



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.

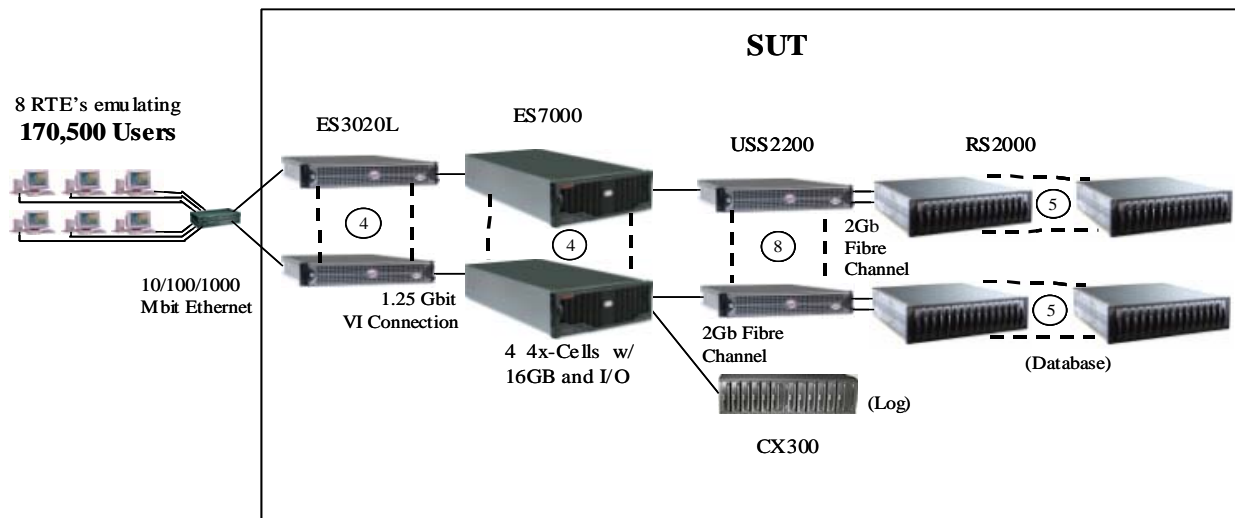
Executive Summary

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
Total System Cost	TPC-C Throughput	Price Performance	Availability Date
\$1,001,940	212,511 tpmC	\$4.72 / 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++
170,500			



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 2.2GHz Intel® Xeon™ MP
 w/ 2MB L3 cache,
 64 GB memory,
 1 internal disk controller,
 1x 40GB internal disk,
 9 PCI Fibre Channel controllers,
 4 PCI VI controllers

Storage
USS2200/RS2000 & CX300
 560x 18GB + 8x 146GB
 Hot-Pluggable,
 External Fibre Channel disks,
 10 FC RAID controllers

System Components	Server		Clients (each of 4)	
	Quantity		Quantity	
Processors/Cores/Threads Cache	16/16/32	2.2GHz Intel® Xeon™ Processor MP, 2MB Lvl 3 Cache	2/2/4	3.06GHz Intel® Xeon™ Processor, 1MB Lvl 2 Cache
Memory	4	16 GB	4	512 MB
Disk Controllers	9	PCI Fibre Channel	1	Inbuilt SCSI
	1	Inbuilt (boot media)		
Disk Drives	560	18GB FC (17.1 GB useable)	1	18GB SCSI (16.9 GB useable)
	8	146GB FC (136.6 GB useable)		
	1	40GB boot (37.3 GB useable)		
Total Storage	10.0 TB		16.9 GB	
Tape / CD-ROM	1	IDE CD-ROM	1	IDE CD-ROM
Terminals	1	Console Monitor	1	Console Monitor



ES7000 Orion 540 Enterprise Server (16P)

TPC-C Rev. 5.2

Report Date
June 14, 2004

Description	Part No.	Third Party			Qty.	Extended Price	3 yr. Maint. Price	
		Brand	Price	Unit Price				
Server Hardware:								
SYS: ES7000-540, 16x 2.2GHz, 128MB Cch, 64GB Mem	ES7540165-140			1	\$185,250	1	\$185,250	\$13,968
Inbuilt Disk Controller, 1x 40GB Disk (boot media)	Included							
SYS MGT: Server, Sentinel Management	SEN70003-MSV			1	\$2,585	1	\$2,585	\$456
SYS MGT: O/S Windows 2000 Server	WSS200004-EN	2	1	1	\$949	1	\$949	* Inc. below
CTRL: HBA, PCI, 2Gb Fibre Channel, 2-Port,	FC76222-P64			1	\$2,850	9	\$25,650	
CTRL: HBA, PCI, VI Connection, 1-Port & Cable	PCI10001-CXG			1	\$755	4	\$3,020	
I/F: Monitor, 15-inch Color, Kybrd, Mse & Cable	ES70003-UIF			1	\$570	1	\$570	
Server Software:								
O/S: Windows 2003 Srvr, Datacenter Edtn, 16P, 1yr Lsub	WND2316-TSP	2	1	1	\$35,112	1	\$35,112	
O/S: Windows 2003 Server, DC Lmtd Sbscrptn, 1yr.	DUS200316-TSP	2	1	2	\$3,173	2	\$6,346	
O/S: Windows 2003 Server DC Support, 24x7x4, 1yr.	GTS7524016-SSA	2	1	3	\$12,574	3		\$37,722
APP: Microsoft SQL Server 2000 Enterprise Edtn, 16P	DQL200316-LX	2	1	1	\$212,800	1	\$212,800	* Inc. below
SRVC: Microsoft Database Server Support Package*	PRO-PRORS-16U-01	2	2	3	\$1,950	3		\$5,850
Server Subtotal							\$472,282	\$57,996
Storage Hardware:								
DISK: 1.5TB Pkg, 84x 18GB, 15Krpm, + 10% spares **	JBD201815-P84			1	\$29,839	7	\$208,873	Spared
DISK: 0.5 TB Pkg, 28x 18GB, 15Krpm, + 10% spares **	JBD201815-P28			1	\$14,556	1	\$14,556	Spared
DISK: 146GB, 10Krpm, 2Gb FC, + 10% Spares **	CXR14610-2GF			1	\$2,508	10	\$25,080	Spared
RCK: FC 2Gb Storage, Standard, Copper/Copper I/F	JBD2002-SA			1	\$3,010	24	\$72,240	\$12,096
RCK: FC 2Gb Storage, Standard, Optical/Copper I/F	JBD2011-SA			1	\$3,214	16	\$51,424	\$8,640
CTRL: Symmetric Disk Virt. 2x2GHz, 512MB Mem	RMM20103-ELS			1	\$4,559	8	\$36,472	\$8,832
CTRL: USS, Fibre Channel HBA, 1-Port, 64-bit PCI	RMM20701-TAR			1	\$1,805	24	\$43,320	\$10,368
APP: Unisys Storage Sentinel 2200 SDV Software	USS10300-SW			1	\$5,472	1	\$5,472	\$4,068
APP: Storage Sentinel SDV SW, 10TB License	USS20310-LIC			1	\$25,200	1	\$25,200	
CBL: FC, Copper, HSDC2 Conn's, 0.3m	JBD20003-CCL			1	\$54	24	\$1,296	
CBL: FC, Optical, LC->LC Conn's, 10m + 10% Spares **	GCFAZLL10	3	3	3	\$42	28	\$1,176	Spared
RCK: Rack Mount Kit, Disk Enclosure	JBD2001-RMK			1	\$190	40	\$7,600	
CTRL: DPE: 2 RAID Cntrl, 1GB Cache ea., 0 Disk	CX300-DPE			1	\$19,000	1	\$19,000	\$2,988
SYS MGT: Storage, Navisphere Agent	CXN600-WIN			1	\$646	1	\$646	\$324
SYS MGT: Storage, Navisphere Manager	CX2002-DPE			1	\$1,549	1	\$1,549	\$720
SYS MGT: Storage, Navisphere Manager	CX200-DAE			1	\$7,695	1	\$7,695	\$3,636
SWTCH: Switch, 10/100/1000Mb Ethernet	GS516-T16			1	\$2,850	1	\$2,850	
CBL: Ethernet, Cat5e, RJ45 Conn's, 10ft + 10% Spares *	GCPO888910	3	3	3	\$2	12	\$24	Spared
SWTCH: Switch, 8-port KVM	SWC81-SXR			1	\$1,520	2	\$3,040	\$2,304
CBL: Cable, KVM, 12 foot	CBL121-SWC			1	\$143	12	\$1,716	
KBD: Keyboard & Drawer, Rackmount	KBR28301-SXR			1	\$333	2	\$666	
MON: Display, Rackmount LCD	MON2145-LCD			1	\$2,565	2	\$5,130	
PWR: Distribution Strip, 9-Plug, 220V	SFR9-PWR			1	\$162	15	\$2,430	
CBL: Power, U.S. (Domestic), C20 - L6-20P	USE1936-LC6			1	\$86	15	\$1,290	
CAB: 36U x 19" x 41" Open Front Cabinet	HRT361941-OFT			1	\$1,425	5	\$7,125	
Storage Subtotal							\$545,870	\$53,976
Client Hardware:								
SYS: ES3020L w/ 1x 3.0GHz Proc., 0MB Mem	ESL302021-306			1	\$1,870	4	\$7,480	\$5,808
PROC: 1x 3.0GHz Intel Xeon/1MB Cache	CPL3020302-1MB			1	\$1,199	4	\$4,796	
MEM: 2GB, 4x 512MB DIMMs DDR SDRAM	DIM3020042-2GB			1	\$1,465	4	\$5,860	
RCK: ESL3020 Disk HS Backpanel, 1x4	HBP3020101-51			1	\$265	4	\$1,060	
DISK: 18GB 15Krpm U320 3.5 Internal	HDP18115-DC4			1	\$333	4	\$1,332	
RCK: ESL3020 Universal Rack Kit	ESL3020-VRL			1	\$333	4	\$1,332	
CTRL: HBA, PCI, VI Connection, 1-Port & Cable	PCI10001-CXG			1	\$755	4	\$3,020	
Client Software:								
O/S: Windows Server 2003, Standard Edition	P73-00295	2	2	2	\$738	4	\$2,952	* Inc. above
ACC: Visual C++ Standard	254-00170	2	2	2	\$109	1	\$109	* Inc. above
Client Subtotal							\$27,941	\$5,808
Total							\$1,046,093	\$117,780
All prices are effective as of the date of publication. Computer Resolutions Inc. 15% Large Volume Discount							(\$161,933)	

Notes:

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

Three Year Cost of Ownership: \$1,001,940
tpmC Rating: 212,511
\$ / tpmC: \$4.72

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: 212,511 tpmC

Response Times, in seconds

Transaction	90th %ile	Average	Maximum
New-Order	0.50	0.39	5.53
Payment	0.45	0.34	5.55
Order-Status	0.46	0.35	5.55
Delivery (interactive portion)	0.34	0.23	2.33
Delivery (deferred portion)	0.38	0.23	2.59
Stock-Level	1.29	0.88	3.98
Menu	0.34	0.23	2.34

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	44.94%
Payment	43.01%
Order-Status	4.00%
Delivery (interactive portion)	4.01%
Stock-Level	4.01%

Keying / Think Time Times, in seconds

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

Test Duration

Ramp up time	43 minutes
Measurement interval (M)	120 minutes
Transactions (all types) completed during measurement interval	56,738,317
Ramp-down time	4 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.

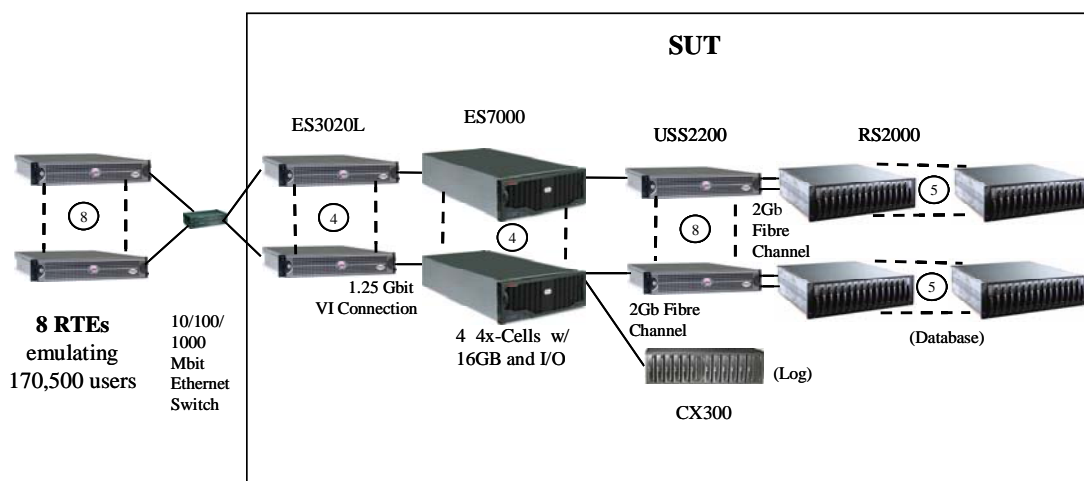
0.7. Configuration Diagrams

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

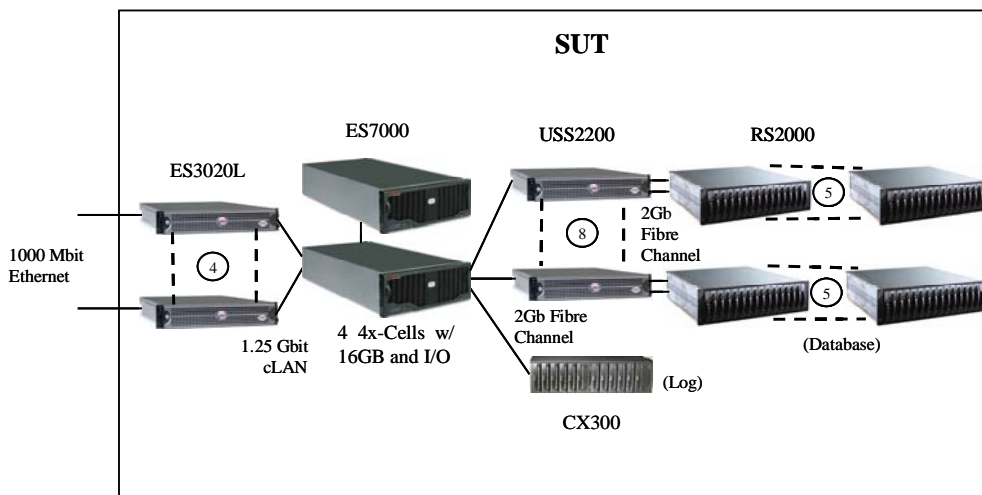
16x 2.2GHz Intel® Xeon™ MP
w/ 2MB L3 cache,
64 GB memory,
1 internal disk controller,
1x 40GB internal disk,
9 PCI Fibre Channel controllers,
4 PCI VI controller

Storage

USS2200/RS2000 & CX300

560x 18GB + 8x 146GB
Hot-Pluggable,
External Fibre Channel disks,
10 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 2.2GHz Intel® Xeon™ MP
w/ 2MB L3 cache,
64 GB memory,
1 internal disk controller,
1x 40GB internal disk,
9 PCI Fibre Channel controllers,
4 PCI VI controller

Storage

USS2200/RS2000 & CX300

560x 18GB + 8x 146GB
Hot-Pluggable,
External Fibre Channel disks,
10 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 17,850 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 17,850 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 17,850 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 17,240 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	17,240
District	172,400
Customer	517,200,000
History	517,200,000
Order	517,200,000
New-Order	155,160,000
Order Line	5,171,986,420
Stock	1,724,000,000
Item	100,000

190 rows from the warehouse table were inactive while executing the measurement runs.

4.2. Constant Values

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

Table 4.2: Constant C for NURand

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

4.3. Database Layout

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

Tables 4.3 and 4.5 list the distribution of the database over 560 18GB disks and the transaction log over 4 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 4.3: Disk Rack Configuration

Disk Rack Configuration																	
Controller	HBA	Rack	Raid Level	ID 0	ID 1	ID 2	ID 3	ID 4	ID 5	ID 6	ID 7	ID 8	ID 9	ID 10	ID 11	ID 12	ID 13
USS1	0	1	0	18GB	18GB	18GB	18GB	18GB	18GB	18GB	18GB	18GB	18GB	18GB	18GB	18GB	18GB
USS1	0	2	0	18GB	18GB	18GB	18GB	18GB	18GB	18GB	18GB	18GB	18GB	18GB	18GB	18GB	18GB
USS1	0	3	0	18GB	18GB	18GB	18GB	18GB	18GB	18GB	18GB	18GB	18GB	18GB	18GB	18GB	18GB
USS1	1	4	0	18GB	18GB	18GB	18GB	18GB	18GB	18GB	18GB	18GB	18GB	18GB	18GB	18GB	18GB
USS1	1	5	0	18GB	18GB	18GB	18GB	18GB	18GB	18GB	18GB	18GB	18GB	18GB	18GB	18GB	18GB
USS2	0	6	0	18GB	18GB	18GB	18GB	18GB	18GB	18GB	18GB	18GB	18GB	18GB	18GB	18GB	18GB
USS2	0	7	0	18GB	18GB	18GB	18GB	18GB	18GB	18GB	18GB	18GB	18GB	18GB	18GB	18GB	18GB
USS2	0	8	0	18GB	18GB	18GB	18GB	18GB	18GB	18GB	18GB	18GB	18GB	18GB	18GB	18GB	18GB
USS2	1	9	0	18GB	18GB	18GB	18GB	18GB	18GB	18GB	18GB	18GB	18GB	18GB	18GB	18GB	18GB
USS2	1	10	0	18GB	18GB	18GB	18GB	18GB	18GB	18GB	18GB	18GB	18GB	18GB	18GB	18GB	18GB
USS3	0	11	0	18GB	18GB	18GB	18GB	18GB	18GB	18GB	18GB	18GB	18GB	18GB	18GB	18GB	18GB
USS3	0	12	0	18GB	18GB	18GB	18GB	18GB	18GB	18GB	18GB	18GB	18GB	18GB	18GB	18GB	18GB
USS3	0	13	0	18GB	18GB	18GB	18GB	18GB	18GB	18GB	18GB	18GB	18GB	18GB	18GB	18GB	18GB
USS3	1	14	0	18GB	18GB	18GB	18GB	18GB	18GB	18GB	18GB	18GB	18GB	18GB	18GB	18GB	18GB
USS3	1	15	0	18GB	18GB	18GB	18GB	18GB	18GB	18GB	18GB	18GB	18GB	18GB	18GB	18GB	18GB
USS4	0	16	0	18GB	18GB	18GB	18GB	18GB	18GB	18GB	18GB	18GB	18GB	18GB	18GB	18GB	18GB
USS4	0	17	0	18GB	18GB	18GB	18GB	18GB	18GB	18GB	18GB	18GB	18GB	18GB	18GB	18GB	18GB
USS4	0	18	0	18GB	18GB	18GB	18GB	18GB	18GB	18GB	18GB	18GB	18GB	18GB	18GB	18GB	18GB
USS4	1	19	0	18GB	18GB	18GB	18GB	18GB	18GB	18GB	18GB	18GB	18GB	18GB	18GB	18GB	18GB
USS4	1	20	0	18GB	18GB	18GB	18GB	18GB	18GB	18GB	18GB	18GB	18GB	18GB	18GB	18GB	18GB
USS5	0	21	0	18GB	18GB	18GB	18GB	18GB	18GB	18GB	18GB	18GB	18GB	18GB	18GB	18GB	18GB
USS5	0	22	0	18GB	18GB	18GB	18GB	18GB	18GB	18GB	18GB	18GB	18GB	18GB	18GB	18GB	18GB
USS5	0	23	0	18GB	18GB	18GB	18GB	18GB	18GB	18GB	18GB	18GB	18GB	18GB	18GB	18GB	18GB
USS5	1	24	0	18GB	18GB	18GB	18GB	18GB	18GB	18GB	18GB	18GB	18GB	18GB	18GB	18GB	18GB
USS5	1	25	0	18GB	18GB	18GB	18GB	18GB	18GB	18GB	18GB	18GB	18GB	18GB	18GB	18GB	18GB
USS6	0	26	0	18GB	18GB	18GB	18GB	18GB	18GB	18GB	18GB	18GB	18GB	18GB	18GB	18GB	18GB
USS6	0	27	0	18GB	18GB	18GB	18GB	18GB	18GB	18GB	18GB	18GB	18GB	18GB	18GB	18GB	18GB
USS6	0	28	0	18GB	18GB	18GB	18GB	18GB	18GB	18GB	18GB	18GB	18GB	18GB	18GB	18GB	18GB
USS6	1	29	0	18GB	18GB	18GB	18GB	18GB	18GB	18GB	18GB	18GB	18GB	18GB	18GB	18GB	18GB
USS6	1	30	0	18GB	18GB	18GB	18GB	18GB	18GB	18GB	18GB	18GB	18GB	18GB	18GB	18GB	18GB
USS7	0	31	0	18GB	18GB	18GB	18GB	18GB	18GB	18GB	18GB	18GB	18GB	18GB	18GB	18GB	18GB
USS7	0	32	0	18GB	18GB	18GB	18GB	18GB	18GB	18GB	18GB	18GB	18GB	18GB	18GB	18GB	18GB
USS7	0	33	0	18GB	18GB	18GB	18GB	18GB	18GB	18GB	18GB	18GB	18GB	18GB	18GB	18GB	18GB
USS7	1	34	0	18GB	18GB	18GB	18GB	18GB	18GB	18GB	18GB	18GB	18GB	18GB	18GB	18GB	18GB
USS7	1	35	0	18GB	18GB	18GB	18GB	18GB	18GB	18GB	18GB	18GB	18GB	18GB	18GB	18GB	18GB
USS8	0	36	0	18GB	18GB	18GB	18GB	18GB	18GB	18GB	18GB	18GB	18GB	18GB	18GB	18GB	18GB
USS8	0	37	0	18GB	18GB	18GB	18GB	18GB	18GB	18GB	18GB	18GB	18GB	18GB	18GB	18GB	18GB
USS8	0	38	0	18GB	18GB	18GB	18GB	18GB	18GB	18GB	18GB	18GB	18GB	18GB	18GB	18GB	18GB
USS8	1	39	0	18GB	18GB	18GB	18GB	18GB	18GB	18GB	18GB	18GB	18GB	18GB	18GB	18GB	18GB
USS8	1	40	0	18GB	18GB	18GB	18GB	18GB	18GB	18GB	18GB	18GB	18GB	18GB	18GB	18GB	18GB
CX300	n/a	1	10	146GB	146GB	146GB	146GB	146GB	146GB	146GB	146GB	146GB	146GB	Empty	Empty	Empty	Empty

Table 4.4: ES7000 Server HBA-PCI Slot Map

4x2.2GHz Xeon Processor MP	16GB	Cell-3		Cell-2		16GB	4x2.2GHz Xeon Processor MP
		Bus-3-1-2	FC HBA – LOG	Bus-2-1-2			
		Bus-3-1-1	FC HBA – USS8	Bus-2-1-1	FC HBA – USS6		
		Bus-3-0-2		Bus-2-0-2			
		Bus-3-0-1	FC HBA – USS7	Bus-2-0-1	FC HBA – USS5		
		Bus-3-0-3	VI controller - 8	Bus-2-0-3	VI controller - 7		
		Cell-1		Cell-0			
		Bus-1-1-2	VI controller - 6	Bus-0-1-2	VI controller - 5		
		Bus-1-1-1	FC HBA – USS4	Bus-0-1-1	FC HBA – USS2		
		Bus-1-0-2		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=509.73 GB FS=Raw Junction Point
CX300	SP		
1	A,B	81	C:\BigDb\dbLogs\tpcclog1

Disk Management Configuration							
USS	HBA	Logical Disk#	Partition 1 Size=5.58GB FS=Raw Junction Point	Partition 2 Size=8.72GB FS=Raw Junction Point	Partition 3 Size=4.44GB FS=Raw Junction Point	Partition 4 Size=1000.89GB 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=5.58GB FS=Raw Junction Point	Partition 2 Size=8.72GB FS=Raw Junction Point	Partition 3 Size=4.44GB FS=Raw Junction Point	Partition 4 Size=1000.89GB 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	

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 212,511

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	0.39	5.53	0.50
Payment	0.34	5.55	0.45
Order Status	0.35	5.55	0.46
Delivery (interactive)	0.23	2.33	0.34
Delivery (deferred)	0.23	2.59	0.38
Stock-Level	0.88	3.98	1.29
Menu	0.23	2.34	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	10.08	100.70
Delivery (interactive)	0.00	5.06	50.61
Stock-Level	0.00	5.06	50.61

5.4. Response Time Frequency Distribution Curves

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

Figure 5.1: New Order Response Time Distribution

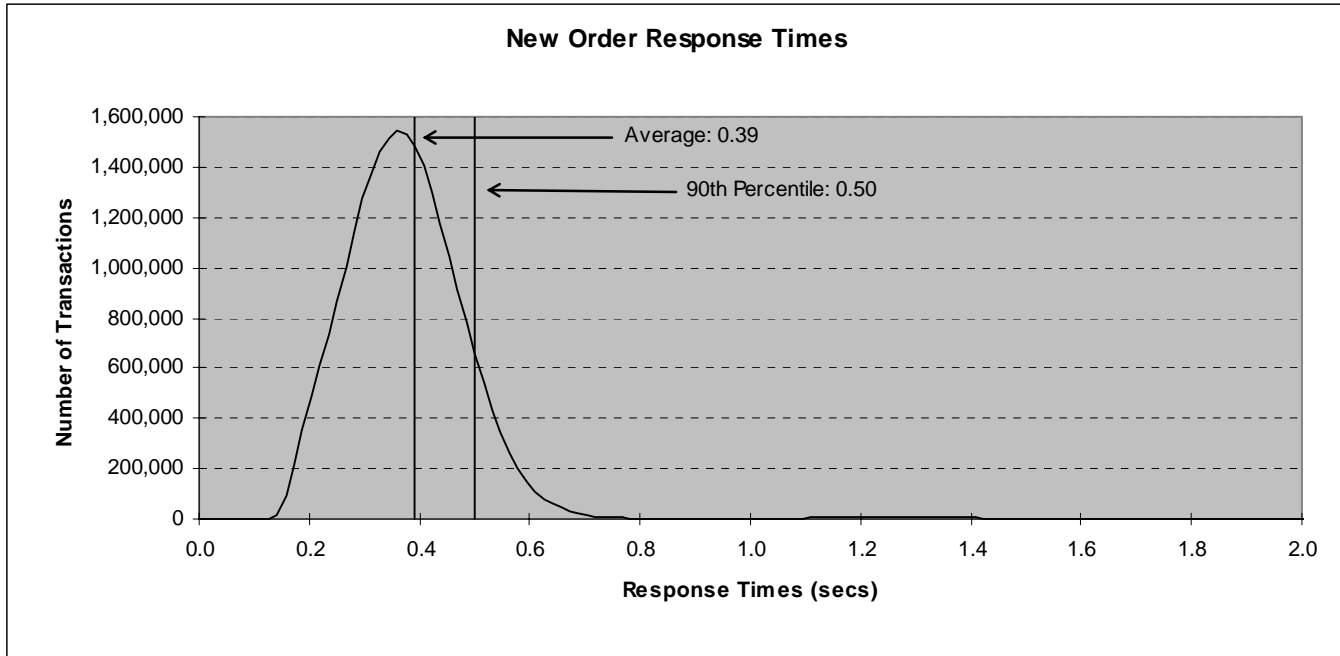


Figure 5.2: Payment Response Time Distribution

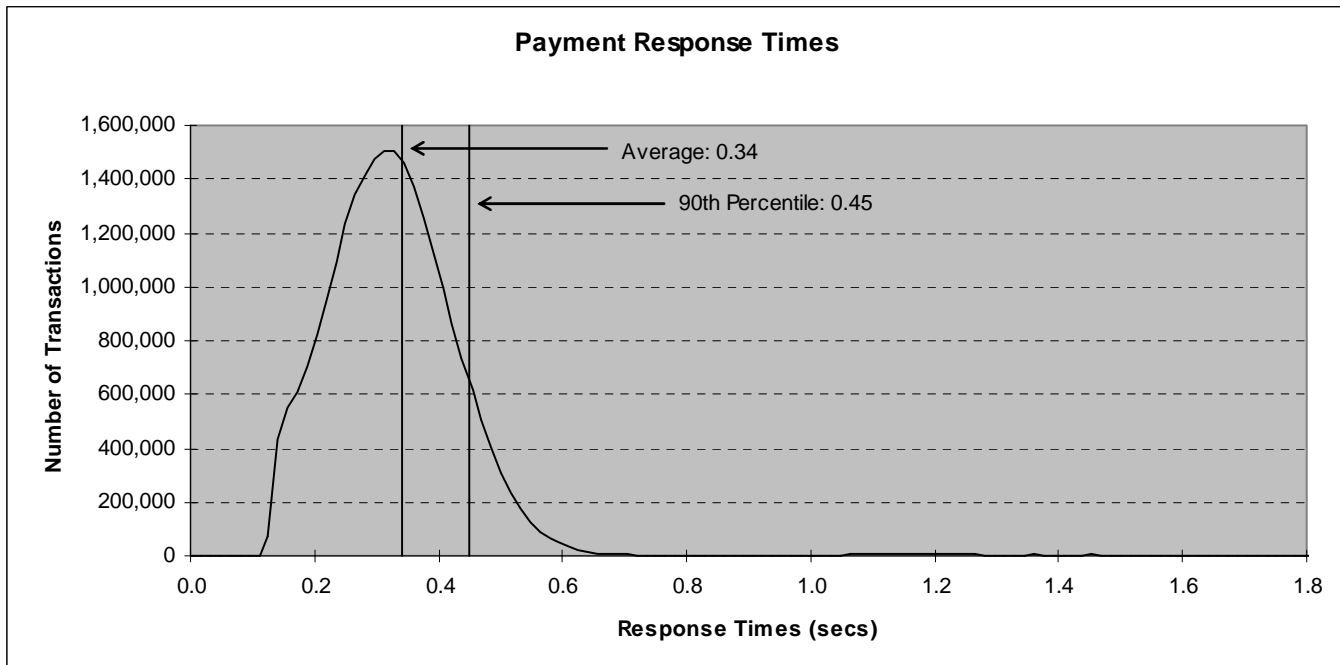


Figure 5.3: Order Status Response Time Distribution

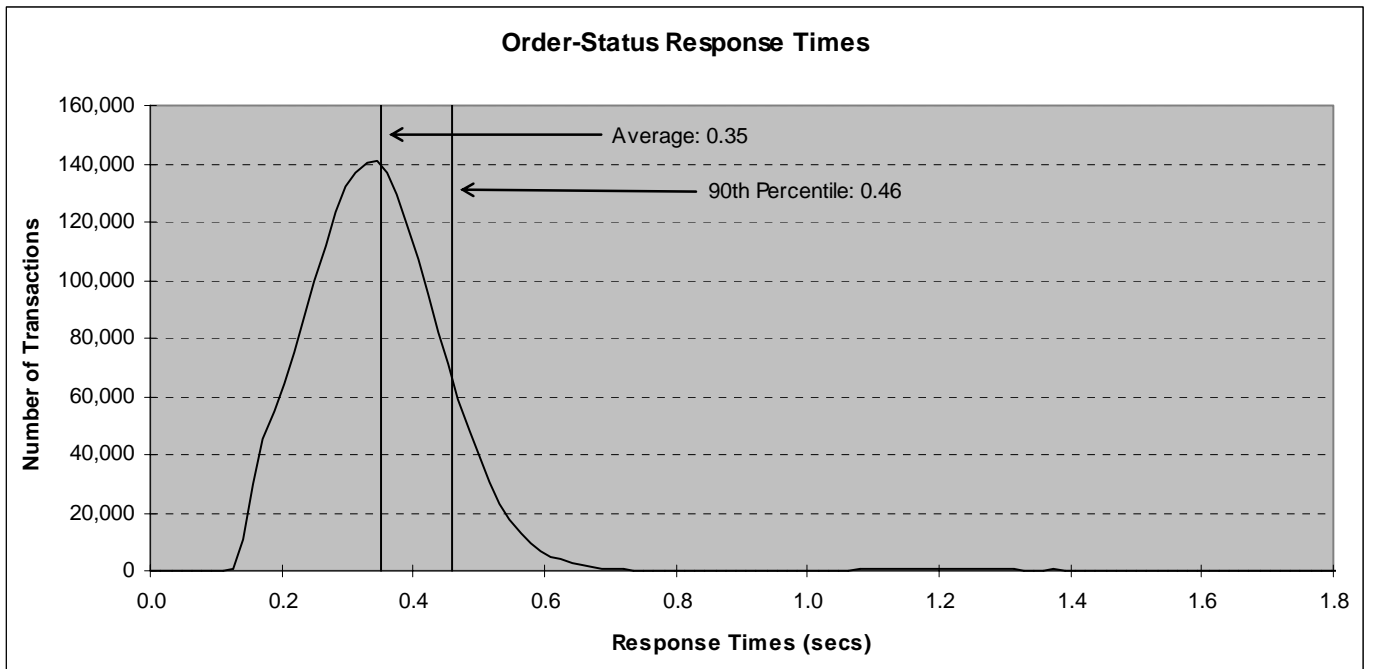


Figure 5.4: Delivery Response Time Distribution

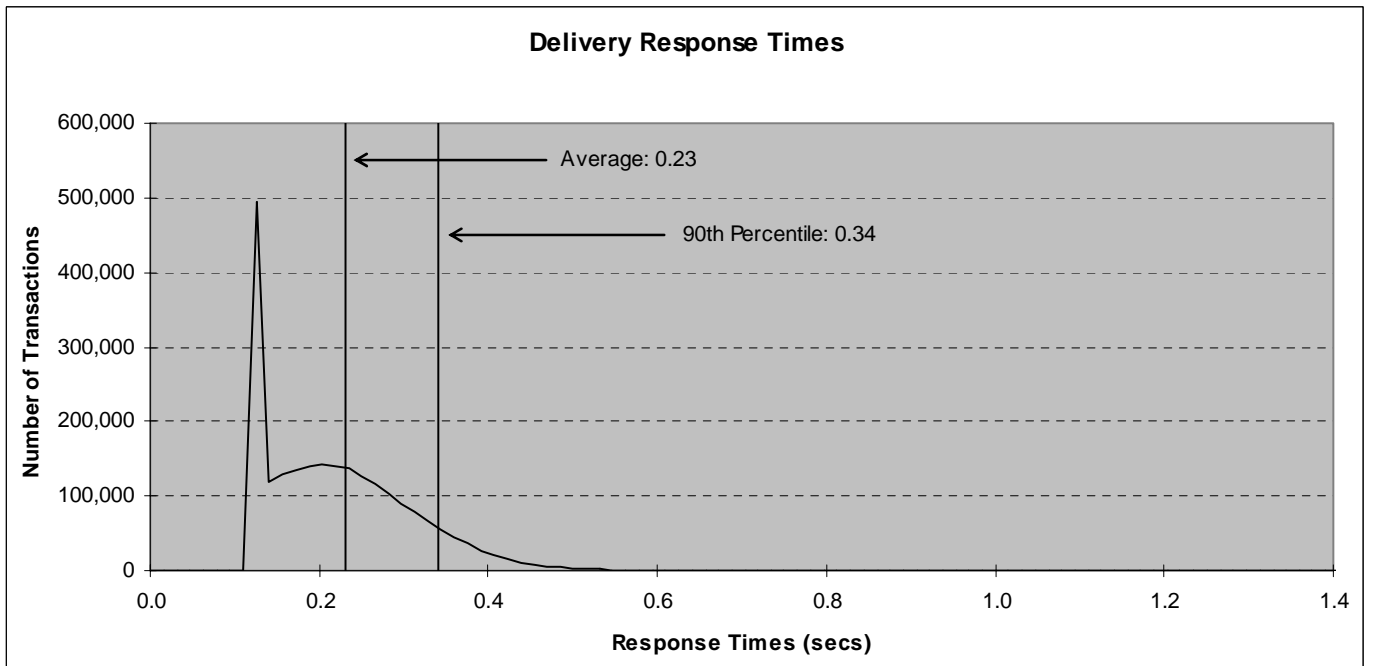
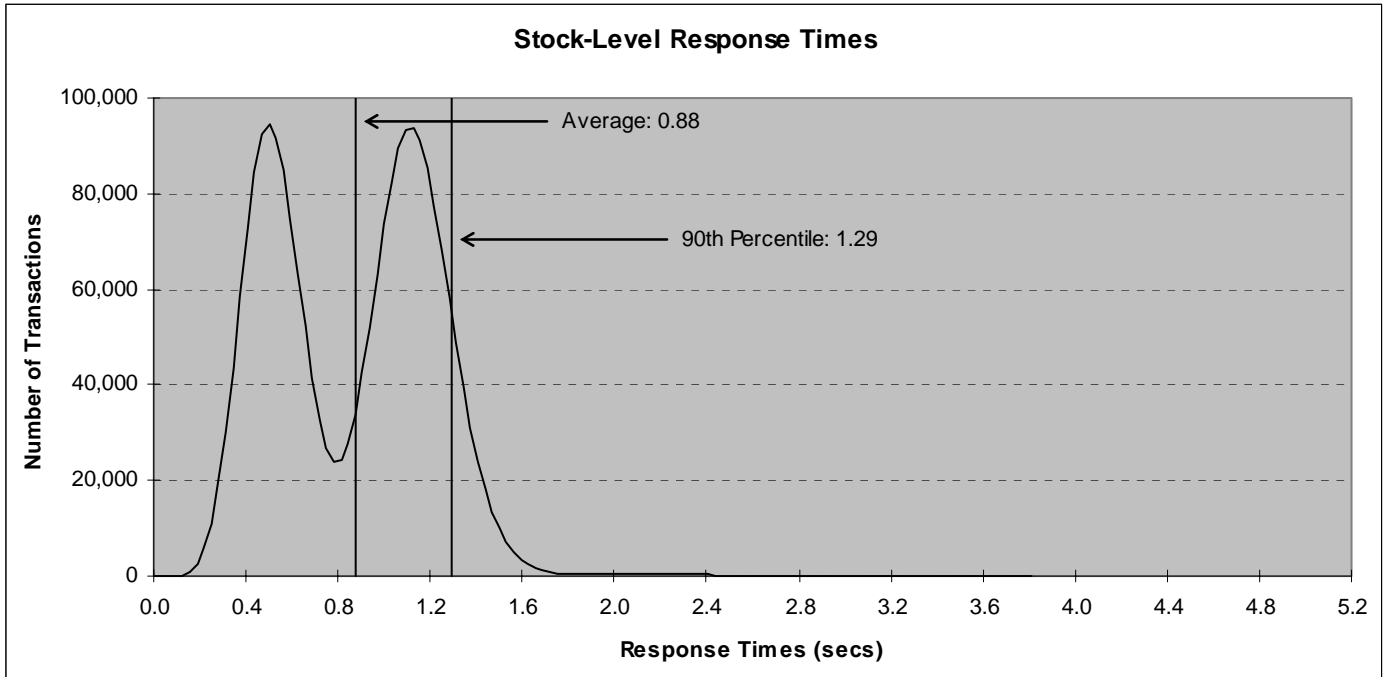


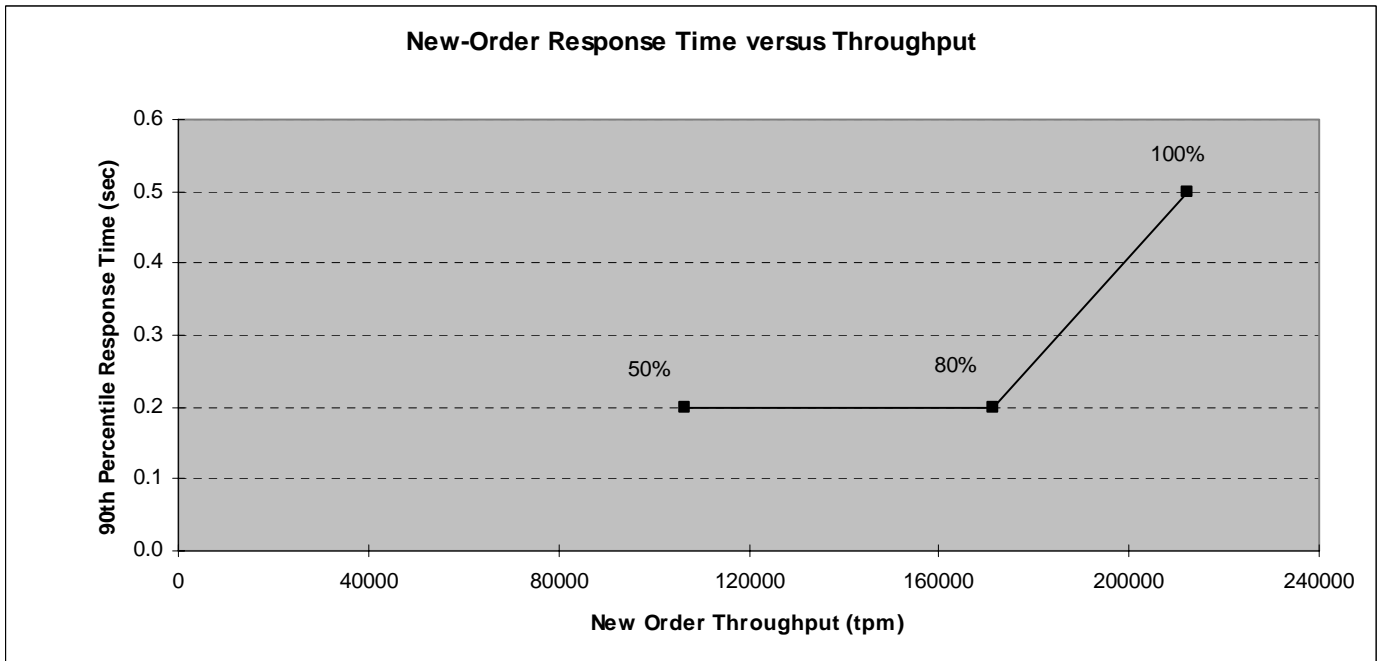
Figure 5.5: Stock Level Response Time Distribution



5.5. Response Time versus Throughput Performance Curve

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

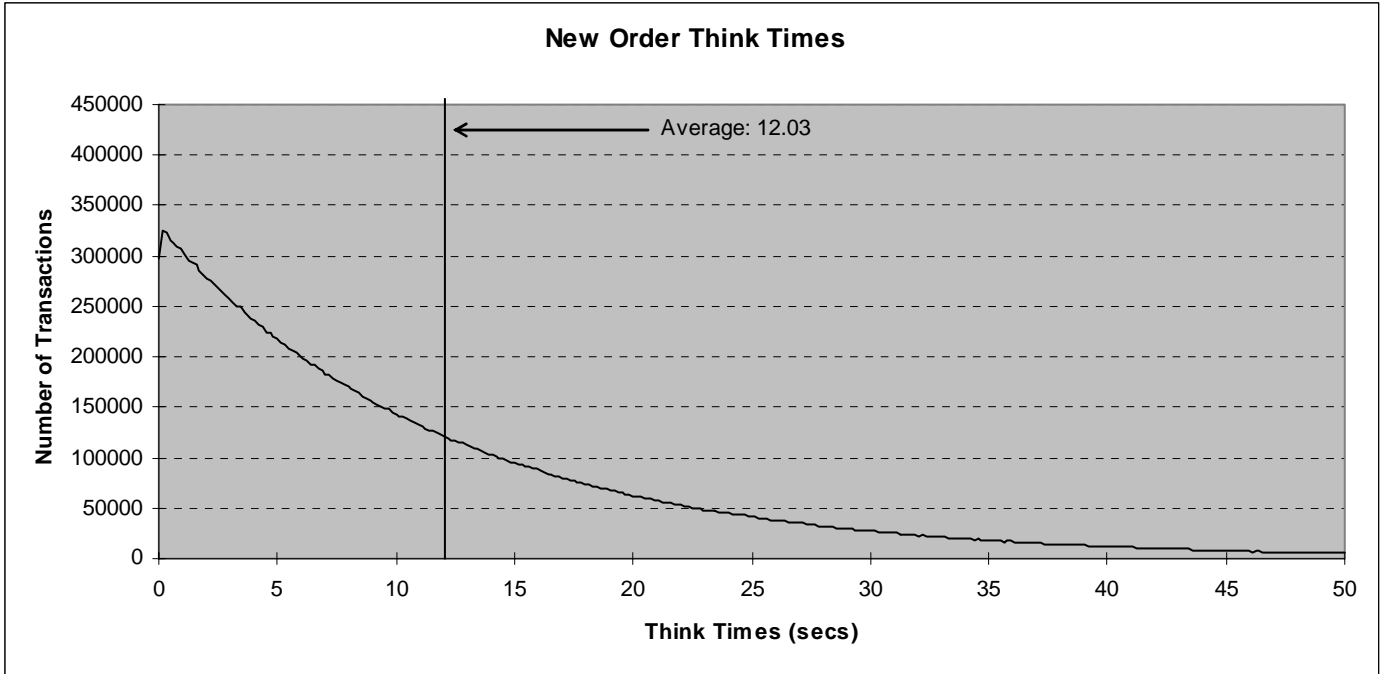
Figure 5.6: New Order Response Time versus Throughput



5.6. New Order Think Time Frequency Distribution Curve

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

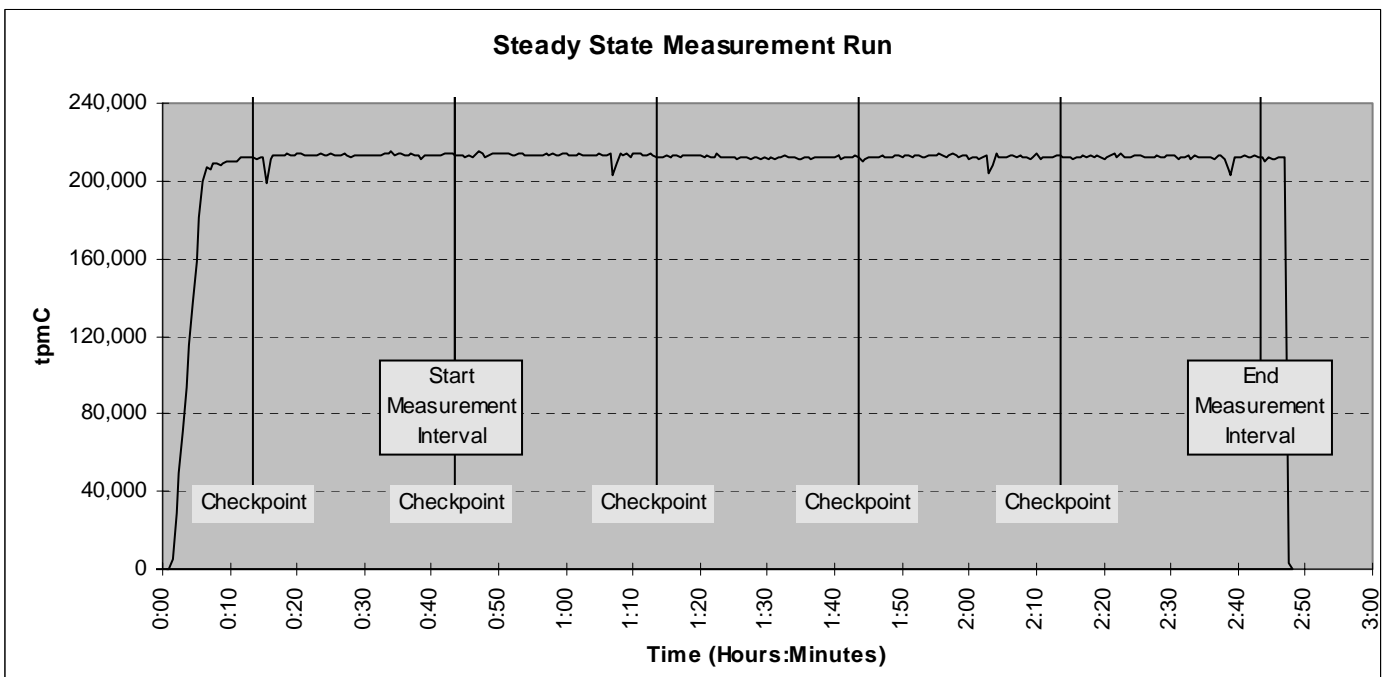
Figure 5.7: New Order Think Time Distribution



5.7. New-Order Throughput vs. Time

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

Figure 5.8: Throughput (tpmC) versus Time



5.8. Determination of “Steady State”

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

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

5.9. Work Performed During Steady State

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

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

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

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

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

5.10. Measurement Interval Duration

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

The measurement interval was 120 minutes.

5.11. Regulation of Transaction Mix

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

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

5.12. Transaction Statistics

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

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

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

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

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

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

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

Table 5.4 shows this information.

Table 5.4: Transaction Statistics

Transaction Type	Statistic	Value
New Order	Rolled back transactions	1.00%
	Home warehouse	99.00%
	Remote warehouse	1.00%
	Average Items per Order	10.00
Payment	Home warehouse	85.01%
	Remote warehouse	14.99%
	Non-primary key access	59.99%
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	44.94%
	Payment	43.01%
	Order-Status	4.00%
	Delivery	4.01%
	Stock-Level	4.01%

5.13. Checkpoint Statistics

The number of checkpoints in the measurement interval, the time in seconds from the start of the measurement interval to the first checkpoint, and the Checkpoint Interval must be disclosed. (8.1.6.21)

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

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

Table 5.5: Checkpoint Start Time and Duration

Item	Start	End	Duration
Measurement Interval	0:43:26	2:43:26	7200
1st Checkpoint	0:43:30	1:13:17	1787
2nd Checkpoint	1:13:30	1:43:17	1787
3rd Checkpoint	1:43:30	2:13:17	1787
4th Checkpoint	2:13:30	2:43:17	1787

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

The attestation letter is shown on the next 2 pages.



PERFORMANCE METRICS INC.
TPC Certified Auditors

May 28, 2004

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

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

Platform: Unisys ES7000 Orion 540 Enterprise Server (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 @ 2.2 GHz	Main: 64 GB Cache: 2MB each	560 @ 18GB 8 @ 146GB 1 @ 40GB	0.50 sec	212,511
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 17,240 warehouses, of which 17,050 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 a portion of the fully scaled database with 17,850 users and 1,785 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 170,500 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 Init 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);
    iTMMMaxSz = max(iTMMMaxSz, sizeof(NEW_ORDER_DATA));
    iTMMMaxSz = max(iTMMMaxSz, sizeof(PAYMENT_DATA));
    iTMMMaxSz = max(iTMMMaxSz, sizeof(ORDER_STATUS_DATA));
    iTMMMaxSz = max(iTMMMaxSz, sizeof(DELIVERY_DATA));
    iTMMMaxSz = max(iTMMMaxSz, sizeof(STOCK_LEVEL_DATA));
    iTMMMaxSz += 10;
    TMonInit(iTMMMaxSz);
    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
    {

```

```

    wsprintf(pTPCC->ErrTxt,
        "Error - Invalid Amount Format (%s)",pTPCC->szWork);
    pTPCC->iStatusId = ERR_AMOUNT_BADFORM;
};

return(bInvalid);

}; // GetAmountKey

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

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

//=====
//
// Function name: FormatMenu
//
//=====
VOID FormatMenu(CHAR * pOut,TPCC_STATE * pTPCC)
{
    wsprintf(pOut,
        "%s<HTML><HEAD><TITLE>TPC-C MainMenu</TITLE></HEAD><BODY>"
        "Select Desired Transaction.<BR><HR>"
        "<FORM ACTION=\"tpcc.dll\"METHOD=\"GET\">"
        "<INPUT TYPE=\"hidden\" NAME=\"STATUSID\" VALUE=\"%d\">"

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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 += wsprintf(pOut + iInx,
        "<PRE>
        New Order<BR>"
#ifdef LONG_WID
        "Warehouse: %6.6d District: <INPUT NAME=\"DID*\" SIZE=1>
Date:<BR>",
#else
        "Warehouse: %4.4d District: <INPUT NAME=\"DID*\" SIZE=1>
Date:<BR>",
#endif
        pTPCC->swId);
    strcpy(pOut + iInx,
        "Customer: <INPUT NAME=\"CID*\" SIZE=4> Name:
Credit: %Disc:<BR>"
        "Order Number: Number of Lines: W_tax:
D_tax:<BR><BR>"
        " Supp_W Item_Id Item Name Qty Stock B/G Price
Amount<BR>");
#ifdef LONG_WID
        " <INPUT NAME=\"SP00*\" SIZE=6> <INPUT NAME=\"IID00*\" SIZE=6>
<INPUT NAME=\"Qty00*\" SIZE=1><BR>"
        " <INPUT NAME=\"SP01*\" SIZE=6> <INPUT NAME=\"IID01*\" SIZE=6>
<INPUT NAME=\"Qty01*\" SIZE=1><BR>"
        " <INPUT NAME=\"SP02*\" SIZE=6> <INPUT NAME=\"IID02*\" SIZE=6>
<INPUT NAME=\"Qty02*\" SIZE=1><BR>"
        " <INPUT NAME=\"SP03*\" SIZE=6> <INPUT NAME=\"IID03*\" SIZE=6>
<INPUT NAME=\"Qty03*\" SIZE=1><BR>"
        " <INPUT NAME=\"SP04*\" SIZE=6> <INPUT NAME=\"IID04*\" SIZE=6>
<INPUT NAME=\"Qty04*\" SIZE=1><BR>"
        " <INPUT NAME=\"SP05*\" SIZE=6> <INPUT NAME=\"IID05*\" SIZE=6>
<INPUT NAME=\"Qty05*\" SIZE=1><BR>"
        " <INPUT NAME=\"SP06*\" SIZE=6> <INPUT NAME=\"IID06*\" SIZE=6>
<INPUT NAME=\"Qty06*\" SIZE=1><BR>"
        " <INPUT NAME=\"SP07*\" SIZE=6> <INPUT NAME=\"IID07*\" SIZE=6>
<INPUT NAME=\"Qty07*\" SIZE=1><BR>"
        " <INPUT NAME=\"SP08*\" SIZE=6> <INPUT NAME=\"IID08*\" SIZE=6>
<INPUT NAME=\"Qty08*\" SIZE=1><BR>"
        " <INPUT NAME=\"SP09*\" SIZE=6> <INPUT NAME=\"IID09*\" SIZE=6>
<INPUT NAME=\"Qty09*\" SIZE=1><BR>"
        " <INPUT NAME=\"SP10*\" SIZE=6> <INPUT NAME=\"IID10*\" SIZE=6>
<INPUT NAME=\"Qty10*\" SIZE=1><BR>"
        " <INPUT NAME=\"SP11*\" SIZE=6> <INPUT NAME=\"IID11*\" SIZE=6>
<INPUT NAME=\"Qty11*\" SIZE=1><BR>"

```

```

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

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

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

//=====
//
// Function name: FormatOrderStatus
//
//=====
VOID FormatOrderStatus (CHAR * pOut,TPCC_STATE * pTPCC)
{
INT iInx;
pTPCC->uFormId = FORM_ORDERSTATUS;
iInx = FormatFormHdr (pOut, "TPC-C Order-Status", pTPCC);

```

```

        wsprintf(pOut + iInx,
                "<PRE>
                Order-Status<BR>"
#ifdef LONG WID
                "Warehouse: %6.6d  "
#else
                "Warehouse: %4.4d  "
#endif
                "District: <INPUT NAME=\"DID*\" SIZE=1><BR>"
                "Customer: <INPUT NAME=\"CID*\" SIZE=4>  Name:
<INPUT NAME=\"CLT*\" SIZE=23><BR>"
                "Cust-Balance:<BR><BR>"
                "Order-Number:          Entry-Date:          Carrier-
Number:<BR>"
                "Supply-W  Item-Id  Qty  Amount  Delivery-
Date<BR></PRE><HR>"
                "<INPUT TYPE=\"submit\" NAME=\"CMD\" VALUE=\"Process\">"
                "<INPUT TYPE=\"submit\" NAME=\"CMD\" VALUE=\"Menu\">"
                "</FORM></BODY></HTML>",
                pTPCC->sWId);
}; // FormatOrderStatus

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

//=====
//
// Function name: FormatFormHdr
//
//=====
INT FormatFormHdr(CHAR * pOut,CHAR * pTitle,TPCC_STATE * pTPCC)
{
    return(wsprintf(pOut,
        "%s<HTML><HEAD><TITLE>%s</TITLE></HEAD>"
        "<FORM ACTION=\"tpcc.dll\" METHOD=\"GET\">"
        "<INPUT TYPE=\"hidden\" NAME=\"PI*\" VALUE=\"\">"
        "<INPUT TYPE=\"hidden\" NAME=\"STATUSID\" VALUE=\"0\">"
        "<INPUT TYPE=\"hidden\" NAME=\"FORMID\" VALUE=\"%d\">"
        "<INPUT TYPE=\"hidden\" NAME=\"TERMIN\" VALUE=\"%d\">"
        "<INPUT TYPE=\"hidden\" NAME=\"SYNCRID\" 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=\"SYNCRID\" 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): TMinInit %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 sDIId; // 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 TMinic(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: TMinic

```

```

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

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

```

```
}; // TMDone
```

timesupp.c

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

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

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

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

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

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

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

    // Establish initial time
    _ftime(&tbInitialTimeb);

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

```
        return(FALSE);
    }

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

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

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

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

//=====
//
// Function name: TimebDiff
// Time difference in milliseconds between _timeb_t1 and _timeb_t2.
//
//=====
TMILLI TimebDiff(struct _timeb * p_tb1, struct _timeb * p_tb2)
{
    LONG lRslt;
    lRslt = ((p_tb2->time - p_tb1->time) * 1000) +
(p_tb2->millitm - p_tb1->millitm);
    if (lRslt < 0)
        return(0);
    else
        return((TMILLI) lRslt);
}; // TimebDiff

//=====
//
// Function name: 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 "oaidl.idl";
import "ocidl.idl";

[
    object,
    uuid(FEEE6AA2-84B1-11d2-BA47-00C04FBFE08B),
    helpstring("ITPCC Interface"),
    pointer_default(unique)
]
interface ITPCC : IUnknown
{
    HRESULT STDMETHODCALLTYPE NewOrder
    (
        [in, out] int * iSize,
        [in, out, size_is(*iSize)] char ** pData
    );

    HRESULT STDMETHODCALLTYPE Payment
    (
        [in, out] int * iSize,
        [in, out, size_is(*iSize)] char ** pData
    );

    HRESULT STDMETHODCALLTYPE Delivery
    (
        [in] int * iSize,
        [in, out, size_is(*iSize)] char ** pData
    );

    HRESULT STDMETHODCALLTYPE StockLevel
    (
        [in, out] int* iSize,
        [in, out, size_is(*iSize)] char ** pData
    );

    HRESULT STDMETHODCALLTYPE OrderStatus
    (
        [in, out] int* iSize,
        [in, out, size_is(*iSize)] char ** pData
    );
};

```



```

        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\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"
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\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"
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\cabA\misc1\\"",
    SIZE = 4525MB,
    FILEGROWTH = 0),
(
    NAME = MSSQL_miscB1,
    FILENAME = "C:\Bigdb\cabB\misc1\\"",
    SIZE = 4525MB,
    FILEGROWTH = 0),
(
    NAME = MSSQL_miscC1,
    FILENAME = "C:\Bigdb\cabC\misc1\\"",
    SIZE = 4525MB,
    FILEGROWTH = 0),
(
    NAME = MSSQL_miscD1,
    FILENAME = "C:\Bigdb\cabD\misc1\\"",
    SIZE = 4525MB,
    FILEGROWTH = 0),
(
    NAME = MSSQL_miscE1,
    FILENAME = "C:\Bigdb\cabE\misc1\\"",
    SIZE = 4525MB,
    FILEGROWTH = 0),
(
    NAME = MSSQL_miscF1,
    FILENAME = "C:\Bigdb\cabF\misc1\\"",
    SIZE = 4525MB,
    FILEGROWTH = 0),
(
    NAME = MSSQL_miscG1,
    FILENAME = "C:\Bigdb\cabG\misc1\\"",
    SIZE = 4525MB,
    FILEGROWTH = 0),
(
    NAME = MSSQL_miscH1,
    FILENAME = "C:\Bigdb\cabH\misc1\\"",
    SIZE = 4525MB,
    FILEGROWTH = 0),
(
    NAME = MSSQL_miscA2,
```



```

( NAME = MSSQL_miscB7,
  FILENAME = "C:\Bigdb\cabB\misc7\",
  SIZE = 4525MB, FILEGROWTH = 0),
( NAME = MSSQL_miscC7,
  FILENAME = "C:\Bigdb\cabC\misc7\",
  SIZE = 4525MB, FILEGROWTH = 0),
( NAME = MSSQL_miscD7,
  FILENAME = "C:\Bigdb\cabD\misc7\",
  SIZE = 4525MB, FILEGROWTH = 0),
( NAME = MSSQL_miscE7,
  FILENAME = "C:\Bigdb\cabE\misc7\",
  SIZE = 4525MB, FILEGROWTH = 0),
( NAME = MSSQL_miscF7,
  FILENAME = "C:\Bigdb\cabF\misc7\",
  SIZE = 4525MB, FILEGROWTH = 0),
( NAME = MSSQL_miscG7,
  FILENAME = "C:\Bigdb\cabG\misc7\",
  SIZE = 4525MB, FILEGROWTH = 0),
( NAME = MSSQL_miscH7,
  FILENAME = "C:\Bigdb\cabH\misc7\",
  SIZE = 4525MB, FILEGROWTH = 0),
( NAME = MSSQL_miscA8,
  FILENAME = "C:\Bigdb\cabA\misc8\",
  SIZE = 4525MB, FILEGROWTH = 0),
( NAME = MSSQL_miscB8,
  FILENAME = "C:\Bigdb\cabB\misc8\",
  SIZE = 4525MB, FILEGROWTH = 0),
( NAME = MSSQL_miscC8,
  FILENAME = "C:\Bigdb\cabC\misc8\",
  SIZE = 4525MB, FILEGROWTH = 0),
( NAME = MSSQL_miscD8,
  FILENAME = "C:\Bigdb\cabD\misc8\",
  SIZE = 4525MB, FILEGROWTH = 0),
( NAME = MSSQL_miscE8,
  FILENAME = "C:\Bigdb\cabE\misc8\",
  SIZE = 4525MB, FILEGROWTH = 0),
( NAME = MSSQL_miscF8,
  FILENAME = "C:\Bigdb\cabF\misc8\",
  SIZE = 4525MB, FILEGROWTH = 0),
( NAME = MSSQL_miscG8,
  FILENAME = "C:\Bigdb\cabG\misc8\",
  SIZE = 4525MB, FILEGROWTH = 0),
( NAME = MSSQL_miscH8,
  FILENAME = "C:\Bigdb\cabH\misc8\",
  SIZE = 4525MB, FILEGROWTH = 0),
( NAME = MSSQL_miscA9,
  FILENAME = "C:\Bigdb\cabA\misc9\",
  SIZE = 4525MB, FILEGROWTH = 0),
( NAME = MSSQL_miscB9,
  FILENAME = "C:\Bigdb\cabB\misc9\",
  SIZE = 4525MB, FILEGROWTH = 0),
( NAME = MSSQL_miscC9,
  FILENAME = "C:\Bigdb\cabC\misc9\",
  SIZE = 4525MB, FILEGROWTH = 0),
( NAME = MSSQL_miscD9,
  FILENAME = "C:\Bigdb\cabD\misc9\",
  SIZE = 4525MB, FILEGROWTH = 0),
( NAME = MSSQL_miscE9,
  FILENAME = "C:\Bigdb\cabE\misc9\",
  SIZE = 4525MB, FILEGROWTH = 0),
( NAME = MSSQL_miscF9,

```

```

  FILENAME = "C:\Bigdb\cabF\misc9\",
  SIZE = 4525MB, FILEGROWTH = 0),
( NAME = MSSQL_miscG9,
  FILENAME = "C:\Bigdb\cabG\misc9\",
  SIZE = 4525MB, FILEGROWTH = 0),
( NAME = MSSQL_miscH9,
  FILENAME = "C:\Bigdb\cabH\misc9\",
  SIZE = 4525MB, FILEGROWTH = 0),
( NAME = MSSQL_miscA10,
  FILENAME = "C:\Bigdb\cabA\misc10\",
  SIZE = 4525MB, FILEGROWTH = 0),
( NAME = MSSQL_miscB10,
  FILENAME = "C:\Bigdb\cabB\misc10\",
  SIZE = 4525MB, FILEGROWTH = 0),
( NAME = MSSQL_miscC10,
  FILENAME = "C:\Bigdb\cabC\misc10\",
  SIZE = 4525MB, FILEGROWTH = 0),
( NAME = MSSQL_miscD10,
  FILENAME = "C:\Bigdb\cabD\misc10\",
  SIZE = 4525MB, FILEGROWTH = 0),
( NAME = MSSQL_miscE10,
  FILENAME = "C:\Bigdb\cabE\misc10\",
  SIZE = 4525MB, FILEGROWTH = 0),
( NAME = MSSQL_miscF10,
  FILENAME = "C:\Bigdb\cabF\misc10\",
  SIZE = 4525MB, FILEGROWTH = 0),
( NAME = MSSQL_miscG10,
  FILENAME = "C:\Bigdb\cabG\misc10\",
  SIZE = 4525MB, FILEGROWTH = 0),
( NAME = MSSQL_miscH10,
  FILENAME = "C:\Bigdb\cabH\misc10\",
  SIZE = 4525MB, FILEGROWTH = 0),
FILEGROUP MSSQL_cs_fg
( NAME = MSSQL_csA1,
  FILENAME = "C:\Bigdb\cabA\cs1\",
  SIZE = 8910MB, FILEGROWTH = 0),
FILEGROUP MSSQL_ord_fg
( NAME = MSSQL_ordA1,
  FILENAME = "C:\Bigdb\cabA\ord1\",
  SIZE = 5695MB, FILEGROWTH = 0)
LOG ON
( NAME = MSSQL_tpcc_log1,
  FILENAME = "C:\Bigdb\dblogs\tpcclog1\",
  SIZE = 505582MB, FILEGROWTH = 0)
go
ALTER DATABASE tpcc ADD FILE
( NAME = MSSQL_csB1,
  FILENAME = "C:\Bigdb\cabB\cs1\",
  SIZE = 8910MB, FILEGROWTH = 0),
( NAME = MSSQL_csC1,
  FILENAME = "C:\Bigdb\cabC\cs1\",
  SIZE = 8910MB, FILEGROWTH = 0),
( NAME = MSSQL_csD1,
  FILENAME = "C:\Bigdb\cabD\cs1\",
  SIZE = 8910MB, FILEGROWTH = 0),
( NAME = MSSQL_csE1,
  FILENAME = "C:\Bigdb\cabE\cs1\",
  SIZE = 8910MB, FILEGROWTH = 0),
( NAME = MSSQL_csF1,
  FILENAME = "C:\Bigdb\cabF\cs1\",
  SIZE = 8910MB, FILEGROWTH = 0),

```



```

    SIZE      = 8910MB,   FILEGROWTH = 0),
(  NAME = MSSQL_csH6,
  FILENAME = "C:\Bigdb\cabH\cs6\",
  SIZE      = 8910MB,   FILEGROWTH = 0),
(  NAME = MSSQL_csA7,
  FILENAME = "C:\Bigdb\cabA\cs7\",
  SIZE      = 8910MB,   FILEGROWTH = 0),
(  NAME = MSSQL_csB7,
  FILENAME = "C:\Bigdb\cabB\cs7\",
  SIZE      = 8910MB,   FILEGROWTH = 0),
(  NAME = MSSQL_csC7,
  FILENAME = "C:\Bigdb\cabC\cs7\",
  SIZE      = 8910MB,   FILEGROWTH = 0),
(  NAME = MSSQL_csD7,
  FILENAME = "C:\Bigdb\cabD\cs7\",
  SIZE      = 8910MB,   FILEGROWTH = 0),
(  NAME = MSSQL_csE7,
  FILENAME = "C:\Bigdb\cabE\cs7\",
  SIZE      = 8910MB,   FILEGROWTH = 0),
(  NAME = MSSQL_csF7,
  FILENAME = "C:\Bigdb\cabF\cs7\",
  SIZE      = 8910MB,   FILEGROWTH = 0),
(  NAME = MSSQL_csG7,
  FILENAME = "C:\Bigdb\cabG\cs7\",
  SIZE      = 8910MB,   FILEGROWTH = 0),
(  NAME = MSSQL_csH7,
  FILENAME = "C:\Bigdb\cabH\cs7\",
  SIZE      = 8910MB,   FILEGROWTH = 0),
(  NAME = MSSQL_csA8,
  FILENAME = "C:\Bigdb\cabA\cs8\",
  SIZE      = 8910MB,   FILEGROWTH = 0),
(  NAME = MSSQL_csB8,
  FILENAME = "C:\Bigdb\cabB\cs8\",
  SIZE      = 8910MB,   FILEGROWTH = 0),
(  NAME = MSSQL_csC8,
  FILENAME = "C:\Bigdb\cabC\cs8\",
  SIZE      = 8910MB,   FILEGROWTH = 0),
(  NAME = MSSQL_csD8,
  FILENAME = "C:\Bigdb\cabD\cs8\",
  SIZE      = 8910MB,   FILEGROWTH = 0),
(  NAME = MSSQL_csE8,
  FILENAME = "C:\Bigdb\cabE\cs8\",
  SIZE      = 8910MB,   FILEGROWTH = 0),
(  NAME = MSSQL_csF8,
  FILENAME = "C:\Bigdb\cabF\cs8\",
  SIZE      = 8910MB,   FILEGROWTH = 0),
(  NAME = MSSQL_csG8,
  FILENAME = "C:\Bigdb\cabG\cs8\",
  SIZE      = 8910MB,   FILEGROWTH = 0),
(  NAME = MSSQL_csH8,
  FILENAME = "C:\Bigdb\cabH\cs8\",
  SIZE      = 8910MB,   FILEGROWTH = 0),
(  NAME = MSSQL_csA9,
  FILENAME = "C:\Bigdb\cabA\cs9\",
  SIZE      = 8910MB,   FILEGROWTH = 0),
(  NAME = MSSQL_csB9,
  FILENAME = "C:\Bigdb\cabB\cs9\",
  SIZE      = 8910MB,   FILEGROWTH = 0),
(  NAME = MSSQL_csC9,
  FILENAME = "C:\Bigdb\cabC\cs9\",
  SIZE      = 8910MB,   FILEGROWTH = 0),

```

```

(  NAME = MSSQL_csD9,
  FILENAME = "C:\Bigdb\cabD\cs9\",
  SIZE      = 8910MB,   FILEGROWTH = 0),
(  NAME = MSSQL_csE9,
  FILENAME = "C:\Bigdb\cabE\cs9\",
  SIZE      = 8910MB,   FILEGROWTH = 0),
(  NAME = MSSQL_csF9,
  FILENAME = "C:\Bigdb\cabF\cs9\",
  SIZE      = 8910MB,   FILEGROWTH = 0),
(  NAME = MSSQL_csG9,
  FILENAME = "C:\Bigdb\cabG\cs9\",
  SIZE      = 8910MB,   FILEGROWTH = 0),
(  NAME = MSSQL_csH9,
  FILENAME = "C:\Bigdb\cabH\cs9\",
  SIZE      = 8910MB,   FILEGROWTH = 0),
(  NAME = MSSQL_csA10,
  FILENAME = "C:\Bigdb\cabA\cs10\",
  SIZE      = 8910MB,   FILEGROWTH = 0),
(  NAME = MSSQL_csB10,
  FILENAME = "C:\Bigdb\cabB\cs10\",
  SIZE      = 8910MB,   FILEGROWTH = 0),
(  NAME = MSSQL_csC10,
  FILENAME = "C:\Bigdb\cabC\cs10\",
  SIZE      = 8910MB,   FILEGROWTH = 0),
(  NAME = MSSQL_csD10,
  FILENAME = "C:\Bigdb\cabD\cs10\",
  SIZE      = 8910MB,   FILEGROWTH = 0),
(  NAME = MSSQL_csE10,
  FILENAME = "C:\Bigdb\cabE\cs10\",
  SIZE      = 8910MB,   FILEGROWTH = 0),
(  NAME = MSSQL_csF10,
  FILENAME = "C:\Bigdb\cabF\cs10\",
  SIZE      = 8910MB,   FILEGROWTH = 0),
(  NAME = MSSQL_csG10,
  FILENAME = "C:\Bigdb\cabG\cs10\",
  SIZE      = 8910MB,   FILEGROWTH = 0),
(  NAME = MSSQL_csH10,
  FILENAME = "C:\Bigdb\cabH\cs10\",
  SIZE      = 8910MB,   FILEGROWTH = 0)
TO FILEGROUP MSSQL_cs_fg
go
ALTER DATABASE tpcc ADD FILE
(  NAME = MSSQL_ordB1,
  FILENAME = "C:\Bigdb\cabB\ord1\",
  SIZE      = 5695MB,   FILEGROWTH = 0),
(  NAME = MSSQL_ordC1,
  FILENAME = "C:\Bigdb\cabC\ord1\",
  SIZE      = 5695MB,   FILEGROWTH = 0),
(  NAME = MSSQL_ordD1,
  FILENAME = "C:\Bigdb\cabD\ord1\",
  SIZE      = 5695MB,   FILEGROWTH = 0),
(  NAME = MSSQL_ordE1,
  FILENAME = "C:\Bigdb\cabE\ord1\",
  SIZE      = 5695MB,   FILEGROWTH = 0),
(  NAME = MSSQL_ordF1,
  FILENAME = "C:\Bigdb\cabF\ord1\",
  SIZE      = 5695MB,   FILEGROWTH = 0),
(  NAME = MSSQL_ordG1,
  FILENAME = "C:\Bigdb\cabG\ord1\",
  SIZE      = 5695MB,   FILEGROWTH = 0),
(  NAME = MSSQL_ordH1,

```



```

( NAME = MSSQL_ordA7,
  FILENAME = "C:\Bigdb\cabA\ord7\",
  SIZE = 5695MB, FILEGROWTH = 0),
( NAME = MSSQL_ordB7,
  FILENAME = "C:\Bigdb\cabB\ord7\",
  SIZE = 5695MB, FILEGROWTH = 0),
( NAME = MSSQL_ordC7,
  FILENAME = "C:\Bigdb\cabC\ord7\",
  SIZE = 5695MB, FILEGROWTH = 0),
( NAME = MSSQL_ordD7,
  FILENAME = "C:\Bigdb\cabD\ord7\",
  SIZE = 5695MB, FILEGROWTH = 0),
( NAME = MSSQL_ordE7,
  FILENAME = "C:\Bigdb\cabE\ord7\",
  SIZE = 5695MB, FILEGROWTH = 0),
( NAME = MSSQL_ordF7,
  FILENAME = "C:\Bigdb\cabF\ord7\",
  SIZE = 5695MB, FILEGROWTH = 0),
( NAME = MSSQL_ordG7,
  FILENAME = "C:\Bigdb\cabG\ord7\",
  SIZE = 5695MB, FILEGROWTH = 0),
( NAME = MSSQL_ordH7,
  FILENAME = "C:\Bigdb\cabH\ord7\",
  SIZE = 5695MB, FILEGROWTH = 0),
( NAME = MSSQL_ordA8,
  FILENAME = "C:\Bigdb\cabA\ord8\",
  SIZE = 5695MB, FILEGROWTH = 0),
( NAME = MSSQL_ordB8,
  FILENAME = "C:\Bigdb\cabB\ord8\",
  SIZE = 5695MB, FILEGROWTH = 0),
( NAME = MSSQL_ordC8,
  FILENAME = "C:\Bigdb\cabC\ord8\",
  SIZE = 5695MB, FILEGROWTH = 0),
( NAME = MSSQL_ordD8,
  FILENAME = "C:\Bigdb\cabD\ord8\",
  SIZE = 5695MB, FILEGROWTH = 0),
( NAME = MSSQL_ordE8,
  FILENAME = "C:\Bigdb\cabE\ord8\",
  SIZE = 5695MB, FILEGROWTH = 0),
( NAME = MSSQL_ordF8,
  FILENAME = "C:\Bigdb\cabF\ord8\",
  SIZE = 5695MB, FILEGROWTH = 0),
( NAME = MSSQL_ordG8,
  FILENAME = "C:\Bigdb\cabG\ord8\",
  SIZE = 5695MB, FILEGROWTH = 0),
( NAME = MSSQL_ordH8,
  FILENAME = "C:\Bigdb\cabH\ord8\",
  SIZE = 5695MB, FILEGROWTH = 0),
( NAME = MSSQL_ordA9,
  FILENAME = "C:\Bigdb\cabA\ord9\",
  SIZE = 5695MB, FILEGROWTH = 0),
( NAME = MSSQL_ordB9,
  FILENAME = "C:\Bigdb\cabB\ord9\",
  SIZE = 5695MB, FILEGROWTH = 0),
( NAME = MSSQL_ordC9,
  FILENAME = "C:\Bigdb\cabC\ord9\",
  SIZE = 5695MB, FILEGROWTH = 0),
( NAME = MSSQL_ordD9,
  FILENAME = "C:\Bigdb\cabD\ord9\",
  SIZE = 5695MB, FILEGROWTH = 0),
( NAME = MSSQL_ordE9,

```

```

  FILENAME = "C:\Bigdb\cabE\ord9\",
  SIZE = 5695MB, FILEGROWTH = 0),
( NAME = MSSQL_ordF9,
  FILENAME = "C:\Bigdb\cabF\ord9\",
  SIZE = 5695MB, FILEGROWTH = 0),
( NAME = MSSQL_ordG9,
  FILENAME = "C:\Bigdb\cabG\ord9\",
  SIZE = 5695MB, FILEGROWTH = 0),
( NAME = MSSQL_ordH9,
  FILENAME = "C:\Bigdb\cabH\ord9\",
  SIZE = 5695MB, FILEGROWTH = 0),
( NAME = MSSQL_ordA10,
  FILENAME = "C:\Bigdb\cabA\ord10\",
  SIZE = 5695MB, FILEGROWTH = 0),
( NAME = MSSQL_ordB10,
  FILENAME = "C:\Bigdb\cabB\ord10\",
  SIZE = 5695MB, FILEGROWTH = 0),
( NAME = MSSQL_ordC10,
  FILENAME = "C:\Bigdb\cabC\ord10\",
  SIZE = 5695MB, FILEGROWTH = 0),
( NAME = MSSQL_ordD10,
  FILENAME = "C:\Bigdb\cabD\ord10\",
  SIZE = 5695MB, FILEGROWTH = 0),
( NAME = MSSQL_ordE10,
  FILENAME = "C:\Bigdb\cabE\ord10\",
  SIZE = 5695MB, FILEGROWTH = 0),
( NAME = MSSQL_ordF10,
  FILENAME = "C:\Bigdb\cabF\ord10\",
  SIZE = 5695MB, FILEGROWTH = 0),
( NAME = MSSQL_ordG10,
  FILENAME = "C:\Bigdb\cabG\ord10\",
  SIZE = 5695MB, FILEGROWTH = 0),
( NAME = MSSQL_ordH10,
  FILENAME = "C:\Bigdb\cabH\ord10\",
  SIZE = 5695MB, 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\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"
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 = 92993 MB),
( NAME = tempdbB10,
  FILENAME = "C:\Bigdb\dbbackups\backupB10\tempdbB10.mdf",

```

```

  SIZE = 15000 MB,
  FILEGROWTH = 10%,
  MAXSIZE = 92993 MB),
( NAME = tempdbC10,
  FILENAME = "C:\Bigdb\dbbackups\backupC10\tempdbC10.mdf",
  SIZE = 15000 MB,
  FILEGROWTH = 10%,
  MAXSIZE = 92993 MB),
( NAME = tempdbD10,
  FILENAME = "C:\Bigdb\dbbackups\backupD10\tempdbD10.mdf",
  SIZE = 15000 MB,
  FILEGROWTH = 10%,
  MAXSIZE = 92993 MB),
( NAME = tempdbE10,
  FILENAME = "C:\Bigdb\dbbackups\backupE10\tempdbE10.mdf",
  SIZE = 15000 MB,
  FILEGROWTH = 10%,
  MAXSIZE = 92993 MB),
( NAME = tempdbF10,
  FILENAME = "C:\Bigdb\dbbackups\backupF10\tempdbF10.mdf",
  SIZE = 15000 MB,
  FILEGROWTH = 10%,
  MAXSIZE = 92993 MB),
( NAME = tempdbG10,
  FILENAME = "C:\Bigdb\dbbackups\backupG10\tempdbG10.mdf",
  SIZE = 15000 MB,
  FILEGROWTH = 10%,
  MAXSIZE = 92993 MB)
go
ALTER database tempdb
add log file
( NAME = tempdblogH10,
  FILENAME = "C:\Bigdb\dbbackups\backupH10\tempdblogH10.ldf",
  SIZE = 15000 MB,
  FILEGROWTH = 10%,
  MAXSIZE = 92993 MB)
Go

```

VERIFYTPCCLOAD

```

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

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

use tpcc
go
-----

```

```

-- Check rows per table
-----
print 'WAREHOUSE TABLE'
select count_big(*)
from warehouse
go

print 'DISTRICT TABLE = (10 * No of warehouses)'
select count_big(*)
from district
go

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

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

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

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

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

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

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

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

use tpcc
go

sp_helpindex warehouse
go

sp_helpindex district
go

```

```

sp_helpindex customer
go

sp_helpindex history
go

sp_helpindex orders
go

sp_helpindex new_order
go

sp_helpindex order_line
go

sp_helpindex stock
go

sp_helpindex item
go

```

Indexes and Tables

IDXCUSCL.SQL

```

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

use tpcc
go

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

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

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

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

go

```


IDXCUSNC.SQL

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

```
use tpcc
go

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

if exists ( select name from sysindexes where name = 'customer_nc1' )
    drop index customer.customer_nc1

create unique nonclustered index customer_nc1 on customer(c_w_id, c_d_id,
c_last, c_first, c_id)
    with SORT_IN_TEMPDB
on MSSQL_cs_fg

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

go
```

IDXDISCL.SQL

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

```
use tpcc
go

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

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

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

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

go
```

IDXHISCL.SQL

```
-----
--
-- File: IDXHISCL.SQL
-- Microsoft TPC-C Benchmark Kit Ver. 4.51
-- Copyright Microsoft, 2003
--
-- Creates clustered index on history table
--
-- CAUTION: This index is only beneficial for systems
-- CAUTION: with 8 or more processors.
-- CAUTION: It may negatively impact performance on
-- CAUTION: systems with less than 8 processors.
-----
```

```
use tpcc
go

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

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

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

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

go
```

IDXITMCL.SQL

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

```

use tpcc
go

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

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

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

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

go

```

IDXNODCL.SQL

```

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

```

```

use tpcc
go

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

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

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

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

go

```

IDXODLCL.SQL

```

-----

```

```

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

```

```

use tpcc
go

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

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

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

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

go

```

IDXORDCL.SQL

```

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

```

```

use tpcc
go

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

if exists ( select name from sysindexes where name = 'orders_c1' )
drop index orders.orders_c1

create unique clustered index orders_c1 on orders(o_w_id, o_d_id, o_id)
on MSSQL_ord_fg

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

```

```
go
```

IDXORDNC.SQL

```
-----  
--  
-- File:   IDXORDNC.SQL  
-- Microsoft TPC-C Benchmark Kit Ver. 4.51  
-- Copyright Microsoft, 2003  
--  
-- Creates non-clustered index on orders table  
-----  
  
use tpcc  
go  
  
declare @startdate datetime  
declare @enddate datetime  
select @startdate = getdate()  
select "Start date:", convert(varchar(30),@startdate,9)  
  
--if exists ( select name from sysindexes where name = 'orders_nc1' )  
-- drop index orders.orders_nc1  
  
--create index orders_nc1 on orders( o_w_id, o_d_id, o_c_id, o_id)  
-- with pad_index, fillfactor=90,  
-- SORT_IN_TEMPDB  
-- on MSSQL_ord_fg  
  
select @enddate = getdate()  
select "End date: ", convert(varchar(30),@enddate,9)  
select "Elapsed time (in seconds): ", datediff(second, @startdate,  
@enddate)  
  
go
```

IDXSTKCL.SQL

```
-----  
--  
-- File:   IDXSTKCL.SQL  
-- Microsoft TPC-C Benchmark Kit Ver. 4.51  
-- Copyright Microsoft, 2003  
--  
-- Creates clustered index on stock table  
-----  
  
use tpcc  
go  
  
declare @startdate datetime  
declare @enddate datetime  
select @startdate = getdate()  
select "Start date:", convert(varchar(30),@startdate,9)
```

```
if exists ( select name from sysindexes where name = 'stock_c1' )  
drop index stock.stock_c1  
  
create unique clustered index stock_c1 on stock(s_i_id, s_w_id)  
on MSSQL_cs_fg  
  
select @enddate = getdate()  
select "End date: ", convert(varchar(30),@enddate,9)  
select "Elapsed time (in seconds): ", datediff(second, @startdate,  
@enddate)  
  
go
```

IDXWARCL.SQL

```
-----  
--  
-- File:   IDXWARCL.SQL  
-- Microsoft TPC-C Benchmark Kit Ver. 4.51  
-- Copyright Microsoft, 2003  
--  
-- Creates clustered index on warehouse table  
-----  
  
use tpcc  
go  
  
declare @startdate datetime  
declare @enddate datetime  
select @startdate = getdate()  
select "Start date:", convert(varchar(30),@startdate,9)  
  
if exists ( select name from sysindexes where name = 'warehouse_c1' )  
drop index warehouse.warehouse_c1  
  
create unique clustered index warehouse_c1 on warehouse(w_id)  
with fillfactor=100 on MSSQL_misc_fg  
  
select @enddate = getdate()  
select "End date: ", convert(varchar(30),@enddate,9)  
select "Elapsed time (in seconds): ", datediff(second, @startdate,  
@enddate)  
  
go
```

TABLES.SQL

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

```

SET ANSI_NULL_DFLT_OFF ON
go

use tpcc
go

-----
-- Remove all existing TPC-C tables
-----

if exists ( select name from sysobjects where name = 'warehouse' )
    drop table warehouse
go
if exists ( select name from sysobjects where name = 'district' )
    drop table district
go
if exists ( select name from sysobjects where name = 'customer' )
    drop table customer
go
if exists ( select name from sysobjects where name = 'history' )
    drop table history
go
if exists ( select name from sysobjects where name = 'new_order' )
    drop table new_order
go
if exists ( select name from sysobjects where name = 'orders' )
    drop table orders
go
if exists ( select name from sysobjects where name = 'order_line' )
    drop table order_line
go
if exists ( select name from sysobjects where name = 'item' )
    drop table item
go
if exists ( select name from sysobjects where name = 'stock' )
    drop table stock
go

-----
-- Create new tables
-----

create table warehouse
(
    w_id                int,
    w_name              char(10),
    w_street_1         char(20),
    w_street_2         char(20),
    w_city             char(20),
    w_state            char(2),
    w_zip              char(9),
    w_tax              numeric(4,4),
    w_ytd              numeric(12,2)
) on MSSQL_misc_fg
go

create table district
(
    d_id                tinyint,
    d_w_id              int,

```

```

    d_name              char(10),
    d_street_1         char(20),
    d_street_2         char(20),
    d_city             char(20),
    d_state            char(2),
    d_zip              char(9),
    d_tax              numeric(4,4),
    d_ytd              numeric(12,2),
    d_next_o_id        int
) on MSSQL_misc_fg
go

create table customer
(
    c_id                int,
    c_d_id              tinyint,
    c_w_id              int,
    c_first             char(16),
    c_middle            char(2),
    c_last              char(16),
    c_street_1         char(20),
    c_street_2         char(20),
    c_city              char(20),
    c_state             char(2),
    c_zip              char(9),
    c_phone             char(16),
    c_since             datetime,
    c_credit            char(2),
    c_credit_lim        numeric(12,2),
    c_discount          numeric(4,4),
    c_balance           numeric(12,2),
    c_ytd_payment       numeric(12,2),
    c_payment_cnt       smallint,
    c_delivery_cnt      smallint,
    c_data              text
) on MSSQL_cs_fg
textimage_on MSSQL_misc_fg
go

create table history
(
    h_c_id              int,
    h_c_d_id            tinyint,
    h_c_w_id            int,
    h_d_id              tinyint,
    h_w_id              int,
    h_date              datetime,
    h_amount            numeric(6,2),
    h_data              char(24)
) on MSSQL_misc_fg
go

create table new_order
(
    no_o_id             int,
    no_d_id             tinyint,
    no_w_id             int
) on MSSQL_ord_fg
go

create table orders

```

```

(
    o_id                int,
    o_d_id             tinyint,
    o_w_id             int,
    o_c_id             int,
    o_entry_d          datetime,
    o_carrier_id       tinyint,
    o_ol_cnt           tinyint,
    o_all_local        tinyint
) on MSSQL_ord_fg
go

create table order_line
(
    ol_o_id            int,
    ol_d_id            tinyint,
    ol_w_id            int,
    ol_number          tinyint,
    ol_i_id            int,
    ol_supply_w_id     int,
    ol_delivery_d       datetime,
    ol_quantity        smallint,
    ol_amount          numeric(6,2),
    ol_dist_info       char(24)
) on MSSQL_ord_fg
go

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

create table stock
(
    s_i_id            int,
    s_w_id            int,
    s_quantity        smallint,
    s_dist_01         char(24),
    s_dist_02         char(24),
    s_dist_03         char(24),
    s_dist_04         char(24),
    s_dist_05         char(24),
    s_dist_06         char(24),
    s_dist_07         char(24),
    s_dist_08         char(24),
    s_dist_09         char(24),
    s_dist_10         char(24),
    s_ytd             int,
    s_order_cnt       smallint,
    s_remote_cnt      smallint,
    s_data            char(50)
) on MSSQL_cs_fg
go

```

Stored Procedures

DELIVERY.SQL

```

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

use tpcc
go

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

create proc tpcc_delivery    @w_id            int,
                             @o_carrier_id    smallint
as

declare @d_id tinyint,
        @o_id int,
        @c_id int,
        @total numeric(12,2),
        @oid1 int,
        @oid2 int,
        @oid3 int,
        @oid4 int,
        @oid5 int,
        @oid6 int,
        @oid7 int,
        @oid8 int,
        @oid9 int,
        @oid10 int

select @d_id = 0

begin tran d

    while (@d_id < 10)
    begin

        select @d_id = @d_id + 1,
               @total = 0,
               @c_id = 0

```

```

select top 1
  @o_id = no_o_id
from new_order WITH (serializable, updlock)
where no_w_id = @w_id and
      no_d_id = @d_id
order by no_o_id asc

  if (@@rowcount <> 0)
  begin
-----
-- claim the order for this district
-----
        delete new_order
        where no_w_id = @w_id and
              no_d_id = @d_id and
              no_o_id = @o_id

-----
-- set carrier_id on this order (and get customer id)
-----
        update orders
        set   o_carrier_id = @o_carrier_id,
             @c_id        = o_c_id
        where o_w_id      = @w_id and
              o_d_id      = @d_id and
              o_id        = @o_id

-----
-- set date in all lineitems for this order (and sum amounts)
-----
        update order_line
        set   ol_delivery_d = getdate(),
             @total         = @total + ol_amount
        where ol_w_id      = @w_id and
              ol_d_id      = @d_id and
              ol_o_id      = @o_id

-----
-- accumulate lineitem amounts for this order into customer
-----
        update customer
        set   c_balance      = c_balance + @total,
             c_delivery_cnt = c_delivery_cnt + 1
        where c_w_id        = @w_id and
              c_d_id        = @d_id and
              c_id          = @c_id

  end

select @oid1 = case @d_id when 1 then @o_id else @oid1 end,
       @oid2 = case @d_id when 2 then @o_id else @oid2 end,
       @oid3 = case @d_id when 3 then @o_id else @oid3 end,
       @oid4 = case @d_id when 4 then @o_id else @oid4 end,
       @oid5 = case @d_id when 5 then @o_id else @oid5 end,
       @oid6 = case @d_id when 6 then @o_id else @oid6 end,
       @oid7 = case @d_id when 7 then @o_id else @oid7 end,
       @oid8 = case @d_id when 8 then @o_id else @oid8 end,
       @oid9 = case @d_id when 9 then @o_id else @oid9 end,

```

```

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

```

NEWORDER.SQL

```

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

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

        -----
-- insert order_line data (using data from item and stock)
        -----
        insert into order_line values(
                @o_id,
                @d_id,
                @w_id,
                @li_no,
                @li_id,
                @li_s_w_id,
                'dec 31, 1899',
                @li_qty,
                @i_price * @li_qty,
                @s_dist)
        -----

```

```

-- send line-item data to client
        -----
        select @i_name,
               @s_quantity,
               b_g = case when (
(patindex('%ORIGINAL%',@i_data) > 0) and
(patindex('%ORIGINAL%',@s_data) > 0) )
                then 'B' else 'G' end,
               @i_price,
               @i_price * @li_qty
        end
        else
        begin

        -----
-- no item (or stock) found - triggers rollback condition
        -----
        select '',0, '',0,0
        select @commit_flag = 0

        end
        end

        -----
-- get customer last name, discount, and credit rating
        -----
        select @c_last      = c_last,
               @c_discount = c_discount,
               @c_credit   = c_credit,
               @c_id local = c_id
        from   customer WITH (repeatableread)
        where  c_id        = @c_id and
               c_w_id      = @w_id and
               c_d_id      = @d_id

        -----
-- insert fresh row into orders table
        -----
        insert into orders values (
                @o_id,
                @d_id,
                @w_id,
                @c_id local,
                @o_entry_d,
                0,
                @o_ol_cnt,
                @o_all_local)

        -----
-- insert corresponding row into new-order table
        -----
        insert into new_order values (
                @o_id,
                @d_id,
                @w_id)

        -----
-- select warehouse tax
        -----
        select @w_tax = w_tax
        from   warehouse WITH (repeatableread)

```



```

where w_id = @w_id

if (@commit_flag = 1)
    commit transaction n
else
-----
-- all that work for nuthin!!!
-----
    rollback transaction n

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

end

go

```

ORDSTAT.SQL

```

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

use tpcc
go

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

create proc tpcc_orderstatus @w_id int,
                             @d_id tinyint,

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

as

declare @c_balance numeric(12,2),
        @c_first char(16),
        @c_middle char(2),
        @o_id int,

```

```

        @o_entry_d datetime,
        @o_carrier_id smallint,
        @cnt smallint

begin tran o

if (@c_id = 0)
    begin
-----
-- get customer id and info using last name
-----
        select @cnt = (count(*)+1)/2
        from customer WITH (repeatableread)
        where c_last = @c_last and
              c_w_id = @w_id and
              c_d_id = @d_id

        set rowcount @cnt

        select @c_id = c_id,
               @c_balance = c_balance,
               @c_first = c_first,
               @c_last = c_last,
               @c_middle = c_middle
        from customer WITH (repeatableread)
        where c_last = @c_last and
              c_w_id = @w_id and
              c_d_id = @d_id

        order by c_w_id, c_d_id, c_last, c_first

        set rowcount 0

    end

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

        select @cnt = @@rowcount

        end

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

```

```

-----
-- get order info
-----
select top 1 @o_id          = o_id,
           @o_entry_d      = o_entry_d,
           @o_carrier_id   = o_carrier_id
from orders WITH (serializable)
where o_c_id = @c_id and
      o_d_id = @d_id and
      o_w_id = @w_id
order by o_id desc

-----
-- select order lines for the current order
-----
select ol_supply_w_id,
       ol_i_id,
       ol_quantity,
       ol_amount,
       ol_delivery_d
from order_line WITH (repeatableread)
where ol_o_id = @o_id and
      ol_d_id = @d_id and
      ol_w_id = @w_id

custnotfound:

commit tran o

-----
-- return data to client
-----
select @c_id,
       @c_last,
       @c_first,
       @c_middle,
       @o_entry_d,
       @o_carrier_id,
       @c_balance,
       @o_id
go

```

PAYMENT.SQL

```

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

use tpcc
go

```

```

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

create proc tpcc_payment @w_id int,
                        @c_w_id int,
                        @h_amount numeric(6,2),
                        @d_id tinyint,
                        @c_d_id tinyint,
                        @c_id int,
                        @c_last char(16) = ''

as
declare @w_street_1 char(20),
        @w_street_2 char(20),
        @w_city char(20),
        @w_state char(2),
        @w_zip char(9),
        @w_name char(10),
        @d_street_1 char(20),
        @d_street_2 char(20),
        @d_city char(20),
        @d_state char(2),
        @d_zip char(9),
        @d_name char(10),
        @c_first char(16),
        @c_middle char(2),
        @c_street_1 char(20),
        @c_street_2 char(20),
        @c_city char(20),
        @c_state char(2),
        @c_zip char(9),
        @c_phone char(16),
        @c_since datetime,
        @c_credit char(2),
        @c_credit_lim numeric(12,2),
        @c_balance numeric(12,2),
        @c_discount numeric(4,4),
-- @data char(500),
-- @c_data char(500),
@c_data char(42),
@datetime datetime,
@w_ytd numeric(12,2),
@d_ytd numeric(12,2),
@cnt smallint,
@val smallint,
@screen_data char(200),
@d_id_local tinyint,
@w_id_local int,
@c_id_local int

select @screen_data = ''

begin tran p

-----
-- get payment date
-----
select @datetime = getdate()

```

```

if (@c_id = 0)
begin
-----
-- get customer id and info using last name
-----
select @cnt = count(*)
from customer WITH (repeatableread)
where c_last = @c_last and
c_w_id = @c_w_id and
c_d_id = @c_d_id

select @val = (@cnt + 1) / 2
set rowcount @val

select @c_id = c_id
from customer WITH (repeatableread)
where c_last = @c_last and
c_w_id = @c_w_id and
c_d_id = @c_d_id
order by c_last, c_first

set rowcount 0
end

-----
-- get customer info and update balances
-----
update customer
set @c_balance = c_balance = c_balance - @h_amount,
c_payment_cnt = c_payment_cnt + 1,
c_ytd_payment = c_ytd_payment + @h_amount,
@c_first = c_first,
@c_middle = c_middle,
@c_last = c_last,
@c_street_1 = c_street_1,
@c_street_2 = c_street_2,
@c_city = c_city,
@c_state = c_state,
@c_zip = c_zip,
@c_phone = c_phone,
@c_credit = c_credit,
@c_credit_lim = c_credit_lim,
@c_discount = c_discount,
@c_since = c_since,
-- @data = c_data,
@c_id_local = c_id
where c_id = @c_id and
c_w_id = @c_w_id and
c_d_id = @c_d_id

-----
-- if customer has bad credit get some more info
-----
if (@c_credit = 'BC')
begin
-----
-- compute new info
-----

```

```

select @c_data = convert(char(5),@c_id) +
convert(char(4),@c_d_id) +
convert(char(5),@c_w_id) +
convert(char(4),@d_id) +
convert(char(5),@w_id) +
convert(char(19),@h_amount)
substring(@data, 1, 458)
-----
-- update customer info
-----
update customer
set c_data = @c_data
set c_data = @c_data + substring(c_data,1,458),
@screen_data = @c_data + substring(c_data,1,158)

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

-- select @screen_data = substring (@c_data,1,200)
end

-----
-- get district data and update year-to-date
-----
update district
set d_ytd = d_ytd + @h_amount,
@d_street_1 = d_street_1,
@d_street_2 = d_street_2,
@d_city = d_city,
@d_state = d_state,
@d_zip = d_zip,
@d_name = d_name,
@d_id_local = d_id
where d_w_id = @w_id and
d_id = @d_id

-----
-- get warehouse data and update year-to-date
-----
update warehouse
set w_ytd = w_ytd + @h_amount,
@w_street_1 = w_street_1,
@w_street_2 = w_street_2,
@w_city = w_city,
@w_state = w_state,
@w_zip = w_zip,
@w_name = w_name,
@w_id_local = w_id
where w_id = @w_id

-----
-- create history record
-----
insert into history values ( @c_id_local,
@c_d_id,
@c_w_id,
@d_id_local,
@w_id_local,
@datetime,

```

```

        @h_amount,
        @w_name + ' ' + @d_name)

commit tran p

-----
-- return data to client
-----
select @c_id,
       @c_last,
       @datetime,
       @w_street_1,
       @w_street_2,
       @w_city,
       @w_state,
       @w_zip,
       @d_street_1,
       @d_street_2,
       @d_city,
       @d_state,
       @d_zip,
       @c_first,
       @c_middle,
       @c_street_1,
       @c_street_2,
       @c_city,
       @c_state,
       @c_zip,
       @c_phone,
       @c_since,
       @c_credit,
       @c_credit_lim,
       @c_discount,
       @c_balance,
       @screen_data

go

```

STOCKLEV.SQL

```

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

use tpcc
go

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

create proc tpcc_stocklevel @w_id int,
                          @d_id tinyint,
                          @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, TPCCLDR_ARGS *pargs)
{
    int      i;
    char     *ptr;

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

    /* init args struct with some useful values */
    pargs->server      = SERVER;
    pargs->user        = USER;
    pargs->password    = PASSWORD;
    pargs->database    = DATABASE;
    pargs->batch       = BATCH;
    pargs->num_warehouses = UNDEF;
    pargs->tables_all  = TRUE;
    pargs->table_item  = FALSE;
    pargs->table_warehouse = FALSE;
    pargs->table_customer = FALSE;
    pargs->table_orders = FALSE;
    pargs->loader_res_file = LOADER_RES_FILE;
    pargs->log_path      = LOADER_LOG_PATH;
    pargs->pack_size    = DEF_LDPACKSIZE;
    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 through */
            GetArgsLoaderUsage();
            break;

        case 'D':
            pargs->database = ptr+2;
            break;

        case 'P':
            pargs->password = ptr+2;
            break;

        case 'S':
            pargs->server = ptr+2;
            break;

        case 'U':
            pargs->user = ptr+2;
            break;

        case 'b':
            pargs->batch = atol(ptr+2);
            break;

        case 'W':
            pargs->num_warehouses = atol(ptr+2);
            break;

        case 's':
            pargs->starting_warehouse = atol(ptr+2);
            break;

        case 't':
            {
                pargs->tables_all = FALSE;
                if (strcmp(ptr+2,"item") == 0)
                    pargs->table_item = TRUE;
                else if (strcmp(ptr+2,"warehouse")
== 0)
                    pargs->table_warehouse =
TRUE;
                else if (strcmp(ptr+2,"customer") ==
0)
                    pargs->table_customer = TRUE;
            }
    }
}

```

```

0)
        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
%d\n", (long) BATCH);
    printf("-p TDS packet size
%d\n", (long) DEFLDPACKSIZE);
    printf("-L Loader BCP Log Path
%s\n", LOADER_LOG_PATH);
    printf("-f Loader Results Output Filename
%s\n", LOADER_RES_FILE);
    printf("-s Starting Warehouse
%d\n", (long) DEF_STARTING_WAREHOUSE);
    printf("-i Build Option (data = 0, data and index = 1)
%d\n", (long) BUILD_INDEX);
    printf("-o Cluster Index Build Order (before = 1, after = 0)
%d\n", (long) INDEX_ORDER);
    printf("-c Build Scaled Database (normal = 0, tiny = 1)
%d\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 <odbcss.h>

// General constants
#define MILLI          1000
#define FALSE          0
#define TRUE           1
#define UNDEF          -1
#define MINPRINTASCII 32
#define MAXPRINTASCII 126

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

// Default loader arguments

```

```

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

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

TPCCLDR_ARGS    *aptr, args;
HANDLE          hIndexMutex;

//=====
//
// Function name: main
//
//=====
int main(int argc, char **argv)
{
        DWORD                dwThreadID[MAX_MAIN_THREADS];
        HANDLE              hThread[MAX_MAIN_THREADS];
        FILE                 *fLoader;
        char                 buffer[255];
        int                  i;

        for (i=0; i<MAX_MAIN_THREADS; i++)
            hThread[i] = NULL;

        printf("\n*****");
        printf("\n*                               *");
        printf("\n* Microsoft SQL Server           *");
        printf("\n*                               *");
        printf("\n* TPC-C BENCHMARK KIT: Database loader *");
        printf("\n* Version %s                      *",
TPCKIT_VER);
        printf("\n*                               *");

```

```

);
printf("\n*****\n\n");
// process command line arguments
aptr = &args;
GetArgsLoader(argc, argv, aptr);

printf("Build interface is ODBC.\n");
if (aptr->build_index == 0)
    printf("Data load only - no index creation.\n");
else
    printf("Data load and index creation.\n");

if (aptr->index_order == 0)
    printf("Clustered indexes will be created after bulk
load.\n");
else
    printf("Clustered indexes will be created before bulk
load.\n");

// set database scale values
if (aptr->scale_down == 1)
{
    printf("*** Scaled Down Database ***\n");
    max_items = MAXITEMS_SCALE_DOWN;
    customers_per_district = CUSTOMERS_SCALE_DOWN;
    orders_per_district = ORDERS_SCALE_DOWN;
    first_new_order = 0;
    last_new_order = 30;
}
else
{
    max_items = MAXITEMS;
    customers_per_district = CUSTOMERS_PER_DISTRICT;
    orders_per_district = ORDERS_PER_DISTRICT;
    first_new_order = 2100;
    last_new_order = 3000;
}

// open connections to SQL Server
OpenConnections();

// open file for loader results
fLoader = fopen(aptr->loader_res_file, "w");

if (fLoader == NULL)
{
    printf("Error, loader result file open failed.");
    exit(-1);
}

// start loading data
sprintf(buffer, "TPC-C load started for %ld warehouses.\n", aptr-
>num_warehouses);

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

main_time_start = (TimeNow() / MILLI);

```

```

hIndexMutex = CreateMutex (NULL, FALSE, NULL);
// start parallel load threads
if (aptr->tables_all || aptr->table_item)
{
    fprintf(fLoader, "\nStarting loader threads for: item\n");

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

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

    if (aptr->tables_all || aptr->table_warehouse)
    {
        fprintf(fLoader, "Starting loader threads for:
warehouse\n");

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

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

        if (aptr->tables_all || aptr->table_customer)
        {
            fprintf(fLoader, "Starting loader threads for:
customer\n");

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

            if (hThread[2] == NULL)

```

```

        {
            printf("Error, failed in creating creating main
thread = 2.\n");
            exit(-1);
        }
    }

    if (aptr->tables_all || aptr->table_orders)
    {
        fprintf(fLoader, "Starting loader threads for: orders\n");

        hThread[3] = CreateThread(NULL,
                                0,
                                (LPTHREAD_START_ROUTINE) LoadOrders,
                                NULL,
                                0,
                                &dwThreadID[3]);

        if (hThread[3] == NULL)
        {
            printf("Error, failed in creating creating main
thread = 3.\n");
            exit(-1);
        }

        // Wait for threads to finish...
        for (i=0; i<MAX_MAIN_THREADS; i++)
        {
            if (hThread[i] != NULL)
            {
                WaitForSingleObject( hThread[i], INFINITE );
                CloseHandle(hThread[i]);
                hThread[i] = NULL;
            }
        }

        main_time_end = (TimeNow() / MILLI);

        sprintf(buffer, "\nTPC-C load completed successfully in %ld
minutes.\n",
                (main_time_end - main_time_start)/60);

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

        fclose(fLoader);

        SQLFreeEnv(henv);

        exit(0);

        return 0;
    }

//=====
//
// Function name: LoadItem

```

```

//
//=====
void LoadItem()
{
    long          i_id;
    long          i_im_id;
    char          i_name[I_NAME_LEN+1];
    double        i_price;
    char          i_data[I_DATA_LEN+1];
    char          name[20];
    long          time_start;
    RETCODE       rc;
    DBINT         rcint;
    char          bcphint[128];
    char          err_log_path[256];

    // Seed with unique number
    seed(1);

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

    //if build index before load
    if ((aptr->build_index == 1) && (aptr->index_order == 1))
        BuildIndex("idxitmc1");

    InitString(i_name, I_NAME_LEN+1);
    InitString(i_data, I_DATA_LEN+1);

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

    strcpy(err_log_path, aptr->log_path);
    strcat(err_log_path, "item.err");
    rc = bcp_init(i_hdbc1, name, NULL, err_log_path, DB_IN);
    if (rc != SUCCEED)
        HandleErrorDBC(i_hdbc1);

    if ((aptr->build_index == 1) && (aptr->index_order == 1))
    {
        sprintf(bcphint, "tablock, order (i_id), ROWS_PER_BATCH =
100000");
        rc = bcp_control(i_hdbc1, BCPHINTS, (void*) bcphint);
        if (rc != SUCCEED)
            HandleErrorDBC(i_hdbc1);
    }

    rc = bcp_bind(i_hdbc1, (BYTE *) &i_id, 0, SQL_VARLEN_DATA, NULL,
0, SQLINT4, 1);
    if (rc != SUCCEED)
        HandleErrorDBC(i_hdbc1);
    rc = bcp_bind(i_hdbc1, (BYTE *) &i_im_id, 0, SQL_VARLEN_DATA,
NULL, 0, SQLINT4, 2);
    if (rc != SUCCEED)
        HandleErrorDBC(i_hdbc1);
    rc = bcp_bind(i_hdbc1, (BYTE *) i_name, 0, I_NAME_LEN, NULL, 0, 0,
3);
    if (rc != SUCCEED)
        HandleErrorDBC(i_hdbc1);
    rc = bcp_bind(i_hdbc1, (BYTE *) &i_price, 0, SQL_VARLEN_DATA,
NULL, 0, SQLFLT8, 4);
    if (rc != SUCCEED)
        HandleErrorDBC(i_hdbc1);
}

```



```

5); rc = bcp_bind(i_hdbc1, (BYTE *) i_data, 0, I_DATA_LEN, NULL, 0, 0,
if (rc != SUCCEED)
    HandleErrorDBC(i_hdbc1);

time_start = (TimeNow() / MILLI);

item_rows_loaded = 0;

for (i_id = 1; i_id <= max_items; i_id++)
{
    i_im_id = RandomNumber(1L, 10000L);

    MakeAlphaString(14, 24, I_NAME_LEN, i_name);

    i_price = ((float) RandomNumber(100L, 10000L))/100.0;

    MakeOriginalAlphaString(26, 50, I_DATA_LEN, i_data, 10);

    rc = bcp_sendrow(i_hdbc1);
    if (rc != SUCCEED)
        HandleErrorDBC(i_hdbc1);

    item_rows_loaded++;
    CheckForCommit(i_hdbc1, i_hstmt1, item_rows_loaded, "item",
&time_start);
}

rcint = bcp_done(i_hdbc1);
if (rcint < 0)
    HandleErrorDBC(i_hdbc1);

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

SQLFreeStmt(i_hstmt1, SQL_DROP);
SQLDisconnect(i_hdbc1);
SQLFreeConnect(i_hdbc1);

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

//=====
//
// Function : LoadWarehouse
//
// Loads WAREHOUSE table and loads Stock and District as Warehouses are
// created
//
//=====
void LoadWarehouse()
{
    long w_id;
    char w_name[W_NAME_LEN+1];
    char w_street_1[ADDRESS_LEN+1];
    char w_street_2[ADDRESS_LEN+1];
    char w_city[ADDRESS_LEN+1];

```

```

char w_state[STATE_LEN+1];
char w_zip[ZIP_LEN+1];
double w_tax;
double w_ytd;
char name[20];
long time_start;
RETCODE rc;
DBINT rcint;
char bcphint[128];
char err_log_path[256];

// Seed with unique number
seed(2);

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

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

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

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

strcpy(err_log_path, aptr->log_path);
strcat(err_log_path, "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);

```

```

6);
    rc = bcp_bind(w_hdbc1, (BYTE *) w_state, 0, STATE_LEN, NULL, 0, 0,
    if (rc != SUCCEED)
        HandleErrorDBC(w_hdbc1);
    rc = bcp_bind(w_hdbc1, (BYTE *) w_zip, 0, ZIP_LEN, NULL, 0, 0, 7);
    if (rc != SUCCEED)
        HandleErrorDBC(w_hdbc1);
    rc = bcp_bind(w_hdbc1, (BYTE *) &w_tax, 0, SQL_VARLEN_DATA, NULL,
0, SQLFLT8, 8);
    if (rc != SUCCEED)
        HandleErrorDBC(w_hdbc1);
    rc = bcp_bind(w_hdbc1, (BYTE *) &w_ytd, 0, SQL_VARLEN_DATA, NULL,
0, SQLFLT8, 9);
    if (rc != SUCCEED)
        HandleErrorDBC(w_hdbc1);

    time_start = (TimeNow() / MILLI);

    warehouse_rows_loaded = 0;

    for (w_id = (long)aptr->starting_warehouse; w_id <= aptr-
>num_warehouses; w_id++)
    {
        MakeAlphaString(6,10, W_NAME_LEN, w_name);

        MakeAddress(w_street_1, w_street_2, w_city, w_state,
w_zip);

        w_tax = ((float) RandomNumber(0L,2000L))/10000.00;

        w_ytd = 300000.00;

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

        warehouse_rows_loaded++;
        CheckForCommit(w_hdbc1, i_hstmt1, warehouse_rows_loaded,
"warehouse", &time_start);
    }

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

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

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

    stock_rows_loaded = 0;
    district_rows_loaded = 0;

    District();
    Stock();
}

//=====
//
// Function : District

```

```

//
//=====
void District()
{
    short    d_id;
    long     d_w_id;
    char     d_name[D_NAME_LEN+1];
    char     d_street_1[ADDRESS_LEN+1];
    char     d_street_2[ADDRESS_LEN+1];
    char     d_city[ADDRESS_LEN+1];
    char     d_state[STATE_LEN+1];
    char     d_zip[ZIP_LEN+1];
    double   d_tax;
    double   d_ytd;
    char     name[20];
    long     d_next_o_id;
    long     time_start;
    long     w_id;
    RETCODE rc;
    DBINT    rcint;
    char     bcphint[128];
    char     err_log_path[256];

    // Seed with unique number
    seed(4);

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

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

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

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

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

    rc = bcp_bind(w_hdbc1, (BYTE *) &d_id, 0, SQL_VARLEN_DATA, NULL,
0, SQLINT2, 1);
    if (rc != SUCCEED)
        HandleErrorDBC(w_hdbc1);
    rc = bcp_bind(w_hdbc1, (BYTE *) &d_w_id, 0, SQL_VARLEN_DATA, NULL,
0, SQLINT4, 2);
    if (rc != SUCCEED)
        HandleErrorDBC(w_hdbc1);
    rc = bcp_bind(w_hdbc1, (BYTE *) d_name, 0, D_NAME_LEN, NULL, 0, 0,
3);
}

```

```

    if (rc != SUCCEED)
        HandleErrorDBC(w_hdbc1);
    rc = bcp_bind(w_hdbc1, (BYTE *) d_street_1, 0, ADDRESS_LEN, NULL,
0, 0, 4);
    if (rc != SUCCEED)
        HandleErrorDBC(w_hdbc1);
    rc = bcp_bind(w_hdbc1, (BYTE *) d_street_2, 0, ADDRESS_LEN, NULL,
0, 0, 5);
    if (rc != SUCCEED)
        HandleErrorDBC(w_hdbc1);
    rc = bcp_bind(w_hdbc1, (BYTE *) d_city, 0, ADDRESS_LEN, NULL, 0,
0, 6);
    if (rc != SUCCEED)
        HandleErrorDBC(w_hdbc1);
    rc = bcp_bind(w_hdbc1, (BYTE *) d_state, 0, STATE_LEN, NULL, 0, 0,
7);
    if (rc != SUCCEED)
        HandleErrorDBC(w_hdbc1);
    rc = bcp_bind(w_hdbc1, (BYTE *) d_zip, 0, ZIP_LEN, NULL, 0, 0, 8);
    if (rc != SUCCEED)
        HandleErrorDBC(w_hdbc1);
    rc = bcp_bind(w_hdbc1, (BYTE *) &d_tax, 0, SQL_VARLEN_DATA, NULL,
0, SQLFLT8, 9);
    if (rc != SUCCEED)
        HandleErrorDBC(w_hdbc1);
    rc = bcp_bind(w_hdbc1, (BYTE *) &d_ytd, 0, SQL_VARLEN_DATA, NULL,
0, SQLFLT8, 10);
    if (rc != SUCCEED)
        HandleErrorDBC(w_hdbc1);
    rc = bcp_bind(w_hdbc1, (BYTE *) &d_next_o_id, 0, SQL_VARLEN_DATA,
NULL, 0, SQLINT4, 11);
    if (rc != SUCCEED)
        HandleErrorDBC(w_hdbc1);

    d_ytd = 30000.0;

    d_next_o_id = orders_per_district+1;

    time_start = (TimeNow() / MILLI);

    for (w_id = aptr->starting_warehouse; w_id <= aptr-
>num_warehouses; w_id++)
    {
        d_w_id = w_id;

        for (d_id = 1; d_id <= DISTRICT_PER_WAREHOUSE; d_id++)
        {
            MakeAlphaString(6,10,D_NAME_LEN, d_name);

            MakeAddress(d_street_1, d_street_2, d_city,
d_state, d_zip);

            d_tax = ((float) RandomNumber(0L,2000L))/10000.00;

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

            district_rows_loaded++;
            CheckForCommit(w_hdbc1, w_hstmt1,
district_rows_loaded, "district", &time_start);

```

```

    }
}

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

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

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

return;
}

//=====
//
// Function : Stock
//
//=====
void Stock()
{
    long    s_i_id;
    long    s_w_id;
    short   s_quantity;
    char    s_dist_01[S_DIST_LEN+1];
    char    s_dist_02[S_DIST_LEN+1];
    char    s_dist_03[S_DIST_LEN+1];
    char    s_dist_04[S_DIST_LEN+1];
    char    s_dist_05[S_DIST_LEN+1];
    char    s_dist_06[S_DIST_LEN+1];
    char    s_dist_07[S_DIST_LEN+1];
    char    s_dist_08[S_DIST_LEN+1];
    char    s_dist_09[S_DIST_LEN+1];
    char    s_dist_10[S_DIST_LEN+1];
    long    s_ytd;
    short   s_order_cnt;
    short   s_remote_cnt;
    char    s_data[S_DATA_LEN+1];
    short   len;
    char    name[20];
    long    time_start;
    RETCODE rc;
    DBINT   rcint;
    char    bcphint[128];
    char    err_log_path[256];

    // Seed with unique number
    seed(3);

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

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

    strcpy(err_log_path, aptr->log_path);
    strcat(err_log_path, "stock.err");

```

```

rc = bcp_init(w_hdbc1, name, NULL, err_log_path, DB_IN);
if (rc != SUCCEED)
    HandleErrorDBC(w_hdbc1);

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

rc = bcp_bind(w_hdbc1, (BYTE *) &s_i_id, 0, SQL_VARLEN_DATA, NULL,
0, SQLINT4, 1);
if (rc != SUCCEED)
    HandleErrorDBC(w_hdbc1);
rc = bcp_bind(w_hdbc1, (BYTE *) &s_w_id, 0, SQL_VARLEN_DATA, NULL,
0, SQLINT4, 2);
if (rc != SUCCEED)
    HandleErrorDBC(w_hdbc1);
rc = bcp_bind(w_hdbc1, (BYTE *) &s_quantity, 0, SQL_VARLEN_DATA,
NULL, 0, SQLINT2, 3);
if (rc != SUCCEED)
    HandleErrorDBC(w_hdbc1);
rc = bcp_bind(w_hdbc1, (BYTE *) s_dist_01, 0, S_DIST_LEN, NULL, 0,
0, 4);
if (rc != SUCCEED)
    HandleErrorDBC(w_hdbc1);
rc = bcp_bind(w_hdbc1, (BYTE *) s_dist_02, 0, S_DIST_LEN, NULL, 0,
0, 5);
if (rc != SUCCEED)
    HandleErrorDBC(w_hdbc1);
rc = bcp_bind(w_hdbc1, (BYTE *) s_dist_03, 0, S_DIST_LEN, NULL, 0,
0, 6);
if (rc != SUCCEED)
    HandleErrorDBC(w_hdbc1);
rc = bcp_bind(w_hdbc1, (BYTE *) s_dist_04, 0, S_DIST_LEN, NULL, 0,
0, 7);
if (rc != SUCCEED)
    HandleErrorDBC(w_hdbc1);
rc = bcp_bind(w_hdbc1, (BYTE *) s_dist_05, 0, S_DIST_LEN, NULL, 0,
0, 8);
if (rc != SUCCEED)
    HandleErrorDBC(w_hdbc1);
rc = bcp_bind(w_hdbc1, (BYTE *) s_dist_06, 0, S_DIST_LEN, NULL, 0,
0, 9);
if (rc != SUCCEED)
    HandleErrorDBC(w_hdbc1);
rc = bcp_bind(w_hdbc1, (BYTE *) s_dist_07, 0, S_DIST_LEN, NULL, 0,
0, 10);
if (rc != SUCCEED)
    HandleErrorDBC(w_hdbc1);
rc = bcp_bind(w_hdbc1, (BYTE *) s_dist_08, 0, S_DIST_LEN, NULL, 0,
0, 11);
if (rc != SUCCEED)
    HandleErrorDBC(w_hdbc1);
rc = bcp_bind(w_hdbc1, (BYTE *) s_dist_09, 0, S_DIST_LEN, NULL, 0,
0, 12);
if (rc != SUCCEED)
    HandleErrorDBC(w_hdbc1);

```

```

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

s_ytd = s_order_cnt = s_remote_cnt = 0;

time_start = (TimeNow() / MILLI);

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

for (s_i_id=1; s_i_id <= max_items; s_i_id++)
{
    for (s_w_id = (long)aptr->starting_warehouse; s_w_id <=
aptr->num_warehouses; s_w_id++)
    {
        s_quantity = (short)RandomNumber(10L,100L);
        len = MakeAlphaString(24,24,S_DIST_LEN, s_dist_01);
        len = MakeAlphaString(24,24,S_DIST_LEN, s_dist_02);
        len = MakeAlphaString(24,24,S_DIST_LEN, s_dist_03);
        len = MakeAlphaString(24,24,S_DIST_LEN, s_dist_04);
        len = MakeAlphaString(24,24,S_DIST_LEN, s_dist_05);
        len = MakeAlphaString(24,24,S_DIST_LEN, s_dist_06);
        len = MakeAlphaString(24,24,S_DIST_LEN, s_dist_07);
        len = MakeAlphaString(24,24,S_DIST_LEN, s_dist_08);
        len = MakeAlphaString(24,24,S_DIST_LEN, s_dist_09);
        len = MakeAlphaString(24,24,S_DIST_LEN, s_dist_10);

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

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

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

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

```

```

        HandleErrorDBC(w_hdbc1);

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

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

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

return;
}

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

// Seed with unique number
seed(5);

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

// if build index before load...
if ((aptr->build_index == 1) && (aptr->index_order == 1))
{
    BuildIndex("idxcuscl");
    // check the number of processors on this system
    // if 8 or more processors, then build index on History.
    // if less than 8 processors, do not build the index
    num_procs = atoi(getenv( "NUMBER_OF_PROCESSORS" ));
    if ( num_procs >= 8 )
        BuildIndex("idxhiscl");
}

// Initialize bulk copy
printf("Waiting 1 minute before customer load starts...\n");
Sleep(60000);
sprintf(name, "%s..%s", aptr->database, "customer");

strcpy(err_log_path_cust, aptr->log_path);
strcat(err_log_path_cust, "customer.err");

```

```

rc = bcp_init(c_hdbc1, name, NULL, err_log_path_cust, DB_IN);
if (rc != SUCCEED)
    HandleErrorDBC(c_hdbc1);

if ((aptr->build_index == 1) && (aptr->index_order == 1))
{
    sprintf(bcphint, "tablock, order (c_w_id, c_d_id, c_id),
ROWS_PER_BATCH = %u", (aptr->num_warehouses * 30000));
    rc = bcp_control(c_hdbc1, BCPHINTS, (void*) bcphint);
    if (rc != SUCCEED)
        HandleErrorDBC(c_hdbc1);
}

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

rc = bcp_init(c_hdbc2, name, NULL, "logs\\history.err", DB_IN);
strcpy(err_log_path_hist, aptr->log_path);
strcat(err_log_path_hist, "history.err");
rc = bcp_init(c_hdbc2, name, NULL, err_log_path_hist, DB_IN);
if (rc != SUCCEED)
    HandleErrorDBC(c_hdbc2);

//
    sprintf(bcphint, "tablock");
    sprintf(bcphint, "tablock, order (h_c_w_id, h_date, h_c_d_id,
h_c_id, h_amount), ROWS_PER_BATCH = %u", (aptr->num_warehouses * 30000));
// 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 != SUCCEEDED)
        HandleErrorDBC(c_hdbc1);
    rc = bcp_bind(c_hdbc1, (BYTE *) &c_w_id, 0, SQL_VARLEN_DATA, NULL,
0, SQLINT4, 3);
    if (rc != SUCCEEDED)
        HandleErrorDBC(c_hdbc1);
    rc = bcp_bind(c_hdbc1, (BYTE *) c_first, 0, FIRST_NAME_LEN, NULL, 0,
0, 4);
    if (rc != SUCCEEDED)
        HandleErrorDBC(c_hdbc1);
    rc = bcp_bind(c_hdbc1, (BYTE *) c_middle, 0, MIDDLE_NAME_LEN, NULL, 0,
0, 5);
    if (rc != SUCCEEDED)
        HandleErrorDBC(c_hdbc1);
    rc = bcp_bind(c_hdbc1, (BYTE *) c_last, 0, LAST_NAME_LEN, NULL, 0, 0,
6);
    if (rc != SUCCEEDED)
        HandleErrorDBC(c_hdbc1);
    rc = bcp_bind(c_hdbc1, (BYTE *) c_street_1, 0, ADDRESS_LEN, NULL, 0,
0, 7);
    if (rc != SUCCEEDED)
        HandleErrorDBC(c_hdbc1);
    rc = bcp_bind(c_hdbc1, (BYTE *) c_street_2, 0, ADDRESS_LEN, NULL, 0, 0,
8);
    if (rc != SUCCEEDED)
        HandleErrorDBC(c_hdbc1);
    rc = bcp_bind(c_hdbc1, (BYTE *) c_city, 0, ADDRESS_LEN, NULL, 0, 0,
9);
    if (rc != SUCCEEDED)
        HandleErrorDBC(c_hdbc1);
    rc = bcp_bind(c_hdbc1, (BYTE *) c_state, 0, STATE_LEN, NULL, 0, 0,
10);
    if (rc != SUCCEEDED)
        HandleErrorDBC(c_hdbc1);
    rc = bcp_bind(c_hdbc1, (BYTE *) c_zip, 0, ZIP_LEN, NULL, 0, 0, 11);
    if (rc != SUCCEEDED)
        HandleErrorDBC(c_hdbc1);
    rc = bcp_bind(c_hdbc1, (BYTE *) c_phone, 0, PHONE_LEN, NULL, 0, 0,
12);
    if (rc != SUCCEEDED)
        HandleErrorDBC(c_hdbc1);
    rc = bcp_bind(c_hdbc1, (BYTE *) &c_since, 0, C_SINCE_LEN, NULL, 0,
SQLCHARACTER, 13);
    if (rc != SUCCEEDED)
        HandleErrorDBC(c_hdbc1);
    rc = bcp_bind(c_hdbc1, (BYTE *) c_credit, 0, CREDIT_LEN, NULL, 0, 0,
14);
    if (rc != SUCCEEDED)
        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 != SUCCEED)
        HandleErrorDBC(c_hdbc2);
    rc = bcp_bind(c_hdbc2, (BYTE *) &c_d_id, 0, SQL_VARLEN_DATA, NULL, 0,
SQLINT2, 2);
    if (rc != SUCCEED)
        HandleErrorDBC(c_hdbc2);
    rc = bcp_bind(c_hdbc2, (BYTE *) &c_w_id, 0, SQL_VARLEN_DATA, NULL,
0, SQLINT4, 3);
    if (rc != SUCCEED)
        HandleErrorDBC(c_hdbc2);
    rc = bcp_bind(c_hdbc2, (BYTE *) &c_d_id, 0, SQL_VARLEN_DATA, NULL, 0,
SQLINT2, 4);
    if (rc != SUCCEED)
        HandleErrorDBC(c_hdbc2);
    rc = bcp_bind(c_hdbc2, (BYTE *) &c_w_id, 0, SQL_VARLEN_DATA, NULL,
0, SQLINT4, 5);
    if (rc != SUCCEED)
        HandleErrorDBC(c_hdbc2);
    rc = bcp_bind(c_hdbc2, (BYTE *) &h_date, 0, H_DATE_LEN, NULL, 0,
SQLCHARACTER, 6);
    if (rc != SUCCEED)
        HandleErrorDBC(c_hdbc2);
    rc = bcp_bind(c_hdbc2, (BYTE *) &h_amount, 0, SQL_VARLEN_DATA, NULL,
0, SQLFLT8, 7);
    if (rc != SUCCEED)
        HandleErrorDBC(c_hdbc2);
    rc = bcp_bind(c_hdbc2, (BYTE *) h_data, 0, H_DATA_LEN, NULL, 0, 0, 8);
    if (rc != SUCCEED)
        HandleErrorDBC(c_hdbc2);

    for (i = 0; i < customers_per_district; i++)
    {
        c_id = customer_buf[i].c_id;
        c_d_id = customer_buf[i].c_d_id;
        c_w_id = customer_buf[i].c_w_id;
        h_amount = customer_buf[i].h_amount;
        strcpy(h_data, customer_buf[i].h_data);

        FormatDate(&h_date);

        // send to server
        rc = bcp_sendrow(c_hdbc2);
        if (rc != SUCCEED)
            HandleErrorDBC(c_hdbc2);

        history_rows_loaded++;
        CheckForCommit(c_hdbc2, c_hstmt2, history_rows_loaded,
"history", &history_time_start->time_start);
    }
}

```

```

}
}
//=====
//
// Function   : LoadOrders
//
//=====
void LoadOrders()
{
    LOADER_TIME_STRUCT  orders_time_start;
    LOADER_TIME_STRUCT  new_order_time_start;
    LOADER_TIME_STRUCT  order_line_time_start;
    long                w_id;
    short               d_id;
    DWORD               dwThreadID[MAX_ORDER_THREADS];
    HANDLE               hThread[MAX_ORDER_THREADS];
    char                name[20];
    RETCODE              rc;
    char                bcphint[128];
    char                err_log_path_ord[256];
    char                err_log_path_nord[256];
    char                err_log_path_ordl[256];

    // seed with unique number
    seed(6);

    printf("Loading orders...\n");

    // if build index before load...
    if ((aptr->build_index == 1) && (aptr->index_order == 1))
    {
        BuildIndex("idxordc1");
        BuildIndex("idxnodc1");
        BuildIndex("idxodlc1");
    }

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

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

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

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

    rc = bcp_init(o_hdbc2, name, NULL, "logs\\neword.err", DB_IN);
}

```

```

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

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

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

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

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

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

OrdersBufInit();

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

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

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

        hThread[0] = CreateThread(NULL,
0,
(LPTHREAD_START_ROUTINE) LoadOrdersTable,

```

```

&orders_time_start,
0,
&dwThreadID[0]);

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

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

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

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

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

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

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

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

if (CloseHandle(hThread[0]) == FALSE)
{

```

```

        printf("Error, failed in closing Orders
thread handle with errno: %d\n", GetLastError());
    }

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

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

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

return;
}

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

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

        for (j=0;j<=14;j++)
        {
            orders_buf[i].o_ol[j].ol = 0;
            orders_buf[i].o_ol[j].ol_i_id = 0;
            orders_buf[i].o_ol[j].ol_supply_w_id = 0;
            orders_buf[i].o_ol[j].ol_quantity = 0;
            orders_buf[i].o_ol[j].ol_amount = 0;
            strcpy(orders_buf[i].o_ol[j].ol_dist_info,"");
        }
    }
}

//=====
//
// Function   : OrdersBufLoad
//
//

```

```

// Fills shared buffer for ORDERS, NEWORDER, and ORDERLINE
//
//=====
void OrdersBufLoad(short d_id, long w_id)
{
    int     cust[ORDERS_PER_DISTRICT+1];
    long    o_id;
    long    ol;

    printf("...Loading Order Buffer for: d_id = %d, w_id = %d\n",
           d_id, w_id);

    GetPermutation(cust, orders_per_district);

    for (o_id=0;o_id<orders_per_district;o_id++)
    {
        // Generate ORDER and NEW-ORDER data
        orders_buf[o_id].o_d_id = d_id;
        orders_buf[o_id].o_w_id = w_id;
        orders_buf[o_id].o_id = o_id+1;
        orders_buf[o_id].o_c_id = cust[o_id+1];
        orders_buf[o_id].o_ol_cnt = (short)RandomNumber(5L, 15L);

        if (o_id < first_new_order)
        {
            orders_buf[o_id].o_carrier_id =
(short)RandomNumber(1L, 10L);
            orders_buf[o_id].o_all_local = 1;
        }
        else
        {
            orders_buf[o_id].o_carrier_id = 0;
            orders_buf[o_id].o_all_local = 1;
        }

        for (ol=0; ol<orders_buf[o_id].o_ol_cnt; ol++)
        {
            orders_buf[o_id].o_ol[ol].ol = ol+1;
            orders_buf[o_id].o_ol[ol].ol_i_id =
RandomNumber(1L, max_items);
            orders_buf[o_id].o_ol[ol].ol_supply_w_id = w_id;
            orders_buf[o_id].o_ol[ol].ol_quantity = 5;
            MakeAlphaString(24, 24, OL_DIST_INFO_LEN,
&orders_buf[o_id].o_ol[ol].ol_dist_info);

            // Generate ORDER-LINE data
            if (o_id < first_new_order)
            {
                orders_buf[o_id].o_ol[ol].ol_amount = 0;
                // Added to insure ol_delivery_d set
                properly during load

                FormatDate(&orders_buf[o_id].o_ol[ol].ol_delivery_d);
            }
            else
            {
                orders_buf[o_id].o_ol[ol].ol_amount =
RandomNumber(1, 999999)/100.0;
            }
        }
    }
}

```

```

        // Added to insure ol_delivery_d set
properly during load
        // odbc datetime format

        strcpy(orders_buf[o_id].o_ol[ol].ol_delivery_d,"1899-12-31
00:00:00.000");
    }
}

//=====
//
// Function   : LoadOrdersTable
//
//=====
void LoadOrdersTable(LOADER_TIME_STRUCT *orders_time_start)
{
    int          i;
    long         o_id;
    short        o_d_id;
    long         o_w_id;
    long         o_c_id;
    short        o_carrier_id;
    short        o_ol_cnt;
    short        o_all_local;
    char         o_entry_d[O_ENTRY_D_LEN+1];
    RETCODE      rc;
    DBINT        rcint;

    // bind ORDER data
    rc = bcp_bind(o_hdbc1, (BYTE *) &o_id, 0, SQL_VARLEN_DATA, NULL, 0,
SQLINT4, 1);
    if (rc != SUCCEED)
        HandleErrorDBC(o_hdbc1);
    rc = bcp_bind(o_hdbc1, (BYTE *) &o_d_id, 0, SQL_VARLEN_DATA, NULL, 0,
SQLINT2, 2);
    if (rc != SUCCEED)
        HandleErrorDBC(o_hdbc1);
    rc = bcp_bind(o_hdbc1, (BYTE *) &o_w_id, 0, SQL_VARLEN_DATA, NULL,
0, SQLINT4, 3);
    if (rc != SUCCEED)
        HandleErrorDBC(o_hdbc1);
    rc = bcp_bind(o_hdbc1, (BYTE *) &o_c_id, 0, SQL_VARLEN_DATA, NULL, 0,
SQLINT4, 4);
    if (rc != SUCCEED)
        HandleErrorDBC(o_hdbc1);
    rc = bcp_bind(o_hdbc1, (BYTE *) &o_entry_d, 0, O_ENTRY_D_LEN,
NULL, 0, SQLCHARACTER, 5);
    if (rc != SUCCEED)
        HandleErrorDBC(o_hdbc1);
    rc = bcp_bind(o_hdbc1, (BYTE *) &o_carrier_id, 0, SQL_VARLEN_DATA,
NULL, 0, SQLINT2, 6);
    if (rc != SUCCEED)
        HandleErrorDBC(o_hdbc1);
    rc = bcp_bind(o_hdbc1, (BYTE *) &o_ol_cnt, 0, SQL_VARLEN_DATA, NULL,
0, SQLINT2, 7);
    if (rc != SUCCEED)
        HandleErrorDBC(o_hdbc1);
    rc = bcp_bind(o_hdbc1, (BYTE *) &o_all_local, 0, SQL_VARLEN_DATA,
NULL, 0, SQLINT2, 8);

```

```

    if (rc != SUCCEED)
        HandleErrorDBC(o_hdbc1);

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

        FormatDate(&o_entry_d);

        // send data to server
        rc = bcp_sendrow(o_hdbc1);
        if (rc != SUCCEED)
            HandleErrorDBC(o_hdbc1);

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

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

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

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

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

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

    // Bind NEW-ORDER data

```

```

rc = bcp_bind(o_hdbc2, (BYTE *) &o_id, 0, SQL_VARLEN_DATA, NULL, 0,
SQLINT4, 1);
if (rc != SUCCEED)
    HandleErrorDBC(o_hdbc2);
rc = bcp_bind(o_hdbc2, (BYTE *) &o_d_id, 0, SQL_VARLEN_DATA, NULL, 0,
SQLINT2, 2);
if (rc != SUCCEED)
    HandleErrorDBC(o_hdbc2);
rc = bcp_bind(o_hdbc2, (BYTE *) &o_w_id, 0, SQL_VARLEN_DATA, NULL,
0, SQLINT4, 3);
if (rc != SUCCEED)
    HandleErrorDBC(o_hdbc2);

for (i = first_new_order; i < last_new_order; i++)
{
    o_id = orders_buf[i].o_id;
    o_d_id = orders_buf[i].o_d_id;
    o_w_id = orders_buf[i].o_w_id;

    rc = bcp_sendrow(o_hdbc2);
    if (rc != SUCCEED)
        HandleErrorDBC(o_hdbc2);

    new_order_rows_loaded++;
    CheckForCommit_Big(o_hdbc2, o_hstmt2,
new_order_rows_loaded, "new_order", &new_order_time_start->time_start);
}

if ((o_w_id == aptr->num_warehouses) && (o_d_id == 10))
{
    rcint = bcp_done(o_hdbc2);
    if (rcint < 0)
        HandleErrorDBC(o_hdbc2);

    SQLFreeStmt(o_hstmt2, SQL_DROP);
    SQLDisconnect(o_hdbc2);
    SQLFreeConnect(o_hdbc2);

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

//=====
//
// Function : LoadOrderLineTable
//
//=====
void LoadOrderLineTable(LOADER_TIME_STRUCT *order_line_time_start)
{
    long i;
    long j;
    long o_id;
    short o_d_id;
    long o_w_id;
    double ol;
    long ol_i_id;
    long ol_supply_w_id;
    short ol_quantity;
    double ol_amount;

```

```

char ol_dist_info[DIST_INFO_LEN+1];
char ol_delivery_d[OL_DELIVERY_D_LEN+1];
RETCODE rc;
DBINT rcint;

// bind ORDER-LINE data
rc = bcp_bind(o_hdbc3, (BYTE *) &o_id, 0, SQL_VARLEN_DATA, NULL, 0,
SQLINT4, 1);
if (rc != SUCCEED)
    HandleErrorDBC(o_hdbc3);
rc = bcp_bind(o_hdbc3, (BYTE *) &o_d_id, 0, SQL_VARLEN_DATA, NULL, 0,
SQLINT2, 2);
if (rc != SUCCEED)
    HandleErrorDBC(o_hdbc3);
rc = bcp_bind(o_hdbc3, (BYTE *) &o_w_id, 0, SQL_VARLEN_DATA, NULL,
0, SQLINT4, 3);
if (rc != SUCCEED)
    HandleErrorDBC(o_hdbc3);
rc = bcp_bind(o_hdbc3, (BYTE *) &ol, 0, SQL_VARLEN_DATA, NULL, 0,
SQLFLT8, 4);
if (rc != SUCCEED)
    HandleErrorDBC(o_hdbc3);
rc = bcp_bind(o_hdbc3, (BYTE *) &ol_i_id, 0, SQL_VARLEN_DATA, NULL, 0,
SQLINT4, 5);
if (rc != SUCCEED)
    HandleErrorDBC(o_hdbc3);
rc = bcp_bind(o_hdbc3, (BYTE *) &ol_supply_w_id, 0,
SQL_VARLEN_DATA, NULL, 0, SQLINT4, 6);
if (rc != SUCCEED)
    HandleErrorDBC(o_hdbc3);
rc = bcp_bind(o_hdbc3, (BYTE *) &ol_delivery_d, 0,
OL_DELIVERY_D_LEN, NULL, 0, SQLCHARACTER, 7);
if (rc != SUCCEED)
    HandleErrorDBC(o_hdbc3);
rc = bcp_bind(o_hdbc3, (BYTE *) &ol_quantity, 0, SQL_VARLEN_DATA,
NULL, 0, SQLINT2, 8);
if (rc != SUCCEED)
    HandleErrorDBC(o_hdbc3);
rc = bcp_bind(o_hdbc3, (BYTE *) &ol_amount, 0, SQL_VARLEN_DATA, NULL,
0, SQLFLT8, 9);
if (rc != SUCCEED)
    HandleErrorDBC(o_hdbc3);
rc = bcp_bind(o_hdbc3, (BYTE *) ol_dist_info, 0, DIST_INFO_LEN, NULL,
0, 0, 10);
if (rc != SUCCEED)
    HandleErrorDBC(o_hdbc3);

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

    for (j=0; j < orders_buf[i].o_ol_cnt; j++)
    {
        ol = orders_buf[i].o_ol[j].ol;
        ol_i_id = orders_buf[i].o_ol[j].ol_i_id;
        ol_supply_w_id =
orders_buf[i].o_ol[j].ol_supply_w_id;
        ol_quantity = orders_buf[i].o_ol[j].ol_quantity;

```

```

        ol_amount      = orders_buf[i].o_ol[j].ol_amount;

strcpy(ol_delivery_d,orders_buf[i].o_ol[j].ol_delivery_d);

strcpy(ol_dist_info,orders_buf[i].o_ol[j].ol_dist_info);

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

        order_line_rows_loaded++;

        CheckForCommit_Big(o_hdbc3, o_hstmt3,
order_line_rows_loaded, "order_line", &order_line_time_start->time_start);
    }

    if ((o_w_id == aptr->num_warehouses) && (o_d_id == 10))
    {
        rcint = bcp_done(o_hdbc3);
        if (rcint < 0)
            HandleErrorDBC(o_hdbc3);

        SQLFreeStmt(o_hstmt3, SQL_DROP);
        SQLDisconnect(o_hdbc3);
        SQLFreeConnect(o_hdbc3);

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

//=====
//
// Function   : GetPermutation
//
//=====
void GetPermutation(int perm[], int n)
{
    int i, r, t;

    for (i=1;i<=n;i++)
        perm[i] = i;

    for (i=1;i<=n;i++)
    {
        r = RandomNumber(i,n);
        t = perm[i];
        perm[i] = perm[r];
        perm[r] = t;
    }
}

//=====
//
// Function   : CheckForCommit
//
//=====

```

```

void CheckForCommit(HDBC hdbc,
                   HSTMT hstmt,
                   long rows_loaded,
                   char *table_name,
                   long *time_start)
{
    long      time_end, time_diff;
    //      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 rows per sec)\n",
               aptr->batch,
               table_name,
               time_diff,
               rows_loaded,
               (float) aptr->batch / (time_diff ? time_diff
: 1L));

        *time_start = time_end;
    }

    return;
}

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

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

    return;
}

//=====
//

```

```

// Function : CheckForCommit_Big
//
//=====
void CheckForCommit_Big(HDBC hdbc,
                       HSTMT hstmt,
                       double rows_loaded,
                       char *table_name,
                       long *time_start)
{
    long    time_end, time_diff;

    if ( !(fmod(rows_loaded,aptr->batch) ) )
    {
        time_end = (TimeNow() / MILLI);
        time_diff = time_end - *time_start;

        printf("-> Loaded %ld rows into %s in %ld sec - Total =
%.0f (%.2f rps)\n",
               aptr->batch,
               table_name,
               time_diff,
               rows_loaded,
               (float) aptr->batch / (time_diff ? time_diff
: 1L));

        *time_start = time_end;
    }

    return;
}
//=====
//
// Function : OpenConnections
//
//=====
void OpenConnections()
{
    RETCODE      rc;

    char          szDriverString[300];
    char          szDriverStringOut[1024];
    SQLSMALLINT   cbDriverStringOut;

    SQLAllocHandle(SQL_HANDLE_ENV, SQL_NULL_HANDLE, &henv );
    SQLSetEnvAttr(henv, SQL_ATTR_ODBC_VERSION, (void*)SQL_OV_ODBC3, 0
);

    SQLAllocHandle(SQL_HANDLE_DBC, henv , &i_hdbc1);
    SQLAllocHandle(SQL_HANDLE_DBC, henv , &w_hdbc1);
    SQLAllocHandle(SQL_HANDLE_DBC, henv , &c_hdbc1);
    SQLAllocHandle(SQL_HANDLE_DBC, henv , &c_hdbc2);
    SQLAllocHandle(SQL_HANDLE_DBC, henv , &o_hdbc1);
    SQLAllocHandle(SQL_HANDLE_DBC, henv , &o_hdbc2);
    SQLAllocHandle(SQL_HANDLE_DBC, henv , &o_hdbc3);

```

```

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

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

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

    rc = SQLDriverConnect ( i_hdbc1,
                           NULL,
                           (SQLCHAR*)&szDriverString[0],
                           SQL_NTS,
                           (SQLCHAR*)&szDriverStringOut[0],
                           sizeof(szDriverStringOut),
                           &cbDriverStringOut,
                           SQL_DRIVER_NOPROMPT );

    if ( (rc != SUCCEED) &&
         (rc != SQL_SUCCESS_WITH_INFO) )
    {
        HandleErrorDBC(i_hdbc1);
        printf("TPC-C Loader aborted!\n");
        exit(9);
    }

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

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

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

```

```

rc = SQLDriverConnect ( w_hdbc1,
                        NULL,
(SQLCHAR*)&szDriverString[0] ,
                        SQL_NTS,
(SQLCHAR*)&szDriverStringOut[0],
sizeof(szDriverStringOut),
                        &cbDriverStringOut,
                        SQL_DRIVER_NOPROMPT
);

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

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

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

rc = SQLDriverConnect ( c_hdbc1,
                        NULL,
(SQLCHAR*)&szDriverString[0] ,
                        SQL_NTS,
(SQLCHAR*)&szDriverStringOut[0],
sizeof(szDriverStringOut),
                        &cbDriverStringOut,
                        SQL_DRIVER_NOPROMPT
);

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

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

```

```

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

rc = SQLDriverConnect ( c_hdbc2,
                        NULL,
(SQLCHAR*)&szDriverString[0] ,
                        SQL_NTS,
(SQLCHAR*)&szDriverStringOut[0],
sizeof(szDriverStringOut),
                        &cbDriverStringOut,
                        SQL_DRIVER_NOPROMPT
);

if ( (rc != SUCCEED) &&
      (rc != SQL_SUCCESS_WITH_INFO) )
{
    HandleErrorDBC(c_hdbc2);
    printf("TPC-C Loader aborted!\n");
    exit(9);
}

// Connection 5
sprintf( szDriverString , "DRIVER={SQL
Server};SERVER=%s;UID=%s;PWD=%s;DATABASE=%s" ,
        aptr->server,
        aptr->user,
        aptr->password,
        aptr->database );

rc = SQLSetConnectOption (o_hdbc1, SQL_PACKET_SIZE, aptr-
>pack_size);
if (rc != SUCCEED)
    HandleErrorDBC(o_hdbc1);

rc = SQLDriverConnect ( o_hdbc1,
                        NULL,
(SQLCHAR*)&szDriverString[0] ,
                        SQL_NTS,
(SQLCHAR*)&szDriverStringOut[0],
sizeof(szDriverStringOut),
                        &cbDriverStringOut,
                        SQL_DRIVER_NOPROMPT
);

if ( (rc != SUCCEED) &&
      (rc != SQL_SUCCESS_WITH_INFO) )
{
    HandleErrorDBC(o_hdbc1);
    printf("TPC-C Loader aborted!\n");
    exit(9);
}

// Connection 6

```



```

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

    rc = SQLSetConnectOption (o_hdbc2, SQL_PACKET_SIZE, aptr-
>pack_size);
    if (rc != SUCCEED)
        HandleErrorDBC(o_hdbc2);

    rc = SQLDriverConnect ( o_hdbc2,
        NULL,
        (SQLCHAR*)&szDriverString[0] ,
        SQL_NTS,
        (SQLCHAR*)&szDriverStringOut[0],
        sizeof(szDriverStringOut),
        &cbDriverStringOut,
        SQL_DRIVER_NOPROMPT
);
    if ( (rc != SUCCEED) &&
        (rc != SQL_SUCCESS_WITH_INFO) )
    {
        HandleErrorDBC(o_hdbc2);
        printf("TPC-C Loader aborted!\n");
        exit(9);
    }

    // Connection 7
    sprintf( szDriverString , "DRIVER={SQL
Server};SERVER=%s;UID=%s;PWD=%s;DATABASE=%s" ,
        aptr->server,
        aptr->user,
        aptr->password,
        aptr->database );

    rc = SQLSetConnectOption (o_hdbc3, SQL_PACKET_SIZE, aptr-
>pack_size);
    if (rc != SUCCEED)
        HandleErrorDBC(o_hdbc3);

    rc = SQLDriverConnect ( o_hdbc3,
        NULL,
        (SQLCHAR*)&szDriverString[0] ,
        SQL_NTS,
        (SQLCHAR*)&szDriverStringOut[0],
        sizeof(szDriverStringOut),
        &cbDriverStringOut,
        SQL_DRIVER_NOPROMPT
);
    if ( (rc != SUCCEED) &&
        (rc != SQL_SUCCESS_WITH_INFO) )
    {
        HandleErrorDBC(o_hdbc3);

```

```

        printf("TPC-C Loader aborted!\n");
        exit(9);
    }
}
//=====
//
// Function name: BuildIndex
//
//=====
void BuildIndex(char *index_script)
{
    char cmd[256];
    WaitForSingleObject( hIndexMutex, INFINITE );
    printf("Starting index creation: %s\n",index_script);
    sprintf(cmd, "osql -S%s -U%s -P%s -e -i%s\\%s.sql > %s%s.log",
        aptr->server,
        aptr->user,
        aptr->password,
        aptr->index_script_path,
        index_script,
        aptr->log_path,
        index_script);

    system(cmd);

    printf("Finished index creation: %s\n",index_script);
    Sleep(5000);
    ReleaseMutex( hIndexMutex);
}
//=====
//
// Function name: HandleErrorDBC
//
//=====
void HandleErrorDBC (SQLHDBC hdbc1)
{
    SQLCHAR          SqlState[6], Msg[SQL_MAX_MESSAGE_LENGTH];
    SQLLEN           NativeError;
    SQLSMALLINT i, MsgLen;
    SQLRETURN rc2;
    char timebuf[128];
    char datebuf[128];
    char err_log_path[256];
    FILE *fp1;

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

        _strtime(timebuf);
        _strdate(datebuf);

```

```

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

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

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

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

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

        _strtime(timebuf);
        _strdate(datebuf);

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

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

```

```

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

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

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

    mktime( &when );

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

    return;
} }

```

Appendix C - Tunable Parameters

Microsoft SQL Server Startup Parameters

```
sqlservr -c -x -g300 -T3502 -T3428
```

Where:

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

BOOT.INI

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

```
-----
2004-05-25 18:59:29.560
```

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

```
2004-05-25 18:59:29.967
```

```
(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
allow updates	0	1	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	624
624			
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):        521971
LUN Capacity (Blocks):           1068996608
UID:
60:06:01:60:5B:30:10:00:BE:20:E3:5B:61:AB:D8:11
Bus 0 Enclosure 0 Disk 0 Queue Length:

```

0

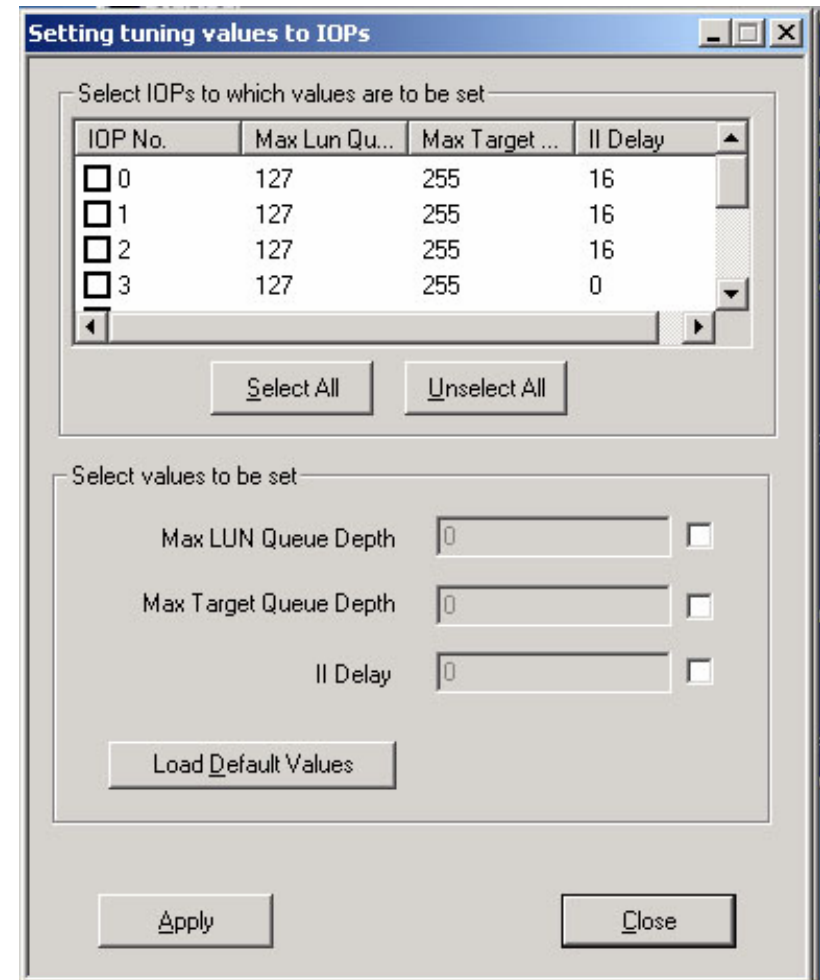
```

Bus 0 Enclosure 0 Disk 2 Queue Length: 0
Bus 0 Enclosure 0 Disk 4 Queue Length: 0
Bus 0 Enclosure 0 Disk 6 Queue Length: 0
Bus 0 Enclosure 0 Disk 1 Queue Length: 0
Bus 0 Enclosure 0 Disk 3 Queue Length: 0
Bus 0 Enclosure 0 Disk 5 Queue Length: 0
Bus 0 Enclosure 0 Disk 7 Queue Length: 0
Bus 0 Enclosure 0 Disk 0 Hard Read Errors: 0
Bus 0 Enclosure 0 Disk 2 Hard Read Errors: 0
Bus 0 Enclosure 0 Disk 4 Hard Read Errors: 0
Bus 0 Enclosure 0 Disk 6 Hard Read Errors: 0
Bus 0 Enclosure 0 Disk 1 Hard Read Errors: 0
Bus 0 Enclosure 0 Disk 3 Hard Read Errors: 0
Bus 0 Enclosure 0 Disk 5 Hard Read Errors: 0
Bus 0 Enclosure 0 Disk 7 Hard Read Errors: 0
Bus 0 Enclosure 0 Disk 0 Hard Write Errors: 0
Bus 0 Enclosure 0 Disk 2 Hard Write Errors: 0
Bus 0 Enclosure 0 Disk 4 Hard Write Errors: 0
Bus 0 Enclosure 0 Disk 6 Hard Write Errors: 0
Bus 0 Enclosure 0 Disk 1 Hard Write Errors: 0
Bus 0 Enclosure 0 Disk 3 Hard Write Errors: 0
Bus 0 Enclosure 0 Disk 5 Hard Write Errors: 0
Bus 0 Enclosure 0 Disk 7 Hard Write Errors: 0
Bus 0 Enclosure 0 Disk 0 Soft Read Errors: 0
Bus 0 Enclosure 0 Disk 2 Soft Read Errors: 0
Bus 0 Enclosure 0 Disk 4 Soft Read Errors: 0
Bus 0 Enclosure 0 Disk 6 Soft Read Errors: 0
Bus 0 Enclosure 0 Disk 1 Soft Read Errors: 0
Bus 0 Enclosure 0 Disk 3 Soft Read Errors: 0
Bus 0 Enclosure 0 Disk 5 Soft Read Errors: 0
Bus 0 Enclosure 0 Disk 7 Soft Read Errors: 0
Bus 0 Enclosure 0 Disk 0 Soft Write Errors: 0
Bus 0 Enclosure 0 Disk 2 Soft Write Errors: 0
Bus 0 Enclosure 0 Disk 4 Soft Write Errors: 0
Bus 0 Enclosure 0 Disk 6 Soft Write Errors: 0
Bus 0 Enclosure 0 Disk 1 Soft Write Errors: 0
Bus 0 Enclosure 0 Disk 3 Soft Write Errors: 0
Bus 0 Enclosure 0 Disk 5 Soft Write Errors: 0
Bus 0 Enclosure 0 Disk 7 Soft Write Errors: 0

Bus 0 Enclosure 0 Disk 0 Enabled
Bus 0 Enclosure 0 Disk 2 Enabled
Bus 0 Enclosure 0 Disk 4 Enabled
Bus 0 Enclosure 0 Disk 6 Enabled
Bus 0 Enclosure 0 Disk 1 Enabled
Bus 0 Enclosure 0 Disk 3 Enabled
Bus 0 Enclosure 0 Disk 5 Enabled
Bus 0 Enclosure 0 Disk 7 Enabled
Is Private: NO
Snapshots List: None
MirrorView Name if any: Not Mirrored

```

Fibre Channel HBAUtility Settings




```

Processor      x86 Family 15 Model 2 Stepping 6 GenuineIntel ~2199 Mhz
Processor      x86 Family 15 Model 2 Stepping 6 GenuineIntel ~2199 Mhz
Processor      x86 Family 15 Model 2 Stepping 6 GenuineIntel ~2199 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 3,708.00 MB
Available Physical Memory 71.29 MB
Total Virtual Memory 129.95 GB
Available Virtual Memory 3.49 GB
Page File Space       66.36 GB
Page File             C:\pagefile.sys

```

[Hardware Resources]

[Conflicts/Sharing]

```

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

Memory Address 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

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 0xEE400000-0xEEFFFFFF      PCI bus

```

```

Memory Address 0xEE400000-0xEEFFFFFF      PCI standard PCI-to-PCI bridge
Memory Address 0xEE400000-0xEEFFFFFF      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 0xEF000000-0xF0FFFFFF      PCI bus
Memory Address 0xEF000000-0xF0FFFFFF      cLAN Host Adapter #6

Memory Address 0xED400000-0xEDFFFFFF      PCI bus
Memory Address 0xED400000-0xEDFFFFFF      PCI standard PCI-to-PCI bridge

Memory Address 0xED400000-0xEDFFFFFF      Unisys Intelligent Fibre Channel
Fabric Bus Adapter

Memory Address 0xEB000000-0xECFFFFFF      PCI bus
Memory Address 0xEB000000-0xECFFFFFF      cLAN Host Adapter #4

Memory Address 0xEA800000-0xEAFFFFFF      PCI standard PCI-to-PCI bridge
Memory Address 0xEA800000-0xEAFFFFFF      Unisys Intelligent Fibre Channel
Fabric Bus Adapter

Memory Address 0xE8800000-0xE8FFFFFF      PCI standard PCI-to-PCI bridge
Memory Address 0xE8800000-0xE8FFFFFF      Unisys Intelligent Fibre Channel
Fabric Bus Adapter

Memory Address 0xE9000000-0xEAFFFFFF      PCI bus
Memory Address 0xE9000000-0xEAFFFFFF      PCI standard PCI-to-PCI bridge

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

Memory Address 0xE7900000-0xE8FFFFFF      PCI bus
Memory Address 0xE7900000-0xE8FFFFFF      PCI standard PCI-to-PCI bridge

Memory Address 0xE7900000-0xE8FFFFFF      Unisys Intelligent Fibre Channel
Fabric Bus Adapter

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

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

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

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

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

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

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

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

Memory Address 0xF2100000-0xF3FFFFFF PCI bus
Memory Address 0xF2100000-0xF3FFFFFF cLAN Host Adapter

Memory Address 0xED800000-0xEDFFFFFF PCI standard PCI-to-PCI bridge

Memory Address 0xED800000-0xEDFFFFFF Unisys Intelligent Fibre Channel
Fabric Bus Adapter

```

[DMA]

```

Resource      Device Status
Channel 4     Direct memory access controller      OK
Channel 1     ECP Printer Port (LPT1)              OK
Channel 2     Standard floppy disk controller      OK

```

[Forced Hardware]

Device PNP Device ID

[I/O]

```

Resource      Device Status
0x000010F0-0x000010FF PCI bus OK
0x00001100-0x000013FF PCI bus OK
0x00000000-0x000010EF PCI bus OK
0x00000000-0x000010EF Direct memory access controller      OK
0x00000A79-0x0000A79 ISAPNP Read Data Port OK

```

```

0x00000279-0x00000279 ISAPNP Read Data Port OK
0x00000274-0x00000277 ISAPNP Read Data Port OK
0x00000081-0x0000008F Direct memory access controller      OK
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 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 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
0xE7800000-0xE78FFFFF	PCI bus OK	

```

0xE7900000-0xE8FFFFFF PCI bus OK
0xE7900000-0xE8FFFFFF PCI standard PCI-to-PCI bridge OK
0xE7900000-0xE8FFFFFF Unisys Intelligent Fibre Channel Fabric Bus Adapter
OK
0xE8800000-0xE8FFFFFF PCI standard PCI-to-PCI bridge OK
0xE8800000-0xE8FFFFFF 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
0xE6000000-0xE77FFFFFF PCI bus OK
0xE7000000-0xE77FFFFFF Console Manager Video Driver IPL2 PCI OK
0xE6800000-0xE6FFFFFF Console Manager Video Driver IPL2 PCI OK
0xE6002000-0xE6002FFF Standard OpenHCD USB Host Controller OK
0xE6001000-0xE6001FFF Standard OpenHCD USB Host Controller OK
0xE6003000-0xE6003FFF Intel 8255x-based PCI Ethernet Adapter (10/100)
OK
0xE6100000-0xE61FFFFFF Intel 8255x-based PCI Ethernet Adapter (10/100)
OK
0xE9000000-0xEAFFFFFF PCI bus OK
0xE9000000-0xEAFFFFFF PCI standard PCI-to-PCI bridge OK
0xE9000000-0xEAFFFFFF Unisys Intelligent Fibre Channel Fabric Bus Adapter
OK
0xEA800000-0xEAFFFFFF PCI standard PCI-to-PCI bridge OK
0xEA800000-0xEAFFFFFF Unisys Intelligent Fibre Channel Fabric Bus Adapter
OK
0xEB000000-0xECFFFFFF PCI bus OK
0xEB000000-0xECFFFFFF cLAN Host Adapter #4 OK
0xEB020000-0xEB03FFFF cLAN Host Adapter #4 OK
0xEB200000-0xEB3FFFFF cLAN Host Adapter #4 OK
0xEC000000-0xECFFFFFF cLAN Host Adapter #4 OK
0xED000000-0xED3FFFFF PCI bus OK
0xED400000-0xEDFFFFFF PCI bus OK
0xED400000-0xEDFFFFFF PCI standard PCI-to-PCI bridge OK
0xED400000-0xEDFFFFFF Unisys Intelligent Fibre Channel Fabric Bus Adapter
OK
0xED800000-0xEDFFFFFF PCI standard PCI-to-PCI bridge OK
0xED800000-0xEDFFFFFF Unisys Intelligent Fibre Channel Fabric Bus Adapter
OK
0xEE000000-0xEE0FFFFFF PCI bus OK
0xEE100000-0xEE3FFFFF PCI bus OK
0xEE400000-0xEEFFFFFF PCI bus OK
0xEE400000-0xEEFFFFFF PCI standard PCI-to-PCI bridge OK
0xEE400000-0xEEFFFFFF Unisys Intelligent Fibre Channel Fabric Bus Adapter
OK
0xEE800000-0xEEFFFFFF PCI standard PCI-to-PCI bridge OK
0xEE800000-0xEEFFFFFF Unisys Intelligent Fibre Channel Fabric Bus Adapter
OK
0xEF000000-0xEF0FFFFFF PCI bus OK
0xEF000000-0xEF0FFFFFF cLAN Host Adapter #6 OK
0xEF020000-0xEF03FFFF cLAN Host Adapter #6 OK
0xEF200000-0xEF3FFFFF cLAN Host Adapter #6 OK
0xF0000000-0xF0FFFFFF cLAN Host Adapter #6 OK
0xF1000000-0xF13FFFFF PCI bus OK
0xF1400000-0xF1FFFFFF PCI bus OK
0xF1400000-0xF1FFFFFF PCI standard PCI-to-PCI bridge OK
0xF1400000-0xF1FFFFFF Unisys Intelligent Fibre Channel Fabric Bus Adapter
OK

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0xF1800000-0xF1FFFFFF PCI standard PCI-to-PCI bridge OK
0xF1800000-0xF1FFFFFF Unisys Intelligent Fibre Channel Fabric Bus Adapter
OK
0xF2000000-0xF2FFFFFF PCI bus OK
0xF2100000-0xF3FFFFFF PCI bus OK
0xF2100000-0xF3FFFFFF cLAN Host Adapter OK
0xF2120000-0xF213FFFF cLAN Host Adapter OK
0xF2200000-0xF23FFFFF cLAN Host Adapter OK
0xF3000000-0xF3FFFFFF cLAN Host Adapter OK
0xF4000000-0xF5FFFFFF PCI bus OK
0xF4000000-0xF5FFFFFF PCI standard PCI-to-PCI bridge OK
0xF4000000-0xF5FFFFFF Unisys Intelligent Fibre Channel Fabric Bus Adapter
OK
0xF5800000-0xF5FFFFFF PCI standard PCI-to-PCI bridge OK
0xF5800000-0xF5FFFFFF Unisys Intelligent Fibre Channel Fabric Bus Adapter
OK
0xF6000000-0xF60FFFFF PCI bus OK
0xF6100000-0xF63FFFFF PCI bus OK
0xF6400000-0xF6FFFFFF PCI bus OK
0xF6400000-0xF6FFFFFF PCI standard PCI-to-PCI bridge OK
0xF6400000-0xF6FFFFFF Unisys Intelligent Fibre Channel Fabric Bus Adapter
OK
0xF6800000-0xF6FFFFFF 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\msg723.acm      Microsoft Corporation      OK
C:\WINDOWS\system32\MSG723.ACM    4.4.4000      116.00 KB
(118,784 bytes)      4/25/2004 1:23 AM
c:\windows\system32\msgsm32.acm    Microsoft Corporation      OK
C:\WINDOWS\system32\MSGSM32.ACM  5.2.3790.0 (srv03_rtm.030324-
2048) 20.50 KB (20,992 bytes)    3/25/2003 4:00 AM
c:\windows\system32\tsoft32.acm    DSP GROUP, INC.           OK
C:\WINDOWS\system32\TSOFT32.ACM  1.01      9.50 KB (9,728 bytes)
3/25/2003 4:00 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 4:00 AM
c:\windows\system32\imaadp32.acm   Microsoft Corporation      OK
C:\WINDOWS\system32\IMAADP32.ACM  5.2.3790.0 (srv03_rtm.030324-
2048) 15.50 KB (15,872 bytes)    3/25/2003 4:00 AM
c:\windows\system32\msadp32.acm    Microsoft Corporation      OK
C:\WINDOWS\system32\MSADP32.ACM  5.2.3790.0 (srv03_rtm.030324-
2048) 14.50 KB (14,848 bytes)    3/25/2003 4:00 AM
c:\windows\system32\msg711.acm    Microsoft Corporation      OK
C:\WINDOWS\system32\MSG711.ACM  5.2.3790.0 (srv03_rtm.030324-
2048) 10.00 KB (10,240 bytes)    3/25/2003 4:00 AM
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\msyuv.dll Microsoft Corporation      OK
C:\WINDOWS\system32\MSYUV.DLL  5.2.3790.0 (srv03_rtm.030324-2048)
16.50 KB (16,896 bytes)    3/24/2003 5:49 PM
c:\windows\system32\msh263.drv Microsoft Corporation      OK
C:\WINDOWS\system32\MSH263.DRV  4.4.4000      284.00 KB
(290,816 bytes)    3/24/2003 5:46 PM
c:\windows\system32\iyuv_32.dll Microsoft Corporation      OK
C:\WINDOWS\system32\IYUV_32.DLL  5.2.3790.0 (srv03_rtm.030324-
2048) 45.00 KB (46,080 bytes)    3/24/2003 5:49 PM
c:\windows\system32\msrle32.dll Microsoft Corporation      OK
C:\WINDOWS\system32\MSRLE32.DLL  5.2.3790.0 (srv03_rtm.030324-
2048) 10.50 KB (10,752 bytes)    3/25/2003 4:00 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 4:00 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\msh261.drv Microsoft Corporation      OK
C:\WINDOWS\system32\MSH261.DRV  4.4.4000      180.00 KB
(184,320 bytes)    4/25/2004 1:23 AM

```

[CD-ROM]

```

Item Value
Drive D:
Description CD-ROM Drive
Media Loaded No
Media Type CD-ROM
Name TEAC CD-224E

```

```

Manufacturer (Standard CD-ROM drives)
Status OK
Transfer Rate Not Available
SCSI Target ID 0
PNP Device ID IDE\CDROMTEAC_CD-
224E_____1.9A____\5&1B78D9&0&0.0.0
[Sound Device]
Item Value
[Display]
Item Value
Name Console Manager Video Driver IPL2 PCI
PNP Device ID
PCI\VEN_1018&DEV_C210&SUBSYS_C2101018&REV_00\3&172E68DD&0&08
Adapter Type Not Available
Adapter Description Unisys Corporation
Adapter RAM Not Available
Installed Drivers Not Available
Driver Version ucondisp.dll
INF File 7.0.0.27 (oem6.inf section)
Color Planes ucon
Color Table Entries 1
Resolution 65536 x 1024 x 768 hertz
Bits/Pixel 75
Memory Address 0xE7000000-0xE77FFFFF
Memory Address 0xE6800000-0xE6FFFFFF
Memory Address 0xA0000-0xBF000
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
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_{B4E35858-75CE-4227-B716-7D1867B22A3B}] SEQPACKET 8
Connectionless Service No
Guarantees Delivery Yes
Guarantees Sequencing Yes
Maximum Address Size 20 bytes
Maximum Message Size 62.50 KB (64,000 bytes)
Message Oriented Yes
Minimum Address Size 20 bytes

Pseudo Stream Oriented No
 Supports Broadcasting No
 Supports Connect Data No
 Supports Disconnect Data No
 Supports Encryption No
 Supports Expedited Data No
 Supports Graceful Closing No
 Supports Guaranteed Bandwidth No
 Supports Multicasting No

Name MSAFD NetBIOS [\Device\NetBT_Tcpip_{B4E35858-75CE-4227-B716-7D1867B22A3B}] DATAGRAM 8
 Connectionless Service Yes
 Guarantees Delivery No
 Guarantees Sequencing No
 Maximum Address Size 20 bytes
 Maximum Message Size 62.50 KB (64,000 bytes)
 Message Oriented Yes
 Minimum Address Size 20 bytes
 Pseudo Stream Oriented No
 Supports Broadcasting Yes
 Supports Connect Data No
 Supports Disconnect Data No
 Supports Encryption No
 Supports Expedited Data No
 Supports Graceful Closing No
 Supports Guaranteed Bandwidth No
 Supports Multicasting No

Name MSAFD NetBIOS [\Device\NetBT_Tcpip_{AD02C75A-183C-4A1A-84D6-0CDCB07DE636}] SEQPACKET 6
 Connectionless Service No
 Guarantees Delivery Yes
 Guarantees Sequencing Yes
 Maximum Address Size 20 bytes
 Maximum Message Size 62.50 KB (64,000 bytes)
 Message Oriented Yes
 Minimum Address Size 20 bytes
 Pseudo Stream Oriented No
 Supports Broadcasting No
 Supports Connect Data No
 Supports Disconnect Data No
 Supports Encryption No
 Supports Expedited Data No
 Supports Graceful Closing No
 Supports Guaranteed Bandwidth No
 Supports Multicasting No

Name MSAFD NetBIOS [\Device\NetBT_Tcpip_{AD02C75A-183C-4A1A-84D6-0CDCB07DE636}] DATAGRAM 6
 Connectionless Service Yes
 Guarantees Delivery No
 Guarantees Sequencing No
 Maximum Address Size 20 bytes
 Maximum Message Size 62.50 KB (64,000 bytes)
 Message Oriented Yes
 Minimum Address Size 20 bytes
 Pseudo Stream Oriented No
 Supports Broadcasting Yes

Supports Connect Data No
 Supports Disconnect Data No
 Supports Encryption No
 Supports Expedited Data No
 Supports Graceful Closing No
 Supports Guaranteed Bandwidth No
 Supports Multicasting No

Name MSAFD NetBIOS [\Device\NetBT_Tcpip_{3A5E9A55-D57D-4FAC-8389-0543309B0046}] SEQPACKET 5
 Connectionless Service No
 Guarantees Delivery Yes
 Guarantees Sequencing Yes
 Maximum Address Size 20 bytes
 Maximum Message Size 62.50 KB (64,000 bytes)
 Message Oriented Yes
 Minimum Address Size 20 bytes
 Pseudo Stream Oriented No
 Supports Broadcasting No
 Supports Connect Data No
 Supports Disconnect Data No
 Supports Encryption No
 Supports Expedited Data No
 Supports Graceful Closing No
 Supports Guaranteed Bandwidth No
 Supports Multicasting No

Name MSAFD NetBIOS [\Device\NetBT_Tcpip_{3A5E9A55-D57D-4FAC-8389-0543309B0046}] DATAGRAM 5
 Connectionless Service Yes
 Guarantees Delivery No
 Guarantees Sequencing No
 Maximum Address Size 20 bytes
 Maximum Message Size 62.50 KB (64,000 bytes)
 Message Oriented Yes
 Minimum Address Size 20 bytes
 Pseudo Stream Oriented No
 Supports Broadcasting Yes
 Supports Connect Data No
 Supports Disconnect Data No
 Supports Encryption No
 Supports Expedited Data No
 Supports Graceful Closing No
 Supports Guaranteed Bandwidth No
 Supports Multicasting No

Name MSAFD NetBIOS [\Device\NetBT_Tcpip_{B324133E-EEF5-4CB1-8DC6-8DDB462EBE28}] SEQPACKET 3
 Connectionless Service No
 Guarantees Delivery Yes
 Guarantees Sequencing Yes
 Maximum Address Size 20 bytes
 Maximum Message Size 62.50 KB (64,000 bytes)
 Message Oriented Yes
 Minimum Address Size 20 bytes
 Pseudo Stream Oriented No
 Supports Broadcasting No
 Supports Connect Data No
 Supports Disconnect Data No

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

Name MSAFD NetBIOS [\Device\NetBT_Tcpip_{8DDB462EBE28}] DATAGRAM 3
Connectionless Service Yes
Guarantees Delivery No
Guarantees Sequencing No
Maximum Address Size 20 bytes
Maximum Message Size 62.50 KB (64,000 bytes)
Message Oriented Yes
Minimum Address Size 20 bytes
Pseudo Stream Oriented No
Supports Broadcasting Yes
Supports Connect Data No
Supports Disconnect Data No
Supports Encryption No
Supports Expedited Data No
Supports Graceful Closing No
Supports Guaranteed Bandwidth No
Supports Multicasting No

Name MSAFD NetBIOS [\Device\NetBT_Tcpip_{9267AEF7-C002-4C89-AFD9-8C576E5B274C}] SEQPACKET 0
Connectionless Service No
Guarantees Delivery Yes
Guarantees Sequencing Yes
Maximum Address Size 20 bytes
Maximum Message Size 62.50 KB (64,000 bytes)
Message Oriented Yes
Minimum Address Size 20 bytes
Pseudo Stream Oriented No
Supports Broadcasting No
Supports Connect Data No
Supports Disconnect Data No
Supports Encryption No
Supports Expedited Data No
Supports Graceful Closing No
Supports Guaranteed Bandwidth No
Supports Multicasting No

Name MSAFD NetBIOS [\Device\NetBT_Tcpip_{9267AEF7-C002-4C89-AFD9-8C576E5B274C}] DATAGRAM 0
Connectionless Service Yes
Guarantees Delivery No
Guarantees Sequencing No
Maximum Address Size 20 bytes
Maximum Message Size 62.50 KB (64,000 bytes)
Message Oriented Yes
Minimum Address Size 20 bytes
Pseudo Stream Oriented No
Supports Broadcasting Yes
Supports Connect Data No
Supports Disconnect Data No
Supports Encryption No
Supports Expedited Data No

Supports Graceful Closing No
Supports Guaranteed Bandwidth No
Supports Multicasting No

Name MSAFD NetBIOS [\Device\NetBT_Tcpip_{C60AE25D-DF86-4E0A-B1C1-71DCC999A9D0}] SEQPACKET 1
Connectionless Service No
Guarantees Delivery Yes
Guarantees Sequencing Yes
Maximum Address Size 20 bytes
Maximum Message Size 62.50 KB (64,000 bytes)
Message Oriented Yes
Minimum Address Size 20 bytes
Pseudo Stream Oriented No
Supports Broadcasting No
Supports Connect Data No
Supports Disconnect Data No
Supports Encryption No
Supports Expedited Data No
Supports Graceful Closing No
Supports Guaranteed Bandwidth No
Supports Multicasting No

Name MSAFD NetBIOS [\Device\NetBT_Tcpip_{C60AE25D-DF86-4E0A-B1C1-71DCC999A9D0}] DATAGRAM 1
Connectionless Service Yes
Guarantees Delivery No
Guarantees Sequencing No
Maximum Address Size 20 bytes
Maximum Message Size 62.50 KB (64,000 bytes)
Message Oriented Yes
Minimum Address Size 20 bytes
Pseudo Stream Oriented No
Supports Broadcasting Yes
Supports Connect Data No
Supports Disconnect Data No
Supports Encryption No
Supports Expedited Data No
Supports Graceful Closing No
Supports Guaranteed Bandwidth No
Supports Multicasting No

Name MSAFD NetBIOS [\Device\NetBT_Tcpip_{4951D7BF-5796-4DF9-9213-30A6C3975B70}] SEQPACKET 2
Connectionless Service No
Guarantees Delivery Yes
Guarantees Sequencing Yes
Maximum Address Size 20 bytes
Maximum Message Size 62.50 KB (64,000 bytes)
Message Oriented Yes
Minimum Address Size 20 bytes
Pseudo Stream Oriented No
Supports Broadcasting No
Supports Connect Data No
Supports Disconnect Data No
Supports Encryption No
Supports Expedited Data No
Supports Graceful Closing No
Supports Guaranteed Bandwidth No

Supports Multicasting No

Name MSAFD NetBIOS [\\Device\NetBT_Tcpip_{4951D7BF-5796-4DF9-9213-30A6C3975B70}] DATAGRAM 2
Connectionless Service Yes
Guarantees Delivery No
Guarantees Sequencing No
Maximum Address Size 20 bytes
Maximum Message Size 62.50 KB (64,000 bytes)
Message Oriented Yes
Minimum Address Size 20 bytes
Pseudo Stream Oriented No
Supports Broadcasting Yes
Supports Connect Data No
Supports Disconnect Data No
Supports Encryption No
Supports Expedited Data No
Supports Graceful Closing No
Supports Guaranteed Bandwidth No
Supports Multicasting No

[WinSock]

Item	Value
File	c:\windows\system32\winsock.dll
Size	2.80 KB (2,864 bytes)
Version	3.10

File	c:\windows\system32\wsock32.dll
Size	22.00 KB (22,528 bytes)
Version	5.2.3790.0 (srv03_rtm.030324-2048)

[Ports]

[Serial]

Item	Value
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	24.83 GB (26,663,489,536 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 509.73 GB (547,318,356,480 bytes)
 Total Cylinders 66,541
 Total Sectors 1,068,981,165
 Total Tracks 16,967,955
 Tracks/Cylinder 255
 Partition Disk #81, Partition #0
 Partition Size 509.73 GB (547,318,324,224 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 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 #61, Partition #0
 Partition Size 5.58 GB (5,987,971,584 bytes)

Partition Starting Offset 32,256 bytes
 Partition Disk #61, Partition #1
 Partition Size 8.72 GB (9,360,368,640 bytes)
 Partition Starting Offset 5,988,003,840 bytes
 Partition Disk #61, Partition #2
 Partition Size 4.44 GB (4,762,437,120 bytes)
 Partition Starting Offset 15,348,372,480 bytes
 Partition Disk #61, Partition #3
 Partition Size 100.89 GB (108,335,162,880 bytes)
 Partition Starting Offset 20,110,809,600 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 #70, Partition #0
 Partition Size 5.58 GB (5,987,971,584 bytes)
 Partition Starting Offset 32,256 bytes
 Partition Disk #70, Partition #1
 Partition Size 8.72 GB (9,360,368,640 bytes)
 Partition Starting Offset 5,988,003,840 bytes
 Partition Disk #70, Partition #2
 Partition Size 4.44 GB (4,762,437,120 bytes)
 Partition Starting Offset 15,348,372,480 bytes
 Partition Disk #70, Partition #3
 Partition Size 100.89 GB (108,335,162,880 bytes)
 Partition Starting Offset 20,110,809,600 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 #69, Partition #0

Partition Size 5.58 GB (5,987,971,584 bytes)
Partition Starting Offset 32,256 bytes
Partition Disk #69, Partition #1
Partition Size 8.72 GB (9,360,368,640 bytes)
Partition Starting Offset 5,988,003,840 bytes
Partition Disk #69, Partition #2
Partition Size 4.44 GB (4,762,437,120 bytes)
Partition Starting Offset 15,348,372,480 bytes
Partition Disk #69, Partition #3
Partition Size 100.89 GB (108,335,162,880 bytes)
Partition Starting Offset 20,110,809,600 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 #68, Partition #0
Partition Size 5.58 GB (5,987,971,584 bytes)
Partition Starting Offset 32,256 bytes
Partition Disk #68, Partition #1
Partition Size 8.72 GB (9,360,368,640 bytes)
Partition Starting Offset 5,988,003,840 bytes
Partition Disk #68, Partition #2
Partition Size 4.44 GB (4,762,437,120 bytes)
Partition Starting Offset 15,348,372,480 bytes
Partition Disk #68, Partition #3
Partition Size 100.89 GB (108,335,162,880 bytes)
Partition Starting Offset 20,110,809,600 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 #67, Partition #0
Partition Size 5.58 GB (5,987,971,584 bytes)
Partition Starting Offset 32,256 bytes
Partition Disk #67, Partition #1
Partition Size 8.72 GB (9,360,368,640 bytes)
Partition Starting Offset 5,988,003,840 bytes
Partition Disk #67, Partition #2
Partition Size 4.44 GB (4,762,437,120 bytes)
Partition Starting Offset 15,348,372,480 bytes
Partition Disk #67, Partition #3
Partition Size 100.89 GB (108,335,162,880 bytes)
Partition Starting Offset 20,110,809,600 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 #66, Partition #0
Partition Size 5.58 GB (5,987,971,584 bytes)
Partition Starting Offset 32,256 bytes
Partition Disk #66, Partition #1
Partition Size 8.72 GB (9,360,368,640 bytes)
Partition Starting Offset 5,988,003,840 bytes
Partition Disk #66, Partition #2
Partition Size 4.44 GB (4,762,437,120 bytes)
Partition Starting Offset 15,348,372,480 bytes
Partition Disk #66, Partition #3
Partition Size 100.89 GB (108,335,162,880 bytes)
Partition Starting Offset 20,110,809,600 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 #65, Partition #0
 Partition Size 5.58 GB (5,987,971,584 bytes)
 Partition Starting Offset 32,256 bytes
 Partition Disk #65, Partition #1
 Partition Size 8.72 GB (9,360,368,640 bytes)
 Partition Starting Offset 5,988,003,840 bytes
 Partition Disk #65, Partition #2
 Partition Size 4.44 GB (4,762,437,120 bytes)
 Partition Starting Offset 15,348,372,480 bytes
 Partition Disk #65, Partition #3
 Partition Size 100.89 GB (108,335,162,880 bytes)
 Partition Starting Offset 20,110,809,600 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 #64, Partition #0
 Partition Size 5.58 GB (5,987,971,584 bytes)
 Partition Starting Offset 32,256 bytes
 Partition Disk #64, Partition #1
 Partition Size 8.72 GB (9,360,368,640 bytes)
 Partition Starting Offset 5,988,003,840 bytes
 Partition Disk #64, Partition #2
 Partition Size 4.44 GB (4,762,437,120 bytes)
 Partition Starting Offset 15,348,372,480 bytes
 Partition Disk #64, Partition #3
 Partition Size 100.89 GB (108,335,162,880 bytes)
 Partition Starting Offset 20,110,809,600 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 #63, Partition #0
 Partition Size 5.58 GB (5,987,971,584 bytes)
 Partition Starting Offset 32,256 bytes
 Partition Disk #63, Partition #1
 Partition Size 8.72 GB (9,360,368,640 bytes)
 Partition Starting Offset 5,988,003,840 bytes
 Partition Disk #63, Partition #2
 Partition Size 4.44 GB (4,762,437,120 bytes)
 Partition Starting Offset 15,348,372,480 bytes
 Partition Disk #63, Partition #3
 Partition Size 100.89 GB (108,335,162,880 bytes)
 Partition Starting Offset 20,110,809,600 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 #62, Partition #0
 Partition Size 5.58 GB (5,987,971,584 bytes)
 Partition Starting Offset 32,256 bytes
 Partition Disk #62, Partition #1
 Partition Size 8.72 GB (9,360,368,640 bytes)
 Partition Starting Offset 5,988,003,840 bytes
 Partition Disk #62, Partition #2
 Partition Size 4.44 GB (4,762,437,120 bytes)
 Partition Starting Offset 15,348,372,480 bytes
 Partition Disk #62, Partition #3
 Partition Size 100.89 GB (108,335,162,880 bytes)
 Partition Starting Offset 20,110,809,600 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 #20, Partition #0
 Partition Size 5.58 GB (5,987,971,584 bytes)
 Partition Starting Offset 32,256 bytes
 Partition Disk #20, Partition #1
 Partition Size 8.72 GB (9,360,368,640 bytes)
 Partition Starting Offset 5,988,003,840 bytes
 Partition Disk #20, Partition #2
 Partition Size 4.44 GB (4,762,437,120 bytes)
 Partition Starting Offset 15,348,372,480 bytes
 Partition Disk #20, Partition #3
 Partition Size 100.89 GB (108,335,162,880 bytes)
 Partition Starting Offset 20,110,809,600 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 #19, Partition #0
 Partition Size 5.58 GB (5,987,971,584 bytes)
 Partition Starting Offset 32,256 bytes
 Partition Disk #19, Partition #1
 Partition Size 8.72 GB (9,360,368,640 bytes)
 Partition Starting Offset 5,988,003,840 bytes
 Partition Disk #19, Partition #2
 Partition Size 4.44 GB (4,762,437,120 bytes)
 Partition Starting Offset 15,348,372,480 bytes
 Partition Disk #19, Partition #3
 Partition Size 100.89 GB (108,335,162,880 bytes)
 Partition Starting Offset 20,110,809,600 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 #18, Partition #0
 Partition Size 5.58 GB (5,987,971,584 bytes)
 Partition Starting Offset 32,256 bytes
 Partition Disk #18, Partition #1
 Partition Size 8.72 GB (9,360,368,640 bytes)
 Partition Starting Offset 5,988,003,840 bytes
 Partition Disk #18, Partition #2
 Partition Size 4.44 GB (4,762,437,120 bytes)
 Partition Starting Offset 15,348,372,480 bytes
 Partition Disk #18, Partition #3
 Partition Size 100.89 GB (108,335,162,880 bytes)
 Partition Starting Offset 20,110,809,600 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 #17, Partition #0
 Partition Size 5.58 GB (5,987,971,584 bytes)
 Partition Starting Offset 32,256 bytes
 Partition Disk #17, Partition #1
 Partition Size 8.72 GB (9,360,368,640 bytes)
 Partition Starting Offset 5,988,003,840 bytes
 Partition Disk #17, Partition #2
 Partition Size 4.44 GB (4,762,437,120 bytes)
 Partition Starting Offset 15,348,372,480 bytes
 Partition Disk #17, Partition #3
 Partition Size 100.89 GB (108,335,162,880 bytes)
 Partition Starting Offset 20,110,809,600 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 #16, Partition #0
 Partition Size 5.58 GB (5,987,971,584 bytes)
 Partition Starting Offset 32,256 bytes
 Partition Disk #16, Partition #1
 Partition Size 8.72 GB (9,360,368,640 bytes)
 Partition Starting Offset 5,988,003,840 bytes
 Partition Disk #16, Partition #2
 Partition Size 4.44 GB (4,762,437,120 bytes)
 Partition Starting Offset 15,348,372,480 bytes
 Partition Disk #16, Partition #3
 Partition Size 100.89 GB (108,335,162,880 bytes)
 Partition Starting Offset 20,110,809,600 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 #15, Partition #0
 Partition Size 5.58 GB (5,987,971,584 bytes)
 Partition Starting Offset 32,256 bytes
 Partition Disk #15, Partition #1
 Partition Size 8.72 GB (9,360,368,640 bytes)
 Partition Starting Offset 5,988,003,840 bytes
 Partition Disk #15, Partition #2
 Partition Size 4.44 GB (4,762,437,120 bytes)
 Partition Starting Offset 15,348,372,480 bytes
 Partition Disk #15, Partition #3
 Partition Size 100.89 GB (108,335,162,880 bytes)
 Partition Starting Offset 20,110,809,600 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 #14, Partition #0
 Partition Size 5.58 GB (5,987,971,584 bytes)
 Partition Starting Offset 32,256 bytes
 Partition Disk #14, Partition #1
 Partition Size 8.72 GB (9,360,368,640 bytes)
 Partition Starting Offset 5,988,003,840 bytes
 Partition Disk #14, Partition #2
 Partition Size 4.44 GB (4,762,437,120 bytes)
 Partition Starting Offset 15,348,372,480 bytes
 Partition Disk #14, Partition #3
 Partition Size 100.89 GB (108,335,162,880 bytes)
 Partition Starting Offset 20,110,809,600 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 #13, Partition #0
 Partition Size 5.58 GB (5,987,971,584 bytes)
 Partition Starting Offset 32,256 bytes
 Partition Disk #13, Partition #1
 Partition Size 8.72 GB (9,360,368,640 bytes)
 Partition Starting Offset 5,988,003,840 bytes
 Partition Disk #13, Partition #2
 Partition Size 4.44 GB (4,762,437,120 bytes)
 Partition Starting Offset 15,348,372,480 bytes
 Partition Disk #13, Partition #3
 Partition Size 100.89 GB (108,335,162,880 bytes)
 Partition Starting Offset 20,110,809,600 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 #12, Partition #0
Partition Size 5.58 GB (5,987,971,584 bytes)
Partition Starting Offset 32,256 bytes
Partition Disk #12, Partition #1
Partition Size 8.72 GB (9,360,368,640 bytes)
Partition Starting Offset 5,988,003,840 bytes
Partition Disk #12, Partition #2
Partition Size 4.44 GB (4,762,437,120 bytes)
Partition Starting Offset 15,348,372,480 bytes
Partition Disk #12, Partition #3
Partition Size 100.89 GB (108,335,162,880 bytes)
Partition Starting Offset 20,110,809,600 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 #11, Partition #0
Partition Size 5.58 GB (5,987,971,584 bytes)
Partition Starting Offset 32,256 bytes
Partition Disk #11, Partition #1
Partition Size 8.72 GB (9,360,368,640 bytes)
Partition Starting Offset 5,988,003,840 bytes
Partition Disk #11, Partition #2
Partition Size 4.44 GB (4,762,437,120 bytes)
Partition Starting Offset 15,348,372,480 bytes
Partition Disk #11, Partition #3
Partition Size 100.89 GB (108,335,162,880 bytes)
Partition Starting Offset 20,110,809,600 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 #80, Partition #0
Partition Size 5.58 GB (5,987,971,584 bytes)
Partition Starting Offset 32,256 bytes
Partition Disk #80, Partition #1
Partition Size 8.72 GB (9,360,368,640 bytes)
Partition Starting Offset 5,988,003,840 bytes
Partition Disk #80, Partition #2
Partition Size 4.44 GB (4,762,437,120 bytes)
Partition Starting Offset 15,348,372,480 bytes
Partition Disk #80, Partition #3
Partition Size 100.89 GB (108,335,162,880 bytes)
Partition Starting Offset 20,110,809,600 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 #79, Partition #0
Partition Size 5.58 GB (5,987,971,584 bytes)
Partition Starting Offset 32,256 bytes
Partition Disk #79, Partition #1
Partition Size 8.72 GB (9,360,368,640 bytes)
Partition Starting Offset 5,988,003,840 bytes
Partition Disk #79, Partition #2
Partition Size 4.44 GB (4,762,437,120 bytes)
Partition Starting Offset 15,348,372,480 bytes
Partition Disk #79, Partition #3
Partition Size 100.89 GB (108,335,162,880 bytes)
Partition Starting Offset 20,110,809,600 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       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 #78, Partition #0
Partition Size     5.58 GB (5,987,971,584 bytes)
Partition Starting Offset 32,256 bytes
Partition           Disk #78, Partition #1
Partition Size     8.72 GB (9,360,368,640 bytes)
Partition Starting Offset 5,988,003,840 bytes
Partition           Disk #78, Partition #2
Partition Size     4.44 GB (4,762,437,120 bytes)
Partition Starting Offset 15,348,372,480 bytes
Partition           Disk #78, Partition #3
Partition Size    100.89 GB (108,335,162,880 bytes)
Partition Starting Offset 20,110,809,600 bytes

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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   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 #77, Partition #0
Partition Size     5.58 GB (5,987,971,584 bytes)
Partition Starting Offset 32,256 bytes
Partition           Disk #77, Partition #1
Partition Size     8.72 GB (9,360,368,640 bytes)
Partition Starting Offset 5,988,003,840 bytes
Partition           Disk #77, Partition #2
Partition Size     4.44 GB (4,762,437,120 bytes)
Partition Starting Offset 15,348,372,480 bytes
Partition           Disk #77, Partition #3
Partition Size    100.89 GB (108,335,162,880 bytes)
Partition Starting Offset 20,110,809,600 bytes

```

```

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

```

```

Bytes/Sector     512
Media Loaded     Yes
Media Type       Fixed hard disk
Partitions       4

```

```

SCSI Bus           0
SCSI Logical Unit  0
SCSI Port         0
SCSI Target ID    5
Sectors/Track     63
Size      119.62 GB (128,445,972,480 bytes)
Total Cylinders      15,616
Total Sectors      250,871,040
Total Tracks       3,982,080
Tracks/Cylinder    255
Partition           Disk #76, Partition #0
Partition Size     5.58 GB (5,987,971,584 bytes)
Partition Starting Offset 32,256 bytes
Partition           Disk #76, Partition #1
Partition Size     8.72 GB (9,360,368,640 bytes)
Partition Starting Offset 5,988,003,840 bytes
Partition           Disk #76, Partition #2
Partition Size     4.44 GB (4,762,437,120 bytes)
Partition Starting Offset 15,348,372,480 bytes
Partition           Disk #76, Partition #3
Partition Size    100.89 GB (108,335,162,880 bytes)
Partition Starting Offset 20,110,809,600 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 #75, Partition #0
Partition Size     5.58 GB (5,987,971,584 bytes)
Partition Starting Offset 32,256 bytes
Partition           Disk #75, Partition #1
Partition Size     8.72 GB (9,360,368,640 bytes)
Partition Starting Offset 5,988,003,840 bytes
Partition           Disk #75, Partition #2
Partition Size     4.44 GB (4,762,437,120 bytes)
Partition Starting Offset 15,348,372,480 bytes
Partition           Disk #75, Partition #3
Partition Size    100.89 GB (108,335,162,880 bytes)
Partition Starting Offset 20,110,809,600 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 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 #74, Partition #0
 Partition Size 5.58 GB (5,987,971,584 bytes)
 Partition Starting Offset 32,256 bytes
 Partition Disk #74, Partition #1
 Partition Size 8.72 GB (9,360,368,640 bytes)
 Partition Starting Offset 5,988,003,840 bytes
 Partition Disk #74, Partition #2
 Partition Size 4.44 GB (4,762,437,120 bytes)
 Partition Starting Offset 15,348,372,480 bytes
 Partition Disk #74, Partition #3
 Partition Size 100.89 GB (108,335,162,880 bytes)
 Partition Starting Offset 20,110,809,600 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 #73, Partition #0
 Partition Size 5.58 GB (5,987,971,584 bytes)
 Partition Starting Offset 32,256 bytes
 Partition Disk #73, Partition #1
 Partition Size 8.72 GB (9,360,368,640 bytes)
 Partition Starting Offset 5,988,003,840 bytes
 Partition Disk #73, Partition #2
 Partition Size 4.44 GB (4,762,437,120 bytes)
 Partition Starting Offset 15,348,372,480 bytes
 Partition Disk #73, Partition #3
 Partition Size 100.89 GB (108,335,162,880 bytes)
 Partition Starting Offset 20,110,809,600 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 #72, Partition #0
 Partition Size 5.58 GB (5,987,971,584 bytes)
 Partition Starting Offset 32,256 bytes
 Partition Disk #72, Partition #1
 Partition Size 8.72 GB (9,360,368,640 bytes)
 Partition Starting Offset 5,988,003,840 bytes
 Partition Disk #72, Partition #2
 Partition Size 4.44 GB (4,762,437,120 bytes)
 Partition Starting Offset 15,348,372,480 bytes
 Partition Disk #72, Partition #3
 Partition Size 100.89 GB (108,335,162,880 bytes)
 Partition Starting Offset 20,110,809,600 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 #71, Partition #0
 Partition Size 5.58 GB (5,987,971,584 bytes)
 Partition Starting Offset 32,256 bytes
 Partition Disk #71, Partition #1
 Partition Size 8.72 GB (9,360,368,640 bytes)
 Partition Starting Offset 5,988,003,840 bytes
 Partition Disk #71, Partition #2
 Partition Size 4.44 GB (4,762,437,120 bytes)
 Partition Starting Offset 15,348,372,480 bytes
 Partition Disk #71, Partition #3
 Partition Size 100.89 GB (108,335,162,880 bytes)
 Partition Starting Offset 20,110,809,600 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 #60, Partition #0
 Partition Size 5.58 GB (5,987,971,584 bytes)
 Partition Starting Offset 32,256 bytes
 Partition Disk #60, Partition #1
 Partition Size 8.72 GB (9,360,368,640 bytes)
 Partition Starting Offset 5,988,003,840 bytes
 Partition Disk #60, Partition #2
 Partition Size 4.44 GB (4,762,437,120 bytes)
 Partition Starting Offset 15,348,372,480 bytes
 Partition Disk #60, Partition #3
 Partition Size 100.89 GB (108,335,162,880 bytes)
 Partition Starting Offset 20,110,809,600 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 #59, Partition #0
 Partition Size 5.58 GB (5,987,971,584 bytes)
 Partition Starting Offset 32,256 bytes
 Partition Disk #59, Partition #1
 Partition Size 8.72 GB (9,360,368,640 bytes)
 Partition Starting Offset 5,988,003,840 bytes
 Partition Disk #59, Partition #2
 Partition Size 4.44 GB (4,762,437,120 bytes)
 Partition Starting Offset 15,348,372,480 bytes
 Partition Disk #59, Partition #3
 Partition Size 100.89 GB (108,335,162,880 bytes)
 Partition Starting Offset 20,110,809,600 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 #58, Partition #0
 Partition Size 5.58 GB (5,987,971,584 bytes)
 Partition Starting Offset 32,256 bytes
 Partition Disk #58, Partition #1
 Partition Size 8.72 GB (9,360,368,640 bytes)
 Partition Starting Offset 5,988,003,840 bytes
 Partition Disk #58, Partition #2
 Partition Size 4.44 GB (4,762,437,120 bytes)
 Partition Starting Offset 15,348,372,480 bytes
 Partition Disk #58, Partition #3
 Partition Size 100.89 GB (108,335,162,880 bytes)
 Partition Starting Offset 20,110,809,600 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 #57, Partition #0
 Partition Size 5.58 GB (5,987,971,584 bytes)
 Partition Starting Offset 32,256 bytes
 Partition Disk #57, Partition #1
 Partition Size 8.72 GB (9,360,368,640 bytes)
 Partition Starting Offset 5,988,003,840 bytes
 Partition Disk #57, Partition #2
 Partition Size 4.44 GB (4,762,437,120 bytes)
 Partition Starting Offset 15,348,372,480 bytes
 Partition Disk #57, Partition #3
 Partition Size 100.89 GB (108,335,162,880 bytes)
 Partition Starting Offset 20,110,809,600 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 #56, Partition #0
 Partition Size 5.58 GB (5,987,971,584 bytes)
 Partition Starting Offset 32,256 bytes
 Partition Disk #56, Partition #1
 Partition Size 8.72 GB (9,360,368,640 bytes)
 Partition Starting Offset 5,988,003,840 bytes
 Partition Disk #56, Partition #2
 Partition Size 4.44 GB (4,762,437,120 bytes)
 Partition Starting Offset 15,348,372,480 bytes
 Partition Disk #56, Partition #3
 Partition Size 100.89 GB (108,335,162,880 bytes)
 Partition Starting Offset 20,110,809,600 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 #55, Partition #0
 Partition Size 5.58 GB (5,987,971,584 bytes)
 Partition Starting Offset 32,256 bytes
 Partition Disk #55, Partition #1
 Partition Size 8.72 GB (9,360,368,640 bytes)
 Partition Starting Offset 5,988,003,840 bytes
 Partition Disk #55, Partition #2
 Partition Size 4.44 GB (4,762,437,120 bytes)
 Partition Starting Offset 15,348,372,480 bytes
 Partition Disk #55, Partition #3
 Partition Size 100.89 GB (108,335,162,880 bytes)
 Partition Starting Offset 20,110,809,600 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 #54, Partition #0
 Partition Size 5.58 GB (5,987,971,584 bytes)
 Partition Starting Offset 32,256 bytes
 Partition Disk #54, Partition #1
 Partition Size 8.72 GB (9,360,368,640 bytes)
 Partition Starting Offset 5,988,003,840 bytes
 Partition Disk #54, Partition #2
 Partition Size 4.44 GB (4,762,437,120 bytes)
 Partition Starting Offset 15,348,372,480 bytes
 Partition Disk #54, Partition #3
 Partition Size 100.89 GB (108,335,162,880 bytes)
 Partition Starting Offset 20,110,809,600 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 #53, Partition #0
 Partition Size 5.58 GB (5,987,971,584 bytes)
 Partition Starting Offset 32,256 bytes
 Partition Disk #53, Partition #1
 Partition Size 8.72 GB (9,360,368,640 bytes)
 Partition Starting Offset 5,988,003,840 bytes
 Partition Disk #53, Partition #2
 Partition Size 4.44 GB (4,762,437,120 bytes)
 Partition Starting Offset 15,348,372,480 bytes
 Partition Disk #53, Partition #3
 Partition Size 100.89 GB (108,335,162,880 bytes)
 Partition Starting Offset 20,110,809,600 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 #52, Partition #0
 Partition Size 5.58 GB (5,987,971,584 bytes)
 Partition Starting Offset 32,256 bytes
 Partition Disk #52, Partition #1
 Partition Size 8.72 GB (9,360,368,640 bytes)
 Partition Starting Offset 5,988,003,840 bytes
 Partition Disk #52, Partition #2
 Partition Size 4.44 GB (4,762,437,120 bytes)
 Partition Starting Offset 15,348,372,480 bytes
 Partition Disk #52, Partition #3
 Partition Size 100.89 GB (108,335,162,880 bytes)
 Partition Starting Offset 20,110,809,600 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 #51, Partition #0
 Partition Size 5.58 GB (5,987,971,584 bytes)
 Partition Starting Offset 32,256 bytes
 Partition Disk #51, Partition #1
 Partition Size 8.72 GB (9,360,368,640 bytes)
 Partition Starting Offset 5,988,003,840 bytes
 Partition Disk #51, Partition #2
 Partition Size 4.44 GB (4,762,437,120 bytes)
 Partition Starting Offset 15,348,372,480 bytes
 Partition Disk #51, Partition #3
 Partition Size 100.89 GB (108,335,162,880 bytes)
 Partition Starting Offset 20,110,809,600 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 #30, Partition #0
 Partition Size 5.58 GB (5,987,971,584 bytes)
 Partition Starting Offset 32,256 bytes
 Partition Disk #30, Partition #1
 Partition Size 8.72 GB (9,360,368,640 bytes)
 Partition Starting Offset 5,988,003,840 bytes
 Partition Disk #30, Partition #2
 Partition Size 4.44 GB (4,762,437,120 bytes)
 Partition Starting Offset 15,348,372,480 bytes
 Partition Disk #30, Partition #3
 Partition Size 100.89 GB (108,335,162,880 bytes)
 Partition Starting Offset 20,110,809,600 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 #29, Partition #0
 Partition Size 5.58 GB (5,987,971,584 bytes)
 Partition Starting Offset 32,256 bytes
 Partition Disk #29, Partition #1
 Partition Size 8.72 GB (9,360,368,640 bytes)
 Partition Starting Offset 5,988,003,840 bytes
 Partition Disk #29, Partition #2
 Partition Size 4.44 GB (4,762,437,120 bytes)
 Partition Starting Offset 15,348,372,480 bytes
 Partition Disk #29, Partition #3
 Partition Size 100.89 GB (108,335,162,880 bytes)

Partition Starting Offset 20,110,809,600 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 #28, Partition #0
Partition Size 5.58 GB (5,987,971,584 bytes)
Partition Starting Offset 32,256 bytes
Partition Disk #28, Partition #1
Partition Size 8.72 GB (9,360,368,640 bytes)
Partition Starting Offset 5,988,003,840 bytes
Partition Disk #28, Partition #2
Partition Size 4.44 GB (4,762,437,120 bytes)
Partition Starting Offset 15,348,372,480 bytes
Partition Disk #28, Partition #3
Partition Size 100.89 GB (108,335,162,880 bytes)
Partition Starting Offset 20,110,809,600 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 #27, Partition #0
Partition Size 5.58 GB (5,987,971,584 bytes)
Partition Starting Offset 32,256 bytes
Partition Disk #27, Partition #1
Partition Size 8.72 GB (9,360,368,640 bytes)
Partition Starting Offset 5,988,003,840 bytes
Partition Disk #27, Partition #2
Partition Size 4.44 GB (4,762,437,120 bytes)
Partition Starting Offset 15,348,372,480 bytes
Partition Disk #27, Partition #3

Partition Size 100.89 GB (108,335,162,880 bytes)
Partition Starting Offset 20,110,809,600 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 #26, Partition #0
Partition Size 5.58 GB (5,987,971,584 bytes)
Partition Starting Offset 32,256 bytes
Partition Disk #26, Partition #1
Partition Size 8.72 GB (9,360,368,640 bytes)
Partition Starting Offset 5,988,003,840 bytes
Partition Disk #26, Partition #2
Partition Size 4.44 GB (4,762,437,120 bytes)
Partition Starting Offset 15,348,372,480 bytes
Partition Disk #26, Partition #3
Partition Size 100.89 GB (108,335,162,880 bytes)
Partition Starting Offset 20,110,809,600 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 #25, Partition #0
Partition Size 5.58 GB (5,987,971,584 bytes)
Partition Starting Offset 32,256 bytes
Partition Disk #25, Partition #1
Partition Size 8.72 GB (9,360,368,640 bytes)
Partition Starting Offset 5,988,003,840 bytes
Partition Disk #25, Partition #2
Partition Size 4.44 GB (4,762,437,120 bytes)
Partition Starting Offset 15,348,372,480 bytes

Partition Disk #25, Partition #3
Partition Size 100.89 GB (108,335,162,880 bytes)
Partition Starting Offset 20,110,809,600 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 #24, Partition #0
Partition Size 5.58 GB (5,987,971,584 bytes)
Partition Starting Offset 32,256 bytes
Partition Disk #24, Partition #1
Partition Size 8.72 GB (9,360,368,640 bytes)
Partition Starting Offset 5,988,003,840 bytes
Partition Disk #24, Partition #2
Partition Size 4.44 GB (4,762,437,120 bytes)
Partition Starting Offset 15,348,372,480 bytes
Partition Disk #24, Partition #3
Partition Size 100.89 GB (108,335,162,880 bytes)
Partition Starting Offset 20,110,809,600 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 #23, Partition #0
Partition Size 5.58 GB (5,987,971,584 bytes)
Partition Starting Offset 32,256 bytes
Partition Disk #23, Partition #1
Partition Size 8.72 GB (9,360,368,640 bytes)
Partition Starting Offset 5,988,003,840 bytes
Partition Disk #23, Partition #2
Partition Size 4.44 GB (4,762,437,120 bytes)

Partition Starting Offset 15,348,372,480 bytes
Partition Disk #23, Partition #3
Partition Size 100.89 GB (108,335,162,880 bytes)
Partition Starting Offset 20,110,809,600 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 #22, Partition #0
Partition Size 5.58 GB (5,987,971,584 bytes)
Partition Starting Offset 32,256 bytes
Partition Disk #22, Partition #1
Partition Size 8.72 GB (9,360,368,640 bytes)
Partition Starting Offset 5,988,003,840 bytes
Partition Disk #22, Partition #2
Partition Size 4.44 GB (4,762,437,120 bytes)
Partition Starting Offset 15,348,372,480 bytes
Partition Disk #22, Partition #3
Partition Size 100.89 GB (108,335,162,880 bytes)
Partition Starting Offset 20,110,809,600 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 #21, Partition #0
Partition Size 5.58 GB (5,987,971,584 bytes)
Partition Starting Offset 32,256 bytes
Partition Disk #21, Partition #1
Partition Size 8.72 GB (9,360,368,640 bytes)
Partition Starting Offset 5,988,003,840 bytes
Partition Disk #21, Partition #2

Partition Size 4.44 GB (4,762,437,120 bytes)
Partition Starting Offset 15,348,372,480 bytes
Partition Disk #21, Partition #3
Partition Size 100.89 GB (108,335,162,880 bytes)
Partition Starting Offset 20,110,809,600 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 #40, Partition #0
Partition Size 5.58 GB (5,987,971,584 bytes)
Partition Starting Offset 32,256 bytes
Partition Disk #40, Partition #1
Partition Size 8.72 GB (9,360,368,640 bytes)
Partition Starting Offset 5,988,003,840 bytes
Partition Disk #40, Partition #2
Partition Size 4.44 GB (4,762,437,120 bytes)
Partition Starting Offset 15,348,372,480 bytes
Partition Disk #40, Partition #3
Partition Size 100.89 GB (108,335,162,880 bytes)
Partition Starting Offset 20,110,809,600 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 #39, Partition #0
Partition Size 5.58 GB (5,987,971,584 bytes)
Partition Starting Offset 32,256 bytes
Partition Disk #39, Partition #1
Partition Size 8.72 GB (9,360,368,640 bytes)
Partition Starting Offset 5,988,003,840 bytes

Partition Disk #39, Partition #2
Partition Size 4.44 GB (4,762,437,120 bytes)
Partition Starting Offset 15,348,372,480 bytes
Partition Disk #39, Partition #3
Partition Size 100.89 GB (108,335,162,880 bytes)
Partition Starting Offset 20,110,809,600 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 #38, Partition #0
Partition Size 5.58 GB (5,987,971,584 bytes)
Partition Starting Offset 32,256 bytes
Partition Disk #38, Partition #1
Partition Size 8.72 GB (9,360,368,640 bytes)
Partition Starting Offset 5,988,003,840 bytes
Partition Disk #38, Partition #2
Partition Size 4.44 GB (4,762,437,120 bytes)
Partition Starting Offset 15,348,372,480 bytes
Partition Disk #38, Partition #3
Partition Size 100.89 GB (108,335,162,880 bytes)
Partition Starting Offset 20,110,809,600 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 #37, Partition #0
Partition Size 5.58 GB (5,987,971,584 bytes)
Partition Starting Offset 32,256 bytes
Partition Disk #37, Partition #1
Partition Size 8.72 GB (9,360,368,640 bytes)

Partition Starting Offset 5,988,003,840 bytes
Partition Disk #37, Partition #2
Partition Size 4.44 GB (4,762,437,120 bytes)
Partition Starting Offset 15,348,372,480 bytes
Partition Disk #37, Partition #3
Partition Size 100.89 GB (108,335,162,880 bytes)
Partition Starting Offset 20,110,809,600 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 #36, Partition #0
Partition Size 5.58 GB (5,987,971,584 bytes)
Partition Starting Offset 32,256 bytes
Partition Disk #36, Partition #1
Partition Size 8.72 GB (9,360,368,640 bytes)
Partition Starting Offset 5,988,003,840 bytes
Partition Disk #36, Partition #2
Partition Size 4.44 GB (4,762,437,120 bytes)
Partition Starting Offset 15,348,372,480 bytes
Partition Disk #36, Partition #3
Partition Size 100.89 GB (108,335,162,880 bytes)
Partition Starting Offset 20,110,809,600 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 #35, Partition #0
Partition Size 5.58 GB (5,987,971,584 bytes)
Partition Starting Offset 32,256 bytes
Partition Disk #35, Partition #1

Partition Size 8.72 GB (9,360,368,640 bytes)
Partition Starting Offset 5,988,003,840 bytes
Partition Disk #35, Partition #2
Partition Size 4.44 GB (4,762,437,120 bytes)
Partition Starting Offset 15,348,372,480 bytes
Partition Disk #35, Partition #3
Partition Size 100.89 GB (108,335,162,880 bytes)
Partition Starting Offset 20,110,809,600 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 #34, Partition #0
Partition Size 5.58 GB (5,987,971,584 bytes)
Partition Starting Offset 32,256 bytes
Partition Disk #34, Partition #1
Partition Size 8.72 GB (9,360,368,640 bytes)
Partition Starting Offset 5,988,003,840 bytes
Partition Disk #34, Partition #2
Partition Size 4.44 GB (4,762,437,120 bytes)
Partition Starting Offset 15,348,372,480 bytes
Partition Disk #34, Partition #3
Partition Size 100.89 GB (108,335,162,880 bytes)
Partition Starting Offset 20,110,809,600 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 #33, Partition #0
Partition Size 5.58 GB (5,987,971,584 bytes)
Partition Starting Offset 32,256 bytes

Partition Disk #33, Partition #1
 Partition Size 8.72 GB (9,360,368,640 bytes)
 Partition Starting Offset 5,988,003,840 bytes
 Partition Disk #33, Partition #2
 Partition Size 4.44 GB (4,762,437,120 bytes)
 Partition Starting Offset 15,348,372,480 bytes
 Partition Disk #33, Partition #3
 Partition Size 100.89 GB (108,335,162,880 bytes)
 Partition Starting Offset 20,110,809,600 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 #32, Partition #0
 Partition Size 5.58 GB (5,987,971,584 bytes)
 Partition Starting Offset 32,256 bytes
 Partition Disk #32, Partition #1
 Partition Size 8.72 GB (9,360,368,640 bytes)
 Partition Starting Offset 5,988,003,840 bytes
 Partition Disk #32, Partition #2
 Partition Size 4.44 GB (4,762,437,120 bytes)
 Partition Starting Offset 15,348,372,480 bytes
 Partition Disk #32, Partition #3
 Partition Size 100.89 GB (108,335,162,880 bytes)
 Partition Starting Offset 20,110,809,600 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 #31, Partition #0
 Partition Size 5.58 GB (5,987,971,584 bytes)

Partition Starting Offset 32,256 bytes
 Partition Disk #31, Partition #1
 Partition Size 8.72 GB (9,360,368,640 bytes)
 Partition Starting Offset 5,988,003,840 bytes
 Partition Disk #31, Partition #2
 Partition Size 4.44 GB (4,762,437,120 bytes)
 Partition Starting Offset 15,348,372,480 bytes
 Partition Disk #31, Partition #3
 Partition Size 100.89 GB (108,335,162,880 bytes)
 Partition Starting Offset 20,110,809,600 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 #10, Partition #0
 Partition Size 5.58 GB (5,987,971,584 bytes)
 Partition Starting Offset 32,256 bytes
 Partition Disk #10, Partition #1
 Partition Size 8.72 GB (9,360,368,640 bytes)
 Partition Starting Offset 5,988,003,840 bytes
 Partition Disk #10, Partition #2
 Partition Size 4.44 GB (4,762,437,120 bytes)
 Partition Starting Offset 15,348,372,480 bytes
 Partition Disk #10, Partition #3
 Partition Size 100.89 GB (108,335,162,880 bytes)
 Partition Starting Offset 20,110,809,600 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 #9, Partition #0

Partition Size 5.58 GB (5,987,971,584 bytes)
Partition Starting Offset 32,256 bytes
Partition Disk #9, Partition #1
Partition Size 8.72 GB (9,360,368,640 bytes)
Partition Starting Offset 5,988,003,840 bytes
Partition Disk #9, Partition #2
Partition Size 4.44 GB (4,762,437,120 bytes)
Partition Starting Offset 15,348,372,480 bytes
Partition Disk #9, Partition #3
Partition Size 100.89 GB (108,335,162,880 bytes)
Partition Starting Offset 20,110,809,600 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 #8, Partition #0
Partition Size 5.58 GB (5,987,971,584 bytes)
Partition Starting Offset 32,256 bytes
Partition Disk #8, Partition #1
Partition Size 8.72 GB (9,360,368,640 bytes)
Partition Starting Offset 5,988,003,840 bytes
Partition Disk #8, Partition #2
Partition Size 4.44 GB (4,762,437,120 bytes)
Partition Starting Offset 15,348,372,480 bytes
Partition Disk #8, Partition #3
Partition Size 100.89 GB (108,335,162,880 bytes)
Partition Starting Offset 20,110,809,600 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 #7, Partition #0
Partition Size 5.58 GB (5,987,971,584 bytes)
Partition Starting Offset 32,256 bytes
Partition Disk #7, Partition #1
Partition Size 8.72 GB (9,360,368,640 bytes)
Partition Starting Offset 5,988,003,840 bytes
Partition Disk #7, Partition #2
Partition Size 4.44 GB (4,762,437,120 bytes)
Partition Starting Offset 15,348,372,480 bytes
Partition Disk #7, Partition #3
Partition Size 100.89 GB (108,335,162,880 bytes)
Partition Starting Offset 20,110,809,600 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 #6, Partition #0
Partition Size 5.58 GB (5,987,971,584 bytes)
Partition Starting Offset 32,256 bytes
Partition Disk #6, Partition #1
Partition Size 8.72 GB (9,360,368,640 bytes)
Partition Starting Offset 5,988,003,840 bytes
Partition Disk #6, Partition #2
Partition Size 4.44 GB (4,762,437,120 bytes)
Partition Starting Offset 15,348,372,480 bytes
Partition Disk #6, Partition #3
Partition Size 100.89 GB (108,335,162,880 bytes)
Partition Starting Offset 20,110,809,600 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 #5, Partition #0
 Partition Size 5.58 GB (5,987,971,584 bytes)
 Partition Starting Offset 32,256 bytes
 Partition Disk #5, Partition #1
 Partition Size 8.72 GB (9,360,368,640 bytes)
 Partition Starting Offset 5,988,003,840 bytes
 Partition Disk #5, Partition #2
 Partition Size 4.44 GB (4,762,437,120 bytes)
 Partition Starting Offset 15,348,372,480 bytes
 Partition Disk #5, Partition #3
 Partition Size 100.89 GB (108,335,162,880 bytes)
 Partition Starting Offset 20,110,809,600 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 #4, Partition #0
 Partition Size 5.58 GB (5,987,971,584 bytes)
 Partition Starting Offset 32,256 bytes
 Partition Disk #4, Partition #1
 Partition Size 8.72 GB (9,360,368,640 bytes)
 Partition Starting Offset 5,988,003,840 bytes
 Partition Disk #4, Partition #2
 Partition Size 4.44 GB (4,762,437,120 bytes)
 Partition Starting Offset 15,348,372,480 bytes
 Partition Disk #4, Partition #3
 Partition Size 100.89 GB (108,335,162,880 bytes)
 Partition Starting Offset 20,110,809,600 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 #3, Partition #0
 Partition Size 5.58 GB (5,987,971,584 bytes)
 Partition Starting Offset 32,256 bytes
 Partition Disk #3, Partition #1
 Partition Size 8.72 GB (9,360,368,640 bytes)
 Partition Starting Offset 5,988,003,840 bytes
 Partition Disk #3, Partition #2
 Partition Size 4.44 GB (4,762,437,120 bytes)
 Partition Starting Offset 15,348,372,480 bytes
 Partition Disk #3, Partition #3
 Partition Size 100.89 GB (108,335,162,880 bytes)
 Partition Starting Offset 20,110,809,600 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 #2, Partition #0
 Partition Size 5.58 GB (5,987,971,584 bytes)
 Partition Starting Offset 32,256 bytes
 Partition Disk #2, Partition #1
 Partition Size 8.72 GB (9,360,368,640 bytes)
 Partition Starting Offset 5,988,003,840 bytes
 Partition Disk #2, Partition #2
 Partition Size 4.44 GB (4,762,437,120 bytes)
 Partition Starting Offset 15,348,372,480 bytes
 Partition Disk #2, Partition #3
 Partition Size 100.89 GB (108,335,162,880 bytes)
 Partition Starting Offset 20,110,809,600 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 #1, Partition #0
 Partition Size 5.58 GB (5,987,971,584 bytes)
 Partition Starting Offset 32,256 bytes
 Partition Disk #1, Partition #1
 Partition Size 8.72 GB (9,360,368,640 bytes)
 Partition Starting Offset 5,988,003,840 bytes
 Partition Disk #1, Partition #2
 Partition Size 4.44 GB (4,762,437,120 bytes)
 Partition Starting Offset 15,348,372,480 bytes
 Partition Disk #1, Partition #3
 Partition Size 100.89 GB (108,335,162,880 bytes)
 Partition Starting Offset 20,110,809,600 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 #50, Partition #0
 Partition Size 5.58 GB (5,987,971,584 bytes)
 Partition Starting Offset 32,256 bytes
 Partition Disk #50, Partition #1
 Partition Size 8.72 GB (9,360,368,640 bytes)
 Partition Starting Offset 5,988,003,840 bytes
 Partition Disk #50, Partition #2
 Partition Size 4.44 GB (4,762,437,120 bytes)
 Partition Starting Offset 15,348,372,480 bytes
 Partition Disk #50, Partition #3
 Partition Size 100.89 GB (108,335,162,880 bytes)
 Partition Starting Offset 20,110,809,600 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 #49, Partition #0
 Partition Size 5.58 GB (5,987,971,584 bytes)
 Partition Starting Offset 32,256 bytes
 Partition Disk #49, Partition #1
 Partition Size 8.72 GB (9,360,368,640 bytes)
 Partition Starting Offset 5,988,003,840 bytes
 Partition Disk #49, Partition #2
 Partition Size 4.44 GB (4,762,437,120 bytes)
 Partition Starting Offset 15,348,372,480 bytes
 Partition Disk #49, Partition #3
 Partition Size 100.89 GB (108,335,162,880 bytes)
 Partition Starting Offset 20,110,809,600 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 #48, Partition #0
 Partition Size 5.58 GB (5,987,971,584 bytes)
 Partition Starting Offset 32,256 bytes
 Partition Disk #48, Partition #1
 Partition Size 8.72 GB (9,360,368,640 bytes)
 Partition Starting Offset 5,988,003,840 bytes
 Partition Disk #48, Partition #2
 Partition Size 4.44 GB (4,762,437,120 bytes)
 Partition Starting Offset 15,348,372,480 bytes
 Partition Disk #48, Partition #3
 Partition Size 100.89 GB (108,335,162,880 bytes)
 Partition Starting Offset 20,110,809,600 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 #47, Partition #0
Partition Size 5.58 GB (5,987,971,584 bytes)
Partition Starting Offset 32,256 bytes
Partition Disk #47, Partition #1
Partition Size 8.72 GB (9,360,368,640 bytes)
Partition Starting Offset 5,988,003,840 bytes
Partition Disk #47, Partition #2
Partition Size 4.44 GB (4,762,437,120 bytes)
Partition Starting Offset 15,348,372,480 bytes
Partition Disk #47, Partition #3
Partition Size 100.89 GB (108,335,162,880 bytes)
Partition Starting Offset 20,110,809,600 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 #46, Partition #0
Partition Size 5.58 GB (5,987,971,584 bytes)
Partition Starting Offset 32,256 bytes
Partition Disk #46, Partition #1
Partition Size 8.72 GB (9,360,368,640 bytes)
Partition Starting Offset 5,988,003,840 bytes
Partition Disk #46, Partition #2
Partition Size 4.44 GB (4,762,437,120 bytes)
Partition Starting Offset 15,348,372,480 bytes
Partition Disk #46, Partition #3
Partition Size 100.89 GB (108,335,162,880 bytes)
Partition Starting Offset 20,110,809,600 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 #45, Partition #0
Partition Size 5.58 GB (5,987,971,584 bytes)
Partition Starting Offset 32,256 bytes
Partition Disk #45, Partition #1
Partition Size 8.72 GB (9,360,368,640 bytes)
Partition Starting Offset 5,988,003,840 bytes
Partition Disk #45, Partition #2
Partition Size 4.44 GB (4,762,437,120 bytes)
Partition Starting Offset 15,348,372,480 bytes
Partition Disk #45, Partition #3
Partition Size 100.89 GB (108,335,162,880 bytes)
Partition Starting Offset 20,110,809,600 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 #44, Partition #0
Partition Size 5.58 GB (5,987,971,584 bytes)
Partition Starting Offset 32,256 bytes
Partition Disk #44, Partition #1
Partition Size 8.72 GB (9,360,368,640 bytes)
Partition Starting Offset 5,988,003,840 bytes
Partition Disk #44, Partition #2
Partition Size 4.44 GB (4,762,437,120 bytes)
Partition Starting Offset 15,348,372,480 bytes
Partition Disk #44, Partition #3
Partition Size 100.89 GB (108,335,162,880 bytes)
Partition Starting Offset 20,110,809,600 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 #43, Partition #0
Partition Size 5.58 GB (5,987,971,584 bytes)
Partition Starting Offset 32,256 bytes
Partition Disk #43, Partition #1
Partition Size 8.72 GB (9,360,368,640 bytes)
Partition Starting Offset 5,988,003,840 bytes
Partition Disk #43, Partition #2
Partition Size 4.44 GB (4,762,437,120 bytes)
Partition Starting Offset 15,348,372,480 bytes
Partition Disk #43, Partition #3
Partition Size 100.89 GB (108,335,162,880 bytes)
Partition Starting Offset 20,110,809,600 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 #42, Partition #0
Partition Size 5.58 GB (5,987,971,584 bytes)
Partition Starting Offset 32,256 bytes
Partition Disk #42, Partition #1
Partition Size 8.72 GB (9,360,368,640 bytes)
Partition Starting Offset 5,988,003,840 bytes
Partition Disk #42, Partition #2
Partition Size 4.44 GB (4,762,437,120 bytes)
Partition Starting Offset 15,348,372,480 bytes
Partition Disk #42, Partition #3
Partition Size 100.89 GB (108,335,162,880 bytes)
Partition Starting Offset 20,110,809,600 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 #41, Partition #0
Partition Size 5.58 GB (5,987,971,584 bytes)
Partition Starting Offset 32,256 bytes
Partition Disk #41, Partition #1
Partition Size 8.72 GB (9,360,368,640 bytes)
Partition Starting Offset 5,988,003,840 bytes
Partition Disk #41, Partition #2
Partition Size 4.44 GB (4,762,437,120 bytes)
Partition Starting Offset 15,348,372,480 bytes
Partition Disk #41, Partition #3
Partition Size 100.89 GB (108,335,162,880 bytes)
Partition Starting Offset 20,110,809,600 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 0xE8800000-0xE8FFFFFF
Memory Address 0xE7900000-0xE8FFFFFF
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 0xEA800000-0xEAFFFFFF
Memory Address 0xE9000000-0xEAFFFFFF
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 0xED800000-0xEDFFFFFF
Memory Address 0xED400000-0xEDFFFFFF
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&5E54501&0&0000

Memory Address 0xEE800000-0xEEFFFFFF
Memory Address 0xEE400000-0xEEFFFFFF
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 0xF1800000-0xF1FFFFFF
Memory Address 0xF1400000-0xF1FFFFFF
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&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    PCIIDE\IDECHANNEL\4&100E6A2D&0&0
I/O Port    0x000001F0-0x000001F7
I/O Port    0x000003F6-0x000003F6
IRQ Channel    IRQ 14

Name    Secondary IDE Channel
Manufacturer    (Standard IDE ATA/ATAPI controllers)
Status OK
PNP Device ID    PCIIDE\IDECHANNEL\4&100E6A2D&0&1
I/O Port    0x00000170-0x00000177
I/O Port    0x00000376-0x00000376
IRQ Channel    IRQ 13

[Printing]

Name    Driver Port Name    Server Name

[Problem Devices]

Device PNP Device ID Error Code
Not Available ACPI\UNO4501\0 The drivers for this device are not
installed.

[USB]

Device PNP Device ID
Intel(r) 82371AB/EB PCI to USB Universal Host Controller
    PCI\VEN_8086&DEV_7112&SUBSYS_00000000&REV_01\3&172E68DD&0&02

USB Root Hub    USB\ROOT_HUB\4&27B1EF4B&0
Standard OpenHCD USB Host Controller
    PCI\VEN_1018&DEV_C211&SUBSYS_C2111018&REV_00\3&172E68DD&0&09

USB Root Hub    USB\ROOT_HUB\4&1949159F&0
Console Manager USB Keyboard    USB\VID_0432&PID_0010\5&37AEB74C&0&1
Console Manager USB Keyboard    HID\VID_0432&PID_0010\6&209FAF05&0&0000

Console Manager USB Mouse    USB\VID_0432&PID_0011\5&37AEB74C&0&2
Console Manager USB Mouse    HID\VID_0432&PID_0011\6&1A2AC7DA&0&0000

[Software Environment]

[System Drivers]

```

Name	Description	File	Type	Started	Start Mode	State	Status
abiosdsk	Error Control	Abiosdsk	Accept Pause	Accept Stop	Not Available	Kernel Driver	No
acpi	Microsoft ACPI Driver	c:\windows\system32\drivers\acpi.sys	Kernel Driver	Yes	Boot	Running OK	Normal No
acpiec	ACPIEC	c:\windows\system32\drivers\acpiec.sys	Kernel Driver	No	Disabled	Stopped OK	Normal No
adpu160m	adpu160m	adpu160m	Not Available	Kernel Driver	No	Disabled	Stopped OK
adpu320	adpu320	adpu320	Not Available	Kernel Driver	No	Disabled	Stopped OK
afcnt	afcnt	afcnt	Not Available	Kernel Driver	No	Disabled	Stopped OK
afd	AFD Networking Support Environment	c:\windows\system32\drivers\afd.sys	Kernel Driver	Yes	Auto	Running OK	Normal No
aha154x	Aha154x	aha154x	Not Available	Kernel Driver	No	Disabled	Stopped OK
aic78u2	aic78u2	aic78u2	Not Available	Kernel Driver	No	Disabled	Stopped OK
aic78xx	aic78xx	aic78xx	Not Available	Kernel Driver	No	Disabled	Stopped OK
aliide	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	Normal No
atapi	Standard IDE/ESDI Hard Disk Controller	c:\windows\system32\drivers\atapi.sys	Kernel Driver	Yes	Boot	Running OK	Normal No
atdisk	Atdisk	atdisk	Not Available	Kernel Driver	No	Disabled	Stopped OK
atmarpc	ATM ARP Client Protocol	c:\windows\system32\drivers\atmarpc.sys	Kernel Driver	No	Manual	Stopped OK	Normal No
audstub	Audio Stub Driver	c:\windows\system32\drivers\audstub.sys	Kernel Driver	Yes	Manual	Running OK	Normal No
beep	Beep	c:\windows\system32\drivers\beep.sys	Kernel Driver	Yes	System	Running OK	Normal No
cbidf2k	cbidf2k	c:\windows\system32\drivers\cbidf2k.sys	Kernel Driver	No	Disabled	Stopped OK	Normal No
cdfs	Cdfs	c:\windows\system32\drivers\cdfs.sys	File System Driver	Yes	Disabled	Running OK	Normal No
cdrom	CD-ROM Driver	c:\windows\system32\drivers\cdrom.sys	Kernel Driver	Yes	System	Running OK	Normal No
changer	Changer	changer	Not Available	Kernel Driver	No	System	Stopped OK
clusdisk	Cluster Disk Driver	c:\windows\system32\drivers\clusdisk.sys	Kernel Driver	No	Disabled	Stopped OK	Normal No
cmdide	CmdIde	cmdide	Not Available	Kernel Driver	No	Disabled	Stopped OK
cpqarray	Cpqarray	cpqarray	Not Available	Kernel Driver	No	Disabled	Stopped OK
cpqarry2	cpqarry2	cpqarry2	Not Available	Kernel Driver	No	Disabled	Stopped OK
cpqcissm	cpqcissm	cpqcissm	Not Available	Kernel Driver	No	Disabled	Stopped OK
cpqfcalm	cpqfcalm	cpqfcalm	Not Available	Kernel Driver	No	Disabled	Stopped OK
crcdisk	CRC Disk Filter Driver	c:\windows\system32\drivers\crcdisk.sys	Kernel Driver	Yes	Boot	Running OK	Normal No
dac960nt	dac960nt	dac960nt	Not Available	Kernel Driver	No	Disabled	Stopped OK
dellcerc	dellcerc	dellcerc	Not Available	Kernel Driver	No	Disabled	Stopped OK
dfsdriver	DfsDriver	c:\windows\system32\drivers\dfs.sys	File System Driver	Yes	Boot	Running OK	Normal No
disk	Disk Driver	c:\windows\system32\drivers\disk.sys	Kernel Driver	Yes	Boot	Running OK	Normal No
dmboot	dmboot	c:\windows\system32\drivers\dmboot.sys	Kernel Driver	No	Disabled	Stopped OK	Normal No
dmio	Logical Disk Manager Driver	c:\windows\system32\drivers\dmio.sys	Kernel Driver	Yes	Boot	Running OK	Normal No
dmload	dmload	c:\windows\system32\drivers\dmload.sys	Kernel Driver	Yes	Boot	Running OK	Normal No
dpti2o	dpti2o	dpti2o	Not Available	Kernel Driver	No	Disabled	Stopped OK
e100b	Intel(R) PRO Adapter Driver	c:\windows\system32\drivers\e100b325.sys	Kernel Driver	Yes	Manual	Running OK	Normal No
em	em	c:\windows\system32\drivers\em.sys	Kernel Driver	No	Manual	Stopped OK	Normal No
fastfat	Fastfat	c:\windows\system32\drivers\fastfat.sys	File System Driver	No	Disabled	Stopped OK	Normal No
fdc	Floppy Disk Controller Driver	c:\windows\system32\drivers\fdc.sys	Kernel Driver	Yes	Manual	Running OK	Normal No
fips	Fips	c:\windows\system32\drivers\fips.sys	Kernel Driver	Yes	System	Running OK	Normal No
flpydisk	Floppy Disk Driver	c:\windows\system32\drivers\flpydisk.sys	Kernel Driver	Yes	Manual	Running OK	Normal No
ftdisk	Volume Manager Driver	c:\windows\system32\drivers\ftdisk.sys	Kernel Driver	Yes	Boot	Running OK	Normal No
gnindis	cLAN NDIS Driver	c:\windows\system32\drivers\gnindis.sys	Kernel Driver	Yes	Auto	Running OK	Normal No
gnivia	cLAN VIA Driver	c:\windows\system32\drivers\gnivia.sys	Kernel Driver	Yes	Auto	Running OK	Normal No
gpc	Generic Packet Classifier	c:\windows\system32\drivers\msgpc.sys	Kernel Driver	Yes	Manual	Running OK	Normal No
hidusb	Microsoft HID Class Driver	c:\windows\system32\drivers\hidusb.sys	Kernel Driver	Yes	Manual	Running OK	Ignore No
hpn	hpn	hpn	Not Available	Kernel Driver	No	Disabled	Stopped OK
hpt3xx	hpt3xx	hpt3xx	Not Available	Kernel Driver	No	Disabled	Stopped OK

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
	Kernel Driver	Yes	Boot	Running OK	Normal	No
	Yes					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
	Kernel Driver	No	Manual	Stopped OK	Normal	No
	No					No
ipnat	IP Network Address Translator					
	c:\windows\system32\drivers\ipnat.sys	Kernel Driver	No	Manual		
	Stopped OK	Normal	No	No		
ipsec	IPSEC driver					
	c:\windows\system32\drivers\ipsec.sys	Kernel Driver	Yes			
	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
	Kernel Driver	Yes	System	Running OK	Ignore	No
	Yes					Yes
ksecdd	KSecDD					
	c:\windows\system32\drivers\ksecdd.sys	Kernel Driver	Yes			
	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
	Kernel Driver	Yes	Manual	Running OK	Ignore	No
	Yes					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	Yes			
	No	Manual	Stopped OK	Normal	No	No
mrxsmb	MRXSMB					
	c:\windows\system32\drivers\mrxsmb.sys	File System Driver	Yes			
	Driver	Yes	System	Running OK	Normal	No
	Yes	System	Running OK	Normal	No	Yes
msfs	Msfs					
	c:\windows\system32\drivers\msfs.sys	File System Driver	Yes			
	Yes	System	Running OK	Normal	No	Yes
mup	Mup					
	c:\windows\system32\drivers\mup.sys	File System Driver	Yes			
	Yes	Boot	Running OK	Normal	No	Yes
ndis	NDIS System Driver					
	c:\windows\system32\drivers\ndis.sys	Kernel Driver	Yes			
	Driver	Yes	Boot	Running OK	Normal	No
	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			
	Driver	Yes	Manual	Running OK	Normal	No
	Yes	Manual	Running OK	Normal	No	Yes
netbios	NetBIOS Interface					
	c:\windows\system32\drivers\netbios.sys	File System Driver	Yes	System	Running OK	Normal
	File System Driver	Yes	System	Running OK	Normal	No
	Yes					Yes
netbt	NetBios over Tcpip					
	c:\windows\system32\drivers\netbt.sys	Kernel Driver	Yes			
	Driver	Yes	System	Running OK	Normal	No
	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			
	Yes	System	Running OK	Normal	No	Yes
ntfs	Ntfs					
	c:\windows\system32\drivers\ntfs.sys	File System Driver	Yes			
	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
	Kernel Driver	Yes	Manual	Running OK	Normal	No
	Yes					Yes
partmgr	Partition Manager					
	c:\windows\system32\drivers\partmgr.sys	Kernel Driver	Yes	Boot	Running OK	Normal
	Kernel Driver	Yes	Boot	Running OK	Normal	No
	Yes					Yes
parvdm	Parvdm					
	c:\windows\system32\drivers\parvdm.sys	Kernel Driver	Yes			
	Yes	Auto	Running OK	Ignore	No	Yes
pci	PCI Bus Driver					
	c:\windows\system32\drivers\pci.sys	Kernel Driver	Yes			
	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							redbook	Digital CD Audio Playback Filter Driver								
	No	Disabled	Stopped OK	Normal	No	No					c:\windows\system32\drivers\redbook.sys	Kernel Driver	Yes						
pdcomp	PDCOMP	Not Available	Kernel Driver	No	Manual	Stopped OK					System Running OK	Normal	No	Yes					
	Ignore	No	No								secdrv	Secdrv	c:\windows\system32\drivers\secdrv.sys	Kernel Driver					
	Ignore	No	No								No	Manual	Stopped OK	Normal	No	No			
pdreli	PDRELI	Not Available	Kernel Driver	No	Manual	Stopped OK					serenum	Serenum Filter Driver	c:\windows\system32\drivers\serenum.sys						
	Ignore	No	No								Kernel Driver	Yes	Manual	Running OK	Normal	No	Yes		
pdrframe	PDRFRAME	Not Available	Kernel Driver	No	Manual	Stopped OK					serial	Serial port driver	c:\windows\system32\drivers\serial.sys						
	Ignore	No	No								Kernel Driver	Yes	System	Running OK	Ignore	No	Yes		
perc2	perc2	Not Available	Kernel Driver	No	Disabled	Stopped OK					sfloppy	Sfloppy	c:\windows\system32\drivers\sfloppy.sys	Kernel Driver					
	Ignore	No	No								No	System	Stopped OK	Ignore	No	No			
perc2hib	perc2hib	Not Available	Kernel Driver	No	Disabled	Stopped OK					simbad	Simbad	Not Available	Kernel Driver	No	Disabled			
	Disabled	Stopped OK	Normal	No	No						Stopped OK	Normal	No	No					
pptpminiport	WAN Miniport (PPTP)										sparrow	Sparrow	Not Available	Kernel Driver	No	Disabled			
	c:\windows\system32\drivers\raspppt.sys		Kernel Driver	Yes							Stopped OK	Normal	No	No					
	Manual	Running OK	Normal	No	Yes						srv	Srv	c:\windows\system32\drivers\srv.sys	File System Driver					
ptilink	Direct Parallel Link Driver										Yes	Manual	Running OK	Normal	No	Yes			
	c:\windows\system32\drivers\ptilink.sys		Kernel Driver	Yes							swenum	Software Bus Driver	c:\windows\system32\drivers\swenum.sys						
	Manual	Running OK	Normal	No	Yes						Kernel Driver	Yes	Manual	Running OK	Normal	No	Yes		
ql1080	ql1080	Not Available	Kernel Driver	No	Disabled	Stopped OK					symc810	symc810	Not Available	Kernel Driver	No	Disabled			
	Ignore	No	No								Stopped OK	Normal	No	No					
ql10wnt	Ql10wnt	Not Available	Kernel Driver	No	Disabled	Stopped OK					symc8xx	symc8xx	Not Available	Kernel Driver	No	Disabled			
	Ignore	No	No								Stopped OK	Normal	No	No					
ql12160	ql12160	Not Available	Kernel Driver	No	Disabled	Stopped OK					symmpi	symmpi	Not Available	Kernel Driver	No	Disabled			
	Ignore	No	No								Stopped OK	Normal	No	No					
ql1240	ql1240	Not Available	Kernel Driver	No	Disabled	Stopped OK					sym_hi	sym_hi	Not Available	Kernel Driver	No	Disabled			
	Ignore	No	No								Stopped OK	Normal	No	No					
ql1280	ql1280	Not Available	Kernel Driver	No	Disabled	Stopped OK					sym_u3	sym_u3	Not Available	Kernel Driver	No	Disabled			
	Ignore	No	No								Stopped OK	Normal	No	No					
ql2100	ql2100	Not Available	Kernel Driver	No	Disabled	Stopped OK					tcpip	TCP/IP Protocol Driver	c:\windows\system32\drivers\tcpip.sys	Kernel Driver					
	Ignore	No	No								Driver	Yes	System	Running OK	Normal	No	Yes		
ql2200	ql2200	Not Available	Kernel Driver	No	Disabled	Stopped OK					tdpipe	TDPIPE	c:\windows\system32\drivers\tdpipe.sys	Kernel Driver					
	Ignore	No	No								No	Manual	Stopped OK	Ignore	No	No			
ql2300	ql2300	Not Available	Kernel Driver	No	Disabled	Stopped OK					tdtcp	TDTCP	c:\windows\system32\drivers\tdtcp.sys	Kernel Driver	No				
	Ignore	No	No								Manual	Stopped OK	Ignore	No	No				
rasacd	Remote Access Auto Connection Driver										termdd	Terminal Device Driver	c:\windows\system32\drivers\termdd.sys						
	c:\windows\system32\drivers\rasacd.sys		Kernel Driver	Yes							Kernel Driver	Yes	System	Running OK	Normal	No	Yes		
	System	Running OK	Normal	No	Yes						toside	TosIde	Not Available	Kernel Driver	No	Disabled			
rasl2tp	WAN Miniport (L2TP)										Stopped OK	Normal	No	No					
	c:\windows\system32\drivers\rasl2tp.sys		Kernel Driver	Yes							ucon	ucon	c:\windows\system32\drivers\uconmini.sys	Kernel Driver					
	Kernel Driver	Yes	Manual	Running OK	Normal	No	Yes				Yes	Manual	Running OK	Ignore	No	Yes			
raspppoe	Remote Access PPPOE Driver										udfs	Udfs	c:\windows\system32\drivers\udfs.sys	File System Driver					
	c:\windows\system32\drivers\raspppoe.sys		Kernel Driver	Yes							No	Disabled	Stopped OK	Normal	No	No			
	Manual	Running OK	Normal	No	Yes						update	Microcode Update Driver							
raspti	Direct Parallel										c:\windows\system32\drivers\update.sys	Kernel Driver	Yes						
	c:\windows\system32\drivers\raspti.sys		Kernel Driver	Yes							Manual	Running OK	Normal	No	Yes				
	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				Kernel Driver	Yes	Manual	Running OK	Normal	No	Yes		
rdbss	Rdbss	c:\windows\system32\drivers\rdbss.sys	File System Driver								usbhcci	Microsoft USB Open Host Controller Miniport Driver							
	Yes	System	Running OK	Normal	No	Yes					c:\windows\system32\drivers\usbhcci.sys	Kernel Driver	Yes						
rdpcdd	RDPcDD	c:\windows\system32\drivers\rdpcdd.sys	Kernel Driver								Manual	Running OK	Normal	No	Yes				
	Yes	System	Running OK	Ignore	No	Yes					usbuhci	Microsoft USB Universal Host Controller Miniport Driver							
rdpdr	Terminal Server Device Redirector Driver										c:\windows\system32\drivers\usbuhci.sys	Kernel Driver	Yes						
	c:\windows\system32\drivers\rdpdr.sys		Kernel Driver	Yes	Manual	Running OK	Normal	No	Yes		Manual	Running OK	Normal	No	Yes				
rdpwd	RDPWD	c:\windows\system32\drivers\rdpwd.sys	Kernel Driver	No							Manual	Running OK	Normal	No	Yes				
	Manual	Stopped OK	Ignore	No	No														

```

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	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	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			
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&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	SCSI\PROCESSORUNISYS_FC76222-				
P64_V2_5&7A21384&0&FC04560B00080010					
Unisys Intelligent Fibre Channel Adapter SCSI Processor	No	SYSTEM			
2.55.0.6	10/22/2003	Unisys Corporation	oem9.inf		
Not Available	SCSI\PROCESSORUNISYS_FC76222-				
P64_V2_5&7A21384&0&FD04560B00080010					
PCI bus No	SYSTEM	5.2.3790.0	10/1/2002	(Standard system devices)	
machine.inf	Not Available	ACPI\PNP0A03\4			
Intel 82371AB/EB PCI to ISA bridge (ISA mode)	No	SYSTEM			
5.2.3790.0	10/1/2002	Intel	machine.inf	Not Available	
PCI\VEN_8086&DEV_7110&SUBSYS_00000000&REV_02\3&172E68DD&0&00					

```

ISAPNP Read Data Port No SYSTEM 5.2.3790.0 10/1/2002
(Standard system devices) machine.inf Not Available
ISAPNP\READDATAPORT\0

Direct memory access controller No SYSTEM 5.2.3790.0
10/1/2002 (Standard system devices) machine.inf Not
Available ACPI\PNP0200\D

Programmable interrupt controller No SYSTEM 5.2.3790.0
10/1/2002 (Standard system devices) machine.inf Not
Available ACPI\PNP0000\D

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

System timer No SYSTEM 5.2.3790.0 10/1/2002 (Standard
system devices) machine.inf Not Available ACPI\PNP0100\D

System speaker No SYSTEM 5.2.3790.0 10/1/2002 (Standard
system devices) machine.inf Not Available ACPI\PNP0800\D

Generic Bus No SYSTEM 5.2.3790.0 10/1/2002 (Standard
system devices) machine.inf Not Available ACPI\PNP0A05\D

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
Microsoft msmouse.inf Not Available ACPI\PNP0F13\D

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

Standard floppy disk controller No FDC 5.2.3790.0
10/1/2002 (Standard floppy disk controllers) fdc.inf Not
Available ACPI\PNP0700\D

Floppy disk drive No FLOPPYDISK 5.2.3790.0 10/1/2002
(Standard floppy disk drives) flpydisk.inf Not Available
FDC\GENERIC_FLOPPY_DRIVE\6&1E621CEF&0&0

Intel(r) 82371AB/EB PCI Bus Master IDE Controller No HDC
5.2.3790.0 10/1/2002 Intel mshdc.inf Not Available
PCI\VEN_8086&DEV_7111&SUBSYS_00000000&REV_01\3&172E68DD&0&01

Primary IDE Channel No HDC 5.2.3790.0 10/1/2002
(Standard IDE ATA/ATAPI controllers) mshdc.inf Not Available
PCIIDE\IDECHANNEL\4&100E6A2D&0&0

Disk drive No DISKDRIVE 5.2.3790.0 10/1/2002
(Standard disk drives) disk.inf Not Available
IDE\DISKFUJITSU_MHS2040AT_8004_\5&28FC923
B&0&0.0.0

Secondary IDE Channel No HDC 5.2.3790.0 10/1/2002
(Standard IDE ATA/ATAPI controllers) mshdc.inf Not Available
PCIIDE\IDECHANNEL\4&100E6A2D&0&1

CD-ROM Drive No CDROM 5.2.3790.0 10/1/2002 (Standard CD-
ROM drives) cdrom.inf Not Available IDE\CDROMTEAC_CD-
224E_1.9A_\5&1B78D9&0&0.0.0

Intel(r) 82371AB/EB PCI to USB Universal Host Controller No USB
5.2.3790.0 10/1/2002 Intel usbport.inf Not Available
PCI\VEN_8086&DEV_7112&SUBSYS_00000000&REV_01\3&172E68DD&0&02

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USB Root Hub No USB 5.2.3790.0 10/1/2002 (Standard USB Host Controller) usbport.inf Not Available
 USB\ROOT_HUB\4&27B1EF4B&0
 Console Manager Video Driver IPL2 PCI No DISPLAY 7.0.0.27
 5/2/2003 Unisys Corporation oem6.inf Not Available
 PCI\VEN_1018&DEV_C210&SUBSYS_C2101018&REV_00\3&172E68DD&0&08

Default Monitor No MONITOR 5.1.2001.0 6/6/2001
 (Standard monitor types) monitor.inf Not Available
 DISPLAY\DEFAULT_MONITOR\4&26C16536&0&22446688&01&01

Standard OpenHCD USB Host Controller No USB 5.2.3790.0
 10/1/2002 (Standard USB Host Controller) usbport.inf
 Not Available
 PCI\VEN_1018&DEV_C211&SUBSYS_C2111018&REV_00\3&172E68DD&0&09

USB Root Hub No USB 5.2.3790.0 10/1/2002 (Standard USB Host Controller) usbport.inf Not Available
 USB\ROOT_HUB\4&1949159F&0

Console Manager USB Keyboard No HIDCLASS 7.0.0.27
 5/2/2003 Unisys Corp oem1.inf Not Available
 USB\VID_0432&PID_0010\5&37AEB74C&0&1

Console Manager USB Keyboard No KEYBOARD 7.0.0.27
 5/2/2003 Unisys Corp oem3.inf Not Available
 HID\VID_0432&PID_0010\6&209FAF05&0&0000

Console Manager USB Mouse No HIDCLASS 7.0.0.27
 5/2/2003 Unisys Corp oem1.inf Not Available
 USB\VID_0432&PID_0011\5&37AEB74C&0&2

Console Manager USB Mouse No MOUSE 7.0.0.27 5/2/2003
 Unisys Corp oem2.inf Not Available
 HID\VID_0432&PID_0011\6&1A2AC7DA&0&0000

Intel 825x-based PCI Ethernet Adapter (10/100) No NET
 6.6.8.1 10/1/2002 Intel net557.inf Not Available
 PCI\VEN_8086&DEV_1229&SUBSYS_10180D88&REV_08\3&172E68DD&0&10

PCI bus No SYSTEM 5.2.3790.0 10/1/2002 (Standard system devices) machine.inf Not Available ACPI\PNP0A03\5
 PCI standard PCI-to-PCI bridge No SYSTEM 5.2.3790.0
 10/1/2002 (Standard system devices) machine.inf Not Available
 PCI\VEN_8086&DEV_0309&SUBSYS_00000000&REV_01\3&474B838&0&00

Unisys Intelligent Fibre Channel Fabric Bus Adapter No SCSIADAPTER
 2.55.0.18 10/22/2003 Unisys Corporation oem8.inf
 Not Available
 PCI\VEN_11AB&DEV_4620&SUBSYS_C0FC1018&REV_12\4&A75DC64&0&0000

Unisys Intelligent Fibre Channel Adapter SCSI Processor No SYSTEM
 2.55.0.6 10/22/2003 Unisys Corporation oem9.inf
 Not Available SCSI\PROCESSORUNISYS_FC76222-
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Unisys Intelligent Fibre Channel Adapter SCSI Processor No SYSTEM
 2.55.0.6 10/22/2003 Unisys Corporation oem9.inf
 Not Available SCSI\PROCESSORUNISYS_FC76222-
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PCI bus No SYSTEM 5.2.3790.0 10/1/2002 (Standard system devices) machine.inf Not Available ACPI\PNP0A03\6
 cLAN Host Adapter No NET 4.2.0.75 10/5/2000
 Giganet oem7.inf Not Available
 PCI\VEN_135B&DEV_0001&SUBSYS_00000000&REV_00\3&E44F86D&0&00

PCI 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
 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
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PCI bus No SYSTEM 5.2.3790.0 10/1/2002 (Standard system devices) machine.inf Not Available ACPI\PNP0A03\9
 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
 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
 PCI\VEN_11AB&DEV_4620&SUBSYS_C0FC1018&REV_12\4&5E54501&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&324B9A0D&0&D004560B00080010

Unisys Intelligent Fibre Channel Adapter SCSI Processor No SYSTEM
 2.55.0.6 10/22/2003 Unisys Corporation oem9.inf
 Not Available SCSI\PROCESSORUNISYS_FC76222-
 P64_V2_\5&324B9A0D&0&D104560B00080010

PCI bus No SYSTEM 5.2.3790.0 10/1/2002 (Standard system devices) machine.inf Not Available ACPI\PNP0A03\C
 cLAN Host Adapter No NET 4.2.0.75 10/5/2000
 Giganet oem7.inf Not Available
 PCI\VEN_135B&DEV_0001&SUBSYS_00000000&REV_00\3&1B2F0CE&0&00

PCI bus No SYSTEM 5.2.3790.0 10/1/2002 (Standard system devices) machine.inf Not Available ACPI\PNP0A03\D
 PCI bus No SYSTEM 5.2.3790.0 10/1/2002 (Standard system devices) machine.inf Not Available ACPI\PNP0A03\E
 PCI standard PCI-to-PCI bridge No SYSTEM 5.2.3790.0
 10/1/2002 (Standard system devices) machine.inf Not Available

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PCI\VEN_8086&DEV_0309&SUBSYS_00000000&REV_01\3&27265218&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&BBE9921&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&382242AB&0&E804560B00080010
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&382242AB&0&E904560B00080010
PCI bus No     SYSTEM 5.2.3790.0      10/1/2002      (Standard system
devices)      machine.inf      Not Available  ACPI\PNP0A03\F
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
10/1/2002      (Standard system devices)      machine.inf      Not
Available
PCI\VEN_8086&DEV_0309&SUBSYS_00000000&REV_01\3&1D521019&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&30F36DAA&0&0000
Unisys Intelligent Fibre Channel Adapter SCSI Processor    No      SYSTEM
2.55.0.6      10/22/2003      Unisys Corporation      oem9.inf
Not Available  SCSI\PROCESSORUNISYS_FC76222-
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Unisys Intelligent Fibre Channel Adapter SCSI Processor    No      SYSTEM
2.55.0.6      10/22/2003      Unisys Corporation      oem9.inf
Not Available  SCSI\PROCESSORUNISYS_FC76222-
P64_V2_\5&1225C8E9&0&C104560B00080010
PCI bus No     SYSTEM 5.2.3790.0      10/1/2002      (Standard system
devices)      machine.inf      Not Available  ACPI\PNP0A03\12
PCI bus No     SYSTEM 5.2.3790.0      10/1/2002      (Standard system
devices)      machine.inf      Not Available  ACPI\PNP0A03\13
PCI bus No     SYSTEM 5.2.3790.0      10/1/2002      (Standard system
devices)      machine.inf      Not Available  ACPI\PNP0A03\14
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&19E45801&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&1F3768A3&0&0000

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Unisys Intelligent Fibre Channel Adapter SCSI Processor    No      SYSTEM
2.55.0.6      10/22/2003      Unisys Corporation      oem9.inf
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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&1181D662&0&B104560B00080010
PCI bus No     SYSTEM 5.2.3790.0      10/1/2002      (Standard system
devices)      machine.inf      Not Available  ACPI\PNP0A03\15
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
PCI\VEN_135B&DEV_0001&SUBSYS_00000000&REV_00\3&3BCE44&0&00
PCI bus No     SYSTEM 5.2.3790.0      10/1/2002      (Standard system
devices)      machine.inf      Not Available  ACPI\PNP0A03\17
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&36B90202&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&1A68EB24&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&38090F63&0&B404560B00080010
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&38090F63&0&B504560B00080010
PCI bus No     SYSTEM 5.2.3790.0      10/1/2002      (Standard system
devices)      machine.inf      Not Available  ACPI\PNP0A03\18
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&23FF515D&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&297B89&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&291E5CA1&1&2409560B00080010
Unisys Intelligent Fibre Channel Adapter SCSI Processor    No      SYSTEM
2.55.0.6      10/22/2003      Unisys Corporation      oem9.inf
Not Available  SCSI\PROCESSORUNISYS_FC76222-
P64_V2_\5&291E5CA1&1&2509560B00080010
PCI bus No     SYSTEM 5.2.3790.0      10/1/2002      (Standard system
devices)      machine.inf      Not Available  ACPI\PNP0A03\19

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3200	STORAGE\VOLUME\1&30A96598&0&SIGNATURE775FFA0COFFSET7E00LENGTH164E9	NDIS Usermode I/O Protocol	Not Available	LEGACYDRIVER	Not Available				
Generic volume No	VOLUME 5.2.3790.0 10/1/2002 Microsoft	Not Available	Not Available	Not Available	Not Available				
volume.inf	Not Available								
22DEBE400	STORAGE\VOLUME\1&30A96598&0&SIGNATURE775FFA0COFFSET164E9B000LENGTH	NDProxy	Not Available	LEGACYDRIVER	Not Available	Not Available	Not Available	Not Available	Not Available
Generic volume No	VOLUME 5.2.3790.0 10/1/2002 Microsoft	Available	Not Available	Not Available	Not Available	Not Available	ROOT\LEGACY_NDPROXY\0000		
volume.inf	Not Available								
11BDD0600	STORAGE\VOLUME\1&30A96598&0&SIGNATURE775FFA0COFFSET392D59400LENGTH	NetBios over Tcpip	Not Available	LEGACYDRIVER	Not Available	Not Available	Not Available	Not Available	Not Available
Generic volume No	VOLUME 5.2.3790.0 10/1/2002 Microsoft	Available	Not Available	Not Available	Not Available	Not Available	Not Available	Not Available	Not Available
volume.inf	Not Available								
1939476600	STORAGE\VOLUME\1&30A96598&0&SIGNATURE775FFA0COFFSET4AEB29A00LENGTH	Null	Not Available	LEGACYDRIVER	Not Available	Not Available	Not Available	Not Available	Not Available
Generic volume No	VOLUME 5.2.3790.0 10/1/2002 Microsoft	Available	Not Available	Not Available	Not Available	Not Available	ROOT\LEGACY_NULL\0000		
volume.inf	Not Available								
6DC00	STORAGE\VOLUME\1&30A96598&0&SIGNATURE58A408D2OFFSET7E00LENGTH7F6EB	Partition Manager	Not Available	LEGACYDRIVER	Not Available	Not Available	Not Available	Not Available	Not Available
AFD Networking Support Environment	Not Available LEGACYDRIVER Not Available	Available	Not Available	Not Available	Not Available	Not Available	Not Available	Not Available	Not Available
Available	Not Available Not Available Not Available Not Available						ROOT\LEGACY_PARTMGR\0000		
Beep	Not Available LEGACYDRIVER Not Available Not Available Not Available	Parvdm	Not Available	LEGACYDRIVER	Not Available	Not Available	Not Available	Not Available	Not Available
Available	Not Available Not Available Not Available Not Available	Available	Not Available	Not Available	Not Available	Not Available	Not Available	Not Available	Not Available
CRC Disk Filter Driver	Not Available LEGACYDRIVER Not Available Not Available	Remote Access Auto Connection Driver	Not Available	LEGACYDRIVER	Not Available	Not Available	Not Available	Not Available	Not Available
Available	Not Available Not Available Not Available Not Available	Available	Not Available	Not Available	Not Available	Not Available	Not Available	Not Available	Not Available
dmboot	Not Available LEGACYDRIVER Not Available Not Available Not Available	Available	Not Available	Not Available	Not Available	Not Available	Not Available	Not Available	Not Available
Available	Not Available Not Available Not Available Not Available						ROOT\LEGACY_RASACD\0000		
dmload	Not Available LEGACYDRIVER Not Available Not Available Not Available	RDPCDD	Not Available	LEGACYDRIVER	Not Available	Not Available	Not Available	Not Available	Not Available
Available	Not Available Not Available Not Available Not Available	Available	Not Available	Not Available	Not Available	Not Available	Not Available	Not Available	Not Available
em	Not Available LEGACYDRIVER Not Available Not Available Not Available	TCP/IP Protocol Driver	Not Available	LEGACYDRIVER	Not Available	Not Available	Not Available	Not Available	Not Available
Available	Not Available Not Available Not Available Not Available	Available	Not Available	Not Available	Not Available	Not Available	Not Available	Not Available	Not Available
Fips	Not Available LEGACYDRIVER Not Available Not Available Not Available	Available	Not Available	Not Available	Not Available	Not Available	Not Available	Not Available	Not Available
Available	Not Available Not Available Not Available Not Available						ROOT\LEGACY_TCPIP\0000		
clAN VIA Driver	Not Available LEGACYDRIVER Not Available Not Available	VGA Display Controller.	Not Available	LEGACYDRIVER	Not Available	Not Available	Not Available	Not Available	Not Available
Available	Not Available Not Available Not Available Not Available	Available	Not Available	Not Available	Not Available	Not Available	Not Available	Not Available	Not Available
Generic Packet Classifier	Not Available LEGACYDRIVER Not Available Not Available						ROOT\LEGACY_VGASAVE\0000		
Available	Not Available Not Available Not Available Not Available	volsnap	Not Available	LEGACYDRIVER	Not Available	Not Available	Not Available	Not Available	Not Available
IPSEC driver	Not Available LEGACYDRIVER Not Available Not Available	Available	Not Available	Not Available	Not Available	Not Available	Not Available	Not Available	Not Available
Available	Not Available Not Available Not Available Not Available						ROOT\LEGACY_VOLSNAP\0000		
ksecdd	Not Available LEGACYDRIVER Not Available Not Available Not Available	Remote Access IP ARP Driver	Not Available	LEGACYDRIVER	Not Available	Not Available	Not Available	Not Available	Not Available
Available	Not Available Not Available Not Available Not Available	Available	Not Available	Not Available	Not Available	Not Available	Not Available	Not Available	Not Available
mmdd	Not Available LEGACYDRIVER Not Available Not Available Not Available	Available	Not Available	Not Available	Not Available	Not Available	Not Available	Not Available	Not Available
Available	Not Available Not Available Not Available Not Available						ROOT\LEGACY_WANARP\0000		
mountmgr	Not Available LEGACYDRIVER Not Available Not Available Not Available	Audio Codecs	No MEDIA 5.2.3790.0 10/1/2002	(Standard system devices)	wave.inf	Not Available	ROOT\MEDIA\MS_MMACM		
Available	Not Available Not Available Not Available Not Available	Available	Not Available	Not Available	Not Available	Not Available	Not Available	Not Available	Not Available
NDIS System Driver	Not Available LEGACYDRIVER Not Available Not Available	Legacy Audio Drivers	No MEDIA 5.2.3790.0 10/1/2002	(Standard system devices)	wave.inf	Not Available	Not Available		
Available	Not Available Not Available Not Available Not Available	Available	Not Available	Not Available	Not Available	Not Available	Not Available		
Remote Access NDIS TAPI Driver	Not Available LEGACYDRIVER Not Available	Media Control Devices	No MEDIA 5.2.3790.0 10/1/2002	(Standard system devices)	wave.inf	Not Available	Not Available		
Available	Not Available Not Available Not Available Not Available	Available	Not Available	Not Available	Not Available	Not Available	Not Available		
	ROOT\LEGACY_NDISTAPI\0000	Legacy Video Capture Devices	No MEDIA 5.2.3790.0 10/1/2002	(Standard system devices)	wave.inf	Not Available	Not Available		
		Available	Not Available	Not Available	Not Available	Not Available	Not Available		
		Video Codecs	No MEDIA 5.2.3790.0 10/1/2002	(Standard system devices)	wave.inf	Not Available	ROOT\MEDIA\MS_MMVID		
		Available	Not Available	Not Available	Not Available	Not Available	Not Available		
		WAN Miniport (L2TP)	No NET 5.2.3790.0 10/1/2002	Microsoft	netrasa.inf	Not Available	Not Available		
		Available	Not Available	Not Available	Not Available	Not Available	Not Available		
		WAN Miniport (IP)	No NET 5.2.3790.0 10/1/2002	Microsoft	netrasa.inf	Not Available	Not Available		
		Available	Not Available	Not Available	Not Available	Not Available	Not Available		
		WAN Miniport (PPPOE)	No NET 5.2.3790.0 10/1/2002	Microsoft	netrasa.inf	Not Available	Not Available		
		Available	Not Available	Not Available	Not Available	Not Available	Not Available		

WAN Miniport (PPTP)	No	NET	5.2.3790.0	10/1/2002		
Microsoft	netrasa.inf		Not Available			
ROOT\MS_PPTPMINIPORT\0000						
Direct Parallel	No	NET	5.2.3790.0	10/1/2002		
Microsoft	netrasa.inf		Not Available			
ROOT\MS_PTMINIPORT\0000						
Terminal Server Device Redirector	No	SYSTEM	5.2.3790.0			
10/1/2002	(Standard system devices)		machine.inf	Not		
Available	ROOT\RDPDR\0000					
Terminal Server Keyboard Driver	No	SYSTEM	5.2.3790.0			
10/1/2002	(Standard system devices)		machine.inf	Not		
Available	ROOT\RDP_KBD\0000					
Terminal Server Mouse Driver	No	SYSTEM	5.2.3790.0	10/1/2002		
(Standard system devices)			machine.inf	Not Available		
ROOT\RDP_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						
Unisys Intelligent Fibre Channel Fabric Bus Enumerator	No	SYSTEM				
2.55.0.51	10/22/2003	Unisys Corporation		oem11.inf		
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						
SCSI\DISK&VEN_UNISYS__VIRTUALSTORAGE__01.0\1&1A590E2C&0&A53F008610						
00001000000000000000C000						
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		
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Not Available						
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000010000000000000009000						
Unisys Intelligent Fibre Channel Fabric Disk Driver	No			DISKDRIVE		
2.55.0.7	10/22/2003	Unisys Corporation		oem10.inf		
Not Available						
SCSI\DISK&VEN_UNISYS__VIRTUALSTORAGE__01.0\1&1A590E2C&0&A53F008610						
000010000000000000008000						
Unisys Intelligent Fibre Channel Fabric Disk Driver	No			DISKDRIVE		
2.55.0.7	10/22/2003	Unisys Corporation		oem10.inf		
Not Available						
SCSI\DISK&VEN_UNISYS__VIRTUALSTORAGE__01.0\1&1A590E2C&0&A53F008610						
000010000000000000007000						
Unisys Intelligent Fibre Channel Fabric Disk Driver	No			DISKDRIVE		
2.55.0.7	10/22/2003	Unisys Corporation		oem10.inf		
Not Available						
SCSI\DISK&VEN_UNISYS__VIRTUALSTORAGE__01.0\1&1A590E2C&0&A53F008610						
000010000000000000006000						

Unisys Intelligent Fibre Channel Fabric Disk Driver	No			DISKDRIVE		
2.55.0.7	10/22/2003	Unisys Corporation		oem10.inf		
Not Available						
SCSI\DISK&VEN_UNISYS__VIRTUALSTORAGE__01.0\1&1A590E2C&0&A53F008610						
000010000000000000005000						
Unisys Intelligent Fibre Channel Fabric Disk Driver	No			DISKDRIVE		
2.55.0.7	10/22/2003	Unisys Corporation		oem10.inf		
Not Available						
SCSI\DISK&VEN_UNISYS__VIRTUALSTORAGE__01.0\1&1A590E2C&0&A53F008610						
000010000000000000004000						
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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000010000000000000003000						
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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00001000000000000000C000						
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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00001000000000000000A000						
Unisys Intelligent Fibre Channel Fabric Disk Driver	No			DISKDRIVE		
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Not Available						
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Unisys Intelligent Fibre Channel Fabric Disk Driver	No			DISKDRIVE		
2.55.0.7	10/22/2003	Unisys Corporation		oem10.inf		
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000010000000000000007000						
Unisys Intelligent Fibre Channel Fabric Disk Driver	No			DISKDRIVE		
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Not Available						
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000010000000000000006000						
Unisys Intelligent Fibre Channel Fabric Disk Driver	No			DISKDRIVE		
2.55.0.7	10/22/2003	Unisys Corporation		oem10.inf		
Not Available						
SCSI\DISK&VEN_UNISYS__VIRTUALSTORAGE__01.0\1&1A590E2C&0&1D40008610						
000010000000000000005000						
Unisys Intelligent Fibre Channel Fabric Disk Driver	No			DISKDRIVE		
2.55.0.7	10/22/2003	Unisys Corporation		oem10.inf		
Not Available						
SCSI\DISK&VEN_UNISYS__VIRTUALSTORAGE__01.0\1&1A590E2C&0&1D40008610						
000010000000000000004000						
Unisys Intelligent Fibre Channel Fabric Disk Driver	No			DISKDRIVE		
2.55.0.7	10/22/2003	Unisys Corporation		oem10.inf		
Not Available						
SCSI\DISK&VEN_UNISYS__VIRTUALSTORAGE__01.0\1&1A590E2C&0&1D40008610						
000010000000000000003000						
Unisys Intelligent Fibre Channel Fabric Disk Driver	No			DISKDRIVE		
2.55.0.7	10/22/2003	Unisys Corporation		oem10.inf		
Not Available						
SCSI\DISK&VEN_UNISYS__VIRTUALSTORAGE__01.0\1&1A590E2C&0&A53F008610						
000010000000000000006000						


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Not Available
SCSI\DISK&VEN_UNISYS__VIRTUALSTORAGE__01.0\1&1A590E2C&0&0B40008610
0000100000000000000007000
Unisys Intelligent Fibre Channel Fabric Disk Driver No      DISKDRIVE
2.55.0.7      10/22/2003      Unisys Corporation      oem10.inf
Not Available
SCSI\DISK&VEN_UNISYS__VIRTUALSTORAGE__01.0\1&1A590E2C&0&0B40008610
0000100000000000000006000
Unisys Intelligent Fibre Channel Fabric Disk Driver No      DISKDRIVE
2.55.0.7      10/22/2003      Unisys Corporation      oem10.inf
Not Available
SCSI\DISK&VEN_UNISYS__VIRTUALSTORAGE__01.0\1&1A590E2C&0&0B40008610
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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
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Not Available
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Unisys Intelligent Fibre Channel Fabric Disk Driver No      DISKDRIVE
2.55.0.7      10/22/2003      Unisys Corporation      oem10.inf
Not Available
SCSI\DISK&VEN_UNISYS__VIRTUALSTORAGE__01.0\1&1A590E2C&0&2340008610
0000100000000000000007000
Unisys Intelligent Fibre Channel Fabric Disk Driver No      DISKDRIVE
2.55.0.7      10/22/2003      Unisys Corporation      oem10.inf
Not Available
SCSI\DISK&VEN_UNISYS__VIRTUALSTORAGE__01.0\1&1A590E2C&0&2340008610
0000100000000000000006000
Unisys Intelligent Fibre Channel Fabric Disk Driver No      DISKDRIVE
2.55.0.7      10/22/2003      Unisys Corporation      oem10.inf
Not Available
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Unisys Intelligent Fibre Channel Fabric Disk Driver No      DISKDRIVE
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Unisys Intelligent Fibre Channel Fabric Disk Driver No      DISKDRIVE
2.55.0.7      10/22/2003      Unisys Corporation      oem10.inf
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0000100000000000000002000
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:\Program Files\Microsoft SQL Server\80\Tools\BINN;C:\Program Files\Microsoft SQL Server\mssql\BINN;C:\Program Files\Debugging Tools for Windows\	<SYSTEM>
PATHEXT	.COM;.EXE;.BAT;.CMD;.VBS;.VBE;.JS;.JSE;.WSF;.WSH	<SYSTEM>
PROCESSOR_ARCHITECTURE	x86	<SYSTEM>
PROCESSOR_IDENTIFIER	x86 Family 15 Model 2 Stepping 6, GenuineIntel	<SYSTEM>
PROCESSOR_LEVEL	15	<SYSTEM>
PROCESSOR_REVISION	0206	<SYSTEM>
TEMP	%SystemRoot%\TEMP	<SYSTEM>
TMP	%SystemRoot%\TEMP	<SYSTEM>
windir	%SystemRoot%	<SYSTEM>
TEMP	%USERPROFILE%\Local Settings\Temp	NT AUTHORITY\SYSTEM
TMP	%USERPROFILE%\Local Settings\Temp	NT AUTHORITY\SYSTEM
TEMP	%USERPROFILE%\Local Settings\Temp	NT AUTHORITY\LOCAL SERVICE
TMP	%USERPROFILE%\Local Settings\Temp	NT AUTHORITY\LOCAL SERVICE
TEMP	%USERPROFILE%\Local Settings\Temp	NT AUTHORITY\NETWORK SERVICE
TMP	%USERPROFILE%\Local Settings\Temp	NT AUTHORITY\NETWORK SERVICE
TEMP	%USERPROFILE%\Local Settings\Temp	MV-BOBDYLAN\Administrator
TMP	%USERPROFILE%\Local Settings\Temp	MV-BOBDYLAN\Administrator

[Print Jobs]

Document	Size	Owner	Notify	Status	Time Submitted	Start Time
Until Time	Parameters	Driver	Print Processor	Pages Printed	Job ID	Priority
Data Type	Name		Host	Print Queue		
[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	Not Available
system	Not Available	4	8	0	1413120	Not Available
Available	Not Available	Not Available	Not Available	Not Available	Not Available	Not Available
smss.exe	Not Available	560	11	204800	1413120	5/25/2004 2:34 PM
PM	Not Available	Not Available	Not Available	Not Available	Not Available	Not Available
csrss.exe	Not Available	608	13	Not Available	Not Available	Not Available
	5/25/2004 2:35 PM	Not Available	Not Available	Not Available	Not Available	Not Available
winlogon.exe	c:\windows\system32\winlogon.exe	632	13	204800	1413120	5/25/2004 2:35 PM
	536.50 KB (549,376 bytes)	3/25/2003 4:00 AM			(srv03_rtm.030324-2048)	
services.exe	c:\windows\system32\services.exe	676	9	204800	1413120	5/25/2004 2:35 PM
	102.00 KB (104,448 bytes)	3/25/2003 4:00 AM			(srv03_rtm.030324-2048)	
lsass.exe	c:\windows\system32\lsass.exe	688	9	204800	1413120	5/25/2004 2:35 PM
	13.00 KB (13,312 bytes)	3/25/2003 4:00 AM			(srv03_rtm.030324-2048)	
svchost.exe	c:\windows\system32\svchost.exe	896	8	204800	1413120	5/25/2004 2:35 PM
	13.00 KB (13,312 bytes)	3/25/2003 4:00 AM			(srv03_rtm.030324-2048)	
gnconmgr.exe	c:\windows\system32\gnconmgr.exe	972	8	204800	1413120	5/25/2004 2:35 PM
	bytes) 4/25/2004 2:17 AM	4.2.0.75		168.05 KB (172,079 bytes)		
svchost.exe	c:\windows\system32\svchost.exe	1000	8	204800	1413120	5/25/2004 2:35 PM
	13.00 KB (13,312 bytes)	3/25/2003 4:00 AM			(srv03_rtm.030324-2048)	
msdtc.exe	Not Available	1172	8	Not Available	Not Available	Not Available
	5/25/2004 2:37 PM	Not Available	Not Available	Not Available	Not Available	Not Available
svchost.exe	Not Available	1648	8	Not Available	Not Available	Not Available
	5/25/2004 2:37 PM	Not Available	Not Available	Not Available	Not Available	Not Available
explorer.exe	c:\windows\explorer.exe	368	8	204800	1413120	5/25/2004 2:38 PM
	1,008.50 KB (1,032,704 bytes)	3/25/2003 4:00 AM			(srv03_rtm.030324-2048)	
wmiprvse.exe	Not Available	1124	8	Not Available	Not Available	Not Available
	5/25/2004 2:38 PM	Not Available	Not Available	Not Available	Not Available	Not Available
cmd.exe	c:\windows\system32\cmd.exe	740	8	204800	1413120	5/25/2004 2:39 PM
	KB (382,976 bytes)	3/25/2003 4:00 AM			(srv03_rtm.030324-2048)	
sqlservr.exe	c:\sql80\sqlbuilds\9_18_03_ave_fix_interpolation\sqlservr.exe					

	2020	13	204800	1413120	5/25/2004 2:39 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	2920	8	204800	1413120	5/25/2004 6:53 PM
	KB (382,976 bytes)	3/25/2003 4:00 AM			5.2.3790.0 (srv03_rtm.030324-2048)	374.00
csccript.exe	c:\windows\system32\csccript.exe	2928	8	204800	1413120	5/25/2004 6:53 PM
	bytes) 3/25/2003 4:00 AM	5.6.0.8515			92.00 KB (94,208 bytes)	
osql.exe	c:\program files\microsoft sql server\80\tools\binn\osql.exe	2948	8	204800	1413120	5/25/2004 6:53 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					3036
	8	204800	1413120	5/25/2004 7:00 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	3120	8	Not Available	Not Available	Not Available
	5/25/2004 7:00 PM	Not Available	Not Available	Not Available	Not Available	Not Available
helpsvc.exe	c:\windows\pchealth\helpctr\binaries\helpsvc.exe					3144
	8	204800	1413120	5/25/2004 7:00 PM	5.2.3790.0	
(srv03_rtm.030324-2048)				720.00 KB (737,280 bytes)		4/25/2004 1:24 AM
[Loaded Modules]						
Name	Version	Size	File Date	Manufacturer	Path	
winlogon	5.2.3790.0	(srv03_rtm.030324-2048)	536.50 KB (549,376 bytes)	3/25/2003 4:00 AM	Microsoft Corporation	
ntdll	5.2.3790.0	(srv03_rtm.030324-2048)	722.50 KB (739,840 bytes)	3/25/2003 4:00 AM	Microsoft Corporation	
kernel32	5.2.3790.73	(srv03_qfe.030614-1003)	965.50 KB (988,672 bytes)	3/25/2003 4:00 AM	Microsoft Corporation	
msvcrt	7.0.3790.0	(srv03_rtm.030324-2048)	319.50 KB (327,168 bytes)	3/25/2003 4:00 AM	Microsoft Corporation	
advapi32	5.2.3790.0	(srv03_rtm.030324-2048)	559.50 KB (572,928 bytes)	3/25/2003 4:00 AM	Microsoft Corporation	
rpcrt4	5.2.3790.59	(srv03_gdr.030614-1004)	642.50 KB (657,920 bytes)	7/5/2003 1:03 PM	Microsoft Corporation	
user32	5.2.3790.0	(srv03_rtm.030324-2048)	562.00 KB (575,488 bytes)	3/25/2003 4:00 AM	Microsoft Corporation	
gdi32	5.2.3790.0	(srv03_rtm.030324-2048)	263.00 KB (269,312 bytes)	3/25/2003 4:00 AM	Microsoft Corporation	
userenv	5.2.3790.0	(srv03_rtm.030324-2048)	732.50 KB (750,080 bytes)	3/25/2003 4:00 AM	Microsoft Corporation	
nddeapi	5.2.3790.0	(srv03_rtm.030324-2048)	16.00 KB (16,384 bytes)	3/25/2003 4:00 AM	Microsoft Corporation	

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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
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

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imagehlp 5.2.3790.0 (srv03_rtm.030324-2048) 142.50 KB (145,920
bytes) 3/25/2003 4:00 AM Microsoft Corporation
c:\windows\system32\imagehlp.dll
comctl32 6.0 (srv03_rtm.030324-2048) 907.00 KB (928,768 bytes)
4/24/2004 6:02 PM Microsoft Corporation
c:\windows\winsxs\x86_microsoft.windows.common-
controls_6595b64144ccf1df_6.0.100.0_x-ww_8417450b\comctl32.dll
winscard 5.2.3790.0 (srv03_rtm.030324-2048) 98.50 KB (100,864
bytes) 3/25/2003 4:00 AM Microsoft Corporation
c:\windows\system32\winscard.dll
wtsapi32 5.2.3790.0 (srv03_rtm.030324-2048) 17.50 KB (17,920
bytes) 3/25/2003 4:00 AM Microsoft Corporation
c:\windows\system32\wtsapi32.dll
sxs 5.2.3790.0 (srv03_rtm.030324-2048) 733.00 KB (750,592 bytes)
3/25/2003 4:00 AM Microsoft Corporation
c:\windows\system32\sxs.dll
rsaenh 5.2.3790.0 (srv03_rtm.030324-2048) 176.83 KB (181,072 bytes)
3/25/2003 4:00 AM Microsoft Corporation
c:\windows\system32\rsaenh.dll
wldap32 5.2.3790.0 (srv03_rtm.030324-2048) 158.00 KB (161,792 bytes)
3/25/2003 4:00 AM Microsoft Corporation
c:\windows\system32\wldap32.dll
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
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
winpool 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\winpool.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
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

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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

msvc60 6.05.2144.0 388.00 KB (397,312 bytes) 3/25/2003 4:00 AM Microsoft Corporation
c:\windows\system32\msvc60.dll

ntdsapi 5.2.3790.0 (srv03_rtm.030324-2048) 76.00 KB (77,824 bytes) 3/25/2003 4:00 AM Microsoft Corporation
c:\windows\system32\ntdsapi.dll

dnsapi 5.2.3790.0 (srv03_rtm.030324-2048) 147.50 KB (151,040 bytes) 3/25/2003 4:00 AM Microsoft Corporation
c:\windows\system32\dnsapi.dll

services 5.2.3790.0 (srv03_rtm.030324-2048) 102.00 KB (104,448 bytes) 3/25/2003 4:00 AM Microsoft Corporation
c:\windows\system32\services.exe

scesrv 5.2.3790.0 (srv03_rtm.030324-2048) 316.50 KB (324,096 bytes) 3/25/2003 4:00 AM Microsoft Corporation
c:\windows\system32\scesrv.dll

authz 5.2.3790.0 (srv03_rtm.030324-2048) 67.00 KB (68,608 bytes) 3/25/2003 4:00 AM Microsoft Corporation
c:\windows\system32\authz.dll

umpnpmgr 5.2.3790.0 (srv03_rtm.030324-2048) 121.50 KB (124,416 bytes) 3/25/2003 4:00 AM Microsoft Corporation
c:\windows\system32\umpnpmgr.dll

ncobjapi 5.2.3790.0 (srv03_rtm.030324-2048) 34.50 KB (35,328 bytes) 3/25/2003 4:00 AM Microsoft Corporation
c:\windows\system32\ncobjapi.dll

eventlog 5.2.3790.0 (srv03_rtm.030324-2048) 60.50 KB (61,952 bytes) 3/25/2003 4:00 AM Microsoft Corporation
c:\windows\system32\eventlog.dll

lsass 5.2.3790.0 (srv03_rtm.030324-2048) 13.00 KB (13,312 bytes) 3/25/2003 4:00 AM Microsoft Corporation
c:\windows\system32\lsass.exe

lsasrv 5.2.3790.0 (srv03_rtm.030324-2048) 780.50 KB (799,232 bytes) 3/25/2003 4:00 AM Microsoft Corporation
c:\windows\system32\lsasrv.dll

samsrv 5.2.3790.0 (srv03_rtm.030324-2048) 452.00 KB (462,848 bytes) 3/25/2003 4:00 AM Microsoft Corporation
c:\windows\system32\samsrv.dll

cryptdll 5.2.3790.0 (srv03_rtm.030324-2048) 34.00 KB (34,816 bytes) 3/25/2003 4:00 AM Microsoft Corporation
c:\windows\system32\cryptdll.dll

msprivs 5.2.3790.0 (srv03_rtm.030324-2048) 46.50 KB (47,616 bytes) 3/25/2003 4:00 AM Microsoft Corporation
c:\windows\system32\msprivs.dll

kerberos 5.2.3790.0 (srv03_rtm.030324-2048) 332.50 KB (340,480 bytes) 3/25/2003 4:00 AM Microsoft Corporation
c:\windows\system32\kerberos.dll

msv1_0 5.2.3790.0 (srv03_rtm.030324-2048) 127.00 KB (130,048 bytes) 3/25/2003 4:00 AM Microsoft Corporation
c:\windows\system32\msv1_0.dll

netlogon 5.2.3790.0 (srv03_rtm.030324-2048) 409.00 KB (418,816 bytes) 3/25/2003 4:00 AM Microsoft Corporation
c:\windows\system32\netlogon.dll

w32time 5.2.3790.0 (srv03_rtm.030324-2048) 216.00 KB (221,184 bytes) 3/25/2003 4:00 AM Microsoft Corporation
c:\windows\system32\w32time.dll

iphlpapi 5.2.3790.0 (srv03_rtm.030324-2048) 82.50 KB (84,480 bytes) 3/25/2003 4:00 AM Microsoft Corporation
c:\windows\system32\iphlpapi.dll

schannel 5.2.3790.0 (srv03_rtm.030324-2048) 149.50 KB (153,088 bytes) 3/25/2003 4:00 AM Microsoft Corporation
c:\windows\system32\schannel.dll

wdigest 5.2.3790.0 (srv03_rtm.030324-2048) 61.00 KB (62,464 bytes) 3/25/2003 4:00 AM Microsoft Corporation
c:\windows\system32\wdigest.dll

rassfm 5.2.3790.0 (srv03_rtm.030324-2048) 20.50 KB (20,992 bytes) 3/25/2003 4:00 AM Microsoft Corporation
c:\windows\system32\rassfm.dll

kdcsvc 5.2.3790.0 (srv03_rtm.030324-2048) 221.00 KB (226,304 bytes) 3/25/2003 4:00 AM Microsoft Corporation
c:\windows\system32\kdcsvc.dll

ntdsa 5.2.3790.0 (srv03_rtm.030324-2048) 1.45 MB (1,520,640 bytes) 3/25/2003 4:00 AM Microsoft Corporation
c:\windows\system32\ntdsa.dll

ntdsatq 5.2.3790.0 (srv03_rtm.030324-2048) 32.00 KB (32,768 bytes) 3/25/2003 4:00 AM Microsoft Corporation
c:\windows\system32\ntdsatq.dll

mswsock 5.2.3790.0 (srv03_rtm.030324-2048) 254.00 KB (260,096 bytes) 3/25/2003 4:00 AM Microsoft Corporation
c:\windows\system32\mswsock.dll

esent 5.2.3790.0 (srv03_rtm.030324-2048) 1.01 MB (1,056,256 bytes) 3/25/2003 4:00 AM Microsoft Corporation
c:\windows\system32\esent.dll

scecli 5.2.3790.0 (srv03_rtm.030324-2048) 179.50 KB (183,808 bytes) 3/25/2003 4:00 AM Microsoft Corporation
c:\windows\system32\scecli.dll

wshtcpip 5.2.3790.0 (srv03_rtm.030324-2048) 18.00 KB (18,432 bytes) 3/25/2003 4:00 AM Microsoft Corporation
c:\windows\system32\wshtcpip.dll

pstorsvc 5.2.3790.0 (srv03_rtm.030324-2048) 24.00 KB (24,576 bytes) 3/25/2003 4:00 AM Microsoft Corporation
c:\windows\system32\pstorsvc.dll

psbase 5.2.3790.0 (srv03_rtm.030324-2048) 81.00 KB (82,944 bytes) 3/25/2003 4:00 AM Microsoft Corporation
c:\windows\system32\psbase.dll

dssenh 5.2.3790.0 (srv03_rtm.030324-2048) 131.33 KB (134,480 bytes) 3/25/2003 4:00 AM Microsoft Corporation
c:\windows\system32\dssenh.dll

svchost 5.2.3790.0 (srv03_rtm.030324-2048) 13.00 KB (13,312 bytes) 3/25/2003 4:00 AM Microsoft Corporation
c:\windows\system32\svchost.exe

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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
dmsserver 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\dmsserver.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
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
adslrpc 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\adslrpc.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

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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
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
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
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

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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
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
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
powerprof 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\powerprof.dll

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browselc 6.00.3790.0 (srv03_rtm.030324-2048) 62.00 KB (63,488
bytes) 3/25/2003 4:00 AM Microsoft Corporation
c:\windows\system32\browselc.dll
shdoclc 6.00.3790.0 (srv03_rtm.030324-2048) 588.50 KB (602,624 bytes)
3/25/2003 4:00 AM Microsoft Corporation
c:\windows\system32\shdoclc.dll
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
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
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
sendmail 6.00.3790.0 (srv03_rtm.030324-2048) 52.00 KB (53,248
bytes) 3/25/2003 4:00 AM Microsoft Corporation
c:\windows\system32\sendmail.dll
mydocs 6.00.3790.0 (srv03_rtm.030324-2048) 88.00 KB (90,112 bytes)
3/25/2003 4:00 AM Microsoft Corporation
c:\windows\system32\mydocs.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
opens60 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\opens60.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
sqllevn70 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\sqllevn70.rll

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xolehlp	2001.12.4720.0 (srv03_rtm.030324-2048)	8.50 KB (8,704 bytes)	mfc42	5.6.0.8515	960.00 KB (983,040 bytes)	3/25/2003 4:00 AM
	4/25/2004 1:20 AM	Microsoft Corporation				
	c:\windows\system32\xolehlp.dll		scrobj	5.6.0.8515	144.00 KB (147,456 bytes)	3/25/2003 4:00 AM
msdtcprx	2001.12.4720.0 (srv03_rtm.030324-2048)	427.50 KB (437,760 bytes)				
	4/25/2004 1:20 AM	Microsoft Corporation	wshom	5.6.0.8515	92.00 KB (94,208 bytes)	3/25/2003 4:00 AM
	c:\windows\system32\msdtcprx.dll					
mtxclu	2001.12.4720.0 (srv03_rtm.030324-2048)	74.50 KB (76,288 bytes)	scrrun	5.6.0.8515	148.00 KB (151,552 bytes)	3/25/2003 4:00 AM
	3/25/2003 4:00 AM	Microsoft Corporation				
	c:\windows\system32\mtxclu.dll		osql	2000.080.0760.00	56.55 KB (57,904 bytes)	4/25/2004 8:23 AM
resutils	5.2.3790.0 (srv03_rtm.030324-2048)	59.00 KB (60,416 bytes)				
	3/25/2003 4:00 AM	Microsoft Corporation	server\80\tools\binn\osql.exe			
	c:\windows\system32\resutils.dll		odbc32	3.525.1022.0 (srv03_rtm.030324-2048)	232.00 KB (237,568 bytes)	
mfc42u	5.2.3790.0 (srv03_rtm.030324-2048)	960.00 KB (983,040 bytes)				
	3/25/2003 4:00 AM	Microsoft Corporation	odbcint	3.525.1022.0 (srv03_rtm.030324-2048)	92.00 KB (94,208 bytes)	
winrnr	5.2.3790.0 (srv03_rtm.030324-2048)	15.00 KB (15,360 bytes)				
	3/25/2003 4:00 AM	Microsoft Corporation	sqlsrv32	2000.085.1022.00 (srv03_rtm.030324-2048)	404.00 KB (413,696 bytes)	3/25/2003 4:00 AM
	c:\windows\system32\winrnr.dll					
ssnetlib	2000.080.0766.00	80.56 KB (82,492 bytes)				
	4/25/2004 8:22 AM	Microsoft Corporation	sqlunirl	2000.080.0728.00	176.56 KB (180,800 bytes)	3/25/2003 4:00 AM
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	sqlsrv32	2000.085.1022.00 (srv03_rtm.030324-2048)	88.00 KB (90,112 bytes)	3/25/2003 4:00 AM
	c:\windows\system32\security.dll					
ssmslpcn	2000.080.0760.00	28.56 KB (29,244 bytes)	odbccp32	3.525.1022.0 (srv03_rtm.030324-2048)	100.00 KB (102,400 bytes)	3/25/2003 4:00 AM
	4/25/2004 8:22 AM	Microsoft Corporation				
files\microsoft sql server\mssql\binn\ssmslpcn.dll			dbnetlib	2000.085.1022 (srv03_rtm.030324-2048)	76.00 KB (77,824 bytes)	3/25/2003 4:00 AM
ssnmpn70	2000.080.0534.00	24.56 KB (25,148 bytes)				
	4/25/2004 8:22 AM	Microsoft Corporation	dbmslpcn	2000.080.0760.00	28.56 KB (29,244 bytes)	4/25/2004 8:22 AM
files\microsoft sql server\mssql\binn\ssnmpn70.dll						
ssmsgnet	2000.080.0851.00	32.07 KB (32,837 bytes)	dbnmpntw	2000.085.1022 built by: (_sqlbld)	28.00 KB (28,672 bytes)	9/17/2003 12:37 PM
	4/25/2004 8:49 AM	Microsoft Corporation				
	c:\sql80\sqlbuilds\9_18_03_awe_fix_interpolation\ssmsgnet.dll		helpctr	5.2.3790.0 (srv03_rtm.030324-2048)	764.00 KB (782,336 bytes)	4/25/2004 1:24 AM
sqloledb	2000.085.1022.00 (srv03_rtm.030324-2048)	536.00 KB (548,864 bytes)				
	4/25/2004 1:23 AM	Microsoft Corporation	hcappres	5.2.3790.0 (srv03_rtm.030324-2048)	6.50 KB (6,656 bytes)	4/25/2004 1:24 AM
	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)	itss	5.2.3790.0 (srv03_rtm.030324-2048)	119.50 KB (122,368 bytes)	3/25/2003 4:00 AM
	3/25/2003 4:00 AM	Microsoft Corporation				
	c:\windows\system32\msdart.dll		msxml3	8.40.9419.0	1.28 MB (1,337,344 bytes)	3/25/2003 4:00 AM
comdlg32	6.00.3790.0 (srv03_rtm.030324-2048)	261.00 KB (267,264 bytes)				
	3/25/2003 4:00 AM	Microsoft Corporation	pchshell	5.2.3790.0 (srv03_rtm.030324-2048)	100.50 KB (102,912 bytes)	4/25/2004 1:24 AM
	c:\windows\system32\comdlg32.dll					
msdatl3	2.80.1022.0 (srv03_rtm.030324-2048)	96.00 KB (98,304 bytes)	mlang	6.00.3790.0 (srv03_rtm.030324-2048)	570.00 KB (583,680 bytes)	3/25/2003 4:00 AM
	4/25/2004 1:23 AM	Microsoft Corporation				
files\common files\system\ole db\msdatl3.dll			mshtml	6.00.3790.0 (srv03_rtm.030324-2048)	2.78 MB (2,916,352 bytes)	3/25/2003 4:00 AM
oledb32	2.80.1022.0 (srv03_rtm.030324-2048)	500.00 KB (512,000 bytes)				
	4/25/2004 1:23 AM	Microsoft Corporation				
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				
files\common files\system\ole db\oledb32r.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					

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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 Name	Name	State	Start Mode	Service Type	Path	Error
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	AppMgmt	Stopped	Manual	Share Process	c:\windows\system32\svchost.exe -k netsvcs	Normal LocalSystem 0
Windows Audio	AudioSrv	Stopped	Disabled	Share Process	c:\windows\system32\svchost.exe -k netsvcs	Normal LocalSystem 0
Background Intelligent Transfer Service	BITS	Stopped	Manual	Share Process	c:\windows\system32\svchost.exe -k netsvcs	Normal LocalSystem 0
Computer Browser	Browser	Stopped	Manual	Share Process	c:\windows\system32\svchost.exe -k netsvcs	Normal LocalSystem 0
Indexing Service	CiSvc	Stopped	Disabled	Share Process	c:\windows\system32\cisvc.exe	Normal LocalSystem 0
ClipBook	ClipSrv	Stopped	Disabled	Own Process	c:\windows\system32\clipsrv.exe	Normal LocalSystem 0
COM+ System Application	COMSysApp	Stopped	Manual	Own Process	c:\windows\system32\dllhost.exe /processid:{02d4b3f1-fd88-11d1-960d-00805fc79235}	Normal LocalSystem 0
Cryptographic Services	CryptSvc	Stopped	Manual	Share Process	c:\windows\system32\svchost.exe -k netsvcs	Normal LocalSystem 0

Distributed File System	Dfs	Stopped	Disabled	Own Process	c:\windows\system32\dfssvc.exe	Normal LocalSystem 0
DHCP Client	Dhcp	Stopped	Manual	Share Process	c:\windows\system32\svchost.exe -k networkservice	Normal NT AUTHORITY\NetworkService 0
Logical Disk Manager	Administrative Service	dmadmin	Stopped	Manual	Share Process	c:\windows\system32\dmadmin.exe /com Normal LocalSystem 0
Logical Disk Manager	dmserver	Running	Auto	Share Process	c:\windows\system32\svchost.exe -k netsvcs	Normal LocalSystem 0
DNS Client	Dnscache	Stopped	Manual	Share Process	c:\windows\system32\svchost.exe -k networkservice	Normal NT AUTHORITY\NetworkService 0
Error Reporting Service	ERSvc	Stopped	Manual	Share Process	c:\windows\system32\svchost.exe -k winerr	Ignore LocalSystem 0
Event Log	Eventlog	Running	Auto	Share Process	c:\windows\system32\services.exe	Normal LocalSystem 0
COM+ Event System	EventSystem	Running	Manual	Share Process	c:\windows\system32\svchost.exe -k netsvcs	Normal LocalSystem 0
cLAN Connection Manager	GniConMgr	Running	Auto	Own Process	c:\windows\system32\gnconmgr.exe	Normal LocalSystem 0
Help and Support	helpsvc	Running	Manual	Share Process	c:\windows\system32\svchost.exe -k netsvcs	Normal LocalSystem 0
Human Interface Device Access	HidServ	Stopped	Disabled	Share Process	c:\windows\system32\svchost.exe -k netsvcs	Normal LocalSystem 0
HTTP SSL	HTTPFilter	Stopped	Manual	Share Process	c:\windows\system32\lsass.exe	Normal LocalSystem 0
IMAPI CD-Burning COM Service	ImapiService	Stopped	Disabled	Own Process	c:\windows\system32\imapi.exe	Normal LocalSystem 0
Intersite Messaging	IsmServ	Stopped	Disabled	Own Process	c:\windows\system32\ismserv.exe	Normal LocalSystem 0
Kerberos Key Distribution Center	kdc	Stopped	Disabled	Share Process	c:\windows\system32\lsass.exe	Normal LocalSystem 0
Server	lanmanserver	Running	Auto	Share Process	c:\windows\system32\svchost.exe -k netsvcs	Normal LocalSystem 0
Workstation	lanmanworkstation	Running	Auto	Share Process	c:\windows\system32\svchost.exe -k netsvcs	Normal LocalSystem 0
License Logging	LicenseService	Stopped	Disabled	Own Process	c:\windows\system32\llssrv.exe	Normal NT AUTHORITY\NetworkService 0
TCP/IP NetBIOS Helper	LmHosts	Stopped	Manual	Share Process	c:\windows\system32\svchost.exe -k localservice	Normal NT AUTHORITY\LocalService 0
Messenger	Messenger	Stopped	Disabled	Share Process	c:\windows\system32\svchost.exe -k netsvcs	Normal LocalSystem 0

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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\micros~1\mssql\binn\sqlservr.exe Normal LocalSystem
0

MSSQLServerADHelper MSSQLServerADHelper Stopped Manual Own Process
c:\program files\microsoft sql server\80\tools\binn\sqladhlp.exe
Normal LocalSystem 0

Network DDE NetDDE Stopped Disabled Share Process
c:\windows\system32\netdde.exe Normal LocalSystem 0

Network DDE DSDM NetDDEdsdm Stopped Disabled Share Process
c:\windows\system32\netdde.exe Normal LocalSystem 0

Net Logon Netlogon Stopped Manual Share Process
c:\windows\system32\lsass.exe Normal LocalSystem 0

Network Connections Netman Running Manual Share Process
c:\windows\system32\svchost.exe -k netsvcs Normal LocalSystem
0

Network Location Awareness (NLA) Nla Running Manual Share Process
c:\windows\system32\svchost.exe -k netsvcs Normal LocalSystem
0

File Replication NtFrs Stopped Manual Own Process
c:\windows\system32\ntfrs.exe Ignore LocalSystem 0

NT LM Security Support Provider NtLmSsp Stopped Manual Share Process
c:\windows\system32\lsass.exe Normal LocalSystem 0

Removable Storage NtmsSvc Stopped Manual Share Process
c:\windows\system32\svchost.exe -k netsvcs Normal LocalSystem
0

Plug and Play PlugPlay Running Auto Share Process
c:\windows\system32\services.exe Normal LocalSystem 0

IPSEC Services PolicyAgent Stopped Manual Share Process
c:\windows\system32\lsass.exe Normal LocalSystem 0

Protected Storage ProtectedStorage Running Auto Share Process
c:\windows\system32\lsass.exe Normal LocalSystem 0

Remote Access Auto Connection Manager RasAuto Stopped Manual Share Process
c:\windows\system32\svchost.exe -k netsvcs Normal LocalSystem
0

Remote Access Connection Manager RasMan Stopped Manual Share Process
c:\windows\system32\svchost.exe -k netsvcs Normal LocalSystem
0

Remote Desktop Help Session Manager RDSessMgr Stopped Manual Own
Process c:\windows\system32\sessmgr.exe Normal LocalSystem 0

Routing and Remote Access RemoteAccess Stopped Disabled Share
Process c:\windows\system32\svchost.exe -k netsvcs Normal LocalSystem
0

Remote Registry RemoteRegistry Running Auto Share Process
c:\windows\system32\svchost.exe -k regsvc Normal NT
AUTHORITY\LocalService 0

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Remote Procedure Call (RPC) Locator RpcLocator Stopped Manual Own
Process c:\windows\system32\locator.exe Normal NT
AUTHORITY\NetworkService 0

Remote Procedure Call (RPC) RpcSs Running Auto Share Process
c:\windows\system32\svchost -k rpcss Normal LocalSystem 0

Resultant Set of Policy Provider RSoPProv Stopped Manual Share
Process c:\windows\system32\rsopprov.exe Normal LocalSystem 0

Special Administration Console Helper sacsvr Stopped Manual Share Process
c:\windows\system32\svchost.exe -k netsvcs Normal LocalSystem
0

Security Accounts Manager SamSs Running Auto Share Process
c:\windows\system32\lsass.exe Normal LocalSystem 0

Smart Card SCardSvr Stopped Manual Share Process
c:\windows\system32\scardsvr.exe Ignore NT
AUTHORITY\LocalService 0

Task Scheduler Schedule Stopped Manual Share Process
c:\windows\system32\svchost.exe -k netsvcs Normal LocalSystem
0

Secondary Logon seclogon Stopped Manual Share Process
c:\windows\system32\svchost.exe -k netsvcs Ignore LocalSystem
0

System Event Notification SENS Running Auto Share Process
c:\windows\system32\svchost.exe -k netsvcs Normal LocalSystem
0

Shell Hardware Detection ShellHWDetection Running Auto Share
Process c:\windows\system32\svchost.exe -k netsvcs Ignore LocalSystem
0

Print Spooler Spooler Stopped Manual Own Process
c:\windows\system32\spoolsv.exe Normal LocalSystem 0

SQLSERVERAGENT SQLSERVERAGENT Stopped Manual Own Process
c:\progra~1\micros~1\mssql\binn\sqlagent.exe Normal LocalSystem
0

Windows Image Acquisition (WIA) stisvc Stopped Disabled Share
Process c:\windows\system32\svchost.exe -k imgsvc Normal NT
AUTHORITY\LocalService 0

Microsoft Software Shadow Copy Provider swprv Stopped Manual Own
Process c:\windows\system32\svchost.exe -k swprv Normal LocalSystem
0

Performance Logs and Alerts SysmonLog Stopped Manual Own Process
c:\windows\system32\smlogsvc.exe Normal NT
Authority\NetworkService 0

Telephony TapiSrv Stopped Manual Share Process
c:\windows\system32\svchost.exe -k tapisrv Normal LocalSystem
0

Terminal Services TermService Stopped Disabled Share Process
c:\windows\system32\svchost.exe -k termsvcs Normal LocalSystem
0

Themes Themes Stopped Disabled Share Process
c:\windows\system32\svchost.exe -k netsvcs Normal LocalSystem
0

Telnet TlntSvr Stopped Disabled Own Process
c:\windows\system32\tlntsvr.exe Normal NT
AUTHORITY\LocalService 0

Distributed Link Tracking Server TrkSvr Stopped Disabled Share
Process c:\windows\system32\svchost.exe -k netsvcs Normal LocalSystem
0

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Distributed Link Tracking Client TrkWks Stopped Disabled Share
Process c:\windows\system32\svchost.exe -k netsvcs Normal LocalSystem
0
Terminal Services Session Directory Tssdis Stopped Disabled Own
Process c:\windows\system32\tssdis.exe Normal LocalSystem 0

Upload Manager uploadmgr Stopped Disabled Share Process
c:\windows\system32\svchost.exe -k netsvcs Normal LocalSystem
0
Uninterruptible Power Supply UPS Stopped Manual Own Process
c:\windows\system32\ups.exe Normal NT AUTHORITY\LocalService
0
Virtual Disk Service vds Stopped Manual Own Process
c:\windows\system32\vds.exe Normal LocalSystem 0
Volume Shadow Copy VSS Stopped Manual Own Process
c:\windows\system32\vssvc.exe Normal LocalSystem 0
Windows Time W32Time Stopped Disabled Share Process
c:\windows\system32\svchost.exe -k netsvcs Normal LocalSystem
0
WebClient WebClient Stopped Disabled Share Process
c:\windows\system32\svchost.exe -k localservice Normal NT
AUTHORITY\LocalService 0
WinHTTP Web Proxy Auto-Discovery Service WinHttpAutoProxySvc
Stopped Manual Share Process c:\windows\system32\svchost.exe -k
localservice Normal NT AUTHORITY\LocalService 0
Windows Management Instrumentation winmgmt Running Auto Share Process
c:\windows\system32\svchost.exe -k netsvcs Ignore LocalSystem
0
Portable Media Serial Number Service WmdmPmSN Stopped Manual Share
Process c:\windows\system32\svchost.exe -k netsvcs Normal LocalSystem
0
Windows Management Instrumentation Driver Extensions Wmi Stopped Manual
Share Process c:\windows\system32\svchost.exe -k netsvcs Normal
LocalSystem 0
WMI Performance Adapter WmiApSrv Stopped Manual Own Process
c:\windows\system32\wbem\wmiapsrv.exe Normal LocalSystem 0

Automatic Updates wuauclt Stopped Disabled Share Process
c:\windows\system32\svchost.exe -k netsvcs Normal LocalSystem
0
Wireless Configuration WZC SVC 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

Debugging Tools for Windows All Users:Debugging Tools for Windows 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\dumpprep 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
browseic.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
dxttrans.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
inetctl.cpl	6.0.3790.0	303 KB	3/25/2003 5:00:00 AM	C:\WINDOWS\system32	Microsoft Corporation
inetctl.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
mshtml.ed.dll	6.0.3790.0	444 KB	3/25/2003 5:00:00 AM	C:\WINDOWS\system32	Microsoft Corporation
mshtmler.dll	6.0.3790.0	55 KB	3/25/2003 5:00:00 AM	C:\WINDOWS\system32	Microsoft Corporation
msident.dll	6.0.3790.0	47 KB	3/25/2003 5:00:00 AM	C:\WINDOWS\system32	Microsoft Corporation
msidntld.dll	6.0.3790.0	15 KB	3/25/2003 5:00:00 AM	C:\WINDOWS\system32	Microsoft Corporation
msieftp.dll	6.0.3790.0	230 KB	3/25/2003 5:00:00 AM	C:\WINDOWS\system32	Microsoft Corporation
msrating.dll	6.0.3790.0	132 KB	3/25/2003 5:00:00 AM	C:\WINDOWS\system32	Microsoft Corporation
mstime.dll	6.0.3790.0	491 KB	3/25/2003 5:00:00 AM	C:\WINDOWS\system32	Microsoft Corporation
occache.dll	6.0.3790.0	89 KB	3/25/2003 5:00:00 AM	C:\WINDOWS\system32	Microsoft Corporation
proctexe.ocx	6.3.3790.0	78 KB	3/25/2003 5:00:00 AM	C:\WINDOWS\system32	Intel Corporation
sendmail.dll	6.0.3790.0	52 KB	3/25/2003 5:00:00 AM	C:\WINDOWS\system32	Microsoft Corporation
shdoclc.dll	6.0.3790.0	589 KB	3/25/2003 5:00:00 AM	C:\WINDOWS\system32	Microsoft Corporation
shdocvw.dll	6.0.3790.0	1,361 KB	3/25/2003 5:00:00 AM	C:\WINDOWS\system32	Microsoft Corporation
shfolder.dll	6.0.3790.0	23 KB	3/25/2003 5:00:00 AM	C:\WINDOWS\system32	Microsoft Corporation
shlwapi.dll	6.0.3790.0	281 KB	3/25/2003 5:00:00 AM	C:\WINDOWS\system32	Microsoft Corporation
tdc.ocx	1.3.0.3130	58 KB	3/25/2003 5:00:00 AM	C:\WINDOWS\system32	Microsoft Corporation
url.dll	6.0.3790.0	36 KB	3/25/2003 5:00:00 AM	C:\WINDOWS\system32	Microsoft Corporation
urlmon.dll	6.0.3790.0	502 KB	3/25/2003 5:00:00 AM	C:\WINDOWS\system32	Microsoft Corporation
webcheck.dll	6.0.3790.0	262 KB	3/25/2003 5:00:00 AM	C:\WINDOWS\system32	Microsoft Corporation
wininet.dll	6.0.3790.0	609 KB	3/25/2003 5:00:00 AM	C:\WINDOWS\system32	Microsoft Corporation

[Connectivity]

Item Value
Connection Preference Never dial

LAN Settings

AutoConfigProxy Not Available
AutoProxyDetectMode 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.txt

\registry\machine\SOFTWARE\Giganet
cLAN Management Console

```

1.00.000
GniConMgrMgmt2
0
  BeginModify
    = 07:44:25
  Fabric
  LastModified
    = 07:44:25
  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
    = 07:44:26
  Fabric
  LastModified
    = 07:44:26
  NodeList
    Node0
      Name = MV-BOBDYLAN
      NICName = gnivia2
      Address = 0090FA0014BC
      MediaType =
      State = REG_DWORD 0x00000001
      SwitchPort = n2
      NodeNumber = REG_DWORD 0x00000001
    Node2
      Name = CLIENT8
      NICName = nic0
      Address = 0090FA001CBB
      MediaType =
      State = REG_DWORD 0x00000001
      SwitchPort = n1
      NodeNumber = REG_DWORD 0x00000002
3
  BeginModify
    = 07:44:26
  Fabric
  LastModified
    = 07:44:26
  NodeList
    Node0
      Name = MV-BOBDYLAN
      NICName = gnivia3
      Address = 0090FA001C5D

```

```

      MediaType =
      State = REG_DWORD 0x00000001
      SwitchPort = n1
      NodeNumber = REG_DWORD 0x00000002
    Node1
      Name = CLIENT5
      NICName = nic0
      Address = 0090FA001420
      MediaType =
      State = REG_DWORD 0x00000001
      SwitchPort = n2
      NodeNumber = REG_DWORD 0x00000001
5
  BeginModify
    = 07:44:25
  Fabric
  LastModified
    = 07:44:25
  NodeList
    Node0
      Name = MV-BOBDYLAN
      NICName = gnivia5
      Address = 0090FA001C45
      MediaType =
      State = REG_DWORD 0x00000001
      SwitchPort = n1
      NodeNumber = REG_DWORD 0x00000002
    Node1
      Name = CLIENT6
      NICName = nic0
      Address = 0090FA00136E
      MediaType =
      State = REG_DWORD 0x00000001
      SwitchPort = n2
      NodeNumber = REG_DWORD 0x00000001
  LastModified
    = 07:44:24

```

Software_Microsoft_MicrosoftSQLServer.txt

```

\registry\machine\SOFTWARE\Microsoft\Microsoft SQL Server
  SsrpActiveServer = MSSQLServer
  InstalledInstances = REG_MULTI_SZ "MSSQLSERVER"
  SqlMdacRegRefCount = REG_DWORD 0x00000001
8.00.000
80
  SharedCode = C:\Program Files\Microsoft SQL Server\80\COM\
  DTS
    Settings
      EnableSaveToRepository = REG_DWORD 0x00000000
MSSQLLicenseInfo
MSSQL8.00
  FlipAllow = REG_DWORD 0x00000000
  ConcurrentLimit = REG_DWORD 0x00000020
  DisplayName = SQL Server 2000
  FamilyDisplayName = Microsoft SQL Server

```



```

Mode = REG_DWORD 0x00000002
Registration
  DigitalProductID = REG_BINARY 0x000000a4 0x000000a4 0x00000003
0x33393335 0x30302d34 0x30302d30 0x39303030 0x35302d35 0x00333937
0x0000000a 0x2d303138 0x36353030 0x00000030 0x00000000 0x00000012
0x0f0aa600 0xef9e9d5e \
                                0x0000050d 0x00000000 0x408b74bc 0x00311a11
0x00000000 0x00000000 0x00000000 0x00000000 0x00000000 0x00000000
0x32353836 0x00000030 0x00000000 0x00000f48 0x2ce13c30 0x00000800
0x00000000 0x00000000 \
                                0x00000000 0x00000000 0x00000000 0x00000000
0x00000000 0x00000000 0x8e3af1f6
  ProductID = 53934-000-0000095-05793
  CD_KEY = BC6JV-WVYQ9-PC8H6-W938R-8BWJD
Replication
  MergeReplicationProvider
    MsJet
      = {f159cf30-0db4-11d1-b272-00aa00b8de95}
Tools
  ClientSetup
    SQLPath = C:\Program Files\Microsoft SQL Server\80\Tools
    CurrentVersion
      CurrentVersion = 8.00.194
      Language = REG_DWORD 0x00000409
  Help
    RefCount = REG_DWORD 0x00000001
    HelpFile = C:\Program Files\Microsoft SQL
Server\80\Tools\Books\SQL80.col
    HelpLCID = 1033
    HelpPath = C:\Program Files\Microsoft SQL
Server\80\Tools\Books
  Service Manager
    Action Verify = REG_DWORD 0x00000000
    Default = MSSQLSERVER
    Remote = REG_DWORD 0x00000001
    Services = REG_MULTI_SZ "MSDTC"
  SQLEW
    CustomizableAlertBaseURL =
    CustomizableAlertDefaultButtonText = &Send Feedback
    CustomizableAlertDefaultBtnShortText = 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 0x0000082c
  uptime_time_utc = REG_BINARY 0x00000008 0xaf534070 0x01c44267
  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[0x0f000f00],2:1428[0xf000f000],3:1425[0x000f000f],5:1426[0x00f000f0]
]
RecognizedVendors = REG_MULTI_SZ "Giganet" \
"ServerNet II" \
"QLogic" \
" "
Providers
AllowInProcess = REG_DWORD 0x00000001
ADSSOObject
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
MSIDX
AllowInProcess = REG_DWORD 0x00000001
MSQLImpProv
AllowInProcess = REG_DWORD 0x00000001
MSSEARCHSQL
AllowInProcess = REG_DWORD 0x00000001
SQLOLEDB

```

```

AllowInProcess = REG_DWORD 0x00000001
DisallowAdhocAccess = REG_DWORD 0x00000000
Setup
SQLPath = C:\Program Files\Microsoft SQL Server\MSSQL
SQLDataRoot = C:\Program Files\Microsoft SQL Server\MSSQL
SourcePath = C:\sql2ksp3
firststart = REG_DWORD 0x00000000
Scripts = REG_MULTI_SZ "sp1_serv_uni.sql" \
"80sp1-tools.sql" \
"sp2_serv_uni.sql" \
"80sp2-tools.sql" \
"sp3_serv_uni.sql" \
"80sp3-tools.sql" \
"replsys.sql" \
"replcom.sql" \
"repltran.sql" \
"replmerg.sql" \
"remove_old_msx_accounts.sql" \
"sp_vupgrade_replication:@login=N'sa',@password=N'',@ver_old=194" \
" "
EnableErrorReporting = REG_DWORD 0x00000000
SQLServerAgent
JobHistoryMaxRowsPerJob = REG_DWORD 0x00000064
RestartServer = REG_DWORD 0x00000001
DownloadedMaxRows = REG_DWORD 0x00000064
JobHistoryMaxRows = REG_DWORD 0x000003e8
ErrorLoggingLevel = REG_DWORD 0x00000003
NonAlertableErrors = 1204,4002
MSXServerName =
ServerHost =
WorkingDirectory = C:\Program Files\Microsoft SQL
Server\MSSQL\JOBS
ErrorLogFile = C:\Program Files\Microsoft SQL
Server\MSSQL\LOG\SQLAGENT.OUT
SysAdminOnly = REG_DWORD 0x00000001
Subsystems
CmdExec = C:\Program Files\Microsoft SQL
Server\MSSQL\BINN\SQLCMDSS.DLL,NULL,CmdExecStart,CmdEvent,CmdExecStop,10
Snapshot = C:\Program Files\Microsoft SQL
Server\MSSQL\BINN\SQLREPSS.DLL,C:\Program Files\Microsoft SQL
Server\80\COM\SNAPSHOT.EXE,ReplStart,ReplEvent,ReplStop,100
Distribution = C:\Program Files\Microsoft SQL
Server\MSSQL\BINN\SQLREPSS.DLL,C:\Program Files\Microsoft SQL
Server\80\COM\DISTRIB.EXE,ReplStart,ReplEvent,ReplStop,100
Merge = C:\Program Files\Microsoft SQL
Server\MSSQL\BINN\SQLREPSS.DLL,C:\Program Files\Microsoft SQL
Server\80\COM\REPLMERG.EXE,ReplStart,ReplEvent,ReplStop,100
ActiveScripting = C:\Program Files\Microsoft SQL
Server\MSSQL\BINN\SQLATXSS.DLL,NULL,ActiveScriptStart,ActiveScriptEvent,Ac
tiveScriptStop,10
QueueReader = C:\Program Files\Microsoft SQL
Server\MSSQL\BINN\SQLREPSS.DLL,C:\Program Files\Microsoft SQL
Server\80\COM\QRDRSVC.EXE,ReplStart,ReplEvent,ReplStop,100
LogReader = C:\Program Files\Microsoft SQL
Server\MSSQL\BINN\SQLREPSS.DLL,C:\Program Files\Microsoft SQL
Server\80\COM\LOGREAD.EXE,ReplStart,ReplEvent,ReplStop,25
Tracking
{E07FDDA4-5A21-11d2-9DAD-00C04F79D434} =

```

```

{E07FDDA5-5A21-11d2-9DAD-00C04F79D434} =
{6DC86044-0C71-11d3-9E18-00C04F79D434} =
{E07FDDA8-5A21-11d2-9DAD-00C04F79D434} =
{E07FDDAA-5A21-11d2-9DAD-00C04F79D434} =
{E07FDDAC-5A21-11d2-9DAD-00C04F79D434} =
{E07FDDAD-5A21-11d2-9DAD-00C04F79D434} =
{E07FDDAF-5A21-11d2-9DAD-00C04F79D434} =
{E07FDDBE-5A21-11d2-9DAD-00C04F79D434} =
{E07FDDC0-5A21-11d2-9DAD-00C04F79D434} =
{E07FDDBF-5A21-11d2-9DAD-00C04F79D434} =
Shortcuts
Enterprise Manager =
Query Analyzer =
Client Network Utility =
Configure SQL XML Support in IIS =
Import and Export Data =
Service Manager =
Server Network Utility =
Books Online =

```

Software_Unisys_IntelligentFibre

```

\registry\machine\SOFTWARE\UNISYS\Intelligent Fibre Utility
AccessTuning = REG_DWORD 0x00000001

```

CurrentControlSet\Control\Session Manager\I/O System

Windows Registry Editor Version 5.00

```

[HKEY_LOCAL_MACHINE\SYSTEM\CurrentControlSet\Control\Session Manager\I/O
System]
"CountOperations"=dword:00000000

```

CurrentControlSet\Services\GniConMgr

```

\registry\machine\SYSTEM\CurrentControlSet\Services\GniConMgr
Type = REG_DWORD 0x00000010
Start = REG_DWORD 0x00000002
ErrorControl = REG_DWORD 0x00000001
ImagePath = REG_EXPAND_SZ %SystemRoot%\system32\GnConMgr.exe
DisplayName = cLAN Connection Manager
Group = TDI
DependOnService = REG_MULTI_SZ "GniVIA"
DependOnGroup = REG_MULTI_SZ
ObjectName = LocalSystem
Parameters
NicName = GniVIA
Security [17 1]
Security = REG_BINARY 0x000000a8 0x80140001 0x00000090 0x0000009c
0x00000014 0x00000030 0x001c0002 0x00000001 0x00148002 0x000f01ff

```

```

0x00000101 0x01000000 0x00000000 0x00600002 0x00000004 0x00140000
0x000201fd 0x00000101 0x05000000 \
0x00000012 0x00180000 0x000f01ff 0x00000201 0x05000000
0x00000020 0x00000220 0x00140000 0x0002018d 0x00000101 0x05000000
0x0000000b 0x00180000 0x000201fd 0x00000201 0x05000000 0x00000020
0x00000223 0x00000101 0x05000000 \
0x00000012 0x00000101 0x05000000 0x00000012
Enum
0 = Root\LEGACY_GNICONMGR\0000
Count = REG_DWORD 0x00000001
NextInstance = REG_DWORD 0x00000001

```

CurrentControlSet\Services\GNINDIS

```

\registry\machine\SYSTEM\CurrentControlSet\Services\GNINDIS
Type = REG_DWORD 0x00000001
Start = REG_DWORD 0x00000002
ErrorControl = REG_DWORD 0x00000001
Tag = REG_DWORD 0x0000000d
ImagePath = REG_EXPAND_SZ system32\DRIVERS\gnindis.sys
DisplayName = cLAN NDIS Driver
Group = NDIS
Security [17 1]
Security = REG_BINARY 0x000000a8 0x80140001 0x00000090 0x0000009c
0x00000014 0x00000030 0x001c0002 0x00000001 0x00148002 0x000f01ff
0x00000101 0x01000000 0x00000000 0x00600002 0x00000004 0x00140000
0x000201fd 0x00000101 0x05000000 \
0x00000012 0x00180000 0x000f01ff 0x00000201 0x05000000
0x00000020 0x00000220 0x00140000 0x0002018d 0x00000101 0x05000000
0x0000000b 0x00180000 0x000201fd 0x00000201 0x05000000 0x00000020
0x00000223 0x00000101 0x05000000 \
0x00000012 0x00000101 0x05000000 0x00000012
Enum
0 = PCI\VEN_135B&DEV_0001&SUBSYS_00000000&REV_00\3&e44f86d&0&0
Count = REG_DWORD 0x00000004
NextInstance = REG_DWORD 0x00000004
1 = PCI\VEN_135B&DEV_0001&SUBSYS_00000000&REV_00\3&1b2f0ce&0&0
2 = PCI\VEN_135B&DEV_0001&SUBSYS_00000000&REV_00\3&a985f74&0&0
3 = PCI\VEN_135B&DEV_0001&SUBSYS_00000000&REV_00\3&3bcef44&0&0

```

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}" \

```

```

0CDCB07DE636}" \
    "Device\{AD02C75A-183C-4A1A-84D6-
0543309B0046}" \
    "Device\{3A5E9A55-D57D-4FAC-8389-
8DDB462EBE28}"
    Route = REG_MULTI_SZ "\{B4E35858-75CE-4227-B716-7D1867B22A3B}\\"
\
\
\
\
    "Device\GniVIA_{B324133E-EEF5-4CB1-8DC6-7D1867B22A3B}" \
    "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
0xad789e0 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 0x00000012
        NextInstance = REG_DWORD 0x00000012
    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&324b9a0d&0&D004560B00080010
    7 = SCSI\ProcessorUNISYS_FC76222-
P64_____v2_\5&324b9a0d&0&D104560B00080010
    8 = SCSI\ProcessorUNISYS_FC76222-
P64_____v2_\5&382242ab&0&E804560B00080010
    9 = SCSI\ProcessorUNISYS_FC76222-
P64_____v2_\5&382242ab&0&E904560B00080010
    10 = SCSI\ProcessorUNISYS_FC76222-
P64_____v2_\5&1225c8e9&0&C004560B00080010
    11 = SCSI\ProcessorUNISYS_FC76222-
P64_____v2_\5&1225c8e9&0&C104560B00080010
    12 = SCSI\ProcessorUNISYS_FC76222-
P64_____v2_\5&1181d662&0&B004560B00080010
    13 = SCSI\ProcessorUNISYS_FC76222-
P64_____v2_\5&1181d662&0&B104560B00080010
    14 = SCSI\ProcessorUNISYS_FC76222-
P64_____v2_\5&38090f63&0&B404560B00080010
    15 = SCSI\ProcessorUNISYS_FC76222-
P64_____v2_\5&38090f63&0&B504560B00080010
    16 = SCSI\ProcessorUNISYS_FC76222-
P64_____v2_\5&291e5ca1&1&2409560B00080010
    17 = SCSI\ProcessorUNISYS_FC76222-
P64_____v2_\5&291e5ca1&1&2509560B00080010

```

CurrentControlSet\Services\lfdisk

```
\registry\machine\SYSTEM\CurrentControlSet\Services\lfdisk
Type = REG_DWORD 0x00000001
Start = REG_DWORD 0x00000003
ErrorControl = REG_DWORD 0x00000001
ImagePath = REG_EXPAND_SZ system32\DRIVERS\lfdisk.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
000000000000C000
    Count = REG_DWORD 0x00000051
    NextInstance = REG_DWORD 0x00000051
1 =
SCSI\Disk&Ven_UNISYS__VirtualStorage__01.0\1&1a590e2c&0&A53F00861000001000
000000000000B000
2 =
SCSI\Disk&Ven_UNISYS__VirtualStorage__01.0\1&1a590e2c&0&A53F00861000001000
000000000000A000
3 =
SCSI\Disk&Ven_UNISYS__VirtualStorage__01.0\1&1a590e2c&0&A53F00861000001000
0000000000009000
4 =
SCSI\Disk&Ven_UNISYS__VirtualStorage__01.0\1&1a590e2c&0&A53F00861000001000
0000000000008000
5 =
SCSI\Disk&Ven_UNISYS__VirtualStorage__01.0\1&1a590e2c&0&A53F00861000001000
0000000000007000
6 =
SCSI\Disk&Ven_UNISYS__VirtualStorage__01.0\1&1a590e2c&0&A53F00861000001000
0000000000006000
7 =
SCSI\Disk&Ven_UNISYS__VirtualStorage__01.0\1&1a590e2c&0&A53F00861000001000
0000000000005000
8 =
SCSI\Disk&Ven_UNISYS__VirtualStorage__01.0\1&1a590e2c&0&A53F00861000001000
0000000000004000
9 =
SCSI\Disk&Ven_UNISYS__VirtualStorage__01.0\1&1a590e2c&0&A53F00861000001000
0000000000003000
10 =
SCSI\Disk&Ven_UNISYS__VirtualStorage__01.0\1&1a590e2c&0&1D4000861000001000
000000000000C000
11 =
SCSI\Disk&Ven_UNISYS__VirtualStorage__01.0\1&1a590e2c&0&1D4000861000001000
000000000000A000
```

```
12 =
SCSI\Disk&Ven_UNISYS__VirtualStorage__01.0\1&1a590e2c&0&1D4000861000001000
0000000000009000
13 =
SCSI\Disk&Ven_UNISYS__VirtualStorage__01.0\1&1a590e2c&0&1D4000861000001000
0000000000008000
14 =
SCSI\Disk&Ven_UNISYS__VirtualStorage__01.0\1&1a590e2c&0&1D4000861000001000
0000000000007000
15 =
SCSI\Disk&Ven_UNISYS__VirtualStorage__01.0\1&1a590e2c&0&1D4000861000001000
0000000000005000
16 =
SCSI\Disk&Ven_UNISYS__VirtualStorage__01.0\1&1a590e2c&0&1D4000861000001000
0000000000004000
17 =
SCSI\Disk&Ven_UNISYS__VirtualStorage__01.0\1&1a590e2c&0&1D4000861000001000
0000000000003000
18 =
SCSI\Disk&Ven_UNISYS__VirtualStorage__01.0\1&1a590e2c&0&1D4000861000001000
0000000000002000
19 =
SCSI\Disk&Ven_UNISYS__VirtualStorage__01.0\1&1a590e2c&0&1D4000861000001000
0000000000001000
20 =
SCSI\Disk&Ven_UNISYS__VirtualStorage__01.0\1&1a590e2c&0&6D4000861000001000
000000000000C000
21 =
SCSI\Disk&Ven_UNISYS__VirtualStorage__01.0\1&1a590e2c&0&6D4000861000001000
000000000000B000
22 =
SCSI\Disk&Ven_UNISYS__VirtualStorage__01.0\1&1a590e2c&0&6D4000861000001000
000000000000A000
23 =
SCSI\Disk&Ven_UNISYS__VirtualStorage__01.0\1&1a590e2c&0&6D4000861000001000
0000000000009000
24 =
SCSI\Disk&Ven_UNISYS__VirtualStorage__01.0\1&1a590e2c&0&6D4000861000001000
0000000000008000
25 =
SCSI\Disk&Ven_UNISYS__VirtualStorage__01.0\1&1a590e2c&0&6D4000861000001000
0000000000007000
26 =
SCSI\Disk&Ven_UNISYS__VirtualStorage__01.0\1&1a590e2c&0&6D4000861000001000
0000000000006000
27 =
SCSI\Disk&Ven_UNISYS__VirtualStorage__01.0\1&1a590e2c&0&6D4000861000001000
0000000000005000
28 =
SCSI\Disk&Ven_UNISYS__VirtualStorage__01.0\1&1a590e2c&0&6D4000861000001000
0000000000004000
29 =
SCSI\Disk&Ven_UNISYS__VirtualStorage__01.0\1&1a590e2c&0&6D4000861000001000
0000000000003000
30 =
SCSI\Disk&Ven_UNISYS__VirtualStorage__01.0\1&1a590e2c&0&6F4000861000001000
000000000000C000
```



```

69 =
SCSI\Disk&Ven_UNISYS_VirtualStorage__01.0\1&1a590e2c&0&0B4000861000001000
000000000001000
70 =
SCSI\Disk&Ven_UNISYS_VirtualStorage__01.0\1&1a590e2c&0&234000861000001000
00000000000A000
71 =
SCSI\Disk&Ven_UNISYS_VirtualStorage__01.0\1&1a590e2c&0&234000861000001000
0000000000009000
72 =
SCSI\Disk&Ven_UNISYS_VirtualStorage__01.0\1&1a590e2c&0&234000861000001000
0000000000008000
73 =
SCSI\Disk&Ven_UNISYS_VirtualStorage__01.0\1&1a590e2c&0&234000861000001000
0000000000007000
74 =
SCSI\Disk&Ven_UNISYS_VirtualStorage__01.0\1&1a590e2c&0&234000861000001000
0000000000006000
75 =
SCSI\Disk&Ven_UNISYS_VirtualStorage__01.0\1&1a590e2c&0&234000861000001000
0000000000005000
76 =
SCSI\Disk&Ven_UNISYS_VirtualStorage__01.0\1&1a590e2c&0&234000861000001000
0000000000004000
77 =
SCSI\Disk&Ven_UNISYS_VirtualStorage__01.0\1&1a590e2c&0&234000861000001000
0000000000003000
78 =
SCSI\Disk&Ven_UNISYS_VirtualStorage__01.0\1&1a590e2c&0&234000861000001000
0000000000002000
79 =
SCSI\Disk&Ven_UNISYS_VirtualStorage__01.0\1&1a590e2c&0&234000861000001000
0000000000001000
80 =
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
0x00000020 0x00000220 0x00140000 0x0002018d 0x00000101 0x05000000
0x0000000b 0x00180000 0x000201fd 0x00000201 0x05000000 0x00000020
0x00000223 0x00000101 0x05000000 \
0x00000012 0x00000101 0x05000000 0x00000012
Enum
0 = PCI\VEN_11AB&DEV_4620&SUBSYS_C0FC1018&REV_12\4&2cf6f8ed&0&0000
Count = REG_DWORD 0x00000009
NextInstance = REG_DWORD 0x00000009
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&5e54501&0&0000
4 = PCI\VEN_11AB&DEV_4620&SUBSYS_C0FC1018&REV_12\4&bbe9921&0&0000
5 = PCI\VEN_11AB&DEV_4620&SUBSYS_C0FC1018&REV_12\4&30f36daa&0&0000
6 = PCI\VEN_11AB&DEV_4620&SUBSYS_C0FC1018&REV_12\4&1f3768a3&0&0000
7 = PCI\VEN_11AB&DEV_4620&SUBSYS_C0FC1018&REV_12\4&1a68eb24&0&0000
8 = 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 0x00000053
NextInstance = REG_DWORD 0x00000053
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
12 =
SCSI\Disk&Ven_UNISYS__VirtualStorage__01.0\1&1a590e2c&0&1D4000861000001000
00000000000C000
13 =
SCSI\Disk&Ven_UNISYS__VirtualStorage__01.0\1&1a590e2c&0&1D4000861000001000
00000000000A000
14 =
SCSI\Disk&Ven_UNISYS__VirtualStorage__01.0\1&1a590e2c&0&1D4000861000001000
000000000009000
15 =
SCSI\Disk&Ven_UNISYS__VirtualStorage__01.0\1&1a590e2c&0&1D4000861000001000
000000000008000
16 =
SCSI\Disk&Ven_UNISYS__VirtualStorage__01.0\1&1a590e2c&0&1D4000861000001000
000000000007000
17 =
SCSI\Disk&Ven_UNISYS__VirtualStorage__01.0\1&1a590e2c&0&1D4000861000001000
000000000005000
18 =
SCSI\Disk&Ven_UNISYS__VirtualStorage__01.0\1&1a590e2c&0&1D4000861000001000
000000000004000
19 =
SCSI\Disk&Ven_UNISYS__VirtualStorage__01.0\1&1a590e2c&0&1D4000861000001000
000000000003000
20 =
SCSI\Disk&Ven_UNISYS__VirtualStorage__01.0\1&1a590e2c&0&1D4000861000001000
000000000002000
21 =
SCSI\Disk&Ven_UNISYS__VirtualStorage__01.0\1&1a590e2c&0&1D4000861000001000
000000000001000
22 =
SCSI\Disk&Ven_UNISYS__VirtualStorage__01.0\1&1a590e2c&0&6D4000861000001000
00000000000C000
23 =
SCSI\Disk&Ven_UNISYS__VirtualStorage__01.0\1&1a590e2c&0&6D4000861000001000
00000000000B000

```



```

62 =
SCSI\Disk&Ven_UNISYS__VirtualStorage__01.0\1&1a590e2c&0&0B4000861000001000
00000000000C000
63 =
SCSI\Disk&Ven_UNISYS__VirtualStorage__01.0\1&1a590e2c&0&0B4000861000001000
00000000000B000
64 =
SCSI\Disk&Ven_UNISYS__VirtualStorage__01.0\1&1a590e2c&0&0B4000861000001000
00000000000A000
65 =
SCSI\Disk&Ven_UNISYS__VirtualStorage__01.0\1&1a590e2c&0&0B4000861000001000
000000000008000
66 =
SCSI\Disk&Ven_UNISYS__VirtualStorage__01.0\1&1a590e2c&0&0B4000861000001000
000000000007000
67 =
SCSI\Disk&Ven_UNISYS__VirtualStorage__01.0\1&1a590e2c&0&0B4000861000001000
000000000006000
68 =
SCSI\Disk&Ven_UNISYS__VirtualStorage__01.0\1&1a590e2c&0&0B4000861000001000
000000000005000
69 =
SCSI\Disk&Ven_UNISYS__VirtualStorage__01.0\1&1a590e2c&0&0B4000861000001000
000000000004000
70 =
SCSI\Disk&Ven_UNISYS__VirtualStorage__01.0\1&1a590e2c&0&0B4000861000001000
000000000003000
71 =
SCSI\Disk&Ven_UNISYS__VirtualStorage__01.0\1&1a590e2c&0&0B4000861000001000
000000000001000
72 =
SCSI\Disk&Ven_UNISYS__VirtualStorage__01.0\1&1a590e2c&0&234000861000001000
00000000000A000
73 =
SCSI\Disk&Ven_UNISYS__VirtualStorage__01.0\1&1a590e2c&0&234000861000001000
000000000009000
74 =
SCSI\Disk&Ven_UNISYS__VirtualStorage__01.0\1&1a590e2c&0&234000861000001000
000000000008000
75 =
SCSI\Disk&Ven_UNISYS__VirtualStorage__01.0\1&1a590e2c&0&234000861000001000
000000000007000
76 =
SCSI\Disk&Ven_UNISYS__VirtualStorage__01.0\1&1a590e2c&0&234000861000001000
000000000006000
77 =
SCSI\Disk&Ven_UNISYS__VirtualStorage__01.0\1&1a590e2c&0&234000861000001000
000000000005000
78 =
SCSI\Disk&Ven_UNISYS__VirtualStorage__01.0\1&1a590e2c&0&234000861000001000
000000000004000
79 =
SCSI\Disk&Ven_UNISYS__VirtualStorage__01.0\1&1a590e2c&0&234000861000001000
000000000003000
80 =
SCSI\Disk&Ven_UNISYS__VirtualStorage__01.0\1&1a590e2c&0&234000861000001000
000000000002000

```

```

81 =
SCSI\Disk&Ven_UNISYS__VirtualStorage__01.0\1&1a590e2c&0&234000861000001000
000000000001000
82 =
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: 05/25/04 08:23:14

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 1.72 GB

Total Virtual Memory 5.85 GB

Available Virtual Memory 5.46 GB

Page File Space 3.86 GB

Page File C:\pagefile.sys

[Hardware Resources]

[Conflicts/Sharing]

Resource	Device	Status
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
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[I/O]

Resource	Device	Status
0x00000000-0x000003AF	PCI bus	OK
0x00000000-0x000003AF	Direct memory access controller	OK
0x000003B0-0x000003DF	PCI bus	OK
0x000003B0-0x000003DF	RAGE XL PCI Family (Microsoft Corporation)	OK
0x000003E0-0x00000CF7	PCI bus	OK
0x00000D00-0x00000FFF	PCI bus	OK
0x0000E000-0x0000EFFF	PCI bus	OK
0x0000ECF8-0x0000ECFF	PCI Device	OK
0x0000ECE8-0x0000ECEF	PCI Device	OK
0x0000EC80-0x0000ECBF	PCI Device	OK
0x0000ECF4-0x0000ECF7	PCI Device	OK
0x0000E800-0x0000E8FF	RAGE XL PCI Family (Microsoft Corporation)	OK
0x000003C0-0x000003DF	RAGE XL PCI Family (Microsoft Corporation)	OK

0x00000080-0x0000009F	Direct memory access controller	OK
0x000000C0-0x000000DF	Direct memory access controller	OK
0x0000040B-0x0000040B	Direct memory access controller	OK
0x000004D6-0x000004D6	Direct memory access controller	OK
0x000000F0-0x000000FF	Numeric data processor	OK
0x00000020-0x0000003F	Programmable interrupt controller	OK
0x000000A0-0x000000BF	Programmable interrupt controller	OK
0x000004D0-0x000004D1	Programmable interrupt controller	OK
0x00000061-0x00000061	System speaker	OK
0x00000040-0x0000005F	System timer	OK
0x000003F0-0x000003F5	Standard floppy disk controller	OK
0x000003F7-0x000003F7	Standard floppy disk controller	OK
0x00000060-0x00000060	Standard 101/102-Key or Microsoft Natural PS/2 Keyboard	OK
0x00000064-0x00000064	Standard 101/102-Key or Microsoft Natural PS/2 Keyboard	OK
0x000003F8-0x000003FF	Communications Port (COM1)	OK
0x000002F8-0x000002FF	Communications Port (COM2)	OK
0x00000070-0x0000007F	System CMOS/real time clock	OK
0x00000800-0x0000089F	System board	OK
0x000008A0-0x000008AF	System board	OK
0x00000C00-0x00000CD7	System board	OK
0x00000F50-0x00000F58	System board	OK
0x000008E0-0x000008E3	System board	OK
0x000000E0-0x000000EF	System board	OK
0x000008B0-0x000008BF	CSB5 IDE Controller	OK
0x000001F0-0x000001F7	Primary IDE Channel	OK
0x000003F6-0x000003F6	Primary IDE Channel	OK
0x00000170-0x00000177	Secondary IDE Channel	OK
0x00000376-0x00000376	Secondary IDE Channel	OK
0x00000A79-0x00000A79	ISAPNP Read Data Port	OK
0x00000279-0x00000279	ISAPNP Read Data Port	OK
0x00000274-0x00000277	ISAPNP Read Data Port	OK
0x0000C000-0x0000CFFF	PCI bus	OK
0x0000C000-0x0000CFFF	PCI standard PCI-to-PCI bridge	OK
0x0000CC00-0x0000CFFF	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

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[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
0xFE80000-0xFE80FFF	PCI Device	OK
0xFE102000-0xFE102FFF	PCI Device	OK
0xFE00000-0xFE7FFFF	PCI Device	OK
0xFE101000-0xFE101FFF	RAGE XL PCI Family (Microsoft Corporation)	OK
0xFE100000-0xFE100FFF	ServerWorks (RCC) PCI to USB Open Host Controller	OK
0xF9000000-0xFADFFFF	PCI bus	OK
0xFAC00000-0xFADFFFF	PCI standard PCI-to-PCI bridge	OK
0xFACFF000-0xFACFFFF	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
0xFB000000-0xFC3FFFF	PCI bus	OK
0xFB000000-0xFC3FFFF	cLAN Host Adapter	OK
0xFC300000-0xFC31FFF	cLAN Host Adapter	OK
0xFC000000-0xFC1FFFF	cLAN Host Adapter	OK
0xFC320000-0xFC32FFF	cLAN Host Adapter	OK

[Components]

[Multimedia]

[Audio Codecs]

CODEC	Manufacturer	Description	Status	File	Version	Size
		Creation Date				
c:\windows\system32\sl_anet.acm	Sipro Lab Telecom Inc.	Sipro Lab Telecom Audio Codec	OK	C:\WINDOWS\system32\SL_ANET.ACM	3.02	84.00 KB (86,016 bytes)
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)

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)
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)
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)
c:\windows\system32\tsssoft32.acm	DSP GROUP, INC.		OK	C:\WINDOWS\system32\TSSOFT32.ACM	1.01	9.50 KB (9,728 bytes)
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)
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)
c:\windows\system32\msg723.acm	Microsoft Corporation		OK	C:\WINDOWS\system32\MSG723.ACM	4.4.4000	116.00 KB (118,784 bytes)

[Video Codecs]

CODEC	Manufacturer	Description	Status	File	Version	Size
		Creation Date				
c:\windows\system32\msh261.drv	Microsoft Corporation		OK	C:\WINDOWS\system32\MSH261.DRV	4.4.4000	180.00 KB (184,320 bytes)
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)
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)
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)
c:\windows\system32\msh263.drv	Microsoft Corporation		OK	C:\WINDOWS\system32\MSH263.DRV	4.4.4000	284.00 KB (290,816 bytes)
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)
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)

[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\rasppptp.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_PPPOEMINIPOINT\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}] SEPPACKET 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 RLSLSD Yes
 Supports RLSLSD 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 (13,040,414,720 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)

Name Adaptec AIC-7899 Ultra160 PCI SCSI Card
Manufacturer Adaptec
Status OK
PNP Device ID
PCI\VEN_9005&DEV_00CF&SUBSYS_01211028&REV_01\4&22300438&0&3140

I/O Port 0x0000C800-0x0000C8FF
Memory Address 0xFACFE000-0xFACFEFFF
IRQ Channel IRQ 31
Driver c:\windows\system32\drivers\adpu160m.sys (RTC_XP07
(lab01_n(storbuild).010917-1031), 99.63 KB (102,016 bytes), 3/25/2003
11:00 AM)

[IDE]

Item Value
Name CSB5 IDE Controller
Manufacturer ServerWorks
Status OK
PNP Device ID
PCI\VEN_1166&DEV_0212&SUBSYS_02121166&REV_93\3&13C0B0C5&0&79

I/O Port 0x000008B0-0x000008BF
Driver c:\windows\system32\drivers\pciide.sys (5.2.3790.0
(srv03_rtm.030324-2048), 5.50 KB (5,632 bytes), 3/25/2003 11:00 AM)

Name Primary IDE Channel
Manufacturer (Standard IDE ATA/ATAPI controllers)
Status OK
PNP Device ID PCIIDE\IDECHANNEL\4&10A8249&0&0
I/O Port 0x000001F0-0x000001F7
I/O Port 0x000003F6-0x000003F6
IRQ Channel IRQ 14
Driver c:\windows\system32\drivers\atapi.sys (5.2.3790.0
(srv03_rtm.030324-2048), 89.00 KB (91,136 bytes), 3/25/2003 11:00 AM)

Name Secondary IDE Channel
Manufacturer (Standard IDE ATA/ATAPI controllers)
Status OK
PNP Device ID PCIIDE\IDECHANNEL\4&10A8249&0&1
I/O Port 0x00000170-0x00000177
I/O Port 0x00000376-0x00000376
Driver c:\windows\system32\drivers\atapi.sys (5.2.3790.0
(srv03_rtm.030324-2048), 89.00 KB (91,136 bytes), 3/25/2003 11:00 AM)

[Printing]

Name Driver Port Name Server Name

[Problem Devices]

Device PNP Device ID Error Code

PCI Device
PCI\VEN_1028&DEV_000C&SUBSYS_000C1028&REV_00\3&13C0B0C5&0&20
The drivers for this device are not installed.

PCI Device
PCI\VEN_1028&DEV_0008&SUBSYS_00081028&REV_00\3&13C0B0C5&0&21
The drivers for this device are not installed.

PCI Device
PCI\VEN_1028&DEV_000D&SUBSYS_000D1028&REV_00\3&13C0B0C5&0&22
The drivers for this device are not installed.

[USB]

Device PNP Device ID
ServerWorks (RCC) PCI to USB Open Host Controller
PCI\VEN_1166&DEV_0220&SUBSYS_02201166&REV_05\3&13C0B0C5&0&7A

USB Root Hub USB\ROOT_HUB\4&1A0F8909&0

[Software Environment]

[System Drivers]

Name	Description	File	Type	Started	Start Mode	State	Status
abiosdsk	Abiosdsk	Not Available	Kernel Driver	No		No	
	Disabled	Stopped	OK	Ignore	No	No	
acpi	Microsoft ACPI Driver	c:\windows\system32\drivers\acpi.sys	Kernel	Running	Normal	Yes	
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
	Stopped	OK	Normal	No	No	No	
afcnt	afcnt	Not Available	Kernel Driver	No	Disabled	Stopped	OK
	Stopped	OK	Normal	No	No	No	
afd	AFD Networking Support Environment	c:\windows\system32\drivers\afd.sys	Kernel Driver	Yes	Running	OK	Auto
	Running	OK	Normal	No	Yes	No	
aha154x	Aha154x	Not Available	Kernel Driver	No	Disabled	Stopped	OK
	Stopped	OK	Normal	No	No	No	
aic78u2	aic78u2	Not Available	Kernel Driver	No	Disabled	Stopped	OK
	Stopped	OK	Normal	No	No	No	
aic78xx	aic78xx	Not Available	Kernel Driver	No	Disabled	Stopped	OK
	Stopped	OK	Normal	No	No	No	
aliide	AliIde	Not Available	Kernel Driver	No	Disabled	Stopped	OK
	Stopped	OK	Normal	No	No	No	
asynmac	RAS Asynchronous Media Driver	c:\windows\system32\drivers\asynmac.sys	Kernel Driver	No	Manual	Stopped	OK
	Manual	Stopped	OK	Normal	No	No	
atapi	Standard IDE/ESDI Hard Disk Controller	c:\windows\system32\drivers\atapi.sys	Kernel Driver	Yes	Running	OK	Boot
	Running	OK	Normal	No	Yes	No	
atdisk	Atdisk	Not Available	Kernel Driver	No	Disabled	Stopped	OK
	Stopped	OK	Ignore	No	No	No	

ati2mpad	ati2mpad	c:\windows\system32\drivers\ati2mpad.sys	Kernel Driver	Yes	Manual	Running OK	Ignore	No	Yes
atmarpc	ATM ARP Client Protocol	c:\windows\system32\drivers\atmarpc.sys	Kernel Driver	No	Manual	Stopped OK	Normal	No	No
audstub	Audio Stub Driver	c:\windows\system32\drivers\audstub.sys	Kernel Driver	Yes	Manual	Running OK	Normal	No	Yes
b57w2k	Broadcom NetXtreme Gigabit Ethernet	c:\windows\system32\drivers\b57xp32.sys	Kernel Driver	Yes	Manual	Running OK	Normal	No	Yes
beep	Beep	c:\windows\system32\drivers\beep.sys	Kernel Driver	Yes	System	Running OK	Normal	No	Yes
cbidf2k	cbidf2k	c:\windows\system32\drivers\cbidf2k.sys	Kernel Driver	No	Disabled	Stopped OK	Normal	No	No
cd20xrnt	cd20xrnt	Not Available	Kernel Driver	No	Disabled	Stopped OK	Normal	No	No
cdfs	Cdfs	c:\windows\system32\drivers\cdfs.sys	File System Driver	Yes	Disabled	Running OK	Normal	Yes	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	Ignore	No	System	Stopped OK	Yes
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	Stopped OK	Normal	No	No	Disabled
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	Stopped OK	Normal	No	No	Disabled
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	Yes	Manual
hpn	hpn	Not Available	Kernel Driver	No	Stopped OK	Normal	No	No	Disabled
hpt3xx	hpt3xx	Not Available	Kernel Driver	No	Stopped OK	Normal	No	No	Disabled
http	HTTP	c:\windows\system32\drivers\http.sys	Kernel Driver	Yes	Manual	Running OK	Normal	No	Yes
i2omgmt	i2omgmt	Not Available	Kernel Driver	No	Normal	No	Kernel Driver	No	System Stopped OK
i2omp	i2omp	Not Available	Kernel Driver	No	Stopped OK	Normal	No	No	Disabled
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	Stopped OK	Normal	No	No	Disabled
imapi	CD-Burning Filter Driver	c:\windows\system32\drivers\imapi.sys	Kernel Driver	No	System	Stopped OK	Normal	No	No
intelide	IntelIde	Not Available	Kernel Driver	No	Disabled	Stopped OK	Normal	No	No
ipfilterdriver	IP Traffic Filter Driver	c:\windows\system32\drivers\ipfltdrv.sys	Kernel Driver	No	Manual	Stopped OK	Normal	No	No
ipinip	IP in IP Tunnel Driver	c:\windows\system32\drivers\ipinip.sys	Kernel Driver	No	Manual	Stopped OK	Normal	No	No
ipnat	IP Network Address Translator	c:\windows\system32\drivers\ipnat.sys	Kernel Driver	No	Manual	Stopped OK	Normal	No	Manual
ipsec	IPSEC driver	c:\windows\system32\drivers\ipsec.sys	Kernel Driver	Yes	System	Running OK	Normal	No	Yes
ipsraidn	ipsraidn	Not Available	Kernel Driver	No	Disabled	Stopped OK	Normal	No	No
irenum	IR Enumerator Service	c:\windows\system32\drivers\irenum.sys	Kernel Driver	No	Manual	Stopped OK	Normal	No	No
isapnp	PnP ISA/EISA Bus Driver	c:\windows\system32\drivers\isapnp.sys	Kernel Driver	Yes	Boot	Running OK	Critical	No	Yes

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kbdclass Keyboard Class Driver
c:\windows\system32\drivers\kbdclass.sys Kernel Driver Yes
System Running OK Normal No Yes
ksecdd KSecDD c:\windows\system32\drivers\ksecdd.sys Kernel Driver
Yes Boot Running OK Normal No Yes
lp6nds35 lp6nds35 Not Available Kernel Driver No
Disabled Stopped OK Normal No No
mnmdd mnmdd c:\windows\system32\drivers\mnmdd.sys Kernel Driver Yes
System Running OK Ignore No Yes
modem Modem c:\windows\system32\drivers\modem.sys Kernel Driver No
Manual Stopped OK Ignore No No
mouclass Mouse Class Driver
c:\windows\system32\drivers\mouclass.sys Kernel Driver Yes
System Running OK Normal No Yes
mountmgr Mount Point Manager
c:\windows\system32\drivers\mountmgr.sys Kernel Driver Yes
Boot Running OK Normal No Yes
mraid35x mraid35x Not Available Kernel Driver No
Disabled Stopped OK Normal No No
mrxdav WebDav Client Redirector
c:\windows\system32\drivers\mrxdav.sys File System Driver
No Manual Stopped OK Normal No No
mrxsmbr MRXSMB c:\windows\system32\drivers\mrxsmbr.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

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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\rasppptp.sys Kernel Driver Yes
Manual Running OK Normal No Yes
processor Processor Driver
c:\windows\system32\drivers\processr.sys Kernel Driver Yes
Manual Running OK Normal No Yes
ptilink Direct Parallel Link Driver
c:\windows\system32\drivers\ptilink.sys Kernel Driver Yes
Manual Running OK Normal No Yes
ql1080 ql1080 Not Available Kernel Driver No Disabled
Stopped OK Normal No No
ql10wnt Ql10wnt Not Available Kernel Driver No Disabled
Stopped OK Normal No No
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 RDPCCDD c:\windows\system32\drivers\rdpcdd.sys Kernel Driver
Yes System Running OK Ignore No Yes

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rdpdr Terminal Server Device Redirector Driver
c:\windows\system32\drivers\rdpdr.sys Kernel Driver Yes Manual
Running OK Normal No Yes
rdpwd RDPWD c:\windows\system32\drivers\rdpwd.sys Kernel Driver Yes
Manual Running OK Ignore No Yes
redbook Digital CD Audio Playback Filter Driver
c:\windows\system32\drivers\redbook.sys Kernel Driver Yes
System Running OK Normal No Yes
secdrv Secdrv c:\windows\system32\drivers\secdrv.sys Kernel Driver
No Manual Stopped OK Normal No No
serenum Serenum Filter Driver c:\windows\system32\drivers\serenum.sys
Kernel Driver Yes Manual Running OK Normal No Yes
serial Serial port driver c:\windows\system32\drivers\serial.sys
Kernel Driver Yes System Running OK Ignore No Yes
sfloppy Sfloppy c:\windows\system32\drivers\sfloppy.sys Kernel Driver
No System Stopped OK Ignore No No
simbad Simbad Not Available Kernel Driver No Disabled
Stopped OK Normal No No
sparrow Sparrow Not Available Kernel Driver No Disabled
Stopped OK Normal No No
srv Srv c:\windows\system32\drivers\srv.sys File System Driver
Yes Manual Running OK Normal No Yes
swenum Software Bus Driver c:\windows\system32\drivers\swenum.sys
Kernel Driver Yes Manual Running OK Normal No Yes
symc810 symc810 Not Available Kernel Driver No Disabled
Stopped OK Normal No No
symc8xx symc8xx Not Available Kernel Driver No Disabled
Stopped OK Normal No No
symmpi symmpi Not Available Kernel Driver No Disabled
Stopped OK Normal No No
sym_hi sym_hi Not Available Kernel Driver No Disabled
Stopped OK Normal No No
sym_u3 sym_u3 Not Available Kernel Driver No Disabled
Stopped OK Normal No No
tcpip TCP/IP Protocol Driver c:\windows\system32\drivers\tcpip.sys Kernel
Driver Yes System Running OK Normal No Yes
tdpipe TDPIPE c:\windows\system32\drivers\tdpipe.sys Kernel Driver
No Manual Stopped OK Ignore No No
tdtcp TDTCP c:\windows\system32\drivers\tdtcp.sys Kernel Driver Yes
Manual Running OK Ignore No Yes
termdd Terminal Device Driver c:\windows\system32\drivers\termdd.sys
Kernel Driver Yes System Running OK Normal No Yes
toside TosIde Not Available Kernel Driver No Disabled
Stopped OK Normal No No
udfs Udfs c:\windows\system32\drivers\udfs.sys File System Driver
No Disabled Stopped OK Normal No No
ultra ultra Not Available Kernel Driver No Disabled
Stopped OK Normal No No
update Microcode Update Driver
c:\windows\system32\drivers\update.sys Kernel Driver Yes
Manual Running OK Normal No Yes
usbhub USB2 Enabled Hub c:\windows\system32\drivers\usbhub.sys
Kernel Driver Yes Manual Running OK Normal No Yes

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usbhcci Microsoft USB Open Host Controller Miniport Driver
c:\windows\system32\drivers\usbhcci.sys Kernel Driver Yes
Manual Running OK Normal No Yes
vgasave VGA Display Controller. c:\windows\system32\drivers\vga.sys
Kernel Driver Yes System Running OK Ignore No Yes
viaide ViaIde Not Available Kernel Driver No Disabled
Stopped OK Normal No No
volsnap Storage volumes c:\windows\system32\drivers\volsnap.sys
Kernel Driver Yes Boot Running OK Normal No Yes
wanarp Remote Access IP ARP Driver
c:\windows\system32\drivers\wanarp.sys Kernel Driver Yes
Manual Running OK Normal No Yes
wdica WDICA Not Available Kernel Driver No Manual Stopped OK
Ignore No No
wlbs Network Load Balancing c:\windows\system32\drivers\wlbs.sys Kernel
Driver No Manual Stopped OK Normal No No
[Signed Drivers]
Device Name Signed Device Class Driver Version Driver Date
Manufacturer INF Name Driver Name Device ID
Not Available Not Available Not Available Not Available Not Available
Not Available Not Available Not Available HTREE\ROOT\0
ACPI Multiprocessor PC 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

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PCI\VEN_1166&DEV_0014&SUBSYS_00000000&REV_00\3&13C0B0C5&0&02
PCI Device Not Available UNKNOWN Not Available Not Available Not
Available Not Available Not Available
PCI\VEN_1028&DEV_000C&SUBSYS_000C1028&REV_00\3&13C0B0C5&0&20
PCI Device Not Available UNKNOWN Not Available Not Available Not
Available Not Available Not Available
PCI\VEN_1028&DEV_0008&SUBSYS_00081028&REV_00\3&13C0B0C5&0&21
PCI Device Not Available UNKNOWN Not Available Not Available Not
Available Not Available Not Available
PCI\VEN_1028&DEV_000D&SUBSYS_000D1028&REV_00\3&13C0B0C5&0&22
RAGE XL PCI Family (Microsoft Corporation) 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
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) fpydisk.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

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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 USB
5.2.3790.0 10/1/2002 ServerWorks (RCC) usbport.inf
Not Available
PCI\VEN_1166&DEV_0220&SUBSYS_02201166&REV_05\3&13C0B0C5&0&7A
USB Root Hub 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

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Available	PCI\VEN_8086&DEV_0309&SUBSYS_00000000&REV_01\3&474B838&0&40	dmload	Not Available	LEGACYDRIVER	Not Available	Not Available	Not Available	Not Available
Adaptec AIC-7899 Ultra160 PCI SCSI Card	No SC5IADAPTER	Available	Not Available	Not Available	Not Available	Not Available	ROOT\LEGACY_DMLOAD\0000	
5.2.3790.0	10/1/2002	Adaptec pnpscsi.inf	Not Available	Fips	Not Available	LEGACYDRIVER	Not Available	Not Available
PCI\VEN_9005&DEV_00CF&SUBSYS_01211028&REV_01\4&22300438&0&3040		Available	Not Available	Not Available	Not Available	Not Available	ROOT\LEGACY_FIPS\0000	
Disk drive	No DISKDRIVE	5.2.3790.0	10/1/2002	cLAN VIA Driver	Not Available	LEGACYDRIVER	Not Available	Not Available
(Standard disk drives)	disk.inf	Not Available		Available	Not Available	Not Available	Not Available	Not Available
SCSI\DISK&VEN_SEAGATE&PROD_ST318406LC&REV_8A03\5&1F5E3F1F&0&000				Available	Not Available	Not Available	Not Available	Not Available
PE 1x5 Backplane	No SYSTEM	5.2.3790.0	10/1/2002	Generic Packet Classifier	Not Available	LEGACYDRIVER	Not Available	
scsidev.inf	Not Available			Available	Not Available	Not Available	Not Available	Not Available
SCSI\PROCESSOR&VEN_PE/PV&PROD_1X5_SCSI_BP&REV_1.1\5&1F5E3F1F&0&060				Available	Not Available	Not Available	Not Available	Not Available
Adaptec AIC-7899 Ultra160 PCI SCSI Card	No SC5IADAPTER	5.2.3790.0	10/1/2002	HTTP	Not Available	LEGACYDRIVER	Not Available	Not Available
5.2.3790.0	10/1/2002	Adaptec pnpscsi.inf	Not Available	Available	Not Available	Not Available	Not Available	Not Available
PCI\VEN_9005&DEV_00CF&SUBSYS_01211028&REV_01\4&22300438&0&3140				Available	Not Available	Not Available	Not Available	Not Available
PCI bus No	SYSTEM	5.2.3790.0	10/1/2002	IPSEC driver	Not Available	LEGACYDRIVER	Not Available	Not Available
devices)	machine.inf	Not Available		Available	Not Available	Not Available	Not Available	Not Available
Broadcom NetXtreme Gigabit Ethernet	No NET	2.91.0.0		Available	Not Available	Not Available	Not Available	Not Available
10/1/2002	Broadcom	netb57xp.inf	Not Available	ksecdd	Not Available	LEGACYDRIVER	Not Available	Not Available
PCI\VEN_14E4&DEV_16A7&SUBSYS_01211028&REV_02\3&172E68DD&0&30				Available	Not Available	Not Available	Not Available	Not Available
Broadcom NetXtreme Gigabit Ethernet	No NET	2.91.0.0		Available	Not Available	Not Available	Not Available	Not Available
10/1/2002	Broadcom	netb57xp.inf	Not Available	Available	Not Available	Not Available	Not Available	Not Available
PCI\VEN_14E4&DEV_16A7&SUBSYS_01211028&REV_02\3&172E68DD&0&40				Available	Not Available	Not Available	Not Available	Not Available
PCI bus No	SYSTEM	5.2.3790.0	10/1/2002	Remote Access NDIS TAPI Driver	Not Available	LEGACYDRIVER	Not Available	Not Available
devices)	machine.inf	Not Available		Available	Not Available	Not Available	Not Available	Not Available
PCI bus No	SYSTEM	5.2.3790.0	10/1/2002	Available	Not Available	Not Available	Not Available	Not Available
devices)	machine.inf	Not Available		Available	Not Available	Not Available	Not Available	Not Available
cLAN Host Adapter	No NET	4.2.0.75	10/5/2000	Available	Not Available	Not Available	Not Available	Not Available
Giganet oem0.inf	Not Available			Available	Not Available	Not Available	Not Available	Not Available
PCI\VEN_135B&DEV_0001&SUBSYS_00000000&REV_00\3&1070020&0&30				Available	Not Available	Not Available	Not Available	Not Available
ACPI Fixed Feature Button	No SYSTEM	5.2.3790.0	10/1/2002	Available	Not Available	Not Available	Not Available	Not Available
(Standard system devices)	machine.inf	Not Available		Available	Not Available	Not Available	Not Available	Not Available
ACPI\FIXEDBUTTON\2&DABA3FF&0				Available	Not Available	Not Available	Not Available	Not Available
Logical Disk Manager	No SYSTEM	5.2.3790.0	10/1/2002	Available	Not Available	Not Available	Not Available	Not Available
(Standard system devices)	machine.inf	Not Available		Available	Not Available	Not Available	Not Available	Not Available
ROOT\DMIO\0000				Available	Not Available	Not Available	Not Available	Not Available
Volume Manager No	SYSTEM	5.2.3790.0	10/1/2002	Available	Not Available	Not Available	Not Available	Not Available
system devices)	machine.inf	Not Available		Available	Not Available	Not Available	Not Available	Not Available
Generic volume No	VOLUME	5.2.3790.0	10/1/2002	Available	Not Available	Not Available	Not Available	Not Available
volume.inf	Not Available			Available	Not Available	Not Available	Not Available	Not Available
STORAGE\VOLUME\1&30A96598&0&SIGNATURE5A205A10FFSET7E00LENGTH43CF44				Available	Not Available	Not Available	Not Available	Not Available
C00				Available	Not Available	Not Available	Not Available	Not Available
AFD Networking Support Environment	Not Available	LEGACYDRIVER	Not Available	Available	Not Available	Not Available	Not Available	Not Available
Available	Not Available	Not Available	Not Available	Available	Not Available	Not Available	Not Available	Not Available
ROOT\LEGACY_AFD\0000				Available	Not Available	Not Available	Not Available	Not Available
Beep	Not Available	LEGACYDRIVER	Not Available	Available	Not Available	Not Available	Not Available	Not Available
Available	Not Available	Not Available	Not Available	Available	Not Available	Not Available	Not Available	Not Available
ROOT\LEGACY_BEEP\0000				Available	Not Available	Not Available	Not Available	Not Available
CRC Disk Filter Driver	Not Available	LEGACYDRIVER	Not Available	Available	Not Available	Not Available	Not Available	Not Available
Available	Not Available	Not Available	Not Available	Available	Not Available	Not Available	Not Available	Not Available
ROOT\LEGACY_CRCDISK\0000				Available	Not Available	Not Available	Not Available	Not Available
dmboot	Not Available	LEGACYDRIVER	Not Available	Available	Not Available	Not Available	Not Available	Not Available
Available	Not Available	Not Available	Not Available	Available	Not Available	Not Available	Not Available	Not Available
ROOT\LEGACY_DMBOOT\0000				Available	Not Available	Not Available	Not Available	Not Available

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TDTCP Not Available LEGACYDRIVER Not Available Not Available Not Available Not Available
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
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_MMCI

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_L2TPMINIPORT\0000
WAN Miniport (IP) No NET 5.2.3790.0 10/1/2002
Microsoft netrasa.inf Not Available
ROOT\MS_NDISWANIP\0000
WAN Miniport (PPPOE) No NET 5.2.3790.0 10/1/2002
Microsoft netrasa.inf Not Available
ROOT\MS_PPPOEMINIPORT\0000
WAN Miniport (PPTP) No NET 5.2.3790.0 10/1/2002
Microsoft netrasa.inf Not Available
ROOT\MS_PPTPMINIPORT\0000
Direct Parallel No NET 5.2.3790.0 10/1/2002
Microsoft netrasa.inf Not Available
ROOT\MS_PTMINIPORT\0000
Terminal Server Device Redirector No SYSTEM 5.2.3790.0
10/1/2002 (Standard system devices) machine.inf Not
Available ROOT\RDPDR\0000
Terminal Server Keyboard Driver No SYSTEM 5.2.3790.0
10/1/2002 (Standard system devices) machine.inf Not
Available ROOT\RDP_KBD\0000
Terminal Server Mouse Driver No SYSTEM 5.2.3790.0
10/1/2002 (Standard system devices) machine.inf Not
Available ROOT\RDP_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
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 Not Available Not Available Not Available
system Not Available 4 8 0 1413120 Not Available Not
Available Not Available Not Available
smss.exe Not Available 344 11 204800 1413120 5/11/2004 9:34
AM Not Available Not Available Not Available
csrss.exe Not Available 472 13 Not Available Not Available
5/11/2004 9:34 AM 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
mmsrvc.exe c:\windows\system32\mmsrvc.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
rhostsvr.exe c:\rhost\rhostsvr.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
cmd.exe c:\windows\system32\cmd.exe 2360 8 204800 1413120
5/17/2004 8:55 AM 5.2.3790.0 (srv03_rtm.030324-2048) 374.00
KB (382,976 bytes) 3/25/2003 11:00 AM
msinfo32.exe c:\program files\common files\microsoft
shared\msinfo\msinfo32.exe 2168 8 204800 1413120 5/25/2004 8:21
AM 5.2.3790.0 (srv03_rtm.030324-2048) 40.50 KB (41,472 bytes)
7/16/2003 3:50 PM
wmiprvse.exe Not Available 188 8 Not Available Not Available
5/25/2004 8:21 AM Not Available Not Available Not Available

```

[Loaded Modules]

Name	Version	Size	File Date	Manufacturer	Path
winlogon	5.2.3790.0	(srv03_rtm.030324-2048)	536.50 KB (549,376 bytes)	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	5.2.3790.0	(srv03_rtm.030324-2048)	965.00 KB (988,160 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)	Microsoft Corporation	c:\windows\system32\advapi32.dll
rpcrt4	5.2.3790.59	(srv03_gdr.030614-1004)	642.50 KB (657,920 bytes)	Microsoft Corporation	c:\windows\system32\rpcrt4.dll
user32	5.2.3790.0	(srv03_rtm.030324-2048)	562.00 KB (575,488 bytes)	Microsoft Corporation	c:\windows\system32\user32.dll
gdi32	5.2.3790.0	(srv03_rtm.030324-2048)	263.00 KB (269,312 bytes)	Microsoft Corporation	c:\windows\system32\gdi32.dll
userenv	5.2.3790.0	(srv03_rtm.030324-2048)	732.50 KB (750,080 bytes)	Microsoft Corporation	c:\windows\system32\userenv.dll
nddeapi	5.2.3790.0	(srv03_rtm.030324-2048)	16.00 KB (16,384 bytes)	Microsoft Corporation	c:\windows\system32\nddeapi.dll
crypt32	5.131.3790.0	(srv03_rtm.030324-2048)	598.00 KB (612,352 bytes)	Microsoft Corporation	c:\windows\system32\crypt32.dll
msasn1	5.2.3790.0	(srv03_rtm.030324-2048)	58.00 KB (59,392 bytes)	Microsoft Corporation	c:\windows\system32\msasn1.dll
secur32	5.2.3790.0	(srv03_rtm.030324-2048)	63.00 KB (64,512 bytes)	Microsoft Corporation	c:\windows\system32\secur32.dll
winsta	5.2.3790.0	(srv03_rtm.030324-2048)	51.00 KB (52,224 bytes)	Microsoft Corporation	c:\windows\system32\winsta.dll

```

netapi32 5.2.3790.0 (srv03_rtm.030324-2048) 317.00 KB (324,608
bytes) 3/25/2003 11:00 AM Microsoft Corporation
c:\windows\system32\netapi32.dll
profmap 5.2.3790.0 (srv03_rtm.030324-2048) 22.00 KB (22,528 bytes)
3/25/2003 11:00 AM Microsoft Corporation
c:\windows\system32\profmap.dll
regapi 5.2.3790.0 (srv03_rtm.030324-2048) 48.50 KB (49,664 bytes)
3/25/2003 11:00 AM Microsoft Corporation
c:\windows\system32\regapi.dll
ws2_32 5.2.3790.0 (srv03_rtm.030324-2048) 87.50 KB (89,600 bytes)
3/25/2003 11:00 AM Microsoft Corporation
c:\windows\system32\ws2_32.dll
ws2help 5.2.3790.0 (srv03_rtm.030324-2048) 19.50 KB (19,968 bytes)
3/25/2003 11:00 AM Microsoft Corporation
c:\windows\system32\ws2help.dll
psapi 5.2.3790.0 (srv03_rtm.030324-2048) 21.50 KB (22,016 bytes)
3/25/2003 11:00 AM Microsoft Corporation
c:\windows\system32\psapi.dll
version 5.2.3790.0 (srv03_rtm.030324-2048) 17.00 KB (17,408 bytes)
3/25/2003 11:00 AM Microsoft Corporation
c:\windows\system32\version.dll
setupapi 5.2.3790.0 (srv03_rtm.030324-2048) 1,014.50 KB
(1,038,848 bytes) 3/25/2003 11:00 AM Microsoft Corporation
c:\windows\system32\setupapi.dll
msgina 5.2.3790.0 (srv03_rtm.030324-2048) 1.14 MB (1,191,936 bytes)
3/25/2003 11:00 AM Microsoft Corporation
c:\windows\system32\msgina.dll
shsvcs 6.00.3790.0 (srv03_rtm.030324-2048) 121.50 KB (124,416 bytes)
3/25/2003 11:00 AM Microsoft Corporation
c:\windows\system32\shsvcs.dll
shlwapi 6.00.3790.0 (srv03_rtm.030324-2048) 281.00 KB (287,744 bytes)
3/25/2003 11:00 AM Microsoft Corporation
c:\windows\system32\shlwapi.dll
sfc 5.2.3790.0 (srv03_rtm.030324-2048) 4.50 KB (4,608 bytes)
3/25/2003 11:00 AM Microsoft Corporation
c:\windows\system32\sfc.dll
sfc_os 5.2.3790.0 (srv03_rtm.030324-2048) 133.00 KB (136,192 bytes)
3/25/2003 11:00 AM Microsoft Corporation
c:\windows\system32\sfc_os.dll
wintrust 5.131.3790.0 (srv03_rtm.030324-2048) 161.50 KB (165,376
bytes) 3/25/2003 11:00 AM Microsoft Corporation
c:\windows\system32\wintrust.dll
ole32 5.2.3790.68 (srv03_gdr.030614-1004) 1.13 MB (1,182,720 bytes)
7/5/2003 1:03 PM Microsoft Corporation
c:\windows\system32\ole32.dll
imagehlp 5.2.3790.0 (srv03_rtm.030324-2048) 142.50 KB (145,920
bytes) 3/25/2003 11:00 AM Microsoft Corporation
c:\windows\system32\imagehlp.dll
comctl32 6.0 (srv03_rtm.030324-2048) 907.00 KB (928,768 bytes)
7/16/2003 8:34 AM Microsoft Corporation
c:\windows\winsxs\x86_microsoft.windows.common-
controls_6595b64144ccf1df_6.0.100.0_x-ww_8417450b\comctl32.dll
winscard 5.2.3790.0 (srv03_rtm.030324-2048) 98.50 KB (100,864
bytes) 3/25/2003 11:00 AM Microsoft Corporation
c:\windows\system32\winscard.dll
wtsapi32 5.2.3790.0 (srv03_rtm.030324-2048) 17.50 KB (17,920
bytes) 3/25/2003 11:00 AM Microsoft Corporation
c:\windows\system32\wtsapi32.dll

```

```

sxs 5.2.3790.0 (srv03_rtm.030324-2048) 733.00 KB (750,592 bytes)
3/25/2003 11:00 AM Microsoft Corporation
c:\windows\system32\sxs.dll
wldap32 5.2.3790.0 (srv03_rtm.030324-2048) 158.00 KB (161,792 bytes)
3/25/2003 11:00 AM Microsoft Corporation
c:\windows\system32\wldap32.dll
rsaenh 5.2.3790.0 (srv03_rtm.030324-2048) 176.83 KB (181,072 bytes)
3/25/2003 11:00 AM Microsoft Corporation
c:\windows\system32\rsaenh.dll
cscdll 5.2.3790.0 (srv03_rtm.030324-2048) 99.00 KB (101,376 bytes)
3/25/2003 11:00 AM Microsoft Corporation
c:\windows\system32\cscdll.dll
wlnotify 5.2.3790.0 (srv03_rtm.030324-2048) 87.50 KB (89,600
bytes) 3/25/2003 11:00 AM Microsoft Corporation
c:\windows\system32\wlnotify.dll
winmm 5.2.3790.0 (srv03_rtm.030324-2048) 166.00 KB (169,984 bytes)
3/25/2003 11:00 AM Microsoft Corporation
c:\windows\system32\winmm.dll
winspool 5.2.3790.0 (srv03_rtm.030324-2048) 140.00 KB (143,360
bytes) 3/25/2003 11:00 AM Microsoft Corporation
c:\windows\system32\winspool.drv
mpr 5.2.3790.0 (srv03_rtm.030324-2048) 56.00 KB (57,344 bytes)
3/25/2003 11:00 AM Microsoft Corporation
c:\windows\system32\mpr.dll
shell32 6.00.3790.0 (srv03_rtm.030324-2048) 7.79 MB (8,166,400 bytes)
3/25/2003 11:00 AM Microsoft Corporation
c:\windows\system32\shell32.dll
comctl32 5.82 (srv03_rtm.030324-2048) 561.00 KB (574,464 bytes)
7/16/2003 8:34 AM Microsoft Corporation
c:\windows\winsxs\x86_microsoft.windows.common-
controls_6595b64144ccf1df_5.82.0.0_x-ww_8a69ba05\comctl32.dll
uxtheme 6.00.3790.0 (srv03_rtm.030324-2048) 196.00 KB (200,704 bytes)
3/25/2003 11:00 AM Microsoft Corporation
c:\windows\system32\uxtheme.dll
samlib 5.2.3790.0 (srv03_rtm.030324-2048) 49.00 KB (50,176 bytes)
3/25/2003 11:00 AM Microsoft Corporation
c:\windows\system32\samlib.dll
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

```

wbemsv 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\wbemsv.dll
 fastprox 5.2.3790.0 (srv03_rtm.030324-2048) 443.00 KB (453,632
 bytes) 7/16/2003 3:46 PM Microsoft Corporation
 c:\windows\system32\wbem\fastprox.dll
 msvcp60 6.05.2144.0 388.00 KB (397,312 bytes) 3/25/2003 11:00 AM
 Microsoft Corporation c:\windows\system32\msvcp60.dll
 ntdsapi 5.2.3790.0 (srv03_rtm.030324-2048) 76.00 KB (77,824 bytes)
 3/25/2003 11:00 AM Microsoft Corporation
 c:\windows\system32\ntdsapi.dll
 dnsapi 5.2.3790.0 (srv03_rtm.030324-2048) 147.50 KB (151,040 bytes)
 3/25/2003 11:00 AM Microsoft Corporation
 c:\windows\system32\dnsapi.dll
 services 5.2.3790.0 (srv03_rtm.030324-2048) 102.00 KB (104,448
 bytes) 3/25/2003 11:00 AM Microsoft Corporation
 c:\windows\system32\services.exe
 scesrv 5.2.3790.0 (srv03_rtm.030324-2048) 316.50 KB (324,096 bytes)
 3/25/2003 11:00 AM Microsoft Corporation
 c:\windows\system32\scesrv.dll
 authz 5.2.3790.0 (srv03_rtm.030324-2048) 67.00 KB (68,608 bytes)
 3/25/2003 11:00 AM Microsoft Corporation
 c:\windows\system32\authz.dll
 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
 mswsock 5.2.3790.0 (srv03_rtm.030324-2048) 254.00 KB (260,096 bytes)
 3/25/2003 11:00 AM Microsoft Corporation
 c:\windows\system32\mswsock.dll
 esent 5.2.3790.0 (srv03_rtm.030324-2048) 1.01 MB (1,056,256 bytes)
 3/25/2003 11:00 AM Microsoft Corporation
 c:\windows\system32\esent.dll
 scecli 5.2.3790.0 (srv03_rtm.030324-2048) 179.50 KB (183,808 bytes)
 3/25/2003 11:00 AM Microsoft Corporation
 c:\windows\system32\scecli.dll
 wshtcpip 5.2.3790.0 (srv03_rtm.030324-2048) 18.00 KB (18,432
 bytes) 3/25/2003 11:00 AM Microsoft Corporation
 c:\windows\system32\wshtcpip.dll
 pstorsvc 5.2.3790.0 (srv03_rtm.030324-2048) 24.00 KB (24,576
 bytes) 3/25/2003 11:00 AM Microsoft Corporation
 c:\windows\system32\pstorsvc.dll
 psbase 5.2.3790.0 (srv03_rtm.030324-2048) 81.00 KB (82,944 bytes)
 3/25/2003 11:00 AM Microsoft Corporation
 c:\windows\system32\psbase.dll
 dssenh 5.2.3790.0 (srv03_rtm.030324-2048) 131.33 KB (134,480 bytes)
 3/25/2003 11:00 AM Microsoft Corporation
 c:\windows\system32\dssenh.dll
 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

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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
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

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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
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
adslldpc 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\adslldpc.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

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clusapi 5.2.3790.0 (srv03_rtm.030324-2048) 56.00 KB (57,344 bytes)
3/25/2003 11:00 AM Microsoft Corporation
c:\windows\system32\clusapi.dll

netcfgx 5.2.3790.0 (srv03_rtm.030324-2048) 726.00 KB (743,424 bytes)
3/25/2003 11:00 AM Microsoft Corporation
c:\windows\system32\netcfgx.dll

winipsec 5.2.3790.0 (srv03_rtm.030324-2048) 34.50 KB (35,328 bytes)
3/25/2003 11:00 AM Microsoft Corporation
c:\windows\system32\winipsec.dll

hnetcfg 5.2.3790.0 (srv03_rtm.030324-2048) 243.50 KB (249,344 bytes)
3/25/2003 11:00 AM Microsoft Corporation
c:\windows\system32\hnetcfg.dll

rasmans 5.2.3790.0 (srv03_rtm.030324-2048) 163.50 KB (167,424 bytes)
3/25/2003 11:00 AM Microsoft Corporation
c:\windows\system32\rasmans.dll

rastapi 5.2.3790.0 (srv03_rtm.030324-2048) 57.00 KB (58,368 bytes)
3/25/2003 11:00 AM Microsoft Corporation
c:\windows\system32\rastapi.dll

rasppp 5.2.3790.0 (srv03_rtm.030324-2048) 195.00 KB (199,680 bytes)
3/25/2003 11:00 AM Microsoft Corporation
c:\windows\system32\rasppp.dll

ntlsapi 5.2.3790.0 (srv03_rtm.030324-2048) 8.00 KB (8,192 bytes)
3/25/2003 11:00 AM Microsoft Corporation
c:\windows\system32\ntlsapi.dll

raschap 5.2.3790.0 (srv03_rtm.030324-2048) 106.00 KB (108,544 bytes)
3/25/2003 11:00 AM Microsoft Corporation
c:\windows\system32\raschap.dll

rastls 5.2.3790.0 (srv03_rtm.030324-2048) 155.00 KB (158,720 bytes)
3/25/2003 11:00 AM Microsoft Corporation
c:\windows\system32\rastls.dll

cryptui 5.131.3790.0 (srv03_rtm.030324-2048) 473.50 KB (484,864 bytes)
3/25/2003 11:00 AM Microsoft Corporation
c:\windows\system32\cryptui.dll

ipbootp 5.2.3790.0 (srv03_rtm.030324-2048) 34.50 KB (35,328 bytes)
3/25/2003 11:00 AM Microsoft Corporation
c:\windows\system32\ipbootp.dll

rasdlg 5.2.3790.0 (srv03_rtm.030324-2048) 642.00 KB (657,408 bytes)
3/25/2003 11:00 AM Microsoft Corporation
c:\windows\system32\rasdlg.dll

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

mmmsrv 4.4.4000 32.00 KB (32,768 bytes) 7/16/2003 3:50 PM
Microsoft Corporation c:\windows\system32\mmmsrv.exe

nmcom 4.4.4000 72.00 KB (73,728 bytes) 7/16/2003 3:50 PM
Microsoft Corporation c:\program files\netmeeting\nmcom.dll

wsock32 5.2.3790.0 (srv03_rtm.030324-2048) 22.00 KB (22,528 bytes)
3/25/2003 11:00 AM Microsoft Corporation
c:\windows\system32\wsock32.dll

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

winrnr 5.2.3790.0 (srv03_rtm.030324-2048) 15.00 KB (15,360 bytes)
3/25/2003 11:00 AM Microsoft Corporation
c:\windows\system32\winrnr.dll

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

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urlmon 6.00.3790.0 (srv03_rtm.030324-2048) 501.50 KB (513,536 bytes)
3/25/2003 11:00 AM Microsoft Corporation
c:\windows\system32\urlmon.dll
linkinfo 5.2.3790.0 (srv03_rtm.030324-2048) 16.50 KB (16,896
bytes) 3/25/2003 11:00 AM Microsoft Corporation
c:\windows\system32\linkinfo.dll
ntshrui 6.00.3790.0 (srv03_rtm.030324-2048) 136.00 KB (139,264 bytes)
3/25/2003 11:00 AM Microsoft Corporation
c:\windows\system32\ntshrui.dll
webcheck 6.00.3790.0 (srv03_rtm.030324-2048) 261.50 KB (267,776
bytes) 3/25/2003 11:00 AM Microsoft Corporation
c:\windows\system32\webcheck.dll
stobject 5.2.3790.0 (srv03_rtm.030324-2048) 117.50 KB (120,320
bytes) 3/25/2003 11:00 AM Microsoft Corporation
c:\windows\system32\stobject.dll
batmeter 6.00.3790.0 (srv03_rtm.030324-2048) 28.50 KB (29,184
bytes) 3/25/2003 11:00 AM Microsoft Corporation
c:\windows\system32\batmeter.dll
powrprof 6.00.3790.0 (srv03_rtm.030324-2048) 14.50 KB (14,848
bytes) 3/25/2003 11:00 AM Microsoft Corporation
c:\windows\system32\powrprof.dll
printui 5.2.3790.0 (srv03_rtm.030324-2048) 536.50 KB (549,376 bytes)
3/25/2003 11:00 AM Microsoft Corporation
c:\windows\system32\printui.dll
cfgmgr32 5.2.3790.0 (srv03_rtm.030324-2048) 17.50 KB (17,920
bytes) 3/25/2003 11:00 AM Microsoft Corporation
c:\windows\system32\cfgmgr32.dll
drprov 5.2.3790.0 (srv03_rtm.030324-2048) 12.50 KB (12,800 bytes)
3/25/2003 11:00 AM Microsoft Corporation
c:\windows\system32\drprov.dll
ntlanman 5.2.3790.0 (srv03_rtm.030324-2048) 41.00 KB (41,984
bytes) 3/25/2003 11:00 AM Microsoft Corporation
c:\windows\system32\ntlanman.dll
netui0 5.2.3790.0 (srv03_rtm.030324-2048) 75.50 KB (77,312 bytes)
3/25/2003 11:00 AM Microsoft Corporation
c:\windows\system32\netui0.dll
netui1 5.2.3790.0 (srv03_rtm.030324-2048) 184.00 KB (188,416 bytes)
3/25/2003 11:00 AM Microsoft Corporation
c:\windows\system32\netui1.dll
davclnt 5.2.3790.0 (srv03_rtm.030324-2048) 23.50 KB (24,064 bytes)
3/25/2003 11:00 AM Microsoft Corporation
c:\windows\system32\davclnt.dll
rhostsvr Not Available 54.50 KB (55,808 bytes) 7/16/2003 4:49
PM Not Available c:\rhost\rhostsvr.exe
tapisrv 5.2.3790.0 (srv03_rtm.030324-2048) 238.50 KB (244,224 bytes)
3/25/2003 11:00 AM Microsoft Corporation
c:\windows\system32\tapisrv.dll
unimdm 5.2.3790.0 (srv03_rtm.030324-2048) 190.50 KB (195,072 bytes)
3/25/2003 11:00 AM Microsoft Corporation
c:\windows\system32\unimdm.tsp
uniplat 5.2.3790.0 (srv03_rtm.030324-2048) 15.00 KB (15,360 bytes)
3/25/2003 11:00 AM Microsoft Corporation
c:\windows\system32\uniplat.dll
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

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ipconf 5.2.3790.0 (srv03_rtm.030324-2048) 16.50 KB (16,896 bytes)
3/25/2003 11:00 AM Microsoft Corporation
c:\windows\system32\ipconf.tsp
h323 5.2.3790.0 (srv03_rtm.030324-2048) 250.00 KB (256,000 bytes)
3/25/2003 11:00 AM Microsoft Corporation
c:\windows\system32\h323.tsp
hidphone 5.2.3790.0 (srv03_rtm.030324-2048) 28.00 KB (28,672
bytes) 3/25/2003 11:00 AM Microsoft Corporation
c:\windows\system32\hidphone.tsp
hid 5.2.3790.0 (srv03_rtm.030324-2048) 17.50 KB (17,920 bytes)
3/24/2003 5:48 PM Microsoft Corporation
c:\windows\system32\hid.dll
dllhost 5.2.3790.0 (srv03_rtm.030324-2048) 5.50 KB (5,632 bytes)
3/25/2003 11:00 AM Microsoft Corporation
c:\windows\system32\dllhost.exe
mtxoci 2001.12.4720.0 (srv03_rtm.030324-2048) 101.00 KB (103,424
bytes) 7/16/2003 3:47 PM Microsoft Corporation
c:\windows\system32\mtxoci.dll
txflog 2001.12.4720.0 (srv03_rtm.030324-2048) 92.50 KB (94,720
bytes) 3/25/2003 11:00 AM Microsoft Corporation
c:\windows\system32\txflog.dll
xolehlp 2001.12.4720.0 (srv03_rtm.030324-2048) 8.50 KB (8,704 bytes)
7/16/2003 3:47 PM Microsoft Corporation
c:\windows\system32\xolehlp.dll
msdtcprx 2001.12.4720.0 (srv03_rtm.030324-2048) 427.50 KB
(437,760 bytes) 7/16/2003 3:47 PM Microsoft Corporation
c:\windows\system32\msdtcprx.dll
mtxclu 2001.12.4720.0 (srv03_rtm.030324-2048) 74.50 KB (76,288
bytes) 3/25/2003 11:00 AM Microsoft Corporation
c:\windows\system32\mtxclu.dll
resutils 5.2.3790.0 (srv03_rtm.030324-2048) 59.00 KB (60,416
bytes) 3/25/2003 11:00 AM Microsoft Corporation
c:\windows\system32\resutils.dll
mfc42u 6.05.3014.0 960.00 KB (983,040 bytes) 3/25/2003 11:00 AM
Microsoft Corporation c:\windows\system32\mfc42u.dll
catsrv 2001.12.4720.0 (srv03_rtm.030324-2048) 256.00 KB (262,144
bytes) 7/16/2003 3:47 PM Microsoft Corporation
c:\windows\system32\catsrv.dll
clbcatex 2001.12.4720.0 (srv03_rtm.030324-2048) 96.00 KB
(98,304 bytes) 7/16/2003 3:47 PM Microsoft Corporation
c:\windows\system32\clbcatex.dll
catsrvps 2001.12.4720.0 (srv03_rtm.030324-2048) 23.50 KB
(24,064 bytes) 7/16/2003 3:47 PM Microsoft Corporation
c:\windows\system32\catsrvps.dll
catsrvut 2001.12.4720.0 (srv03_rtm.030324-2048) 572.50 KB
(586,240 bytes) 7/16/2003 3:47 PM Microsoft Corporation
c:\windows\system32\catsrvut.dll
mfcsubs 2001.12.4720.0 (srv03_rtm.030324-2048) 21.50 KB (22,016
bytes) 3/25/2003 11:00 AM Microsoft Corporation
c:\windows\system32\mfcsubs.dll
rdpsnd 5.2.3790.0 (srv03_rtm.030324-2048) 18.00 KB (18,432 bytes)
3/25/2003 11:00 AM Microsoft Corporation
c:\windows\system32\rdpsnd.dll
scredir 5.2.3790.0 (srv03_rtm.030324-2048) 27.00 KB (27,648 bytes)
3/25/2003 11:00 AM Microsoft Corporation
c:\windows\system32\scredir.dll
msacm32 5.2.3790.0 (srv03_rtm.030324-2048) 21.00 KB (21,504 bytes)
3/25/2003 11:00 AM Microsoft Corporation
c:\windows\system32\msacm32.drv

```



```

imaadp32 5.2.3790.0 (srv03_rtm.030324-2048) 15.50 KB (15,872
bytes) 3/25/2003 11:00 AM Microsoft Corporation
c:\windows\system32\imaadp32.acm
msadp32 5.2.3790.0 (srv03_rtm.030324-2048) 14.50 KB (14,848 bytes)
3/25/2003 11:00 AM Microsoft Corporation
c:\windows\system32\msadp32.acm
msg711 5.2.3790.0 (srv03_rtm.030324-2048) 10.00 KB (10,240 bytes)
3/25/2003 11:00 AM Microsoft Corporation
c:\windows\system32\msg711.acm
msgsm32 5.2.3790.0 (srv03_rtm.030324-2048) 20.50 KB (20,992 bytes)
3/25/2003 11:00 AM Microsoft Corporation
c:\windows\system32\msgsm32.acm
tssoft32 1.01 9.50 KB (9,728 bytes) 3/25/2003 11:00 AM DSP
GROUP, INC. c:\windows\system32\tssoft32.acm
tsd32 1.03 16.50 KB (16,896 bytes) 3/25/2003 11:00 AM DSP
GROUP, INC. c:\windows\system32\tsd32.dll
msg723 4.4.4000 116.00 KB (118,784 bytes) 7/16/2003 3:50 PM
Microsoft Corporation c:\windows\system32\msg723.acm
msaud32 8.00.00.4487 288.00 KB (294,912 bytes) 3/25/2003 11:00 AM
Microsoft Corporation c:\windows\system32\msaud32.acm
sl_anet 3.02 84.00 KB (86,016 bytes) 3/25/2003 11:00 AM Sipro
Lab Telecom Inc. c:\windows\system32\sl_anet.acm
l3codeca 1, 9, 0, 0305 284.00 KB (290,816 bytes) 3/25/2003
11:00 AM Fraunhofer Institut Integrierte Schaltungen IIS
c:\windows\system32\l3codeca.acm
rdpclip 5.2.3790.0 (srv03_rtm.030324-2048) 53.00 KB (54,272 bytes)
7/16/2003 3:47 PM Microsoft Corporation
c:\windows\system32\rdpclip.exe
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
cmd 5.2.3790.0 (srv03_rtm.030324-2048) 374.00 KB (382,976 bytes)
3/25/2003 11:00 AM Microsoft Corporation
c:\windows\system32\cmd.exe
msinfo32 5.2.3790.0 (srv03_rtm.030324-2048) 40.50 KB (41,472
bytes) 7/16/2003 3:50 PM Microsoft Corporation c:\program
files\common files\microsoft shared\msinfo\msinfo32.exe
msinfo 5.2.3790.0 (srv03_rtm.030324-2048) 358.50 KB (367,104 bytes)
7/16/2003 3:50 PM Microsoft Corporation
c:\windows\pchealth\helpctr\binaries\msinfo.dll

```

```

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\inetrv\inetinfo.exe		Normal LocalSystem	0
IMAPI CD-Burning COM Service	ImapiService	Stopped Disabled	Own Process	
	c:\windows\system32\imapi.exe		Normal LocalSystem	0
Intersite Messaging	IsmServ	Stopped Disabled	Own Process	
	c:\windows\system32\ismserv.exe		Normal LocalSystem	0
Kerberos Key Distribution Center	kdc	Stopped Disabled	Share Process	
	c:\windows\system32\lsass.exe		Normal LocalSystem	0
Server lanmanserver		Running Auto	Share Process	
	c:\windows\system32\svchost.exe -k netsvcs		Normal LocalSystem	0
Workstation	lanmanworkstation	Running Auto	Share Process	
	c:\windows\system32\svchost.exe -k netsvcs		Normal LocalSystem	0
License Logging	LicenseService	Stopped Disabled	Own Process	
	c:\windows\system32\llssrv.exe		Normal NT	
AUTHORITY\NetworkService		0		
TCP/IP NetBIOS Helper	LmHosts	Stopped Disabled	Share Process	
	c:\windows\system32\svchost.exe -k localService		Normal NT	
AUTHORITY\LocalService		0		
Messenger	Messenger	Stopped Disabled	Share Process	
	c:\windows\system32\svchost.exe -k netsvcs		Normal LocalSystem	0
NetMeeting Remote Desktop Sharing	mnmsrvc	Running Auto	Own Process	
	c:\windows\system32\mnmsrvc.exe		Normal LocalSystem	0
Distributed Transaction Coordinator	MSDTC	Running Manual	Own Process	
	c:\windows\system32\msdtc.exe		Normal NT AUTHORITY\NetworkService	0
Windows Installer	MSIServer	Stopped Manual	Share Process	
	c:\windows\system32\msiexec.exe /v		Normal LocalSystem	0
Network DDE	NetDDE	Stopped Disabled	Share Process	
	c:\windows\system32\netdde.exe		Normal LocalSystem	0
Network DDE DSDM	NetDDEdsdm	Stopped Disabled	Share Process	
	c:\windows\system32\netdde.exe		Normal LocalSystem	0
Net Logon	Netlogon	Stopped Manual	Share Process	
	c:\windows\system32\lsass.exe		Normal LocalSystem	0

Network Connections	Netman	Running Manual	Share Process	
	c:\windows\system32\svchost.exe -k netsvcs		Normal LocalSystem	0
Network Location Awareness (NLA)	Nla	Running Manual	Share Process	
	c:\windows\system32\svchost.exe -k netsvcs		Normal LocalSystem	0
File Replication	NtFrs	Stopped Manual	Own Process	
	c:\windows\system32\ntfrs.exe		Ignore LocalSystem	0
NT LM Security Support Provider	NtLmSsp	Stopped Manual	Share Process	
	c:\windows\system32\lsass.exe		Normal LocalSystem	0
Removable Storage	NtmsSvc	Stopped Manual	Share Process	
	c:\windows\system32\svchost.exe -k netsvcs		Normal LocalSystem	0
Plug and Play	PlugPlay	Running Auto	Share Process	
	c:\windows\system32\services.exe		Normal LocalSystem	0
IPSEC Services PolicyAgent		Stopped Disabled	Share Process	
	c:\windows\system32\lsass.exe		Normal LocalSystem	0
Protected Storage	ProtectedStorage	Running Auto	Share Process	
	c:\windows\system32\lsass.exe		Normal LocalSystem	0
Remote Access Auto Connection Manager	RasAuto	Stopped Manual	Share Process	
	c:\windows\system32\svchost.exe -k netsvcs		Normal LocalSystem	0
Remote Access Connection Manager	RasMan	Running Manual	Share Process	
	c:\windows\system32\svchost.exe -k netsvcs		Normal LocalSystem	0
Remote Desktop Help Session Manager	RDSessMgr	Stopped Manual	Own Process	
	c:\windows\system32\sessmgr.exe		Normal LocalSystem	0
Routing and Remote Access	RemoteAccess	Stopped Disabled	Share Process	
	c:\windows\system32\svchost.exe -k netsvcs		Normal LocalSystem	0
Remote Registry	RemoteRegistry	Running Auto	Share Process	
	c:\windows\system32\svchost.exe -k regsvc		Normal NT	
AUTHORITY\LocalService		0		
Remote Procedure Call (RPC) Locator	RpcLocator	Stopped Manual	Own Process	
	c:\windows\system32\locator.exe		Normal NT	
AUTHORITY\NetworkService		0		
Remote Procedure Call (RPC)	RpcSs	Running Auto	Share Process	
	c:\windows\system32\svchost.exe -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 WndmPmSN 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 wuauerv 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
browseui.dll	6.0.3790.0	62 KB	3/25/2003 12:00:00 PM	C:\WINDOWS\system32	Microsoft Corporation
browserui.dll	6.0.3790.0	1,033 KB	3/25/2003 12:00:00 PM	C:\WINDOWS\system32	Microsoft Corporation
cdfview.dll	6.0.3790.0	144 KB	3/25/2003 12:00:00 PM	C:\WINDOWS\system32	Microsoft Corporation
comctl32.dll	5.82.3790.0	561 KB	3/25/2003 12:00:00 PM	C:\WINDOWS\system32	Microsoft Corporation
dxtrans.dll	6.3.3790.0	198 KB	3/25/2003 12:00:00 PM	C:\WINDOWS\system32	Microsoft Corporation
dxtmsft.dll	6.3.3790.0	344 KB	3/25/2003 12:00:00 PM	C:\WINDOWS\system32	Microsoft Corporation
iecont.dll	<File Missing>	Not Available	Not Available	Not Available	Not Available
iecontlc.dll	<File Missing>	Not Available	Not Available	Not Available	Not Available
iedkcs32.dll	16.0.3790.0	300 KB	3/25/2003 12:00:00 PM	C:\WINDOWS\system32	Microsoft Corporation
iepeers.dll	6.0.3790.0	230 KB	3/25/2003 12:00:00 PM	C:\WINDOWS\system32	Microsoft Corporation
iesetup.dll	6.0.3790.0	59 KB	3/25/2003 12:00:00 PM	C:\WINDOWS\system32	Microsoft Corporation
ieuinit.inf	Not Available	20 KB	3/25/2003 12:00:00 PM	C:\WINDOWS\system32	Not Available
iexplore.exe	6.0.3790.0	90 KB	3/25/2003 12:00:00 PM	C:\Program Files\Internet Explorer	Microsoft Corporation
imgutil.dll	5.2.3790.0	35 KB	3/25/2003 12:00:00 PM	C:\WINDOWS\system32	Microsoft Corporation
inetcpl.cpl	6.0.3790.0	303 KB	3/25/2003 12:00:00 PM	C:\WINDOWS\system32	Microsoft Corporation
inetcplc.dll	6.0.3790.0	109 KB	3/25/2003 12:00:00 PM	C:\WINDOWS\system32	Microsoft Corporation
inseng.dll	6.0.3790.0	72 KB	3/25/2003 12:00:00 PM	C:\WINDOWS\system32	Microsoft Corporation
mlang.dll	6.0.3790.0	570 KB	3/25/2003 12:00:00 PM	C:\WINDOWS\system32	Microsoft Corporation
msencode.dll	2002.10.4.0	112 KB	3/25/2003 12:00:00 PM	C:\WINDOWS\system32	Not Available
mshta.exe	6.0.3790.0	26 KB	3/25/2003 12:00:00 PM	C:\WINDOWS\system32	Microsoft Corporation
mshtml.dll	6.0.3790.0	2,848 KB	3/25/2003 12:00:00 PM	C:\WINDOWS\system32	Microsoft Corporation
mshtml.tlb	6.0.3790.0	1,319 KB	3/25/2003 12:00:00 PM	C:\WINDOWS\system32	Microsoft Corporation

```

mshtml.dll 6.0.3790.0 444 KB 3/25/2003 12:00:00 PM
C:\WINDOWS\system32 Microsoft Corporation
mshtml.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 156
Maximum pool size 156
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
EnableDHCP = REG_DWORD 0x00000000
IPAddress = REG_MULTI_SZ "192.5.1.1"
SubnetMask = REG_MULTI_SZ "255.255.255.0"
DefaultGateway = REG_MULTI_SZ
DefaultGatewayMetric = REG_MULTI_SZ
NameServer =
Domain =
RegistrationEnabled = REG_DWORD 0x00000000
RegisterAdapterName = REG_DWORD 0x00000000
TCPAllowedPorts = REG_MULTI_SZ "0"
UDPAllowedPorts = REG_MULTI_SZ "0"
RawIPAllowedProtocols = REG_MULTI_SZ "0"
NTEContextList = REG_MULTI_SZ "0x00000003"
DhcpClassIdBin = REG_BINARY 0x00000000
DhcpServer = 255.255.255.255
Lease = REG_DWORD 0x00000e10
LeaseObtainedTime = REG_DWORD 0x3f15e2b3
T1 = REG_DWORD 0x3f15e9bb
T2 = REG_DWORD 0x3f15ef01
LeaseTerminatesTime = REG_DWORD 0x3f15f0c3
IPAutoconfigurationAddress = 0.0.0.0
IPAutoconfigurationMask = 255.255.0.0
IPAutoconfigurationSeed = REG_DWORD 0x00000000
AddressType = REG_DWORD 0x00000000
{A6102462-5B4E-4973-915B-715C49C76CDF}
UseZeroBroadcast = REG_DWORD 0x00000000
EnableDeadGWDetect = REG_DWORD 0x00000001
EnableDHCP = REG_DWORD 0x00000000
IPAddress = REG_MULTI_SZ "192.5.1.1"
SubnetMask = REG_MULTI_SZ "255.255.255.0"
DefaultGateway = REG_MULTI_SZ
DefaultGatewayMetric = REG_MULTI_SZ
NameServer =
Domain =
RegistrationEnabled = REG_DWORD 0x00000001
RegisterAdapterName = REG_DWORD 0x00000000
TCPAllowedPorts = REG_MULTI_SZ "0"
UDPAllowedPorts = REG_MULTI_SZ "0"
RawIPAllowedProtocols = REG_MULTI_SZ "0"
NTEContextList = REG_MULTI_SZ "0x00000003"
{C299F768-4966-4146-9295-AA099379D574}
UseZeroBroadcast = REG_DWORD 0x00000000
EnableDeadGWDetect = REG_DWORD 0x00000001
EnableDHCP = REG_DWORD 0x00000000
IPAddress = REG_MULTI_SZ "192.168.91.5"
SubnetMask = REG_MULTI_SZ "255.255.255.0"
DefaultGateway = REG_MULTI_SZ
DefaultGatewayMetric = REG_MULTI_SZ
NameServer =
Domain =
RegistrationEnabled = REG_DWORD 0x00000001
RegisterAdapterName = REG_DWORD 0x00000000
TCPAllowedPorts = REG_MULTI_SZ "0"
UDPAllowedPorts = REG_MULTI_SZ "0"
RawIPAllowedProtocols = REG_MULTI_SZ "0"
NTEContextList = REG_MULTI_SZ "0x00000002"
{E02AF43D-453A-494B-9807-62F5640324E3}

```

```

UseZeroBroadcast = REG_DWORD 0x00000000
EnableDeadGWDetect = REG_DWORD 0x00000001
EnableDHCP = REG_DWORD 0x00000001
IPAddress = REG_MULTI_SZ "0.0.0.0"
SubnetMask = REG_MULTI_SZ "0.0.0.0"
DefaultGateway = REG_MULTI_SZ
DefaultGatewayMetric = REG_MULTI_SZ
NameServer =
Domain =
RegistrationEnabled = REG_DWORD 0x00000001
RegisterAdapterName = REG_DWORD 0x00000000
TCPAllowedPorts = REG_MULTI_SZ "0"
UDPAllowedPorts = REG_MULTI_SZ "0"
RawIPAllowedProtocols = REG_MULTI_SZ "0"
NTEContextList = REG_MULTI_SZ
{F8003B81-70DB-411C-B383-CF9434D33F7A}
UseZeroBroadcast = REG_DWORD 0x00000000
EnableDeadGWDetect = REG_DWORD 0x00000001
EnableDHCP = REG_DWORD 0x00000000
IPAddress = REG_MULTI_SZ "192.168.91.5"
SubnetMask = REG_MULTI_SZ "255.255.255.0"
DefaultGateway = REG_MULTI_SZ
DefaultGatewayMetric = REG_MULTI_SZ
NameServer =
Domain =
RegistrationEnabled = REG_DWORD 0x00000000
RegisterAdapterName = REG_DWORD 0x00000000
TCPAllowedPorts = REG_MULTI_SZ "0"
UDPAllowedPorts = REG_MULTI_SZ "0"
RawIPAllowedProtocols = REG_MULTI_SZ "0"
NTEContextList = REG_MULTI_SZ "0x00000002"
DhcpClassIdBin = REG_BINARY 0x00000000
DhcpServer = 255.255.255.255
Lease = REG_DWORD 0x00000e10
LeaseObtainedTime = REG_DWORD 0x3f15e1be
T1 = REG_DWORD 0x3f15e8c6
T2 = REG_DWORD 0x3f15ee0c
LeaseTerminatesTime = REG_DWORD 0x3f15efce
IPAutoconfigurationAddress = 0.0.0.0
IPAutoconfigurationMask = 255.255.0.0
IPAutoconfigurationSeed = REG_DWORD 0x00000000
AddressType = REG_DWORD 0x00000000
PersistentRoutes
Winsoc
UseDelayedAcceptance = REG_DWORD 0x00000000
HelperDllName = REG_EXPAND_SZ %SystemRoot%\System32\wshtcpip.dll
MaxSockAddrLength = REG_DWORD 0x00000010
MinSockAddrLength = REG_DWORD 0x00000010
Mapping = REG_BINARY 0x0000008c 0x0000000b 0x00000003 0x00000002
0x00000001 0x00000006 0x00000002 0x00000001 0x00000000 0x00000002
0x00000000 0x00000006 0x00000000 0x00000000 0x00000006 0x00000000
0x00000001 0x00000006 0x00000002 \
0x00000002 0x00000011 0x00000002 0x00000002 0x00000000
0x00000002 0x00000000 0x00000011 0x00000000 0x00000000 0x00000011
0x00000000 0x00000002 0x00000011 0x00000002 0x00000003 0x00000000

```


MSSQL Server Registry Parameters

Software_Microsoft_Mssqlserver_Client_Connectto_Sqlconnect.txt

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

```
\registry\machine\software\microsoft\mssqlserver\client\connectto
DSQUERY = DBMSSOCN
DBSERVER-tcp = DBMSSOCN,192.168.91.213
DBSERVER = DBNETLIB,via:mv-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\inetrv
AccessDeniedMessage = Error: Access is Denied.
ServiceDll = REG_EXPAND_SZ
C:\WINDOWS\system32\inetrv\iisw3adm.dll
CertMapList = C:\WINNT\System32\inetrv\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\inetrv\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 0x000003d10 0x00000000
WbemAdapFileSignature = REG_BINARY 0x00000010 0x2c6ce339
0xf559beb4 0xd5c47c17 0x1af7dc2f
WbemAdapFileTime = REG_BINARY 0x00000008 0x964e6000 0x01bf40aa
WbemAdapFileSize = REG_DWORD 0x000003d10
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 0x000730072 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 1,17050
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 700
1 INITMYWID 1,70
//
//Configuration Driver 2
//
2 INITIPADDR 192.168.93.1
2 INITIISADDR 192.5.1.1
2 INITIISPORT 80
2 INITBROWSERS 700
2 INITMYWID 71,140
//
//Configuration Driver 3
//
3 INITIPADDR 192.168.93.1
3 INITIISADDR 192.5.1.1
3 INITIISPORT 80
3 INITBROWSERS 700
3 INITMYWID 141,210
//
//Configuration Driver 4
//
4 INITIPADDR 192.168.93.1
4 INITIISADDR 192.5.1.1
4 INITIISPORT 80
4 INITBROWSERS 700
4 INITMYWID 211,280
//
//Configuration Driver 5
//
5 INITIPADDR 192.168.93.1
5 INITIISADDR 192.5.1.1
5 INITIISPORT 80
5 INITBROWSERS 700
5 INITMYWID 281,350
//
//Configuration Driver 6
//
6 INITIPADDR 192.168.93.1
6 INITIISADDR 192.5.1.1
6 INITIISPORT 80
6 INITBROWSERS 700
6 INITMYWID 351,420
//
//Configuration Driver 7
//
7 INITIPADDR 192.168.93.1
7 INITIISADDR 192.5.1.1
7 INITIISPORT 80
```

```

7 INITBROWSERS 700
7 INITMYWID 421,490
//
//Configuration Driver 8
//
8 INITIPADDR 192.168.93.1
8 INITIISADDR 192.5.1.1
8 INITIISPORT 80
8 INITBROWSERS 700
8 INITMYWID 491,560
//
//Configuration Driver 9
//
9 INITIPADDR 192.168.93.1
9 INITIISADDR 192.5.1.1
9 INITIISPORT 80
9 INITBROWSERS 700
9 INITMYWID 561,630
//
//Configuration Driver 10
//
10 INITIPADDR 192.168.93.1
10 INITIISADDR 192.5.1.1
10 INITIISPORT 80
10 INITBROWSERS 700
10 INITMYWID 631,700
//
//Configuration Driver 11
//
11 INITIPADDR 192.168.93.1
11 INITIISADDR 192.5.1.1
11 INITIISPORT 80
11 INITBROWSERS 700
11 INITMYWID 701,770
//
//Configuration Driver 12
//
12 INITIPADDR 192.168.93.1
12 INITIISADDR 192.5.1.1
12 INITIISPORT 80
12 INITBROWSERS 700
12 INITMYWID 771,840
//
//Configuration Driver 13
//
13 INITIPADDR 192.168.93.1
13 INITIISADDR 192.5.1.1
13 INITIISPORT 80
13 INITBROWSERS 700
13 INITMYWID 841,910
//
//Configuration Driver 14
//
14 INITIPADDR 192.168.93.1
14 INITIISADDR 192.5.1.1
14 INITIISPORT 80
14 INITBROWSERS 700
14 INITMYWID 911,980
//

```

```

//Configuration Driver 15
//
15 INITIPADDR 192.168.93.1
15 INITIISADDR 192.5.1.1
15 INITIISPORT 80
15 INITBROWSERS 700
15 INITMYWID 981,1050
//
//Configuration Driver 16
//
16 INITIPADDR 192.168.93.1
16 INITIISADDR 192.5.1.1
16 INITIISPORT 80
16 INITBROWSERS 700
16 INITMYWID 1051,1120
//
//Configuration Driver 17
//
17 INITIPADDR 192.168.93.1
17 INITIISADDR 192.5.1.1
17 INITIISPORT 80
17 INITBROWSERS 700
17 INITMYWID 1121,1190
//
//Configuration Driver 18
//
18 INITIPADDR 192.168.93.1
18 INITIISADDR 192.5.1.1
18 INITIISPORT 80
18 INITBROWSERS 700
18 INITMYWID 1191,1260
//
//Configuration Driver 19
//
19 INITIPADDR 192.168.93.1
19 INITIISADDR 192.5.1.1
19 INITIISPORT 80
19 INITBROWSERS 700
19 INITMYWID 1261,1330
//
//Configuration Driver 20
//
20 INITIPADDR 192.168.93.1
20 INITIISADDR 192.5.1.1
20 INITIISPORT 80
20 INITBROWSERS 700
20 INITMYWID 1331,1400
//
//Configuration Driver 21
//
21 INITIPADDR 192.168.93.1
21 INITIISADDR 192.5.1.1
21 INITIISPORT 80
21 INITBROWSERS 700
21 INITMYWID 1401,1470
//
//Configuration Driver 22
//
22 INITIPADDR 192.168.93.1

```

```

22 INITIISADDR 192.5.1.1
22 INITIISPORT 80
22 INITBROWSERS 700
22 INITMYWID 1471,1540
//
//Configuration Driver 23
//
23 INITIPADDR 192.168.93.1
23 INITIISADDR 192.5.1.1
23 INITIISPORT 80
23 INITBROWSERS 700
23 INITMYWID 1541,1610
//
//Configuration Driver 24
//
24 INITIPADDR 192.168.93.1
24 INITIISADDR 192.5.1.1
24 INITIISPORT 80
24 INITBROWSERS 700
24 INITMYWID 1611,1680
//
//Configuration Driver 25
//
25 INITIPADDR 192.168.93.1
25 INITIISADDR 192.5.1.1
25 INITIISPORT 80
25 INITBROWSERS 700
25 INITMYWID 1681,1750
//
//Configuration Driver 26
//
26 INITIPADDR 192.168.93.1
26 INITIISADDR 192.5.1.1
26 INITIISPORT 80
26 INITBROWSERS 700
26 INITMYWID 1751,1820
//
//Configuration Driver 27
//
27 INITIPADDR 192.168.93.1
27 INITIISADDR 192.5.1.1
27 INITIISPORT 80
27 INITBROWSERS 700
27 INITMYWID 1821,1890
//
//Configuration Driver 28
//
28 INITIPADDR 192.168.93.1
28 INITIISADDR 192.5.1.1
28 INITIISPORT 80
28 INITBROWSERS 700
28 INITMYWID 1891,1960
//
//Configuration Driver 29
//
29 INITIPADDR 192.168.93.1
29 INITIISADDR 192.5.1.1
29 INITIISPORT 80
29 INITBROWSERS 700

```

```

29 INITMYWID 1961,2030
//
//Configuration Driver 30
//
30 INITIPADDR 192.168.93.1
30 INITIISADDR 192.5.1.1
30 INITIISPORT 80
30 INITBROWSERS 700
30 INITMYWID 2031,2100
//
//Configuration Driver 31
//
31 INITIPADDR 192.168.93.2
31 INITIISADDR 192.5.1.1
31 INITIISPORT 80
31 INITBROWSERS 700
31 INITMYWID 2101,2170
//
//Configuration Driver 32
//
32 INITIPADDR 192.168.93.2
32 INITIISADDR 192.5.1.1
32 INITIISPORT 80
32 INITBROWSERS 700
32 INITMYWID 2171,2240
//
//Configuration Driver 33
//
33 INITIPADDR 192.168.93.2
33 INITIISADDR 192.5.1.1
33 INITIISPORT 80
33 INITBROWSERS 700
33 INITMYWID 2241,2310
//
//Configuration Driver 34
//
34 INITIPADDR 192.168.93.2
34 INITIISADDR 192.5.1.1
34 INITIISPORT 80
34 INITBROWSERS 700
34 INITMYWID 2311,2380
//
//Configuration Driver 35
//
35 INITIPADDR 192.168.93.2
35 INITIISADDR 192.5.1.1
35 INITIISPORT 80
35 INITBROWSERS 700
35 INITMYWID 2381,2450
//
//Configuration Driver 36
//
36 INITIPADDR 192.168.93.2
36 INITIISADDR 192.5.1.1
36 INITIISPORT 80
36 INITBROWSERS 700
36 INITMYWID 2451,2520
//
//Configuration Driver 37

```

```

//
37 INITIPADDR 192.168.93.2
37 INITIISADDR 192.5.1.1
37 INITIISPORT 80
37 INITBROWSERS 700
37 INITMYWID 2521,2590
//
//Configuration Driver 38
//
38 INITIPADDR 192.168.93.2
38 INITIISADDR 192.5.1.1
38 INITIISPORT 80
38 INITBROWSERS 700
38 INITMYWID 2591,2660
//
//Configuration Driver 39
//
39 INITIPADDR 192.168.93.2
39 INITIISADDR 192.5.1.1
39 INITIISPORT 80
39 INITBROWSERS 700
39 INITMYWID 2661,2730
//
//Configuration Driver 40
//
40 INITIPADDR 192.168.93.2
40 INITIISADDR 192.5.1.1
40 INITIISPORT 80
40 INITBROWSERS 700
40 INITMYWID 2731,2800
//
//Configuration Driver 41
//
41 INITIPADDR 192.168.93.2
41 INITIISADDR 192.5.1.1
41 INITIISPORT 80
41 INITBROWSERS 700
41 INITMYWID 2801,2870
//
//Configuration Driver 42
//
42 INITIPADDR 192.168.93.2
42 INITIISADDR 192.5.1.1
42 INITIISPORT 80
42 INITBROWSERS 700
42 INITMYWID 2871,2940
//
//Configuration Driver 43
//
43 INITIPADDR 192.168.93.2
43 INITIISADDR 192.5.1.1
43 INITIISPORT 80
43 INITBROWSERS 700
43 INITMYWID 2941,3010
//
//Configuration Driver 44
//
44 INITIPADDR 192.168.93.2
44 INITIISADDR 192.5.1.1

```

```

44 INITIISPORT 80
44 INITBROWSERS 700
44 INITMYWID 3011,3080
//
//Configuration Driver 45
//
45 INITIPADDR 192.168.93.2
45 INITIISADDR 192.5.1.1
45 INITIISPORT 80
45 INITBROWSERS 700
45 INITMYWID 3081,3150
//
//Configuration Driver 46
//
46 INITIPADDR 192.168.93.2
46 INITIISADDR 192.5.1.1
46 INITIISPORT 80
46 INITBROWSERS 700
46 INITMYWID 3151,3220
//
//Configuration Driver 47
//
47 INITIPADDR 192.168.93.2
47 INITIISADDR 192.5.1.1
47 INITIISPORT 80
47 INITBROWSERS 700
47 INITMYWID 3221,3290
//
//Configuration Driver 48
//
48 INITIPADDR 192.168.93.2
48 INITIISADDR 192.5.1.1
48 INITIISPORT 80
48 INITBROWSERS 700
48 INITMYWID 3291,3360
//
//Configuration Driver 49
//
49 INITIPADDR 192.168.93.2
49 INITIISADDR 192.5.1.1
49 INITIISPORT 80
49 INITBROWSERS 700
49 INITMYWID 3361,3430
//
//Configuration Driver 50
//
50 INITIPADDR 192.168.93.2
50 INITIISADDR 192.5.1.1
50 INITIISPORT 80
50 INITBROWSERS 700
50 INITMYWID 3431,3500
//
//Configuration Driver 51
//
51 INITIPADDR 192.168.93.2
51 INITIISADDR 192.5.1.1
51 INITIISPORT 80
51 INITBROWSERS 700
51 INITMYWID 3501,3570

```

```

//
//Configuration Driver 52
//
52 INITIPADDR 192.168.93.2
52 INITIISADDR 192.5.1.1
52 INITIISPORT 80
52 INITBROWSERS 700
52 INITMYWID 3571,3640
//
//Configuration Driver 53
//
53 INITIPADDR 192.168.93.2
53 INITIISADDR 192.5.1.1
53 INITIISPORT 80
53 INITBROWSERS 700
53 INITMYWID 3641,3710
//
//Configuration Driver 54
//
54 INITIPADDR 192.168.93.2
54 INITIISADDR 192.5.1.1
54 INITIISPORT 80
54 INITBROWSERS 700
54 INITMYWID 3711,3780
//
//Configuration Driver 55
//
55 INITIPADDR 192.168.93.2
55 INITIISADDR 192.5.1.1
55 INITIISPORT 80
55 INITBROWSERS 700
55 INITMYWID 3781,3850
//
//Configuration Driver 56
//
56 INITIPADDR 192.168.93.2
56 INITIISADDR 192.5.1.1
56 INITIISPORT 80
56 INITBROWSERS 700
56 INITMYWID 3851,3920
//
//Configuration Driver 57
//
57 INITIPADDR 192.168.93.2
57 INITIISADDR 192.5.1.1
57 INITIISPORT 80
57 INITBROWSERS 700
57 INITMYWID 3921,3990
//
//Configuration Driver 58
//
58 INITIPADDR 192.168.93.2
58 INITIISADDR 192.5.1.1
58 INITIISPORT 80
58 INITBROWSERS 700
58 INITMYWID 3991,4060
//
//Configuration Driver 59
//

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```

59 INITIPADDR 192.168.93.2
59 INITIISADDR 192.5.1.1
59 INITIISPORT 80
59 INITBROWSERS 700
59 INITMYWID 4061,4130
//
//Configuration Driver 60
//
60 INITIPADDR 192.168.93.2
60 INITIISADDR 192.5.1.1
60 INITIISPORT 80
60 INITBROWSERS 700
60 INITMYWID 4131,4200
//
//Configuration Driver 61
//
61 INITIPADDR 192.168.93.3
61 INITIISADDR 192.6.1.1
61 INITIISPORT 80
61 INITBROWSERS 720
61 INITMYWID 4201,4272
//
//Configuration Driver 62
//
62 INITIPADDR 192.168.93.3
62 INITIISADDR 192.6.1.1
62 INITIISPORT 80
62 INITBROWSERS 710
62 INITMYWID 4273,4343
//
//Configuration Driver 63
//
63 INITIPADDR 192.168.93.3
63 INITIISADDR 192.6.1.1
63 INITIISPORT 80
63 INITBROWSERS 720
63 INITMYWID 4344,4415
//
//Configuration Driver 64
//
64 INITIPADDR 192.168.93.3
64 INITIISADDR 192.6.1.1
64 INITIISPORT 80
64 INITBROWSERS 710
64 INITMYWID 4416,4486
//
//Configuration Driver 65
//
65 INITIPADDR 192.168.93.3
65 INITIISADDR 192.6.1.1
65 INITIISPORT 80
65 INITBROWSERS 720
65 INITMYWID 4487,4558
//
//Configuration Driver 66
//
66 INITIPADDR 192.168.93.3
66 INITIISADDR 192.6.1.1
66 INITIISPORT 80

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66 INITBROWSERS 710
66 INITMYWID 4559,4629
//
//Configuration Driver 67
//
67 INITIPADDR 192.168.93.3
67 INITIISADDR 192.6.1.1
67 INITIISPORT 80
67 INITBROWSERS 720
67 INITMYWID 4630,4701
//
//Configuration Driver 68
//
68 INITIPADDR 192.168.93.3
68 INITIISADDR 192.6.1.1
68 INITIISPORT 80
68 INITBROWSERS 710
68 INITMYWID 4702,4772
//
//Configuration Driver 69
//
69 INITIPADDR 192.168.93.3
69 INITIISADDR 192.6.1.1
69 INITIISPORT 80
69 INITBROWSERS 720
69 INITMYWID 4773,4844
//
//Configuration Driver 70
//
70 INITIPADDR 192.168.93.3
70 INITIISADDR 192.6.1.1
70 INITIISPORT 80
70 INITBROWSERS 710
70 INITMYWID 4845,4915
//
//Configuration Driver 71
//
71 INITIPADDR 192.168.93.3
71 INITIISADDR 192.6.1.1
71 INITIISPORT 80
71 INITBROWSERS 720
71 INITMYWID 4916,4987
//
//Configuration Driver 72
//
72 INITIPADDR 192.168.93.3
72 INITIISADDR 192.6.1.1
72 INITIISPORT 80
72 INITBROWSERS 710
72 INITMYWID 4988,5058
//
//Configuration Driver 73
//
73 INITIPADDR 192.168.93.3
73 INITIISADDR 192.6.1.1
73 INITIISPORT 80
73 INITBROWSERS 720
73 INITMYWID 5059,5130
//

```

```

//Configuration Driver 74
//
74 INITIPADDR 192.168.93.3
74 INITIISADDR 192.6.1.1
74 INITIISPORT 80
74 INITBROWSERS 710
74 INITMYWID 5131,5201
//
//Configuration Driver 75
//
75 INITIPADDR 192.168.93.3
75 INITIISADDR 192.6.1.1
75 INITIISPORT 80
75 INITBROWSERS 720
75 INITMYWID 5202,5273
//
//Configuration Driver 76
//
76 INITIPADDR 192.168.93.3
76 INITIISADDR 192.6.1.1
76 INITIISPORT 80
76 INITBROWSERS 710
76 INITMYWID 5274,5344
//
//Configuration Driver 77
//
77 INITIPADDR 192.168.93.3
77 INITIISADDR 192.6.1.1
77 INITIISPORT 80
77 INITBROWSERS 720
77 INITMYWID 5345,5416
//
//Configuration Driver 78
//
78 INITIPADDR 192.168.93.3
78 INITIISADDR 192.6.1.1
78 INITIISPORT 80
78 INITBROWSERS 710
78 INITMYWID 5417,5487
//
//Configuration Driver 79
//
79 INITIPADDR 192.168.93.3
79 INITIISADDR 192.6.1.1
79 INITIISPORT 80
79 INITBROWSERS 720
79 INITMYWID 5488,5559
//
//Configuration Driver 80
//
80 INITIPADDR 192.168.93.3
80 INITIISADDR 192.6.1.1
80 INITIISPORT 80
80 INITBROWSERS 710
80 INITMYWID 5560,5630
//
//Configuration Driver 81
//
81 INITIPADDR 192.168.93.3

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81 INITIISADDR 192.6.1.1
81 INITIISPORT 80
81 INITBROWSERS 720
81 INITMYWID 5631,5702
//
//Configuration Driver 82
//
82 INITIPADDR 192.168.93.3
82 INITIISADDR 192.6.1.1
82 INITIISPORT 80
82 INITBROWSERS 710
82 INITMYWID 5703,5773
//
//Configuration Driver 83
//
83 INITIPADDR 192.168.93.3
83 INITIISADDR 192.6.1.1
83 INITIISPORT 80
83 INITBROWSERS 720
83 INITMYWID 5774,5845
//
//Configuration Driver 84
//
84 INITIPADDR 192.168.93.3
84 INITIISADDR 192.6.1.1
84 INITIISPORT 80
84 INITBROWSERS 710
84 INITMYWID 5846,5916
//
//Configuration Driver 85
//
85 INITIPADDR 192.168.93.3
85 INITIISADDR 192.6.1.1
85 INITIISPORT 80
85 INITBROWSERS 720
85 INITMYWID 5917,5988
//
//Configuration Driver 86
//
86 INITIPADDR 192.168.93.3
86 INITIISADDR 192.6.1.1
86 INITIISPORT 80
86 INITBROWSERS 710
86 INITMYWID 5989,6059
//
//Configuration Driver 87
//
87 INITIPADDR 192.168.93.3
87 INITIISADDR 192.6.1.1
87 INITIISPORT 80
87 INITBROWSERS 720
87 INITMYWID 6060,6131
//
//Configuration Driver 88
//
88 INITIPADDR 192.168.93.3
88 INITIISADDR 192.6.1.1
88 INITIISPORT 80
88 INITBROWSERS 710

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```

88 INITMYWID 6132,6202
//
//Configuration Driver 89
//
89 INITIPADDR 192.168.93.3
89 INITIISADDR 192.6.1.1
89 INITIISPORT 80
89 INITBROWSERS 720
89 INITMYWID 6203,6274
//
//Configuration Driver 90
//
90 INITIPADDR 192.168.93.3
90 INITIISADDR 192.6.1.1
90 INITIISPORT 80
90 INITBROWSERS 710
90 INITMYWID 6275,6345
//
//Configuration Driver 91
//
91 INITIPADDR 192.168.93.4
91 INITIISADDR 192.6.1.1
91 INITIISPORT 80
91 INITBROWSERS 720
91 INITMYWID 6346,6417
//
//Configuration Driver 92
//
92 INITIPADDR 192.168.93.4
92 INITIISADDR 192.6.1.1
92 INITIISPORT 80
92 INITBROWSERS 710
92 INITMYWID 6418,6488
//
//Configuration Driver 93
//
93 INITIPADDR 192.168.93.4
93 INITIISADDR 192.6.1.1
93 INITIISPORT 80
93 INITBROWSERS 720
93 INITMYWID 6489,6560
//
//Configuration Driver 94
//
94 INITIPADDR 192.168.93.4
94 INITIISADDR 192.6.1.1
94 INITIISPORT 80
94 INITBROWSERS 710
94 INITMYWID 6561,6631
//
//Configuration Driver 95
//
95 INITIPADDR 192.168.93.4
95 INITIISADDR 192.6.1.1
95 INITIISPORT 80
95 INITBROWSERS 720
95 INITMYWID 6632,6703
//
//Configuration Driver 96

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```

//
96 INITIPADDR 192.168.93.4
96 INITIISADDR 192.6.1.1
96 INITIISPORT 80
96 INITBROWSERS 710
96 INITMYWID 6704,6774
//
//Configuration Driver 97
//
97 INITIPADDR 192.168.93.4
97 INITIISADDR 192.6.1.1
97 INITIISPORT 80
97 INITBROWSERS 720
97 INITMYWID 6775,6846
//
//Configuration Driver 98
//
98 INITIPADDR 192.168.93.4
98 INITIISADDR 192.6.1.1
98 INITIISPORT 80
98 INITBROWSERS 710
98 INITMYWID 6847,6917
//
//Configuration Driver 99
//
99 INITIPADDR 192.168.93.4
99 INITIISADDR 192.6.1.1
99 INITIISPORT 80
99 INITBROWSERS 720
99 INITMYWID 6918,6989
//
//Configuration Driver 100
//
100 INITIPADDR 192.168.93.4
100 INITIISADDR 192.6.1.1
100 INITIISPORT 80
100 INITBROWSERS 710
100 INITMYWID 6990,7060
//
//Configuration Driver 101
//
101 INITIPADDR 192.168.93.4
101 INITIISADDR 192.6.1.1
101 INITIISPORT 80
101 INITBROWSERS 720
101 INITMYWID 7061,7132
//
//Configuration Driver 102
//
102 INITIPADDR 192.168.93.4
102 INITIISADDR 192.6.1.1
102 INITIISPORT 80
102 INITBROWSERS 710
102 INITMYWID 7133,7203
//
//Configuration Driver 103
//
103 INITIPADDR 192.168.93.4
103 INITIISADDR 192.6.1.1

```

```

103 INITIISPORT 80
103 INITBROWSERS 720
103 INITMYWID 7204,7275
//
//Configuration Driver 104
//
104 INITIPADDR 192.168.93.4
104 INITIISADDR 192.6.1.1
104 INITIISPORT 80
104 INITBROWSERS 710
104 INITMYWID 7276,7346
//
//Configuration Driver 105
//
105 INITIPADDR 192.168.93.4
105 INITIISADDR 192.6.1.1
105 INITIISPORT 80
105 INITBROWSERS 720
105 INITMYWID 7347,7418
//
//Configuration Driver 106
//
106 INITIPADDR 192.168.93.4
106 INITIISADDR 192.6.1.1
106 INITIISPORT 80
106 INITBROWSERS 710
106 INITMYWID 7419,7489
//
//Configuration Driver 107
//
107 INITIPADDR 192.168.93.4
107 INITIISADDR 192.6.1.1
107 INITIISPORT 80
107 INITBROWSERS 720
107 INITMYWID 7490,7561
//
//Configuration Driver 108
//
108 INITIPADDR 192.168.93.4
108 INITIISADDR 192.6.1.1
108 INITIISPORT 80
108 INITBROWSERS 710
108 INITMYWID 7562,7632
//
//Configuration Driver 109
//
109 INITIPADDR 192.168.93.4
109 INITIISADDR 192.6.1.1
109 INITIISPORT 80
109 INITBROWSERS 720
109 INITMYWID 7633,7704
//
//Configuration Driver 110
//
110 INITIPADDR 192.168.93.4
110 INITIISADDR 192.6.1.1
110 INITIISPORT 80
110 INITBROWSERS 710
110 INITMYWID 7705,7775

```

```

//
//Configuration Driver 111
//
111 INITIPADDR 192.168.93.4
111 INITIISADDR 192.6.1.1
111 INITIISPORT 80
111 INITBROWSERS 720
111 INITMYWID 7776,7847
//
//Configuration Driver 112
//
112 INITIPADDR 192.168.93.4
112 INITIISADDR 192.6.1.1
112 INITIISPORT 80
112 INITBROWSERS 710
112 INITMYWID 7848,7918
//
//Configuration Driver 113
//
113 INITIPADDR 192.168.93.4
113 INITIISADDR 192.6.1.1
113 INITIISPORT 80
113 INITBROWSERS 720
113 INITMYWID 7919,7990
//
//Configuration Driver 114
//
114 INITIPADDR 192.168.93.4
114 INITIISADDR 192.6.1.1
114 INITIISPORT 80
114 INITBROWSERS 710
114 INITMYWID 7991,8061
//
//Configuration Driver 115
//
115 INITIPADDR 192.168.93.4
115 INITIISADDR 192.6.1.1
115 INITIISPORT 80
115 INITBROWSERS 720
115 INITMYWID 8062,8133
//
//Configuration Driver 116
//
116 INITIPADDR 192.168.93.4
116 INITIISADDR 192.6.1.1
116 INITIISPORT 80
116 INITBROWSERS 710
116 INITMYWID 8134,8204
//
//Configuration Driver 117
//
117 INITIPADDR 192.168.93.4
117 INITIISADDR 192.6.1.1
117 INITIISPORT 80
117 INITBROWSERS 720
117 INITMYWID 8205,8276
//
//Configuration Driver 118
//

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```

118 INITIPADDR 192.168.93.4
118 INITIISADDR 192.6.1.1
118 INITIISPORT 80
118 INITBROWSERS 710
118 INITMYWID 8277,8347
//
//Configuration Driver 119
//
119 INITIPADDR 192.168.93.4
119 INITIISADDR 192.6.1.1
119 INITIISPORT 80
119 INITBROWSERS 720
119 INITMYWID 8348,8419
//
//Configuration Driver 120
//
120 INITIPADDR 192.168.93.4
120 INITIISADDR 192.6.1.1
120 INITIISPORT 80
120 INITBROWSERS 710
120 INITMYWID 8420,8490
//
//Configuration Driver 121
//
121 INITIPADDR 192.168.93.5
121 INITIISADDR 192.7.1.1
121 INITIISPORT 80
121 INITBROWSERS 720
121 INITMYWID 8491,8562
//
//Configuration Driver 122
//
122 INITIPADDR 192.168.93.5
122 INITIISADDR 192.7.1.1
122 INITIISPORT 80
122 INITBROWSERS 710
122 INITMYWID 8563,8633
//
//Configuration Driver 123
//
123 INITIPADDR 192.168.93.5
123 INITIISADDR 192.7.1.1
123 INITIISPORT 80
123 INITBROWSERS 720
123 INITMYWID 8634,8705
//
//Configuration Driver 124
//
124 INITIPADDR 192.168.93.5
124 INITIISADDR 192.7.1.1
124 INITIISPORT 80
124 INITBROWSERS 710
124 INITMYWID 8706,8776
//
//Configuration Driver 125
//
125 INITIPADDR 192.168.93.5
125 INITIISADDR 192.7.1.1
125 INITIISPORT 80

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```
125 INITBROWSERS 720
125 INITMYWID 8777,8848
//
//Configuration Driver 126
//
126 INITIPADDR 192.168.93.5
126 INITIISADDR 192.7.1.1
126 INITIISPORT 80
126 INITBROWSERS 710
126 INITMYWID 8849,8919
//
//Configuration Driver 127
//
127 INITIPADDR 192.168.93.5
127 INITIISADDR 192.7.1.1
127 INITIISPORT 80
127 INITBROWSERS 720
127 INITMYWID 8920,8991
//
//Configuration Driver 128
//
128 INITIPADDR 192.168.93.5
128 INITIISADDR 192.7.1.1
128 INITIISPORT 80
128 INITBROWSERS 710
128 INITMYWID 8992,9062
//
//Configuration Driver 129
//
129 INITIPADDR 192.168.93.5
129 INITIISADDR 192.7.1.1
129 INITIISPORT 80
129 INITBROWSERS 720
129 INITMYWID 9063,9134
//
//Configuration Driver 130
//
130 INITIPADDR 192.168.93.5
130 INITIISADDR 192.7.1.1
130 INITIISPORT 80
130 INITBROWSERS 710
130 INITMYWID 9135,9205
//
//Configuration Driver 131
//
131 INITIPADDR 192.168.93.5
131 INITIISADDR 192.7.1.1
131 INITIISPORT 80
131 INITBROWSERS 720
131 INITMYWID 9206,9277
//
//Configuration Driver 132
//
132 INITIPADDR 192.168.93.5
132 INITIISADDR 192.7.1.1
132 INITIISPORT 80
132 INITBROWSERS 710
132 INITMYWID 9278,9348
//
```

```
//Configuration Driver 133
//
133 INITIPADDR 192.168.93.5
133 INITIISADDR 192.7.1.1
133 INITIISPORT 80
133 INITBROWSERS 720
133 INITMYWID 9349,9420
//
//Configuration Driver 134
//
134 INITIPADDR 192.168.93.5
134 INITIISADDR 192.7.1.1
134 INITIISPORT 80
134 INITBROWSERS 710
134 INITMYWID 9421,9491
//
//Configuration Driver 135
//
135 INITIPADDR 192.168.93.5
135 INITIISADDR 192.7.1.1
135 INITIISPORT 80
135 INITBROWSERS 720
135 INITMYWID 9492,9563
//
//Configuration Driver 136
//
136 INITIPADDR 192.168.93.5
136 INITIISADDR 192.7.1.1
136 INITIISPORT 80
136 INITBROWSERS 710
136 INITMYWID 9564,9634
//
//Configuration Driver 137
//
137 INITIPADDR 192.168.93.5
137 INITIISADDR 192.7.1.1
137 INITIISPORT 80
137 INITBROWSERS 720
137 INITMYWID 9635,9706
//
//Configuration Driver 138
//
138 INITIPADDR 192.168.93.5
138 INITIISADDR 192.7.1.1
138 INITIISPORT 80
138 INITBROWSERS 710
138 INITMYWID 9707,9777
//
//Configuration Driver 139
//
139 INITIPADDR 192.168.93.5
139 INITIISADDR 192.7.1.1
139 INITIISPORT 80
139 INITBROWSERS 720
139 INITMYWID 9778,9849
//
//Configuration Driver 140
//
140 INITIPADDR 192.168.93.5
```

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140 INITIISADDR 192.7.1.1
140 INITIISPORT 80
140 INITBROWSERS 710
140 INITMYWID 9850,9920
//
//Configuration Driver 141
//
141 INITIPADDR 192.168.93.5
141 INITIISADDR 192.7.1.1
141 INITIISPORT 80
141 INITBROWSERS 720
141 INITMYWID 9921,9992
//
//Configuration Driver 142
//
142 INITIPADDR 192.168.93.5
142 INITIISADDR 192.7.1.1
142 INITIISPORT 80
142 INITBROWSERS 710
142 INITMYWID 9993,10063
//
//Configuration Driver 143
//
143 INITIPADDR 192.168.93.5
143 INITIISADDR 192.7.1.1
143 INITIISPORT 80
143 INITBROWSERS 720
143 INITMYWID 10064,10135
//
//Configuration Driver 144
//
144 INITIPADDR 192.168.93.5
144 INITIISADDR 192.7.1.1
144 INITIISPORT 80
144 INITBROWSERS 710
144 INITMYWID 10136,10206
//
//Configuration Driver 145
//
145 INITIPADDR 192.168.93.5
145 INITIISADDR 192.7.1.1
145 INITIISPORT 80
145 INITBROWSERS 720
145 INITMYWID 10207,10278
//
//Configuration Driver 146
//
146 INITIPADDR 192.168.93.5
146 INITIISADDR 192.7.1.1
146 INITIISPORT 80
146 INITBROWSERS 710
146 INITMYWID 10279,10349
//
//Configuration Driver 147
//
147 INITIPADDR 192.168.93.5
147 INITIISADDR 192.7.1.1
147 INITIISPORT 80
147 INITBROWSERS 720
```

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147 INITMYWID 10350,10421
//
//Configuration Driver 148
//
148 INITIPADDR 192.168.93.5
148 INITIISADDR 192.7.1.1
148 INITIISPORT 80
148 INITBROWSERS 710
148 INITMYWID 10422,10492
//
//Configuration Driver 149
//
149 INITIPADDR 192.168.93.5
149 INITIISADDR 192.7.1.1
149 INITIISPORT 80
149 INITBROWSERS 720
149 INITMYWID 10493,10564
//
//Configuration Driver 150
//
150 INITIPADDR 192.168.93.5
150 INITIISADDR 192.7.1.1
150 INITIISPORT 80
150 INITBROWSERS 710
150 INITMYWID 10565,10635
//
//Configuration Driver 151
//
151 INITIPADDR 192.168.93.6
151 INITIISADDR 192.7.1.1
151 INITIISPORT 80
151 INITBROWSERS 720
151 INITMYWID 10636,10707
//
//Configuration Driver 152
//
152 INITIPADDR 192.168.93.6
152 INITIISADDR 192.7.1.1
152 INITIISPORT 80
152 INITBROWSERS 710
152 INITMYWID 10708,10778
//
//Configuration Driver 153
//
153 INITIPADDR 192.168.93.6
153 INITIISADDR 192.7.1.1
153 INITIISPORT 80
153 INITBROWSERS 720
153 INITMYWID 10779,10850
//
//Configuration Driver 154
//
154 INITIPADDR 192.168.93.6
154 INITIISADDR 192.7.1.1
154 INITIISPORT 80
154 INITBROWSERS 710
154 INITMYWID 10851,10921
//
//Configuration Driver 155
```

```

//
155 INITIPADDR 192.168.93.6
155 INITIISADDR 192.7.1.1
155 INITIISPORT 80
155 INITBROWSERS 720
155 INITMYWID 10922,10993
//
//Configuration Driver 156
//
156 INITIPADDR 192.168.93.6
156 INITIISADDR 192.7.1.1
156 INITIISPORT 80
156 INITBROWSERS 710
156 INITMYWID 10994,11064
//
//Configuration Driver 157
//
157 INITIPADDR 192.168.93.6
157 INITIISADDR 192.7.1.1
157 INITIISPORT 80
157 INITBROWSERS 720
157 INITMYWID 11065,11136
//
//Configuration Driver 158
//
158 INITIPADDR 192.168.93.6
158 INITIISADDR 192.7.1.1
158 INITIISPORT 80
158 INITBROWSERS 710
158 INITMYWID 11137,11207
//
//Configuration Driver 159
//
159 INITIPADDR 192.168.93.6
159 INITIISADDR 192.7.1.1
159 INITIISPORT 80
159 INITBROWSERS 720
159 INITMYWID 11208,11279
//
//Configuration Driver 160
//
160 INITIPADDR 192.168.93.6
160 INITIISADDR 192.7.1.1
160 INITIISPORT 80
160 INITBROWSERS 710
160 INITMYWID 11280,11350
//
//Configuration Driver 161
//
161 INITIPADDR 192.168.93.6
161 INITIISADDR 192.7.1.1
161 INITIISPORT 80
161 INITBROWSERS 720
161 INITMYWID 11351,11422
//
//Configuration Driver 162
//
162 INITIPADDR 192.168.93.6
162 INITIISADDR 192.7.1.1

```

```

162 INITIISPORT 80
162 INITBROWSERS 710
162 INITMYWID 11423,11493
//
//Configuration Driver 163
//
163 INITIPADDR 192.168.93.6
163 INITIISADDR 192.7.1.1
163 INITIISPORT 80
163 INITBROWSERS 720
163 INITMYWID 11494,11565
//
//Configuration Driver 164
//
164 INITIPADDR 192.168.93.6
164 INITIISADDR 192.7.1.1
164 INITIISPORT 80
164 INITBROWSERS 710
164 INITMYWID 11566,11636
//
//Configuration Driver 165
//
165 INITIPADDR 192.168.93.6
165 INITIISADDR 192.7.1.1
165 INITIISPORT 80
165 INITBROWSERS 720
165 INITMYWID 11637,11708
//
//Configuration Driver 166
//
166 INITIPADDR 192.168.93.6
166 INITIISADDR 192.7.1.1
166 INITIISPORT 80
166 INITBROWSERS 710
166 INITMYWID 11709,11779
//
//Configuration Driver 167
//
167 INITIPADDR 192.168.93.6
167 INITIISADDR 192.7.1.1
167 INITIISPORT 80
167 INITBROWSERS 720
167 INITMYWID 11780,11851
//
//Configuration Driver 168
//
168 INITIPADDR 192.168.93.6
168 INITIISADDR 192.7.1.1
168 INITIISPORT 80
168 INITBROWSERS 710
168 INITMYWID 11852,11922
//
//Configuration Driver 169
//
169 INITIPADDR 192.168.93.6
169 INITIISADDR 192.7.1.1
169 INITIISPORT 80
169 INITBROWSERS 720
169 INITMYWID 11923,11994

```

```

//
//Configuration Driver 170
//
170 INITIPADDR 192.168.93.6
170 INITIISADDR 192.7.1.1
170 INITIISPORT 80
170 INITBROWSERS 710
170 INITMYWID 11995,12065
//
//Configuration Driver 171
//
171 INITIPADDR 192.168.93.6
171 INITIISADDR 192.7.1.1
171 INITIISPORT 80
171 INITBROWSERS 720
171 INITMYWID 12066,12137
//
//Configuration Driver 172
//
172 INITIPADDR 192.168.93.6
172 INITIISADDR 192.7.1.1
172 INITIISPORT 80
172 INITBROWSERS 710
172 INITMYWID 12138,12208
//
//Configuration Driver 173
//
173 INITIPADDR 192.168.93.6
173 INITIISADDR 192.7.1.1
173 INITIISPORT 80
173 INITBROWSERS 720
173 INITMYWID 12209,12280
//
//Configuration Driver 174
//
174 INITIPADDR 192.168.93.6
174 INITIISADDR 192.7.1.1
174 INITIISPORT 80
174 INITBROWSERS 710
174 INITMYWID 12281,12351
//
//Configuration Driver 175
//
175 INITIPADDR 192.168.93.6
175 INITIISADDR 192.7.1.1
175 INITIISPORT 80
175 INITBROWSERS 720
175 INITMYWID 12352,12423
//
//Configuration Driver 176
//
176 INITIPADDR 192.168.93.6
176 INITIISADDR 192.7.1.1
176 INITIISPORT 80
176 INITBROWSERS 710
176 INITMYWID 12424,12494
//
//Configuration Driver 177
//

```

```

177 INITIPADDR 192.168.93.6
177 INITIISADDR 192.7.1.1
177 INITIISPORT 80
177 INITBROWSERS 720
177 INITMYWID 12495,12566
//
//Configuration Driver 178
//
178 INITIPADDR 192.168.93.6
178 INITIISADDR 192.7.1.1
178 INITIISPORT 80
178 INITBROWSERS 710
178 INITMYWID 12567,12637
//
//Configuration Driver 179
//
179 INITIPADDR 192.168.93.6
179 INITIISADDR 192.7.1.1
179 INITIISPORT 80
179 INITBROWSERS 720
179 INITMYWID 12638,12709
//
//Configuration Driver 180
//
180 INITIPADDR 192.168.93.6
180 INITIISADDR 192.7.1.1
180 INITIISPORT 80
180 INITBROWSERS 710
180 INITMYWID 12710,12780
//
//Configuration Driver 181
//
181 INITIPADDR 192.168.93.7
181 INITIISADDR 192.8.1.1
181 INITIISPORT 80
181 INITBROWSERS 720
181 INITMYWID 12781,12852
//
//Configuration Driver 182
//
182 INITIPADDR 192.168.93.7
182 INITIISADDR 192.8.1.1
182 INITIISPORT 80
182 INITBROWSERS 710
182 INITMYWID 12853,12923
//
//Configuration Driver 183
//
183 INITIPADDR 192.168.93.7
183 INITIISADDR 192.8.1.1
183 INITIISPORT 80
183 INITBROWSERS 720
183 INITMYWID 12924,12995
//
//Configuration Driver 184
//
184 INITIPADDR 192.168.93.7
184 INITIISADDR 192.8.1.1
184 INITIISPORT 80

```

```

184 INITBROWSERS 710
184 INITMYWID 12996,13066
//
//Configuration Driver 185
//
185 INITIPADDR 192.168.93.7
185 INITIISADDR 192.8.1.1
185 INITIISPORT 80
185 INITBROWSERS 720
185 INITMYWID 13067,13138
//
//Configuration Driver 186
//
186 INITIPADDR 192.168.93.7
186 INITIISADDR 192.8.1.1
186 INITIISPORT 80
186 INITBROWSERS 710
186 INITMYWID 13139,13209
//
//Configuration Driver 187
//
187 INITIPADDR 192.168.93.7
187 INITIISADDR 192.8.1.1
187 INITIISPORT 80
187 INITBROWSERS 720
187 INITMYWID 13210,13281
//
//Configuration Driver 188
//
188 INITIPADDR 192.168.93.7
188 INITIISADDR 192.8.1.1
188 INITIISPORT 80
188 INITBROWSERS 710
188 INITMYWID 13282,13352
//
//Configuration Driver 189
//
189 INITIPADDR 192.168.93.7
189 INITIISADDR 192.8.1.1
189 INITIISPORT 80
189 INITBROWSERS 720
189 INITMYWID 13353,13424
//
//Configuration Driver 190
//
190 INITIPADDR 192.168.93.7
190 INITIISADDR 192.8.1.1
190 INITIISPORT 80
190 INITBROWSERS 710
190 INITMYWID 13425,13495
//
//Configuration Driver 191
//
191 INITIPADDR 192.168.93.7
191 INITIISADDR 192.8.1.1
191 INITIISPORT 80
191 INITBROWSERS 720
191 INITMYWID 13496,13567
//

```

```

//Configuration Driver 192
//
192 INITIPADDR 192.168.93.7
192 INITIISADDR 192.8.1.1
192 INITIISPORT 80
192 INITBROWSERS 710
192 INITMYWID 13568,13638
//
//Configuration Driver 193
//
193 INITIPADDR 192.168.93.7
193 INITIISADDR 192.8.1.1
193 INITIISPORT 80
193 INITBROWSERS 720
193 INITMYWID 13639,13710
//
//Configuration Driver 194
//
194 INITIPADDR 192.168.93.7
194 INITIISADDR 192.8.1.1
194 INITIISPORT 80
194 INITBROWSERS 710
194 INITMYWID 13711,13781
//
//Configuration Driver 195
//
195 INITIPADDR 192.168.93.7
195 INITIISADDR 192.8.1.1
195 INITIISPORT 80
195 INITBROWSERS 720
195 INITMYWID 13782,13853
//
//Configuration Driver 196
//
196 INITIPADDR 192.168.93.7
196 INITIISADDR 192.8.1.1
196 INITIISPORT 80
196 INITBROWSERS 710
196 INITMYWID 13854,13924
//
//Configuration Driver 197
//
197 INITIPADDR 192.168.93.7
197 INITIISADDR 192.8.1.1
197 INITIISPORT 80
197 INITBROWSERS 720
197 INITMYWID 13925,13996
//
//Configuration Driver 198
//
198 INITIPADDR 192.168.93.7
198 INITIISADDR 192.8.1.1
198 INITIISPORT 80
198 INITBROWSERS 710
198 INITMYWID 13997,14067
//
//Configuration Driver 199
//
199 INITIPADDR 192.168.93.7

```



```
199 INITIISADDR 192.8.1.1
199 INITIISPORT 80
199 INITBROWSERS 720
199 INITMYWID 14068,14139
//
//Configuration Driver 200
//
200 INITIPADDR 192.168.93.7
200 INITIISADDR 192.8.1.1
200 INITIISPORT 80
200 INITBROWSERS 710
200 INITMYWID 14140,14210
//
//Configuration Driver 201
//
201 INITIPADDR 192.168.93.7
201 INITIISADDR 192.8.1.1
201 INITIISPORT 80
201 INITBROWSERS 720
201 INITMYWID 14211,14282
//
//Configuration Driver 202
//
202 INITIPADDR 192.168.93.7
202 INITIISADDR 192.8.1.1
202 INITIISPORT 80
202 INITBROWSERS 710
202 INITMYWID 14283,14353
//
//Configuration Driver 203
//
203 INITIPADDR 192.168.93.7
203 INITIISADDR 192.8.1.1
203 INITIISPORT 80
203 INITBROWSERS 720
203 INITMYWID 14354,14425
//
//Configuration Driver 204
//
204 INITIPADDR 192.168.93.7
204 INITIISADDR 192.8.1.1
204 INITIISPORT 80
204 INITBROWSERS 710
204 INITMYWID 14426,14496
//
//Configuration Driver 205
//
205 INITIPADDR 192.168.93.7
205 INITIISADDR 192.8.1.1
205 INITIISPORT 80
205 INITBROWSERS 720
205 INITMYWID 14497,14568
//
//Configuration Driver 206
//
206 INITIPADDR 192.168.93.7
206 INITIISADDR 192.8.1.1
206 INITIISPORT 80
206 INITBROWSERS 710
```

```
206 INITMYWID 14569,14639
//
//Configuration Driver 207
//
207 INITIPADDR 192.168.93.7
207 INITIISADDR 192.8.1.1
207 INITIISPORT 80
207 INITBROWSERS 720
207 INITMYWID 14640,14711
//
//Configuration Driver 208
//
208 INITIPADDR 192.168.93.7
208 INITIISADDR 192.8.1.1
208 INITIISPORT 80
208 INITBROWSERS 710
208 INITMYWID 14712,14782
//
//Configuration Driver 209
//
209 INITIPADDR 192.168.93.7
209 INITIISADDR 192.8.1.1
209 INITIISPORT 80
209 INITBROWSERS 720
209 INITMYWID 14783,14854
//
//Configuration Driver 210
//
210 INITIPADDR 192.168.93.7
210 INITIISADDR 192.8.1.1
210 INITIISPORT 80
210 INITBROWSERS 710
210 INITMYWID 14855,14925
//
//Configuration Driver 211
//
211 INITIPADDR 192.168.93.8
211 INITIISADDR 192.8.1.1
211 INITIISPORT 80
211 INITBROWSERS 720
211 INITMYWID 14926,14997
//
//Configuration Driver 212
//
212 INITIPADDR 192.168.93.8
212 INITIISADDR 192.8.1.1
212 INITIISPORT 80
212 INITBROWSERS 710
212 INITMYWID 14998,15068
//
//Configuration Driver 213
//
213 INITIPADDR 192.168.93.8
213 INITIISADDR 192.8.1.1
213 INITIISPORT 80
213 INITBROWSERS 720
213 INITMYWID 15069,15140
//
//Configuration Driver 214
```

```

//
214 INITIPADDR 192.168.93.8
214 INITIISADDR 192.8.1.1
214 INITIISPORT 80
214 INITBROWSERS 710
214 INITMYWID 15141,15211
//
//Configuration Driver 215
//
215 INITIPADDR 192.168.93.8
215 INITIISADDR 192.8.1.1
215 INITIISPORT 80
215 INITBROWSERS 720
215 INITMYWID 15212,15283
//
//Configuration Driver 216
//
216 INITIPADDR 192.168.93.8
216 INITIISADDR 192.8.1.1
216 INITIISPORT 80
216 INITBROWSERS 710
216 INITMYWID 15284,15354
//
//Configuration Driver 217
//
217 INITIPADDR 192.168.93.8
217 INITIISADDR 192.8.1.1
217 INITIISPORT 80
217 INITBROWSERS 720
217 INITMYWID 15355,15426
//
//Configuration Driver 218
//
218 INITIPADDR 192.168.93.8
218 INITIISADDR 192.8.1.1
218 INITIISPORT 80
218 INITBROWSERS 710
218 INITMYWID 15427,15497
//
//Configuration Driver 219
//
219 INITIPADDR 192.168.93.8
219 INITIISADDR 192.8.1.1
219 INITIISPORT 80
219 INITBROWSERS 720
219 INITMYWID 15498,15569
//
//Configuration Driver 220
//
220 INITIPADDR 192.168.93.8
220 INITIISADDR 192.8.1.1
220 INITIISPORT 80
220 INITBROWSERS 710
220 INITMYWID 15570,15640
//
//Configuration Driver 221
//
221 INITIPADDR 192.168.93.8
221 INITIISADDR 192.8.1.1

```

```

221 INITIISPORT 80
221 INITBROWSERS 720
221 INITMYWID 15641,15712
//
//Configuration Driver 222
//
222 INITIPADDR 192.168.93.8
222 INITIISADDR 192.8.1.1
222 INITIISPORT 80
222 INITBROWSERS 710
222 INITMYWID 15713,15783
//
//Configuration Driver 223
//
223 INITIPADDR 192.168.93.8
223 INITIISADDR 192.8.1.1
223 INITIISPORT 80
223 INITBROWSERS 720
223 INITMYWID 15784,15855
//
//Configuration Driver 224
//
224 INITIPADDR 192.168.93.8
224 INITIISADDR 192.8.1.1
224 INITIISPORT 80
224 INITBROWSERS 710
224 INITMYWID 15856,15926
//
//Configuration Driver 225
//
225 INITIPADDR 192.168.93.8
225 INITIISADDR 192.8.1.1
225 INITIISPORT 80
225 INITBROWSERS 720
225 INITMYWID 15927,15998
//
//Configuration Driver 226
//
226 INITIPADDR 192.168.93.8
226 INITIISADDR 192.8.1.1
226 INITIISPORT 80
226 INITBROWSERS 710
226 INITMYWID 15999,16069
//
//Configuration Driver 227
//
227 INITIPADDR 192.168.93.8
227 INITIISADDR 192.8.1.1
227 INITIISPORT 80
227 INITBROWSERS 720
227 INITMYWID 16070,16141
//
//Configuration Driver 228
//
228 INITIPADDR 192.168.93.8
228 INITIISADDR 192.8.1.1
228 INITIISPORT 80
228 INITBROWSERS 710
228 INITMYWID 16142,16212

```

```

//
//Configuration Driver 229
//
229 INITIPADDR 192.168.93.8
229 INITIISADDR 192.8.1.1
229 INITIISPORT 80
229 INITBROWSERS 720
229 INITMYWID 16213,16284
//
//Configuration Driver 230
//
230 INITIPADDR 192.168.93.8
230 INITIISADDR 192.8.1.1
230 INITIISPORT 80
230 INITBROWSERS 710
230 INITMYWID 16285,16355
//
//Configuration Driver 231
//
231 INITIPADDR 192.168.93.8
231 INITIISADDR 192.8.1.1
231 INITIISPORT 80
231 INITBROWSERS 720
231 INITMYWID 16356,16427
//
//Configuration Driver 232
//
232 INITIPADDR 192.168.93.8
232 INITIISADDR 192.8.1.1
232 INITIISPORT 80
232 INITBROWSERS 710
232 INITMYWID 16428,16498
//
//Configuration Driver 233
//
233 INITIPADDR 192.168.93.8
233 INITIISADDR 192.8.1.1
233 INITIISPORT 80
233 INITBROWSERS 720
233 INITMYWID 16499,16570
//
//Configuration Driver 234
//
234 INITIPADDR 192.168.93.8
234 INITIISADDR 192.8.1.1
234 INITIISPORT 80
234 INITBROWSERS 710
234 INITMYWID 16571,16641
//
//Configuration Driver 235
//
235 INITIPADDR 192.168.93.8
235 INITIISADDR 192.8.1.1
235 INITIISPORT 80
235 INITBROWSERS 720
235 INITMYWID 16642,16713
//
//Configuration Driver 236
//

```

```

236 INITIPADDR 192.168.93.8
236 INITIISADDR 192.8.1.1
236 INITIISPORT 80
236 INITBROWSERS 710
236 INITMYWID 16714,16784
//
//Configuration Driver 237
//
237 INITIPADDR 192.168.93.8
237 INITIISADDR 192.8.1.1
237 INITIISPORT 80
237 INITBROWSERS 720
237 INITMYWID 16785,16856
//
//Configuration Driver 238
//
238 INITIPADDR 192.168.93.8
238 INITIISADDR 192.8.1.1
238 INITIISPORT 80
238 INITBROWSERS 710
238 INITMYWID 16857,16927
//
//Configuration Driver 239
//
239 INITIPADDR 192.168.93.8
239 INITIISADDR 192.8.1.1
239 INITIISPORT 80
239 INITBROWSERS 720
239 INITMYWID 16928,16999
//
//Configuration Driver 240
//
240 INITIPADDR 192.168.93.8
240 INITIISADDR 192.8.1.1
240 INITIISPORT 80
240 INITBROWSERS 510
240 INITMYWID 17000,17050

```

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 Tcpi. : 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 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 : 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	17,240	tpmC	212,511	tpmC/W	12.33
Table	Initial Rows	Data KB	Index KB	Extra 5% KB	Total With 5% KB
Warehouse	17,240	1,864	328	110	2,302
District	172,400	19,432	688	1,006	21,126
Customer	517,200,000	106,092,312	22,987,216	6,453,976	135,533,504
Customer.Text	517,200,000	309,354,568		15,467,728	324,822,296
History (D)	517,200,000	30,877,616	120,976		30,998,592
Order (D)	517,200,000	16,888,168	39,160		16,927,328
New-Order	155,160,000	3,064,896	8,904	153,690	3,227,490
Order-Line (D)	5,171,986,420	344,799,096	816,416		345,615,512
Item	100,000	9,528	664	510	10,702
Stock	1,724,000,000	551,680,000	1,168,272	27,642,414	580,490,686
Totals KB		1,362,787,480	25,142,624	49,719,434	1,437,649,538
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	80	4,525	362,000	347,515	354,233
mssql70_cs_fg	80	8,910	712,800	699,242	699,242
mssql70_ord_fg	80	5,695	455,600	357,198	444,276
Total Allocated MB			1,530,442	1,403,997	1,497,794
		MB			
Dynamic Space MB	383,364	Sum of data for orders, order_line & history			
Static Space	1,020,590	Sum of data+index+5% - Dynamic Space			
Free Space	126,487	Total allocated space - (Dynamic & Static Spaces)			
Daily Growth	75,609	(Dynamic Space / (W * 62.5)) * tpmC			
Daily Spread	13,073	Free space - 1.5 * Daily growth (zero if negative)			
	0	SQL Server can be configured to eliminate Daily Spread			
60 Day Space MB	5,557,153	Static Space + 60 * (Daily Growth + Daily Spread)			
60 Day Space GB	5,426.91				
8 hr log GB	459.23	(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	5426.91 GB	560	9156.88 GB	18GB drives	
Total DB		560	9156.88 GB		
8-hr log+mirror	918.46 GB	8	1019.73 GB	146GB drives	
OS, SQL Server	14.00 GB	1	37.26 GB	40GB drive	
Total space	6359.37 GB	569	10213.87 GB	10.0 TB	

TPC-C Dynamic Table Growth Rates for 8 Hours					212,511 tpmC	
Tables	Initial (KB)	Final (KB)	Change(KB)	KB / New-Order	8-Hr MB	
History	30,998,592	33,498,624	2,500,032	0.0674	36,990.53	
Orders	16,927,328	20,725,976	3,798,648	0.1025	26,738.89	
Order_line	345,615,512	373,500,248	27,884,736	0.7523	412,451.21	
Dynamic	393,541,432	427,724,848	34,183,416	0.9222	476,180.63	
New_order	3,073,800	3,849,400	775,600	0.0209	5,086.07	
Static						
Log	1,038,353	175,648,763	174,610,410	4.7106	470,253.43	459.232 GB
SUM(d_next_o_id)	517,372,400	554,440,331	37,067,931			

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.

COMPUTER RESOLUTIONS®

Taking IT Personally™

Phone: 800-848-7185
 Fax: 203-384-0473
 35 Benham Avenue
 Bridgeport, CT 06605
 www.cri1.com

SERVICE QUOTE

SQ-17653

May 27, 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 26, 2004	Dave Loewenbaum					
Quotation	PO #	Reference	Ship VIA	Page	Printed			
SQ-17653			UPS GROUND	1	05/27/04 16:43			
L	Item	Description	Qty	Ship	Price	M	Discount	Amount
1		ES7000-540 SERVER						
2	ES7540165-140	ES7000-540 16X 2.2GHZ,128MB, CCH	1		185250.00	EA		185250.00
3	SEN70002-MSV	SRV:SENTINEL MNGMT SRV	1		2585.00	EA		2585.00
4	WSS200004-EN	O/S: W2K SERVER ENGLISH	1		949.00	EA		949.00
5	FC76222-P64	CTRL: 2 GB FC, INTELLIFIBRE	9		2850.00	EA		25650.00
6	PCI10001-CXG	COMM HW:GIGANET CLUSTER XCNT ADPT	4		755.00	EA		3020.00
7	ES70003-UIF	RCK:105 KBRD/MOUSE/MON	1		570.00	EA		570.00
8	WND2316-TSP	O/S:WINDOWS 2003 SERVER, DC, 16P,1YR LSU	1		35112.00	EA		35112.00
9	DUS200316-TSP	O/S:DC 16X LTD. SUB 1 YR	2		3173.00	EA		6346.00
10	GTS7524016-SSA	O/S:WINDOWS SERVER 2003. DC SUPPORT 1YR	3		12574.00	EA		37722.00
11	DQL200316-LX	SW:16X SQL+NO SUBCRIP	1		212800.00	EA		212800.00
12		USS2200/RS2000 STORAGE						
13	JBD201815-P84	6 RACKS - 84 X 18GB 15K RPM	7		29839.00	EA		208873.00
14	JBD201815-P28	2RACKS-28X18GB 15K RPM	1		14556.00	EA		14556.00
15	CXR14610-2GF	DISK:146GB,10KRPM,2GB FC, +10%SPARES	10		2508.00	EA		25080.00
16	JBD2002-SA	DISK:NON-HA ENCLOSURE WITH 14 DRIVE SLOT	24		3010.00	EA		72240.00
17	JBD2011-SA	DISK:NON-HA ENCLOSURE WITH 14 DRIVE SLOT	16		3214.00	EA		51424.00
18	RMM20103-ELS	SAN:SYMM DISK VIRT SRVR II-ELS	8		4559.00	EA		36472.00
19	RMM20701-TAR	SAN:HBA,ATTO PCI3300	24		1805.00	EA		43320.00
20	USS10300-SW	SAN:USS2100 SW & PROD INF	1		5472.00	EA		5472.00
21	USS20310-LIC	SAN:USS2200 10 TBYTE LIC	1		25200.00	EA		25200.00
22	JBD20003-CCL	DISK:.3 METER 2GB FIBRE CHANNEL COPPER C	24		54.00	EA		1296.00
23	JBD2001-RMK	DISK:ENCLOSURE RACK MOUNT KIT FOR 36U RA	40		190.00	EA		7600.00
24	CX300-DPE	DPE:2RAID CNTRL, 1GB CACHE EA	1		19000.00	EA		19000.00
25	CXN600-WIN	EMC SW:NAVISPHERE AGENT NT/W2K	1		646.00	EA		646.00
26	CX2002-DPE	EMC SW: NAVISPHERE MANAGER BASE FOR CX20	1		1549.00	EA		1549.00
27	CX200-DAE	EMC SW: NAVISPHERE MANAGER BASE FOR CX20	1		7695.00	EA		7695.00
28	GSS16-T16	LAN HW:GIGABIT SWITCH, 16P	1		2850.00	EA		2850.00
							Page 1	
							SubTotal	1033277.00

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SERVICE QUOTE

SQ-17653

May 27, 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 26, 2004	Dave Loewenbaum				
Quotation	PO #	Reference	Ship VIA	Page	Printed		
SQ-17653			UPS GROUND	2	05/27/04 16:43		
L Item	Description	Qty	Ship	Price	M	Discount	Amount
29	SWC81-SXR ADPTR:8 PORT SWITCH UNIT	2		1520.00	EA		3040.00
30	CBL121-SWC CABLE:12FT SYS TO ADJ RK	12		143.00	EA		1716.00
31	KBR28301-SXR KEYBD:RACK MOUNT KYBD	2		333.00	EA		666.00
32	MON2145-LCD DISPLAY: 1U LCD MONITOR	2		2565.00	EA		5130.00
33	SFR9-PWR ACC: 9-PLUG POWER STRIP	15		162.00	EA		2430.00
34	USE1936-LC6 PWR CORD:C20/NEMA L6-20P	15		86.00	EA		1290.00
35	HRT361941-OPT ACC:36U 19X41 OPEN FRT CAB, HRT COLOR	5		1425.00	EA		7125.00
36	ES3020L SERVERS						
37	ESL302021-306 SVR:ESL3020 3.06GHZ 1M	4		1870.00	EA		7480.00
38	CPL3020302-1MB ACC:ESL3020 3.06G 1MB	4		1199.00	EA		4796.00
39	DIM3020042-2GB DIM3020042-2GB; MEM:2GB 4X512 533FSB MEM	4		1465.00	EA		5860.00
40	HBP3020101-51 DISK:ESL3020 HSEFP 1X4 1"	4		265.00	EA		1060.00
41	HDP18115-DC4 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-CXG COMM HW:GIGANET CLUSTER XCNT ADPT	4		755.00	EA		3020.00
44							
45	DISCOUNT LARGE VOLUME CASH DISCOUNT	1		-161933.00	EA		-161933.00
46	Disks come with a 3yr						
47	return-to factory warranty						
48	7 day replenishment						
49	Quote valid for 90 days						
50							
						Taxable	0.00
						Tax	0.00
						Exempt	917621.00
						Total	917621.00
						Paid	0.00
						Tr Disc	0.00
						Balance	917621.00
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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GCPO8889

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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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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

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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.