



TPC Benchmark™ C Full Disclosure Report

**Unisys ES7000 Orion 540
Enterprise Server (16P)**

using

Microsoft SQL Server 2000 Enterprise Edition

on

**Microsoft Windows Server 2003,
Datacenter Edition**

**First Edition
June 14, 2004**

First Edition – June 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.

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

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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 (16P). 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.

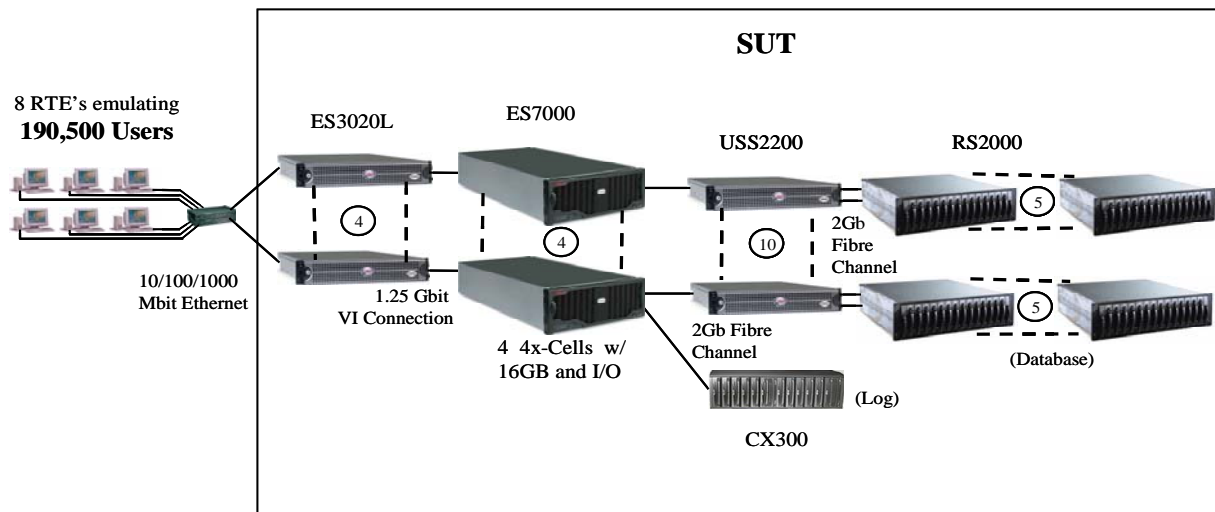
Executive Summary

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		TPC-C Rev. 5.2
	Enterprise Server (16P)		Report Date June 14, 2004
	TPC-C Throughput	Price Performance	Availability Date
\$1,207,108	237,869 tpmC	\$5.08 / tpmC	June 14, 2004
Processors/ Cores/Threads	Database Manager	Operating System	Other Software
16/16/32 Database 8/8/16 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++
190,500			



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

ES7000 Orion 540

Enterprise Server

16x 3.0GHz Intel® Xeon™ MP
w/ 4MB L3 cache,
64 GB memory,
1 internal disk controller,
1x 40GB internal disk,
11 PCI Fibre Channel controllers,
4 PCI VI controllers

Storage

USS2200/RS2000 & CX300

700x 18GB + 10x 146GB
Hot-Pluggable,
External Fibre Channel disks,
12 FC RAID controllers

System Components	Server		Clients (each of 4)	
	Quantity		Quantity	
Processors/Cores/Threads	16/16/32	3.0GHz Intel® Xeon™ Processor MP, 4MB Lvl 3 Cache	2/2/4	3.06GHz Intel® Xeon™ Processor, 1MB Lvl 2 Cache
Memory	4	16 GB	4	512 MB
Disk Controllers	11	PCI Fibre Channel	1	Inbuilt SCSI
Disk Drives	1	Inbuilt (boot media)		
	700	18GB FC (17.1 GB useable)		
	10	146GB FC (136.6 GB useable)	1	18GB SCSI (16.9 GB useable)
	1	40GB boot (37.3 GB useable)		
Total Storage		12.5 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 (16P)				TPC-C Rev. 5.2		
					Report Date June 14, 2004		
Description	Part No.	Third Party		Unit Price	Qty.	Extended Price	3 yr.Maint. Price
		Brand	Price				
Server Hardware:							
SYS: ES7000-540, 16x 3.0GHz, 128MB Cch, 64GB Mem	ES7540167-140			1	1	\$283,100	\$13,968
Inbuilt Disk Controller, 1x 40GB Disk (boot media)	Included						
SYS MGT: Server, Sentinel Management	SEN70003-MSV			1	1	\$2,585	\$456
SYS MGT: O/S Windows 2000 Server	WSS200004-EN	2	1	\$949	1	\$949	* Inc. below
CTRL: HBA, PCI, 2Gb Fibre Channel, 2-Port,	FC76222-P64			1	11	\$31,350	
CTRL: HBA, PCI, VI Connection, 1-Port & Cable	PCII0001-CXG			1	4	\$3,020	
I/F: Monitor, 15-inch Color, Kybrd, Mse & Cable	ES70003-UIF			1	1	\$570	
Server Software:							
O/S: Windows 2003 Srvr, Datacenter Edtn, 16P, 1yr Lsub	WND2316-TSP	2	1	\$35,112	1	\$35,112	
O/S: Windows 2003 Server, DC Lmt'd Sbscrptn, 1yr.	DUS200316-TSP	2	1	\$3,173	2	\$6,346	
O/S: Windows 2003 Server DC Support, 24x7x4, 1yr.	GTS7524016-SSA	2	1	\$12,574	3		\$37,722
APP: Microsoft SQL Server 2000 Enterprise Edtn, 16P	DQL200316-LX	2	1	\$212,800	1	\$212,800	* Inc. below
SRVC: Microsoft Database Server Support Package*	PRO-PRORS-16U-01	2	2	\$1,950	3		\$5,850
Server Subtotal						\$575,832	\$57,996
Storage Hardware:							
DISK: 1.5TB Pkg, 84x 18GB, 15Krpm, + 10% spares **	JBD201815-P84			1	9	\$29,839	Spared
DISK: 0.3 TB Pkg, 14x 18GB, 15Krpm, + 10% spares **	JBD201815-P14			1	1	\$7,763	Spared
DISK: 146GB, 10Krpm, 2Gb FC, + 10% Spares **	CXR14610-2GF			1	12	\$2,508	Spared
RCK: FC 2Gb Storage, Standard, Copper/Copper I/F	JBD2002-SA			1	30	\$3,010	\$15,120
RCK: FC 2Gb Storage, Standard, Optical/Copper I/F	JBD2011-SA			1	20	\$3,214	\$64,280
CTRL: Symmetric Disk Virt. 2x2GHz, 512MB Mem	RMM20103-ELS			1	10	\$4,559	\$11,040
CTRL: USS, Fibre Channel HBA, 1-Port, 64-bit PCI	RMM20701-TAR			1	30	\$1,805	\$12,960
APP: Unisys Storage Sentinel 2200 SDV Software	USS10300-SW			1	1	\$5,472	\$4,068
APP: Storage Sentinel SDV SW, 20TB License	USS20320-LIC			1	1	\$37,484	
CBL: FC, Copper, HSDC2 Conn's, 0.3m	JBD20003-CCL			1	30	\$54	\$1,620
CBL: FC, Optical, LC->LC Conn's, 10m + 10% Spares **	GCFAZLL10	3	3	\$42	35	\$1,470	Spared
RCK: Rack Mount Kit, Disk Enclosure	JBD2001-RMK			1	50	\$190	\$9,500
CTRL: DPE: 2 RAID Cntrl, 1GB Cache ea., 0 Disk	CX300-DPE			1	1	\$19,000	\$2,988
SYS MGT: Storage, Navisphere Agent	CXN600-WIN			1	1	\$646	\$324
SYS MGT: Storage, Navisphere Manager	CX2002-DPE			1	1	\$1,549	\$720
SYS MGT: Storage, Navisphere Manager	CX200-DAE			1	1	\$7,695	\$3,636
SWTCH: Switch, 10/100/1000Mb Ethernet	GS516-T16			1	1	\$2,850	
CBL: Ethernet, Cat5e, RJ45 Conn's, 10ft + 10% Spares *	GCPO888910	3	3	\$2	14	\$28	Spared
SWTCH: Switch, 8-port KVM	SWC81-SXR			1	2	\$1,520	\$2,304
CBL: Cable, KVM, 12 foot	CBL121-SWC			1	14	\$143	\$2,002
KBD: Keyboard & Drawer, Rackmount	KBR28301-SXR			1	2	\$333	\$666
MON: Display, Rackmount LCD	MON2145-LCD			1	2	\$2,565	\$5,130
PWR: Distribution Strip, 9-Plug, 220V	SFR9-PWR			1	18	\$162	\$2,916
CBL: Power, U.S. (Domestic), C20 - L6-20P	USE1936-LC6			1	18	\$86	\$1,548
CAB: 36U x 19" x 41" Open Front Cabinet	HRT361941-OFT			1	6	\$1,425	\$8,550
Storage Subtotal						\$671,896	\$63,960
Client Hardware:							
SYS: ES3020L w/ 1x 3.0GHz Proc., 0MB Mem	ESL302021-306			1	4	\$1,870	\$5,808
PROC: 1x 3.0GHz Intel Xeon/1MB Cache	CPL3020302-1MB			1	4	\$1,199	\$4,796
MEM: 2GB, 4x 512MB DIMMs DDR SDRAM	DIM3020042-2GB			1	4	\$1,465	\$5,860
RCK: ESL3020 Disk HS Backpanel, 1x4	HBP3020101-51			1	4	\$265	\$1,060
DISK: 18GB 15Krpm U320 3.5 Internal	HDP18115-DC4			1	4	\$333	\$1,332
RCK: ESL3020 Universal Rack Kit	ESL3020-VRL			1	4	\$333	\$1,332
CTRL: HBA, PCI, VI Connection, 1-Port & Cable	PCII0001-CXG			1	4	\$755	\$3,020
Client Software:							
O/S: Windows Server 2003, Standard Edition	P73-00295	2	2	\$738	4	\$2,952	* Inc. above
ACC: Visual C++ Standard	254-00170	2	2	\$109	1	\$109	* Inc. above
Client Subtotal						\$27,941	\$5,808
Total						\$1,275,669	\$127,764
						(\$196,325)	
Notes:							
1. 3rd Party Brand & Pricing: 1 = CRI Product Price, Unisys Maintenance Price 2 = Microsoft 3 = GoCables						Three Year Cost of Ownership: \$1,207,108 tpmC Rating: 237,869 \$/ tpmC: \$5.08	
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.							
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: 237,869 tpmC

Response Times, in seconds

Transaction	90th %ile	Average	Maximum
New-Order	0.50	0.35	5.73
Payment	0.43	0.30	5.70
Order-Status	0.45	0.32	5.38
Delivery (interactive portion)	0.34	0.22	2.36
Delivery (deferred portion)	0.38	0.22	2.59
Stock-Level	1.28	0.88	4.33
Menu	0.34	0.22	2.55

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)	4.00%
Stock-Level	4.02%

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 / 10.07	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	74 minutes
Measurement interval (M)	120 minutes
Transactions (all types) completed during measurement interval	63,528,058
Ramp-down time	5 minutes

Checkpointing:

Number of checkpoints	4
Checkpoint interval	30 minutes

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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 (16P) 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.

0.1. 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.

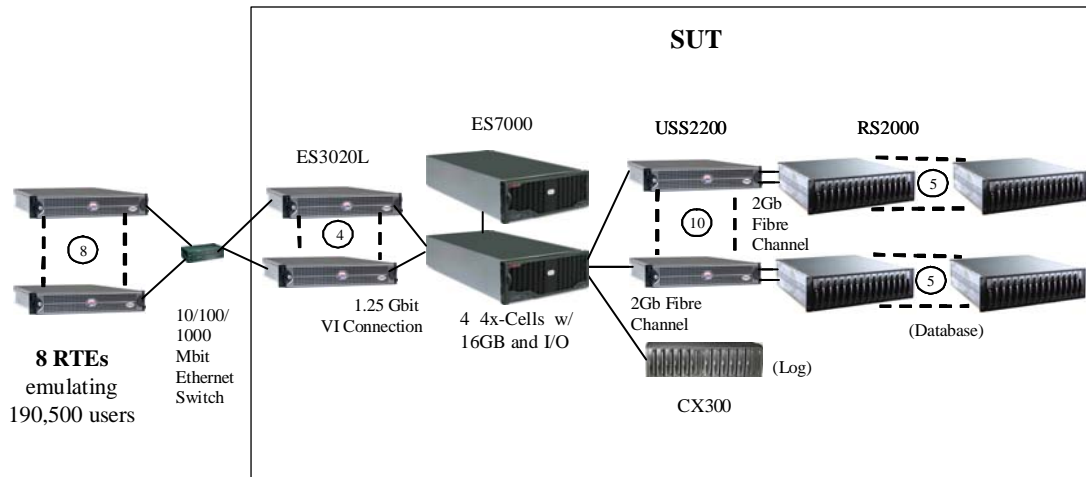
0.7. Configuration Diagrams

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 (16P) is illustrated in Figure 0.1. Tables 4.3 and 4.5 contain a detailed explanation of the disk configuration.

Figure 0.1: Benchmarked Configuration

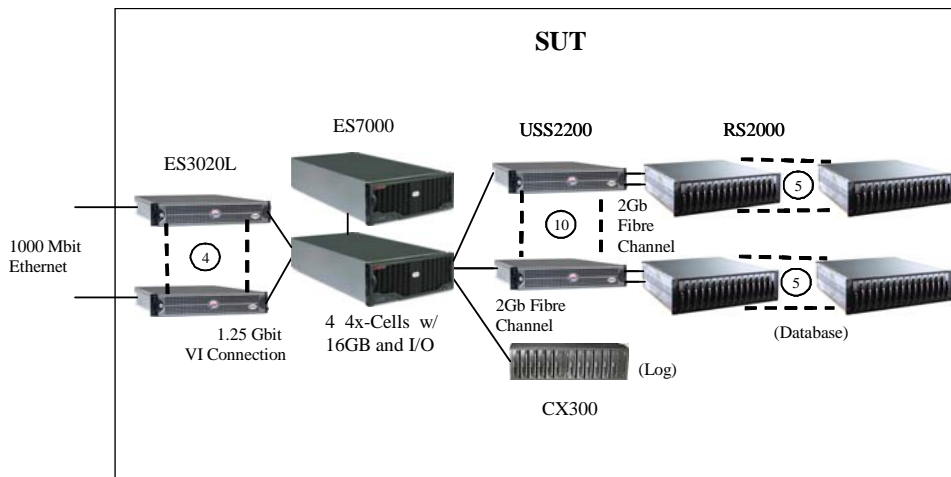


Clients (each of 4)
ES3020L Server
 2x 3.06GHz Intel® Xeon™
 w/ 1MB L2 cache,
 2 GB memory,
 1x 18GB internal disk,
 2 Inbuilt 10/100/1000Mb
 Ethernet (1 used),
 1 PCI VI controller

**ES7000 Orion 540
 Enterprise Server**
 16x 3.0GHz Intel® Xeon™ MP
 w/ 4MB L3 cache,
 64 GB memory,
 1 internal disk controller,
 1x 40GB internal disk,
 11 PCI Fibre Channel controllers,
 4 PCI VI controller

**Storage
 USS2200/RS2000 & CX300**
 700x 18GB + 10x 146GB
 Hot-Pluggable,
 External Fibre Channel disks,
 12 FC RAID controllers

Figure 0.2: Priced 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

**ES7000 Orion 540
 Enterprise Server**
 16x 3.0GHz Intel® Xeon™ MP
 w/ 4MB L3 cache,
 64 GB memory,
 1 internal disk controller,
 1x 40GB internal disk,
 11 PCI Fibre Channel controllers,
 4 PCI VI controller

**Storage
 USS2200/RS2000 & CX300**
 700x 18GB + 10x 146GB
 Hot-Pluggable,
 External Fibre Channel disks,
 12 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 19,890 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 19,890 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 19,890 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 19,400 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	19,400
District	194,000
Customer	582,000,000
History	582,000,000
Order	582,000,000
New-Order	174,600,000
Order Line	5,819,981,351
Stock	1,940,000,000
Item	100,000

350 rows from the warehouse table were deleted 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 700 18GB disks and the transaction log over 5 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.

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 4.4: ES7000 Server HBA-PCI Slot Map

4x3.0GHz Xeon Processor MP	16GB	Cell-3		Cell-2		16GB	4x3.0GHz Xeon Processor MP		
		Bus-3-1-2	FC HBA – Log	Bus-2-1-2					
		Bus-3-1-1	FC HBA – USS10	Bus-2-1-1	FC HBA – USS8				
		Bus-3-0-2		Bus-2-0-2	FC HBA – USS7				
		Bus-3-0-1	FC HBA – USS9	Bus-2-0-1	FC HBA – USS6				
		Bus-3-0-3	VI controller - 8	Bus-2-0-3	VI controller - 7				
4x3.0GHz Xeon Processor MP	16GB	Cell-1		Cell-0		16GB	4x3.0GHz Xeon Processor MP		
		Bus-1-1-2	VI controller - 6	Bus-0-1-2	VI controller - 5				
		Bus-1-1-1	FC HBA – USS5	Bus-0-1-1	FC HBA – USS2				
		Bus-1-0-2	FC HBA – USS4	Bus-0-0-2	FC HBA – USS1				
		Bus-1-0-1	FC HBA – USS3	Bus-0-0-1					
		Bus-1-0-3		Bus-0-0-3	Uniscreen CPH				

Table 4.5: Disk Management Configuration

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

		Logical Disk#	Partition 1 Size=637.17 GB FS=Raw Junction Point
CX300	SP		
1	A,B	101	C:\BigDb\dbLogs\tpcclog1

Disk Management Configuration							
USS	HBA	Logical Disk#	Partition 1 Size=4.96GB FS=Raw Junction Point	Partition 2 Size=7.74GB FS=Raw Junction Point	Partition 3 Size=3.94GB FS=Raw Junction Point	Partition 4 Size=102.99GB 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	16	C:\BigDb\cabC\ord6	C:\BigDb\cabC\cs6	C:\BigDb\cabC\misc6	Unallocated	
	1	17	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	
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	

Table 4.5: Disk Management Configuration (Continued)

Disk Management Configuration							
USS	HBA	Logical Disk#	Partition 1 Size=4.96GB FS=Raw Junction Point	Partition 2 Size=7.74GB FS=Raw Junction Point	Partition 3 Size=3.94GB FS=Raw Junction Point	Partition 4 Size=102.99GB FS=NTFS Junction Point	
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	77	C:\BigDb\cabH\ord7	C:\BigDb\cabH\cs7	C:\BigDb\cabH\misc7	Unallocated	
	1	78	C:\BigDb\cabH\ord8	C:\BigDb\cabH\cs8	C:\BigDb\cabH\misc8	Unallocated	
	1	79	C:\BigDb\cabH\ord9	C:\BigDb\cabH\cs9	C:\BigDb\cabH\misc9	Unallocated	
	1	80	C:\BigDb\cabH\ord10	C:\BigDb\cabH\cs10	C:\BigDb\cabH\misc10	Unallocated	
9	0	81	C:\BigDb\cabI\ord1	C:\BigDb\cabI\cs1	C:\BigDb\cabI\misc1	C:\BigDb\dbBackups\backupI1	
	0	82	C:\BigDb\cabI\ord2	C:\BigDb\cabI\cs2	C:\BigDb\cabI\misc2	C:\BigDb\dbBackups\backupI2	
	0	83	C:\BigDb\cabI\ord3	C:\BigDb\cabI\cs3	C:\BigDb\cabI\misc3	Unallocated	
	0	84	C:\BigDb\cabI\ord4	C:\BigDb\cabI\cs4	C:\BigDb\cabI\misc4	Unallocated	
	0	85	C:\BigDb\cabI\ord5	C:\BigDb\cabI\cs5	C:\BigDb\cabI\misc5	Unallocated	
	0	86	C:\BigDb\cabI\ord6	C:\BigDb\cabI\cs6	C:\BigDb\cabI\misc6	Unallocated	
	1	87	C:\BigDb\cabI\ord7	C:\BigDb\cabI\cs7	C:\BigDb\cabI\misc7	Unallocated	
	1	88	C:\BigDb\cabI\ord8	C:\BigDb\cabI\cs8	C:\BigDb\cabI\misc8	Unallocated	
	1	89	C:\BigDb\cabI\ord9	C:\BigDb\cabI\cs9	C:\BigDb\cabI\misc9	Unallocated	
	1	90	C:\BigDb\cabI\ord10	C:\BigDb\cabI\cs10	C:\BigDb\cabI\misc10	Unallocated	
10	0	91	C:\BigDb\cabJ\ord1	C:\BigDb\cabJ\cs1	C:\BigDb\cabJ\misc1	C:\BigDb\dbBackups\backupJ1	
	0	92	C:\BigDb\cabJ\ord2	C:\BigDb\cabJ\cs2	C:\BigDb\cabJ\misc2	C:\BigDb\dbBackups\backupJ2	
	0	93	C:\BigDb\cabJ\ord3	C:\BigDb\cabJ\cs3	C:\BigDb\cabJ\misc3	Unallocated	
	0	94	C:\BigDb\cabJ\ord4	C:\BigDb\cabJ\cs4	C:\BigDb\cabJ\misc4	Unallocated	
	0	95	C:\BigDb\cabJ\ord5	C:\BigDb\cabJ\cs5	C:\BigDb\cabJ\misc5	Unallocated	
	0	96	C:\BigDb\cabJ\ord6	C:\BigDb\cabJ\cs6	C:\BigDb\cabJ\misc6	Unallocated	
	1	97	C:\BigDb\cabJ\ord7	C:\BigDb\cabJ\cs7	C:\BigDb\cabJ\misc7	Unallocated	
	1	98	C:\BigDb\cabJ\ord8	C:\BigDb\cabJ\cs8	C:\BigDb\cabJ\misc8	Unallocated	
	1	99	C:\BigDb\cabJ\ord9	C:\BigDb\cabJ\cs9	C:\BigDb\cabJ\misc9	Unallocated	
	1	100	C:\BigDb\cabJ\ord10	C:\BigDb\cabJ\cs10	C:\BigDb\cabJ\misc10	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 237,869

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	0.35	5.73	0.50
Payment	0.30	5.70	0.43
Order Status	0.32	5.38	0.45
Delivery (interactive)	0.22	2.36	0.34
Delivery (deferred)	0.22	2.59	0.38
Stock-Level	0.88	4.33	1.28
Menu	0.22	2.55	0.34

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	10.07	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

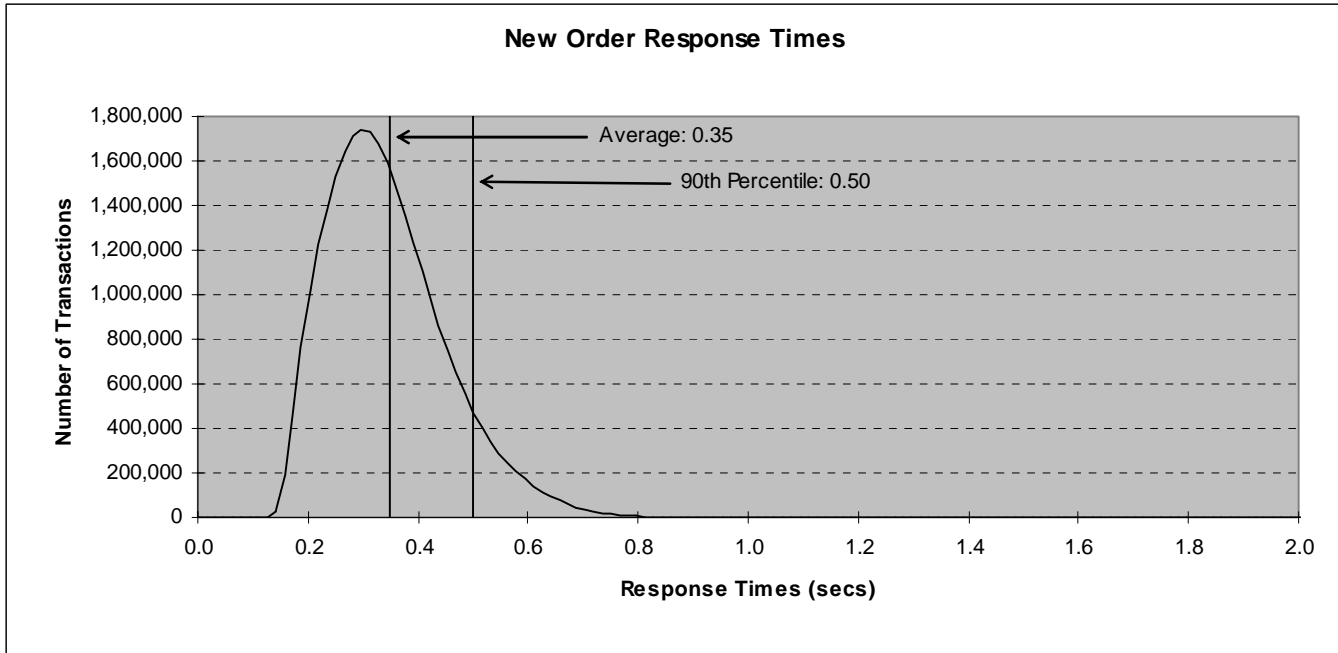


Figure 5.2: Payment Response Time Distribution

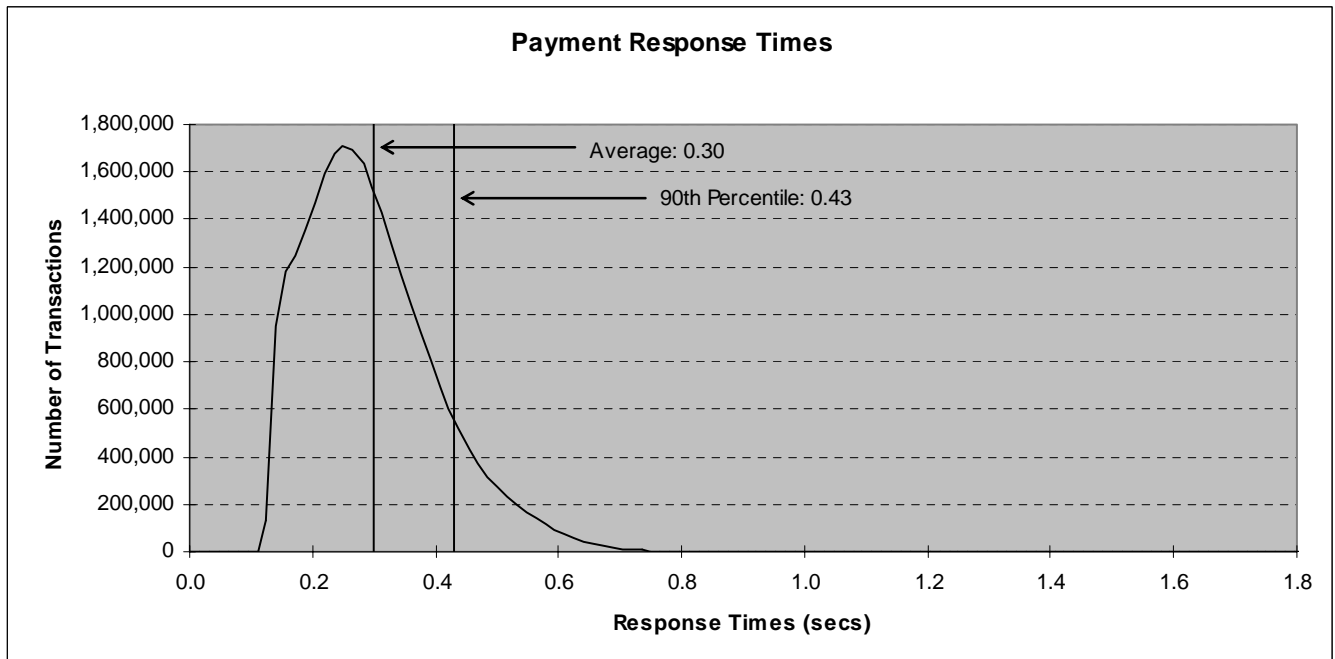


Figure 5.3: Order Status Response Time Distribution

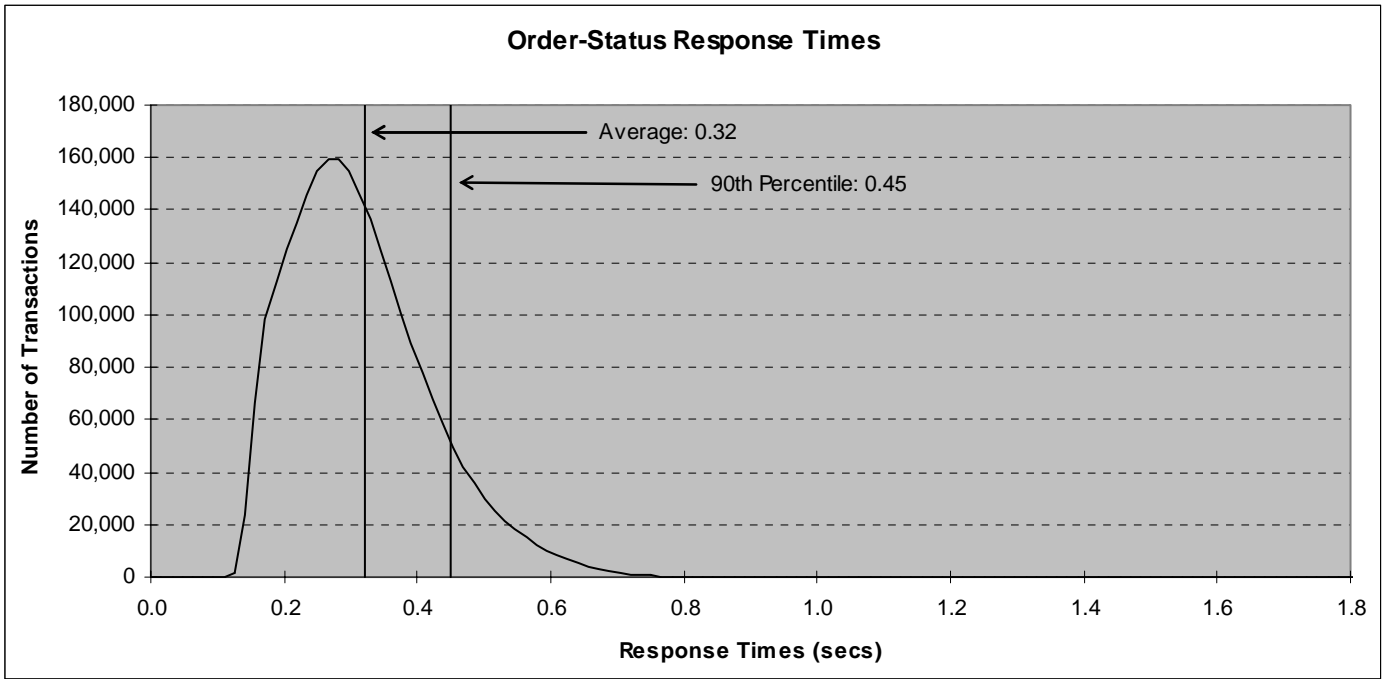


Figure 5.4: Delivery Response Time Distribution

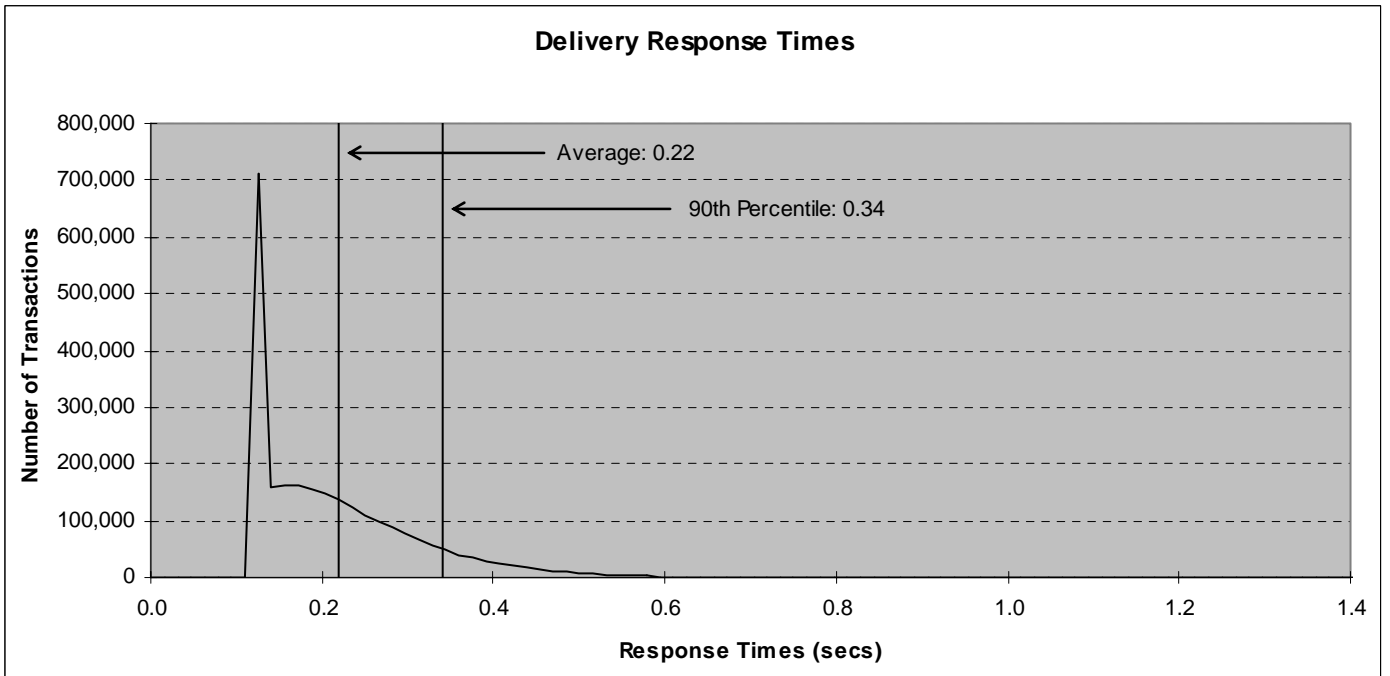
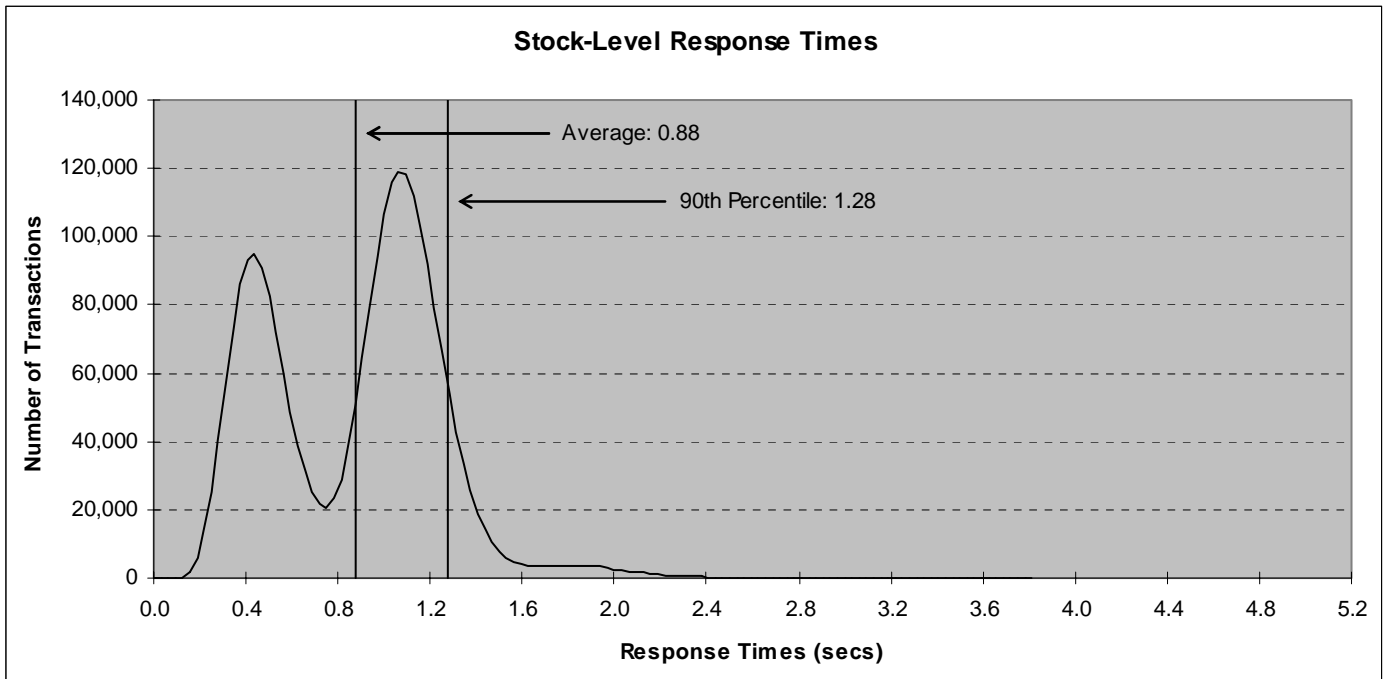


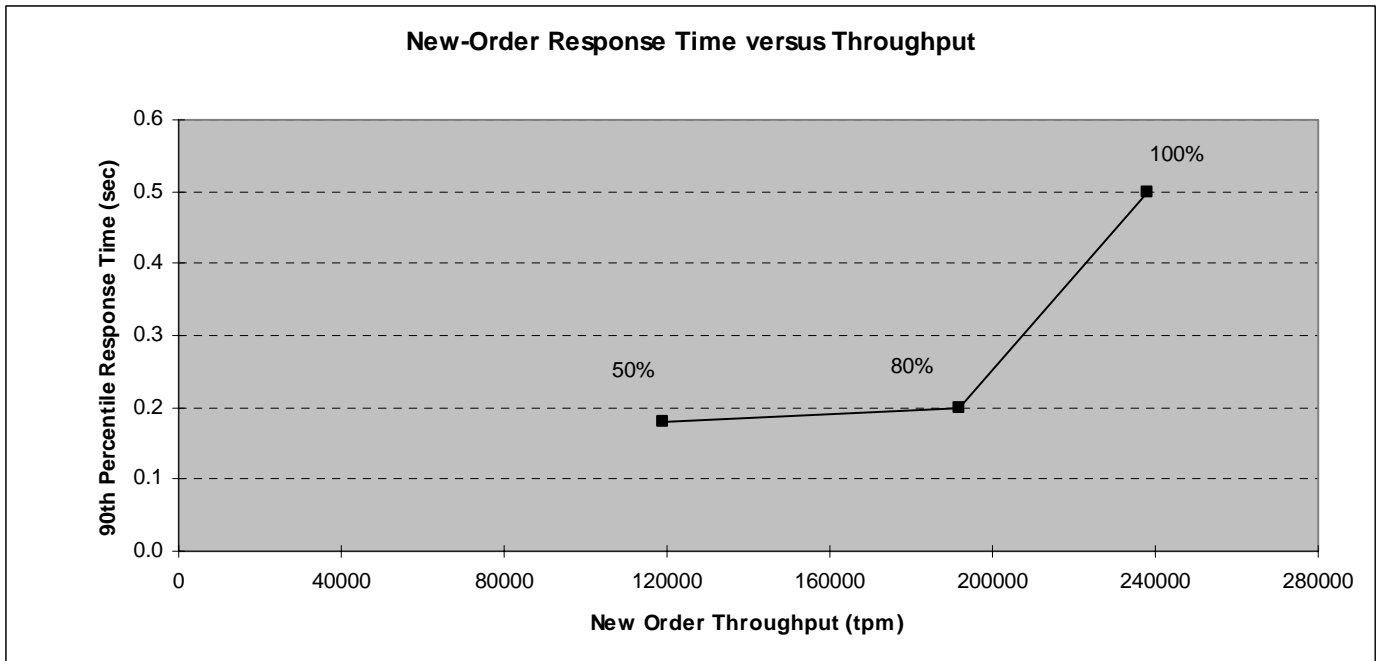
Figure 5.5: Stock Level Response Time Distribution



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)

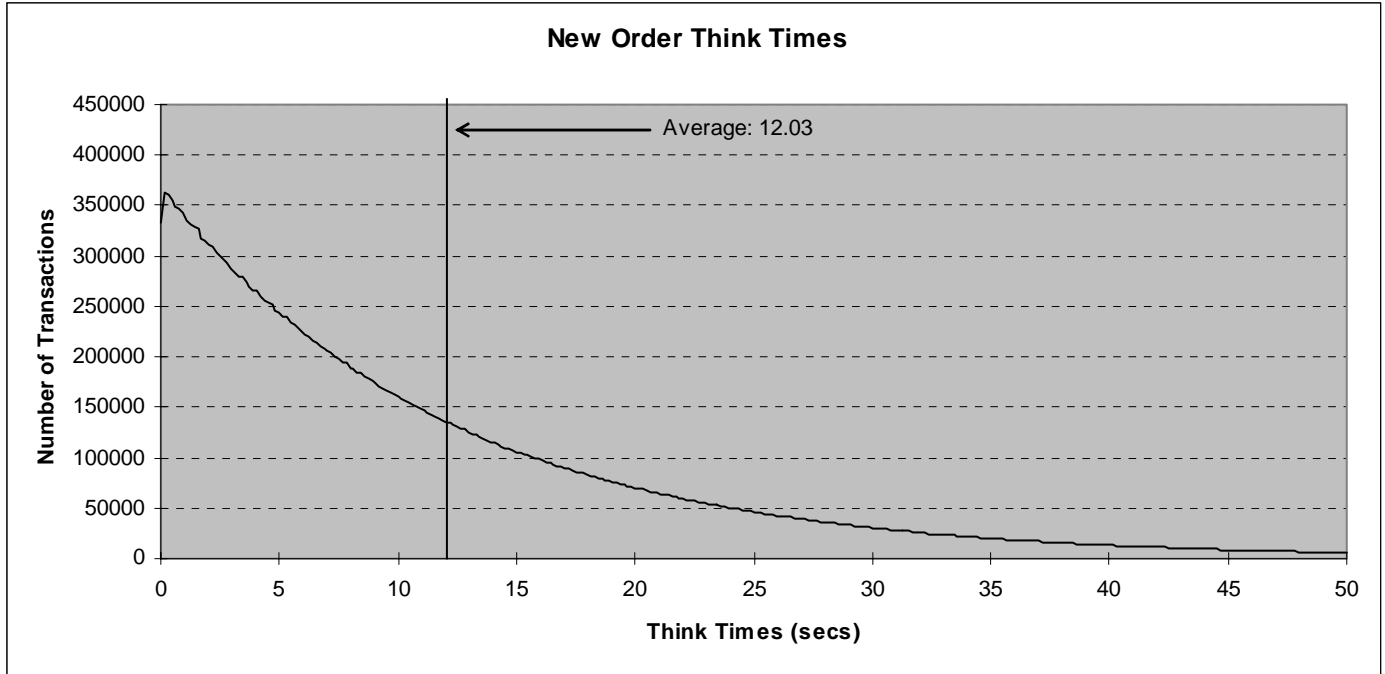
Figure 5.6: New Order Response Time versus Throughput



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)

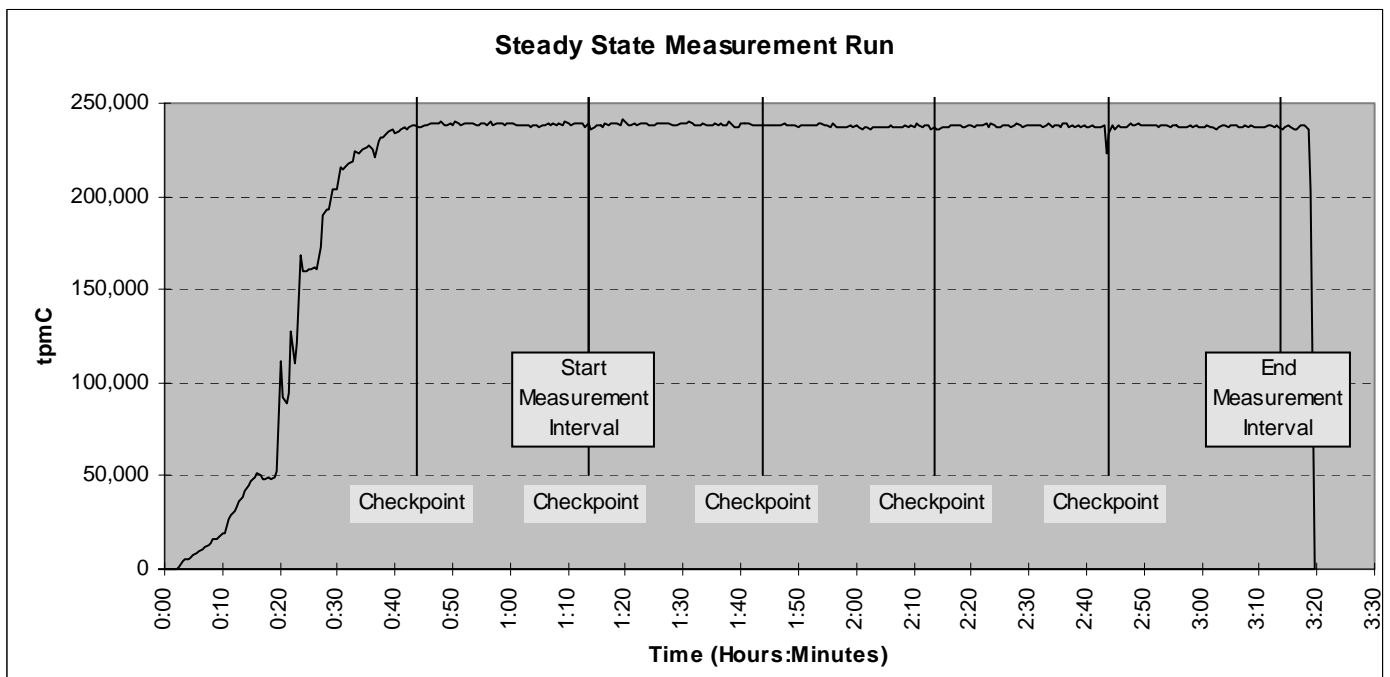
Figure 5.7: New Order Think Time Distribution



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	60.00%
Order Status	Non-primary key access	60.00%
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	4.00%
	Stock-Level	4.02%

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 6 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	1:13:36	3:13:36	7200
1st Checkpoint	1:13:42	1:43:29	1787
2nd Checkpoint	1:43:42	2:13:29	1787
3rd Checkpoint	2:13:42	2:43:28	1786
4th Checkpoint	2:43:42	3:13:28	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)

No terminal connections were lost.

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 four (4) VI 1.25 gigabit-per-second LAN adapters. Each was direct connected to a VI adapter in the four (4) 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.

7.1. 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, KB834628, and KB827452 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, 16 processor
- One (1) Microsoft SQL Server 2000 Enterprise Edition license, 16 processor
- Four (4) 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

9.1. 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 (16P) representing:

Performance Metrics, Inc.
P.O. Box 984
Klamath, CA 95548-0984

Phone: (707) 482-0575
Fax: (707) 482-0115
Email: Lorna@PerfMetrics.com

The attestation letter is shown on the next 2 pages.



PERFORMANCE METRICS INC.
TPC Certified Auditors

May 21, 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 (16P)
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 (16P)				
CPU's	Memory	Disks	90% Response	TpmC
16 Intel Xeon MP @ 3.0 GHz	Main: 64 GB Cache: 4MB each	700 @ 18GB 10 @ 146GB 1 @ 40GB	0.50 sec	237,869
4 Clients: Unisys ES3020L Server				
2 Intel Xeon @ 3.06 GHz	Main: 2 GB Cache: 1MB	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 19,400 warehouses, of which 19,050 were active during the Measured Interval. I verified that the unused warehouse rows were deleted.

PERFORMANCE METRICS INC.
TPC Certified Auditors

- The ACID properties were successfully demonstrated.
- The durability data loss and log loss tests were performed on the fully scaled database with 19,890 users and 1,989 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 190,500 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:

None

Sincerely,



Tom Sawyer
Auditor

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 ERRRTXT_CMD_UNKNOWN "Unrecognized Command"
#define ERR_ALREADY_LOGGEDIN -11
#define ERRRTXT_ALREADY_LOGGEDIN "Already Logged In"
#define ERR_TERMID -12
#define ERRRTXT_TERMID "TermId or SyncId in Error"
#define ERR_FORM_UNKNOWN -13
#define ERRRTXT_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
#ifdef
    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
#ifdef
    short d_id;
    long c_id;
    short c_d_id;
#endif
#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 * szTMinError =
    HTTPHdr "<HTML>"
    "<HEAD><TITLE>Welcome To TPC-C</TITLE></HEAD><BODY>"
    "<B>TPCC Extension Error (TMin 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 WINAPI 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 (TMonInit(&pTPCC->tsTMon))
    {
        wsprintf(pDiag, "ThrAtt(%ld): TMonInit %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,szTMinInitError,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
    #endif
    {
        FormatLogin(pOut,pTPCC->ErrTxt);
        return(TRUE);
    };
    if (sWId < 1)
    {
        sprintf(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)
    {
        sprintf(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)
    {
        sprintf(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:
            sprintf(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;
    wprintf(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)
{
    wprintf(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 += wprintf(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 += wprintf(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 += wprintf(pOut + iInx,
            "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,
        "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>
        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 += sprintf(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)
    {
        sprintf(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;

        sprintf(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)
    {
        sprintf(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 += sprintf(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)))
    {
        fprintf(pTPCC->ErrTxt,"Error - Missing %s Key",pKey);
        pTPCC->iStatusId = ERR_MISSING_KEY;
        return(TRUE);
    };
    if (pTPCC->szWork[0] != 0 )
    {
        if (CheckNumeric(pTPCC->szWork))
        {
            fprintf(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)))
    {
        fprintf(pTPCC->ErrTxt,"Error - Missing %s Key",pKey);
        pTPCC->iStatusId = ERR_MISSING_KEY;
        return(TRUE);
    };
    uLen = strlen(pTPCC->szWork);
    if (uLen > uMax)
    {
        fprintf(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)))
    {
        fprintf(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
    {

```

```

    wprintf(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)
{
    wprintf(pOut, "%s<BR>%s<BR>%s",szFormLogin,pAddText,HTMLTrailer);
}; // FormatLogin

//=====
//
// Function name: FormatMenu
//
//=====
VOID FormatMenu(CHAR * pOut,TPCC_STATE * pTPCC)
{
    wprintf(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\">"

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```

        "<INPUT TYPE=\"hidden\" NAME=\"TERMINID\" 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 += wprintf(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>"

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```

" <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 += sprintf (pOut + iInx,
" <PRE>
"Date:<BR><BR>"
Payment<BR><BR>"
);
#endif
"Warehouse: %6.6d",
#else
#endif
}; // FormatPayment

```

```

"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>"
#endif
"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><BR>"
);
#endif
"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=\"TERMIN\" 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=\"TERMIN\" 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\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 TMinInit(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: TMinInit
```

```
//
// Result:
// FALSE Initialization completed successfully
// TRUE Initialization failed
//
//=====
BOOL TMinInit(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);
}; // TMinInit

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

//=====
//
// 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: TimebElapsedd
//
//=====
```

```

//=====
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: TimebAddMilliseconds
//
//=====
VOID TimebAddMilliseconds(struct _timeb * p_tb, TMILLI tmMilliseconds)
{
    time_t ttSecs;
    unsigned short utm;

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

    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 DEFAULTTEVENTLOG 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 "oidl.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 OSDData;
        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;
    SQLUIINTEGER m_BindOffset;
    SQLUIINTEGER 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)
        {
Failed\n"
            wsprintf(szDiag,"DllMain(%s): Allocate Environment
                "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
// strcpy 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;
        wcsncpy(&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 committed.");
            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 committed.");
    return(S_OK);
};
if (m_iTPRslt == SVCERR_NOCUSTOMER)
{
    strcpy(ppd->execution_status,"Invalid Customer id,name.");
    return(S_OK);
};
if (m_iTPRslt == SVCERR_DEADLOCK)
    sprintf(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];
    sprintf(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)
    {
        sprintf(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
        )
    {
        sprintf(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)
        {
            sprintf(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];
                sprintf(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 O1
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 committed.");
    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 committed.");
    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\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"
with format, stats = 1
select @enddate = getdate()
select 'End date:', convert(varchar(30),@enddate,9)
select 'Elapsed time (in seconds):', datediff(second, @startdate,
@enddate)
go
restore verifyonly 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\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"
go
```

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\cab\misc1\",
    SIZE = 4020MB, FILEGROWTH = 0),
(
    NAME = MSSQL_miscB1,
    FILENAME = "C:\Bigdb\cabB\misc1\",
    SIZE = 4020MB, FILEGROWTH = 0),
(
    NAME = MSSQL_miscC1,
    FILENAME = "C:\Bigdb\cabC\misc1\",
    SIZE = 4020MB, FILEGROWTH = 0),
(
    NAME = MSSQL_miscD1,
    FILENAME = "C:\Bigdb\cabD\misc1\",
    SIZE = 4020MB, FILEGROWTH = 0),
(
    NAME = MSSQL_miscE1,
    FILENAME = "C:\Bigdb\cabE\misc1\",
    SIZE = 4020MB, FILEGROWTH = 0),
(
    NAME = MSSQL_miscF1,
    FILENAME = "C:\Bigdb\cabF\misc1\",
    SIZE = 4020MB, FILEGROWTH = 0),
(
    NAME = MSSQL_miscG1,
    FILENAME = "C:\Bigdb\cabG\misc1\",
    SIZE = 4020MB, FILEGROWTH = 0),
(
    NAME = MSSQL_miscH1,
```



```

    SIZE      = 4020MB,  FILEGROWTH = 0),
( NAME = MSSQL_miscJ9,
  FILENAME = "C:\Bigdb\cabJ\misc9\ ",
  SIZE      = 4020MB,  FILEGROWTH = 0),
( NAME = MSSQL_miscA10,
  FILENAME = "C:\Bigdb\cabA\misc10\ ",
  SIZE      = 4020MB,  FILEGROWTH = 0),
( NAME = MSSQL_miscB10,
  FILENAME = "C:\Bigdb\cabB\misc10\ ",
  SIZE      = 4020MB,  FILEGROWTH = 0),
( NAME = MSSQL_miscC10,
  FILENAME = "C:\Bigdb\cabC\misc10\ ",
  SIZE      = 4020MB,  FILEGROWTH = 0),
( NAME = MSSQL_miscD10,
  FILENAME = "C:\Bigdb\cabD\misc10\ ",
  SIZE      = 4020MB,  FILEGROWTH = 0),
( NAME = MSSQL_miscE10,
  FILENAME = "C:\Bigdb\cabE\misc10\ ",
  SIZE      = 4020MB,  FILEGROWTH = 0),
( NAME = MSSQL_miscF10,
  FILENAME = "C:\Bigdb\cabF\misc10\ ",
  SIZE      = 4020MB,  FILEGROWTH = 0),
( NAME = MSSQL_miscG10,
  FILENAME = "C:\Bigdb\cabG\misc10\ ",
  SIZE      = 4020MB,  FILEGROWTH = 0),
( NAME = MSSQL_miscH10,
  FILENAME = "C:\Bigdb\cabH\misc10\ ",
  SIZE      = 4020MB,  FILEGROWTH = 0),
( NAME = MSSQL_miscI10,
  FILENAME = "C:\Bigdb\cabI\misc10\ ",
  SIZE      = 4020MB,  FILEGROWTH = 0),
( NAME = MSSQL_miscJ10,
  FILENAME = "C:\Bigdb\cabJ\misc10\ ",
  SIZE      = 4020MB,  FILEGROWTH = 0),
FILEGROUP      MSSQL_cs_fg
( NAME = MSSQL_csA1,
  FILENAME = "C:\Bigdb\cabA\cs1\ ",
  SIZE      = 7920MB,  FILEGROWTH = 0),
FILEGROUP      MSSQL_ord_fg
( NAME = MSSQL_ordA1,
  FILENAME = "C:\Bigdb\cabA\ord1\ ",
  SIZE      = 5060MB,  FILEGROWTH = 0)
LOG ON
( NAME      = MSSQL_tpcc_log1,
  FILENAME = "C:\Bigdb\dblogs\tpcclog1\ ",
  SIZE      = 564833MB, FILEGROWTH = 0)
go
ALTER DATABASE tpcc ADD FILE
( NAME = MSSQL_csB1,
  FILENAME = "C:\Bigdb\cabB\cs1\ ",
  SIZE      = 7920MB,  FILEGROWTH = 0),
( NAME = MSSQL_csC1,
  FILENAME = "C:\Bigdb\cabC\cs1\ ",
  SIZE      = 7920MB,  FILEGROWTH = 0),
( NAME = MSSQL_csD1,
  FILENAME = "C:\Bigdb\cabD\cs1\ ",
  SIZE      = 7920MB,  FILEGROWTH = 0),
( NAME = MSSQL_csE1,
  FILENAME = "C:\Bigdb\cabE\cs1\ ",
  SIZE      = 7920MB,  FILEGROWTH = 0),
( NAME = MSSQL_csF1,

```

```

  FILENAME = "C:\Bigdb\cabF\cs1\ ",
  SIZE      = 7920MB,  FILEGROWTH = 0),
( NAME = MSSQL_csG1,
  FILENAME = "C:\Bigdb\cabG\cs1\ ",
  SIZE      = 7920MB,  FILEGROWTH = 0),
( NAME = MSSQL_csH1,
  FILENAME = "C:\Bigdb\cabH\cs1\ ",
  SIZE      = 7920MB,  FILEGROWTH = 0),
( NAME = MSSQL_csI1,
  FILENAME = "C:\Bigdb\cabI\cs1\ ",
  SIZE      = 7920MB,  FILEGROWTH = 0),
( NAME = MSSQL_csJ1,
  FILENAME = "C:\Bigdb\cabJ\cs1\ ",
  SIZE      = 7920MB,  FILEGROWTH = 0),
( NAME = MSSQL_csA2,
  FILENAME = "C:\Bigdb\cabA\cs2\ ",
  SIZE      = 7920MB,  FILEGROWTH = 0),
( NAME = MSSQL_csB2,
  FILENAME = "C:\Bigdb\cabB\cs2\ ",
  SIZE      = 7920MB,  FILEGROWTH = 0),
( NAME = MSSQL_csC2,
  FILENAME = "C:\Bigdb\cabC\cs2\ ",
  SIZE      = 7920MB,  FILEGROWTH = 0),
( NAME = MSSQL_csD2,
  FILENAME = "C:\Bigdb\cabD\cs2\ ",
  SIZE      = 7920MB,  FILEGROWTH = 0),
( NAME = MSSQL_csE2,
  FILENAME = "C:\Bigdb\cabE\cs2\ ",
  SIZE      = 7920MB,  FILEGROWTH = 0),
( NAME = MSSQL_csF2,
  FILENAME = "C:\Bigdb\cabF\cs2\ ",
  SIZE      = 7920MB,  FILEGROWTH = 0),
( NAME = MSSQL_csG2,
  FILENAME = "C:\Bigdb\cabG\cs2\ ",
  SIZE      = 7920MB,  FILEGROWTH = 0),
( NAME = MSSQL_csH2,
  FILENAME = "C:\Bigdb\cabH\cs2\ ",
  SIZE      = 7920MB,  FILEGROWTH = 0),
( NAME = MSSQL_csI2,
  FILENAME = "C:\Bigdb\cabI\cs2\ ",
  SIZE      = 7920MB,  FILEGROWTH = 0),
( NAME = MSSQL_csJ2,
  FILENAME = "C:\Bigdb\cabJ\cs2\ ",
  SIZE      = 7920MB,  FILEGROWTH = 0),
( NAME = MSSQL_csA3,
  FILENAME = "C:\Bigdb\cabA\cs3\ ",
  SIZE      = 7920MB,  FILEGROWTH = 0),
( NAME = MSSQL_csB3,
  FILENAME = "C:\Bigdb\cabB\cs3\ ",
  SIZE      = 7920MB,  FILEGROWTH = 0),
( NAME = MSSQL_csC3,
  FILENAME = "C:\Bigdb\cabC\cs3\ ",
  SIZE      = 7920MB,  FILEGROWTH = 0),
( NAME = MSSQL_csD3,
  FILENAME = "C:\Bigdb\cabD\cs3\ ",
  SIZE      = 7920MB,  FILEGROWTH = 0),
( NAME = MSSQL_csE3,
  FILENAME = "C:\Bigdb\cabE\cs3\ ",
  SIZE      = 7920MB,  FILEGROWTH = 0),
( NAME = MSSQL_csF3,
  FILENAME = "C:\Bigdb\cabF\cs3\ ",

```



```

FILENAME = "C:\Bigdb\cabG\cs7\",
SIZE = 7920MB, FILEGROWTH = 0),
(
NAME = MSSQL_csH7,
FILENAME = "C:\Bigdb\cabH\cs7\",
SIZE = 7920MB, FILEGROWTH = 0),
(
NAME = MSSQL_csI7,
FILENAME = "C:\Bigdb\cabI\cs7\",
SIZE = 7920MB, FILEGROWTH = 0),
(
NAME = MSSQL_csJ7,
FILENAME = "C:\Bigdb\cabJ\cs7\",
SIZE = 7920MB, FILEGROWTH = 0),
(
NAME = MSSQL_csA8,
FILENAME = "C:\Bigdb\cabA\cs8\",
SIZE = 7920MB, FILEGROWTH = 0),
(
NAME = MSSQL_csB8,
FILENAME = "C:\Bigdb\cabB\cs8\",
SIZE = 7920MB, FILEGROWTH = 0),
(
NAME = MSSQL_csC8,
FILENAME = "C:\Bigdb\cabC\cs8\",
SIZE = 7920MB, FILEGROWTH = 0),
(
NAME = MSSQL_csD8,
FILENAME = "C:\Bigdb\cabD\cs8\",
SIZE = 7920MB, FILEGROWTH = 0),
(
NAME = MSSQL_csE8,
FILENAME = "C:\Bigdb\cabE\cs8\",
SIZE = 7920MB, FILEGROWTH = 0),
(
NAME = MSSQL_csF8,
FILENAME = "C:\Bigdb\cabF\cs8\",
SIZE = 7920MB, FILEGROWTH = 0),
(
NAME = MSSQL_csG8,
FILENAME = "C:\Bigdb\cabG\cs8\",
SIZE = 7920MB, FILEGROWTH = 0),
(
NAME = MSSQL_csH8,
FILENAME = "C:\Bigdb\cabH\cs8\",
SIZE = 7920MB, FILEGROWTH = 0),
(
NAME = MSSQL_csI8,
FILENAME = "C:\Bigdb\cabI\cs8\",
SIZE = 7920MB, FILEGROWTH = 0),
(
NAME = MSSQL_csJ8,
FILENAME = "C:\Bigdb\cabJ\cs8\",
SIZE = 7920MB, FILEGROWTH = 0),
(
NAME = MSSQL_csA9,
FILENAME = "C:\Bigdb\cabA\cs9\",
SIZE = 7920MB, FILEGROWTH = 0),
(
NAME = MSSQL_csB9,
FILENAME = "C:\Bigdb\cabB\cs9\",
SIZE = 7920MB, FILEGROWTH = 0),
(
NAME = MSSQL_csC9,
FILENAME = "C:\Bigdb\cabC\cs9\",
SIZE = 7920MB, FILEGROWTH = 0),
(
NAME = MSSQL_csD9,
FILENAME = "C:\Bigdb\cabD\cs9\",
SIZE = 7920MB, FILEGROWTH = 0),
(
NAME = MSSQL_csE9,
FILENAME = "C:\Bigdb\cabE\cs9\",
SIZE = 7920MB, FILEGROWTH = 0),
(
NAME = MSSQL_csF9,
FILENAME = "C:\Bigdb\cabF\cs9\",
SIZE = 7920MB, FILEGROWTH = 0),
(
NAME = MSSQL_csG9,
FILENAME = "C:\Bigdb\cabG\cs9\",

```

```

SIZE = 7920MB, FILEGROWTH = 0),
(
NAME = MSSQL_csH9,
FILENAME = "C:\Bigdb\cabH\cs9\",
SIZE = 7920MB, FILEGROWTH = 0),
(
NAME = MSSQL_csI9,
FILENAME = "C:\Bigdb\cabI\cs9\",
SIZE = 7920MB, FILEGROWTH = 0),
(
NAME = MSSQL_csJ9,
FILENAME = "C:\Bigdb\cabJ\cs9\",
SIZE = 7920MB, FILEGROWTH = 0),
(
NAME = MSSQL_csA10,
FILENAME = "C:\Bigdb\cabA\cs10\",
SIZE = 7920MB, FILEGROWTH = 0),
(
NAME = MSSQL_csB10,
FILENAME = "C:\Bigdb\cabB\cs10\",
SIZE = 7920MB, FILEGROWTH = 0),
(
NAME = MSSQL_csC10,
FILENAME = "C:\Bigdb\cabC\cs10\",
SIZE = 7920MB, FILEGROWTH = 0),
(
NAME = MSSQL_csD10,
FILENAME = "C:\Bigdb\cabD\cs10\",
SIZE = 7920MB, FILEGROWTH = 0),
(
NAME = MSSQL_csE10,
FILENAME = "C:\Bigdb\cabE\cs10\",
SIZE = 7920MB, FILEGROWTH = 0),
(
NAME = MSSQL_csF10,
FILENAME = "C:\Bigdb\cabF\cs10\",
SIZE = 7920MB, FILEGROWTH = 0),
(
NAME = MSSQL_csG10,
FILENAME = "C:\Bigdb\cabG\cs10\",
SIZE = 7920MB, FILEGROWTH = 0),
(
NAME = MSSQL_csH10,
FILENAME = "C:\Bigdb\cabH\cs10\",
SIZE = 7920MB, FILEGROWTH = 0),
(
NAME = MSSQL_csI10,
FILENAME = "C:\Bigdb\cabI\cs10\",
SIZE = 7920MB, FILEGROWTH = 0),
(
NAME = MSSQL_csJ10,
FILENAME = "C:\Bigdb\cabJ\cs10\",
SIZE = 7920MB, FILEGROWTH = 0)
TO FILEGROUP MSSQL_cs_fg
go
ALTER DATABASE tpcc ADD FILE
(
NAME = MSSQL_ordB1,
FILENAME = "C:\Bigdb\cabB\ord1\",
SIZE = 5060MB, FILEGROWTH = 0),
(
NAME = MSSQL_ordC1,
FILENAME = "C:\Bigdb\cabC\ord1\",
SIZE = 5060MB, FILEGROWTH = 0),
(
NAME = MSSQL_ordD1,
FILENAME = "C:\Bigdb\cabD\ord1\",
SIZE = 5060MB, FILEGROWTH = 0),
(
NAME = MSSQL_ordE1,
FILENAME = "C:\Bigdb\cabE\ord1\",
SIZE = 5060MB, FILEGROWTH = 0),
(
NAME = MSSQL_ordF1,
FILENAME = "C:\Bigdb\cabF\ord1\",
SIZE = 5060MB, FILEGROWTH = 0),
(
NAME = MSSQL_ordG1,
FILENAME = "C:\Bigdb\cabG\ord1\",
SIZE = 5060MB, FILEGROWTH = 0),

```



```

FILENAME = "C:\Bigdb\cabI\ord9\",
SIZE     = 5060MB, FILEGROWTH = 0),
(NAME = MSSQL_ordJ9,
FILENAME = "C:\Bigdb\cabJ\ord9\",
SIZE     = 5060MB, FILEGROWTH = 0),
(NAME = MSSQL_orda10,
FILENAME = "C:\Bigdb\cabA\ord10\",
SIZE     = 5060MB, FILEGROWTH = 0),
(NAME = MSSQL_ordB10,
FILENAME = "C:\Bigdb\cabB\ord10\",
SIZE     = 5060MB, FILEGROWTH = 0),
(NAME = MSSQL_ordC10,
FILENAME = "C:\Bigdb\cabC\ord10\",
SIZE     = 5060MB, FILEGROWTH = 0),
(NAME = MSSQL_ordD10,
FILENAME = "C:\Bigdb\cabD\ord10\",
SIZE     = 5060MB, FILEGROWTH = 0),
(NAME = MSSQL_ordE10,
FILENAME = "C:\Bigdb\cabE\ord10\",
SIZE     = 5060MB, FILEGROWTH = 0),
(NAME = MSSQL_ordF10,
FILENAME = "C:\Bigdb\cabF\ord10\",
SIZE     = 5060MB, FILEGROWTH = 0),
(NAME = MSSQL_ordG10,
FILENAME = "C:\Bigdb\cabG\ord10\",
SIZE     = 5060MB, FILEGROWTH = 0),
(NAME = MSSQL_ordH10,
FILENAME = "C:\Bigdb\cabH\ord10\",
SIZE     = 5060MB, FILEGROWTH = 0),
(NAME = MSSQL_ordI10,
FILENAME = "C:\Bigdb\cabI\ord10\",
SIZE     = 5060MB, FILEGROWTH = 0),
(NAME = MSSQL_ordJ10,
FILENAME = "C:\Bigdb\cabJ\ord10\",
SIZE     = 5060MB, 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

```

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\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"
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

```

Tempdb.sql

```

ALTER database tempdb
add file
( NAME = tempdbA10,
  FILENAME = "C:\Bigdb\dbbackups\backupA10\tempdbA10.mdf",
  SIZE = 15000 MB,

```



```

FILEGROWTH = 10%,
MAXSIZE = 94910 MB),
( NAME = tempdbB10,
  FILENAME = "C:\Bigdb\dbbackups\backupB10\tempdbB10.mdf",
  SIZE = 15000 MB,
  FILEGROWTH = 10%,
  MAXSIZE = 94910 MB),
( NAME = tempdbC10,
  FILENAME = "C:\Bigdb\dbbackups\backupC10\tempdbC10.mdf",
  SIZE = 15000 MB,
  FILEGROWTH = 10%,
  MAXSIZE = 94910 MB),
( NAME = tempdbD10,
  FILENAME = "C:\Bigdb\dbbackups\backupD10\tempdbD10.mdf",
  SIZE = 15000 MB,
  FILEGROWTH = 10%,
  MAXSIZE = 94910 MB),
( NAME = tempdbE10,
  FILENAME = "C:\Bigdb\dbbackups\backupE10\tempdbE10.mdf",
  SIZE = 15000 MB,
  FILEGROWTH = 10%,
  MAXSIZE = 94910 MB),
( NAME = tempdbF10,
  FILENAME = "C:\Bigdb\dbbackups\backupF10\tempdbF10.mdf",
  SIZE = 15000 MB,
  FILEGROWTH = 10%,
  MAXSIZE = 94910 MB),
( NAME = tempdbG10,
  FILENAME = "C:\Bigdb\dbbackups\backupG10\tempdbG10.mdf",
  SIZE = 15000 MB,
  FILEGROWTH = 10%,
  MAXSIZE = 94910 MB),
( NAME = tempdbH10,
  FILENAME = "C:\Bigdb\dbbackups\backupH10\tempdbH10.mdf",
  SIZE = 15000 MB,
  FILEGROWTH = 10%,
  MAXSIZE = 94910 MB),
( NAME = tempdbI10,
  FILENAME = "C:\Bigdb\dbbackups\backupI10\tempdbI10.mdf",
  SIZE = 15000 MB,
  FILEGROWTH = 10%,
  MAXSIZE = 94910 MB)
go
ALTER database tempdb
add log file
( NAME = tempdblogJ10,
  FILENAME = "C:\Bigdb\dbbackups\backupJ10\tempdblogJ10.ldf",
  SIZE = 15000 MB,
  FILEGROWTH = 10%,
  MAXSIZE = 94910 MB)
go

```

VERIFYTPCCLOAD

```

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

```

```

--
--          Performs series of TPC-C 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, uplock)
                where no_w_id = @w_id and
                       no_d_id = @d_id and
                order by no_o_id asc

                if (@@rowcount <> 0)
                begin
-----
-- claim the order for this district
-----

                        delete new_order
                        where no_w_id = @w_id and
                               no_d_id = @d_id and
                               no_o_id = @o_id

-----
-- set carrier_id on this order (and get customer id)
-----

                                update orders
                                set o_carrier_id = @o_carrier_id,
                                      @c_id = o_c_id
                                where o_w_id = @w_id and
                                       o_d_id = @d_id and
                                       o_id = @o_id

-----
-- set date in all lineitems for this order (and sum amounts)
-----

                                update order_line
                                set ol_delivery_d = getdate(),
                                      @total = @total + ol_amount
                                where ol_w_id = @w_id and
                                       ol_d_id = @d_id and
                                       ol_o_id = @o_id

-----
-- accumulate lineitem amounts for this order into customer
-----

                                update customer
                                set c_balance = c_balance + @total,
                                      c_delivery_cnt = c_delivery_cnt + 1

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

```

```

end
select @oid1 = case @d_id when 1 then @o_id else @oid1 end,
@oid2 = case @d_id when 2 then @o_id else @oid2 end,
@oid3 = case @d_id when 3 then @o_id else @oid3 end,
@oid4 = case @d_id when 4 then @o_id else @oid4 end,
@oid5 = case @d_id when 5 then @o_id else @oid5 end,
@oid6 = case @d_id when 6 then @o_id else @oid6 end,
@oid7 = case @d_id when 7 then @o_id else @oid7 end,
@oid8 = case @d_id when 8 then @o_id else @oid8 end,
@oid9 = case @d_id when 9 then @o_id else @oid9 end,
@oid10 = case @d_id when 10 then @o_id else @oid10 end
end
commit tran d
-----
-- return delivery data to client
-----
select @oid1,
@oid2,
@oid3,
@oid4,
@oid5,
@oid6,
@oid7,
@oid8,
@oid9,
@oid10
go

```

NEWORD.SQL

```

-----
--
-- File:      NEWORD.SQL
--           Microsoft TPC-C Benchmark Kit Ver. 4.51
--           Copyright Microsoft, 2003
--
--           Creates neworder stored procedure
--
--           Interface Level:      4.10.000
--
-----
use tpcc
go
if exists ( select name from sysobjects where name = 'tpcc_neworder' )
drop procedure tpcc_neworder
go
create proc tpcc_neworder
@w_id      int,
@d_id      tinyint,
@c_id      int,
@o_ol_cnt  tinyint,
@o_all_local tinyint,

```

```

@i_id1 int = 0, @s_w_id1 int = 0, @ol_qty1
smallint = 0,
@i_id2 int = 0, @s_w_id2 int = 0, @ol_qty2
smallint = 0,
@i_id3 int = 0, @s_w_id3 int = 0, @ol_qty3
smallint = 0,
@i_id4 int = 0, @s_w_id4 int = 0, @ol_qty4
smallint = 0,
@i_id5 int = 0, @s_w_id5 int = 0, @ol_qty5
smallint = 0,
@i_id6 int = 0, @s_w_id6 int = 0, @ol_qty6
smallint = 0,
@i_id7 int = 0, @s_w_id7 int = 0, @ol_qty7
smallint = 0,
@i_id8 int = 0, @s_w_id8 int = 0, @ol_qty8
smallint = 0,
@i_id9 int = 0, @s_w_id9 int = 0, @ol_qty9
smallint = 0,
@i_id10 int = 0, @s_w_id10 int = 0,
@ol_qty10 smallint = 0,
@i_id11 int = 0, @s_w_id11 int = 0,
@ol_qty11 smallint = 0,
@i_id12 int = 0, @s_w_id12 int = 0,
@ol_qty12 smallint = 0,
@i_id13 int = 0, @s_w_id13 int = 0,
@ol_qty13 smallint = 0,
@i_id14 int = 0, @s_w_id14 int = 0,
@ol_qty14 smallint = 0,
@i_id15 int = 0, @s_w_id15 int = 0,
@ol_qty15 smallint = 0
as
declare @w_tax      numeric(4,4),
@d_tax      numeric(4,4),
@c_last      char(16),
@c_credit     char(2),
@c_discount  numeric(4,4),
@i_price     numeric(5,2),
@i_name      char(24),
@i_data      char(50),
@o_entry_d   datetime,
@remote_flag int,
@s_quantity  smallint,
@s_data      char(50),
@s_dist      char(24),
@li_no       int,
@o_id        int,
@commit_flag tinyint,
@li_id       int,
@li_s_w_id   int,
@li_qty      smallint,
@ol_number   int,
@c_id_local  int
begin
begin transaction n
-----
-- get district tax and next available order id and update

```



```

-- plus initialize local variables
-----
update district
set   @d_tax      = d_tax,
      @o_id       = d_next_o_id,
      d_next_o_id = d_next_o_id + 1,
      @o_entry_d  = getdate(),
      @li_no      = 0,
      @commit_flag = 1
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 - @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
-----
--  end
                select @screen_data = substring (@c_data,1,200)
            end
-----
--  get district data and update year-to-date
-----
                update district
                set      d_ytd      = d_ytd + @h_amount,
                    @d_street_1 = d_street_1,
                    @d_street_2 = d_street_2,
                    @d_city      = d_city,
                    @d_state     = d_state,
                    @d_zip       = d_zip,
                    @d_name      = d_name,
                    @d_id_local  = d_id
                where   d_w_id      = @w_id and
                    d_id         = @d_id
-----
--  get warehouse data and update year-to-date
-----
                update warehouse
                set      w_ytd      = w_ytd + @h_amount,
                    @w_street_1 = w_street_1,
                    @w_street_2 = w_street_2,
                    @w_city      = w_city,
                    @w_state     = w_state,
                    @w_zip       = w_zip,
                    @w_name      = w_name,

```

```

                    @w_id_local  = w_id
                where   w_id      = @w_id
-----
--  create history record
-----
                insert into history values ( @c_id_local,
                    @c_d_id,
                    @c_w_id,
                    @d_id_local,
                    @w_id_local,
                    @datetime,
                    @h_amount,
                    @w_name + ' ' + @d_name)
-----
commit tran p
-----
--  return data to client
-----
                select @c_id,
                    @c_last,
                    @datetime,
                    @w_street_1,
                    @w_street_2,
                    @w_city,
                    @w_state,
                    @w_zip,
                    @d_street_1,
                    @d_street_2,
                    @d_city,
                    @d_state,
                    @d_zip,
                    @c_first,
                    @c_middle,
                    @c_street_1,
                    @c_street_2,
                    @c_city,
                    @c_state,
                    @c_zip,
                    @c_phone,
                    @c_since,
                    @c_credit,
                    @c_credit_lim,
                    @c_discount,
                    @c_balance,
                    @screen_data
            go

```

STOCKLEV.SQL

```

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

```

```

-----
use tpcc
go

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

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

as

declare @o_id_low int,
        @o_id_high int

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

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

go

```

VERSION.SQL

```

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

```

```

use tpcc
go

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

create proc tpcc_version
as
declare @version        char(8)

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

go
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, TPCCCLR_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 = DEFPLDPACKSIZE;
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;

```

```

== 0)

```

```

TRUE;

```

```

0)

```

```

0)

```

```

case 't':

```

```

{

```

```

    pargs->tables_all = FALSE;
    if (strcmp(ptr+2,"item") == 0)
        pargs->table_item = TRUE;
    else if (strcmp(ptr+2,"warehouse")

```

```

        pargs->table_warehouse =

```

```

    else if (strcmp(ptr+2,"customer") ==

```

```

        pargs->table_customer = TRUE;
    else if (strcmp(ptr+2,"orders") ==

```

```

        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 (long) BATCH);
    printf("-p TDS packet size (long) DEFLDPACKSIZE);
    printf("-L Loader BCP Log Path %s\n",
LOADER_LOG_PATH);
    printf("-f Loader Results Output Filename %s\n",
LOADER_RES_FILE);
    printf("-s Starting Warehouse %ld\n", (long) DEF_STARTING_WAREHOUSE);
    printf("-i Build Option (data = 0, data and index = 1) %ld\n", (long) BUILD_INDEX);
    printf("-o Cluster Index Build Order (before = 1, after = 0) %ld\n", (long) INDEX_ORDER);
    printf("-c Build Scaled Database (normal = 0, tiny = 1) %ld\n", (long) SCALE_DOWN);
    printf("-d Index Script Path %s\n",
INDEX_SCRIPT_PATH);
    printf("-t Table to Load          all
tables \n");
    printf("    [item|warehouse|customer|orders]\n");

```

```

    printf(" Notes: \n");
    printf(" - the '-t' parameter may be included multiple times to
\n");
    printf(" specify multiple tables to be loaded \n");
    printf(" - 'item' loads ITEM table \n");
    printf(" - 'warehouse' loads WAREHOUSE, DISTRICT, and STOCK tables
\n");
    printf(" - 'customer' loads CUSTOMER and HISTORY tables \n");
    printf(" - 'orders' load NEW-ORDER, ORDERS, ORDER-LINE tables
\n");

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

    exit(0);
}
}

```

RANDOM.C

```

// File: RANDOM.C
// Microsoft TPC-C Kit Ver. 4.51
// Copyright Microsoft, 1996, 1997, 1998, 1999,
2000, 2001, 2002, 2003
// Purpose: Random number generation routines for database
loader

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

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

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

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

```



```

*
*
* Machine Dependencies:
*
*     long must be 2 ^ 31 - 1 or greater.
*
*
*
*****
/*****
****
* seed - load the Seed value used in irand and drand.  Should be used
before *
*     first call to irand or drand.
*
*****
****/

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

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

    Seed = val;
}

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

```

```

*     seed get recomputed.
*
*****
****/

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

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

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

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

    return( Seed );
}

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

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

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

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

#ifdef DEBUG

```

```

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

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

    upper++;

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

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

    return rand_num;
}

#if 0
//Original code pgd 08/13/96

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

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

    upper++;

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

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

    return rand_num;
}
#endif

```

```

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

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

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

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

    return rand_num;
}

STRINGS.C

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

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

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

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

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

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

    return strlen(str);
}

```

```

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

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

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

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

    str[16] = 0;

    return 16;
}

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

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

    strcpy(str, "000011111");

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

    return 9;
}

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

    memset(str, ' ', len);
}

```

```

    str[len] = 0;
}

//=====
// Function name: InitAddress
//
// Description:
//
//=====
void InitAddress(char *street_1, char *street_2, char *city, char *state,
char *zip)
{
    memset(street_1, ' ', ADDRESS_LEN+1);
    memset(street_2, ' ', ADDRESS_LEN+1);
    memset(city, ' ', ADDRESS_LEN+1);

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

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

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

```

```

//=====
//
// Function name: PaddString
//
//=====
void PaddString(int max, char *name)
{
    int        len;

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

    return;
} }

```

TIME.C

```

// File:          TIME.C
//
// Microsoft TPC-C Kit Ver. 4.51
// Copyright Microsoft, 1996, 1997, 1998, 1999,
2000, 2001, 2002, 2003
// Purpose:      Source file for time functions

// Includes
#include "tpcc.h"

```

```

// Globals
static long start_sec;

//=====
//
// Function name: TimeNow
//
//=====
long TimeNow()
{
    long        time_now;
    struct      _timeb el_time;

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

    _ftime(&el_time);

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

    return time_now;
}

```

TPCC.H

```

// File:          TPCC.H
//
// Microsoft TPC-C Kit Ver. 4.51
// Copyright Microsoft, 1996, 1997, 1998, 1999,
2000, 2001, 2002, 2003
// Purpose:      Header file for TPC-C database loader

```

```

// Build number of TPC Benchmark Kit
#define TPCKIT_VER    "4.51"

```

```

// General headers
#include <windows.h>
#include <winbase.h>
#include <stdlib.h>
#include <stdio.h>
#include <process.h>
#include <stddef.h>
#include <stdarg.h>
#include <string.h>
#include <time.h>
#include <sys\timeb.h>
#include <sys\types.h>
#include <math.h>

```

```

// ODBC headers
#include <sql.h>
#include <sqlext.h>
#include <odbc.h>

```

```

// General constants
#define MILLI

```

```
1000
```

```

#define FALSE          0
#define TRUE           1
#define UNDEF          -1
#define MINPRINTASCII 32
#define MAXPRINTASCII 126

// Default environment constants
#define SERVER         ""
#define DATABASE       "tpcc"
#define USER           "sa"
#define PASSWORD       ""

// Default loader arguments
#define BATCH          10000
#define DEFLOADPACKSIZE 32768
#define LOADER_RES_FILE
    "C:\\MSTPCC.450\\SETUP\\LOGS\\load.out"
#define LOADER_LOG_PATH
    "C:\\MSTPCC.450\\SETUP\\LOGS\\"
#define LOADER_NURAND_C 123
#define DEF_STARTING_WAREHOUSE 1
#define BUILD_INDEX    1 // build both
data and indexes
#define INDEX_ORDER    1 // build
indexes before load
#define SCALE_DOWN    0 // build a normal
scale database
#define INDEX_SCRIPT_PATH "scripts"

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

// String length constants

```

```

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

```

```

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

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

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

// Functions in strings.c
void MakeAddress();
void LastName();
int MakeAlphaString();
int MakeOriginalAlphaString();
int MakeNumberString();
int MakeZipNumberString();
void InitString();
void InitAddress();
void PaddString();

```

TPCCLDR.C

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

// 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
    long ol_i_id; ol;
    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;

TPCC_LDR_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 != SUCCEEDED)
        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 != SUCCEEDED)
            HandleErrorDBC(i_hdbc1);
    }

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

```

```

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

```

```

d_state, d_zip);

        MakeAddress(d_street_1, d_street_2, d_city,

        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 != SUCCEEDED)
        HandleErrorDBC(w_hdbc1);
    rc = bcp_bind(w_hdbc1, (BYTE *) s_dist_08, 0, S_DIST_LEN, NULL, 0,
0, 11);
    if (rc != SUCCEEDED)
        HandleErrorDBC(w_hdbc1);
    rc = bcp_bind(w_hdbc1, (BYTE *) s_dist_09, 0, S_DIST_LEN, NULL, 0,
0, 12);
    if (rc != SUCCEEDED)
        HandleErrorDBC(w_hdbc1);
    rc = bcp_bind(w_hdbc1, (BYTE *) s_dist_10, 0, S_DIST_LEN, NULL, 0,
0, 13);
    if (rc != SUCCEEDED)
        HandleErrorDBC(w_hdbc1);
    rc = bcp_bind(w_hdbc1, (BYTE *) &s_ytd, 0, SQL_VARLEN_DATA, NULL,
0, SQLINT4, 14);
    if (rc != SUCCEEDED)
        HandleErrorDBC(w_hdbc1);
    rc = bcp_bind(w_hdbc1, (BYTE *) &s_order_cnt, 0, SQL_VARLEN_DATA,
NULL, 0, SQLINT2, 15);
    if (rc != SUCCEEDED)
        HandleErrorDBC(w_hdbc1);
    rc = bcp_bind(w_hdbc1, (BYTE *) &s_remote_cnt, 0, SQL_VARLEN_DATA,
NULL, 0, SQLINT2, 16);
    if (rc != SUCCEEDED)
        HandleErrorDBC(w_hdbc1);
    rc = bcp_bind(w_hdbc1, (BYTE *) s_data, 0, S_DATA_LEN, NULL, 0, 0,
17);
    if (rc != SUCCEEDED)
        HandleErrorDBC(w_hdbc1);

    s_ytd = s_order_cnt = s_remote_cnt = 0;

    time_start = (TimeNow() / MILLI);

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

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

        for (s_w_id = (long)aptr->starting_warehouse; s_w_id <=
aptr->num_warehouses; s_w_id++)
        {

            s_quantity = (short)RandomNumber(10L,100L);
            len = MakeAlphaString(24,24,S_DIST_LEN, s_dist_01);
            len = MakeAlphaString(24,24,S_DIST_LEN, s_dist_02);
            len = MakeAlphaString(24,24,S_DIST_LEN, s_dist_03);
            len = MakeAlphaString(24,24,S_DIST_LEN, s_dist_04);
            len = MakeAlphaString(24,24,S_DIST_LEN, s_dist_05);
            len = MakeAlphaString(24,24,S_DIST_LEN, s_dist_06);
            len = MakeAlphaString(24,24,S_DIST_LEN, s_dist_07);
            len = MakeAlphaString(24,24,S_DIST_LEN, s_dist_08);
            len = MakeAlphaString(24,24,S_DIST_LEN, s_dist_09);
            len = MakeAlphaString(24,24,S_DIST_LEN, s_dist_10);

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

```

```

        rc = bcp_sendrow(w_hdbc1);
        if (rc != SUCCEEDED)
            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));
    //      Originally 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 != SUCCEEDED)
        HandleErrorDBC(c_hdbc1);
    rc = bcp_bind(c_hdbc1, (BYTE *) &c_discount, 0, SQL_VARLEN_DATA, NULL,
0, SQLFLT8, 16);
    if (rc != SUCCEEDED)
        HandleErrorDBC(c_hdbc1);
    rc = bcp_bind(c_hdbc1, (BYTE *) c_balance, 0, 5, NULL, 0,
SQLCHARACTER, 17);
    if (rc != SUCCEEDED)
        HandleErrorDBC(c_hdbc1);
    rc = bcp_bind(c_hdbc1, (BYTE *) &c_ytd_payment, 0, SQL_VARLEN_DATA,
NULL, 0, SQLFLT8, 18);
    if (rc != SUCCEEDED)
        HandleErrorDBC(c_hdbc1);
    rc = bcp_bind(c_hdbc1, (BYTE *) &c_payment_cnt, 0, SQL_VARLEN_DATA,
NULL, 0, SQLINT2, 19);
    if (rc != SUCCEEDED)
        HandleErrorDBC(c_hdbc1);
    rc = bcp_bind(c_hdbc1, (BYTE *) &c_delivery_cnt, 0, SQL_VARLEN_DATA,
NULL, 0, SQLINT2, 20);
    if (rc != SUCCEEDED)
        HandleErrorDBC(c_hdbc1);
    rc = bcp_bind(c_hdbc1, (BYTE *) c_data, 0, 500, NULL, 0, 0, 21);
    if (rc != SUCCEEDED)
        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 != SUCCEEDED)
        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 != SUCCEEDED)
        HandleErrorDBC(c_hdbc2);
    rc = bcp_bind(c_hdbc2, (BYTE *) &c_d_id, 0, SQL_VARLEN_DATA, NULL, 0,
SQLINT2, 2);
    if (rc != SUCCEEDED)
        HandleErrorDBC(c_hdbc2);
    rc = bcp_bind(c_hdbc2, (BYTE *) &c_w_id, 0, SQL_VARLEN_DATA, NULL,
0, SQLINT4, 3);
    if (rc != SUCCEEDED)
        HandleErrorDBC(c_hdbc2);
    rc = bcp_bind(c_hdbc2, (BYTE *) &c_d_id, 0, SQL_VARLEN_DATA, NULL, 0,
SQLINT2, 4);
    if (rc != SUCCEEDED)
        HandleErrorDBC(c_hdbc2);
    rc = bcp_bind(c_hdbc2, (BYTE *) &c_w_id, 0, SQL_VARLEN_DATA, NULL,
0, SQLINT4, 5);
    if (rc != SUCCEEDED)
        HandleErrorDBC(c_hdbc2);
    rc = bcp_bind(c_hdbc2, (BYTE *) &h_date, 0, H_DATE_LEN, NULL, 0,
SQLCHARACTER, 6);
    if (rc != SUCCEEDED)
        HandleErrorDBC(c_hdbc2);
    rc = bcp_bind(c_hdbc2, (BYTE *) &h_amount, 0, SQL_VARLEN_DATA, NULL,
0, SQLFLT8, 7);
    if (rc != SUCCEEDED)
        HandleErrorDBC(c_hdbc2);
    rc = bcp_bind(c_hdbc2, (BYTE *) h_data, 0, H_DATA_LEN, NULL, 0, 0, 8);
    if (rc != SUCCEEDED)
        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 != SUCCEEDED)
        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 != SUCCEEDED)
        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 != SUCCEEDED)
            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 != SUCCEEDED)
        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 != SUCCEEDED)
            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 != SUCCEEDED)
        HandleErrorDBC(o_hdbc3);

    if ((aptr->build_index == 1) && (aptr->index_order == 1))
    {
        sprintf(bcphint, "tablock, order (ol_w_id, ol_d_id,
ol_o_id, ol_number), ROWS_PER_BATCH = %u", (aptr->num_warehouses *
30000));
        rc = bcp_control(o_hdbc3, BCPHINTS, (void*) bcphint);
        if (rc != SUCCEEDED)
            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 != SUCCEEDED)
        HandleErrorDBC(o_hdbc1);
    rc = bcp_bind(o_hdbc1, (BYTE *) &o_carrier_id, 0, SQL_VARLEN_DATA,
NULL, 0, SQLINT2, 6);
    if (rc != SUCCEEDED)
        HandleErrorDBC(o_hdbc1);
    rc = bcp_bind(o_hdbc1, (BYTE *) &o_ol_cnt, 0, SQL_VARLEN_DATA, NULL,
0, SQLINT2, 7);
    if (rc != SUCCEEDED)
        HandleErrorDBC(o_hdbc1);
    rc = bcp_bind(o_hdbc1, (BYTE *) &o_all_local, 0, SQL_VARLEN_DATA,
NULL, 0, SQLINT2, 8);
    if (rc != SUCCEEDED)
        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 != SUCCEEDED)
        HandleErrorDBC(o_hdbc1);

    orders_rows_loaded++;
    CheckForCommit(o_hdbc1, o_hstmt1, orders_rows_loaded,
"orders", &orders_time_start->time_start);
}

if ((o_w_id == aptr->num_warehouses) && (o_d_id == 10))
{
    rcint = bcp_done(o_hdbc1);
    if (rcint < 0)
        HandleErrorDBC(o_hdbc1);

    SQLFreeStmt(o_hstmt1, SQL_DROP);
    SQLDisconnect(o_hdbc1);
    SQLFreeConnect(o_hdbc1);

    // if build index after load...
    if ((aptr->build_index == 1) && (aptr->index_order == 0))
        BuildIndex("idxordc1");

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

//=====
//

```

```

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

    // Bind NEW-ORDER data
    rc = bcp_bind(o_hdbc2, (BYTE *) &o_id, 0, SQL_VARLEN_DATA, NULL, 0,
SQLINT4, 1);
    if (rc != SUCCEEDED)
        HandleErrorDBC(o_hdbc2);
    rc = bcp_bind(o_hdbc2, (BYTE *) &o_d_id, 0, SQL_VARLEN_DATA, NULL, 0,
SQLINT2, 2);
    if (rc != SUCCEEDED)
        HandleErrorDBC(o_hdbc2);
    rc = bcp_bind(o_hdbc2, (BYTE *) &o_w_id, 0, SQL_VARLEN_DATA, NULL,
0, SQLINT4, 3);
    if (rc != SUCCEEDED)
        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 != SUCCEEDED)
            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("idxnodc1");
    }
}

//=====
//
// 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 != SUCCEEDED)
        HandleErrorDBC(o_hdbc3);
    rc = bcp_bind(o_hdbc3, (BYTE *) &o_d_id, 0, SQL_VARLEN_DATA, NULL, 0,
SQLINT2, 2);
    if (rc != SUCCEEDED)
        HandleErrorDBC(o_hdbc3);
    rc = bcp_bind(o_hdbc3, (BYTE *) &o_w_id, 0, SQL_VARLEN_DATA, NULL,
0, SQLINT4, 3);
    if (rc != SUCCEEDED)
        HandleErrorDBC(o_hdbc3);
    rc = bcp_bind(o_hdbc3, (BYTE *) &ol, 0, SQL_VARLEN_DATA, NULL, 0,
SQLFLT8, 4);
    if (rc != SUCCEEDED)
        HandleErrorDBC(o_hdbc3);
    rc = bcp_bind(o_hdbc3, (BYTE *) &ol_i_id, 0, SQL_VARLEN_DATA, NULL, 0,
SQLINT4, 5);
    if (rc != SUCCEEDED)
        HandleErrorDBC(o_hdbc3);
    rc = bcp_bind(o_hdbc3, (BYTE *) &ol_supply_w_id, 0,
SQL_VARLEN_DATA, NULL, 0, SQLINT4, 6);
    if (rc != SUCCEEDED)
        HandleErrorDBC(o_hdbc3);
    rc = bcp_bind(o_hdbc3, (BYTE *) &ol_delivery_d, 0,
OL_DELIVERY_D_LEN, NULL, 0, SQLCHARACTER, 7);
    if (rc != SUCCEEDED)
        HandleErrorDBC(o_hdbc3);
    rc = bcp_bind(o_hdbc3, (BYTE *) &ol_quantity, 0, SQL_VARLEN_DATA,
NULL, 0, SQLINT2, 8);
    if (rc != SUCCEEDED)
        HandleErrorDBC(o_hdbc3);
    rc = bcp_bind(o_hdbc3, (BYTE *) &ol_amount, 0, SQL_VARLEN_DATA, NULL,
0, SQLFLT8, 9);
    if (rc != SUCCEEDED)
        HandleErrorDBC(o_hdbc3);
    rc = bcp_bind(o_hdbc3, (BYTE *) ol_dist_info, 0, DIST_INFO_LEN, NULL,
0, 0, 10);
    if (rc != SUCCEEDED)
        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 != SUCCEEDED)
                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
(%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 (%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   : 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 TPCCCLR.<<<<\n",total_db_errors);
                exit(9);
            }
            total_db_errors++;

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

```

```

        _strtime(timebuf);
        _strdate(datebuf);

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

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

        i++;
    }
}

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

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

    mktime( &when );

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

    return;
} }

```

Appendix C - Tunable Parameters

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 HAL CLSTR etc." /fastdetect /PAE /clstr=f6f6f4f4f2f2f0f0
```

The /pae switch was added to the boot.ini file to cause the OS to support more than 4GB of physical memory.

The /clstr switch was added to bind interrupts from an IO module (DIB) to a specific processor group.

User Rights Assignment

The Group Policy Editor of the OS was used to modify an entry under User Rights Assignment. Specifically, the right to “Lock pages in memory” was given to the Administrators group so that SQL Server 2000 could use large amounts of physical memory.

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)
```

```
-----
2004-05-17 06:36:16.093
```

```
(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 ' '
-----
```

```
2004-05-17 06:36:16.513
```

```
(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	0	0

awe enabled	0	1	1
1			
c2 audit mode	0	1	0
0			
cost threshold for parallelism	0	32767	5
5			
Cross DB Ownership Chaining	0	1	0
0			
cursor threshold	-1	2147483647	-1
-1			
default full-text language	0	2147483647	1033
1033			
default language	0	9999	0
0			
fill factor (%)	0	100	0
0			
index create memory (KB)	704	2147483647	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	63550
63550			
max text repl size (B)	0	2147483647	65536
65536			
max worker threads	32	32767	704
704			
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 =           4
Segment size (blocks) =         0
Segment multiplier =            4
Maximum prefetch (blocks) =     4096
Prefetch Disable Size (blocks) = 4097
Prefetch idle count =           40

```

```

Variable length prefetching YES
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:                1023
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):        652463
LUN Capacity (Blocks):           1336245760
UID:
60:06:01:60:5B:30:10:00:76:C8:FA:B5:92:A3:D8:11
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 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 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 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 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 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 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 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 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 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 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

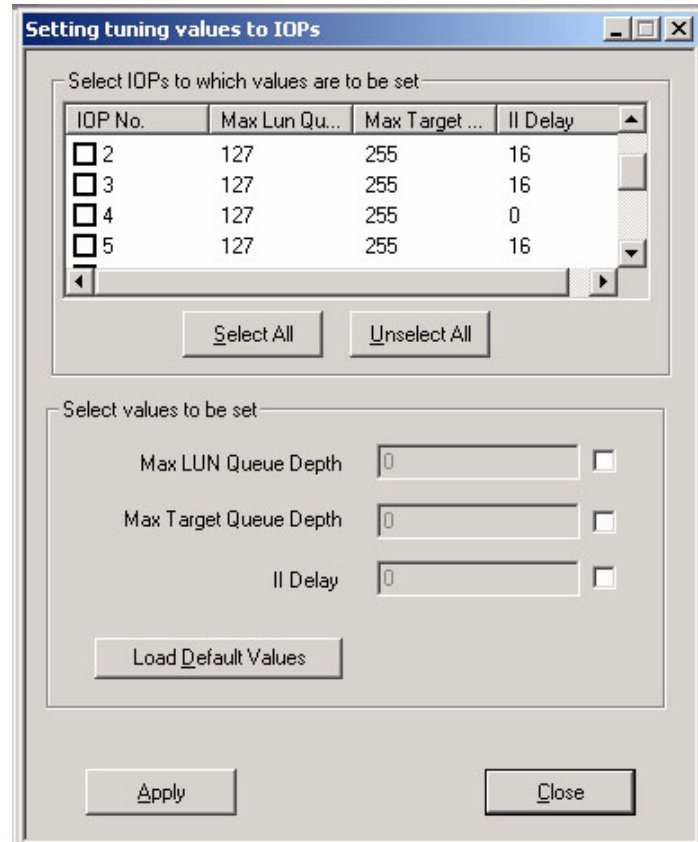
```

```

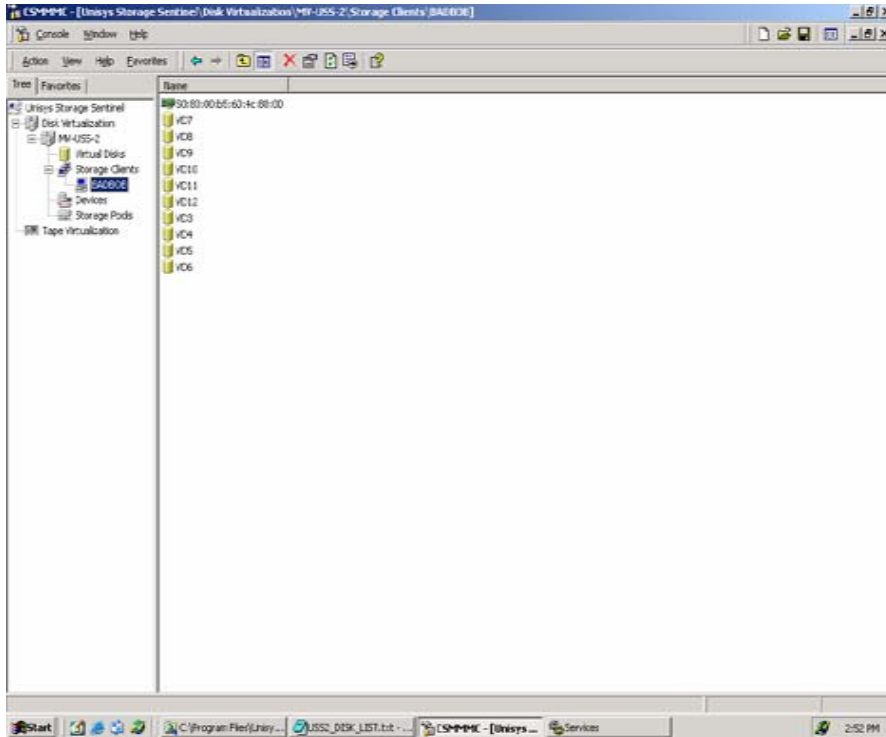
Bus 0 Enclosure 0 Disk 8 Enabled
Bus 0 Enclosure 0 Disk 6 Enabled
Bus 0 Enclosure 0 Disk 4 Enabled
Bus 0 Enclosure 0 Disk 2 Enabled
Bus 0 Enclosure 0 Disk 0 Enabled
Is Private: NO
Snapshots List: None
MirrorView Name if any: Not Mirrored

```

Fibre Channel HBAUtility Settings



Database USS Configuration Info (common to USS 1-10)



```

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

```

Windows Datacenter Server Configuration Information

System Information report written at: 05/16/04 23:12:10
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
 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 3,644.00 MB
 Available Physical Memory 38.41 MB
 Total Virtual Memory 129.81 GB
 Available Virtual Memory 3.42 GB
 Page File Space 66.28 GB
 Page File C:\pagefile.sys

[Hardware Resources]

[Conflicts/Sharing]

Resource	Device
Memory Address 0xF0000000-0xF1FFFFFF	PCI bus
Memory Address 0xF0000000-0xF1FFFFFF	PCI standard PCI-to-PCI bridge
Memory Address 0xF0000000-0xF1FFFFFF	Unisys Intelligent Fibre Channel Fabric Bus Adapter
Memory Address 0xEF800000-0xEFFFFFFF	PCI standard PCI-to-PCI bridge
Memory Address 0xEF800000-0xEFFFFFFF	Unisys Intelligent Fibre Channel Fabric Bus Adapter
I/O Port 0x00000000-0x000010EF	PCI bus
I/O Port 0x00000000-0x000010EF	Direct memory access controller
Memory Address 0xFC800000-0xFCFFFFFF	PCI standard PCI-to-PCI bridge
Memory Address 0xFC800000-0xFCFFFFFF	Unisys Intelligent Fibre Channel Fabric Bus Adapter
Memory Address 0xF9000000-0xFAFFFFFF	PCI bus
Memory Address 0xF9000000-0xFAFFFFFF	PCI standard PCI-to-PCI bridge
Memory Address 0xF9000000-0xFAFFFFFF	Unisys Intelligent Fibre Channel Fabric Bus Adapter
Memory Address 0xF4000000-0xF5FFFFFF	PCI bus

Memory Address 0xF4000000-0xF5FFFFFF	PCI standard PCI-to-PCI bridge
Memory Address 0xF4000000-0xF5FFFFFF	Unisys Intelligent Fibre Channel Fabric Bus Adapter
Memory Address 0xEF400000-0xEFFFFFFF	PCI bus
Memory Address 0xEF400000-0xEFFFFFFF	PCI standard PCI-to-PCI bridge
Memory Address 0xEF400000-0xEFFFFFFF	Unisys Intelligent Fibre Channel Fabric Bus Adapter
IRQ 4	Unisys Intelligent Fibre Channel Fabric Bus Adapter
IRQ 4	Communications Port (COM1)
I/O Port 0x000003F6-0x000003F6	System speaker
I/O Port 0x000003F6-0x000003F6	Primary IDE Channel
Memory Address 0xEC400000-0xECFFFFFF	PCI bus
Memory Address 0xEC400000-0xECFFFFFF	PCI standard PCI-to-PCI bridge
Memory Address 0xEC400000-0xECFFFFFF	Unisys Intelligent Fibre Channel Fabric Bus Adapter
Memory Address 0xE3900000-0xE4FFFFFF	PCI bus
Memory Address 0xE3900000-0xE4FFFFFF	PCI standard PCI-to-PCI bridge
Memory Address 0xE3900000-0xE4FFFFFF	Unisys Intelligent Fibre Channel Fabric Bus Adapter
Memory Address 0xF2000000-0xF3FFFFFF	PCI bus
Memory Address 0xF2000000-0xF3FFFFFF	cLAN Host Adapter
Memory Address 0xE9800000-0xE9FFFFFF	PCI standard PCI-to-PCI bridge
Memory Address 0xE9800000-0xE9FFFFFF	Unisys Intelligent Fibre Channel Fabric Bus Adapter
Memory Address 0xFB000000-0xFCFFFFFF	PCI bus
Memory Address 0xFB000000-0xFCFFFFFF	PCI standard PCI-to-PCI bridge
Memory Address 0xFB000000-0xFCFFFFFF	Unisys Intelligent Fibre Channel Fabric Bus Adapter
Memory Address 0xF6800000-0xF6FFFFFF	PCI standard PCI-to-PCI bridge
Memory Address 0xF6800000-0xF6FFFFFF	Unisys Intelligent Fibre Channel Fabric Bus Adapter
Memory Address 0xF5800000-0xF5FFFFFF	PCI standard PCI-to-PCI bridge
Memory Address 0xF5800000-0xF5FFFFFF	Unisys Intelligent Fibre Channel Fabric Bus Adapter
Memory Address 0xEB000000-0xEBFFFFFF	PCI standard PCI-to-PCI bridge
Memory Address 0xEB000000-0xEBFFFFFF	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 0xE5000000-0xE6FFFFFF PCI bus

Memory Address 0xE5000000-0xE6FFFFFF PCI standard PCI-to-PCI bridge

Memory Address 0xE5000000-0xE6FFFFFF Unisys Intelligent Fibre Channel Fabric Bus Adapter

Memory Address 0xED000000-0xEEFFFFFF PCI bus

Memory Address 0xED000000-0xEEFFFFFF cLAN Host Adapter #6

Memory Address 0xE7000000-0xE8FFFFFF PCI bus

Memory Address 0xE7000000-0xE8FFFFFF cLAN Host Adapter #4

Memory Address 0xF6400000-0xF6FFFFFF PCI bus

Memory Address 0xF6400000-0xF6FFFFFF PCI standard PCI-to-PCI bridge

Memory Address 0xF6400000-0xF6FFFFFF 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 0xA0000-0xBFFFF PCI bus

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

Memory Address 0xF7100000-0xF8FFFFFF PCI bus

Memory Address 0xF7100000-0xF8FFFFFF cLAN Host Adapter #3

Memory Address 0xFA800000-0xFAFFFFFF PCI standard PCI-to-PCI bridge

Memory Address 0xFA800000-0xFAFFFFFF Unisys Intelligent Fibre Channel Fabric Bus Adapter

Memory Address 0xE9400000-0xE9FFFFFF PCI bus

Memory Address 0xE9400000-0xE9FFFFFF PCI standard PCI-to-PCI bridge

Memory Address 0xE9400000-0xE9FFFFFF Unisys Intelligent Fibre Channel Fabric Bus Adapter

Memory Address 0xE4800000-0xE4FFFFFF PCI standard PCI-to-PCI bridge

Memory Address 0xE4800000-0xE4FFFFFF Unisys Intelligent Fibre Channel Fabric Bus Adapter

Memory Address 0xEC800000-0xECFFFFFF PCI standard PCI-to-PCI bridge

Memory Address 0xEC800000-0xECFFFFFF Unisys Intelligent Fibre Channel Fabric Bus Adapter

Memory Address 0xEA000000-0xEBFFFFFF PCI bus

Memory Address 0xEA000000-0xEBFFFFFF PCI standard PCI-to-PCI bridge

Memory Address 0xEA000000-0xEBFFFFFF 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
0x0000A79-0x0000A79	ISAPNP Read Data Port	OK
0x0000279-0x0000279	ISAPNP Read Data Port	OK
0x0000274-0x0000277	ISAPNP Read Data Port	OK
0x00000081-0x0000008F	Direct memory access controller	OK
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
 0x000003F8-0x000003FF Communications Port (COM1) 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
 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 4	Unisys Intelligent Fibre Channel Fabric Bus Adapter	OK
IRQ 4	Communications Port (COM1)	OK
IRQ 8	System CMOS/real time clock	OK
IRQ 0	System timer	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 48 Unisys Intelligent Fibre Channel Fabric Bus Adapter OK
 IRQ 52 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 96 Unisys Intelligent Fibre Channel Fabric Bus Adapter OK
 IRQ 100 Unisys Intelligent Fibre Channel Fabric Bus Adapter OK
 IRQ 104 cLAN Host Adapter OK
 IRQ 120 Unisys Intelligent Fibre Channel Fabric Bus Adapter OK
 IRQ 144 Unisys Intelligent Fibre Channel Fabric Bus Adapter 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
0xE3800000-0xE38FFFFFF	PCI bus	OK
0xE3900000-0xE4FFFFFF	PCI bus	OK
0xE3900000-0xE4FFFFFF	PCI standard PCI-to-PCI bridge	OK
0xE3900000-0xE4FFFFFF	Unisys Intelligent Fibre Channel Fabric Bus Adapter	OK
0xE4800000-0xE4FFFFFF	PCI standard PCI-to-PCI bridge	OK
0xE4800000-0xE4FFFFFF	Unisys Intelligent Fibre Channel Fabric Bus Adapter	OK
0xA0000-0xBFFFF	PCI bus	OK
0xA0000-0xBFFFF	Console Manager Video Driver IPL2	PCI OK
0xC0000-0xDFFFF	PCI bus	OK
0xE0000-0xFFFF	PCI bus	OK
0xE2000000-0xE37FFFFFF	PCI bus	OK
0xE3000000-0xE37FFFFFF	Console Manager Video Driver IPL2	PCI OK
0xE2800000-0xE2FFFFFF	Console Manager Video Driver IPL2	PCI OK
0xE2002000-0xE2002FFF	Standard OpenHCD USB Host Controller	OK
0xE2001000-0xE2001FFF	Standard OpenHCD USB Host Controller	OK
0xE2003000-0xE2003FFF	Intel 8255x-based PCI Ethernet Adapter (10/100)	OK
0xE2100000-0xE21FFFF	Intel 8255x-based PCI Ethernet Adapter (10/100)	OK
0xE5000000-0xE6FFFFFF	PCI bus	OK
0xE5000000-0xE6FFFFFF	PCI standard PCI-to-PCI bridge	OK
0xE5000000-0xE6FFFFFF	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
0xE7000000-0xE8FFFFFF	PCI bus	OK
0xE7000000-0xE8FFFFFF	cLAN Host Adapter #4	OK
0xE7020000-0xE703FFF	cLAN Host Adapter #4	OK
0xE7200000-0xE73FFF	cLAN Host Adapter #4	OK
0xE8000000-0xE8FFFFFF	cLAN Host Adapter #4	OK
0xE9000000-0xE93FFF	PCI bus	OK
0xE9400000-0xE9FFFF	PCI bus	OK
0xE9400000-0xE9FFFF	PCI standard PCI-to-PCI bridge	OK

0xE9400000-0xE9FFFF	Unisys Intelligent Fibre Channel Fabric Bus Adapter	OK
0xE9800000-0xE9FFFF	PCI standard PCI-to-PCI bridge	OK
0xE9800000-0xE9FFFF	Unisys Intelligent Fibre Channel Fabric Bus Adapter	OK
0xEA000000-0xEBFFFF	PCI bus	OK
0xEA000000-0xEBFFFF	PCI standard PCI-to-PCI bridge	OK
0xEA000000-0xEBFFFF	Unisys Intelligent Fibre Channel Fabric Bus Adapter	OK
0xEB800000-0xEBFFFF	PCI standard PCI-to-PCI bridge	OK
0xEB800000-0xEBFFFF	Unisys Intelligent Fibre Channel Fabric Bus Adapter	OK
0xEC000000-0xEC3FFF	PCI bus	OK
0xEC400000-0xECFFFF	PCI bus	OK
0xEC400000-0xECFFFF	PCI standard PCI-to-PCI bridge	OK
0xEC400000-0xECFFFF	Unisys Intelligent Fibre Channel Fabric Bus Adapter	OK
0xEC800000-0xECFFFF	PCI standard PCI-to-PCI bridge	OK
0xEC800000-0xECFFFF	Unisys Intelligent Fibre Channel Fabric Bus Adapter	OK
0xED000000-0xEEFFFF	PCI bus	OK
0xED000000-0xEEFFFF	cLAN Host Adapter #6	OK
0xED020000-0xED03FFF	cLAN Host Adapter #6	OK
0xED200000-0xED3FFF	cLAN Host Adapter #6	OK
0xEE000000-0xEEFFFF	cLAN Host Adapter #6	OK
0xEF000000-0xEF3FFF	PCI bus	OK
0xEF400000-0xEFFFF	PCI bus	OK
0xEF400000-0xEFFFF	PCI standard PCI-to-PCI bridge	OK
0xEF400000-0xEFFFF	Unisys Intelligent Fibre Channel Fabric Bus Adapter	OK
0xEF800000-0xEFFFF	PCI standard PCI-to-PCI bridge	OK
0xEF800000-0xEFFFF	Unisys Intelligent Fibre Channel Fabric Bus Adapter	OK
0xF0000000-0xF1FFFF	PCI bus	OK
0xF0000000-0xF1FFFF	PCI standard PCI-to-PCI bridge	OK
0xF0000000-0xF1FFFF	Unisys Intelligent Fibre Channel Fabric Bus Adapter	OK
0xF1800000-0xF1FFFF	PCI standard PCI-to-PCI bridge	OK
0xF1800000-0xF1FFFF	Unisys Intelligent Fibre Channel Fabric Bus Adapter	OK
0xF2000000-0xF3FFFF	PCI bus	OK
0xF2000000-0xF3FFFF	cLAN Host Adapter	OK
0xF2020000-0xF203FFF	cLAN Host Adapter	OK
0xF2200000-0xF23FFF	cLAN Host Adapter	OK
0xF3000000-0xF3FFFF	cLAN Host Adapter	OK
0xF4000000-0xF5FFFF	PCI bus	OK
0xF4000000-0xF5FFFF	PCI standard PCI-to-PCI bridge	OK
0xF4000000-0xF5FFFF	Unisys Intelligent Fibre Channel Fabric Bus Adapter	OK
0xF5800000-0xF5FFFF	PCI standard PCI-to-PCI bridge	OK
0xF5800000-0xF5FFFF	Unisys Intelligent Fibre Channel Fabric Bus Adapter	OK
0xF6000000-0xF6FFFF	PCI bus	OK
0xF6100000-0xF63FFF	PCI bus	OK
0xF6400000-0xF6FFFF	PCI bus	OK
0xF6400000-0xF6FFFF	PCI standard PCI-to-PCI bridge	OK
0xF6400000-0xF6FFFF	Unisys Intelligent Fibre Channel Fabric Bus Adapter	OK
0xF6800000-0xF6FFFF	PCI standard PCI-to-PCI bridge	OK

```

0xF6800000-0xF6FFFFFF Unisys Intelligent Fibre Channel Fabric Bus Adapter
OK
0xF7000000-0xF70FFFFFF PCI bus OK
0xF7100000-0xF8FFFFFF PCI bus OK
0xF7100000-0xF8FFFFFF cLAN Host Adapter #3 OK
0xF7120000-0xF713FFFF cLAN Host Adapter #3 OK
0xF7200000-0xF73FFFFF cLAN Host Adapter #3 OK
0xF8000000-0xF8FFFFFF cLAN Host Adapter #3 OK
0xF9000000-0xFAFFFFFF PCI bus OK
0xF9000000-0xFAFFFFFF PCI standard PCI-to-PCI bridge OK
0xF9000000-0xFAFFFFFF Unisys Intelligent Fibre Channel Fabric Bus Adapter
OK
0xFA800000-0xFAFFFFFF PCI standard PCI-to-PCI bridge OK
0xFA800000-0xFAFFFFFF Unisys Intelligent Fibre Channel Fabric Bus Adapter
OK
0xFB000000-0xFCFFFFFF PCI bus OK
0xFB000000-0xFCFFFFFF PCI standard PCI-to-PCI bridge OK
0xFB000000-0xFCFFFFFF Unisys Intelligent Fibre Channel Fabric Bus Adapter
OK
0xFC800000-0xFCFFFFFF PCI standard PCI-to-PCI bridge OK
0xFC800000-0xFCFFFFFF Unisys Intelligent Fibre Channel Fabric Bus Adapter
OK
0xFD000000-0xFDFFFFFF PCI bus OK

```

[Components]

[Multimedia]

[Audio Codecs]

CODEC	Manufacturer	Description	Status	File	Version	Size
Creation Date						
c:\windows\system32\msg711.acm	Microsoft Corporation		OK			
2048)	C:\WINDOWS\system32\MSG711.ACM	10.00 KB (10,240 bytes)	3/25/2003 4:00 AM	5.2.3790.0 (srv03_rtm.030324-		
c:\windows\system32\imaadp32.acm	Microsoft Corporation		OK			
2048)	C:\WINDOWS\system32\IMAADP32.ACM	15.50 KB (15,872 bytes)	3/25/2003 4:00 AM	5.2.3790.0 (srv03_rtm.030324-		
c:\windows\system32\msgsm32.acm	Microsoft Corporation		OK			
2048)	C:\WINDOWS\system32\MSGSM32.ACM	20.50 KB (20,992 bytes)	3/25/2003 4:00 AM	5.2.3790.0 (srv03_rtm.030324-		
c:\windows\system32\sl_anet.acm	Sipro Lab Telecom		OK			
2048)	C:\WINDOWS\system32\SL_ANET.ACM	84.00 KB (86,016 bytes)	3/25/2003 4:00 AM	Sipro Lab Telecom	3.02	
c:\windows\system32\tsoft32.acm	DSP GROUP, INC.		OK			
2048)	C:\WINDOWS\system32\TSSOFT32.ACM	9.50 KB (9,728 bytes)	3/25/2003 4:00 AM	1.01		
c:\windows\system32\msg723.acm	Microsoft Corporation		OK			
(118,784 bytes)	C:\WINDOWS\system32\MSG723.ACM	4.4.4000	4/25/2004 1:23 AM	116.00 KB		
c:\windows\system32\msadp32.acm	Microsoft Corporation		OK			
2048)	C:\WINDOWS\system32\MSADP32.ACM	14.50 KB (14,848 bytes)	3/25/2003 4:00 AM	5.2.3790.0 (srv03_rtm.030324-		

```

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

```

[Video Codecs]

CODEC	Manufacturer	Description	Status	File	Version	Size
Creation Date						
c:\windows\system32\msrle32.dll	Microsoft Corporation		OK			
2048)	C:\WINDOWS\system32\MSRLE32.DLL	10.50 KB (10,752 bytes)	3/25/2003 4:00 AM	5.2.3790.0 (srv03_rtm.030324-		
c:\windows\system32\tsbyuv.dll	Microsoft Corporation		OK			
2048)	C:\WINDOWS\system32\TSBYUV.DLL	8.00 KB (8,192 bytes)	3/24/2003 5:50 PM	5.2.3790.0 (srv03_rtm.030324-		
c:\windows\system32\msh261.drv	Microsoft Corporation		OK			
(184,320 bytes)	C:\WINDOWS\system32\MSH261.DRV	4.4.4000	4/25/2004 1:23 AM	180.00 KB		
c:\windows\system32\msvidc32.dll	Microsoft Corporation		OK			
2048)	C:\WINDOWS\system32\MSVIDC32.DLL	26.50 KB (27,136 bytes)	3/25/2003 4:00 AM	5.2.3790.0 (srv03_rtm.030324-		
c:\windows\system32\msh263.drv	Microsoft Corporation		OK			
(290,816 bytes)	C:\WINDOWS\system32\MSH263.DRV	4.4.4000	3/24/2003 5:46 PM	284.00 KB		
c:\windows\system32\iyuv_32.dll	Microsoft Corporation		OK			
2048)	C:\WINDOWS\system32\IYUV_32.DLL	45.00 KB (46,080 bytes)	3/24/2003 5:49 PM	5.2.3790.0 (srv03_rtm.030324-		
c:\windows\system32\msyuv.dll	Microsoft Corporation		OK			
16.50 KB (16,896 bytes)	C:\WINDOWS\system32\MSYUV.DLL	5.2.3790.0 (srv03_rtm.030324-2048)	3/24/2003 5:49 PM			

[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
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

[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 1024 x 768 hertz
 Bits/Pixel 75
 Memory Address 0xE3000000-0xE37FFFFF
 Memory Address 0xE2800000-0xE2FFFFFF
 Memory Address 0xA00000-0xBFFFFF
 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

[Protocol]

Item Value

[WinSock]

Item Value

[Ports]

[Serial]

Item Value
 Name Communications Port (COM1)
 Status OK
 PNP Device ID ACPI\PNP0501\11
 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

[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 26.44 GB (28,387,405,824 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
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	0	
Sectors/Track	63	
Size	637.17 GB (684,154,114,560 bytes)	
Total Cylinders	83,177	
Total Sectors	1,336,238,505	
Total Tracks	21,210,135	
Tracks/Cylinder	255	
Partition	Disk #101, Partition #0	
Partition Size	637.17 GB (684,154,082,304 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	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 #90, Partition #0	
Partition Size	4.96 GB (5,321,723,904 bytes)	
Partition Starting Offset	32,256 bytes	
Partition	Disk #90, Partition #1	
Partition Size	7.74 GB (8,315,758,080 bytes)	
Partition Starting Offset	5,321,756,160 bytes	
Partition	Disk #90, Partition #2	
Partition Size	3.94 GB (4,227,793,920 bytes)	
Partition Starting Offset	13,637,514,240 bytes	
Partition	Disk #90, Partition #3	
Partition Size	102.99 GB (110,580,664,320 bytes)	
Partition Starting Offset	17,865,308,160 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 #89, Partition #0
 Partition Size 4.96 GB (5,321,723,904 bytes)
 Partition Starting Offset 32,256 bytes
 Partition Disk #89, Partition #1
 Partition Size 7.74 GB (8,315,758,080 bytes)
 Partition Starting Offset 5,321,756,160 bytes
 Partition Disk #89, Partition #2
 Partition Size 3.94 GB (4,227,793,920 bytes)
 Partition Starting Offset 13,637,514,240 bytes
 Partition Disk #89, Partition #3
 Partition Size 102.99 GB (110,580,664,320 bytes)
 Partition Starting Offset 17,865,308,160 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 #88, Partition #0
 Partition Size 4.96 GB (5,321,723,904 bytes)
 Partition Starting Offset 32,256 bytes
 Partition Disk #88, Partition #1
 Partition Size 7.74 GB (8,315,758,080 bytes)
 Partition Starting Offset 5,321,756,160 bytes
 Partition Disk #88, Partition #2
 Partition Size 3.94 GB (4,227,793,920 bytes)
 Partition Starting Offset 13,637,514,240 bytes
 Partition Disk #88, Partition #3
 Partition Size 102.99 GB (110,580,664,320 bytes)
 Partition Starting Offset 17,865,308,160 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 #87, Partition #0
 Partition Size 4.96 GB (5,321,723,904 bytes)
 Partition Starting Offset 32,256 bytes
 Partition Disk #87, Partition #1
 Partition Size 7.74 GB (8,315,758,080 bytes)
 Partition Starting Offset 5,321,756,160 bytes
 Partition Disk #87, Partition #2
 Partition Size 3.94 GB (4,227,793,920 bytes)
 Partition Starting Offset 13,637,514,240 bytes
 Partition Disk #87, Partition #3
 Partition Size 102.99 GB (110,580,664,320 bytes)
 Partition Starting Offset 17,865,308,160 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 #86, Partition #0
 Partition Size 4.96 GB (5,321,723,904 bytes)
 Partition Starting Offset 32,256 bytes
 Partition Disk #86, Partition #1
 Partition Size 7.74 GB (8,315,758,080 bytes)
 Partition Starting Offset 5,321,756,160 bytes
 Partition Disk #86, Partition #2
 Partition Size 3.94 GB (4,227,793,920 bytes)
 Partition Starting Offset 13,637,514,240 bytes
 Partition Disk #86, Partition #3
 Partition Size 102.99 GB (110,580,664,320 bytes)

Partition Starting Offset 17,865,308,160 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 #85, Partition #0
Partition Size 4.96 GB (5,321,723,904 bytes)
Partition Starting Offset 32,256 bytes
Partition Disk #85, Partition #1
Partition Size 7.74 GB (8,315,758,080 bytes)
Partition Starting Offset 5,321,756,160 bytes
Partition Disk #85, Partition #2
Partition Size 3.94 GB (4,227,793,920 bytes)
Partition Starting Offset 13,637,514,240 bytes
Partition Disk #85, Partition #3
Partition Size 102.99 GB (110,580,664,320 bytes)
Partition Starting Offset 17,865,308,160 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 #84, Partition #0
Partition Size 4.96 GB (5,321,723,904 bytes)
Partition Starting Offset 32,256 bytes
Partition Disk #84, Partition #1
Partition Size 7.74 GB (8,315,758,080 bytes)
Partition Starting Offset 5,321,756,160 bytes
Partition Disk #84, Partition #2
Partition Size 3.94 GB (4,227,793,920 bytes)
Partition Starting Offset 13,637,514,240 bytes
Partition Disk #84, Partition #3

Partition Size 102.99 GB (110,580,664,320 bytes)
Partition Starting Offset 17,865,308,160 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 #83, Partition #0
Partition Size 4.96 GB (5,321,723,904 bytes)
Partition Starting Offset 32,256 bytes
Partition Disk #83, Partition #1
Partition Size 7.74 GB (8,315,758,080 bytes)
Partition Starting Offset 5,321,756,160 bytes
Partition Disk #83, Partition #2
Partition Size 3.94 GB (4,227,793,920 bytes)
Partition Starting Offset 13,637,514,240 bytes
Partition Disk #83, Partition #3
Partition Size 102.99 GB (110,580,664,320 bytes)
Partition Starting Offset 17,865,308,160 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 #82, Partition #0
Partition Size 4.96 GB (5,321,723,904 bytes)
Partition Starting Offset 32,256 bytes
Partition Disk #82, Partition #1
Partition Size 7.74 GB (8,315,758,080 bytes)
Partition Starting Offset 5,321,756,160 bytes
Partition Disk #82, Partition #2
Partition Size 3.94 GB (4,227,793,920 bytes)
Partition Starting Offset 13,637,514,240 bytes

Partition Disk #82, Partition #3
Partition Size 102.99 GB (110,580,664,320 bytes)
Partition Starting Offset 17,865,308,160 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 #81, Partition #0
Partition Size 4.96 GB (5,321,723,904 bytes)
Partition Starting Offset 32,256 bytes
Partition Disk #81, Partition #1
Partition Size 7.74 GB (8,315,758,080 bytes)
Partition Starting Offset 5,321,756,160 bytes
Partition Disk #81, Partition #2
Partition Size 3.94 GB (4,227,793,920 bytes)
Partition Starting Offset 13,637,514,240 bytes
Partition Disk #81, Partition #3
Partition Size 102.99 GB (110,580,664,320 bytes)
Partition Starting Offset 17,865,308,160 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 #70, Partition #0
Partition Size 4.96 GB (5,321,723,904 bytes)
Partition Starting Offset 32,256 bytes
Partition Disk #70, Partition #1
Partition Size 7.74 GB (8,315,758,080 bytes)
Partition Starting Offset 5,321,756,160 bytes
Partition Disk #70, Partition #2
Partition Size 3.94 GB (4,227,793,920 bytes)

Partition Starting Offset 13,637,514,240 bytes
Partition Disk #70, Partition #3
Partition Size 102.99 GB (110,580,664,320 bytes)
Partition Starting Offset 17,865,308,160 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 #69, Partition #0
Partition Size 4.96 GB (5,321,723,904 bytes)
Partition Starting Offset 32,256 bytes
Partition Disk #69, Partition #1
Partition Size 7.74 GB (8,315,758,080 bytes)
Partition Starting Offset 5,321,756,160 bytes
Partition Disk #69, Partition #2
Partition Size 3.94 GB (4,227,793,920 bytes)
Partition Starting Offset 13,637,514,240 bytes
Partition Disk #69, Partition #3
Partition Size 102.99 GB (110,580,664,320 bytes)
Partition Starting Offset 17,865,308,160 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 #68, Partition #0
Partition Size 4.96 GB (5,321,723,904 bytes)
Partition Starting Offset 32,256 bytes
Partition Disk #68, Partition #1
Partition Size 7.74 GB (8,315,758,080 bytes)
Partition Starting Offset 5,321,756,160 bytes
Partition Disk #68, Partition #2

Partition Size 3.94 GB (4,227,793,920 bytes)
Partition Starting Offset 13,637,514,240 bytes
Partition Disk #68, Partition #3
Partition Size 102.99 GB (110,580,664,320 bytes)
Partition Starting Offset 17,865,308,160 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 #67, Partition #0
Partition Size 4.96 GB (5,321,723,904 bytes)
Partition Starting Offset 32,256 bytes
Partition Disk #67, Partition #1
Partition Size 7.74 GB (8,315,758,080 bytes)
Partition Starting Offset 5,321,756,160 bytes
Partition Disk #67, Partition #2
Partition Size 3.94 GB (4,227,793,920 bytes)
Partition Starting Offset 13,637,514,240 bytes
Partition Disk #67, Partition #3
Partition Size 102.99 GB (110,580,664,320 bytes)
Partition Starting Offset 17,865,308,160 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 #66, Partition #0
Partition Size 4.96 GB (5,321,723,904 bytes)
Partition Starting Offset 32,256 bytes
Partition Disk #66, Partition #1
Partition Size 7.74 GB (8,315,758,080 bytes)
Partition Starting Offset 5,321,756,160 bytes

Partition Disk #66, Partition #2
Partition Size 3.94 GB (4,227,793,920 bytes)
Partition Starting Offset 13,637,514,240 bytes
Partition Disk #66, Partition #3
Partition Size 102.99 GB (110,580,664,320 bytes)
Partition Starting Offset 17,865,308,160 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 #65, Partition #0
Partition Size 4.96 GB (5,321,723,904 bytes)
Partition Starting Offset 32,256 bytes
Partition Disk #65, Partition #1
Partition Size 7.74 GB (8,315,758,080 bytes)
Partition Starting Offset 5,321,756,160 bytes
Partition Disk #65, Partition #2
Partition Size 3.94 GB (4,227,793,920 bytes)
Partition Starting Offset 13,637,514,240 bytes
Partition Disk #65, Partition #3
Partition Size 102.99 GB (110,580,664,320 bytes)
Partition Starting Offset 17,865,308,160 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 #64, Partition #0
Partition Size 4.96 GB (5,321,723,904 bytes)
Partition Starting Offset 32,256 bytes
Partition Disk #64, Partition #1
Partition Size 7.74 GB (8,315,758,080 bytes)

Partition Starting Offset 5,321,756,160 bytes
Partition Disk #64, Partition #2
Partition Size 3.94 GB (4,227,793,920 bytes)
Partition Starting Offset 13,637,514,240 bytes
Partition Disk #64, Partition #3
Partition Size 102.99 GB (110,580,664,320 bytes)
Partition Starting Offset 17,865,308,160 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 #63, Partition #0
Partition Size 4.96 GB (5,321,723,904 bytes)
Partition Starting Offset 32,256 bytes
Partition Disk #63, Partition #1
Partition Size 7.74 GB (8,315,758,080 bytes)
Partition Starting Offset 5,321,756,160 bytes
Partition Disk #63, Partition #2
Partition Size 3.94 GB (4,227,793,920 bytes)
Partition Starting Offset 13,637,514,240 bytes
Partition Disk #63, Partition #3
Partition Size 102.99 GB (110,580,664,320 bytes)
Partition Starting Offset 17,865,308,160 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 #62, Partition #0
Partition Size 4.96 GB (5,321,723,904 bytes)
Partition Starting Offset 32,256 bytes
Partition Disk #62, Partition #1

Partition Size 7.74 GB (8,315,758,080 bytes)
Partition Starting Offset 5,321,756,160 bytes
Partition Disk #62, Partition #2
Partition Size 3.94 GB (4,227,793,920 bytes)
Partition Starting Offset 13,637,514,240 bytes
Partition Disk #62, Partition #3
Partition Size 102.99 GB (110,580,664,320 bytes)
Partition Starting Offset 17,865,308,160 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 #61, Partition #0
Partition Size 4.96 GB (5,321,723,904 bytes)
Partition Starting Offset 32,256 bytes
Partition Disk #61, Partition #1
Partition Size 7.74 GB (8,315,758,080 bytes)
Partition Starting Offset 5,321,756,160 bytes
Partition Disk #61, Partition #2
Partition Size 3.94 GB (4,227,793,920 bytes)
Partition Starting Offset 13,637,514,240 bytes
Partition Disk #61, Partition #3
Partition Size 102.99 GB (110,580,664,320 bytes)
Partition Starting Offset 17,865,308,160 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 #20, Partition #0
Partition Size 4.96 GB (5,321,723,904 bytes)
Partition Starting Offset 32,256 bytes

Partition Disk #20, Partition #1
 Partition Size 7.74 GB (8,315,758,080 bytes)
 Partition Starting Offset 5,321,756,160 bytes
 Partition Disk #20, Partition #2
 Partition Size 3.94 GB (4,227,793,920 bytes)
 Partition Starting Offset 13,637,514,240 bytes
 Partition Disk #20, Partition #3
 Partition Size 102.99 GB (110,580,664,320 bytes)
 Partition Starting Offset 17,865,308,160 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 #19, Partition #0
 Partition Size 4.96 GB (5,321,723,904 bytes)
 Partition Starting Offset 32,256 bytes
 Partition Disk #19, Partition #1
 Partition Size 7.74 GB (8,315,758,080 bytes)
 Partition Starting Offset 5,321,756,160 bytes
 Partition Disk #19, Partition #2
 Partition Size 3.94 GB (4,227,793,920 bytes)
 Partition Starting Offset 13,637,514,240 bytes
 Partition Disk #19, Partition #3
 Partition Size 102.99 GB (110,580,664,320 bytes)
 Partition Starting Offset 17,865,308,160 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 #18, Partition #0
 Partition Size 4.96 GB (5,321,723,904 bytes)

Partition Starting Offset 32,256 bytes
 Partition Disk #18, Partition #1
 Partition Size 7.74 GB (8,315,758,080 bytes)
 Partition Starting Offset 5,321,756,160 bytes
 Partition Disk #18, Partition #2
 Partition Size 3.94 GB (4,227,793,920 bytes)
 Partition Starting Offset 13,637,514,240 bytes
 Partition Disk #18, Partition #3
 Partition Size 102.99 GB (110,580,664,320 bytes)
 Partition Starting Offset 17,865,308,160 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 #17, Partition #0
 Partition Size 4.96 GB (5,321,723,904 bytes)
 Partition Starting Offset 32,256 bytes
 Partition Disk #17, Partition #1
 Partition Size 7.74 GB (8,315,758,080 bytes)
 Partition Starting Offset 5,321,756,160 bytes
 Partition Disk #17, Partition #2
 Partition Size 3.94 GB (4,227,793,920 bytes)
 Partition Starting Offset 13,637,514,240 bytes
 Partition Disk #17, Partition #3
 Partition Size 102.99 GB (110,580,664,320 bytes)
 Partition Starting Offset 17,865,308,160 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 #16, Partition #0

Partition Size 4.96 GB (5,321,723,904 bytes)
 Partition Starting Offset 32,256 bytes
 Partition Disk #16, Partition #1
 Partition Size 7.74 GB (8,315,758,080 bytes)
 Partition Starting Offset 5,321,756,160 bytes
 Partition Disk #16, Partition #2
 Partition Size 3.94 GB (4,227,793,920 bytes)
 Partition Starting Offset 13,637,514,240 bytes
 Partition Disk #16, Partition #3
 Partition Size 102.99 GB (110,580,664,320 bytes)
 Partition Starting Offset 17,865,308,160 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 #15, Partition #0
 Partition Size 4.96 GB (5,321,723,904 bytes)
 Partition Starting Offset 32,256 bytes
 Partition Disk #15, Partition #1
 Partition Size 7.74 GB (8,315,758,080 bytes)
 Partition Starting Offset 5,321,756,160 bytes
 Partition Disk #15, Partition #2
 Partition Size 3.94 GB (4,227,793,920 bytes)
 Partition Starting Offset 13,637,514,240 bytes
 Partition Disk #15, Partition #3
 Partition Size 102.99 GB (110,580,664,320 bytes)
 Partition Starting Offset 17,865,308,160 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
 Tracks/Cylinder 255

Partition Disk #14, Partition #0
 Partition Size 4.96 GB (5,321,723,904 bytes)
 Partition Starting Offset 32,256 bytes
 Partition Disk #14, Partition #1
 Partition Size 7.74 GB (8,315,758,080 bytes)
 Partition Starting Offset 5,321,756,160 bytes
 Partition Disk #14, Partition #2
 Partition Size 3.94 GB (4,227,793,920 bytes)
 Partition Starting Offset 13,637,514,240 bytes
 Partition Disk #14, Partition #3
 Partition Size 102.99 GB (110,580,664,320 bytes)
 Partition Starting Offset 17,865,308,160 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 #13, Partition #0
 Partition Size 4.96 GB (5,321,723,904 bytes)
 Partition Starting Offset 32,256 bytes
 Partition Disk #13, Partition #1
 Partition Size 7.74 GB (8,315,758,080 bytes)
 Partition Starting Offset 5,321,756,160 bytes
 Partition Disk #13, Partition #2
 Partition Size 3.94 GB (4,227,793,920 bytes)
 Partition Starting Offset 13,637,514,240 bytes
 Partition Disk #13, Partition #3
 Partition Size 102.99 GB (110,580,664,320 bytes)
 Partition Starting Offset 17,865,308,160 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 #12, Partition #0
 Partition Size 4.96 GB (5,321,723,904 bytes)
 Partition Starting Offset 32,256 bytes
 Partition Disk #12, Partition #1
 Partition Size 7.74 GB (8,315,758,080 bytes)
 Partition Starting Offset 5,321,756,160 bytes
 Partition Disk #12, Partition #2
 Partition Size 3.94 GB (4,227,793,920 bytes)
 Partition Starting Offset 13,637,514,240 bytes
 Partition Disk #12, Partition #3
 Partition Size 102.99 GB (110,580,664,320 bytes)
 Partition Starting Offset 17,865,308,160 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 #11, Partition #0
 Partition Size 4.96 GB (5,321,723,904 bytes)
 Partition Starting Offset 32,256 bytes
 Partition Disk #11, Partition #1
 Partition Size 7.74 GB (8,315,758,080 bytes)
 Partition Starting Offset 5,321,756,160 bytes
 Partition Disk #11, Partition #2
 Partition Size 3.94 GB (4,227,793,920 bytes)
 Partition Starting Offset 13,637,514,240 bytes
 Partition Disk #11, Partition #3
 Partition Size 102.99 GB (110,580,664,320 bytes)
 Partition Starting Offset 17,865,308,160 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 #80, Partition #0
 Partition Size 4.96 GB (5,321,723,904 bytes)
 Partition Starting Offset 32,256 bytes
 Partition Disk #80, Partition #1
 Partition Size 7.74 GB (8,315,758,080 bytes)
 Partition Starting Offset 5,321,756,160 bytes
 Partition Disk #80, Partition #2
 Partition Size 3.94 GB (4,227,793,920 bytes)
 Partition Starting Offset 13,637,514,240 bytes
 Partition Disk #80, Partition #3
 Partition Size 102.99 GB (110,580,664,320 bytes)
 Partition Starting Offset 17,865,308,160 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 #79, Partition #0
 Partition Size 4.96 GB (5,321,723,904 bytes)
 Partition Starting Offset 32,256 bytes
 Partition Disk #79, Partition #1
 Partition Size 7.74 GB (8,315,758,080 bytes)
 Partition Starting Offset 5,321,756,160 bytes
 Partition Disk #79, Partition #2
 Partition Size 3.94 GB (4,227,793,920 bytes)
 Partition Starting Offset 13,637,514,240 bytes
 Partition Disk #79, Partition #3
 Partition Size 102.99 GB (110,580,664,320 bytes)
 Partition Starting Offset 17,865,308,160 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 #78, Partition #0
 Partition Size 4.96 GB (5,321,723,904 bytes)
 Partition Starting Offset 32,256 bytes
 Partition Disk #78, Partition #1
 Partition Size 7.74 GB (8,315,758,080 bytes)
 Partition Starting Offset 5,321,756,160 bytes
 Partition Disk #78, Partition #2
 Partition Size 3.94 GB (4,227,793,920 bytes)
 Partition Starting Offset 13,637,514,240 bytes
 Partition Disk #78, Partition #3
 Partition Size 102.99 GB (110,580,664,320 bytes)
 Partition Starting Offset 17,865,308,160 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 #77, Partition #0
 Partition Size 4.96 GB (5,321,723,904 bytes)
 Partition Starting Offset 32,256 bytes
 Partition Disk #77, Partition #1
 Partition Size 7.74 GB (8,315,758,080 bytes)
 Partition Starting Offset 5,321,756,160 bytes
 Partition Disk #77, Partition #2
 Partition Size 3.94 GB (4,227,793,920 bytes)
 Partition Starting Offset 13,637,514,240 bytes
 Partition Disk #77, Partition #3
 Partition Size 102.99 GB (110,580,664,320 bytes)
 Partition Starting Offset 17,865,308,160 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 #76, Partition #0
 Partition Size 4.96 GB (5,321,723,904 bytes)
 Partition Starting Offset 32,256 bytes
 Partition Disk #76, Partition #1
 Partition Size 7.74 GB (8,315,758,080 bytes)
 Partition Starting Offset 5,321,756,160 bytes
 Partition Disk #76, Partition #2
 Partition Size 3.94 GB (4,227,793,920 bytes)
 Partition Starting Offset 13,637,514,240 bytes
 Partition Disk #76, Partition #3
 Partition Size 102.99 GB (110,580,664,320 bytes)
 Partition Starting Offset 17,865,308,160 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 #75, Partition #0
 Partition Size 4.96 GB (5,321,723,904 bytes)
 Partition Starting Offset 32,256 bytes
 Partition Disk #75, Partition #1
 Partition Size 7.74 GB (8,315,758,080 bytes)
 Partition Starting Offset 5,321,756,160 bytes
 Partition Disk #75, Partition #2
 Partition Size 3.94 GB (4,227,793,920 bytes)
 Partition Starting Offset 13,637,514,240 bytes
 Partition Disk #75, Partition #3
 Partition Size 102.99 GB (110,580,664,320 bytes)
 Partition Starting Offset 17,865,308,160 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 #74, Partition #0
 Partition Size 4.96 GB (5,321,723,904 bytes)
 Partition Starting Offset 32,256 bytes
 Partition Disk #74, Partition #1
 Partition Size 7.74 GB (8,315,758,080 bytes)
 Partition Starting Offset 5,321,756,160 bytes
 Partition Disk #74, Partition #2
 Partition Size 3.94 GB (4,227,793,920 bytes)
 Partition Starting Offset 13,637,514,240 bytes
 Partition Disk #74, Partition #3
 Partition Size 102.99 GB (110,580,664,320 bytes)
 Partition Starting Offset 17,865,308,160 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 #73, Partition #0
 Partition Size 4.96 GB (5,321,723,904 bytes)
 Partition Starting Offset 32,256 bytes
 Partition Disk #73, Partition #1
 Partition Size 7.74 GB (8,315,758,080 bytes)
 Partition Starting Offset 5,321,756,160 bytes
 Partition Disk #73, Partition #2
 Partition Size 3.94 GB (4,227,793,920 bytes)
 Partition Starting Offset 13,637,514,240 bytes
 Partition Disk #73, Partition #3
 Partition Size 102.99 GB (110,580,664,320 bytes)
 Partition Starting Offset 17,865,308,160 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 #72, Partition #0
 Partition Size 4.96 GB (5,321,723,904 bytes)
 Partition Starting Offset 32,256 bytes
 Partition Disk #72, Partition #1
 Partition Size 7.74 GB (8,315,758,080 bytes)
 Partition Starting Offset 5,321,756,160 bytes
 Partition Disk #72, Partition #2
 Partition Size 3.94 GB (4,227,793,920 bytes)
 Partition Starting Offset 13,637,514,240 bytes
 Partition Disk #72, Partition #3
 Partition Size 102.99 GB (110,580,664,320 bytes)
 Partition Starting Offset 17,865,308,160 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 #71, Partition #0
 Partition Size 4.96 GB (5,321,723,904 bytes)
 Partition Starting Offset 32,256 bytes
 Partition Disk #71, Partition #1
 Partition Size 7.74 GB (8,315,758,080 bytes)
 Partition Starting Offset 5,321,756,160 bytes
 Partition Disk #71, Partition #2
 Partition Size 3.94 GB (4,227,793,920 bytes)
 Partition Starting Offset 13,637,514,240 bytes
 Partition Disk #71, Partition #3
 Partition Size 102.99 GB (110,580,664,320 bytes)
 Partition Starting Offset 17,865,308,160 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 #100, Partition #0
 Partition Size 4.96 GB (5,321,723,904 bytes)
 Partition Starting Offset 32,256 bytes
 Partition Disk #100, Partition #1
 Partition Size 7.74 GB (8,315,758,080 bytes)
 Partition Starting Offset 5,321,756,160 bytes
 Partition Disk #100, Partition #2
 Partition Size 3.94 GB (4,227,793,920 bytes)
 Partition Starting Offset 13,637,514,240 bytes
 Partition Disk #100, Partition #3
 Partition Size 102.99 GB (110,580,664,320 bytes)
 Partition Starting Offset 17,865,308,160 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 #99, Partition #0
 Partition Size 4.96 GB (5,321,723,904 bytes)
 Partition Starting Offset 32,256 bytes
 Partition Disk #99, Partition #1
 Partition Size 7.74 GB (8,315,758,080 bytes)
 Partition Starting Offset 5,321,756,160 bytes
 Partition Disk #99, Partition #2
 Partition Size 3.94 GB (4,227,793,920 bytes)
 Partition Starting Offset 13,637,514,240 bytes
 Partition Disk #99, Partition #3
 Partition Size 102.99 GB (110,580,664,320 bytes)
 Partition Starting Offset 17,865,308,160 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 #98, Partition #0
 Partition Size 4.96 GB (5,321,723,904 bytes)
 Partition Starting Offset 32,256 bytes
 Partition Disk #98, Partition #1
 Partition Size 7.74 GB (8,315,758,080 bytes)
 Partition Starting Offset 5,321,756,160 bytes
 Partition Disk #98, Partition #2
 Partition Size 3.94 GB (4,227,793,920 bytes)
 Partition Starting Offset 13,637,514,240 bytes
 Partition Disk #98, Partition #3
 Partition Size 102.99 GB (110,580,664,320 bytes)
 Partition Starting Offset 17,865,308,160 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 #97, Partition #0
 Partition Size 4.96 GB (5,321,723,904 bytes)
 Partition Starting Offset 32,256 bytes
 Partition Disk #97, Partition #1
 Partition Size 7.74 GB (8,315,758,080 bytes)
 Partition Starting Offset 5,321,756,160 bytes
 Partition Disk #97, Partition #2
 Partition Size 3.94 GB (4,227,793,920 bytes)
 Partition Starting Offset 13,637,514,240 bytes
 Partition Disk #97, Partition #3
 Partition Size 102.99 GB (110,580,664,320 bytes)
 Partition Starting Offset 17,865,308,160 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

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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 #96, Partition #0
Partition Size         4.96 GB (5,321,723,904 bytes)
Partition Starting Offset 32,256 bytes
Partition              Disk #96, Partition #1
Partition Size         7.74 GB (8,315,758,080 bytes)
Partition Starting Offset 5,321,756,160 bytes
Partition              Disk #96, Partition #2
Partition Size         3.94 GB (4,227,793,920 bytes)
Partition Starting Offset 13,637,514,240 bytes
Partition              Disk #96, Partition #3
Partition Size         102.99 GB (110,580,664,320 bytes)
Partition Starting Offset 17,865,308,160 bytes

```

```

Description      Unisys Intelligent Fibre Channel Fabric Disk Driver
Manufacturer      Unisys Corporation
Model      UNISYS VirtualStorage 01.0

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```

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 #95, Partition #0
Partition Size         4.96 GB (5,321,723,904 bytes)
Partition Starting Offset 32,256 bytes
Partition              Disk #95, Partition #1
Partition Size         7.74 GB (8,315,758,080 bytes)
Partition Starting Offset 5,321,756,160 bytes
Partition              Disk #95, Partition #2
Partition Size         3.94 GB (4,227,793,920 bytes)
Partition Starting Offset 13,637,514,240 bytes
Partition              Disk #95, Partition #3
Partition Size         102.99 GB (110,580,664,320 bytes)
Partition Starting Offset 17,865,308,160 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 #94, Partition #0
Partition Size     4.96 GB (5,321,723,904 bytes)
Partition Starting Offset 32,256 bytes
Partition          Disk #94, Partition #1
Partition Size     7.74 GB (8,315,758,080 bytes)
Partition Starting Offset 5,321,756,160 bytes
Partition          Disk #94, Partition #2
Partition Size     3.94 GB (4,227,793,920 bytes)
Partition Starting Offset 13,637,514,240 bytes
Partition          Disk #94, Partition #3
Partition Size     102.99 GB (110,580,664,320 bytes)
Partition Starting Offset 17,865,308,160 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    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 #93, Partition #0
Partition Size     4.96 GB (5,321,723,904 bytes)
Partition Starting Offset 32,256 bytes
Partition          Disk #93, Partition #1
Partition Size     7.74 GB (8,315,758,080 bytes)
Partition Starting Offset 5,321,756,160 bytes
Partition          Disk #93, Partition #2
Partition Size     3.94 GB (4,227,793,920 bytes)
Partition Starting Offset 13,637,514,240 bytes
Partition          Disk #93, Partition #3
Partition Size     102.99 GB (110,580,664,320 bytes)
Partition Starting Offset 17,865,308,160 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 #92, Partition #0
 Partition Size 4.96 GB (5,321,723,904 bytes)
 Partition Starting Offset 32,256 bytes
 Partition Disk #92, Partition #1
 Partition Size 7.74 GB (8,315,758,080 bytes)
 Partition Starting Offset 5,321,756,160 bytes
 Partition Disk #92, Partition #2
 Partition Size 3.94 GB (4,227,793,920 bytes)
 Partition Starting Offset 13,637,514,240 bytes
 Partition Disk #92, Partition #3
 Partition Size 102.99 GB (110,580,664,320 bytes)
 Partition Starting Offset 17,865,308,160 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 #91, Partition #0
 Partition Size 4.96 GB (5,321,723,904 bytes)
 Partition Starting Offset 32,256 bytes
 Partition Disk #91, Partition #1
 Partition Size 7.74 GB (8,315,758,080 bytes)
 Partition Starting Offset 5,321,756,160 bytes
 Partition Disk #91, Partition #2
 Partition Size 3.94 GB (4,227,793,920 bytes)
 Partition Starting Offset 13,637,514,240 bytes
 Partition Disk #91, Partition #3
 Partition Size 102.99 GB (110,580,664,320 bytes)
 Partition Starting Offset 17,865,308,160 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 #60, Partition #0
 Partition Size 4.96 GB (5,321,723,904 bytes)
 Partition Starting Offset 32,256 bytes
 Partition Disk #60, Partition #1
 Partition Size 7.74 GB (8,315,758,080 bytes)
 Partition Starting Offset 5,321,756,160 bytes
 Partition Disk #60, Partition #2
 Partition Size 3.94 GB (4,227,793,920 bytes)
 Partition Starting Offset 13,637,514,240 bytes
 Partition Disk #60, Partition #3
 Partition Size 102.99 GB (110,580,664,320 bytes)
 Partition Starting Offset 17,865,308,160 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 #59, Partition #0
 Partition Size 4.96 GB (5,321,723,904 bytes)
 Partition Starting Offset 32,256 bytes
 Partition Disk #59, Partition #1
 Partition Size 7.74 GB (8,315,758,080 bytes)
 Partition Starting Offset 5,321,756,160 bytes
 Partition Disk #59, Partition #2
 Partition Size 3.94 GB (4,227,793,920 bytes)
 Partition Starting Offset 13,637,514,240 bytes
 Partition Disk #59, Partition #3
 Partition Size 102.99 GB (110,580,664,320 bytes)
 Partition Starting Offset 17,865,308,160 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 #58, Partition #0
 Partition Size 4.96 GB (5,321,723,904 bytes)
 Partition Starting Offset 32,256 bytes
 Partition Disk #58, Partition #1
 Partition Size 7.74 GB (8,315,758,080 bytes)
 Partition Starting Offset 5,321,756,160 bytes
 Partition Disk #58, Partition #2
 Partition Size 3.94 GB (4,227,793,920 bytes)
 Partition Starting Offset 13,637,514,240 bytes
 Partition Disk #58, Partition #3
 Partition Size 102.99 GB (110,580,664,320 bytes)
 Partition Starting Offset 17,865,308,160 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 #57, Partition #0
 Partition Size 4.96 GB (5,321,723,904 bytes)
 Partition Starting Offset 32,256 bytes
 Partition Disk #57, Partition #1
 Partition Size 7.74 GB (8,315,758,080 bytes)
 Partition Starting Offset 5,321,756,160 bytes
 Partition Disk #57, Partition #2
 Partition Size 3.94 GB (4,227,793,920 bytes)
 Partition Starting Offset 13,637,514,240 bytes
 Partition Disk #57, Partition #3
 Partition Size 102.99 GB (110,580,664,320 bytes)
 Partition Starting Offset 17,865,308,160 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 #56, Partition #0
 Partition Size 4.96 GB (5,321,723,904 bytes)
 Partition Starting Offset 32,256 bytes
 Partition Disk #56, Partition #1
 Partition Size 7.74 GB (8,315,758,080 bytes)
 Partition Starting Offset 5,321,756,160 bytes
 Partition Disk #56, Partition #2
 Partition Size 3.94 GB (4,227,793,920 bytes)
 Partition Starting Offset 13,637,514,240 bytes
 Partition Disk #56, Partition #3
 Partition Size 102.99 GB (110,580,664,320 bytes)
 Partition Starting Offset 17,865,308,160 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 #55, Partition #0
 Partition Size 4.96 GB (5,321,723,904 bytes)
 Partition Starting Offset 32,256 bytes
 Partition Disk #55, Partition #1
 Partition Size 7.74 GB (8,315,758,080 bytes)
 Partition Starting Offset 5,321,756,160 bytes
 Partition Disk #55, Partition #2
 Partition Size 3.94 GB (4,227,793,920 bytes)
 Partition Starting Offset 13,637,514,240 bytes
 Partition Disk #55, Partition #3
 Partition Size 102.99 GB (110,580,664,320 bytes)
 Partition Starting Offset 17,865,308,160 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 #54, Partition #0
 Partition Size 4.96 GB (5,321,723,904 bytes)
 Partition Starting Offset 32,256 bytes
 Partition Disk #54, Partition #1
 Partition Size 7.74 GB (8,315,758,080 bytes)
 Partition Starting Offset 5,321,756,160 bytes
 Partition Disk #54, Partition #2
 Partition Size 3.94 GB (4,227,793,920 bytes)
 Partition Starting Offset 13,637,514,240 bytes
 Partition Disk #54, Partition #3
 Partition Size 102.99 GB (110,580,664,320 bytes)
 Partition Starting Offset 17,865,308,160 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 #53, Partition #0
 Partition Size 4.96 GB (5,321,723,904 bytes)
 Partition Starting Offset 32,256 bytes
 Partition Disk #53, Partition #1
 Partition Size 7.74 GB (8,315,758,080 bytes)
 Partition Starting Offset 5,321,756,160 bytes
 Partition Disk #53, Partition #2
 Partition Size 3.94 GB (4,227,793,920 bytes)
 Partition Starting Offset 13,637,514,240 bytes
 Partition Disk #53, Partition #3
 Partition Size 102.99 GB (110,580,664,320 bytes)
 Partition Starting Offset 17,865,308,160 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 #52, Partition #0
 Partition Size 4.96 GB (5,321,723,904 bytes)
 Partition Starting Offset 32,256 bytes
 Partition Disk #52, Partition #1
 Partition Size 7.74 GB (8,315,758,080 bytes)
 Partition Starting Offset 5,321,756,160 bytes
 Partition Disk #52, Partition #2
 Partition Size 3.94 GB (4,227,793,920 bytes)
 Partition Starting Offset 13,637,514,240 bytes
 Partition Disk #52, Partition #3
 Partition Size 102.99 GB (110,580,664,320 bytes)
 Partition Starting Offset 17,865,308,160 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 #51, Partition #0
 Partition Size 4.96 GB (5,321,723,904 bytes)
 Partition Starting Offset 32,256 bytes
 Partition Disk #51, Partition #1
 Partition Size 7.74 GB (8,315,758,080 bytes)
 Partition Starting Offset 5,321,756,160 bytes
 Partition Disk #51, Partition #2
 Partition Size 3.94 GB (4,227,793,920 bytes)
 Partition Starting Offset 13,637,514,240 bytes
 Partition Disk #51, Partition #3
 Partition Size 102.99 GB (110,580,664,320 bytes)
 Partition Starting Offset 17,865,308,160 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 #30, Partition #0
 Partition Size 4.96 GB (5,321,723,904 bytes)
 Partition Starting Offset 32,256 bytes
 Partition Disk #30, Partition #1
 Partition Size 7.74 GB (8,315,758,080 bytes)
 Partition Starting Offset 5,321,756,160 bytes
 Partition Disk #30, Partition #2
 Partition Size 3.94 GB (4,227,793,920 bytes)
 Partition Starting Offset 13,637,514,240 bytes
 Partition Disk #30, Partition #3
 Partition Size 102.99 GB (110,580,664,320 bytes)
 Partition Starting Offset 17,865,308,160 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 #29, Partition #0
 Partition Size 4.96 GB (5,321,723,904 bytes)
 Partition Starting Offset 32,256 bytes
 Partition Disk #29, Partition #1
 Partition Size 7.74 GB (8,315,758,080 bytes)
 Partition Starting Offset 5,321,756,160 bytes
 Partition Disk #29, Partition #2
 Partition Size 3.94 GB (4,227,793,920 bytes)
 Partition Starting Offset 13,637,514,240 bytes
 Partition Disk #29, Partition #3
 Partition Size 102.99 GB (110,580,664,320 bytes)
 Partition Starting Offset 17,865,308,160 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 #28, Partition #0
 Partition Size 4.96 GB (5,321,723,904 bytes)
 Partition Starting Offset 32,256 bytes
 Partition Disk #28, Partition #1
 Partition Size 7.74 GB (8,315,758,080 bytes)
 Partition Starting Offset 5,321,756,160 bytes
 Partition Disk #28, Partition #2
 Partition Size 3.94 GB (4,227,793,920 bytes)
 Partition Starting Offset 13,637,514,240 bytes
 Partition Disk #28, Partition #3
 Partition Size 102.99 GB (110,580,664,320 bytes)
 Partition Starting Offset 17,865,308,160 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 #27, Partition #0
 Partition Size 4.96 GB (5,321,723,904 bytes)
 Partition Starting Offset 32,256 bytes
 Partition Disk #27, Partition #1
 Partition Size 7.74 GB (8,315,758,080 bytes)
 Partition Starting Offset 5,321,756,160 bytes
 Partition Disk #27, Partition #2
 Partition Size 3.94 GB (4,227,793,920 bytes)
 Partition Starting Offset 13,637,514,240 bytes
 Partition Disk #27, Partition #3
 Partition Size 102.99 GB (110,580,664,320 bytes)

Partition Starting Offset 17,865,308,160 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 #26, Partition #0
Partition Size 4.96 GB (5,321,723,904 bytes)
Partition Starting Offset 32,256 bytes
Partition Disk #26, Partition #1
Partition Size 7.74 GB (8,315,758,080 bytes)
Partition Starting Offset 5,321,756,160 bytes
Partition Disk #26, Partition #2
Partition Size 3.94 GB (4,227,793,920 bytes)
Partition Starting Offset 13,637,514,240 bytes
Partition Disk #26, Partition #3
Partition Size 102.99 GB (110,580,664,320 bytes)
Partition Starting Offset 17,865,308,160 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 #25, Partition #0
Partition Size 4.96 GB (5,321,723,904 bytes)
Partition Starting Offset 32,256 bytes
Partition Disk #25, Partition #1
Partition Size 7.74 GB (8,315,758,080 bytes)
Partition Starting Offset 5,321,756,160 bytes
Partition Disk #25, Partition #2
Partition Size 3.94 GB (4,227,793,920 bytes)
Partition Starting Offset 13,637,514,240 bytes
Partition Disk #25, Partition #3

Partition Size 102.99 GB (110,580,664,320 bytes)
Partition Starting Offset 17,865,308,160 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 #24, Partition #0
Partition Size 4.96 GB (5,321,723,904 bytes)
Partition Starting Offset 32,256 bytes
Partition Disk #24, Partition #1
Partition Size 7.74 GB (8,315,758,080 bytes)
Partition Starting Offset 5,321,756,160 bytes
Partition Disk #24, Partition #2
Partition Size 3.94 GB (4,227,793,920 bytes)
Partition Starting Offset 13,637,514,240 bytes
Partition Disk #24, Partition #3
Partition Size 102.99 GB (110,580,664,320 bytes)
Partition Starting Offset 17,865,308,160 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 #23, Partition #0
Partition Size 4.96 GB (5,321,723,904 bytes)
Partition Starting Offset 32,256 bytes
Partition Disk #23, Partition #1
Partition Size 7.74 GB (8,315,758,080 bytes)
Partition Starting Offset 5,321,756,160 bytes
Partition Disk #23, Partition #2
Partition Size 3.94 GB (4,227,793,920 bytes)
Partition Starting Offset 13,637,514,240 bytes

Partition Disk #23, Partition #3
Partition Size 102.99 GB (110,580,664,320 bytes)
Partition Starting Offset 17,865,308,160 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 #22, Partition #0
Partition Size 4.96 GB (5,321,723,904 bytes)
Partition Starting Offset 32,256 bytes
Partition Disk #22, Partition #1
Partition Size 7.74 GB (8,315,758,080 bytes)
Partition Starting Offset 5,321,756,160 bytes
Partition Disk #22, Partition #2
Partition Size 3.94 GB (4,227,793,920 bytes)
Partition Starting Offset 13,637,514,240 bytes
Partition Disk #22, Partition #3
Partition Size 102.99 GB (110,580,664,320 bytes)
Partition Starting Offset 17,865,308,160 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 80
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 4.96 GB (5,321,723,904 bytes)
Partition Starting Offset 32,256 bytes
Partition Disk #21, Partition #1
Partition Size 7.74 GB (8,315,758,080 bytes)
Partition Starting Offset 5,321,756,160 bytes
Partition Disk #21, Partition #2
Partition Size 3.94 GB (4,227,793,920 bytes)

Partition Starting Offset 13,637,514,240 bytes
Partition Disk #21, Partition #3
Partition Size 102.99 GB (110,580,664,320 bytes)
Partition Starting Offset 17,865,308,160 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 #40, Partition #0
Partition Size 4.96 GB (5,321,723,904 bytes)
Partition Starting Offset 32,256 bytes
Partition Disk #40, Partition #1
Partition Size 7.74 GB (8,315,758,080 bytes)
Partition Starting Offset 5,321,756,160 bytes
Partition Disk #40, Partition #2
Partition Size 3.94 GB (4,227,793,920 bytes)
Partition Starting Offset 13,637,514,240 bytes
Partition Disk #40, Partition #3
Partition Size 102.99 GB (110,580,664,320 bytes)
Partition Starting Offset 17,865,308,160 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 #39, Partition #0
Partition Size 4.96 GB (5,321,723,904 bytes)
Partition Starting Offset 32,256 bytes
Partition Disk #39, Partition #1
Partition Size 7.74 GB (8,315,758,080 bytes)
Partition Starting Offset 5,321,756,160 bytes
Partition Disk #39, Partition #2

Partition Size 3.94 GB (4,227,793,920 bytes)
Partition Starting Offset 13,637,514,240 bytes
Partition Disk #39, Partition #3
Partition Size 102.99 GB (110,580,664,320 bytes)
Partition Starting Offset 17,865,308,160 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 #38, Partition #0
Partition Size 4.96 GB (5,321,723,904 bytes)
Partition Starting Offset 32,256 bytes
Partition Disk #38, Partition #1
Partition Size 7.74 GB (8,315,758,080 bytes)
Partition Starting Offset 5,321,756,160 bytes
Partition Disk #38, Partition #2
Partition Size 3.94 GB (4,227,793,920 bytes)
Partition Starting Offset 13,637,514,240 bytes
Partition Disk #38, Partition #3
Partition Size 102.99 GB (110,580,664,320 bytes)
Partition Starting Offset 17,865,308,160 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 #37, Partition #0
Partition Size 4.96 GB (5,321,723,904 bytes)
Partition Starting Offset 32,256 bytes
Partition Disk #37, Partition #1
Partition Size 7.74 GB (8,315,758,080 bytes)
Partition Starting Offset 5,321,756,160 bytes

Partition Disk #37, Partition #2
Partition Size 3.94 GB (4,227,793,920 bytes)
Partition Starting Offset 13,637,514,240 bytes
Partition Disk #37, Partition #3
Partition Size 102.99 GB (110,580,664,320 bytes)
Partition Starting Offset 17,865,308,160 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 #36, Partition #0
Partition Size 4.96 GB (5,321,723,904 bytes)
Partition Starting Offset 32,256 bytes
Partition Disk #36, Partition #1
Partition Size 7.74 GB (8,315,758,080 bytes)
Partition Starting Offset 5,321,756,160 bytes
Partition Disk #36, Partition #2
Partition Size 3.94 GB (4,227,793,920 bytes)
Partition Starting Offset 13,637,514,240 bytes
Partition Disk #36, Partition #3
Partition Size 102.99 GB (110,580,664,320 bytes)
Partition Starting Offset 17,865,308,160 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 #35, Partition #0
Partition Size 4.96 GB (5,321,723,904 bytes)
Partition Starting Offset 32,256 bytes
Partition Disk #35, Partition #1
Partition Size 7.74 GB (8,315,758,080 bytes)

Partition Starting Offset 5,321,756,160 bytes
Partition Disk #35, Partition #2
Partition Size 3.94 GB (4,227,793,920 bytes)
Partition Starting Offset 13,637,514,240 bytes
Partition Disk #35, Partition #3
Partition Size 102.99 GB (110,580,664,320 bytes)
Partition Starting Offset 17,865,308,160 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 #34, Partition #0
Partition Size 4.96 GB (5,321,723,904 bytes)
Partition Starting Offset 32,256 bytes
Partition Disk #34, Partition #1
Partition Size 7.74 GB (8,315,758,080 bytes)
Partition Starting Offset 5,321,756,160 bytes
Partition Disk #34, Partition #2
Partition Size 3.94 GB (4,227,793,920 bytes)
Partition Starting Offset 13,637,514,240 bytes
Partition Disk #34, Partition #3
Partition Size 102.99 GB (110,580,664,320 bytes)
Partition Starting Offset 17,865,308,160 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 #33, Partition #0
Partition Size 4.96 GB (5,321,723,904 bytes)
Partition Starting Offset 32,256 bytes
Partition Disk #33, Partition #1

Partition Size 7.74 GB (8,315,758,080 bytes)
Partition Starting Offset 5,321,756,160 bytes
Partition Disk #33, Partition #2
Partition Size 3.94 GB (4,227,793,920 bytes)
Partition Starting Offset 13,637,514,240 bytes
Partition Disk #33, Partition #3
Partition Size 102.99 GB (110,580,664,320 bytes)
Partition Starting Offset 17,865,308,160 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 #32, Partition #0
Partition Size 4.96 GB (5,321,723,904 bytes)
Partition Starting Offset 32,256 bytes
Partition Disk #32, Partition #1
Partition Size 7.74 GB (8,315,758,080 bytes)
Partition Starting Offset 5,321,756,160 bytes
Partition Disk #32, Partition #2
Partition Size 3.94 GB (4,227,793,920 bytes)
Partition Starting Offset 13,637,514,240 bytes
Partition Disk #32, Partition #3
Partition Size 102.99 GB (110,580,664,320 bytes)
Partition Starting Offset 17,865,308,160 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 #31, Partition #0
Partition Size 4.96 GB (5,321,723,904 bytes)
Partition Starting Offset 32,256 bytes

Partition Disk #31, Partition #1
 Partition Size 7.74 GB (8,315,758,080 bytes)
 Partition Starting Offset 5,321,756,160 bytes
 Partition Disk #31, Partition #2
 Partition Size 3.94 GB (4,227,793,920 bytes)
 Partition Starting Offset 13,637,514,240 bytes
 Partition Disk #31, Partition #3
 Partition Size 102.99 GB (110,580,664,320 bytes)
 Partition Starting Offset 17,865,308,160 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 #10, Partition #0
 Partition Size 4.96 GB (5,321,723,904 bytes)
 Partition Starting Offset 32,256 bytes
 Partition Disk #10, Partition #1
 Partition Size 7.74 GB (8,315,758,080 bytes)
 Partition Starting Offset 5,321,756,160 bytes
 Partition Disk #10, Partition #2
 Partition Size 3.94 GB (4,227,793,920 bytes)
 Partition Starting Offset 13,637,514,240 bytes
 Partition Disk #10, Partition #3
 Partition Size 102.99 GB (110,580,664,320 bytes)
 Partition Starting Offset 17,865,308,160 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 #9, Partition #0
 Partition Size 4.96 GB (5,321,723,904 bytes)

Partition Starting Offset 32,256 bytes
 Partition Disk #9, Partition #1
 Partition Size 7.74 GB (8,315,758,080 bytes)
 Partition Starting Offset 5,321,756,160 bytes
 Partition Disk #9, Partition #2
 Partition Size 3.94 GB (4,227,793,920 bytes)
 Partition Starting Offset 13,637,514,240 bytes
 Partition Disk #9, Partition #3
 Partition Size 102.99 GB (110,580,664,320 bytes)
 Partition Starting Offset 17,865,308,160 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 #8, Partition #0
 Partition Size 4.96 GB (5,321,723,904 bytes)
 Partition Starting Offset 32,256 bytes
 Partition Disk #8, Partition #1
 Partition Size 7.74 GB (8,315,758,080 bytes)
 Partition Starting Offset 5,321,756,160 bytes
 Partition Disk #8, Partition #2
 Partition Size 3.94 GB (4,227,793,920 bytes)
 Partition Starting Offset 13,637,514,240 bytes
 Partition Disk #8, Partition #3
 Partition Size 102.99 GB (110,580,664,320 bytes)
 Partition Starting Offset 17,865,308,160 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 #7, Partition #0

Partition Size 4.96 GB (5,321,723,904 bytes)
 Partition Starting Offset 32,256 bytes
 Partition Disk #7, Partition #1
 Partition Size 7.74 GB (8,315,758,080 bytes)
 Partition Starting Offset 5,321,756,160 bytes
 Partition Disk #7, Partition #2
 Partition Size 3.94 GB (4,227,793,920 bytes)
 Partition Starting Offset 13,637,514,240 bytes
 Partition Disk #7, Partition #3
 Partition Size 102.99 GB (110,580,664,320 bytes)
 Partition Starting Offset 17,865,308,160 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 #6, Partition #0
 Partition Size 4.96 GB (5,321,723,904 bytes)
 Partition Starting Offset 32,256 bytes
 Partition Disk #6, Partition #1
 Partition Size 7.74 GB (8,315,758,080 bytes)
 Partition Starting Offset 5,321,756,160 bytes
 Partition Disk #6, Partition #2
 Partition Size 3.94 GB (4,227,793,920 bytes)
 Partition Starting Offset 13,637,514,240 bytes
 Partition Disk #6, Partition #3
 Partition Size 102.99 GB (110,580,664,320 bytes)
 Partition Starting Offset 17,865,308,160 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 #5, Partition #0
 Partition Size 4.96 GB (5,321,723,904 bytes)
 Partition Starting Offset 32,256 bytes
 Partition Disk #5, Partition #1
 Partition Size 7.74 GB (8,315,758,080 bytes)
 Partition Starting Offset 5,321,756,160 bytes
 Partition Disk #5, Partition #2
 Partition Size 3.94 GB (4,227,793,920 bytes)
 Partition Starting Offset 13,637,514,240 bytes
 Partition Disk #5, Partition #3
 Partition Size 102.99 GB (110,580,664,320 bytes)
 Partition Starting Offset 17,865,308,160 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 #4, Partition #0
 Partition Size 4.96 GB (5,321,723,904 bytes)
 Partition Starting Offset 32,256 bytes
 Partition Disk #4, Partition #1
 Partition Size 7.74 GB (8,315,758,080 bytes)
 Partition Starting Offset 5,321,756,160 bytes
 Partition Disk #4, Partition #2
 Partition Size 3.94 GB (4,227,793,920 bytes)
 Partition Starting Offset 13,637,514,240 bytes
 Partition Disk #4, Partition #3
 Partition Size 102.99 GB (110,580,664,320 bytes)
 Partition Starting Offset 17,865,308,160 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 #3, Partition #0
 Partition Size 4.96 GB (5,321,723,904 bytes)
 Partition Starting Offset 32,256 bytes
 Partition Disk #3, Partition #1
 Partition Size 7.74 GB (8,315,758,080 bytes)
 Partition Starting Offset 5,321,756,160 bytes
 Partition Disk #3, Partition #2
 Partition Size 3.94 GB (4,227,793,920 bytes)
 Partition Starting Offset 13,637,514,240 bytes
 Partition Disk #3, Partition #3
 Partition Size 102.99 GB (110,580,664,320 bytes)
 Partition Starting Offset 17,865,308,160 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 #2, Partition #0
 Partition Size 4.96 GB (5,321,723,904 bytes)
 Partition Starting Offset 32,256 bytes
 Partition Disk #2, Partition #1
 Partition Size 7.74 GB (8,315,758,080 bytes)
 Partition Starting Offset 5,321,756,160 bytes
 Partition Disk #2, Partition #2
 Partition Size 3.94 GB (4,227,793,920 bytes)
 Partition Starting Offset 13,637,514,240 bytes
 Partition Disk #2, Partition #3
 Partition Size 102.99 GB (110,580,664,320 bytes)
 Partition Starting Offset 17,865,308,160 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 #1, Partition #0
 Partition Size 4.96 GB (5,321,723,904 bytes)
 Partition Starting Offset 32,256 bytes
 Partition Disk #1, Partition #1
 Partition Size 7.74 GB (8,315,758,080 bytes)
 Partition Starting Offset 5,321,756,160 bytes
 Partition Disk #1, Partition #2
 Partition Size 3.94 GB (4,227,793,920 bytes)
 Partition Starting Offset 13,637,514,240 bytes
 Partition Disk #1, Partition #3
 Partition Size 102.99 GB (110,580,664,320 bytes)
 Partition Starting Offset 17,865,308,160 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 #50, Partition #0
 Partition Size 4.96 GB (5,321,723,904 bytes)
 Partition Starting Offset 32,256 bytes
 Partition Disk #50, Partition #1
 Partition Size 7.74 GB (8,315,758,080 bytes)
 Partition Starting Offset 5,321,756,160 bytes
 Partition Disk #50, Partition #2
 Partition Size 3.94 GB (4,227,793,920 bytes)
 Partition Starting Offset 13,637,514,240 bytes
 Partition Disk #50, Partition #3
 Partition Size 102.99 GB (110,580,664,320 bytes)
 Partition Starting Offset 17,865,308,160 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 #49, Partition #0
Partition Size 4.96 GB (5,321,723,904 bytes)
Partition Starting Offset 32,256 bytes
Partition Disk #49, Partition #1
Partition Size 7.74 GB (8,315,758,080 bytes)
Partition Starting Offset 5,321,756,160 bytes
Partition Disk #49, Partition #2
Partition Size 3.94 GB (4,227,793,920 bytes)
Partition Starting Offset 13,637,514,240 bytes
Partition Disk #49, Partition #3
Partition Size 102.99 GB (110,580,664,320 bytes)
Partition Starting Offset 17,865,308,160 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 #48, Partition #0
Partition Size 4.96 GB (5,321,723,904 bytes)
Partition Starting Offset 32,256 bytes
Partition Disk #48, Partition #1
Partition Size 7.74 GB (8,315,758,080 bytes)
Partition Starting Offset 5,321,756,160 bytes
Partition Disk #48, Partition #2
Partition Size 3.94 GB (4,227,793,920 bytes)
Partition Starting Offset 13,637,514,240 bytes
Partition Disk #48, Partition #3
Partition Size 102.99 GB (110,580,664,320 bytes)
Partition Starting Offset 17,865,308,160 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 #47, Partition #0
Partition Size 4.96 GB (5,321,723,904 bytes)
Partition Starting Offset 32,256 bytes
Partition Disk #47, Partition #1
Partition Size 7.74 GB (8,315,758,080 bytes)
Partition Starting Offset 5,321,756,160 bytes
Partition Disk #47, Partition #2
Partition Size 3.94 GB (4,227,793,920 bytes)
Partition Starting Offset 13,637,514,240 bytes
Partition Disk #47, Partition #3
Partition Size 102.99 GB (110,580,664,320 bytes)
Partition Starting Offset 17,865,308,160 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 #46, Partition #0
Partition Size 4.96 GB (5,321,723,904 bytes)
Partition Starting Offset 32,256 bytes
Partition Disk #46, Partition #1
Partition Size 7.74 GB (8,315,758,080 bytes)
Partition Starting Offset 5,321,756,160 bytes
Partition Disk #46, Partition #2
Partition Size 3.94 GB (4,227,793,920 bytes)
Partition Starting Offset 13,637,514,240 bytes
Partition Disk #46, Partition #3
Partition Size 102.99 GB (110,580,664,320 bytes)
Partition Starting Offset 17,865,308,160 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 #45, Partition #0
 Partition Size 4.96 GB (5,321,723,904 bytes)
 Partition Starting Offset 32,256 bytes
 Partition Disk #45, Partition #1
 Partition Size 7.74 GB (8,315,758,080 bytes)
 Partition Starting Offset 5,321,756,160 bytes
 Partition Disk #45, Partition #2
 Partition Size 3.94 GB (4,227,793,920 bytes)
 Partition Starting Offset 13,637,514,240 bytes
 Partition Disk #45, Partition #3
 Partition Size 102.99 GB (110,580,664,320 bytes)
 Partition Starting Offset 17,865,308,160 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 #44, Partition #0
 Partition Size 4.96 GB (5,321,723,904 bytes)
 Partition Starting Offset 32,256 bytes
 Partition Disk #44, Partition #1
 Partition Size 7.74 GB (8,315,758,080 bytes)
 Partition Starting Offset 5,321,756,160 bytes
 Partition Disk #44, Partition #2
 Partition Size 3.94 GB (4,227,793,920 bytes)
 Partition Starting Offset 13,637,514,240 bytes
 Partition Disk #44, Partition #3
 Partition Size 102.99 GB (110,580,664,320 bytes)
 Partition Starting Offset 17,865,308,160 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 #43, Partition #0
 Partition Size 4.96 GB (5,321,723,904 bytes)
 Partition Starting Offset 32,256 bytes
 Partition Disk #43, Partition #1
 Partition Size 7.74 GB (8,315,758,080 bytes)
 Partition Starting Offset 5,321,756,160 bytes
 Partition Disk #43, Partition #2
 Partition Size 3.94 GB (4,227,793,920 bytes)
 Partition Starting Offset 13,637,514,240 bytes
 Partition Disk #43, Partition #3
 Partition Size 102.99 GB (110,580,664,320 bytes)
 Partition Starting Offset 17,865,308,160 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 #42, Partition #0
 Partition Size 4.96 GB (5,321,723,904 bytes)
 Partition Starting Offset 32,256 bytes
 Partition Disk #42, Partition #1
 Partition Size 7.74 GB (8,315,758,080 bytes)
 Partition Starting Offset 5,321,756,160 bytes
 Partition Disk #42, Partition #2
 Partition Size 3.94 GB (4,227,793,920 bytes)
 Partition Starting Offset 13,637,514,240 bytes
 Partition Disk #42, Partition #3
 Partition Size 102.99 GB (110,580,664,320 bytes)
 Partition Starting Offset 17,865,308,160 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 #41, Partition #0
Partition Size 4.96 GB (5,321,723,904 bytes)
Partition Starting Offset 32,256 bytes
Partition Disk #41, Partition #1
Partition Size 7.74 GB (8,315,758,080 bytes)
Partition Starting Offset 5,321,756,160 bytes
Partition Disk #41, Partition #2
Partition Size 3.94 GB (4,227,793,920 bytes)
Partition Starting Offset 13,637,514,240 bytes
Partition Disk #41, Partition #3
Partition Size 102.99 GB (110,580,664,320 bytes)
Partition Starting Offset 17,865,308,160 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&2CF6F8ED&0&0000

```

```

Memory Address 0xE4800000-0xE4FFFFFF
Memory Address 0xE3900000-0xE4FFFFFF
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 0xE6800000-0xE6FFFFFF
Memory Address 0xE5000000-0xE6FFFFFF
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&1B316B8F&0&0000

```

```

Memory Address 0xE9800000-0xE9FFFFFF
Memory Address 0xE9400000-0xE9FFFFFF
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 0xEB800000-0xEBFFFFFF
Memory Address 0xEA000000-0xEBFFFFFF
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&5E54501&0&0000

```

```

Memory Address 0xEC800000-0xECFFFFFF
Memory Address 0xEC400000-0xECFFFFFF
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&BBE9921&0&0000

```

```

Memory Address 0xEF800000-0xEFFFFFFF
Memory Address 0xEF400000-0xEFFFFFFF
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 0xF1800000-0xF1FFFFFF
Memory Address 0xF0000000-0xF1FFFFFF
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 0xF5800000-0xF5FFFFFF
Memory Address 0xF4000000-0xF5FFFFFF
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&1F3768A3&0&0000

```

```

Memory Address 0xF6800000-0xF6FFFFFF
Memory Address 0xF6400000-0xF6FFFFFF
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&1A68EB24&0&0000

Memory Address 0xFA800000-0xFAFFFFFF
Memory Address 0xF9000000-0xFAFFFFFF
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 0xFC800000-0xFCFFFFFF
Memory Address 0xFB000000-0xFCFFFFFF
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 PCI\IDE\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 PCI\IDE\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
abiosdsk	Abiosdsk	Accept Pause	Not Available	Kernel Driver	No	No	No
acpi	Microsoft ACPI Driver	c:\windows\system32\drivers\acpi.sys	Kernel Driver	Running OK	Normal	No	Yes
acpiec	ACPIEC	c:\windows\system32\drivers\acpiec.sys	Kernel Driver	Stopped OK	Normal	No	No
adpu160m	adpu160m	Not Available	Kernel Driver	Not Available	Kernel Driver	No	No
adpu320	adpu320	Not Available	Kernel Driver	Stopped OK	Normal	No	No
afcnt	afcnt	Not Available	Kernel Driver	Not Available	Kernel Driver	No	Disabled
afd	AFD Networking Support Environment	c:\windows\system32\drivers\afd.sys	Kernel Driver	Running OK	Normal	Yes	Auto
aha154x	Aha154x	Not Available	Kernel Driver	Stopped OK	Normal	No	Disabled
aic78u2	aic78u2	Not Available	Kernel Driver	Stopped OK	Normal	No	Disabled
aic78xx	aic78xx	Not Available	Kernel Driver	Stopped OK	Normal	No	Disabled
aliide	AliIde	Not Available	Kernel Driver	Stopped OK	Normal	No	Disabled
asynccmac	RAS Asynchronous Media Driver	c:\windows\system32\drivers\asynccmac.sys	Kernel Driver	Manual Stopped OK	Normal	No	No
atapi	Standard IDE/ESDI Hard Disk Controller	c:\windows\system32\drivers\atapi.sys	Kernel Driver	Running OK	Normal	Yes	Boot
atdisk	Atdisk	Not Available	Kernel Driver	Stopped OK	Ignore	No	No
atmarpc	ATM ARP Client Protocol	c:\windows\system32\drivers\atmarpc.sys	Kernel Driver	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 c:\windows\system32\drivers\cbidf2k.sys 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

cpqarray2 cpqarray2 Not Available Kernel Driver No
Disabled Stopped OK Normal No No

cpqcissm cpqcissm Not Available Kernel Driver No
Disabled Stopped OK Normal No No

cpqfcalm cpqfcalm Not Available Kernel Driver No
Disabled Stopped OK Normal No No

crcdisk CRC Disk Filter Driver c:\windows\system32\drivers\crcdisk.sys
Kernel Driver Yes Boot Running OK Normal No Yes

dac960nt dac960nt Not Available Kernel Driver No
Disabled Stopped OK Normal No No

dellcerc dellcerc Not Available Kernel Driver No
Disabled Stopped OK Normal No No

dfsdriver DfsDriver c:\windows\system32\drivers\dfs.sys File
System Driver Yes Boot Running OK Normal No Yes

disk Disk Driver c:\windows\system32\drivers\disk.sys Kernel Driver
Yes Boot Running OK Normal No Yes

dmboot dmboot c:\windows\system32\drivers\dmboot.sys Kernel Driver
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

em em c:\windows\system32\drivers\em.sys Kernel Driver No
Manual Stopped OK Normal No No

fastfat Fastfat c:\windows\system32\drivers\fastfat.sys File System
Driver No Disabled Stopped OK Normal No No

fdc 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

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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

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ipnat IP Network Address Translator
c:\windows\system32\drivers\ipnat.sys Kernel Driver No Manual
Stopped OK Normal No No
ipsec IPSEC driver c:\windows\system32\drivers\ipsec.sys Kernel Driver
Yes System Running OK Normal No Yes
ipsraidn ipsraidn Not Available Kernel Driver No
Disabled Stopped OK Normal No No
isapnp PnP ISA/EISA Bus Driver
c:\windows\system32\drivers\isapnp.sys Kernel Driver Yes
Boot Running OK Critical No Yes
kbdclass Keyboard Class Driver
c:\windows\system32\drivers\kbdclass.sys Kernel Driver Yes
System Running OK Normal No Yes
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
mmdd mmdd c:\windows\system32\drivers\mmdd.sys Kernel Driver Yes
System Running OK Ignore No Yes
modem Modem c:\windows\system32\drivers\modem.sys Kernel Driver No
Manual Stopped OK Ignore No No
mouclass Mouse Class Driver
c:\windows\system32\drivers\mouclass.sys Kernel Driver Yes
System Running OK Normal No Yes
mouhid Mouse HID Driver c:\windows\system32\drivers\mouhid.sys
Kernel Driver Yes Manual Running OK Ignore No Yes
mountmgr Mount Point Manager
c:\windows\system32\drivers\mountmgr.sys Kernel Driver Yes
Boot Running OK Normal No Yes
mraid35x mraid35x 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

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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\rasppptp.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

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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

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 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

sync810 sync810 Not Available Kernel Driver No Disabled
Stopped OK Normal No No
sync8xx sync8xx 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

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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 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 bus No SYSTEM 5.2.3790.0 10/1/2002 (Standard system
devices) machine.inf Not Available ACPI\PNP0A03\3

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PCI standard PCI-to-PCI bridge	No	SYSTEM	5.2.3790.0	10/1/2002	(Standard system devices)	machine.inf	Not Available
PCI\VEN_8086&DEV_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	Not Available
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
P64_V2_5&7A21384&0&FD04560B00080010							
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)							
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							
Communications Port	No	PORTS	5.2.3790.0	10/1/2002	(Standard port types)	msports.inf	Not Available
ACPI\PNP0501\11							
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	(Standard system devices)	machine.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&28FC923B&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							
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	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							
Console Manager USB Keyboard	No	HIDCLASS	5/2/2003	Unisys Corp	oem1.inf	Not Available	USB\VID_0432&PID_0010\5&37AEB74C&0&1
Console Manager USB Keyboard	No	KEYBOARD	5/2/2003	Unisys Corp	oem3.inf	Not Available	HID\VID_0432&PID_0010\6&209FAF05&0&0000
Console Manager USB Mouse	No	HIDCLASS	5/2/2003	Unisys Corp	oem1.inf	Not Available	USB\VID_0432&PID_0011\5&37AEB74C&0&2
Console Manager USB Mouse	No	MOUSE	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
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-

P64_V2_\5&11F71242&0&C804560B00080010
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&11F71242&0&C904560B00080010
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 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
Available PCI\VEN_8086&DEV_0309&SUBSYS_00000000&REV_01\3&33B859B7&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&1B316B8F&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-

P64_V2_\5&24C648AC&0&7008560B00080010
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&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
Available PCI\VEN_8086&DEV_0309&SUBSYS_00000000&REV_01\3&AD74055&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&101F93C3&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-
P64_V2_\5&55E65EF&0&AC08560B00080010
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&55E65EF&0&AD08560B00080010
PCI bus No SYSTEM 5.2.3790.0 10/1/2002 (Standard system devices) machine.inf Not Available ACPI\PNP0A03\A
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
Available PCI\VEN_8086&DEV_0309&SUBSYS_00000000&REV_01\3&1106BFD7&0&00

Unisys Intelligent Fibre Channel Fabric Bus Adapter No SCSIADAPTER
2.55.0.18 10/22/2003 Unisys Corporation oem8.inf
Not Available
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P64_V2_\5&324B9A0D&0&D004560B00080010
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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

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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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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 SCISIADAPTER
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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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Unisys Intelligent Fibre Channel Adapter SCSI Processor No SYSTEM
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Not Available SCSI\PROCESSORUNISYS_FC76222-

P64 V2_5&13E7DE95&0&8525560B00080010
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
PCI\VEN_135B&DEV_0001&SUBSYS_00000000&REV_00\3&A985F74&0&00
PCI bus No SYSTEM 5.2.3790.0 10/1/2002 (Standard system
devices) machine.inf Not Available ACPI\PNP0A03\11
PCI standard PCI-to-PCI bridge No SYSTEM 5.2.3790.0
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Unisys Intelligent Fibre Channel Fabric Bus Adapter No SCISIADAPTER
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devices) machine.inf Not Available ACPI\PNP0A03\14
PCI standard PCI-to-PCI bridge No SYSTEM 5.2.3790.0
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Unisys Intelligent Fibre Channel Fabric Bus Adapter No SCISIADAPTER
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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\16
cLAN Host Adapter No NET 4.2.0.75 10/5/2000
Giganet oem7.inf Not Available
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10/1/2002 (Standard system devices) machine.inf Not

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Unisys Intelligent Fibre Channel Fabric Bus Adapter No SCISIADAPTER
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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
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PCI standard PCI-to-PCI bridge No SYSTEM 5.2.3790.0
10/1/2002 (Standard system devices) machine.inf Not

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PCI bus No SYSTEM 5.2.3790.0 10/1/2002 (Standard system
devices) machine.inf Not Available ACPI\PNP0A03\19
Logical Disk Manager No SYSTEM 5.2.3790.0 10/1/2002
(Standard system devices) machine.inf Not Available
ROOT\DMIO\0000

STORAGE\VOLUME\1&30A96598&0&SIGNATURE81FEC5AE0FFSET428DAF800LENGTH
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 AFD Networking Support Environment Not Available LEGACYDRIVER 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

em	Not Available	LEGACYDRIVER	Not Available	Not Available	Not Available
Available	Not Available	Not Available	Not Available	ROOT\LEGACY_EM\0000	
Fips	Not Available	LEGACYDRIVER	Not Available	Not Available	Not Available
Available	Not Available	Not Available	Not Available	ROOT\LEGACY_FIPS\0000	
cLAN VIA Driver	Not Available	LEGACYDRIVER	Not Available	Not Available	Not Available
Available	Not Available	Not Available	Not Available	ROOT\LEGACY_GNVIA\0000	
Generic Packet Classifier	Not Available	LEGACYDRIVER	Not Available	Not Available	Not Available
Not Available	Not Available	Not Available	Not Available	Not Available	Not Available
ROOT\LEGACY_GPC\0000					
IPSEC driver	Not Available	LEGACYDRIVER	Not Available	Not Available	Not Available
Not Available	Not Available	Not Available	Not Available	Not Available	Not Available
ROOT\LEGACY_IPSEC\0000					
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Available	Not Available	Not Available	Not Available	ROOT\LEGACY_KSECDD\0000	
mmdd	Not Available	LEGACYDRIVER	Not Available	Not Available	Not Available
Available	Not Available	Not Available	Not Available	ROOT\LEGACY_MMDD\0000	
mountmgr	Not Available	LEGACYDRIVER	Not Available	Not Available	Not Available
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Available	Not Available	Not Available	Not Available	Not Available	Not Available
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Remote Access NDIS TAPI Driver	Not Available	LEGACYDRIVER	Not Available	Not Available	Not Available
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NDIS Usermode I/O Protocol	Not Available	LEGACYDRIVER	Not Available	Not Available	Not Available
Not Available	Not Available	Not Available	Not Available	Not Available	Not Available
ROOT\LEGACY_NDISUIO\0000					
NDProxy	Not Available	LEGACYDRIVER	Not Available	Not Available	Not Available
Available	Not Available	Not Available	Not Available	ROOT\LEGACY_NDPROXY\0000	
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Available	Not Available	Not Available	Not Available	Not Available	Not Available
ROOT\LEGACY_NETBT\0000					
Null	Not Available	LEGACYDRIVER	Not Available	Not Available	Not Available
Available	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
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Parvdm	Not Available	LEGACYDRIVER	Not Available	Not Available	Not Available
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ROOT\LEGACY_PARVDM\0000					
Remote Access Auto Connection Driver	Not Available	LEGACYDRIVER	Not Available	Not Available	Not Available
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ROOT\LEGACY_RASACD\0000					
RDPCCD	Not Available	LEGACYDRIVER	Not Available	Not Available	Not Available
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ROOT\LEGACY_RDPCCD\0000					
TCP/IP Protocol Driver	Not Available	LEGACYDRIVER	Not Available	Not Available	Not Available
Available	Not Available	Not Available	Not Available	Not Available	Not Available
ROOT\LEGACY_TCPIP\0000					
VGA Display Controller.	Not Available	LEGACYDRIVER	Not Available	Not Available	Not Available
Not Available	Not Available	Not Available	Not Available	Not Available	Not Available
ROOT\LEGACY_VGASAVE\0000					
volsnap	Not Available	LEGACYDRIVER	Not Available	Not Available	Not Available
Available	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	Not Available	Not Available	Not Available	Not Available
ROOT\LEGACY_WANARP\0000					
Audio Codecs	No	MEDIA	5.2.3790.0	10/1/2002	(Standard system devices)
system devices)	wave.inf	Not Available	Not Available	Not Available	ROOT\MEDIA\MS_MMACM
Legacy Audio Drivers	No	MEDIA	5.2.3790.0	10/1/2002	(Standard system devices)
(Standard system devices)	wave.inf	Not Available	Not Available	Not Available	ROOT\MEDIA\MS_MMDRV
Media Control Devices	No	MEDIA	5.2.3790.0	10/1/2002	(Standard system devices)
(Standard system devices)	wave.inf	Not Available	Not Available	Not Available	ROOT\MEDIA\MS_MMMCI
Legacy Video Capture Devices	No	MEDIA	5.2.3790.0	10/1/2002	(Standard system devices)
(Standard system devices)	wave.inf	Not Available	Not Available	Not Available	ROOT\MEDIA\MS_MMVCD
Video Codecs	No	MEDIA	5.2.3790.0	10/1/2002	(Standard system devices)
system devices)	wave.inf	Not Available	Not Available	Not Available	ROOT\MEDIA\MS_MMVID
WAN Miniport (L2TP)	No	NET	5.2.3790.0	10/1/2002	Microsoft netrasa.inf
Microsoft netrasa.inf	Not Available	Not Available	Not Available	Not Available	ROOT\MS_L2TPMINIPOINT\0000
WAN Miniport (IP)	No	NET	5.2.3790.0	10/1/2002	Microsoft netrasa.inf
Microsoft netrasa.inf	Not Available	Not Available	Not Available	Not Available	ROOT\MS_NDISWANIP\0000
WAN Miniport (PPPOE)	No	NET	5.2.3790.0	10/1/2002	Microsoft netrasa.inf
Microsoft netrasa.inf	Not Available	Not Available	Not Available	Not Available	ROOT\MS_PPPOEMINIPOINT\0000
WAN Miniport (PPTP)	No	NET	5.2.3790.0	10/1/2002	Microsoft netrasa.inf
Microsoft netrasa.inf	Not Available	Not Available	Not Available	Not Available	ROOT\MS_PPTPMINIPOINT\0000
Direct Parallel	No	NET	5.2.3790.0	10/1/2002	Microsoft netrasa.inf
Microsoft netrasa.inf	Not Available	Not Available	Not Available	Not Available	ROOT\MS_PTMINIPOINT\0000
Terminal Server Device Redirector	No	SYSTEM	5.2.3790.0	10/1/2002	(Standard system devices)
(Standard system devices)	machine.inf	Not Available	Not Available	Not Available	ROOT\RDPDR\0000
Terminal Server Keyboard Driver	No	SYSTEM	5.2.3790.0	10/1/2002	(Standard system devices)
(Standard system devices)	machine.inf	Not Available	Not Available	Not Available	ROOT\RDP_KBD\0000
Terminal Server Mouse Driver	No	SYSTEM	5.2.3790.0	10/1/2002	(Standard system devices)
(Standard system devices)	machine.inf	Not Available	Not Available	Not Available	ROOT\RDP_MOU\0000
Plug and Play Software Device Enumerator	No	SYSTEM	5.2.3790.0	10/1/2002	(Standard system devices)
(Standard system devices)	machine.inf	Not Available	Not Available	Not Available	ROOT\SYSTEM\0000
Microcode Update Device	No	SYSTEM	5.2.3790.0	10/1/2002	(Standard system devices)
(Standard system devices)	machine.inf	Not Available	Not Available	Not Available	ROOT\SYSTEM\0001
Unisys Intelligent Fibre Channel Fabric Bus Enumerator	No	SYSTEM	2.55.0.51	10/22/2003	Unisys Corporation oem11.inf
Not Available	Not Available	Not Available	Not Available	Not Available	ROOT\SYSTEM\0002
Unisys Intelligent Fibre Channel Fabric Disk Driver	No	DISKDRIVE	2.55.0.7	10/22/2003	Unisys Corporation oem10.inf
Not Available	Not Available	Not Available	Not Available	Not Available	SCSI\DISK&VEN_UNISYS_VIRTUALSTORAGE_01.0\1&1A590E2C&0&A53F008610
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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	Not Available	Not Available	Not Available	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
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
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
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
2.55.0.7          10/22/2003    Unisys Corporation    oem10.inf
Not Available
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```

[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

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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
Parameters	Driver	Print Processor	Host	Print Queue	Job ID	Priority
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
Available	Not Available	Not Available	Not Available	Not Available	Not Available
system	Not Available	4	8	0	1413120
Available	Not Available	Not Available	Not Available	Not Available	Not Available
smss.exe	Not Available	576	11	204800	1413120 5/16/2004 1:13 AM
csrss.exe	Not Available	624	13	Not Available	Not Available
	5/16/2004 1:14 AM	Not Available	Not Available	Not Available	Not Available
winlogon.exe	c:\windows\system32\winlogon.exe	648	13	204800	
	1413120 5/16/2004 1:14 AM	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	692	9	204800	
	1413120 5/16/2004 1:14 AM	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	704	9	204800	
	1413120 5/16/2004 1:14 AM	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	912	8	204800	
	1413120 5/16/2004 1:14 AM	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	988	8	204800	
	1413120 5/16/2004 1:14 AM	4.2.0.75			
	bytes) 4/25/2004 2:17 AM				
svchost.exe	c:\windows\system32\svchost.exe	1016	8	204800	
	1413120 5/16/2004 1:14 AM	5.2.3790.0	(srv03_rtm.030324-2048)		
	13.00 KB (13,312 bytes)	3/25/2003 4:00 AM			
msdtc.exe	Not Available	1184	8	Not Available	Not Available
	5/16/2004 1:17 AM	Not Available	Not Available	Not Available	Not Available
svchost.exe	Not Available	1656	8	Not Available	Not Available
	5/16/2004 1:17 AM	Not Available	Not Available	Not Available	Not Available

```

explorer.exe c:\windows\explorer.exe 400 8 204800
1413120 5/16/2004 1:17 AM 6.00.3790.0 (srv03_rtm.030324-2048)
1,008.50 KB (1,032,704 bytes) 3/25/2003 4:00 AM
wmiprvse.exe Not Available 896 8 Not Available Not Available
5/16/2004 1:18 AM Not Available Not Available Not Available

cmd.exe c:\windows\system32\cmd.exe 3516 8 204800 1413120
5/16/2004 7:13 PM 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_ave_fix_interpolation\sqlservr.exe
3548 13 204800 1413120 5/16/2004 7:13 PM
2000.080.0857.00 7.18 MB (7,532,584 bytes) 4/25/2004 8:49
AM
cmd.exe c:\windows\system32\cmd.exe 2304 8 204800 1413120
5/16/2004 10:47 PM 5.2.3790.0 (srv03_rtm.030324-2048) 374.00
KB (382,976 bytes) 3/25/2003 4:00 AM
isql.exe c:\program files\microsoft sql
server\80\tools\bin\isql.exe 2484 8 204800 1413120 5/16/2004
10:47 PM 2000.080.0194.00 96.00 KB (98,304 bytes)
4/25/2004 8:23 AM
cmd.exe c:\windows\system32\cmd.exe 2140 8 204800 1413120
5/16/2004 11:04 PM 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 396 8 204800
1413120 5/16/2004 11:04 PM 5.6.0.8515 92.00 KB (94,208
bytes) 3/25/2003 4:00 AM
osql.exe c:\program files\microsoft sql
server\80\tools\bin\osql.exe 2776 8 204800 1413120 5/16/2004
11:04 PM 2000.080.0760.00 56.55 KB (57,904 bytes)
4/25/2004 8:23 AM
helpctr.exe c:\windows\pchealth\helpctr\binaries\helpctr.exe 2908
8 204800 1413120 5/16/2004 11:04 PM 5.2.3790.0
(srv03_rtm.030324-2048) 764.00 KB (782,336 bytes) 4/25/2004 1:24
AM
wmiprvse.exe Not Available 2976 8 Not Available Not Available
5/16/2004 11:04 PM Not Available Not Available Not Available

helpsvc.exe c:\windows\pchealth\helpctr\binaries\helpsvc.exe 536
8 204800 1413120 5/16/2004 11:04 PM 5.2.3790.0
(srv03_rtm.030324-2048) 720.00 KB (737,280 bytes) 4/25/2004 1:24
AM

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[Loaded Modules]

Name	Version	Size	File Date	Manufacturer	Path
winlogon	5.2.3790.0	(srv03_rtm.030324-2048)	536.50 KB (549,376 bytes)	Microsoft Corporation	c:\windows\system32\winlogon.exe
ntdll	5.2.3790.0	(srv03_rtm.030324-2048)	722.50 KB (739,840 bytes)	Microsoft Corporation	c:\windows\system32\ntdll.dll
kernel32	5.2.3790.73	(srv03_gfe.030614-1003)	965.50 KB (988,672 bytes)	Microsoft Corporation	c:\windows\system32\kernel32.dll
msvcrt	7.0.3790.0	(srv03_rtm.030324-2048)	319.50 KB (327,168 bytes)	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
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

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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
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
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
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
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

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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
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
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
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
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
msvcpx60 6.05.2144.0 388.00 KB (397,312 bytes) 3/25/2003 4:00 AM
Microsoft Corporation c:\windows\system32\msvcpx60.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
scserv 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\scserv.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

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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

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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
pstersvc 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\pstersvc.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
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
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

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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
adslldpc 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\adslldpc.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
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

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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
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
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
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
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
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
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
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
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

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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
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
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
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
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
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
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
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
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_ave_fix_interpolation\sqlservr.exe

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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_ave_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

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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
isql 2000.080.0194.00 96.00 KB (98,304 bytes) 4/25/2004 8:23
AM Microsoft Corporation c:\program files\microsoft sql
server\80\tools\bin\isql.exe
ntwdblib 2000.080.0194.00 268.06 KB (274,489 bytes)
4/25/2004 8:22 AM Microsoft Corporation
c:\windows\system32\ntwdblib.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
dbnmpntw 2000.085.1022 built by: (_sqlbld) 28.00 KB (28,672
bytes) 9/17/2003 12:37 PM Microsoft Corporation
c:\windows\system32\dbnmpntw.dll
cscrip 5.6.0.8515 92.00 KB (94,208 bytes) 3/25/2003 4:00 AM
Microsoft Corporation c:\windows\system32\cscrip.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
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\bin\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
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

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dbmslpcn 2000.080.0760.00 28.56 KB (29,244 bytes)
4/25/2004 8:22 AM Microsoft Corporation
c:\windows\system32\dbmslpcn.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
mshtml 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\mshtml.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

```

[Services]

Display Name	Name	State	Start Mode	Service Type	Path	Error
Control Start	Alerter	Stopped	Disabled	Share Process		
	Alerter	Stopped	Disabled	Share Process	c:\windows\system32\svchost.exe -k localservice	Normal NT
AUTHORITY\LocalService						
Application Layer Gateway Service		ALG	Stopped	Manual	Own Process	
					c:\windows\system32\alg.exe	Normal NT AUTHORITY\LocalService

```

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\dlh\host.exe /processid:{02d4b3f1-fd88-11d1-
960d-00805fc79235} Normal LocalSystem 0
Cryptographic Services CryptSvc Stopped Manual Share Process
c:\windows\system32\svchost.exe -k netsvcs Normal LocalSystem
0
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
MSSQLSERVER MSSQLSERVER Stopped Manual Own Process
c:\progra-1\microso~1\mssql\bin\sqlservr.exe Normal LocalSystem
0
MSSQLServerADHelper MSSQLServerADHelper Stopped Manual Own Process
c:\program files\microsoft sql server\80\tools\bin\sqladhlp.exe
Normal LocalSystem 0
Network DDE NetDDE Stopped 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					Windows Image Acquisition (WIA)	stisvc	Stopped	Disabled	Share
	c:\windows\system32\services.exe			Normal	LocalSystem	0			Process c:\windows\system32\svchost.exe -k imgsvc		Normal	NT	
IPSEC Services	PolicyAgent	Stopped	Manual	Share Process					AUTHORITY\LocalService	0			
	c:\windows\system32\lsass.exe	Normal	LocalSystem	0					Microsoft Software Shadow Copy Provider	swprv	Stopped	Manual	Own
Protected Storage	ProtectedStorage	Running	Auto	Share Process					Process c:\windows\system32\svchost.exe -k swprv		Normal	LocalSystem	
	c:\windows\system32\lsass.exe	Normal	LocalSystem	0					Performance Logs and Alerts	SysmonLog	Stopped	Manual	Own
Remote Access	Auto Connection Manager	RasAuto	Stopped	Manual	Share Process				c:\windows\system32\smlogsvc.exe		Normal	NT	Process
	c:\windows\system32\svchost.exe -k netsvcs	Normal	LocalSystem	0					Authority\NetworkService	0			
Remote Access	Connection Manager	RasMan	Stopped	Manual	Share Process				Telephony	TapiSrv	Stopped	Manual	Share Process
	c:\windows\system32\svchost.exe -k netsvcs	Normal	LocalSystem	0					c:\windows\system32\svchost.exe -k tapisrv		Normal	LocalSystem	
Remote Desktop	Help Session Manager	RDSessMgr	Stopped	Manual	Own				Terminal Services	TermService	Stopped	Disabled	Share Process
Process	c:\windows\system32\sessmgr.exe	Normal	LocalSystem	0					c:\windows\system32\svchost.exe -k termsvcs		Normal	LocalSystem	
Routing and Remote	Access	RemoteAccess	Stopped	Disabled	Share				Themes	Themes	Stopped	Disabled	Share Process
Process	c:\windows\system32\svchost.exe -k netsvcs	Normal	LocalSystem	0					c:\windows\system32\svchost.exe -k netsvcs		Normal	LocalSystem	
Remote Registry	RemoteRegistry	Running	Auto	Share Process					Telnet	TlntSvr	Stopped	Disabled	Own Process
	c:\windows\system32\svchost.exe -k regsvc	Normal	NT						c:\windows\system32\tlntsvr.exe		Normal	NT	
AUTHORITY\LocalService	0								Distributed Link Tracking Server	TrkSvr	Stopped	Disabled	Share
Remote Procedure Call (RPC)	Locator	RpcLocator	Stopped	Manual	Own				Process c:\windows\system32\svchost.exe -k netsvcs		Normal	LocalSystem	
Process	c:\windows\system32\locator.exe	Normal	NT						Distributed Link Tracking Client	TrkWks	Stopped	Disabled	Share
AUTHORITY\NetworkService	0								Process c:\windows\system32\svchost.exe -k netsvcs		Normal	LocalSystem	
Remote Procedure Call (RPC)	RpcSs	Running	Auto	Share Process					Terminal Services Session Directory	Tssdis	Stopped	Disabled	Own
	c:\windows\system32\svchost -k rpcss	Normal	LocalSystem	0					Process c:\windows\system32\tssdis.exe		Normal	LocalSystem	0
Resultant Set of Policy	Provider	RSoPProv	Stopped	Manual	Share				Upload Manager	uploadmgr	Stopped	Disabled	Share Process
Process	c:\windows\system32\rsopprov.exe	Normal	LocalSystem	0					c:\windows\system32\svchost.exe -k netsvcs		Normal	LocalSystem	
Special Administration	Console Helper	sacsvr	Stopped	Manual	Share Process				Uninterruptible Power Supply	UPS	Stopped	Manual	Own Process
	c:\windows\system32\svchost.exe -k netsvcs	Normal	LocalSystem	0					c:\windows\system32\ups.exe		Normal	NT	AUTHORITY\LocalService
Security Accounts	Manager	SamSs	Running	Auto	Share Process				Virtual Disk Service	vds	Stopped	Manual	Own Process
	c:\windows\system32\lsass.exe	Normal	LocalSystem	0					c:\windows\system32\vds.exe		Normal	LocalSystem	0
Smart Card	SCardSvr	Stopped	Manual	Share Process					Volume Shadow Copy	VSS	Stopped	Manual	Own Process
	c:\windows\system32\scardsvr.exe	Ignore	NT						c:\windows\system32\vssvc.exe		Normal	LocalSystem	0
AUTHORITY\LocalService	0								Windows Time	W32Time	Stopped	Disabled	Share Process
Task Scheduler	Schedule	Stopped	Manual	Share Process					c:\windows\system32\svchost.exe -k netsvcs		Normal	LocalSystem	
	c:\windows\system32\svchost.exe -k netsvcs	Normal	LocalSystem	0					WebClient	WebClient	Stopped	Disabled	Share Process
Secondary Logon	seclogon	Stopped	Manual	Share Process					c:\windows\system32\svchost.exe -k localservice		Normal	NT	
	c:\windows\system32\svchost.exe -k netsvcs	Ignore	LocalSystem	0					AUTHORITY\LocalService	0			
System Event	Notification	SENS	Running	Auto	Share Process				WinHTTP	Web Proxy Auto-Discovery Service	WinHttpAutoProxySvc		
	c:\windows\system32\svchost.exe -k netsvcs	Normal	LocalSystem	0					Stopped	Manual	Share Process	c:\windows\system32\svchost.exe -k	
Shell Hardware	Detection	ShellHWDetection	Running	Auto	Share				localservice	Normal	NT	AUTHORITY\LocalService	0
Process	c:\windows\system32\svchost.exe -k netsvcs	Ignore	LocalSystem	0					Windows Management Instrumentation	winmgmt	Running	Auto	Share Process
Print Spooler	Spooler	Stopped	Manual	Own Process					c:\windows\system32\svchost.exe -k netsvcs		Ignore	LocalSystem	
	c:\windows\system32\spoolsv.exe	Normal	LocalSystem	0					Portable Media Serial Number Service	WmdmPmSN	Stopped	Manual	Share
SQLSERVERAGENT	SQLSERVERAGENT	Stopped	Manual	Own Process					Process c:\windows\system32\svchost.exe -k netsvcs		Normal	LocalSystem	
	c:\progra~1\microso~1\mssql\bin\sqlagent.exe	Normal	LocalSystem	0					Windows Management Instrumentation Driver Extensions	Wmi	Stopped	Manual	Share Process
	0								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          wuauclt      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
KernelFaultCheck     %systemroot%\system32\dumprep 0 -k     All Users
HKLM\SOFTWARE\Microsoft\Windows\CurrentVersion\Run

```

[OLE Registration]

```

Object Local Server
Sound (OLE2)     sndrec32.exe
Media Clip     mplay32.exe
Video Clip     mplay32.exe /avi
MIDI Sequence     mplay32.exe /mid
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
browsecl.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		
dxtmsft.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		
ieunit.inf	Not Available	20 KB	3/25/2003 5:00:00 AM	
C:\WINDOWS\system32		Not Available		
ieexplore.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		
mshtmlcd.dll	6.0.3790.0	444 KB	3/25/2003 5:00:00 AM	
C:\WINDOWS\system32		Microsoft Corporation		
mshtmlr.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		
msieftpl.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	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 Low
Internet Medium
Restricted sites High

Hyperthreading.txt

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: 2 PHY ID: 1, LOG ID: 0
OS Affinity ID: 0x00000004, APIC ID: 4 PHY ID: 2, LOG ID: 0
OS Affinity ID: 0x00000008, APIC ID: 6 PHY ID: 3, LOG ID: 0
OS Affinity ID: 0x00000010, APIC ID: 8 PHY ID: 4, LOG ID: 0
OS Affinity ID: 0x00000020, APIC ID: 10 PHY ID: 5, LOG ID: 0
OS Affinity ID: 0x00000040, APIC ID: 12 PHY ID: 6, LOG ID: 0
OS Affinity ID: 0x00000080, APIC ID: 14 PHY ID: 7, LOG ID: 0
OS Affinity ID: 0x00000100, APIC ID: 16 PHY ID: 8, LOG ID: 0
OS Affinity ID: 0x00000200, APIC ID: 18 PHY ID: 9, LOG ID: 0
OS Affinity ID: 0x00000400, APIC ID: 20 PHY ID: 10, LOG ID: 0
OS Affinity ID: 0x00000800, APIC ID: 22 PHY ID: 11, LOG ID: 0
OS Affinity ID: 0x00001000, APIC ID: 24 PHY ID: 12, LOG ID: 0
OS Affinity ID: 0x00002000, APIC ID: 26 PHY ID: 13, LOG ID: 0
OS Affinity ID: 0x00004000, APIC ID: 28 PHY ID: 14, LOG ID: 0
OS Affinity ID: 0x00008000, APIC ID: 30 PHY ID: 15, LOG ID: 0
OS Affinity ID: 0x00010000, APIC ID: 1 PHY ID: 0, LOG ID: 1
OS Affinity ID: 0x00020000, APIC ID: 3 PHY ID: 1, LOG ID: 1
OS Affinity ID: 0x00040000, APIC ID: 5 PHY ID: 2, LOG ID: 1
OS Affinity ID: 0x00080000, APIC ID: 7 PHY ID: 3, LOG ID: 1
OS Affinity ID: 0x00100000, APIC ID: 9 PHY ID: 4, LOG ID: 1
OS Affinity ID: 0x00200000, APIC ID: 11 PHY ID: 5, LOG ID: 1

OS Affinity ID: 0x00400000, APIC ID: 13 PHY ID: 6, LOG ID: 1
OS Affinity ID: 0x00800000, APIC ID: 15 PHY ID: 7, LOG ID: 1
OS Affinity ID: 0x01000000, APIC ID: 17 PHY ID: 8, LOG ID: 1
OS Affinity ID: 0x02000000, APIC ID: 19 PHY ID: 9, LOG ID: 1
OS Affinity ID: 0x04000000, APIC ID: 21 PHY ID: 10, LOG ID: 1
OS Affinity ID: 0x08000000, APIC ID: 23 PHY ID: 11, LOG ID: 1
OS Affinity ID: 0x10000000, APIC ID: 25 PHY ID: 12, LOG ID: 1
OS Affinity ID: 0x20000000, APIC ID: 27 PHY ID: 13, LOG ID: 1
OS Affinity ID: 0x40000000, APIC ID: 29 PHY ID: 14, LOG ID: 1
OS Affinity ID: 0x80000000, APIC ID: 31 PHY ID: 15, LOG ID: 1
Processors with Hyper-Threading Technology enabled was detected.

Windows Datacenter Server Registry Information

Software\GigaNet

```
\registry\machine\SOFTWARE\Giganet
  cLAN Management Console
    1.00.000
  GniConMgrMgmt2
    0
    BeginModify
      = 01:14:31
    Fabric
    LastModified
      = 01:14:31
    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
    2
    BeginModify
      = 01:14:32
    Fabric
    LastModified
      = 01:14:32
    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

= 01:14:32

Fabric

LastModified

= 01:14:32

NodeList

Node0

```
Name = MV-BOBDYLAN
NICName = gnvia3
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
```

5

BeginModify

= 01:14:32

Fabric

LastModified

= 01:14:32

NodeList

Node0

```
Name = MV-BOBDYLAN
NICName = gnvia5
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
```

```
LastModified
= 01:14:30
```

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 0x0000000a4 0x0000000a4 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
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 = Feedback&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 0x00000000
  ConnectTo
    DSQUERY = DBNETLIB
  DB-Lib
    AutoAnsiToOem = ON
    UseIntlSettings = ON
  SuperSocketNetLib
    ProtocolOrder = REG_MULTI_SZ "np"
    Encrypt = REG_DWORD 0x00000000
    LastConnect
    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 0x00000ddc
  uptime_time_utc = REG_BINARY 0x00000008 0x808b9580 0x01c43bb4
  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[0x0f00f00],2:1428[0xf00f00],3:1425[0x00f00f],5:1426[0x00f00f0
]

```

```

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 0x0000003e8
    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&e44f86d&0&00
```

```
Count = REG_DWORD 0x00000004
NextInstance = REG_DWORD 0x00000004
1 = PCI\VEN_135B&DEV_0001&SUBSYS_00000000&REV_00\3&1b2f0ce&0&00
2 = PCI\VEN_135B&DEV_0001&SUBSYS_00000000&REV_00\3&a985f74&0&00
3 = 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\{B4E35858-75CE-4227-B716-7D1867B22A3B}" \
"\Device\{AD02C75A-183C-4A1A-84D6-0CDCB07DE636}" \
"\Device\{3A5E9A55-D57D-4FAC-8389-0543309B0046}" \
"\Device\{B324133E-EEF5-4CB1-8DC6-8DDB462EBE28}"
    Route = REG_MULTI_SZ "{B4E35858-75CE-4227-B716-7D1867B22A3B}" \
"\Device\{AD02C75A-183C-4A1A-84D6-0CDCB07DE636}" \
"\Device\{3A5E9A55-D57D-4FAC-8389-0543309B0046}" \
"\Device\{B324133E-EEF5-4CB1-8DC6-8DDB462EBE28}"
  Export = REG_MULTI_SZ "\Device\GniVIA_{B4E35858-75CE-4227-B716-7D1867B22A3B}" \
"\Device\GniVIA_{AD02C75A-183C-4A1A-84D6-0CDCB07DE636}" \
"\Device\GniVIA_{3A5E9A55-D57D-4FAC-8389-0543309B0046}" \
"\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
0xadbb789e0 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\Ibfa

```

\registry\machine\SYSTEM\CurrentControlSet\Services\Ibfa
Type = REG_DWORD 0x00000001
Start = REG_DWORD 0x00000003
ErrorControl = REG_DWORD 0x00000001
Tag = REG_DWORD 0x00000004
ImagePath = REG_EXPAND_SZ system32\DRIVERS\Ibfa.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&7a21384&0&FC04560B00080010
    Count = REG_DWORD 0x00000016
    NextInstance = REG_DWORD 0x00000016
    1 = SCSI\ProcessorUNISYS_FC76222-
P64 v2 \5&7a21384&0&FD04560B00080010
    2 = SCSI\ProcessorUNISYS_FC76222-
P64 v2 \5&11f71242&0&C804560B00080010
    3 = SCSI\ProcessorUNISYS_FC76222-
P64 v2 \5&11f71242&0&C904560B00080010
    4 = SCSI\ProcessorUNISYS_FC76222-
P64 v2 \5&24c648ac&0&7008560B00080010
    5 = SCSI\ProcessorUNISYS_FC76222-
P64 v2 \5&24c648ac&0&7108560B00080010
    6 = SCSI\ProcessorUNISYS_FC76222-
P64 v2 \5&55e65ef&0&AC08560B00080010
    7 = SCSI\ProcessorUNISYS_FC76222-
P64 v2 \5&55e65ef&0&AD08560B00080010

```

```

    8 = SCSI\ProcessorUNISYS_FC76222-
P64 v2 \5&324b9a0d&0&D004560B00080010
    9 = SCSI\ProcessorUNISYS_FC76222-
P64 v2 \5&324b9a0d&0&D104560B00080010
    10 = SCSI\ProcessorUNISYS_FC76222-
P64 v2 \5&382242ab&0&E804560B00080010
    11 = SCSI\ProcessorUNISYS_FC76222-
P64 v2 \5&382242ab&0&E904560B00080010
    12 = SCSI\ProcessorUNISYS_FC76222-
P64 v2 \5&13e7de95&0&8425560B00080010
    13 = SCSI\ProcessorUNISYS_FC76222-
P64 v2 \5&13e7de95&0&8525560B00080010
    14 = SCSI\ProcessorUNISYS_FC76222-
P64 v2 \5&1225c8e9&0&C004560B00080010
    15 = SCSI\ProcessorUNISYS_FC76222-
P64 v2 \5&1225c8e9&0&C104560B00080010
    16 = SCSI\ProcessorUNISYS_FC76222-
P64 v2 \5&1181d662&0&B004560B00080010
    17 = SCSI\ProcessorUNISYS_FC76222-
P64 v2 \5&1181d662&0&B104560B00080010
    18 = SCSI\ProcessorUNISYS_FC76222-
P64 v2 \5&38090f63&0&B404560B00080010
    19 = SCSI\ProcessorUNISYS_FC76222-
P64 v2 \5&38090f63&0&B504560B00080010
    20 = SCSI\ProcessorUNISYS_FC76222-
P64 v2 \5&291e5ca1&1&2409560B00080010
    21 = SCSI\ProcessorUNISYS_FC76222-
P64 v2 \5&291e5ca1&1&2509560B00080010

```

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&A53F00861000001000
0000000000C000
    Count = REG_DWORD 0x00000065
    NextInstance = REG_DWORD 0x00000065
    1 =
SCSI\Disk&Ven_UNISYS_VirtualStorage__01.0\1&1a590e2c&0&A53F00861000001000
0000000000B000

```



```

78 =
SCSI\Disk&Ven_UNISYS_VirtualStorage__01.0\1&1a590e2c&0&234000861000001000
000000000002000
79 =
SCSI\Disk&Ven_UNISYS_VirtualStorage__01.0\1&1a590e2c&0&234000861000001000
000000000001000
80 =
SCSI\Disk&Ven_UNISYS_VirtualStorage__01.0\1&1a590e2c&0&094000861000001000
00000000000C000
81 =
SCSI\Disk&Ven_UNISYS_VirtualStorage__01.0\1&1a590e2c&0&094000861000001000
00000000000B000
82 =
SCSI\Disk&Ven_UNISYS_VirtualStorage__01.0\1&1a590e2c&0&094000861000001000
00000000000A000
83 =
SCSI\Disk&Ven_UNISYS_VirtualStorage__01.0\1&1a590e2c&0&094000861000001000
000000000009000
84 =
SCSI\Disk&Ven_UNISYS_VirtualStorage__01.0\1&1a590e2c&0&094000861000001000
000000000008000
85 =
SCSI\Disk&Ven_UNISYS_VirtualStorage__01.0\1&1a590e2c&0&094000861000001000
000000000007000
86 =
SCSI\Disk&Ven_UNISYS_VirtualStorage__01.0\1&1a590e2c&0&094000861000001000
000000000006000
87 =
SCSI\Disk&Ven_UNISYS_VirtualStorage__01.0\1&1a590e2c&0&094000861000001000
000000000005000
88 =
SCSI\Disk&Ven_UNISYS_VirtualStorage__01.0\1&1a590e2c&0&094000861000001000
000000000004000
89 =
SCSI\Disk&Ven_UNISYS_VirtualStorage__01.0\1&1a590e2c&0&094000861000001000
000000000003000
90 =
SCSI\Disk&Ven_UNISYS_VirtualStorage__01.0\1&1a590e2c&0&354000861000001000
00000000000C000
91 =
SCSI\Disk&Ven_UNISYS_VirtualStorage__01.0\1&1a590e2c&0&354000861000001000
00000000000B000
92 =
SCSI\Disk&Ven_UNISYS_VirtualStorage__01.0\1&1a590e2c&0&354000861000001000
00000000000A000
93 =
SCSI\Disk&Ven_UNISYS_VirtualStorage__01.0\1&1a590e2c&0&354000861000001000
000000000009000
94 =
SCSI\Disk&Ven_UNISYS_VirtualStorage__01.0\1&1a590e2c&0&354000861000001000
000000000008000
95 =
SCSI\Disk&Ven_UNISYS_VirtualStorage__01.0\1&1a590e2c&0&354000861000001000
000000000007000
96 =
SCSI\Disk&Ven_UNISYS_VirtualStorage__01.0\1&1a590e2c&0&354000861000001000
000000000006000

```

```

97 =
SCSI\Disk&Ven_UNISYS_VirtualStorage__01.0\1&1a590e2c&0&354000861000001000
000000000005000
98 =
SCSI\Disk&Ven_UNISYS_VirtualStorage__01.0\1&1a590e2c&0&354000861000001000
000000000004000
99 =
SCSI\Disk&Ven_UNISYS_VirtualStorage__01.0\1&1a590e2c&0&354000861000001000
000000000003000
100 =
SCSI\Disk&Ven_DGC_____RAID_10_____0206\1&1a590e2c&0&B81121106001065000
0000000000000000

```

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
0x00000220 0x000140000 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&2cf6f8ed&0&0000
Count = REG_DWORD 0x0000000b
NextInstance = REG_DWORD 0x0000000b
1 = PCI\VEN_11AB&DEV_4620&SUBSYS_C0FC1018&REV_12\4&a75dc64&0&0000
2 = PCI\VEN_11AB&DEV_4620&SUBSYS_C0FC1018&REV_12\4&1b316b8f&0&0000
3 = PCI\VEN_11AB&DEV_4620&SUBSYS_C0FC1018&REV_12\4&101f93c3&0&0000
4 = PCI\VEN_11AB&DEV_4620&SUBSYS_C0FC1018&REV_12\4&5e54501&0&0000
5 = PCI\VEN_11AB&DEV_4620&SUBSYS_C0FC1018&REV_12\4&bbe9921&0&0000
6 = PCI\VEN_11AB&DEV_4620&SUBSYS_C0FC1018&REV_12\4&32dc1527&0&0000
7 = PCI\VEN_11AB&DEV_4620&SUBSYS_C0FC1018&REV_12\4&30f36daa&0&0000
8 = PCI\VEN_11AB&DEV_4620&SUBSYS_C0FC1018&REV_12\4&1f3768a3&0&0000
9 = PCI\VEN_11AB&DEV_4620&SUBSYS_C0FC1018&REV_12\4&1a68eb24&0&0000
10 = 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\bin\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 0x00000067
NextInstance = REG_DWORD 0x00000067
1 =
IDE\DiskFUJITSU_MHS2040AT_____8004____\5&28fc923b&0&0.0.
0
2 =
SCSI\Disk&Ven_UNISYS__VirtualStorage__01.0\1&1a590e2c&0&A53F00861000001000
00000000000C000
3 =
SCSI\Disk&Ven_UNISYS__VirtualStorage__01.0\1&1a590e2c&0&A53F00861000001000
00000000000B000
4 =
SCSI\Disk&Ven_UNISYS__VirtualStorage__01.0\1&1a590e2c&0&A53F00861000001000
00000000000A000
5 =
SCSI\Disk&Ven_UNISYS__VirtualStorage__01.0\1&1a590e2c&0&A53F00861000001000
000000000009000
6 =
SCSI\Disk&Ven_UNISYS__VirtualStorage__01.0\1&1a590e2c&0&A53F00861000001000
000000000008000
7 =
SCSI\Disk&Ven_UNISYS__VirtualStorage__01.0\1&1a590e2c&0&A53F00861000001000
000000000007000
8 =
SCSI\Disk&Ven_UNISYS__VirtualStorage__01.0\1&1a590e2c&0&A53F00861000001000
000000000006000
9 =
SCSI\Disk&Ven_UNISYS__VirtualStorage__01.0\1&1a590e2c&0&A53F00861000001000
000000000005000
10 =
SCSI\Disk&Ven_UNISYS__VirtualStorage__01.0\1&1a590e2c&0&A53F00861000001000
000000000004000
11 =
SCSI\Disk&Ven_UNISYS__VirtualStorage__01.0\1&1a590e2c&0&A53F00861000001000
000000000003000

```



```

88 =
SCSI\Disk&Ven_UNISYS__VirtualStorage__01.0\1&1a590e2c&0&094000861000001000
000000000006000
89 =
SCSI\Disk&Ven_UNISYS__VirtualStorage__01.0\1&1a590e2c&0&094000861000001000
000000000005000
90 =
SCSI\Disk&Ven_UNISYS__VirtualStorage__01.0\1&1a590e2c&0&094000861000001000
000000000004000
91 =
SCSI\Disk&Ven_UNISYS__VirtualStorage__01.0\1&1a590e2c&0&094000861000001000
000000000003000
92 =
SCSI\Disk&Ven_UNISYS__VirtualStorage__01.0\1&1a590e2c&0&354000861000001000
00000000000C000
93 =
SCSI\Disk&Ven_UNISYS__VirtualStorage__01.0\1&1a590e2c&0&354000861000001000
00000000000B000
94 =
SCSI\Disk&Ven_UNISYS__VirtualStorage__01.0\1&1a590e2c&0&354000861000001000
00000000000A000
95 =
SCSI\Disk&Ven_UNISYS__VirtualStorage__01.0\1&1a590e2c&0&354000861000001000
000000000009000
96 =
SCSI\Disk&Ven_UNISYS__VirtualStorage__01.0\1&1a590e2c&0&354000861000001000
000000000008000
97 =
SCSI\Disk&Ven_UNISYS__VirtualStorage__01.0\1&1a590e2c&0&354000861000001000
000000000007000
98 =
SCSI\Disk&Ven_UNISYS__VirtualStorage__01.0\1&1a590e2c&0&354000861000001000
000000000006000
99 =
SCSI\Disk&Ven_UNISYS__VirtualStorage__01.0\1&1a590e2c&0&354000861000001000
000000000005000
100 =
SCSI\Disk&Ven_UNISYS__VirtualStorage__01.0\1&1a590e2c&0&354000861000001000
000000000004000
101 =
SCSI\Disk&Ven_UNISYS__VirtualStorage__01.0\1&1a590e2c&0&354000861000001000
000000000003000
102 =
SCSI\Disk&Ven_DGC_____RAID_10_____0206\1&1a590e2c&0&B81121106001065000
000000000000000

```

Windows 2000 Server Client Configuration Information

(Common to 4 clients except for System Name, IP Address & MAC Address)

Hwconfig.ver

System Information report written at: 05/16/04 22:50:54
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  1.67 GB
Total Virtual Memory  5.85 GB
Available Virtual Memory  5.42 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 0xFB000000-0xFC3FFFFFF PCI bus
Memory Address 0xFB000000-0xFC3FFFFFF cLAN Host Adapter

Memory Address 0xFD000000-0xFEBFFFFFF PCI bus
Memory Address 0xFD000000-0xFEBFFFFFF 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
0x0000ECE8-0x0000ECE7	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
0xFD000000-0xFEFFFFFF	PCI bus	OK
0xFD000000-0xFEFFFFFF	RAGE XL PCI Family (Microsoft Corporation)	OK
0xFE800000-0xFE80FFF	PCI Device	OK
0xFE102000-0xFE102FFF	PCI Device	OK
0xFEB00000-0xFEB7FFF	PCI Device	OK

```

0xFE101000-0xFE101FFF RAGE XL PCI Family (Microsoft Corporation) OK
0xFE100000-0xFE100FFF ServerWorks (RCC) PCI to USB Open Host Controller
OK
0xF9000000-0xFADFFFFFF PCI bus OK
0xFAC00000-0xFADFFFFFF PCI standard PCI-to-PCI bridge OK
0xFACFF000-0xFACFFFFFF 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
0xFB000000-0xFC3FFFFFF PCI bus OK
0xFB000000-0xFC3FFFFFF 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\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\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\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\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		

```

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

```

[Video Codecs]

CODEC	Manufacturer	Description	Status	File	Version	Size
Creation Date						
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		
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\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\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\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\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\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		

[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 0xFD000000-0xFEBFFFFFFF
I/O Port 0x0000E800-0x0000E8FF
Memory Address 0xFE101000-0xFE101FFF
I/O Port 0x000003B0-0x000003DF
I/O Port 0x000003C0-0x000003DF
Memory Address 0xA0000-0xBFFFFF
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 5/11/2004 9:33 AM
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 5/11/2004 9:33 AM
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 5/11/2004 9:33 AM
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 5/11/2004 9:33 AM
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 5/11/2004 9:33 AM
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 5/11/2004 9:33 AM
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_PTMINIPORT\0000
Last Reset 5/11/2004 9:33 AM
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 5/11/2004 9:33 AM
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 5/11/2004 9:33 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:00:14:20
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 5/11/2004 9:33 AM
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 5/11/2004 9:33 AM
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 12.14 GB (13,037,301,760 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
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)

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```

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)

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[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\ataapi.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\ataapi.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
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[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
abiosdsk	Error Control	Accept	Pause	Accept	Stop		
abiosdsk	Abiosdsk		Not Available	Kernel Driver	No		
acpi	Disabled	Stopped	OK	Ignore	No	No	
acpi	Microsoft ACPI Driver	c:\windows\system32\drivers\acpi.sys	Kernel Driver	Yes	Boot	Running	OK
acpiec	ACPIEC	c:\windows\system32\drivers\acpiec.sys	Kernel Driver	No	Disabled	Stopped	OK
adpu160m	adpu160m	c:\windows\system32\drivers\adpu160m.sys	Kernel Driver	Yes	Boot	Running	OK
adpu320	adpu320	Not Available	Kernel Driver	No	Disabled	Stopped	OK
afcnt	afcnt	Not Available	Kernel Driver	No	Disabled	Stopped	OK
afd	AFD Networking Support Environment	c:\windows\system32\drivers\afd.sys	Kernel Driver	Yes	Running	OK	Normal
aha154x	Aha154x	Not Available	Kernel Driver	No	Disabled	Stopped	OK
aic78u2	aic78u2	Not Available	Kernel Driver	No	Disabled	Stopped	OK
aic78xx	aic78xx	Not Available	Kernel Driver	No	Disabled	Stopped	OK
aliide	AliIde	Not Available	Kernel Driver	No	Disabled	Stopped	OK
asynmac	RAS Asynchronous Media Driver	c:\windows\system32\drivers\asynmac.sys	Kernel Driver	No	Manual	Stopped	OK
ataapi	Standard IDE/ESDI Hard Disk Controller	c:\windows\system32\drivers\ataapi.sys	Kernel Driver	Yes	Boot	Running	OK
atdisk	Atdisk	Not Available	Kernel Driver	No	Disabled	Stopped	OK
ati2mpad	ati2mpad	c:\windows\system32\drivers\ati2mpad.sys	Kernel Driver	Yes	Manual	Running	OK
atmarpc	ATM ARP Client Protocol	c:\windows\system32\drivers\atmarpc.sys	Kernel Driver	No	Manual	Stopped	OK
audstub	Audio Stub Driver	c:\windows\system32\drivers\audstub.sys	Kernel Driver	Yes	Manual	Running	OK
b57w2k	Broadcom NetXtreme Gigabit Ethernet	c:\windows\system32\drivers\b57xp32.sys	Kernel Driver	Yes	Manual	Running	OK
beep	Beep	c:\windows\system32\drivers\beep.sys	Kernel Driver	Yes	System	Running	OK
cbidf2k	cbidf2k	c:\windows\system32\drivers\cbidf2k.sys	Kernel Driver	No	Disabled	Stopped	OK
cd20xrnt	cd20xrnt	Not Available	Kernel Driver	No	Disabled	Stopped	OK
cdfs	Cdfs	c:\windows\system32\drivers\cdfs.sys	File System Driver	Yes	Disabled	Running	OK
cdrom	CD-ROM Driver	c:\windows\system32\drivers\cdrom.sys	Kernel Driver	Yes	System	Running	OK

changer	Changer	Not Available	Kernel Driver	No	System	Stopped	OK
	Ignore	No					
clusdisk	Cluster Disk Driver						
	c:\windows\system32\drivers\clusdisk.sys		Kernel Driver	No			
	Disabled	Stopped	OK	Normal	No	No	
cmdide	CmdIde	Not Available	Kernel Driver	No	Disabled		
	Stopped	OK	Normal	No	No		
cpqarray	Cpqarray	Not Available	Kernel Driver	No			
	Disabled	Stopped	OK	Normal	No	No	
cpqarray2	cpqarray2	Not Available	Kernel Driver	No			
	Disabled	Stopped	OK	Normal	No	No	
cpqcissm	cpqcissm	Not Available	Kernel Driver	No			
	Disabled	Stopped	OK	Normal	No	No	
cpqfcalm	cpqfcalm	Not Available	Kernel Driver	No			
	Disabled	Stopped	OK	Normal	No	No	
crdisk	CRC Disk Filter Driver	c:\windows\system32\drivers\crdisk.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
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
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	
mnmd	mnmd	c:\windows\system32\drivers\mnmd.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	
mrraid35x	mrraid35x	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

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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\raspttp.sys Kernel Driver Yes
Manual Running OK Normal No Yes

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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
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

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sparrow	Sparrow Not Available	Kernel Driver	No	Disabled
srv	Srv c:\windows\system32\drivers\srv.sys	File System Driver	Yes	Manual Running OK
swenum	Software Bus Driver	c:\windows\system32\drivers\swenum.sys	Kernel Driver	Yes
sync810	sync810 Not Available	Kernel Driver	No	Disabled
sync8xx	sync8xx Not Available	Kernel Driver	No	Disabled
symmpi	symmpi Not Available	Kernel Driver	No	Disabled
sym_hi	sym_hi Not Available	Kernel Driver	No	Disabled
sym_u3	sym_u3 Not Available	Kernel Driver	No	Disabled
tcpip	TCP/IP Protocol Driver	c:\windows\system32\drivers\tcpip.sys	Kernel Driver	Yes
tdpipe	TDPIPE c:\windows\system32\drivers\tdpipe.sys	Kernel Driver	Yes	Manual Stopped OK
tdtcp	TDTCP c:\windows\system32\drivers\tdtcp.sys	Kernel Driver	Yes	Manual Running OK
termdd	Terminal Device Driver	c:\windows\system32\drivers\termdd.sys	Kernel Driver	Yes
toside	TosIde Not Available	Kernel Driver	No	Disabled
udfs	Udfs c:\windows\system32\drivers\udfs.sys	File System Driver	No	Disabled
ultra	ultra Not Available	Kernel Driver	No	Disabled
update	Microcode Update Driver	c:\windows\system32\drivers\update.sys	Kernel Driver	Yes
usbhub	USB2 Enabled Hub	c:\windows\system32\drivers\usbhub.sys	Kernel Driver	Yes
usbohci	Microsoft USB Open Host Controller Miniport Driver	c:\windows\system32\drivers\usbohci.sys	Kernel Driver	Yes
vgasave	VGA Display Controller.	c:\windows\system32\drivers\vga.sys	Kernel Driver	Yes
viaide	ViaIde Not Available	Kernel Driver	No	Disabled
volsnap	Storage volumes	c:\windows\system32\drivers\volsnap.sys	Kernel Driver	Yes
wanarp	Remote Access IP ARP Driver	c:\windows\system32\drivers\wanarp.sys	Kernel Driver	Yes
wdica	WDICA Not Available	Kernel Driver	No	Manual Stopped OK
wlbs	Network Load Balancing	c:\windows\system32\drivers\wlbs.sys	Kernel Driver	No

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
ACPI Multiprocessor	PC No	COMPUTER	5.2.3790.0	10/1/2002
(Standard computers)	hal.inf	Not Available	ROOT\ACPI_HAL\0000	
Microsoft ACPI-Compliant System	No	SYSTEM	5.2.3790.0	
10/1/2002	Microsoft	acpi.inf	Not Available	
ACPI_HAL\PNP0C08\0				
Processor	No	PROCESSOR	5.2.3790.0	10/1/2002
(Standard processor types)		cpu.inf	Not Available	
ACPI\GENUINEINTEL - X86_FAMILY_15_MODEL_2\0				
Processor	No	PROCESSOR	5.2.3790.0	10/1/2002
(Standard processor types)		cpu.inf	Not Available	
ACPI\GENUINEINTEL - X86_FAMILY_15_MODEL_2\1				
Processor	No	PROCESSOR	5.2.3790.0	10/1/2002
(Standard processor types)		cpu.inf	Not Available	
ACPI\GENUINEINTEL - X86_FAMILY_15_MODEL_2\2				
Processor	No	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 No	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(*)	No	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(*)	No	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(*)	No	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
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
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
Available	Not Available	Not Available		
PCI\VEN_1028&DEV_000D&SUBSYS_000D1028&REV_00\3&13C0B0C5&0&22				
RAGE XL PCI Family (Microsoft Corporation)	No	DISPLAY	5.10.2600.6014	
8/8/2001	ATI Technologies Inc.	atiixpad.inf	Not Available	
PCI\VEN_1002&DEV_4752&SUBSYS_01211028&REV_27\3&13C0B0C5&0&70				
Plug and Play Monitor	No	MONITOR	5.1.2001.0	6/6/2001
(Standard monitor types)		monitor.inf	Not Available	
DISPLAY\DEL0000\4&2664298A&0&80000001&00&0E				

[Signed Drivers]

ServerWorks Champion CSB5 - SouthBridge 5 No 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 No SYSTEM 5.2.3790.0
 10/1/2002 (Standard system devices) machine.inf Not
 Available ACPI\PNP0200\4&25F73A82&0

Numeric data processor No SYSTEM 5.2.3790.0 10/1/2002
 (Standard system devices) machine.inf Not Available
 ACPI\PNP0C04\4&25F73A82&0

Programmable interrupt controller No SYSTEM 5.2.3790.0
 10/1/2002 (Standard system devices) machine.inf Not
 Available ACPI\PNP0000\4&25F73A82&0

System speaker No SYSTEM 5.2.3790.0 10/1/2002 (Standard
 system devices) machine.inf Not Available
 ACPI\PNP0800\4&25F73A82&0

System timer No SYSTEM 5.2.3790.0 10/1/2002 (Standard
 system devices) machine.inf Not Available
 ACPI\PNP0100\4&25F73A82&0

Standard floppy disk controller No FDC 5.2.3790.0
 10/1/2002 (Standard floppy disk controllers) fdc.inf Not
 Available ACPI\PNP0700\4&25F73A82&0

Floppy disk drive No FLOPPYDISK 5.2.3790.0 10/1/2002
 (Standard floppy disk drives) floppydisk.inf Not Available
 FDC\GENERIC_FLOPPY_DRIVE\5&1AE2F47D&0&0

Standard 101/102-Key or Microsoft Natural PS/2 Keyboard No
 KEYBOARD 5.2.3790.0 10/1/2002 (Standard keyboards)
 keyboard.inf Not Available ACPI\PNP0303\4&25F73A82&0

PS/2 Compatible Mouse No MOUSE 5.2.3790.0 10/1/2002
 Microsoft msmouse.inf Not Available
 ACPI\PNP0F13\4&25F73A82&0

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

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

System CMOS/real time clock No SYSTEM 5.2.3790.0 10/1/2002
 (Standard system devices) machine.inf Not Available
 ACPI\PNP0B00\4&25F73A82&0

System board No SYSTEM 5.2.3790.0 10/1/2002 (Standard
 system devices) machine.inf Not Available ACPI\PNP0C01\2

CSB5 IDE Controller No 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 No 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 No 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 No 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 No
 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 No 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 No SYSTEM
 5.2.3790.0 10/1/2002 ServerWorks (RCC) machine.inf
 Not Available
 PCI\VEN_1166&DEV_0225&SUBSYS_00000000&REV_00\3&13C0B0C5&0&7B

ISAPNP Read Data Port No 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 No 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 No 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 No 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 No 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 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&40

Adaptec AIC-7899 Ultra160 PCI SCSI Card No SCSIADAPTER
 5.2.3790.0 10/1/2002 Adaptec pnp SCSI.inf Not Available
 PCI\VEN_9005&DEV_00CF&SUBSYS_01211028&REV_01\4&22300438&0&3040

Disk drive No 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 No SYSTEM 5.2.3790.0 10/1/2002 Dell
 scsudev.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 No SCSIADAPTER
 5.2.3790.0 10/1/2002 Adaptec pnp SCSI.inf Not Available
 PCI\VEN_9005&DEV_00CF&SUBSYS_01211028&REV_01\4&22300438&0&3140

PCI bus No SYSTEM 5.2.3790.0 10/1/2002 (Standard system
 devices) machine.inf Not Available ACPI\PNP0A03\4

Broadcom NetXtreme Gigabit Ethernet No 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 No 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 No SYSTEM 5.2.3790.0 10/1/2002 (Standard system
devices) machine.inf Not Available ACPI\PNP0A03\3
PCI bus No 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 No SYSTEM 5.2.3790.0 10/1/2002
(Standard system devices) machine.inf Not Available
ACPI\FIXEDBUTTON\2&DABA3FF&0
Logical Disk Manager No SYSTEM 5.2.3790.0 10/1/2002
(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\FDISK\0000

Generic volume No 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

mmdd Not Available LEGACYDRIVER Not Available Not Available Not
Available Not Available Not Available ROOT\LEGACY_MMDD\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
Remote Access NDIS TAPI Driver Not Available LEGACYDRIVER Not
Available Not Available Not Available Not Available
ROOT\LEGACY_NDIS\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 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
system devices) wave.inf Not Available ROOT\MEDIA\MS_MMVID

WAN Miniport (L2TP) No NET 5.2.3790.0 10/1/2002
Microsoft netrasa.inf Not Available
ROOT\MS_L2TPMINIPOINT\0000
WAN Miniport (IP) No NET 5.2.3790.0 10/1/2002
Microsoft netrasa.inf Not Available
ROOT\MS_NDISWANIP\0000
WAN Miniport (PPPOE) No NET 5.2.3790.0 10/1/2002
Microsoft netrasa.inf Not Available
ROOT\MS_PPPOEMINIPOINT\0000
WAN Miniport (PPTP) No NET 5.2.3790.0 10/1/2002
Microsoft netrasa.inf Not Available
ROOT\MS_PPTPMINIPOINT\0000
Direct Parallel No NET 5.2.3790.0 10/1/2002
Microsoft netrasa.inf Not Available
ROOT\MS_PTIMINIPOINT\0000
Terminal Server Device Redirector No SYSTEM 5.2.3790.0
10/1/2002 (Standard system devices) machine.inf Not
Available ROOT\RDPDR\0000
Terminal Server Keyboard Driver No SYSTEM 5.2.3790.0
10/1/2002 (Standard system devices) machine.inf Not
Available ROOT\RDP_KBD\0000
Terminal Server Mouse Driver No SYSTEM 5.2.3790.0
10/1/2002 (Standard system devices) machine.inf Not
Available ROOT\RDP_MOUSE\0000
Plug and Play Software Device Enumerator No SYSTEM 5.2.3790.0
10/1/2002 (Standard system devices) machine.inf Not
Available ROOT\SYSTEM\0000
Microcode Update Device No SYSTEM 5.2.3790.0 10/1/2002
(Standard system devices) machine.inf Not Available
ROOT\SYSTEM\0001

```

[Environment Variables]

```

Variable Value User Name
ComSpec %SystemRoot%\system32\cmd.exe <SYSTEM>
Path
%SystemRoot%\system32;%SystemRoot%;%SystemRoot%\System32\Wbem;C:\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	Host	Print Queue
Parameters	Driver	Print Processor	Host	Print Queue		
Data Type	Name					

[Network Connections]

Local Name	Remote Name	Type	Status	User Name
Z:	\\192.168.91.100\c\$	Disk	Current Connection	CLIENT5\Administrator

[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
Available	Not Available	Not Available	Not Available	Not Available	Not Available
system	Not Available	4	8	0	1413120
Available	Not Available	Not Available	Not Available	Not Available	Not Available
smss.exe	Not Available	344	11	204800	1413120
AM	Not Available	Not Available	Not Available	Not Available	5/11/2004 9:34
csrss.exe	Not Available	472	13	Not Available	Not Available
	5/11/2004 9:34 AM	Not Available	Not Available	Not Available	Not Available
winlogon.exe	c:\windows\system32\winlogon.exe	496	13	204800	
	1413120 5/11/2004 9:34 AM	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 5/11/2004 9:34 AM	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 5/11/2004 9:34 AM	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	820	8	204800	
	1413120 5/11/2004 9:34 AM	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	880	8	204800	
	1413120 5/11/2004 9:34 AM	4.2.0.75	168.05 KB (172,079		
	bytes) 7/16/2003 6:40 PM				
svchost.exe	c:\windows\system32\svchost.exe	896	8	204800	
	1413120 5/11/2004 9:34 AM	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	1004	8	204800	
	1413120 5/11/2004 9:34 AM	4.4.4000	32.00 KB (32,768		
	bytes) 7/16/2003 3:50 PM				

```

rundll32.exe c:\windows\system32\rundll32.exe 1040 8 204800
1413120 5/11/2004 9:34 AM 5.2.3790.0 (srv03_rtm.030324-2048)
32.00 KB (32,768 bytes) 3/25/2003 11:00 AM
svchost.exe Not Available 1124 8 Not Available Not Available
5/11/2004 9:34 AM Not Available Not Available Not Available

svchost.exe c:\windows\system32\svchost.exe 1268 8 204800
1413120 5/11/2004 9:35 AM 5.2.3790.0 (srv03_rtm.030324-2048)
13.00 KB (13,312 bytes) 3/25/2003 11:00 AM
explorer.exe c:\windows\explorer.exe 1536 8 204800
1413120 5/11/2004 9:36 AM 6.00.3790.0 (srv03_rtm.030324-2048)
1,008.50 KB (1,032,704 bytes) 3/25/2003 11:00 AM
wmiprvse.exe Not Available 1600 8 Not Available Not Available
5/11/2004 9:36 AM Not Available Not Available Not Available

rhostsrvr.exe c:\rhost\rhostsrvr.exe 1760 8 204800 1413120
5/11/2004 9:36 AM Not Available 54.50 KB (55,808 bytes)
7/16/2003 4:49 PM
svchost.exe c:\windows\system32\svchost.exe 1828 8 204800
1413120 5/11/2004 9:36 AM 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 1492 8 204800
1413120 5/11/2004 9:39 AM 5.2.3790.0 (srv03_rtm.030324-2048)
5.50 KB (5,632 bytes) 3/25/2003 11:00 AM
msdtc.exe Not Available 1900 8 Not Available Not Available
5/11/2004 9:39 AM Not Available Not Available Not Available

csrss.exe Not Available 3764 13 Not Available Not Available
5/14/2004 9:33 PM Not Available Not Available Not Available

winlogon.exe c:\windows\system32\winlogon.exe 2260 13 204800
1413120 5/14/2004 9:33 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 3304 8 204800
1413120 5/14/2004 9:33 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 3104 8 204800
1413120 5/14/2004 9:33 PM 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 3152 8 204800 1413120 5/16/2004
10:49 PM 5.2.3790.0 (srv03_rtm.030324-2048) 40.50 KB (41,472
bytes) 7/16/2003 3:50 PM
wmiprvse.exe Not Available 2484 8 Not Available Not Available
5/16/2004 10:49 PM Not Available Not Available Not Available

```

[Loaded Modules]

Name	Version	Size	File Date	Manufacturer	Path
winlogon	5.2.3790.0	536.50 KB (549,376 bytes)	3/25/2003 11:00 AM	Microsoft Corporation	c:\windows\system32\winlogon.exe
ntdll	5.2.3790.0	722.50 KB (739,840 bytes)	3/25/2003 11:00 AM	Microsoft Corporation	c:\windows\system32\ntdll.dll
kernel32	5.2.3790.0	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

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```

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
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
oleaut32 5.2.3790.0 486.00 KB (497,664 bytes) 3/25/2003
11:00 AM Microsoft Corporation c:\windows\system32\oleaut32.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
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
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
msvcpc60 6.05.2144.0 388.00 KB (397,312 bytes) 3/25/2003 11:00 AM
Microsoft Corporation c:\windows\system32\msvcpc60.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
scserv 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\scserv.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

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umpnpgmr 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\umpnpgmr.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
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

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msock 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\msock.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
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
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

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atl 3.05.2283 83.00 KB (84,992 bytes) 3/25/2003 11:00 AM
Microsoft Corporation c:\windows\system32\atl.dll
wuauerv 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\wuauerv.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
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
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
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

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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
adslsdp 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\adslsdp.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
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
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
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
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

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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
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
wbemcons 5.2.3790.0 (srv03_rtm.030324-2048) 69.00 KB (70,656
bytes) 7/16/2003 3:46 PM Microsoft Corporation
c:\windows\system32\wbem\wbemcons.dll
mnmstrvc 4.4.4000 32.00 KB (32,768 bytes) 7/16/2003 3:50 PM
Microsoft Corporation c:\windows\system32\mnmstrvc.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
wssock32 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\wssock32.dll
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

winnr 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\winnr.dll

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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
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
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
ntshru 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\ntshru.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

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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
kmdisp 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\kmdisp.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
scremdir 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\scremdir.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
browselc 6.00.3790.0 (srv03_rtm.030324-2048) 62.00 KB (63,488
bytes) 3/25/2003 11:00 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 11:00 AM Microsoft Corporation
c:\windows\system32\shdoclc.dll
mprui 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\mprui.dll
netui2 5.2.3790.0 (srv03_rtm.030324-2048) 309.50 KB (316,928 bytes)
3/25/2003 11:00 AM Microsoft Corporation
c:\windows\system32\netui2.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
netmsg 5.2.3790.0 (srv03_rtm.030324-2048) 178.00 KB (182,272 bytes)
3/25/2003 11:00 AM Microsoft Corporation
c:\windows\system32\netmsg.dll
netplwiz 5.2.3790.0 (srv03_rtm.030324-2048) 843.00 KB (863,232
bytes) 3/25/2003 11:00 AM Microsoft Corporation
c:\windows\system32\netplwiz.dll
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
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 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 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\inetresrv\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\ismsserv.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 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	sacsrv	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
browseic.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
ieexplore.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
mshtml.ed.dll	6.0.3790.0	444 KB	3/25/2003 12:00:00 PM	C:\WINDOWS\system32	Microsoft Corporation
mshtmlr.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 4 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 4 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) 13,037,301,760 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) 13,037,301,760 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) 13,037,301,760 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 176
Maximum pool size 176
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 0x0000001f
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 4 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
EnabledDHCP = 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
EnabledDHCP = 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
EnabledDHCP = 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 0x00000008c 0x0000000b 0x00000003 0x00000002

```

```

0x00000001 0x00000006 0x00000002 0x00000001 0x00000000 0x00000002
0x00000000 0x00000006 0x00000000 0x00000000 0x00000000 0x00000000
0x00000001 0x00000006 0x00000002 \
                                0x00000002 0x00000011 0x00000002 0x00000002 0x00000000
0x00000002 0x00000000 0x00000011 0x00000000 0x00000000 0x00000000 0x00000011
0x00000000 0x00000002 0x00000011 0x00000002 0x00000003 0x00000000

```

MSSQL Server Registry Parameters

Software_Microsoft_Mssqlserver_Client_Connectto_Sqlconnect.txt

(Common to all 4 clients except for DBServer port #)

```

\registry\machine\software\microsoft\mssqlserver\client\connectto
  DSQUERY = DBSSOEN
  DBSERVER-tcp = DBSSOEN,192.168.91.213
  DBSERVER = DBNETLIB,via:mv-bobbylan,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\iisrmap.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 1,19050
INITFIXEDWID 1
INITCCLAST 208
INITCCID 208
INITCITEMID 208
```

```
//
//Configuration Driver 1
//
1 INITIPADDR 192.168.93.1
1 INITIISADDR 192.5.1.1
1 INITIISPORT 80
1 INITBROWSERS 770
1 INITMYWID 1,77
//
//Configuration Driver 2
//
2 INITIPADDR 192.168.93.1
2 INITIISADDR 192.5.1.1
2 INITIISPORT 80
2 INITBROWSERS 770
2 INITMYWID 78,154
//
//Configuration Driver 3
//
3 INITIPADDR 192.168.93.1
3 INITIISADDR 192.5.1.1
3 INITIISPORT 80
3 INITBROWSERS 770
3 INITMYWID 155,231
//
//Configuration Driver 4
//
4 INITIPADDR 192.168.93.1
4 INITIISADDR 192.5.1.1
4 INITIISPORT 80
4 INITBROWSERS 770
4 INITMYWID 232,308
//
//Configuration Driver 5
//
5 INITIPADDR 192.168.93.1
5 INITIISADDR 192.5.1.1
5 INITIISPORT 80
5 INITBROWSERS 770
5 INITMYWID 309,385
//
//Configuration Driver 6
//
6 INITIPADDR 192.168.93.1
6 INITIISADDR 192.5.1.1
6 INITIISPORT 80
6 INITBROWSERS 770
6 INITMYWID 386,462
//
//Configuration Driver 7
//
7 INITIPADDR 192.168.93.1
7 INITIISADDR 192.5.1.1
7 INITIISPORT 80
```

```

7 INITBROWSERS 770
7 INITMYWID 463,539
//
//Configuration Driver 8
//
8 INITIPADDR 192.168.93.1
8 INITIISADDR 192.5.1.1
8 INITIISPORT 80
8 INITBROWSERS 770
8 INITMYWID 540,616
//
//Configuration Driver 9
//
9 INITIPADDR 192.168.93.1
9 INITIISADDR 192.5.1.1
9 INITIISPORT 80
9 INITBROWSERS 770
9 INITMYWID 617,693
//
//Configuration Driver 10
//
10 INITIPADDR 192.168.93.1
10 INITIISADDR 192.5.1.1
10 INITIISPORT 80
10 INITBROWSERS 770
10 INITMYWID 694,770
//
//Configuration Driver 11
//
11 INITIPADDR 192.168.93.1
11 INITIISADDR 192.5.1.1
11 INITIISPORT 80
11 INITBROWSERS 770
11 INITMYWID 771,847
//
//Configuration Driver 12
//
12 INITIPADDR 192.168.93.1
12 INITIISADDR 192.5.1.1
12 INITIISPORT 80
12 INITBROWSERS 770
12 INITMYWID 848,924
//
//Configuration Driver 13
//
13 INITIPADDR 192.168.93.1
13 INITIISADDR 192.5.1.1
13 INITIISPORT 80
13 INITBROWSERS 770
13 INITMYWID 925,1001
//
//Configuration Driver 14
//
14 INITIPADDR 192.168.93.1
14 INITIISADDR 192.5.1.1
14 INITIISPORT 80
14 INITBROWSERS 770
14 INITMYWID 1002,1078
//

```

```

//Configuration Driver 15
//
15 INITIPADDR 192.168.93.1
15 INITIISADDR 192.5.1.1
15 INITIISPORT 80
15 INITBROWSERS 770
15 INITMYWID 1079,1155
//
//Configuration Driver 16
//
16 INITIPADDR 192.168.93.1
16 INITIISADDR 192.5.1.1
16 INITIISPORT 80
16 INITBROWSERS 770
16 INITMYWID 1156,1232
//
//Configuration Driver 17
//
17 INITIPADDR 192.168.93.1
17 INITIISADDR 192.5.1.1
17 INITIISPORT 80
17 INITBROWSERS 770
17 INITMYWID 1233,1309
//
//Configuration Driver 18
//
18 INITIPADDR 192.168.93.1
18 INITIISADDR 192.5.1.1
18 INITIISPORT 80
18 INITBROWSERS 770
18 INITMYWID 1310,1386
//
//Configuration Driver 19
//
19 INITIPADDR 192.168.93.1
19 INITIISADDR 192.5.1.1
19 INITIISPORT 80
19 INITBROWSERS 770
19 INITMYWID 1387,1463
//
//Configuration Driver 20
//
20 INITIPADDR 192.168.93.1
20 INITIISADDR 192.5.1.1
20 INITIISPORT 80
20 INITBROWSERS 770
20 INITMYWID 1464,1540
//
//Configuration Driver 21
//
21 INITIPADDR 192.168.93.1
21 INITIISADDR 192.5.1.1
21 INITIISPORT 80
21 INITBROWSERS 770
21 INITMYWID 1541,1617
//
//Configuration Driver 22
//
22 INITIPADDR 192.168.93.1

```

```

22 INITIISADDR 192.5.1.1
22 INITIISPORT 80
22 INITBROWSERS 770
22 INITMYWID 1618,1694
//
//Configuration Driver 23
//
23 INITIPADDR 192.168.93.1
23 INITIISADDR 192.5.1.1
23 INITIISPORT 80
23 INITBROWSERS 770
23 INITMYWID 1695,1771
//
//Configuration Driver 24
//
24 INITIPADDR 192.168.93.1
24 INITIISADDR 192.5.1.1
24 INITIISPORT 80
24 INITBROWSERS 770
24 INITMYWID 1772,1848
//
//Configuration Driver 25
//
25 INITIPADDR 192.168.93.1
25 INITIISADDR 192.5.1.1
25 INITIISPORT 80
25 INITBROWSERS 770
25 INITMYWID 1849,1925
//
//Configuration Driver 26
//
26 INITIPADDR 192.168.93.1
26 INITIISADDR 192.5.1.1
26 INITIISPORT 80
26 INITBROWSERS 770
26 INITMYWID 1926,2002
//
//Configuration Driver 27
//
27 INITIPADDR 192.168.93.1
27 INITIISADDR 192.5.1.1
27 INITIISPORT 80
27 INITBROWSERS 770
27 INITMYWID 2003,2079
//
//Configuration Driver 28
//
28 INITIPADDR 192.168.93.1
28 INITIISADDR 192.5.1.1
28 INITIISPORT 80
28 INITBROWSERS 770
28 INITMYWID 2080,2156
//
//Configuration Driver 29
//
29 INITIPADDR 192.168.93.1
29 INITIISADDR 192.5.1.1
29 INITIISPORT 80
29 INITBROWSERS 770

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```

29 INITMYWID 2157,2233
//
//Configuration Driver 30
//
30 INITIPADDR 192.168.93.1
30 INITIISADDR 192.5.1.1
30 INITIISPORT 80
30 INITBROWSERS 770
30 INITMYWID 2234,2310
//
//Configuration Driver 31
//
31 INITIPADDR 192.168.93.2
31 INITIISADDR 192.5.1.1
31 INITIISPORT 80
31 INITBROWSERS 770
31 INITMYWID 2311,2387
//
//Configuration Driver 32
//
32 INITIPADDR 192.168.93.2
32 INITIISADDR 192.5.1.1
32 INITIISPORT 80
32 INITBROWSERS 770
32 INITMYWID 2388,2464
//
//Configuration Driver 33
//
33 INITIPADDR 192.168.93.2
33 INITIISADDR 192.5.1.1
33 INITIISPORT 80
33 INITBROWSERS 770
33 INITMYWID 2465,2541
//
//Configuration Driver 34
//
34 INITIPADDR 192.168.93.2
34 INITIISADDR 192.5.1.1
34 INITIISPORT 80
34 INITBROWSERS 770
34 INITMYWID 2542,2618
//
//Configuration Driver 35
//
35 INITIPADDR 192.168.93.2
35 INITIISADDR 192.5.1.1
35 INITIISPORT 80
35 INITBROWSERS 770
35 INITMYWID 2619,2695
//
//Configuration Driver 36
//
36 INITIPADDR 192.168.93.2
36 INITIISADDR 192.5.1.1
36 INITIISPORT 80
36 INITBROWSERS 770
36 INITMYWID 2696,2772
//
//Configuration Driver 37

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//
37 INITIPADDR 192.168.93.2
37 INITIISADDR 192.5.1.1
37 INITIISPORT 80
37 INITBROWSERS 770
37 INITMYWID 2773,2849
//
//Configuration Driver 38
//
38 INITIPADDR 192.168.93.2
38 INITIISADDR 192.5.1.1
38 INITIISPORT 80
38 INITBROWSERS 770
38 INITMYWID 2850,2926
//
//Configuration Driver 39
//
39 INITIPADDR 192.168.93.2
39 INITIISADDR 192.5.1.1
39 INITIISPORT 80
39 INITBROWSERS 770
39 INITMYWID 2927,3003
//
//Configuration Driver 40
//
40 INITIPADDR 192.168.93.2
40 INITIISADDR 192.5.1.1
40 INITIISPORT 80
40 INITBROWSERS 770
40 INITMYWID 3004,3080
//
//Configuration Driver 41
//
41 INITIPADDR 192.168.93.2
41 INITIISADDR 192.5.1.1
41 INITIISPORT 80
41 INITBROWSERS 770
41 INITMYWID 3081,3157
//
//Configuration Driver 42
//
42 INITIPADDR 192.168.93.2
42 INITIISADDR 192.5.1.1
42 INITIISPORT 80
42 INITBROWSERS 770
42 INITMYWID 3158,3234
//
//Configuration Driver 43
//
43 INITIPADDR 192.168.93.2
43 INITIISADDR 192.5.1.1
43 INITIISPORT 80
43 INITBROWSERS 770
43 INITMYWID 3235,3311
//
//Configuration Driver 44
//
44 INITIPADDR 192.168.93.2
44 INITIISADDR 192.5.1.1

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44 INITIISPORT 80
44 INITBROWSERS 770
44 INITMYWID 3312,3388
//
//Configuration Driver 45
//
45 INITIPADDR 192.168.93.2
45 INITIISADDR 192.5.1.1
45 INITIISPORT 80
45 INITBROWSERS 770
45 INITMYWID 3389,3465
//
//Configuration Driver 46
//
46 INITIPADDR 192.168.93.2
46 INITIISADDR 192.5.1.1
46 INITIISPORT 80
46 INITBROWSERS 770
46 INITMYWID 3466,3542
//
//Configuration Driver 47
//
47 INITIPADDR 192.168.93.2
47 INITIISADDR 192.5.1.1
47 INITIISPORT 80
47 INITBROWSERS 770
47 INITMYWID 3543,3619
//
//Configuration Driver 48
//
48 INITIPADDR 192.168.93.2
48 INITIISADDR 192.5.1.1
48 INITIISPORT 80
48 INITBROWSERS 770
48 INITMYWID 3620,3696
//
//Configuration Driver 49
//
49 INITIPADDR 192.168.93.2
49 INITIISADDR 192.5.1.1
49 INITIISPORT 80
49 INITBROWSERS 770
49 INITMYWID 3697,3773
//
//Configuration Driver 50
//
50 INITIPADDR 192.168.93.2
50 INITIISADDR 192.5.1.1
50 INITIISPORT 80
50 INITBROWSERS 770
50 INITMYWID 3774,3850
//
//Configuration Driver 51
//
51 INITIPADDR 192.168.93.2
51 INITIISADDR 192.5.1.1
51 INITIISPORT 80
51 INITBROWSERS 770
51 INITMYWID 3851,3927

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//
//Configuration Driver 52
//
52 INITIPADDR 192.168.93.2
52 INITIISADDR 192.5.1.1
52 INITIISPORT 80
52 INITBROWSERS 770
52 INITMYWID 3928,4004
//
//Configuration Driver 53
//
53 INITIPADDR 192.168.93.2
53 INITIISADDR 192.5.1.1
53 INITIISPORT 80
53 INITBROWSERS 770
53 INITMYWID 4005,4081
//
//Configuration Driver 54
//
54 INITIPADDR 192.168.93.2
54 INITIISADDR 192.5.1.1
54 INITIISPORT 80
54 INITBROWSERS 770
54 INITMYWID 4082,4158
//
//Configuration Driver 55
//
55 INITIPADDR 192.168.93.2
55 INITIISADDR 192.5.1.1
55 INITIISPORT 80
55 INITBROWSERS 770
55 INITMYWID 4159,4235
//
//Configuration Driver 56
//
56 INITIPADDR 192.168.93.2
56 INITIISADDR 192.5.1.1
56 INITIISPORT 80
56 INITBROWSERS 770
56 INITMYWID 4236,4312
//
//Configuration Driver 57
//
57 INITIPADDR 192.168.93.2
57 INITIISADDR 192.5.1.1
57 INITIISPORT 80
57 INITBROWSERS 770
57 INITMYWID 4313,4389
//
//Configuration Driver 58
//
58 INITIPADDR 192.168.93.2
58 INITIISADDR 192.5.1.1
58 INITIISPORT 80
58 INITBROWSERS 770
58 INITMYWID 4390,4466
//
//Configuration Driver 59
//

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59 INITIPADDR 192.168.93.2
59 INITIISADDR 192.5.1.1
59 INITIISPORT 80
59 INITBROWSERS 770
59 INITMYWID 4467,4543
//
//Configuration Driver 60
//
60 INITIPADDR 192.168.93.2
60 INITIISADDR 192.5.1.1
60 INITIISPORT 80
60 INITBROWSERS 770
60 INITMYWID 4544,4620
//
//Configuration Driver 61
//
61 INITIPADDR 192.168.93.3
61 INITIISADDR 192.6.1.1
61 INITIISPORT 80
61 INITBROWSERS 800
61 INITMYWID 4621,4700
//
//Configuration Driver 62
//
62 INITIPADDR 192.168.93.3
62 INITIISADDR 192.6.1.1
62 INITIISPORT 80
62 INITBROWSERS 800
62 INITMYWID 4701,4780
//
//Configuration Driver 63
//
63 INITIPADDR 192.168.93.3
63 INITIISADDR 192.6.1.1
63 INITIISPORT 80
63 INITBROWSERS 800
63 INITMYWID 4781,4860
//
//Configuration Driver 64
//
64 INITIPADDR 192.168.93.3
64 INITIISADDR 192.6.1.1
64 INITIISPORT 80
64 INITBROWSERS 800
64 INITMYWID 4861,4940
//
//Configuration Driver 65
//
65 INITIPADDR 192.168.93.3
65 INITIISADDR 192.6.1.1
65 INITIISPORT 80
65 INITBROWSERS 800
65 INITMYWID 4941,5020
//
//Configuration Driver 66
//
66 INITIPADDR 192.168.93.3
66 INITIISADDR 192.6.1.1
66 INITIISPORT 80

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66 INITBROWSERS 810
66 INITMYWID 5021,5101
//
//Configuration Driver 67
//
67 INITIPADDR 192.168.93.3
67 INITIISADDR 192.6.1.1
67 INITIISPORT 80
67 INITBROWSERS 800
67 INITMYWID 5102,5181
//
//Configuration Driver 68
//
68 INITIPADDR 192.168.93.3
68 INITIISADDR 192.6.1.1
68 INITIISPORT 80
68 INITBROWSERS 800
68 INITMYWID 5182,5261
//
//Configuration Driver 69
//
69 INITIPADDR 192.168.93.3
69 INITIISADDR 192.6.1.1
69 INITIISPORT 80
69 INITBROWSERS 800
69 INITMYWID 5262,5341
//
//Configuration Driver 70
//
70 INITIPADDR 192.168.93.3
70 INITIISADDR 192.6.1.1
70 INITIISPORT 80
70 INITBROWSERS 800
70 INITMYWID 5342,5421
//
//Configuration Driver 71
//
71 INITIPADDR 192.168.93.3
71 INITIISADDR 192.6.1.1
71 INITIISPORT 80
71 INITBROWSERS 800
71 INITMYWID 5422,5501
//
//Configuration Driver 72
//
72 INITIPADDR 192.168.93.3
72 INITIISADDR 192.6.1.1
72 INITIISPORT 80
72 INITBROWSERS 810
72 INITMYWID 5502,5582
//
//Configuration Driver 73
//
73 INITIPADDR 192.168.93.3
73 INITIISADDR 192.6.1.1
73 INITIISPORT 80
73 INITBROWSERS 800
73 INITMYWID 5583,5662
//

```

```

//Configuration Driver 74
//
74 INITIPADDR 192.168.93.3
74 INITIISADDR 192.6.1.1
74 INITIISPORT 80
74 INITBROWSERS 800
74 INITMYWID 5663,5742
//
//Configuration Driver 75
//
75 INITIPADDR 192.168.93.3
75 INITIISADDR 192.6.1.1
75 INITIISPORT 80
75 INITBROWSERS 800
75 INITMYWID 5743,5822
//
//Configuration Driver 76
//
76 INITIPADDR 192.168.93.3
76 INITIISADDR 192.6.1.1
76 INITIISPORT 80
76 INITBROWSERS 800
76 INITMYWID 5823,5902
//
//Configuration Driver 77
//
77 INITIPADDR 192.168.93.3
77 INITIISADDR 192.6.1.1
77 INITIISPORT 80
77 INITBROWSERS 800
77 INITMYWID 5903,5982
//
//Configuration Driver 78
//
78 INITIPADDR 192.168.93.3
78 INITIISADDR 192.6.1.1
78 INITIISPORT 80
78 INITBROWSERS 810
78 INITMYWID 5983,6063
//
//Configuration Driver 79
//
79 INITIPADDR 192.168.93.3
79 INITIISADDR 192.6.1.1
79 INITIISPORT 80
79 INITBROWSERS 800
79 INITMYWID 6064,6143
//
//Configuration Driver 80
//
80 INITIPADDR 192.168.93.3
80 INITIISADDR 192.6.1.1
80 INITIISPORT 80
80 INITBROWSERS 800
80 INITMYWID 6144,6223
//
//Configuration Driver 81
//
81 INITIPADDR 192.168.93.3

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81 INITIISADDR 192.6.1.1
81 INITIISPORT 80
81 INITBROWSERS 800
81 INITMYWID 6224,6303
//
//Configuration Driver 82
//
82 INITIPADDR 192.168.93.3
82 INITIISADDR 192.6.1.1
82 INITIISPORT 80
82 INITBROWSERS 800
82 INITMYWID 6304,6383
//
//Configuration Driver 83
//
83 INITIPADDR 192.168.93.3
83 INITIISADDR 192.6.1.1
83 INITIISPORT 80
83 INITBROWSERS 800
83 INITMYWID 6384,6463
//
//Configuration Driver 84
//
84 INITIPADDR 192.168.93.3
84 INITIISADDR 192.6.1.1
84 INITIISPORT 80
84 INITBROWSERS 810
84 INITMYWID 6464,6544
//
//Configuration Driver 85
//
85 INITIPADDR 192.168.93.3
85 INITIISADDR 192.6.1.1
85 INITIISPORT 80
85 INITBROWSERS 800
85 INITMYWID 6545,6624
//
//Configuration Driver 86
//
86 INITIPADDR 192.168.93.3
86 INITIISADDR 192.6.1.1
86 INITIISPORT 80
86 INITBROWSERS 800
86 INITMYWID 6625,6704
//
//Configuration Driver 87
//
87 INITIPADDR 192.168.93.3
87 INITIISADDR 192.6.1.1
87 INITIISPORT 80
87 INITBROWSERS 800
87 INITMYWID 6705,6784
//
//Configuration Driver 88
//
88 INITIPADDR 192.168.93.3
88 INITIISADDR 192.6.1.1
88 INITIISPORT 80
88 INITBROWSERS 800
```

```
88 INITMYWID 6785,6864
//
//Configuration Driver 89
//
89 INITIPADDR 192.168.93.3
89 INITIISADDR 192.6.1.1
89 INITIISPORT 80
89 INITBROWSERS 800
89 INITMYWID 6865,6944
//
//Configuration Driver 90
//
90 INITIPADDR 192.168.93.3
90 INITIISADDR 192.6.1.1
90 INITIISPORT 80
90 INITBROWSERS 810
90 INITMYWID 6945,7025
//
//Configuration Driver 91
//
91 INITIPADDR 192.168.93.4
91 INITIISADDR 192.6.1.1
91 INITIISPORT 80
91 INITBROWSERS 800
91 INITMYWID 7026,7105
//
//Configuration Driver 92
//
92 INITIPADDR 192.168.93.4
92 INITIISADDR 192.6.1.1
92 INITIISPORT 80
92 INITBROWSERS 800
92 INITMYWID 7106,7185
//
//Configuration Driver 93
//
93 INITIPADDR 192.168.93.4
93 INITIISADDR 192.6.1.1
93 INITIISPORT 80
93 INITBROWSERS 800
93 INITMYWID 7186,7265
//
//Configuration Driver 94
//
94 INITIPADDR 192.168.93.4
94 INITIISADDR 192.6.1.1
94 INITIISPORT 80
94 INITBROWSERS 800
94 INITMYWID 7266,7345
//
//Configuration Driver 95
//
95 INITIPADDR 192.168.93.4
95 INITIISADDR 192.6.1.1
95 INITIISPORT 80
95 INITBROWSERS 800
95 INITMYWID 7346,7425
//
//Configuration Driver 96
```

```

//
96 INITIPADDR 192.168.93.4
96 INITIISADDR 192.6.1.1
96 INITIISPORT 80
96 INITBROWSERS 810
96 INITMYWID 7426,7506
//
//Configuration Driver 97
//
97 INITIPADDR 192.168.93.4
97 INITIISADDR 192.6.1.1
97 INITIISPORT 80
97 INITBROWSERS 800
97 INITMYWID 7507,7586
//
//Configuration Driver 98
//
98 INITIPADDR 192.168.93.4
98 INITIISADDR 192.6.1.1
98 INITIISPORT 80
98 INITBROWSERS 800
98 INITMYWID 7587,7666
//
//Configuration Driver 99
//
99 INITIPADDR 192.168.93.4
99 INITIISADDR 192.6.1.1
99 INITIISPORT 80
99 INITBROWSERS 800
99 INITMYWID 7667,7746
//
//Configuration Driver 100
//
100 INITIPADDR 192.168.93.4
100 INITIISADDR 192.6.1.1
100 INITIISPORT 80
100 INITBROWSERS 800
100 INITMYWID 7747,7826
//
//Configuration Driver 101
//
101 INITIPADDR 192.168.93.4
101 INITIISADDR 192.6.1.1
101 INITIISPORT 80
101 INITBROWSERS 800
101 INITMYWID 7827,7906
//
//Configuration Driver 102
//
102 INITIPADDR 192.168.93.4
102 INITIISADDR 192.6.1.1
102 INITIISPORT 80
102 INITBROWSERS 810
102 INITMYWID 7907,7987
//
//Configuration Driver 103
//
103 INITIPADDR 192.168.93.4
103 INITIISADDR 192.6.1.1

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```

103 INITIISPORT 80
103 INITBROWSERS 800
103 INITMYWID 7988,8067
//
//Configuration Driver 104
//
104 INITIPADDR 192.168.93.4
104 INITIISADDR 192.6.1.1
104 INITIISPORT 80
104 INITBROWSERS 800
104 INITMYWID 8068,8147
//
//Configuration Driver 105
//
105 INITIPADDR 192.168.93.4
105 INITIISADDR 192.6.1.1
105 INITIISPORT 80
105 INITBROWSERS 800
105 INITMYWID 8148,8227
//
//Configuration Driver 106
//
106 INITIPADDR 192.168.93.4
106 INITIISADDR 192.6.1.1
106 INITIISPORT 80
106 INITBROWSERS 800
106 INITMYWID 8228,8307
//
//Configuration Driver 107
//
107 INITIPADDR 192.168.93.4
107 INITIISADDR 192.6.1.1
107 INITIISPORT 80
107 INITBROWSERS 800
107 INITMYWID 8308,8387
//
//Configuration Driver 108
//
108 INITIPADDR 192.168.93.4
108 INITIISADDR 192.6.1.1
108 INITIISPORT 80
108 INITBROWSERS 810
108 INITMYWID 8388,8468
//
//Configuration Driver 109
//
109 INITIPADDR 192.168.93.4
109 INITIISADDR 192.6.1.1
109 INITIISPORT 80
109 INITBROWSERS 800
109 INITMYWID 8469,8548
//
//Configuration Driver 110
//
110 INITIPADDR 192.168.93.4
110 INITIISADDR 192.6.1.1
110 INITIISPORT 80
110 INITBROWSERS 800
110 INITMYWID 8549,8628

```

```

//
//Configuration Driver 111
//
111 INITIPADDR 192.168.93.4
111 INITIISADDR 192.6.1.1
111 INITIISPORT 80
111 INITBROWSERS 800
111 INITMYWID 8629,8708
//
//Configuration Driver 112
//
112 INITIPADDR 192.168.93.4
112 INITIISADDR 192.6.1.1
112 INITIISPORT 80
112 INITBROWSERS 800
112 INITMYWID 8709,8788
//
//Configuration Driver 113
//
113 INITIPADDR 192.168.93.4
113 INITIISADDR 192.6.1.1
113 INITIISPORT 80
113 INITBROWSERS 800
113 INITMYWID 8789,8868
//
//Configuration Driver 114
//
114 INITIPADDR 192.168.93.4
114 INITIISADDR 192.6.1.1
114 INITIISPORT 80
114 INITBROWSERS 810
114 INITMYWID 8869,8949
//
//Configuration Driver 115
//
115 INITIPADDR 192.168.93.4
115 INITIISADDR 192.6.1.1
115 INITIISPORT 80
115 INITBROWSERS 800
115 INITMYWID 8950,9029
//
//Configuration Driver 116
//
116 INITIPADDR 192.168.93.4
116 INITIISADDR 192.6.1.1
116 INITIISPORT 80
116 INITBROWSERS 800
116 INITMYWID 9030,9109
//
//Configuration Driver 117
//
117 INITIPADDR 192.168.93.4
117 INITIISADDR 192.6.1.1
117 INITIISPORT 80
117 INITBROWSERS 800
117 INITMYWID 9110,9189
//
//Configuration Driver 118
//

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118 INITIPADDR 192.168.93.4
118 INITIISADDR 192.6.1.1
118 INITIISPORT 80
118 INITBROWSERS 800
118 INITMYWID 9190,9269
//
//Configuration Driver 119
//
119 INITIPADDR 192.168.93.4
119 INITIISADDR 192.6.1.1
119 INITIISPORT 80
119 INITBROWSERS 800
119 INITMYWID 9270,9349
//
//Configuration Driver 120
//
120 INITIPADDR 192.168.93.4
120 INITIISADDR 192.6.1.1
120 INITIISPORT 80
120 INITBROWSERS 810
120 INITMYWID 9350,9430
//
//Configuration Driver 121
//
121 INITIPADDR 192.168.93.5
121 INITIISADDR 192.7.1.1
121 INITIISPORT 80
121 INITBROWSERS 800
121 INITMYWID 9431,9510
//
//Configuration Driver 122
//
122 INITIPADDR 192.168.93.5
122 INITIISADDR 192.7.1.1
122 INITIISPORT 80
122 INITBROWSERS 800
122 INITMYWID 9511,9590
//
//Configuration Driver 123
//
123 INITIPADDR 192.168.93.5
123 INITIISADDR 192.7.1.1
123 INITIISPORT 80
123 INITBROWSERS 800
123 INITMYWID 9591,9670
//
//Configuration Driver 124
//
124 INITIPADDR 192.168.93.5
124 INITIISADDR 192.7.1.1
124 INITIISPORT 80
124 INITBROWSERS 800
124 INITMYWID 9671,9750
//
//Configuration Driver 125
//
125 INITIPADDR 192.168.93.5
125 INITIISADDR 192.7.1.1
125 INITIISPORT 80

```

```
125 INITBROWSERS 800
125 INITMYWID 9751,9830
//
//Configuration Driver 126
//
126 INITIPADDR 192.168.93.5
126 INITIISADDR 192.7.1.1
126 INITIISPORT 80
126 INITBROWSERS 810
126 INITMYWID 9831,9911
//
//Configuration Driver 127
//
127 INITIPADDR 192.168.93.5
127 INITIISADDR 192.7.1.1
127 INITIISPORT 80
127 INITBROWSERS 800
127 INITMYWID 9912,9991
//
//Configuration Driver 128
//
128 INITIPADDR 192.168.93.5
128 INITIISADDR 192.7.1.1
128 INITIISPORT 80
128 INITBROWSERS 800
128 INITMYWID 9992,10071
//
//Configuration Driver 129
//
129 INITIPADDR 192.168.93.5
129 INITIISADDR 192.7.1.1
129 INITIISPORT 80
129 INITBROWSERS 800
129 INITMYWID 10072,10151
//
//Configuration Driver 130
//
130 INITIPADDR 192.168.93.5
130 INITIISADDR 192.7.1.1
130 INITIISPORT 80
130 INITBROWSERS 800
130 INITMYWID 10152,10231
//
//Configuration Driver 131
//
131 INITIPADDR 192.168.93.5
131 INITIISADDR 192.7.1.1
131 INITIISPORT 80
131 INITBROWSERS 800
131 INITMYWID 10232,10311
//
//Configuration Driver 132
//
132 INITIPADDR 192.168.93.5
132 INITIISADDR 192.7.1.1
132 INITIISPORT 80
132 INITBROWSERS 810
132 INITMYWID 10312,10392
//
```

```
//Configuration Driver 133
//
133 INITIPADDR 192.168.93.5
133 INITIISADDR 192.7.1.1
133 INITIISPORT 80
133 INITBROWSERS 800
133 INITMYWID 10393,10472
//
//Configuration Driver 134
//
134 INITIPADDR 192.168.93.5
134 INITIISADDR 192.7.1.1
134 INITIISPORT 80
134 INITBROWSERS 800
134 INITMYWID 10473,10552
//
//Configuration Driver 135
//
135 INITIPADDR 192.168.93.5
135 INITIISADDR 192.7.1.1
135 INITIISPORT 80
135 INITBROWSERS 800
135 INITMYWID 10553,10632
//
//Configuration Driver 136
//
136 INITIPADDR 192.168.93.5
136 INITIISADDR 192.7.1.1
136 INITIISPORT 80
136 INITBROWSERS 800
136 INITMYWID 10633,10712
//
//Configuration Driver 137
//
137 INITIPADDR 192.168.93.5
137 INITIISADDR 192.7.1.1
137 INITIISPORT 80
137 INITBROWSERS 800
137 INITMYWID 10713,10792
//
//Configuration Driver 138
//
138 INITIPADDR 192.168.93.5
138 INITIISADDR 192.7.1.1
138 INITIISPORT 80
138 INITBROWSERS 810
138 INITMYWID 10793,10873
//
//Configuration Driver 139
//
139 INITIPADDR 192.168.93.5
139 INITIISADDR 192.7.1.1
139 INITIISPORT 80
139 INITBROWSERS 800
139 INITMYWID 10874,10953
//
//Configuration Driver 140
//
140 INITIPADDR 192.168.93.5
```

```
140 INITIISADDR 192.7.1.1
140 INITIISPORT 80
140 INITBROWSERS 800
140 INITMYWID 10954,11033
//
//Configuration Driver 141
//
141 INITIPADDR 192.168.93.5
141 INITIISADDR 192.7.1.1
141 INITIISPORT 80
141 INITBROWSERS 800
141 INITMYWID 11034,11113
//
//Configuration Driver 142
//
142 INITIPADDR 192.168.93.5
142 INITIISADDR 192.7.1.1
142 INITIISPORT 80
142 INITBROWSERS 800
142 INITMYWID 11114,11193
//
//Configuration Driver 143
//
143 INITIPADDR 192.168.93.5
143 INITIISADDR 192.7.1.1
143 INITIISPORT 80
143 INITBROWSERS 800
143 INITMYWID 11194,11273
//
//Configuration Driver 144
//
144 INITIPADDR 192.168.93.5
144 INITIISADDR 192.7.1.1
144 INITIISPORT 80
144 INITBROWSERS 810
144 INITMYWID 11274,11354
//
//Configuration Driver 145
//
145 INITIPADDR 192.168.93.5
145 INITIISADDR 192.7.1.1
145 INITIISPORT 80
145 INITBROWSERS 800
145 INITMYWID 11355,11434
//
//Configuration Driver 146
//
146 INITIPADDR 192.168.93.5
146 INITIISADDR 192.7.1.1
146 INITIISPORT 80
146 INITBROWSERS 800
146 INITMYWID 11435,11514
//
//Configuration Driver 147
//
147 INITIPADDR 192.168.93.5
147 INITIISADDR 192.7.1.1
147 INITIISPORT 80
147 INITBROWSERS 800
```

```
147 INITMYWID 11515,11594
//
//Configuration Driver 148
//
148 INITIPADDR 192.168.93.5
148 INITIISADDR 192.7.1.1
148 INITIISPORT 80
148 INITBROWSERS 800
148 INITMYWID 11595,11674
//
//Configuration Driver 149
//
149 INITIPADDR 192.168.93.5
149 INITIISADDR 192.7.1.1
149 INITIISPORT 80
149 INITBROWSERS 800
149 INITMYWID 11675,11754
//
//Configuration Driver 150
//
150 INITIPADDR 192.168.93.5
150 INITIISADDR 192.7.1.1
150 INITIISPORT 80
150 INITBROWSERS 810
150 INITMYWID 11755,11835
//
//Configuration Driver 151
//
151 INITIPADDR 192.168.93.6
151 INITIISADDR 192.7.1.1
151 INITIISPORT 80
151 INITBROWSERS 800
151 INITMYWID 11836,11915
//
//Configuration Driver 152
//
152 INITIPADDR 192.168.93.6
152 INITIISADDR 192.7.1.1
152 INITIISPORT 80
152 INITBROWSERS 800
152 INITMYWID 11916,11995
//
//Configuration Driver 153
//
153 INITIPADDR 192.168.93.6
153 INITIISADDR 192.7.1.1
153 INITIISPORT 80
153 INITBROWSERS 800
153 INITMYWID 11996,12075
//
//Configuration Driver 154
//
154 INITIPADDR 192.168.93.6
154 INITIISADDR 192.7.1.1
154 INITIISPORT 80
154 INITBROWSERS 800
154 INITMYWID 12076,12155
//
//Configuration Driver 155
```

```

//
155 INITIPADDR 192.168.93.6
155 INITIISADDR 192.7.1.1
155 INITIISPORT 80
155 INITBROWSERS 800
155 INITMYWID 12156,12235
//
//Configuration Driver 156
//
156 INITIPADDR 192.168.93.6
156 INITIISADDR 192.7.1.1
156 INITIISPORT 80
156 INITBROWSERS 810
156 INITMYWID 12236,12316
//
//Configuration Driver 157
//
157 INITIPADDR 192.168.93.6
157 INITIISADDR 192.7.1.1
157 INITIISPORT 80
157 INITBROWSERS 800
157 INITMYWID 12317,12396
//
//Configuration Driver 158
//
158 INITIPADDR 192.168.93.6
158 INITIISADDR 192.7.1.1
158 INITIISPORT 80
158 INITBROWSERS 800
158 INITMYWID 12397,12476
//
//Configuration Driver 159
//
159 INITIPADDR 192.168.93.6
159 INITIISADDR 192.7.1.1
159 INITIISPORT 80
159 INITBROWSERS 800
159 INITMYWID 12477,12556
//
//Configuration Driver 160
//
160 INITIPADDR 192.168.93.6
160 INITIISADDR 192.7.1.1
160 INITIISPORT 80
160 INITBROWSERS 800
160 INITMYWID 12557,12636
//
//Configuration Driver 161
//
161 INITIPADDR 192.168.93.6
161 INITIISADDR 192.7.1.1
161 INITIISPORT 80
161 INITBROWSERS 800
161 INITMYWID 12637,12716
//
//Configuration Driver 162
//
162 INITIPADDR 192.168.93.6
162 INITIISADDR 192.7.1.1

```

```

162 INITIISPORT 80
162 INITBROWSERS 810
162 INITMYWID 12717,12797
//
//Configuration Driver 163
//
163 INITIPADDR 192.168.93.6
163 INITIISADDR 192.7.1.1
163 INITIISPORT 80
163 INITBROWSERS 800
163 INITMYWID 12798,12877
//
//Configuration Driver 164
//
164 INITIPADDR 192.168.93.6
164 INITIISADDR 192.7.1.1
164 INITIISPORT 80
164 INITBROWSERS 800
164 INITMYWID 12878,12957
//
//Configuration Driver 165
//
165 INITIPADDR 192.168.93.6
165 INITIISADDR 192.7.1.1
165 INITIISPORT 80
165 INITBROWSERS 800
165 INITMYWID 12958,13037
//
//Configuration Driver 166
//
166 INITIPADDR 192.168.93.6
166 INITIISADDR 192.7.1.1
166 INITIISPORT 80
166 INITBROWSERS 800
166 INITMYWID 13038,13117
//
//Configuration Driver 167
//
167 INITIPADDR 192.168.93.6
167 INITIISADDR 192.7.1.1
167 INITIISPORT 80
167 INITBROWSERS 800
167 INITMYWID 13118,13197
//
//Configuration Driver 168
//
168 INITIPADDR 192.168.93.6
168 INITIISADDR 192.7.1.1
168 INITIISPORT 80
168 INITBROWSERS 810
168 INITMYWID 13198,13278
//
//Configuration Driver 169
//
169 INITIPADDR 192.168.93.6
169 INITIISADDR 192.7.1.1
169 INITIISPORT 80
169 INITBROWSERS 800
169 INITMYWID 13279,13358

```



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//
//Configuration Driver 170
//
170 INITIPADDR 192.168.93.6
170 INITIISADDR 192.7.1.1
170 INITIISPORT 80
170 INITBROWSERS 800
170 INITMYWID 13359,13438
//
//Configuration Driver 171
//
171 INITIPADDR 192.168.93.6
171 INITIISADDR 192.7.1.1
171 INITIISPORT 80
171 INITBROWSERS 800
171 INITMYWID 13439,13518
//
//Configuration Driver 172
//
172 INITIPADDR 192.168.93.6
172 INITIISADDR 192.7.1.1
172 INITIISPORT 80
172 INITBROWSERS 800
172 INITMYWID 13519,13598
//
//Configuration Driver 173
//
173 INITIPADDR 192.168.93.6
173 INITIISADDR 192.7.1.1
173 INITIISPORT 80
173 INITBROWSERS 800
173 INITMYWID 13599,13678
//
//Configuration Driver 174
//
174 INITIPADDR 192.168.93.6
174 INITIISADDR 192.7.1.1
174 INITIISPORT 80
174 INITBROWSERS 810
174 INITMYWID 13679,13759
//
//Configuration Driver 175
//
175 INITIPADDR 192.168.93.6
175 INITIISADDR 192.7.1.1
175 INITIISPORT 80
175 INITBROWSERS 800
175 INITMYWID 13760,13839
//
//Configuration Driver 176
//
176 INITIPADDR 192.168.93.6
176 INITIISADDR 192.7.1.1
176 INITIISPORT 80
176 INITBROWSERS 800
176 INITMYWID 13840,13919
//
//Configuration Driver 177
//

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```

177 INITIPADDR 192.168.93.6
177 INITIISADDR 192.7.1.1
177 INITIISPORT 80
177 INITBROWSERS 800
177 INITMYWID 13920,13999
//
//Configuration Driver 178
//
178 INITIPADDR 192.168.93.6
178 INITIISADDR 192.7.1.1
178 INITIISPORT 80
178 INITBROWSERS 800
178 INITMYWID 14000,14079
//
//Configuration Driver 179
//
179 INITIPADDR 192.168.93.6
179 INITIISADDR 192.7.1.1
179 INITIISPORT 80
179 INITBROWSERS 800
179 INITMYWID 14080,14159
//
//Configuration Driver 180
//
180 INITIPADDR 192.168.93.6
180 INITIISADDR 192.7.1.1
180 INITIISPORT 80
180 INITBROWSERS 810
180 INITMYWID 14160,14240
//
//Configuration Driver 181
//
181 INITIPADDR 192.168.93.7
181 INITIISADDR 192.8.1.1
181 INITIISPORT 80
181 INITBROWSERS 800
181 INITMYWID 14241,14320
//
//Configuration Driver 182
//
182 INITIPADDR 192.168.93.7
182 INITIISADDR 192.8.1.1
182 INITIISPORT 80
182 INITBROWSERS 800
182 INITMYWID 14321,14400
//
//Configuration Driver 183
//
183 INITIPADDR 192.168.93.7
183 INITIISADDR 192.8.1.1
183 INITIISPORT 80
183 INITBROWSERS 800
183 INITMYWID 14401,14480
//
//Configuration Driver 184
//
184 INITIPADDR 192.168.93.7
184 INITIISADDR 192.8.1.1
184 INITIISPORT 80

```

```

184 INITBROWSERS 800
184 INITMYWID 14481,14560
//
//Configuration Driver 185
//
185 INITIPADDR 192.168.93.7
185 INITIISADDR 192.8.1.1
185 INITIISPORT 80
185 INITBROWSERS 800
185 INITMYWID 14561,14640
//
//Configuration Driver 186
//
186 INITIPADDR 192.168.93.7
186 INITIISADDR 192.8.1.1
186 INITIISPORT 80
186 INITBROWSERS 810
186 INITMYWID 14641,14721
//
//Configuration Driver 187
//
187 INITIPADDR 192.168.93.7
187 INITIISADDR 192.8.1.1
187 INITIISPORT 80
187 INITBROWSERS 800
187 INITMYWID 14722,14801
//
//Configuration Driver 188
//
188 INITIPADDR 192.168.93.7
188 INITIISADDR 192.8.1.1
188 INITIISPORT 80
188 INITBROWSERS 800
188 INITMYWID 14802,14881
//
//Configuration Driver 189
//
189 INITIPADDR 192.168.93.7
189 INITIISADDR 192.8.1.1
189 INITIISPORT 80
189 INITBROWSERS 800
189 INITMYWID 14882,14961
//
//Configuration Driver 190
//
190 INITIPADDR 192.168.93.7
190 INITIISADDR 192.8.1.1
190 INITIISPORT 80
190 INITBROWSERS 800
190 INITMYWID 14962,15041
//
//Configuration Driver 191
//
191 INITIPADDR 192.168.93.7
191 INITIISADDR 192.8.1.1
191 INITIISPORT 80
191 INITBROWSERS 800
191 INITMYWID 15042,15121
//

```

```

//Configuration Driver 192
//
192 INITIPADDR 192.168.93.7
192 INITIISADDR 192.8.1.1
192 INITIISPORT 80
192 INITBROWSERS 810
192 INITMYWID 15122,15202
//
//Configuration Driver 193
//
193 INITIPADDR 192.168.93.7
193 INITIISADDR 192.8.1.1
193 INITIISPORT 80
193 INITBROWSERS 800
193 INITMYWID 15203,15282
//
//Configuration Driver 194
//
194 INITIPADDR 192.168.93.7
194 INITIISADDR 192.8.1.1
194 INITIISPORT 80
194 INITBROWSERS 800
194 INITMYWID 15283,15362
//
//Configuration Driver 195
//
195 INITIPADDR 192.168.93.7
195 INITIISADDR 192.8.1.1
195 INITIISPORT 80
195 INITBROWSERS 800
195 INITMYWID 15363,15442
//
//Configuration Driver 196
//
196 INITIPADDR 192.168.93.7
196 INITIISADDR 192.8.1.1
196 INITIISPORT 80
196 INITBROWSERS 800
196 INITMYWID 15443,15522
//
//Configuration Driver 197
//
197 INITIPADDR 192.168.93.7
197 INITIISADDR 192.8.1.1
197 INITIISPORT 80
197 INITBROWSERS 800
197 INITMYWID 15523,15602
//
//Configuration Driver 198
//
198 INITIPADDR 192.168.93.7
198 INITIISADDR 192.8.1.1
198 INITIISPORT 80
198 INITBROWSERS 810
198 INITMYWID 15603,15683
//
//Configuration Driver 199
//
199 INITIPADDR 192.168.93.7

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199 INITIISADDR 192.8.1.1
199 INITIISPORT 80
199 INITBROWSERS 800
199 INITMYWID 15684,15763
//
//Configuration Driver 200
//
200 INITIPADDR 192.168.93.7
200 INITIISADDR 192.8.1.1
200 INITIISPORT 80
200 INITBROWSERS 800
200 INITMYWID 15764,15843
//
//Configuration Driver 201
//
201 INITIPADDR 192.168.93.7
201 INITIISADDR 192.8.1.1
201 INITIISPORT 80
201 INITBROWSERS 800
201 INITMYWID 15844,15923
//
//Configuration Driver 202
//
202 INITIPADDR 192.168.93.7
202 INITIISADDR 192.8.1.1
202 INITIISPORT 80
202 INITBROWSERS 800
202 INITMYWID 15924,16003
//
//Configuration Driver 203
//
203 INITIPADDR 192.168.93.7
203 INITIISADDR 192.8.1.1
203 INITIISPORT 80
203 INITBROWSERS 800
203 INITMYWID 16004,16083
//
//Configuration Driver 204
//
204 INITIPADDR 192.168.93.7
204 INITIISADDR 192.8.1.1
204 INITIISPORT 80
204 INITBROWSERS 810
204 INITMYWID 16084,16164
//
//Configuration Driver 205
//
205 INITIPADDR 192.168.93.7
205 INITIISADDR 192.8.1.1
205 INITIISPORT 80
205 INITBROWSERS 800
205 INITMYWID 16165,16244
//
//Configuration Driver 206
//
206 INITIPADDR 192.168.93.7
206 INITIISADDR 192.8.1.1
206 INITIISPORT 80
206 INITBROWSERS 800

```

```

206 INITMYWID 16245,16324
//
//Configuration Driver 207
//
207 INITIPADDR 192.168.93.7
207 INITIISADDR 192.8.1.1
207 INITIISPORT 80
207 INITBROWSERS 800
207 INITMYWID 16325,16404
//
//Configuration Driver 208
//
208 INITIPADDR 192.168.93.7
208 INITIISADDR 192.8.1.1
208 INITIISPORT 80
208 INITBROWSERS 800
208 INITMYWID 16405,16484
//
//Configuration Driver 209
//
209 INITIPADDR 192.168.93.7
209 INITIISADDR 192.8.1.1
209 INITIISPORT 80
209 INITBROWSERS 800
209 INITMYWID 16485,16564
//
//Configuration Driver 210
//
210 INITIPADDR 192.168.93.7
210 INITIISADDR 192.8.1.1
210 INITIISPORT 80
210 INITBROWSERS 810
210 INITMYWID 16565,16645
//
//Configuration Driver 211
//
211 INITIPADDR 192.168.93.8
211 INITIISADDR 192.8.1.1
211 INITIISPORT 80
211 INITBROWSERS 800
211 INITMYWID 16646,16725
//
//Configuration Driver 212
//
212 INITIPADDR 192.168.93.8
212 INITIISADDR 192.8.1.1
212 INITIISPORT 80
212 INITBROWSERS 800
212 INITMYWID 16726,16805
//
//Configuration Driver 213
//
213 INITIPADDR 192.168.93.8
213 INITIISADDR 192.8.1.1
213 INITIISPORT 80
213 INITBROWSERS 800
213 INITMYWID 16806,16885
//
//Configuration Driver 214

```

```

//
214 INITIPADDR 192.168.93.8
214 INITIISADDR 192.8.1.1
214 INITIISPORT 80
214 INITBROWSERS 800
214 INITMYWID 16886,16965
//
//Configuration Driver 215
//
215 INITIPADDR 192.168.93.8
215 INITIISADDR 192.8.1.1
215 INITIISPORT 80
215 INITBROWSERS 800
215 INITMYWID 16966,17045
//
//Configuration Driver 216
//
216 INITIPADDR 192.168.93.8
216 INITIISADDR 192.8.1.1
216 INITIISPORT 80
216 INITBROWSERS 810
216 INITMYWID 17046,17126
//
//Configuration Driver 217
//
217 INITIPADDR 192.168.93.8
217 INITIISADDR 192.8.1.1
217 INITIISPORT 80
217 INITBROWSERS 800
217 INITMYWID 17127,17206
//
//Configuration Driver 218
//
218 INITIPADDR 192.168.93.8
218 INITIISADDR 192.8.1.1
218 INITIISPORT 80
218 INITBROWSERS 800
218 INITMYWID 17207,17286
//
//Configuration Driver 219
//
219 INITIPADDR 192.168.93.8
219 INITIISADDR 192.8.1.1
219 INITIISPORT 80
219 INITBROWSERS 800
219 INITMYWID 17287,17366
//
//Configuration Driver 220
//
220 INITIPADDR 192.168.93.8
220 INITIISADDR 192.8.1.1
220 INITIISPORT 80
220 INITBROWSERS 800
220 INITMYWID 17367,17446
//
//Configuration Driver 221
//
221 INITIPADDR 192.168.93.8
221 INITIISADDR 192.8.1.1

```

```

221 INITIISPORT 80
221 INITBROWSERS 800
221 INITMYWID 17447,17526
//
//Configuration Driver 222
//
222 INITIPADDR 192.168.93.8
222 INITIISADDR 192.8.1.1
222 INITIISPORT 80
222 INITBROWSERS 810
222 INITMYWID 17527,17607
//
//Configuration Driver 223
//
223 INITIPADDR 192.168.93.8
223 INITIISADDR 192.8.1.1
223 INITIISPORT 80
223 INITBROWSERS 800
223 INITMYWID 17608,17687
//
//Configuration Driver 224
//
224 INITIPADDR 192.168.93.8
224 INITIISADDR 192.8.1.1
224 INITIISPORT 80
224 INITBROWSERS 800
224 INITMYWID 17688,17767
//
//Configuration Driver 225
//
225 INITIPADDR 192.168.93.8
225 INITIISADDR 192.8.1.1
225 INITIISPORT 80
225 INITBROWSERS 800
225 INITMYWID 17768,17847
//
//Configuration Driver 226
//
226 INITIPADDR 192.168.93.8
226 INITIISADDR 192.8.1.1
226 INITIISPORT 80
226 INITBROWSERS 800
226 INITMYWID 17848,17927
//
//Configuration Driver 227
//
227 INITIPADDR 192.168.93.8
227 INITIISADDR 192.8.1.1
227 INITIISPORT 80
227 INITBROWSERS 800
227 INITMYWID 17928,18007
//
//Configuration Driver 228
//
228 INITIPADDR 192.168.93.8
228 INITIISADDR 192.8.1.1
228 INITIISPORT 80
228 INITBROWSERS 810
228 INITMYWID 18008,18088

```

```

//
//Configuration Driver 229
//
229 INITIPADDR 192.168.93.8
229 INITIISADDR 192.8.1.1
229 INITIISPORT 80
229 INITBROWSERS 800
229 INITMYWID 18089,18168
//
//Configuration Driver 230
//
230 INITIPADDR 192.168.93.8
230 INITIISADDR 192.8.1.1
230 INITIISPORT 80
230 INITBROWSERS 800
230 INITMYWID 18169,18248
//
//Configuration Driver 231
//
231 INITIPADDR 192.168.93.8
231 INITIISADDR 192.8.1.1
231 INITIISPORT 80
231 INITBROWSERS 800
231 INITMYWID 18249,18328
//
//Configuration Driver 232
//
232 INITIPADDR 192.168.93.8
232 INITIISADDR 192.8.1.1
232 INITIISPORT 80
232 INITBROWSERS 800
232 INITMYWID 18329,18408
//
//Configuration Driver 233
//
233 INITIPADDR 192.168.93.8
233 INITIISADDR 192.8.1.1
233 INITIISPORT 80
233 INITBROWSERS 800
233 INITMYWID 18409,18488
//
//Configuration Driver 234
//
234 INITIPADDR 192.168.93.8
234 INITIISADDR 192.8.1.1
234 INITIISPORT 80
234 INITBROWSERS 810
234 INITMYWID 18489,18569
//
//Configuration Driver 235
//
235 INITIPADDR 192.168.93.8
235 INITIISADDR 192.8.1.1
235 INITIISPORT 80
235 INITBROWSERS 800
235 INITMYWID 18570,18649
//
//Configuration Driver 236
//

```

```

236 INITIPADDR 192.168.93.8
236 INITIISADDR 192.8.1.1
236 INITIISPORT 80
236 INITBROWSERS 800
236 INITMYWID 18650,18729
//
//Configuration Driver 237
//
237 INITIPADDR 192.168.93.8
237 INITIISADDR 192.8.1.1
237 INITIISPORT 80
237 INITBROWSERS 800
237 INITMYWID 18730,18809
//
//Configuration Driver 238
//
238 INITIPADDR 192.168.93.8
238 INITIISADDR 192.8.1.1
238 INITIISPORT 80
238 INITBROWSERS 800
238 INITMYWID 18810,18889
//
//Configuration Driver 239
//
239 INITIPADDR 192.168.93.8
239 INITIISADDR 192.8.1.1
239 INITIISPORT 80
239 INITBROWSERS 800
239 INITMYWID 18890,18969
//
//Configuration Driver 240
//
240 INITIPADDR 192.168.93.8
240 INITIISADDR 192.8.1.1
240 INITIISPORT 80
240 INITBROWSERS 810
240 INITMYWID 18970,19050

```

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

Rtedif.ver

```
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 Tcpi. . . . . : 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 Tcpi. . . . . : 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 Tcpi. . . . . : 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 Tcpi. . . . . : 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)    13,303,664,640 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)    13,288,779,776 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)    13,254,094,848 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)    13,244,895,232 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)    13,248,757,760 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)    13,251,309,568 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)    13,269,831,680 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)    13,268,393,984 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 " D6 RTE163 " /MIN webdriver.cmd 163
start " D6 RTE164 " /MIN webdriver.cmd 164
start " D6 RTE165 " /MIN webdriver.cmd 165
start " D6 RTE166 " /MIN webdriver.cmd 166
start " D6 RTE167 " /MIN webdriver.cmd 167
start " D6 RTE168 " /MIN webdriver.cmd 168
start " D6 RTE169 " /MIN webdriver.cmd 169
start " D6 RTE170 " /MIN webdriver.cmd 170
start " D6 RTE171 " /MIN webdriver.cmd 171
start " D6 RTE172 " /MIN webdriver.cmd 172
start " D6 RTE173 " /MIN webdriver.cmd 173
start " D6 RTE174 " /MIN webdriver.cmd 174
start " D6 RTE175 " /MIN webdriver.cmd 175
start " D6 RTE176 " /MIN webdriver.cmd 176
start " D6 RTE177 " /MIN webdriver.cmd 177
start " D6 RTE178 " /MIN webdriver.cmd 178
start " D6 RTE179 " /MIN webdriver.cmd 179
start " D6 RTE180 " /MIN webdriver.cmd 180
start " D7 RTE181 " /MIN webdriver.cmd 181
start " D7 RTE182 " /MIN webdriver.cmd 182
start " D7 RTE183 " /MIN webdriver.cmd 183
start " D7 RTE184 " /MIN webdriver.cmd 184
start " D7 RTE185 " /MIN webdriver.cmd 185
start " D7 RTE186 " /MIN webdriver.cmd 186
start " D7 RTE187 " /MIN webdriver.cmd 187
start " D7 RTE188 " /MIN webdriver.cmd 188
start " D7 RTE189 " /MIN webdriver.cmd 189
start " D7 RTE190 " /MIN webdriver.cmd 190
start " D7 RTE191 " /MIN webdriver.cmd 191
start " D7 RTE192 " /MIN webdriver.cmd 192
start " D7 RTE193 " /MIN webdriver.cmd 193
start " D7 RTE194 " /MIN webdriver.cmd 194
start " D7 RTE195 " /MIN webdriver.cmd 195
start " D7 RTE196 " /MIN webdriver.cmd 196
start " D7 RTE197 " /MIN webdriver.cmd 197
start " D7 RTE198 " /MIN webdriver.cmd 198
start " D7 RTE199 " /MIN webdriver.cmd 199
start " D7 RTE200 " /MIN webdriver.cmd 200
start " D7 RTE201 " /MIN webdriver.cmd 201
start " D7 RTE202 " /MIN webdriver.cmd 202
start " D7 RTE203 " /MIN webdriver.cmd 203
start " D7 RTE204 " /MIN webdriver.cmd 204
start " D7 RTE205 " /MIN webdriver.cmd 205
start " D7 RTE206 " /MIN webdriver.cmd 206
start " D7 RTE207 " /MIN webdriver.cmd 207
start " D7 RTE208 " /MIN webdriver.cmd 208
start " D7 RTE209 " /MIN webdriver.cmd 209
start " D7 RTE210 " /MIN webdriver.cmd 210
start " D8 RTE211 " /MIN webdriver.cmd 211
start " D8 RTE212 " /MIN webdriver.cmd 212
start " D8 RTE213 " /MIN webdriver.cmd 213
start " D8 RTE214 " /MIN webdriver.cmd 214
start " D8 RTE215 " /MIN webdriver.cmd 215
start " D8 RTE216 " /MIN webdriver.cmd 216
start " D8 RTE217 " /MIN webdriver.cmd 217
start " D8 RTE218 " /MIN webdriver.cmd 218
start " D8 RTE219 " /MIN webdriver.cmd 219
start " D8 RTE220 " /MIN webdriver.cmd 220
start " D8 RTE221 " /MIN webdriver.cmd 221

start " D8 RTE222 " /MIN webdriver.cmd 222
start " D8 RTE223 " /MIN webdriver.cmd 223
start " D8 RTE224 " /MIN webdriver.cmd 224
start " D8 RTE225 " /MIN webdriver.cmd 225
start " D8 RTE226 " /MIN webdriver.cmd 226
start " D8 RTE227 " /MIN webdriver.cmd 227
start " D8 RTE228 " /MIN webdriver.cmd 228
start " D8 RTE229 " /MIN webdriver.cmd 229
start " D8 RTE230 " /MIN webdriver.cmd 230
start " D8 RTE231 " /MIN webdriver.cmd 231
start " D8 RTE232 " /MIN webdriver.cmd 232
start " D8 RTE233 " /MIN webdriver.cmd 233
start " D8 RTE234 " /MIN webdriver.cmd 234
start " D8 RTE235 " /MIN webdriver.cmd 235
start " D8 RTE236 " /MIN webdriver.cmd 236
start " D8 RTE237 " /MIN webdriver.cmd 237
start " D8 RTE238 " /MIN webdriver.cmd 238
start " D8 RTE239 " /MIN webdriver.cmd 239
start " D8 RTE240 " /MIN webdriver.cmd 240

Appendix E - Disk Storage

TPC-C 60-Day Disk Space Requirements					
Warehouses	19,400	tpmC	237,869	tpmC/W	12.26
Table	Initial Rows	Data KB	Index KB	Extra 5% KB	Total With 5% KB
Warehouse	19,400	2,104	408	126	2,638
District	194,000	21,864	848	1,136	23,848
Customer	582,000,000	119,384,616	25,867,504	7,262,606	152,514,726
Customer.Text	582,000,000	348,112,968		17,405,648	365,518,616
History (D)	582,000,000	34,746,272	135,488		34,881,760
Order (D)	582,000,000	19,004,088	44,224		19,048,312
New-Order	174,600,000	3,448,896	10,176	172,954	3,632,026
Order-Line (D)	5,819,981,351	387,998,760	918,864		388,917,624
Item	100,000	9,528	808	517	10,853
Stock	1,940,000,000	620,800,000	1,314,088	31,105,704	653,219,792
Totals KB		1,533,529,096	28,292,408	55,948,690	1,617,770,194
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	100	4,020	402,000	391,052	398,566
mssql70_cs_fg	100	7,920	792,000	786,850	786,850
mssql70_ord_fg	100	5,060	506,000	401,951	499,310
Total Allocated MB			1,700,042	1,579,896	1,684,768
		MB			
Dynamic Space MB	431,396	Sum of data for orders, order_line & history			
Static Space	1,148,458	Sum of data+index+5% - Dynamic Space			
Free Space	120,188	Total allocated space - (Dynamic & Static Spaces)			
Daily Growth	84,631	(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	6,226,346	Static Space + 60 * (Daily Growth + Daily Spread)			
60 Day Space GB	6,080.42				
8 hr log GB	542.44	(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 146GB disks (10,000 RPM)		
Space Usage	GB Needed	Disks Priced	GB Priced		
60-day space DB	6080.42 GB	700	11446.09 GB	18GB drives	
Total DB		700	11446.09 GB		
8-hr log+mirror	1084.88 GB	10	1274.67 GB	146GB drives	
OS, SQL Server	14.00 GB	1	37.26 GB	40GB drive	
Total space	7179.30 GB	711	12758.02 GB	12.5 TB	

TPC-C Dynamic Table Growth Rates for 8 Hours					237,869 tpmC	
Tables	Initial (KB)	Final (KB)	Change(KB)	KB / New-Order	8-Hr MB	
History	34,881,760	37,695,896	2,814,136	0.0674	41,578.03	
Orders	19,048,312	23,313,840	4,265,528	0.1021	29,990.94	
Order_line	388,917,624	420,300,160	31,382,536	0.7515	463,594.55	
Dynamic	442,847,696	481,309,896	38,462,200	0.9210	535,163.52	
New_order	3,459,072	4,337,768	878,696	0.0210	5,724.14	
Static						
Log	31,828,880	228,222,695	196,393,815	4.7029	555,459.44	542.441 GB
SUM(d_next_o_id)	582,194,000	623,954,306	41,760,306			

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

May 18, 2004

Unisys Corporation
Glenn Weeks
MS4333
2470 Highcrest Road
Roseville, MN 55113

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 <i>Server license only - No CALs</i> <i>Discount Schedule: Open Program - No Level</i> <i>Unit Price reflects a 26% discount from the</i> <i>retail unit price of \$999.</i>	\$738	4	\$2,952
254-00170	Visual C++ Standard <i>No discounts applied</i>	\$109	1	\$109
PRO-PRORS-16U-01	Database Server Support Package <i>1 Year Term</i>	\$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: PCglwe0418051270

Please include this Reference ID in any correspondence regarding this price quote.

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SALES QUOTE

SQ-17616

May 20, 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	Jun 19, 2004	Dave Loewenbaum				
Quotation	PO #	Reference	Ship VIA		Page	Printed	
SQ-17616			UPS GROUND		1	05/20/04 11:12	
L Item	Description	Qty	Ship	Price	M	Discount	Amount
1	ES7000-540 SERVER						
2	ES7540167-140	1		283100.00	EA		283100.00
3	SEN70002-MSV	1		2585.00	EA		2585.00
4	WSS200004-EN	1		949.00	EA		949.00
5	FC76222-P64	11		2850.00	EA		31350.00
6	PCI10001-CXG	4		755.00	EA		3020.00
7	ES70003-UIF	1		570.00	EA		570.00
8	WND2316-TSP	1		35112.00	EA		35112.00
9	DUS200316-TSP	2		3173.00	EA		6346.00
10	GTS7524016-SSA	3		12574.00	EA		37722.00
11	DQL200316-LX	1		212800.00	EA		212800.00
12	US\$2200/RS2000 STORAGE						
13	JBD201615-P84	9		29839.00	EA		268551.00
14	JBD201615-P14	1		7763.00	EA		7763.00
15	CXR14610-2GF	12		2508.00	EA		30096.00
16	JBD2002-SA	30		3010.00	EA		90300.00
17	JBD2011-SA	20		3214.00	EA		64280.00
18	RMM20103-ELS	10		4559.00	EA		45590.00
19	RMM20701-TAR	30		1805.00	EA		54150.00
20	USS10300-SW	1		5472.00	EA		5472.00
21	USS20320-LIC	1		37484.00	EA		37484.00
22	JBD20003-CCL	30		54.00	EA		1620.00
23	JBD2001-RMK	50		190.00	EA		9500.00
24	CX300-DPE	1		19000.00	EA		19000.00
25	CXN600-WIN	1		646.00	EA		646.00
26	CX2002-DPE	1		1549.00	EA		1549.00
27	CX200-DAE	1		7695.00	EA		7695.00
28	GS516-T16	1		2850.00	EA		2850.00
						Page 1	
						SubTotal	1260100.00

SALES QUOTE	
SQ-17616	May 20, 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	Jun 10, 2004	Dave Lowenbaum				
Quotation	PO #	Reference	Ship VIA	Page	Printed		
SQ-17616			UPS GROUND	2	5/20/04 09:10:17		
L Item	Description	Qty	Ship	Price	M	Discount	Amount
29	SWC91-SER ADPR:8 PORT SWITCH UNIT	2		1520.00	EA		3040.00
30	CEL121-SWC CABLE:12FT SYS TO ADJ BK	14		143.00	EA		2002.00
31	KWR20301-SER KEYBD:RACK MOUNT KEYB	2		333.00	EA		666.00
32	MON2145-LCD DISPLAY: 15 LCD MONITOR	2		2565.00	EA		5130.00
33	SFR9-PWR ACC: 9-PLUG POWER STRIP	19		162.00	EA		2916.00
34	USE1936-LC6 PWR CORD:CS9/NEWA L4-20P	19		96.00	EA		1824.00
35	ERT361941-OPT ACC:360 19X41 OPEN FRF CAB, WRT COLOR	6		1425.00	EA		8550.00
36	ES3020L SERVERS						
37	ESL302021-306 SVR:ESL3020 3.06GHE IM	4		1870.00	EA		7480.00
38	CEL3020303-1MB ACC:ESL3020 3.06G 1MB	4		1199.00	EA		4796.00
39	DIM3020042-2GB DIM3020042-2GB; MEM:2GB 40512 533FSB MEM	4		1465.00	EA		5860.00
40	HDP3020101-5I DISK:ESL3020 HSDP 134 1"	4		265.00	EA		1060.00
41	HDP18115-804 DISK:18GB 15KRPM U320	4		333.00	EA		1332.00
42	ESL3020-VRL ACC:ESL3020 V-RAILS	4		333.00	EA		1332.00
43	PCI10001-CEG COMM HW: GIGANET CLUSTER XONT ADPT	4		755.00	EA		3020.00
44							
45	DISCOUNT LARGE VOLUME CASH DISCOUNT	1		-196325.00	EA		-196325.00
46	Disks come with a 3 year						
47	return-to factory warranty						
48	7 day replenishment						
49	Quote valid for 90 days						
50							
						Exempt Tax	0.00
						Exempt	1112507.00
						Total	1112507.00
						Paid	0.00
						Tr Disc	0.00
						Balance	1112507.00
						Amount shown in Rate : 0.00 of	

CAT 5 Patch Cables#Standard#Standard#Standard - Microsoft Internet Explorer

Address: http://www.gocables.com/CAT5_Patch_Cables/index.htm#Standard

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CAT 5e & CAT 6 Patch Cables

CAT 5 Patch Cables are designed to optimize transmission performance of telecommunication components while improving the signal strength of today's high speed networks. Made in the USA, our Built to Order CAT 5 Patch Cables are truly customizable including length, color, wiring and labeling. Click the "Add to Cart" button to customize your cable order. Please allow a minimum of 3 days lead time for custom assemblies. Custom Assemblies are non returnable unless defective.

Standard CAT 5e Patch Cables

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.

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

More Information

GCPO8SS9

Standard 25 foot - CAT 5e Patch Cord cables (Orders of 10-19 = 20% Discount)

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Multimode Duplex Fiber Optic Jumper Cables

LC to LC - Multimode Duplex Fiber Optic Patch Cable. LC cables are available 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.

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	35.69	33.22
GCFAZLL05	5 m	50.98	40.78	38.23	35.68
GCFAZLL10	10 m	59.78	47.82	44.83	41.84

Standard Length Cables

Custom Length Cable Pricing

GoCables Discount 20% to 30% Off

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.