0
SPB Read Cache Size =               0
SPA Write Cache Size =              568
SPB Write Cache Size =              568
SPA Optimized Raid 3 Memory Size =  0
SPB Optimized Raid 3 Memory Size =  0
```

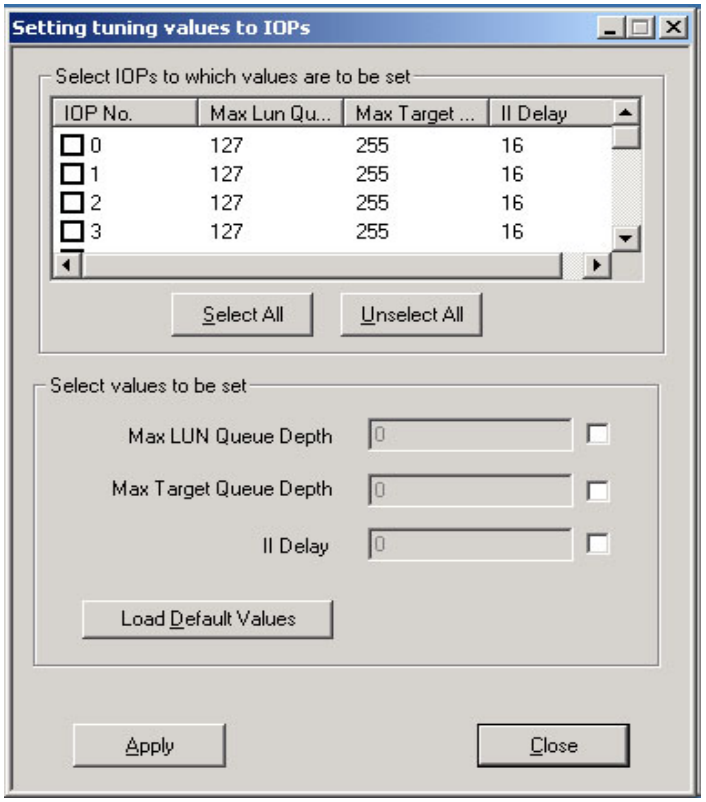
Log DPE LUN Configurations

Lun 0

```
Statistics logging is disabled.
 Certain fields are not printed if statistics
 logging is not enabled.
Prefetch size (blocks) =         0
Prefetch multiplier =            0
Segment size (blocks) =          0
Segment multiplier =             0
Maximum prefetch (blocks) =      4096
Prefetch Disable Size (blocks) = 4097
Prefetch idle count =            40

Prefetching: NO
Prefetched data retained    YES

Read cache configured according to
 specified parameters.

Total Hard Errors:          0
Total Soft Errors:          0
Total Queue Length:         0
Name                        LUN 0
Minimum latency reads N/A

RAID Type:                  RAID1/0
RAIDGroup ID:               0
State:                      Bound
Stripe Crossing:            0
Element Size:               256
Current owner:              SP A
Offset:                     0
Auto-trespass:              DISABLED
Auto-assign:                DISABLED
Write cache:                ENABLED
Read cache:                 DISABLED
Idle Threshold:             0
Idle Delay Time:            20
Write Aside Size:           65534
Default Owner:              SP A
Rebuild Priority:           ASAP
Verify Priority:            ASAP
Prct Reads Forced Flushed:  0
Prct Writes Forced Flushed: 0
Prct Rebuilt:               100
Prct Bound:                 100
LUN Capacity(Megabytes):    782956
LUN Capacity(Blocks):       1603494912
UID:
60:06:01:60:36:31:10:00:8C:2F:22:31:74:7F:D8:11
Bus 0 Enclosure 0  Disk 11  Queue Length:          0
Bus 0 Enclosure 0  Disk 9  Queue Length:          0
Bus 0 Enclosure 0  Disk 7  Queue Length:          0
Bus 0 Enclosure 0  Disk 5  Queue Length:          0
Bus 0 Enclosure 0  Disk 3  Queue Length:          0
Bus 0 Enclosure 0  Disk 1  Queue Length:          0
Bus 0 Enclosure 0  Disk 10  Queue Length:          0
Bus 0 Enclosure 0  Disk 8  Queue Length:          0
Bus 0 Enclosure 0  Disk 6  Queue Length:          0
Bus 0 Enclosure 0  Disk 4  Queue Length:          0
Bus 0 Enclosure 0  Disk 2  Queue Length:          0
Bus 0 Enclosure 0  Disk 0  Queue Length:          0
Bus 0 Enclosure 0  Disk 11  Hard Read Errors:          0
Bus 0 Enclosure 0  Disk 9  Hard Read Errors:          0
Bus 0 Enclosure 0  Disk 7  Hard Read Errors:          0
Bus 0 Enclosure 0  Disk 5  Hard Read Errors:          0
Bus 0 Enclosure 0  Disk 3  Hard Read Errors:          0
Bus 0 Enclosure 0  Disk 1  Hard Read Errors:          0
Bus 0 Enclosure 0  Disk 10  Hard Read Errors:          0
```

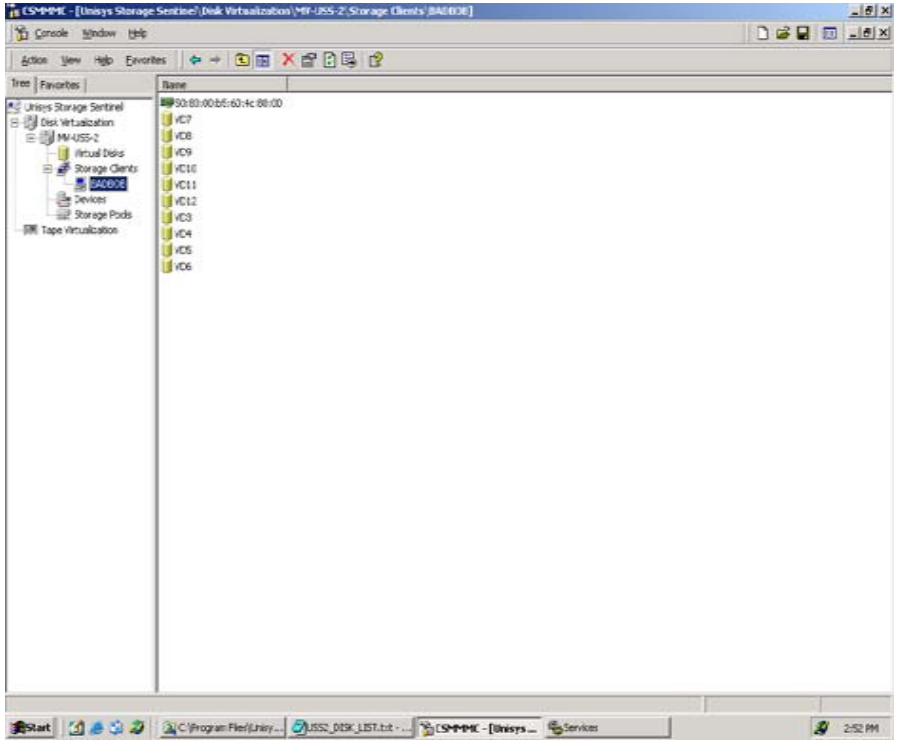
```
Bus 0 Enclosure 0  Disk 8  Hard Read Errors:          0
Bus 0 Enclosure 0  Disk 6  Hard Read Errors:          0
Bus 0 Enclosure 0  Disk 4  Hard Read Errors:          0
Bus 0 Enclosure 0  Disk 2  Hard Read Errors:          0
Bus 0 Enclosure 0  Disk 0  Hard Read Errors:          0
Bus 0 Enclosure 0  Disk 11  Hard Write Errors:         0
Bus 0 Enclosure 0  Disk 9  Hard Write Errors:         0
Bus 0 Enclosure 0  Disk 7  Hard Write Errors:         0
Bus 0 Enclosure 0  Disk 5  Hard Write Errors:         0
Bus 0 Enclosure 0  Disk 3  Hard Write Errors:         0
Bus 0 Enclosure 0  Disk 1  Hard Write Errors:         0
Bus 0 Enclosure 0  Disk 10  Hard Write Errors:         0
Bus 0 Enclosure 0  Disk 8  Hard Write Errors:         0
Bus 0 Enclosure 0  Disk 6  Hard Write Errors:         0
Bus 0 Enclosure 0  Disk 4  Hard Write Errors:         0
Bus 0 Enclosure 0  Disk 2  Hard Write Errors:         0
Bus 0 Enclosure 0  Disk 0  Hard Write Errors:         0
Bus 0 Enclosure 0  Disk 11  Soft Read Errors:          0
Bus 0 Enclosure 0  Disk 9  Soft Read Errors:          0
Bus 0 Enclosure 0  Disk 7  Soft Read Errors:          0
Bus 0 Enclosure 0  Disk 5  Soft Read Errors:          0
Bus 0 Enclosure 0  Disk 3  Soft Read Errors:          0
Bus 0 Enclosure 0  Disk 1  Soft Read Errors:          0
Bus 0 Enclosure 0  Disk 10  Soft Read Errors:          0
Bus 0 Enclosure 0  Disk 8  Soft Read Errors:          0
Bus 0 Enclosure 0  Disk 6  Soft Read Errors:          0
Bus 0 Enclosure 0  Disk 4  Soft Read Errors:          0
Bus 0 Enclosure 0  Disk 2  Soft Read Errors:          0
Bus 0 Enclosure 0  Disk 0  Soft Read Errors:          0
Bus 0 Enclosure 0  Disk 11  Soft Write Errors:         0
Bus 0 Enclosure 0  Disk 9  Soft Write Errors:         0
Bus 0 Enclosure 0  Disk 7  Soft Write Errors:         0
Bus 0 Enclosure 0  Disk 5  Soft Write Errors:         0
Bus 0 Enclosure 0  Disk 3  Soft Write Errors:         0
Bus 0 Enclosure 0  Disk 1  Soft Write Errors:         0
Bus 0 Enclosure 0  Disk 10  Soft Write Errors:         0
Bus 0 Enclosure 0  Disk 8  Soft Write Errors:         0
Bus 0 Enclosure 0  Disk 6  Soft Write Errors:         0
Bus 0 Enclosure 0  Disk 4  Soft Write Errors:         0
Bus 0 Enclosure 0  Disk 2  Soft Write Errors:         0
Bus 0 Enclosure 0  Disk 0  Soft Write Errors:         0

Bus 0 Enclosure 0  Disk 11   Enabled

Bus 0 Enclosure 0  Disk 9   Enabled

Bus 0 Enclosure 0  Disk 7   Enabled

Bus 0 Enclosure 0  Disk 5   Enabled

Bus 0 Enclosure 0  Disk 3   Enabled

Bus 0 Enclosure 0  Disk 1   Enabled

Bus 0 Enclosure 0  Disk 10   Enabled

Bus 0 Enclosure 0  Disk 8   Enabled

Bus 0 Enclosure 0  Disk 6   Enabled

Bus 0 Enclosure 0  Disk 4   Enabled

Bus 0 Enclosure 0  Disk 2   Enabled

Bus 0 Enclosure 0  Disk 0   Enabled
Is Private:                 NO
Snapshots List:             None
MirrorView Name if any:     Not Mirrored
```

Fibre Channel HBAUtility Settings

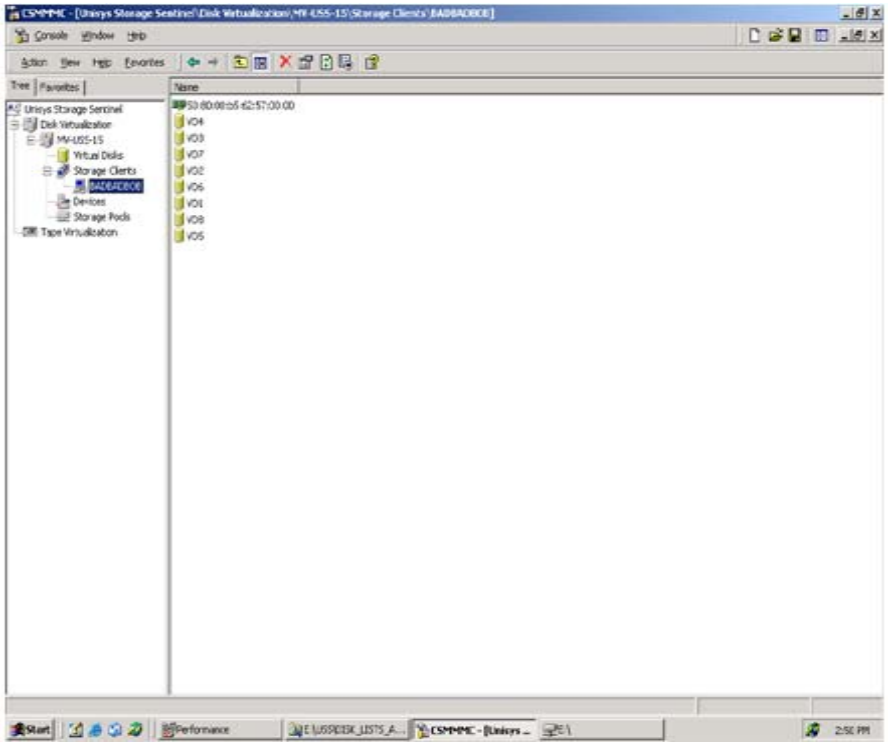


Database USS Configuration Info

(common to USS 1-13,17)



(common to USS 14,15)



Windows Datacenter Server Configuration Information

```
System Information report written at: 04/26/04 09:50:17
System Name: MV-BOBDYLAN
[System Summary]

Item    Value
OS Name Microsoft(R) Windows(R) Server 2003, Datacenter Edition
Version 5.2.3790  Build 3790
OS Manufacturer        Microsoft Corporation
System Name    MV-BOBDYLAN
System Manufacturer    UNISYS
System Model   ES7000
System Type    X86-based PC
Processor      x86 Family 15 Model 2 Stepping 6 GenuineIntel ~3000 Mhz

Processor      x86 Family 15 Model 2 Stepping 6 GenuineIntel ~3000 Mhz

Processor      x86 Family 15 Model 2 Stepping 6 GenuineIntel ~3000 Mhz

Processor      x86 Family 15 Model 2 Stepping 6 GenuineIntel ~3000 Mhz

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Processor      x86 Family 15 Model 2 Stepping 6 GenuineIntel ~3000 Mhz

Processor      x86 Family 15 Model 2 Stepping 6 GenuineIntel ~3000 Mhz

Processor      x86 Family 15 Model 2 Stepping 6 GenuineIntel ~3000 Mhz

Processor      x86 Family 15 Model 2 Stepping 6 GenuineIntel ~2999 Mhz

Processor      x86 Family 15 Model 2 Stepping 6 GenuineIntel ~3000 Mhz

Processor      x86 Family 15 Model 2 Stepping 6 GenuineIntel ~3000 Mhz

Processor      x86 Family 15 Model 2 Stepping 6 GenuineIntel ~3000 Mhz

BIOS Version/Date      Phoenix Technologies LTD BIOS Release 000181 Build
000208, 11/18/2003
SMBIOS Version 2.31
Windows Directory      C:\WINDOWS
System Directory       C:\WINDOWS\system32
Boot Device    \Device\HarddiskVolume1
Locale  United States
Hardware Abstraction Layer    Version = "5.2.3763.308 built by: WinDDK"

User Name      MV-BOBDYLAN\Administrator
Time Zone      Pacific Daylight Time
Total Physical Memory  3,292.00 MB
Available Physical Memory     66.96 MB
Total Virtual Memory  127.80 GB
Available Virtual Memory      2.18 GB
Page File Space        64.61 GB
Page File      C:\pagefile.sys

[Hardware Resources]



[Conflicts/Sharing]

Resource       Device
I/O Port 0x00000000-0x000010EF       PCI bus
I/O Port 0x00000000-0x000010EF       Direct memory access controller


Memory Address 0xF4000000-0xF40FFFFF  PCI standard PCI-to-PCI bridge

Memory Address 0xF4000000-0xF40FFFFF  Unisys Intelligent Fibre Channel
Fabric Bus Adapter

Memory Address 0xF0800000-0xF0FFFFFF  PCI standard PCI-to-PCI bridge
```

```
Memory Address 0xF0800000-0xF0FFFFFF  Unisys Intelligent Fibre Channel
Fabric Bus Adapter

Memory Address 0xD7000000-0xD70FFFFF  PCI standard PCI-to-PCI bridge

Memory Address 0xD7000000-0xD70FFFFF  Unisys Intelligent Fibre Channel
Fabric Bus Adapter

Memory Address 0xE5800000-0xE5FFFFFF  PCI standard PCI-to-PCI bridge

Memory Address 0xE5800000-0xE5FFFFFF  Unisys Intelligent Fibre Channel
Fabric Bus Adapter

Memory Address 0xDA000000-0xDDFFFFFF  PCI bus
Memory Address 0xDA000000-0xDDFFFFFF  cLAN Host Adapter #5

Memory Address 0xD9800000-0xD9FFFFFF  PCI standard PCI-to-PCI bridge

Memory Address 0xD9800000-0xD9FFFFFF  Unisys Intelligent Fibre Channel
Fabric Bus Adapter

Memory Address 0xD9400000-0xD9FFFFFF  PCI bus
Memory Address 0xD9400000-0xD9FFFFFF  PCI standard PCI-to-PCI bridge

Memory Address 0xD9400000-0xD9FFFFFF  Unisys Intelligent Fibre Channel
Fabric Bus Adapter

I/O Port 0x000003F6-0x000003F6        System speaker
I/O Port 0x000003F6-0x000003F6        Primary IDE Channel

Memory Address 0xF2000000-0xF5FFFFFF  PCI bus
Memory Address 0xF2000000-0xF5FFFFFF  cLAN Host Adapter #2

Memory Address 0xF6000000-0xF7FFFFFF  PCI bus
Memory Address 0xF6000000-0xF7FFFFFF  cLAN Host Adapter #3

Memory Address 0xF5800000-0xF5FFFFFF  PCI standard PCI-to-PCI bridge

Memory Address 0xF5800000-0xF5FFFFFF  Unisys Intelligent Fibre Channel
Fabric Bus Adapter

Memory Address 0xEF000000-0xF0FFFFFF  PCI bus
Memory Address 0xEF000000-0xF0FFFFFF  PCI standard PCI-to-PCI bridge

Memory Address 0xEF000000-0xF0FFFFFF  Unisys Intelligent Fibre Channel
Fabric Bus Adapter

Memory Address 0xEB000000-0xECFFFFFF  PCI bus
Memory Address 0xEB000000-0xECFFFFFF  cLAN Host Adapter

Memory Address 0xEA800000-0xEAFFFFFF  PCI standard PCI-to-PCI bridge

Memory Address 0xEA800000-0xEAFFFFFF  Unisys Intelligent Fibre Channel
Fabric Bus Adapter

Memory Address 0xE6800000-0xE6FFFFFF  PCI standard PCI-to-PCI bridge

Memory Address 0xE6800000-0xE6FFFFFF  Unisys Intelligent Fibre Channel
Fabric Bus Adapter

Memory Address 0xE4000000-0xE40FFFFF  PCI standard PCI-to-PCI bridge

Memory Address 0xE4000000-0xE40FFFFF  Unisys Intelligent Fibre Channel
Fabric Bus Adapter

Memory Address 0xE2000000-0xE5FFFFFF  PCI bus
Memory Address 0xE2000000-0xE5FFFFFF  cLAN Host Adapter #6

Memory Address 0xE1800000-0xE1FFFFFF  PCI standard PCI-to-PCI bridge

Memory Address 0xE1800000-0xE1FFFFFF  Unisys Intelligent Fibre Channel
Fabric Bus Adapter

Memory Address 0xE0000000-0xE1FFFFFF  PCI bus
Memory Address 0xE0000000-0xE1FFFFFF  PCI standard PCI-to-PCI bridge

Memory Address 0xE0000000-0xE1FFFFFF  Unisys Intelligent Fibre Channel
Fabric Bus Adapter

Memory Address 0xDE000000-0xDFFFFFFF  PCI bus
Memory Address 0xDE000000-0xDFFFFFFF  PCI standard PCI-to-PCI bridge

Memory Address 0xDE000000-0xDFFFFFFF  Unisys Intelligent Fibre Channel
Fabric Bus Adapter

Memory Address 0xDD800000-0xDDFFFFFF  PCI standard PCI-to-PCI bridge

Memory Address 0xDD800000-0xDDFFFFFF  Unisys Intelligent Fibre Channel
Fabric Bus Adapter

Memory Address 0xD3000000-0xD4FFFFFF  PCI bus
Memory Address 0xD3000000-0xD4FFFFFF  PCI standard PCI-to-PCI bridge

Memory Address 0xD3000000-0xD4FFFFFF  Unisys Intelligent Fibre Channel
Fabric Bus Adapter

Memory Address 0xED000000-0xEEFFFFFF  PCI bus
Memory Address 0xED000000-0xEEFFFFFF  PCI standard PCI-to-PCI bridge

Memory Address 0xED000000-0xEEFFFFFF  Unisys Intelligent Fibre Channel
Fabric Bus Adapter

Memory Address 0xE9000000-0xE90FFFFF  PCI standard PCI-to-PCI bridge

Memory Address 0xE9000000-0xE90FFFFF  Unisys Intelligent Fibre Channel
Fabric Bus Adapter

Memory Address 0xE7000000-0xEAFFFFFF  PCI bus
Memory Address 0xE7000000-0xEAFFFFFF  cLAN Host Adapter #7

Memory Address 0xE6400000-0xE6FFFFFF  PCI bus
Memory Address 0xE6400000-0xE6FFFFFF  PCI standard PCI-to-PCI bridge

Memory Address 0xE6400000-0xE6FFFFFF  Unisys Intelligent Fibre Channel
Fabric Bus Adapter
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```
Memory Address 0xDF800000-0xDFFFFFFF  PCI standard PCI-to-PCI bridge

Memory Address 0xDF800000-0xDFFFFFFF  Unisys Intelligent Fibre Channel
Fabric Bus Adapter

Memory Address 0xF1800000-0xF1FFFFFF  PCI standard PCI-to-PCI bridge

Memory Address 0xF1800000-0xF1FFFFFF  Unisys Intelligent Fibre Channel
Fabric Bus Adapter

Memory Address 0xEE800000-0xEEFFFFFF  PCI standard PCI-to-PCI bridge

Memory Address 0xEE800000-0xEEFFFFFF  Unisys Intelligent Fibre Channel
Fabric Bus Adapter

Memory Address 0xA0000-0xBFFFF        PCI bus
Memory Address 0xA0000-0xBFFFF        Console Manager Video Driver IPL2
PCI

Memory Address 0xFA000000-0xFBFFFFFF  PCI bus
Memory Address 0xFA000000-0xFBFFFFFF  PCI standard PCI-to-PCI bridge

Memory Address 0xFA000000-0xFBFFFFFF  Unisys Intelligent Fibre Channel
Fabric Bus Adapter

Memory Address 0xF9800000-0xF9FFFFFF  PCI standard PCI-to-PCI bridge

Memory Address 0xF9800000-0xF9FFFFFF  Unisys Intelligent Fibre Channel
Fabric Bus Adapter

Memory Address 0xF8000000-0xF9FFFFFF  PCI bus
Memory Address 0xF8000000-0xF9FFFFFF  PCI standard PCI-to-PCI bridge

Memory Address 0xF8000000-0xF9FFFFFF  Unisys Intelligent Fibre Channel
Fabric Bus Adapter

Memory Address 0xF1400000-0xF1FFFFFF  PCI bus
Memory Address 0xF1400000-0xF1FFFFFF  PCI standard PCI-to-PCI bridge

Memory Address 0xF1400000-0xF1FFFFFF  Unisys Intelligent Fibre Channel
Fabric Bus Adapter

Memory Address 0xFB800000-0xFBFFFFFF  PCI standard PCI-to-PCI bridge

Memory Address 0xFB800000-0xFBFFFFFF  Unisys Intelligent Fibre Channel
Fabric Bus Adapter

Memory Address 0xD8800000-0xD8FFFFFF  PCI standard PCI-to-PCI bridge

Memory Address 0xD8800000-0xD8FFFFFF  Unisys Intelligent Fibre Channel
Fabric Bus Adapter

Memory Address 0xD5000000-0xD8FFFFFF  PCI bus
Memory Address 0xD5000000-0xD8FFFFFF  cLAN Host Adapter #4

Memory Address 0xD4800000-0xD4FFFFFF  PCI standard PCI-to-PCI bridge

Memory Address 0xD4800000-0xD4FFFFFF  Unisys Intelligent Fibre Channel
Fabric Bus Adapter

Memory Address 0xD2800000-0xD2FFFFFF  PCI standard PCI-to-PCI bridge

Memory Address 0xD2800000-0xD2FFFFFF  Unisys Intelligent Fibre Channel
Fabric Bus Adapter

Memory Address 0xD1000000-0xD10FFFFF  PCI standard PCI-to-PCI bridge

Memory Address 0xD1000000-0xD10FFFFF  Unisys Intelligent Fibre Channel
Fabric Bus Adapter

Memory Address 0xCF000000-0xD2FFFFFF  PCI bus
Memory Address 0xCF000000-0xD2FFFFFF  cLAN Host Adapter #8

Memory Address 0xCE800000-0xCEFFFFFF  PCI standard PCI-to-PCI bridge

Memory Address 0xCE800000-0xCEFFFFFF  Unisys Intelligent Fibre Channel
Fabric Bus Adapter

Memory Address 0xDC000000-0xDC0FFFFF  PCI standard PCI-to-PCI bridge

Memory Address 0xDC000000-0xDC0FFFFF  Unisys Intelligent Fibre Channel
Fabric Bus Adapter

IRQ 0   Unisys Intelligent Fibre Channel Fabric Bus Adapter
IRQ 0   System timer

Memory Address 0xCD800000-0xCEFFFFFF  PCI bus
Memory Address 0xCD800000-0xCEFFFFFF  PCI standard PCI-to-PCI bridge

Memory Address 0xCD800000-0xCEFFFFFF  Unisys Intelligent Fibre Channel
Fabric Bus Adapter


[DMA]

Resource       Device  Status
Channel 4      Direct memory access controller      OK
Channel 1      ECP Printer Port (LPT1)       OK
Channel 2      Standard floppy disk controller      OK

[Forced Hardware]

Device  PNP Device ID

[I/O]

Resource       Device  Status
0x000010F0-0x000010FF  PCI bus OK
0x00001100-0x000013FF  PCI bus OK
0x00000000-0x000010EF  PCI bus OK
0x00000000-0x000010EF  Direct memory access controller      OK
0x00000A79-0x00000A79  ISAPNP Read Data Port  OK
0x00000279-0x00000279  ISAPNP Read Data Port  OK
0x00000274-0x00000277  ISAPNP Read Data Port  OK
0x00000081-0x0000008F  Direct memory access controller      OK
```

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0x000000C0-0x000000DF  Direct memory access controller      OK
0x00000020-0x00000021  Programmable interrupt controller    OK
0x000000A0-0x000000A1  Programmable interrupt controller    OK
0x00000070-0x00000071  System CMOS/real time clock   OK
0x00000040-0x00000043  System timer   OK
0x00000061-0x00000061  System speaker OK
0x00000101-0x0000016F  System speaker OK
0x00000178-0x000001CD  System speaker OK
0x000001D0-0x000001EF  System speaker OK
0x000001F8-0x00000273  System speaker OK
0x00000280-0x000002E7  System speaker OK
0x000002F0-0x000002F7  System speaker OK
0x00000300-0x00000377  System speaker OK
0x00000380-0x000003AF  System speaker OK
0x000003BC-0x000003BF  System speaker OK
0x000003E0-0x000003E7  System speaker OK
0x000003F6-0x000003F6  System speaker OK
0x000003F6-0x000003F6  Primary IDE Channel    OK
0x00000501-0x0000056F  System speaker OK
0x00000578-0x000005CD  System speaker OK
0x000005D0-0x000005EF  System speaker OK
0x000005F8-0x00000677  System speaker OK
0x00000680-0x000006E7  System speaker OK
0x000006F0-0x000006F7  System speaker OK
0x00000700-0x00000777  System speaker OK
0x00000780-0x000007AF  System speaker OK
0x000007BC-0x000007BF  System speaker OK
0x000007E0-0x000007E7  System speaker OK
0x000007F6-0x000007F6  System speaker OK
0x00000901-0x0000096F  System speaker OK
0x00000978-0x000009CD  System speaker OK
0x000009D0-0x000009EF  System speaker OK
0x000009F8-0x00000A77  System speaker OK
0x00000A80-0x00000AE7  System speaker OK
0x00000AF0-0x00000AF7  System speaker OK
0x00000B00-0x00000B77  System speaker OK
0x00000B80-0x00000BAF  System speaker OK
0x00000BBC-0x00000BBF  System speaker OK
0x00000BE0-0x00000BE7  System speaker OK
0x00000BF6-0x00000BF6  System speaker OK
0x00000D01-0x00000D6F  System speaker OK
0x00000D78-0x00000DCD  System speaker OK
0x00000DD0-0x00000DEF  System speaker OK
0x00000DF8-0x00000E77  System speaker OK
0x00000E80-0x00000EE7  System speaker OK
0x00000EF0-0x00000EF7  System speaker OK
0x00000F00-0x00000F77  System speaker OK
0x00000F80-0x00000FAF  System speaker OK
0x00000FBC-0x00000FBF  System speaker OK
0x00000FE0-0x00000FE7  System speaker OK
0x00000FF6-0x00000FF6  System speaker OK
0x00001101-0x0000116F  System speaker OK
0x00001178-0x000011CD  System speaker OK
0x000011D0-0x000011EF  System speaker OK
0x000011F8-0x00001277  System speaker OK
0x00001280-0x000012E7  System speaker OK
0x000012F0-0x000012F7  System speaker OK
0x00001300-0x00001377  System speaker OK
0x00001380-0x000013AF  System speaker OK
0x000013BC-0x000013BF  System speaker OK
0x000013E0-0x000013E7  System speaker OK
0x000013F6-0x000013F6  System speaker OK
0x00001501-0x0000156F  System speaker OK
0x00001578-0x000015CD  System speaker OK
0x000015D0-0x000015EF  System speaker OK
0x000015F8-0x00001677  System speaker OK
0x00001680-0x000016E7  System speaker OK
0x000016F0-0x000016F7  System speaker OK
0x00001700-0x00001777  System speaker OK
0x00001780-0x000017AF  System speaker OK
0x000017BC-0x000017BF  System speaker OK
0x000017E0-0x000017E7  System speaker OK
0x000017F6-0x000017F6  System speaker OK
0x00001901-0x0000196F  System speaker OK
0x00001978-0x000019CD  System speaker OK
0x000019D0-0x000019EF  System speaker OK
0x000019F8-0x00001A77  System speaker OK
0x00001A80-0x00001AE7  System speaker OK
0x00001AF0-0x00001AF7  System speaker OK
0x00001B00-0x00001B77  System speaker OK
0x00001B80-0x00001BAF  System speaker OK
0x00001BBC-0x00001BBF  System speaker OK
0x00001BE0-0x00001BE7  System speaker OK
0x00001BF6-0x00001BF6  System speaker OK
0x00001D01-0x00001D6F  System speaker OK
0x00001D78-0x00001DCD  System speaker OK
0x00001DD0-0x00001DEF  System speaker OK
0x00001DF8-0x00001E77  System speaker OK
0x00001E80-0x00001EE7  System speaker OK
0x00001EF0-0x00001EF7  System speaker OK
0x00001F00-0x00001F77  System speaker OK
0x00001F80-0x00001FAF  System speaker OK
0x00001FBC-0x00001FBF  System speaker OK
0x00001FE0-0x00001FE7  System speaker OK
0x00001FF6-0x00001FF6  System speaker OK
0x00000378-0x0000037F  ECP Printer Port (LPT1)       OK
0x00000778-0x0000077F  ECP Printer Port (LPT1)       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
0x000003F0-0x000003F5  Standard floppy disk controller      OK
0x000003F7-0x000003F7  Standard floppy disk controller      OK
0x000010E0-0x000010EF  Intel(r) 82371AB/EB PCI Bus Master IDE Controller
       OK
0x000001F0-0x000001F7  Primary IDE Channel    OK
0x00000170-0x00000177  Secondary IDE Channel  OK
0x00000376-0x00000376  Secondary IDE Channel  OK
0x000010C0-0x000010DF  Intel(r) 82371AB/EB PCI to USB Universal Host
Controller     OK
0x000003B0-0x000003BB  Console Manager Video Driver IPL2 PCI OK
0x000003C0-0x000003DF  Console Manager Video Driver IPL2 PCI OK
0x00001000-0x0000107F  Standard OpenHCD USB Host Controller  OK
0x00001080-0x000010BF  Intel 8255x-based PCI Ethernet Adapter (10/100)
       OK
0x00001400-0x0000140F  PCI bus OK
```

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0x00001410-0x0000141F  PCI bus OK
0x00001420-0x000017FF  PCI bus OK
0x00001800-0x0000180F  PCI bus OK
0x00001810-0x0000181F  PCI bus OK
0x00001820-0x00001BFF  PCI bus OK
0x00001C00-0x00001C0F  PCI bus OK
0x00001C10-0x00001C1F  PCI bus OK
0x00001C20-0x00001FFF  PCI bus OK
0x00002000-0x0000200F  PCI bus OK
0x00002010-0x0000201F  PCI bus OK
0x00002020-0x000023FF  PCI bus OK
0x00002400-0x0000240F  PCI bus OK
0x00002410-0x0000241F  PCI bus OK
0x00002420-0x000027FF  PCI bus OK
0x00002800-0x0000280F  PCI bus OK
0x00002810-0x0000281F  PCI bus OK
0x00002820-0x00002BFF  PCI bus OK
0x00002C00-0x00002C0F  PCI bus OK
0x00002C10-0x00002C1F  PCI bus OK
0x00002C20-0x0000FFFF  PCI bus OK

[IRQs]

Resource       Device  Status
IRQ 23  Microsoft ACPI-Compliant System      OK
IRQ 0   Unisys Intelligent Fibre Channel Fabric Bus Adapter  OK
IRQ 0   System timer   OK
IRQ 4   Unisys Intelligent Fibre Channel Fabric Bus Adapter  OK
IRQ 5   cLAN Host Adapter #8   OK
IRQ 8   System CMOS/real time clock   OK
IRQ 12  PS/2 Compatible Mouse  OK
IRQ 1   Standard 101/102-Key or Microsoft Natural PS/2 Keyboard     OK

IRQ 6   Standard floppy disk controller      OK
IRQ 14  Primary IDE Channel    OK
IRQ 13  Secondary IDE Channel  OK
IRQ 11  Intel(r) 82371AB/EB PCI to USB Universal Host Controller    OK

IRQ 9   Standard OpenHCD USB Host Controller  OK
IRQ 10  Intel 8255x-based PCI Ethernet Adapter (10/100)      OK
IRQ 24  Unisys Intelligent Fibre Channel Fabric Bus Adapter  OK
IRQ 28  cLAN Host Adapter #4   OK
IRQ 29  Unisys Intelligent Fibre Channel Fabric Bus Adapter  OK
IRQ 48  Unisys Intelligent Fibre Channel Fabric Bus Adapter  OK
IRQ 52  Unisys Intelligent Fibre Channel Fabric Bus Adapter  OK
IRQ 53  cLAN Host Adapter #5   OK
IRQ 56  Unisys Intelligent Fibre Channel Fabric Bus Adapter  OK
IRQ 72  Unisys Intelligent Fibre Channel Fabric Bus Adapter  OK
IRQ 76  cLAN Host Adapter #6   OK
IRQ 77  Unisys Intelligent Fibre Channel Fabric Bus Adapter  OK
IRQ 96  Unisys Intelligent Fibre Channel Fabric Bus Adapter  OK
IRQ 100 Unisys Intelligent Fibre Channel Fabric Bus Adapter  OK
IRQ 101 cLAN Host Adapter #7   OK
IRQ 104 cLAN Host Adapter      OK
IRQ 120 Unisys Intelligent Fibre Channel Fabric Bus Adapter  OK
IRQ 124 Unisys Intelligent Fibre Channel Fabric Bus Adapter  OK
IRQ 144 Unisys Intelligent Fibre Channel Fabric Bus Adapter  OK
IRQ 148 Unisys Intelligent Fibre Channel Fabric Bus Adapter  OK
IRQ 149 cLAN Host Adapter #2   OK
IRQ 152 cLAN Host Adapter #3   OK
IRQ 168 Unisys Intelligent Fibre Channel Fabric Bus Adapter  OK
IRQ 172 Unisys Intelligent Fibre Channel Fabric Bus Adapter  OK

[Memory]

Resource       Device  Status
0xCD800000-0xCEFFFFFF  PCI bus OK
0xCD800000-0xCEFFFFFF  PCI standard PCI-to-PCI bridge       OK
0xCD800000-0xCEFFFFFF  Unisys Intelligent Fibre Channel Fabric Bus Adapter
       OK
0xCE800000-0xCEFFFFFF  PCI standard PCI-to-PCI bridge       OK
0xCE800000-0xCEFFFFFF  Unisys Intelligent Fibre Channel Fabric Bus Adapter
       OK
0xCF000000-0xD2FFFFFF  PCI bus OK
0xCF000000-0xD2FFFFFF  cLAN Host Adapter #8   OK
0xD1000000-0xD10FFFFF  PCI standard PCI-to-PCI bridge       OK
0xD1000000-0xD10FFFFF  Unisys Intelligent Fibre Channel Fabric Bus Adapter
       OK
0xD2800000-0xD2FFFFFF  PCI standard PCI-to-PCI bridge       OK
0xD2800000-0xD2FFFFFF  Unisys Intelligent Fibre Channel Fabric Bus Adapter
       OK
0xCF020000-0xCF03FFFF  cLAN Host Adapter #8   OK
0xCF200000-0xCF3FFFFF  cLAN Host Adapter #8   OK
0xD0000000-0xD0FFFFFF  cLAN Host Adapter #8   OK
0xA0000-0xBFFFF        PCI bus OK
0xA0000-0xBFFFF        Console Manager Video Driver IPL2 PCI OK
0xC0000-0xDFFFF        PCI bus OK
0xE0000-0xFFFFF        PCI bus OK
0xCC000000-0xCD7FFFFF  PCI bus OK
0xCD000000-0xCD7FFFFF  Console Manager Video Driver IPL2 PCI OK
0xCC800000-0xCCFFFFFF  Console Manager Video Driver IPL2 PCI OK
0xCC002000-0xCC002FFF  Standard OpenHCD USB Host Controller  OK
0xCC001000-0xCC001FFF  Standard OpenHCD USB Host Controller  OK
0xCC003000-0xCC003FFF  Intel 8255x-based PCI Ethernet Adapter (10/100)
       OK
0xCC100000-0xCC1FFFFF  Intel 8255x-based PCI Ethernet Adapter (10/100)
       OK
0xD3000000-0xD4FFFFFF  PCI bus OK
0xD3000000-0xD4FFFFFF  PCI standard PCI-to-PCI bridge       OK
0xD3000000-0xD4FFFFFF  Unisys Intelligent Fibre Channel Fabric Bus Adapter
       OK
0xD4800000-0xD4FFFFFF  PCI standard PCI-to-PCI bridge       OK
0xD4800000-0xD4FFFFFF  Unisys Intelligent Fibre Channel Fabric Bus Adapter
       OK
0xD5000000-0xD8FFFFFF  PCI bus OK
0xD5000000-0xD8FFFFFF  cLAN Host Adapter #4   OK
0xD5020000-0xD503FFFF  cLAN Host Adapter #4   OK
0xD5200000-0xD53FFFFF  cLAN Host Adapter #4   OK
0xD6000000-0xD6FFFFFF  cLAN Host Adapter #4   OK
0xD7000000-0xD70FFFFF  PCI standard PCI-to-PCI bridge       OK
0xD7000000-0xD70FFFFF  Unisys Intelligent Fibre Channel Fabric Bus Adapter
       OK
0xD8800000-0xD8FFFFFF  PCI standard PCI-to-PCI bridge       OK
0xD8800000-0xD8FFFFFF  Unisys Intelligent Fibre Channel Fabric Bus Adapter
       OK
0xD9000000-0xD93FFFFF  PCI bus OK
```

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0xD9400000-0xD9FFFFFF  PCI bus OK
0xD9400000-0xD9FFFFFF  PCI standard PCI-to-PCI bridge        OK
0xD9400000-0xD9FFFFFF  Unisys Intelligent Fibre Channel Fabric Bus Adapter
        OK
0xD9800000-0xD9FFFFFF  PCI standard PCI-to-PCI bridge        OK
0xD9800000-0xD9FFFFFF  Unisys Intelligent Fibre Channel Fabric Bus Adapter
        OK
0xDA000000-0xDDFFFFFF  PCI bus OK
0xDA000000-0xDDFFFFFF  cLAN Host Adapter #5   OK
0xDC000000-0xDC0FFFFF  PCI standard PCI-to-PCI bridge        OK
0xDC000000-0xDC0FFFFF  Unisys Intelligent Fibre Channel Fabric Bus Adapter
        OK
0xDD800000-0xDDFFFFFF  PCI standard PCI-to-PCI bridge        OK
0xDD800000-0xDDFFFFFF  Unisys Intelligent Fibre Channel Fabric Bus Adapter
        OK
0xDA020000-0xDA03FFFF  cLAN Host Adapter #5   OK
0xDA200000-0xDA3FFFFF  cLAN Host Adapter #5   OK
0xDB000000-0xDBFFFFFF  cLAN Host Adapter #5   OK
0xDE000000-0xDFFFFFFF  PCI bus OK
0xDE000000-0xDFFFFFFF  PCI standard PCI-to-PCI bridge        OK
0xDE000000-0xDFFFFFFF  Unisys Intelligent Fibre Channel Fabric Bus Adapter
        OK
0xDF800000-0xDFFFFFFF  PCI standard PCI-to-PCI bridge        OK
0xDF800000-0xDFFFFFFF  Unisys Intelligent Fibre Channel Fabric Bus Adapter
        OK
0xE0000000-0xE1FFFFFF  PCI bus OK
0xE0000000-0xE1FFFFFF  PCI standard PCI-to-PCI bridge        OK
0xE0000000-0xE1FFFFFF  Unisys Intelligent Fibre Channel Fabric Bus Adapter
        OK
0xE1800000-0xE1FFFFFF  PCI standard PCI-to-PCI bridge        OK
0xE1800000-0xE1FFFFFF  Unisys Intelligent Fibre Channel Fabric Bus Adapter
        OK
0xE2000000-0xE5FFFFFF  PCI bus OK
0xE2000000-0xE5FFFFFF  cLAN Host Adapter #6   OK
0xE2020000-0xE203FFFF  cLAN Host Adapter #6   OK
0xE2200000-0xE23FFFFF  cLAN Host Adapter #6   OK
0xE3000000-0xE3FFFFFF  cLAN Host Adapter #6   OK
0xE4000000-0xE40FFFFF  PCI standard PCI-to-PCI bridge        OK
0xE4000000-0xE40FFFFF  Unisys Intelligent Fibre Channel Fabric Bus Adapter
        OK
0xE5800000-0xE5FFFFFF  PCI standard PCI-to-PCI bridge        OK
0xE5800000-0xE5FFFFFF  Unisys Intelligent Fibre Channel Fabric Bus Adapter
        OK
0xE6000000-0xE63FFFFF  PCI bus OK
0xE6400000-0xE6FFFFFF  PCI bus OK
0xE6400000-0xE6FFFFFF  PCI standard PCI-to-PCI bridge        OK
0xE6400000-0xE6FFFFFF  Unisys Intelligent Fibre Channel Fabric Bus Adapter
        OK
0xE6800000-0xE6FFFFFF  PCI standard PCI-to-PCI bridge        OK
0xE6800000-0xE6FFFFFF  Unisys Intelligent Fibre Channel Fabric Bus Adapter
        OK
0xE7000000-0xEAFFFFFF  PCI bus OK
0xE7000000-0xEAFFFFFF  cLAN Host Adapter #7   OK
0xE9000000-0xE90FFFFF  PCI standard PCI-to-PCI bridge        OK
0xE9000000-0xE90FFFFF  Unisys Intelligent Fibre Channel Fabric Bus Adapter
        OK
0xEA800000-0xEAFFFFFF  PCI standard PCI-to-PCI bridge        OK
0xEA800000-0xEAFFFFFF  Unisys Intelligent Fibre Channel Fabric Bus Adapter
        OK
0xE7020000-0xE703FFFF  cLAN Host Adapter #7   OK
0xE7200000-0xE73FFFFF  cLAN Host Adapter #7   OK
0xE8000000-0xE8FFFFFF  cLAN Host Adapter #7   OK
0xEB000000-0xECFFFFFF  PCI bus OK
0xEB000000-0xECFFFFFF  cLAN Host Adapter      OK
0xEB020000-0xEB03FFFF  cLAN Host Adapter      OK
0xEB200000-0xEB3FFFFF  cLAN Host Adapter      OK
0xEC000000-0xECFFFFFF  cLAN Host Adapter      OK
0xED000000-0xEEFFFFFF  PCI bus OK
0xED000000-0xEEFFFFFF  PCI standard PCI-to-PCI bridge        OK
0xED000000-0xEEFFFFFF  Unisys Intelligent Fibre Channel Fabric Bus Adapter
        OK
0xEE800000-0xEEFFFFFF  PCI standard PCI-to-PCI bridge        OK
0xEE800000-0xEEFFFFFF  Unisys Intelligent Fibre Channel Fabric Bus Adapter
        OK
0xEF000000-0xF0FFFFFF  PCI bus OK
0xEF000000-0xF0FFFFFF  PCI standard PCI-to-PCI bridge        OK
0xEF000000-0xF0FFFFFF  Unisys Intelligent Fibre Channel Fabric Bus Adapter
        OK
0xF0800000-0xF0FFFFFF  PCI standard PCI-to-PCI bridge        OK
0xF0800000-0xF0FFFFFF  Unisys Intelligent Fibre Channel Fabric Bus Adapter
        OK
0xF1000000-0xF13FFFFF  PCI bus OK
0xF1400000-0xF1FFFFFF  PCI bus OK
0xF1400000-0xF1FFFFFF  PCI standard PCI-to-PCI bridge        OK
0xF1400000-0xF1FFFFFF  Unisys Intelligent Fibre Channel Fabric Bus Adapter
        OK
0xF1800000-0xF1FFFFFF  PCI standard PCI-to-PCI bridge        OK
0xF1800000-0xF1FFFFFF  Unisys Intelligent Fibre Channel Fabric Bus Adapter
        OK
0xF2000000-0xF5FFFFFF  PCI bus OK
0xF2000000-0xF5FFFFFF  cLAN Host Adapter #2   OK
0xF4000000-0xF40FFFFF  PCI standard PCI-to-PCI bridge        OK
0xF4000000-0xF40FFFFF  Unisys Intelligent Fibre Channel Fabric Bus Adapter
        OK
0xF5800000-0xF5FFFFFF  PCI standard PCI-to-PCI bridge        OK
0xF5800000-0xF5FFFFFF  Unisys Intelligent Fibre Channel Fabric Bus Adapter
        OK
0xF2020000-0xF203FFFF  cLAN Host Adapter #2   OK
0xF2200000-0xF23FFFFF  cLAN Host Adapter #2   OK
0xF3000000-0xF3FFFFFF  cLAN Host Adapter #2   OK
0xF6000000-0xF7FFFFFF  PCI bus OK
0xF6000000-0xF7FFFFFF  cLAN Host Adapter #3   OK
0xF6020000-0xF603FFFF  cLAN Host Adapter #3   OK
0xF6200000-0xF63FFFFF  cLAN Host Adapter #3   OK
0xF7000000-0xF7FFFFFF  cLAN Host Adapter #3   OK
0xF8000000-0xF9FFFFFF  PCI bus OK
0xF8000000-0xF9FFFFFF  PCI standard PCI-to-PCI bridge        OK
0xF8000000-0xF9FFFFFF  Unisys Intelligent Fibre Channel Fabric Bus Adapter
        OK
0xF9800000-0xF9FFFFFF  PCI standard PCI-to-PCI bridge        OK
0xF9800000-0xF9FFFFFF  Unisys Intelligent Fibre Channel Fabric Bus Adapter
        OK
0xFA000000-0xFBFFFFFF  PCI bus OK
0xFA000000-0xFBFFFFFF  PCI standard PCI-to-PCI bridge        OK
```

```
0xFA000000-0xFBFFFFFF  Unisys Intelligent Fibre Channel Fabric Bus Adapter
        OK
0xFB800000-0xFBFFFFFF  PCI standard PCI-to-PCI bridge        OK
0xFB800000-0xFBFFFFFF  Unisys Intelligent Fibre Channel Fabric Bus Adapter
        OK
0xFC000000-0xFDFFFFFF  PCI bus OK

[Components]



[Multimedia]



[Audio Codecs]

CODEC   Manufacturer   Description    Status  File    Version Size
        Creation Date
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 4:00 AM
c:\windows\system32\msgsm32.acm       Microsoft Corporation         OK
        C:\WINDOWS\system32\MSGSM32.ACM       5.2.3790.0 (srv03_rtm.030324-
2048)   20.50 KB (20,992 bytes)       3/25/2003 4:00 AM
c:\windows\system32\msaud32.acm       Microsoft Corporation  Windows Media
Audio Codec    OK      C:\WINDOWS\system32\MSAUD32.ACM       8.00.00.4487
        288.00 KB (294,912 bytes)     3/25/2003 4:00 AM
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 4:00 AM
c:\windows\system32\msg723.acm        Microsoft Corporation         OK
        C:\WINDOWS\system32\MSG723.ACM        4.4.4000       116.00 KB
(118,784 bytes)       4/25/2004 1:23 AM
c:\windows\system32\msadp32.acm       Microsoft Corporation         OK
        C:\WINDOWS\system32\MSADP32.ACM       5.2.3790.0 (srv03_rtm.030324-
2048)   14.50 KB (14,848 bytes)       3/25/2003 4:00 AM
c:\windows\system32\tssoft32.acm      DSP GROUP, INC.               OK
        C:\WINDOWS\system32\TSSOFT32.ACM      1.01    9.50 KB (9,728 bytes)
        3/25/2003 4:00 AM
c:\windows\system32\msg711.acm        Microsoft Corporation         OK
        C:\WINDOWS\system32\MSG711.ACM        5.2.3790.0 (srv03_rtm.030324-
2048)   10.00 KB (10,240 bytes)       3/25/2003 4:00 AM

[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       5.2.3790.0 (srv03_rtm.030324-
2048)   45.00 KB (46,080 bytes)       3/24/2003 5:49 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)  3/24/2003 5:50 PM
c:\windows\system32\msyuv.dll Microsoft Corporation         OK
        C:\WINDOWS\system32\MSYUV.DLL 5.2.3790.0 (srv03_rtm.030324-2048)
        16.50 KB (16,896 bytes)       3/24/2003 5:49 PM
c:\windows\system32\msh263.drv        Microsoft Corporation         OK
        C:\WINDOWS\system32\MSH263.DRV        4.4.4000       284.00 KB
(290,816 bytes)       3/24/2003 5:46 PM
c:\windows\system32\msh261.drv        Microsoft Corporation         OK
        C:\WINDOWS\system32\MSH261.DRV        4.4.4000       180.00 KB
(184,320 bytes)       4/25/2004 1:23 AM
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 4:00 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 4:00 AM

[CD-ROM]

Item    Value
Drive   D:
Description    CD-ROM Drive
Media Loaded   No
Media Type     CD-ROM
Name    TEAC CD-224E
Manufacturer   (Standard CD-ROM drives)
Status  OK
Transfer Rate  Not Available
SCSI Target ID 0
PNP Device ID  IDE\CDROMTEAC_CD-
224E_____________________________1.9A____\5&1B78D9&0&0.0.0

[Sound Device]

Item    Value

[Display]

Item    Value
Name    Console Manager Video Driver IPL2 PCI
PNP Device ID
        PCI\VEN_1018&DEV_C210&SUBSYS_C2101018&REV_00\3&172E68DD&0&08

Adapter Type   Not Available
Adapter Description   Unisys Corporation
Adapter RAM    Not Available
Installed Drivers     Not Available
Driver Version ucondisp.dll
INF File       7.0.0.27 (oem6.inf section)
Color Planes   ucon
Color Table Entries    1
Resolution     65536 x 800 x 600 hertz
Bits/Pixel     75
Memory Address 0xCD000000-0xCD7FFFFF
Memory Address 0xCC800000-0xCCFFFFFF
Memory Address 0xA0000-0xBFFFF
I/O Port       0x000003B0-0x000003BB
I/O Port       0x000003C0-0x000003DF

[Infrared]

Item    Value
```

```
[Input]



[Keyboard]

Item    Value
Description    Standard 101/102-Key or Microsoft Natural PS/2 Keyboard

Name    Enhanced (101- or 102-key)
Layout  00000409
PNP Device ID  ACPI\PNP0303\D
Number of Function Keys       12
I/O Port       0x00000060-0x00000060
I/O Port       0x00000064-0x00000064
IRQ Channel    IRQ 1

Description    Console Manager USB Keyboard
Name    Enhanced (101- or 102-key)
Layout  00000409
PNP Device ID  USB\VID_0432&PID_0010\5&37AEB74C&0&1
Number of Function Keys       12

[Pointing Device]

Item    Value
Hardware Type  PS/2 Compatible Mouse
Number of Buttons      5
Status  OK
PNP Device ID  ACPI\PNP0F13\D
Power Management Supported    No
Double Click Threshold 0
Handedness     Right Handed Operation
IRQ Channel    IRQ 12

Hardware Type  Console Manager USB Mouse
Number of Buttons      5
Status  OK
PNP Device ID  USB\VID_0432&PID_0011\5&37AEB74C&0&2
Power Management Supported    No
Double Click Threshold 0
Handedness     Right Handed Operation

[Modem]

Item    Value

[Network]



[Adapter]

Item    Value
Name    [00000001] Intel 8255x-based PCI Ethernet Adapter (10/100)
Adapter Type   Ethernet 802.3
Product Type   Intel 8255x-based PCI Ethernet Adapter (10/100)
Installed      Yes
PNP Device ID
       PCI\VEN_8086&DEV_1229&SUBSYS_10180D88&REV_08\3&172E68DD&0&10

Last Reset     4/26/2004 5:06 AM
Index  1
Service Name   E100B
IP Address     192.59.13.213
IP Subnet      255.255.255.0
Default IP Gateway    192.59.13.250
DHCP Enabled   No
DHCP Server    Not Available
DHCP Lease Expires    Not Available
DHCP Lease Obtained   Not Available
MAC Address    08:00:0B:26:04:27
Memory Address 0xCC003000-0xCC003FFF
I/O Port       0x00001080-0x000010BF
Memory Address 0xCC100000-0xCC1FFFFF
IRQ Channel    IRQ 10

Name    [00000002] RAS Async Adapter
Adapter Type   Not Available
Product Type   RAS Async Adapter
Installed      Yes
PNP Device ID  Not Available
Last Reset     4/26/2004 5:06 AM
Index  2
Service Name   AsyncMac
IP Address     Not Available
IP Subnet      Not Available
Default IP Gateway    Not Available
DHCP Enabled   No
DHCP Server    Not Available
DHCP Lease Expires    Not Available
DHCP Lease Obtained   Not Available
MAC Address    Not Available

Name    [00000003] WAN Miniport (L2TP)
Adapter Type   Not Available
Product Type   WAN Miniport (L2TP)
Installed      Yes
PNP Device ID  ROOT\MS_L2TPMINIPORT\0000
Last Reset     4/26/2004 5:06 AM
Index  3
Service Name   Rasl2tp
IP Address     Not Available
IP Subnet      Not Available
Default IP Gateway    Not Available
DHCP Enabled   No
DHCP Server    Not Available
DHCP Lease Expires    Not Available
DHCP Lease Obtained   Not Available
MAC Address    Not Available

Name    [00000004] WAN Miniport (PPTP)
Adapter Type   Wide Area Network (WAN)
Product Type   WAN Miniport (PPTP)
Installed      Yes
```

```
PNP Device ID  ROOT\MS_PPTPMINIPORT\0000
Last Reset     4/26/2004 5:06 AM
Index  4
Service Name   PptpMiniport
IP Address     Not Available
IP Subnet      Not Available
Default IP Gateway    Not Available
DHCP Enabled   No
DHCP Server    Not Available
DHCP Lease Expires    Not Available
DHCP Lease Obtained   Not Available
MAC Address    50:50:54:50:30:30

Name   [00000005] 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     4/26/2004 5:06 AM
Index  5
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

Name   [00000006] Direct Parallel
Adapter Type   Not Available
Product Type   Direct Parallel
Installed      Yes
PNP Device ID  ROOT\MS_PTIMINIPORT\0000
Last Reset     4/26/2004 5:06 AM
Index  6
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

Name   [00000007] WAN Miniport (IP)
Adapter Type   Not Available
Product Type   WAN Miniport (IP)
Installed      Yes
PNP Device ID  ROOT\MS_NDISWANIP\0000
Last Reset     4/26/2004 5:06 AM
Index  7
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

Name   [00000008] cLAN Host Adapter
Adapter Type   Ethernet 802.3
Product Type   cLAN Host Adapter
Installed      Yes
PNP Device ID  PCI\VEN_135B&DEV_0001&SUBSYS_00000000&REV_00\3&A985F74&0&00

Last Reset     4/26/2004 5:06 AM
Index  8
Service Name   GNINDIS
IP Address     Not Available
IP Subnet      Not Available
Default IP Gateway    Not Available
DHCP Enabled   Yes
DHCP Server    Not Available
DHCP Lease Expires    Not Available
DHCP Lease Obtained   Not Available
MAC Address    00:90:FA:00:1D:14
Memory Address 0xEB020000-0xEB03FFFF
Memory Address 0xEB200000-0xEB3FFFFF
Memory Address 0xEC000000-0xECFFFFFF
Memory Address 0xEB000000-0xECFFFFFF
IRQ Channel    IRQ 104

Name   [00000009] cLAN Host Adapter
Adapter Type   Ethernet 802.3
Product Type   cLAN Host Adapter
Installed      Yes
PNP Device ID
       PCI\VEN_135B&DEV_0001&SUBSYS_00000000&REV_00\3&2C9E08A6&0&08

Last Reset     4/26/2004 5:06 AM
Index  9
Service Name   GNINDIS
IP Address     Not Available
IP Subnet      Not Available
Default IP Gateway    Not Available
DHCP Enabled   Yes
DHCP Server    Not Available
DHCP Lease Expires    Not Available
DHCP Lease Obtained   Not Available
MAC Address    00:90:FA:00:1C:15
Memory Address 0xF2020000-0xF203FFFF
Memory Address 0xF2200000-0xF23FFFFF
Memory Address 0xF3000000-0xF3FFFFFF
Memory Address 0xF2000000-0xF5FFFFFF
IRQ Channel    IRQ 149

Name   [00000010] cLAN Host Adapter
Adapter Type   Ethernet 802.3
Product Type   cLAN Host Adapter
Installed      Yes
```

```
PNP Device ID  PCI\VEN_135B&DEV_0001&SUBSYS_00000000&REV_00\3&3BCEF44&0&00

Last Reset     4/26/2004 5:06 AM
Index  10
Service Name   GNINDIS
IP Address     Not Available
IP Subnet      Not Available
Default IP Gateway    Not Available
DHCP Enabled   Yes
DHCP Server    Not Available
DHCP Lease Expires    Not Available
DHCP Lease Obtained   Not Available
MAC Address    00:90:FA:00:14:BC
Memory Address 0xF6020000-0xF603FFFF
Memory Address 0xF6200000-0xF63FFFFF
Memory Address 0xF7000000-0xF7FFFFFF
Memory Address 0xF6000000-0xF7FFFFFF
IRQ Channel    IRQ 152

Name   [00000011] cLAN Host Adapter
Adapter Type   Ethernet 802.3
Product Type   cLAN Host Adapter
Installed      Yes
PNP Device ID  PCI\VEN_135B&DEV_0001&SUBSYS_00000000&REV_00\3&E44F86D&0&00

Last Reset     4/26/2004 5:06 AM
Index  11
Service Name   GNINDIS
IP Address     Not Available
IP Subnet      Not Available
Default IP Gateway    Not Available
DHCP Enabled   Yes
DHCP Server    Not Available
DHCP Lease Expires    Not Available
DHCP Lease Obtained   Not Available
MAC Address    00:90:FA:00:1C:5D
Memory Address 0xD5020000-0xD503FFFF
Memory Address 0xD5200000-0xD53FFFFF
Memory Address 0xD6000000-0xD6FFFFFF
Memory Address 0xD5000000-0xD8FFFFFF
IRQ Channel    IRQ 28

Name   [00000012] cLAN Host Adapter
Adapter Type   Ethernet 802.3
Product Type   cLAN Host Adapter
Installed      Yes
PNP Device ID  PCI\VEN_135B&DEV_0001&SUBSYS_00000000&REV_00\3&AD74055&0&08

Last Reset     4/26/2004 5:06 AM
Index  12
Service Name   GNINDIS
IP Address     Not Available
IP Subnet      Not Available
Default IP Gateway    Not Available
DHCP Enabled   Yes
DHCP Server    Not Available
DHCP Lease Expires    Not Available
DHCP Lease Obtained   Not Available
MAC Address    00:90:FA:00:1C:8C
Memory Address 0xDA020000-0xDA03FFFF
Memory Address 0xDA200000-0xDA3FFFFF
Memory Address 0xDB000000-0xDBFFFFFF
Memory Address 0xDA000000-0xDDFFFFFF
IRQ Channel    IRQ 53

Name   [00000013] cLAN Host Adapter
Adapter Type   Ethernet 802.3
Product Type   cLAN Host Adapter
Installed      Yes
PNP Device ID  PCI\VEN_135B&DEV_0001&SUBSYS_00000000&REV_00\3&1B2F0CE&0&00

Last Reset     4/26/2004 5:06 AM
Index  13
Service Name   GNINDIS
IP Address     Not Available
IP Subnet      Not Available
Default IP Gateway    Not Available
DHCP Enabled   Yes
DHCP Server    Not Available
DHCP Lease Expires    Not Available
DHCP Lease Obtained   Not Available
MAC Address    00:90:FA:00:1C:45
Memory Address 0xE2020000-0xE203FFFF
Memory Address 0xE2200000-0xE23FFFFF
Memory Address 0xE3000000-0xE3FFFFFF
Memory Address 0xE2000000-0xE5FFFFFF
IRQ Channel    IRQ 76

Name   [00000014] cLAN Host Adapter
Adapter Type   Ethernet 802.3
Product Type   cLAN Host Adapter
Installed      Yes
PNP Device ID
       PCI\VEN_135B&DEV_0001&SUBSYS_00000000&REV_00\3&39E002BD&0&08

Last Reset     4/26/2004 5:06 AM
Index  14
Service Name   GNINDIS
IP Address     Not Available
IP Subnet      Not Available
Default IP Gateway    Not Available
DHCP Enabled   Yes
DHCP Server    Not Available
DHCP Lease Expires    Not Available
DHCP Lease Obtained   Not Available
MAC Address    00:90:FA:00:1C:34
Memory Address 0xE7020000-0xE703FFFF
Memory Address 0xE7200000-0xE73FFFFF
Memory Address 0xE8000000-0xE8FFFFFF
Memory Address 0xE7000000-0xEAFFFFFF
IRQ Channel    IRQ 101

Name   [00000015] cLAN Host Adapter
Adapter Type   Ethernet 802.3
Product Type   cLAN Host Adapter
Installed      Yes
```

```
PNP Device ID
        PCI\VEN_135B&DEV_0001&SUBSYS_00000000&REV_00\3&29E81982&0&08

Last Reset     4/26/2004 5:06 AM
Index   15
Service Name   GNINDIS
IP Address     Not Available
IP Subnet      Not Available
Default IP Gateway     Not Available
DHCP Enabled   Yes
DHCP Server    Not Available
DHCP Lease Expires     Not Available
DHCP Lease Obtained    Not Available
MAC Address    00:90:FA:00:1C:0F
Memory Address 0xCF020000-0xCF03FFFF
Memory Address 0xCF200000-0xCF3FFFFF
Memory Address 0xD0000000-0xD0FFFFFF
Memory Address 0xCF000000-0xD2FFFFFF
IRQ Channel    IRQ 5

[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_{E0739E7E-DA74-4327-835D-
C7749802E94A}] SEQPACKET 10
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_{E0739E7E-DA74-4327-835D-
C7749802E94A}] DATAGRAM 10
```

```
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_{A68C76C9-E7C4-4656-A6E2-
49954FF0E297}] SEQPACKET 9
Connectionless Service No
Guarantees Delivery   Yes
Guarantees Sequencing  Yes
Maximum Address Size   20 bytes
Maximum Message Size   62.50 KB (64,000 bytes)
Message Oriented       Yes
Minimum Address Size   20 bytes
Pseudo Stream Oriented No
Supports Broadcasting  No
Supports Connect Data  No
Supports Disconnect Data      No
Supports Encryption   No
Supports Expedited Data       No
Supports Graceful Closing     No
Supports Guaranteed Bandwidth No
Supports Multicasting  No

Name   MSAFD NetBIOS [\Device\NetBT_Tcpip_{A68C76C9-E7C4-4656-A6E2-
49954FF0E297}] DATAGRAM 9
Connectionless Service Yes
Guarantees Delivery   No
Guarantees Sequencing  No
Maximum Address Size   20 bytes
Maximum Message Size   62.50 KB (64,000 bytes)
Message Oriented       Yes
Minimum Address Size   20 bytes
Pseudo Stream Oriented No
Supports Broadcasting  Yes
Supports Connect Data  No
Supports Disconnect Data      No
Supports Encryption   No
Supports Expedited Data       No
Supports Graceful Closing     No
Supports Guaranteed Bandwidth No
Supports Multicasting  No

Name   MSAFD NetBIOS [\Device\NetBT_Tcpip_{B4E35858-75CE-4227-B716-
7D1867B22A3B}] SEQPACKET 8
Connectionless Service No
Guarantees Delivery   Yes
Guarantees Sequencing  Yes
Maximum Address Size   20 bytes
Maximum Message Size   62.50 KB (64,000 bytes)
Message Oriented       Yes
Minimum Address Size   20 bytes
Pseudo Stream Oriented No
Supports Broadcasting  No
Supports Connect Data  No
Supports Disconnect Data      No
Supports Encryption   No
Supports Expedited Data       No
Supports Graceful Closing     No
Supports Guaranteed Bandwidth No
Supports Multicasting  No

Name   MSAFD NetBIOS [\Device\NetBT_Tcpip_{B4E35858-75CE-4227-B716-
7D1867B22A3B}] DATAGRAM 8
Connectionless Service Yes
Guarantees Delivery   No
Guarantees Sequencing  No
Maximum Address Size   20 bytes
Maximum Message Size   62.50 KB (64,000 bytes)
Message Oriented       Yes
Minimum Address Size   20 bytes
Pseudo Stream Oriented No
Supports Broadcasting  Yes
Supports Connect Data  No
Supports Disconnect Data      No
Supports Encryption   No
Supports Expedited Data       No
Supports Graceful Closing     No
Supports Guaranteed Bandwidth No
Supports Multicasting  No

Name   MSAFD NetBIOS [\Device\NetBT_Tcpip_{45FFC04F-5A5A-4D48-8BB8-
2769A78E69A9}] SEQPACKET 7
Connectionless Service No
Guarantees Delivery   Yes
Guarantees Sequencing  Yes
Maximum Address Size   20 bytes
Maximum Message Size   62.50 KB (64,000 bytes)
Message Oriented       Yes
Minimum Address Size   20 bytes
Pseudo Stream Oriented No
Supports Broadcasting  No
Supports Connect Data  No
Supports Disconnect Data      No
Supports Encryption   No
Supports Expedited Data       No
Supports Graceful Closing     No
Supports Guaranteed Bandwidth No
Supports Multicasting  No

Name   MSAFD NetBIOS [\Device\NetBT_Tcpip_{45FFC04F-5A5A-4D48-8BB8-
2769A78E69A9}] DATAGRAM 7
Connectionless Service Yes
Guarantees Delivery   No
```

```
Guarantees Sequencing  No
Maximum Address Size   20 bytes
Maximum Message Size   62.50 KB (64,000 bytes)
Message Oriented       Yes
Minimum Address Size   20 bytes
Pseudo Stream Oriented No
Supports Broadcasting  Yes
Supports Connect Data  No
Supports Disconnect Data      No
Supports Encryption    No
Supports Expedited Data       No
Supports Graceful Closing     No
Supports Guaranteed Bandwidth No
Supports Multicasting  No

Name    MSAFD NetBIOS [\Device\NetBT_Tcpip_{AD02C75A-183C-4A1A-84D6-
0CDCB07DE636}] SEQPACKET 6
Connectionless Service No
Guarantees Delivery    Yes
Guarantees Sequencing  Yes
Maximum Address Size   20 bytes
Maximum Message Size   62.50 KB (64,000 bytes)
Message Oriented       Yes
Minimum Address Size   20 bytes
Pseudo Stream Oriented No
Supports Broadcasting  No
Supports Connect Data  No
Supports Disconnect Data      No
Supports Encryption    No
Supports Expedited Data       No
Supports Graceful Closing     No
Supports Guaranteed Bandwidth No
Supports Multicasting  No

Name    MSAFD NetBIOS [\Device\NetBT_Tcpip_{AD02C75A-183C-4A1A-84D6-
0CDCB07DE636}] DATAGRAM 6
Connectionless Service Yes
Guarantees Delivery    No
Guarantees Sequencing  No
Maximum Address Size   20 bytes
Maximum Message Size   62.50 KB (64,000 bytes)
Message Oriented       Yes
Minimum Address Size   20 bytes
Pseudo Stream Oriented No
Supports Broadcasting  Yes
Supports Connect Data  No
Supports Disconnect Data      No
Supports Encryption    No
Supports Expedited Data       No
Supports Graceful Closing     No
Supports Guaranteed Bandwidth No
Supports Multicasting  No

Name    MSAFD NetBIOS [\Device\NetBT_Tcpip_{3A5E9A55-D57D-4FAC-8389-
0543309B0046}] SEQPACKET 5
Connectionless Service No
Guarantees Delivery    Yes
Guarantees Sequencing  Yes
Maximum Address Size   20 bytes
Maximum Message Size   62.50 KB (64,000 bytes)
Message Oriented       Yes
Minimum Address Size   20 bytes
Pseudo Stream Oriented No
Supports Broadcasting  No
Supports Connect Data  No
Supports Disconnect Data      No
Supports Encryption    No
Supports Expedited Data       No
Supports Graceful Closing     No
Supports Guaranteed Bandwidth No
Supports Multicasting  No

Name    MSAFD NetBIOS [\Device\NetBT_Tcpip_{3A5E9A55-D57D-4FAC-8389-
0543309B0046}] DATAGRAM 5
Connectionless Service Yes
Guarantees Delivery    No
Guarantees Sequencing  No
Maximum Address Size   20 bytes
Maximum Message Size   62.50 KB (64,000 bytes)
Message Oriented       Yes
Minimum Address Size   20 bytes
Pseudo Stream Oriented No
Supports Broadcasting  Yes
Supports Connect Data  No
Supports Disconnect Data      No
Supports Encryption    No
Supports Expedited Data       No
Supports Graceful Closing     No
Supports Guaranteed Bandwidth No
Supports Multicasting  No

Name    MSAFD NetBIOS [\Device\NetBT_Tcpip_{50A64804-AD78-4EA1-9846-
53148EE2A8E4}] 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_{50A64804-AD78-4EA1-9846-
53148EE2A8E4}] DATAGRAM 4
Connectionless Service Yes
Guarantees Delivery    No
Guarantees Sequencing  No
Maximum Address Size   20 bytes
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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_{B324133E-EEF5-4CB1-8DC6-
8DDB462EBE28}] 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_{B324133E-EEF5-4CB1-8DC6-
8DDB462EBE28}] 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_{9267AEF7-C002-4C89-AFD9-
8C576E5B274C}] 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_{9267AEF7-C002-4C89-AFD9-
8C576E5B274C}] 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_{C60AE25D-DF86-4E0A-B1C1-
71DCC999A9D0}] 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_{C60AE25D-DF86-4E0A-B1C1-
71DCC999A9D0}] 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_{4951D7BF-5796-4DF9-9213-
30A6C3975B70}] 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_{4951D7BF-5796-4DF9-9213-
30A6C3975B70}] 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
Name    LPT1
PNP Device ID  ACPI\PNP0401\D
I/O Port       0x00000378-0x0000037F
I/O Port       0x00000778-0x0000077F
DMA Channel    Channel 1

[Storage]



[Drives]

Item    Value
Drive   A:
Description    3 1/2 Inch Floppy Drive

Drive   C:
Description    Local Fixed Disk
Compressed     No
File System    NTFS
Size    37.25 GB (39,999,500,288 bytes)
Free Space     32.13 GB (34,494,795,776 bytes)
Volume Name
Volume Serial Number   2CE13C30

Drive   D:
Description    CD-ROM Disc

[Disks]

Item    Value
Description    Disk drive
Manufacturer   (Standard disk drives)
Model   FUJITSU MHS2040AT
Bytes/Sector   512
Media Loaded   Yes
Media Type     Fixed hard disk
Partitions     1
SCSI Bus       0
SCSI Logical Unit      0
SCSI Port      1
SCSI Target ID 0
Sectors/Track  63
Size    37.26 GB (40,007,761,920 bytes)
Total Cylinders        4,864
```

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Total Sectors  78,140,160
Total Tracks   1,240,320
Tracks/Cylinder        255
Partition      Disk #0, Partition #0
Partition Size 37.25 GB (39,999,504,384 bytes)
Partition Starting Offset     32,256 bytes

Description    Unisys Intelligent Fibre Channel Fabric Disk Driver
Manufacturer   Unisys Corporation
Model   DGC     RAID 10         0206
Bytes/Sector   512
Media Loaded   Yes
Media Type     Fixed hard disk
Partitions     1
SCSI Bus       0
SCSI Logical Unit      0
SCSI Port      0
SCSI Target ID 80
Sectors/Track  63
Size   764.60 GB (820,981,647,360 bytes)
Total Cylinders        99,812
Total Sectors  1,603,479,780
Total Tracks   25,452,060
Tracks/Cylinder        255
Partition      Disk #77, Partition #0
Partition Size 764.60 GB (820,981,615,104 bytes)
Partition Starting Offset     32,256 bytes

Description    Unisys Intelligent Fibre Channel Fabric Disk Driver
Manufacturer   Unisys Corporation
Model   UNISYS  VirtualStorage  01.0
Bytes/Sector   512
Media Loaded   Yes
Media Type     Fixed hard disk
Partitions     4
SCSI Bus       0
SCSI Logical Unit      0
SCSI Port      0
SCSI Target ID 44
Sectors/Track  63
Size   119.62 GB (128,445,972,480 bytes)
Total Cylinders        15,616
Total Sectors  250,871,040
Total Tracks   3,982,080
Tracks/Cylinder        255
Partition      Disk #113, Partition #0
Partition Size 4.01 GB (4,301,789,184 bytes)
Partition Starting Offset     32,256 bytes
Partition      Disk #113, Partition #1
Partition Size 6.18 GB (6,637,800,960 bytes)
Partition Starting Offset     4,301,821,440 bytes
Partition      Disk #113, Partition #2
Partition Size 3.15 GB (3,380,590,080 bytes)
Partition Starting Offset     10,939,622,400 bytes
Partition      Disk #113, Partition #3
Partition Size 106.29 GB (114,125,760,000 bytes)
Partition Starting Offset     14,320,212,480 bytes

Description    Unisys Intelligent Fibre Channel Fabric Disk Driver
Manufacturer   Unisys Corporation
Model   UNISYS  VirtualStorage  01.0
Bytes/Sector   512
Media Loaded   Yes
Media Type     Fixed hard disk
Partitions     4
SCSI Bus       0
SCSI Logical Unit      0
SCSI Port      0
SCSI Target ID 45
Sectors/Track  63
Size   119.62 GB (128,445,972,480 bytes)
Total Cylinders        15,616
Total Sectors  250,871,040
Total Tracks   3,982,080
Tracks/Cylinder        255
Partition      Disk #112, Partition #0
Partition Size 4.01 GB (4,301,789,184 bytes)
Partition Starting Offset     32,256 bytes
Partition      Disk #112, Partition #1
Partition Size 6.18 GB (6,637,800,960 bytes)
Partition Starting Offset     4,301,821,440 bytes
Partition      Disk #112, Partition #2
Partition Size 3.15 GB (3,380,590,080 bytes)
Partition Starting Offset     10,939,622,400 bytes
Partition      Disk #112, Partition #3
Partition Size 106.29 GB (114,125,760,000 bytes)
Partition Starting Offset     14,320,212,480 bytes

Description    Unisys Intelligent Fibre Channel Fabric Disk Driver
Manufacturer   Unisys Corporation
Model   UNISYS  VirtualStorage  01.0
Bytes/Sector   512
Media Loaded   Yes
Media Type     Fixed hard disk
Partitions     4
SCSI Bus       0
SCSI Logical Unit      0
SCSI Port      0
SCSI Target ID 46
Sectors/Track  63
Size   119.62 GB (128,445,972,480 bytes)
Total Cylinders        15,616
Total Sectors  250,871,040
Total Tracks   3,982,080
Tracks/Cylinder        255
Partition      Disk #111, Partition #0
Partition Size 4.01 GB (4,301,789,184 bytes)
Partition Starting Offset     32,256 bytes
Partition      Disk #111, Partition #1
Partition Size 6.18 GB (6,637,800,960 bytes)
Partition Starting Offset     4,301,821,440 bytes
Partition      Disk #111, Partition #2
Partition Size 3.15 GB (3,380,590,080 bytes)
Partition Starting Offset     10,939,622,400 bytes
Partition      Disk #111, Partition #3
Partition Size 106.29 GB (114,125,760,000 bytes)
```

```
Partition Starting Offset     14,320,212,480 bytes

Description    Unisys Intelligent Fibre Channel Fabric Disk Driver
Manufacturer   Unisys Corporation
Model   UNISYS  VirtualStorage  01.0
Bytes/Sector   512
Media Loaded   Yes
Media Type     Fixed hard disk
Partitions     4
SCSI Bus       0
SCSI Logical Unit      0
SCSI Port      0
SCSI Target ID 47
Sectors/Track  63
Size   119.62 GB (128,445,972,480 bytes)
Total Cylinders        15,616
Total Sectors  250,871,040
Total Tracks   3,982,080
Tracks/Cylinder        255
Partition      Disk #110, Partition #0
Partition Size 4.01 GB (4,301,789,184 bytes)
Partition Starting Offset     32,256 bytes
Partition      Disk #110, Partition #1
Partition Size 6.18 GB (6,637,800,960 bytes)
Partition Starting Offset     4,301,821,440 bytes
Partition      Disk #110, Partition #2
Partition Size 3.15 GB (3,380,590,080 bytes)
Partition Starting Offset     10,939,622,400 bytes
Partition      Disk #110, Partition #3
Partition Size 106.29 GB (114,125,760,000 bytes)
Partition Starting Offset     14,320,212,480 bytes

Description    Unisys Intelligent Fibre Channel Fabric Disk Driver
Manufacturer   Unisys Corporation
Model   UNISYS  VirtualStorage  01.0
Bytes/Sector   512
Media Loaded   Yes
Media Type     Fixed hard disk
Partitions     4
SCSI Bus       0
SCSI Logical Unit      0
SCSI Port      0
SCSI Target ID 48
Sectors/Track  63
Size   119.62 GB (128,445,972,480 bytes)
Total Cylinders        15,616
Total Sectors  250,871,040
Total Tracks   3,982,080
Tracks/Cylinder        255
Partition      Disk #109, Partition #0
Partition Size 4.01 GB (4,301,789,184 bytes)
Partition Starting Offset     32,256 bytes
Partition      Disk #109, Partition #1
Partition Size 6.18 GB (6,637,800,960 bytes)
Partition Starting Offset     4,301,821,440 bytes
Partition      Disk #109, Partition #2
Partition Size 3.15 GB (3,380,590,080 bytes)
Partition Starting Offset     10,939,622,400 bytes
Partition      Disk #109, Partition #3
Partition Size 106.29 GB (114,125,760,000 bytes)
Partition Starting Offset     14,320,212,480 bytes

Description    Unisys Intelligent Fibre Channel Fabric Disk Driver
Manufacturer   Unisys Corporation
Model   UNISYS  VirtualStorage  01.0
Bytes/Sector   512
Media Loaded   Yes
Media Type     Fixed hard disk
Partitions     4
SCSI Bus       0
SCSI Logical Unit      0
SCSI Port      0
SCSI Target ID 49
Sectors/Track  63
Size   119.62 GB (128,445,972,480 bytes)
Total Cylinders        15,616
Total Sectors  250,871,040
Total Tracks   3,982,080
Tracks/Cylinder        255
Partition      Disk #108, Partition #0
Partition Size 4.01 GB (4,301,789,184 bytes)
Partition Starting Offset     32,256 bytes
Partition      Disk #108, Partition #1
Partition Size 6.18 GB (6,637,800,960 bytes)
Partition Starting Offset     4,301,821,440 bytes
Partition      Disk #108, Partition #2
Partition Size 3.15 GB (3,380,590,080 bytes)
Partition Starting Offset     10,939,622,400 bytes
Partition      Disk #108, Partition #3
Partition Size 106.29 GB (114,125,760,000 bytes)
Partition Starting Offset     14,320,212,480 bytes

Description    Unisys Intelligent Fibre Channel Fabric Disk Driver
Manufacturer   Unisys Corporation
Model   UNISYS  VirtualStorage  01.0
Bytes/Sector   512
Media Loaded   Yes
Media Type     Fixed hard disk
Partitions     4
SCSI Bus       0
SCSI Logical Unit      0
SCSI Port      0
SCSI Target ID 40
Sectors/Track  63
Size   119.62 GB (128,445,972,480 bytes)
Total Cylinders        15,616
Total Sectors  250,871,040
Total Tracks   3,982,080
Tracks/Cylinder        255
Partition      Disk #117, Partition #0
Partition Size 4.01 GB (4,301,789,184 bytes)
Partition Starting Offset     32,256 bytes
Partition      Disk #117, Partition #1
Partition Size 6.18 GB (6,637,800,960 bytes)
Partition Starting Offset     4,301,821,440 bytes
Partition      Disk #117, Partition #2
```

```
Partition Size 3.15 GB (3,380,590,080 bytes)
Partition Starting Offset     10,939,622,400 bytes
Partition      Disk #117, Partition #3
Partition Size 106.29 GB (114,125,760,000 bytes)
Partition Starting Offset     14,320,212,480 bytes

Description    Unisys Intelligent Fibre Channel Fabric Disk Driver
Manufacturer   Unisys Corporation
Model   UNISYS  VirtualStorage  01.0
Bytes/Sector   512
Media Loaded   Yes
Media Type     Fixed hard disk
Partitions     4
SCSI Bus       0
SCSI Logical Unit      0
SCSI Port      0
SCSI Target ID 41
Sectors/Track  63
Size   119.62 GB (128,445,972,480 bytes)
Total Cylinders        15,616
Total Sectors  250,871,040
Total Tracks   3,982,080
Tracks/Cylinder        255
Partition      Disk #116, Partition #0
Partition Size 4.01 GB (4,301,789,184 bytes)
Partition Starting Offset     32,256 bytes
Partition      Disk #116, Partition #1
Partition Size 6.18 GB (6,637,800,960 bytes)
Partition Starting Offset     4,301,821,440 bytes
Partition      Disk #116, Partition #2
Partition Size 3.15 GB (3,380,590,080 bytes)
Partition Starting Offset     10,939,622,400 bytes
Partition      Disk #116, Partition #3
Partition Size 106.29 GB (114,125,760,000 bytes)
Partition Starting Offset     14,320,212,480 bytes

Description    Unisys Intelligent Fibre Channel Fabric Disk Driver
Manufacturer   Unisys Corporation
Model   UNISYS  VirtualStorage  01.0
Bytes/Sector   512
Media Loaded   Yes
Media Type     Fixed hard disk
Partitions     4
SCSI Bus       0
SCSI Logical Unit      0
SCSI Port      0
SCSI Target ID 42
Sectors/Track  63
Size   119.62 GB (128,445,972,480 bytes)
Total Cylinders        15,616
Total Sectors  250,871,040
Total Tracks   3,982,080
Tracks/Cylinder        255
Partition      Disk #115, Partition #0
Partition Size 4.01 GB (4,301,789,184 bytes)
Partition Starting Offset     32,256 bytes
Partition      Disk #115, Partition #1
Partition Size 6.18 GB (6,637,800,960 bytes)
Partition Starting Offset     4,301,821,440 bytes
Partition      Disk #115, Partition #2
Partition Size 3.15 GB (3,380,590,080 bytes)
Partition Starting Offset     10,939,622,400 bytes
Partition      Disk #115, Partition #3
Partition Size 106.29 GB (114,125,760,000 bytes)
Partition Starting Offset     14,320,212,480 bytes

Description    Unisys Intelligent Fibre Channel Fabric Disk Driver
Manufacturer   Unisys Corporation
Model   UNISYS  VirtualStorage  01.0
Bytes/Sector   512
Media Loaded   Yes
Media Type     Fixed hard disk
Partitions     4
SCSI Bus       0
SCSI Logical Unit      0
SCSI Port      0
SCSI Target ID 43
Sectors/Track  63
Size   119.62 GB (128,445,972,480 bytes)
Total Cylinders        15,616
Total Sectors  250,871,040
Total Tracks   3,982,080
Tracks/Cylinder        255
Partition      Disk #114, Partition #0
Partition Size 4.01 GB (4,301,789,184 bytes)
Partition Starting Offset     32,256 bytes
Partition      Disk #114, Partition #1
Partition Size 6.18 GB (6,637,800,960 bytes)
Partition Starting Offset     4,301,821,440 bytes
Partition      Disk #114, Partition #2
Partition Size 3.15 GB (3,380,590,080 bytes)
Partition Starting Offset     10,939,622,400 bytes
Partition      Disk #114, Partition #3
Partition Size 106.29 GB (114,125,760,000 bytes)
Partition Starting Offset     14,320,212,480 bytes

Description    Unisys Intelligent Fibre Channel Fabric Disk Driver
Manufacturer   Unisys Corporation
Model   UNISYS  VirtualStorage  01.0
Bytes/Sector   512
Media Loaded   Yes
Media Type     Fixed hard disk
Partitions     4
SCSI Bus       0
SCSI Logical Unit      0
SCSI Port      0
SCSI Target ID 64
Sectors/Track  63
Size   119.62 GB (128,445,972,480 bytes)
Total Cylinders        15,616
Total Sectors  250,871,040
Total Tracks   3,982,080
Tracks/Cylinder        255
Partition      Disk #93, Partition #0
Partition Size 4.01 GB (4,301,789,184 bytes)
Partition Starting Offset     32,256 bytes
```

```
Partition      Disk #93, Partition #1
Partition Size 6.18 GB (6,637,800,960 bytes)
Partition Starting Offset     4,301,821,440 bytes
Partition      Disk #93, Partition #2
Partition Size 3.15 GB (3,380,590,080 bytes)
Partition Starting Offset     10,939,622,400 bytes
Partition      Disk #93, Partition #3
Partition Size 106.29 GB (114,125,760,000 bytes)
Partition Starting Offset     14,320,212,480 bytes

Description    Unisys Intelligent Fibre Channel Fabric Disk Driver
Manufacturer   Unisys Corporation
Model   UNISYS  VirtualStorage  01.0
Bytes/Sector   512
Media Loaded   Yes
Media Type     Fixed hard disk
Partitions     4
SCSI Bus       0
SCSI Logical Unit      0
SCSI Port      0
SCSI Target ID 65
Sectors/Track  63
Size   119.62 GB (128,445,972,480 bytes)
Total Cylinders        15,616
Total Sectors  250,871,040
Total Tracks   3,982,080
Tracks/Cylinder        255
Partition      Disk #92, Partition #0
Partition Size 4.01 GB (4,301,789,184 bytes)
Partition Starting Offset     32,256 bytes
Partition      Disk #92, Partition #1
Partition Size 6.18 GB (6,637,800,960 bytes)
Partition Starting Offset     4,301,821,440 bytes
Partition      Disk #92, Partition #2
Partition Size 3.15 GB (3,380,590,080 bytes)
Partition Starting Offset     10,939,622,400 bytes
Partition      Disk #92, Partition #3
Partition Size 106.29 GB (114,125,760,000 bytes)
Partition Starting Offset     14,320,212,480 bytes

Description    Unisys Intelligent Fibre Channel Fabric Disk Driver
Manufacturer   Unisys Corporation
Model   UNISYS  VirtualStorage  01.0
Bytes/Sector   512
Media Loaded   Yes
Media Type     Fixed hard disk
Partitions     4
SCSI Bus       0
SCSI Logical Unit      0
SCSI Port      0
SCSI Target ID 66
Sectors/Track  63
Size   119.62 GB (128,445,972,480 bytes)
Total Cylinders        15,616
Total Sectors  250,871,040
Total Tracks   3,982,080
Tracks/Cylinder        255
Partition      Disk #91, Partition #0
Partition Size 4.01 GB (4,301,789,184 bytes)
Partition Starting Offset     32,256 bytes
Partition      Disk #91, Partition #1
Partition Size 6.18 GB (6,637,800,960 bytes)
Partition Starting Offset     4,301,821,440 bytes
Partition      Disk #91, Partition #2
Partition Size 3.15 GB (3,380,590,080 bytes)
Partition Starting Offset     10,939,622,400 bytes
Partition      Disk #91, Partition #3
Partition Size 106.29 GB (114,125,760,000 bytes)
Partition Starting Offset     14,320,212,480 bytes

Description    Unisys Intelligent Fibre Channel Fabric Disk Driver
Manufacturer   Unisys Corporation
Model   UNISYS  VirtualStorage  01.0
Bytes/Sector   512
Media Loaded   Yes
Media Type     Fixed hard disk
Partitions     4
SCSI Bus       0
SCSI Logical Unit      0
SCSI Port      0
SCSI Target ID 67
Sectors/Track  63
Size   119.62 GB (128,445,972,480 bytes)
Total Cylinders        15,616
Total Sectors  250,871,040
Total Tracks   3,982,080
Tracks/Cylinder        255
Partition      Disk #90, Partition #0
Partition Size 4.01 GB (4,301,789,184 bytes)
Partition Starting Offset     32,256 bytes
Partition      Disk #90, Partition #1
Partition Size 6.18 GB (6,637,800,960 bytes)
Partition Starting Offset     4,301,821,440 bytes
Partition      Disk #90, Partition #2
Partition Size 3.15 GB (3,380,590,080 bytes)
Partition Starting Offset     10,939,622,400 bytes
Partition      Disk #90, Partition #3
Partition Size 106.29 GB (114,125,760,000 bytes)
Partition Starting Offset     14,320,212,480 bytes

Description    Unisys Intelligent Fibre Channel Fabric Disk Driver
Manufacturer   Unisys Corporation
Model   UNISYS  VirtualStorage  01.0
Bytes/Sector   512
Media Loaded   Yes
Media Type     Fixed hard disk
Partitions     4
SCSI Bus       0
SCSI Logical Unit      0
SCSI Port      0
SCSI Target ID 68
Sectors/Track  63
Size   119.62 GB (128,445,972,480 bytes)
Total Cylinders        15,616
Total Sectors  250,871,040
Total Tracks   3,982,080
```

```
Tracks/Cylinder        255
Partition      Disk #89, Partition #0
Partition Size 4.01 GB (4,301,789,184 bytes)
Partition Starting Offset     32,256 bytes
Partition      Disk #89, Partition #1
Partition Size 6.18 GB (6,637,800,960 bytes)
Partition Starting Offset     4,301,821,440 bytes
Partition      Disk #89, Partition #2
Partition Size 3.15 GB (3,380,590,080 bytes)
Partition Starting Offset     10,939,622,400 bytes
Partition      Disk #89, Partition #3
Partition Size 106.29 GB (114,125,760,000 bytes)
Partition Starting Offset     14,320,212,480 bytes

Description    Unisys Intelligent Fibre Channel Fabric Disk Driver
Manufacturer   Unisys Corporation
Model   UNISYS  VirtualStorage  01.0
Bytes/Sector   512
Media Loaded   Yes
Media Type     Fixed hard disk
Partitions     4
SCSI Bus       0
SCSI Logical Unit      0
SCSI Port      0
SCSI Target ID 69
Sectors/Track  63
Size   119.62 GB (128,445,972,480 bytes)
Total Cylinders        15,616
Total Sectors  250,871,040
Total Tracks   3,982,080
Tracks/Cylinder        255
Partition      Disk #88, Partition #0
Partition Size 4.01 GB (4,301,789,184 bytes)
Partition Starting Offset     32,256 bytes
Partition      Disk #88, Partition #1
Partition Size 6.18 GB (6,637,800,960 bytes)
Partition Starting Offset     4,301,821,440 bytes
Partition      Disk #88, Partition #2
Partition Size 3.15 GB (3,380,590,080 bytes)
Partition Starting Offset     10,939,622,400 bytes
Partition      Disk #88, Partition #3
Partition Size 106.29 GB (114,125,760,000 bytes)
Partition Starting Offset     14,320,212,480 bytes

Description    Unisys Intelligent Fibre Channel Fabric Disk Driver
Manufacturer   Unisys Corporation
Model   UNISYS  VirtualStorage  01.0
Bytes/Sector   512
Media Loaded   Yes
Media Type     Fixed hard disk
Partitions     4
SCSI Bus       0
SCSI Logical Unit      0
SCSI Port      0
SCSI Target ID 60
Sectors/Track  63
Size   119.62 GB (128,445,972,480 bytes)
Total Cylinders        15,616
Total Sectors  250,871,040
Total Tracks   3,982,080
Tracks/Cylinder        255
Partition      Disk #97, Partition #0
Partition Size 4.01 GB (4,301,789,184 bytes)
Partition Starting Offset     32,256 bytes
Partition      Disk #97, Partition #1
Partition Size 6.18 GB (6,637,800,960 bytes)
Partition Starting Offset     4,301,821,440 bytes
Partition      Disk #97, Partition #2
Partition Size 3.15 GB (3,380,590,080 bytes)
Partition Starting Offset     10,939,622,400 bytes
Partition      Disk #97, Partition #3
Partition Size 106.29 GB (114,125,760,000 bytes)
Partition Starting Offset     14,320,212,480 bytes

Description    Unisys Intelligent Fibre Channel Fabric Disk Driver
Manufacturer   Unisys Corporation
Model   UNISYS  VirtualStorage  01.0
Bytes/Sector   512
Media Loaded   Yes
Media Type     Fixed hard disk
Partitions     4
SCSI Bus       0
SCSI Logical Unit      0
SCSI Port      0
SCSI Target ID 61
Sectors/Track  63
Size   119.62 GB (128,445,972,480 bytes)
Total Cylinders        15,616
Total Sectors  250,871,040
Total Tracks   3,982,080
Tracks/Cylinder        255
Partition      Disk #96, Partition #0
Partition Size 4.01 GB (4,301,789,184 bytes)
Partition Starting Offset     32,256 bytes
Partition      Disk #96, Partition #1
Partition Size 6.18 GB (6,637,800,960 bytes)
Partition Starting Offset     4,301,821,440 bytes
Partition      Disk #96, Partition #2
Partition Size 3.15 GB (3,380,590,080 bytes)
Partition Starting Offset     10,939,622,400 bytes
Partition      Disk #96, Partition #3
Partition Size 106.29 GB (114,125,760,000 bytes)
Partition Starting Offset     14,320,212,480 bytes

Description    Unisys Intelligent Fibre Channel Fabric Disk Driver
Manufacturer   Unisys Corporation
Model   UNISYS  VirtualStorage  01.0
Bytes/Sector   512
Media Loaded   Yes
Media Type     Fixed hard disk
Partitions     4
SCSI Bus       0
SCSI Logical Unit      0
SCSI Port      0
SCSI Target ID 62
Sectors/Track  63
```

```
Size   119.62 GB (128,445,972,480 bytes)
Total Cylinders        15,616
Total Sectors  250,871,040
Total Tracks   3,982,080
Tracks/Cylinder        255
Partition      Disk #95, Partition #0
Partition Size 4.01 GB (4,301,789,184 bytes)
Partition Starting Offset     32,256 bytes
Partition      Disk #95, Partition #1
Partition Size 6.18 GB (6,637,800,960 bytes)
Partition Starting Offset     4,301,821,440 bytes
Partition      Disk #95, Partition #2
Partition Size 3.15 GB (3,380,590,080 bytes)
Partition Starting Offset     10,939,622,400 bytes
Partition      Disk #95, Partition #3
Partition Size 106.29 GB (114,125,760,000 bytes)
Partition Starting Offset     14,320,212,480 bytes

Description    Unisys Intelligent Fibre Channel Fabric Disk Driver
Manufacturer   Unisys Corporation
Model   UNISYS  VirtualStorage  01.0
Bytes/Sector   512
Media Loaded   Yes
Media Type     Fixed hard disk
Partitions     4
SCSI Bus       0
SCSI Logical Unit      0
SCSI Port      0
SCSI Target ID 63
Sectors/Track  63
Size   119.62 GB (128,445,972,480 bytes)
Total Cylinders        15,616
Total Sectors  250,871,040
Total Tracks   3,982,080
Tracks/Cylinder        255
Partition      Disk #94, Partition #0
Partition Size 4.01 GB (4,301,789,184 bytes)
Partition Starting Offset     32,256 bytes
Partition      Disk #94, Partition #1
Partition Size 6.18 GB (6,637,800,960 bytes)
Partition Starting Offset     4,301,821,440 bytes
Partition      Disk #94, Partition #2
Partition Size 3.15 GB (3,380,590,080 bytes)
Partition Starting Offset     10,939,622,400 bytes
Partition      Disk #94, Partition #3
Partition Size 106.29 GB (114,125,760,000 bytes)
Partition Starting Offset     14,320,212,480 bytes

Description    Unisys Intelligent Fibre Channel Fabric Disk Driver
Manufacturer   Unisys Corporation
Model   UNISYS  VirtualStorage  01.0
Bytes/Sector   512
Media Loaded   Yes
Media Type     Fixed hard disk
Partitions     4
SCSI Bus       0
SCSI Logical Unit      0
SCSI Port      0
SCSI Target ID 131
Sectors/Track  63
Size   119.62 GB (128,445,972,480 bytes)
Total Cylinders        15,616
Total Sectors  250,871,040
Total Tracks   3,982,080
Tracks/Cylinder        255
Partition      Disk #26, Partition #0
Partition Size 4.01 GB (4,301,789,184 bytes)
Partition Starting Offset     32,256 bytes
Partition      Disk #26, Partition #1
Partition Size 6.18 GB (6,637,800,960 bytes)
Partition Starting Offset     4,301,821,440 bytes
Partition      Disk #26, Partition #2
Partition Size 3.15 GB (3,380,590,080 bytes)
Partition Starting Offset     10,939,622,400 bytes
Partition      Disk #26, Partition #3
Partition Size 106.29 GB (114,125,760,000 bytes)
Partition Starting Offset     14,320,212,480 bytes

Description    Unisys Intelligent Fibre Channel Fabric Disk Driver
Manufacturer   Unisys Corporation
Model   UNISYS  VirtualStorage  01.0
Bytes/Sector   512
Media Loaded   Yes
Media Type     Fixed hard disk
Partitions     4
SCSI Bus       0
SCSI Logical Unit      0
SCSI Port      0
SCSI Target ID 132
Sectors/Track  63
Size   119.62 GB (128,445,972,480 bytes)
Total Cylinders        15,616
Total Sectors  250,871,040
Total Tracks   3,982,080
Tracks/Cylinder        255
Partition      Disk #25, Partition #0
Partition Size 4.01 GB (4,301,789,184 bytes)
Partition Starting Offset     32,256 bytes
Partition      Disk #25, Partition #1
Partition Size 6.18 GB (6,637,800,960 bytes)
Partition Starting Offset     4,301,821,440 bytes
Partition      Disk #25, Partition #2
Partition Size 3.15 GB (3,380,590,080 bytes)
Partition Starting Offset     10,939,622,400 bytes
Partition      Disk #25, Partition #3
Partition Size 106.29 GB (114,125,760,000 bytes)
Partition Starting Offset     14,320,212,480 bytes

Description    Unisys Intelligent Fibre Channel Fabric Disk Driver
Manufacturer   Unisys Corporation
Model   UNISYS  VirtualStorage  01.0
Bytes/Sector   512
Media Loaded   Yes
Media Type     Fixed hard disk
Partitions     4
SCSI Bus       0
```

```
SCSI Logical Unit      0
SCSI Port      0
SCSI Target ID 133
Sectors/Track  63
Size   119.62 GB (128,445,972,480 bytes)
Total Cylinders        15,616
Total Sectors  250,871,040
Total Tracks   3,982,080
Tracks/Cylinder        255
Partition      Disk #24, Partition #0
Partition Size 4.01 GB (4,301,789,184 bytes)
Partition Starting Offset     32,256 bytes
Partition      Disk #24, Partition #1
Partition Size 6.18 GB (6,637,800,960 bytes)
Partition Starting Offset     4,301,821,440 bytes
Partition      Disk #24, Partition #2
Partition Size 3.15 GB (3,380,590,080 bytes)
Partition Starting Offset     10,939,622,400 bytes
Partition      Disk #24, Partition #3
Partition Size 106.29 GB (114,125,760,000 bytes)
Partition Starting Offset     14,320,212,480 bytes

Description    Unisys Intelligent Fibre Channel Fabric Disk Driver
Manufacturer   Unisys Corporation
Model   UNISYS  VirtualStorage  01.0
Bytes/Sector   512
Media Loaded   Yes
Media Type     Fixed hard disk
Partitions     4
SCSI Bus       0
SCSI Logical Unit      0
SCSI Port      0
SCSI Target ID 134
Sectors/Track  63
Size   119.62 GB (128,445,972,480 bytes)
Total Cylinders        15,616
Total Sectors  250,871,040
Total Tracks   3,982,080
Tracks/Cylinder        255
Partition      Disk #23, Partition #0
Partition Size 4.01 GB (4,301,789,184 bytes)
Partition Starting Offset     32,256 bytes
Partition      Disk #23, Partition #1
Partition Size 6.18 GB (6,637,800,960 bytes)
Partition Starting Offset     4,301,821,440 bytes
Partition      Disk #23, Partition #2
Partition Size 3.15 GB (3,380,590,080 bytes)
Partition Starting Offset     10,939,622,400 bytes
Partition      Disk #23, Partition #3
Partition Size 106.29 GB (114,125,760,000 bytes)
Partition Starting Offset     14,320,212,480 bytes

Description    Unisys Intelligent Fibre Channel Fabric Disk Driver
Manufacturer   Unisys Corporation
Model   UNISYS  VirtualStorage  01.0
Bytes/Sector   512
Media Loaded   Yes
Media Type     Fixed hard disk
Partitions     4
SCSI Bus       0
SCSI Logical Unit      0
SCSI Port      0
SCSI Target ID 135
Sectors/Track  63
Size   119.62 GB (128,445,972,480 bytes)
Total Cylinders        15,616
Total Sectors  250,871,040
Total Tracks   3,982,080
Tracks/Cylinder        255
Partition      Disk #22, Partition #0
Partition Size 4.01 GB (4,301,789,184 bytes)
Partition Starting Offset     32,256 bytes
Partition      Disk #22, Partition #1
Partition Size 6.18 GB (6,637,800,960 bytes)
Partition Starting Offset     4,301,821,440 bytes
Partition      Disk #22, Partition #2
Partition Size 3.15 GB (3,380,590,080 bytes)
Partition Starting Offset     10,939,622,400 bytes
Partition      Disk #22, Partition #3
Partition Size 106.29 GB (114,125,760,000 bytes)
Partition Starting Offset     14,320,212,480 bytes

Description    Unisys Intelligent Fibre Channel Fabric Disk Driver
Manufacturer   Unisys Corporation
Model   UNISYS  VirtualStorage  01.0
Bytes/Sector   512
Media Loaded   Yes
Media Type     Fixed hard disk
Partitions     4
SCSI Bus       0
SCSI Logical Unit      0
SCSI Port      0
SCSI Target ID 136
Sectors/Track  63
Size   119.62 GB (128,445,972,480 bytes)
Total Cylinders        15,616
Total Sectors  250,871,040
Total Tracks   3,982,080
Tracks/Cylinder        255
Partition      Disk #21, Partition #0
Partition Size 4.01 GB (4,301,789,184 bytes)
Partition Starting Offset     32,256 bytes
Partition      Disk #21, Partition #1
Partition Size 6.18 GB (6,637,800,960 bytes)
Partition Starting Offset     4,301,821,440 bytes
Partition      Disk #21, Partition #2
Partition Size 3.15 GB (3,380,590,080 bytes)
Partition Starting Offset     10,939,622,400 bytes
Partition      Disk #21, Partition #3
Partition Size 106.29 GB (114,125,760,000 bytes)
Partition Starting Offset     14,320,212,480 bytes

Description    Unisys Intelligent Fibre Channel Fabric Disk Driver
Manufacturer   Unisys Corporation
Model   UNISYS  VirtualStorage  01.0
Bytes/Sector   512
```

```
Media Loaded   Yes
Media Type     Fixed hard disk
Partitions     4
SCSI Bus       0
SCSI Logical Unit      0
SCSI Port      0
SCSI Target ID 127
Sectors/Track  63
Size   119.62 GB (128,445,972,480 bytes)
Total Cylinders        15,616
Total Sectors  250,871,040
Total Tracks   3,982,080
Tracks/Cylinder        255
Partition      Disk #30, Partition #0
Partition Size 4.01 GB (4,301,789,184 bytes)
Partition Starting Offset     32,256 bytes
Partition      Disk #30, Partition #1
Partition Size 6.18 GB (6,637,800,960 bytes)
Partition Starting Offset     4,301,821,440 bytes
Partition      Disk #30, Partition #2
Partition Size 3.15 GB (3,380,590,080 bytes)
Partition Starting Offset     10,939,622,400 bytes
Partition      Disk #30, Partition #3
Partition Size 106.29 GB (114,125,760,000 bytes)
Partition Starting Offset     14,320,212,480 bytes

Description    Unisys Intelligent Fibre Channel Fabric Disk Driver
Manufacturer   Unisys Corporation
Model   UNISYS  VirtualStorage  01.0
Bytes/Sector   512
Media Loaded   Yes
Media Type     Fixed hard disk
Partitions     4
SCSI Bus       0
SCSI Logical Unit      0
SCSI Port      0
SCSI Target ID 128
Sectors/Track  63
Size   119.62 GB (128,445,972,480 bytes)
Total Cylinders        15,616
Total Sectors  250,871,040
Total Tracks   3,982,080
Tracks/Cylinder        255
Partition      Disk #29, Partition #0
Partition Size 4.01 GB (4,301,789,184 bytes)
Partition Starting Offset     32,256 bytes
Partition      Disk #29, Partition #1
Partition Size 6.18 GB (6,637,800,960 bytes)
Partition Starting Offset     4,301,821,440 bytes
Partition      Disk #29, Partition #2
Partition Size 3.15 GB (3,380,590,080 bytes)
Partition Starting Offset     10,939,622,400 bytes
Partition      Disk #29, Partition #3
Partition Size 106.29 GB (114,125,760,000 bytes)
Partition Starting Offset     14,320,212,480 bytes

Description    Unisys Intelligent Fibre Channel Fabric Disk Driver
Manufacturer   Unisys Corporation
Model   UNISYS  VirtualStorage  01.0
Bytes/Sector   512
Media Loaded   Yes
Media Type     Fixed hard disk
Partitions     4
SCSI Bus       0
SCSI Logical Unit      0
SCSI Port      0
SCSI Target ID 129
Sectors/Track  63
Size   119.62 GB (128,445,972,480 bytes)
Total Cylinders        15,616
Total Sectors  250,871,040
Total Tracks   3,982,080
Tracks/Cylinder        255
Partition      Disk #28, Partition #0
Partition Size 4.01 GB (4,301,789,184 bytes)
Partition Starting Offset     32,256 bytes
Partition      Disk #28, Partition #1
Partition Size 6.18 GB (6,637,800,960 bytes)
Partition Starting Offset     4,301,821,440 bytes
Partition      Disk #28, Partition #2
Partition Size 3.15 GB (3,380,590,080 bytes)
Partition Starting Offset     10,939,622,400 bytes
Partition      Disk #28, Partition #3
Partition Size 106.29 GB (114,125,760,000 bytes)
Partition Starting Offset     14,320,212,480 bytes

Description    Unisys Intelligent Fibre Channel Fabric Disk Driver
Manufacturer   Unisys Corporation
Model   UNISYS  VirtualStorage  01.0
Bytes/Sector   512
Media Loaded   Yes
Media Type     Fixed hard disk
Partitions     4
SCSI Bus       0
SCSI Logical Unit      0
SCSI Port      0
SCSI Target ID 130
Sectors/Track  63
Size   119.62 GB (128,445,972,480 bytes)
Total Cylinders        15,616
Total Sectors  250,871,040
Total Tracks   3,982,080
Tracks/Cylinder        255
Partition      Disk #27, Partition #0
Partition Size 4.01 GB (4,301,789,184 bytes)
Partition Starting Offset     32,256 bytes
Partition      Disk #27, Partition #1
Partition Size 6.18 GB (6,637,800,960 bytes)
Partition Starting Offset     4,301,821,440 bytes
Partition      Disk #27, Partition #2
Partition Size 3.15 GB (3,380,590,080 bytes)
Partition Starting Offset     10,939,622,400 bytes
Partition      Disk #27, Partition #3
Partition Size 106.29 GB (114,125,760,000 bytes)
Partition Starting Offset     14,320,212,480 bytes
```

```
Description    Unisys Intelligent Fibre Channel Fabric Disk Driver
Manufacturer   Unisys Corporation
Model   UNISYS  VirtualStorage  01.0
Bytes/Sector   512
Media Loaded   Yes
Media Type     Fixed hard disk
Partitions     4
SCSI Bus       0
SCSI Logical Unit      0
SCSI Port      0
SCSI Target ID 52
Sectors/Track  63
Size   119.62 GB (128,445,972,480 bytes)
Total Cylinders        15,616
Total Sectors  250,871,040
Total Tracks   3,982,080
Tracks/Cylinder        255
Partition      Disk #105, Partition #0
Partition Size 4.01 GB (4,301,789,184 bytes)
Partition Starting Offset     32,256 bytes
Partition      Disk #105, Partition #1
Partition Size 6.18 GB (6,637,800,960 bytes)
Partition Starting Offset     4,301,821,440 bytes
Partition      Disk #105, Partition #2
Partition Size 3.15 GB (3,380,590,080 bytes)
Partition Starting Offset     10,939,622,400 bytes
Partition      Disk #105, Partition #3
Partition Size 106.29 GB (114,125,760,000 bytes)
Partition Starting Offset     14,320,212,480 bytes

Description    Unisys Intelligent Fibre Channel Fabric Disk Driver
Manufacturer   Unisys Corporation
Model   UNISYS  VirtualStorage  01.0
Bytes/Sector   512
Media Loaded   Yes
Media Type     Fixed hard disk
Partitions     4
SCSI Bus       0
SCSI Logical Unit      0
SCSI Port      0
SCSI Target ID 53
Sectors/Track  63
Size   119.62 GB (128,445,972,480 bytes)
Total Cylinders        15,616
Total Sectors  250,871,040
Total Tracks   3,982,080
Tracks/Cylinder        255
Partition      Disk #104, Partition #0
Partition Size 4.01 GB (4,301,789,184 bytes)
Partition Starting Offset     32,256 bytes
Partition      Disk #104, Partition #1
Partition Size 6.18 GB (6,637,800,960 bytes)
Partition Starting Offset     4,301,821,440 bytes
Partition      Disk #104, Partition #2
Partition Size 3.15 GB (3,380,590,080 bytes)
Partition Starting Offset     10,939,622,400 bytes
Partition      Disk #104, Partition #3
Partition Size 106.29 GB (114,125,760,000 bytes)
Partition Starting Offset     14,320,212,480 bytes

Description    Unisys Intelligent Fibre Channel Fabric Disk Driver
Manufacturer   Unisys Corporation
Model   UNISYS  VirtualStorage  01.0
Bytes/Sector   512
Media Loaded   Yes
Media Type     Fixed hard disk
Partitions     4
SCSI Bus       0
SCSI Logical Unit      0
SCSI Port      0
SCSI Target ID 54
Sectors/Track  63
Size   119.62 GB (128,445,972,480 bytes)
Total Cylinders        15,616
Total Sectors  250,871,040
Total Tracks   3,982,080
Tracks/Cylinder        255
Partition      Disk #103, Partition #0
Partition Size 4.01 GB (4,301,789,184 bytes)
Partition Starting Offset     32,256 bytes
Partition      Disk #103, Partition #1
Partition Size 6.18 GB (6,637,800,960 bytes)
Partition Starting Offset     4,301,821,440 bytes
Partition      Disk #103, Partition #2
Partition Size 3.15 GB (3,380,590,080 bytes)
Partition Starting Offset     10,939,622,400 bytes
Partition      Disk #103, Partition #3
Partition Size 106.29 GB (114,125,760,000 bytes)
Partition Starting Offset     14,320,212,480 bytes

Description    Unisys Intelligent Fibre Channel Fabric Disk Driver
Manufacturer   Unisys Corporation
Model   UNISYS  VirtualStorage  01.0
Bytes/Sector   512
Media Loaded   Yes
Media Type     Fixed hard disk
Partitions     4
SCSI Bus       0
SCSI Logical Unit      0
SCSI Port      0
SCSI Target ID 55
Sectors/Track  63
Size   119.62 GB (128,445,972,480 bytes)
Total Cylinders        15,616
Total Sectors  250,871,040
Total Tracks   3,982,080
Tracks/Cylinder        255
Partition      Disk #102, Partition #0
Partition Size 4.01 GB (4,301,789,184 bytes)
Partition Starting Offset     32,256 bytes
Partition      Disk #102, Partition #1
Partition Size 6.18 GB (6,637,800,960 bytes)
Partition Starting Offset     4,301,821,440 bytes
Partition      Disk #102, Partition #2
Partition Size 3.15 GB (3,380,590,080 bytes)
Partition Starting Offset     10,939,622,400 bytes
```

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Partition      Disk #102, Partition #3
Partition Size 106.29 GB (114,125,760,000 bytes)
Partition Starting Offset     14,320,212,480 bytes

Description    Unisys Intelligent Fibre Channel Fabric Disk Driver
Manufacturer   Unisys Corporation
Model   UNISYS  VirtualStorage  01.0
Bytes/Sector   512
Media Loaded   Yes
Media Type     Fixed hard disk
Partitions     4
SCSI Bus       0
SCSI Logical Unit      0
SCSI Port      0
SCSI Target ID 56
Sectors/Track  63
Size   119.62 GB (128,445,972,480 bytes)
Total Cylinders        15,616
Total Sectors  250,871,040
Total Tracks   3,982,080
Tracks/Cylinder        255
Partition      Disk #101, Partition #0
Partition Size 4.01 GB (4,301,789,184 bytes)
Partition Starting Offset     32,256 bytes
Partition      Disk #101, Partition #1
Partition Size 6.18 GB (6,637,800,960 bytes)
Partition Starting Offset     4,301,821,440 bytes
Partition      Disk #101, Partition #2
Partition Size 3.15 GB (3,380,590,080 bytes)
Partition Starting Offset     10,939,622,400 bytes
Partition      Disk #101, Partition #3
Partition Size 106.29 GB (114,125,760,000 bytes)
Partition Starting Offset     14,320,212,480 bytes

Description    Unisys Intelligent Fibre Channel Fabric Disk Driver
Manufacturer   Unisys Corporation
Model   UNISYS  VirtualStorage  01.0
Bytes/Sector   512
Media Loaded   Yes
Media Type     Fixed hard disk
Partitions     4
SCSI Bus       0
SCSI Logical Unit      0
SCSI Port      0
SCSI Target ID 57
Sectors/Track  63
Size   119.62 GB (128,445,972,480 bytes)
Total Cylinders        15,616
Total Sectors  250,871,040
Total Tracks   3,982,080
Tracks/Cylinder        255
Partition      Disk #100, Partition #0
Partition Size 4.01 GB (4,301,789,184 bytes)
Partition Starting Offset     32,256 bytes
Partition      Disk #100, Partition #1
Partition Size 6.18 GB (6,637,800,960 bytes)
Partition Starting Offset     4,301,821,440 bytes
Partition      Disk #100, Partition #2
Partition Size 3.15 GB (3,380,590,080 bytes)
Partition Starting Offset     10,939,622,400 bytes
Partition      Disk #100, Partition #3
Partition Size 106.29 GB (114,125,760,000 bytes)
Partition Starting Offset     14,320,212,480 bytes

Description    Unisys Intelligent Fibre Channel Fabric Disk Driver
Manufacturer   Unisys Corporation
Model   UNISYS  VirtualStorage  01.0
Bytes/Sector   512
Media Loaded   Yes
Media Type     Fixed hard disk
Partitions     4
SCSI Bus       0
SCSI Logical Unit      0
SCSI Port      0
SCSI Target ID 58
Sectors/Track  63
Size   119.62 GB (128,445,972,480 bytes)
Total Cylinders        15,616
Total Sectors  250,871,040
Total Tracks   3,982,080
Tracks/Cylinder        255
Partition      Disk #99, Partition #0
Partition Size 4.01 GB (4,301,789,184 bytes)
Partition Starting Offset     32,256 bytes
Partition      Disk #99, Partition #1
Partition Size 6.18 GB (6,637,800,960 bytes)
Partition Starting Offset     4,301,821,440 bytes
Partition      Disk #99, Partition #2
Partition Size 3.15 GB (3,380,590,080 bytes)
Partition Starting Offset     10,939,622,400 bytes
Partition      Disk #99, Partition #3
Partition Size 106.29 GB (114,125,760,000 bytes)
Partition Starting Offset     14,320,212,480 bytes

Description    Unisys Intelligent Fibre Channel Fabric Disk Driver
Manufacturer   Unisys Corporation
Model   UNISYS  VirtualStorage  01.0
Bytes/Sector   512
Media Loaded   Yes
Media Type     Fixed hard disk
Partitions     4
SCSI Bus       0
SCSI Logical Unit      0
SCSI Port      0
SCSI Target ID 59
Sectors/Track  63
Size   119.62 GB (128,445,972,480 bytes)
Total Cylinders        15,616
Total Sectors  250,871,040
Total Tracks   3,982,080
Tracks/Cylinder        255
Partition      Disk #98, Partition #0
Partition Size 4.01 GB (4,301,789,184 bytes)
Partition Starting Offset     32,256 bytes
Partition      Disk #98, Partition #1
Partition Size 6.18 GB (6,637,800,960 bytes)
```

```
Partition Starting Offset     4,301,821,440 bytes
Partition      Disk #98, Partition #2
Partition Size 3.15 GB (3,380,590,080 bytes)
Partition Starting Offset     10,939,622,400 bytes
Partition      Disk #98, Partition #3
Partition Size 106.29 GB (114,125,760,000 bytes)
Partition Starting Offset     14,320,212,480 bytes

Description    Unisys Intelligent Fibre Channel Fabric Disk Driver
Manufacturer   Unisys Corporation
Model   UNISYS  VirtualStorage  01.0
Bytes/Sector   512
Media Loaded   Yes
Media Type     Fixed hard disk
Partitions     4
SCSI Bus       0
SCSI Logical Unit      0
SCSI Port      0
SCSI Target ID 50
Sectors/Track  63
Size   119.62 GB (128,445,972,480 bytes)
Total Cylinders        15,616
Total Sectors  250,871,040
Total Tracks   3,982,080
Tracks/Cylinder        255
Partition      Disk #107, Partition #0
Partition Size 4.01 GB (4,301,789,184 bytes)
Partition Starting Offset     32,256 bytes
Partition      Disk #107, Partition #1
Partition Size 6.18 GB (6,637,800,960 bytes)
Partition Starting Offset     4,301,821,440 bytes
Partition      Disk #107, Partition #2
Partition Size 3.15 GB (3,380,590,080 bytes)
Partition Starting Offset     10,939,622,400 bytes
Partition      Disk #107, Partition #3
Partition Size 106.29 GB (114,125,760,000 bytes)
Partition Starting Offset     14,320,212,480 bytes

Description    Unisys Intelligent Fibre Channel Fabric Disk Driver
Manufacturer   Unisys Corporation
Model   UNISYS  VirtualStorage  01.0
Bytes/Sector   512
Media Loaded   Yes
Media Type     Fixed hard disk
Partitions     4
SCSI Bus       0
SCSI Logical Unit      0
SCSI Port      0
SCSI Target ID 51
Sectors/Track  63
Size   119.62 GB (128,445,972,480 bytes)
Total Cylinders        15,616
Total Sectors  250,871,040
Total Tracks   3,982,080
Tracks/Cylinder        255
Partition      Disk #106, Partition #0
Partition Size 4.01 GB (4,301,789,184 bytes)
Partition Starting Offset     32,256 bytes
Partition      Disk #106, Partition #1
Partition Size 6.18 GB (6,637,800,960 bytes)
Partition Starting Offset     4,301,821,440 bytes
Partition      Disk #106, Partition #2
Partition Size 3.15 GB (3,380,590,080 bytes)
Partition Starting Offset     10,939,622,400 bytes
Partition      Disk #106, Partition #3
Partition Size 106.29 GB (114,125,760,000 bytes)
Partition Starting Offset     14,320,212,480 bytes

Description    Unisys Intelligent Fibre Channel Fabric Disk Driver
Manufacturer   Unisys Corporation
Model   UNISYS  VirtualStorage  01.0
Bytes/Sector   512
Media Loaded   Yes
Media Type     Fixed hard disk
Partitions     4
SCSI Bus       0
SCSI Logical Unit      0
SCSI Port      0
SCSI Target ID 34
Sectors/Track  63
Size   119.62 GB (128,445,972,480 bytes)
Total Cylinders        15,616
Total Sectors  250,871,040
Total Tracks   3,982,080
Tracks/Cylinder        255
Partition      Disk #123, Partition #0
Partition Size 4.01 GB (4,301,789,184 bytes)
Partition Starting Offset     32,256 bytes
Partition      Disk #123, Partition #1
Partition Size 6.18 GB (6,637,800,960 bytes)
Partition Starting Offset     4,301,821,440 bytes
Partition      Disk #123, Partition #2
Partition Size 3.15 GB (3,380,590,080 bytes)
Partition Starting Offset     10,939,622,400 bytes
Partition      Disk #123, Partition #3
Partition Size 106.29 GB (114,125,760,000 bytes)
Partition Starting Offset     14,320,212,480 bytes

Description    Unisys Intelligent Fibre Channel Fabric Disk Driver
Manufacturer   Unisys Corporation
Model   UNISYS  VirtualStorage  01.0
Bytes/Sector   512
Media Loaded   Yes
Media Type     Fixed hard disk
Partitions     4
SCSI Bus       0
SCSI Logical Unit      0
SCSI Port      0
SCSI Target ID 35
Sectors/Track  63
Size   119.62 GB (128,445,972,480 bytes)
Total Cylinders        15,616
Total Sectors  250,871,040
Total Tracks   3,982,080
Tracks/Cylinder        255
Partition      Disk #122, Partition #0
```

```
Partition Size 4.01 GB (4,301,789,184 bytes)
Partition Starting Offset     32,256 bytes
Partition      Disk #122, Partition #1
Partition Size 6.18 GB (6,637,800,960 bytes)
Partition Starting Offset     4,301,821,440 bytes
Partition      Disk #122, Partition #2
Partition Size 3.15 GB (3,380,590,080 bytes)
Partition Starting Offset     10,939,622,400 bytes
Partition      Disk #122, Partition #3
Partition Size 106.29 GB (114,125,760,000 bytes)
Partition Starting Offset     14,320,212,480 bytes

Description    Unisys Intelligent Fibre Channel Fabric Disk Driver
Manufacturer   Unisys Corporation
Model   UNISYS  VirtualStorage  01.0
Bytes/Sector   512
Media Loaded   Yes
Media Type     Fixed hard disk
Partitions     4
SCSI Bus       0
SCSI Logical Unit      0
SCSI Port      0
SCSI Target ID 36
Sectors/Track  63
Size   119.62 GB (128,445,972,480 bytes)
Total Cylinders        15,616
Total Sectors  250,871,040
Total Tracks   3,982,080
Tracks/Cylinder        255
Partition      Disk #121, Partition #0
Partition Size 4.01 GB (4,301,789,184 bytes)
Partition Starting Offset     32,256 bytes
Partition      Disk #121, Partition #1
Partition Size 6.18 GB (6,637,800,960 bytes)
Partition Starting Offset     4,301,821,440 bytes
Partition      Disk #121, Partition #2
Partition Size 3.15 GB (3,380,590,080 bytes)
Partition Starting Offset     10,939,622,400 bytes
Partition      Disk #121, Partition #3
Partition Size 106.29 GB (114,125,760,000 bytes)
Partition Starting Offset     14,320,212,480 bytes

Description    Unisys Intelligent Fibre Channel Fabric Disk Driver
Manufacturer   Unisys Corporation
Model   UNISYS  VirtualStorage  01.0
Bytes/Sector   512
Media Loaded   Yes
Media Type     Fixed hard disk
Partitions     4
SCSI Bus       0
SCSI Logical Unit      0
SCSI Port      0
SCSI Target ID 37
Sectors/Track  63
Size   119.62 GB (128,445,972,480 bytes)
Total Cylinders        15,616
Total Sectors  250,871,040
Total Tracks   3,982,080
Tracks/Cylinder        255
Partition      Disk #120, Partition #0
Partition Size 4.01 GB (4,301,789,184 bytes)
Partition Starting Offset     32,256 bytes
Partition      Disk #120, Partition #1
Partition Size 6.18 GB (6,637,800,960 bytes)
Partition Starting Offset     4,301,821,440 bytes
Partition      Disk #120, Partition #2
Partition Size 3.15 GB (3,380,590,080 bytes)
Partition Starting Offset     10,939,622,400 bytes
Partition      Disk #120, Partition #3
Partition Size 106.29 GB (114,125,760,000 bytes)
Partition Starting Offset     14,320,212,480 bytes

Description    Unisys Intelligent Fibre Channel Fabric Disk Driver
Manufacturer   Unisys Corporation
Model   UNISYS  VirtualStorage  01.0
Bytes/Sector   512
Media Loaded   Yes
Media Type     Fixed hard disk
Partitions     4
SCSI Bus       0
SCSI Logical Unit      0
SCSI Port      0
SCSI Target ID 38
Sectors/Track  63
Size   119.62 GB (128,445,972,480 bytes)
Total Cylinders        15,616
Total Sectors  250,871,040
Total Tracks   3,982,080
Tracks/Cylinder        255
Partition      Disk #119, Partition #0
Partition Size 4.01 GB (4,301,789,184 bytes)
Partition Starting Offset     32,256 bytes
Partition      Disk #119, Partition #1
Partition Size 6.18 GB (6,637,800,960 bytes)
Partition Starting Offset     4,301,821,440 bytes
Partition      Disk #119, Partition #2
Partition Size 3.15 GB (3,380,590,080 bytes)
Partition Starting Offset     10,939,622,400 bytes
Partition      Disk #119, Partition #3
Partition Size 106.29 GB (114,125,760,000 bytes)
Partition Starting Offset     14,320,212,480 bytes

Description    Unisys Intelligent Fibre Channel Fabric Disk Driver
Manufacturer   Unisys Corporation
Model   UNISYS  VirtualStorage  01.0
Bytes/Sector   512
Media Loaded   Yes
Media Type     Fixed hard disk
Partitions     4
SCSI Bus       0
SCSI Logical Unit      0
SCSI Port      0
SCSI Target ID 39
Sectors/Track  63
Size   119.62 GB (128,445,972,480 bytes)
Total Cylinders        15,616
```

```
Total Sectors  250,871,040
Total Tracks   3,982,080
Tracks/Cylinder        255
Partition      Disk #118, Partition #0
Partition Size 4.01 GB (4,301,789,184 bytes)
Partition Starting Offset     32,256 bytes
Partition      Disk #118, Partition #1
Partition Size 6.18 GB (6,637,800,960 bytes)
Partition Starting Offset     4,301,821,440 bytes
Partition      Disk #118, Partition #2
Partition Size 3.15 GB (3,380,590,080 bytes)
Partition Starting Offset     10,939,622,400 bytes
Partition      Disk #118, Partition #3
Partition Size 106.29 GB (114,125,760,000 bytes)
Partition Starting Offset     14,320,212,480 bytes

Description    Unisys Intelligent Fibre Channel Fabric Disk Driver
Manufacturer   Unisys Corporation
Model   UNISYS  VirtualStorage  01.0
Bytes/Sector   512
Media Loaded   Yes
Media Type     Fixed hard disk
Partitions     4
SCSI Bus       0
SCSI Logical Unit      0
SCSI Port      0
SCSI Target ID 30
Sectors/Track  63
Size   119.62 GB (128,445,972,480 bytes)
Total Cylinders        15,616
Total Sectors  250,871,040
Total Tracks   3,982,080
Tracks/Cylinder        255
Partition      Disk #127, Partition #0
Partition Size 4.01 GB (4,301,789,184 bytes)
Partition Starting Offset     32,256 bytes
Partition      Disk #127, Partition #1
Partition Size 6.18 GB (6,637,800,960 bytes)
Partition Starting Offset     4,301,821,440 bytes
Partition      Disk #127, Partition #2
Partition Size 3.15 GB (3,380,590,080 bytes)
Partition Starting Offset     10,939,622,400 bytes
Partition      Disk #127, Partition #3
Partition Size 106.29 GB (114,125,760,000 bytes)
Partition Starting Offset     14,320,212,480 bytes

Description    Unisys Intelligent Fibre Channel Fabric Disk Driver
Manufacturer   Unisys Corporation
Model   UNISYS  VirtualStorage  01.0
Bytes/Sector   512
Media Loaded   Yes
Media Type     Fixed hard disk
Partitions     4
SCSI Bus       0
SCSI Logical Unit      0
SCSI Port      0
SCSI Target ID 31
Sectors/Track  63
Size   119.62 GB (128,445,972,480 bytes)
Total Cylinders        15,616
Total Sectors  250,871,040
Total Tracks   3,982,080
Tracks/Cylinder        255
Partition      Disk #126, Partition #0
Partition Size 4.01 GB (4,301,789,184 bytes)
Partition Starting Offset     32,256 bytes
Partition      Disk #126, Partition #1
Partition Size 6.18 GB (6,637,800,960 bytes)
Partition Starting Offset     4,301,821,440 bytes
Partition      Disk #126, Partition #2
Partition Size 3.15 GB (3,380,590,080 bytes)
Partition Starting Offset     10,939,622,400 bytes
Partition      Disk #126, Partition #3
Partition Size 106.29 GB (114,125,760,000 bytes)
Partition Starting Offset     14,320,212,480 bytes

Description    Unisys Intelligent Fibre Channel Fabric Disk Driver
Manufacturer   Unisys Corporation
Model   UNISYS  VirtualStorage  01.0
Bytes/Sector   512
Media Loaded   Yes
Media Type     Fixed hard disk
Partitions     4
SCSI Bus       0
SCSI Logical Unit      0
SCSI Port      0
SCSI Target ID 32
Sectors/Track  63
Size   119.62 GB (128,445,972,480 bytes)
Total Cylinders        15,616
Total Sectors  250,871,040
Total Tracks   3,982,080
Tracks/Cylinder        255
Partition      Disk #125, Partition #0
Partition Size 4.01 GB (4,301,789,184 bytes)
Partition Starting Offset     32,256 bytes
Partition      Disk #125, Partition #1
Partition Size 6.18 GB (6,637,800,960 bytes)
Partition Starting Offset     4,301,821,440 bytes
Partition      Disk #125, Partition #2
Partition Size 3.15 GB (3,380,590,080 bytes)
Partition Starting Offset     10,939,622,400 bytes
Partition      Disk #125, Partition #3
Partition Size 106.29 GB (114,125,760,000 bytes)
Partition Starting Offset     14,320,212,480 bytes

Description    Unisys Intelligent Fibre Channel Fabric Disk Driver
Manufacturer   Unisys Corporation
Model   UNISYS  VirtualStorage  01.0
Bytes/Sector   512
Media Loaded   Yes
Media Type     Fixed hard disk
Partitions     4
SCSI Bus       0
SCSI Logical Unit      0
SCSI Port      0
```

```
SCSI Target ID 33
Sectors/Track  63
Size   119.62 GB (128,445,972,480 bytes)
Total Cylinders        15,616
Total Sectors  250,871,040
Total Tracks   3,982,080
Tracks/Cylinder        255
Partition      Disk #124, Partition #0
Partition Size 4.01 GB (4,301,789,184 bytes)
Partition Starting Offset     32,256 bytes
Partition      Disk #124, Partition #1
Partition Size 6.18 GB (6,637,800,960 bytes)
Partition Starting Offset     4,301,821,440 bytes
Partition      Disk #124, Partition #2
Partition Size 3.15 GB (3,380,590,080 bytes)
Partition Starting Offset     10,939,622,400 bytes
Partition      Disk #124, Partition #3
Partition Size 106.29 GB (114,125,760,000 bytes)
Partition Starting Offset     14,320,212,480 bytes

Description    Unisys Intelligent Fibre Channel Fabric Disk Driver
Manufacturer   Unisys Corporation
Model   UNISYS  VirtualStorage  01.0
Bytes/Sector   512
Media Loaded   Yes
Media Type     Fixed hard disk
Partitions     4
SCSI Bus       0
SCSI Logical Unit      0
SCSI Port      0
SCSI Target ID 74
Sectors/Track  63
Size   119.62 GB (128,445,972,480 bytes)
Total Cylinders        15,616
Total Sectors  250,871,040
Total Tracks   3,982,080
Tracks/Cylinder        255
Partition      Disk #83, Partition #0
Partition Size 4.01 GB (4,301,789,184 bytes)
Partition Starting Offset     32,256 bytes
Partition      Disk #83, Partition #1
Partition Size 6.18 GB (6,637,800,960 bytes)
Partition Starting Offset     4,301,821,440 bytes
Partition      Disk #83, Partition #2
Partition Size 3.15 GB (3,380,590,080 bytes)
Partition Starting Offset     10,939,622,400 bytes
Partition      Disk #83, Partition #3
Partition Size 106.29 GB (114,125,760,000 bytes)
Partition Starting Offset     14,320,212,480 bytes

Description    Unisys Intelligent Fibre Channel Fabric Disk Driver
Manufacturer   Unisys Corporation
Model   UNISYS  VirtualStorage  01.0
Bytes/Sector   512
Media Loaded   Yes
Media Type     Fixed hard disk
Partitions     4
SCSI Bus       0
SCSI Logical Unit      0
SCSI Port      0
SCSI Target ID 75
Sectors/Track  63
Size   119.62 GB (128,445,972,480 bytes)
Total Cylinders        15,616
Total Sectors  250,871,040
Total Tracks   3,982,080
Tracks/Cylinder        255
Partition      Disk #82, Partition #0
Partition Size 4.01 GB (4,301,789,184 bytes)
Partition Starting Offset     32,256 bytes
Partition      Disk #82, Partition #1
Partition Size 6.18 GB (6,637,800,960 bytes)
Partition Starting Offset     4,301,821,440 bytes
Partition      Disk #82, Partition #2
Partition Size 3.15 GB (3,380,590,080 bytes)
Partition Starting Offset     10,939,622,400 bytes
Partition      Disk #82, Partition #3
Partition Size 106.29 GB (114,125,760,000 bytes)
Partition Starting Offset     14,320,212,480 bytes

Description    Unisys Intelligent Fibre Channel Fabric Disk Driver
Manufacturer   Unisys Corporation
Model   UNISYS  VirtualStorage  01.0
Bytes/Sector   512
Media Loaded   Yes
Media Type     Fixed hard disk
Partitions     4
SCSI Bus       0
SCSI Logical Unit      0
SCSI Port      0
SCSI Target ID 76
Sectors/Track  63
Size   119.62 GB (128,445,972,480 bytes)
Total Cylinders        15,616
Total Sectors  250,871,040
Total Tracks   3,982,080
Tracks/Cylinder        255
Partition      Disk #81, Partition #0
Partition Size 4.01 GB (4,301,789,184 bytes)
Partition Starting Offset     32,256 bytes
Partition      Disk #81, Partition #1
Partition Size 6.18 GB (6,637,800,960 bytes)
Partition Starting Offset     4,301,821,440 bytes
Partition      Disk #81, Partition #2
Partition Size 3.15 GB (3,380,590,080 bytes)
Partition Starting Offset     10,939,622,400 bytes
Partition      Disk #81, Partition #3
Partition Size 106.29 GB (114,125,760,000 bytes)
Partition Starting Offset     14,320,212,480 bytes

Description    Unisys Intelligent Fibre Channel Fabric Disk Driver
Manufacturer   Unisys Corporation
Model   UNISYS  VirtualStorage  01.0
Bytes/Sector   512
Media Loaded   Yes
Media Type     Fixed hard disk
```

```
Partitions     4
SCSI Bus       0
SCSI Logical Unit      0
SCSI Port      0
SCSI Target ID 77
Sectors/Track  63
Size   119.62 GB (128,445,972,480 bytes)
Total Cylinders        15,616
Total Sectors  250,871,040
Total Tracks   3,982,080
Tracks/Cylinder        255
Partition      Disk #80, Partition #0
Partition Size 4.01 GB (4,301,789,184 bytes)
Partition Starting Offset     32,256 bytes
Partition      Disk #80, Partition #1
Partition Size 6.18 GB (6,637,800,960 bytes)
Partition Starting Offset     4,301,821,440 bytes
Partition      Disk #80, Partition #2
Partition Size 3.15 GB (3,380,590,080 bytes)
Partition Starting Offset     10,939,622,400 bytes
Partition      Disk #80, Partition #3
Partition Size 106.29 GB (114,125,760,000 bytes)
Partition Starting Offset     14,320,212,480 bytes

Description    Unisys Intelligent Fibre Channel Fabric Disk Driver
Manufacturer   Unisys Corporation
Model   UNISYS  VirtualStorage  01.0
Bytes/Sector   512
Media Loaded   Yes
Media Type     Fixed hard disk
Partitions     4
SCSI Bus       0
SCSI Logical Unit      0
SCSI Port      0
SCSI Target ID 78
Sectors/Track  63
Size   119.62 GB (128,445,972,480 bytes)
Total Cylinders        15,616
Total Sectors  250,871,040
Total Tracks   3,982,080
Tracks/Cylinder        255
Partition      Disk #79, Partition #0
Partition Size 4.01 GB (4,301,789,184 bytes)
Partition Starting Offset     32,256 bytes
Partition      Disk #79, Partition #1
Partition Size 6.18 GB (6,637,800,960 bytes)
Partition Starting Offset     4,301,821,440 bytes
Partition      Disk #79, Partition #2
Partition Size 3.15 GB (3,380,590,080 bytes)
Partition Starting Offset     10,939,622,400 bytes
Partition      Disk #79, Partition #3
Partition Size 106.29 GB (114,125,760,000 bytes)
Partition Starting Offset     14,320,212,480 bytes

Description    Unisys Intelligent Fibre Channel Fabric Disk Driver
Manufacturer   Unisys Corporation
Model   UNISYS  VirtualStorage  01.0
Bytes/Sector   512
Media Loaded   Yes
Media Type     Fixed hard disk
Partitions     4
SCSI Bus       0
SCSI Logical Unit      0
SCSI Port      0
SCSI Target ID 79
Sectors/Track  63
Size   119.62 GB (128,445,972,480 bytes)
Total Cylinders        15,616
Total Sectors  250,871,040
Total Tracks   3,982,080
Tracks/Cylinder        255
Partition      Disk #78, Partition #0
Partition Size 4.01 GB (4,301,789,184 bytes)
Partition Starting Offset     32,256 bytes
Partition      Disk #78, Partition #1
Partition Size 6.18 GB (6,637,800,960 bytes)
Partition Starting Offset     4,301,821,440 bytes
Partition      Disk #78, Partition #2
Partition Size 3.15 GB (3,380,590,080 bytes)
Partition Starting Offset     10,939,622,400 bytes
Partition      Disk #78, Partition #3
Partition Size 106.29 GB (114,125,760,000 bytes)
Partition Starting Offset     14,320,212,480 bytes

Description    Unisys Intelligent Fibre Channel Fabric Disk Driver
Manufacturer   Unisys Corporation
Model   UNISYS  VirtualStorage  01.0
Bytes/Sector   512
Media Loaded   Yes
Media Type     Fixed hard disk
Partitions     4
SCSI Bus       0
SCSI Logical Unit      0
SCSI Port      0
SCSI Target ID 70
Sectors/Track  63
Size   119.62 GB (128,445,972,480 bytes)
Total Cylinders        15,616
Total Sectors  250,871,040
Total Tracks   3,982,080
Tracks/Cylinder        255
Partition      Disk #87, Partition #0
Partition Size 4.01 GB (4,301,789,184 bytes)
Partition Starting Offset     32,256 bytes
Partition      Disk #87, Partition #1
Partition Size 6.18 GB (6,637,800,960 bytes)
Partition Starting Offset     4,301,821,440 bytes
Partition      Disk #87, Partition #2
Partition Size 3.15 GB (3,380,590,080 bytes)
Partition Starting Offset     10,939,622,400 bytes
Partition      Disk #87, Partition #3
Partition Size 106.29 GB (114,125,760,000 bytes)
Partition Starting Offset     14,320,212,480 bytes

Description    Unisys Intelligent Fibre Channel Fabric Disk Driver
Manufacturer   Unisys Corporation
```

```
Model   UNISYS  VirtualStorage  01.0
Bytes/Sector   512
Media Loaded   Yes
Media Type     Fixed hard disk
Partitions     4
SCSI Bus       0
SCSI Logical Unit      0
SCSI Port      0
SCSI Target ID 71
Sectors/Track  63
Size   119.62 GB (128,445,972,480 bytes)
Total Cylinders        15,616
Total Sectors  250,871,040
Total Tracks   3,982,080
Tracks/Cylinder        255
Partition      Disk #86, Partition #0
Partition Size 4.01 GB (4,301,789,184 bytes)
Partition Starting Offset     32,256 bytes
Partition      Disk #86, Partition #1
Partition Size 6.18 GB (6,637,800,960 bytes)
Partition Starting Offset     4,301,821,440 bytes
Partition      Disk #86, Partition #2
Partition Size 3.15 GB (3,380,590,080 bytes)
Partition Starting Offset     10,939,622,400 bytes
Partition      Disk #86, Partition #3
Partition Size 106.29 GB (114,125,760,000 bytes)
Partition Starting Offset     14,320,212,480 bytes

Description    Unisys Intelligent Fibre Channel Fabric Disk Driver
Manufacturer   Unisys Corporation
Model   UNISYS  VirtualStorage  01.0
Bytes/Sector   512
Media Loaded   Yes
Media Type     Fixed hard disk
Partitions     4
SCSI Bus       0
SCSI Logical Unit      0
SCSI Port      0
SCSI Target ID 72
Sectors/Track  63
Size   119.62 GB (128,445,972,480 bytes)
Total Cylinders        15,616
Total Sectors  250,871,040
Total Tracks   3,982,080
Tracks/Cylinder        255
Partition      Disk #85, Partition #0
Partition Size 4.01 GB (4,301,789,184 bytes)
Partition Starting Offset     32,256 bytes
Partition      Disk #85, Partition #1
Partition Size 6.18 GB (6,637,800,960 bytes)
Partition Starting Offset     4,301,821,440 bytes
Partition      Disk #85, Partition #2
Partition Size 3.15 GB (3,380,590,080 bytes)
Partition Starting Offset     10,939,622,400 bytes
Partition      Disk #85, Partition #3
Partition Size 106.29 GB (114,125,760,000 bytes)
Partition Starting Offset     14,320,212,480 bytes

Description    Unisys Intelligent Fibre Channel Fabric Disk Driver
Manufacturer   Unisys Corporation
Model   UNISYS  VirtualStorage  01.0
Bytes/Sector   512
Media Loaded   Yes
Media Type     Fixed hard disk
Partitions     4
SCSI Bus       0
SCSI Logical Unit      0
SCSI Port      0
SCSI Target ID 73
Sectors/Track  63
Size   119.62 GB (128,445,972,480 bytes)
Total Cylinders        15,616
Total Sectors  250,871,040
Total Tracks   3,982,080
Tracks/Cylinder        255
Partition      Disk #84, Partition #0
Partition Size 4.01 GB (4,301,789,184 bytes)
Partition Starting Offset     32,256 bytes
Partition      Disk #84, Partition #1
Partition Size 6.18 GB (6,637,800,960 bytes)
Partition Starting Offset     4,301,821,440 bytes
Partition      Disk #84, Partition #2
Partition Size 3.15 GB (3,380,590,080 bytes)
Partition Starting Offset     10,939,622,400 bytes
Partition      Disk #84, Partition #3
Partition Size 106.29 GB (114,125,760,000 bytes)
Partition Starting Offset     14,320,212,480 bytes

Description    Unisys Intelligent Fibre Channel Fabric Disk Driver
Manufacturer   Unisys Corporation
Model   UNISYS  VirtualStorage  01.0
Bytes/Sector   512
Media Loaded   Yes
Media Type     Fixed hard disk
Partitions     4
SCSI Bus       0
SCSI Logical Unit      0
SCSI Port      0
SCSI Target ID 14
Sectors/Track  63
Size   119.62 GB (128,445,972,480 bytes)
Total Cylinders        15,616
Total Sectors  250,871,040
Total Tracks   3,982,080
Tracks/Cylinder        255
Partition      Disk #143, Partition #0
Partition Size 4.01 GB (4,301,789,184 bytes)
Partition Starting Offset     32,256 bytes
Partition      Disk #143, Partition #1
Partition Size 6.18 GB (6,637,800,960 bytes)
Partition Starting Offset     4,301,821,440 bytes
Partition      Disk #143, Partition #2
Partition Size 3.15 GB (3,380,590,080 bytes)
Partition Starting Offset     10,939,622,400 bytes
Partition      Disk #143, Partition #3
Partition Size 106.29 GB (114,125,760,000 bytes)
```

```
Partition Starting Offset     14,320,212,480 bytes

Description    Unisys Intelligent Fibre Channel Fabric Disk Driver
Manufacturer   Unisys Corporation
Model   UNISYS  VirtualStorage  01.0
Bytes/Sector   512
Media Loaded   Yes
Media Type     Fixed hard disk
Partitions     4
SCSI Bus       0
SCSI Logical Unit      0
SCSI Port      0
SCSI Target ID 15
Sectors/Track  63
Size   119.62 GB (128,445,972,480 bytes)
Total Cylinders        15,616
Total Sectors  250,871,040
Total Tracks   3,982,080
Tracks/Cylinder        255
Partition      Disk #142, Partition #0
Partition Size 4.01 GB (4,301,789,184 bytes)
Partition Starting Offset     32,256 bytes
Partition      Disk #142, Partition #1
Partition Size 6.18 GB (6,637,800,960 bytes)
Partition Starting Offset     4,301,821,440 bytes
Partition      Disk #142, Partition #2
Partition Size 3.15 GB (3,380,590,080 bytes)
Partition Starting Offset     10,939,622,400 bytes
Partition      Disk #142, Partition #3
Partition Size 106.29 GB (114,125,760,000 bytes)
Partition Starting Offset     14,320,212,480 bytes

Description    Unisys Intelligent Fibre Channel Fabric Disk Driver
Manufacturer   Unisys Corporation
Model   UNISYS  VirtualStorage  01.0
Bytes/Sector   512
Media Loaded   Yes
Media Type     Fixed hard disk
Partitions     4
SCSI Bus       0
SCSI Logical Unit      0
SCSI Port      0
SCSI Target ID 16
Sectors/Track  63
Size   119.62 GB (128,445,972,480 bytes)
Total Cylinders        15,616
Total Sectors  250,871,040
Total Tracks   3,982,080
Tracks/Cylinder        255
Partition      Disk #141, Partition #0
Partition Size 4.01 GB (4,301,789,184 bytes)
Partition Starting Offset     32,256 bytes
Partition      Disk #141, Partition #1
Partition Size 6.18 GB (6,637,800,960 bytes)
Partition Starting Offset     4,301,821,440 bytes
Partition      Disk #141, Partition #2
Partition Size 3.15 GB (3,380,590,080 bytes)
Partition Starting Offset     10,939,622,400 bytes
Partition      Disk #141, Partition #3
Partition Size 106.29 GB (114,125,760,000 bytes)
Partition Starting Offset     14,320,212,480 bytes

Description    Unisys Intelligent Fibre Channel Fabric Disk Driver
Manufacturer   Unisys Corporation
Model   UNISYS  VirtualStorage  01.0
Bytes/Sector   512
Media Loaded   Yes
Media Type     Fixed hard disk
Partitions     4
SCSI Bus       0
SCSI Logical Unit      0
SCSI Port      0
SCSI Target ID 17
Sectors/Track  63
Size   119.62 GB (128,445,972,480 bytes)
Total Cylinders        15,616
Total Sectors  250,871,040
Total Tracks   3,982,080
Tracks/Cylinder        255
Partition      Disk #140, Partition #0
Partition Size 4.01 GB (4,301,789,184 bytes)
Partition Starting Offset     32,256 bytes
Partition      Disk #140, Partition #1
Partition Size 6.18 GB (6,637,800,960 bytes)
Partition Starting Offset     4,301,821,440 bytes
Partition      Disk #140, Partition #2
Partition Size 3.15 GB (3,380,590,080 bytes)
Partition Starting Offset     10,939,622,400 bytes
Partition      Disk #140, Partition #3
Partition Size 106.29 GB (114,125,760,000 bytes)
Partition Starting Offset     14,320,212,480 bytes

Description    Unisys Intelligent Fibre Channel Fabric Disk Driver
Manufacturer   Unisys Corporation
Model   UNISYS  VirtualStorage  01.0
Bytes/Sector   512
Media Loaded   Yes
Media Type     Fixed hard disk
Partitions     4
SCSI Bus       0
SCSI Logical Unit      0
SCSI Port      0
SCSI Target ID 18
Sectors/Track  63
Size   119.62 GB (128,445,972,480 bytes)
Total Cylinders        15,616
Total Sectors  250,871,040
Total Tracks   3,982,080
Tracks/Cylinder        255
Partition      Disk #139, Partition #0
Partition Size 4.01 GB (4,301,789,184 bytes)
Partition Starting Offset     32,256 bytes
Partition      Disk #139, Partition #1
Partition Size 6.18 GB (6,637,800,960 bytes)
Partition Starting Offset     4,301,821,440 bytes
Partition      Disk #139, Partition #2
```

```
Partition Size 3.15 GB (3,380,590,080 bytes)
Partition Starting Offset     10,939,622,400 bytes
Partition      Disk #139, Partition #3
Partition Size 106.29 GB (114,125,760,000 bytes)
Partition Starting Offset     14,320,212,480 bytes

Description    Unisys Intelligent Fibre Channel Fabric Disk Driver
Manufacturer   Unisys Corporation
Model   UNISYS  VirtualStorage  01.0
Bytes/Sector   512
Media Loaded   Yes
Media Type     Fixed hard disk
Partitions     4
SCSI Bus       0
SCSI Logical Unit      0
SCSI Port      0
SCSI Target ID 19
Sectors/Track  63
Size   119.62 GB (128,445,972,480 bytes)
Total Cylinders        15,616
Total Sectors  250,871,040
Total Tracks   3,982,080
Tracks/Cylinder        255
Partition      Disk #138, Partition #0
Partition Size 4.01 GB (4,301,789,184 bytes)
Partition Starting Offset     32,256 bytes
Partition      Disk #138, Partition #1
Partition Size 6.18 GB (6,637,800,960 bytes)
Partition Starting Offset     4,301,821,440 bytes
Partition      Disk #138, Partition #2
Partition Size 3.15 GB (3,380,590,080 bytes)
Partition Starting Offset     10,939,622,400 bytes
Partition      Disk #138, Partition #3
Partition Size 106.29 GB (114,125,760,000 bytes)
Partition Starting Offset     14,320,212,480 bytes

Description    Unisys Intelligent Fibre Channel Fabric Disk Driver
Manufacturer   Unisys Corporation
Model   UNISYS  VirtualStorage  01.0
Bytes/Sector   512
Media Loaded   Yes
Media Type     Fixed hard disk
Partitions     4
SCSI Bus       0
SCSI Logical Unit      0
SCSI Port      0
SCSI Target ID 10
Sectors/Track  63
Size   119.62 GB (128,445,972,480 bytes)
Total Cylinders        15,616
Total Sectors  250,871,040
Total Tracks   3,982,080
Tracks/Cylinder        255
Partition      Disk #147, Partition #0
Partition Size 4.01 GB (4,301,789,184 bytes)
Partition Starting Offset     32,256 bytes
Partition      Disk #147, Partition #1
Partition Size 6.18 GB (6,637,800,960 bytes)
Partition Starting Offset     4,301,821,440 bytes
Partition      Disk #147, Partition #2
Partition Size 3.15 GB (3,380,590,080 bytes)
Partition Starting Offset     10,939,622,400 bytes
Partition      Disk #147, Partition #3
Partition Size 106.29 GB (114,125,760,000 bytes)
Partition Starting Offset     14,320,212,480 bytes

Description    Unisys Intelligent Fibre Channel Fabric Disk Driver
Manufacturer   Unisys Corporation
Model   UNISYS  VirtualStorage  01.0
Bytes/Sector   512
Media Loaded   Yes
Media Type     Fixed hard disk
Partitions     4
SCSI Bus       0
SCSI Logical Unit      0
SCSI Port      0
SCSI Target ID 11
Sectors/Track  63
Size   119.62 GB (128,445,972,480 bytes)
Total Cylinders        15,616
Total Sectors  250,871,040
Total Tracks   3,982,080
Tracks/Cylinder        255
Partition      Disk #146, Partition #0
Partition Size 4.01 GB (4,301,789,184 bytes)
Partition Starting Offset     32,256 bytes
Partition      Disk #146, Partition #1
Partition Size 6.18 GB (6,637,800,960 bytes)
Partition Starting Offset     4,301,821,440 bytes
Partition      Disk #146, Partition #2
Partition Size 3.15 GB (3,380,590,080 bytes)
Partition Starting Offset     10,939,622,400 bytes
Partition      Disk #146, Partition #3
Partition Size 106.29 GB (114,125,760,000 bytes)
Partition Starting Offset     14,320,212,480 bytes

Description    Unisys Intelligent Fibre Channel Fabric Disk Driver
Manufacturer   Unisys Corporation
Model   UNISYS  VirtualStorage  01.0
Bytes/Sector   512
Media Loaded   Yes
Media Type     Fixed hard disk
Partitions     4
SCSI Bus       0
SCSI Logical Unit      0
SCSI Port      0
SCSI Target ID 12
Sectors/Track  63
Size   119.62 GB (128,445,972,480 bytes)
Total Cylinders        15,616
Total Sectors  250,871,040
Total Tracks   3,982,080
Tracks/Cylinder        255
Partition      Disk #145, Partition #0
Partition Size 4.01 GB (4,301,789,184 bytes)
Partition Starting Offset     32,256 bytes
```

```
Partition      Disk #145, Partition #1
Partition Size 6.18 GB (6,637,800,960 bytes)
Partition Starting Offset     4,301,821,440 bytes
Partition      Disk #145, Partition #2
Partition Size 3.15 GB (3,380,590,080 bytes)
Partition Starting Offset     10,939,622,400 bytes
Partition      Disk #145, Partition #3
Partition Size 106.29 GB (114,125,760,000 bytes)
Partition Starting Offset     14,320,212,480 bytes

Description    Unisys Intelligent Fibre Channel Fabric Disk Driver
Manufacturer   Unisys Corporation
Model   UNISYS  VirtualStorage  01.0
Bytes/Sector   512
Media Loaded   Yes
Media Type     Fixed hard disk
Partitions     4
SCSI Bus       0
SCSI Logical Unit      0
SCSI Port      0
SCSI Target ID 13
Sectors/Track  63
Size   119.62 GB (128,445,972,480 bytes)
Total Cylinders        15,616
Total Sectors  250,871,040
Total Tracks   3,982,080
Tracks/Cylinder        255
Partition      Disk #144, Partition #0
Partition Size 4.01 GB (4,301,789,184 bytes)
Partition Starting Offset     32,256 bytes
Partition      Disk #144, Partition #1
Partition Size 6.18 GB (6,637,800,960 bytes)
Partition Starting Offset     4,301,821,440 bytes
Partition      Disk #144, Partition #2
Partition Size 3.15 GB (3,380,590,080 bytes)
Partition Starting Offset     10,939,622,400 bytes
Partition      Disk #144, Partition #3
Partition Size 106.29 GB (114,125,760,000 bytes)
Partition Starting Offset     14,320,212,480 bytes

Description    Unisys Intelligent Fibre Channel Fabric Disk Driver
Manufacturer   Unisys Corporation
Model   UNISYS  VirtualStorage  01.0
Bytes/Sector   512
Media Loaded   Yes
Media Type     Fixed hard disk
Partitions     4
SCSI Bus       0
SCSI Logical Unit      0
SCSI Port      0
SCSI Target ID 151
Sectors/Track  63
Size   119.62 GB (128,445,972,480 bytes)
Total Cylinders        15,616
Total Sectors  250,871,040
Total Tracks   3,982,080
Tracks/Cylinder        255
Partition      Disk #6, Partition #0
Partition Size 4.01 GB (4,301,789,184 bytes)
Partition Starting Offset     32,256 bytes
Partition      Disk #6, Partition #1
Partition Size 6.18 GB (6,637,800,960 bytes)
Partition Starting Offset     4,301,821,440 bytes
Partition      Disk #6, Partition #2
Partition Size 3.15 GB (3,380,590,080 bytes)
Partition Starting Offset     10,939,622,400 bytes
Partition      Disk #6, Partition #3
Partition Size 106.29 GB (114,125,760,000 bytes)
Partition Starting Offset     14,320,212,480 bytes

Description    Unisys Intelligent Fibre Channel Fabric Disk Driver
Manufacturer   Unisys Corporation
Model   UNISYS  VirtualStorage  01.0
Bytes/Sector   512
Media Loaded   Yes
Media Type     Fixed hard disk
Partitions     4
SCSI Bus       0
SCSI Logical Unit      0
SCSI Port      0
SCSI Target ID 152
Sectors/Track  63
Size   119.62 GB (128,445,972,480 bytes)
Total Cylinders        15,616
Total Sectors  250,871,040
Total Tracks   3,982,080
Tracks/Cylinder        255
Partition      Disk #5, Partition #0
Partition Size 4.01 GB (4,301,789,184 bytes)
Partition Starting Offset     32,256 bytes
Partition      Disk #5, Partition #1
Partition Size 6.18 GB (6,637,800,960 bytes)
Partition Starting Offset     4,301,821,440 bytes
Partition      Disk #5, Partition #2
Partition Size 3.15 GB (3,380,590,080 bytes)
Partition Starting Offset     10,939,622,400 bytes
Partition      Disk #5, Partition #3
Partition Size 106.29 GB (114,125,760,000 bytes)
Partition Starting Offset     14,320,212,480 bytes

Description    Unisys Intelligent Fibre Channel Fabric Disk Driver
Manufacturer   Unisys Corporation
Model   UNISYS  VirtualStorage  01.0
Bytes/Sector   512
Media Loaded   Yes
Media Type     Fixed hard disk
Partitions     4
SCSI Bus       0
SCSI Logical Unit      0
SCSI Port      0
SCSI Target ID 153
Sectors/Track  63
Size   119.62 GB (128,445,972,480 bytes)
Total Cylinders        15,616
Total Sectors  250,871,040
Total Tracks   3,982,080
```

```
Tracks/Cylinder        255
Partition      Disk #4, Partition #0
Partition Size 4.01 GB (4,301,789,184 bytes)
Partition Starting Offset     32,256 bytes
Partition      Disk #4, Partition #1
Partition Size 6.18 GB (6,637,800,960 bytes)
Partition Starting Offset     4,301,821,440 bytes
Partition      Disk #4, Partition #2
Partition Size 3.15 GB (3,380,590,080 bytes)
Partition Starting Offset     10,939,622,400 bytes
Partition      Disk #4, Partition #3
Partition Size 106.29 GB (114,125,760,000 bytes)
Partition Starting Offset     14,320,212,480 bytes

Description    Unisys Intelligent Fibre Channel Fabric Disk Driver
Manufacturer   Unisys Corporation
Model   UNISYS  VirtualStorage  01.0
Bytes/Sector   512
Media Loaded   Yes
Media Type     Fixed hard disk
Partitions     4
SCSI Bus       0
SCSI Logical Unit      0
SCSI Port      0
SCSI Target ID 154
Sectors/Track  63
Size   119.62 GB (128,445,972,480 bytes)
Total Cylinders        15,616
Total Sectors  250,871,040
Total Tracks   3,982,080
Tracks/Cylinder        255
Partition      Disk #3, Partition #0
Partition Size 4.01 GB (4,301,789,184 bytes)
Partition Starting Offset     32,256 bytes
Partition      Disk #3, Partition #1
Partition Size 6.18 GB (6,637,800,960 bytes)
Partition Starting Offset     4,301,821,440 bytes
Partition      Disk #3, Partition #2
Partition Size 3.15 GB (3,380,590,080 bytes)
Partition Starting Offset     10,939,622,400 bytes
Partition      Disk #3, Partition #3
Partition Size 106.29 GB (114,125,760,000 bytes)
Partition Starting Offset     14,320,212,480 bytes

Description    Unisys Intelligent Fibre Channel Fabric Disk Driver
Manufacturer   Unisys Corporation
Model   UNISYS  VirtualStorage  01.0
Bytes/Sector   512
Media Loaded   Yes
Media Type     Fixed hard disk
Partitions     4
SCSI Bus       0
SCSI Logical Unit      0
SCSI Port      0
SCSI Target ID 155
Sectors/Track  63
Size   119.62 GB (128,445,972,480 bytes)
Total Cylinders        15,616
Total Sectors  250,871,040
Total Tracks   3,982,080
Tracks/Cylinder        255
Partition      Disk #2, Partition #0
Partition Size 4.01 GB (4,301,789,184 bytes)
Partition Starting Offset     32,256 bytes
Partition      Disk #2, Partition #1
Partition Size 6.18 GB (6,637,800,960 bytes)
Partition Starting Offset     4,301,821,440 bytes
Partition      Disk #2, Partition #2
Partition Size 3.15 GB (3,380,590,080 bytes)
Partition Starting Offset     10,939,622,400 bytes
Partition      Disk #2, Partition #3
Partition Size 106.29 GB (114,125,760,000 bytes)
Partition Starting Offset     14,320,212,480 bytes

Description    Unisys Intelligent Fibre Channel Fabric Disk Driver
Manufacturer   Unisys Corporation
Model   UNISYS  VirtualStorage  01.0
Bytes/Sector   512
Media Loaded   Yes
Media Type     Fixed hard disk
Partitions     4
SCSI Bus       0
SCSI Logical Unit      0
SCSI Port      0
SCSI Target ID 156
Sectors/Track  63
Size   119.62 GB (128,445,972,480 bytes)
Total Cylinders        15,616
Total Sectors  250,871,040
Total Tracks   3,982,080
Tracks/Cylinder        255
Partition      Disk #1, Partition #0
Partition Size 4.01 GB (4,301,789,184 bytes)
Partition Starting Offset     32,256 bytes
Partition      Disk #1, Partition #1
Partition Size 6.18 GB (6,637,800,960 bytes)
Partition Starting Offset     4,301,821,440 bytes
Partition      Disk #1, Partition #2
Partition Size 3.15 GB (3,380,590,080 bytes)
Partition Starting Offset     10,939,622,400 bytes
Partition      Disk #1, Partition #3
Partition Size 106.29 GB (114,125,760,000 bytes)
Partition Starting Offset     14,320,212,480 bytes

Description    Unisys Intelligent Fibre Channel Fabric Disk Driver
Manufacturer   Unisys Corporation
Model   UNISYS  VirtualStorage  01.0
Bytes/Sector   512
Media Loaded   Yes
Media Type     Fixed hard disk
Partitions     4
SCSI Bus       0
SCSI Logical Unit      0
SCSI Port      0
SCSI Target ID 147
Sectors/Track  63
```

```
Size   119.62 GB (128,445,972,480 bytes)
Total Cylinders        15,616
Total Sectors  250,871,040
Total Tracks   3,982,080
Tracks/Cylinder        255
Partition      Disk #10, Partition #0
Partition Size 4.01 GB (4,301,789,184 bytes)
Partition Starting Offset     32,256 bytes
Partition      Disk #10, Partition #1
Partition Size 6.18 GB (6,637,800,960 bytes)
Partition Starting Offset     4,301,821,440 bytes
Partition      Disk #10, Partition #2
Partition Size 3.15 GB (3,380,590,080 bytes)
Partition Starting Offset     10,939,622,400 bytes
Partition      Disk #10, Partition #3
Partition Size 106.29 GB (114,125,760,000 bytes)
Partition Starting Offset     14,320,212,480 bytes

Description    Unisys Intelligent Fibre Channel Fabric Disk Driver
Manufacturer   Unisys Corporation
Model   UNISYS  VirtualStorage  01.0
Bytes/Sector   512
Media Loaded   Yes
Media Type     Fixed hard disk
Partitions     4
SCSI Bus       0
SCSI Logical Unit      0
SCSI Port      0
SCSI Target ID 148
Sectors/Track  63
Size   119.62 GB (128,445,972,480 bytes)
Total Cylinders        15,616
Total Sectors  250,871,040
Total Tracks   3,982,080
Tracks/Cylinder        255
Partition      Disk #9, Partition #0
Partition Size 4.01 GB (4,301,789,184 bytes)
Partition Starting Offset     32,256 bytes
Partition      Disk #9, Partition #1
Partition Size 6.18 GB (6,637,800,960 bytes)
Partition Starting Offset     4,301,821,440 bytes
Partition      Disk #9, Partition #2
Partition Size 3.15 GB (3,380,590,080 bytes)
Partition Starting Offset     10,939,622,400 bytes
Partition      Disk #9, Partition #3
Partition Size 106.29 GB (114,125,760,000 bytes)
Partition Starting Offset     14,320,212,480 bytes

Description    Unisys Intelligent Fibre Channel Fabric Disk Driver
Manufacturer   Unisys Corporation
Model   UNISYS  VirtualStorage  01.0
Bytes/Sector   512
Media Loaded   Yes
Media Type     Fixed hard disk
Partitions     4
SCSI Bus       0
SCSI Logical Unit      0
SCSI Port      0
SCSI Target ID 149
Sectors/Track  63
Size   119.62 GB (128,445,972,480 bytes)
Total Cylinders        15,616
Total Sectors  250,871,040
Total Tracks   3,982,080
Tracks/Cylinder        255
Partition      Disk #8, Partition #0
Partition Size 4.01 GB (4,301,789,184 bytes)
Partition Starting Offset     32,256 bytes
Partition      Disk #8, Partition #1
Partition Size 6.18 GB (6,637,800,960 bytes)
Partition Starting Offset     4,301,821,440 bytes
Partition      Disk #8, Partition #2
Partition Size 3.15 GB (3,380,590,080 bytes)
Partition Starting Offset     10,939,622,400 bytes
Partition      Disk #8, Partition #3
Partition Size 106.29 GB (114,125,760,000 bytes)
Partition Starting Offset     14,320,212,480 bytes

Description    Unisys Intelligent Fibre Channel Fabric Disk Driver
Manufacturer   Unisys Corporation
Model   UNISYS  VirtualStorage  01.0
Bytes/Sector   512
Media Loaded   Yes
Media Type     Fixed hard disk
Partitions     4
SCSI Bus       0
SCSI Logical Unit      0
SCSI Port      0
SCSI Target ID 150
Sectors/Track  63
Size   119.62 GB (128,445,972,480 bytes)
Total Cylinders        15,616
Total Sectors  250,871,040
Total Tracks   3,982,080
Tracks/Cylinder        255
Partition      Disk #7, Partition #0
Partition Size 4.01 GB (4,301,789,184 bytes)
Partition Starting Offset     32,256 bytes
Partition      Disk #7, Partition #1
Partition Size 6.18 GB (6,637,800,960 bytes)
Partition Starting Offset     4,301,821,440 bytes
Partition      Disk #7, Partition #2
Partition Size 3.15 GB (3,380,590,080 bytes)
Partition Starting Offset     10,939,622,400 bytes
Partition      Disk #7, Partition #3
Partition Size 106.29 GB (114,125,760,000 bytes)
Partition Starting Offset     14,320,212,480 bytes

Description    Unisys Intelligent Fibre Channel Fabric Disk Driver
Manufacturer   Unisys Corporation
Model   UNISYS  VirtualStorage  01.0
Bytes/Sector   512
Media Loaded   Yes
Media Type     Fixed hard disk
Partitions     4
SCSI Bus       0
```

```
SCSI Logical Unit      0
SCSI Port      0
SCSI Target ID 113
Sectors/Track  63
Size   119.62 GB (128,445,972,480 bytes)
Total Cylinders        15,616
Total Sectors  250,871,040
Total Tracks   3,982,080
Tracks/Cylinder        255
Partition      Disk #44, Partition #0
Partition Size 4.01 GB (4,301,789,184 bytes)
Partition Starting Offset     32,256 bytes
Partition      Disk #44, Partition #1
Partition Size 6.18 GB (6,637,800,960 bytes)
Partition Starting Offset     4,301,821,440 bytes
Partition      Disk #44, Partition #2
Partition Size 3.15 GB (3,380,590,080 bytes)
Partition Starting Offset     10,939,622,400 bytes
Partition      Disk #44, Partition #3
Partition Size 106.29 GB (114,125,760,000 bytes)
Partition Starting Offset     14,320,212,480 bytes

Description    Unisys Intelligent Fibre Channel Fabric Disk Driver
Manufacturer   Unisys Corporation
Model   UNISYS  VirtualStorage  01.0
Bytes/Sector   512
Media Loaded   Yes
Media Type     Fixed hard disk
Partitions     4
SCSI Bus       0
SCSI Logical Unit      0
SCSI Port      0
SCSI Target ID 114
Sectors/Track  63
Size   119.62 GB (128,445,972,480 bytes)
Total Cylinders        15,616
Total Sectors  250,871,040
Total Tracks   3,982,080
Tracks/Cylinder        255
Partition      Disk #43, Partition #0
Partition Size 4.01 GB (4,301,789,184 bytes)
Partition Starting Offset     32,256 bytes
Partition      Disk #43, Partition #1
Partition Size 6.18 GB (6,637,800,960 bytes)
Partition Starting Offset     4,301,821,440 bytes
Partition      Disk #43, Partition #2
Partition Size 3.15 GB (3,380,590,080 bytes)
Partition Starting Offset     10,939,622,400 bytes
Partition      Disk #43, Partition #3
Partition Size 106.29 GB (114,125,760,000 bytes)
Partition Starting Offset     14,320,212,480 bytes

Description    Unisys Intelligent Fibre Channel Fabric Disk Driver
Manufacturer   Unisys Corporation
Model   UNISYS  VirtualStorage  01.0
Bytes/Sector   512
Media Loaded   Yes
Media Type     Fixed hard disk
Partitions     4
SCSI Bus       0
SCSI Logical Unit      0
SCSI Port      0
SCSI Target ID 115
Sectors/Track  63
Size   119.62 GB (128,445,972,480 bytes)
Total Cylinders        15,616
Total Sectors  250,871,040
Total Tracks   3,982,080
Tracks/Cylinder        255
Partition      Disk #42, Partition #0
Partition Size 4.01 GB (4,301,789,184 bytes)
Partition Starting Offset     32,256 bytes
Partition      Disk #42, Partition #1
Partition Size 6.18 GB (6,637,800,960 bytes)
Partition Starting Offset     4,301,821,440 bytes
Partition      Disk #42, Partition #2
Partition Size 3.15 GB (3,380,590,080 bytes)
Partition Starting Offset     10,939,622,400 bytes
Partition      Disk #42, Partition #3
Partition Size 106.29 GB (114,125,760,000 bytes)
Partition Starting Offset     14,320,212,480 bytes

Description    Unisys Intelligent Fibre Channel Fabric Disk Driver
Manufacturer   Unisys Corporation
Model   UNISYS  VirtualStorage  01.0
Bytes/Sector   512
Media Loaded   Yes
Media Type     Fixed hard disk
Partitions     4
SCSI Bus       0
SCSI Logical Unit      0
SCSI Port      0
SCSI Target ID 116
Sectors/Track  63
Size   119.62 GB (128,445,972,480 bytes)
Total Cylinders        15,616
Total Sectors  250,871,040
Total Tracks   3,982,080
Tracks/Cylinder        255
Partition      Disk #41, Partition #0
Partition Size 4.01 GB (4,301,789,184 bytes)
Partition Starting Offset     32,256 bytes
Partition      Disk #41, Partition #1
Partition Size 6.18 GB (6,637,800,960 bytes)
Partition Starting Offset     4,301,821,440 bytes
Partition      Disk #41, Partition #2
Partition Size 3.15 GB (3,380,590,080 bytes)
Partition Starting Offset     10,939,622,400 bytes
Partition      Disk #41, Partition #3
Partition Size 106.29 GB (114,125,760,000 bytes)
Partition Starting Offset     14,320,212,480 bytes

Description    Unisys Intelligent Fibre Channel Fabric Disk Driver
Manufacturer   Unisys Corporation
Model   UNISYS  VirtualStorage  01.0
Bytes/Sector   512
```

```
Media Loaded   Yes
Media Type     Fixed hard disk
Partitions     4
SCSI Bus       0
SCSI Logical Unit      0
SCSI Port      0
SCSI Target ID 117
Sectors/Track  63
Size   119.62 GB (128,445,972,480 bytes)
Total Cylinders        15,616
Total Sectors  250,871,040
Total Tracks   3,982,080
Tracks/Cylinder        255
Partition      Disk #40, Partition #0
Partition Size 4.01 GB (4,301,789,184 bytes)
Partition Starting Offset     32,256 bytes
Partition      Disk #40, Partition #1
Partition Size 6.18 GB (6,637,800,960 bytes)
Partition Starting Offset     4,301,821,440 bytes
Partition      Disk #40, Partition #2
Partition Size 3.15 GB (3,380,590,080 bytes)
Partition Starting Offset     10,939,622,400 bytes
Partition      Disk #40, Partition #3
Partition Size 106.29 GB (114,125,760,000 bytes)
Partition Starting Offset     14,320,212,480 bytes

Description    Unisys Intelligent Fibre Channel Fabric Disk Driver
Manufacturer   Unisys Corporation
Model   UNISYS  VirtualStorage  01.0
Bytes/Sector   512
Media Loaded   Yes
Media Type     Fixed hard disk
Partitions     4
SCSI Bus       0
SCSI Logical Unit      0
SCSI Port      0
SCSI Target ID 118
Sectors/Track  63
Size   119.62 GB (128,445,972,480 bytes)
Total Cylinders        15,616
Total Sectors  250,871,040
Total Tracks   3,982,080
Tracks/Cylinder        255
Partition      Disk #39, Partition #0
Partition Size 4.01 GB (4,301,789,184 bytes)
Partition Starting Offset     32,256 bytes
Partition      Disk #39, Partition #1
Partition Size 6.18 GB (6,637,800,960 bytes)
Partition Starting Offset     4,301,821,440 bytes
Partition      Disk #39, Partition #2
Partition Size 3.15 GB (3,380,590,080 bytes)
Partition Starting Offset     10,939,622,400 bytes
Partition      Disk #39, Partition #3
Partition Size 106.29 GB (114,125,760,000 bytes)
Partition Starting Offset     14,320,212,480 bytes

Description    Unisys Intelligent Fibre Channel Fabric Disk Driver
Manufacturer   Unisys Corporation
Model   UNISYS  VirtualStorage  01.0
Bytes/Sector   512
Media Loaded   Yes
Media Type     Fixed hard disk
Partitions     4
SCSI Bus       0
SCSI Logical Unit      0
SCSI Port      0
SCSI Target ID 109
Sectors/Track  63
Size   119.62 GB (128,445,972,480 bytes)
Total Cylinders        15,616
Total Sectors  250,871,040
Total Tracks   3,982,080
Tracks/Cylinder        255
Partition      Disk #48, Partition #0
Partition Size 4.01 GB (4,301,789,184 bytes)
Partition Starting Offset     32,256 bytes
Partition      Disk #48, Partition #1
Partition Size 6.18 GB (6,637,800,960 bytes)
Partition Starting Offset     4,301,821,440 bytes
Partition      Disk #48, Partition #2
Partition Size 3.15 GB (3,380,590,080 bytes)
Partition Starting Offset     10,939,622,400 bytes
Partition      Disk #48, Partition #3
Partition Size 106.29 GB (114,125,760,000 bytes)
Partition Starting Offset     14,320,212,480 bytes

Description    Unisys Intelligent Fibre Channel Fabric Disk Driver
Manufacturer   Unisys Corporation
Model   UNISYS  VirtualStorage  01.0
Bytes/Sector   512
Media Loaded   Yes
Media Type     Fixed hard disk
Partitions     4
SCSI Bus       0
SCSI Logical Unit      0
SCSI Port      0
SCSI Target ID 110
Sectors/Track  63
Size   119.62 GB (128,445,972,480 bytes)
Total Cylinders        15,616
Total Sectors  250,871,040
Total Tracks   3,982,080
Tracks/Cylinder        255
Partition      Disk #47, Partition #0
Partition Size 4.01 GB (4,301,789,184 bytes)
Partition Starting Offset     32,256 bytes
Partition      Disk #47, Partition #1
Partition Size 6.18 GB (6,637,800,960 bytes)
Partition Starting Offset     4,301,821,440 bytes
Partition      Disk #47, Partition #2
Partition Size 3.15 GB (3,380,590,080 bytes)
Partition Starting Offset     10,939,622,400 bytes
Partition      Disk #47, Partition #3
Partition Size 106.29 GB (114,125,760,000 bytes)
Partition Starting Offset     14,320,212,480 bytes
```

```
Description    Unisys Intelligent Fibre Channel Fabric Disk Driver
Manufacturer   Unisys Corporation
Model   UNISYS  VirtualStorage  01.0
Bytes/Sector   512
Media Loaded   Yes
Media Type     Fixed hard disk
Partitions     4
SCSI Bus       0
SCSI Logical Unit      0
SCSI Port      0
SCSI Target ID 111
Sectors/Track  63
Size   119.62 GB (128,445,972,480 bytes)
Total Cylinders        15,616
Total Sectors  250,871,040
Total Tracks   3,982,080
Tracks/Cylinder        255
Partition      Disk #46, Partition #0
Partition Size 4.01 GB (4,301,789,184 bytes)
Partition Starting Offset     32,256 bytes
Partition      Disk #46, Partition #1
Partition Size 6.18 GB (6,637,800,960 bytes)
Partition Starting Offset     4,301,821,440 bytes
Partition      Disk #46, Partition #2
Partition Size 3.15 GB (3,380,590,080 bytes)
Partition Starting Offset     10,939,622,400 bytes
Partition      Disk #46, Partition #3
Partition Size 106.29 GB (114,125,760,000 bytes)
Partition Starting Offset     14,320,212,480 bytes

Description    Unisys Intelligent Fibre Channel Fabric Disk Driver
Manufacturer   Unisys Corporation
Model   UNISYS  VirtualStorage  01.0
Bytes/Sector   512
Media Loaded   Yes
Media Type     Fixed hard disk
Partitions     4
SCSI Bus       0
SCSI Logical Unit      0
SCSI Port      0
SCSI Target ID 112
Sectors/Track  63
Size   119.62 GB (128,445,972,480 bytes)
Total Cylinders        15,616
Total Sectors  250,871,040
Total Tracks   3,982,080
Tracks/Cylinder        255
Partition      Disk #45, Partition #0
Partition Size 4.01 GB (4,301,789,184 bytes)
Partition Starting Offset     32,256 bytes
Partition      Disk #45, Partition #1
Partition Size 6.18 GB (6,637,800,960 bytes)
Partition Starting Offset     4,301,821,440 bytes
Partition      Disk #45, Partition #2
Partition Size 3.15 GB (3,380,590,080 bytes)
Partition Starting Offset     10,939,622,400 bytes
Partition      Disk #45, Partition #3
Partition Size 106.29 GB (114,125,760,000 bytes)
Partition Starting Offset     14,320,212,480 bytes

Description    Unisys Intelligent Fibre Channel Fabric Disk Driver
Manufacturer   Unisys Corporation
Model   UNISYS  VirtualStorage  01.0
Bytes/Sector   512
Media Loaded   Yes
Media Type     Fixed hard disk
Partitions     4
SCSI Bus       0
SCSI Logical Unit      0
SCSI Port      0
SCSI Target ID 103
Sectors/Track  63
Size   119.62 GB (128,445,972,480 bytes)
Total Cylinders        15,616
Total Sectors  250,871,040
Total Tracks   3,982,080
Tracks/Cylinder        255
Partition      Disk #54, Partition #0
Partition Size 4.01 GB (4,301,789,184 bytes)
Partition Starting Offset     32,256 bytes
Partition      Disk #54, Partition #1
Partition Size 6.18 GB (6,637,800,960 bytes)
Partition Starting Offset     4,301,821,440 bytes
Partition      Disk #54, Partition #2
Partition Size 3.15 GB (3,380,590,080 bytes)
Partition Starting Offset     10,939,622,400 bytes
Partition      Disk #54, Partition #3
Partition Size 106.29 GB (114,125,760,000 bytes)
Partition Starting Offset     14,320,212,480 bytes

Description    Unisys Intelligent Fibre Channel Fabric Disk Driver
Manufacturer   Unisys Corporation
Model   UNISYS  VirtualStorage  01.0
Bytes/Sector   512
Media Loaded   Yes
Media Type     Fixed hard disk
Partitions     4
SCSI Bus       0
SCSI Logical Unit      0
SCSI Port      0
SCSI Target ID 104
Sectors/Track  63
Size   119.62 GB (128,445,972,480 bytes)
Total Cylinders        15,616
Total Sectors  250,871,040
Total Tracks   3,982,080
Tracks/Cylinder        255
Partition      Disk #53, Partition #0
Partition Size 4.01 GB (4,301,789,184 bytes)
Partition Starting Offset     32,256 bytes
Partition      Disk #53, Partition #1
Partition Size 6.18 GB (6,637,800,960 bytes)
Partition Starting Offset     4,301,821,440 bytes
Partition      Disk #53, Partition #2
Partition Size 3.15 GB (3,380,590,080 bytes)
Partition Starting Offset     10,939,622,400 bytes
```

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Partition      Disk #53, Partition #3
Partition Size 106.29 GB (114,125,760,000 bytes)
Partition Starting Offset     14,320,212,480 bytes

Description    Unisys Intelligent Fibre Channel Fabric Disk Driver
Manufacturer   Unisys Corporation
Model   UNISYS  VirtualStorage  01.0
Bytes/Sector   512
Media Loaded   Yes
Media Type     Fixed hard disk
Partitions     4
SCSI Bus       0
SCSI Logical Unit      0
SCSI Port      0
SCSI Target ID 105
Sectors/Track  63
Size   119.62 GB (128,445,972,480 bytes)
Total Cylinders        15,616
Total Sectors  250,871,040
Total Tracks   3,982,080
Tracks/Cylinder        255
Partition      Disk #52, Partition #0
Partition Size 4.01 GB (4,301,789,184 bytes)
Partition Starting Offset     32,256 bytes
Partition      Disk #52, Partition #1
Partition Size 6.18 GB (6,637,800,960 bytes)
Partition Starting Offset     4,301,821,440 bytes
Partition      Disk #52, Partition #2
Partition Size 3.15 GB (3,380,590,080 bytes)
Partition Starting Offset     10,939,622,400 bytes
Partition      Disk #52, Partition #3
Partition Size 106.29 GB (114,125,760,000 bytes)
Partition Starting Offset     14,320,212,480 bytes

Description    Unisys Intelligent Fibre Channel Fabric Disk Driver
Manufacturer   Unisys Corporation
Model   UNISYS  VirtualStorage  01.0
Bytes/Sector   512
Media Loaded   Yes
Media Type     Fixed hard disk
Partitions     4
SCSI Bus       0
SCSI Logical Unit      0
SCSI Port      0
SCSI Target ID 106
Sectors/Track  63
Size   119.62 GB (128,445,972,480 bytes)
Total Cylinders        15,616
Total Sectors  250,871,040
Total Tracks   3,982,080
Tracks/Cylinder        255
Partition      Disk #51, Partition #0
Partition Size 4.01 GB (4,301,789,184 bytes)
Partition Starting Offset     32,256 bytes
Partition      Disk #51, Partition #1
Partition Size 6.18 GB (6,637,800,960 bytes)
Partition Starting Offset     4,301,821,440 bytes
Partition      Disk #51, Partition #2
Partition Size 3.15 GB (3,380,590,080 bytes)
Partition Starting Offset     10,939,622,400 bytes
Partition      Disk #51, Partition #3
Partition Size 106.29 GB (114,125,760,000 bytes)
Partition Starting Offset     14,320,212,480 bytes

Description    Unisys Intelligent Fibre Channel Fabric Disk Driver
Manufacturer   Unisys Corporation
Model   UNISYS  VirtualStorage  01.0
Bytes/Sector   512
Media Loaded   Yes
Media Type     Fixed hard disk
Partitions     4
SCSI Bus       0
SCSI Logical Unit      0
SCSI Port      0
SCSI Target ID 107
Sectors/Track  63
Size   119.62 GB (128,445,972,480 bytes)
Total Cylinders        15,616
Total Sectors  250,871,040
Total Tracks   3,982,080
Tracks/Cylinder        255
Partition      Disk #50, Partition #0
Partition Size 4.01 GB (4,301,789,184 bytes)
Partition Starting Offset     32,256 bytes
Partition      Disk #50, Partition #1
Partition Size 6.18 GB (6,637,800,960 bytes)
Partition Starting Offset     4,301,821,440 bytes
Partition      Disk #50, Partition #2
Partition Size 3.15 GB (3,380,590,080 bytes)
Partition Starting Offset     10,939,622,400 bytes
Partition      Disk #50, Partition #3
Partition Size 106.29 GB (114,125,760,000 bytes)
Partition Starting Offset     14,320,212,480 bytes

Description    Unisys Intelligent Fibre Channel Fabric Disk Driver
Manufacturer   Unisys Corporation
Model   UNISYS  VirtualStorage  01.0
Bytes/Sector   512
Media Loaded   Yes
Media Type     Fixed hard disk
Partitions     4
SCSI Bus       0
SCSI Logical Unit      0
SCSI Port      0
SCSI Target ID 108
Sectors/Track  63
Size   119.62 GB (128,445,972,480 bytes)
Total Cylinders        15,616
Total Sectors  250,871,040
Total Tracks   3,982,080
Tracks/Cylinder        255
Partition      Disk #49, Partition #0
Partition Size 4.01 GB (4,301,789,184 bytes)
Partition Starting Offset     32,256 bytes
Partition      Disk #49, Partition #1
Partition Size 6.18 GB (6,637,800,960 bytes)
```

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Partition Starting Offset     4,301,821,440 bytes
Partition      Disk #49, Partition #2
Partition Size 3.15 GB (3,380,590,080 bytes)
Partition Starting Offset     10,939,622,400 bytes
Partition      Disk #49, Partition #3
Partition Size 106.29 GB (114,125,760,000 bytes)
Partition Starting Offset     14,320,212,480 bytes

Description    Unisys Intelligent Fibre Channel Fabric Disk Driver
Manufacturer   Unisys Corporation
Model   UNISYS  VirtualStorage  01.0
Bytes/Sector   512
Media Loaded   Yes
Media Type     Fixed hard disk
Partitions     4
SCSI Bus       0
SCSI Logical Unit      0
SCSI Port      0
SCSI Target ID 99
Sectors/Track  63
Size   119.62 GB (128,445,972,480 bytes)
Total Cylinders        15,616
Total Sectors  250,871,040
Total Tracks   3,982,080
Tracks/Cylinder        255
Partition      Disk #58, Partition #0
Partition Size 4.01 GB (4,301,789,184 bytes)
Partition Starting Offset     32,256 bytes
Partition      Disk #58, Partition #1
Partition Size 6.18 GB (6,637,800,960 bytes)
Partition Starting Offset     4,301,821,440 bytes
Partition      Disk #58, Partition #2
Partition Size 3.15 GB (3,380,590,080 bytes)
Partition Starting Offset     10,939,622,400 bytes
Partition      Disk #58, Partition #3
Partition Size 106.29 GB (114,125,760,000 bytes)
Partition Starting Offset     14,320,212,480 bytes

Description    Unisys Intelligent Fibre Channel Fabric Disk Driver
Manufacturer   Unisys Corporation
Model   UNISYS  VirtualStorage  01.0
Bytes/Sector   512
Media Loaded   Yes
Media Type     Fixed hard disk
Partitions     4
SCSI Bus       0
SCSI Logical Unit      0
SCSI Port      0
SCSI Target ID 100
Sectors/Track  63
Size   119.62 GB (128,445,972,480 bytes)
Total Cylinders        15,616
Total Sectors  250,871,040
Total Tracks   3,982,080
Tracks/Cylinder        255
Partition      Disk #57, Partition #0
Partition Size 4.01 GB (4,301,789,184 bytes)
Partition Starting Offset     32,256 bytes
Partition      Disk #57, Partition #1
Partition Size 6.18 GB (6,637,800,960 bytes)
Partition Starting Offset     4,301,821,440 bytes
Partition      Disk #57, Partition #2
Partition Size 3.15 GB (3,380,590,080 bytes)
Partition Starting Offset     10,939,622,400 bytes
Partition      Disk #57, Partition #3
Partition Size 106.29 GB (114,125,760,000 bytes)
Partition Starting Offset     14,320,212,480 bytes

Description    Unisys Intelligent Fibre Channel Fabric Disk Driver
Manufacturer   Unisys Corporation
Model   UNISYS  VirtualStorage  01.0
Bytes/Sector   512
Media Loaded   Yes
Media Type     Fixed hard disk
Partitions     4
SCSI Bus       0
SCSI Logical Unit      0
SCSI Port      0
SCSI Target ID 101
Sectors/Track  63
Size   119.62 GB (128,445,972,480 bytes)
Total Cylinders        15,616
Total Sectors  250,871,040
Total Tracks   3,982,080
Tracks/Cylinder        255
Partition      Disk #56, Partition #0
Partition Size 4.01 GB (4,301,789,184 bytes)
Partition Starting Offset     32,256 bytes
Partition      Disk #56, Partition #1
Partition Size 6.18 GB (6,637,800,960 bytes)
Partition Starting Offset     4,301,821,440 bytes
Partition      Disk #56, Partition #2
Partition Size 3.15 GB (3,380,590,080 bytes)
Partition Starting Offset     10,939,622,400 bytes
Partition      Disk #56, Partition #3
Partition Size 106.29 GB (114,125,760,000 bytes)
Partition Starting Offset     14,320,212,480 bytes

Description    Unisys Intelligent Fibre Channel Fabric Disk Driver
Manufacturer   Unisys Corporation
Model   UNISYS  VirtualStorage  01.0
Bytes/Sector   512
Media Loaded   Yes
Media Type     Fixed hard disk
Partitions     4
SCSI Bus       0
SCSI Logical Unit      0
SCSI Port      0
SCSI Target ID 102
Sectors/Track  63
Size   119.62 GB (128,445,972,480 bytes)
Total Cylinders        15,616
Total Sectors  250,871,040
Total Tracks   3,982,080
Tracks/Cylinder        255
Partition      Disk #55, Partition #0
```

```
Partition Size 4.01 GB (4,301,789,184 bytes)
Partition Starting Offset     32,256 bytes
Partition      Disk #55, Partition #1
Partition Size 6.18 GB (6,637,800,960 bytes)
Partition Starting Offset     4,301,821,440 bytes
Partition      Disk #55, Partition #2
Partition Size 3.15 GB (3,380,590,080 bytes)
Partition Starting Offset     10,939,622,400 bytes
Partition      Disk #55, Partition #3
Partition Size 106.29 GB (114,125,760,000 bytes)
Partition Starting Offset     14,320,212,480 bytes

Description    Unisys Intelligent Fibre Channel Fabric Disk Driver
Manufacturer   Unisys Corporation
Model   UNISYS  VirtualStorage  01.0
Bytes/Sector   512
Media Loaded   Yes
Media Type     Fixed hard disk
Partitions     4
SCSI Bus       0
SCSI Logical Unit      0
SCSI Port      0
SCSI Target ID 24
Sectors/Track  63
Size   119.62 GB (128,445,972,480 bytes)
Total Cylinders        15,616
Total Sectors  250,871,040
Total Tracks   3,982,080
Tracks/Cylinder        255
Partition      Disk #133, Partition #0
Partition Size 4.01 GB (4,301,789,184 bytes)
Partition Starting Offset     32,256 bytes
Partition      Disk #133, Partition #1
Partition Size 6.18 GB (6,637,800,960 bytes)
Partition Starting Offset     4,301,821,440 bytes
Partition      Disk #133, Partition #2
Partition Size 3.15 GB (3,380,590,080 bytes)
Partition Starting Offset     10,939,622,400 bytes
Partition      Disk #133, Partition #3
Partition Size 106.29 GB (114,125,760,000 bytes)
Partition Starting Offset     14,320,212,480 bytes

Description    Unisys Intelligent Fibre Channel Fabric Disk Driver
Manufacturer   Unisys Corporation
Model   UNISYS  VirtualStorage  01.0
Bytes/Sector   512
Media Loaded   Yes
Media Type     Fixed hard disk
Partitions     4
SCSI Bus       0
SCSI Logical Unit      0
SCSI Port      0
SCSI Target ID 25
Sectors/Track  63
Size   119.62 GB (128,445,972,480 bytes)
Total Cylinders        15,616
Total Sectors  250,871,040
Total Tracks   3,982,080
Tracks/Cylinder        255
Partition      Disk #132, Partition #0
Partition Size 4.01 GB (4,301,789,184 bytes)
Partition Starting Offset     32,256 bytes
Partition      Disk #132, Partition #1
Partition Size 6.18 GB (6,637,800,960 bytes)
Partition Starting Offset     4,301,821,440 bytes
Partition      Disk #132, Partition #2
Partition Size 3.15 GB (3,380,590,080 bytes)
Partition Starting Offset     10,939,622,400 bytes
Partition      Disk #132, Partition #3
Partition Size 106.29 GB (114,125,760,000 bytes)
Partition Starting Offset     14,320,212,480 bytes

Description    Unisys Intelligent Fibre Channel Fabric Disk Driver
Manufacturer   Unisys Corporation
Model   UNISYS  VirtualStorage  01.0
Bytes/Sector   512
Media Loaded   Yes
Media Type     Fixed hard disk
Partitions     4
SCSI Bus       0
SCSI Logical Unit      0
SCSI Port      0
SCSI Target ID 26
Sectors/Track  63
Size   119.62 GB (128,445,972,480 bytes)
Total Cylinders        15,616
Total Sectors  250,871,040
Total Tracks   3,982,080
Tracks/Cylinder        255
Partition      Disk #131, Partition #0
Partition Size 4.01 GB (4,301,789,184 bytes)
Partition Starting Offset     32,256 bytes
Partition      Disk #131, Partition #1
Partition Size 6.18 GB (6,637,800,960 bytes)
Partition Starting Offset     4,301,821,440 bytes
Partition      Disk #131, Partition #2
Partition Size 3.15 GB (3,380,590,080 bytes)
Partition Starting Offset     10,939,622,400 bytes
Partition      Disk #131, Partition #3
Partition Size 106.29 GB (114,125,760,000 bytes)
Partition Starting Offset     14,320,212,480 bytes

Description    Unisys Intelligent Fibre Channel Fabric Disk Driver
Manufacturer   Unisys Corporation
Model   UNISYS  VirtualStorage  01.0
Bytes/Sector   512
Media Loaded   Yes
Media Type     Fixed hard disk
Partitions     4
SCSI Bus       0
SCSI Logical Unit      0
SCSI Port      0
SCSI Target ID 27
Sectors/Track  63
Size   119.62 GB (128,445,972,480 bytes)
Total Cylinders        15,616
```

```
Total Sectors  250,871,040
Total Tracks   3,982,080
Tracks/Cylinder        255
Partition      Disk #130, Partition #0
Partition Size 4.01 GB (4,301,789,184 bytes)
Partition Starting Offset     32,256 bytes
Partition      Disk #130, Partition #1
Partition Size 6.18 GB (6,637,800,960 bytes)
Partition Starting Offset     4,301,821,440 bytes
Partition      Disk #130, Partition #2
Partition Size 3.15 GB (3,380,590,080 bytes)
Partition Starting Offset     10,939,622,400 bytes
Partition      Disk #130, Partition #3
Partition Size 106.29 GB (114,125,760,000 bytes)
Partition Starting Offset     14,320,212,480 bytes

Description    Unisys Intelligent Fibre Channel Fabric Disk Driver
Manufacturer   Unisys Corporation
Model   UNISYS  VirtualStorage  01.0
Bytes/Sector   512
Media Loaded   Yes
Media Type     Fixed hard disk
Partitions     4
SCSI Bus       0
SCSI Logical Unit      0
SCSI Port      0
SCSI Target ID 28
Sectors/Track  63
Size   119.62 GB (128,445,972,480 bytes)
Total Cylinders        15,616
Total Sectors  250,871,040
Total Tracks   3,982,080
Tracks/Cylinder        255
Partition      Disk #129, Partition #0
Partition Size 4.01 GB (4,301,789,184 bytes)
Partition Starting Offset     32,256 bytes
Partition      Disk #129, Partition #1
Partition Size 6.18 GB (6,637,800,960 bytes)
Partition Starting Offset     4,301,821,440 bytes
Partition      Disk #129, Partition #2
Partition Size 3.15 GB (3,380,590,080 bytes)
Partition Starting Offset     10,939,622,400 bytes
Partition      Disk #129, Partition #3
Partition Size 106.29 GB (114,125,760,000 bytes)
Partition Starting Offset     14,320,212,480 bytes

Description    Unisys Intelligent Fibre Channel Fabric Disk Driver
Manufacturer   Unisys Corporation
Model   UNISYS  VirtualStorage  01.0
Bytes/Sector   512
Media Loaded   Yes
Media Type     Fixed hard disk
Partitions     4
SCSI Bus       0
SCSI Logical Unit      0
SCSI Port      0
SCSI Target ID 29
Sectors/Track  63
Size   119.62 GB (128,445,972,480 bytes)
Total Cylinders        15,616
Total Sectors  250,871,040
Total Tracks   3,982,080
Tracks/Cylinder        255
Partition      Disk #128, Partition #0
Partition Size 4.01 GB (4,301,789,184 bytes)
Partition Starting Offset     32,256 bytes
Partition      Disk #128, Partition #1
Partition Size 6.18 GB (6,637,800,960 bytes)
Partition Starting Offset     4,301,821,440 bytes
Partition      Disk #128, Partition #2
Partition Size 3.15 GB (3,380,590,080 bytes)
Partition Starting Offset     10,939,622,400 bytes
Partition      Disk #128, Partition #3
Partition Size 106.29 GB (114,125,760,000 bytes)
Partition Starting Offset     14,320,212,480 bytes

Description    Unisys Intelligent Fibre Channel Fabric Disk Driver
Manufacturer   Unisys Corporation
Model   UNISYS  VirtualStorage  01.0
Bytes/Sector   512
Media Loaded   Yes
Media Type     Fixed hard disk
Partitions     4
SCSI Bus       0
SCSI Logical Unit      0
SCSI Port      0
SCSI Target ID 20
Sectors/Track  63
Size   119.62 GB (128,445,972,480 bytes)
Total Cylinders        15,616
Total Sectors  250,871,040
Total Tracks   3,982,080
Tracks/Cylinder        255
Partition      Disk #137, Partition #0
Partition Size 4.01 GB (4,301,789,184 bytes)
Partition Starting Offset     32,256 bytes
Partition      Disk #137, Partition #1
Partition Size 6.18 GB (6,637,800,960 bytes)
Partition Starting Offset     4,301,821,440 bytes
Partition      Disk #137, Partition #2
Partition Size 3.15 GB (3,380,590,080 bytes)
Partition Starting Offset     10,939,622,400 bytes
Partition      Disk #137, Partition #3
Partition Size 106.29 GB (114,125,760,000 bytes)
Partition Starting Offset     14,320,212,480 bytes

Description    Unisys Intelligent Fibre Channel Fabric Disk Driver
Manufacturer   Unisys Corporation
Model   UNISYS  VirtualStorage  01.0
Bytes/Sector   512
Media Loaded   Yes
Media Type     Fixed hard disk
Partitions     4
SCSI Bus       0
SCSI Logical Unit      0
SCSI Port      0
```

```
SCSI Target ID 21
Sectors/Track  63
Size   119.62 GB (128,445,972,480 bytes)
Total Cylinders        15,616
Total Sectors  250,871,040
Total Tracks   3,982,080
Tracks/Cylinder        255
Partition      Disk #136, Partition #0
Partition Size 4.01 GB (4,301,789,184 bytes)
Partition Starting Offset     32,256 bytes
Partition      Disk #136, Partition #1
Partition Size 6.18 GB (6,637,800,960 bytes)
Partition Starting Offset     4,301,821,440 bytes
Partition      Disk #136, Partition #2
Partition Size 3.15 GB (3,380,590,080 bytes)
Partition Starting Offset     10,939,622,400 bytes
Partition      Disk #136, Partition #3
Partition Size 106.29 GB (114,125,760,000 bytes)
Partition Starting Offset     14,320,212,480 bytes

Description    Unisys Intelligent Fibre Channel Fabric Disk Driver
Manufacturer   Unisys Corporation
Model   UNISYS  VirtualStorage  01.0
Bytes/Sector   512
Media Loaded   Yes
Media Type     Fixed hard disk
Partitions     4
SCSI Bus       0
SCSI Logical Unit      0
SCSI Port      0
SCSI Target ID 22
Sectors/Track  63
Size   119.62 GB (128,445,972,480 bytes)
Total Cylinders        15,616
Total Sectors  250,871,040
Total Tracks   3,982,080
Tracks/Cylinder        255
Partition      Disk #135, Partition #0
Partition Size 4.01 GB (4,301,789,184 bytes)
Partition Starting Offset     32,256 bytes
Partition      Disk #135, Partition #1
Partition Size 6.18 GB (6,637,800,960 bytes)
Partition Starting Offset     4,301,821,440 bytes
Partition      Disk #135, Partition #2
Partition Size 3.15 GB (3,380,590,080 bytes)
Partition Starting Offset     10,939,622,400 bytes
Partition      Disk #135, Partition #3
Partition Size 106.29 GB (114,125,760,000 bytes)
Partition Starting Offset     14,320,212,480 bytes

Description    Unisys Intelligent Fibre Channel Fabric Disk Driver
Manufacturer   Unisys Corporation
Model   UNISYS  VirtualStorage  01.0
Bytes/Sector   512
Media Loaded   Yes
Media Type     Fixed hard disk
Partitions     4
SCSI Bus       0
SCSI Logical Unit      0
SCSI Port      0
SCSI Target ID 23
Sectors/Track  63
Size   119.62 GB (128,445,972,480 bytes)
Total Cylinders        15,616
Total Sectors  250,871,040
Total Tracks   3,982,080
Tracks/Cylinder        255
Partition      Disk #134, Partition #0
Partition Size 4.01 GB (4,301,789,184 bytes)
Partition Starting Offset     32,256 bytes
Partition      Disk #134, Partition #1
Partition Size 6.18 GB (6,637,800,960 bytes)
Partition Starting Offset     4,301,821,440 bytes
Partition      Disk #134, Partition #2
Partition Size 3.15 GB (3,380,590,080 bytes)
Partition Starting Offset     10,939,622,400 bytes
Partition      Disk #134, Partition #3
Partition Size 106.29 GB (114,125,760,000 bytes)
Partition Starting Offset     14,320,212,480 bytes

Description    Unisys Intelligent Fibre Channel Fabric Disk Driver
Manufacturer   Unisys Corporation
Model   UNISYS  VirtualStorage  01.0
Bytes/Sector   512
Media Loaded   Yes
Media Type     Fixed hard disk
Partitions     4
SCSI Bus       0
SCSI Logical Unit      0
SCSI Port      0
SCSI Target ID 119
Sectors/Track  63
Size   119.62 GB (128,445,972,480 bytes)
Total Cylinders        15,616
Total Sectors  250,871,040
Total Tracks   3,982,080
Tracks/Cylinder        255
Partition      Disk #38, Partition #0
Partition Size 4.01 GB (4,301,789,184 bytes)
Partition Starting Offset     32,256 bytes
Partition      Disk #38, Partition #1
Partition Size 6.18 GB (6,637,800,960 bytes)
Partition Starting Offset     4,301,821,440 bytes
Partition      Disk #38, Partition #2
Partition Size 3.15 GB (3,380,590,080 bytes)
Partition Starting Offset     10,939,622,400 bytes
Partition      Disk #38, Partition #3
Partition Size 106.29 GB (114,125,760,000 bytes)
Partition Starting Offset     14,320,212,480 bytes

Description    Unisys Intelligent Fibre Channel Fabric Disk Driver
Manufacturer   Unisys Corporation
Model   UNISYS  VirtualStorage  01.0
Bytes/Sector   512
Media Loaded   Yes
Media Type     Fixed hard disk
```

```
Partitions     4
SCSI Bus       0
SCSI Logical Unit      0
SCSI Port      0
SCSI Target ID 120
Sectors/Track  63
Size   119.62 GB (128,445,972,480 bytes)
Total Cylinders        15,616
Total Sectors  250,871,040
Total Tracks   3,982,080
Tracks/Cylinder        255
Partition      Disk #37, Partition #0
Partition Size 4.01 GB (4,301,789,184 bytes)
Partition Starting Offset     32,256 bytes
Partition      Disk #37, Partition #1
Partition Size 6.18 GB (6,637,800,960 bytes)
Partition Starting Offset     4,301,821,440 bytes
Partition      Disk #37, Partition #2
Partition Size 3.15 GB (3,380,590,080 bytes)
Partition Starting Offset     10,939,622,400 bytes
Partition      Disk #37, Partition #3
Partition Size 106.29 GB (114,125,760,000 bytes)
Partition Starting Offset     14,320,212,480 bytes

Description    Unisys Intelligent Fibre Channel Fabric Disk Driver
Manufacturer   Unisys Corporation
Model   UNISYS  VirtualStorage  01.0
Bytes/Sector   512
Media Loaded   Yes
Media Type     Fixed hard disk
Partitions     4
SCSI Bus       0
SCSI Logical Unit      0
SCSI Port      0
SCSI Target ID 121
Sectors/Track  63
Size   119.62 GB (128,445,972,480 bytes)
Total Cylinders        15,616
Total Sectors  250,871,040
Total Tracks   3,982,080
Tracks/Cylinder        255
Partition      Disk #36, Partition #0
Partition Size 4.01 GB (4,301,789,184 bytes)
Partition Starting Offset     32,256 bytes
Partition      Disk #36, Partition #1
Partition Size 6.18 GB (6,637,800,960 bytes)
Partition Starting Offset     4,301,821,440 bytes
Partition      Disk #36, Partition #2
Partition Size 3.15 GB (3,380,590,080 bytes)
Partition Starting Offset     10,939,622,400 bytes
Partition      Disk #36, Partition #3
Partition Size 106.29 GB (114,125,760,000 bytes)
Partition Starting Offset     14,320,212,480 bytes

Description    Unisys Intelligent Fibre Channel Fabric Disk Driver
Manufacturer   Unisys Corporation
Model   UNISYS  VirtualStorage  01.0
Bytes/Sector   512
Media Loaded   Yes
Media Type     Fixed hard disk
Partitions     4
SCSI Bus       0
SCSI Logical Unit      0
SCSI Port      0
SCSI Target ID 122
Sectors/Track  63
Size   119.62 GB (128,445,972,480 bytes)
Total Cylinders        15,616
Total Sectors  250,871,040
Total Tracks   3,982,080
Tracks/Cylinder        255
Partition      Disk #35, Partition #0
Partition Size 4.01 GB (4,301,789,184 bytes)
Partition Starting Offset     32,256 bytes
Partition      Disk #35, Partition #1
Partition Size 6.18 GB (6,637,800,960 bytes)
Partition Starting Offset     4,301,821,440 bytes
Partition      Disk #35, Partition #2
Partition Size 3.15 GB (3,380,590,080 bytes)
Partition Starting Offset     10,939,622,400 bytes
Partition      Disk #35, Partition #3
Partition Size 106.29 GB (114,125,760,000 bytes)
Partition Starting Offset     14,320,212,480 bytes

Description    Unisys Intelligent Fibre Channel Fabric Disk Driver
Manufacturer   Unisys Corporation
Model   UNISYS  VirtualStorage  01.0
Bytes/Sector   512
Media Loaded   Yes
Media Type     Fixed hard disk
Partitions     4
SCSI Bus       0
SCSI Logical Unit      0
SCSI Port      0
SCSI Target ID 123
Sectors/Track  63
Size   119.62 GB (128,445,972,480 bytes)
Total Cylinders        15,616
Total Sectors  250,871,040
Total Tracks   3,982,080
Tracks/Cylinder        255
Partition      Disk #34, Partition #0
Partition Size 4.01 GB (4,301,789,184 bytes)
Partition Starting Offset     32,256 bytes
Partition      Disk #34, Partition #1
Partition Size 6.18 GB (6,637,800,960 bytes)
Partition Starting Offset     4,301,821,440 bytes
Partition      Disk #34, Partition #2
Partition Size 3.15 GB (3,380,590,080 bytes)
Partition Starting Offset     10,939,622,400 bytes
Partition      Disk #34, Partition #3
Partition Size 106.29 GB (114,125,760,000 bytes)
Partition Starting Offset     14,320,212,480 bytes

Description    Unisys Intelligent Fibre Channel Fabric Disk Driver
Manufacturer   Unisys Corporation
```

```
Model   UNISYS  VirtualStorage  01.0
Bytes/Sector   512
Media Loaded   Yes
Media Type     Fixed hard disk
Partitions     4
SCSI Bus       0
SCSI Logical Unit      0
SCSI Port      0
SCSI Target ID 124
Sectors/Track  63
Size   119.62 GB (128,445,972,480 bytes)
Total Cylinders        15,616
Total Sectors  250,871,040
Total Tracks   3,982,080
Tracks/Cylinder        255
Partition      Disk #33, Partition #0
Partition Size 4.01 GB (4,301,789,184 bytes)
Partition Starting Offset     32,256 bytes
Partition      Disk #33, Partition #1
Partition Size 6.18 GB (6,637,800,960 bytes)
Partition Starting Offset     4,301,821,440 bytes
Partition      Disk #33, Partition #2
Partition Size 3.15 GB (3,380,590,080 bytes)
Partition Starting Offset     10,939,622,400 bytes
Partition      Disk #33, Partition #3
Partition Size 106.29 GB (114,125,760,000 bytes)
Partition Starting Offset     14,320,212,480 bytes

Description    Unisys Intelligent Fibre Channel Fabric Disk Driver
Manufacturer   Unisys Corporation
Model   UNISYS  VirtualStorage  01.0
Bytes/Sector   512
Media Loaded   Yes
Media Type     Fixed hard disk
Partitions     4
SCSI Bus       0
SCSI Logical Unit      0
SCSI Port      0
SCSI Target ID 125
Sectors/Track  63
Size   119.62 GB (128,445,972,480 bytes)
Total Cylinders        15,616
Total Sectors  250,871,040
Total Tracks   3,982,080
Tracks/Cylinder        255
Partition      Disk #32, Partition #0
Partition Size 4.01 GB (4,301,789,184 bytes)
Partition Starting Offset     32,256 bytes
Partition      Disk #32, Partition #1
Partition Size 6.18 GB (6,637,800,960 bytes)
Partition Starting Offset     4,301,821,440 bytes
Partition      Disk #32, Partition #2
Partition Size 3.15 GB (3,380,590,080 bytes)
Partition Starting Offset     10,939,622,400 bytes
Partition      Disk #32, Partition #3
Partition Size 106.29 GB (114,125,760,000 bytes)
Partition Starting Offset     14,320,212,480 bytes

Description    Unisys Intelligent Fibre Channel Fabric Disk Driver
Manufacturer   Unisys Corporation
Model   UNISYS  VirtualStorage  01.0
Bytes/Sector   512
Media Loaded   Yes
Media Type     Fixed hard disk
Partitions     4
SCSI Bus       0
SCSI Logical Unit      0
SCSI Port      0
SCSI Target ID 126
Sectors/Track  63
Size   119.62 GB (128,445,972,480 bytes)
Total Cylinders        15,616
Total Sectors  250,871,040
Total Tracks   3,982,080
Tracks/Cylinder        255
Partition      Disk #31, Partition #0
Partition Size 4.01 GB (4,301,789,184 bytes)
Partition Starting Offset     32,256 bytes
Partition      Disk #31, Partition #1
Partition Size 6.18 GB (6,637,800,960 bytes)
Partition Starting Offset     4,301,821,440 bytes
Partition      Disk #31, Partition #2
Partition Size 3.15 GB (3,380,590,080 bytes)
Partition Starting Offset     10,939,622,400 bytes
Partition      Disk #31, Partition #3
Partition Size 106.29 GB (114,125,760,000 bytes)
Partition Starting Offset     14,320,212,480 bytes

Description    Unisys Intelligent Fibre Channel Fabric Disk Driver
Manufacturer   Unisys Corporation
Model   UNISYS  VirtualStorage  01.0
Bytes/Sector   512
Media Loaded   Yes
Media Type     Fixed hard disk
Partitions     4
SCSI Bus       0
SCSI Logical Unit      0
SCSI Port      0
SCSI Target ID 141
Sectors/Track  63
Size   119.62 GB (128,445,972,480 bytes)
Total Cylinders        15,616
Total Sectors  250,871,040
Total Tracks   3,982,080
Tracks/Cylinder        255
Partition      Disk #16, Partition #0
Partition Size 4.01 GB (4,301,789,184 bytes)
Partition Starting Offset     32,256 bytes
Partition      Disk #16, Partition #1
Partition Size 6.18 GB (6,637,800,960 bytes)
Partition Starting Offset     4,301,821,440 bytes
Partition      Disk #16, Partition #2
Partition Size 3.15 GB (3,380,590,080 bytes)
Partition Starting Offset     10,939,622,400 bytes
Partition      Disk #16, Partition #3
Partition Size 106.29 GB (114,125,760,000 bytes)
```

```
Partition Starting Offset     14,320,212,480 bytes

Description    Unisys Intelligent Fibre Channel Fabric Disk Driver
Manufacturer   Unisys Corporation
Model   UNISYS  VirtualStorage  01.0
Bytes/Sector   512
Media Loaded   Yes
Media Type     Fixed hard disk
Partitions     4
SCSI Bus       0
SCSI Logical Unit      0
SCSI Port      0
SCSI Target ID 142
Sectors/Track  63
Size   119.62 GB (128,445,972,480 bytes)
Total Cylinders        15,616
Total Sectors  250,871,040
Total Tracks   3,982,080
Tracks/Cylinder        255
Partition      Disk #15, Partition #0
Partition Size 4.01 GB (4,301,789,184 bytes)
Partition Starting Offset     32,256 bytes
Partition      Disk #15, Partition #1
Partition Size 6.18 GB (6,637,800,960 bytes)
Partition Starting Offset     4,301,821,440 bytes
Partition      Disk #15, Partition #2
Partition Size 3.15 GB (3,380,590,080 bytes)
Partition Starting Offset     10,939,622,400 bytes
Partition      Disk #15, Partition #3
Partition Size 106.29 GB (114,125,760,000 bytes)
Partition Starting Offset     14,320,212,480 bytes

Description    Unisys Intelligent Fibre Channel Fabric Disk Driver
Manufacturer   Unisys Corporation
Model   UNISYS  VirtualStorage  01.0
Bytes/Sector   512
Media Loaded   Yes
Media Type     Fixed hard disk
Partitions     4
SCSI Bus       0
SCSI Logical Unit      0
SCSI Port      0
SCSI Target ID 143
Sectors/Track  63
Size   119.62 GB (128,445,972,480 bytes)
Total Cylinders        15,616
Total Sectors  250,871,040
Total Tracks   3,982,080
Tracks/Cylinder        255
Partition      Disk #14, Partition #0
Partition Size 4.01 GB (4,301,789,184 bytes)
Partition Starting Offset     32,256 bytes
Partition      Disk #14, Partition #1
Partition Size 6.18 GB (6,637,800,960 bytes)
Partition Starting Offset     4,301,821,440 bytes
Partition      Disk #14, Partition #2
Partition Size 3.15 GB (3,380,590,080 bytes)
Partition Starting Offset     10,939,622,400 bytes
Partition      Disk #14, Partition #3
Partition Size 106.29 GB (114,125,760,000 bytes)
Partition Starting Offset     14,320,212,480 bytes

Description    Unisys Intelligent Fibre Channel Fabric Disk Driver
Manufacturer   Unisys Corporation
Model   UNISYS  VirtualStorage  01.0
Bytes/Sector   512
Media Loaded   Yes
Media Type     Fixed hard disk
Partitions     4
SCSI Bus       0
SCSI Logical Unit      0
SCSI Port      0
SCSI Target ID 144
Sectors/Track  63
Size   119.62 GB (128,445,972,480 bytes)
Total Cylinders        15,616
Total Sectors  250,871,040
Total Tracks   3,982,080
Tracks/Cylinder        255
Partition      Disk #13, Partition #0
Partition Size 4.01 GB (4,301,789,184 bytes)
Partition Starting Offset     32,256 bytes
Partition      Disk #13, Partition #1
Partition Size 6.18 GB (6,637,800,960 bytes)
Partition Starting Offset     4,301,821,440 bytes
Partition      Disk #13, Partition #2
Partition Size 3.15 GB (3,380,590,080 bytes)
Partition Starting Offset     10,939,622,400 bytes
Partition      Disk #13, Partition #3
Partition Size 106.29 GB (114,125,760,000 bytes)
Partition Starting Offset     14,320,212,480 bytes

Description    Unisys Intelligent Fibre Channel Fabric Disk Driver
Manufacturer   Unisys Corporation
Model   UNISYS  VirtualStorage  01.0
Bytes/Sector   512
Media Loaded   Yes
Media Type     Fixed hard disk
Partitions     4
SCSI Bus       0
SCSI Logical Unit      0
SCSI Port      0
SCSI Target ID 145
Sectors/Track  63
Size   119.62 GB (128,445,972,480 bytes)
Total Cylinders        15,616
Total Sectors  250,871,040
Total Tracks   3,982,080
Tracks/Cylinder        255
Partition      Disk #12, Partition #0
Partition Size 4.01 GB (4,301,789,184 bytes)
Partition Starting Offset     32,256 bytes
Partition      Disk #12, Partition #1
Partition Size 6.18 GB (6,637,800,960 bytes)
Partition Starting Offset     4,301,821,440 bytes
Partition      Disk #12, Partition #2
```

```
Partition Size 3.15 GB (3,380,590,080 bytes)
Partition Starting Offset     10,939,622,400 bytes
Partition      Disk #12, Partition #3
Partition Size 106.29 GB (114,125,760,000 bytes)
Partition Starting Offset     14,320,212,480 bytes

Description    Unisys Intelligent Fibre Channel Fabric Disk Driver
Manufacturer   Unisys Corporation
Model   UNISYS  VirtualStorage  01.0
Bytes/Sector   512
Media Loaded   Yes
Media Type     Fixed hard disk
Partitions     4
SCSI Bus       0
SCSI Logical Unit      0
SCSI Port      0
SCSI Target ID 146
Sectors/Track  63
Size   119.62 GB (128,445,972,480 bytes)
Total Cylinders        15,616
Total Sectors  250,871,040
Total Tracks   3,982,080
Tracks/Cylinder        255
Partition      Disk #11, Partition #0
Partition Size 4.01 GB (4,301,789,184 bytes)
Partition Starting Offset     32,256 bytes
Partition      Disk #11, Partition #1
Partition Size 6.18 GB (6,637,800,960 bytes)
Partition Starting Offset     4,301,821,440 bytes
Partition      Disk #11, Partition #2
Partition Size 3.15 GB (3,380,590,080 bytes)
Partition Starting Offset     10,939,622,400 bytes
Partition      Disk #11, Partition #3
Partition Size 106.29 GB (114,125,760,000 bytes)
Partition Starting Offset     14,320,212,480 bytes

Description    Unisys Intelligent Fibre Channel Fabric Disk Driver
Manufacturer   Unisys Corporation
Model   UNISYS  VirtualStorage  01.0
Bytes/Sector   512
Media Loaded   Yes
Media Type     Fixed hard disk
Partitions     4
SCSI Bus       0
SCSI Logical Unit      0
SCSI Port      0
SCSI Target ID 137
Sectors/Track  63
Size   119.62 GB (128,445,972,480 bytes)
Total Cylinders        15,616
Total Sectors  250,871,040
Total Tracks   3,982,080
Tracks/Cylinder        255
Partition      Disk #20, Partition #0
Partition Size 4.01 GB (4,301,789,184 bytes)
Partition Starting Offset     32,256 bytes
Partition      Disk #20, Partition #1
Partition Size 6.18 GB (6,637,800,960 bytes)
Partition Starting Offset     4,301,821,440 bytes
Partition      Disk #20, Partition #2
Partition Size 3.15 GB (3,380,590,080 bytes)
Partition Starting Offset     10,939,622,400 bytes
Partition      Disk #20, Partition #3
Partition Size 106.29 GB (114,125,760,000 bytes)
Partition Starting Offset     14,320,212,480 bytes

Description    Unisys Intelligent Fibre Channel Fabric Disk Driver
Manufacturer   Unisys Corporation
Model   UNISYS  VirtualStorage  01.0
Bytes/Sector   512
Media Loaded   Yes
Media Type     Fixed hard disk
Partitions     4
SCSI Bus       0
SCSI Logical Unit      0
SCSI Port      0
SCSI Target ID 138
Sectors/Track  63
Size   119.62 GB (128,445,972,480 bytes)
Total Cylinders        15,616
Total Sectors  250,871,040
Total Tracks   3,982,080
Tracks/Cylinder        255
Partition      Disk #19, Partition #0
Partition Size 4.01 GB (4,301,789,184 bytes)
Partition Starting Offset     32,256 bytes
Partition      Disk #19, Partition #1
Partition Size 6.18 GB (6,637,800,960 bytes)
Partition Starting Offset     4,301,821,440 bytes
Partition      Disk #19, Partition #2
Partition Size 3.15 GB (3,380,590,080 bytes)
Partition Starting Offset     10,939,622,400 bytes
Partition      Disk #19, Partition #3
Partition Size 106.29 GB (114,125,760,000 bytes)
Partition Starting Offset     14,320,212,480 bytes

Description    Unisys Intelligent Fibre Channel Fabric Disk Driver
Manufacturer   Unisys Corporation
Model   UNISYS  VirtualStorage  01.0
Bytes/Sector   512
Media Loaded   Yes
Media Type     Fixed hard disk
Partitions     4
SCSI Bus       0
SCSI Logical Unit      0
SCSI Port      0
SCSI Target ID 139
Sectors/Track  63
Size   119.62 GB (128,445,972,480 bytes)
Total Cylinders        15,616
Total Sectors  250,871,040
Total Tracks   3,982,080
Tracks/Cylinder        255
Partition      Disk #18, Partition #0
Partition Size 4.01 GB (4,301,789,184 bytes)
Partition Starting Offset     32,256 bytes
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```
Partition      Disk #18, Partition #1
Partition Size 6.18 GB (6,637,800,960 bytes)
Partition Starting Offset     4,301,821,440 bytes
Partition      Disk #18, Partition #2
Partition Size 3.15 GB (3,380,590,080 bytes)
Partition Starting Offset     10,939,622,400 bytes
Partition      Disk #18, Partition #3
Partition Size 106.29 GB (114,125,760,000 bytes)
Partition Starting Offset     14,320,212,480 bytes

Description    Unisys Intelligent Fibre Channel Fabric Disk Driver
Manufacturer   Unisys Corporation
Model   UNISYS  VirtualStorage  01.0
Bytes/Sector   512
Media Loaded   Yes
Media Type     Fixed hard disk
Partitions     4
SCSI Bus       0
SCSI Logical Unit      0
SCSI Port      0
SCSI Target ID 140
Sectors/Track  63
Size   119.62 GB (128,445,972,480 bytes)
Total Cylinders        15,616
Total Sectors  250,871,040
Total Tracks   3,982,080
Tracks/Cylinder        255
Partition      Disk #17, Partition #0
Partition Size 4.01 GB (4,301,789,184 bytes)
Partition Starting Offset     32,256 bytes
Partition      Disk #17, Partition #1
Partition Size 6.18 GB (6,637,800,960 bytes)
Partition Starting Offset     4,301,821,440 bytes
Partition      Disk #17, Partition #2
Partition Size 3.15 GB (3,380,590,080 bytes)
Partition Starting Offset     10,939,622,400 bytes
Partition      Disk #17, Partition #3
Partition Size 106.29 GB (114,125,760,000 bytes)
Partition Starting Offset     14,320,212,480 bytes

Description    Unisys Intelligent Fibre Channel Fabric Disk Driver
Manufacturer   Unisys Corporation
Model   UNISYS  VirtualStorage  01.0
Bytes/Sector   512
Media Loaded   Yes
Media Type     Fixed hard disk
Partitions     4
SCSI Bus       0
SCSI Logical Unit      0
SCSI Port      0
SCSI Target ID 85
Sectors/Track  63
Size   119.62 GB (128,445,972,480 bytes)
Total Cylinders        15,616
Total Sectors  250,871,040
Total Tracks   3,982,080
Tracks/Cylinder        255
Partition      Disk #72, Partition #0
Partition Size 4.01 GB (4,301,789,184 bytes)
Partition Starting Offset     32,256 bytes
Partition      Disk #72, Partition #1
Partition Size 6.18 GB (6,637,800,960 bytes)
Partition Starting Offset     4,301,821,440 bytes
Partition      Disk #72, Partition #2
Partition Size 3.15 GB (3,380,590,080 bytes)
Partition Starting Offset     10,939,622,400 bytes
Partition      Disk #72, Partition #3
Partition Size 106.29 GB (114,125,760,000 bytes)
Partition Starting Offset     14,320,212,480 bytes

Description    Unisys Intelligent Fibre Channel Fabric Disk Driver
Manufacturer   Unisys Corporation
Model   UNISYS  VirtualStorage  01.0
Bytes/Sector   512
Media Loaded   Yes
Media Type     Fixed hard disk
Partitions     4
SCSI Bus       0
SCSI Logical Unit      0
SCSI Port      0
SCSI Target ID 86
Sectors/Track  63
Size   119.62 GB (128,445,972,480 bytes)
Total Cylinders        15,616
Total Sectors  250,871,040
Total Tracks   3,982,080
Tracks/Cylinder        255
Partition      Disk #71, Partition #0
Partition Size 4.01 GB (4,301,789,184 bytes)
Partition Starting Offset     32,256 bytes
Partition      Disk #71, Partition #1
Partition Size 6.18 GB (6,637,800,960 bytes)
Partition Starting Offset     4,301,821,440 bytes
Partition      Disk #71, Partition #2
Partition Size 3.15 GB (3,380,590,080 bytes)
Partition Starting Offset     10,939,622,400 bytes
Partition      Disk #71, Partition #3
Partition Size 106.29 GB (114,125,760,000 bytes)
Partition Starting Offset     14,320,212,480 bytes

Description    Unisys Intelligent Fibre Channel Fabric Disk Driver
Manufacturer   Unisys Corporation
Model   UNISYS  VirtualStorage  01.0
Bytes/Sector   512
Media Loaded   Yes
Media Type     Fixed hard disk
Partitions     4
SCSI Bus       0
SCSI Logical Unit      0
SCSI Port      0
SCSI Target ID 87
Sectors/Track  63
Size   119.62 GB (128,445,972,480 bytes)
Total Cylinders        15,616
Total Sectors  250,871,040
Total Tracks   3,982,080
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Tracks/Cylinder        255
Partition      Disk #70, Partition #0
Partition Size 4.01 GB (4,301,789,184 bytes)
Partition Starting Offset     32,256 bytes
Partition      Disk #70, Partition #1
Partition Size 6.18 GB (6,637,800,960 bytes)
Partition Starting Offset     4,301,821,440 bytes
Partition      Disk #70, Partition #2
Partition Size 3.15 GB (3,380,590,080 bytes)
Partition Starting Offset     10,939,622,400 bytes
Partition      Disk #70, Partition #3
Partition Size 106.29 GB (114,125,760,000 bytes)
Partition Starting Offset     14,320,212,480 bytes

Description    Unisys Intelligent Fibre Channel Fabric Disk Driver
Manufacturer   Unisys Corporation
Model   UNISYS  VirtualStorage  01.0
Bytes/Sector   512
Media Loaded   Yes
Media Type     Fixed hard disk
Partitions     4
SCSI Bus       0
SCSI Logical Unit      0
SCSI Port      0
SCSI Target ID 88
Sectors/Track  63
Size   119.62 GB (128,445,972,480 bytes)
Total Cylinders        15,616
Total Sectors  250,871,040
Total Tracks   3,982,080
Tracks/Cylinder        255
Partition      Disk #69, Partition #0
Partition Size 4.01 GB (4,301,789,184 bytes)
Partition Starting Offset     32,256 bytes
Partition      Disk #69, Partition #1
Partition Size 6.18 GB (6,637,800,960 bytes)
Partition Starting Offset     4,301,821,440 bytes
Partition      Disk #69, Partition #2
Partition Size 3.15 GB (3,380,590,080 bytes)
Partition Starting Offset     10,939,622,400 bytes
Partition      Disk #69, Partition #3
Partition Size 106.29 GB (114,125,760,000 bytes)
Partition Starting Offset     14,320,212,480 bytes

Description    Unisys Intelligent Fibre Channel Fabric Disk Driver
Manufacturer   Unisys Corporation
Model   UNISYS  VirtualStorage  01.0
Bytes/Sector   512
Media Loaded   Yes
Media Type     Fixed hard disk
Partitions     4
SCSI Bus       0
SCSI Logical Unit      0
SCSI Port      0
SCSI Target ID 89
Sectors/Track  63
Size   119.62 GB (128,445,972,480 bytes)
Total Cylinders        15,616
Total Sectors  250,871,040
Total Tracks   3,982,080
Tracks/Cylinder        255
Partition      Disk #68, Partition #0
Partition Size 4.01 GB (4,301,789,184 bytes)
Partition Starting Offset     32,256 bytes
Partition      Disk #68, Partition #1
Partition Size 6.18 GB (6,637,800,960 bytes)
Partition Starting Offset     4,301,821,440 bytes
Partition      Disk #68, Partition #2
Partition Size 3.15 GB (3,380,590,080 bytes)
Partition Starting Offset     10,939,622,400 bytes
Partition      Disk #68, Partition #3
Partition Size 106.29 GB (114,125,760,000 bytes)
Partition Starting Offset     14,320,212,480 bytes

Description    Unisys Intelligent Fibre Channel Fabric Disk Driver
Manufacturer   Unisys Corporation
Model   UNISYS  VirtualStorage  01.0
Bytes/Sector   512
Media Loaded   Yes
Media Type     Fixed hard disk
Partitions     4
SCSI Bus       0
SCSI Logical Unit      0
SCSI Port      0
SCSI Target ID 90
Sectors/Track  63
Size   119.62 GB (128,445,972,480 bytes)
Total Cylinders        15,616
Total Sectors  250,871,040
Total Tracks   3,982,080
Tracks/Cylinder        255
Partition      Disk #67, Partition #0
Partition Size 4.01 GB (4,301,789,184 bytes)
Partition Starting Offset     32,256 bytes
Partition      Disk #67, Partition #1
Partition Size 6.18 GB (6,637,800,960 bytes)
Partition Starting Offset     4,301,821,440 bytes
Partition      Disk #67, Partition #2
Partition Size 3.15 GB (3,380,590,080 bytes)
Partition Starting Offset     10,939,622,400 bytes
Partition      Disk #67, Partition #3
Partition Size 106.29 GB (114,125,760,000 bytes)
Partition Starting Offset     14,320,212,480 bytes

Description    Unisys Intelligent Fibre Channel Fabric Disk Driver
Manufacturer   Unisys Corporation
Model   UNISYS  VirtualStorage  01.0
Bytes/Sector   512
Media Loaded   Yes
Media Type     Fixed hard disk
Partitions     4
SCSI Bus       0
SCSI Logical Unit      0
SCSI Port      0
SCSI Target ID 81
Sectors/Track  63
```

```
Size   119.62 GB (128,445,972,480 bytes)
Total Cylinders        15,616
Total Sectors  250,871,040
Total Tracks   3,982,080
Tracks/Cylinder        255
Partition      Disk #76, Partition #0
Partition Size 4.01 GB (4,301,789,184 bytes)
Partition Starting Offset     32,256 bytes
Partition      Disk #76, Partition #1
Partition Size 6.18 GB (6,637,800,960 bytes)
Partition Starting Offset     4,301,821,440 bytes
Partition      Disk #76, Partition #2
Partition Size 3.15 GB (3,380,590,080 bytes)
Partition Starting Offset     10,939,622,400 bytes
Partition      Disk #76, Partition #3
Partition Size 106.29 GB (114,125,760,000 bytes)
Partition Starting Offset     14,320,212,480 bytes

Description    Unisys Intelligent Fibre Channel Fabric Disk Driver
Manufacturer   Unisys Corporation
Model   UNISYS  VirtualStorage  01.0
Bytes/Sector   512
Media Loaded   Yes
Media Type     Fixed hard disk
Partitions     4
SCSI Bus       0
SCSI Logical Unit      0
SCSI Port      0
SCSI Target ID 82
Sectors/Track  63
Size   119.62 GB (128,445,972,480 bytes)
Total Cylinders        15,616
Total Sectors  250,871,040
Total Tracks   3,982,080
Tracks/Cylinder        255
Partition      Disk #75, Partition #0
Partition Size 4.01 GB (4,301,789,184 bytes)
Partition Starting Offset     32,256 bytes
Partition      Disk #75, Partition #1
Partition Size 6.18 GB (6,637,800,960 bytes)
Partition Starting Offset     4,301,821,440 bytes
Partition      Disk #75, Partition #2
Partition Size 3.15 GB (3,380,590,080 bytes)
Partition Starting Offset     10,939,622,400 bytes
Partition      Disk #75, Partition #3
Partition Size 106.29 GB (114,125,760,000 bytes)
Partition Starting Offset     14,320,212,480 bytes

Description    Unisys Intelligent Fibre Channel Fabric Disk Driver
Manufacturer   Unisys Corporation
Model   UNISYS  VirtualStorage  01.0
Bytes/Sector   512
Media Loaded   Yes
Media Type     Fixed hard disk
Partitions     4
SCSI Bus       0
SCSI Logical Unit      0
SCSI Port      0
SCSI Target ID 83
Sectors/Track  63
Size   119.62 GB (128,445,972,480 bytes)
Total Cylinders        15,616
Total Sectors  250,871,040
Total Tracks   3,982,080
Tracks/Cylinder        255
Partition      Disk #74, Partition #0
Partition Size 4.01 GB (4,301,789,184 bytes)
Partition Starting Offset     32,256 bytes
Partition      Disk #74, Partition #1
Partition Size 6.18 GB (6,637,800,960 bytes)
Partition Starting Offset     4,301,821,440 bytes
Partition      Disk #74, Partition #2
Partition Size 3.15 GB (3,380,590,080 bytes)
Partition Starting Offset     10,939,622,400 bytes
Partition      Disk #74, Partition #3
Partition Size 106.29 GB (114,125,760,000 bytes)
Partition Starting Offset     14,320,212,480 bytes

Description    Unisys Intelligent Fibre Channel Fabric Disk Driver
Manufacturer   Unisys Corporation
Model   UNISYS  VirtualStorage  01.0
Bytes/Sector   512
Media Loaded   Yes
Media Type     Fixed hard disk
Partitions     4
SCSI Bus       0
SCSI Logical Unit      0
SCSI Port      0
SCSI Target ID 84
Sectors/Track  63
Size   119.62 GB (128,445,972,480 bytes)
Total Cylinders        15,616
Total Sectors  250,871,040
Total Tracks   3,982,080
Tracks/Cylinder        255
Partition      Disk #73, Partition #0
Partition Size 4.01 GB (4,301,789,184 bytes)
Partition Starting Offset     32,256 bytes
Partition      Disk #73, Partition #1
Partition Size 6.18 GB (6,637,800,960 bytes)
Partition Starting Offset     4,301,821,440 bytes
Partition      Disk #73, Partition #2
Partition Size 3.15 GB (3,380,590,080 bytes)
Partition Starting Offset     10,939,622,400 bytes
Partition      Disk #73, Partition #3
Partition Size 106.29 GB (114,125,760,000 bytes)
Partition Starting Offset     14,320,212,480 bytes

Description    Unisys Intelligent Fibre Channel Fabric Disk Driver
Manufacturer   Unisys Corporation
Model   UNISYS  VirtualStorage  01.0
Bytes/Sector   512
Media Loaded   Yes
Media Type     Fixed hard disk
Partitions     4
SCSI Bus       0
```

```
SCSI Logical Unit      0
SCSI Port      0
SCSI Target ID 4
Sectors/Track  63
Size   119.62 GB (128,445,972,480 bytes)
Total Cylinders        15,616
Total Sectors  250,871,040
Total Tracks   3,982,080
Tracks/Cylinder        255
Partition      Disk #153, Partition #0
Partition Size 4.01 GB (4,301,789,184 bytes)
Partition Starting Offset     32,256 bytes
Partition      Disk #153, Partition #1
Partition Size 6.18 GB (6,637,800,960 bytes)
Partition Starting Offset     4,301,821,440 bytes
Partition      Disk #153, Partition #2
Partition Size 3.15 GB (3,380,590,080 bytes)
Partition Starting Offset     10,939,622,400 bytes
Partition      Disk #153, Partition #3
Partition Size 106.29 GB (114,125,760,000 bytes)
Partition Starting Offset     14,320,212,480 bytes

Description    Unisys Intelligent Fibre Channel Fabric Disk Driver
Manufacturer   Unisys Corporation
Model   UNISYS  VirtualStorage  01.0
Bytes/Sector   512
Media Loaded   Yes
Media Type     Fixed hard disk
Partitions     4
SCSI Bus       0
SCSI Logical Unit      0
SCSI Port      0
SCSI Target ID 5
Sectors/Track  63
Size   119.62 GB (128,445,972,480 bytes)
Total Cylinders        15,616
Total Sectors  250,871,040
Total Tracks   3,982,080
Tracks/Cylinder        255
Partition      Disk #152, Partition #0
Partition Size 4.01 GB (4,301,789,184 bytes)
Partition Starting Offset     32,256 bytes
Partition      Disk #152, Partition #1
Partition Size 6.18 GB (6,637,800,960 bytes)
Partition Starting Offset     4,301,821,440 bytes
Partition      Disk #152, Partition #2
Partition Size 3.15 GB (3,380,590,080 bytes)
Partition Starting Offset     10,939,622,400 bytes
Partition      Disk #152, Partition #3
Partition Size 106.29 GB (114,125,760,000 bytes)
Partition Starting Offset     14,320,212,480 bytes

Description    Unisys Intelligent Fibre Channel Fabric Disk Driver
Manufacturer   Unisys Corporation
Model   UNISYS  VirtualStorage  01.0
Bytes/Sector   512
Media Loaded   Yes
Media Type     Fixed hard disk
Partitions     4
SCSI Bus       0
SCSI Logical Unit      0
SCSI Port      0
SCSI Target ID 6
Sectors/Track  63
Size   119.62 GB (128,445,972,480 bytes)
Total Cylinders        15,616
Total Sectors  250,871,040
Total Tracks   3,982,080
Tracks/Cylinder        255
Partition      Disk #151, Partition #0
Partition Size 4.01 GB (4,301,789,184 bytes)
Partition Starting Offset     32,256 bytes
Partition      Disk #151, Partition #1
Partition Size 6.18 GB (6,637,800,960 bytes)
Partition Starting Offset     4,301,821,440 bytes
Partition      Disk #151, Partition #2
Partition Size 3.15 GB (3,380,590,080 bytes)
Partition Starting Offset     10,939,622,400 bytes
Partition      Disk #151, Partition #3
Partition Size 106.29 GB (114,125,760,000 bytes)
Partition Starting Offset     14,320,212,480 bytes

Description    Unisys Intelligent Fibre Channel Fabric Disk Driver
Manufacturer   Unisys Corporation
Model   UNISYS  VirtualStorage  01.0
Bytes/Sector   512
Media Loaded   Yes
Media Type     Fixed hard disk
Partitions     4
SCSI Bus       0
SCSI Logical Unit      0
SCSI Port      0
SCSI Target ID 7
Sectors/Track  63
Size   119.62 GB (128,445,972,480 bytes)
Total Cylinders        15,616
Total Sectors  250,871,040
Total Tracks   3,982,080
Tracks/Cylinder        255
Partition      Disk #150, Partition #0
Partition Size 4.01 GB (4,301,789,184 bytes)
Partition Starting Offset     32,256 bytes
Partition      Disk #150, Partition #1
Partition Size 6.18 GB (6,637,800,960 bytes)
Partition Starting Offset     4,301,821,440 bytes
Partition      Disk #150, Partition #2
Partition Size 3.15 GB (3,380,590,080 bytes)
Partition Starting Offset     10,939,622,400 bytes
Partition      Disk #150, Partition #3
Partition Size 106.29 GB (114,125,760,000 bytes)
Partition Starting Offset     14,320,212,480 bytes

Description    Unisys Intelligent Fibre Channel Fabric Disk Driver
Manufacturer   Unisys Corporation
Model   UNISYS  VirtualStorage  01.0
Bytes/Sector   512
```

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Media Loaded   Yes
Media Type     Fixed hard disk
Partitions     4
SCSI Bus       0
SCSI Logical Unit      0
SCSI Port      0
SCSI Target ID 8
Sectors/Track  63
Size   119.62 GB (128,445,972,480 bytes)
Total Cylinders        15,616
Total Sectors  250,871,040
Total Tracks   3,982,080
Tracks/Cylinder        255
Partition      Disk #149, Partition #0
Partition Size 4.01 GB (4,301,789,184 bytes)
Partition Starting Offset     32,256 bytes
Partition      Disk #149, Partition #1
Partition Size 6.18 GB (6,637,800,960 bytes)
Partition Starting Offset     4,301,821,440 bytes
Partition      Disk #149, Partition #2
Partition Size 3.15 GB (3,380,590,080 bytes)
Partition Starting Offset     10,939,622,400 bytes
Partition      Disk #149, Partition #3
Partition Size 106.29 GB (114,125,760,000 bytes)
Partition Starting Offset     14,320,212,480 bytes

Description    Unisys Intelligent Fibre Channel Fabric Disk Driver
Manufacturer   Unisys Corporation
Model   UNISYS  VirtualStorage  01.0
Bytes/Sector   512
Media Loaded   Yes
Media Type     Fixed hard disk
Partitions     4
SCSI Bus       0
SCSI Logical Unit      0
SCSI Port      0
SCSI Target ID 9
Sectors/Track  63
Size   119.62 GB (128,445,972,480 bytes)
Total Cylinders        15,616
Total Sectors  250,871,040
Total Tracks   3,982,080
Tracks/Cylinder        255
Partition      Disk #148, Partition #0
Partition Size 4.01 GB (4,301,789,184 bytes)
Partition Starting Offset     32,256 bytes
Partition      Disk #148, Partition #1
Partition Size 6.18 GB (6,637,800,960 bytes)
Partition Starting Offset     4,301,821,440 bytes
Partition      Disk #148, Partition #2
Partition Size 3.15 GB (3,380,590,080 bytes)
Partition Starting Offset     10,939,622,400 bytes
Partition      Disk #148, Partition #3
Partition Size 106.29 GB (114,125,760,000 bytes)
Partition Starting Offset     14,320,212,480 bytes

Description    Unisys Intelligent Fibre Channel Fabric Disk Driver
Manufacturer   Unisys Corporation
Model   UNISYS  VirtualStorage  01.0
Bytes/Sector   512
Media Loaded   Yes
Media Type     Fixed hard disk
Partitions     4
SCSI Bus       0
SCSI Logical Unit      0
SCSI Port      0
SCSI Target ID 0
Sectors/Track  63
Size   119.62 GB (128,445,972,480 bytes)
Total Cylinders        15,616
Total Sectors  250,871,040
Total Tracks   3,982,080
Tracks/Cylinder        255
Partition      Disk #157, Partition #0
Partition Size 4.01 GB (4,301,789,184 bytes)
Partition Starting Offset     32,256 bytes
Partition      Disk #157, Partition #1
Partition Size 6.18 GB (6,637,800,960 bytes)
Partition Starting Offset     4,301,821,440 bytes
Partition      Disk #157, Partition #2
Partition Size 3.15 GB (3,380,590,080 bytes)
Partition Starting Offset     10,939,622,400 bytes
Partition      Disk #157, Partition #3
Partition Size 106.29 GB (114,125,760,000 bytes)
Partition Starting Offset     14,320,212,480 bytes

Description    Unisys Intelligent Fibre Channel Fabric Disk Driver
Manufacturer   Unisys Corporation
Model   UNISYS  VirtualStorage  01.0
Bytes/Sector   512
Media Loaded   Yes
Media Type     Fixed hard disk
Partitions     4
SCSI Bus       0
SCSI Logical Unit      0
SCSI Port      0
SCSI Target ID 1
Sectors/Track  63
Size   119.62 GB (128,445,972,480 bytes)
Total Cylinders        15,616
Total Sectors  250,871,040
Total Tracks   3,982,080
Tracks/Cylinder        255
Partition      Disk #156, Partition #0
Partition Size 4.01 GB (4,301,789,184 bytes)
Partition Starting Offset     32,256 bytes
Partition      Disk #156, Partition #1
Partition Size 6.18 GB (6,637,800,960 bytes)
Partition Starting Offset     4,301,821,440 bytes
Partition      Disk #156, Partition #2
Partition Size 3.15 GB (3,380,590,080 bytes)
Partition Starting Offset     10,939,622,400 bytes
Partition      Disk #156, Partition #3
Partition Size 106.29 GB (114,125,760,000 bytes)
Partition Starting Offset     14,320,212,480 bytes
```

```
Description    Unisys Intelligent Fibre Channel Fabric Disk Driver
Manufacturer   Unisys Corporation
Model   UNISYS  VirtualStorage  01.0
Bytes/Sector   512
Media Loaded   Yes
Media Type     Fixed hard disk
Partitions     4
SCSI Bus       0
SCSI Logical Unit      0
SCSI Port      0
SCSI Target ID 2
Sectors/Track  63
Size   119.62 GB (128,445,972,480 bytes)
Total Cylinders        15,616
Total Sectors  250,871,040
Total Tracks   3,982,080
Tracks/Cylinder        255
Partition      Disk #155, Partition #0
Partition Size 4.01 GB (4,301,789,184 bytes)
Partition Starting Offset     32,256 bytes
Partition      Disk #155, Partition #1
Partition Size 6.18 GB (6,637,800,960 bytes)
Partition Starting Offset     4,301,821,440 bytes
Partition      Disk #155, Partition #2
Partition Size 3.15 GB (3,380,590,080 bytes)
Partition Starting Offset     10,939,622,400 bytes
Partition      Disk #155, Partition #3
Partition Size 106.29 GB (114,125,760,000 bytes)
Partition Starting Offset     14,320,212,480 bytes

Description    Unisys Intelligent Fibre Channel Fabric Disk Driver
Manufacturer   Unisys Corporation
Model   UNISYS  VirtualStorage  01.0
Bytes/Sector   512
Media Loaded   Yes
Media Type     Fixed hard disk
Partitions     4
SCSI Bus       0
SCSI Logical Unit      0
SCSI Port      0
SCSI Target ID 3
Sectors/Track  63
Size   119.62 GB (128,445,972,480 bytes)
Total Cylinders        15,616
Total Sectors  250,871,040
Total Tracks   3,982,080
Tracks/Cylinder        255
Partition      Disk #154, Partition #0
Partition Size 4.01 GB (4,301,789,184 bytes)
Partition Starting Offset     32,256 bytes
Partition      Disk #154, Partition #1
Partition Size 6.18 GB (6,637,800,960 bytes)
Partition Starting Offset     4,301,821,440 bytes
Partition      Disk #154, Partition #2
Partition Size 3.15 GB (3,380,590,080 bytes)
Partition Starting Offset     10,939,622,400 bytes
Partition      Disk #154, Partition #3
Partition Size 106.29 GB (114,125,760,000 bytes)
Partition Starting Offset     14,320,212,480 bytes

Description    Unisys Intelligent Fibre Channel Fabric Disk Driver
Manufacturer   Unisys Corporation
Model   UNISYS  VirtualStorage  01.0
Bytes/Sector   512
Media Loaded   Yes
Media Type     Fixed hard disk
Partitions     4
SCSI Bus       0
SCSI Logical Unit      0
SCSI Port      0
SCSI Target ID 95
Sectors/Track  63
Size   119.62 GB (128,445,972,480 bytes)
Total Cylinders        15,616
Total Sectors  250,871,040
Total Tracks   3,982,080
Tracks/Cylinder        255
Partition      Disk #62, Partition #0
Partition Size 4.01 GB (4,301,789,184 bytes)
Partition Starting Offset     32,256 bytes
Partition      Disk #62, Partition #1
Partition Size 6.18 GB (6,637,800,960 bytes)
Partition Starting Offset     4,301,821,440 bytes
Partition      Disk #62, Partition #2
Partition Size 3.15 GB (3,380,590,080 bytes)
Partition Starting Offset     10,939,622,400 bytes
Partition      Disk #62, Partition #3
Partition Size 106.29 GB (114,125,760,000 bytes)
Partition Starting Offset     14,320,212,480 bytes

Description    Unisys Intelligent Fibre Channel Fabric Disk Driver
Manufacturer   Unisys Corporation
Model   UNISYS  VirtualStorage  01.0
Bytes/Sector   512
Media Loaded   Yes
Media Type     Fixed hard disk
Partitions     4
SCSI Bus       0
SCSI Logical Unit      0
SCSI Port      0
SCSI Target ID 96
Sectors/Track  63
Size   119.62 GB (128,445,972,480 bytes)
Total Cylinders        15,616
Total Sectors  250,871,040
Total Tracks   3,982,080
Tracks/Cylinder        255
Partition      Disk #61, Partition #0
Partition Size 4.01 GB (4,301,789,184 bytes)
Partition Starting Offset     32,256 bytes
Partition      Disk #61, Partition #1
Partition Size 6.18 GB (6,637,800,960 bytes)
Partition Starting Offset     4,301,821,440 bytes
Partition      Disk #61, Partition #2
Partition Size 3.15 GB (3,380,590,080 bytes)
Partition Starting Offset     10,939,622,400 bytes
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Partition      Disk #61, Partition #3
Partition Size 106.29 GB (114,125,760,000 bytes)
Partition Starting Offset     14,320,212,480 bytes

Description    Unisys Intelligent Fibre Channel Fabric Disk Driver
Manufacturer   Unisys Corporation
Model   UNISYS  VirtualStorage  01.0
Bytes/Sector   512
Media Loaded   Yes
Media Type     Fixed hard disk
Partitions     4
SCSI Bus       0
SCSI Logical Unit      0
SCSI Port      0
SCSI Target ID 97
Sectors/Track  63
Size   119.62 GB (128,445,972,480 bytes)
Total Cylinders        15,616
Total Sectors  250,871,040
Total Tracks   3,982,080
Tracks/Cylinder        255
Partition      Disk #60, Partition #0
Partition Size 4.01 GB (4,301,789,184 bytes)
Partition Starting Offset     32,256 bytes
Partition      Disk #60, Partition #1
Partition Size 6.18 GB (6,637,800,960 bytes)
Partition Starting Offset     4,301,821,440 bytes
Partition      Disk #60, Partition #2
Partition Size 3.15 GB (3,380,590,080 bytes)
Partition Starting Offset     10,939,622,400 bytes
Partition      Disk #60, Partition #3
Partition Size 106.29 GB (114,125,760,000 bytes)
Partition Starting Offset     14,320,212,480 bytes

Description    Unisys Intelligent Fibre Channel Fabric Disk Driver
Manufacturer   Unisys Corporation
Model   UNISYS  VirtualStorage  01.0
Bytes/Sector   512
Media Loaded   Yes
Media Type     Fixed hard disk
Partitions     4
SCSI Bus       0
SCSI Logical Unit      0
SCSI Port      0
SCSI Target ID 98
Sectors/Track  63
Size   119.62 GB (128,445,972,480 bytes)
Total Cylinders        15,616
Total Sectors  250,871,040
Total Tracks   3,982,080
Tracks/Cylinder        255
Partition      Disk #59, Partition #0
Partition Size 4.01 GB (4,301,789,184 bytes)
Partition Starting Offset     32,256 bytes
Partition      Disk #59, Partition #1
Partition Size 6.18 GB (6,637,800,960 bytes)
Partition Starting Offset     4,301,821,440 bytes
Partition      Disk #59, Partition #2
Partition Size 3.15 GB (3,380,590,080 bytes)
Partition Starting Offset     10,939,622,400 bytes
Partition      Disk #59, Partition #3
Partition Size 106.29 GB (114,125,760,000 bytes)
Partition Starting Offset     14,320,212,480 bytes

Description    Unisys Intelligent Fibre Channel Fabric Disk Driver
Manufacturer   Unisys Corporation
Model   UNISYS  VirtualStorage  01.0
Bytes/Sector   512
Media Loaded   Yes
Media Type     Fixed hard disk
Partitions     4
SCSI Bus       0
SCSI Logical Unit      0
SCSI Port      0
SCSI Target ID 91
Sectors/Track  63
Size   119.62 GB (128,445,972,480 bytes)
Total Cylinders        15,616
Total Sectors  250,871,040
Total Tracks   3,982,080
Tracks/Cylinder        255
Partition      Disk #66, Partition #0
Partition Size 4.01 GB (4,301,789,184 bytes)
Partition Starting Offset     32,256 bytes
Partition      Disk #66, Partition #1
Partition Size 6.18 GB (6,637,800,960 bytes)
Partition Starting Offset     4,301,821,440 bytes
Partition      Disk #66, Partition #2
Partition Size 3.15 GB (3,380,590,080 bytes)
Partition Starting Offset     10,939,622,400 bytes
Partition      Disk #66, Partition #3
Partition Size 106.29 GB (114,125,760,000 bytes)
Partition Starting Offset     14,320,212,480 bytes

Description    Unisys Intelligent Fibre Channel Fabric Disk Driver
Manufacturer   Unisys Corporation
Model   UNISYS  VirtualStorage  01.0
Bytes/Sector   512
Media Loaded   Yes
Media Type     Fixed hard disk
Partitions     4
SCSI Bus       0
SCSI Logical Unit      0
SCSI Port      0
SCSI Target ID 92
Sectors/Track  63
Size   119.62 GB (128,445,972,480 bytes)
Total Cylinders        15,616
Total Sectors  250,871,040
Total Tracks   3,982,080
Tracks/Cylinder        255
Partition      Disk #65, Partition #0
Partition Size 4.01 GB (4,301,789,184 bytes)
Partition Starting Offset     32,256 bytes
Partition      Disk #65, Partition #1
Partition Size 6.18 GB (6,637,800,960 bytes)
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Partition Starting Offset     4,301,821,440 bytes
Partition      Disk #65, Partition #2
Partition Size 3.15 GB (3,380,590,080 bytes)
Partition Starting Offset     10,939,622,400 bytes
Partition      Disk #65, Partition #3
Partition Size 106.29 GB (114,125,760,000 bytes)
Partition Starting Offset     14,320,212,480 bytes

Description    Unisys Intelligent Fibre Channel Fabric Disk Driver
Manufacturer   Unisys Corporation
Model   UNISYS  VirtualStorage  01.0
Bytes/Sector   512
Media Loaded   Yes
Media Type     Fixed hard disk
Partitions     4
SCSI Bus       0
SCSI Logical Unit      0
SCSI Port      0
SCSI Target ID 93
Sectors/Track  63
Size   119.62 GB (128,445,972,480 bytes)
Total Cylinders        15,616
Total Sectors  250,871,040
Total Tracks   3,982,080
Tracks/Cylinder        255
Partition      Disk #64, Partition #0
Partition Size 4.01 GB (4,301,789,184 bytes)
Partition Starting Offset     32,256 bytes
Partition      Disk #64, Partition #1
Partition Size 6.18 GB (6,637,800,960 bytes)
Partition Starting Offset     4,301,821,440 bytes
Partition      Disk #64, Partition #2
Partition Size 3.15 GB (3,380,590,080 bytes)
Partition Starting Offset     10,939,622,400 bytes
Partition      Disk #64, Partition #3
Partition Size 106.29 GB (114,125,760,000 bytes)
Partition Starting Offset     14,320,212,480 bytes

Description    Unisys Intelligent Fibre Channel Fabric Disk Driver
Manufacturer   Unisys Corporation
Model   UNISYS  VirtualStorage  01.0
Bytes/Sector   512
Media Loaded   Yes
Media Type     Fixed hard disk
Partitions     4
SCSI Bus       0
SCSI Logical Unit      0
SCSI Port      0
SCSI Target ID 94
Sectors/Track  63
Size   119.62 GB (128,445,972,480 bytes)
Total Cylinders        15,616
Total Sectors  250,871,040
Total Tracks   3,982,080
Tracks/Cylinder        255
Partition      Disk #63, Partition #0
Partition Size 4.01 GB (4,301,789,184 bytes)
Partition Starting Offset     32,256 bytes
Partition      Disk #63, Partition #1
Partition Size 6.18 GB (6,637,800,960 bytes)
Partition Starting Offset     4,301,821,440 bytes
Partition      Disk #63, Partition #2
Partition Size 3.15 GB (3,380,590,080 bytes)
Partition Starting Offset     10,939,622,400 bytes
Partition      Disk #63, Partition #3
Partition Size 106.29 GB (114,125,760,000 bytes)
Partition Starting Offset     14,320,212,480 bytes

[SCSI]

Item   Value
Name   Unisys Intelligent Fibre Channel Fabric Bus Adapter
Manufacturer   Unisys Corporation
Status  OK
PNP Device ID
       PCI\VEN_11AB&DEV_4620&SUBSYS_C0FC1018&REV_12\4&25EA3EC6&0&0000

Memory Address 0xCE800000-0xCEFFFFFF
Memory Address 0xCD800000-0xCEFFFFFF
IRQ Channel    IRQ 0

Name   Unisys Intelligent Fibre Channel Fabric Bus Adapter
Manufacturer   Unisys Corporation
Status  OK
PNP Device ID
       PCI\VEN_11AB&DEV_4620&SUBSYS_C0FC1018&REV_12\4&2CF6F8ED&0&0000

Memory Address 0xD2800000-0xD2FFFFFF
Memory Address 0xD1000000-0xD10FFFFF
IRQ Channel    IRQ 4

Name   Unisys Intelligent Fibre Channel Fabric Bus Adapter
Manufacturer   Unisys Corporation
Status  OK
PNP Device ID
       PCI\VEN_11AB&DEV_4620&SUBSYS_C0FC1018&REV_12\4&A75DC64&0&0000

Memory Address 0xD4800000-0xD4FFFFFF
Memory Address 0xD3000000-0xD4FFFFFF
IRQ Channel    IRQ 24

Name   Unisys Intelligent Fibre Channel Fabric Bus Adapter
Manufacturer   Unisys Corporation
Status  OK
PNP Device ID
       PCI\VEN_11AB&DEV_4620&SUBSYS_C0FC1018&REV_12\4&A3CF7D6&0&0008

Memory Address 0xD8800000-0xD8FFFFFF
Memory Address 0xD7000000-0xD70FFFFF
IRQ Channel    IRQ 29

Name   Unisys Intelligent Fibre Channel Fabric Bus Adapter
Manufacturer   Unisys Corporation
Status  OK
```

```
PNP Device ID
       PCI\VEN_11AB&DEV_4620&SUBSYS_C0FC1018&REV_12\4&1B316B8F&0&0000

Memory Address 0xD9800000-0xD9FFFFFF
Memory Address 0xD9400000-0xD9FFFFFF
IRQ Channel    IRQ 48

Name   Unisys Intelligent Fibre Channel Fabric Bus Adapter
Manufacturer   Unisys Corporation
Status  OK
PNP Device ID
       PCI\VEN_11AB&DEV_4620&SUBSYS_C0FC1018&REV_12\4&101F93C3&0&0000

Memory Address 0xDD800000-0xDDFFFFFF
Memory Address 0xDC000000-0xDC0FFFFF
IRQ Channel    IRQ 52

Name   Unisys Intelligent Fibre Channel Fabric Bus Adapter
Manufacturer   Unisys Corporation
Status  OK
PNP Device ID
       PCI\VEN_11AB&DEV_4620&SUBSYS_C0FC1018&REV_12\4&5E61C6&0&0000

Memory Address 0xDF800000-0xDFFFFFFF
Memory Address 0xDE000000-0xDFFFFFFF
IRQ Channel    IRQ 56

Name   Unisys Intelligent Fibre Channel Fabric Bus Adapter
Manufacturer   Unisys Corporation
Status  OK
PNP Device ID
       PCI\VEN_11AB&DEV_4620&SUBSYS_C0FC1018&REV_12\4&5E54501&0&0000

Memory Address 0xE1800000-0xE1FFFFFF
Memory Address 0xE0000000-0xE1FFFFFF
IRQ Channel    IRQ 72

Name   Unisys Intelligent Fibre Channel Fabric Bus Adapter
Manufacturer   Unisys Corporation
Status  OK
PNP Device ID
       PCI\VEN_11AB&DEV_4620&SUBSYS_C0FC1018&REV_12\4&31204F29&0&0008

Memory Address 0xE5800000-0xE5FFFFFF
Memory Address 0xE4000000-0xE40FFFFF
IRQ Channel    IRQ 77

Name   Unisys Intelligent Fibre Channel Fabric Bus Adapter
Manufacturer   Unisys Corporation
Status  OK
PNP Device ID
       PCI\VEN_11AB&DEV_4620&SUBSYS_C0FC1018&REV_12\4&BBE9921&0&0000

Memory Address 0xE6800000-0xE6FFFFFF
Memory Address 0xE6400000-0xE6FFFFFF
IRQ Channel    IRQ 96

Name   Unisys Intelligent Fibre Channel Fabric Bus Adapter
Manufacturer   Unisys Corporation
Status  OK
PNP Device ID
       PCI\VEN_11AB&DEV_4620&SUBSYS_C0FC1018&REV_12\4&32DC1527&0&0000

Memory Address 0xEA800000-0xEAFFFFFF
Memory Address 0xE9000000-0xE90FFFFF
IRQ Channel    IRQ 100

Name   Unisys Intelligent Fibre Channel Fabric Bus Adapter
Manufacturer   Unisys Corporation
Status  OK
PNP Device ID
       PCI\VEN_11AB&DEV_4620&SUBSYS_C0FC1018&REV_12\4&30F36DAA&0&0000

Memory Address 0xEE800000-0xEEFFFFFF
Memory Address 0xED000000-0xEEFFFFFF
IRQ Channel    IRQ 120

Name   Unisys Intelligent Fibre Channel Fabric Bus Adapter
Manufacturer   Unisys Corporation
Status  OK
PNP Device ID
       PCI\VEN_11AB&DEV_4620&SUBSYS_C0FC1018&REV_12\4&3798F592&0&0000

Memory Address 0xF0800000-0xF0FFFFFF
Memory Address 0xEF000000-0xF0FFFFFF
IRQ Channel    IRQ 124

Name   Unisys Intelligent Fibre Channel Fabric Bus Adapter
Manufacturer   Unisys Corporation
Status  OK
PNP Device ID
       PCI\VEN_11AB&DEV_4620&SUBSYS_C0FC1018&REV_12\4&1F3768A3&0&0000

Memory Address 0xF1800000-0xF1FFFFFF
Memory Address 0xF1400000-0xF1FFFFFF
IRQ Channel    IRQ 144

Name   Unisys Intelligent Fibre Channel Fabric Bus Adapter
Manufacturer   Unisys Corporation
Status  OK
PNP Device ID
       PCI\VEN_11AB&DEV_4620&SUBSYS_C0FC1018&REV_12\4&102FA53&0&0000

Memory Address 0xF5800000-0xF5FFFFFF
Memory Address 0xF4000000-0xF40FFFFF
IRQ Channel    IRQ 148

Name   Unisys Intelligent Fibre Channel Fabric Bus Adapter
Manufacturer   Unisys Corporation
Status  OK
PNP Device ID
       PCI\VEN_11AB&DEV_4620&SUBSYS_C0FC1018&REV_12\4&1A68EB24&0&0000

Memory Address 0xF9800000-0xF9FFFFFF
Memory Address 0xF8000000-0xF9FFFFFF
IRQ Channel    IRQ 168
```

```
Name    Unisys Intelligent Fibre Channel Fabric Bus Adapter
Manufacturer   Unisys Corporation
Status  OK
PNP Device ID
        PCI\VEN_11AB&DEV_4620&SUBSYS_C0FC1018&REV_12\4&297B89&0&0000

Memory Address 0xFB800000-0xFBFFFFFF
Memory Address 0xFA000000-0xFBFFFFFF
IRQ Channel    IRQ 172

[IDE]

Item    Value
Name    Intel(r) 82371AB/EB PCI Bus Master IDE Controller
Manufacturer   Intel
Status  OK
PNP Device ID
        PCI\VEN_8086&DEV_7111&SUBSYS_00000000&REV_01\3&172E68DD&0&01

I/O Port       0x000010E0-0x000010EF

Name    Primary IDE Channel
Manufacturer   (Standard IDE ATA/ATAPI controllers)
Status  OK
PNP Device ID  PCIIDE\IDECHANNEL\4&100E6A2D&0&0
I/O Port       0x000001F0-0x000001F7
I/O Port       0x000003F6-0x000003F6
IRQ Channel    IRQ 14

Name    Secondary IDE Channel
Manufacturer   (Standard IDE ATA/ATAPI controllers)
Status  OK
PNP Device ID  PCIIDE\IDECHANNEL\4&100E6A2D&0&1
I/O Port       0x00000170-0x00000177
I/O Port       0x00000376-0x00000376
IRQ Channel    IRQ 13

[Printing]

Name    Driver  Port Name      Server Name

[Problem Devices]

Device  PNP Device ID  Error Code
Not Available  ACPI\UNO4501\0 The drivers for this device are not
installed.

[USB]

Device  PNP Device ID
Intel(r) 82371AB/EB PCI to USB Universal Host Controller
        PCI\VEN_8086&DEV_7112&SUBSYS_00000000&REV_01\3&172E68DD&0&02

USB Root Hub   USB\ROOT_HUB\4&27B1EF4B&0
Standard OpenHCD USB Host Controller
        PCI\VEN_1018&DEV_C211&SUBSYS_C2111018&REV_00\3&172E68DD&0&09
USB Root Hub   USB\ROOT_HUB\4&1949159F&0
Console Manager USB Keyboard  USB\VID_0432&PID_0010\5&37AEB74C&0&1
Console Manager USB Keyboard  HID\VID_0432&PID_0010\6&209FAF05&0&0000

Console Manager USB Mouse     USB\VID_0432&PID_0011\5&37AEB74C&0&2
Console Manager USB Mouse     HID\VID_0432&PID_0011\6&1A2AC7DA&0&0000


[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
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
asyncmac       RAS Asynchronous Media Driver
        c:\windows\system32\drivers\asyncmac.sys     Kernel Driver  No
        Manual  Stopped OK      Normal  No      No
atapi   Standard IDE/ESDI Hard Disk Controller
        c:\windows\system32\drivers\atapi.sys Kernel Driver  Yes     Boot
        Running OK      Normal  No      Yes
atdisk  Atdisk  Not Available  Kernel Driver  No      Disabled
        Stopped OK      Ignore  No      No
atmarpc ATM ARP Client Protocol
        c:\windows\system32\drivers\atmarpc.sys      Kernel Driver  No
        Manual  Stopped OK      Normal  No      No
audstub Audio Stub Driver      c:\windows\system32\drivers\audstub.sys
        Kernel Driver  Yes     Manual  Running OK      Normal  No      Yes

beep    Beep    c:\windows\system32\drivers\beep.sys  Kernel Driver  Yes
        System  Running OK      Normal  No      Yes
cbidf2k cbidf2k c:\windows\system32\drivers\cbidf2k.sys      Kernel Driver
        No      Disabled       Stopped OK      Normal  No      No
```

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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
        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
cpqarry2        cpqarry2        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
        No      Disabled        Stopped OK      Normal  No      No
dmio    Logical Disk Manager Driver   c:\windows\system32\drivers\dmio.sys
        Kernel Driver  Yes     Boot    Running OK      Normal  No      Yes

dmload  dmload  c:\windows\system32\drivers\dmload.sys       Kernel Driver
        Yes     Boot    Running OK      Normal  No      Yes
dpti2o  dpti2o  Not Available  Kernel Driver  No      Disabled
        Stopped OK      Normal  No      No
e100b   Intel(R) PRO Adapter Driver
        c:\windows\system32\drivers\e100b325.sys     Kernel Driver  Yes
        Manual  Running OK      Normal  No      Yes
fastfat Fastfat c:\windows\system32\drivers\fastfat.sys      File System
Driver  No      Disabled        Stopped OK      Normal  No      No
fdc     Floppy Disk Controller Driver c:\windows\system32\drivers\fdc.sys
        Kernel Driver  Yes     Manual  Running OK      Normal  No      Yes

fips    Fips    c:\windows\system32\drivers\fips.sys  Kernel Driver  Yes
        System  Running OK      Normal  No      Yes
flpydisk        Floppy Disk Driver
        c:\windows\system32\drivers\flpydisk.sys     Kernel Driver  Yes
        Manual  Running OK      Normal  No      Yes
ftdisk  Volume Manager Driver  c:\windows\system32\drivers\ftdisk.sys
        Kernel Driver  Yes     Boot    Running OK      Normal  No      Yes

gnindis cLAN NDIS Driver       c:\windows\system32\drivers\gnindis.sys
        Kernel Driver  Yes     Auto    Running OK      Normal  No      Yes

gnivia  cLAN VIA Driver        c:\windows\system32\drivers\gnivia.sys
        Kernel Driver  Yes     Auto    Running OK      Normal  No      Yes

gpc     Generic Packet Classifier
        c:\windows\system32\drivers\msgpc.sys Kernel Driver  Yes     Manual
        Running OK      Normal  No      Yes
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  Kernel Driver  No
        Manual  Stopped OK      Normal  No      No
i2omgmt i2omgmt Not Available  Kernel Driver  No      System  Stopped OK
        Normal  No      No
i2omp   i2omp   Not Available  Kernel Driver  No      Disabled
        Stopped OK      Normal  No      No
i8042prt        i8042 Keyboard and PS/2 Mouse Port Driver
        c:\windows\system32\drivers\i8042prt.sys     Kernel Driver  Yes
        System  Running OK      Normal  No      Yes
ifba    Unisys Intelligent Fibre Channel Adapter SCSI Processor
        c:\windows\system32\drivers\ifba.sys  Kernel Driver  Yes     Manual
        Running OK      Normal  No      Yes
ifdisk  Unisys Intelligent Fibre Channel Fabric Disk Driver
        c:\windows\system32\drivers\ifdisk.sys       Kernel Driver  Yes
        Manual  Running OK      Normal  No      Yes
ifip    Unisys Intelligent Fibre Channel Fabric Bus Enumerator
        c:\windows\system32\drivers\ifip.sys  Kernel Driver  Yes     Boot
        Running OK      Normal  No      Yes
ifxp    Unisys Intelligent Fibre Channel Fabric Bus Adapter
        c:\windows\system32\drivers\ifxp.sys  Kernel Driver  Yes     Boot
        Running OK      Normal  No      Yes
iirsp   iirsp   Not Available  Kernel Driver  No      Disabled
        Stopped OK      Normal  No      No
imapi   CD-Burning Filter Driver
        c:\windows\system32\drivers\imapi.sys Kernel Driver  No      System
        Stopped OK      Normal  No      No
intelide        IntelIde       c:\windows\system32\drivers\intelide.sys
        Kernel Driver  Yes     Boot    Running OK      Normal  No      Yes

ipfilterdriver IP Traffic Filter Driver
        c:\windows\system32\drivers\ipfltdrv.sys     Kernel Driver  No
        Manual  Stopped OK      Normal  No      No
ipinip  IP in IP Tunnel Driver c:\windows\system32\drivers\ipinip.sys
        Kernel Driver  No      Manual  Stopped OK      Normal  No      No

ipnat   IP Network Address Translator
        c:\windows\system32\drivers\ipnat.sys Kernel Driver  No      Manual
        Stopped OK      Normal  No      No
ipsec   IPSEC driver   c:\windows\system32\drivers\ipsec.sys Kernel Driver
        Yes     System  Running OK      Normal  No      Yes
ipsraidn        ipsraidn       Not Available  Kernel Driver  No
        Disabled        Stopped OK      Normal  No      No
isapnp  PnP ISA/EISA Bus Driver
        c:\windows\system32\drivers\isapnp.sys       Kernel Driver  Yes
        Boot    Running OK      Critical        No      Yes
```

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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       Not Available  Kernel Driver  No
        Disabled       Stopped OK      Normal  No      No
mnmdd   mnmdd   c:\windows\system32\drivers\mnmdd.sys Kernel Driver  Yes
        System  Running OK      Ignore  No      Yes
modem   Modem   c:\windows\system32\drivers\modem.sys Kernel Driver  No
        Manual  Stopped OK      Ignore  No      No
mouclass       Mouse Class Driver
        c:\windows\system32\drivers\mouclass.sys     Kernel Driver  Yes
        System  Running OK      Normal  No      Yes
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       Not Available  Kernel Driver  No
        Disabled       Stopped OK      Normal  No      No
mrxdav  WebDav Client Redirector
        c:\windows\system32\drivers\mrxdav.sys       File System Driver
        No      Manual  Stopped OK      Normal  No      No
mrxsmb  MRXSMB  c:\windows\system32\drivers\mrxsmb.sys       File System
Driver  Yes     System  Running OK      Normal  No      Yes
msfs    Msfs    c:\windows\system32\drivers\msfs.sys  File System Driver
        Yes     System  Running OK      Normal  No      Yes
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
        Yes
netbt   NetBios over Tcpip     c:\windows\system32\drivers\netbt.sys Kernel
Driver  Yes     System  Running OK      Normal  No      Yes
nfrd960 nfrd960 Not Available  Kernel Driver  No      Disabled
        Stopped OK      Normal  No      No
npfs    Npfs    c:\windows\system32\drivers\npfs.sys  File System Driver
        Yes     System  Running OK      Normal  No      Yes
ntfs    Ntfs    c:\windows\system32\drivers\ntfs.sys  File System Driver
        Yes     Disabled       Running OK      Normal  No      Yes
null    Null    c:\windows\system32\drivers\null.sys  Kernel Driver  Yes
        System  Running OK      Normal  No      Yes
parport Parallel port driver   c:\windows\system32\drivers\parport.sys
        Kernel Driver  Yes     Manual  Running OK      Normal  No      Yes

partmgr Partition Manager      c:\windows\system32\drivers\partmgr.sys
        Kernel Driver  Yes     Boot    Running OK      Normal  No      Yes

parvdm  Parvdm  c:\windows\system32\drivers\parvdm.sys       Kernel Driver
        Yes     Auto    Running OK      Ignore  No      Yes
pci     PCI Bus Driver c:\windows\system32\drivers\pci.sys   Kernel Driver
        Yes     Boot    Running OK      Critical        No      Yes
pciide  PCIIde  Not Available  Kernel Driver  No      Disabled
        Stopped OK      Normal  No      No
pcmcia  Pcmcia  c:\windows\system32\drivers\pcmcia.sys       Kernel Driver
        No      Disabled       Stopped OK      Normal  No      No
pdcomp  PDCOMP  Not Available  Kernel Driver  No      Manual  Stopped OK
        Ignore  No      No
pdframe PDFRAME Not Available  Kernel Driver  No      Manual  Stopped OK
        Ignore  No      No
pdreli  PDRELI  Not Available  Kernel Driver  No      Manual  Stopped OK
        Ignore  No      No
pdrframe       PDRFRAME       Not Available  Kernel Driver  No      Manual
        Stopped OK      Ignore  No      No
perc2   perc2   Not Available  Kernel Driver  No      Disabled
        Stopped OK      Normal  No      No
perc2hib       perc2hib       Not Available  Kernel Driver  No
        Disabled       Stopped OK      Normal  No      No
pptpminiport   WAN Miniport (PPTP)
        c:\windows\system32\drivers\raspptp.sys      Kernel Driver  Yes
        Manual  Running OK      Normal  No      Yes
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  Not Available  Kernel 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
```

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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
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      System  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  Not Available  Kernel Driver  No      Disabled
       Stopped OK      Normal  No      No
sym_hi  sym_hi  Not Available  Kernel Driver  No      Disabled
       Stopped OK      Normal  No      No
sym_u3  sym_u3  Not Available  Kernel Driver  No      Disabled
       Stopped OK      Normal  No      No
tcpip   TCP/IP Protocol Driver c:\windows\system32\drivers\tcpip.sys Kernel
Driver  Yes     System  Running OK      Normal  No      Yes
tdpipe  TDPIPE  c:\windows\system32\drivers\tdpipe.sys       Kernel Driver
       No      Manual  Stopped OK      Ignore  No      No
tdtcp   TDTCP   c:\windows\system32\drivers\tdtcp.sys Kernel Driver  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
ucon    ucon    c:\windows\system32\drivers\uconmini.sys     Kernel Driver
       Yes     Manual  Running OK      Ignore  No      Yes
udfs    Udfs    c:\windows\system32\drivers\udfs.sys  File System 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
usbhub  USB2 Enabled Hub       c:\windows\system32\drivers\usbhub.sys
       Kernel Driver  Yes     Manual  Running OK      Normal  No      Yes

usbohci Microsoft USB Open Host Controller Miniport Driver
       c:\windows\system32\drivers\usbohci.sys      Kernel Driver  Yes
       Manual  Running OK      Normal  No      Yes
usbuhci Microsoft USB Universal Host Controller Miniport Driver
       c:\windows\system32\drivers\usbuhci.sys      Kernel Driver  Yes
       Manual  Running OK      Normal  No      Yes
vga     vga     c:\windows\system32\drivers\vgapnp.sys       Kernel Driver
       No      Manual  Stopped OK      Ignore  No      No
vgasave VGA Display Controller.        c:\windows\system32\drivers\vga.sys
       Kernel Driver  Yes     System  Running OK      Ignore  No      Yes

viaide  ViaIde  Not Available  Kernel Driver  No      Disabled
       Stopped OK      Normal  No      No
volsnap Storage volumes        c:\windows\system32\drivers\volsnap.sys
       Kernel Driver  Yes     Boot    Running OK      Normal  No      Yes

wanarp  Remote Access IP ARP Driver
       c:\windows\system32\drivers\wanarp.sys       Kernel Driver  Yes
       Manual  Running OK      Normal  No      Yes
wdica   WDICA   Not Available  Kernel Driver  No      Manual  Stopped OK
       Ignore  No      No
wlbs    Network Load Balancing c:\windows\system32\drivers\wlbs.sys  Kernel
Driver  No      Manual  Stopped OK      Normal  No      No

[Signed Drivers]

Device Name    Signed  Device Class   Driver Version Driver Date
       Manufacturer   INF Name       Driver Name    Device ID
Not Available  Not Available  Not Available  Not Available  Not Available
       Not Available  Not Available  Not Available  HTREE\ROOT\0
CMP (ACPI) Server      No      COMPUTER       5.3763.8.308   2/10/2003
       Unisys  oem0.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
Not Available  Not Available  Not Available  Not Available  Not Available
       Not Available  Not Available  Not Available  ACPI\UNO4501\0
PCI bus No      SYSTEM  5.2.3790.0     10/1/2002      (Standard system
devices)       machine.inf    Not Available  ACPI\PNP0A03\2
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_0309&SUBSYS_00000000&REV_01\3&1070020&0&00

Unisys Intelligent Fibre Channel Fabric Bus Adapter  No      SCSIADAPTER
       2.55.0.18      10/22/2003     Unisys Corporation     oem8.inf
       Not Available
       PCI\VEN_11AB&DEV_4620&SUBSYS_C0FC1018&REV_12\4&25EA3EC6&0&0000
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Unisys Intelligent Fibre Channel Adapter SCSI Processor     No      SYSTEM
       2.55.0.6       10/22/2003     Unisys Corporation     oem9.inf
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P64_____V2__\5&3A90EBEF&0&2409560B00080010
Unisys Intelligent Fibre Channel Adapter SCSI Processor     No      SYSTEM
       2.55.0.6       10/22/2003     Unisys Corporation     oem9.inf
       Not Available  SCSI\PROCESSORUNISYS__FC76222-
P64_____V2__\5&3A90EBEF&0&2509560B00080010
PCI bus No      SYSTEM  5.2.3790.0     10/1/2002      (Standard system
devices)       machine.inf    Not Available  ACPI\PNP0A03\3
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_0309&SUBSYS_00000000&REV_01\3&29E81982&0&00

Unisys Intelligent Fibre Channel Fabric Bus Adapter  No      SCSIADAPTER
       2.55.0.18      10/22/2003     Unisys Corporation     oem8.inf
       Not Available
       PCI\VEN_11AB&DEV_4620&SUBSYS_C0FC1018&REV_12\4&2CF6F8ED&0&0000

Unisys Intelligent Fibre Channel Adapter SCSI Processor     No      SYSTEM
       2.55.0.6       10/22/2003     Unisys Corporation     oem9.inf
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P64_____V2__\5&7A21384&0&FC04560B00080010
Unisys Intelligent Fibre Channel Adapter SCSI Processor     No      SYSTEM
       2.55.0.6       10/22/2003     Unisys Corporation     oem9.inf
       Not Available  SCSI\PROCESSORUNISYS__FC76222-
P64_____V2__\5&7A21384&0&FD04560B00080010
cLAN Host Adapter      No      NET     4.2.0.75       10/5/2000
       Giganet oem7.inf       Not Available
       PCI\VEN_135B&DEV_0001&SUBSYS_00000000&REV_00\3&29E81982&0&08

PCI bus No      SYSTEM  5.2.3790.0     10/1/2002      (Standard system
devices)       machine.inf    Not Available  ACPI\PNP0A03\4
Intel 82371AB/EB PCI to ISA bridge (ISA mode)        No      SYSTEM
       5.2.3790.0     10/1/2002      Intel   machine.inf    Not Available
       PCI\VEN_8086&DEV_7110&SUBSYS_00000000&REV_02\3&172E68DD&0&00

ISAPNP Read Data Port  No      SYSTEM  5.2.3790.0     10/1/2002
       (Standard system devices)     machine.inf    Not Available
       ISAPNP\READDATAPORT\0
Direct memory access controller       No      SYSTEM  5.2.3790.0
       10/1/2002      (Standard system devices)     machine.inf    Not
Available      ACPI\PNP0200\D
Programmable interrupt controller     No      SYSTEM  5.2.3790.0
       10/1/2002      (Standard system devices)     machine.inf    Not
Available      ACPI\PNP0000\D
System CMOS/real time clock   No      SYSTEM  5.2.3790.0     10/1/2002
       (Standard system devices)     machine.inf    Not Available
       ACPI\PNP0B00\D
System timer   No      SYSTEM  5.2.3790.0     10/1/2002      (Standard
system devices)        machine.inf    Not Available  ACPI\PNP0100\D
System speaker No      SYSTEM  5.2.3790.0     10/1/2002      (Standard
system devices)        machine.inf    Not Available  ACPI\PNP0800\D
Generic Bus    No      SYSTEM  5.2.3790.0     10/1/2002      (Standard
system devices)        machine.inf    Not Available  ACPI\PNP0A05\D
ECP Printer Port       No      PORTS   5.2.3790.0     10/1/2002
       (Standard port types)  msports.inf    Not Available  ACPI\PNP0401\D

Printer Port Logical Interface        No      SYSTEM  5.2.3790.0
       10/1/2002      (Standard system devices)     machine.inf    Not
Available      LPTENUM\MICROSOFTRAWPORT\6&2DCCF168&0&LPT1
PS/2 Compatible Mouse  No      MOUSE   5.2.3790.0     10/1/2002
       Microsoft      msmouse.inf    Not Available  ACPI\PNP0F13\D
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\D
Standard floppy disk controller       No      FDC     5.2.3790.0
       10/1/2002      (Standard floppy disk controllers)    fdc.inf Not
Available      ACPI\PNP0700\D
Floppy disk drive      No      FLOPPYDISK     5.2.3790.0     10/1/2002
       (Standard floppy disk drives) flpydisk.inf   Not Available
       FDC\GENERIC_FLOPPY_DRIVE\6&1E621CEF&0&0
Intel(r) 82371AB/EB PCI Bus Master IDE Controller    No      HDC
       5.2.3790.0     10/1/2002      Intel   mshdc.inf      Not Available
       PCI\VEN_8086&DEV_7111&SUBSYS_00000000&REV_01\3&172E68DD&0&01

Primary IDE Channel    No      HDC     5.2.3790.0     10/1/2002
       (Standard IDE ATA/ATAPI controllers)  mshdc.inf      Not Available
       PCIIDE\IDECHANNEL\4&100E6A2D&0&0
Disk drive     No      DISKDRIVE      5.2.3790.0     10/1/2002
       (Standard disk drives) disk.inf       Not Available
       IDE\DISKFUJITSU_MHS2040AT_______________________8004____\5&28FC923
B&0&0.0.0
Secondary IDE Channel  No      HDC     5.2.3790.0     10/1/2002
       (Standard IDE ATA/ATAPI controllers)  mshdc.inf      Not Available
       PCIIDE\IDECHANNEL\4&100E6A2D&0&1
CD-ROM Drive   No      CDROM   5.2.3790.0     10/1/2002      (Standard CD-
ROM drives)    cdrom.inf      Not Available  IDE\CDROMTEAC_CD-
224E_______________________________1.9A____\5&1B78D9&0&0.0.0
Intel(r) 82371AB/EB PCI to USB Universal Host Controller    No      USB
       5.2.3790.0     10/1/2002      Intel   usbport.inf    Not Available
       PCI\VEN_8086&DEV_7112&SUBSYS_00000000&REV_01\3&172E68DD&0&02

USB Root Hub   No      USB     5.2.3790.0     10/1/2002      (Standard USB
Host Controller)       usbport.inf    Not Available
       USB\ROOT_HUB\4&27B1EF4B&0
Console Manager Video Driver IPL2 PCI No      DISPLAY 7.0.0.27
       5/2/2003       Unisys Corporation     oem6.inf       Not Available
       PCI\VEN_1018&DEV_C210&SUBSYS_C2101018&REV_00\3&172E68DD&0&08

Default Monitor        No      MONITOR 5.1.2001.0     6/6/2001
       (Standard monitor types)      monitor.inf    Not Available
       DISPLAY\DEFAULT_MONITOR\4&26C16536&0&22446688&01&01
Standard OpenHCD USB Host Controller  No      USB     5.2.3790.0
       10/1/2002      (Standard USB Host Controller)        usbport.inf
       Not Available
       PCI\VEN_1018&DEV_C211&SUBSYS_C2111018&REV_00\3&172E68DD&0&09

USB Root Hub   No      USB     5.2.3790.0     10/1/2002      (Standard USB
Host Controller)       usbport.inf    Not Available
       USB\ROOT_HUB\4&1949159F&0
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Console Manager USB Keyboard  No      HIDCLASS       7.0.0.27
       5/2/2003       Unisys Corp    oem1.inf       Not Available
       USB\VID_0432&PID_0010\5&37AEB74C&0&1
Console Manager USB Keyboard  No      KEYBOARD       7.0.0.27
       5/2/2003       Unisys Corp    oem3.inf       Not Available
       HID\VID_0432&PID_0010\6&209FAF05&0&0000
Console Manager USB Mouse     No      HIDCLASS       7.0.0.27
       5/2/2003       Unisys Corp    oem1.inf       Not Available
       USB\VID_0432&PID_0011\5&37AEB74C&0&2
Console Manager USB Mouse     No      MOUSE   7.0.0.27       5/2/2003
       Unisys Corp    oem2.inf       Not Available
       HID\VID_0432&PID_0011\6&1A2AC7DA&0&0000
Intel 8255x-based PCI Ethernet Adapter (10/100)      No      NET
       6.6.8.1 10/1/2002      Intel   net557.inf     Not Available
       PCI\VEN_8086&DEV_1229&SUBSYS_10180D88&REV_08\3&172E68DD&0&10

PCI bus No      SYSTEM  5.2.3790.0     10/1/2002      (Standard system
devices)       machine.inf    Not Available  ACPI\PNP0A03\5
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_0309&SUBSYS_00000000&REV_01\3&474B838&0&00

Unisys Intelligent Fibre Channel Fabric Bus Adapter  No      SCSIADAPTER
       2.55.0.18      10/22/2003     Unisys Corporation     oem8.inf
       Not Available
       PCI\VEN_11AB&DEV_4620&SUBSYS_C0FC1018&REV_12\4&A75DC64&0&0000

Unisys Intelligent Fibre Channel Adapter SCSI Processor     No      SYSTEM
       2.55.0.6       10/22/2003     Unisys Corporation     oem9.inf
       Not Available  SCSI\PROCESSORUNISYS__FC76222-
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Unisys Intelligent Fibre Channel Adapter SCSI Processor     No      SYSTEM
       2.55.0.6       10/22/2003     Unisys Corporation     oem9.inf
       Not Available  SCSI\PROCESSORUNISYS__FC76222-
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PCI bus No      SYSTEM  5.2.3790.0     10/1/2002      (Standard system
devices)       machine.inf    Not Available  ACPI\PNP0A03\6
cLAN Host Adapter     No      NET     4.2.0.75       10/5/2000
       Giganet oem7.inf       Not Available
       PCI\VEN_135B&DEV_0001&SUBSYS_00000000&REV_00\3&E44F86D&0&00
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_0309&SUBSYS_00000000&REV_01\3&E44F86D&0&08

Unisys Intelligent Fibre Channel Fabric Bus Adapter  No      SCSIADAPTER
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       Not Available
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Unisys Intelligent Fibre Channel Adapter SCSI Processor     No      SYSTEM
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P64_____V2__\5&228890DA&0&9C04560B00080010
Unisys Intelligent Fibre Channel Adapter SCSI Processor     No      SYSTEM
       2.55.0.6       10/22/2003     Unisys Corporation     oem9.inf
       Not Available  SCSI\PROCESSORUNISYS__FC76222-
P64_____V2__\5&228890DA&0&9D04560B00080010
PCI bus No      SYSTEM  5.2.3790.0     10/1/2002      (Standard system
devices)       machine.inf    Not Available  ACPI\PNP0A03\7
PCI bus No      SYSTEM  5.2.3790.0     10/1/2002      (Standard system
devices)       machine.inf    Not Available  ACPI\PNP0A03\8
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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Unisys Intelligent Fibre Channel Fabric Bus Adapter  No      SCSIADAPTER
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       Not Available
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Unisys Intelligent Fibre Channel Adapter SCSI Processor     No      SYSTEM
       2.55.0.6       10/22/2003     Unisys Corporation     oem9.inf
       Not Available  SCSI\PROCESSORUNISYS__FC76222-
P64_____V2__\5&24C648AC&0&7008560B00080010
Unisys Intelligent Fibre Channel Adapter SCSI Processor     No      SYSTEM
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       Not Available  SCSI\PROCESSORUNISYS__FC76222-
P64_____V2__\5&24C648AC&0&7108560B00080010
PCI bus No      SYSTEM  5.2.3790.0     10/1/2002      (Standard system
devices)       machine.inf    Not Available  ACPI\PNP0A03\9
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_0309&SUBSYS_00000000&REV_01\3&AD74055&0&00

Unisys Intelligent Fibre Channel Fabric Bus Adapter  No      SCSIADAPTER
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       Not Available
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Unisys Intelligent Fibre Channel Adapter SCSI Processor     No      SYSTEM
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Unisys Intelligent Fibre Channel Adapter SCSI Processor     No      SYSTEM
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       Not Available  SCSI\PROCESSORUNISYS__FC76222-
P64_____V2__\5&55E65EF&0&AD08560B00080010
cLAN Host Adapter     No      NET     4.2.0.75       10/5/2000
       Giganet oem7.inf       Not Available
       PCI\VEN_135B&DEV_0001&SUBSYS_00000000&REV_00\3&AD74055&0&08
PCI bus No      SYSTEM  5.2.3790.0     10/1/2002      (Standard system
devices)       machine.inf    Not Available  ACPI\PNP0A03\A
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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Unisys Intelligent Fibre Channel Fabric Bus Adapter  No      SCSIADAPTER
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       Not Available
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Unisys Intelligent Fibre Channel Adapter SCSI Processor     No      SYSTEM
       2.55.0.6       10/22/2003     Unisys Corporation     oem9.inf
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Unisys Intelligent Fibre Channel Adapter SCSI Processor     No      SYSTEM
        2.55.0.6       10/22/2003     Unisys Corporation     oem9.inf
        Not Available  SCSI\PROCESSORUNISYS__FC76222-
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PCI bus No      SYSTEM  5.2.3790.0     10/1/2002      (Standard system
devices)       machine.inf    Not Available  ACPI\PNP0A03\B
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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Unisys Intelligent Fibre Channel Fabric Bus Adapter  No      SCSIADAPTER
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        Not Available
        PCI\VEN_11AB&DEV_4620&SUBSYS_C0FC1018&REV_12\4&5E54501&0&0000

Unisys Intelligent Fibre Channel Adapter SCSI Processor     No      SYSTEM
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Unisys Intelligent Fibre Channel Adapter SCSI Processor     No      SYSTEM
        2.55.0.6       10/22/2003     Unisys Corporation     oem9.inf
        Not Available  SCSI\PROCESSORUNISYS__FC76222-
P64_____V2__\5&324B9A0D&0&D104560B00080010
PCI bus No      SYSTEM  5.2.3790.0     10/1/2002      (Standard system
devices)       machine.inf    Not Available  ACPI\PNP0A03\C
cLAN Host Adapter      No      NET     4.2.0.75       10/5/2000
        Giganet oem7.inf       Not Available
        PCI\VEN_135B&DEV_0001&SUBSYS_00000000&REV_00\3&1B2F0CE&0&00
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_0309&SUBSYS_00000000&REV_01\3&1B2F0CE&0&08

Unisys Intelligent Fibre Channel Fabric Bus Adapter  No      SCSIADAPTER
        2.55.0.18      10/22/2003     Unisys Corporation     oem8.inf
        Not Available
        PCI\VEN_11AB&DEV_4620&SUBSYS_C0FC1018&REV_12\4&31204F29&0&0008

Unisys Intelligent Fibre Channel Adapter SCSI Processor     No      SYSTEM
        2.55.0.6       10/22/2003     Unisys Corporation     oem9.inf
        Not Available  SCSI\PROCESSORUNISYS__FC76222-
P64_____V2__\5&4D2B20A&0&8825560B00080010
Unisys Intelligent Fibre Channel Adapter SCSI Processor     No      SYSTEM
        2.55.0.6       10/22/2003     Unisys Corporation     oem9.inf
        Not Available  SCSI\PROCESSORUNISYS__FC76222-
P64_____V2__\5&4D2B20A&0&8925560B00080010
PCI bus No      SYSTEM  5.2.3790.0     10/1/2002      (Standard system
devices)       machine.inf    Not Available  ACPI\PNP0A03\D
PCI bus No      SYSTEM  5.2.3790.0     10/1/2002      (Standard system
devices)       machine.inf    Not Available  ACPI\PNP0A03\E
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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Unisys Intelligent Fibre Channel Fabric Bus Adapter  No      SCSIADAPTER
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        Not Available
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Unisys Intelligent Fibre Channel Adapter SCSI Processor     No      SYSTEM
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Unisys Intelligent Fibre Channel Adapter SCSI Processor     No      SYSTEM
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        Not Available  SCSI\PROCESSORUNISYS__FC76222-
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PCI bus No      SYSTEM  5.2.3790.0     10/1/2002      (Standard system
devices)       machine.inf    Not Available  ACPI\PNP0A03\F
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_0309&SUBSYS_00000000&REV_01\3&39E002BD&0&00

Unisys Intelligent Fibre Channel Fabric Bus Adapter  No      SCSIADAPTER
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        Not Available
        PCI\VEN_11AB&DEV_4620&SUBSYS_C0FC1018&REV_12\4&32DC1527&0&0000

Unisys Intelligent Fibre Channel Adapter SCSI Processor     No      SYSTEM
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Unisys Intelligent Fibre Channel Adapter SCSI Processor     No      SYSTEM
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PCI bus No      SYSTEM  5.2.3790.0     10/1/2002      (Standard system
devices)       machine.inf    Not Available  ACPI\PNP0A03\10
cLAN Host Adapter      No      NET     4.2.0.75       10/5/2000
        Giganet oem7.inf       Not Available
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devices)       machine.inf    Not Available  ACPI\PNP0A03\11
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devices)       machine.inf    Not Available  ACPI\PNP0A03\13
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devices)       machine.inf    Not Available  ACPI\PNP0A03\14
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devices)       machine.inf    Not Available  ACPI\PNP0A03\17
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       (Standard system devices)     machine.inf    Not Available
       ROOT\DMIO\0000
Volume Manager No      SYSTEM  5.2.3790.0     10/1/2002      (Standard
system devices)        machine.inf    Not Available  ROOT\FTDISK\0000

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C97FB600
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       volume.inf     Not Available
       STORAGE\VOLUME\1&30A96598&0&SIGNATURE3D70FE86OFFSET3558D1A00LENGTH
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       volume.inf     Not Available
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C97FB600
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AFD Networking Support Environment   Not Available  LEGACYDRIVER   Not
Available      Not Available  Not Available  Not Available  Not Available
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Beep   Not Available  LEGACYDRIVER   Not Available  Not Available  Not
Available      Not Available  Not Available  ROOT\LEGACY_BEEP\0000
CRC Disk Filter Driver Not Available  LEGACYDRIVER   Not Available  Not
Available      Not Available  Not Available  Not Available
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dmboot  Not Available  LEGACYDRIVER   Not Available  Not Available  Not
Available      Not Available  Not Available  ROOT\LEGACY_DMBOOT\0000

dmload  Not Available  LEGACYDRIVER   Not Available  Not Available  Not
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Fips   Not Available  LEGACYDRIVER   Not Available  Not Available  Not
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cLAN VIA Driver        Not Available  LEGACYDRIVER   Not Available  Not
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Generic Packet Classifier     Not Available  LEGACYDRIVER   Not Available
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       ROOT\LEGACY_GPC\0000
IPSEC driver   Not Available  LEGACYDRIVER   Not Available  Not Available
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mountmgr       Not Available  LEGACYDRIVER   Not Available  Not Available
       Not Available  Not Available  Not Available
       ROOT\LEGACY_MOUNTMGR\0000
NDIS System Driver    Not Available  LEGACYDRIVER   Not Available  Not
Available      Not Available  Not Available  Not Available
       ROOT\LEGACY_NDIS\0000
Remote Access NDIS TAPI Driver        Not Available  LEGACYDRIVER   Not
Available      Not Available  Not Available  Not Available  Not Available
       ROOT\LEGACY_NDISTAPI\0000
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NDProxy Not Available  LEGACYDRIVER   Not Available  Not Available  Not
Available      Not Available  Not Available  ROOT\LEGACY_NDPROXY\0000

NetBios over Tcpip    Not Available  LEGACYDRIVER   Not Available  Not
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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
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Parvdm Not Available  LEGACYDRIVER   Not Available  Not Available  Not
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Remote Access Auto Connection Driver Not Available  LEGACYDRIVER   Not
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RDPCDD Not Available  LEGACYDRIVER   Not Available  Not Available  Not
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TCP/IP Protocol Driver Not Available  LEGACYDRIVER   Not Available  Not
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VGA Display Controller.       Not Available  LEGACYDRIVER   Not Available
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       ROOT\LEGACY_VGASAVE\0000
volsnap Not Available  LEGACYDRIVER   Not Available  Not Available  Not
Available      Not Available  Not Available  ROOT\LEGACY_VOLSNAP\0000

Remote Access IP ARP Driver   Not Available  LEGACYDRIVER   Not Available
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Audio Codecs   No     MEDIA   5.2.3790.0     10/1/2002      (Standard
system devices)       wave.inf       Not Available  ROOT\MEDIA\MS_MMACM

Legacy Audio Drivers  No     MEDIA   5.2.3790.0     10/1/2002
       (Standard system devices)     wave.inf       Not Available
       ROOT\MEDIA\MS_MMDRV
Media Control Devices No     MEDIA   5.2.3790.0     10/1/2002
       (Standard system devices)     wave.inf       Not Available
       ROOT\MEDIA\MS_MMMCI
Legacy Video Capture Devices  No     MEDIA   5.2.3790.0     10/1/2002
       (Standard system devices)     wave.inf       Not Available
       ROOT\MEDIA\MS_MMVCD
Video Codecs   No     MEDIA   5.2.3790.0     10/1/2002      (Standard
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WAN Miniport (L2TP)   No     NET     5.2.3790.0     10/1/2002
       Microsoft      netrasa.inf    Not Available
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WAN Miniport (IP)     No     NET     5.2.3790.0     10/1/2002
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       ROOT\MS_NDISWANIP\0000
WAN Miniport (PPPOE)  No     NET     5.2.3790.0     10/1/2002
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       ROOT\MS_PPPOEMINIPORT\0000
WAN Miniport (PPTP)   No     NET     5.2.3790.0     10/1/2002
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       ROOT\MS_PPTPMINIPORT\0000
Direct Parallel       No     NET     5.2.3790.0     10/1/2002
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       ROOT\MS_PTIMINIPORT\0000
Terminal Server Device Redirector    No     SYSTEM  5.2.3790.0
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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
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Microcode Update Device       No     SYSTEM  5.2.3790.0     10/1/2002
       (Standard system devices)     machine.inf    Not Available
       ROOT\SYSTEM\0001
Unisys Intelligent Fibre Channel Fabric Bus Enumerator      No     SYSTEM
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       Not Available  ROOT\SYSTEM\0002
Unisys Intelligent Fibre Channel Fabric Disk Driver  No     DISKDRIVE
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        2.55.0.7       10/22/2003     Unisys Corporation     oem10.inf
        Not Available
        SCSI\DISK&VEN_UNISYS__VIRTUALSTORAGE__01.0\1&1A590E2C&0&0940008610
0000100000000000004000
Unisys Intelligent Fibre Channel Fabric Disk Driver  No      DISKDRIVE
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        Not Available
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0000100000000000003000
Unisys Intelligent Fibre Channel Fabric Disk Driver  No      DISKDRIVE
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        Not Available
        SCSI\DISK&VEN_UNISYS__VIRTUALSTORAGE__01.0\1&1A590E2C&0&0940008610
000010000000000000C000
Unisys Intelligent Fibre Channel Fabric Disk Driver  No      DISKDRIVE
        2.55.0.7       10/22/2003     Unisys Corporation     oem10.inf
        Not Available
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000010000000000000B000
Unisys Intelligent Fibre Channel Fabric Disk Driver  No      DISKDRIVE
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        Not Available
        SCSI\DISK&VEN_UNISYS__VIRTUALSTORAGE__01.0\1&1A590E2C&0&0940008610
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Unisys Intelligent Fibre Channel Fabric Disk Driver  No      DISKDRIVE
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Unisys Intelligent Fibre Channel Fabric Disk Driver  No      DISKDRIVE
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        Not Available
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Unisys Intelligent Fibre Channel Fabric Disk Driver  No      DISKDRIVE
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        Not Available
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Unisys Intelligent Fibre Channel Fabric Disk Driver  No      DISKDRIVE
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        Not Available
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Unisys Intelligent Fibre Channel Fabric Disk Driver  No      DISKDRIVE
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        Not Available
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Unisys Intelligent Fibre Channel Fabric Disk Driver  No      DISKDRIVE
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Unisys Intelligent Fibre Channel Fabric Disk Driver  No      DISKDRIVE
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        Not Available
        SCSI\DISK&VEN_UNISYS__VIRTUALSTORAGE__01.0\1&1A590E2C&0&3540008610
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Unisys Intelligent Fibre Channel Fabric Disk Driver  No      DISKDRIVE
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        Not Available
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Unisys Intelligent Fibre Channel Fabric Disk Driver  No      DISKDRIVE
        2.55.0.7       10/22/2003     Unisys Corporation     oem10.inf
        Not Available
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Unisys Intelligent Fibre Channel Fabric Disk Driver  No      DISKDRIVE
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        Not Available
        SCSI\DISK&VEN_UNISYS__VIRTUALSTORAGE__01.0\1&1A590E2C&0&3540008610
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Unisys Intelligent Fibre Channel Fabric Disk Driver  No      DISKDRIVE
        2.55.0.7       10/22/2003     Unisys Corporation     oem10.inf
        Not Available
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Unisys Intelligent Fibre Channel Fabric Disk Driver  No      DISKDRIVE
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        Not Available
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Unisys Intelligent Fibre Channel Fabric Disk Driver  No      DISKDRIVE
        2.55.0.7       10/22/2003     Unisys Corporation     oem10.inf
        Not Available
        SCSI\DISK&VEN_UNISYS__VIRTUALSTORAGE__01.0\1&1A590E2C&0&9B3F008610
000010000000000000007000
Unisys Intelligent Fibre Channel Fabric Disk Driver  No      DISKDRIVE
        2.55.0.7       10/22/2003     Unisys Corporation     oem10.inf
        Not Available
        SCSI\DISK&VEN_UNISYS__VIRTUALSTORAGE__01.0\1&1A590E2C&0&9B3F008610
000010000000000000006000
Unisys Intelligent Fibre Channel Fabric Disk Driver  No      DISKDRIVE
        2.55.0.7       10/22/2003     Unisys Corporation     oem10.inf
        Not Available
        SCSI\DISK&VEN_UNISYS__VIRTUALSTORAGE__01.0\1&1A590E2C&0&9B3F008610
000010000000000000005000
Unisys Intelligent Fibre Channel Fabric Disk Driver  No      DISKDRIVE
        2.55.0.7       10/22/2003     Unisys Corporation     oem10.inf
        Not Available
        SCSI\DISK&VEN_UNISYS__VIRTUALSTORAGE__01.0\1&1A590E2C&0&9B3F008610
000010000000000000004000
Unisys Intelligent Fibre Channel Fabric Disk Driver  No      DISKDRIVE
        2.55.0.7       10/22/2003     Unisys Corporation     oem10.inf
        Not Available
        SCSI\DISK&VEN_UNISYS__VIRTUALSTORAGE__01.0\1&1A590E2C&0&9B3F008610
000010000000000000003000
Unisys Intelligent Fibre Channel Fabric Disk Driver  No      DISKDRIVE
        2.55.0.7       10/22/2003     Unisys Corporation     oem10.inf
        Not Available
        SCSI\DISK&VEN_UNISYS__VIRTUALSTORAGE__01.0\1&1A590E2C&0&9B3F008610
000010000000000000C000
Unisys Intelligent Fibre Channel Fabric Disk Driver  No      DISKDRIVE
        2.55.0.7       10/22/2003     Unisys Corporation     oem10.inf
        Not Available
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Unisys Intelligent Fibre Channel Fabric Disk Driver  No      DISKDRIVE
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Unisys Intelligent Fibre Channel Fabric Disk Driver  No      DISKDRIVE
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Unisys Intelligent Fibre Channel Fabric Disk Driver  No      DISKDRIVE
        2.55.0.7       10/22/2003     Unisys Corporation     oem10.inf
        Not Available
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000010000000000000007000
Unisys Intelligent Fibre Channel Fabric Disk Driver  No      DISKDRIVE
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        Not Available
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Unisys Intelligent Fibre Channel Fabric Disk Driver  No      DISKDRIVE
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        Not Available
        SCSI\DISK&VEN_UNISYS__VIRTUALSTORAGE__01.0\1&1A590E2C&0&6340008610
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Unisys Intelligent Fibre Channel Fabric Disk Driver  No      DISKDRIVE
        2.55.0.7       10/22/2003     Unisys Corporation     oem10.inf
        Not Available
        SCSI\DISK&VEN_UNISYS__VIRTUALSTORAGE__01.0\1&1A590E2C&0&6340008610
000010000000000000004000
Unisys Intelligent Fibre Channel Fabric Disk Driver  No      DISKDRIVE
        2.55.0.7       10/22/2003     Unisys Corporation     oem10.inf
        Not Available
        SCSI\DISK&VEN_UNISYS__VIRTUALSTORAGE__01.0\1&1A590E2C&0&6340008610
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Unisys Intelligent Fibre Channel Fabric Disk Driver  No      DISKDRIVE
        2.55.0.7       10/22/2003     Unisys Corporation     oem10.inf
        Not Available
        SCSI\DISK&VEN_UNISYS__VIRTUALSTORAGE__01.0\1&1A590E2C&0&6340008610
000010000000000000C000
```

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Unisys Intelligent Fibre Channel Fabric Disk Driver  No      DISKDRIVE
        2.55.0.7       10/22/2003     Unisys Corporation     oem10.inf
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        SCSI\DISK&VEN_UNISYS__VIRTUALSTORAGE__01.0\1&1A590E2C&0&6340008610
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Unisys Intelligent Fibre Channel Fabric Disk Driver  No      DISKDRIVE
        2.55.0.7       10/22/2003     Unisys Corporation     oem10.inf
        Not Available
        SCSI\DISK&VEN_UNISYS__VIRTUALSTORAGE__01.0\1&1A590E2C&0&6340008610
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Unisys Intelligent Fibre Channel Fabric Disk Driver  No      DISKDRIVE
        2.55.0.7       10/22/2003     Unisys Corporation     oem10.inf
        Not Available
        SCSI\DISK&VEN_UNISYS__VIRTUALSTORAGE__01.0\1&1A590E2C&0&6340008610
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Unisys Intelligent Fibre Channel Fabric Disk Driver  No      DISKDRIVE
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        Not Available
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Unisys Intelligent Fibre Channel Fabric Disk Driver  No      DISKDRIVE
        2.55.0.7       10/22/2003     Unisys Corporation     oem10.inf
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Unisys Intelligent Fibre Channel Fabric Disk Driver  No      DISKDRIVE
        2.55.0.7       10/22/2003     Unisys Corporation     oem10.inf
        Not Available
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Unisys Intelligent Fibre Channel Fabric Disk Driver  No      DISKDRIVE
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Unisys Intelligent Fibre Channel Fabric Disk Driver  No      DISKDRIVE
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        Not Available
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Unisys Intelligent Fibre Channel Fabric Disk Driver  No      DISKDRIVE
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Unisys Intelligent Fibre Channel Fabric Disk Driver  No      DISKDRIVE
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        Not Available
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Unisys Intelligent Fibre Channel Fabric Disk Driver  No      DISKDRIVE
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        Not Available
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000010000000000000009000

[Environment Variables]

Variable       Value   User Name
ClusterLog     C:\WINDOWS\Cluster\cluster.log        <SYSTEM>
ComSpec %SystemRoot%\system32\cmd.exe <SYSTEM>
NUMBER_OF_PROCESSORS   32      <SYSTEM>
OS      Windows_NT     <SYSTEM>
Path
        %SystemRoot%\system32;%SystemRoot%;%SystemRoot%\System32\Wbem;C:\P
rogram Files\Microsoft SQL Server\80\Tools\BINN;C:\Program Files\Microsoft
SQL Server\mssql\BINN  <SYSTEM>
PATHEXT .COM;.EXE;.BAT;.CMD;.VBS;.VBE;.JS;.JSE;.WSF;.WSH     <SYSTEM>

PROCESSOR_ARCHITECTURE x86     <SYSTEM>
PROCESSOR_IDENTIFIER   x86 Family 15 Model 2 Stepping 6, GenuineIntel
        <SYSTEM>
PROCESSOR_LEVEL        15      <SYSTEM>
PROCESSOR_REVISION     0206    <SYSTEM>
TEMP    %SystemRoot%\TEMP      <SYSTEM>
TMP     %SystemRoot%\TEMP      <SYSTEM>
windir  %SystemRoot%   <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     MV-BOBDYLAN\Administrator

TMP     %USERPROFILE%\Local Settings\Temp     MV-BOBDYLAN\Administrator


[Print Jobs]

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

[Network Connections]

Local Name     Remote Name    Type    Status  User Name

[Running Tasks]
```

```
Name    Path    Process ID     Priority       Min Working Set       Max
Working Set    Start Time     Version Size    File Date
system idle process    Not Available  0       0       Not Available  Not
Available      Not Available  Not Available  Not Available  Not Available

system  Not Available  4       8       0       1413120 Not Available  Not
Available      Not Available  Not Available
smss.exe       Not Available  672     11      204800  1413120 4/25/2004 5:11
PM     Not Available  Not Available  Not Available
csrss.exe      Not Available  720     13      Not Available  Not Available
       4/25/2004 5:12 PM      Not Available  Not Available  Not Available

winlogon.exe   c:\windows\system32\winlogon.exe      744     13      204800
       1413120 4/25/2004 5:12 PM      5.2.3790.0 (srv03_rtm.030324-2048)
       536.50 KB (549,376 bytes)      3/25/2003 4:00 AM
services.exe   c:\windows\system32\services.exe      788     9       204800
       1413120 4/25/2004 5:12 PM      5.2.3790.0 (srv03_rtm.030324-2048)
       102.00 KB (104,448 bytes)      3/25/2003 4:00 AM
lsass.exe      c:\windows\system32\lsass.exe 800     9       204800
       1413120 4/25/2004 5:12 PM      5.2.3790.0 (srv03_rtm.030324-2048)
       13.00 KB (13,312 bytes)        3/25/2003 4:00 AM
svchost.exe    c:\windows\system32\svchost.exe       1012    8       204800
       1413120 4/25/2004 5:12 PM      5.2.3790.0 (srv03_rtm.030324-2048)
       13.00 KB (13,312 bytes)        3/25/2003 4:00 AM
gnconmgr.exe   c:\windows\system32\gnconmgr.exe      1120    8       204800
       1413120 4/25/2004 5:12 PM      4.2.0.75       168.05 KB (172,079
bytes)  4/25/2004 2:17 AM
svchost.exe    c:\windows\system32\svchost.exe       1164    8       204800
       1413120 4/25/2004 5:12 PM      5.2.3790.0 (srv03_rtm.030324-2048)
       13.00 KB (13,312 bytes)        3/25/2003 4:00 AM
explorer.exe   c:\windows\explorer.exe       1492    8       204800
       1413120 4/25/2004 5:14 PM      6.00.3790.0 (srv03_rtm.030324-2048)
       1,008.50 KB (1,032,704 bytes) 3/25/2003 4:00 AM
msdtc.exe      Not Available  1544    8       Not Available  Not Available
       4/25/2004 5:14 PM      Not Available  Not Available  Not Available

svchost.exe    Not Available  2020    8       Not Available  Not Available
       4/25/2004 5:14 PM      Not Available  Not Available  Not Available

wmiprvse.exe   Not Available  1312    8       Not Available  Not Available
       4/25/2004 5:15 PM      Not Available  Not Available  Not Available

cmd.exe c:\windows\system32\cmd.exe   2524    8       204800  1413120
       4/26/2004 5:47 AM      5.2.3790.0 (srv03_rtm.030324-2048)    374.00
KB (382,976 bytes)     3/25/2003 4:00 AM
sqlservr.exe
       c:\sql80\sqlbuilds\9_18_03_awe_fix_interpolation\sqlservr.exe
       344     13      204800  1413120 4/26/2004 5:47 AM
       2000.080.0857.00       7.18 MB (7,532,584 bytes)      4/25/2004 8:49
AM
cmd.exe c:\windows\system32\cmd.exe   3956    8       204800  1413120
       4/26/2004 9:26 AM      5.2.3790.0 (srv03_rtm.030324-2048)    374.00
KB (382,976 bytes)     3/25/2003 4:00 AM
cscript.exe    c:\windows\system32\cscript.exe       968     8       204800
       1413120 4/26/2004 9:26 AM      5.6.0.8515     92.00 KB (94,208
bytes)  3/25/2003 4:00 AM
helpctr.exe    c:\windows\pchealth\helpctr\binaries\helpctr.exe     2244
       8       204800  1413120 4/26/2004 9:37 AM      5.2.3790.0
(srv03_rtm.030324-2048)       764.00 KB (782,336 bytes)      4/25/2004 1:24
AM
wmiprvse.exe   Not Available  856     8       Not Available  Not Available
       4/26/2004 9:37 AM      Not Available  Not Available  Not Available

helpsvc.exe    c:\windows\pchealth\helpctr\binaries\helpsvc.exe     2252
       8       204800  1413120 4/26/2004 9:37 AM      5.2.3790.0
(srv03_rtm.030324-2048)       720.00 KB (737,280 bytes)      4/25/2004 1:24
AM
osql.exe       c:\program files\microsoft sql
server\80\tools\binn\osql.exe 2508    8       204800  1413120 4/26/2004 9:38
AM      2000.080.0760.00       56.55 KB (57,904 bytes)        4/25/2004 8:23
AM

[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 4:00 AM      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 4:00 AM      Microsoft Corporation
       c:\windows\system32\ntdll.dll
kernel32       5.2.3790.73 (srv03_qfe.030614-1003)   965.50 KB (988,672
bytes)  3/25/2003 4:00 AM      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 4:00 AM      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 4:00 AM      Microsoft Corporation
       c:\windows\system32\advapi32.dll
rpcrt4  5.2.3790.59 (srv03_gdr.030614-1004)   642.50 KB (657,920 bytes)
       7/5/2003 1:03 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 4:00 AM      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 4:00 AM      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 4:00 AM      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 4:00 AM      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 4:00 AM      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 4:00 AM      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 4:00 AM      Microsoft Corporation
       c:\windows\system32\secur32.dll
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winsta  5.2.3790.0 (srv03_rtm.030324-2048)    51.00 KB (52,224 bytes)
        3/25/2003 4:00 AM      Microsoft Corporation
        c:\windows\system32\winsta.dll
netapi32        5.2.3790.0 (srv03_rtm.030324-2048)    317.00 KB (324,608
bytes)  3/25/2003 4:00 AM      Microsoft Corporation
        c:\windows\system32\netapi32.dll
profmap 5.2.3790.0 (srv03_rtm.030324-2048)    22.00 KB (22,528 bytes)
        3/25/2003 4:00 AM      Microsoft Corporation
        c:\windows\system32\profmap.dll
regapi  5.2.3790.0 (srv03_rtm.030324-2048)    48.50 KB (49,664 bytes)
        3/25/2003 4:00 AM      Microsoft Corporation
        c:\windows\system32\regapi.dll
ws2_32  5.2.3790.0 (srv03_rtm.030324-2048)    87.50 KB (89,600 bytes)
        3/25/2003 4:00 AM      Microsoft Corporation
        c:\windows\system32\ws2_32.dll
ws2help 5.2.3790.0 (srv03_rtm.030324-2048)    19.50 KB (19,968 bytes)
        3/25/2003 4:00 AM      Microsoft Corporation
        c:\windows\system32\ws2help.dll
psapi   5.2.3790.0 (srv03_rtm.030324-2048)    21.50 KB (22,016 bytes)
        3/25/2003 4:00 AM      Microsoft Corporation
        c:\windows\system32\psapi.dll
version 5.2.3790.0 (srv03_rtm.030324-2048)    17.00 KB (17,408 bytes)
        3/25/2003 4:00 AM      Microsoft Corporation
        c:\windows\system32\version.dll
setupapi        5.2.3790.0 (srv03_rtm.030324-2048)    1,014.50 KB
(1,038,848 bytes)      3/25/2003 4:00 AM      Microsoft Corporation
        c:\windows\system32\setupapi.dll
msgina  5.2.3790.0 (srv03_rtm.030324-2048)    1.14 MB (1,191,936 bytes)
        3/25/2003 4:00 AM      Microsoft Corporation
        c:\windows\system32\msgina.dll
shsvcs  6.00.3790.0 (srv03_rtm.030324-2048)   121.50 KB (124,416 bytes)
        3/25/2003 4:00 AM      Microsoft Corporation
        c:\windows\system32\shsvcs.dll
shlwapi 6.00.3790.0 (srv03_rtm.030324-2048)   281.00 KB (287,744 bytes)
        3/25/2003 4:00 AM      Microsoft Corporation
        c:\windows\system32\shlwapi.dll
sfc     5.2.3790.0 (srv03_rtm.030324-2048)    4.50 KB (4,608 bytes)
        3/25/2003 4:00 AM      Microsoft Corporation
        c:\windows\system32\sfc.dll
sfc_os  5.2.3790.0 (srv03_rtm.030324-2048)    133.00 KB (136,192 bytes)
        3/25/2003 4:00 AM      Microsoft Corporation
        c:\windows\system32\sfc_os.dll
wintrust        5.131.3790.0 (srv03_rtm.030324-2048)  161.50 KB (165,376
bytes)  3/25/2003 4:00 AM      Microsoft Corporation
        c:\windows\system32\wintrust.dll
ole32   5.2.3790.68 (srv03_gdr.030614-1004)   1.13 MB (1,182,720 bytes)
        7/5/2003 1:03 PM       Microsoft Corporation
        c:\windows\system32\ole32.dll
imagehlp        5.2.3790.0 (srv03_rtm.030324-2048)    142.50 KB (145,920
bytes)  3/25/2003 4:00 AM      Microsoft Corporation
        c:\windows\system32\imagehlp.dll
comctl32        6.0 (srv03_rtm.030324-2048)   907.00 KB (928,768 bytes)
        4/24/2004 6:02 PM      Microsoft Corporation
        c:\windows\winsxs\x86_microsoft.windows.common-
controls_6595b64144ccf1df_6.0.100.0_x-ww_8417450b\comctl32.dll
winscard        5.2.3790.0 (srv03_rtm.030324-2048)    98.50 KB (100,864
bytes)  3/25/2003 4:00 AM      Microsoft Corporation
        c:\windows\system32\winscard.dll
wtsapi32        5.2.3790.0 (srv03_rtm.030324-2048)    17.50 KB (17,920
bytes)  3/25/2003 4:00 AM      Microsoft Corporation
        c:\windows\system32\wtsapi32.dll
sxs     5.2.3790.0 (srv03_rtm.030324-2048)    733.00 KB (750,592 bytes)
        3/25/2003 4:00 AM      Microsoft Corporation
        c:\windows\system32\sxs.dll
rsaenh  5.2.3790.0 (srv03_rtm.030324-2048)    176.83 KB (181,072 bytes)
        3/25/2003 4:00 AM      Microsoft Corporation
        c:\windows\system32\rsaenh.dll
wldap32 5.2.3790.0 (srv03_rtm.030324-2048)    158.00 KB (161,792 bytes)
        3/25/2003 4:00 AM      Microsoft Corporation
        c:\windows\system32\wldap32.dll
cscdll  5.2.3790.0 (srv03_rtm.030324-2048)    99.00 KB (101,376 bytes)
        3/25/2003 4:00 AM      Microsoft Corporation
        c:\windows\system32\cscdll.dll
wlnotify        5.2.3790.0 (srv03_rtm.030324-2048)    87.50 KB (89,600
bytes)  3/25/2003 4:00 AM      Microsoft Corporation
        c:\windows\system32\wlnotify.dll
winmm   5.2.3790.0 (srv03_rtm.030324-2048)    166.00 KB (169,984 bytes)
        3/25/2003 4:00 AM      Microsoft Corporation
        c:\windows\system32\winmm.dll
winspool        5.2.3790.0 (srv03_rtm.030324-2048)    140.00 KB (143,360
bytes)  3/25/2003 4:00 AM      Microsoft Corporation
        c:\windows\system32\winspool.drv
mpr     5.2.3790.0 (srv03_rtm.030324-2048)    56.00 KB (57,344 bytes)
        3/25/2003 4:00 AM      Microsoft Corporation
        c:\windows\system32\mpr.dll
shell32 6.00.3790.0 (srv03_rtm.030324-2048)   7.79 MB (8,166,400 bytes)
        3/25/2003 4:00 AM      Microsoft Corporation
        c:\windows\system32\shell32.dll
comctl32        5.82 (srv03_rtm.030324-2048)  561.00 KB (574,464 bytes)
        4/24/2004 6:02 PM      Microsoft Corporation
        c:\windows\winsxs\x86_microsoft.windows.common-
controls_6595b64144ccf1df_5.82.0.0_x-ww_8a69ba05\comctl32.dll
uxtheme 6.00.3790.0 (srv03_rtm.030324-2048)   196.00 KB (200,704 bytes)
        3/25/2003 4:00 AM      Microsoft Corporation
        c:\windows\system32\uxtheme.dll
samlib  5.2.3790.0 (srv03_rtm.030324-2048)    49.00 KB (50,176 bytes)
        3/25/2003 4:00 AM      Microsoft Corporation
        c:\windows\system32\samlib.dll
cscui   5.2.3790.0 (srv03_rtm.030324-2048)    305.00 KB (312,320 bytes)
        3/25/2003 4:00 AM      Microsoft Corporation
        c:\windows\system32\cscui.dll
ntmarta 5.2.3790.0 (srv03_rtm.030324-2048)    114.00 KB (116,736 bytes)
        3/25/2003 4:00 AM      Microsoft Corporation
        c:\windows\system32\ntmarta.dll
oleaut32        5.2.3790.0     486.00 KB (497,664 bytes)     3/25/2003 4:00
AM      Microsoft Corporation  c:\windows\system32\oleaut32.dll
clbcatq 2001.12.4720.0 (srv03_rtm.030324-2048)        481.00 KB (492,544
bytes)  4/25/2004 1:20 AM      Microsoft Corporation
        c:\windows\system32\clbcatq.dll
comres  2001.12.4720.0 (srv03_rtm.030324-2048)        778.00 KB (796,672
bytes)  3/25/2003 4:00 AM      Microsoft Corporation
        c:\windows\system32\comres.dll
wbemprox        5.2.3790.0 (srv03_rtm.030324-2048)    17.50 KB (17,920
bytes)  4/25/2004 1:20 AM      Microsoft Corporation
        c:\windows\system32\wbem\wbemprox.dll
```

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wbemcomn       5.2.3790.0 (srv03_rtm.030324-2048)    211.50 KB (216,576
bytes)  3/25/2003 4:00 AM      Microsoft Corporation
        c:\windows\system32\wbem\wbemcomn.dll
wbemsvc 5.2.3790.0 (srv03_rtm.030324-2048)    42.50 KB (43,520 bytes)
        4/25/2004 1:20 AM      Microsoft Corporation
        c:\windows\system32\wbem\wbemsvc.dll
fastprox       5.2.3790.0 (srv03_rtm.030324-2048)    443.00 KB (453,632
bytes)  4/25/2004 1:20 AM      Microsoft Corporation
        c:\windows\system32\wbem\fastprox.dll
msvcp60 6.05.2144.0    388.00 KB (397,312 bytes)     3/25/2003 4:00 AM
        Microsoft Corporation  c:\windows\system32\msvcp60.dll
ntdsapi 5.2.3790.0 (srv03_rtm.030324-2048)    76.00 KB (77,824 bytes)
        3/25/2003 4:00 AM      Microsoft Corporation
        c:\windows\system32\ntdsapi.dll
dnsapi  5.2.3790.0 (srv03_rtm.030324-2048)    147.50 KB (151,040 bytes)
        3/25/2003 4:00 AM      Microsoft Corporation
        c:\windows\system32\dnsapi.dll
services       5.2.3790.0 (srv03_rtm.030324-2048)    102.00 KB (104,448
bytes)  3/25/2003 4:00 AM      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 4:00 AM      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 4:00 AM      Microsoft Corporation
        c:\windows\system32\authz.dll
umpnpmgr       5.2.3790.0 (srv03_rtm.030324-2048)    121.50 KB (124,416
bytes)  3/25/2003 4:00 AM      Microsoft Corporation
        c:\windows\system32\umpnpmgr.dll
ncobjapi       5.2.3790.0 (srv03_rtm.030324-2048)    34.50 KB (35,328
bytes)  3/25/2003 4:00 AM      Microsoft Corporation
        c:\windows\system32\ncobjapi.dll
eventlog       5.2.3790.0 (srv03_rtm.030324-2048)    60.50 KB (61,952
bytes)  3/25/2003 4:00 AM      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 4:00 AM      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 4:00 AM      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 4:00 AM      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 4:00 AM      Microsoft Corporation
        c:\windows\system32\cryptdll.dll
msprivs 5.2.3790.0 (srv03_rtm.030324-2048)    46.50 KB (47,616 bytes)
        3/25/2003 4:00 AM      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 4:00 AM      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 4:00 AM      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 4:00 AM      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 4:00 AM      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 4:00 AM      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 4:00 AM      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 4:00 AM      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 4:00 AM      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 4:00 AM      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 4:00 AM      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 4:00 AM      Microsoft Corporation
        c:\windows\system32\ntdsatq.dll
mswsock 5.2.3790.0 (srv03_rtm.030324-2048)    254.00 KB (260,096 bytes)
        3/25/2003 4:00 AM      Microsoft Corporation
        c:\windows\system32\mswsock.dll
esent   5.2.3790.0 (srv03_rtm.030324-2048)    1.01 MB (1,056,256 bytes)
        3/25/2003 4:00 AM      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 4:00 AM      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 4:00 AM      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 4:00 AM      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 4:00 AM      Microsoft Corporation
        c:\windows\system32\psbase.dll
dssenh  5.2.3790.0 (srv03_rtm.030324-2048)    131.33 KB (134,480 bytes)
        3/25/2003 4:00 AM      Microsoft Corporation
        c:\windows\system32\dssenh.dll
svchost 5.2.3790.0 (srv03_rtm.030324-2048)    13.00 KB (13,312 bytes)
        3/25/2003 4:00 AM      Microsoft Corporation
        c:\windows\system32\svchost.exe
rpcss   5.2.3790.68 (srv03_gdr.030614-1004)   212.00 KB (217,088 bytes)
        7/5/2003 1:03 PM       Microsoft Corporation
        c:\windows\system32\rpcss.dll
gnconmgr       4.2.0.75       168.05 KB (172,079 bytes)     4/25/2004 2:17
AM      Giganet Incorporated   c:\windows\system32\gnconmgr.exe
vipl    4.2.0.75       80.00 KB (81,920 bytes)       4/25/2004 2:25 AM
        Giganet Incorporated   c:\windows\system32\vipl.dll
```

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wkssvc  5.2.3790.0 (srv03_rtm.030324-2048)    125.00 KB (128,000 bytes)
        3/25/2003 4:00 AM      Microsoft Corporation
        c:\windows\system32\wkssvc.dll
dmserver        5.2.3790.0 (srv03_rtm.030324-2048)    24.00 KB (24,576
bytes)  3/25/2003 4:00 AM      Microsoft Corporation
        c:\windows\system32\dmserver.dll
es      2001.12.4720.0 (srv03_rtm.030324-2048)        221.50 KB (226,816
bytes)  3/25/2003 4:00 AM      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 4:00 AM      Microsoft Corporation
        c:\windows\system32\srvsvc.dll
sens    5.2.3790.0 (srv03_rtm.030324-2048)    35.50 KB (36,352 bytes)
        3/25/2003 4:00 AM      Microsoft Corporation
        c:\windows\system32\sens.dll
wmisvc  5.2.3790.0 (srv03_rtm.030324-2048)    131.00 KB (134,144 bytes)
        4/25/2004 1:20 AM      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 4:00 AM      Microsoft Corporation
        c:\windows\system32\vssapi.dll
atl     3.05.2283      83.00 KB (84,992 bytes)       3/25/2003 4:00 AM
        Microsoft Corporation  c:\windows\system32\atl.dll
comsvcs 2001.12.4720.0 (srv03_rtm.030324-2048)        1.14 MB (1,199,616
bytes)  4/25/2004 1:20 AM      Microsoft Corporation
        c:\windows\system32\comsvcs.dll
ntlsapi 5.2.3790.0 (srv03_rtm.030324-2048)    8.00 KB (8,192 bytes)
        3/25/2003 4:00 AM      Microsoft Corporation
        c:\windows\system32\ntlsapi.dll
wbemcore        5.2.3790.0 (srv03_rtm.030324-2048)    457.00 KB (467,968
bytes)  4/25/2004 1:20 AM      Microsoft Corporation
        c:\windows\system32\wbem\wbemcore.dll
esscli  5.2.3790.0 (srv03_rtm.030324-2048)    235.50 KB (241,152 bytes)
        4/25/2004 1:20 AM      Microsoft Corporation
        c:\windows\system32\wbem\esscli.dll
wmiutils        5.2.3790.0 (srv03_rtm.030324-2048)    90.50 KB (92,672
bytes)  4/25/2004 1:20 AM      Microsoft Corporation
        c:\windows\system32\wbem\wmiutils.dll
repdrvfs        5.2.3790.0 (srv03_rtm.030324-2048)    165.00 KB (168,960
bytes)  4/25/2004 1:20 AM      Microsoft Corporation
        c:\windows\system32\wbem\repdrvfs.dll
wmiprvsd        5.2.3790.0 (srv03_rtm.030324-2048)    405.50 KB (415,232
bytes)  4/25/2004 1:20 AM      Microsoft Corporation
        c:\windows\system32\wbem\wmiprvsd.dll
wbemess 5.2.3790.0 (srv03_rtm.030324-2048)    256.50 KB (262,656 bytes)
        4/25/2004 1:20 AM      Microsoft Corporation
        c:\windows\system32\wbem\wbemess.dll
ncprov  5.2.3790.0 (srv03_rtm.030324-2048)    43.00 KB (44,032 bytes)
        4/25/2004 1:20 AM      Microsoft Corporation
        c:\windows\system32\wbem\ncprov.dll
wiarpc  5.2.3790.0 (srv03_rtm.030324-2048)    30.00 KB (30,720 bytes)
        3/25/2003 4:00 AM      Microsoft Corporation
        c:\windows\system32\wiarpc.dll
netman  5.2.3790.0 (srv03_rtm.030324-2048)    209.00 KB (214,016 bytes)
        3/25/2003 4:00 AM      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 4:00 AM      Microsoft Corporation
        c:\windows\system32\mprapi.dll
activeds        5.2.3790.0 (srv03_rtm.030324-2048)    189.00 KB (193,536
bytes)  3/25/2003 4:00 AM      Microsoft Corporation
        c:\windows\system32\activeds.dll
adsldpc 5.2.3790.0 (srv03_rtm.030324-2048)    142.50 KB (145,920 bytes)
        3/25/2003 4:00 AM      Microsoft Corporation
        c:\windows\system32\adsldpc.dll
credui  5.2.3790.0 (srv03_rtm.030324-2048)    159.00 KB (162,816 bytes)
        3/25/2003 4:00 AM      Microsoft Corporation
        c:\windows\system32\credui.dll
rtutils 5.2.3790.0 (srv03_rtm.030324-2048)    32.00 KB (32,768 bytes)
        3/25/2003 4:00 AM      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 4:00 AM      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 4:00 AM      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 4:00 AM      Microsoft Corporation
        c:\windows\system32\tapi32.dll
wzcsvc  5.2.3790.0 (srv03_rtm.030324-2048)    272.50 KB (279,040 bytes)
        3/25/2003 4:15 AM      Microsoft Corporation
        c:\windows\system32\wzcsvc.dll
wmi     5.2.3790.0 (srv03_rtm.030324-2048)    6.50 KB (6,656 bytes)
        3/25/2003 4:00 AM      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 4:00 AM      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 4:15 AM      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 4:00 AM      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 4:00 AM      Microsoft Corporation
        c:\windows\system32\clusapi.dll
hnetcfg 5.2.3790.0 (srv03_rtm.030324-2048)    243.50 KB (249,344 bytes)
        3/25/2003 4:00 AM      Microsoft Corporation
        c:\windows\system32\hnetcfg.dll
wininet 6.00.3790.0 (srv03_rtm.030324-2048)   609.00 KB (623,616 bytes)
        3/25/2003 4:00 AM      Microsoft Corporation
        c:\windows\system32\wininet.dll
rasdlg  5.2.3790.0 (srv03_rtm.030324-2048)    642.00 KB (657,408 bytes)
        3/25/2003 4:00 AM      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 4:00 AM      Microsoft Corporation
        c:\windows\system32\rasadhlp.dll
netcfgx 5.2.3790.0 (srv03_rtm.030324-2048)    726.00 KB (743,424 bytes)
        3/25/2003 4:00 AM      Microsoft Corporation
        c:\windows\system32\netcfgx.dll
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winipsec       5.2.3790.0 (srv03_rtm.030324-2048)    34.50 KB (35,328
bytes)  3/25/2003 4:00 AM      Microsoft Corporation
        c:\windows\system32\winipsec.dll
pchsvc  5.2.3790.0 (srv03_rtm.030324-2048)    31.50 KB (32,256 bytes)
        4/25/2004 1:24 AM      Microsoft Corporation
        c:\windows\pchealth\helpctr\binaries\pchsvc.dll
wbemcons       5.2.3790.0 (srv03_rtm.030324-2048)    69.00 KB (70,656
bytes)  4/25/2004 1:20 AM      Microsoft Corporation
        c:\windows\system32\wbem\wbemcons.dll
explorer       6.00.3790.0 (srv03_rtm.030324-2048)   1,008.50 KB
(1,032,704 bytes)      3/25/2003 4:00 AM      Microsoft Corporation
        c:\windows\explorer.exe
browseui       6.00.3790.0 (srv03_rtm.030324-2048)   1.01 MB (1,057,280
bytes)  3/25/2003 4:00 AM      Microsoft Corporation
        c:\windows\system32\browseui.dll
shdocvw 6.00.3790.0 (srv03_rtm.030324-2048)   1.33 MB (1,393,664 bytes)
        3/25/2003 4:00 AM      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 4:00 AM      Microsoft Corporation
        c:\windows\system32\apphelp.dll
themeui 6.00.3790.0 (srv03_rtm.030324-2048)   360.50 KB (369,152 bytes)
        3/25/2003 4:00 AM      Microsoft Corporation
        c:\windows\system32\themeui.dll
msimg32 5.2.3790.0 (srv03_rtm.030324-2048)    4.50 KB (4,608 bytes)
        3/25/2003 4:00 AM      Microsoft Corporation
        c:\windows\system32\msimg32.dll
linkinfo       5.2.3790.0 (srv03_rtm.030324-2048)    16.50 KB (16,896
bytes)  3/25/2003 4:00 AM      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 4:00 AM      Microsoft Corporation
        c:\windows\system32\ntshrui.dll
drprov  5.2.3790.0 (srv03_rtm.030324-2048)    12.50 KB (12,800 bytes)
        3/25/2003 4:00 AM      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 4:00 AM      Microsoft Corporation
        c:\windows\system32\ntlanman.dll
netui0  5.2.3790.0 (srv03_rtm.030324-2048)    75.50 KB (77,312 bytes)
        3/25/2003 4:00 AM      Microsoft Corporation
        c:\windows\system32\netui0.dll
netui1  5.2.3790.0 (srv03_rtm.030324-2048)    184.00 KB (188,416 bytes)
        3/25/2003 4:00 AM      Microsoft Corporation
        c:\windows\system32\netui1.dll
davclnt 5.2.3790.0 (srv03_rtm.030324-2048)    23.50 KB (24,064 bytes)
        3/25/2003 4:00 AM      Microsoft Corporation
        c:\windows\system32\davclnt.dll
webcheck       6.00.3790.0 (srv03_rtm.030324-2048)   261.50 KB (267,776
bytes)  3/25/2003 4:00 AM      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 4:00 AM      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 4:00 AM      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 4:00 AM      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 4:00 AM      Microsoft Corporation
        c:\windows\system32\powrprof.dll
urlmon  6.00.3790.0 (srv03_rtm.030324-2048)   501.50 KB (513,536 bytes)
        3/25/2003 4:00 AM      Microsoft Corporation
        c:\windows\system32\urlmon.dll
printui 5.2.3790.0 (srv03_rtm.030324-2048)    536.50 KB (549,376 bytes)
        3/25/2003 4:00 AM      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 4:00 AM      Microsoft Corporation
        c:\windows\system32\cfgmgr32.dll
browselc       6.00.3790.0 (srv03_rtm.030324-2048)   62.00 KB (63,488
bytes)  3/25/2003 4:00 AM      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 4:00 AM      Microsoft Corporation
        c:\windows\system32\shdoclc.dll
zipfldr 6.00.3790.0 (srv03_rtm.030324-2048)   316.00 KB (323,584 bytes)
        3/25/2003 4:00 AM      Microsoft Corporation
        c:\windows\system32\zipfldr.dll
actxprxy       6.00.3790.0 (srv03_rtm.030324-2048)   95.00 KB (97,280
bytes)  3/25/2003 4:00 AM      Microsoft Corporation
        c:\windows\system32\actxprxy.dll
cmd     5.2.3790.0 (srv03_rtm.030324-2048)    374.00 KB (382,976 bytes)
        3/25/2003 4:00 AM      Microsoft Corporation
        c:\windows\system32\cmd.exe
sqlservr       2000.080.0857.00       7.18 MB (7,532,584 bytes)
        4/25/2004 8:49 AM      Microsoft Corporation
        c:\sql80\sqlbuilds\9_18_03_awe_fix_interpolation\sqlservr.exe

opends60       2000.080.0194.00       24.06 KB (24,639 bytes)
        4/25/2004 8:22 AM      Microsoft Corporation  c:\program
files\microsoft sql server\mssql\binn\opends60.dll
ums     2000.080.0760.00       52.55 KB (53,808 bytes)       4/25/2004 8:22
AM      Microsoft Corporation  c:\program files\microsoft sql
server\mssql\binn\ums.dll
sqlsort 2000.080.0760.00       576.56 KB (590,396 bytes)     4/25/2004 8:22
AM      Microsoft Corporation  c:\program files\microsoft sql
server\mssql\binn\sqlsort.dll
msvcirt 7.0.3790.0 (srv03_rtm.030324-2048)    50.00 KB (51,200 bytes)
        3/25/2003 4:00 AM      Microsoft Corporation
        c:\windows\system32\msvcirt.dll
sqlevn70       2000.080.0760.00       28.00 KB (28,672 bytes)
        4/25/2004 8:22 AM      Microsoft Corporation  c:\program
files\microsoft sql server\mssql\binn\resources\1033\sqlevn70.rll
xolehlp 2001.12.4720.0 (srv03_rtm.030324-2048)       8.50 KB (8,704 bytes)
        4/25/2004 1:20 AM      Microsoft Corporation
        c:\windows\system32\xolehlp.dll
msdtcprx       2001.12.4720.0 (srv03_rtm.030324-2048)       427.50 KB
(437,760 bytes)        4/25/2004 1:20 AM      Microsoft Corporation
        c:\windows\system32\msdtcprx.dll
mtxclu  2001.12.4720.0 (srv03_rtm.030324-2048)       74.50 KB (76,288
bytes)  3/25/2003 4:00 AM      Microsoft Corporation
        c:\windows\system32\mtxclu.dll
```

```
resutils       5.2.3790.0 (srv03_rtm.030324-2048)    59.00 KB (60,416
bytes)  3/25/2003 4:00 AM     Microsoft Corporation
        c:\windows\system32\resutils.dll
mfc42u  6.05.3014.0    960.00 KB (983,040 bytes)     3/25/2003 4:00 AM
        Microsoft Corporation  c:\windows\system32\mfc42u.dll
winrnr  5.2.3790.0 (srv03_rtm.030324-2048)    15.00 KB (15,360 bytes)
        3/25/2003 4:00 AM     Microsoft Corporation
        c:\windows\system32\winrnr.dll
ssnetlib       2000.080.0766.00       80.56 KB (82,492 bytes)
        4/25/2004 8:22 AM     Microsoft Corporation  c:\program
files\microsoft sql server\mssql\binn\ssnetlib.dll
security       5.2.3790.0 (srv03_rtm.030324-2048)    5.50 KB (5,632 bytes)
        3/25/2003 4:00 AM     Microsoft Corporation
        c:\windows\system32\security.dll
ssmslpcn       2000.080.0760.00       28.56 KB (29,244 bytes)
        4/25/2004 8:22 AM     Microsoft Corporation  c:\program
files\microsoft sql server\mssql\binn\ssmslpcn.dll
ssnmpn70       2000.080.0534.00       24.56 KB (25,148 bytes)
        4/25/2004 8:22 AM     Microsoft Corporation  c:\program
files\microsoft sql server\mssql\binn\ssnmpn70.dll
ssmsgnet       2000.080.0851.00       32.07 KB (32,837 bytes)
        4/25/2004 8:49 AM     Microsoft Corporation
        c:\sql80\sqlbuilds\9_18_03_awe_fix_interpolation\ssmsgnet.dll

sqloledb       2000.085.1022.00 (srv03_rtm.030324-2048)     536.00 KB
(548,864 bytes)        4/25/2004 1:23 AM     Microsoft Corporation
        c:\program files\common files\system\ole db\sqloledb.dll
msdart  2.80.1022.0 (srv03_rtm.030324-2048)  164.00 KB (167,936 bytes)
        3/25/2003 4:00 AM     Microsoft Corporation
        c:\windows\system32\msdart.dll
comdlg32       6.00.3790.0 (srv03_rtm.030324-2048)  261.00 KB (267,264
bytes)  3/25/2003 4:00 AM     Microsoft Corporation
        c:\windows\system32\comdlg32.dll
msdatl3 2.80.1022.0 (srv03_rtm.030324-2048)  96.00 KB (98,304 bytes)
        4/25/2004 1:23 AM     Microsoft Corporation  c:\program
files\common files\system\ole db\msdatl3.dll
oledb32 2.80.1022.0 (srv03_rtm.030324-2048)  500.00 KB (512,000 bytes)
        4/25/2004 1:23 AM     Microsoft Corporation  c:\program
files\common files\system\ole db\oledb32.dll
oledb32r       2.80.1022.0 (srv03_rtm.030324-2048)  68.00 KB (69,632
bytes)  4/25/2004 1:23 AM     Microsoft Corporation  c:\program
files\common files\system\ole db\oledb32r.dll
cscript 5.6.0.8515     92.00 KB (94,208 bytes)       3/25/2003 4:00 AM
        Microsoft Corporation  c:\windows\system32\cscript.exe
imm32   5.2.3790.0 (srv03_rtm.030324-2048)   105.50 KB (108,032 bytes)
        3/25/2003 4:00 AM     Microsoft Corporation
        c:\windows\system32\imm32.dll
vbscript       5.6.0.8515     404.00 KB (413,696 bytes)     3/25/2003 4:00
AM      Microsoft Corporation  c:\windows\system32\vbscript.dll
mfc42   6.05.3014.0    960.00 KB (983,040 bytes)     3/25/2003 4:00 AM
        Microsoft Corporation  c:\windows\system32\mfc42.dll
scrobj  5.6.0.8515     144.00 KB (147,456 bytes)     3/25/2003 4:00 AM
        Microsoft Corporation  c:\windows\system32\scrobj.dll
wshom   5.6.0.8515     92.00 KB (94,208 bytes)       3/25/2003 4:00 AM
        Microsoft Corporation  c:\windows\system32\wshom.ocx
scrrun  5.6.0.8515     148.00 KB (151,552 bytes)     3/25/2003 4:00 AM
        Microsoft Corporation  c:\windows\system32\scrrun.dll
helpctr 5.2.3790.0 (srv03_rtm.030324-2048)    764.00 KB (782,336 bytes)
        4/25/2004 1:24 AM     Microsoft Corporation
        c:\windows\pchealth\helpctr\binaries\helpctr.exe
hcappres       5.2.3790.0 (srv03_rtm.030324-2048)    6.50 KB (6,656 bytes)
        4/25/2004 1:24 AM     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 4:00 AM     Microsoft Corporation
        c:\windows\system32\itss.dll
msxml3  8.40.9419.0    1.28 MB (1,337,344 bytes)     3/25/2003 4:00 AM
        Microsoft Corporation  c:\windows\system32\msxml3.dll
pchshell       5.2.3790.0 (srv03_rtm.030324-2048)    100.50 KB (102,912
bytes)  4/25/2004 1:24 AM     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 4:00 AM     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 4:00 AM     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 4:00 AM     Microsoft Corporation
        c:\windows\system32\msimtf.dll
msctf   5.2.3790.0 (srv03_rtm.030324-2048)    287.00 KB (293,888 bytes)
        3/25/2003 4:00 AM     Microsoft Corporation
        c:\windows\system32\msctf.dll
jscript 5.6.0.8515     436.00 KB (446,464 bytes)     3/25/2003 4:00 AM
        Microsoft Corporation  c:\windows\system32\jscript.dll
msls31  3.10.349.0     147.00 KB (150,528 bytes)     3/25/2003 4:00 AM
        Microsoft Corporation  c:\windows\system32\msls31.dll
mshtmled       6.00.3790.0 (srv03_rtm.030324-2048)  443.50 KB (454,144
bytes)  3/25/2003 4:00 AM     Microsoft Corporation
        c:\windows\system32\mshtmled.dll
msinfo  5.2.3790.0 (srv03_rtm.030324-2048)    358.50 KB (367,104 bytes)
        4/25/2004 1:24 AM     Microsoft Corporation
        c:\windows\pchealth\helpctr\binaries\msinfo.dll
riched32       5.2.3790.0 (srv03_rtm.030324-2048)    3.50 KB (3,584 bytes)
        3/25/2003 4:00 AM     Microsoft Corporation
        c:\windows\system32\riched32.dll
riched20       5.31.23.1218   406.00 KB (415,744 bytes)     3/25/2003 4:00
AM      Microsoft Corporation  c:\windows\system32\riched20.dll
helpsvc 5.2.3790.0 (srv03_rtm.030324-2048)    720.00 KB (737,280 bytes)
        4/25/2004 1:24 AM     Microsoft Corporation
        c:\windows\pchealth\helpctr\binaries\helpsvc.exe
osql    2000.080.0760.00       56.55 KB (57,904 bytes)       4/25/2004 8:23
AM      Microsoft Corporation  c:\program files\microsoft sql
server\80\tools\binn\osql.exe
odbc32  3.525.1022.0 (srv03_rtm.030324-2048)  232.00 KB (237,568 bytes)
        3/25/2003 4:00 AM     Microsoft Corporation
        c:\windows\system32\odbc32.dll
odbcint 3.525.1022.0 (srv03_rtm.030324-2048)  92.00 KB (94,208 bytes)
        3/25/2003 4:00 AM     Microsoft Corporation
        c:\windows\system32\odbcint.dll
sqlsrv32       2000.085.1022.00 (srv03_rtm.030324-2048)     404.00 KB
(413,696 bytes)        3/25/2003 4:00 AM     Microsoft Corporation
        c:\windows\system32\sqlsrv32.dll
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sqlunirl       2000.080.0728.00       176.56 KB (180,800 bytes)
       3/25/2003 4:00 AM      Microsoft Corporation
       c:\windows\system32\sqlunirl.dll
sqlsrv32       2000.085.1022.00 (srv03_rtm.030324-2048)     88.00 KB
(90,112 bytes) 3/25/2003 4:00 AM      Microsoft Corporation
       c:\windows\system32\sqlsrv32.rll
odbccp32       3.525.1022.0 (srv03_rtm.030324-2048)  100.00 KB (102,400
bytes)  3/25/2003 4:00 AM      Microsoft Corporation
       c:\windows\system32\odbccp32.dll
dbnetlib       2000.085.1022 (srv03_rtm.030324-2048) 76.00 KB (77,824
bytes)  3/25/2003 4:00 AM      Microsoft Corporation
       c:\windows\system32\dbnetlib.dll
dbmslpcn       2000.080.0760.00       28.56 KB (29,244 bytes)
       4/25/2004 8:22 AM      Microsoft Corporation
       c:\windows\system32\dbmslpcn.dll

[Services]

Display Name   Name    State   Start Mode     Service Type   Path    Error
Control Start Name     Tag ID
Alerter Alerter Stopped Disabled       Share Process
       c:\windows\system32\svchost.exe -k localservice      Normal  NT
AUTHORITY\LocalService 0
Application Layer Gateway Service     ALG     Stopped Manual  Own Process
       c:\windows\system32\alg.exe   Normal  NT AUTHORITY\LocalService
       0
Application Management AppMgmt Stopped Manual  Share Process
       c:\windows\system32\svchost.exe -k netsvcs   Normal  LocalSystem
       0
Windows Audio  AudioSrv       Stopped Disabled       Share Process
       c:\windows\system32\svchost.exe -k netsvcs   Normal  LocalSystem
       0
Background Intelligent Transfer Service      BITS    Stopped Manual  Share
Process c:\windows\system32\svchost.exe -k netsvcs   Normal  LocalSystem
       0
Computer Browser       Browser 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\dllhost.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 Disabled       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  dmadmin Stopped Manual  Share
Process c:\windows\system32\dmadmin.exe /com  Normal  LocalSystem    0
Logical Disk Manager   dmserver       Running Auto    Share Process
       c:\windows\system32\svchost.exe -k netsvcs   Normal  LocalSystem
       0
DNS Client     Dnscache       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
cLAN Connection Manager       GniConMgr      Running Auto    Own Process
       c:\windows\system32\gnconmgr.exe      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     Stopped Manual  Share Process
       c:\windows\system32\lsass.exe Normal  LocalSystem    0
IMAPI CD-Burning COM Service  ImapiService   Stopped Disabled       Own
Process c:\windows\system32\imapi.exe Normal  LocalSystem    0
Intersite Messaging    IsmServ Stopped Disabled       Own Process
       c:\windows\system32\ismserv.exe       Normal  LocalSystem    0

Kerberos Key Distribution Center      kdc     Stopped Disabled       Share
Process c:\windows\system32\lsass.exe Normal  LocalSystem    0
Server  lanmanserver   Running Auto    Share Process
       c:\windows\system32\svchost.exe -k netsvcs   Normal  LocalSystem
       0
Workstation    lanmanworkstation      Running Auto    Share Process
       c:\windows\system32\svchost.exe -k netsvcs   Normal  LocalSystem
       0
License Logging        LicenseService Stopped Disabled       Own Process
       c:\windows\system32\llssrv.exe        Normal  NT
AUTHORITY\NetworkService      0
TCP/IP NetBIOS Helper  LmHosts Stopped Manual  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
```

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MSSQLSERVER    MSSQLSERVER    Stopped Manual  Own Process
        c:\progra~1\micros~1\mssql\binn\sqlservr.exe Normal  LocalSystem
        0
MSSQLServerADHelper    MSSQLServerADHelper    Stopped Manual  Own Process
        c:\program files\microsoft sql server\80\tools\binn\sqladhlp.exe
        Normal  LocalSystem    0
Network DDE    NetDDE  Stopped Disabled       Share Process
        c:\windows\system32\netdde.exe        Normal  LocalSystem    0

Network DDE DSDM       NetDDEdsdm     Stopped Disabled       Share Process
        c:\windows\system32\netdde.exe        Normal  LocalSystem    0

Net Logon      Netlogon       Stopped Manual  Share Process
        c:\windows\system32\lsass.exe Normal  LocalSystem    0
Network Connections    Netman  Running Manual  Share Process
        c:\windows\system32\svchost.exe -k netsvcs   Normal  LocalSystem
        0
Network Location Awareness (NLA)      Nla     Running Manual  Share Process
        c:\windows\system32\svchost.exe -k netsvcs   Normal  LocalSystem
        0
File Replication       NtFrs   Stopped Manual  Own Process
        c:\windows\system32\ntfrs.exe Ignore  LocalSystem    0
NT LM Security Support Provider       NtLmSsp Stopped Manual  Share Process
        c:\windows\system32\lsass.exe Normal  LocalSystem    0
Removable Storage      NtmsSvc Stopped Manual  Share Process
        c:\windows\system32\svchost.exe -k netsvcs   Normal  LocalSystem
        0
Plug and Play  PlugPlay       Running Auto    Share Process
        c:\windows\system32\services.exe      Normal  LocalSystem    0

IPSEC Services PolicyAgent    Stopped Manual  Share Process
        c:\windows\system32\lsass.exe Normal  LocalSystem    0
Protected Storage      ProtectedStorage       Running Auto    Share Process
        c:\windows\system32\lsass.exe Normal  LocalSystem    0
Remote Access Auto Connection Manager RasAuto Stopped Manual  Share Process
        c:\windows\system32\svchost.exe -k netsvcs   Normal  LocalSystem
        0
Remote Access Connection Manager      RasMan  Stopped Manual  Share Process
        c:\windows\system32\svchost.exe -k netsvcs   Normal  LocalSystem
        0
Remote Desktop Help Session Manager   RDSessMgr      Stopped Manual  Own
Process c:\windows\system32\sessmgr.exe       Normal  LocalSystem    0

Routing and Remote Access     RemoteAccess   Stopped Disabled       Share
Process c:\windows\system32\svchost.exe -k netsvcs   Normal  LocalSystem
        0
Remote Registry        RemoteRegistry Running Auto    Share Process
        c:\windows\system32\svchost.exe -k regsvc    Normal  NT
AUTHORITY\LocalService 0
Remote Procedure Call (RPC) Locator   RpcLocator     Stopped Manual  Own
Process c:\windows\system32\locator.exe       Normal  NT
AUTHORITY\NetworkService       0
Remote Procedure Call (RPC)   RpcSs   Running Auto    Share Process
        c:\windows\system32\svchost -k rpcss  Normal  LocalSystem    0

Resultant Set of Policy Provider      RSoPProv       Stopped Manual  Share
Process c:\windows\system32\rsopprov.exe      Normal  LocalSystem    0
Special Administration Console Helper sacsvr  Stopped Manual  Share Process
        c:\windows\system32\svchost.exe -k netsvcs   Normal  LocalSystem
        0
Security Accounts Manager     SamSs   Running Auto    Share Process
        c:\windows\system32\lsass.exe Normal  LocalSystem    0
Smart Card     SCardSvr       Stopped Manual  Share Process
        c:\windows\system32\scardsvr.exe      Ignore  NT
AUTHORITY\LocalService 0
Task Scheduler Schedule       Stopped Manual  Share Process
        c:\windows\system32\svchost.exe -k netsvcs   Normal  LocalSystem
        0
Secondary Logon        seclogon       Stopped Manual  Share Process
        c:\windows\system32\svchost.exe -k netsvcs   Ignore  LocalSystem
        0
System Event Notification     SENS    Running Auto    Share Process
        c:\windows\system32\svchost.exe -k netsvcs   Normal  LocalSystem
        0
Shell Hardware Detection      ShellHWDetection       Running Auto    Share
Process c:\windows\system32\svchost.exe -k netsvcs   Ignore  LocalSystem
        0
Print Spooler  Spooler Stopped Manual  Own Process
        c:\windows\system32\spoolsv.exe       Normal  LocalSystem    0

SQLSERVERAGENT SQLSERVERAGENT Stopped Manual  Own Process
        c:\progra~1\micros~1\mssql\binn\sqlagent.exe Normal  LocalSystem
        0
Windows Image Acquisition (WIA)       stisvc  Stopped Disabled       Share
Process c:\windows\system32\svchost.exe -k imgsvc    Normal  NT
AUTHORITY\LocalService 0
Microsoft Software Shadow Copy Provider      swprv   Stopped Manual  Own
Process c:\windows\system32\svchost.exe -k swprv     Normal  LocalSystem
        0
Performance Logs and Alerts   SysmonLog      Stopped Manual  Own Process
        c:\windows\system32\smlogsvc.exe      Normal  NT
Authority\NetworkService       0
Telephony      TapiSrv Stopped Manual  Share Process
        c:\windows\system32\svchost.exe -k tapisrv   Normal  LocalSystem
        0
Terminal Services      TermService    Stopped Disabled       Share Process
        c:\windows\system32\svchost.exe -k termsvcs  Normal  LocalSystem
        0
Themes  Themes  Stopped Disabled       Share Process
        c:\windows\system32\svchost.exe -k netsvcs   Normal  LocalSystem
        0
Telnet  TlntSvr Stopped Disabled       Own Process
        c:\windows\system32\tlntsvr.exe       Normal  NT
AUTHORITY\LocalService 0
Distributed Link Tracking Server      TrkSvr  Stopped Disabled       Share
Process c:\windows\system32\svchost.exe -k netsvcs   Normal  LocalSystem
        0
Distributed Link Tracking Client      TrkWks  Stopped Disabled       Share
Process c:\windows\system32\svchost.exe -k netsvcs   Normal  LocalSystem
        0
Terminal Services Session Directory   Tssdis  Stopped Disabled       Own
Process c:\windows\system32\tssdis.exe        Normal  LocalSystem    0
```

```
Upload Manager uploadmgr      Stopped Disabled       Share Process
        c:\windows\system32\svchost.exe -k netsvcs   Normal  LocalSystem
        0
Uninterruptible Power Supply  UPS     Stopped Manual  Own Process
        c:\windows\system32\ups.exe   Normal  NT AUTHORITY\LocalService
        0
Virtual Disk Service   vds     Stopped Manual  Own Process
        c:\windows\system32\vds.exe   Normal  LocalSystem    0
Volume Shadow Copy     VSS     Stopped Manual  Own Process
        c:\windows\system32\vssvc.exe Normal  LocalSystem    0
Windows Time   W32Time Stopped Disabled       Share Process
        c:\windows\system32\svchost.exe -k netsvcs   Normal  LocalSystem
        0
WebClient      WebClient      Stopped Disabled       Share Process
        c:\windows\system32\svchost.exe -k localservice      Normal  NT
AUTHORITY\LocalService 0
WinHTTP Web Proxy Auto-Discovery Service     WinHttpAutoProxySvc
        Stopped Manual  Share Process  c:\windows\system32\svchost.exe -k
localservice   Normal  NT AUTHORITY\LocalService     0
Windows Management Instrumentation    winmgmt Running Auto    Share Process
        c:\windows\system32\svchost.exe -k netsvcs   Ignore  LocalSystem
        0
Portable Media Serial Number Service  WmdmPmSN       Stopped Manual  Share
Process c:\windows\system32\svchost.exe -k netsvcs   Normal  LocalSystem
        0
Windows Management Instrumentation Driver Extensions Wmi     Stopped Manual
        Share Process  c:\windows\system32\svchost.exe -k netsvcs   Normal
        LocalSystem    0
WMI Performance Adapter       WmiApSrv       Stopped Manual  Own Process
        c:\windows\system32\wbem\wmiapsrv.exe Normal  LocalSystem    0

Automatic Updates      wuauserv       Stopped Disabled       Share Process
        c:\windows\system32\svchost.exe -k netsvcs   Normal  LocalSystem
        0
Wireless Configuration WZCSVC  Stopped 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
GigaNet All Users:GigaNet      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    MV-BOBDYLAN\Administrator:Accessories MV-
BOBDYLAN\Administrator
Accessories\Accessibility     MV-
BOBDYLAN\Administrator:Accessories\Accessibility     MV-
BOBDYLAN\Administrator
Accessories\Entertainment     MV-
BOBDYLAN\Administrator:Accessories\Entertainment     MV-
BOBDYLAN\Administrator
Administrative Tools   MV-BOBDYLAN\Administrator:Administrative Tools
        MV-BOBDYLAN\Administrator
Startup MV-BOBDYLAN\Administrator:Startup     MV-BOBDYLAN\Administrator


[Startup Programs]

Program Command User Name      Location
desktop desktop.ini    NT AUTHORITY\SYSTEM    Startup
desktop desktop.ini    MV-BOBDYLAN\Administrator     Startup
desktop desktop.ini    .DEFAULT       Startup
desktop desktop.ini    All Users      Common Startup

[OLE Registration]

Object  Local Server
Sound (OLE2)   sndrec32.exe
Media Clip     mplay32.exe
Video Clip     mplay32.exe /avi
MIDI Sequence  mplay32.exe /mid
Sound   Not Available
Media Clip     Not Available
WordPad Document       "%programfiles%\windows nt\accessories\wordpad.exe"

Windows Media Services DRM Storage object    Not Available
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
Build   63790
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 5:00:00 AM
       C:\WINDOWS\system32    Microsoft Corporation
advpack.dll    6.0.3790.0     94 KB   3/25/2003 5:00:00 AM
       C:\WINDOWS\system32    Microsoft Corporation
asctrls.ocx    6.0.3790.0     90 KB   3/25/2003 5:00:00 AM
       C:\WINDOWS\system32    Microsoft Corporation
browselc.dll   6.0.3790.0     62 KB   3/25/2003 5:00:00 AM
       C:\WINDOWS\system32    Microsoft Corporation
browseui.dll   6.0.3790.0     1,033 KB       3/25/2003 5:00:00 AM
       C:\WINDOWS\system32    Microsoft Corporation
cdfview.dll    6.0.3790.0     144 KB  3/25/2003 5:00:00 AM
       C:\WINDOWS\system32    Microsoft Corporation
comctl32.dll   5.82.3790.0    561 KB  3/25/2003 5:00:00 AM
       C:\WINDOWS\system32    Microsoft Corporation
dxtrans.dll    6.3.3790.0     198 KB  3/25/2003 5:00:00 AM
       C:\WINDOWS\system32    Microsoft Corporation
dxtmsft.dll    6.3.3790.0     344 KB  3/25/2003 5:00:00 AM
       C:\WINDOWS\system32    Microsoft Corporation
iecont.dll     <File Missing> Not Available  Not Available  Not Available
       Not Available
iecontlc.dll   <File Missing> Not Available  Not Available  Not Available
       Not Available
iedkcs32.dll   16.0.3790.0    300 KB  3/25/2003 5:00:00 AM
       C:\WINDOWS\system32    Microsoft Corporation
iepeers.dll    6.0.3790.0     230 KB  3/25/2003 5:00:00 AM
       C:\WINDOWS\system32    Microsoft Corporation
iesetup.dll    6.0.3790.0     59 KB   3/25/2003 5:00:00 AM
       C:\WINDOWS\system32    Microsoft Corporation
ieuinit.inf    Not Available  20 KB   3/25/2003 5:00:00 AM
       C:\WINDOWS\system32    Not Available
iexplore.exe   6.0.3790.0     90 KB   3/25/2003 5:00:00 AM   C:\Program
Files\Internet Explorer       Microsoft Corporation
imgutil.dll    5.2.3790.0     35 KB   3/25/2003 5:00:00 AM
       C:\WINDOWS\system32    Microsoft Corporation
inetcpl.cpl    6.0.3790.0     303 KB  3/25/2003 5:00:00 AM
       C:\WINDOWS\system32    Microsoft Corporation
inetcplc.dll   6.0.3790.0     109 KB  3/25/2003 5:00:00 AM
       C:\WINDOWS\system32    Microsoft Corporation
inseng.dll     6.0.3790.0     72 KB   3/25/2003 5:00:00 AM
       C:\WINDOWS\system32    Microsoft Corporation
mlang.dll      6.0.3790.0     570 KB  3/25/2003 5:00:00 AM
       C:\WINDOWS\system32    Microsoft Corporation
msencode.dll   2002.10.4.0    112 KB  3/25/2003 5:00:00 AM
       C:\WINDOWS\system32    Not Available
mshta.exe      6.0.3790.0     26 KB   3/25/2003 5:00:00 AM
       C:\WINDOWS\system32    Microsoft Corporation
mshtml.dll     6.0.3790.0     2,848 KB       3/25/2003 5:00:00 AM
       C:\WINDOWS\system32    Microsoft Corporation
mshtml.tlb     6.0.3790.0     1,319 KB       3/25/2003 5:00:00 AM
       C:\WINDOWS\system32    Microsoft Corporation
mshtmled.dll   6.0.3790.0     444 KB  3/25/2003 5:00:00 AM
       C:\WINDOWS\system32    Microsoft Corporation
mshtmler.dll   6.0.3790.0     55 KB   3/25/2003 5:00:00 AM
       C:\WINDOWS\system32    Microsoft Corporation
msident.dll    6.0.3790.0     47 KB   3/25/2003 5:00:00 AM
       C:\WINDOWS\system32    Microsoft Corporation
msidntld.dll   6.0.3790.0     15 KB   3/25/2003 5:00:00 AM
       C:\WINDOWS\system32    Microsoft Corporation
msieftp.dll    6.0.3790.0     230 KB  3/25/2003 5:00:00 AM
       C:\WINDOWS\system32    Microsoft Corporation
msrating.dll   6.0.3790.0     132 KB  3/25/2003 5:00:00 AM
       C:\WINDOWS\system32    Microsoft Corporation
mstime.dll     6.0.3790.0     491 KB  3/25/2003 5:00:00 AM
       C:\WINDOWS\system32    Microsoft Corporation
occache.dll    6.0.3790.0     89 KB   3/25/2003 5:00:00 AM
       C:\WINDOWS\system32    Microsoft Corporation
proctexe.ocx   6.3.3790.0     78 KB   3/25/2003 5:00:00 AM
       C:\WINDOWS\system32    Intel Corporation
sendmail.dll   6.0.3790.0     52 KB   3/25/2003 5:00:00 AM
       C:\WINDOWS\system32    Microsoft Corporation
shdoclc.dll    6.0.3790.0     589 KB  3/25/2003 5:00:00 AM
       C:\WINDOWS\system32    Microsoft Corporation
shdocvw.dll    6.0.3790.0     1,361 KB       3/25/2003 5:00:00 AM
       C:\WINDOWS\system32    Microsoft Corporation
shfolder.dll   6.0.3790.0     23 KB   3/25/2003 5:00:00 AM
       C:\WINDOWS\system32    Microsoft Corporation
shlwapi.dll    6.0.3790.0     281 KB  3/25/2003 5:00:00 AM
       C:\WINDOWS\system32    Microsoft Corporation
tdc.ocx 1.3.0.3130     58 KB   3/25/2003 5:00:00 AM   C:\WINDOWS\system32
       Microsoft Corporation
url.dll 6.0.3790.0     36 KB   3/25/2003 5:00:00 AM   C:\WINDOWS\system32
       Microsoft Corporation
urlmon.dll     6.0.3790.0     502 KB  3/25/2003 5:00:00 AM
       C:\WINDOWS\system32    Microsoft Corporation
webcheck.dll   6.0.3790.0     262 KB  3/25/2003 5:00:00 AM
       C:\WINDOWS\system32    Microsoft Corporation
wininet.dll    6.0.3790.0     609 KB  3/25/2003 5:00:00 AM
       C:\WINDOWS\system32    Microsoft Corporation

[Connectivity]

Item    Value
Connection Preference  Never dial

LAN Settings

AutoConfigProxy        Not Available
AutoProxyDetectMode    Enabled
```

```
AutoConfigURL
Proxy   Disabled
ProxyServer
ProxyOverride

[Cache]

[ Following are sub-categories of this main category ]
[Summary]

Item    Value
Page Refresh Type      Automatic
Temporary Internet Files Folder       C:\Documents and
Settings\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  Low
Internet       Medium
Restricted sites       High
```

Windows Datacenter Server Registry Information

Software\GigaNet

```
\registry\machine\SOFTWARE\Giganet
    cLAN Management Console
        1.00.000
    GniConMgrMgmt2
        0
            BeginModify
                = 17:12:26
            Fabric
            LastModified
                = 17:12:26
            NodeList
                Node0
                    Name = MV-BOBDYLAN
                    NICName = gnivia0
                    Address = 0090FA001D14
                    MediaType =
                    State = REG_DWORD 0x00000001
                    SwitchPort = n1
                    NodeNumber = REG_DWORD 0x00000002
                Node1
                    Name = CLIENT7
                    NICName = nic0
                    Address = 0090FA00159A
                    MediaType =
                    State = REG_DWORD 0x00000001
                    SwitchPort = n2
                    NodeNumber = REG_DWORD 0x00000001
        1
            BeginModify
                = 17:12:25
            Fabric
            LastModified
                = 17:12:25
            NodeList
                Node0
                    Name = MV-BOBDYLAN
                    NICName = gnivia1
                    Address = 0090FA001C15
                    MediaType =
                    State = REG_DWORD 0x00000001
                    SwitchPort = n2
                    NodeNumber = REG_DWORD 0x00000001
                Node2
                    Name = CLIENT4
                    NICName = nic0
                    Address = 0090FA001CD7
                    MediaType =
                    State = REG_DWORD 0x00000001
                    SwitchPort = n1
                    NodeNumber = REG_DWORD 0x00000002
        2
            BeginModify
```

```
        = 17:12:26
    Fabric
    LastModified
        = 17:12:26
    NodeList
        Node0
            Name = MV-BOBDYLAN
            NICName = gnivia2
            Address = 0090FA0014BC
            MediaType =
            State = REG_DWORD 0x00000001
            SwitchPort = n2
            NodeNumber = REG_DWORD 0x00000001
        Node2
            Name = CLIENT8
            NICName = nic0
            Address = 0090FA001CBB
            MediaType =
            State = REG_DWORD 0x00000001
            SwitchPort = n1
            NodeNumber = REG_DWORD 0x00000002
3
    BeginModify
        = 17:12:25
    Fabric
    LastModified
        = 17:12:25
    NodeList
        Node0
            Name = MV-BOBDYLAN
            NICName = gnivia3
            Address = 0090FA001C5D
            MediaType =
            State = REG_DWORD 0x00000001
            SwitchPort = n1
            NodeNumber = REG_DWORD 0x00000002
        Node1
            Name = CLIENT5
            NICName = nic0
            Address = 0090FA001420
            MediaType =
            State = REG_DWORD 0x00000001
            SwitchPort = n2
            NodeNumber = REG_DWORD 0x00000001
4
    BeginModify
        = 17:12:25
    Fabric
    LastModified
        = 17:12:25
    NodeList
        Node0
            Name = MV-BOBDYLAN
            NICName = gnivia4
            Address = 0090FA001C8C
            MediaType =
            State = REG_DWORD 0x00000001
            SwitchPort = n2
            NodeNumber = REG_DWORD 0x00000001
        Node2
            Name = CLIENT2
            NICName = nic0
            Address = 0090FA001D12
            MediaType =
            State = REG_DWORD 0x00000001
            SwitchPort = n1
            NodeNumber = REG_DWORD 0x00000002
5
    BeginModify
        = 17:12:25
    Fabric
    LastModified
        = 17:12:25
    NodeList
        Node0
            Name = MV-BOBDYLAN
            NICName = gnivia5
            Address = 0090FA001C45
            MediaType =
            State = REG_DWORD 0x00000001
            SwitchPort = n1
            NodeNumber = REG_DWORD 0x00000002
        Node1
            Name = CLIENT6
            NICName = nic0
            Address = 0090FA00136E
            MediaType =
            State = REG_DWORD 0x00000001
            SwitchPort = n2
            NodeNumber = REG_DWORD 0x00000001
6
    BeginModify
        = 17:12:25
    Fabric
    LastModified
        = 17:12:25
    NodeList
        Node0
            Name = MV-BOBDYLAN
            NICName = gnivia6
            Address = 0090FA001C34
            MediaType =
            State = REG_DWORD 0x00000001
            SwitchPort = n2
            NodeNumber = REG_DWORD 0x00000001
        Node2
            Name = CLIENT3
            NICName = nic0
            Address = 0090FA001D1D
            MediaType =
            State = REG_DWORD 0x00000001
            SwitchPort = n1
            NodeNumber = REG_DWORD 0x00000002
7
    BeginModify
        = 17:12:25
```

```
            Fabric
            LastModified
                = 17:12:25
            NodeList
                Node0
                    Name = MV-BOBDYLAN
                    NICName = gnivia7
                    Address = 0090FA001C0F
                    MediaType =
                    State = REG_DWORD 0x00000001
                    SwitchPort = n2
                    NodeNumber = REG_DWORD 0x00000001
                Node2
                    Name = CLIENT1
                    NICName = nic0
                    Address = 0090FA001D11
                    MediaType =
                    State = REG_DWORD 0x00000001
                    SwitchPort = n1
                    NodeNumber = REG_DWORD 0x00000002
        LastModified
            = 17:12:24
```

Software_Microsoft_MicrosoftSQLServer

```
\registry\machine\SOFTWARE\Microsoft\Microsoft SQL Server
    SsrpActiveServer = MSSQLServer
    InstalledInstances = REG_MULTI_SZ "MSSQLSERVER"
    SqlMdacRegRefCount = REG_DWORD 0x00000001
    8.00.000
    80
        SharedCode = C:\Program Files\Microsoft SQL Server\80\COM\
        DTS
            Settings
                EnableSaveToRepository = REG_DWORD 0x00000000
        MSSQLLicenseInfo
            MSSQL8.00
                FlipAllow = REG_DWORD 0x00000000
                ConcurrentLimit = REG_DWORD 0x00000020
                DisplayName = SQL Server 2000
                FamilyDisplayName = Microsoft SQL Server
                Mode = REG_DWORD 0x00000002
        Registration
            DigitalProductID = REG_BINARY 0x000000a4 0x000000a4 0x00000003
0x33393335 0x30302d34 0x30302d30 0x39303030 0x35302d35 0x00333937
0x0000000a 0x2d303138 0x36353030 0x00000030 0x00000000 0x00000012
0x0f0aa600 0xef9e9d5e \
                                0x0000050d 0x00000000 0x408b74bc 0x00311a11
0x00000000 0x00000000 0x00000000 0x00000000 0x00000000 0x00000000
0x32353836 0x00000030 0x00000000 0x00000f48 0x2ce13c30 0x00000800
0x00000000 0x00000000 \
                                0x00000000 0x00000000 0x00000000 0x00000000
0x00000000 0x00000000 0x8e3af1f6
            ProductID = 53934-000-0000095-05793
            CD_KEY = BC6JV-WVYQ9-PC8H6-W938R-8BWJD
        Replication
            MergeReplicationProvider
                MsJet
                    = {f159cf30-0db4-11d1-b272-00aa00b8de95}
        Tools
            ClientSetup
                SQLPath = C:\Program Files\Microsoft SQL Server\80\Tools
                CurrentVersion
                    CurrentVersion = 8.00.194
                    Language = REG_DWORD 0x00000409
            Help
                RefCount = REG_DWORD 0x00000001
                HelpFile = C:\Program Files\Microsoft SQL
Server\80\Tools\Books\SQL80.col
                HelpLCID = 1033
                HelpPath = C:\Program Files\Microsoft SQL
Server\80\Tools\Books
            Service Manager
                Action Verify = REG_DWORD 0x00000000
                Default = MSSQLSERVER
                Remote = REG_DWORD 0x00000001
                Services = REG_MULTI_SZ "MSDTC"
            SQLEW
                CustomizableAlertBaseURL =
                CustomizableAlertDefaultButtonText = &Send Feedback
                CustomizableAlertDefaultBtnShortText = Feedbac&k
                Replication
                    PerfmonFile = C:\Program Files\Microsoft SQL
Server\80\Tools\BINN\REPLMON.PMC
                Wizards
                    Web Assistant = C:\Program Files\Microsoft SQL
Server\80\Tools\BINN\semwebwz.DLL^WebWizardEntry
            Tracking
                {E07FDDA8-5A21-11d2-9DAD-00C04F79D434} = REG_DWORD
0x00000001
                {E07FDDAA-5A21-11d2-9DAD-00C04F79D434} = REG_DWORD
0x00000001
                {E07FDDAC-5A21-11d2-9DAD-00C04F79D434} = REG_DWORD
0x00000001
                {E07FDDAD-5A21-11d2-9DAD-00C04F79D434} = REG_DWORD
0x00000001
                {E07FDDAF-5A21-11d2-9DAD-00C04F79D434} = REG_DWORD
0x00000001
                {E07FDDBE-5A21-11d2-9DAD-00C04F79D434} = REG_DWORD
0x00000001
                {E07FDDBF-5A21-11d2-9DAD-00C04F79D434} = REG_DWORD
0x00000001
                Shortcuts
                    Enterprise Manager = REG_DWORD 0x00000001
                    Query Analyzer = REG_DWORD 0x00000001
                    Client Network Utility = REG_DWORD 0x00000001
                    Configure SQL XML Support in IIS = REG_DWORD
0x00000001
                    Import and Export Data = REG_DWORD 0x00000001
                    Service Manager = REG_DWORD 0x00000001
                    Server Network Utility = REG_DWORD 0x00000001
                    Books Online = REG_DWORD 0x00000001
```

Software_Microsoft_MSSQLServer

```
\registry\machine\SOFTWARE\Microsoft\MSSQLServer
    Client
        SharedMemoryOn = REG_DWORD 0x00000001
        ConnectTo
            DSQUERY = DBNETLIB
        DB-Lib
            AutoAnsiToOem = ON
            UseIntlSettings = ON
        SuperSocketNetLib
            ProtocolOrder = REG_MULTI_SZ "tcp"  \
                                         "np"
            LastConnect
                MV-LE566P0 = -1040187384:lpc:MV-LE566P0
            Np
                DefaultPipe = sql\query
            Tcp
                DefaultPort = REG_DWORD 0x00000599
            VIA
                RecognizedVendors = Giganet,QLogic,ServerNet II
    MSSQLServer
        ListenOn = REG_MULTI_SZ "SSMSSH70"  \
                                "SSNETLIB"
        ResourceMgrID = {0DA0898C-F319-463C-93F6-34AA0602641C}
        SetHostName = REG_DWORD 0x00000000
        AuditLevel = REG_DWORD 0x00000000
        LoginMode = REG_DWORD 0x00000002
        Tapeloadwaittime = REG_DWORD 0xffffffff
        DefaultLogin = guest
        Map_ = \
        Map# = -
        Map$ =
        BackupDirectory = C:\Program Files\Microsoft SQL
Server\MSSQL\BACKUP
        DefaultDomain = MV-LE566P0
        DefaultCollationName = Latin1_General_BIN
        uptime_pid = REG_DWORD 0x00000158
        uptime_time_utc = REG_BINARY 0x00000008 0x7610f47a 0x01c42bc3
        CurrentVersion
            checksum = REG_BINARY 0x000000a1 0x32323937 0x38353163
0x64376561 0x37646334 0x61643035 0x62343330 0x33636437 0x32346237
0x32653865 0x66323332 0x63313166 0x65623430 0x31336435 0x32333365
0x37643663 0x63343630 0x65333638 \
                       0x39636131 0x31633839 0x33656237 0x61393237
0x37646463 0x35303236 0x63313733 0x61353465 0x33646334 0x66633465
0x64616265 0x37616234 0x65626337 0x63366632 0x66376633 0x30356235
0x39663163 0x38306236 0x32303965 \
                       0x30383530 0x34633131 0x38303832 0x31623965
0x00000000
            RegisteredOwner = TRACKS
            SerialNumber = REG_DWORD 0x81ea0040
            CurrentVersion = 8.00.194
            Language = REG_DWORD 0x00000409
            CSDVersionNumber = REG_DWORD 0x00000300
            CSDVersion = 8.00.761
        Parameters
            SQLArg0 = -dC:\Program Files\Microsoft SQL
Server\MSSQL\data\master.mdf
            SQLArg1 = -eC:\Program Files\Microsoft SQL
Server\MSSQL\log\ERRORLOG
            SQLArg2 = -lC:\Program Files\Microsoft SQL
Server\MSSQL\data\mastlog.ldf
        RPCNetLib
            Security =
        SuperSocketNetLib
            ProtocolList = REG_MULTI_SZ "np"  \
                                        "via"
            Encrypt = REG_DWORD 0x00000000
            Np
                PipeName = \\.\pipe\sql\query
            Tcp
                TcpHideFlag = REG_DWORD 0x00000000
                TcpPort = 1433
                TcpDynamicPorts =
            VIA
                Vendor = Giganet
                ListenInfo =
0:1427[0x0f000000],1:1424[0x0000f000],2:1428[0xf0000000],3:1425[0x000f0000
],4:1422[0x000000f0],5:1426[0x00f00000],6:1423[0x00000f00],7:1421[0x000000
0f]
                RecognizedVendors = REG_MULTI_SZ "Giganet"  \
                                                 "ServerNet II"  \
                                                 "QLogic"  \
                                                 " "
    Providers
        AllowInProcess = REG_DWORD 0x00000001
        ADSDSOObject
            AllowInProcess = REG_DWORD 0x00000001
        DB2OLEDB
            AllowInProcess = REG_DWORD 0x00000001
        Microsoft.Jet.OLEDB.4.0
            AllowInProcess = REG_DWORD 0x00000001
        MSDAORA
            AllowInProcess = REG_DWORD 0x00000001
        MSDASQL
            AllowInProcess = REG_DWORD 0x00000001
        MSIDXS
            AllowInProcess = REG_DWORD 0x00000001
        MSQLImpProv
            AllowInProcess = REG_DWORD 0x00000001
        MSSEARCHSQL
            AllowInProcess = REG_DWORD 0x00000001
        SQLOLEDB
            AllowInProcess = REG_DWORD 0x00000001
            DisallowAdhocAccess = REG_DWORD 0x00000000
    Setup
        SQLPath = C:\Program Files\Microsoft SQL Server\MSSQL
        SQLDataRoot = C:\Program Files\Microsoft SQL Server\MSSQL
        SourcePath = C:\sql2ksp3
        firststart = REG_DWORD 0x00000000
        Scripts = REG_MULTI_SZ "sp1_serv_uni.sql"  \
                               "80sp1-tools.sql"  \
                               "sp2_serv_uni.sql"  \
                               "80sp2-tools.sql"  \
```

```
                                "sp3_serv_uni.sql"  \
                                "80sp3-tools.sql"  \
                                "replsys.sql"  \
                                "replcom.sql"  \
                                "repltran.sql"  \
                                "replmerg.sql"  \
                                "remove_old_msx_accounts.sql"  \

"sp_vupgrade_replication:@login=N'sa',@password=N'',@ver_old=194"  \
                                " "
        EnableErrorReporting = REG_DWORD 0x00000000
    SQLServerAgent
        JobHistoryMaxRowsPerJob = REG_DWORD 0x00000064
        RestartServer = REG_DWORD 0x00000001
        DownloadedMaxRows = REG_DWORD 0x00000064
        JobHistoryMaxRows = REG_DWORD 0x000003e8
        ErrorLoggingLevel = REG_DWORD 0x00000003
        NonAlertableErrors = 1204,4002
        MSXServerName =
        ServerHost =
        WorkingDirectory = C:\Program Files\Microsoft SQL
Server\MSSQL\JOBS
        ErrorLogFile = C:\Program Files\Microsoft SQL
Server\MSSQL\LOG\SQLAGENT.OUT
        SysAdminOnly = REG_DWORD 0x00000001
        Subsystems
            CmdExec = C:\Program Files\Microsoft SQL
Server\MSSQL\BINN\SQLCMDSS.DLL,NULL,CmdExecStart,CmdEvent,CmdExecStop,10
            Snapshot = C:\Program Files\Microsoft SQL
Server\MSSQL\BINN\SQLREPSS.DLL,C:\Program Files\Microsoft SQL
Server\80\COM\SNAPSHOT.EXE,ReplStart,ReplEvent,ReplStop,100
            Distribution = C:\Program Files\Microsoft SQL
Server\MSSQL\BINN\SQLREPSS.DLL,C:\Program Files\Microsoft SQL
Server\80\COM\DISTRIB.EXE,ReplStart,ReplEvent,ReplStop,100
            Merge = C:\Program Files\Microsoft SQL
Server\MSSQL\BINN\SQLREPSS.DLL,C:\Program Files\Microsoft SQL
Server\80\COM\REPLMERG.EXE,ReplStart,ReplEvent,ReplStop,100
            ActiveScripting = C:\Program Files\Microsoft SQL
Server\MSSQL\BINN\SQLATXSS.DLL,NULL,ActiveScriptStart,ActiveScriptEvent,Ac
tiveScriptStop,10
            QueueReader = C:\Program Files\Microsoft SQL
Server\MSSQL\BINN\SQLREPSS.DLL,C:\Program Files\Microsoft SQL
Server\80\COM\QRDRSVC.EXE,ReplStart,ReplEvent,ReplStop,100
            LogReader = C:\Program Files\Microsoft SQL
Server\MSSQL\BINN\SQLREPSS.DLL,C:\Program Files\Microsoft SQL
Server\80\COM\LOGREAD.EXE,ReplStart,ReplEvent,ReplStop,25
    Tracking
        {E07FDDA4-5A21-11d2-9DAD-00C04F79D434} =
        {E07FDDA5-5A21-11d2-9DAD-00C04F79D434} =
        {6DC86044-0C71-11d3-9E18-00C04F79D434} =
        {E07FDDA8-5A21-11d2-9DAD-00C04F79D434} =
        {E07FDDAA-5A21-11d2-9DAD-00C04F79D434} =
        {E07FDDAC-5A21-11d2-9DAD-00C04F79D434} =
        {E07FDDAD-5A21-11d2-9DAD-00C04F79D434} =
        {E07FDDAF-5A21-11d2-9DAD-00C04F79D434} =
        {E07FDDBE-5A21-11d2-9DAD-00C04F79D434} =
        {E07FDDC0-5A21-11d2-9DAD-00C04F79D434} =
        {E07FDDBF-5A21-11d2-9DAD-00C04F79D434} =
        Shortcuts
            Enterprise Manager =
            Query Analyzer =
            Client Network Utility =
            Configure SQL XML Support in IIS =
            Import and Export Data =
            Service Manager =
            Server Network Utility =
            Books Online =
```

Software_Unisys_IntelligentFibre

```
\registry\machine\SOFTWARE\UNISYS\Intelligent Fibre Utility
    AccessTuning = REG_DWORD 0x00000001
```

CurrentControlSet\ Control\Session Manager\I/O System

```
Windows Registry Editor Version 5.00

[HKEY_LOCAL_MACHINE\SYSTEM\CurrentControlSet\Control\Session Manager\I/O
System]
"CountOperations"=dword:00000000
```

CurrentControlSet\Services\GniConMgr

```
\registry\machine\SYSTEM\CurrentControlSet\Services\GniConMgr
    Type = REG_DWORD 0x00000010
    Start = REG_DWORD 0x00000002
    ErrorControl = REG_DWORD 0x00000001
    ImagePath = REG_EXPAND_SZ %SystemRoot%\system32\GnConMgr.exe
    DisplayName = cLAN Connection Manager
    Group = TDI
    DependOnService = REG_MULTI_SZ "GniVIA"
    DependOnGroup = REG_MULTI_SZ
    ObjectName = LocalSystem
    Parameters
        NicName = GniVIA
    Security [17 1]
        Security = REG_BINARY 0x000000a8 0x80140001 0x00000090 0x0000009c
0x00000014 0x00000030 0x001c0002 0x00000001 0x00148002 0x000f01ff
0x00000101 0x01000000 0x00000000 0x00600002 0x00000004 0x00140000
0x000201fd 0x00000101 0x05000000 \
                   0x00000012 0x00180000 0x000f01ff 0x00000201 0x05000000
0x00000020 0x00000220 0x00140000 0x0002018d 0x00000101 0x05000000
0x0000000b 0x00180000 0x000201fd 0x00000201 0x05000000 0x00000020
0x00000223 0x00000101 0x05000000 \
                   0x00000012 0x00000101 0x05000000 0x00000012
    Enum
        0 = Root\LEGACY_GNICONMGR\0000
        Count = REG_DWORD 0x00000001
        NextInstance = REG_DWORD 0x00000001
```

CurrentControlSet\Services\GNINDIS

```
\registry\machine\SYSTEM\CurrentControlSet\Services\GNINDIS
    Type = REG_DWORD 0x00000001
    Start = REG_DWORD 0x00000002
    ErrorControl = REG_DWORD 0x00000001
    Tag = REG_DWORD 0x0000000d
    ImagePath = REG_EXPAND_SZ system32\DRIVERS\gnindis.sys
    DisplayName = cLAN NDIS Driver
    Group = NDIS
    Security [17 1]
        Security = REG_BINARY 0x000000a8 0x80140001 0x00000090 0x0000009c
0x00000014 0x00000030 0x001c0002 0x00000001 0x00148002 0x000f01ff
0x00000101 0x01000000 0x00000000 0x00600002 0x00000004 0x00140000
0x000201fd 0x00000101 0x05000000 \
                    0x00000012 0x00180000 0x000f01ff 0x00000201 0x05000000
0x00000020 0x00000220 0x00140000 0x0002018d 0x00000101 0x05000000
0x0000000b 0x00180000 0x000201fd 0x00000201 0x05000000 0x00000020
0x00000223 0x00000101 0x05000000 \
                    0x00000012 0x00000101 0x05000000 0x00000012
    Enum
        0 = PCI\VEN_135B&DEV_0001&SUBSYS_00000000&REV_00\3&29e81982&0&08
        Count = REG_DWORD 0x00000008
        NextInstance = REG_DWORD 0x00000008
        1 = PCI\VEN_135B&DEV_0001&SUBSYS_00000000&REV_00\3&e44f86d&0&00
        2 = PCI\VEN_135B&DEV_0001&SUBSYS_00000000&REV_00\3&ad74055&0&08
        3 = PCI\VEN_135B&DEV_0001&SUBSYS_00000000&REV_00\3&1b2f0ce&0&00
        4 = PCI\VEN_135B&DEV_0001&SUBSYS_00000000&REV_00\3&39e002bd&0&08
        5 = PCI\VEN_135B&DEV_0001&SUBSYS_00000000&REV_00\3&a985f74&0&00
        6 = PCI\VEN_135B&DEV_0001&SUBSYS_00000000&REV_00\3&2c9e08a6&0&08
        7 = PCI\VEN_135B&DEV_0001&SUBSYS_00000000&REV_00\3&3bcef44&0&00
```

CurrentControlSet\Services\GniVIA

```
\registry\machine\SYSTEM\CurrentControlSet\Services\GniVIA
    Type = REG_DWORD 0x00000001
    Start = REG_DWORD 0x00000002
    ErrorControl = REG_DWORD 0x00000001
    Tag = REG_DWORD 0x00000008
    ImagePath = REG_EXPAND_SZ system32\DRIVERS\GniVIA.sys
    DisplayName = cLAN VIA Driver
    Group = PNP_TDI
    Linkage
        Bind = REG_MULTI_SZ "\Device\{E0739E7E-DA74-4327-835D-
C7749802E94A}"  \
                            "\Device\{A68C76C9-E7C4-4656-A6E2-
49954FF0E297}"  \
                            "\Device\{B4E35858-75CE-4227-B716-
7D1867B22A3B}"  \
                            "\Device\{45FFC04F-5A5A-4D48-8BB8-
2769A78E69A9}"  \
                            "\Device\{AD02C75A-183C-4A1A-84D6-
0CDCB07DE636}"  \
                            "\Device\{3A5E9A55-D57D-4FAC-8389-
0543309B0046}"  \
                            "\Device\{50A64804-AD78-4EA1-9846-
53148EE2A8E4}"  \
                            "\Device\{B324133E-EEF5-4CB1-8DC6-
8DDB462EBE28}"
        Route = REG_MULTI_SZ "\"{E0739E7E-DA74-4327-835D-C7749802E94A}\""
\
                             "\"{A68C76C9-E7C4-4656-A6E2-49954FF0E297}\""
\
                             "\"{B4E35858-75CE-4227-B716-7D1867B22A3B}\""
\
                             "\"{45FFC04F-5A5A-4D48-8BB8-2769A78E69A9}\""
\
                             "\"{AD02C75A-183C-4A1A-84D6-0CDCB07DE636}\""
\
                             "\"{3A5E9A55-D57D-4FAC-8389-0543309B0046}\""
\
                             "\"{50A64804-AD78-4EA1-9846-53148EE2A8E4}\""
\
                             "\"{B324133E-EEF5-4CB1-8DC6-8DDB462EBE28}\""
        Export = REG_MULTI_SZ "\Device\GniVIA_{E0739E7E-DA74-4327-835D-
C7749802E94A}"  \
                              "\Device\GniVIA_{A68C76C9-E7C4-4656-A6E2-
49954FF0E297}"  \
                              "\Device\GniVIA_{B4E35858-75CE-4227-B716-
7D1867B22A3B}"  \
                              "\Device\GniVIA_{45FFC04F-5A5A-4D48-8BB8-
2769A78E69A9}"  \
                              "\Device\GniVIA_{AD02C75A-183C-4A1A-84D6-
0CDCB07DE636}"  \
                              "\Device\GniVIA_{3A5E9A55-D57D-4FAC-8389-
0543309B0046}"  \
                              "\Device\GniVIA_{50A64804-AD78-4EA1-9846-
53148EE2A8E4}"  \
                              "\Device\GniVIA_{B324133E-EEF5-4CB1-8DC6-
8DDB462EBE28}"
    Parameters
        =
        MaxNumberNics = REG_DWORD 0x00000008
    Performance
        Open = OpenNicPerformanceData
        Close = CloseNicPerformanceData
        Collect = CollectNicPerformanceData
        Library = gni_perf.dll
        PerfIniFile = gni_perf.ini
        Last Counter = REG_DWORD 0x000009da
        Last Help = REG_DWORD 0x000009db
        First Counter = REG_DWORD 0x0000099c
        First Help = REG_DWORD 0x0000099d
        WbemAdapFileSignature = REG_BINARY 0x00000010 0x07f5b972
0xadb789e0 0x414ea06b 0xbab4fb53
        WbemAdapFileTime = REG_BINARY 0x00000008 0xa9aef12e 0x01c42aa6
        WbemAdapFileSize = REG_DWORD 0x0000c000
        WbemAdapStatus = REG_DWORD 0x00000000
    Security [17 1]
        Security = REG_BINARY 0x000000a8 0x80140001 0x00000090 0x0000009c
0x00000014 0x00000030 0x001c0002 0x00000001 0x00148002 0x000f01ff
0x00000101 0x01000000 0x00000000 0x00600002 0x00000004 0x00140000
0x000201fd 0x00000101 0x05000000 \
```

```
                    0x00000012 0x00180000 0x000f01ff 0x00000201 0x05000000
0x00000020 0x00000220 0x00140000 0x0002018d 0x00000101 0x05000000
0x0000000b 0x00180000 0x000201fd 0x00000201 0x05000000 0x00000020
0x00000223 0x00000101 0x05000000 \
                    0x00000012 0x00000101 0x05000000 0x00000012
    Enum
        0 = Root\LEGACY_GNIVIA\0000
        Count = REG_DWORD 0x00000001
        NextInstance = REG_DWORD 0x00000001
```

CurrentControlSet\Services\Ifba

```
\registry\machine\SYSTEM\CurrentControlSet\Services\ifba
    Type = REG_DWORD 0x00000001
    Start = REG_DWORD 0x00000003
    ErrorControl = REG_DWORD 0x00000001
    Tag = REG_DWORD 0x00000004
    ImagePath = REG_EXPAND_SZ system32\DRIVERS\ifba.sys
    DisplayName = Unisys Intelligent Fibre Channel Adapter SCSI Processor
    Group = SCSI Class
    Security [17 1]
        Security = REG_BINARY 0x000000a8 0x80140001 0x00000090 0x0000009c
0x00000014 0x00000030 0x001c0002 0x00000001 0x00148002 0x000f01ff
0x00000101 0x01000000 0x00000000 0x00600002 0x00000004 0x00140000
0x000201fd 0x00000101 0x05000000 \
                    0x00000012 0x00180000 0x000f01ff 0x00000201 0x05000000
0x00000020 0x00000220 0x00140000 0x0002018d 0x00000101 0x05000000
0x0000000b 0x00180000 0x000201fd 0x00000201 0x05000000 0x00000020
0x00000223 0x00000101 0x05000000 \
                    0x00000012 0x00000101 0x05000000 0x00000012
    Enum
        0 = SCSI\ProcessorUNISYS__FC76222-
P64_____v2__\5&3a90ebef&0&2409560B00080010
        Count = REG_DWORD 0x00000022
        NextInstance = REG_DWORD 0x00000022
        1 = SCSI\ProcessorUNISYS__FC76222-
P64_____v2__\5&3a90ebef&0&2509560B00080010
        2 = SCSI\ProcessorUNISYS__FC76222-
P64_____v2__\5&7a21384&0&FC04560B00080010
        3 = SCSI\ProcessorUNISYS__FC76222-
P64_____v2__\5&7a21384&0&FD04560B00080010
        4 = SCSI\ProcessorUNISYS__FC76222-
P64_____v2__\5&11f71242&0&C804560B00080010
        5 = SCSI\ProcessorUNISYS__FC76222-
P64_____v2__\5&11f71242&0&C904560B00080010
        6 = SCSI\ProcessorUNISYS__FC76222-
P64_____v2__\5&228890da&0&9C04560B00080010
        7 = SCSI\ProcessorUNISYS__FC76222-
P64_____v2__\5&228890da&0&9D04560B00080010
        8 = SCSI\ProcessorUNISYS__FC76222-
P64_____v2__\5&24c648ac&0&7008560B00080010
        9 = SCSI\ProcessorUNISYS__FC76222-
P64_____v2__\5&24c648ac&0&7108560B00080010
        10 = SCSI\ProcessorUNISYS__FC76222-
P64_____v2__\5&55e65ef&0&AC08560B00080010
        11 = SCSI\ProcessorUNISYS__FC76222-
P64_____v2__\5&55e65ef&0&AD08560B00080010
        12 = SCSI\ProcessorUNISYS__FC76222-
P64_____v2__\5&2b79ac66&0&7025560B00080010
        13 = SCSI\ProcessorUNISYS__FC76222-
P64_____v2__\5&2b79ac66&0&7125560B00080010
        14 = SCSI\ProcessorUNISYS__FC76222-
P64_____v2__\5&324b9a0d&0&D004560B00080010
        15 = SCSI\ProcessorUNISYS__FC76222-
P64_____v2__\5&324b9a0d&0&D104560B00080010
        16 = SCSI\ProcessorUNISYS__FC76222-
P64_____v2__\5&4d2b20a&0&8825560B00080010
        17 = SCSI\ProcessorUNISYS__FC76222-
P64_____v2__\5&4d2b20a&0&8925560B00080010
        18 = SCSI\ProcessorUNISYS__FC76222-
P64_____v2__\5&382242ab&0&E804560B00080010
        19 = SCSI\ProcessorUNISYS__FC76222-
P64_____v2__\5&382242ab&0&E904560B00080010
        20 = SCSI\ProcessorUNISYS__FC76222-
P64_____v2__\5&13e7de95&0&8425560B00080010
        21 = SCSI\ProcessorUNISYS__FC76222-
P64_____v2__\5&13e7de95&0&8525560B00080010
        22 = SCSI\ProcessorUNISYS__FC76222-
P64_____v2__\5&1225c8e9&0&C004560B00080010
        23 = SCSI\ProcessorUNISYS__FC76222-
P64_____v2__\5&1225c8e9&0&C104560B00080010
        24 = SCSI\ProcessorUNISYS__FC76222-
P64_____v2__\5&2ef4e044&0&EC04560B00080010
        25 = SCSI\ProcessorUNISYS__FC76222-
P64_____v2__\5&2ef4e044&0&ED04560B00080010
        26 = SCSI\ProcessorUNISYS__FC76222-
P64_____v2__\5&1181d662&0&B004560B00080010
        27 = SCSI\ProcessorUNISYS__FC76222-
P64_____v2__\5&1181d662&0&B104560B00080010
        28 = SCSI\ProcessorUNISYS__FC76222-
P64_____v2__\5&3081098b&0&2009560B00080010
        29 = SCSI\ProcessorUNISYS__FC76222-
P64_____v2__\5&3081098b&0&2109560B00080010
        30 = SCSI\ProcessorUNISYS__FC76222-
P64_____v2__\5&38090f63&0&B404560B00080010
        31 = SCSI\ProcessorUNISYS__FC76222-
P64_____v2__\5&38090f63&0&B504560B00080010
        32 = SCSI\ProcessorUNISYS__FC76222-
P64_____v2__\5&291e5ca1&0&8004560B00080010
        33 = SCSI\ProcessorUNISYS__FC76222-
P64_____v2__\5&291e5ca1&0&8104560B00080010
```

CurrentControlSet\Services\Ifdisk

```
\registry\machine\SYSTEM\CurrentControlSet\Services\ifdisk
    Type = REG_DWORD 0x00000001
    Start = REG_DWORD 0x00000003
    ErrorControl = REG_DWORD 0x00000001
    ImagePath = REG_EXPAND_SZ system32\DRIVERS\ifdisk.sys
    DisplayName = Unisys Intelligent Fibre Channel Fabric Disk Driver
    Security [17 1]
        Security = REG_BINARY 0x000000a8 0x80140001 0x00000090 0x0000009c
0x00000014 0x00000030 0x001c0002 0x00000001 0x00148002 0x000f01ff
```

```
0x00000101 0x01000000 0x00000000 0x00600002 0x00000004 0x00140000
0x000201fd 0x00000101 0x05000000 \
                    0x00000012 0x00180000 0x000f01ff 0x00000201 0x05000000
0x00000020 0x00000220 0x00140000 0x0002018d 0x00000101 0x05000000
0x0000000b 0x00180000 0x000201fd 0x00000201 0x05000000 0x00000020
0x00000223 0x00000101 0x05000000 \
                    0x00000012 0x00000101 0x05000000 0x00000012
    Enum
        0 =
SCSI\Disk&Ven_UNISYS__VirtualStorage__01.0\1&1a590e2c&0&654000861000001000
000000000006000
        Count = REG_DWORD 0x0000009d
        NextInstance = REG_DWORD 0x0000009d
        1 =
SCSI\Disk&Ven_UNISYS__VirtualStorage__01.0\1&1a590e2c&0&654000861000001000
000000000005000
        2 =
SCSI\Disk&Ven_UNISYS__VirtualStorage__01.0\1&1a590e2c&0&654000861000001000
000000000004000
        3 =
SCSI\Disk&Ven_UNISYS__VirtualStorage__01.0\1&1a590e2c&0&654000861000001000
000000000003000
        4 =
SCSI\Disk&Ven_UNISYS__VirtualStorage__01.0\1&1a590e2c&0&654000861000001000
000000000002000
        5 =
SCSI\Disk&Ven_UNISYS__VirtualStorage__01.0\1&1a590e2c&0&654000861000001000
000000000001000
        6 =
SCSI\Disk&Ven_UNISYS__VirtualStorage__01.0\1&1a590e2c&0&654000861000001000
00000000000A000
        7 =
SCSI\Disk&Ven_UNISYS__VirtualStorage__01.0\1&1a590e2c&0&654000861000001000
000000000009000
        8 =
SCSI\Disk&Ven_UNISYS__VirtualStorage__01.0\1&1a590e2c&0&654000861000001000
000000000008000
        9 =
SCSI\Disk&Ven_UNISYS__VirtualStorage__01.0\1&1a590e2c&0&654000861000001000
000000000007000
        10 =
SCSI\Disk&Ven_UNISYS__VirtualStorage__01.0\1&1a590e2c&0&A53F00861000001000
000000000008000
        11 =
SCSI\Disk&Ven_UNISYS__VirtualStorage__01.0\1&1a590e2c&0&A53F00861000001000
000000000007000
        12 =
SCSI\Disk&Ven_UNISYS__VirtualStorage__01.0\1&1a590e2c&0&A53F00861000001000
000000000006000
        13 =
SCSI\Disk&Ven_UNISYS__VirtualStorage__01.0\1&1a590e2c&0&A53F00861000001000
000000000005000
        14 =
SCSI\Disk&Ven_UNISYS__VirtualStorage__01.0\1&1a590e2c&0&A53F00861000001000
000000000004000
        15 =
SCSI\Disk&Ven_UNISYS__VirtualStorage__01.0\1&1a590e2c&0&A53F00861000001000
000000000003000
        16 =
SCSI\Disk&Ven_UNISYS__VirtualStorage__01.0\1&1a590e2c&0&A53F00861000001000
00000000000C000
        17 =
SCSI\Disk&Ven_UNISYS__VirtualStorage__01.0\1&1a590e2c&0&A53F00861000001000
00000000000B000
        18 =
SCSI\Disk&Ven_UNISYS__VirtualStorage__01.0\1&1a590e2c&0&A53F00861000001000
00000000000A000
        19 =
SCSI\Disk&Ven_UNISYS__VirtualStorage__01.0\1&1a590e2c&0&A53F00861000001000
000000000009000
        20 =
SCSI\Disk&Ven_UNISYS__VirtualStorage__01.0\1&1a590e2c&0&1D4000861000001000
000000000008000
        21 =
SCSI\Disk&Ven_UNISYS__VirtualStorage__01.0\1&1a590e2c&0&1D4000861000001000
000000000007000
        22 =
SCSI\Disk&Ven_UNISYS__VirtualStorage__01.0\1&1a590e2c&0&1D4000861000001000
000000000004000
        23 =
SCSI\Disk&Ven_UNISYS__VirtualStorage__01.0\1&1a590e2c&0&1D4000861000001000
000000000003000
        24 =
SCSI\Disk&Ven_UNISYS__VirtualStorage__01.0\1&1a590e2c&0&1D4000861000001000
000000000002000
        25 =
SCSI\Disk&Ven_UNISYS__VirtualStorage__01.0\1&1a590e2c&0&1D4000861000001000
000000000001000
        26 =
SCSI\Disk&Ven_UNISYS__VirtualStorage__01.0\1&1a590e2c&0&1D4000861000001000
00000000000C000
        27 =
SCSI\Disk&Ven_UNISYS__VirtualStorage__01.0\1&1a590e2c&0&1D4000861000001000
00000000000B000
        28 =
SCSI\Disk&Ven_UNISYS__VirtualStorage__01.0\1&1a590e2c&0&1D4000861000001000
00000000000A000
        29 =
SCSI\Disk&Ven_UNISYS__VirtualStorage__01.0\1&1a590e2c&0&1D4000861000001000
000000000009000
        30 =
SCSI\Disk&Ven_UNISYS__VirtualStorage__01.0\1&1a590e2c&0&A13F00861000001000
000000000008000
        31 =
SCSI\Disk&Ven_UNISYS__VirtualStorage__01.0\1&1a590e2c&0&A13F00861000001000
000000000007000
        32 =
SCSI\Disk&Ven_UNISYS__VirtualStorage__01.0\1&1a590e2c&0&A13F00861000001000
000000000006000
        33 =
SCSI\Disk&Ven_UNISYS__VirtualStorage__01.0\1&1a590e2c&0&A13F00861000001000
000000000005000
        34 =
SCSI\Disk&Ven_UNISYS__VirtualStorage__01.0\1&1a590e2c&0&A13F00861000001000
000000000004000
```

```
        35 =
SCSI\Disk&Ven_UNISYS__VirtualStorage__01.0\1&1a590e2c&0&A13F00861000001000
000000000003000
        36 =
SCSI\Disk&Ven_UNISYS__VirtualStorage__01.0\1&1a590e2c&0&A13F00861000001000
000000000002000
        37 =
SCSI\Disk&Ven_UNISYS__VirtualStorage__01.0\1&1a590e2c&0&A13F00861000001000
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        38 =
SCSI\Disk&Ven_UNISYS__VirtualStorage__01.0\1&1a590e2c&0&6D4000861000001000
000000000008000
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SCSI\Disk&Ven_UNISYS__VirtualStorage__01.0\1&1a590e2c&0&6D4000861000001000
000000000007000
        40 =
SCSI\Disk&Ven_UNISYS__VirtualStorage__01.0\1&1a590e2c&0&6D4000861000001000
000000000006000
        41 =
SCSI\Disk&Ven_UNISYS__VirtualStorage__01.0\1&1a590e2c&0&6D4000861000001000
000000000005000
        42 =
SCSI\Disk&Ven_UNISYS__VirtualStorage__01.0\1&1a590e2c&0&6D4000861000001000
000000000004000
        43 =
SCSI\Disk&Ven_UNISYS__VirtualStorage__01.0\1&1a590e2c&0&6D4000861000001000
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        44 =
SCSI\Disk&Ven_UNISYS__VirtualStorage__01.0\1&1a590e2c&0&6D4000861000001000
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        45 =
SCSI\Disk&Ven_UNISYS__VirtualStorage__01.0\1&1a590e2c&0&6D4000861000001000
00000000000B000
        46 =
SCSI\Disk&Ven_UNISYS__VirtualStorage__01.0\1&1a590e2c&0&6D4000861000001000
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        47 =
SCSI\Disk&Ven_UNISYS__VirtualStorage__01.0\1&1a590e2c&0&6D4000861000001000
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        48 =
SCSI\Disk&Ven_UNISYS__VirtualStorage__01.0\1&1a590e2c&0&6F4000861000001000
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        49 =
SCSI\Disk&Ven_UNISYS__VirtualStorage__01.0\1&1a590e2c&0&6F4000861000001000
000000000007000
        50 =
SCSI\Disk&Ven_UNISYS__VirtualStorage__01.0\1&1a590e2c&0&6F4000861000001000
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SCSI\Disk&Ven_UNISYS__VirtualStorage__01.0\1&1a590e2c&0&6F4000861000001000
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        53 =
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        54 =
SCSI\Disk&Ven_UNISYS__VirtualStorage__01.0\1&1a590e2c&0&6F4000861000001000
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        55 =
SCSI\Disk&Ven_UNISYS__VirtualStorage__01.0\1&1a590e2c&0&6F4000861000001000
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        56 =
SCSI\Disk&Ven_UNISYS__VirtualStorage__01.0\1&1a590e2c&0&6F4000861000001000
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        57 =
SCSI\Disk&Ven_UNISYS__VirtualStorage__01.0\1&1a590e2c&0&6F4000861000001000
000000000009000
        58 =
SCSI\Disk&Ven_UNISYS__VirtualStorage__01.0\1&1a590e2c&0&DD3F00861000001000
000000000004000
        59 =
SCSI\Disk&Ven_UNISYS__VirtualStorage__01.0\1&1a590e2c&0&DD3F00861000001000
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        60 =
SCSI\Disk&Ven_UNISYS__VirtualStorage__01.0\1&1a590e2c&0&DD3F00861000001000
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        61 =
SCSI\Disk&Ven_UNISYS__VirtualStorage__01.0\1&1a590e2c&0&DD3F00861000001000
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        62 =
SCSI\Disk&Ven_UNISYS__VirtualStorage__01.0\1&1a590e2c&0&DD3F00861000001000
000000000008000
        63 =
SCSI\Disk&Ven_UNISYS__VirtualStorage__01.0\1&1a590e2c&0&DD3F00861000001000
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        64 =
SCSI\Disk&Ven_UNISYS__VirtualStorage__01.0\1&1a590e2c&0&DD3F00861000001000
000000000006000
        65 =
SCSI\Disk&Ven_UNISYS__VirtualStorage__01.0\1&1a590e2c&0&DD3F00861000001000
000000000005000
        66 =
SCSI\Disk&Ven_UNISYS__VirtualStorage__01.0\1&1a590e2c&0&B53F00861000001000
000000000008000
        67 =
SCSI\Disk&Ven_UNISYS__VirtualStorage__01.0\1&1a590e2c&0&B53F00861000001000
000000000007000
        68 =
SCSI\Disk&Ven_UNISYS__VirtualStorage__01.0\1&1a590e2c&0&B53F00861000001000
000000000006000
        69 =
SCSI\Disk&Ven_UNISYS__VirtualStorage__01.0\1&1a590e2c&0&B53F00861000001000
000000000005000
        70 =
SCSI\Disk&Ven_UNISYS__VirtualStorage__01.0\1&1a590e2c&0&B53F00861000001000
000000000004000
        71 =
SCSI\Disk&Ven_UNISYS__VirtualStorage__01.0\1&1a590e2c&0&B53F00861000001000
000000000003000
        72 =
SCSI\Disk&Ven_UNISYS__VirtualStorage__01.0\1&1a590e2c&0&B53F00861000001000
00000000000C000
```

```
        73 =
SCSI\Disk&Ven_UNISYS__VirtualStorage__01.0\1&1a590e2c&0&B53F00861000001000
00000000000B000
        74 =
SCSI\Disk&Ven_UNISYS__VirtualStorage__01.0\1&1a590e2c&0&B53F00861000001000
00000000000A000
        75 =
SCSI\Disk&Ven_UNISYS__VirtualStorage__01.0\1&1a590e2c&0&B53F00861000001000
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        76 =
SCSI\Disk&Ven_DGC_____RAID_10_________0206\1&1a590e2c&0&B81121106001065000
000000000000000
        77 =
SCSI\Disk&Ven_UNISYS__VirtualStorage__01.0\1&1a590e2c&0&454000861000001000
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        78 =
SCSI\Disk&Ven_UNISYS__VirtualStorage__01.0\1&1a590e2c&0&454000861000001000
000000000007000
        79 =
SCSI\Disk&Ven_UNISYS__VirtualStorage__01.0\1&1a590e2c&0&454000861000001000
000000000006000
        80 =
SCSI\Disk&Ven_UNISYS__VirtualStorage__01.0\1&1a590e2c&0&454000861000001000
000000000005000
        81 =
SCSI\Disk&Ven_UNISYS__VirtualStorage__01.0\1&1a590e2c&0&454000861000001000
000000000004000
        82 =
SCSI\Disk&Ven_UNISYS__VirtualStorage__01.0\1&1a590e2c&0&454000861000001000
000000000003000
        83 =
SCSI\Disk&Ven_UNISYS__VirtualStorage__01.0\1&1a590e2c&0&454000861000001000
00000000000C000
        84 =
SCSI\Disk&Ven_UNISYS__VirtualStorage__01.0\1&1a590e2c&0&454000861000001000
00000000000B000
        85 =
SCSI\Disk&Ven_UNISYS__VirtualStorage__01.0\1&1a590e2c&0&454000861000001000
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        86 =
SCSI\Disk&Ven_UNISYS__VirtualStorage__01.0\1&1a590e2c&0&454000861000001000
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        87 =
SCSI\Disk&Ven_UNISYS__VirtualStorage__01.0\1&1a590e2c&0&0B4000861000001000
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        88 =
SCSI\Disk&Ven_UNISYS__VirtualStorage__01.0\1&1a590e2c&0&0B4000861000001000
000000000007000
        89 =
SCSI\Disk&Ven_UNISYS__VirtualStorage__01.0\1&1a590e2c&0&0B4000861000001000
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        90 =
SCSI\Disk&Ven_UNISYS__VirtualStorage__01.0\1&1a590e2c&0&0B4000861000001000
000000000005000
        91 =
SCSI\Disk&Ven_UNISYS__VirtualStorage__01.0\1&1a590e2c&0&0B4000861000001000
000000000004000
        92 =
SCSI\Disk&Ven_UNISYS__VirtualStorage__01.0\1&1a590e2c&0&0B4000861000001000
000000000003000
        93 =
SCSI\Disk&Ven_UNISYS__VirtualStorage__01.0\1&1a590e2c&0&0B4000861000001000
00000000000C000
        94 =
SCSI\Disk&Ven_UNISYS__VirtualStorage__01.0\1&1a590e2c&0&0B4000861000001000
00000000000B000
        95 =
SCSI\Disk&Ven_UNISYS__VirtualStorage__01.0\1&1a590e2c&0&0B4000861000001000
00000000000A000
        96 =
SCSI\Disk&Ven_UNISYS__VirtualStorage__01.0\1&1a590e2c&0&0B4000861000001000
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        98 =
SCSI\Disk&Ven_UNISYS__VirtualStorage__01.0\1&1a590e2c&0&234000861000001000
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SCSI\Disk&Ven_UNISYS__VirtualStorage__01.0\1&1a590e2c&0&234000861000001000
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000000000004000
        102 =
SCSI\Disk&Ven_UNISYS__VirtualStorage__01.0\1&1a590e2c&0&234000861000001000
000000000003000
        103 =
SCSI\Disk&Ven_UNISYS__VirtualStorage__01.0\1&1a590e2c&0&234000861000001000
000000000002000
        104 =
SCSI\Disk&Ven_UNISYS__VirtualStorage__01.0\1&1a590e2c&0&234000861000001000
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        105 =
SCSI\Disk&Ven_UNISYS__VirtualStorage__01.0\1&1a590e2c&0&234000861000001000
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        106 =
SCSI\Disk&Ven_UNISYS__VirtualStorage__01.0\1&1a590e2c&0&234000861000001000
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        107 =
SCSI\Disk&Ven_UNISYS__VirtualStorage__01.0\1&1a590e2c&0&094000861000001000
000000000008000
        108 =
SCSI\Disk&Ven_UNISYS__VirtualStorage__01.0\1&1a590e2c&0&094000861000001000
000000000007000
        109 =
SCSI\Disk&Ven_UNISYS__VirtualStorage__01.0\1&1a590e2c&0&094000861000001000
000000000006000
        110 =
SCSI\Disk&Ven_UNISYS__VirtualStorage__01.0\1&1a590e2c&0&094000861000001000
000000000005000
```

```
        111 =
SCSI\Disk&Ven_UNISYS__VirtualStorage__01.0\1&1a590e2c&0&094000861000001000
000000000004000
        112 =
SCSI\Disk&Ven_UNISYS__VirtualStorage__01.0\1&1a590e2c&0&094000861000001000
000000000003000
        113 =
SCSI\Disk&Ven_UNISYS__VirtualStorage__01.0\1&1a590e2c&0&094000861000001000
00000000000C000
        114 =
SCSI\Disk&Ven_UNISYS__VirtualStorage__01.0\1&1a590e2c&0&094000861000001000
00000000000B000
        115 =
SCSI\Disk&Ven_UNISYS__VirtualStorage__01.0\1&1a590e2c&0&094000861000001000
00000000000A000
        116 =
SCSI\Disk&Ven_UNISYS__VirtualStorage__01.0\1&1a590e2c&0&094000861000001000
000000000009000
        117 =
SCSI\Disk&Ven_UNISYS__VirtualStorage__01.0\1&1a590e2c&0&354000861000001000
000000000008000
        118 =
SCSI\Disk&Ven_UNISYS__VirtualStorage__01.0\1&1a590e2c&0&354000861000001000
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SCSI\Disk&Ven_UNISYS__VirtualStorage__01.0\1&1a590e2c&0&354000861000001000
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        120 =
SCSI\Disk&Ven_UNISYS__VirtualStorage__01.0\1&1a590e2c&0&354000861000001000
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        121 =
SCSI\Disk&Ven_UNISYS__VirtualStorage__01.0\1&1a590e2c&0&354000861000001000
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        122 =
SCSI\Disk&Ven_UNISYS__VirtualStorage__01.0\1&1a590e2c&0&354000861000001000
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        123 =
SCSI\Disk&Ven_UNISYS__VirtualStorage__01.0\1&1a590e2c&0&354000861000001000
00000000000C000
        124 =
SCSI\Disk&Ven_UNISYS__VirtualStorage__01.0\1&1a590e2c&0&354000861000001000
00000000000B000
        125 =
SCSI\Disk&Ven_UNISYS__VirtualStorage__01.0\1&1a590e2c&0&354000861000001000
00000000000A000
        126 =
SCSI\Disk&Ven_UNISYS__VirtualStorage__01.0\1&1a590e2c&0&354000861000001000
000000000009000
        127 =
SCSI\Disk&Ven_UNISYS__VirtualStorage__01.0\1&1a590e2c&0&9B3F00861000001000
000000000008000
        128 =
SCSI\Disk&Ven_UNISYS__VirtualStorage__01.0\1&1a590e2c&0&9B3F00861000001000
000000000007000
        129 =
SCSI\Disk&Ven_UNISYS__VirtualStorage__01.0\1&1a590e2c&0&9B3F00861000001000
000000000006000
        130 =
SCSI\Disk&Ven_UNISYS__VirtualStorage__01.0\1&1a590e2c&0&9B3F00861000001000
000000000005000
        131 =
SCSI\Disk&Ven_UNISYS__VirtualStorage__01.0\1&1a590e2c&0&9B3F00861000001000
000000000004000
        132 =
SCSI\Disk&Ven_UNISYS__VirtualStorage__01.0\1&1a590e2c&0&9B3F00861000001000
000000000003000
        133 =
SCSI\Disk&Ven_UNISYS__VirtualStorage__01.0\1&1a590e2c&0&9B3F00861000001000
00000000000C000
        134 =
SCSI\Disk&Ven_UNISYS__VirtualStorage__01.0\1&1a590e2c&0&9B3F00861000001000
00000000000B000
        135 =
SCSI\Disk&Ven_UNISYS__VirtualStorage__01.0\1&1a590e2c&0&9B3F00861000001000
00000000000A000
        136 =
SCSI\Disk&Ven_UNISYS__VirtualStorage__01.0\1&1a590e2c&0&9B3F00861000001000
000000000009000
        137 =
SCSI\Disk&Ven_UNISYS__VirtualStorage__01.0\1&1a590e2c&0&634000861000001000
000000000008000
        138 =
SCSI\Disk&Ven_UNISYS__VirtualStorage__01.0\1&1a590e2c&0&634000861000001000
000000000007000
        139 =
SCSI\Disk&Ven_UNISYS__VirtualStorage__01.0\1&1a590e2c&0&634000861000001000
000000000006000
        140 =
SCSI\Disk&Ven_UNISYS__VirtualStorage__01.0\1&1a590e2c&0&634000861000001000
000000000005000
        141 =
SCSI\Disk&Ven_UNISYS__VirtualStorage__01.0\1&1a590e2c&0&634000861000001000
000000000004000
        142 =
SCSI\Disk&Ven_UNISYS__VirtualStorage__01.0\1&1a590e2c&0&634000861000001000
000000000003000
        143 =
SCSI\Disk&Ven_UNISYS__VirtualStorage__01.0\1&1a590e2c&0&634000861000001000
00000000000C000
        144 =
SCSI\Disk&Ven_UNISYS__VirtualStorage__01.0\1&1a590e2c&0&634000861000001000
00000000000B000
        145 =
SCSI\Disk&Ven_UNISYS__VirtualStorage__01.0\1&1a590e2c&0&634000861000001000
00000000000A000
        146 =
SCSI\Disk&Ven_UNISYS__VirtualStorage__01.0\1&1a590e2c&0&634000861000001000
000000000009000
        147 =
SCSI\Disk&Ven_UNISYS__VirtualStorage__01.0\1&1a590e2c&0&DB3F00861000001000
000000000008000
        148 =
SCSI\Disk&Ven_UNISYS__VirtualStorage__01.0\1&1a590e2c&0&DB3F00861000001000
000000000007000
```

```
        149 =
SCSI\Disk&Ven_UNISYS__VirtualStorage__01.0\1&1a590e2c&0&DB3F00861000001000
000000000006000
        150 =
SCSI\Disk&Ven_UNISYS__VirtualStorage__01.0\1&1a590e2c&0&DB3F00861000001000
000000000005000
        151 =
SCSI\Disk&Ven_UNISYS__VirtualStorage__01.0\1&1a590e2c&0&DB3F00861000001000
000000000004000
        152 =
SCSI\Disk&Ven_UNISYS__VirtualStorage__01.0\1&1a590e2c&0&DB3F00861000001000
000000000003000
        153 =
SCSI\Disk&Ven_UNISYS__VirtualStorage__01.0\1&1a590e2c&0&DB3F00861000001000
00000000000C000
        154 =
SCSI\Disk&Ven_UNISYS__VirtualStorage__01.0\1&1a590e2c&0&DB3F00861000001000
00000000000B000
        155 =
SCSI\Disk&Ven_UNISYS__VirtualStorage__01.0\1&1a590e2c&0&DB3F00861000001000
00000000000A000
        156 =
SCSI\Disk&Ven_UNISYS__VirtualStorage__01.0\1&1a590e2c&0&DB3F00861000001000
000000000009000
```

CurrentControlSet\Services\IfIp

```
\registry\machine\SYSTEM\CurrentControlSet\Services\IfIp
    Type = REG_DWORD 0x00000001
    Start = REG_DWORD 0x00000000
    ErrorControl = REG_DWORD 0x00000001
    Tag = REG_DWORD 0x00000006
    ImagePath = REG_EXPAND_SZ system32\DRIVERS\IfIp.sys
    DisplayName = Unisys Intelligent Fibre Channel Fabric Bus Enumerator
    Group = Boot Bus Extender
    Security [17 1]
        Security = REG_BINARY 0x000000a8 0x80140001 0x00000090 0x0000009c
0x00000014 0x00000030 0x001c0002 0x00000001 0x00148002 0x000f01ff
0x00000101 0x01000000 0x00000000 0x00600002 0x00000004 0x00140000
0x000201fd 0x00000101 0x05000000 \
                   0x00000012 0x00180000 0x000f01ff 0x00000201 0x05000000
0x00000020 0x00000220 0x00140000 0x0002018d 0x00000101 0x05000000
0x0000000b 0x00180000 0x000201fd 0x00000201 0x05000000 0x00000020
0x00000223 0x00000101 0x05000000 \
                   0x00000012 0x00000101 0x05000000 0x00000012
    Enum
        0 = Root\SYSTEM\0002
        Count = REG_DWORD 0x00000001
        NextInstance = REG_DWORD 0x00000001
```

CurrentControlSet\Services\ifxp

```
\registry\machine\SYSTEM\CurrentControlSet\Services\ifxp
    Type = REG_DWORD 0x00000001
    Start = REG_DWORD 0x00000000
    ErrorControl = REG_DWORD 0x00000001
    Tag = REG_DWORD 0x00000021
    ImagePath = REG_EXPAND_SZ system32\DRIVERS\ifxp.sys
    DisplayName = Unisys Intelligent Fibre Channel Fabric Bus Adapter
    Group = SCSI Miniport
    Parameters
        PnpInterface
            5 = REG_DWORD 0x00000001
    Security [17 1]
        Security = REG_BINARY 0x000000a8 0x80140001 0x00000090 0x0000009c
0x00000014 0x00000030 0x001c0002 0x00000001 0x00148002 0x000f01ff
0x00000101 0x01000000 0x00000000 0x00600002 0x00000004 0x00140000
0x000201fd 0x00000101 0x05000000 \
                   0x00000012 0x00180000 0x000f01ff 0x00000201 0x05000000
0x00000020 0x00000220 0x00140000 0x0002018d 0x00000101 0x05000000
0x0000000b 0x00180000 0x000201fd 0x00000201 0x05000000 0x00000020
0x00000223 0x00000101 0x05000000 \
                   0x00000012 0x00000101 0x05000000 0x00000012
    Enum
        0 = PCI\VEN_11AB&DEV_4620&SUBSYS_C0FC1018&REV_12\4&25ea3ec6&0&0000
        Count = REG_DWORD 0x00000011
        NextInstance = REG_DWORD 0x00000011
        1 = PCI\VEN_11AB&DEV_4620&SUBSYS_C0FC1018&REV_12\4&2cf6f8ed&0&0000
        2 = PCI\VEN_11AB&DEV_4620&SUBSYS_C0FC1018&REV_12\4&a75dc64&0&0000
        3 = PCI\VEN_11AB&DEV_4620&SUBSYS_C0FC1018&REV_12\4&a3cf7d6&0&0008
        4 = PCI\VEN_11AB&DEV_4620&SUBSYS_C0FC1018&REV_12\4&1b316b8f&0&0000
        5 = PCI\VEN_11AB&DEV_4620&SUBSYS_C0FC1018&REV_12\4&101f93c3&0&0000
        6 = PCI\VEN_11AB&DEV_4620&SUBSYS_C0FC1018&REV_12\4&5e61c6&0&0000
        7 = PCI\VEN_11AB&DEV_4620&SUBSYS_C0FC1018&REV_12\4&5e54501&0&0000
        8 = PCI\VEN_11AB&DEV_4620&SUBSYS_C0FC1018&REV_12\4&31204f29&0&0008
        9 = PCI\VEN_11AB&DEV_4620&SUBSYS_C0FC1018&REV_12\4&bbe9921&0&0000
        10 =
PCI\VEN_11AB&DEV_4620&SUBSYS_C0FC1018&REV_12\4&32dc1527&0&0000
        11 =
PCI\VEN_11AB&DEV_4620&SUBSYS_C0FC1018&REV_12\4&30f36daa&0&0000
        12 =
PCI\VEN_11AB&DEV_4620&SUBSYS_C0FC1018&REV_12\4&3798f592&0&0000
        13 =
PCI\VEN_11AB&DEV_4620&SUBSYS_C0FC1018&REV_12\4&1f3768a3&0&0000
        14 = PCI\VEN_11AB&DEV_4620&SUBSYS_C0FC1018&REV_12\4&102fa53&0&0000
        15 =
PCI\VEN_11AB&DEV_4620&SUBSYS_C0FC1018&REV_12\4&1a68eb24&0&0000
        16 = PCI\VEN_11AB&DEV_4620&SUBSYS_C0FC1018&REV_12\4&297b89&0&0000
```

CurrentControlSet\Services\MSSQLSERVER

```
\registry\machine\SYSTEM\CurrentControlSet\Services\MSSQLSERVER
    Type = REG_DWORD 0x00000010
    Start = REG_DWORD 0x00000003
    ErrorControl = REG_DWORD 0x00000001
    ImagePath = REG_EXPAND_SZ C:\PROGRA~1\MICROS~1\MSSQL\binn\sqlservr.exe
    DisplayName = MSSQLSERVER
    ObjectName = LocalSystem
    Linkage
        Export = REG_MULTI_SZ "MSSQLSERVER"
    Performance
        Library = C:\PROGRA~1\MICROS~1\MSSQL\BINN\SQLCTR80.DLL
```

```
        Collect = CollectSQLPerformanceData
        Open = OpenSQLPerformanceData
        Close = CloseSQLPerformanceData
        PerfIniFile = sqlctr.ini
        Last Counter = REG_DWORD 0x00000af0
        Last Help = REG_DWORD 0x00000af1
        First Counter = REG_DWORD 0x000009dc
        First Help = REG_DWORD 0x000009dd
        WbemAdapFileSignature = REG_BINARY 0x00000010 0xc1b9a0d6
0x637885d1 0xf28b314f 0x5d1a5118
        WbemAdapFileTime = REG_BINARY 0x00000008 0x3104a7b8 0x01c42ad9
        WbemAdapFileSize = REG_DWORD 0x0000803b
        WbemAdapStatus = REG_DWORD 0x00000000
    Security
        Security = REG_BINARY 0x000000a8 0x80140001 0x00000090 0x0000009c
0x00000014 0x00000030 0x001c0002 0x00000001 0x00148002 0x000f01ff
0x00000101 0x01000000 0x00000000 0x00600002 0x00000004 0x00140000
0x000201fd 0x00000101 0x05000000 \
                   0x00000012 0x00180000 0x000f01ff 0x00000201 0x05000000
0x00000020 0x00000220 0x00140000 0x0002018d 0x00000101 0x05000000
0x0000000b 0x00180000 0x000201fd 0x00000201 0x05000000 0x00000020
0x00000223 0x00000101 0x05000000 \
                   0x00000012 0x00000101 0x05000000 0x00000012
    Enum
        0 = Root\LEGACY_MSSQLSERVER\0000
        Count = REG_DWORD 0x00000001
        NextInstance = REG_DWORD 0x00000001
```

CurrentControlSet\Services\PartMgr

```
\registry\machine\SYSTEM\CurrentControlSet\Services\PartMgr
    DisplayName = Partition Manager
    ErrorControl = REG_DWORD 0x00000001
    Group = System Bus Extender
    Start = REG_DWORD 0x00000000
    Tag = REG_DWORD 0x00000005
    Type = REG_DWORD 0x00000001
    Enum
        0 = Root\LEGACY_PARTMGR\0000
        Count = REG_DWORD 0x0000009f
        NextInstance = REG_DWORD 0x0000009f
        1 =
IDE\DiskFUJITSU_MHS2040AT_______________________8004____\5&28fc923b&0&0.0.
0
        2 =
SCSI\Disk&Ven_UNISYS__VirtualStorage__01.0\1&1a590e2c&0&654000861000001000
000000000006000
        3 =
SCSI\Disk&Ven_UNISYS__VirtualStorage__01.0\1&1a590e2c&0&654000861000001000
000000000005000
        4 =
SCSI\Disk&Ven_UNISYS__VirtualStorage__01.0\1&1a590e2c&0&654000861000001000
000000000004000
        5 =
SCSI\Disk&Ven_UNISYS__VirtualStorage__01.0\1&1a590e2c&0&654000861000001000
000000000003000
        6 =
SCSI\Disk&Ven_UNISYS__VirtualStorage__01.0\1&1a590e2c&0&654000861000001000
000000000002000
        7 =
SCSI\Disk&Ven_UNISYS__VirtualStorage__01.0\1&1a590e2c&0&654000861000001000
000000000001000
        8 =
SCSI\Disk&Ven_UNISYS__VirtualStorage__01.0\1&1a590e2c&0&654000861000001000
00000000000A000
        9 =
SCSI\Disk&Ven_UNISYS__VirtualStorage__01.0\1&1a590e2c&0&654000861000001000
000000000009000
        10 =
SCSI\Disk&Ven_UNISYS__VirtualStorage__01.0\1&1a590e2c&0&654000861000001000
000000000008000
        11 =
SCSI\Disk&Ven_UNISYS__VirtualStorage__01.0\1&1a590e2c&0&654000861000001000
000000000007000
        12 =
SCSI\Disk&Ven_UNISYS__VirtualStorage__01.0\1&1a590e2c&0&A53F00861000001000
000000000008000
        13 =
SCSI\Disk&Ven_UNISYS__VirtualStorage__01.0\1&1a590e2c&0&A53F00861000001000
000000000007000
        14 =
SCSI\Disk&Ven_UNISYS__VirtualStorage__01.0\1&1a590e2c&0&A53F00861000001000
000000000006000
        15 =
SCSI\Disk&Ven_UNISYS__VirtualStorage__01.0\1&1a590e2c&0&A53F00861000001000
000000000005000
        16 =
SCSI\Disk&Ven_UNISYS__VirtualStorage__01.0\1&1a590e2c&0&A53F00861000001000
000000000004000
        17 =
SCSI\Disk&Ven_UNISYS__VirtualStorage__01.0\1&1a590e2c&0&A53F00861000001000
000000000003000
        18 =
SCSI\Disk&Ven_UNISYS__VirtualStorage__01.0\1&1a590e2c&0&A53F00861000001000
00000000000C000
        19 =
SCSI\Disk&Ven_UNISYS__VirtualStorage__01.0\1&1a590e2c&0&A53F00861000001000
00000000000B000
        20 =
SCSI\Disk&Ven_UNISYS__VirtualStorage__01.0\1&1a590e2c&0&A53F00861000001000
00000000000A000
        21 =
SCSI\Disk&Ven_UNISYS__VirtualStorage__01.0\1&1a590e2c&0&A53F00861000001000
000000000009000
        22 =
SCSI\Disk&Ven_UNISYS__VirtualStorage__01.0\1&1a590e2c&0&1D4000861000001000
000000000008000
        23 =
SCSI\Disk&Ven_UNISYS__VirtualStorage__01.0\1&1a590e2c&0&1D4000861000001000
000000000007000
        24 =
SCSI\Disk&Ven_UNISYS__VirtualStorage__01.0\1&1a590e2c&0&1D4000861000001000
000000000004000
```

```
        25 =
SCSI\Disk&Ven_UNISYS__VirtualStorage__01.0\1&1a590e2c&0&1D4000861000001000
000000000003000
        26 =
SCSI\Disk&Ven_UNISYS__VirtualStorage__01.0\1&1a590e2c&0&1D4000861000001000
000000000002000
        27 =
SCSI\Disk&Ven_UNISYS__VirtualStorage__01.0\1&1a590e2c&0&1D4000861000001000
000000000001000
        28 =
SCSI\Disk&Ven_UNISYS__VirtualStorage__01.0\1&1a590e2c&0&1D4000861000001000
00000000000C000
        29 =
SCSI\Disk&Ven_UNISYS__VirtualStorage__01.0\1&1a590e2c&0&1D4000861000001000
00000000000B000
        30 =
SCSI\Disk&Ven_UNISYS__VirtualStorage__01.0\1&1a590e2c&0&1D4000861000001000
00000000000A000
        31 =
SCSI\Disk&Ven_UNISYS__VirtualStorage__01.0\1&1a590e2c&0&1D4000861000001000
000000000009000
        32 =
SCSI\Disk&Ven_UNISYS__VirtualStorage__01.0\1&1a590e2c&0&A13F00861000001000
000000000008000
        33 =
SCSI\Disk&Ven_UNISYS__VirtualStorage__01.0\1&1a590e2c&0&A13F00861000001000
000000000007000
        34 =
SCSI\Disk&Ven_UNISYS__VirtualStorage__01.0\1&1a590e2c&0&A13F00861000001000
000000000006000
        35 =
SCSI\Disk&Ven_UNISYS__VirtualStorage__01.0\1&1a590e2c&0&A13F00861000001000
000000000005000
        36 =
SCSI\Disk&Ven_UNISYS__VirtualStorage__01.0\1&1a590e2c&0&A13F00861000001000
000000000004000
        37 =
SCSI\Disk&Ven_UNISYS__VirtualStorage__01.0\1&1a590e2c&0&A13F00861000001000
000000000003000
        38 =
SCSI\Disk&Ven_UNISYS__VirtualStorage__01.0\1&1a590e2c&0&A13F00861000001000
000000000002000
        39 =
SCSI\Disk&Ven_UNISYS__VirtualStorage__01.0\1&1a590e2c&0&A13F00861000001000
000000000001000
        40 =
SCSI\Disk&Ven_UNISYS__VirtualStorage__01.0\1&1a590e2c&0&6D4000861000001000
000000000008000
        41 =
SCSI\Disk&Ven_UNISYS__VirtualStorage__01.0\1&1a590e2c&0&6D4000861000001000
000000000007000
        42 =
SCSI\Disk&Ven_UNISYS__VirtualStorage__01.0\1&1a590e2c&0&6D4000861000001000
000000000006000
        43 =
SCSI\Disk&Ven_UNISYS__VirtualStorage__01.0\1&1a590e2c&0&6D4000861000001000
000000000005000
        44 =
SCSI\Disk&Ven_UNISYS__VirtualStorage__01.0\1&1a590e2c&0&6D4000861000001000
000000000004000
        45 =
SCSI\Disk&Ven_UNISYS__VirtualStorage__01.0\1&1a590e2c&0&6D4000861000001000
000000000003000
        46 =
SCSI\Disk&Ven_UNISYS__VirtualStorage__01.0\1&1a590e2c&0&6D4000861000001000
00000000000C000
        47 =
SCSI\Disk&Ven_UNISYS__VirtualStorage__01.0\1&1a590e2c&0&6D4000861000001000
00000000000B000
        48 =
SCSI\Disk&Ven_UNISYS__VirtualStorage__01.0\1&1a590e2c&0&6D4000861000001000
00000000000A000
        49 =
SCSI\Disk&Ven_UNISYS__VirtualStorage__01.0\1&1a590e2c&0&6D4000861000001000
000000000009000
        50 =
SCSI\Disk&Ven_UNISYS__VirtualStorage__01.0\1&1a590e2c&0&6F4000861000001000
000000000008000
        51 =
SCSI\Disk&Ven_UNISYS__VirtualStorage__01.0\1&1a590e2c&0&6F4000861000001000
000000000007000
        52 =
SCSI\Disk&Ven_UNISYS__VirtualStorage__01.0\1&1a590e2c&0&6F4000861000001000
000000000006000
        53 =
SCSI\Disk&Ven_UNISYS__VirtualStorage__01.0\1&1a590e2c&0&6F4000861000001000
000000000005000
        54 =
SCSI\Disk&Ven_UNISYS__VirtualStorage__01.0\1&1a590e2c&0&6F4000861000001000
000000000004000
        55 =
SCSI\Disk&Ven_UNISYS__VirtualStorage__01.0\1&1a590e2c&0&6F4000861000001000
000000000003000
        56 =
SCSI\Disk&Ven_UNISYS__VirtualStorage__01.0\1&1a590e2c&0&6F4000861000001000
00000000000C000
        57 =
SCSI\Disk&Ven_UNISYS__VirtualStorage__01.0\1&1a590e2c&0&6F4000861000001000
00000000000B000
        58 =
SCSI\Disk&Ven_UNISYS__VirtualStorage__01.0\1&1a590e2c&0&6F4000861000001000
00000000000A000
        59 =
SCSI\Disk&Ven_UNISYS__VirtualStorage__01.0\1&1a590e2c&0&6F4000861000001000
000000000009000
        60 =
SCSI\Disk&Ven_UNISYS__VirtualStorage__01.0\1&1a590e2c&0&DD3F00861000001000
000000000004000
        61 =
SCSI\Disk&Ven_UNISYS__VirtualStorage__01.0\1&1a590e2c&0&DD3F00861000001000
000000000003000
        62 =
SCSI\Disk&Ven_UNISYS__VirtualStorage__01.0\1&1a590e2c&0&DD3F00861000001000
000000000002000
```

```
        63 =
SCSI\Disk&Ven_UNISYS__VirtualStorage__01.0\1&1a590e2c&0&DD3F00861000001000
000000000001000
        64 =
SCSI\Disk&Ven_UNISYS__VirtualStorage__01.0\1&1a590e2c&0&DD3F00861000001000
000000000008000
        65 =
SCSI\Disk&Ven_UNISYS__VirtualStorage__01.0\1&1a590e2c&0&DD3F00861000001000
000000000007000
        66 =
SCSI\Disk&Ven_UNISYS__VirtualStorage__01.0\1&1a590e2c&0&DD3F00861000001000
000000000006000
        67 =
SCSI\Disk&Ven_UNISYS__VirtualStorage__01.0\1&1a590e2c&0&DD3F00861000001000
000000000005000
        68 =
SCSI\Disk&Ven_UNISYS__VirtualStorage__01.0\1&1a590e2c&0&B53F00861000001000
000000000008000
        69 =
SCSI\Disk&Ven_UNISYS__VirtualStorage__01.0\1&1a590e2c&0&B53F00861000001000
000000000007000
        70 =
SCSI\Disk&Ven_UNISYS__VirtualStorage__01.0\1&1a590e2c&0&B53F00861000001000
000000000006000
        71 =
SCSI\Disk&Ven_UNISYS__VirtualStorage__01.0\1&1a590e2c&0&B53F00861000001000
000000000005000
        72 =
SCSI\Disk&Ven_UNISYS__VirtualStorage__01.0\1&1a590e2c&0&B53F00861000001000
000000000004000
        73 =
SCSI\Disk&Ven_UNISYS__VirtualStorage__01.0\1&1a590e2c&0&B53F00861000001000
000000000003000
        74 =
SCSI\Disk&Ven_UNISYS__VirtualStorage__01.0\1&1a590e2c&0&B53F00861000001000
00000000000C000
        75 =
SCSI\Disk&Ven_UNISYS__VirtualStorage__01.0\1&1a590e2c&0&B53F00861000001000
00000000000B000
        76 =
SCSI\Disk&Ven_UNISYS__VirtualStorage__01.0\1&1a590e2c&0&B53F00861000001000
00000000000A000
        77 =
SCSI\Disk&Ven_UNISYS__VirtualStorage__01.0\1&1a590e2c&0&B53F00861000001000
000000000009000
        78 =
SCSI\Disk&Ven_DGC_____RAID_10_________0206\1&1a590e2c&0&B81121106001065000
000000000000000
        79 =
SCSI\Disk&Ven_UNISYS__VirtualStorage__01.0\1&1a590e2c&0&454000861000001000
000000000008000
        80 =
SCSI\Disk&Ven_UNISYS__VirtualStorage__01.0\1&1a590e2c&0&454000861000001000
000000000007000
        81 =
SCSI\Disk&Ven_UNISYS__VirtualStorage__01.0\1&1a590e2c&0&454000861000001000
000000000006000
        82 =
SCSI\Disk&Ven_UNISYS__VirtualStorage__01.0\1&1a590e2c&0&454000861000001000
000000000005000
        83 =
SCSI\Disk&Ven_UNISYS__VirtualStorage__01.0\1&1a590e2c&0&454000861000001000
000000000004000
        84 =
SCSI\Disk&Ven_UNISYS__VirtualStorage__01.0\1&1a590e2c&0&454000861000001000
000000000003000
        85 =
SCSI\Disk&Ven_UNISYS__VirtualStorage__01.0\1&1a590e2c&0&454000861000001000
00000000000C000
        86 =
SCSI\Disk&Ven_UNISYS__VirtualStorage__01.0\1&1a590e2c&0&454000861000001000
00000000000B000
        87 =
SCSI\Disk&Ven_UNISYS__VirtualStorage__01.0\1&1a590e2c&0&454000861000001000
00000000000A000
        88 =
SCSI\Disk&Ven_UNISYS__VirtualStorage__01.0\1&1a590e2c&0&454000861000001000
000000000009000
        89 =
SCSI\Disk&Ven_UNISYS__VirtualStorage__01.0\1&1a590e2c&0&0B4000861000001000
000000000008000
        90 =
SCSI\Disk&Ven_UNISYS__VirtualStorage__01.0\1&1a590e2c&0&0B4000861000001000
000000000007000
        91 =
SCSI\Disk&Ven_UNISYS__VirtualStorage__01.0\1&1a590e2c&0&0B4000861000001000
000000000006000
        92 =
SCSI\Disk&Ven_UNISYS__VirtualStorage__01.0\1&1a590e2c&0&0B4000861000001000
000000000005000
        93 =
SCSI\Disk&Ven_UNISYS__VirtualStorage__01.0\1&1a590e2c&0&0B4000861000001000
000000000004000
        94 =
SCSI\Disk&Ven_UNISYS__VirtualStorage__01.0\1&1a590e2c&0&0B4000861000001000
000000000003000
        95 =
SCSI\Disk&Ven_UNISYS__VirtualStorage__01.0\1&1a590e2c&0&0B4000861000001000
00000000000C000
        96 =
SCSI\Disk&Ven_UNISYS__VirtualStorage__01.0\1&1a590e2c&0&0B4000861000001000
00000000000B000
        97 =
SCSI\Disk&Ven_UNISYS__VirtualStorage__01.0\1&1a590e2c&0&0B4000861000001000
00000000000A000
        98 =
SCSI\Disk&Ven_UNISYS__VirtualStorage__01.0\1&1a590e2c&0&0B4000861000001000
000000000009000
        99 =
SCSI\Disk&Ven_UNISYS__VirtualStorage__01.0\1&1a590e2c&0&234000861000001000
000000000008000
        100 =
SCSI\Disk&Ven_UNISYS__VirtualStorage__01.0\1&1a590e2c&0&234000861000001000
000000000007000
```

```
        101 =
SCSI\Disk&Ven_UNISYS__VirtualStorage__01.0\1&1a590e2c&0&234000861000001000
000000000006000
        102 =
SCSI\Disk&Ven_UNISYS__VirtualStorage__01.0\1&1a590e2c&0&234000861000001000
000000000005000
        103 =
SCSI\Disk&Ven_UNISYS__VirtualStorage__01.0\1&1a590e2c&0&234000861000001000
000000000004000
        104 =
SCSI\Disk&Ven_UNISYS__VirtualStorage__01.0\1&1a590e2c&0&234000861000001000
000000000003000
        105 =
SCSI\Disk&Ven_UNISYS__VirtualStorage__01.0\1&1a590e2c&0&234000861000001000
000000000002000
        106 =
SCSI\Disk&Ven_UNISYS__VirtualStorage__01.0\1&1a590e2c&0&234000861000001000
000000000001000
        107 =
SCSI\Disk&Ven_UNISYS__VirtualStorage__01.0\1&1a590e2c&0&234000861000001000
00000000000A000
        108 =
SCSI\Disk&Ven_UNISYS__VirtualStorage__01.0\1&1a590e2c&0&234000861000001000
000000000009000
        109 =
SCSI\Disk&Ven_UNISYS__VirtualStorage__01.0\1&1a590e2c&0&094000861000001000
000000000008000
        110 =
SCSI\Disk&Ven_UNISYS__VirtualStorage__01.0\1&1a590e2c&0&094000861000001000
000000000007000
        111 =
SCSI\Disk&Ven_UNISYS__VirtualStorage__01.0\1&1a590e2c&0&094000861000001000
000000000006000
        112 =
SCSI\Disk&Ven_UNISYS__VirtualStorage__01.0\1&1a590e2c&0&094000861000001000
000000000005000
        113 =
SCSI\Disk&Ven_UNISYS__VirtualStorage__01.0\1&1a590e2c&0&094000861000001000
000000000004000
        114 =
SCSI\Disk&Ven_UNISYS__VirtualStorage__01.0\1&1a590e2c&0&094000861000001000
000000000003000
        115 =
SCSI\Disk&Ven_UNISYS__VirtualStorage__01.0\1&1a590e2c&0&094000861000001000
00000000000C000
        116 =
SCSI\Disk&Ven_UNISYS__VirtualStorage__01.0\1&1a590e2c&0&094000861000001000
00000000000B000
        117 =
SCSI\Disk&Ven_UNISYS__VirtualStorage__01.0\1&1a590e2c&0&094000861000001000
00000000000A000
        118 =
SCSI\Disk&Ven_UNISYS__VirtualStorage__01.0\1&1a590e2c&0&094000861000001000
000000000009000
        119 =
SCSI\Disk&Ven_UNISYS__VirtualStorage__01.0\1&1a590e2c&0&354000861000001000
000000000008000
        120 =
SCSI\Disk&Ven_UNISYS__VirtualStorage__01.0\1&1a590e2c&0&354000861000001000
000000000007000
        121 =
SCSI\Disk&Ven_UNISYS__VirtualStorage__01.0\1&1a590e2c&0&354000861000001000
000000000006000
        122 =
SCSI\Disk&Ven_UNISYS__VirtualStorage__01.0\1&1a590e2c&0&354000861000001000
000000000005000
        123 =
SCSI\Disk&Ven_UNISYS__VirtualStorage__01.0\1&1a590e2c&0&354000861000001000
000000000004000
        124 =
SCSI\Disk&Ven_UNISYS__VirtualStorage__01.0\1&1a590e2c&0&354000861000001000
000000000003000
        125 =
SCSI\Disk&Ven_UNISYS__VirtualStorage__01.0\1&1a590e2c&0&354000861000001000
00000000000C000
        126 =
SCSI\Disk&Ven_UNISYS__VirtualStorage__01.0\1&1a590e2c&0&354000861000001000
00000000000B000
        127 =
SCSI\Disk&Ven_UNISYS__VirtualStorage__01.0\1&1a590e2c&0&354000861000001000
00000000000A000
        128 =
SCSI\Disk&Ven_UNISYS__VirtualStorage__01.0\1&1a590e2c&0&354000861000001000
000000000009000
        129 =
SCSI\Disk&Ven_UNISYS__VirtualStorage__01.0\1&1a590e2c&0&9B3F00861000001000
000000000008000
        130 =
SCSI\Disk&Ven_UNISYS__VirtualStorage__01.0\1&1a590e2c&0&9B3F00861000001000
000000000007000
        131 =
SCSI\Disk&Ven_UNISYS__VirtualStorage__01.0\1&1a590e2c&0&9B3F00861000001000
000000000006000
        132 =
SCSI\Disk&Ven_UNISYS__VirtualStorage__01.0\1&1a590e2c&0&9B3F00861000001000
000000000005000
        133 =
SCSI\Disk&Ven_UNISYS__VirtualStorage__01.0\1&1a590e2c&0&9B3F00861000001000
000000000004000
        134 =
SCSI\Disk&Ven_UNISYS__VirtualStorage__01.0\1&1a590e2c&0&9B3F00861000001000
000000000003000
        135 =
SCSI\Disk&Ven_UNISYS__VirtualStorage__01.0\1&1a590e2c&0&9B3F00861000001000
00000000000C000
        136 =
SCSI\Disk&Ven_UNISYS__VirtualStorage__01.0\1&1a590e2c&0&9B3F00861000001000
00000000000B000
        137 =
SCSI\Disk&Ven_UNISYS__VirtualStorage__01.0\1&1a590e2c&0&9B3F00861000001000
00000000000A000
        138 =
SCSI\Disk&Ven_UNISYS__VirtualStorage__01.0\1&1a590e2c&0&9B3F00861000001000
000000000009000
```

```
        139 =
SCSI\Disk&Ven_UNISYS__VirtualStorage__01.0\1&1a590e2c&0&634000861000001000
000000000008000
        140 =
SCSI\Disk&Ven_UNISYS__VirtualStorage__01.0\1&1a590e2c&0&634000861000001000
000000000007000
        141 =
SCSI\Disk&Ven_UNISYS__VirtualStorage__01.0\1&1a590e2c&0&634000861000001000
000000000006000
        142 =
SCSI\Disk&Ven_UNISYS__VirtualStorage__01.0\1&1a590e2c&0&634000861000001000
000000000005000
        143 =
SCSI\Disk&Ven_UNISYS__VirtualStorage__01.0\1&1a590e2c&0&634000861000001000
000000000004000
        144 =
SCSI\Disk&Ven_UNISYS__VirtualStorage__01.0\1&1a590e2c&0&634000861000001000
000000000003000
        145 =
SCSI\Disk&Ven_UNISYS__VirtualStorage__01.0\1&1a590e2c&0&634000861000001000
00000000000C000
        146 =
SCSI\Disk&Ven_UNISYS__VirtualStorage__01.0\1&1a590e2c&0&634000861000001000
00000000000B000
        147 =
SCSI\Disk&Ven_UNISYS__VirtualStorage__01.0\1&1a590e2c&0&634000861000001000
00000000000A000
        148 =
SCSI\Disk&Ven_UNISYS__VirtualStorage__01.0\1&1a590e2c&0&634000861000001000
000000000009000
        149 =
SCSI\Disk&Ven_UNISYS__VirtualStorage__01.0\1&1a590e2c&0&DB3F00861000001000
000000000008000
        150 =
SCSI\Disk&Ven_UNISYS__VirtualStorage__01.0\1&1a590e2c&0&DB3F00861000001000
000000000007000
        151 =
SCSI\Disk&Ven_UNISYS__VirtualStorage__01.0\1&1a590e2c&0&DB3F00861000001000
000000000006000
        152 =
SCSI\Disk&Ven_UNISYS__VirtualStorage__01.0\1&1a590e2c&0&DB3F00861000001000
000000000005000
        153 =
SCSI\Disk&Ven_UNISYS__VirtualStorage__01.0\1&1a590e2c&0&DB3F00861000001000
000000000004000
        154 =
SCSI\Disk&Ven_UNISYS__VirtualStorage__01.0\1&1a590e2c&0&DB3F00861000001000
000000000003000
        155 =
SCSI\Disk&Ven_UNISYS__VirtualStorage__01.0\1&1a590e2c&0&DB3F00861000001000
00000000000C000
        156 =
SCSI\Disk&Ven_UNISYS__VirtualStorage__01.0\1&1a590e2c&0&DB3F00861000001000
00000000000B000
        157 =
SCSI\Disk&Ven_UNISYS__VirtualStorage__01.0\1&1a590e2c&0&DB3F00861000001000
00000000000A000
        158 =
SCSI\Disk&Ven_UNISYS__VirtualStorage__01.0\1&1a590e2c&0&DB3F00861000001000
000000000009000
```

Windows 2000 Server Client Configuration Information

(Common to 8 clients except for System Name, IP Address & MAC Address)

Hwconfig.ver

```
System Information report written at: 04/26/04 09:38:40
System Name: CLIENT5
[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    CLIENT5
System Manufacturer   UNISYS Corp.
System Model   ES3020L
System Type    X86-based PC
Processor      x86 Family 15 Model 2 Stepping 5 GenuineIntel ~3055 Mhz

Processor      x86 Family 15 Model 2 Stepping 5 GenuineIntel ~3055 Mhz

Processor      x86 Family 15 Model 2 Stepping 5 GenuineIntel ~3055 Mhz

Processor      x86 Family 15 Model 2 Stepping 5 GenuineIntel ~3055 Mhz

BIOS Version/Date      UNISYS Corp. A15, 7/14/2003
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      CLIENT5\Administrator
Time Zone      Pacific Daylight Time
Total Physical Memory  2,048.00 MB
Available Physical Memory     1.73 GB
Total Virtual Memory  5.85 GB
Available Virtual Memory      5.46 GB
Page File Space        3.86 GB
Page File      C:\pagefile.sys

[Hardware Resources]



[Conflicts/Sharing]
```

```
Resource       Device
I/O Port 0x00000000-0x000003AF       PCI bus
I/O Port 0x00000000-0x000003AF       Direct memory access controller


IRQ 7   PCI Device
IRQ 7   ServerWorks (RCC) PCI to USB Open Host Controller

Memory Address 0xFB000000-0xFC3FFFFF  PCI bus
Memory Address 0xFB000000-0xFC3FFFFF  cLAN Host Adapter

Memory Address 0xFD000000-0xFEBFFFFF  PCI bus
Memory Address 0xFD000000-0xFEBFFFFF  RAGE XL PCI Family (Microsoft
Corporation)

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

I/O Port 0x000003B0-0x000003DF       PCI bus
I/O Port 0x000003B0-0x000003DF       RAGE XL PCI Family (Microsoft
Corporation)

I/O Port 0x0000C000-0x0000CFFF       PCI bus
I/O Port 0x0000C000-0x0000CFFF       PCI standard PCI-to-PCI bridge



[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
0x00000000-0x000003AF  PCI bus OK
0x00000000-0x000003AF  Direct memory access controller      OK
0x000003B0-0x000003DF  PCI bus OK
0x000003B0-0x000003DF  RAGE XL PCI Family (Microsoft Corporation)   OK

0x000003E0-0x00000CF7  PCI bus OK
0x00000D00-0x00000FFF  PCI bus OK
0x0000E000-0x0000EFFF  PCI bus OK
0x0000ECF8-0x0000ECFF  PCI Device     OK
0x0000ECE8-0x0000ECEF  PCI Device     OK
0x0000EC80-0x0000ECBF  PCI Device     OK
0x0000ECF4-0x0000ECF7  PCI Device     OK
0x0000E800-0x0000E8FF  RAGE XL PCI Family (Microsoft Corporation)   OK

0x000003C0-0x000003DF  RAGE XL PCI Family (Microsoft Corporation)   OK

0x00000080-0x0000009F  Direct memory access controller      OK
0x000000C0-0x000000DF  Direct memory access controller      OK
0x0000040B-0x0000040B  Direct memory access controller      OK
0x000004D6-0x000004D6  Direct memory access controller      OK
0x000000F0-0x000000FF  Numeric data processor OK
0x00000020-0x0000003F  Programmable interrupt controller    OK
0x000000A0-0x000000BF  Programmable interrupt controller    OK
0x000004D0-0x000004D1  Programmable interrupt controller    OK
0x00000061-0x00000061  System speaker OK
0x00000040-0x0000005F  System timer   OK
0x000003F0-0x000003F5  Standard floppy disk controller      OK
0x000003F7-0x000003F7  Standard floppy disk controller      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
0x000003F8-0x000003FF  Communications Port (COM1)    OK
0x000002F8-0x000002FF  Communications Port (COM2)    OK
0x00000070-0x0000007F  System CMOS/real time clock   OK
0x00000800-0x0000089F  System board   OK
0x000008A0-0x000008AF  System board   OK
0x00000C00-0x00000CD7  System board   OK
0x00000F50-0x00000F58  System board   OK
0x000008E0-0x000008E3  System board   OK
0x000000E0-0x000000EF  System board   OK
0x000008B0-0x000008BF  CSB5 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
0x00000A79-0x00000A79  ISAPNP Read Data Port  OK
0x00000279-0x00000279  ISAPNP Read Data Port  OK
0x00000274-0x00000277  ISAPNP Read Data Port  OK
0x0000C000-0x0000CFFF  PCI bus OK
0x0000C000-0x0000CFFF  PCI standard PCI-to-PCI bridge       OK
0x0000CC00-0x0000CCFF  Adaptec AIC-7899 Ultra160 PCI SCSI Card      OK

0x0000C800-0x0000C8FF  Adaptec AIC-7899 Ultra160 PCI SCSI Card      OK

0x0000D000-0x0000DFFF  PCI bus OK

[IRQs]

Resource       Device  Status
IRQ 9   Microsoft ACPI-Compliant System      OK
IRQ 11  PCI Device     OK
IRQ 10  PCI Device     OK
IRQ 7   PCI Device     OK
IRQ 7   ServerWorks (RCC) PCI to USB Open Host Controller   OK
IRQ 13  Numeric data processor OK
IRQ 0   System timer   OK
IRQ 6   Standard floppy disk controller      OK
IRQ 1   Standard 101/102-Key or Microsoft Natural PS/2 Keyboard     OK

IRQ 12  PS/2 Compatible Mouse  OK
IRQ 4   Communications Port (COM1)    OK
IRQ 3   Communications Port (COM2)    OK
IRQ 8   System CMOS/real time clock   OK
IRQ 14  Primary IDE Channel   OK
```

```
IRQ 30  Adaptec AIC-7899 Ultra160 PCI SCSI Card      OK
IRQ 31  Adaptec AIC-7899 Ultra160 PCI SCSI Card      OK
IRQ 28  Broadcom NetXtreme Gigabit Ethernet #3       OK
IRQ 29  Broadcom NetXtreme Gigabit Ethernet #4       OK
IRQ 16  cLAN Host Adapter     OK

[Memory]

Resource       Device  Status
0xA0000-0xBFFFF        PCI bus OK
0xA0000-0xBFFFF        RAGE XL PCI Family (Microsoft Corporation)   OK

0xD0000-0xE7FFF        PCI bus OK
0xFD000000-0xFEBFFFFF  PCI bus OK
0xFD000000-0xFEBFFFFF  RAGE XL PCI Family (Microsoft Corporation)   OK

0xFEB80000-0xFEB80FFF  PCI Device     OK
0xFE102000-0xFE102FFF  PCI Device     OK
0xFEB00000-0xFEB7FFFF  PCI Device     OK
0xFE101000-0xFE101FFF  RAGE XL PCI Family (Microsoft Corporation)   OK

0xFE100000-0xFE100FFF  ServerWorks (RCC) PCI to USB Open Host Controller
       OK
0xF9000000-0xFADFFFFF  PCI bus OK
0xFAC00000-0xFADFFFFF  PCI standard PCI-to-PCI bridge        OK
0xFACFF000-0xFACFFFFF  Adaptec AIC-7899 Ultra160 PCI SCSI Card      OK

0xFACFE000-0xFACFEFFF  Adaptec AIC-7899 Ultra160 PCI SCSI Card      OK

0xFAE00000-0xFAFFFFFF  PCI bus OK
0xFAF10000-0xFAF1FFFF  Broadcom NetXtreme Gigabit Ethernet #3       OK

0xFAF00000-0xFAF0FFFF  Broadcom NetXtreme Gigabit Ethernet #4       OK

0xFB000000-0xFC3FFFFF  PCI bus OK
0xFB000000-0xFC3FFFFF  cLAN Host Adapter      OK
0xFC300000-0xFC31FFFF  cLAN Host Adapter      OK
0xFC000000-0xFC1FFFFF  cLAN Host Adapter      OK
0xFC320000-0xFC32FFFF  cLAN Host Adapter      OK

[Components]



[Multimedia]



[Audio Codecs]

CODEC   Manufacturer   Description    Status  File    Version Size
       Creation Date
c:\windows\system32\tssoft32.acm      DSP GROUP, INC.               OK
       C:\WINDOWS\system32\TSSOFT32.ACM      1.01    9.50 KB (9,728 bytes)
       3/25/2003 11:00 AM
c:\windows\system32\msaud32.acm       Microsoft Corporation  Windows Media
Audio Codec    OK      C:\WINDOWS\system32\MSAUD32.ACM       8.00.00.4487
       288.00 KB (294,912 bytes)     3/25/2003 11:00 AM
c:\windows\system32\msadp32.acm       Microsoft Corporation         OK
       C:\WINDOWS\system32\MSADP32.ACM       5.2.3790.0 (srv03_rtm.030324-
2048)   14.50 KB (14,848 bytes)       3/25/2003 11:00 AM
c:\windows\system32\msg711.acm        Microsoft Corporation         OK
       C:\WINDOWS\system32\MSG711.ACM        5.2.3790.0 (srv03_rtm.030324-
2048)   10.00 KB (10,240 bytes)       3/25/2003 11:00 AM
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 11:00 AM
c:\windows\system32\msgsm32.acm       Microsoft Corporation         OK
       C:\WINDOWS\system32\MSGSM32.ACM       5.2.3790.0 (srv03_rtm.030324-
2048)   20.50 KB (20,992 bytes)       3/25/2003 11:00 AM
c:\windows\system32\msg723.acm        Microsoft Corporation         OK
       C:\WINDOWS\system32\MSG723.ACM        4.4.4000       116.00 KB
(118,784 bytes)       7/16/2003 3:50 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 11:00 AM
c:\windows\system32\l3codeca.acm      Fraunhofer Institut Integrierte
Schaltungen IIS        Fraunhofer IIS MPEG Layer-3 Codec     OK
       C:\WINDOWS\system32\L3CODECA.ACM      1, 9, 0, 0305  284.00 KB
(290,816 bytes)       3/25/2003 11:00 AM

[Video Codecs]

CODEC   Manufacturer   Description    Status  File    Version Size
       Creation Date
c:\windows\system32\tsbyuv.dll        Microsoft Corporation         OK
       C:\WINDOWS\system32\TSBYUV.DLL        5.2.3790.0 (srv03_rtm.030324-
2048)   8.00 KB (8,192 bytes)  3/24/2003 5:50 PM
c:\windows\system32\msh261.drv        Microsoft Corporation         OK
       C:\WINDOWS\system32\MSH261.DRV        4.4.4000       180.00 KB
(184,320 bytes)       7/16/2003 3:50 PM
c:\windows\system32\msh263.drv        Microsoft Corporation         OK
       C:\WINDOWS\system32\MSH263.DRV        4.4.4000       284.00 KB
(290,816 bytes)       3/24/2003 5:46 PM
c:\windows\system32\msyuv.dll Microsoft Corporation         OK
       C:\WINDOWS\system32\MSYUV.DLL 5.2.3790.0 (srv03_rtm.030324-2048)
       16.50 KB (16,896 bytes)       3/24/2003 5:49 PM
c:\windows\system32\msvidc32.dll      Microsoft Corporation         OK
       C:\WINDOWS\system32\MSVIDC32.DLL      5.2.3790.0 (srv03_rtm.030324-
2048)   26.50 KB (27,136 bytes)       3/25/2003 11:00 AM
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)       3/24/2003 5:49 PM
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 11:00 AM

[CD-ROM]

Item    Value
Drive   D:
Description    CD-ROM Drive
Media Loaded   No
Media Type     CD-ROM
Name    TEAC CD-224E
Manufacturer   (Standard CD-ROM drives)
```

```
Status  OK
Transfer Rate  Not Available
SCSI Target ID 0
PNP Device ID  IDE\CDROMTEAC_CD-
224E_____________________________K.9A____\5&3125DC91&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 11:00 AM)


[Sound Device]

Item    Value

[Display]

Item    Value
Name    RAGE XL PCI Family (Microsoft Corporation)
PNP Device ID
        PCI\VEN_1002&DEV_4752&SUBSYS_01211028&REV_27\3&13C0B0C5&0&70

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     800 x 600 x 75 hertz
Bits/Pixel     32
Memory Address 0xFD000000-0xFEBFFFFF
I/O Port       0x0000E800-0x0000E8FF
Memory Address 0xFE101000-0xFE101FFF
I/O Port       0x000003B0-0x000003DF
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), 7/16/2003 8:39 AM)

[Infrared]

Item    Value

[Input]



[Keyboard]

Item    Value
Description    Standard 101/102-Key or Microsoft Natural PS/2 Keyboard

Name    Enhanced (101- or 102-key)
Layout  00000409
PNP Device ID  ACPI\PNP0303\4&25F73A82&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 11:00 AM)


[Pointing Device]

Item    Value
Hardware Type  PS/2 Compatible Mouse
Number of Buttons      5
Status  OK
PNP Device ID  ACPI\PNP0F13\4&25F73A82&0
Power Management Supported    No
Double Click Threshold 6
Handedness     Right Handed Operation
IRQ Channel    IRQ 12
Driver  c:\windows\system32\drivers\i8042prt.sys (5.2.3790.0
(srv03_rtm.030324-2048), 68.50 KB (70,144 bytes), 3/25/2003 11:00 AM)


[Modem]

Item    Value

[Network]



[Adapter]

Item    Value
Name    [00000001] Broadcom NetXtreme Gigabit Ethernet
Adapter Type   Not Available
Product Type   Broadcom NetXtreme Gigabit Ethernet
Installed      Yes
PNP Device ID  Not Available
Last Reset     4/24/2004 8:35 PM
Index   1
Service Name   b57w2k
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] Broadcom NetXtreme Gigabit Ethernet
Adapter Type   Not Available
Product Type   Broadcom NetXtreme Gigabit Ethernet
Installed      Yes
PNP Device ID  Not Available
Last Reset     4/24/2004 8:35 PM
Index   2
Service Name   b57w2k
IP Address     Not Available
```

```
IP Subnet      Not Available
Default IP Gateway    Not Available
DHCP Enabled   No
DHCP Server    Not Available
DHCP Lease Expires    Not Available
DHCP Lease Obtained   Not Available
MAC Address    Not Available

Name    [00000003] RAS Async Adapter
Adapter Type   Not Available
Product Type   RAS Async Adapter
Installed      Yes
PNP Device ID  Not Available
Last Reset     4/24/2004 8:35 PM
Index  3
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    [00000004] WAN Miniport (L2TP)
Adapter Type   Not Available
Product Type   WAN Miniport (L2TP)
Installed      Yes
PNP Device ID  ROOT\MS_L2TPMINIPORT\0000
Last Reset     4/24/2004 8:35 PM
Index  4
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 11:00 AM)


Name    [00000005] 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     4/24/2004 8:35 PM
Index  5
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 11:00 AM)


Name    [00000006] 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     4/24/2004 8:35 PM
Index  6
Service Name   RasPppoe
IP Address     Not Available
IP Subnet      Not Available
Default IP Gateway    Not Available
DHCP Enabled   No
DHCP Server    Not Available
DHCP Lease Expires    Not Available
DHCP Lease Obtained   Not Available
MAC Address    33:50:6F:45:30:30
Driver c:\windows\system32\drivers\raspppoe.sys (5.2.3790.0
(srv03_rtm.030324-2048), 38.00 KB (38,912 bytes), 3/25/2003 11:00 AM)


Name    [00000007] Direct Parallel
Adapter Type   Not Available
Product Type   Direct Parallel
Installed      Yes
PNP Device ID  ROOT\MS_PTIMINIPORT\0000
Last Reset     4/24/2004 8:35 PM
Index  7
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 11:00 AM)


Name    [00000008] WAN Miniport (IP)
Adapter Type   Not Available
Product Type   WAN Miniport (IP)
Installed      Yes
PNP Device ID  ROOT\MS_NDISWANIP\0000
Last Reset     4/24/2004 8:35 PM
Index  8
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 11:00 AM)


Name    [00000009] cLAN Host Adapter
Adapter Type   Ethernet 802.3
Product Type   cLAN Host Adapter
Installed      Yes
PNP Device ID  PCI\VEN_135B&DEV_0001&SUBSYS_00000000&REV_00\3&1070020&0&30

Last Reset     4/24/2004 8:35 PM
Index   9
Service Name   GNINDIS
IP Address     Not Available
IP Subnet      Not Available
Default IP Gateway     Not Available
DHCP Enabled   Yes
DHCP Server    Not Available
DHCP Lease Expires     Not Available
DHCP Lease Obtained    Not Available
MAC Address    00:90:FA:00:14:20
Memory Address 0xFC300000-0xFC31FFFF
Memory Address 0xFC000000-0xFC1FFFFF
Memory Address 0xFB000000-0xFC3FFFFF
Memory Address 0xFC320000-0xFC32FFFF
IRQ Channel    IRQ 16
Driver  c:\windows\system32\drivers\gnindis.sys (4.2.0.75, 22.19 KB
(22,726 bytes), 7/16/2003 4:47 PM)

Name    [00000010] Broadcom NetXtreme Gigabit Ethernet
Adapter Type   Ethernet 802.3
Product Type   Broadcom NetXtreme Gigabit Ethernet
Installed      Yes
PNP Device ID
        PCI\VEN_14E4&DEV_16A7&SUBSYS_01211028&REV_02\3&172E68DD&0&30

Last Reset     4/24/2004 8:35 PM
Index   10
Service Name   b57w2k
IP Address     192.168.91.5
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    00:06:5B:FE:80:97
Memory Address 0xFAF10000-0xFAF1FFFF
IRQ Channel    IRQ 28
Driver  c:\windows\system32\drivers\b57xp32.sys (2.91.0.0 built by:
WinDDK, 137.00 KB (140,288 bytes), 7/16/2003 8:39 AM)

Name    [00000011] Broadcom NetXtreme Gigabit Ethernet
Adapter Type   Ethernet 802.3
Product Type   Broadcom NetXtreme Gigabit Ethernet
Installed      Yes
PNP Device ID
        PCI\VEN_14E4&DEV_16A7&SUBSYS_01211028&REV_02\3&172E68DD&0&40

Last Reset     4/24/2004 8:35 PM
Index   11
Service Name   b57w2k
IP Address     192.5.1.1
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    00:06:5B:FE:80:98
Memory Address 0xFAF00000-0xFAF0FFFF
IRQ Channel    IRQ 29
Driver  c:\windows\system32\drivers\b57xp32.sys (2.91.0.0 built by:
WinDDK, 137.00 KB (140,288 bytes), 7/16/2003 8:39 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_{A6102462-5B4E-4973-915B-
715C49C76CDF}] SEQPACKET 6
Connectionless Service No
Guarantees Delivery    Yes
Guarantees Sequencing  Yes
Maximum Address Size   20 bytes
Maximum Message Size   62.50 KB (64,000 bytes)
Message Oriented       Yes
Minimum Address Size   20 bytes
Pseudo Stream Oriented No
Supports Broadcasting  No
Supports Connect Data  No
Supports Disconnect Data      No
Supports Encryption    No
Supports Expedited Data       No
Supports Graceful Closing     No
Supports Guaranteed Bandwidth No
Supports Multicasting  No

Name    MSAFD NetBIOS [\Device\NetBT_Tcpip_{A6102462-5B4E-4973-915B-
715C49C76CDF}] DATAGRAM 6
Connectionless Service Yes
Guarantees Delivery    No
Guarantees Sequencing  No
Maximum Address Size   20 bytes
Maximum Message Size   62.50 KB (64,000 bytes)
Message Oriented       Yes
Minimum Address Size   20 bytes
Pseudo Stream Oriented No
Supports Broadcasting  Yes
Supports Connect Data  No
Supports Disconnect Data      No
Supports Encryption    No
Supports Expedited Data       No
Supports Graceful Closing     No
Supports Guaranteed Bandwidth No
Supports Multicasting  No

Name    MSAFD NetBIOS [\Device\NetBT_Tcpip_{C299F768-4966-4146-9295-
AA099379D574}] SEQPACKET 5
Connectionless Service No
Guarantees Delivery    Yes
Guarantees Sequencing  Yes
Maximum Address Size   20 bytes
Maximum Message Size   62.50 KB (64,000 bytes)
Message Oriented       Yes
Minimum Address Size   20 bytes
Pseudo Stream Oriented No
Supports Broadcasting  No
Supports Connect Data  No
Supports Disconnect Data      No
Supports Encryption    No
Supports Expedited Data       No
Supports Graceful Closing     No
Supports Guaranteed Bandwidth No
Supports Multicasting  No

Name    MSAFD NetBIOS [\Device\NetBT_Tcpip_{C299F768-4966-4146-9295-
AA099379D574}] DATAGRAM 5
Connectionless Service Yes
Guarantees Delivery    No
Guarantees Sequencing  No
Maximum Address Size   20 bytes
Maximum Message Size   62.50 KB (64,000 bytes)
Message Oriented       Yes
Minimum Address Size   20 bytes
Pseudo Stream Oriented No
Supports Broadcasting  Yes
Supports Connect Data  No
Supports Disconnect Data      No
Supports Encryption    No
Supports Expedited Data       No
Supports Graceful Closing     No
Supports Guaranteed Bandwidth No
Supports Multicasting  No
```

```
Name    MSAFD NetBIOS [\Device\NetBT_Tcpip_{E02AF43D-453A-494B-9807-
62F5640324E3}] 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_{E02AF43D-453A-494B-9807-
62F5640324E3}] 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_{F8003B81-70DB-411C-B383-
CF9434D33F7A}] 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_{F8003B81-70DB-411C-B383-
CF9434D33F7A}] 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_{A218374A-72E5-46C8-A286-
324E933BCAB4}] 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_{A218374A-72E5-46C8-A286-
324E933BCAB4}] 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_{2382CB34-8270-44D4-B672-
233CC1568F18}] 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_{2382CB34-8270-44D4-B672-
233CC1568F18}] DATAGRAM 2
Connectionless Service Yes
Guarantees Delivery    No
Guarantees Sequencing  No
Maximum Address Size   20 bytes
Maximum Message Size   62.50 KB (64,000 bytes)
Message Oriented       Yes
Minimum Address Size   20 bytes
Pseudo Stream Oriented No
Supports Broadcasting  Yes
Supports Connect Data  No
Supports Disconnect Data      No
Supports Encryption    No
Supports Expedited Data       No
Supports Graceful Closing     No
Supports Guaranteed Bandwidth No
Supports Multicasting  No

Name    MSAFD NetBIOS [\Device\NetBT_Tcpip_{6DD7A721-5093-4121-86B6-
C903B9FA7030}] 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_{6DD7A721-5093-4121-86B6-
C903B9FA7030}] 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

[WinSock]

Item    Value
File    c:\windows\system32\winsock.dll
Size    2.80 KB (2,864 bytes)
Version 3.10

File    c:\windows\system32\wsock32.dll
Size    22.00 KB (22,528 bytes)
Version 5.2.3790.0 (srv03_rtm.030324-2048)

[Ports]



[Serial]

Item    Value
Name    Communications Port (COM1)
Status  OK
PNP Device ID  ACPI\PNP0501\1
Maximum Input Buffer Size     0
Maximum Output Buffer Size    No
Settable Baud Rate     Yes
Settable Data Bits     Yes
Settable Flow Control  Yes
Settable Parity        Yes
Settable Parity Check  Yes
Settable Stop Bits     Yes
Settable RLSD  Yes
Supports RLSD  Yes
Supports 16 Bit Mode   No
Supports Special Characters   No
Baud Rate      9600
Bits/Byte      8
Stop Bits      1
Parity  None
Busy    No
Abort Read/Write on Error     No
```

```
Binary Mode Enabled    Yes
Continue XMit on XOff  No
CTS Outflow Control    No
Discard NULL Bytes     No
DSR Outflow Control    0
DSR Sensitivity        0
DTR Flow Control Type  Enable
EOF Character  0
Error Replace Character       0
Error Replacement Enabled     No
Event Character        0
Parity Check Enabled   No
RTS Flow Control Type  Enable
XOff Character 19
XOffXMit Threshold     512
XOn Character  17
XOnXMit Threshold      2048
XOnXOff InFlow Control 0
XOnXOff OutFlow Control       0
I/O Port       0x000003F8-0x000003FF
IRQ Channel    IRQ 4
Driver  c:\windows\system32\drivers\serial.sys (5.2.3790.0
(srv03_rtm.030324-2048), 76.00 KB (77,824 bytes), 3/25/2003 11:00 AM)


Name    Communications Port (COM2)
Status  OK
PNP Device ID  ACPI\PNP0501\2
Maximum Input Buffer Size     0
Maximum Output Buffer Size    No
Settable Baud Rate     Yes
Settable Data Bits     Yes
Settable Flow Control  Yes
Settable Parity        Yes
Settable Parity Check  Yes
Settable Stop Bits     Yes
Settable RLSD  Yes
Supports RLSD  Yes
Supports 16 Bit Mode   No
Supports Special Characters   No
Baud Rate      9600
Bits/Byte      8
Stop Bits      1
Parity  None
Busy    No
Abort Read/Write on Error     No
Binary Mode Enabled    Yes
Continue XMit on XOff  No
CTS Outflow Control    No
Discard NULL Bytes     No
DSR Outflow Control    0
DSR Sensitivity        0
DTR Flow Control Type  Enable
EOF Character  0
Error Replace Character       0
Error Replacement Enabled     No
Event Character        0
Parity Check Enabled   No
RTS Flow Control Type  Enable
XOff Character 19
XOffXMit Threshold     512
XOn Character  17
XOnXMit Threshold      2048
XOnXOff InFlow Control 0
XOnXOff OutFlow Control       0
I/O Port       0x000002F8-0x000002FF
IRQ Channel    IRQ 3
Driver  c:\windows\system32\drivers\serial.sys (5.2.3790.0
(srv03_rtm.030324-2048), 76.00 KB (77,824 bytes), 3/25/2003 11:00 AM)


[Parallel]

Item    Value

[Storage]



[Drives]

Item    Value
Drive   A:
Description    3 1/2 Inch Floppy Drive

Drive   C:
Description    Local Fixed Disk
Compressed     No
File System    NTFS
Size    16.95 GB (18,202,509,312 bytes)
Free Space     12.18 GB (13,077,049,344 bytes)
Volume Name
Volume Serial Number   7433AD41

Drive   D:
Description    CD-ROM Disc

[Disks]

Item    Value
Description    Disk drive
Manufacturer   (Standard disk drives)
Model   SEAGATE ST318406LC 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    16.95 GB (18,202,544,640 bytes)
Total Cylinders        2,213
Total Sectors  35,551,845
Total Tracks   564,315
```

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Tracks/Cylinder        255
Partition      Disk #0, Partition #0
Partition Size 16.95 GB (18,202,512,384 bytes)
Partition Starting Offset     32,256 bytes

[SCSI]

Item    Value
Name    Adaptec AIC-7899 Ultra160 PCI SCSI Card
Manufacturer   Adaptec
Status  OK
PNP Device ID
        PCI\VEN_9005&DEV_00CF&SUBSYS_01211028&REV_01\4&22300438&0&3040

I/O Port       0x0000CC00-0x0000CCFF
Memory Address 0xFACFF000-0xFACFFFFF
IRQ Channel    IRQ 30
Driver  c:\windows\system32\drivers\adpu160m.sys (RTC_XP07
(lab01_n(storbuild).010917-1031), 99.63 KB (102,016 bytes), 3/25/2003
11:00 AM)

Name    Adaptec AIC-7899 Ultra160 PCI SCSI Card
Manufacturer   Adaptec
Status  OK
PNP Device ID
        PCI\VEN_9005&DEV_00CF&SUBSYS_01211028&REV_01\4&22300438&0&3140

I/O Port       0x0000C800-0x0000C8FF
Memory Address 0xFACFE000-0xFACFEFFF
IRQ Channel    IRQ 31
Driver  c:\windows\system32\drivers\adpu160m.sys (RTC_XP07
(lab01_n(storbuild).010917-1031), 99.63 KB (102,016 bytes), 3/25/2003
11:00 AM)

[IDE]

Item    Value
Name    CSB5 IDE Controller
Manufacturer   ServerWorks
Status  OK
PNP Device ID
        PCI\VEN_1166&DEV_0212&SUBSYS_02121166&REV_93\3&13C0B0C5&0&79

I/O Port       0x000008B0-0x000008BF
Driver  c:\windows\system32\drivers\pciide.sys (5.2.3790.0
(srv03_rtm.030324-2048), 5.50 KB (5,632 bytes), 3/25/2003 11:00 AM)

Name    Primary IDE Channel
Manufacturer   (Standard IDE ATA/ATAPI controllers)
Status  OK
PNP Device ID  PCIIDE\IDECHANNEL\4&10A8249&0&0
I/O Port       0x000001F0-0x000001F7
I/O Port       0x000003F6-0x000003F6
IRQ Channel    IRQ 14
Driver  c:\windows\system32\drivers\atapi.sys (5.2.3790.0
(srv03_rtm.030324-2048), 89.00 KB (91,136 bytes), 3/25/2003 11:00 AM)

Name    Secondary IDE Channel
Manufacturer   (Standard IDE ATA/ATAPI controllers)
Status  OK
PNP Device ID  PCIIDE\IDECHANNEL\4&10A8249&0&1
I/O Port       0x00000170-0x00000177
I/O Port       0x00000376-0x00000376
Driver  c:\windows\system32\drivers\atapi.sys (5.2.3790.0
(srv03_rtm.030324-2048), 89.00 KB (91,136 bytes), 3/25/2003 11:00 AM)


[Printing]

Name    Driver  Port Name      Server Name

[Problem Devices]

Device  PNP Device ID  Error Code
PCI Device
        PCI\VEN_1028&DEV_000C&SUBSYS_000C1028&REV_00\3&13C0B0C5&0&20
        The drivers for this device are not installed.
PCI Device
        PCI\VEN_1028&DEV_0008&SUBSYS_00081028&REV_00\3&13C0B0C5&0&21
        The drivers for this device are not installed.
PCI Device
        PCI\VEN_1028&DEV_000D&SUBSYS_000D1028&REV_00\3&13C0B0C5&0&22
        The drivers for this device are not installed.

[USB]

Device  PNP Device ID
ServerWorks (RCC) PCI to USB Open Host Controller
        PCI\VEN_1166&DEV_0220&SUBSYS_02201166&REV_05\3&13C0B0C5&0&7A

USB Root Hub   USB\ROOT_HUB\4&1A0F8909&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       c:\windows\system32\drivers\adpu160m.sys
        Kernel Driver  Yes     Boot    Running OK      Normal  No      Yes

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
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
asyncmac        RAS Asynchronous Media Driver
        c:\windows\system32\drivers\asyncmac.sys     Kernel Driver  No
        Manual  Stopped OK      Normal  No      No
atapi   Standard IDE/ESDI Hard Disk Controller
        c:\windows\system32\drivers\atapi.sys Kernel Driver  Yes     Boot
        Running OK      Normal  No      Yes
atdisk  Atdisk  Not Available  Kernel Driver  No      Disabled
        Stopped OK      Ignore  No      No
ati2mpad        ati2mpad        c:\windows\system32\drivers\ati2mpad.sys
        Kernel Driver  Yes     Manual  Running OK      Ignore  No      Yes

atmarpc ATM ARP Client Protocol
        c:\windows\system32\drivers\atmarpc.sys      Kernel Driver  No
        Manual  Stopped OK      Normal  No      No
audstub Audio Stub Driver       c:\windows\system32\drivers\audstub.sys
        Kernel Driver  Yes     Manual  Running OK      Normal  No      Yes

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  Kernel Driver  Yes
        System  Running OK      Normal  No      Yes
cbidf2k cbidf2k c:\windows\system32\drivers\cbidf2k.sys      Kernel Driver
        No      Disabled        Stopped OK      Normal  No      No
cd20xrnt        cd20xrnt        Not Available  Kernel Driver  No
        Disabled        Stopped OK      Normal  No      No
cdfs    Cdfs    c:\windows\system32\drivers\cdfs.sys  File System Driver
        Yes     Disabled        Running OK      Normal  No      Yes
cdrom   CD-ROM Driver  c:\windows\system32\drivers\cdrom.sys Kernel 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
cpqarry2        cpqarry2        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
        No      Disabled        Stopped OK      Normal  No      No
dmio    Logical Disk Manager Driver   c:\windows\system32\drivers\dmio.sys
        Kernel Driver  Yes     Boot    Running OK      Normal  No      Yes

dmload  dmload  c:\windows\system32\drivers\dmload.sys       Kernel Driver
        Yes     Boot    Running OK      Normal  No      Yes
dpti2o  dpti2o  Not Available  Kernel Driver  No      Disabled
        Stopped OK      Normal  No      No
fastfat Fastfat c:\windows\system32\drivers\fastfat.sys      File System
Driver  No      Disabled        Stopped OK      Normal  No      No
fdc     Floppy Disk Controller Driver c:\windows\system32\drivers\fdc.sys
        Kernel Driver  Yes     Manual  Running OK      Normal  No      Yes

fips    Fips    c:\windows\system32\drivers\fips.sys  Kernel Driver  Yes
        System  Running OK      Normal  No      Yes
flpydisk        Floppy Disk Driver
        c:\windows\system32\drivers\flpydisk.sys     Kernel Driver  Yes
        Manual  Running OK      Normal  No      Yes
ftdisk  Volume Manager Driver  c:\windows\system32\drivers\ftdisk.sys
        Kernel Driver  Yes     Boot    Running OK      Normal  No      Yes

gnindis cLAN NDIS Driver       c:\windows\system32\drivers\gnindis.sys
        Kernel Driver  Yes     Auto    Running OK      Normal  No      Yes

gnivia  cLAN VIA Driver        c:\windows\system32\drivers\gnivia.sys
        Kernel Driver  Yes     Auto    Running OK      Normal  No      Yes

gpc     Generic Packet Classifier
        c:\windows\system32\drivers\msgpc.sys Kernel Driver  Yes     Manual
        Running OK      Normal  No      Yes
hpn     hpn     Not Available  Kernel Driver  No      Disabled
        Stopped OK      Normal  No      No
hpt3xx  hpt3xx  Not Available  Kernel Driver  No      Disabled
        Stopped OK      Normal  No      No
http    HTTP    c:\windows\system32\drivers\http.sys  Kernel Driver  Yes
        Manual  Running OK      Normal  No      Yes
i2omgmt i2omgmt Not Available  Kernel Driver  No      System  Stopped OK
        Normal  No      No
i2omp   i2omp   Not Available  Kernel Driver  No      Disabled
        Stopped OK      Normal  No      No
i8042prt        i8042 Keyboard and PS/2 Mouse Port Driver
        c:\windows\system32\drivers\i8042prt.sys     Kernel Driver  Yes
        System  Running OK      Normal  No      Yes
iirsp   iirsp   Not Available  Kernel Driver  No      Disabled
        Stopped OK      Normal  No      No
```

```
imapi   CD-Burning Filter Driver
        c:\windows\system32\drivers\imapi.sys Kernel Driver  No      System
        Stopped OK      Normal  No      No
intelide        IntelIde        Not Available  Kernel Driver  No
        Disabled        Stopped OK      Normal  No      No
ipfilterdriver IP Traffic Filter Driver
        c:\windows\system32\drivers\ipfltdrv.sys     Kernel Driver  No
        Manual  Stopped OK      Normal  No      No
ipinip  IP in IP Tunnel Driver c:\windows\system32\drivers\ipinip.sys
        Kernel Driver  No       Manual  Stopped OK      Normal  No      No

ipnat   IP Network Address Translator
        c:\windows\system32\drivers\ipnat.sys Kernel Driver  No      Manual
        Stopped OK      Normal  No      No
ipsec   IPSEC driver    c:\windows\system32\drivers\ipsec.sys Kernel Driver
        Yes     System  Running OK      Normal  No      Yes
ipsraidn        ipsraidn        Not Available  Kernel Driver  No
        Disabled        Stopped OK      Normal  No      No
irenum  IR Enumerator Service  c:\windows\system32\drivers\irenum.sys
        Kernel Driver  No       Manual  Stopped OK      Normal  No      No

isapnp  PnP ISA/EISA Bus Driver
        c:\windows\system32\drivers\isapnp.sys       Kernel Driver  Yes
        Boot    Running OK      Critical        No      Yes
kbdclass        Keyboard Class Driver
        c:\windows\system32\drivers\kbdclass.sys     Kernel Driver  Yes
        System  Running OK      Normal  No      Yes
ksecdd  KSecDD  c:\windows\system32\drivers\ksecdd.sys       Kernel Driver
        Yes     Boot    Running OK      Normal  No      Yes
lp6nds35        lp6nds35        Not Available  Kernel Driver  No
        Disabled        Stopped OK      Normal  No      No
mnmdd   mnmdd   c:\windows\system32\drivers\mnmdd.sys Kernel Driver  Yes
        System  Running OK      Ignore  No      Yes
modem   Modem   c:\windows\system32\drivers\modem.sys Kernel Driver  No
        Manual  Stopped OK      Ignore  No      No
mouclass        Mouse Class Driver
        c:\windows\system32\drivers\mouclass.sys     Kernel Driver  Yes
        System  Running OK      Normal  No      Yes
mountmgr        Mount Point Manager
        c:\windows\system32\drivers\mountmgr.sys     Kernel Driver  Yes
        Boot    Running OK      Normal  No      Yes
mraid35x        mraid35x        Not Available  Kernel Driver  No
        Disabled        Stopped OK      Normal  No      No
mrxdav  WebDav Client Redirector
        c:\windows\system32\drivers\mrxdav.sys       File System Driver
        No      Manual  Stopped OK      Normal  No      No
mrxsmb  MRXSMB  c:\windows\system32\drivers\mrxsmb.sys       File System
Driver  Yes     System  Running OK      Normal  No      Yes
msfs    Msfs    c:\windows\system32\drivers\msfs.sys  File System Driver
        Yes     System  Running OK      Normal  No      Yes
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
        Yes
netbt   NetBios over Tcpip     c:\windows\system32\drivers\netbt.sys Kernel
Driver  Yes     System  Running OK      Normal  No      Yes
nfrd960 nfrd960 Not Available  Kernel Driver  No      Disabled
        Stopped OK      Normal  No      No
npfs    Npfs    c:\windows\system32\drivers\npfs.sys  File System Driver
        Yes     System  Running OK      Normal  No      Yes
ntfs    Ntfs    c:\windows\system32\drivers\ntfs.sys  File System Driver
        Yes     Disabled        Running OK      Normal  No      Yes
null    Null    c:\windows\system32\drivers\null.sys  Kernel Driver  Yes
        System  Running OK      Normal  No      Yes
parport Parport c:\windows\system32\drivers\parport.sys      Kernel Driver
        No      Manual  Stopped OK      Ignore  No      No
partmgr Partition Manager      c:\windows\system32\drivers\partmgr.sys
        Kernel Driver  Yes     Boot    Running OK      Normal  No      Yes

pci     PCI Bus Driver c:\windows\system32\drivers\pci.sys   Kernel Driver
        Yes     Boot    Running OK      Critical        No      Yes
pciide  PCIIde  c:\windows\system32\drivers\pciide.sys       Kernel Driver
        Yes     Boot    Running OK      Normal  No      Yes
pcmcia  Pcmcia  c:\windows\system32\drivers\pcmcia.sys       Kernel Driver
        No      Disabled        Stopped OK      Normal  No      No
pdcomp  PDCOMP  Not Available  Kernel Driver  No      Manual  Stopped OK
        Ignore  No      No
pdframe PDFRAME Not Available  Kernel Driver  No      Manual  Stopped OK
        Ignore  No      No
pdreli  PDRELI  Not Available  Kernel Driver  No      Manual  Stopped OK
        Ignore  No      No
pdrframe        PDRFRAME        Not Available  Kernel Driver  No      Manual
        Stopped OK      Ignore  No      No
perc2   perc2   Not Available  Kernel Driver  No      Disabled
        Stopped OK      Normal  No      No
perc2hib        perc2hib        Not Available  Kernel Driver  No
        Disabled        Stopped OK      Normal  No      No
pptpminiport    WAN Miniport (PPTP)
        c:\windows\system32\drivers\raspptp.sys      Kernel Driver  Yes
        Manual  Running OK      Normal  No      Yes
processor       Processor Driver
        c:\windows\system32\drivers\processr.sys     Kernel Driver  Yes
        Manual  Running OK      Normal  No      Yes
ptilink Direct Parallel Link Driver
        c:\windows\system32\drivers\ptilink.sys      Kernel Driver  Yes
        Manual  Running OK      Normal  No      Yes
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
```

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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  Yes
        Manual  Running OK      Ignore  No      Yes
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
serenum Serenum Filter Driver  c:\windows\system32\drivers\serenum.sys
        Kernel Driver  Yes     Manual  Running OK      Normal  No      Yes

serial  Serial port driver     c:\windows\system32\drivers\serial.sys
        Kernel Driver  Yes     System  Running OK      Ignore  No      Yes

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  Not Available  Kernel Driver  No      Disabled
        Stopped OK      Normal  No      No
sym_hi  sym_hi  Not Available  Kernel Driver  No      Disabled
        Stopped OK      Normal  No      No
sym_u3  sym_u3  Not Available  Kernel Driver  No      Disabled
        Stopped OK      Normal  No      No
tcpip   TCP/IP Protocol Driver c:\windows\system32\drivers\tcpip.sys Kernel
Driver  Yes     System  Running OK      Normal  No      Yes
tdpipe  TDPIPE  c:\windows\system32\drivers\tdpipe.sys       Kernel Driver
        No      Manual  Stopped OK      Ignore  No      No
tdtcp   TDTCP   c:\windows\system32\drivers\tdtcp.sys Kernel Driver  Yes
        Manual  Running OK      Ignore  No      Yes
termdd  Terminal Device Driver c:\windows\system32\drivers\termdd.sys
        Kernel Driver  Yes     System  Running OK      Normal  No      Yes

toside  TosIde  Not Available  Kernel Driver  No      Disabled
        Stopped OK      Normal  No      No
udfs    Udfs    c:\windows\system32\drivers\udfs.sys  File System Driver
        No      Disabled        Stopped OK      Normal  No      No
ultra   ultra   Not Available  Kernel Driver  No      Disabled
        Stopped OK      Normal  No      No
update  Microcode Update Driver
        c:\windows\system32\drivers\update.sys       Kernel Driver  Yes
        Manual  Running OK      Normal  No      Yes
usbhub  USB2 Enabled Hub       c:\windows\system32\drivers\usbhub.sys
        Kernel Driver  Yes     Manual  Running OK      Normal  No      Yes

usbohci Microsoft USB Open Host Controller Miniport Driver
        c:\windows\system32\drivers\usbohci.sys      Kernel Driver  Yes
        Manual  Running OK      Normal  No      Yes
vgasave VGA Display Controller.        c:\windows\system32\drivers\vga.sys
        Kernel Driver  Yes     System  Running OK      Ignore  No      Yes

viaide  ViaIde  Not Available  Kernel Driver  No      Disabled
        Stopped OK      Normal  No      No
volsnap Storage volumes        c:\windows\system32\drivers\volsnap.sys
        Kernel Driver  Yes     Boot    Running OK      Normal  No      Yes

wanarp  Remote Access IP ARP Driver
        c:\windows\system32\drivers\wanarp.sys       Kernel Driver  Yes
        Manual  Running OK      Normal  No      Yes
wdica   WDICA   Not Available  Kernel Driver  No      Manual  Stopped OK
        Ignore  No      No
wlbs    Network Load Balancing c:\windows\system32\drivers\wlbs.sys  Kernel
Driver  No      Manual  Stopped OK      Normal  No      No

[Signed Drivers]

Device Name    Signed  Device Class   Driver Version Driver Date
        Manufacturer   INF Name       Driver Name    Device ID
Not Available  Not Available  Not Available  Not Available  Not Available
        Not Available  Not Available  Not Available  HTREE\ROOT\0
ACPI Multiprocessor PC Yes     COMPUTER       5.2.3790.0     10/1/2002
        (Standard computers)   hal.inf Not Available  ROOT\ACPI_HAL\0000
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Microsoft ACPI-Compliant System       Yes     SYSTEM  5.2.3790.0
        10/1/2002      Microsoft      acpi.inf       Not Available
        ACPI_HAL\PNP0C08\0
Processor      Yes     PROCESSOR      5.2.3790.0     10/1/2002
        (Standard processor types)    cpu.inf Not Available
        ACPI\GENUINEINTEL_-_X86_FAMILY_15_MODEL_2\_0
Processor      Yes     PROCESSOR      5.2.3790.0     10/1/2002
        (Standard processor types)    cpu.inf Not Available
        ACPI\GENUINEINTEL_-_X86_FAMILY_15_MODEL_2\_1
Processor      Yes     PROCESSOR      5.2.3790.0     10/1/2002
        (Standard processor types)    cpu.inf Not Available
        ACPI\GENUINEINTEL_-_X86_FAMILY_15_MODEL_2\_2
Processor      Yes     PROCESSOR      5.2.3790.0     10/1/2002
        (Standard processor types)    cpu.inf Not Available
        ACPI\GENUINEINTEL_-_X86_FAMILY_15_MODEL_2\_3
PCI bus Yes     SYSTEM  5.2.3790.0     10/1/2002      (Standard system
devices)       machine.inf    Not Available  ACPI\PNP0A03\1
ServerWorks (RCC) CMIC_LE Processor to PCI Bridge(*) Yes     SYSTEM
        5.2.3790.0     10/1/2002      ServerWorks (RCC)      machine.inf
        Not Available
        PCI\VEN_1166&DEV_0014&SUBSYS_00000000&REV_32\3&13C0B0C5&0&00

ServerWorks (RCC) CMIC_LE Processor to PCI Bridge(*) Yes     SYSTEM
        5.2.3790.0     10/1/2002      ServerWorks (RCC)      machine.inf
        Not Available
        PCI\VEN_1166&DEV_0014&SUBSYS_00000000&REV_00\3&13C0B0C5&0&01

ServerWorks (RCC) CMIC_LE Processor to PCI Bridge(*) Yes     SYSTEM
        5.2.3790.0     10/1/2002      ServerWorks (RCC)      machine.inf
        Not Available
        PCI\VEN_1166&DEV_0014&SUBSYS_00000000&REV_00\3&13C0B0C5&0&02

PCI Device     Not Available  UNKNOWN Not Available  Not Available  Not
Available      Not Available  Not Available
        PCI\VEN_1028&DEV_000C&SUBSYS_000C1028&REV_00\3&13C0B0C5&0&20

PCI Device     Not Available  UNKNOWN Not Available  Not Available  Not
Available      Not Available  Not Available
        PCI\VEN_1028&DEV_0008&SUBSYS_00081028&REV_00\3&13C0B0C5&0&21

PCI Device     Not Available  UNKNOWN Not Available  Not Available  Not
Available      Not Available  Not Available
        PCI\VEN_1028&DEV_000D&SUBSYS_000D1028&REV_00\3&13C0B0C5&0&22

RAGE XL PCI Family (Microsoft Corporation)   Yes     DISPLAY 5.10.2600.6014
        8/8/2001       ATI Technologies Inc.  atiixpad.inf   Not Available
        PCI\VEN_1002&DEV_4752&SUBSYS_01211028&REV_27\3&13C0B0C5&0&70

Plug and Play Monitor  Yes     MONITOR 5.1.2001.0     6/6/2001
        (Standard monitor types)      monitor.inf    Not Available
        DISPLAY\DEL0000\4&2664298A&0&80000001&00&0E
ServerWorks Champion CSB5 - SouthBridge 5    Yes     SYSTEM  5.2.3790.0
        10/1/2002      ServerWorks (RCC)      machine.inf    Not Available
        PCI\VEN_1166&DEV_0201&SUBSYS_00000000&REV_93\3&13C0B0C5&0&78

Direct memory access controller       Yes     SYSTEM  5.2.3790.0
        10/1/2002      (Standard system devices)     machine.inf    Not
Available      ACPI\PNP0200\4&25F73A82&0
Numeric data processor Yes     SYSTEM  5.2.3790.0     10/1/2002
        (Standard system devices)     machine.inf    Not Available
        ACPI\PNP0C04\4&25F73A82&0
Programmable interrupt controller     Yes     SYSTEM  5.2.3790.0
        10/1/2002      (Standard system devices)     machine.inf    Not
Available      ACPI\PNP0000\4&25F73A82&0
System speaker Yes     SYSTEM  5.2.3790.0     10/1/2002      (Standard
system devices)        machine.inf    Not Available
        ACPI\PNP0800\4&25F73A82&0
System timer   Yes     SYSTEM  5.2.3790.0     10/1/2002      (Standard
system devices)        machine.inf    Not Available
        ACPI\PNP0100\4&25F73A82&0
Standard floppy disk controller       Yes     FDC     5.2.3790.0
        10/1/2002      (Standard floppy disk controllers)    fdc.inf Not
Available      ACPI\PNP0700\4&25F73A82&0
Floppy disk drive      Yes     FLOPPYDISK     5.2.3790.0     10/1/2002
        (Standard floppy disk drives) flpydisk.inf   Not Available
        FDC\GENERIC_FLOPPY_DRIVE\5&1AE2F47D&0&0
Standard 101/102-Key or Microsoft Natural PS/2 Keyboard     Yes
        KEYBOARD       5.2.3790.0     10/1/2002      (Standard keyboards)
        keyboard.inf   Not Available  ACPI\PNP0303\4&25F73A82&0
PS/2 Compatible Mouse  Yes     MOUSE   5.2.3790.0     10/1/2002
        Microsoft      msmouse.inf    Not Available
        ACPI\PNP0F13\4&25F73A82&0
Communications Port    Yes     PORTS   5.2.3790.0     10/1/2002
        (Standard port types)  msports.inf    Not Available  ACPI\PNP0501\1

Communications Port    Yes     PORTS   5.2.3790.0     10/1/2002
        (Standard port types)  msports.inf    Not Available  ACPI\PNP0501\2

System CMOS/real time clock   Yes     SYSTEM  5.2.3790.0     10/1/2002
        (Standard system devices)     machine.inf    Not Available
        ACPI\PNP0B00\4&25F73A82&0
System board   Yes     SYSTEM  5.2.3790.0     10/1/2002      (Standard
system devices)        machine.inf    Not Available  ACPI\PNP0C01\2
CSB5 IDE Controller    Yes     HDC     5.2.3790.0     10/1/2002
        ServerWorks    mshdc.inf      Not Available
        PCI\VEN_1166&DEV_0212&SUBSYS_02121166&REV_93\3&13C0B0C5&0&79

Primary IDE Channel    Yes     HDC     5.2.3790.0     10/1/2002
        (Standard IDE ATA/ATAPI controllers)  mshdc.inf      Not Available
        PCIIDE\IDECHANNEL\4&10A8249&0&0
CD-ROM Drive   Yes     CDROM   5.2.3790.0     10/1/2002      (Standard CD-
ROM drives)    cdrom.inf      Not Available  IDE\CDROMTEAC_CD-
224E_____________________________K.9A____\5&3125DC91&0&0.0.0
Secondary IDE Channel  Yes     HDC     5.2.3790.0     10/1/2002
        (Standard IDE ATA/ATAPI controllers)  mshdc.inf      Not Available
        PCIIDE\IDECHANNEL\4&10A8249&0&1
ServerWorks (RCC) PCI to USB Open Host Controller    Yes     USB
        5.2.3790.0     10/1/2002      ServerWorks (RCC)      usbport.inf
        Not Available
        PCI\VEN_1166&DEV_0220&SUBSYS_02201166&REV_05\3&13C0B0C5&0&7A

USB Root Hub   Yes     USB     5.2.3790.0     10/1/2002      (Standard USB
Host Controller)       usbport.inf    Not Available
        USB\ROOT_HUB\4&1A0F8909&0
Serverworks Champion CSB5 - SouthBridge 5 LPC        Yes     SYSTEM
        5.2.3790.0     10/1/2002      ServerWorks (RCC)      machine.inf
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        Not Available
        PCI\VEN_1166&DEV_0225&SUBSYS_00000000&REV_00\3&13C0B0C5&0&7B

ISAPNP Read Data Port  Yes     SYSTEM  5.2.3790.0     10/1/2002
        (Standard system devices)     machine.inf    Not Available
        ISAPNP\READDATAPORT\0
ServerWorks Grand Champion CIOB_X2 - I/O Bridge 133 Mhz     Yes     SYSTEM
        5.2.3790.0     10/1/2002      ServerWorks (RCC)      machine.inf
        Not Available
        PCI\VEN_1166&DEV_0101&SUBSYS_00000000&REV_05\3&13C0B0C5&0&80

ServerWorks Grand Champion CIOB_X2 - I/O Bridge 133 Mhz     Yes     SYSTEM
        5.2.3790.0     10/1/2002      ServerWorks (RCC)      machine.inf
        Not Available
        PCI\VEN_1166&DEV_0101&SUBSYS_00000000&REV_05\3&13C0B0C5&0&82

ServerWorks Grand Champion CIOB_X2 - I/O Bridge 133 Mhz     Yes     SYSTEM
        5.2.3790.0     10/1/2002      ServerWorks (RCC)      machine.inf
        Not Available
        PCI\VEN_1166&DEV_0101&SUBSYS_00000000&REV_03\3&13C0B0C5&0&88

ServerWorks Grand Champion CIOB_X2 - I/O Bridge 133 Mhz     Yes     SYSTEM
        5.2.3790.0     10/1/2002      ServerWorks (RCC)      machine.inf
        Not Available
        PCI\VEN_1166&DEV_0101&SUBSYS_00000000&REV_03\3&13C0B0C5&0&8A

PCI bus Yes     SYSTEM  5.2.3790.0     10/1/2002      (Standard system
devices)       machine.inf    Not Available  ACPI\PNP0A03\5
PCI standard PCI-to-PCI bridge        Yes     SYSTEM  5.2.3790.0
        10/1/2002      (Standard system devices)     machine.inf    Not
Available      PCI\VEN_8086&DEV_0309&SUBSYS_00000000&REV_01\3&474B838&0&40

Adaptec AIC-7899 Ultra160 PCI SCSI Card      Yes     SCSIADAPTER
        5.2.3790.0     10/1/2002      Adaptec pnpscsi.inf    Not Available
        PCI\VEN_9005&DEV_00CF&SUBSYS_01211028&REV_01\4&22300438&0&3040

Disk drive     Yes     DISKDRIVE      5.2.3790.0     10/1/2002
        (Standard disk drives) disk.inf       Not Available
        SCSI\DISK&VEN_SEAGATE&PROD_ST318406LC&REV_8A03\5&1F5E3F1F&0&000

PE 1x5 Backplane       Yes     SYSTEM  5.2.3790.0     10/1/2002      Dell
        scsidev.inf    Not Available
        SCSI\PROCESSOR&VEN_PE/PV&PROD_1X5_SCSI_BP&REV_1.1\5&1F5E3F1F&0&060

Adaptec AIC-7899 Ultra160 PCI SCSI Card      Yes     SCSIADAPTER
        5.2.3790.0     10/1/2002      Adaptec pnpscsi.inf    Not Available
        PCI\VEN_9005&DEV_00CF&SUBSYS_01211028&REV_01\4&22300438&0&3140

PCI bus Yes     SYSTEM  5.2.3790.0     10/1/2002      (Standard system
devices)       machine.inf    Not Available  ACPI\PNP0A03\4
Broadcom NetXtreme Gigabit Ethernet   Yes     NET     2.91.0.0
        10/1/2002      Broadcom       netb57xp.inf   Not Available
        PCI\VEN_14E4&DEV_16A7&SUBSYS_01211028&REV_02\3&172E68DD&0&30

Broadcom NetXtreme Gigabit Ethernet   Yes     NET     2.91.0.0
        10/1/2002      Broadcom       netb57xp.inf   Not Available
        PCI\VEN_14E4&DEV_16A7&SUBSYS_01211028&REV_02\3&172E68DD&0&40
PCI bus Yes     SYSTEM  5.2.3790.0     10/1/2002      (Standard system
devices)       machine.inf    Not Available  ACPI\PNP0A03\3
PCI bus Yes     SYSTEM  5.2.3790.0     10/1/2002      (Standard system
devices)       machine.inf    Not Available  ACPI\PNP0A03\2
cLAN Host Adapter      No      NET     4.2.0.75       10/5/2000
        Giganet oem0.inf       Not Available
        PCI\VEN_135B&DEV_0001&SUBSYS_00000000&REV_00\3&1070020&0&30
ACPI Fixed Feature Button      Yes     SYSTEM  5.2.3790.0     10/1/2002
        (Standard system devices)     machine.inf    Not Available
        ACPI\FIXEDBUTTON\2&DABA3FF&0
Logical Disk Manager   Yes     SYSTEM  5.2.3790.0     10/1/2002
        (Standard system devices)     machine.inf    Not Available
        ROOT\DMIO\0000
Volume Manager Yes     SYSTEM  5.2.3790.0     10/1/2002      (Standard
system devices)        machine.inf    Not Available  ROOT\FTDISK\0000

Generic volume Yes     VOLUME  5.2.3790.0     10/1/2002      Microsoft
        volume.inf     Not Available
        STORAGE\VOLUME\1&30A96598&0&SIGNATURE5A205A1OFFSET7E00LENGTH43CF44
C00
AFD Networking Support Environment   Not Available  LEGACYDRIVER   Not
Available      Not Available  Not Available  Not Available  Not Available
        ROOT\LEGACY_AFD\0000
Beep   Not Available  LEGACYDRIVER   Not Available  Not Available  Not
Available      Not Available  Not Available  ROOT\LEGACY_BEEP\0000
CRC Disk Filter Driver Not Available  LEGACYDRIVER   Not Available  Not
Available      Not Available  Not Available  Not Available
        ROOT\LEGACY_CRCDISK\0000
dmboot  Not Available  LEGACYDRIVER   Not Available  Not Available  Not
Available      Not Available  Not Available  ROOT\LEGACY_DMBOOT\0000

dmload  Not Available  LEGACYDRIVER   Not Available  Not Available  Not
Available      Not Available  Not Available  ROOT\LEGACY_DMLOAD\0000

Fips   Not Available  LEGACYDRIVER   Not Available  Not Available  Not
Available      Not Available  Not Available  ROOT\LEGACY_FIPS\0000
cLAN VIA Driver        Not Available  LEGACYDRIVER   Not Available  Not
Available      Not Available  Not Available  Not Available
        ROOT\LEGACY_GNIVIA\0000
Generic Packet Classifier      Not Available  LEGACYDRIVER   Not Available
        Not Available  Not Available  Not Available  Not Available
        ROOT\LEGACY_GPC\0000
HTTP   Not Available  LEGACYDRIVER   Not Available  Not Available  Not
Available      Not Available  Not Available  ROOT\LEGACY_HTTP\0000
IPSEC driver   Not Available  LEGACYDRIVER   Not Available  Not Available
        Not Available  Not Available  Not Available
        ROOT\LEGACY_IPSEC\0000
ksecdd  Not Available  LEGACYDRIVER   Not Available  Not Available  Not
Available      Not Available  Not Available  ROOT\LEGACY_KSECDD\0000

mnmdd  Not Available  LEGACYDRIVER   Not Available  Not Available  Not
Available      Not Available  Not Available  ROOT\LEGACY_MNMDD\0000
mountmgr       Not Available  LEGACYDRIVER   Not Available  Not Available
        Not Available  Not Available  Not Available
        ROOT\LEGACY_MOUNTMGR\0000
NDIS System Driver     Not Available  LEGACYDRIVER   Not Available  Not
Available      Not Available  Not Available  Not Available
        ROOT\LEGACY_NDIS\0000
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Remote Access NDIS TAPI Driver        Not Available  LEGACYDRIVER   Not
Available      Not Available  Not Available  Not Available  Not Available
       ROOT\LEGACY_NDISTAPI\0000
NDIS Usermode I/O Protocol    Not Available  LEGACYDRIVER   Not Available
       Not Available  Not Available  Not Available  Not Available
       ROOT\LEGACY_NDISUIO\0000
NDProxy Not Available  LEGACYDRIVER   Not Available  Not Available  Not
Available      Not Available  Not Available  ROOT\LEGACY_NDPROXY\0000

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  Not Available
       ROOT\LEGACY_RASACD\0000
RDPCDD Not Available  LEGACYDRIVER   Not Available  Not Available  Not
Available      Not Available  Not Available  ROOT\LEGACY_RDPCDD\0000

RDPWD  Not Available  LEGACYDRIVER   Not Available  Not Available  Not
Available      Not Available  Not Available  ROOT\LEGACY_RDPWD\0000
TCP/IP Protocol Driver Not Available  LEGACYDRIVER   Not Available  Not
Available      Not Available  Not Available  Not Available
       ROOT\LEGACY_TCPIP\0000
TDTCP  Not Available  LEGACYDRIVER   Not Available  Not Available  Not
Available      Not Available  Not Available  ROOT\LEGACY_TDTCP\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_VOLSNAP\0000

Remote Access IP ARP Driver   Not Available  LEGACYDRIVER   Not Available
       Not Available  Not Available  Not Available  Not Available
       ROOT\LEGACY_WANARP\0000
Audio Codecs   Yes     MEDIA   5.2.3790.0     10/1/2002      (Standard
system devices)        wave.inf       Not Available  ROOT\MEDIA\MS_MMACM

Legacy Audio Drivers  Yes     MEDIA   5.2.3790.0     10/1/2002
       (Standard system devices)     wave.inf       Not Available
       ROOT\MEDIA\MS_MMDRV
Media Control Devices Yes     MEDIA   5.2.3790.0     10/1/2002
       (Standard system devices)     wave.inf       Not Available
       ROOT\MEDIA\MS_MMMCI
Legacy Video Capture Devices  Yes     MEDIA   5.2.3790.0     10/1/2002
       (Standard system devices)     wave.inf       Not Available
       ROOT\MEDIA\MS_MMVCD
Video Codecs   Yes     MEDIA   5.2.3790.0     10/1/2002      (Standard
system devices)        wave.inf       Not Available  ROOT\MEDIA\MS_MMVID
WAN Miniport (L2TP)   Yes     NET     5.2.3790.0     10/1/2002
       Microsoft      netrasa.inf    Not Available
       ROOT\MS_L2TPMINIPORT\0000
WAN Miniport (IP)     Yes     NET     5.2.3790.0     10/1/2002
       Microsoft      netrasa.inf    Not Available
       ROOT\MS_NDISWANIP\0000
WAN Miniport (PPPOE)  Yes     NET     5.2.3790.0     10/1/2002
       Microsoft      netrasa.inf    Not Available
       ROOT\MS_PPPOEMINIPORT\0000
WAN Miniport (PPTP)   Yes     NET     5.2.3790.0     10/1/2002
       Microsoft      netrasa.inf    Not Available
       ROOT\MS_PPTPMINIPORT\0000
Direct Parallel       Yes     NET     5.2.3790.0     10/1/2002
       Microsoft      netrasa.inf    Not Available
       ROOT\MS_PTIMINIPORT\0000
Terminal Server Device Redirector     Yes     SYSTEM  5.2.3790.0
       10/1/2002      (Standard system devices)     machine.inf    Not
Available      ROOT\RDPDR\0000
Terminal Server Keyboard Driver       Yes     SYSTEM  5.2.3790.0
       10/1/2002      (Standard system devices)     machine.inf    Not
Available      ROOT\RDP_KBD\0000
Terminal Server Mouse Driver  Yes     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     Yes     SYSTEM  5.2.3790.0
       10/1/2002      (Standard system devices)     machine.inf    Not
Available      ROOT\SYSTEM\0000
Microcode Update Device       Yes     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:\P
rogram 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 2 Stepping 5, GenuineIntel
       <SYSTEM>
PROCESSOR_REVISION     0205    <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     CLIENT5\Administrator
TMP     %USERPROFILE%\Local Settings\Temp     CLIENT5\Administrator

[Print Jobs]

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

[Network Connections]

Local Name     Remote Name    Type    Status  User Name

[Running Tasks]

Name    Path    Process ID     Priority       Min Working Set        Max
Working Set    Start Time     Version Size    File Date
system idle process    Not Available  0       0       Not Available  Not
Available      Not Available  Not Available  Not Available  Not Available

system  Not Available  4       8       0       1413120 Not Available  Not
Available      Not Available  Not Available
smss.exe       Not Available  344     11      204800  1413120 4/24/2004 8:30
PM     Not Available  Not Available  Not Available
csrss.exe      Not Available  472     13      Not Available  Not Available
       4/24/2004 8:30 PM     Not Available  Not Available  Not Available

winlogon.exe   c:\windows\system32\winlogon.exe      496     13      204800
       1413120 4/24/2004 8:30 PM      5.2.3790.0 (srv03_rtm.030324-2048)
       536.50 KB (549,376 bytes)      3/25/2003 11:00 AM
services.exe   c:\windows\system32\services.exe      540     9       204800
       1413120 4/24/2004 8:30 PM      5.2.3790.0 (srv03_rtm.030324-2048)
       102.00 KB (104,448 bytes)      3/25/2003 11:00 AM
lsass.exe      c:\windows\system32\lsass.exe 552     9       204800
       1413120 4/24/2004 8:30 PM      5.2.3790.0 (srv03_rtm.030324-2048)
       13.00 KB (13,312 bytes)        3/25/2003 11:00 AM
svchost.exe    c:\windows\system32\svchost.exe       828     8       204800
       1413120 4/24/2004 8:30 PM      5.2.3790.0 (srv03_rtm.030324-2048)
       13.00 KB (13,312 bytes)        3/25/2003 11:00 AM
gnconmgr.exe   c:\windows\system32\gnconmgr.exe      888     8       204800
       1413120 4/24/2004 8:30 PM      4.2.0.75       168.05 KB (172,079
bytes)  7/16/2003 6:40 PM
svchost.exe    c:\windows\system32\svchost.exe       904     8       204800
       1413120 4/24/2004 8:30 PM      5.2.3790.0 (srv03_rtm.030324-2048)
       13.00 KB (13,312 bytes)        3/25/2003 11:00 AM
mnmsrvc.exe    c:\windows\system32\mnmsrvc.exe       1024    8       204800
       1413120 4/24/2004 8:30 PM      4.4.4000       32.00 KB (32,768
bytes)  7/16/2003 3:50 PM
rundll32.exe   c:\windows\system32\rundll32.exe      1060    8       204800
       1413120 4/24/2004 8:30 PM      5.2.3790.0 (srv03_rtm.030324-2048)
       32.00 KB (32,768 bytes)        3/25/2003 11:00 AM
svchost.exe    Not Available  1136    8       Not Available  Not Available
       4/24/2004 8:30 PM      Not Available  Not Available  Not Available

svchost.exe    c:\windows\system32\svchost.exe       1280    8       204800
       1413120 4/24/2004 8:31 PM      5.2.3790.0 (srv03_rtm.030324-2048)
       13.00 KB (13,312 bytes)        3/25/2003 11:00 AM
wmiprvse.exe   Not Available  1464    8       Not Available  Not Available
       4/24/2004 8:32 PM      Not Available  Not Available  Not Available

explorer.exe   c:\windows\explorer.exe       1684    8       204800
       1413120 4/24/2004 8:32 PM      6.00.3790.0 (srv03_rtm.030324-2048)
       1,008.50 KB (1,032,704 bytes) 3/25/2003 11:00 AM
rhostsvr.exe   c:\rhost\rhostsvr.exe 1792    8       204800  1413120
       4/24/2004 8:32 PM      Not Available  54.50 KB (55,808 bytes)
       7/16/2003 4:49 PM
svchost.exe    c:\windows\system32\svchost.exe       1872    8       204800
       1413120 4/24/2004 8:32 PM      5.2.3790.0 (srv03_rtm.030324-2048)
       13.00 KB (13,312 bytes)        3/25/2003 11:00 AM
dllhost.exe    c:\windows\system32\dllhost.exe       1752    8       204800
       1413120 4/24/2004 8:37 PM      5.2.3790.0 (srv03_rtm.030324-2048)
       5.50 KB (5,632 bytes)  3/25/2003 11:00 AM
msdtc.exe      Not Available  144     8       Not Available  Not Available
       4/24/2004 8:37 PM      Not Available  Not Available  Not Available

csrss.exe      Not Available  700     13      Not Available  Not Available
       4/24/2004 8:39 PM      Not Available  Not Available  Not Available

winlogon.exe   c:\windows\system32\winlogon.exe      456     13      204800
       1413120 4/24/2004 8:39 PM      5.2.3790.0 (srv03_rtm.030324-2048)
       536.50 KB (549,376 bytes)      3/25/2003 11:00 AM
rdpclip.exe    c:\windows\system32\rdpclip.exe       808     8       204800
       1413120 4/24/2004 8:39 PM      5.2.3790.0 (srv03_rtm.030324-2048)
       53.00 KB (54,272 bytes)        7/16/2003 3:47 PM
explorer.exe   c:\windows\explorer.exe       1668    8       204800
       1413120 4/24/2004 8:39 PM      6.00.3790.0 (srv03_rtm.030324-2048)
       1,008.50 KB (1,032,704 bytes) 3/25/2003 11:00 AM
csrss.exe      Not Available  2536    13      Not Available  Not Available
       4/26/2004 9:37 AM      Not Available  Not Available  Not Available

winlogon.exe   c:\windows\system32\winlogon.exe      3724    13      204800
       1413120 4/26/2004 9:37 AM      5.2.3790.0 (srv03_rtm.030324-2048)
       536.50 KB (549,376 bytes)      3/25/2003 11:00 AM
rdpclip.exe    c:\windows\system32\rdpclip.exe       3044    8       204800
       1413120 4/26/2004 9:37 AM      5.2.3790.0 (srv03_rtm.030324-2048)
       53.00 KB (54,272 bytes)        7/16/2003 3:47 PM
userinit.exe   c:\windows\system32\userinit.exe      2508    8       204800
       1413120 4/26/2004 9:37 AM      5.2.3790.0 (srv03_rtm.030324-2048)
       23.50 KB (24,064 bytes)        3/25/2003 11:00 AM
explorer.exe   c:\windows\explorer.exe       4024    8       204800
       1413120 4/26/2004 9:37 AM      6.00.3790.0 (srv03_rtm.030324-2048)
       1,008.50 KB (1,032,704 bytes) 3/25/2003 11:00 AM
msinfo32.exe   c:\program files\common files\microsoft
shared\msinfo\msinfo32.exe    3780    8       204800  1413120 4/26/2004 9:37
AM     5.2.3790.0 (srv03_rtm.030324-2048)    40.50 KB (41,472 bytes)
       7/16/2003 3:50 PM
wmiprvse.exe   Not Available  3296    8       Not Available  Not Available
       4/26/2004 9:37 AM      Not Available  Not Available  Not Available
```

```
[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 11:00 AM     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 11:00 AM     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 11:00 AM     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 11:00 AM     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 11:00 AM     Microsoft Corporation
        c:\windows\system32\advapi32.dll
rpcrt4  5.2.3790.59 (srv03_gdr.030614-1004)   642.50 KB (657,920 bytes)
        7/5/2003 1:03 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 11:00 AM     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 11:00 AM     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 11:00 AM     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 11:00 AM     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 11:00 AM     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 11:00 AM     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 11:00 AM     Microsoft Corporation
        c:\windows\system32\secur32.dll
winsta  5.2.3790.0 (srv03_rtm.030324-2048)    51.00 KB (52,224 bytes)
        3/25/2003 11:00 AM     Microsoft Corporation
        c:\windows\system32\winsta.dll
netapi32       5.2.3790.0 (srv03_rtm.030324-2048)    317.00 KB (324,608
bytes)  3/25/2003 11:00 AM     Microsoft Corporation
        c:\windows\system32\netapi32.dll
profmap 5.2.3790.0 (srv03_rtm.030324-2048)    22.00 KB (22,528 bytes)
        3/25/2003 11:00 AM     Microsoft Corporation
        c:\windows\system32\profmap.dll
regapi  5.2.3790.0 (srv03_rtm.030324-2048)    48.50 KB (49,664 bytes)
        3/25/2003 11:00 AM     Microsoft Corporation
        c:\windows\system32\regapi.dll
ws2_32  5.2.3790.0 (srv03_rtm.030324-2048)    87.50 KB (89,600 bytes)
        3/25/2003 11:00 AM     Microsoft Corporation
        c:\windows\system32\ws2_32.dll
ws2help 5.2.3790.0 (srv03_rtm.030324-2048)    19.50 KB (19,968 bytes)
        3/25/2003 11:00 AM     Microsoft Corporation
        c:\windows\system32\ws2help.dll
psapi   5.2.3790.0 (srv03_rtm.030324-2048)    21.50 KB (22,016 bytes)
        3/25/2003 11:00 AM     Microsoft Corporation
        c:\windows\system32\psapi.dll
version 5.2.3790.0 (srv03_rtm.030324-2048)    17.00 KB (17,408 bytes)
        3/25/2003 11:00 AM     Microsoft Corporation
        c:\windows\system32\version.dll
setupapi       5.2.3790.0 (srv03_rtm.030324-2048)    1,014.50 KB
(1,038,848 bytes)      3/25/2003 11:00 AM     Microsoft Corporation
        c:\windows\system32\setupapi.dll
msgina  5.2.3790.0 (srv03_rtm.030324-2048)    1.14 MB (1,191,936 bytes)
        3/25/2003 11:00 AM     Microsoft Corporation
        c:\windows\system32\msgina.dll
shsvcs  6.00.3790.0 (srv03_rtm.030324-2048)   121.50 KB (124,416 bytes)
        3/25/2003 11:00 AM     Microsoft Corporation
        c:\windows\system32\shsvcs.dll
shlwapi 6.00.3790.0 (srv03_rtm.030324-2048)   281.00 KB (287,744 bytes)
        3/25/2003 11:00 AM     Microsoft Corporation
        c:\windows\system32\shlwapi.dll
sfc     5.2.3790.0 (srv03_rtm.030324-2048)    4.50 KB (4,608 bytes)
        3/25/2003 11:00 AM     Microsoft Corporation
        c:\windows\system32\sfc.dll
sfc_os  5.2.3790.0 (srv03_rtm.030324-2048)    133.00 KB (136,192 bytes)
        3/25/2003 11:00 AM     Microsoft Corporation
        c:\windows\system32\sfc_os.dll
wintrust       5.131.3790.0 (srv03_rtm.030324-2048)  161.50 KB (165,376
bytes)  3/25/2003 11:00 AM     Microsoft Corporation
        c:\windows\system32\wintrust.dll
ole32   5.2.3790.68 (srv03_gdr.030614-1004)   1.13 MB (1,182,720 bytes)
        7/5/2003 1:03 PM       Microsoft Corporation
        c:\windows\system32\ole32.dll
imagehlp       5.2.3790.0 (srv03_rtm.030324-2048)    142.50 KB (145,920
bytes)  3/25/2003 11:00 AM     Microsoft Corporation
        c:\windows\system32\imagehlp.dll
comctl32       6.0 (srv03_rtm.030324-2048)   907.00 KB (928,768 bytes)
        7/16/2003 8:34 AM      Microsoft Corporation
        c:\windows\winsxs\x86_microsoft.windows.common-
controls_6595b64144ccf1df_6.0.100.0_x-ww_8417450b\comctl32.dll
winscard       5.2.3790.0 (srv03_rtm.030324-2048)    98.50 KB (100,864
bytes)  3/25/2003 11:00 AM     Microsoft Corporation
        c:\windows\system32\winscard.dll
wtsapi32       5.2.3790.0 (srv03_rtm.030324-2048)    17.50 KB (17,920
bytes)  3/25/2003 11:00 AM     Microsoft Corporation
        c:\windows\system32\wtsapi32.dll
sxs     5.2.3790.0 (srv03_rtm.030324-2048)    733.00 KB (750,592 bytes)
        3/25/2003 11:00 AM     Microsoft Corporation
        c:\windows\system32\sxs.dll
wldap32 5.2.3790.0 (srv03_rtm.030324-2048)    158.00 KB (161,792 bytes)
        3/25/2003 11:00 AM     Microsoft Corporation
        c:\windows\system32\wldap32.dll
rsaenh  5.2.3790.0 (srv03_rtm.030324-2048)    176.83 KB (181,072 bytes)
        3/25/2003 11:00 AM     Microsoft Corporation
        c:\windows\system32\rsaenh.dll
cscdll  5.2.3790.0 (srv03_rtm.030324-2048)    99.00 KB (101,376 bytes)
        3/25/2003 11:00 AM     Microsoft Corporation
        c:\windows\system32\cscdll.dll
```

```
wlnotify       5.2.3790.0 (srv03_rtm.030324-2048)    87.50 KB (89,600
bytes)  3/25/2003 11:00 AM     Microsoft Corporation
        c:\windows\system32\wlnotify.dll
winmm   5.2.3790.0 (srv03_rtm.030324-2048)    166.00 KB (169,984 bytes)
        3/25/2003 11:00 AM     Microsoft Corporation
        c:\windows\system32\winmm.dll
winspool       5.2.3790.0 (srv03_rtm.030324-2048)    140.00 KB (143,360
bytes)  3/25/2003 11:00 AM     Microsoft Corporation
        c:\windows\system32\winspool.drv
mpr     5.2.3790.0 (srv03_rtm.030324-2048)    56.00 KB (57,344 bytes)
        3/25/2003 11:00 AM     Microsoft Corporation
        c:\windows\system32\mpr.dll
shell32 6.00.3790.0 (srv03_rtm.030324-2048)   7.79 MB (8,166,400 bytes)
        3/25/2003 11:00 AM     Microsoft Corporation
        c:\windows\system32\shell32.dll
comctl32       5.82 (srv03_rtm.030324-2048)  561.00 KB (574,464 bytes)
        7/16/2003 8:34 AM      Microsoft Corporation
        c:\windows\winsxs\x86_microsoft.windows.common-
controls_6595b64144ccf1df_5.82.0.0_x-ww_8a69ba05\comctl32.dll
uxtheme 6.00.3790.0 (srv03_rtm.030324-2048)   196.00 KB (200,704 bytes)
        3/25/2003 11:00 AM     Microsoft Corporation
        c:\windows\system32\uxtheme.dll
samlib  5.2.3790.0 (srv03_rtm.030324-2048)    49.00 KB (50,176 bytes)
        3/25/2003 11:00 AM     Microsoft Corporation
        c:\windows\system32\samlib.dll
clbcatq 2001.12.4720.0 (srv03_rtm.030324-2048)       481.00 KB (492,544
bytes)  7/16/2003 3:47 PM      Microsoft Corporation
        c:\windows\system32\clbcatq.dll
oleaut32       5.2.3790.0     486.00 KB (497,664 bytes)     3/25/2003
11:00 AM       Microsoft Corporation  c:\windows\system32\oleaut32.dll

comres  2001.12.4720.0 (srv03_rtm.030324-2048)       778.00 KB (796,672
bytes)  3/25/2003 11:00 AM     Microsoft Corporation
        c:\windows\system32\comres.dll
cscui   5.2.3790.0 (srv03_rtm.030324-2048)    305.00 KB (312,320 bytes)
        3/25/2003 11:00 AM     Microsoft Corporation
        c:\windows\system32\cscui.dll
ntmarta 5.2.3790.0 (srv03_rtm.030324-2048)    114.00 KB (116,736 bytes)
        3/25/2003 11:00 AM     Microsoft Corporation
        c:\windows\system32\ntmarta.dll
wbemprox       5.2.3790.0 (srv03_rtm.030324-2048)    17.50 KB (17,920
bytes)  7/16/2003 3:46 PM      Microsoft Corporation
        c:\windows\system32\wbem\wbemprox.dll
wbemcomn       5.2.3790.0 (srv03_rtm.030324-2048)    211.50 KB (216,576
bytes)  3/25/2003 11:00 AM     Microsoft Corporation
        c:\windows\system32\wbem\wbemcomn.dll
wbemsvc 5.2.3790.0 (srv03_rtm.030324-2048)    42.50 KB (43,520 bytes)
        7/16/2003 3:46 PM      Microsoft Corporation
        c:\windows\system32\wbem\wbemsvc.dll
fastprox       5.2.3790.0 (srv03_rtm.030324-2048)    443.00 KB (453,632
bytes)  7/16/2003 3:46 PM      Microsoft Corporation
        c:\windows\system32\wbem\fastprox.dll
msvcp60 6.05.2144.0    388.00 KB (397,312 bytes)     3/25/2003 11:00 AM
        Microsoft Corporation  c:\windows\system32\msvcp60.dll
ntdsapi 5.2.3790.0 (srv03_rtm.030324-2048)    76.00 KB (77,824 bytes)
        3/25/2003 11:00 AM     Microsoft Corporation
        c:\windows\system32\ntdsapi.dll
dnsapi  5.2.3790.0 (srv03_rtm.030324-2048)    147.50 KB (151,040 bytes)
        3/25/2003 11:00 AM     Microsoft Corporation
        c:\windows\system32\dnsapi.dll
services       5.2.3790.0 (srv03_rtm.030324-2048)    102.00 KB (104,448
bytes)  3/25/2003 11:00 AM     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 11:00 AM     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 11:00 AM     Microsoft Corporation
        c:\windows\system32\authz.dll
umpnpmgr       5.2.3790.0 (srv03_rtm.030324-2048)    121.50 KB (124,416
bytes)  3/25/2003 11:00 AM     Microsoft Corporation
        c:\windows\system32\umpnpmgr.dll
ncobjapi       5.2.3790.0 (srv03_rtm.030324-2048)    34.50 KB (35,328
bytes)  3/25/2003 11:00 AM     Microsoft Corporation
        c:\windows\system32\ncobjapi.dll
eventlog       5.2.3790.0 (srv03_rtm.030324-2048)    60.50 KB (61,952
bytes)  3/25/2003 11:00 AM     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 11:00 AM     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 11:00 AM     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 11:00 AM     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 11:00 AM     Microsoft Corporation
        c:\windows\system32\cryptdll.dll
msprivs 5.2.3790.0 (srv03_rtm.030324-2048)    46.50 KB (47,616 bytes)
        3/25/2003 11:00 AM     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 11:00 AM     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 11:00 AM     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 11:00 AM     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 11:00 AM     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 11:00 AM     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 11:00 AM     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 11:00 AM     Microsoft Corporation
        c:\windows\system32\wdigest.dll
```

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rassfm  5.2.3790.0 (srv03_rtm.030324-2048)    20.50 KB (20,992 bytes)
        3/25/2003 11:00 AM     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 11:00 AM     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 11:00 AM     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 11:00 AM     Microsoft Corporation
        c:\windows\system32\ntdsatq.dll
mswsock 5.2.3790.0 (srv03_rtm.030324-2048)    254.00 KB (260,096 bytes)
        3/25/2003 11:00 AM     Microsoft Corporation
        c:\windows\system32\mswsock.dll
esent   5.2.3790.0 (srv03_rtm.030324-2048)    1.01 MB (1,056,256 bytes)
        3/25/2003 11:00 AM     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 11:00 AM     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 11:00 AM     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 11:00 AM     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 11:00 AM     Microsoft Corporation
        c:\windows\system32\psbase.dll
dssenh  5.2.3790.0 (srv03_rtm.030324-2048)    131.33 KB (134,480 bytes)
        3/25/2003 11:00 AM     Microsoft Corporation
        c:\windows\system32\dssenh.dll
cryptnet        5.131.3790.0 (srv03_rtm.030324-2048)  59.50 KB (60,928
bytes)  3/25/2003 11:00 AM     Microsoft Corporation
        c:\windows\system32\cryptnet.dll
sensapi 5.2.3790.0 (srv03_rtm.030324-2048)    6.00 KB (6,144 bytes)
        3/25/2003 11:00 AM     Microsoft Corporation
        c:\windows\system32\sensapi.dll
winhttp 5.2.3790.0 (srv03_rtm.030324-2048)    327.50 KB (335,360 bytes)
        7/16/2003 8:34 AM      Microsoft Corporation
        c:\windows\winsxs\x86_microsoft.windows.winhttp_6595b64144ccf1df_5
.1.0.0_x-ww_e0651936\winhttp.dll
rasapi32        5.2.3790.0 (srv03_rtm.030324-2048)    227.50 KB (232,960
bytes)  3/25/2003 11:00 AM     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 11:00 AM     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 11:00 AM     Microsoft Corporation
        c:\windows\system32\tapi32.dll
rtutils 5.2.3790.0 (srv03_rtm.030324-2048)    32.00 KB (32,768 bytes)
        3/25/2003 11:00 AM     Microsoft Corporation
        c:\windows\system32\rtutils.dll
winrnr  5.2.3790.0 (srv03_rtm.030324-2048)    15.00 KB (15,360 bytes)
        3/25/2003 11:00 AM     Microsoft Corporation
        c:\windows\system32\winrnr.dll
netman  5.2.3790.0 (srv03_rtm.030324-2048)    209.00 KB (214,016 bytes)
        3/25/2003 11:00 AM     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 11:00 AM     Microsoft Corporation
        c:\windows\system32\mprapi.dll
activeds        5.2.3790.0 (srv03_rtm.030324-2048)    189.00 KB (193,536
bytes)  3/25/2003 11:00 AM     Microsoft Corporation
        c:\windows\system32\activeds.dll
adsldpc 5.2.3790.0 (srv03_rtm.030324-2048)    142.50 KB (145,920 bytes)
        3/25/2003 11:00 AM     Microsoft Corporation
        c:\windows\system32\adsldpc.dll
credui  5.2.3790.0 (srv03_rtm.030324-2048)    159.00 KB (162,816 bytes)
        3/25/2003 11:00 AM     Microsoft Corporation
        c:\windows\system32\credui.dll
atl     3.05.2283       83.00 KB (84,992 bytes)       3/25/2003 11:00 AM
        Microsoft Corporation  c:\windows\system32\atl.dll
wzcsvc  5.2.3790.0 (srv03_rtm.030324-2048)    272.50 KB (279,040 bytes)
        3/25/2003 4:15 AM      Microsoft Corporation
        c:\windows\system32\wzcsvc.dll
wmi     5.2.3790.0 (srv03_rtm.030324-2048)    6.50 KB (6,656 bytes)
        3/25/2003 11:00 AM     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 11:00 AM     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 4:15 AM      Microsoft Corporation
        c:\windows\system32\wzcsapi.dll
rasadhlp        5.2.3790.0 (srv03_rtm.030324-2048)    6.50 KB (6,656 bytes)
        3/25/2003 11:00 AM     Microsoft Corporation
        c:\windows\system32\rasadhlp.dll
svchost 5.2.3790.0 (srv03_rtm.030324-2048)    13.00 KB (13,312 bytes)
        3/25/2003 11:00 AM     Microsoft Corporation
        c:\windows\system32\svchost.exe
rpcss   5.2.3790.68 (srv03_gdr.030614-1004)   212.00 KB (217,088 bytes)
        7/5/2003 1:03 PM       Microsoft Corporation
        c:\windows\system32\rpcss.dll
gnconmgr        4.2.0.75        168.05 KB (172,079 bytes)     7/16/2003 6:40
PM      Giganet Incorporated   c:\windows\system32\gnconmgr.exe
vipl    4.2.0.75        80.00 KB (81,920 bytes)       7/16/2003 6:40 PM
        Giganet Incorporated   c:\windows\system32\vipl.dll
wkssvc  5.2.3790.0 (srv03_rtm.030324-2048)    125.00 KB (128,000 bytes)
        3/25/2003 11:00 AM     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 11:00 AM     Microsoft Corporation
        c:\windows\system32\wiarpc.dll
dmserver        5.2.3790.0 (srv03_rtm.030324-2048)    24.00 KB (24,576
bytes)  3/25/2003 11:00 AM     Microsoft Corporation
        c:\windows\system32\dmserver.dll
es      2001.12.4720.0 (srv03_rtm.030324-2048)        221.50 KB (226,816
bytes)  3/25/2003 11:00 AM     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 11:00 AM     Microsoft Corporation
        c:\windows\system32\srvsvc.dll
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seclogon       5.2.3790.0 (srv03_rtm.030324-2048)    16.50 KB (16,896
bytes)  3/25/2003 11:00 AM     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 11:00 AM     Microsoft Corporation
        c:\windows\system32\sens.dll
wmisvc  5.2.3790.0 (srv03_rtm.030324-2048)    131.00 KB (134,144 bytes)
        7/16/2003 3:46 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 11:00 AM     Microsoft Corporation
        c:\windows\system32\vssapi.dll
wuauserv       5.4.3790.0 (srv03_rtm.030324-2048)    10.50 KB (10,752
bytes)  7/16/2003 3:47 PM      Microsoft Corporation
        c:\windows\system32\wuauserv.dll
wuaueng 5.4.3790.0 (srv03_rtm.030324-2048)    188.50 KB (193,024 bytes)
        7/16/2003 3:47 PM      Microsoft Corporation
        c:\windows\system32\wuaueng.dll
advpack 6.00.3790.0 (srv03_rtm.030324-2048)   93.50 KB (95,744 bytes)
        3/25/2003 11:00 AM     Microsoft Corporation
        c:\windows\system32\advpack.dll
wininet 6.00.3790.0 (srv03_rtm.030324-2048)   609.00 KB (623,616 bytes)
        3/25/2003 11:00 AM     Microsoft Corporation
        c:\windows\system32\wininet.dll
browser 5.2.3790.0 (srv03_rtm.030324-2048)    70.50 KB (72,192 bytes)
        3/25/2003 11:00 AM     Microsoft Corporation
        c:\windows\system32\browser.dll
comsvcs 2001.12.4720.0 (srv03_rtm.030324-2048)       1.14 MB (1,199,616
bytes)  7/16/2003 3:47 PM      Microsoft Corporation
        c:\windows\system32\comsvcs.dll
xactsrv 5.2.3790.0 (srv03_rtm.030324-2048)    86.50 KB (88,576 bytes)
        3/25/2003 11:00 AM     Microsoft Corporation
        c:\windows\system32\xactsrv.dll
netrap  5.2.3790.0 (srv03_rtm.030324-2048)    11.50 KB (11,776 bytes)
        3/25/2003 11:00 AM     Microsoft Corporation
        c:\windows\system32\netrap.dll
wbemcore       5.2.3790.0 (srv03_rtm.030324-2048)    457.00 KB (467,968
bytes)  7/16/2003 3:46 PM      Microsoft Corporation
        c:\windows\system32\wbem\wbemcore.dll
esscli  5.2.3790.0 (srv03_rtm.030324-2048)    235.50 KB (241,152 bytes)
        7/16/2003 3:46 PM      Microsoft Corporation
        c:\windows\system32\wbem\esscli.dll
wmiutils       5.2.3790.0 (srv03_rtm.030324-2048)    90.50 KB (92,672
bytes)  7/16/2003 3:46 PM      Microsoft Corporation
        c:\windows\system32\wbem\wmiutils.dll
repdrvfs       5.2.3790.0 (srv03_rtm.030324-2048)    165.00 KB (168,960
bytes)  7/16/2003 3:46 PM      Microsoft Corporation
        c:\windows\system32\wbem\repdrvfs.dll
wmiprvsd       5.2.3790.0 (srv03_rtm.030324-2048)    405.50 KB (415,232
bytes)  7/16/2003 3:46 PM      Microsoft Corporation
        c:\windows\system32\wbem\wmiprvsd.dll
wbemess 5.2.3790.0 (srv03_rtm.030324-2048)    256.50 KB (262,656 bytes)
        7/16/2003 3:46 PM      Microsoft Corporation
        c:\windows\system32\wbem\wbemess.dll
ncprov  5.2.3790.0 (srv03_rtm.030324-2048)    43.00 KB (44,032 bytes)
        7/16/2003 3:46 PM      Microsoft Corporation
        c:\windows\system32\wbem\ncprov.dll
netshell       5.2.3790.0 (srv03_rtm.030324-2048)    1.67 MB (1,747,456
bytes)  3/25/2003 11:00 AM     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 11:00 AM     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 11:00 AM     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 11:00 AM     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 11:00 AM     Microsoft Corporation
        c:\windows\system32\hnetcfg.dll
rasmans 5.2.3790.0 (srv03_rtm.030324-2048)    163.50 KB (167,424 bytes)
        3/25/2003 11:00 AM     Microsoft Corporation
        c:\windows\system32\rasmans.dll
rastapi 5.2.3790.0 (srv03_rtm.030324-2048)    57.00 KB (58,368 bytes)
        3/25/2003 11:00 AM     Microsoft Corporation
        c:\windows\system32\rastapi.dll
rasppp  5.2.3790.0 (srv03_rtm.030324-2048)    195.00 KB (199,680 bytes)
        3/25/2003 11:00 AM     Microsoft Corporation
        c:\windows\system32\rasppp.dll
ntlsapi 5.2.3790.0 (srv03_rtm.030324-2048)    8.00 KB (8,192 bytes)
        3/25/2003 11:00 AM     Microsoft Corporation
        c:\windows\system32\ntlsapi.dll
raschap 5.2.3790.0 (srv03_rtm.030324-2048)    106.00 KB (108,544 bytes)
        3/25/2003 11:00 AM     Microsoft Corporation
        c:\windows\system32\raschap.dll
rastls  5.2.3790.0 (srv03_rtm.030324-2048)    155.00 KB (158,720 bytes)
        3/25/2003 11:00 AM     Microsoft Corporation
        c:\windows\system32\rastls.dll
cryptui 5.131.3790.0 (srv03_rtm.030324-2048)  473.50 KB (484,864 bytes)
        3/25/2003 11:00 AM     Microsoft Corporation
        c:\windows\system32\cryptui.dll
ipbootp 5.2.3790.0 (srv03_rtm.030324-2048)    34.50 KB (35,328 bytes)
        3/25/2003 11:00 AM     Microsoft Corporation
        c:\windows\system32\ipbootp.dll
rasdlg  5.2.3790.0 (srv03_rtm.030324-2048)    642.00 KB (657,408 bytes)
        3/25/2003 11:00 AM     Microsoft Corporation
        c:\windows\system32\rasdlg.dll
cryptsvc       5.2.3790.0 (srv03_rtm.030324-2048)    51.00 KB (52,224
bytes)  3/25/2003 11:00 AM     Microsoft Corporation
        c:\windows\system32\cryptsvc.dll
certcli 5.2.3790.0 (srv03_rtm.030324-2048)    228.00 KB (233,472 bytes)
        3/25/2003 11:00 AM     Microsoft Corporation
        c:\windows\system32\certcli.dll
actxprxy       6.00.3790.0 (srv03_rtm.030324-2048)   95.00 KB (97,280
bytes)  3/25/2003 11:00 AM     Microsoft Corporation
        c:\windows\system32\actxprxy.dll
mnmsrvc 4.4.4000       32.00 KB (32,768 bytes)       7/16/2003 3:50 PM
        Microsoft Corporation  c:\windows\system32\mnmsrvc.exe
nmcom   4.4.4000       72.00 KB (73,728 bytes)       7/16/2003 3:50 PM
        Microsoft Corporation  c:\program files\netmeeting\nmcom.dll
wsock32 5.2.3790.0 (srv03_rtm.030324-2048)    22.00 KB (22,528 bytes)
        3/25/2003 11:00 AM     Microsoft Corporation
        c:\windows\system32\wsock32.dll
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mst120  4.4.4000       248.00 KB (253,952 bytes)     7/16/2003 3:50 PM
        Microsoft Corporation  c:\program files\netmeeting\mst120.dll

nmas    4.4.4000       216.00 KB (221,184 bytes)     7/16/2003 3:50 PM
        Microsoft Corporation  c:\program files\netmeeting\nmas.dll
nmasnt  4.4.4000       28.00 KB (28,672 bytes)       7/16/2003 3:50 PM
        Microsoft Corporation  c:\program files\netmeeting\nmasnt.dll

h323cc  4.4.4000       52.00 KB (53,248 bytes)       7/16/2003 3:50 PM
        Microsoft Corporation  c:\program files\netmeeting\h323cc.dll

callcont       4.4.4000       356.00 KB (364,544 bytes)     7/16/2003 3:50
PM      Microsoft Corporation  c:\program files\netmeeting\callcont.dll

nac     4.4.4000       208.00 KB (212,992 bytes)     7/16/2003 3:50 PM
        Microsoft Corporation  c:\program files\netmeeting\nac.dll
msacm32 5.2.3790.0 (srv03_rtm.030324-2048)    67.50 KB (69,120 bytes)
        3/25/2003 11:00 AM     Microsoft Corporation
        c:\windows\system32\msacm32.dll
msvfw32 5.2.3790.0 (srv03_rtm.030324-2048)    112.50 KB (115,200 bytes)
        3/25/2003 11:00 AM     Microsoft Corporation
        c:\windows\system32\msvfw32.dll
dcap32  4.4.4000       40.00 KB (40,960 bytes)       7/16/2003 3:50 PM
        Microsoft Corporation  c:\program files\netmeeting\dcap32.dll

rundll32       5.2.3790.0 (srv03_rtm.030324-2048)    32.00 KB (32,768
bytes)  3/25/2003 11:00 AM     Microsoft Corporation
        c:\windows\system32\rundll32.exe
msconf  4.4.4000       68.00 KB (69,632 bytes)       7/16/2003 3:50 PM
        Microsoft Corporation  c:\windows\system32\msconf.dll
termsrv 5.2.3790.0 (srv03_rtm.030324-2048)    216.50 KB (221,696 bytes)
        7/16/2003 3:47 PM      Microsoft Corporation
        c:\windows\system32\termsrv.dll
icaapi  5.2.3790.0 (srv03_rtm.030324-2048)    10.50 KB (10,752 bytes)
        7/16/2003 3:47 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 11:00 AM     Microsoft Corporation
        c:\windows\system32\mstlsapi.dll
rdpwsx  5.2.3790.0 (srv03_rtm.030324-2048)    80.13 KB (82,056 bytes)
        7/16/2003 3:47 PM      Microsoft Corporation
        c:\windows\system32\rdpwsx.dll
explorer       6.00.3790.0 (srv03_rtm.030324-2048)   1,008.50 KB
(1,032,704 bytes)      3/25/2003 11:00 AM     Microsoft Corporation
        c:\windows\explorer.exe
browseui       6.00.3790.0 (srv03_rtm.030324-2048)   1.01 MB (1,057,280
bytes)  3/25/2003 11:00 AM     Microsoft Corporation
        c:\windows\system32\browseui.dll
shdocvw 6.00.3790.0 (srv03_rtm.030324-2048)   1.33 MB (1,393,664 bytes)
        3/25/2003 11:00 AM     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 11:00 AM     Microsoft Corporation
        c:\windows\system32\apphelp.dll
themeui 6.00.3790.0 (srv03_rtm.030324-2048)   360.50 KB (369,152 bytes)
        3/25/2003 11:00 AM     Microsoft Corporation
        c:\windows\system32\themeui.dll
msimg32 5.2.3790.0 (srv03_rtm.030324-2048)    4.50 KB (4,608 bytes)
        3/25/2003 11:00 AM     Microsoft Corporation
        c:\windows\system32\msimg32.dll
urlmon  6.00.3790.0 (srv03_rtm.030324-2048)   501.50 KB (513,536 bytes)
        3/25/2003 11:00 AM     Microsoft Corporation
        c:\windows\system32\urlmon.dll
linkinfo       5.2.3790.0 (srv03_rtm.030324-2048)    16.50 KB (16,896
bytes)  3/25/2003 11:00 AM     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 11:00 AM     Microsoft Corporation
        c:\windows\system32\ntshrui.dll
webcheck       6.00.3790.0 (srv03_rtm.030324-2048)   261.50 KB (267,776
bytes)  3/25/2003 11:00 AM     Microsoft Corporation
        c:\windows\system32\webcheck.dll
stobject       5.2.3790.0 (srv03_rtm.030324-2048)    117.50 KB (120,320
bytes)  3/25/2003 11:00 AM     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 11:00 AM     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 11:00 AM     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 11:00 AM     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 11:00 AM     Microsoft Corporation
        c:\windows\system32\cfgmgr32.dll
drprov  5.2.3790.0 (srv03_rtm.030324-2048)    12.50 KB (12,800 bytes)
        3/25/2003 11:00 AM     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 11:00 AM     Microsoft Corporation
        c:\windows\system32\ntlanman.dll
netui0  5.2.3790.0 (srv03_rtm.030324-2048)    75.50 KB (77,312 bytes)
        3/25/2003 11:00 AM     Microsoft Corporation
        c:\windows\system32\netui0.dll
netui1  5.2.3790.0 (srv03_rtm.030324-2048)    184.00 KB (188,416 bytes)
        3/25/2003 11:00 AM     Microsoft Corporation
        c:\windows\system32\netui1.dll
davclnt 5.2.3790.0 (srv03_rtm.030324-2048)    23.50 KB (24,064 bytes)
        3/25/2003 11:00 AM     Microsoft Corporation
        c:\windows\system32\davclnt.dll
rhostsvr       Not Available  54.50 KB (55,808 bytes)       7/16/2003 4:49
PM      Not Available  c:\rhost\rhostsvr.exe
tapisrv 5.2.3790.0 (srv03_rtm.030324-2048)    238.50 KB (244,224 bytes)
        3/25/2003 11:00 AM     Microsoft Corporation
        c:\windows\system32\tapisrv.dll
unimdm  5.2.3790.0 (srv03_rtm.030324-2048)    190.50 KB (195,072 bytes)
        3/25/2003 11:00 AM     Microsoft Corporation
        c:\windows\system32\unimdm.tsp
uniplat 5.2.3790.0 (srv03_rtm.030324-2048)    15.00 KB (15,360 bytes)
        3/25/2003 11:00 AM     Microsoft Corporation
        c:\windows\system32\uniplat.dll
```

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kmddsp  5.2.3790.0 (srv03_rtm.030324-2048)    34.00 KB (34,816 bytes)
        3/25/2003 11:00 AM     Microsoft Corporation
        c:\windows\system32\kmddsp.tsp
ndptsp  5.2.3790.0 (srv03_rtm.030324-2048)    54.50 KB (55,808 bytes)
        3/25/2003 11:00 AM     Microsoft Corporation
        c:\windows\system32\ndptsp.tsp
ipconf  5.2.3790.0 (srv03_rtm.030324-2048)    16.50 KB (16,896 bytes)
        3/25/2003 11:00 AM     Microsoft Corporation
        c:\windows\system32\ipconf.tsp
h323    5.2.3790.0 (srv03_rtm.030324-2048)    250.00 KB (256,000 bytes)
        3/25/2003 11:00 AM     Microsoft Corporation
        c:\windows\system32\h323.tsp
hidphone        5.2.3790.0 (srv03_rtm.030324-2048)    28.00 KB (28,672
bytes)  3/25/2003 11:00 AM     Microsoft Corporation
        c:\windows\system32\hidphone.tsp
hid     5.2.3790.0 (srv03_rtm.030324-2048)    17.50 KB (17,920 bytes)
        3/24/2003 5:48 PM      Microsoft Corporation
        c:\windows\system32\hid.dll
dllhost 5.2.3790.0 (srv03_rtm.030324-2048)    5.50 KB (5,632 bytes)
        3/25/2003 11:00 AM     Microsoft Corporation
        c:\windows\system32\dllhost.exe
mtxoci  2001.12.4720.0 (srv03_rtm.030324-2048)       101.00 KB (103,424
bytes)  7/16/2003 3:47 PM      Microsoft Corporation
        c:\windows\system32\mtxoci.dll
txflog  2001.12.4720.0 (srv03_rtm.030324-2048)       92.50 KB (94,720
bytes)  3/25/2003 11:00 AM     Microsoft Corporation
        c:\windows\system32\txflog.dll
xolehlp 2001.12.4720.0 (srv03_rtm.030324-2048)       8.50 KB (8,704 bytes)
        7/16/2003 3:47 PM      Microsoft Corporation
        c:\windows\system32\xolehlp.dll
msdtcprx        2001.12.4720.0 (srv03_rtm.030324-2048)       427.50 KB
(437,760 bytes)        7/16/2003 3:47 PM      Microsoft Corporation
        c:\windows\system32\msdtcprx.dll
mtxclu  2001.12.4720.0 (srv03_rtm.030324-2048)       74.50 KB (76,288
bytes)  3/25/2003 11:00 AM     Microsoft Corporation
        c:\windows\system32\mtxclu.dll
resutils        5.2.3790.0 (srv03_rtm.030324-2048)    59.00 KB (60,416
bytes)  3/25/2003 11:00 AM     Microsoft Corporation
        c:\windows\system32\resutils.dll
mfc42u  6.05.3014.0    960.00 KB (983,040 bytes)     3/25/2003 11:00 AM
        Microsoft Corporation  c:\windows\system32\mfc42u.dll
catsrv  2001.12.4720.0 (srv03_rtm.030324-2048)       256.00 KB (262,144
bytes)  7/16/2003 3:47 PM      Microsoft Corporation
        c:\windows\system32\catsrv.dll
clbcatex        2001.12.4720.0 (srv03_rtm.030324-2048)       96.00 KB
(98,304 bytes) 7/16/2003 3:47 PM      Microsoft Corporation
        c:\windows\system32\clbcatex.dll
catsrvps        2001.12.4720.0 (srv03_rtm.030324-2048)       23.50 KB
(24,064 bytes) 7/16/2003 3:47 PM      Microsoft Corporation
        c:\windows\system32\catsrvps.dll
catsrvut        2001.12.4720.0 (srv03_rtm.030324-2048)       572.50 KB
(586,240 bytes)        7/16/2003 3:47 PM      Microsoft Corporation
        c:\windows\system32\catsrvut.dll
mfcsubs 2001.12.4720.0 (srv03_rtm.030324-2048)       21.50 KB (22,016
bytes)  3/25/2003 11:00 AM     Microsoft Corporation
        c:\windows\system32\mfcsubs.dll
rdpsnd  5.2.3790.0 (srv03_rtm.030324-2048)    18.00 KB (18,432 bytes)
        3/25/2003 11:00 AM     Microsoft Corporation
        c:\windows\system32\rdpsnd.dll
scredir 5.2.3790.0 (srv03_rtm.030324-2048)    27.00 KB (27,648 bytes)
        3/25/2003 11:00 AM     Microsoft Corporation
        c:\windows\system32\scredir.dll
msacm32 5.2.3790.0 (srv03_rtm.030324-2048)    21.00 KB (21,504 bytes)
        3/25/2003 11:00 AM     Microsoft Corporation
        c:\windows\system32\msacm32.drv
imaadp32        5.2.3790.0 (srv03_rtm.030324-2048)    15.50 KB (15,872
bytes)  3/25/2003 11:00 AM     Microsoft Corporation
        c:\windows\system32\imaadp32.acm
msadp32 5.2.3790.0 (srv03_rtm.030324-2048)    14.50 KB (14,848 bytes)
        3/25/2003 11:00 AM     Microsoft Corporation
        c:\windows\system32\msadp32.acm
msg711  5.2.3790.0 (srv03_rtm.030324-2048)    10.00 KB (10,240 bytes)
        3/25/2003 11:00 AM     Microsoft Corporation
        c:\windows\system32\msg711.acm
msgsm32 5.2.3790.0 (srv03_rtm.030324-2048)    20.50 KB (20,992 bytes)
        3/25/2003 11:00 AM     Microsoft Corporation
        c:\windows\system32\msgsm32.acm
tssoft32        1.01    9.50 KB (9,728 bytes)  3/25/2003 11:00 AM     DSP
GROUP, INC.     c:\windows\system32\tssoft32.acm
tsd32   1.03    16.50 KB (16,896 bytes)        3/25/2003 11:00 AM     DSP
GROUP, INC.     c:\windows\system32\tsd32.dll
msg723  4.4.4000       116.00 KB (118,784 bytes)     7/16/2003 3:50 PM
        Microsoft Corporation  c:\windows\system32\msg723.acm
msaud32 8.00.00.4487   288.00 KB (294,912 bytes)     3/25/2003 11:00 AM
        Microsoft Corporation  c:\windows\system32\msaud32.acm
sl_anet 3.02    84.00 KB (86,016 bytes)        3/25/2003 11:00 AM     Sipro
Lab Telecom Inc.       c:\windows\system32\sl_anet.acm
l3codeca        1, 9, 0, 0305  284.00 KB (290,816 bytes)     3/25/2003
11:00 AM       Fraunhofer Institut Integrierte Schaltungen IIS
        c:\windows\system32\l3codeca.acm
rdpclip 5.2.3790.0 (srv03_rtm.030324-2048)    53.00 KB (54,272 bytes)
        7/16/2003 3:47 PM      Microsoft Corporation
        c:\windows\system32\rdpclip.exe
userinit        5.2.3790.0 (srv03_rtm.030324-2048)    23.50 KB (24,064
bytes)  3/25/2003 11:00 AM     Microsoft Corporation
        c:\windows\system32\userinit.exe
msinfo32        5.2.3790.0 (srv03_rtm.030324-2048)    40.50 KB (41,472
bytes)  7/16/2003 3:50 PM      Microsoft Corporation  c:\program
files\common files\microsoft shared\msinfo\msinfo32.exe
msinfo  5.2.3790.0 (srv03_rtm.030324-2048)    358.50 KB (367,104 bytes)
        7/16/2003 3:50 PM      Microsoft Corporation
        c:\windows\pchealth\helpctr\binaries\msinfo.dll
comdlg32        6.00.3790.0 (srv03_rtm.030324-2048)   261.00 KB (267,264
bytes)  3/25/2003 11:00 AM     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 11:00 AM     Microsoft Corporation
        c:\windows\system32\riched32.dll
riched20        5.31.23.1218   406.00 KB (415,744 bytes)     3/25/2003
11:00 AM       Microsoft Corporation  c:\windows\system32\riched20.dll


[Services]
```

```
Display Name   Name    State   Start Mode     Service Type   Path    Error
Control Start Name     Tag ID
Alerter Alerter Stopped Disabled       Share Process
        c:\windows\system32\svchost.exe -k localservice      Normal  NT
AUTHORITY\LocalService 0
Application Layer Gateway Service     ALG     Stopped Manual  Own Process
        c:\windows\system32\alg.exe   Normal  NT AUTHORITY\LocalService
        0
Application Management AppMgmt Stopped Manual  Share Process
        c:\windows\system32\svchost.exe -k netsvcs   Normal  LocalSystem
        0
Windows Audio  AudioSrv       Stopped Disabled       Share Process
        c:\windows\system32\svchost.exe -k netsvcs   Normal  LocalSystem
        0
Background Intelligent Transfer Service      BITS    Stopped Manual  Share
Process c:\windows\system32\svchost.exe -k netsvcs   Normal  LocalSystem
        0
Computer Browser       Browser Running Auto    Share Process
        c:\windows\system32\svchost.exe -k netsvcs   Normal  LocalSystem
        0
Indexing Service       CiSvc   Stopped Disabled       Share Process
        c:\windows\system32\cisvc.exe Normal  LocalSystem    0
ClipBook       ClipSrv Stopped Disabled       Own Process
        c:\windows\system32\clipsrv.exe      Normal  LocalSystem    0

COM+ System Application       COMSysApp      Running Manual  Own Process
        c:\windows\system32\dllhost.exe /processid:{02d4b3f1-fd88-11d1-
960d-00805fc79235}     Normal  LocalSystem    0
Cryptographic Services CryptSvc       Running Manual  Share Process
        c:\windows\system32\svchost.exe -k netsvcs   Normal  LocalSystem
        0
Distributed File System       Dfs     Stopped Disabled       Own Process
        c:\windows\system32\dfssvc.exe       Normal  LocalSystem    0

DHCP Client    Dhcp    Stopped Disabled       Share Process
        c:\windows\system32\svchost.exe -k networkservice    Normal  NT
AUTHORITY\NetworkService      0
Logical Disk Manager Administrative Service  dmadmin Stopped Manual  Share
Process c:\windows\system32\dmadmin.exe /com  Normal  LocalSystem    0

Logical Disk Manager   dmserver       Running Auto    Share Process
        c:\windows\system32\svchost.exe -k netsvcs   Normal  LocalSystem
        0
DNS Client     Dnscache       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 Manual  Share Process
        c:\windows\system32\svchost.exe -k netsvcs   Normal  LocalSystem
        0
cLAN Connection Manager       GniConMgr      Running Auto    Own Process
        c:\windows\system32\gnconmgr.exe     Normal  LocalSystem    0
Help and Support       helpsvc Stopped 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     Stopped Manual  Share Process
        c:\windows\system32\lsass.exe Normal  LocalSystem    0
IIS Admin Service      IISADMIN       Stopped Manual  Share Process
        c:\windows\system32\inetsrv\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 Stopped Disabled       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 Running Auto    Own Process
        c:\windows\system32\mnmsrvc.exe      Normal  LocalSystem    0

Distributed Transaction Coordinator   MSDTC   Running 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

Network DDE    NetDDE  Stopped Disabled       Share Process
        c:\windows\system32\netdde.exe       Normal  LocalSystem    0

Network DDE DSDM       NetDDEdsdm     Stopped Disabled       Share Process
        c:\windows\system32\netdde.exe       Normal  LocalSystem    0

Net Logon      Netlogon       Stopped Manual  Share Process
        c:\windows\system32\lsass.exe Normal  LocalSystem    0
Network Connections    Netman Running Manual  Share Process
        c:\windows\system32\svchost.exe -k netsvcs   Normal  LocalSystem
        0
Network Location Awareness (NLA)      Nla     Running Manual  Share Process
        c:\windows\system32\svchost.exe -k netsvcs   Normal  LocalSystem
        0
File Replication       NtFrs   Stopped Manual  Own Process
        c:\windows\system32\ntfrs.exe Ignore  LocalSystem    0
```

```
NT LM Security Support Provider       NtLmSsp Stopped Manual  Share Process
        c:\windows\system32\lsass.exe Normal  LocalSystem    0
Removable Storage      NtmsSvc Stopped Manual  Share Process
        c:\windows\system32\svchost.exe -k netsvcs   Normal  LocalSystem
        0
Plug and Play  PlugPlay       Running Auto    Share Process
        c:\windows\system32\services.exe      Normal  LocalSystem    0

IPSEC Services PolicyAgent    Stopped Disabled       Share Process
        c:\windows\system32\lsass.exe Normal  LocalSystem    0
Protected Storage      ProtectedStorage       Running Auto    Share Process
        c:\windows\system32\lsass.exe Normal  LocalSystem    0
Remote Access Auto Connection Manager RasAuto Stopped Manual  Share Process
        c:\windows\system32\svchost.exe -k netsvcs   Normal  LocalSystem
        0
Remote Access Connection Manager      RasMan  Running Manual  Share Process
        c:\windows\system32\svchost.exe -k netsvcs   Normal  LocalSystem
        0
Remote Desktop Help Session Manager   RDSessMgr      Stopped Manual  Own
Process c:\windows\system32\sessmgr.exe       Normal  LocalSystem    0

Routing and Remote Access     RemoteAccess   Stopped Disabled       Share
Process c:\windows\system32\svchost.exe -k netsvcs   Normal  LocalSystem
        0
Remote Registry        RemoteRegistry Running Auto    Share Process
        c:\windows\system32\svchost.exe -k regsvc    Normal  NT
AUTHORITY\LocalService 0
Remote Procedure Call (RPC) Locator   RpcLocator     Stopped Manual  Own
Process c:\windows\system32\locator.exe       Normal  NT
AUTHORITY\NetworkService      0
Remote Procedure Call (RPC)   RpcSs   Running Auto    Share Process
        c:\windows\system32\svchost -k rpcss  Normal  LocalSystem    0

Resultant Set of Policy Provider      RSoPProv       Stopped Manual  Share
Process c:\windows\system32\rsopprov.exe      Normal  LocalSystem    0

Special Administration Console Helper sacsvr  Stopped Manual  Share Process
        c:\windows\system32\svchost.exe -k netsvcs   Normal  LocalSystem
        0
Security Accounts Manager     SamSs   Running Auto    Share Process
        c:\windows\system32\lsass.exe Normal  LocalSystem    0
Smart Card     SCardSvr       Stopped Manual  Share Process
        c:\windows\system32\scardsvr.exe      Ignore  NT
AUTHORITY\LocalService 0
Task Scheduler Schedule       Stopped Manual  Share Process
        c:\windows\system32\svchost.exe -k netsvcs   Normal  LocalSystem
        0
Secondary Logon        seclogon       Running Auto    Share Process
        c:\windows\system32\svchost.exe -k netsvcs   Ignore  LocalSystem
        0
System Event Notification     SENS    Running Auto    Share Process
        c:\windows\system32\svchost.exe -k netsvcs   Normal  LocalSystem
        0
Internet Connection Firewall (ICF) / Internet Connection Sharing (ICS)
        SharedAccess   Stopped Disabled       Share Process
        c:\windows\system32\svchost.exe -k netsvcs   Normal  LocalSystem
        0
Shell Hardware Detection      ShellHWDetection       Running Auto    Share
Process c:\windows\system32\svchost.exe -k netsvcs   Ignore  LocalSystem
        0
Print Spooler  Spooler Stopped Manual  Own Process
        c:\windows\system32\spoolsv.exe       Normal  LocalSystem    0

Windows Image Acquisition (WIA)       stisvc  Stopped Disabled       Share
Process c:\windows\system32\svchost.exe -k imgsvc    Normal  NT
AUTHORITY\LocalService 0
Microsoft Software Shadow Copy Provider      swprv   Stopped Manual  Own
Process c:\windows\system32\svchost.exe -k swprv     Normal  LocalSystem
        0
Performance Logs and Alerts   SysmonLog      Stopped Manual  Own Process
        c:\windows\system32\smlogsvc.exe      Normal  NT
Authority\NetworkService      0
Telephony      TapiSrv Running Manual  Share Process
        c:\windows\system32\svchost.exe -k tapisrv   Normal  LocalSystem
        0
Terminal Services      TermService    Running Manual  Share Process
        c:\windows\system32\svchost.exe -k termsvcs  Normal  LocalSystem
        0
Themes  Themes  Stopped Disabled       Share Process
        c:\windows\system32\svchost.exe -k netsvcs   Normal  LocalSystem
        0
Telnet  TlntSvr Stopped Disabled       Own Process
        c:\windows\system32\tlntsvr.exe       Normal  NT
AUTHORITY\LocalService 0
Distributed Link Tracking Server      TrkSvr  Stopped Disabled       Share
Process c:\windows\system32\svchost.exe -k netsvcs   Normal  LocalSystem
        0
Distributed Link Tracking Client      TrkWks  Stopped Disabled       Share
Process c:\windows\system32\svchost.exe -k netsvcs   Normal  LocalSystem
        0
Terminal Services Session Directory   Tssdis  Stopped Disabled       Own
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  NT AUTHORITY\LocalService
        0
Virtual Disk Service   vds     Stopped Manual  Own Process
        c:\windows\system32\vds.exe   Normal  LocalSystem    0
Volume Shadow Copy     VSS     Stopped Manual  Own Process
        c:\windows\system32\vssvc.exe Normal  LocalSystem    0
Windows Time   W32Time Stopped Disabled       Share Process
        c:\windows\system32\svchost.exe -k netsvcs   Normal  LocalSystem
        0
World Wide Web Publishing Service     W3SVC   Stopped Manual  Share Process
        c:\windows\system32\svchost.exe -k iissvcs   Normal  LocalSystem
        0
WebClient      WebClient      Stopped Disabled       Share Process
        c:\windows\system32\svchost.exe -k localservice      Normal  NT
AUTHORITY\LocalService 0
WinHTTP Web Proxy Auto-Discovery Service     WinHttpAutoProxySvc
        Stopped Manual  Share Process  c:\windows\system32\svchost.exe -k
localservice   Normal  NT AUTHORITY\LocalService     0
```

```
Windows Management Instrumentation    winmgmt Running Auto    Share Process
        c:\windows\system32\svchost.exe -k netsvcs   Ignore  LocalSystem
        0
Portable Media Serial Number Service  WmdmPmSN       Stopped Manual  Share
Process c:\windows\system32\svchost.exe -k netsvcs   Normal  LocalSystem
        0
Windows Management Instrumentation Driver Extensions Wmi     Stopped Manual
        Share Process  c:\windows\system32\svchost.exe -k netsvcs   Normal
        LocalSystem    0
WMI Performance Adapter       WmiApSrv       Stopped Manual  Own Process
        c:\windows\system32\wbem\wmiapsrv.exe Normal  LocalSystem    0

Automatic Updates      wuauserv       Running Auto    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

[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    CLIENT5\Administrator:Accessories     CLIENT5\Administrator

Accessories\Accessibility
        CLIENT5\Administrator:Accessories\Accessibility
        CLIENT5\Administrator
Accessories\Entertainment
        CLIENT5\Administrator:Accessories\Entertainment
        CLIENT5\Administrator
Administrative Tools   CLIENT5\Administrator:Administrative Tools
        CLIENT5\Administrator
QLogic Corporation     CLIENT5\Administrator:QLogic Corporation
        CLIENT5\Administrator
QLogic Corporation\SANblade Control VIX      CLIENT5\Administrator:QLogic
Corporation\SANblade Control VIX      CLIENT5\Administrator
Startup CLIENT5\Administrator:Startup CLIENT5\Administrator

[Startup Programs]

Program Command User Name      Location
desktop desktop.ini    NT AUTHORITY\SYSTEM    Startup
desktop desktop.ini    CLIENT5\Administrator  Startup
desktop desktop.ini    .DEFAULT       Startup
desktop desktop.ini    All Users      Common Startup
rhostsvr.exe   c:\rhost\rhostsvr.exe -d\rhost -crhosthdlr.exe       All
Users   Common Startup
ShutdownEventCheck     %systemroot%\system32\dumprep 0 -s    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
Sound   Not Available
Media Clip     Not 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
Build   63790
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 12:00:00 PM
        C:\WINDOWS\system32    Microsoft Corporation
advpack.dll    6.0.3790.0     94 KB   3/25/2003 12:00:00 PM
        C:\WINDOWS\system32    Microsoft Corporation
asctrls.ocx    6.0.3790.0     90 KB   3/25/2003 12:00:00 PM
        C:\WINDOWS\system32    Microsoft Corporation
browselc.dll   6.0.3790.0     62 KB   3/25/2003 12:00:00 PM
        C:\WINDOWS\system32    Microsoft Corporation
browseui.dll   6.0.3790.0     1,033 KB       3/25/2003 12:00:00 PM
        C:\WINDOWS\system32    Microsoft Corporation
cdfview.dll    6.0.3790.0     144 KB  3/25/2003 12:00:00 PM
        C:\WINDOWS\system32    Microsoft Corporation
comctl32.dll   5.82.3790.0    561 KB  3/25/2003 12:00:00 PM
        C:\WINDOWS\system32    Microsoft Corporation
dxtrans.dll    6.3.3790.0     198 KB  3/25/2003 12:00:00 PM
        C:\WINDOWS\system32    Microsoft Corporation
dxtmsft.dll    6.3.3790.0     344 KB  3/25/2003 12:00:00 PM
        C:\WINDOWS\system32    Microsoft Corporation
iecont.dll     <File Missing> Not Available  Not Available  Not Available
        Not Available
iecontlc.dll   <File Missing> Not Available  Not Available  Not Available
        Not Available
iedkcs32.dll   16.0.3790.0    300 KB  3/25/2003 12:00:00 PM
        C:\WINDOWS\system32    Microsoft Corporation
iepeers.dll    6.0.3790.0     230 KB  3/25/2003 12:00:00 PM
        C:\WINDOWS\system32    Microsoft Corporation
iesetup.dll    6.0.3790.0     59 KB   3/25/2003 12:00:00 PM
        C:\WINDOWS\system32    Microsoft Corporation
ieuinit.inf    Not Available  20 KB   3/25/2003 12:00:00 PM
        C:\WINDOWS\system32    Not Available
iexplore.exe   6.0.3790.0     90 KB   3/25/2003 12:00:00 PM  C:\Program
Files\Internet Explorer        Microsoft Corporation
imgutil.dll    5.2.3790.0     35 KB   3/25/2003 12:00:00 PM
        C:\WINDOWS\system32    Microsoft Corporation
inetcpl.cpl    6.0.3790.0     303 KB  3/25/2003 12:00:00 PM
        C:\WINDOWS\system32    Microsoft Corporation
inetcplc.dll   6.0.3790.0     109 KB  3/25/2003 12:00:00 PM
        C:\WINDOWS\system32    Microsoft Corporation
inseng.dll     6.0.3790.0     72 KB   3/25/2003 12:00:00 PM
        C:\WINDOWS\system32    Microsoft Corporation
mlang.dll      6.0.3790.0     570 KB  3/25/2003 12:00:00 PM
        C:\WINDOWS\system32    Microsoft Corporation
msencode.dll   2002.10.4.0    112 KB  3/25/2003 12:00:00 PM
        C:\WINDOWS\system32    Not Available
mshta.exe      6.0.3790.0     26 KB   3/25/2003 12:00:00 PM
        C:\WINDOWS\system32    Microsoft Corporation
mshtml.dll     6.0.3790.0     2,848 KB       3/25/2003 12:00:00 PM
        C:\WINDOWS\system32    Microsoft Corporation
mshtml.tlb     6.0.3790.0     1,319 KB       3/25/2003 12:00:00 PM
        C:\WINDOWS\system32    Microsoft Corporation
mshtmled.dll   6.0.3790.0     444 KB  3/25/2003 12:00:00 PM
        C:\WINDOWS\system32    Microsoft Corporation
mshtmler.dll   6.0.3790.0     55 KB   3/25/2003 12:00:00 PM
        C:\WINDOWS\system32    Microsoft Corporation
msident.dll    6.0.3790.0     47 KB   3/25/2003 12:00:00 PM
        C:\WINDOWS\system32    Microsoft Corporation
msidntld.dll   6.0.3790.0     15 KB   3/25/2003 12:00:00 PM
        C:\WINDOWS\system32    Microsoft Corporation
msieftp.dll    6.0.3790.0     230 KB  3/25/2003 12:00:00 PM
        C:\WINDOWS\system32    Microsoft Corporation
msrating.dll   6.0.3790.0     132 KB  3/25/2003 12:00:00 PM
        C:\WINDOWS\system32    Microsoft Corporation
mstime.dll     6.0.3790.0     491 KB  3/25/2003 12:00:00 PM
        C:\WINDOWS\system32    Microsoft Corporation
occache.dll    6.0.3790.0     89 KB   3/25/2003 12:00:00 PM
        C:\WINDOWS\system32    Microsoft Corporation
proctexe.ocx   6.3.3790.0     78 KB   3/25/2003 12:00:00 PM
        C:\WINDOWS\system32    Intel Corporation
sendmail.dll   6.0.3790.0     52 KB   3/25/2003 12:00:00 PM
        C:\WINDOWS\system32    Microsoft Corporation
shdoclc.dll    6.0.3790.0     589 KB  3/25/2003 12:00:00 PM
        C:\WINDOWS\system32    Microsoft Corporation
shdocvw.dll    6.0.3790.0     1,361 KB       3/25/2003 12:00:00 PM
        C:\WINDOWS\system32    Microsoft Corporation
shfolder.dll   6.0.3790.0     23 KB   3/25/2003 12:00:00 PM
        C:\WINDOWS\system32    Microsoft Corporation
shlwapi.dll    6.0.3790.0     281 KB  3/25/2003 12:00:00 PM
        C:\WINDOWS\system32    Microsoft Corporation
tdc.ocx 1.3.0.3130     58 KB   3/25/2003 12:00:00 PM  C:\WINDOWS\system32
        Microsoft Corporation
url.dll 6.0.3790.0     36 KB   3/25/2003 12:00:00 PM  C:\WINDOWS\system32
        Microsoft Corporation
urlmon.dll     6.0.3790.0     502 KB  3/25/2003 12:00:00 PM
        C:\WINDOWS\system32    Microsoft Corporation
webcheck.dll   6.0.3790.0     262 KB  3/25/2003 12:00:00 PM
        C:\WINDOWS\system32    Microsoft Corporation
wininet.dll    6.0.3790.0     609 KB  3/25/2003 12:00:00 PM
        C:\WINDOWS\system32    Microsoft Corporation

[Connectivity]

Item    Value
Connection Preference  Never dial

LAN Settings

AutoConfigProxy        Not Available
AutoProxyDetectMode    Disabled
AutoConfigURL
Proxy   Disabled
ProxyServer
ProxyOverride

[Cache]

[ Following are sub-categories of this main category ]
[Summary]

Item    Value
Page Refresh Type      Automatic
Temporary Internet Files Folder       C:\Documents and
Settings\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
```

Client Hyperthreading Information (Common to 8 clients)

```
Hyper-Threading Technology is available.
Logical Processors Per Package: 2
OS Affinity ID: 0x00000001, APIC ID: 0 PHY ID: 0, LOG ID: 0
OS Affinity ID: 0x00000002, APIC ID: 6 PHY ID: 3, LOG ID: 0
OS Affinity ID: 0x00000004, APIC ID: 1 PHY ID: 0, LOG ID: 1
OS Affinity ID: 0x00000008, APIC ID: 7 PHY ID: 3, LOG ID: 1
Processors with Hyper-Threading Technology enabled was detected.
```

Windows 2000 IP Configuration Information

(Common to 8 clients except for Host Name, Physical Address, and IP Address)

Swcfg.ver

```
Windows IP Configuration


   Host Name . . . . . . . . . . . . : client5

   Primary Dns Suffix  . . . . . . . :

   Node Type . . . . . . . . . . . . : Unknown

   IP Routing Enabled. . . . . . . . : No

   WINS Proxy Enabled. . . . . . . . : No


Ethernet adapter Admin:


   Connection-specific DNS Suffix  . :

   Description . . . . . . . . . . . : Broadcom NetXtreme Gigabit Ethernet
#3

   Physical Address. . . . . . . . . : 00-06-5B-FE-80-97

   DHCP Enabled. . . . . . . . . . . : No

   IP Address. . . . . . . . . . . . : 192.168.91.5

   Subnet Mask . . . . . . . . . . . : 255.255.255.0

   Default Gateway . . . . . . . . . :


Ethernet adapter RTE:


   Connection-specific DNS Suffix  . :

   Description . . . . . . . . . . . : Broadcom NetXtreme Gigabit Ethernet
#4

   Physical Address. . . . . . . . . : 00-06-5B-FE-80-98
```

```
   DHCP Enabled. . . . . . . . . . . : No

   IP Address. . . . . . . . . . . . : 192.5.1.1

   Subnet Mask . . . . . . . . . . . : 255.255.255.0

   Default Gateway . . . . . . . . . :

 Volume in drive C has no label.
 Volume Serial Number is 7433-AD41

 Directory of C:\inetpub\wwwroot

04/19/2004  05:13 PM           274,494 tpcc.dll
               1 File(s)        274,494 bytes
               0 Dir(s)  13,078,110,208 bytes free
 Volume in drive C has no label.
 Volume Serial Number is 7433-AD41

 Directory of C:\inetpub\wwwroot

04/20/2004  12:07 PM           303,185 tpcc_com_all.dll
               1 File(s)        303,185 bytes
               0 Dir(s)  13,078,110,208 bytes free
 Volume in drive C has no label.
 Volume Serial Number is 7433-AD41

 Directory of C:\inetpub\wwwroot

04/19/2004  01:42 PM           102,471 tpcc_com_ps.dll
               1 File(s)        102,471 bytes
               0 Dir(s)  13,078,110,208 bytes free
```

System_Currentcontrolset_Services_HTTP.txt

```
\registry\machine\system\currentcontrolset\services\HTTP\Parameters
    MaxConnections = REG_DWORD 0x00018fff
    DisableServerHeader = REG_DWORD 0x00000001
```

Component Services Configuration

Complus.txt

```
Component Services Configuration

COM+ Component TPCC.AllTxns Settings:
   Transactions not supported
   Enable object pooling
   Minimum pool size 108
   Maximum pool size 108
   Creation timeout 120,000
   Enable object construction
   Enable just in time activation
   Concurrency required
```

Internet Information Server Registry Parameters

System_Currentcontrolset_Services_Inetinfo.txt

```
\registry\machine\system\currentcontrolset\services\inetinfo
    Parameters
        ListenBackLog = REG_DWORD 0x0000000f
        MaxConnections = REG_DWORD 0x00018fff
        BandwidthLevel = REG_DWORD 0xffffffff
        ThreadTimeout = REG_DWORD 0x00015180
        DisableMemoryCache = REG_DWORD 0x00000001
        MemoryCacheSize = REG_DWORD 0x00000000
        PoolThreadLimit = REG_DWORD 0x0000012c
        ObjectCacheTTL = REG_DWORD 0xffffffff
    Performance
        Library = infoctrs.dll
        Open = OpenINFOPerformanceData
        Close = CloseINFOPerformanceData
        Collect = CollectINFOPerformanceData
        PerfIniFile = infoctrs.ini
        Last Counter = REG_DWORD 0x000013d8
        Last Help = REG_DWORD 0x000013d9
        First Counter = REG_DWORD 0x00001398
        First Help = REG_DWORD 0x00001399
        Object List = 5016
        Library Validation Code = REG_BINARY 0x00000010 0x2d24d700
0x01c34fe5 0x00002000 0x00000000
        WbemAdapFileSignature = REG_BINARY 0x00000010 0xe7d3c34c
0xe056ca44 0x14a0e8f3 0x0ffb2652
        WbemAdapFileTime = REG_BINARY 0x00000008 0x2c2ce270 0x01c34fe5
        WbemAdapFileSize = REG_DWORD 0x00002000
        WbemAdapStatus = REG_DWORD 0x00000000
```

Tcpip Parameters

System_Currentcontrolset_Services_Tcpip.txt

(Common to 8 clients except for Host Name, Physical Address, and IP Address)

```
\registry\machine\system\currentcontrolset\services\Tcpip\Parameters
    NV Hostname = client5
    DataBasePath = REG_EXPAND_SZ %SystemRoot%\System32\drivers\etc
    NameServer =
    ForwardBroadcasts = REG_DWORD 0x00000000
    IPEnableRouter = REG_DWORD 0x00000000
```

```
    Domain =
    Hostname = client5
    SearchList =
    UseDomainNameDevolution = REG_DWORD 0x00000000
    EnableICMPRedirect = REG_DWORD 0x00000001
    DeadGWDetectDefault = REG_DWORD 0x00000001
    DontAddDefaultGatewayDefault = REG_DWORD 0x00000000
    EnableSecurityFilters = REG_DWORD 0x00000000
    ReservedPorts = REG_MULTI_SZ "3343-3343"
    KeepAliveInterval = REG_DWORD 0x00002710
    MaxUserPort = REG_DWORD 0x00018fff
    Adapters
        NdisWanIp
            LLInterface = WANARP
            IpConfig = REG_MULTI_SZ
"Tcpip\Parameters\Interfaces\{2382CB34-8270-44D4-B672-233CC1568F18}"  \

"Tcpip\Parameters\Interfaces\{6DD7A721-5093-4121-86B6-C903B9FA7030}"
            NumInterfaces = REG_DWORD 0x00000002
            IpInterfaces = REG_BINARY 0x00000020 0x2382cb34 0x44d48270
0x3c2372b6 0x188f56c1 0x6dd7a721 0x41215093 0x03c9b686 0x3070fab9
        {A218374A-72E5-46C8-A286-324E933BCAB4}
            LLInterface =
            IpConfig = REG_MULTI_SZ
"Tcpip\Parameters\Interfaces\{A218374A-72E5-46C8-A286-324E933BCAB4}"
        {A6102462-5B4E-4973-915B-715C49C76CDF}
            LLInterface =
            IpConfig = REG_MULTI_SZ
"Tcpip\Parameters\Interfaces\{A6102462-5B4E-4973-915B-715C49C76CDF}"
        {C299F768-4966-4146-9295-AA099379D574}
            LLInterface =
            IpConfig = REG_MULTI_SZ
"Tcpip\Parameters\Interfaces\{C299F768-4966-4146-9295-AA099379D574}"
        {E02AF43D-453A-494B-9807-62F5640324E3}
            LLInterface =
            IpConfig = REG_MULTI_SZ
"Tcpip\Parameters\Interfaces\{E02AF43D-453A-494B-9807-62F5640324E3}"
        {F8003B81-70DB-411C-B383-CF9434D33F7A}
            LLInterface =
            IpConfig = REG_MULTI_SZ
"Tcpip\Parameters\Interfaces\{F8003B81-70DB-411C-B383-CF9434D33F7A}"
    DNSRegisteredAdapters
    Interfaces
        {2382CB34-8270-44D4-B672-233CC1568F18}
            UseZeroBroadcast = REG_DWORD 0x00000000
            EnableDHCP = REG_DWORD 0x00000000
            IPAddress = REG_MULTI_SZ "0.0.0.0"
            SubnetMask = REG_MULTI_SZ "0.0.0.0"
            DefaultGateway = REG_MULTI_SZ
            EnableDeadGWDetect = REG_DWORD 0x00000001
            DontAddDefaultGateway = REG_DWORD 0x00000000
        {6DD7A721-5093-4121-86B6-C903B9FA7030}
            UseZeroBroadcast = REG_DWORD 0x00000000
            EnableDHCP = REG_DWORD 0x00000000
            IPAddress = REG_MULTI_SZ "0.0.0.0"
            SubnetMask = REG_MULTI_SZ "0.0.0.0"
            DefaultGateway = REG_MULTI_SZ
            EnableDeadGWDetect = REG_DWORD 0x00000001
            DontAddDefaultGateway = REG_DWORD 0x00000000
        {A218374A-72E5-46C8-A286-324E933BCAB4}
            UseZeroBroadcast = REG_DWORD 0x00000000
            EnableDeadGWDetect = REG_DWORD 0x00000001
            EnableDHCP = REG_DWORD 0x00000000
            IPAddress = REG_MULTI_SZ "192.5.1.1"
            SubnetMask = REG_MULTI_SZ "255.255.255.0"
            DefaultGateway = REG_MULTI_SZ
            DefaultGatewayMetric = REG_MULTI_SZ
            NameServer =
            Domain =
            RegistrationEnabled = REG_DWORD 0x00000000
            RegisterAdapterName = REG_DWORD 0x00000000
            TCPAllowedPorts = REG_MULTI_SZ "0"
            UDPAllowedPorts = REG_MULTI_SZ "0"
            RawIPAllowedProtocols = REG_MULTI_SZ "0"
            NTEContextList = REG_MULTI_SZ "0x00000003"
            DhcpClassIdBin = REG_BINARY 0x00000000
            DhcpServer = 255.255.255.255
            Lease = REG_DWORD 0x00000e10
            LeaseObtainedTime = REG_DWORD 0x3f15e2b3
            T1 = REG_DWORD 0x3f15e9bb
            T2 = REG_DWORD 0x3f15ef01
            LeaseTerminatesTime = REG_DWORD 0x3f15f0c3
            IPAutoconfigurationAddress = 0.0.0.0
            IPAutoconfigurationMask = 255.255.0.0
            IPAutoconfigurationSeed = REG_DWORD 0x00000000
            AddressType = REG_DWORD 0x00000000
        {A6102462-5B4E-4973-915B-715C49C76CDF}
            UseZeroBroadcast = REG_DWORD 0x00000000
            EnableDeadGWDetect = REG_DWORD 0x00000001
            EnableDHCP = REG_DWORD 0x00000000
            IPAddress = REG_MULTI_SZ "192.5.1.1"
            SubnetMask = REG_MULTI_SZ "255.255.255.0"
            DefaultGateway = REG_MULTI_SZ
            DefaultGatewayMetric = REG_MULTI_SZ
            NameServer =
            Domain =
            RegistrationEnabled = REG_DWORD 0x00000001
            RegisterAdapterName = REG_DWORD 0x00000000
            TCPAllowedPorts = REG_MULTI_SZ "0"
            UDPAllowedPorts = REG_MULTI_SZ "0"
            RawIPAllowedProtocols = REG_MULTI_SZ "0"
            NTEContextList = REG_MULTI_SZ "0x00000003"
        {C299F768-4966-4146-9295-AA099379D574}
            UseZeroBroadcast = REG_DWORD 0x00000000
            EnableDeadGWDetect = REG_DWORD 0x00000001
            EnableDHCP = REG_DWORD 0x00000000
            IPAddress = REG_MULTI_SZ "192.168.91.5"
            SubnetMask = REG_MULTI_SZ "255.255.255.0"
            DefaultGateway = REG_MULTI_SZ
            DefaultGatewayMetric = REG_MULTI_SZ
            NameServer =
            Domain =
            RegistrationEnabled = REG_DWORD 0x00000001
            RegisterAdapterName = REG_DWORD 0x00000000
            TCPAllowedPorts = REG_MULTI_SZ "0"
            UDPAllowedPorts = REG_MULTI_SZ "0"
```

```
            RawIPAllowedProtocols = REG_MULTI_SZ "0"
            NTEContextList = REG_MULTI_SZ "0x00000002"
        {E02AF43D-453A-494B-9807-62F5640324E3}
            UseZeroBroadcast = REG_DWORD 0x00000000
            EnableDeadGWDetect = REG_DWORD 0x00000001
            EnableDHCP = REG_DWORD 0x00000001
            IPAddress = REG_MULTI_SZ "0.0.0.0"
            SubnetMask = REG_MULTI_SZ "0.0.0.0"
            DefaultGateway = REG_MULTI_SZ
            DefaultGatewayMetric = REG_MULTI_SZ
            NameServer =
            Domain =
            RegistrationEnabled = REG_DWORD 0x00000001
            RegisterAdapterName = REG_DWORD 0x00000000
            TCPAllowedPorts = REG_MULTI_SZ "0"
            UDPAllowedPorts = REG_MULTI_SZ "0"
            RawIPAllowedProtocols = REG_MULTI_SZ "0"
            NTEContextList = REG_MULTI_SZ
        {F8003B81-70DB-411C-B383-CF9434D33F7A}
            UseZeroBroadcast = REG_DWORD 0x00000000
            EnableDeadGWDetect = REG_DWORD 0x00000001
            EnableDHCP = REG_DWORD 0x00000000
            IPAddress = REG_MULTI_SZ "192.168.91.5"
            SubnetMask = REG_MULTI_SZ "255.255.255.0"
            DefaultGateway = REG_MULTI_SZ
            DefaultGatewayMetric = REG_MULTI_SZ
            NameServer =
            Domain =
            RegistrationEnabled = REG_DWORD 0x00000000
            RegisterAdapterName = REG_DWORD 0x00000000
            TCPAllowedPorts = REG_MULTI_SZ "0"
            UDPAllowedPorts = REG_MULTI_SZ "0"
            RawIPAllowedProtocols = REG_MULTI_SZ "0"
            NTEContextList = REG_MULTI_SZ "0x00000002"
            DhcpClassIdBin = REG_BINARY 0x00000000
            DhcpServer = 255.255.255.255
            Lease = REG_DWORD 0x00000e10
            LeaseObtainedTime = REG_DWORD 0x3f15e1be
            T1 = REG_DWORD 0x3f15e8c6
            T2 = REG_DWORD 0x3f15ee0c
            LeaseTerminatesTime = REG_DWORD 0x3f15efce
            IPAutoconfigurationAddress = 0.0.0.0
            IPAutoconfigurationMask = 255.255.0.0
            IPAutoconfigurationSeed = REG_DWORD 0x00000000
            AddressType = REG_DWORD 0x00000000
    PersistentRoutes
    Winsock
        UseDelayedAcceptance = REG_DWORD 0x00000000
        HelperDllName = REG_EXPAND_SZ %SystemRoot%\System32\wshtcpip.dll
        MaxSockAddrLength = REG_DWORD 0x00000010
        MinSockAddrLength = REG_DWORD 0x00000010
        Mapping = REG_BINARY 0x0000008c 0x0000000b 0x00000003 0x00000002
0x00000001 0x00000006 0x00000002 0x00000001 0x00000000 0x00000002
0x00000000 0x00000006 0x00000000 0x00000000 0x00000006 0x00000000
0x00000001 0x00000006 0x00000002 \
                  0x00000002 0x00000011 0x00000002 0x00000002 0x00000000
0x00000002 0x00000000 0x00000011 0x00000000 0x00000000 0x00000011
0x00000000 0x00000002 0x00000011 0x00000002 0x00000003 0x00000000
```

MSSQL Server Registry Parameters

Software_Microsoft_Mssqlserver_Client_Connectto_Sqlconnect.txt

(Common to all 8 clients except for DBServer port #)

```
\registry\machine\software\microsoft\mssqlserver\client\connectto
    DSQUERY = DBMSSOCN
    DBSERVER-tcp = DBMSSOCN,192.168.91.213
    DBSERVER = DBNETLIB,via:mv-bobdylan,1425,0
```

Start World Wide Web Server Registry Parameters

System_Currentcontrolset_Services_W3svc.txt

```
\registry\machine\system\currentcontrolset\services\w3svc
    Type = REG_DWORD 0x00000020
    Start = REG_DWORD 0x00000003
    ErrorControl = REG_DWORD 0x00000001
    ImagePath = REG_EXPAND_SZ %SystemRoot%\System32\svchost.exe -k iissvcs
    DisplayName = World Wide Web Publishing Service
    DependOnService = REG_MULTI_SZ "IISADMIN"
    DependOnGroup = REG_MULTI_SZ
    ObjectName = LocalSystem
    Description = Provides Web connectivity and administration through the
Internet Information Services snap-in.
    FailureActions = REG_BINARY 0x0000002c 0x00015180 0x00000001
0x00000000 0x00000003 0x00700061 0x00000001 0x00000001 0x00000001
0x00000001 0x00000001 0x00000001
    ASP
        NOTE = This is for backward compatibility only.
        Parameters
    Parameters
        MajorVersion = REG_DWORD 0x00000005
```

```
        MinorVersion = REG_DWORD 0x00000000
        InstallPath = C:\WINNT\System32\inetsrv
        AccessDeniedMessage = Error: Access is Denied.
        ServiceDll = REG_EXPAND_SZ
C:\WINDOWS\system32\inetsrv\iisw3adm.dll
        CertMapList = C:\WINNT\System32\inetsrv\iiscrmap.dll
        Filter DLLs =
        LogFileDirectory = C:\WINNT\System32\LogFiles
        AcceptExOutStanding = REG_DWORD 0x00000028
        ADCLaunch
            AdvancedDataFactory
            RDSServer.DataFactory
        Script Map
        Virtual Roots
            / = c:\inetpub\wwwroot,,207
            /Scripts = c:\inetpub\scripts,,204
            /IISHelp = c:\winnt\help\iishelp,,201
            /IISAdmin = C:\WINNT\System32\inetsrv\iisadmin,,201
            /IISSamples = c:\inetpub\iissamples,,201
            /MSADC = c:\program files\common files\system\msadc,,205
            /Printers = C:\WINNT\web\printers,,201
    Performance
        Library = w3ctrs.dll
        Open = OpenW3PerformanceData
        Close = CloseW3PerformanceData
        Collect = CollectW3PerformanceData
        PerfIniFile = w3ctrs.ini
        Last Counter = REG_DWORD 0x000008e6
        Last Help = REG_DWORD 0x000008e7
        First Counter = REG_DWORD 0x00000844
        First Help = REG_DWORD 0x00000845
        Object List = 5082 5256
        Library Validation Code = REG_BINARY 0x00000010 0xc18a727c
0x01c026d2 0x00003d10 0x00000000
        WbemAdapFileSignature = REG_BINARY 0x00000010 0x2c6ce339
0xf559beb4 0xd5c47c17 0x1af7dc2f
        WbemAdapFileTime = REG_BINARY 0x00000008 0x964e6000 0x01bf40aa
        WbemAdapFileSize = REG_DWORD 0x00003d10
        WbemAdapStatus = REG_DWORD 0x00000000
    Security [17 1]
        Security = REG_BINARY 0x000000b8 0x80140001 0x000000a0 0x000000ac
0x00000014 0x00000030 0x001c0002 0x00000001 0x00148002 0x000f01ff
0x00000101 0x01000000 0x00000000 0x00700002 0x00000004 0x00180000
0x000201fd 0x00000101 0x05000000 \
                    0x00000012 0x006f0074 0x001c0000 0x000f01ff 0x00000201
0x05000000 0x00000020 0x00000220 0x00730072 0x00180000 0x0002018d
0x00000101 0x05000000 0x0000000b 0x00000220 0x001c0000 0x000201fd
0x00000201 0x05000000 0x00000020 \
                    0x00000223 0x00730072 0x00000101 0x05000000 0x00000012
0x00000101 0x05000000 0x00000012
    Enum
        0 = Root\LEGACY_W3SVC\0000
        Count = REG_DWORD 0x00000001
        NextInstance = REG_DWORD 0x00000001
```

TPCC Application Settings

Software_Unisys.txt

```
\registry\machine\software\unisys
    TPCC
        MAXTERMS = 100000
        DELIVERYTHREADS = 30
        SERVERNAME = DBSERVER
        DATABASE = tpcc
```

Appendix D - RTE Code

Admin Environment

Webnnnn.cmd

```
if '%1'==='' goto usage
if '%2'==='' goto usage
if '%3'==='' goto usage

:paramok

set WEBCHECKWIDS=1
set WEBDIAGLEVEL=4
set WEBEVENTLOG=0
set WEBEVENTHOST=
set WEBCHECKLEVEL=2

c:\webdriver\webadmin.exe -cweb%1.cfg -m%2 -d%3 -s160
if %ERRORLEVEL% NEQ 0 pause

goto end

:usage
@ECHO You must supply the following parameters:
@ECHO "webnnn.cmd <cfg file suffix> <min driver #> <max driver #>"
pause

:end
```

Profiles used for Performance Run

WebAdmin.cfg

```
//
//  Common Driver Configuration
//
INITBASEPORT 4300
INITSYNCMAX 4
INITPAUSE 1
INITRSCALE 1200
INITTSCALE 100
INITRWID 1,24160
INITFIXEDWID 1
INITCCLAST 208
INITCCID 208
INITCITEMID 208
//
//Configuration Driver 1
//
1 INITIPADDR 192.168.93.1
1 INITIISADDR 192.1.1.1
1 INITIISPORT 80
1 INITBROWSERS 980
1 INITMYWID 1,98
//
//Configuration Driver 2
//
2 INITIPADDR 192.168.93.1
2 INITIISADDR 192.1.1.1
2 INITIISPORT 80
2 INITBROWSERS 980
2 INITMYWID 99,196
//
//Configuration Driver 3
//
3 INITIPADDR 192.168.93.1
3 INITIISADDR 192.1.1.1
3 INITIISPORT 80
3 INITBROWSERS 980
3 INITMYWID 197,294
//
//Configuration Driver 4
//
4 INITIPADDR 192.168.93.1
4 INITIISADDR 192.1.1.1
4 INITIISPORT 80
4 INITBROWSERS 980
4 INITMYWID 295,392
//
//Configuration Driver 5
//
5 INITIPADDR 192.168.93.1
5 INITIISADDR 192.1.1.1
5 INITIISPORT 80
5 INITBROWSERS 980
5 INITMYWID 393,490
//
//Configuration Driver 6
//
6 INITIPADDR 192.168.93.1
6 INITIISADDR 192.1.1.1
6 INITIISPORT 80
6 INITBROWSERS 980
6 INITMYWID 491,588
//
//Configuration Driver 7
//
7 INITIPADDR 192.168.93.1
7 INITIISADDR 192.1.1.1
7 INITIISPORT 80
```

```
7 INITBROWSERS 980
7 INITMYWID 589,686
//
//Configuration Driver 8
//
8 INITIPADDR 192.168.93.1
8 INITIISADDR 192.1.1.1
8 INITIISPORT 80
8 INITBROWSERS 980
8 INITMYWID 687,784
//
//Configuration Driver 9
//
9 INITIPADDR 192.168.93.1
9 INITIISADDR 192.1.1.1
9 INITIISPORT 80
9 INITBROWSERS 980
9 INITMYWID 785,882
//
//Configuration Driver 10
//
10 INITIPADDR 192.168.93.1
10 INITIISADDR 192.1.1.1
10 INITIISPORT 80
10 INITBROWSERS 980
10 INITMYWID 883,980
//
//Configuration Driver 11
//
11 INITIPADDR 192.168.93.1
11 INITIISADDR 192.1.1.1
11 INITIISPORT 80
11 INITBROWSERS 980
11 INITMYWID 981,1078
//
//Configuration Driver 12
//
12 INITIPADDR 192.168.93.1
12 INITIISADDR 192.1.1.1
12 INITIISPORT 80
12 INITBROWSERS 980
12 INITMYWID 1079,1176
//
//Configuration Driver 13
//
13 INITIPADDR 192.168.93.1
13 INITIISADDR 192.1.1.1
13 INITIISPORT 80
13 INITBROWSERS 980
13 INITMYWID 1177,1274
//
//Configuration Driver 14
//
14 INITIPADDR 192.168.93.1
14 INITIISADDR 192.1.1.1
14 INITIISPORT 80
14 INITBROWSERS 980
14 INITMYWID 1275,1372
//
//Configuration Driver 15
//
15 INITIPADDR 192.168.93.1
15 INITIISADDR 192.1.1.1
15 INITIISPORT 80
15 INITBROWSERS 980
15 INITMYWID 1373,1470
//
//Configuration Driver 16
//
16 INITIPADDR 192.168.93.1
16 INITIISADDR 192.1.1.1
16 INITIISPORT 80
16 INITBROWSERS 980
16 INITMYWID 1471,1568
//
//Configuration Driver 17
//
17 INITIPADDR 192.168.93.1
17 INITIISADDR 192.1.1.1
17 INITIISPORT 80
17 INITBROWSERS 980
17 INITMYWID 1569,1666
//
//Configuration Driver 18
//
18 INITIPADDR 192.168.93.1
18 INITIISADDR 192.1.1.1
18 INITIISPORT 80
18 INITBROWSERS 980
18 INITMYWID 1667,1764
//
//Configuration Driver 19
//
19 INITIPADDR 192.168.93.1
19 INITIISADDR 192.1.1.1
19 INITIISPORT 80
19 INITBROWSERS 980
19 INITMYWID 1765,1862
//
//Configuration Driver 20
//
20 INITIPADDR 192.168.93.1
20 INITIISADDR 192.1.1.1
20 INITIISPORT 80
20 INITBROWSERS 980
20 INITMYWID 1863,1960
//
//Configuration Driver 21
//
21 INITIPADDR 192.168.93.1
21 INITIISADDR 192.1.1.1
21 INITIISPORT 80
21 INITBROWSERS 980
21 INITMYWID 1961,2058
//
//Configuration Driver 22
```

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//
22 INITIPADDR 192.168.93.1
22 INITIISADDR 192.1.1.1
22 INITIISPORT 80
22 INITBROWSERS 980
22 INITMYWID 2059,2156
//
//Configuration Driver 23
//
23 INITIPADDR 192.168.93.1
23 INITIISADDR 192.1.1.1
23 INITIISPORT 80
23 INITBROWSERS 980
23 INITMYWID 2157,2254
//
//Configuration Driver 24
//
24 INITIPADDR 192.168.93.1
24 INITIISADDR 192.1.1.1
24 INITIISPORT 80
24 INITBROWSERS 980
24 INITMYWID 2255,2352
//
//Configuration Driver 25
//
25 INITIPADDR 192.168.93.1
25 INITIISADDR 192.1.1.1
25 INITIISPORT 80
25 INITBROWSERS 980
25 INITMYWID 2353,2450
//
//Configuration Driver 26
//
26 INITIPADDR 192.168.93.1
26 INITIISADDR 192.1.1.1
26 INITIISPORT 80
26 INITBROWSERS 980
26 INITMYWID 2451,2548
//
//Configuration Driver 27
//
27 INITIPADDR 192.168.93.1
27 INITIISADDR 192.1.1.1
27 INITIISPORT 80
27 INITBROWSERS 980
27 INITMYWID 2549,2646
//
//Configuration Driver 28
//
28 INITIPADDR 192.168.93.1
28 INITIISADDR 192.1.1.1
28 INITIISPORT 80
28 INITBROWSERS 980
28 INITMYWID 2647,2744
//
//Configuration Driver 29
//
29 INITIPADDR 192.168.93.1
29 INITIISADDR 192.1.1.1
29 INITIISPORT 80
29 INITBROWSERS 980
29 INITMYWID 2745,2842
//
//Configuration Driver 30
//
30 INITIPADDR 192.168.93.1
30 INITIISADDR 192.1.1.1
30 INITIISPORT 80
30 INITBROWSERS 980
30 INITMYWID 2843,2940
//
//Configuration Driver 31
//
31 INITIPADDR 192.168.93.2
31 INITIISADDR 192.2.1.1
31 INITIISPORT 80
31 INITBROWSERS 1010
31 INITMYWID 2941,3041
//
//Configuration Driver 32
//
32 INITIPADDR 192.168.93.2
32 INITIISADDR 192.2.1.1
32 INITIISPORT 80
32 INITBROWSERS 1010
32 INITMYWID 3042,3142
//
//Configuration Driver 33
//
33 INITIPADDR 192.168.93.2
33 INITIISADDR 192.2.1.1
33 INITIISPORT 80
33 INITBROWSERS 1010
33 INITMYWID 3143,3243
//
//Configuration Driver 34
//
34 INITIPADDR 192.168.93.2
34 INITIISADDR 192.2.1.1
34 INITIISPORT 80
34 INITBROWSERS 1010
34 INITMYWID 3244,3344
//
//Configuration Driver 35
//
35 INITIPADDR 192.168.93.2
35 INITIISADDR 192.2.1.1
35 INITIISPORT 80
35 INITBROWSERS 1010
35 INITMYWID 3345,3445
//
//Configuration Driver 36
//
36 INITIPADDR 192.168.93.2
36 INITIISADDR 192.2.1.1
36 INITIISPORT 80
```

```
36 INITBROWSERS 1010
36 INITMYWID 3446,3546
//
//Configuration Driver 37
//
37 INITIPADDR 192.168.93.2
37 INITIISADDR 192.2.1.1
37 INITIISPORT 80
37 INITBROWSERS 1010
37 INITMYWID 3547,3647
//
//Configuration Driver 38
//
38 INITIPADDR 192.168.93.2
38 INITIISADDR 192.2.1.1
38 INITIISPORT 80
38 INITBROWSERS 1010
38 INITMYWID 3648,3748
//
//Configuration Driver 39
//
39 INITIPADDR 192.168.93.2
39 INITIISADDR 192.2.1.1
39 INITIISPORT 80
39 INITBROWSERS 1010
39 INITMYWID 3749,3849
//
//Configuration Driver 40
//
40 INITIPADDR 192.168.93.2
40 INITIISADDR 192.2.1.1
40 INITIISPORT 80
40 INITBROWSERS 1010
40 INITMYWID 3850,3950
//
//Configuration Driver 41
//
41 INITIPADDR 192.168.93.2
41 INITIISADDR 192.2.1.1
41 INITIISPORT 80
41 INITBROWSERS 1010
41 INITMYWID 3951,4051
//
//Configuration Driver 42
//
42 INITIPADDR 192.168.93.2
42 INITIISADDR 192.2.1.1
42 INITIISPORT 80
42 INITBROWSERS 1020
42 INITMYWID 4052,4153
//
//Configuration Driver 43
//
43 INITIPADDR 192.168.93.2
43 INITIISADDR 192.2.1.1
43 INITIISPORT 80
43 INITBROWSERS 1010
43 INITMYWID 4154,4254
//
//Configuration Driver 44
//
44 INITIPADDR 192.168.93.2
44 INITIISADDR 192.2.1.1
44 INITIISPORT 80
44 INITBROWSERS 1010
44 INITMYWID 4255,4355
//
//Configuration Driver 45
//
45 INITIPADDR 192.168.93.2
45 INITIISADDR 192.2.1.1
45 INITIISPORT 80
45 INITBROWSERS 1010
45 INITMYWID 4356,4456
//
//Configuration Driver 46
//
46 INITIPADDR 192.168.93.2
46 INITIISADDR 192.2.1.1
46 INITIISPORT 80
46 INITBROWSERS 1010
46 INITMYWID 4457,4557
//
//Configuration Driver 47
//
47 INITIPADDR 192.168.93.2
47 INITIISADDR 192.2.1.1
47 INITIISPORT 80
47 INITBROWSERS 1010
47 INITMYWID 4558,4658
//
//Configuration Driver 48
//
48 INITIPADDR 192.168.93.2
48 INITIISADDR 192.2.1.1
48 INITIISPORT 80
48 INITBROWSERS 1010
48 INITMYWID 4659,4759
//
//Configuration Driver 49
//
49 INITIPADDR 192.168.93.2
49 INITIISADDR 192.2.1.1
49 INITIISPORT 80
49 INITBROWSERS 1010
49 INITMYWID 4760,4860
//
//Configuration Driver 50
//
50 INITIPADDR 192.168.93.2
50 INITIISADDR 192.2.1.1
50 INITIISPORT 80
50 INITBROWSERS 1010
50 INITMYWID 4861,4961
//
//Configuration Driver 51
```

```
//
51 INITIPADDR 192.168.93.2
51 INITIISADDR 192.2.1.1
51 INITIISPORT 80
51 INITBROWSERS 1010
51 INITMYWID 4962,5062
//
//Configuration Driver 52
//
52 INITIPADDR 192.168.93.2
52 INITIISADDR 192.2.1.1
52 INITIISPORT 80
52 INITBROWSERS 1010
52 INITMYWID 5063,5163
//
//Configuration Driver 53
//
53 INITIPADDR 192.168.93.2
53 INITIISADDR 192.2.1.1
53 INITIISPORT 80
53 INITBROWSERS 1010
53 INITMYWID 5164,5264
//
//Configuration Driver 54
//
54 INITIPADDR 192.168.93.2
54 INITIISADDR 192.2.1.1
54 INITIISPORT 80
54 INITBROWSERS 1010
54 INITMYWID 5265,5365
//
//Configuration Driver 55
//
55 INITIPADDR 192.168.93.2
55 INITIISADDR 192.2.1.1
55 INITIISPORT 80
55 INITBROWSERS 1010
55 INITMYWID 5366,5466
//
//Configuration Driver 56
//
56 INITIPADDR 192.168.93.2
56 INITIISADDR 192.2.1.1
56 INITIISPORT 80
56 INITBROWSERS 1010
56 INITMYWID 5467,5567
//
//Configuration Driver 57
//
57 INITIPADDR 192.168.93.2
57 INITIISADDR 192.2.1.1
57 INITIISPORT 80
57 INITBROWSERS 1010
57 INITMYWID 5568,5668
//
//Configuration Driver 58
//
58 INITIPADDR 192.168.93.2
58 INITIISADDR 192.2.1.1
58 INITIISPORT 80
58 INITBROWSERS 1010
58 INITMYWID 5669,5769
//
//Configuration Driver 59
//
59 INITIPADDR 192.168.93.2
59 INITIISADDR 192.2.1.1
59 INITIISPORT 80
59 INITBROWSERS 1010
59 INITMYWID 5770,5870
//
//Configuration Driver 60
//
60 INITIPADDR 192.168.93.2
60 INITIISADDR 192.2.1.1
60 INITIISPORT 80
60 INITBROWSERS 1010
60 INITMYWID 5871,5971
//
//Configuration Driver 61
//
61 INITIPADDR 192.168.93.3
61 INITIISADDR 192.3.1.1
61 INITIISPORT 80
61 INITBROWSERS 1010
61 INITMYWID 5972,6072
//
//Configuration Driver 62
//
62 INITIPADDR 192.168.93.3
62 INITIISADDR 192.3.1.1
62 INITIISPORT 80
62 INITBROWSERS 1010
62 INITMYWID 6073,6173
//
//Configuration Driver 63
//
63 INITIPADDR 192.168.93.3
63 INITIISADDR 192.3.1.1
63 INITIISPORT 80
63 INITBROWSERS 1020
63 INITMYWID 6174,6275
//
//Configuration Driver 64
//
64 INITIPADDR 192.168.93.3
64 INITIISADDR 192.3.1.1
64 INITIISPORT 80
64 INITBROWSERS 1010
64 INITMYWID 6276,6376
//
//Configuration Driver 65
//
65 INITIPADDR 192.168.93.3
65 INITIISADDR 192.3.1.1
65 INITIISPORT 80
```

```
65 INITBROWSERS 1010
65 INITMYWID 6377,6477
//
//Configuration Driver 66
//
66 INITIPADDR 192.168.93.3
66 INITIISADDR 192.3.1.1
66 INITIISPORT 80
66 INITBROWSERS 1010
66 INITMYWID 6478,6578
//
//Configuration Driver 67
//
67 INITIPADDR 192.168.93.3
67 INITIISADDR 192.3.1.1
67 INITIISPORT 80
67 INITBROWSERS 1010
67 INITMYWID 6579,6679
//
//Configuration Driver 68
//
68 INITIPADDR 192.168.93.3
68 INITIISADDR 192.3.1.1
68 INITIISPORT 80
68 INITBROWSERS 1010
68 INITMYWID 6680,6780
//
//Configuration Driver 69
//
69 INITIPADDR 192.168.93.3
69 INITIISADDR 192.3.1.1
69 INITIISPORT 80
69 INITBROWSERS 1010
69 INITMYWID 6781,6881
//
//Configuration Driver 70
//
70 INITIPADDR 192.168.93.3
70 INITIISADDR 192.3.1.1
70 INITIISPORT 80
70 INITBROWSERS 1010
70 INITMYWID 6882,6982
//
//Configuration Driver 71
//
71 INITIPADDR 192.168.93.3
71 INITIISADDR 192.3.1.1
71 INITIISPORT 80
71 INITBROWSERS 1010
71 INITMYWID 6983,7083
//
//Configuration Driver 72
//
72 INITIPADDR 192.168.93.3
72 INITIISADDR 192.3.1.1
72 INITIISPORT 80
72 INITBROWSERS 1010
72 INITMYWID 7084,7184
//
//Configuration Driver 73
//
73 INITIPADDR 192.168.93.3
73 INITIISADDR 192.3.1.1
73 INITIISPORT 80
73 INITBROWSERS 1010
73 INITMYWID 7185,7285
//
//Configuration Driver 74
//
74 INITIPADDR 192.168.93.3
74 INITIISADDR 192.3.1.1
74 INITIISPORT 80
74 INITBROWSERS 1010
74 INITMYWID 7286,7386
//
//Configuration Driver 75
//
75 INITIPADDR 192.168.93.3
75 INITIISADDR 192.3.1.1
75 INITIISPORT 80
75 INITBROWSERS 1010
75 INITMYWID 7387,7487
//
//Configuration Driver 76
//
76 INITIPADDR 192.168.93.3
76 INITIISADDR 192.3.1.1
76 INITIISPORT 80
76 INITBROWSERS 1010
76 INITMYWID 7488,7588
//
//Configuration Driver 77
//
77 INITIPADDR 192.168.93.3
77 INITIISADDR 192.3.1.1
77 INITIISPORT 80
77 INITBROWSERS 1010
77 INITMYWID 7589,7689
//
//Configuration Driver 78
//
78 INITIPADDR 192.168.93.3
78 INITIISADDR 192.3.1.1
78 INITIISPORT 80
78 INITBROWSERS 1010
78 INITMYWID 7690,7790
//
//Configuration Driver 79
//
79 INITIPADDR 192.168.93.3
79 INITIISADDR 192.3.1.1
79 INITIISPORT 80
79 INITBROWSERS 1010
79 INITMYWID 7791,7891
//
//Configuration Driver 80
```

```
//
80 INITIPADDR 192.168.93.3
80 INITIISADDR 192.3.1.1
80 INITIISPORT 80
80 INITBROWSERS 1010
80 INITMYWID 7892,7992
//
//Configuration Driver 81
//
81 INITIPADDR 192.168.93.3
81 INITIISADDR 192.3.1.1
81 INITIISPORT 80
81 INITBROWSERS 1010
81 INITMYWID 7993,8093
//
//Configuration Driver 82
//
82 INITIPADDR 192.168.93.3
82 INITIISADDR 192.3.1.1
82 INITIISPORT 80
82 INITBROWSERS 1010
82 INITMYWID 8094,8194
//
//Configuration Driver 83
//
83 INITIPADDR 192.168.93.3
83 INITIISADDR 192.3.1.1
83 INITIISPORT 80
83 INITBROWSERS 1010
83 INITMYWID 8195,8295
//
//Configuration Driver 84
//
84 INITIPADDR 192.168.93.3
84 INITIISADDR 192.3.1.1
84 INITIISPORT 80
84 INITBROWSERS 1020
84 INITMYWID 8296,8397
//
//Configuration Driver 85
//
85 INITIPADDR 192.168.93.3
85 INITIISADDR 192.3.1.1
85 INITIISPORT 80
85 INITBROWSERS 1010
85 INITMYWID 8398,8498
//
//Configuration Driver 86
//
86 INITIPADDR 192.168.93.3
86 INITIISADDR 192.3.1.1
86 INITIISPORT 80
86 INITBROWSERS 1010
86 INITMYWID 8499,8599
//
//Configuration Driver 87
//
87 INITIPADDR 192.168.93.3
87 INITIISADDR 192.3.1.1
87 INITIISPORT 80
87 INITBROWSERS 1010
87 INITMYWID 8600,8700
//
//Configuration Driver 88
//
88 INITIPADDR 192.168.93.3
88 INITIISADDR 192.3.1.1
88 INITIISPORT 80
88 INITBROWSERS 1010
88 INITMYWID 8701,8801
//
//Configuration Driver 89
//
89 INITIPADDR 192.168.93.3
89 INITIISADDR 192.3.1.1
89 INITIISPORT 80
89 INITBROWSERS 1010
89 INITMYWID 8802,8902
//
//Configuration Driver 90
//
90 INITIPADDR 192.168.93.3
90 INITIISADDR 192.3.1.1
90 INITIISPORT 80
90 INITBROWSERS 1010
90 INITMYWID 8903,9003
//
//Configuration Driver 91
//
91 INITIPADDR 192.168.93.4
91 INITIISADDR 192.4.1.1
91 INITIISPORT 80
91 INITBROWSERS 1010
91 INITMYWID 9004,9104
//
//Configuration Driver 92
//
92 INITIPADDR 192.168.93.4
92 INITIISADDR 192.4.1.1
92 INITIISPORT 80
92 INITBROWSERS 1010
92 INITMYWID 9105,9205
//
//Configuration Driver 93
//
93 INITIPADDR 192.168.93.4
93 INITIISADDR 192.4.1.1
93 INITIISPORT 80
93 INITBROWSERS 1010
93 INITMYWID 9206,9306
//
//Configuration Driver 94
//
94 INITIPADDR 192.168.93.4
94 INITIISADDR 192.4.1.1
94 INITIISPORT 80
```

```
94 INITBROWSERS 1010
94 INITMYWID 9307,9407
//
//Configuration Driver 95
//
95 INITIPADDR 192.168.93.4
95 INITIISADDR 192.4.1.1
95 INITIISPORT 80
95 INITBROWSERS 1010
95 INITMYWID 9408,9508
//
//Configuration Driver 96
//
96 INITIPADDR 192.168.93.4
96 INITIISADDR 192.4.1.1
96 INITIISPORT 80
96 INITBROWSERS 1010
96 INITMYWID 9509,9609
//
//Configuration Driver 97
//
97 INITIPADDR 192.168.93.4
97 INITIISADDR 192.4.1.1
97 INITIISPORT 80
97 INITBROWSERS 1010
97 INITMYWID 9610,9710
//
//Configuration Driver 98
//
98 INITIPADDR 192.168.93.4
98 INITIISADDR 192.4.1.1
98 INITIISPORT 80
98 INITBROWSERS 1010
98 INITMYWID 9711,9811
//
//Configuration Driver 99
//
99 INITIPADDR 192.168.93.4
99 INITIISADDR 192.4.1.1
99 INITIISPORT 80
99 INITBROWSERS 1010
99 INITMYWID 9812,9912
//
//Configuration Driver 100
//
100 INITIPADDR 192.168.93.4
100 INITIISADDR 192.4.1.1
100 INITIISPORT 80
100 INITBROWSERS 1010
100 INITMYWID 9913,10013
//
//Configuration Driver 101
//
101 INITIPADDR 192.168.93.4
101 INITIISADDR 192.4.1.1
101 INITIISPORT 80
101 INITBROWSERS 1010
101 INITMYWID 10014,10114
//
//Configuration Driver 102
//
102 INITIPADDR 192.168.93.4
102 INITIISADDR 192.4.1.1
102 INITIISPORT 80
102 INITBROWSERS 1010
102 INITMYWID 10115,10215
//
//Configuration Driver 103
//
103 INITIPADDR 192.168.93.4
103 INITIISADDR 192.4.1.1
103 INITIISPORT 80
103 INITBROWSERS 1010
103 INITMYWID 10216,10316
//
//Configuration Driver 104
//
104 INITIPADDR 192.168.93.4
104 INITIISADDR 192.4.1.1
104 INITIISPORT 80
104 INITBROWSERS 1010
104 INITMYWID 10317,10417
//
//Configuration Driver 105
//
105 INITIPADDR 192.168.93.4
105 INITIISADDR 192.4.1.1
105 INITIISPORT 80
105 INITBROWSERS 1020
105 INITMYWID 10418,10519
//
//Configuration Driver 106
//
106 INITIPADDR 192.168.93.4
106 INITIISADDR 192.4.1.1
106 INITIISPORT 80
106 INITBROWSERS 1010
106 INITMYWID 10520,10620
//
//Configuration Driver 107
//
107 INITIPADDR 192.168.93.4
107 INITIISADDR 192.4.1.1
107 INITIISPORT 80
107 INITBROWSERS 1010
107 INITMYWID 10621,10721
//
//Configuration Driver 108
//
108 INITIPADDR 192.168.93.4
108 INITIISADDR 192.4.1.1
108 INITIISPORT 80
108 INITBROWSERS 1010
108 INITMYWID 10722,10822
//
//Configuration Driver 109
```

```
//
109 INITIPADDR 192.168.93.4
109 INITIISADDR 192.4.1.1
109 INITIISPORT 80
109 INITBROWSERS 1010
109 INITMYWID 10823,10923
//
//Configuration Driver 110
//
110 INITIPADDR 192.168.93.4
110 INITIISADDR 192.4.1.1
110 INITIISPORT 80
110 INITBROWSERS 1010
110 INITMYWID 10924,11024
//
//Configuration Driver 111
//
111 INITIPADDR 192.168.93.4
111 INITIISADDR 192.4.1.1
111 INITIISPORT 80
111 INITBROWSERS 1010
111 INITMYWID 11025,11125
//
//Configuration Driver 112
//
112 INITIPADDR 192.168.93.4
112 INITIISADDR 192.4.1.1
112 INITIISPORT 80
112 INITBROWSERS 1010
112 INITMYWID 11126,11226
//
//Configuration Driver 113
//
113 INITIPADDR 192.168.93.4
113 INITIISADDR 192.4.1.1
113 INITIISPORT 80
113 INITBROWSERS 1010
113 INITMYWID 11227,11327
//
//Configuration Driver 114
//
114 INITIPADDR 192.168.93.4
114 INITIISADDR 192.4.1.1
114 INITIISPORT 80
114 INITBROWSERS 1010
114 INITMYWID 11328,11428
//
//Configuration Driver 115
//
115 INITIPADDR 192.168.93.4
115 INITIISADDR 192.4.1.1
115 INITIISPORT 80
115 INITBROWSERS 1010
115 INITMYWID 11429,11529
//
//Configuration Driver 116
//
116 INITIPADDR 192.168.93.4
116 INITIISADDR 192.4.1.1
116 INITIISPORT 80
116 INITBROWSERS 1010
116 INITMYWID 11530,11630
//
//Configuration Driver 117
//
117 INITIPADDR 192.168.93.4
117 INITIISADDR 192.4.1.1
117 INITIISPORT 80
117 INITBROWSERS 1010
117 INITMYWID 11631,11731
//
//Configuration Driver 118
//
118 INITIPADDR 192.168.93.4
118 INITIISADDR 192.4.1.1
118 INITIISPORT 80
118 INITBROWSERS 1010
118 INITMYWID 11732,11832
//
//Configuration Driver 119
//
119 INITIPADDR 192.168.93.4
119 INITIISADDR 192.4.1.1
119 INITIISPORT 80
119 INITBROWSERS 1010
119 INITMYWID 11833,11933
//
//Configuration Driver 120
//
120 INITIPADDR 192.168.93.4
120 INITIISADDR 192.4.1.1
120 INITIISPORT 80
120 INITBROWSERS 1010
120 INITMYWID 11934,12034
//
//Configuration Driver 121
//
121 INITIPADDR 192.168.93.5
121 INITIISADDR 192.5.1.1
121 INITIISPORT 80
121 INITBROWSERS 1010
121 INITMYWID 12035,12135
//
//Configuration Driver 122
//
122 INITIPADDR 192.168.93.5
122 INITIISADDR 192.5.1.1
122 INITIISPORT 80
122 INITBROWSERS 1010
122 INITMYWID 12136,12236
//
//Configuration Driver 123
//
123 INITIPADDR 192.168.93.5
123 INITIISADDR 192.5.1.1
123 INITIISPORT 80
```

```
123 INITBROWSERS 1010
123 INITMYWID 12237,12337
//
//Configuration Driver 124
//
124 INITIPADDR 192.168.93.5
124 INITIISADDR 192.5.1.1
124 INITIISPORT 80
124 INITBROWSERS 1010
124 INITMYWID 12338,12438
//
//Configuration Driver 125
//
125 INITIPADDR 192.168.93.5
125 INITIISADDR 192.5.1.1
125 INITIISPORT 80
125 INITBROWSERS 1010
125 INITMYWID 12439,12539
//
//Configuration Driver 126
//
126 INITIPADDR 192.168.93.5
126 INITIISADDR 192.5.1.1
126 INITIISPORT 80
126 INITBROWSERS 1020
126 INITMYWID 12540,12641
//
//Configuration Driver 127
//
127 INITIPADDR 192.168.93.5
127 INITIISADDR 192.5.1.1
127 INITIISPORT 80
127 INITBROWSERS 1010
127 INITMYWID 12642,12742
//
//Configuration Driver 128
//
128 INITIPADDR 192.168.93.5
128 INITIISADDR 192.5.1.1
128 INITIISPORT 80
128 INITBROWSERS 1010
128 INITMYWID 12743,12843
//
//Configuration Driver 129
//
129 INITIPADDR 192.168.93.5
129 INITIISADDR 192.5.1.1
129 INITIISPORT 80
129 INITBROWSERS 1010
129 INITMYWID 12844,12944
//
//Configuration Driver 130
//
130 INITIPADDR 192.168.93.5
130 INITIISADDR 192.5.1.1
130 INITIISPORT 80
130 INITBROWSERS 1010
130 INITMYWID 12945,13045
//
//Configuration Driver 131
//
131 INITIPADDR 192.168.93.5
131 INITIISADDR 192.5.1.1
131 INITIISPORT 80
131 INITBROWSERS 1010
131 INITMYWID 13046,13146
//
//Configuration Driver 132
//
132 INITIPADDR 192.168.93.5
132 INITIISADDR 192.5.1.1
132 INITIISPORT 80
132 INITBROWSERS 1010
132 INITMYWID 13147,13247
//
//Configuration Driver 133
//
133 INITIPADDR 192.168.93.5
133 INITIISADDR 192.5.1.1
133 INITIISPORT 80
133 INITBROWSERS 1010
133 INITMYWID 13248,13348
//
//Configuration Driver 134
//
134 INITIPADDR 192.168.93.5
134 INITIISADDR 192.5.1.1
134 INITIISPORT 80
134 INITBROWSERS 1010
134 INITMYWID 13349,13449
//
//Configuration Driver 135
//
135 INITIPADDR 192.168.93.5
135 INITIISADDR 192.5.1.1
135 INITIISPORT 80
135 INITBROWSERS 1010
135 INITMYWID 13450,13550
//
//Configuration Driver 136
//
136 INITIPADDR 192.168.93.5
136 INITIISADDR 192.5.1.1
136 INITIISPORT 80
136 INITBROWSERS 1010
136 INITMYWID 13551,13651
//
//Configuration Driver 137
//
137 INITIPADDR 192.168.93.5
137 INITIISADDR 192.5.1.1
137 INITIISPORT 80
137 INITBROWSERS 1010
137 INITMYWID 13652,13752
//
//Configuration Driver 138
```

```
//
138 INITIPADDR 192.168.93.5
138 INITIISADDR 192.5.1.1
138 INITIISPORT 80
138 INITBROWSERS 1010
138 INITMYWID 13753,13853
//
//Configuration Driver 139
//
139 INITIPADDR 192.168.93.5
139 INITIISADDR 192.5.1.1
139 INITIISPORT 80
139 INITBROWSERS 1010
139 INITMYWID 13854,13954
//
//Configuration Driver 140
//
140 INITIPADDR 192.168.93.5
140 INITIISADDR 192.5.1.1
140 INITIISPORT 80
140 INITBROWSERS 1010
140 INITMYWID 13955,14055
//
//Configuration Driver 141
//
141 INITIPADDR 192.168.93.5
141 INITIISADDR 192.5.1.1
141 INITIISPORT 80
141 INITBROWSERS 1010
141 INITMYWID 14056,14156
//
//Configuration Driver 142
//
142 INITIPADDR 192.168.93.5
142 INITIISADDR 192.5.1.1
142 INITIISPORT 80
142 INITBROWSERS 1010
142 INITMYWID 14157,14257
//
//Configuration Driver 143
//
143 INITIPADDR 192.168.93.5
143 INITIISADDR 192.5.1.1
143 INITIISPORT 80
143 INITBROWSERS 1010
143 INITMYWID 14258,14358
//
//Configuration Driver 144
//
144 INITIPADDR 192.168.93.5
144 INITIISADDR 192.5.1.1
144 INITIISPORT 80
144 INITBROWSERS 1010
144 INITMYWID 14359,14459
//
//Configuration Driver 145
//
145 INITIPADDR 192.168.93.5
145 INITIISADDR 192.5.1.1
145 INITIISPORT 80
145 INITBROWSERS 1010
145 INITMYWID 14460,14560
//
//Configuration Driver 146
//
146 INITIPADDR 192.168.93.5
146 INITIISADDR 192.5.1.1
146 INITIISPORT 80
146 INITBROWSERS 1010
146 INITMYWID 14561,14661
//
//Configuration Driver 147
//
147 INITIPADDR 192.168.93.5
147 INITIISADDR 192.5.1.1
147 INITIISPORT 80
147 INITBROWSERS 1020
147 INITMYWID 14662,14763
//
//Configuration Driver 148
//
148 INITIPADDR 192.168.93.5
148 INITIISADDR 192.5.1.1
148 INITIISPORT 80
148 INITBROWSERS 1010
148 INITMYWID 14764,14864
//
//Configuration Driver 149
//
149 INITIPADDR 192.168.93.5
149 INITIISADDR 192.5.1.1
149 INITIISPORT 80
149 INITBROWSERS 1010
149 INITMYWID 14865,14965
//
//Configuration Driver 150
//
150 INITIPADDR 192.168.93.5
150 INITIISADDR 192.5.1.1
150 INITIISPORT 80
150 INITBROWSERS 1010
150 INITMYWID 14966,15066
//
//Configuration Driver 151
//
151 INITIPADDR 192.168.93.6
151 INITIISADDR 192.6.1.1
151 INITIISPORT 80
151 INITBROWSERS 1010
151 INITMYWID 15067,15167
//
//Configuration Driver 152
//
152 INITIPADDR 192.168.93.6
152 INITIISADDR 192.6.1.1
152 INITIISPORT 80
```

```
152 INITBROWSERS 1010
152 INITMYWID 15168,15268
//
//Configuration Driver 153
//
153 INITIPADDR 192.168.93.6
153 INITIISADDR 192.6.1.1
153 INITIISPORT 80
153 INITBROWSERS 1010
153 INITMYWID 15269,15369
//
//Configuration Driver 154
//
154 INITIPADDR 192.168.93.6
154 INITIISADDR 192.6.1.1
154 INITIISPORT 80
154 INITBROWSERS 1010
154 INITMYWID 15370,15470
//
//Configuration Driver 155
//
155 INITIPADDR 192.168.93.6
155 INITIISADDR 192.6.1.1
155 INITIISPORT 80
155 INITBROWSERS 1010
155 INITMYWID 15471,15571
//
//Configuration Driver 156
//
156 INITIPADDR 192.168.93.6
156 INITIISADDR 192.6.1.1
156 INITIISPORT 80
156 INITBROWSERS 1010
156 INITMYWID 15572,15672
//
//Configuration Driver 157
//
157 INITIPADDR 192.168.93.6
157 INITIISADDR 192.6.1.1
157 INITIISPORT 80
157 INITBROWSERS 1010
157 INITMYWID 15673,15773
//
//Configuration Driver 158
//
158 INITIPADDR 192.168.93.6
158 INITIISADDR 192.6.1.1
158 INITIISPORT 80
158 INITBROWSERS 1010
158 INITMYWID 15774,15874
//
//Configuration Driver 159
//
159 INITIPADDR 192.168.93.6
159 INITIISADDR 192.6.1.1
159 INITIISPORT 80
159 INITBROWSERS 1010
159 INITMYWID 15875,15975
//
//Configuration Driver 160
//
160 INITIPADDR 192.168.93.6
160 INITIISADDR 192.6.1.1
160 INITIISPORT 80
160 INITBROWSERS 1010
160 INITMYWID 15976,16076
//
//Configuration Driver 161
//
161 INITIPADDR 192.168.93.6
161 INITIISADDR 192.6.1.1
161 INITIISPORT 80
161 INITBROWSERS 1010
161 INITMYWID 16077,16177
//
//Configuration Driver 162
//
162 INITIPADDR 192.168.93.6
162 INITIISADDR 192.6.1.1
162 INITIISPORT 80
162 INITBROWSERS 1010
162 INITMYWID 16178,16278
//
//Configuration Driver 163
//
163 INITIPADDR 192.168.93.6
163 INITIISADDR 192.6.1.1
163 INITIISPORT 80
163 INITBROWSERS 1010
163 INITMYWID 16279,16379
//
//Configuration Driver 164
//
164 INITIPADDR 192.168.93.6
164 INITIISADDR 192.6.1.1
164 INITIISPORT 80
164 INITBROWSERS 1010
164 INITMYWID 16380,16480
//
//Configuration Driver 165
//
165 INITIPADDR 192.168.93.6
165 INITIISADDR 192.6.1.1
165 INITIISPORT 80
165 INITBROWSERS 1010
165 INITMYWID 16481,16581
//
//Configuration Driver 166
//
166 INITIPADDR 192.168.93.6
166 INITIISADDR 192.6.1.1
166 INITIISPORT 80
166 INITBROWSERS 1010
166 INITMYWID 16582,16682
//
//Configuration Driver 167
```

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//
167 INITIPADDR 192.168.93.6
167 INITIISADDR 192.6.1.1
167 INITIISPORT 80
167 INITBROWSERS 1010
167 INITMYWID 16683,16783
//
//Configuration Driver 168
//
168 INITIPADDR 192.168.93.6
168 INITIISADDR 192.6.1.1
168 INITIISPORT 80
168 INITBROWSERS 1020
168 INITMYWID 16784,16885
//
//Configuration Driver 169
//
169 INITIPADDR 192.168.93.6
169 INITIISADDR 192.6.1.1
169 INITIISPORT 80
169 INITBROWSERS 1010
169 INITMYWID 16886,16986
//
//Configuration Driver 170
//
170 INITIPADDR 192.168.93.6
170 INITIISADDR 192.6.1.1
170 INITIISPORT 80
170 INITBROWSERS 1010
170 INITMYWID 16987,17087
//
//Configuration Driver 171
//
171 INITIPADDR 192.168.93.6
171 INITIISADDR 192.6.1.1
171 INITIISPORT 80
171 INITBROWSERS 1010
171 INITMYWID 17088,17188
//
//Configuration Driver 172
//
172 INITIPADDR 192.168.93.6
172 INITIISADDR 192.6.1.1
172 INITIISPORT 80
172 INITBROWSERS 1010
172 INITMYWID 17189,17289
//
//Configuration Driver 173
//
173 INITIPADDR 192.168.93.6
173 INITIISADDR 192.6.1.1
173 INITIISPORT 80
173 INITBROWSERS 1010
173 INITMYWID 17290,17390
//
//Configuration Driver 174
//
174 INITIPADDR 192.168.93.6
174 INITIISADDR 192.6.1.1
174 INITIISPORT 80
174 INITBROWSERS 1010
174 INITMYWID 17391,17491
//
//Configuration Driver 175
//
175 INITIPADDR 192.168.93.6
175 INITIISADDR 192.6.1.1
175 INITIISPORT 80
175 INITBROWSERS 1010
175 INITMYWID 17492,17592
//
//Configuration Driver 176
//
176 INITIPADDR 192.168.93.6
176 INITIISADDR 192.6.1.1
176 INITIISPORT 80
176 INITBROWSERS 1010
176 INITMYWID 17593,17693
//
//Configuration Driver 177
//
177 INITIPADDR 192.168.93.6
177 INITIISADDR 192.6.1.1
177 INITIISPORT 80
177 INITBROWSERS 1010
177 INITMYWID 17694,17794
//
//Configuration Driver 178
//
178 INITIPADDR 192.168.93.6
178 INITIISADDR 192.6.1.1
178 INITIISPORT 80
178 INITBROWSERS 1010
178 INITMYWID 17795,17895
//
//Configuration Driver 179
//
179 INITIPADDR 192.168.93.6
179 INITIISADDR 192.6.1.1
179 INITIISPORT 80
179 INITBROWSERS 1010
179 INITMYWID 17896,17996
//
//Configuration Driver 180
//
180 INITIPADDR 192.168.93.6
180 INITIISADDR 192.6.1.1
180 INITIISPORT 80
180 INITBROWSERS 1010
180 INITMYWID 17997,18097
//
//Configuration Driver 181
//
181 INITIPADDR 192.168.93.7
181 INITIISADDR 192.7.1.1
181 INITIISPORT 80
```

```
181 INITBROWSERS 1010
181 INITMYWID 18098,18198
//
//Configuration Driver 182
//
182 INITIPADDR 192.168.93.7
182 INITIISADDR 192.7.1.1
182 INITIISPORT 80
182 INITBROWSERS 1010
182 INITMYWID 18199,18299
//
//Configuration Driver 183
//
183 INITIPADDR 192.168.93.7
183 INITIISADDR 192.7.1.1
183 INITIISPORT 80
183 INITBROWSERS 1010
183 INITMYWID 18300,18400
//
//Configuration Driver 184
//
184 INITIPADDR 192.168.93.7
184 INITIISADDR 192.7.1.1
184 INITIISPORT 80
184 INITBROWSERS 1010
184 INITMYWID 18401,18501
//
//Configuration Driver 185
//
185 INITIPADDR 192.168.93.7
185 INITIISADDR 192.7.1.1
185 INITIISPORT 80
185 INITBROWSERS 1010
185 INITMYWID 18502,18602
//
//Configuration Driver 186
//
186 INITIPADDR 192.168.93.7
186 INITIISADDR 192.7.1.1
186 INITIISPORT 80
186 INITBROWSERS 1010
186 INITMYWID 18603,18703
//
//Configuration Driver 187
//
187 INITIPADDR 192.168.93.7
187 INITIISADDR 192.7.1.1
187 INITIISPORT 80
187 INITBROWSERS 1010
187 INITMYWID 18704,18804
//
//Configuration Driver 188
//
188 INITIPADDR 192.168.93.7
188 INITIISADDR 192.7.1.1
188 INITIISPORT 80
188 INITBROWSERS 1010
188 INITMYWID 18805,18905
//
//Configuration Driver 189
//
189 INITIPADDR 192.168.93.7
189 INITIISADDR 192.7.1.1
189 INITIISPORT 80
189 INITBROWSERS 1020
189 INITMYWID 18906,19007
//
//Configuration Driver 190
//
190 INITIPADDR 192.168.93.7
190 INITIISADDR 192.7.1.1
190 INITIISPORT 80
190 INITBROWSERS 1010
190 INITMYWID 19008,19108
//
//Configuration Driver 191
//
191 INITIPADDR 192.168.93.7
191 INITIISADDR 192.7.1.1
191 INITIISPORT 80
191 INITBROWSERS 1010
191 INITMYWID 19109,19209
//
//Configuration Driver 192
//
192 INITIPADDR 192.168.93.7
192 INITIISADDR 192.7.1.1
192 INITIISPORT 80
192 INITBROWSERS 1010
192 INITMYWID 19210,19310
//
//Configuration Driver 193
//
193 INITIPADDR 192.168.93.7
193 INITIISADDR 192.7.1.1
193 INITIISPORT 80
193 INITBROWSERS 1010
193 INITMYWID 19311,19411
//
//Configuration Driver 194
//
194 INITIPADDR 192.168.93.7
194 INITIISADDR 192.7.1.1
194 INITIISPORT 80
194 INITBROWSERS 1010
194 INITMYWID 19412,19512
//
//Configuration Driver 195
//
195 INITIPADDR 192.168.93.7
195 INITIISADDR 192.7.1.1
195 INITIISPORT 80
195 INITBROWSERS 1010
195 INITMYWID 19513,19613
//
//Configuration Driver 196
```

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//
196 INITIPADDR 192.168.93.7
196 INITIISADDR 192.7.1.1
196 INITIISPORT 80
196 INITBROWSERS 1010
196 INITMYWID 19614,19714
//
//Configuration Driver 197
//
197 INITIPADDR 192.168.93.7
197 INITIISADDR 192.7.1.1
197 INITIISPORT 80
197 INITBROWSERS 1010
197 INITMYWID 19715,19815
//
//Configuration Driver 198
//
198 INITIPADDR 192.168.93.7
198 INITIISADDR 192.7.1.1
198 INITIISPORT 80
198 INITBROWSERS 1010
198 INITMYWID 19816,19916
//
//Configuration Driver 199
//
199 INITIPADDR 192.168.93.7
199 INITIISADDR 192.7.1.1
199 INITIISPORT 80
199 INITBROWSERS 1010
199 INITMYWID 19917,20017
//
//Configuration Driver 200
//
200 INITIPADDR 192.168.93.7
200 INITIISADDR 192.7.1.1
200 INITIISPORT 80
200 INITBROWSERS 1010
200 INITMYWID 20018,20118
//
//Configuration Driver 201
//
201 INITIPADDR 192.168.93.7
201 INITIISADDR 192.7.1.1
201 INITIISPORT 80
201 INITBROWSERS 1010
201 INITMYWID 20119,20219
//
//Configuration Driver 202
//
202 INITIPADDR 192.168.93.7
202 INITIISADDR 192.7.1.1
202 INITIISPORT 80
202 INITBROWSERS 1010
202 INITMYWID 20220,20320
//
//Configuration Driver 203
//
203 INITIPADDR 192.168.93.7
203 INITIISADDR 192.7.1.1
203 INITIISPORT 80
203 INITBROWSERS 1010
203 INITMYWID 20321,20421
//
//Configuration Driver 204
//
204 INITIPADDR 192.168.93.7
204 INITIISADDR 192.7.1.1
204 INITIISPORT 80
204 INITBROWSERS 1010
204 INITMYWID 20422,20522
//
//Configuration Driver 205
//
205 INITIPADDR 192.168.93.7
205 INITIISADDR 192.7.1.1
205 INITIISPORT 80
205 INITBROWSERS 1010
205 INITMYWID 20523,20623
//
//Configuration Driver 206
//
206 INITIPADDR 192.168.93.7
206 INITIISADDR 192.7.1.1
206 INITIISPORT 80
206 INITBROWSERS 1010
206 INITMYWID 20624,20724
//
//Configuration Driver 207
//
207 INITIPADDR 192.168.93.7
207 INITIISADDR 192.7.1.1
207 INITIISPORT 80
207 INITBROWSERS 1010
207 INITMYWID 20725,20825
//
//Configuration Driver 208
//
208 INITIPADDR 192.168.93.7
208 INITIISADDR 192.7.1.1
208 INITIISPORT 80
208 INITBROWSERS 1010
208 INITMYWID 20826,20926
//
//Configuration Driver 209
//
209 INITIPADDR 192.168.93.7
209 INITIISADDR 192.7.1.1
209 INITIISPORT 80
209 INITBROWSERS 1010
209 INITMYWID 20927,21027
//
//Configuration Driver 210
//
210 INITIPADDR 192.168.93.7
210 INITIISADDR 192.7.1.1
210 INITIISPORT 80
```

```
210 INITBROWSERS 1020
210 INITMYWID 21028,21129
//
//Configuration Driver 211
//
211 INITIPADDR 192.168.93.8
211 INITIISADDR 192.8.1.1
211 INITIISPORT 80
211 INITBROWSERS 1010
211 INITMYWID 21130,21230
//
//Configuration Driver 212
//
212 INITIPADDR 192.168.93.8
212 INITIISADDR 192.8.1.1
212 INITIISPORT 80
212 INITBROWSERS 1010
212 INITMYWID 21231,21331
//
//Configuration Driver 213
//
213 INITIPADDR 192.168.93.8
213 INITIISADDR 192.8.1.1
213 INITIISPORT 80
213 INITBROWSERS 1010
213 INITMYWID 21332,21432
//
//Configuration Driver 214
//
214 INITIPADDR 192.168.93.8
214 INITIISADDR 192.8.1.1
214 INITIISPORT 80
214 INITBROWSERS 1010
214 INITMYWID 21433,21533
//
//Configuration Driver 215
//
215 INITIPADDR 192.168.93.8
215 INITIISADDR 192.8.1.1
215 INITIISPORT 80
215 INITBROWSERS 1010
215 INITMYWID 21534,21634
//
//Configuration Driver 216
//
216 INITIPADDR 192.168.93.8
216 INITIISADDR 192.8.1.1
216 INITIISPORT 80
216 INITBROWSERS 1010
216 INITMYWID 21635,21735
//
//Configuration Driver 217
//
217 INITIPADDR 192.168.93.8
217 INITIISADDR 192.8.1.1
217 INITIISPORT 80
217 INITBROWSERS 1010
217 INITMYWID 21736,21836
//
//Configuration Driver 218
//
218 INITIPADDR 192.168.93.8
218 INITIISADDR 192.8.1.1
218 INITIISPORT 80
218 INITBROWSERS 1010
218 INITMYWID 21837,21937
//
//Configuration Driver 219
//
219 INITIPADDR 192.168.93.8
219 INITIISADDR 192.8.1.1
219 INITIISPORT 80
219 INITBROWSERS 1010
219 INITMYWID 21938,22038
//
//Configuration Driver 220
//
220 INITIPADDR 192.168.93.8
220 INITIISADDR 192.8.1.1
220 INITIISPORT 80
220 INITBROWSERS 1010
220 INITMYWID 22039,22139
//
//Configuration Driver 221
//
221 INITIPADDR 192.168.93.8
221 INITIISADDR 192.8.1.1
221 INITIISPORT 80
221 INITBROWSERS 1010
221 INITMYWID 22140,22240
//
//Configuration Driver 222
//
222 INITIPADDR 192.168.93.8
222 INITIISADDR 192.8.1.1
222 INITIISPORT 80
222 INITBROWSERS 1010
222 INITMYWID 22241,22341
//
//Configuration Driver 223
//
223 INITIPADDR 192.168.93.8
223 INITIISADDR 192.8.1.1
223 INITIISPORT 80
223 INITBROWSERS 1010
223 INITMYWID 22342,22442
//
//Configuration Driver 224
//
224 INITIPADDR 192.168.93.8
224 INITIISADDR 192.8.1.1
224 INITIISPORT 80
224 INITBROWSERS 1010
224 INITMYWID 22443,22543
//
//Configuration Driver 225
```

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//
225 INITIPADDR 192.168.93.8
225 INITIISADDR 192.8.1.1
225 INITIISPORT 80
225 INITBROWSERS 1010
225 INITMYWID 22544,22644
//
//Configuration Driver 226
//
226 INITIPADDR 192.168.93.8
226 INITIISADDR 192.8.1.1
226 INITIISPORT 80
226 INITBROWSERS 1010
226 INITMYWID 22645,22745
//
//Configuration Driver 227
//
227 INITIPADDR 192.168.93.8
227 INITIISADDR 192.8.1.1
227 INITIISPORT 80
227 INITBROWSERS 1010
227 INITMYWID 22746,22846
//
//Configuration Driver 228
//
228 INITIPADDR 192.168.93.8
228 INITIISADDR 192.8.1.1
228 INITIISPORT 80
228 INITBROWSERS 1010
228 INITMYWID 22847,22947
//
//Configuration Driver 229
//
229 INITIPADDR 192.168.93.8
229 INITIISADDR 192.8.1.1
229 INITIISPORT 80
229 INITBROWSERS 1010
229 INITMYWID 22948,23048
//
//Configuration Driver 230
//
230 INITIPADDR 192.168.93.8
230 INITIISADDR 192.8.1.1
230 INITIISPORT 80
230 INITBROWSERS 1010
230 INITMYWID 23049,23149
//
//Configuration Driver 231
//
231 INITIPADDR 192.168.93.8
231 INITIISADDR 192.8.1.1
231 INITIISPORT 80
231 INITBROWSERS 1020
231 INITMYWID 23150,23251
//
//Configuration Driver 232
//
232 INITIPADDR 192.168.93.8
232 INITIISADDR 192.8.1.1
232 INITIISPORT 80
232 INITBROWSERS 1010
232 INITMYWID 23252,23352
//
//Configuration Driver 233
//
233 INITIPADDR 192.168.93.8
233 INITIISADDR 192.8.1.1
233 INITIISPORT 80
233 INITBROWSERS 1010
233 INITMYWID 23353,23453
//
//Configuration Driver 234
//
234 INITIPADDR 192.168.93.8
234 INITIISADDR 192.8.1.1
234 INITIISPORT 80
234 INITBROWSERS 1010
234 INITMYWID 23454,23554
//
//Configuration Driver 235
//
235 INITIPADDR 192.168.93.8
235 INITIISADDR 192.8.1.1
235 INITIISPORT 80
235 INITBROWSERS 1010
235 INITMYWID 23555,23655
//
//Configuration Driver 236
//
236 INITIPADDR 192.168.93.8
236 INITIISADDR 192.8.1.1
236 INITIISPORT 80
236 INITBROWSERS 1010
236 INITMYWID 23656,23756
//
//Configuration Driver 237
//
237 INITIPADDR 192.168.93.8
237 INITIISADDR 192.8.1.1
237 INITIISPORT 80
237 INITBROWSERS 1010
237 INITMYWID 23757,23857
//
//Configuration Driver 238
//
238 INITIPADDR 192.168.93.8
238 INITIISADDR 192.8.1.1
238 INITIISPORT 80
238 INITBROWSERS 1010
238 INITMYWID 23858,23958
//
//Configuration Driver 239
//
239 INITIPADDR 192.168.93.8
239 INITIISADDR 192.8.1.1
239 INITIISPORT 80
```

```
239 INITBROWSERS 1010
239 INITMYWID 23959,24059
//
//Configuration Driver 240
//
240 INITIPADDR 192.168.93.8
240 INITIISADDR 192.8.1.1
240 INITIISPORT 80
240 INITBROWSERS 1010
240 INITMYWID 24060,24160
```

Driver Environment

Webdriver.cmd

```
if '%1'=='' goto usage

:paramok

set WEBDRIVERNO=%1
set WEBADMBASEPORT=4300
set WEBDIAGLEVEL=2
set WEBEVENTLOG=1
set WEBEVENTHOST=
set WEBLOGLEVEL=1
set WEBSINGLETRAN=0
set WEBTPCCAUDIT=0
set WEBRTFUDGETM=110
set WEBNEWORDERPROB=4494
set WEBPAYMENTPROB=4303
set WEBORDERSTATUSPROB=401
set WEBDELIVERYPROB=401
set WEBSTOCKLEVELPROB=401
set WEBTTNEWORDER=12030
set WEBTTPAYMENT=12030
set WEBTTDELIVERY=5060
set WEBTTORDERSTATUS=10070
set WEBTTSTOCKLEVEL=5060

webdriver.exe

goto end

:usage
@ECHO  You must supply the following parameters:
@ECHO  "webdriver.cmd <driver number>"
pause

:end
exit
```

RTE IP Configuration Information

(common to 8 RTEs except for Host Name, Physical Address and IP Address)

```
C:\rhost>if 'ipconfig' == '' goto usage

C:\rhost>c:

C:\rhost>cd \webdriver

C:\webdriver>call ipconfig /all


Windows IP Configuration


   Host Name . . . . . . . . . . . . : RTE1

   Primary Dns Suffix  . . . . . . . :

   Node Type . . . . . . . . . . . . : Unknown

   IP Routing Enabled. . . . . . . . : No

   WINS Proxy Enabled. . . . . . . . : No


Ethernet adapter Admin:


   Connection-specific DNS Suffix  . :

   Description . . . . . . . . . . . : Intel 8255x-based PCI Ethernet
Adapter (10/100)

   Physical Address. . . . . . . . . : 00-06-5B-39-9A-82

   DHCP Enabled. . . . . . . . . . . : No

   IP Address. . . . . . . . . . . . : 192.158.2.101

   Subnet Mask . . . . . . . . . . . : 255.255.255.0

   IP Address. . . . . . . . . . . . : 192.168.93.1

   Subnet Mask . . . . . . . . . . . : 255.255.255.0

   Default Gateway . . . . . . . . . :

   NetBIOS over Tcpip. . . . . . . . : Disabled
```

```
Ethernet adapter Client:

   Connection-specific DNS Suffix  . :
   Description . . . . . . . . . . . : Broadcom NetXtreme Gigabit Ethernet
   Physical Address. . . . . . . . . : 00-06-5B-39-9A-83
   DHCP Enabled. . . . . . . . . . . : No
   IP Address. . . . . . . . . . . . : 192.6.1.202
   Subnet Mask . . . . . . . . . . . : 255.255.255.0
   IP Address. . . . . . . . . . . . : 192.5.1.101
   Subnet Mask . . . . . . . . . . . : 255.255.255.0
   IP Address. . . . . . . . . . . . : 192.1.1.2
   Subnet Mask . . . . . . . . . . . : 255.255.255.0
   Default Gateway . . . . . . . . . :
   NetBIOS over Tcpip. . . . . . . . : Disabled

C:\webdriver>goto end
C:\rhost>if 'ipconfig' == '' goto usage
C:\rhost>c:
C:\rhost>cd \webdriver
C:\webdriver>call ipconfig /all

Windows IP Configuration

   Host Name . . . . . . . . . . . . : RTE2
   Primary Dns Suffix  . . . . . . . :
   Node Type . . . . . . . . . . . . : Unknown
   IP Routing Enabled. . . . . . . . : No
   WINS Proxy Enabled. . . . . . . . : No

Ethernet adapter Admin:

   Connection-specific DNS Suffix  . :
   Description . . . . . . . . . . . : Intel 8255x-based PCI Ethernet
Adapter (10/100)
   Physical Address. . . . . . . . . : 00-06-5B-39-9B-EF
   DHCP Enabled. . . . . . . . . . . : No
   IP Address. . . . . . . . . . . . : 192.158.2.102
   Subnet Mask . . . . . . . . . . . : 255.255.255.0
   IP Address. . . . . . . . . . . . : 192.168.93.2
   Subnet Mask . . . . . . . . . . . : 255.255.255.0
   Default Gateway . . . . . . . . . :
   NetBIOS over Tcpip. . . . . . . . : Disabled

Ethernet adapter Client:

   Connection-specific DNS Suffix  . :
   Description . . . . . . . . . . . : Broadcom NetXtreme Gigabit Ethernet
   Physical Address. . . . . . . . . : 00-06-5B-39-9B-F0
   DHCP Enabled. . . . . . . . . . . : No
   IP Address. . . . . . . . . . . . : 192.8.1.111
   Subnet Mask . . . . . . . . . . . : 255.255.255.0
   IP Address. . . . . . . . . . . . : 192.7.1.111
   Subnet Mask . . . . . . . . . . . : 255.255.255.0
   IP Address. . . . . . . . . . . . : 192.5.1.102
   Subnet Mask . . . . . . . . . . . : 255.255.255.0
   IP Address. . . . . . . . . . . . : 192.1.1.22
   Subnet Mask . . . . . . . . . . . : 255.255.255.0
   IP Address. . . . . . . . . . . . : 192.2.1.2
   Subnet Mask . . . . . . . . . . . : 255.255.255.0
```

```
   Default Gateway . . . . . . . . . :

   NetBIOS over Tcpip. . . . . . . . : Disabled

C:\webdriver>goto end

C:\rhost>if 'ipconfig' == '' goto usage

C:\rhost>c:

C:\rhost>cd \webdriver

C:\webdriver>call ipconfig /all

Windows IP Configuration


   Host Name . . . . . . . . . . . . : RTE3

   Primary Dns Suffix  . . . . . . . :

   Node Type . . . . . . . . . . . . : Unknown

   IP Routing Enabled. . . . . . . . : No

   WINS Proxy Enabled. . . . . . . . : No


Ethernet adapter Admin:


   Connection-specific DNS Suffix  . :

   Description . . . . . . . . . . . : Intel 8255x-based PCI Ethernet
Adapter (10/100)

   Physical Address. . . . . . . . . : 00-06-5B-39-9C-DB

   DHCP Enabled. . . . . . . . . . . : No

   IP Address. . . . . . . . . . . . : 192.158.2.103

   Subnet Mask . . . . . . . . . . . : 255.255.255.0

   IP Address. . . . . . . . . . . . : 192.168.93.3

   Subnet Mask . . . . . . . . . . . : 255.255.255.0

   Default Gateway . . . . . . . . . :

   NetBIOS over Tcpip. . . . . . . . : Disabled


Ethernet adapter Client:


   Connection-specific DNS Suffix  . :

   Description . . . . . . . . . . . : Broadcom NetXtreme Gigabit Ethernet

   Physical Address. . . . . . . . . : 00-06-5B-39-9C-DC

   DHCP Enabled. . . . . . . . . . . : No

   IP Address. . . . . . . . . . . . : 192.6.1.101

   Subnet Mask . . . . . . . . . . . : 255.255.255.0

   IP Address. . . . . . . . . . . . : 192.2.1.23

   Subnet Mask . . . . . . . . . . . : 255.255.255.0

   IP Address. . . . . . . . . . . . : 192.3.1.2

   Subnet Mask . . . . . . . . . . . : 255.255.255.0

   Default Gateway . . . . . . . . . :

   NetBIOS over Tcpip. . . . . . . . : Disabled

C:\webdriver>goto end

C:\rhost>if 'ipconfig' == '' goto usage

C:\rhost>c:

C:\rhost>cd \webdriver

C:\webdriver>call ipconfig /all

Windows IP Configuration


   Host Name . . . . . . . . . . . . : RTE4

   Primary Dns Suffix  . . . . . . . :

   Node Type . . . . . . . . . . . . : Unknown

   IP Routing Enabled. . . . . . . . : No

   WINS Proxy Enabled. . . . . . . . : No
```

```
Ethernet adapter Admin:


   Connection-specific DNS Suffix  . :

   Description . . . . . : Intel 8255x-based PCI Ethernet
Adapter (10/100)

   Physical Address. . . . . : 00-06-5B-39-9E-FD

   DHCP Enabled. . . . . : No

   IP Address. . . . . : 192.158.2.104

   Subnet Mask . . . . . : 255.255.255.0

   IP Address. . . . . : 192.168.93.4

   Subnet Mask . . . . . : 255.255.255.0

   Default Gateway . . . . . :

   NetBIOS over Tcpip. . . . . : Disabled


Ethernet adapter Client:


   Connection-specific DNS Suffix  . :

   Description . . . . . : Broadcom NetXtreme Gigabit Ethernet

   Physical Address. . . . . : 00-06-5B-39-9E-FE

   DHCP Enabled. . . . . : No

   IP Address. . . . . : 192.6.1.102

   Subnet Mask . . . . . : 255.255.255.0

   IP Address. . . . . : 192.2.1.24

   Subnet Mask . . . . . : 255.255.255.0

   IP Address. . . . . : 192.4.1.2

   Subnet Mask . . . . . : 255.255.255.0

   Default Gateway . . . . . :

   NetBIOS over Tcpip. . . . . : Disabled

C:\webdriver>goto end
```

```
C:\rhost>if 'ipconfig' == '' goto usage

C:\rhost>c:

C:\rhost>cd \webdriver

C:\webdriver>call ipconfig /all


Windows IP Configuration


   Host Name . . . . . : RTE5

   Primary Dns Suffix  . . . . . :

   Node Type . . . . . : Unknown

   IP Routing Enabled. . . . . : No

   WINS Proxy Enabled. . . . . : No


Ethernet adapter Admin:


   Connection-specific DNS Suffix  . :

   Description . . . . . : Intel 8255x-based PCI Ethernet
Adapter (10/100)

   Physical Address. . . . . : 00-06-5B-39-9C-D7

   DHCP Enabled. . . . . : No

   IP Address. . . . . : 192.158.2.105

   Subnet Mask . . . . . : 255.255.255.0

   IP Address. . . . . : 192.168.93.5

   Subnet Mask . . . . . : 255.255.255.0

   Default Gateway . . . . . :

   NetBIOS over Tcpip. . . . . : Disabled


Ethernet adapter Client:


   Connection-specific DNS Suffix  . :
```

```
   Description . . . . . . . . . . . : Broadcom NetXtreme Gigabit Ethernet
   Physical Address. . . . . . . . . : 00-06-5B-39-9C-D8
   DHCP Enabled. . . . . . . . . . . : No
   IP Address. . . . . . . . . . . . : 192.7.1.101
   Subnet Mask . . . . . . . . . . . : 255.255.255.0
   IP Address. . . . . . . . . . . . : 192.6.1.111
   Subnet Mask . . . . . . . . . . . : 255.255.255.0
   IP Address. . . . . . . . . . . . : 192.3.1.25
   Subnet Mask . . . . . . . . . . . : 255.255.255.0
   IP Address. . . . . . . . . . . . : 192.5.1.2
   Subnet Mask . . . . . . . . . . . : 255.255.255.0
   Default Gateway . . . . . . . . . :
   NetBIOS over Tcpip. . . . . . . . : Disabled

C:\webdriver>goto end
C:\rhost>if 'ipconfig' == '' goto usage
C:\rhost>c:
C:\rhost>cd \webdriver
C:\webdriver>call ipconfig /all

Windows IP Configuration


   Host Name . . . . . . . . . . . . : RTE6
   Primary Dns Suffix  . . . . . . . :
   Node Type . . . . . . . . . . . . : Unknown
   IP Routing Enabled. . . . . . . . : No
   WINS Proxy Enabled. . . . . . . . : No


Ethernet adapter Admin:

   Connection-specific DNS Suffix  . :
   Description . . . . . . . . . . . : Intel 8255x-based PCI Ethernet
Adapter (10/100)
   Physical Address. . . . . . . . . : 00-06-5B-39-96-6D
   DHCP Enabled. . . . . . . . . . . : No
   IP Address. . . . . . . . . . . . : 192.158.2.106
   Subnet Mask . . . . . . . . . . . : 255.255.255.0
   IP Address. . . . . . . . . . . . : 192.168.93.6
   Subnet Mask . . . . . . . . . . . : 255.255.255.0
   Default Gateway . . . . . . . . . :
   NetBIOS over Tcpip. . . . . . . . : Disabled


Ethernet adapter Client:


   Connection-specific DNS Suffix  . :
   Description . . . . . . . . . . . : Broadcom NetXtreme Gigabit Ethernet
   Physical Address. . . . . . . . . : 00-06-5B-39-96-6E
   DHCP Enabled. . . . . . . . . . . : No
   IP Address. . . . . . . . . . . . : 192.7.1.102
   Subnet Mask . . . . . . . . . . . : 255.255.255.0
   IP Address. . . . . . . . . . . . : 192.3.1.26
   Subnet Mask . . . . . . . . . . . : 255.255.255.0
   IP Address. . . . . . . . . . . . : 192.6.1.2
   Subnet Mask . . . . . . . . . . . : 255.255.255.0
   Default Gateway . . . . . . . . . :
   NetBIOS over Tcpip. . . . . . . . : Disabled

C:\webdriver>goto end
C:\rhost>if 'ipconfig' == '' goto usage
C:\rhost>c:
```

```
C:\rhost>cd \webdriver

C:\webdriver>call ipconfig /all

Windows IP Configuration


   Host Name . . . . . : RTE7

   Primary Dns Suffix  . . . . . :

   Node Type . . . . . : Unknown

   IP Routing Enabled. . . . . : No

   WINS Proxy Enabled. . . . . : No


Ethernet adapter Admin:


   Connection-specific DNS Suffix  . :

   Description . . . . . : Intel 8255x-based PCI Ethernet
Adapter (10/100)

   Physical Address. . . . . : 00-06-5B-39-9E-DA

   DHCP Enabled. . . . . : No

   IP Address. . . . . : 192.158.2.107

   Subnet Mask . . . . . : 255.255.255.0

   IP Address. . . . . : 192.168.93.7

   Subnet Mask . . . . . : 255.255.255.0

   Default Gateway . . . . . :

   NetBIOS over Tcpip. . . . . : Disabled


Ethernet adapter Client:


   Connection-specific DNS Suffix  . :

   Description . . . . . : Broadcom NetXtreme Gigabit Ethernet

   Physical Address. . . . . : 00-06-5B-39-9E-DB

   DHCP Enabled. . . . . : No

   IP Address. . . . . : 192.8.1.101

   Subnet Mask . . . . . : 255.255.255.0

   IP Address. . . . . : 192.4.1.27

   Subnet Mask . . . . . : 255.255.255.0

   IP Address. . . . . : 192.7.1.2

   Subnet Mask . . . . . : 255.255.255.0

   Default Gateway . . . . . :

   NetBIOS over Tcpip. . . . . : Disabled

C:\webdriver>goto end

C:\rhost>if 'ipconfig' == '' goto usage

C:\rhost>c:

C:\rhost>cd \webdriver

C:\webdriver>call ipconfig /all

Windows IP Configuration


   Host Name . . . . . : RTE8

   Primary Dns Suffix  . . . . . :

   Node Type . . . . . : Unknown

   IP Routing Enabled. . . . . : No

   WINS Proxy Enabled. . . . . : No


Ethernet adapter Admin:


   Connection-specific DNS Suffix  . :

   Description . . . . . : Intel 8255x-based PCI Ethernet
Adapter (10/100)

   Physical Address. . . . . : 00-06-5B-39-1E-64
```

```
   DHCP Enabled. . . . . . . . . . . : No

   IP Address. . . . . . . . . . . . : 192.158.2.108

   Subnet Mask . . . . . . . . . . . : 255.255.255.0

   IP Address. . . . . . . . . . . . : 192.168.93.8

   Subnet Mask . . . . . . . . . . . : 255.255.255.0

   Default Gateway . . . . . . . . . :

   NetBIOS over Tcpip. . . . . . . . : Disabled


Ethernet adapter Client:


   Connection-specific DNS Suffix  . :

   Description . . . . . . . . . . . : Broadcom NetXtreme Gigabit Ethernet

   Physical Address. . . . . . . . . : 00-06-5B-39-1E-65

   DHCP Enabled. . . . . . . . . . . : No

   IP Address. . . . . . . . . . . . : 192.4.1.28

   Subnet Mask . . . . . . . . . . . : 255.255.255.0

   IP Address. . . . . . . . . . . . : 192.8.1.2

   Subnet Mask . . . . . . . . . . . : 255.255.255.0

   Default Gateway . . . . . . . . . :

   NetBIOS over Tcpip. . . . . . . . : Disabled


C:\webdriver>goto end
 Volume in drive \\rte1\c$ has no label.
 Volume Serial Number is EC05-D30B

 Directory of \\rte1\c$\webdriver

10/14/2003  10:54a              90,112 webdriver.exe
               1 File(s)         90,112 bytes
               0 Dir(s)  14,537,261,056 bytes free
 Volume in drive \\rte2\c$ has no label.
 Volume Serial Number is EC05-D30B

 Directory of \\rte2\c$\webdriver

10/14/2003  10:54a              90,112 webdriver.exe
               1 File(s)         90,112 bytes
               0 Dir(s)  14,523,744,256 bytes free
 Volume in drive \\rte3\c$ has no label.
 Volume Serial Number is EC05-D30B

 Directory of \\rte3\c$\webdriver

10/14/2003  10:54a              90,112 webdriver.exe
               1 File(s)         90,112 bytes
               0 Dir(s)  14,539,845,632 bytes free
 Volume in drive \\rte4\c$ has no label.
 Volume Serial Number is EC05-D30B

 Directory of \\rte4\c$\webdriver

10/14/2003  10:54a              90,112 webdriver.exe
               1 File(s)         90,112 bytes
               0 Dir(s)  14,539,710,464 bytes free
 Volume in drive \\rte5\c$ has no label.
 Volume Serial Number is EC05-D30B

 Directory of \\rte5\c$\webdriver

10/14/2003  10:54a              90,112 webdriver.exe
               1 File(s)         90,112 bytes
               0 Dir(s)  14,536,577,024 bytes free
 Volume in drive \\rte6\c$ has no label.
 Volume Serial Number is EC05-D30B

 Directory of \\rte6\c$\webdriver

10/14/2003  10:54a              90,112 webdriver.exe
               1 File(s)         90,112 bytes
               0 Dir(s)  14,539,427,840 bytes free
 Volume in drive \\rte7\c$ has no label.
 Volume Serial Number is EC05-D30B

 Directory of \\rte7\c$\webdriver

10/14/2003  10:54a              90,112 webdriver.exe
               1 File(s)         90,112 bytes
               0 Dir(s)  14,543,659,008 bytes free
 Volume in drive \\rte8\c$ has no label.
 Volume Serial Number is EC05-D30B

 Directory of \\rte8\c$\webdriver

10/14/2003  10:54a              90,112 webdriver.exe
               1 File(s)         90,112 bytes
               0 Dir(s)  14,542,381,056 bytes free
```

Start RTE Cmd

Startrte.txt

```
start " D1 RTE1 " /MIN webdriver.cmd 1
```

```
start " D1 RTE2 " /MIN webdriver.cmd 2
start " D1 RTE3 " /MIN webdriver.cmd 3
start " D1 RTE4 " /MIN webdriver.cmd 4
start " D1 RTE5 " /MIN webdriver.cmd 5
start " D1 RTE6 " /MIN webdriver.cmd 6
start " D1 RTE7 " /MIN webdriver.cmd 7
start " D1 RTE8 " /MIN webdriver.cmd 8
start " D1 RTE9 " /MIN webdriver.cmd 9
start " D1 RTE10 " /MIN webdriver.cmd 10
start " D1 RTE11 " /MIN webdriver.cmd 11
start " D1 RTE12 " /MIN webdriver.cmd 12
start " D1 RTE13 " /MIN webdriver.cmd 13
start " D1 RTE14 " /MIN webdriver.cmd 14
start " D1 RTE15 " /MIN webdriver.cmd 15
start " D1 RTE16 " /MIN webdriver.cmd 16
start " D1 RTE17 " /MIN webdriver.cmd 17
start " D1 RTE18 " /MIN webdriver.cmd 18
start " D1 RTE19 " /MIN webdriver.cmd 19
start " D1 RTE20 " /MIN webdriver.cmd 20
start " D1 RTE21 " /MIN webdriver.cmd 21
start " D1 RTE22 " /MIN webdriver.cmd 22
start " D1 RTE23 " /MIN webdriver.cmd 23
start " D1 RTE24 " /MIN webdriver.cmd 24
start " D1 RTE25 " /MIN webdriver.cmd 25
start " D1 RTE26 " /MIN webdriver.cmd 26
start " D1 RTE27 " /MIN webdriver.cmd 27
start " D1 RTE28 " /MIN webdriver.cmd 28
start " D1 RTE29 " /MIN webdriver.cmd 29
start " D1 RTE30 " /MIN webdriver.cmd 30
start " D2 RTE31 " /MIN webdriver.cmd 31
start " D2 RTE32 " /MIN webdriver.cmd 32
start " D2 RTE33 " /MIN webdriver.cmd 33
start " D2 RTE34 " /MIN webdriver.cmd 34
start " D2 RTE35 " /MIN webdriver.cmd 35
start " D2 RTE36 " /MIN webdriver.cmd 36
start " D2 RTE37 " /MIN webdriver.cmd 37
start " D2 RTE38 " /MIN webdriver.cmd 38
start " D2 RTE39 " /MIN webdriver.cmd 39
start " D2 RTE40 " /MIN webdriver.cmd 40
start " D2 RTE41 " /MIN webdriver.cmd 41
start " D2 RTE42 " /MIN webdriver.cmd 42
start " D2 RTE43 " /MIN webdriver.cmd 43
start " D2 RTE44 " /MIN webdriver.cmd 44
start " D2 RTE45 " /MIN webdriver.cmd 45
start " D2 RTE46 " /MIN webdriver.cmd 46
start " D2 RTE47 " /MIN webdriver.cmd 47
start " D2 RTE48 " /MIN webdriver.cmd 48
start " D2 RTE49 " /MIN webdriver.cmd 49
start " D2 RTE50 " /MIN webdriver.cmd 50
start " D2 RTE51 " /MIN webdriver.cmd 51
start " D2 RTE52 " /MIN webdriver.cmd 52
start " D2 RTE53 " /MIN webdriver.cmd 53
start " D2 RTE54 " /MIN webdriver.cmd 54
start " D2 RTE55 " /MIN webdriver.cmd 55
start " D2 RTE56 " /MIN webdriver.cmd 56
start " D2 RTE57 " /MIN webdriver.cmd 57
start " D2 RTE58 " /MIN webdriver.cmd 58
start " D2 RTE59 " /MIN webdriver.cmd 59
start " D2 RTE60 " /MIN webdriver.cmd 60
start " D3 RTE61 " /MIN webdriver.cmd 61
start " D3 RTE62 " /MIN webdriver.cmd 62
start " D3 RTE63 " /MIN webdriver.cmd 63
start " D3 RTE64 " /MIN webdriver.cmd 64
start " D3 RTE65 " /MIN webdriver.cmd 65
start " D3 RTE66 " /MIN webdriver.cmd 66
start " D3 RTE67 " /MIN webdriver.cmd 67
start " D3 RTE68 " /MIN webdriver.cmd 68
start " D3 RTE69 " /MIN webdriver.cmd 69
start " D3 RTE70 " /MIN webdriver.cmd 70
start " D3 RTE71 " /MIN webdriver.cmd 71
start " D3 RTE72 " /MIN webdriver.cmd 72
start " D3 RTE73 " /MIN webdriver.cmd 73
start " D3 RTE74 " /MIN webdriver.cmd 74
start " D3 RTE75 " /MIN webdriver.cmd 75
start " D3 RTE76 " /MIN webdriver.cmd 76
start " D3 RTE77 " /MIN webdriver.cmd 77
start " D3 RTE78 " /MIN webdriver.cmd 78
start " D3 RTE79 " /MIN webdriver.cmd 79
start " D3 RTE80 " /MIN webdriver.cmd 80
start " D3 RTE81 " /MIN webdriver.cmd 81
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start " D8 RTE239 " /MIN webdriver.cmd 239
start " D8 RTE240 " /MIN webdriver.cmd 240
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Appendix E - Disk Storage

TPC-C 60-Day Disk Space Requirements

Warehouses	**24,160**	tpmC	**304,148.50**	tpmC/W	**12.59**

Table	**Initial Rows**	**Data KB**	**Index KB**	**Extra 5% KB**	**Total With 5% KB**
Warehouse	24,160	2,616	480	155	3,251
District	241,600	27,224	1,304	1,426	29,954
Customer	724,800,000	148,676,928	32,215,104	9,044,602	189,936,634
Customer.Text	724,800,000	433,526,504		21,676,325	455,202,829
History (D)	724,800,000	43,271,648	168,976		43,440,624
Order (D)	724,800,000	23,666,944	54,328		23,721,272
New-Order	232,200,000	4,295,112	11,920	215,352	4,522,384
Order-Line (D)	7,247,980,181	483,198,680	1,143,568		484,342,248
Item	100,000	9,528	1,168	535	11,231
Stock	2,416,000,000	773,120,000	1,637,008	38,737,850	813,494,858
Totals KB		1,909,795,184	35,233,856	69,676,245	2,014,705,285

Db/Filegroup	**Count**	**Size MB**	**MB Allocated**	**MB Loaded +5%**	**MB for 8 Hours**
master, model & msdb		22	22	22	22
tempdb		10	10	10	10
mssql70_tpcc_root	1	10	10	10	10
mssql70_misc_fg	156	3,210	500,760	487,000	496,539
mssql70_cs_fg	156	6,315	985,140	979,914	979,914
mssql70_ord_fg	156	4,090	638,040	500,572	624,314
Total Allocated MB			**2,123,982**	**1,967,528**	**2,100,809**

	MB	
Dynamic Space MB	537,243	Sum of data for orders, order_line & history
Static Space	1,430,242	Sum of data+index+5% - Dynamic Space
Free Space	156,496	Total allocated space - (Dynamic & Static Spaces)
Daily Growth	108,213	(Dynamic Space / (W * 62.5)) * tpmC
Daily Spread	0	Free space - 1.5 * Daily growth (zero if negative)
	0	SQL Server can be configured to eliminate Daily Spread
60 Day Space MB	7,923,028	Static Space + 60 * (Daily Growth + Daily Spread)
60 Day Space GB	**7,737.33**	
8 hr log GB	**684.78**	(need double for mirroring)
Disk Capacity MB	16,744	**16.352 GB** Capacity of 18GB disks (15,000 RPM)
	136,888	**133.680 GB** Capacity of 136GB disks (10,000 RPM)

Space Usage	**GB Needed**	**Disks Priced**	**GB Priced**	
60-day space DB	7737.33 GB	1092	17855.91 GB	18GB drives
Total DB		**1092**	17855.91 GB	
8-hr log+mirror	1369.56 GB	12	1529.60 GB	73GB drives
OS, SQL Server	14.00 GB	1	27.95 GB	30GB drive
Total space	**9120.89 GB**	**1105**	**19413.46 GB**	**19.0 TB**

TPC-C Dynamic Table Growth Rates for 8 Hours					304,148.50	tpmC
Tables	**Initial (KB)**	**Final (KB)**	**Change(KB)**	**KB / New-Order**	**8-Hr MB**	
History	43,440,624	47,144,568	3,703,944	0.0669	51,962.00	
Orders	23,721,272	29,272,088	5,550,816	0.1003	37,461.44	
Order_line	484,342,248	525,740,792	41,398,544	0.7479	579,612.51	
Dynamic	**551,504,144**	**602,157,448**	**50,653,304**	**0.9150**	**669,035.96**	
New_order	4,307,032	5,485,192	1,178,160	0.0213	7,240.44	
Static						
Log	34,582,994	293,733,606	259,150,612	**4.6815**	701,215.40	**684.781 GB**
SUM(d_next_o_id)	725,041,600	780,397,645	55,356,045			

Appendix F - Third-Party Price Quotations

Microsoft Corporation
One Microsoft Way
Redmond, WA 98052-6399

Tel 425 882 8080
Fax 425 936 7329
http://www.microsoft.com/

Microsoft

April 28, 2004

Unisys Corporation
Glenn Weeks
MS237
25725 Jeronimo Road
Mission Viejo, CA 92691

Mr. Weeks:

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
P73-00295	**Windows Server 2003, Standard Edition** *Server license only - No CALs* *Discount Schedule: Open Program - No Level* *Unit Price reflects a 26% discount from the retail unit price of $999.*	$738	8	$5,904
254-00170	**Visual C++ Standard** *No discounts applied*	$109	1	$109
PRO-PRORS-16U-01	**Database Server Support Package** *1 Year Term*	$1,950	3	$5,850

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: PCglwe0428044838
Please include this Reference ID in any correspondence regarding this price quote.

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SALES QUOTE

SQ-17426	Apr 22,2004

Customer	Contact	Ship To
UNISYS CORPORATION 25725 JERONIMO RD MISSION VIEJO CA 92691 UNITED STATES		UNISYS CORPORATION 25725 JERONIMO RD MISSION VIEJO CA 92691 UNITED STATES

Account	Terms	Due Date	Account Rep	Schedule Date
UNIMISSI	NET 30	May 22, 2004	John Palmieri	

Quotation	PO #	Reference	Ship VIA	Page	Printed
SQ-17426			UPS GROUND	1	04/27/04 17:01

L	Item	Description	Qty	Ship	Price	M	Discount	Amount
1		ES7000-540 SERVER						
2	ES7540327-100	ES7000-540 32X 3,0 GHZ, 128MB CCH,16GB	1		349220.00	EA		349220.00
3	SEN70002-MSV	SRV:SENTINEL MNGMT SRV	1		4242.00	EA		4242.00
4	RAM7500-16G	16GB MEMORY, 1GB DIMMS	3		9500.00	EA		28500.00
5	FC76222-P64	CTRL: 2 GB FC, INTELLIFIBRE	17		2850.00	EA		48450.00
6	PCI10001-CXG	COMM HW:GIGANET CLUSTER XCNT ADPT	8		755.00	EA		6040.00
7	ES70003-UIF	RCK:105 KBRD/MOUSE/MON	1		570.00	EA		570.00
8	WND2332-TSP	O/S:WIN 2003 SRVR,DCENTER EDTN 32P 1YR	1		70224.00	EA		70224.00
9	DUS200332-TSP	O/S:WIN 2003 SRVR, DC LMTD SBSCRPTN, 1YR	2		6346.00	EA		12692.00
10	GTS7524032-SSA	O/S:WINDOWS 2003 SERVER DC SUPPORT	3		17168.00	EA		51504.00
11	DQL200332-LX	APP:MICROSOFT SQL SERVER 2000 ENT ED 32P	1		425600.00	EA		425600.00
12								
13		USS200/RS2000 STORAGE						
14	JBD201815-P84	6 RACKS - 84 X 18GB 15K RPM	14		29839.00	EA		417746.00
15	JBD201815-P28	2RACKS-28X18GB 15K RPM	1		14556.00	EA		14556.00
16	CXR3610-2GF	EMC DISK:36GB 10K DRIVE	14		2500.00	EA		35112.00
17	JBD2002-SA	DISK:NON-HA ENCLOSURE WITH 14 DRIVE SLOT	46		3010.00	EA		138460.00
18	JBD2011-SA	DISK:NON-HA ENCLOSURE WITH 14 DRIVE SLOT	32		3214.00	EA		102848.00
19	RMM20103-ELS	SAN:SYMM DISK VIRT SRVR II-ELS	16		4559.00	EA		72944.00
20	RMM20701-TAR	SAN:HBA,ATTO PCI3300	48		1805.00	EA		86640.00
21	USS10300-SW	SAN:USS2100 SW & PROD INF	1		5472.00	EA		5472.00
22	US820320-LIC	SAN:USS2100 20 TBYTE LIC	1		37484.00	EA		37484.00
23	JBD20003-CCL	DISK:.3 METER 2GB FIBRE CHANNEL COPPER C	46		54.00	EA		2484.00
24	JBD2001-RMK	DISK:ENCLOSURE RACK MOUNT KIT FOR 3GU RA	78		190.00	EA		14820.00
25	CX300-DPE	DPE:2RAID CNTRL, 1GB CACHE EA	1		19000.00	EA		19000.00
26	CXN600-WIN	EMC SW:NAVISPHERE AGENT NT/W2K	1		646.00	EA		646.00
27	CX2002-DPE	EMC SW: NAVISPHERE MANAGER BASE FOR CX20	1		1549.00	EA		1549.00
28	CX200-DAE	EMC SW: NAVISPHERE MANAGER BASE FOR CX20	1		7695.00	EA		7695.00
29	GS516-T16	LAN HW:GIGABIT SWITCH, 16P	1		2850.00	EA		2850.00

Page 1	
SubTotal	1957348.00

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UNIMISSI	NET 30	May 22, 2004	John Palmieri	

Quotation	PO #	Reference	Ship VIA	Page	Printed
SQ-17426			UPS GROUND	2	04/27/04 17:01

L	Item	Description	Qty	Ship	Price	M	Discount	Amount
30	SWCH1-SXR	ADPTR:8 PORT SWITCH UNIT	3		1520.00	EA		4560.00
31	CBL121-SWC	CABLE:12FT SYS TO ADJ RK	24		143.00	EA		3432.00
32	KBR28301-SXR	KEYBD:RACK MOUNT KYBD	2		333.00	EA		666.00
33	MON2145-LCD	DISPLAY: 1U LCD MONITOR	2		2565.00	EA		5130.00
34	SFR9-PWR	ACC: 9-PLUG POWER STRIP	27		162.00	EA		4374.00
35	PSE1936-LC6	PWR CORD:C20/NEMA L6-20P	27		86.00	EA		2322.00
36	KRT361941-OPT	ACC:36U 19X41 OPEN FRT CAB, MRT COLOR	9		1425.00	EA		12825.00
37								
38		ES3020L SERVERS						
39	ESL302021-306	SVR:ESL3020 3.06GHZ 1M	8		1870.00	EA		14960.00
40	CPL3020302-1MB	PROC:1X3.0GHZ INTEL XEON 1MB	8		1199.00	EA		9592.00
41	DIM3020042-2GB	DIM3020042-2GB; MEM:2GB 4X512 533FSB MEM	8		1465.00	EA		11720.00
42	HBP3020101-51	DISK:ESL3020 HSBP 1X4 1"	8		265.00	EA		2120.00
43	HDP18115-DC4	DISK:18GB 15KRPM U320	8		333.00	EA		2664.00
44	ESL3020-VRL	ACC:ESL3020 V-RAILS	8		333.00	EA		2664.00
45	PCI10001-CXG	COMM HW:GIGANET CLUSTER XCNT ADPT	8		755.00	EA		6040.00
46								
47	DISCOUNT	LARGE VOLUME CASH DISCOUNT	1		-306063.00	EA		-306063.00
48								
49		Large Volume Cash Disc						
50		Disks come with a 3 year						
51		return-to-factory warranty						
52		7 day replenishment						
53		Quote valid for 90 days						
54								

Taxable	0.00
Tax	0.00
Exempt	1734354.00
Total	1734354.00
Paid	0.00
Tr Disc	0.00
Balance	1734354.00

Amount shown in
Rate :0.00 of

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GCPO8889

CAT 5e Patch Cable designed for high performance in a CAT 5e link. CAT 5e Patch Cables come with standard T568B Wiring. Available in 5 colors Black, Blue, Gray, White, and Yellow.

More Information

Part No.	Length	Each	10 - 19 20% Off	20 or More 35% Off
GCPO888903	3 ft	$0.91	$0.73	$0.59
GCPO888905	5 ft	$1.22	$0.98	$0.79
GCPO888907	7 ft	$1.53	$1.22	$0.99
GCPO888910	10 ft	$1.99	$1.59	$1.29
GCPO888914	14 ft	$2.60	$2.08	$1.69
GCPO888920	20 ft	$3.52	$2.82	$2.29
GCPO888925	25 ft	$4.29	$3.43	$2.79

Add to Cart

GCPO8SS9

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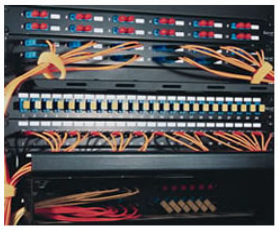

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Multimode Duplex Fiber Optic Jumper Cables

Fiber Optic Menu

GCFAZLL

LC to LC - Multimode Duplex Fiber Optic Patch Cable. LC cables are avaliable in 50µ and 62.5µ (62.5 is Standard) and in *any cable length*.

The LC fiber optic connector interface is based on a 1.25mm ceramic ferrule and the familiar latching mechanism of the RJ-45 modular plug and jack. The LC connector is a small-form-factor connector that offers a port density equal to the modular jack.

Standard Length Cables					
Part #	Cable Length	Unit Price	5-9 20% Off	10-19 25% Off	20 or more 30% Off
GCFAZLL01	1 m	43.94	35.15	32.95	30.76
GCFAZLL02	2 m	45.70	36.56	34.27	31.99
GCFAZLL03	3 m	47.46	37.97	35.59	33.22
GCFAZLL05	5 m	50.98	40.78	38.23	35.68
GCFAZLL10	10 m	59.78	47.82	44.83	41.84
Custom Length Cable Pricing					Click Here

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Fiber Optic Adapters
Fiber Attenuators
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Singlemode Duplex
Singlemode Simplex
Fibre Channel
Fire Wire
IEEE-488
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KVM Switchs & Cables
Printer Cables
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OEM Customers

GoCables Discount 20% to 30% Off

All sale pricing is for Web Orders ONLY

The quantity discount for each product is located on the product page. Discounts will be combined for each product code and displayed at the bottom of the shopping cart and on your invoice.

The GoCables production facility is well equipped with Videconn(TM) video inspection scope and monitor for easy detection of scratches, cracks, dirt and any other undesirable conditions during production. Optical fiber inspection scopes are used for final inspection. Polishing of the ceramic ferrules