



TPC Benchmark™ C Full Disclosure Report

**Unisys ES7000 Aries 420
Enterprise Server (16P)**

using

Oracle Database 10g Enterprise Edition

on

**Microsoft Windows Server 2003,
Datacenter Edition for 64-bit Itanium-based
Systems**

**First Edition
May 11, 2004**

First Edition – May 2004

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

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Overview

This report documents the methodology and results of the TPC Benchmark C (TPC-C) conducted on the Unisys Corporation ES7000 Aries 420 Enterprise Server (16P). The operating system on the server was Microsoft Windows Server 2003, Datacenter Edition for 64-bit Itanium-based Systems. The database used was Oracle Database 10g Enterprise Edition. The operating system on the clients was Microsoft Windows 2003 Server. The clients ran Microsoft's Internet Information Server 6.0 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.

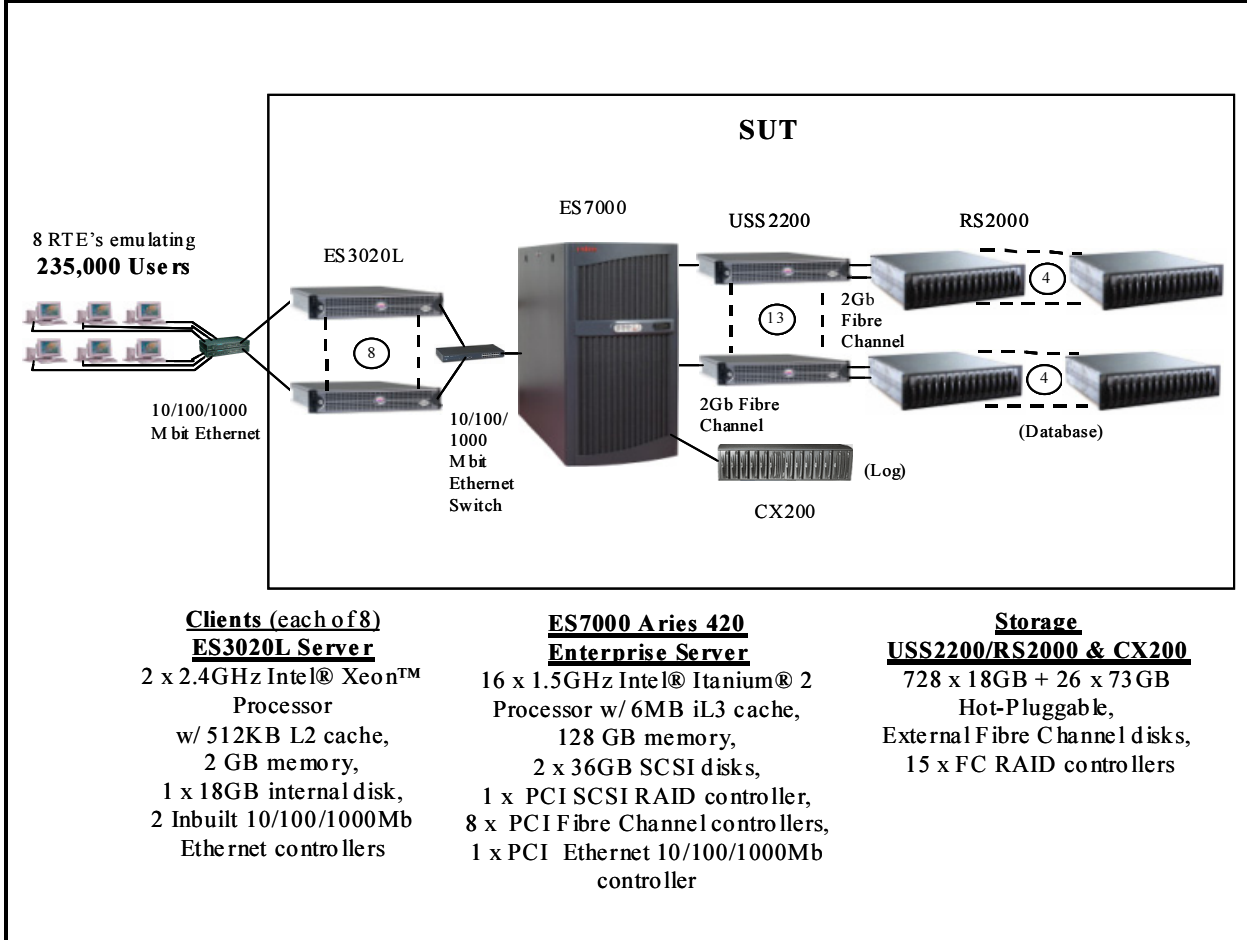
Executive Summary

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 Aries 420 Enterprise Server		TPC-C Rev. 5.2
			Report Date May 11, 2004
Total System Cost	TPC-C Throughput	Price Performance	Availability Date
\$1,448,706	291,413 tpmC	\$4.98 / tpmC	Oct 25, 2004 *
Processors	Database Manager	Operating System	Other Software
16 - Database 16 - Clients	Oracle Database 10g Enterprise Edition	Microsoft Windows Server 2003, Datacenter Edition 64-bit	Windows Server 2003 w/ IIS 6.0 and COM+ Microsoft Visual C++
			Number of Users
			235,000



System Components	Enterprise Server		Clients (each of 8)	
	Quantity	Type	Quantity	Type
Processors	16	1.5GHz Intel® Itanium® 2 with 6MB iL3 Cache	2	2.4GHz Intel® Xeon™ Processor, 512KB Lvl 2 Cache
Memory	16	8 GB	4	512 MB
Disk Controllers	8	PCI Fibre Channel	1	Inbuilt SCSI
	1	PCI SCSI RAID (boot media)		
Disk Drives	728	18GB FC (17.1 GB useable)	1	18GB SCSI (16.9 GB useable)
	26	73GB FC (66.6 GB useable)		
	2	36GB boot (34.3 GB useable)		
Total Storage		14.0 TB		16.9 GB
Tape / CD-ROM	1	IDE CD-ROM	1	IDE CD-ROM
Terminals	1	Console Monitor	1	Console Monitor

* All hardware available now



ES7000 Aries 420 Enterprise Server

TPC-C Rev. 5.2

Report Date
May 11, 2004

Description	Part No.	Third Party		Unit Price	Qty.	Extended Price	3 yr. Maint. Price
		Brand	Price				
Server Hardware:							
SYS: ES7000-420, 16x 1.5GHz/6MB, 64GB Mem.	ES7420166-111		1	\$287,328	1	\$287,328	\$12,936
1x RAID Controller, 2x 36GB Disk (boot media)	Included						
Sentinel System Management S/W and Media	Included						
MEM: 32GB Memory, 2 GB DIMMs	MEM162-32G		1	\$31,065	2	\$62,130	
MOD: I/F, 2-Port IO Module, 133MHz	MOD3133-PCI		1	\$1,805	3	\$5,415	
CTRL: Fibre Channel HBA, 2-Port, 64-bit PCI	FC76222-P64		1	\$2,850	8	\$22,800	
CTRL: Ethernet, 1000Mb, 1-Port Cu, PCI	ETH23312-P64		1	\$238	1	\$238	
I/F: Monitor, 15-inch Color, Kybrd, Mse & Cable	ES70003-UIF		1	\$570	1	\$570	
Server Software:							
O/S: Windows Svr 2003, Datacenter Edtn, 16P, 1yr Lsub. WND2316-TSP		2	1	\$35,112	1	\$35,112	
O/S: Windows Server 2003, DC Lmted Sbscrptn, 1yr.	DUS200316-TSP	2	1	\$3,173	2	\$6,346	
O/S: Windows Server 2003, DC Support, 24x7x4, 1yr.	GTS7524016-SSA	2	1	\$12,574	3		\$37,722
APP: Oracle Database 10g Ent. Edtn, Per Proc, Unlmted Usrs, 3yrs		4	4	\$20,000	16	\$320,000	Inc. below
SRVC: Oracle Database Server Support Pkg. for 3 yrs		4	4	\$6,000	1		\$6,000
				Server Subtotal		\$739,939	\$56,658
Storage Hardware:							
DISK: 1.5TB Pkg, 84x 18GB, 15Krpm, + 10% spares *	JBD201815-P84		1	\$29,839	9	\$268,551	Spared
DISK: 1 TB Pkg, 56x 18GB, 15Krpm, + 10% spares *	JBD201815-P56		1	\$22,642	1	\$22,642	Spared
DISK: 73GB Drive, 10Krpm, 2Gb FC, + 10% Spares *	CXR7310-2GF		1	\$1,568	29	\$45,472	Spared
RCK: FC 2Gb Storage, Standard, Copper/Copper I/F	JBD2002-SA		1	\$3,010	26	\$78,260	\$14,040
RCK: FC 2Gb Storage, Standard, Optical/Copper I/F	JBD2011-SA		1	\$3,214	26	\$83,564	\$14,976
CTRL: Symmetric Disk Virt. 2x2GHz, 512MB Mem	RMM20103-ELS		1	\$4,559	13	\$59,267	\$15,132
CTRL: USS, Fibre Channel HBA, 1-Port, 64-bit PCI	RMM20701-TAR		1	\$1,805	39	\$70,395	\$17,784
APP: Unisys Storage Sentinel 2200 SDV Software	USS10300-SW		1	\$5,472	1	\$5,472	\$4,068
APP: Storage Sentinel SDV SW, 20TB License	USS20320-LIC		1	\$37,484	1	\$37,484	
CBL: FC, Copper, HSDC2 Conn's, 0.3m	JBD20003-CCL		1	\$54	26	\$1,404	
CBL: FC, Optical, LC->LC Conn's, 10m + 10% Spares *	GCFAZLL10	3	3	\$42	44	\$1,848	Spared
RCK: Rack Mount Kit, Disk Enclosure	JBD2001-RMK		1	\$190	52	\$9,880	
CTRL: DPE: 2 RAID Cntrl, 1GB Cache ea., 0 Disk	CX200-DPE		1	\$19,000	1	\$19,000	\$2,988
RCK: FC 2Gb Storage, Optical I/F, DAE	CX600-DAE		1	\$7,600	1	\$7,600	\$1,212
SYS MGT: Storage, Navisphere Agent	CXN600-WIN		1	\$646	1	\$646	\$132
SYS MGT: Storage, Navisphere Manager	CX2002-DPE		1	\$1,549	1	\$1,549	\$312
SYS MGT: Storage, Navisphere Manager	CX200-DAE		1	\$7,695	1	\$7,695	\$1,524
SWTCH: Switch, 10/100/1000Mb Ethernet	GS516-T16		1	\$2,850	1	\$2,850	
SWTCH: Switch, 8-port KVM	SWC81-SXR		1	\$1,520	3	\$4,560	\$3,348
CBL: Cable, KVM, 12 foot	CBL121-SWC		1	\$143	21	\$3,003	
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	18	\$2,916	
CBL: Power, U.S. (Domestic), C20 - L6-20P	USE1936-LC6		1	\$86	18	\$1,548	
CAB: 36U x 19" x 41" Open Front Cabinet	HRT361941-OFT		1	\$1,425	6	\$8,550	
				Storage Subtotal		\$749,952	\$75,516
Client Hardware:							
SYS: ES3020L w/ 1x 2.4GHz Proc., 0MB Mem	ESL30202-240		1	\$1,072	8	\$8,576	\$6,336
PROC: 1x 2.4GHz Intel Xeon/512KB Cache	CPL3020242-512		1	\$532	8	\$4,256	
MEM: 2GB, 4x 512KB DIMMs DDR SDRAM	DIM3020042-2GB		1	\$1,465	8	\$11,720	
RCK: ESL2026 Disk Backpanel, 1x4	HBP3020101-51		1	\$265	8	\$2,120	
DISK: 18GB 15Krpm U320 3.5 Internal	HDP18115-DC4		1	\$333	8	\$2,664	
RCK: ES3020L Universal Rack Kit	ESL3020-VRL		1	\$333	8	\$2,664	
SWTCH: Switch, 10/100/1000Mb Ethernet	GS516-T16		1	\$2,850	1	\$2,850	
CBL: Ethernet, Cat5e, RJ45 Conn's, 10ft + 10% Spares *	GCPO888910	3	3	\$2	36	\$72	Spared
Client Software:							
O/S: Windows Server 2003, Standard. Edition.	P73-00295	2	2	\$738	8	\$5,904	Inc. below
ACC: Visual C++ Standard	254-00170	2	2	\$109	1	\$109	Inc. below
SRVC: Database Server Support Package	PRO-PRORS-16U-01	2	2	\$1,950	3	\$5,850	
				Client Subtotal		\$40,935	\$12,186
				Total		\$1,530,826	\$144,360
Note: All prices are effective as of the date of publication							
Oracle Mandatory E-Business Discount (license and support) - 20%						(\$65,200)	
Computer Resolutions Inc. 13% Large Volume Discount						(\$161,280)	
Notes: 1. * = 10% spare disks added in place of onsite service.				Three Year Cost of Ownership: \$1,448,706			
2. HW & SW maintenance at 24 x 7 w/ 4 hr. max. response time for spares.							
3. 3rd Party Brand & Pricing 1 = CRI Product Price, Unisys Maintenance Price							
2 = Microsoft 3 = GoCables 4 = Oracle; pricing contact: MaryBeth Pierantoni, mary.beth.pierantoni@oracle.com, 916-315-5081				tpmC Rating: 291,413			
				\$ / tpmC: \$4.98			
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: 291,413 tpmC

Response Times, in seconds

Transaction	90th %ile	Average	Maximum
New-Order	0.96	0.43	11.66
Payment	0.93	0.40	12.02
Order-Status	0.96	0.43	11.73
Delivery (interactive portion)	0.75	0.28	10.72
Delivery (deferred portion)	0.20	0.13	9.94
Stock-Level	1.00	0.45	11.22
Menu	0.76	0.29	10.98

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	44.87%
Payment	43.02%
Order-Status	4.03%
Delivery (interactive portion)	4.03%
Stock-Level	4.03%

Keying / Think Time Times, in seconds

Transaction	Minimum	Average	Maximum
New Order	18.01 / 0.00	18.01 / 12.03	18.08 / 120.31
Payment	3.01 / 0.00	3.01 / 12.03	3.08 / 120.31
Order-Status	2.01 / 0.00	2.01 / 10.08	2.06 / 100.70
Delivery (interactive portion)	2.01 / 0.00	2.01 / 5.06	2.08 / 50.61
Stock-Level	2.01 / 0.00	2.01 / 5.06	2.08 / 50.61

Test Duration

Ramp up time	83 minutes
Measurement interval (M)	120 minutes
Transactions (all types) completed during measurement interval	77,929,203
Ramp-down time	40 minutes

Checkpointing:

Number of checkpoints	4
Checkpoint interval	29 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 Aries 420 Enterprise Server (16P) using Oracle Database 10g Enterprise Edition on Microsoft Windows Server 2003, Datacenter Edition for 64-bit Itanium-based Systems.

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, Microsoft Corporation, and Oracle 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 database code that implements 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. Unisys and Oracle Corporation 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, server OS, and Oracle database 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)

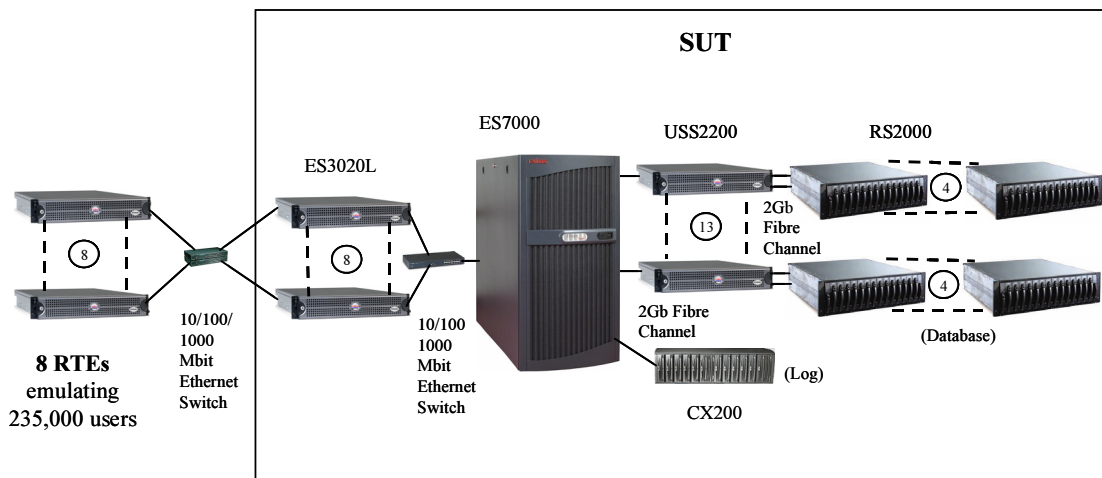
- *Number and type of processors.*
- *Size of allocated memory, and any specific mapping/partitioning of memory unique to the test.*
- *Number and type of disk units (and controllers, if applicable).*
- *Number of channels or bus connections to disk units, including their protocol type.*
- *Number of 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 Aries 420 Enterprise Server (16P) is illustrated in Figure 0.1. Table 4.3 contains a detailed explanation of the disk configuration.

There were eight ES3020L clients in the measured configuration, seven older clients with dual 2.4 GHz processors, 400MHz FSB, 2GB memory, one 18 GB 10K rpm drive, and one new client with dual 2.4GHz processors, 533 MHz FSB, 2GB memory, one 18 GB 15Krpm drive. The pricing uses eight new ES3020L clients in the benchmark configuration, each with dual 2.4 GHz processors, 533 MHz FSB, 2GB memory and one 18 GB 15K rpm drive because the older measured clients are no longer orderable through Unisys.

The priced configuration for the Unisys ES7000 Aries 420 Enterprise Server (16P) is shown in Figure 0.2.

Figure 0.1: Benchmarked Configuration

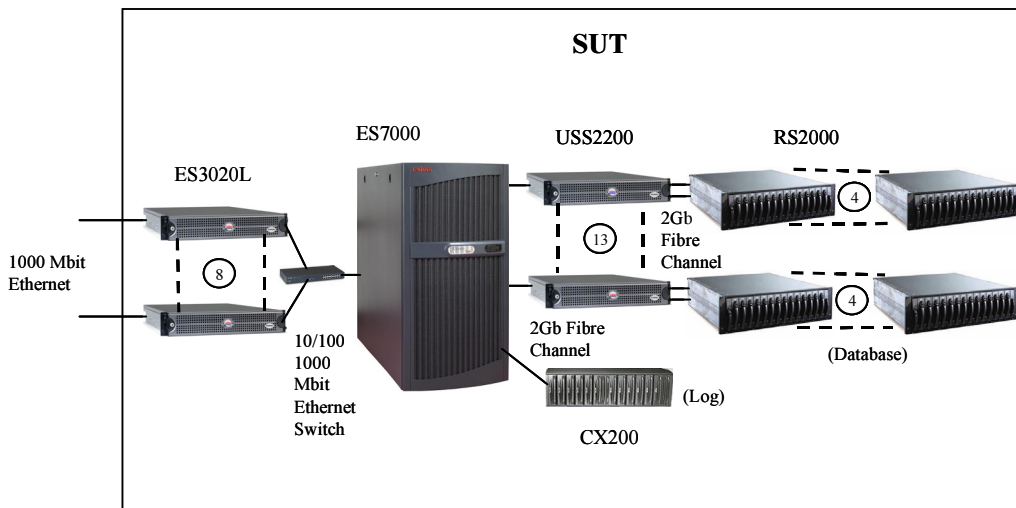


Clients (each of 8)
ES3020L Server
 2 x 2.4GHz Intel® Xeon™ Processor
 w/ 512KB L2 cache,
 400MHz FSB,
 2 GB memory,
 1 x 18GB 10Krpm disk,
 2 Inbuilt 10/100/1000Mb Ethernet controllers

ES7000 Aries 420 Enterprise Server
 16 x 1.5GHz Intel® Itanium® 2 Processor w/ 6MB iL3 cache,
 128 GB memory,
 2 x 36GB SCSI disks,
 1 x PCI SCSI RAID controller,
 8 x PCI Fibre Channel controllers,
 1 x PCI Ethernet 10/100/1000Mb controller

Storage
USS2200/RS2000 & CX200
 728 x 18GB + 26 x 73GB
 Hot-Pluggable,
 External Fibre Channel disks,
 15 x FC RAID controllers

Figure 0.2: Priced Configuration



Clients (each of 8)
ES3020L Server
 2 x 2.4GHz Intel® Xeon™ Processor
 w/ 512KB L2 cache,
 533MHz FSB,
 2 GB memory,
 1 x 18GB 15Krpm disk,
 2 Inbuilt 10/100/1000Mb Ethernet controllers

ES7000 Aries 420 Enterprise Server
 16 x 1.5GHz Intel® Itanium® 2 Processor w/ 6MB iL3 cache,
 128 GB memory,
 2 x 36GB SCSI disks,
 1 x PCI SCSI RAID controller,
 8 x PCI Fibre Channel controllers,
 1 x PCI Ethernet 10/100/1000Mb controller

Storage
USS2200/RS2000 & CX200
 728 x 18GB + 26 x 73GB
 Hot-Pluggable,
 External Fibre Channel disks,
 15 x 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 programs that define, create, and populate the Oracle Database 10g Enterprise Edition database.

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 the Oracle database according to the data in Table 4.3. The Oracle 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, which was independently audited.

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)

The above disclosure 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 of 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).

The client application processes submitted delivery transactions to server software running on the client machines. These delivery servers were responsible for processing queued deliveries to submit to the database server.

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

For conventional locking schemes, isolation should be tested as described below. Systems that implement other isolation schemes may require different validation techniques. It is the responsibility of the test sponsor to disclose those techniques and the tests for them. If isolation schemes other than conventional locking are used, it is permissible to implement these tests differently provided full details are disclosed. (Examples of different validation techniques are shown in Isolation Test 7, Clause 3.4.2.7).

3.4.1. Isolation Test 1

This test demonstrates isolation for read-write conflicts of Order-Status and New-Order transactions.

Performed the following steps:

1. An Order-Status transaction T0 was executed for a randomly selected customer, and the order returned was noted. T0 was committed.
2. A New-Order transaction T1 was started for the same customer used in T0. T1 was stopped prior to COMMIT.
3. An Order-Status transaction T2 was started for the same customer used in T1. T2 completed and was committed without being blocked by T1. T2 returned the same order that T0 had returned.
4. T1 was allowed to complete and was committed.
5. An Order-Status transaction T3 was started for the same customer used in T1. T3 returned the order inserted by T1.

This result demonstrates serialization of T2 before T1. T3 returned the order inserted by T1.

3.4.2. Isolation Test 2

This test demonstrates isolation for read-write conflicts of Order-Status and New-Order transactions when the New-Order transaction is ROLLED BACK.

Performed the following steps:

1. An Order-Status transaction T0 was executed for a randomly selected customer, and the order returned was noted. T0 was committed.

2. A New-Order transaction T1 with an invalid item number, was started for the same customer used in T0. T1 was stopped immediately prior to ROLLBACK.
3. An Order-Status transaction T2 was started for the same customer used in T1. T2 completed and was committed without being blocked by T1. T2 returned the same order that T0 had returned.
4. T1 was allowed to ROLLBACK.
5. An Order-Status transaction T3 was started for the same customer used in T1. T3 returned the same order that T0 had returned.

3.4.3. Isolation Test 3

This test demonstrates isolation for write-write conflicts of two New-Order transactions.

Performed the following steps:

1. Start a New-Order transaction T1.
2. Stop transaction T1 immediately prior to COMMIT.
3. Start another New-Order transaction T2 for the same customer as T1.
4. Verify that transaction T2 waits.
5. Allow transaction T1 to complete. T2 should now complete.

Verify that the order number returned for T2 is one greater than the order number for T1. Verify that the value of D_NEXT_O_ID reflects the results of both T1 and T2, i.e., it has been incremented by two and is one greater than the order number for T2.

3.4.4. Isolation Test 4

This test demonstrates isolation for write-write conflicts of two New-Order transactions when one transaction is ROLLED BACK.

Performed the following steps:

1. The D_NEXT_O_ID of a randomly selected district was retrieved.
2. A New-Order transaction T1 which contains an invalid item number, was started for a randomly selected customer with the district used in step 1. T1 was stopped immediately prior to ROLLBACK.
3. Started another New-Order transaction T2 for the same customer as T1. Transaction T2 waited.
4. T1 was allowed to roll back. T2 completed and was committed.

The order number returned by T2 was the same as the D_NEXT_O_ID retrieved in step 1.

The D_NEXT_O_ID of the same district was retrieved again. It had been incremented by one (greater than the order number returned by T2).

3.4.5. Isolation Test 5

This test demonstrates isolation for write-write conflicts of Payment and Delivery transactions. Perform the following steps:

Performed the following steps:

1. A query was executed to find out the customer who would be updated by the next delivery transaction for a randomly selected warehouse and district.
2. The C_BALANCE of the customer found in step 1 was retrieved.

3. Started a Delivery transaction T1 for the same warehouse used in step 1. The T1 transaction was stopped immediately prior to COMMIT.
4. Started a Payment transaction T2 for the same customer found in step 1. T2 waited.
5. Transaction T1 was allowed to complete. Now T2 completed and committed.

Retrieved C_BALANCE and verified. It reflected the results of both T1 and T2.

3.4.6. Isolation Test 6

This test demonstrates isolation for write-write conflicts of Payment and Delivery transactions when the Delivery transaction is ROLLED BACK. Perform the following steps:

Performed the following steps:

1. A query was executed to find out the customer who would be updated by the next delivery transaction for a randomly selected warehouse and district.
2. The C_BALANCE of the customer found in step 1 was retrieved.
3. Started a Delivery transaction T1 for the same warehouse used in step 1. Stopped transaction T1 immediately prior to ROLLBACK.
4. Started a Payment transaction T2 for the same customer found in step 1. T2 waited.
5. Transaction T1 was allowed to ROLLBACK. Now T2 completed and committed.

Retrieved C_BALANCE and verified. It reflected the results of both T1 and T2.

3.4.7. Isolation Test 7

This test demonstrates repeatable reads for the New-Order transaction while an interactive transaction updates the price of an item. Given two random item number x and y, perform the following steps:

1. Started a transaction T1. Queried I_PRICE from items x and y. Transaction T1 was committed.
2. Start a New-Order transaction T2 for a group of items including item x twice and item y.
3. Transaction T2 was stopped after querying the price of item x a first time and immediately before querying the prices of item y and of item x a second time.
4. Started a transaction T3 to increase the price of items x and y by 10 percent.
5. Transaction T3 has completed and has been COMMITTED.
6. Continued transaction T2 and the price of items x (the second time) and y were retrieved again. These prices matched the values read by transaction T1.
7. Transaction T2 was committed.

The prices of items x and y were retrieved again. The values matched the values set by T3. Execution followed Case D of Clause 3.4.2.7.

3.4.8. Isolation Test 8

This test demonstrates phantom protection between New-Order and Delivery transactions.

Performed the following steps:

1. The NO_D_ID of all NEW_ORDER rows for a randomly selected warehouse and district was changed to 11 and were committed.
2. A delivery transaction T1 was started for the selected warehouse.

3. Transaction T1 was stopped immediately after reading the NEW_ORDER table for the selected warehouse and district. No qualifying row was found.
4. A New-Order transaction T2 was started for the same warehouse and district. T2 completed and was committed without being blocked by T1.
5. T1 completed and was committed.
6. The NO_D_ID of all NEW_ORDER rows for the selected warehouse and district was restored to the original value. The changes were committed.

Execution followed Case B of Clause 3.4.2.8.

3.4.9. Isolation Test 9

This test demonstrates phantom protection between New-Order and Order-Status transactions.

Performed the following steps:

1. An Order-Status transaction T1 was started for a randomly selected customer.
2. Transaction T1 was stopped immediately after reading the ORDER table for the selected customer. The most recent order for that customer was found.
3. A New-Order transaction T2 was started for the same customer. T2 completed and was committed without being blocked by T1.
4. Transaction T1 was resumed and the ORDER table was read again to determine the most recent order for the same customer. The order found was the same as the one found in step 2.
5. T1 completed and was committed.

Execution followed Case B of Clause 3.4.2.9.

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 also performed with 220,000 emulated users, but running at 20% of full load. 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 220,000 emulated users to demonstrate durability in the case of loss of a log disk and loss of a data disk:

1. One data LUN of the database was backed up to extra space on a backup volume.
2. The Oracle database was started up. 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 all users at 20% of full load. 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 Oracle.
5. After 5 additional minutes of operation, a hot-pluggable data disk was removed from the data LUN.

6. Windows Server 2003 and Oracle encountered IO errors due to the missing disk and recorded these errors in the system event log and Oracle alert log, respectively. The RTEs also recorded errors.
7. The RTEs and then the clients were stopped.
8. 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 LUN. Partitions were made using Diskpart on the new LUN.
9. Data files from the backup LUN (step1) were restored on the new LUN. The missing log drive was not replaced.
10. The SUT was restarted, Oracle was then restarted and began the recovery process, which recovered all committed transactions to the database from the redo log file.
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 shut down.
6. Power was restored to the SUT, the system rebooted, the Oracle database was restarted, and automatic database recovery was performed. The database recovery used the transaction log to reapply all committed transactions and rollback any (in progress) uncommitted transactions, so that the database disks were correct.
7. After recovery finished, Consistency Condition 3 of Clause 3.3.2.3 (no gaps in NO_O_ID) was executed to verify that the database was consistent.
8. Finally, step 1 was repeated to determine the total number of orders (count2). Count2 minus count1 was not less than the number of committed New-Order records in the “success” file from the drivers.
9. The contents of the “success” files on the drivers were sampled to verify that the records in the “success” file for committed New-Order transactions had corresponding records in the ORDER table.

4.

Clause 4: Scaling & Database Population

4.1. Initial Cardinality of Tables

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

The TPC-C database for this test was configured with 24,000 warehouses. The cardinality of each table in the database is listed in Table 4.1

Table 4.1: Initial Cardinality of Database Table

Table	Occurrences
Warehouse	24,000
District	240,000
Customer	720,000,000
History	720,000,000
Order	720,000,000
New-Order	216,000,000
Order-Line	7,200,996,928
Stock	2,400,000,000
Item	100,000

500 rows of the warehouse table were inactive while executing the measurement run.

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)	0
C_LAST (Run)	85

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)

Table 4.3 lists the distribution of the database over 728 18GB disks and the transaction log over 26 mirrored 73GB disks for the benchmark configuration. In addition, there were two mirrored 36GB disks in the host server containing Windows Server 2003, Datacenter Edition for 64-bit Itanium-based Systems, and Oracle 10g Database code plus the paging file. The tested and priced disk configurations were identical, except for the changes noted in Section 0.7.

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

A statement must be provided that describes: (8.1.5.3)

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

Oracle Database 10g Enterprise Edition is a relational DBMS.

The client software interfaced to the Oracle database using embedded SQL code via OCI (Oracle Call Interface). For details, see Appendix A.

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 Configuration

External Disk Configuration							
HBA	USS	Logical Unit #	Drive #	RAID Level	Striping	Size (GB)	Database files
1, port 1	1	LUN1	1	0	7 striped	119.62	icust2_0_0, cust_0_0, stok_0_0, stok_0_96, ordr_0_0, iordr2_0_0, temp_0_0
1, port 1	1	LUN2	2	0	7 striped	119.62	icust2_0_1, cust_0_1, stok_0_1, stok_0_97, ordr_0_1, iordr2_0_1, temp_0_1
1, port 1	1	LUN3	3	0	7 striped	119.62	icust2_0_2, cust_0_2, stok_0_2, stok_0_98, ordr_0_2, iordr2_0_2, temp_0_2
1, port 1	1	LUN4	4	0	7 striped	119.62	icust2_0_3, cust_0_3, stok_0_3, stok_0_99, ordr_0_3, iordr2_0_3, iware_0_0, temp_0_3
1, port 1	1	LUN5	5	0	7 striped	119.62	icust2_0_4, cust_0_4, stok_0_100, ordr_0_4, iordr2_0_4, hist_0_0, temp_0_4
1, port 1	1	LUN6	6	0	7 striped	119.62	icust2_0_5, cust_0_5, stok_0_101, ordr_0_5, iordr2_0_5, hist_0_1, temp_0_5
1, port 1	1	LUN7	7	0	7 striped	119.62	icust2_0_6, cust_0_6, stok_0_102, ordr_0_6, iordr2_0_6, hist_0_2, temp_0_6
1, port 1	1	LUN8	8	0	7 striped	119.62	icust2_0_7, cust_0_7, stok_0_29, stok_0_103, ordr_0_7, iordr2_0_7, hist_0_3, temp_0_7
1, port 2	2	LUN1	9	0	7 striped	119.62	icust2_0_8, cust_0_8, stok_0_71, stok_0_188, ordr_0_8, iordr2_0_8, hist_0_4, temp_0_8
1, port 2	2	LUN2	10	0	7 striped	119.62	icust2_0_9, cust_0_9, stok_0_9, stok_0_105, ordr_0_9, iordr2_0_9, hist_0_5, temp_0_9
1, port 2	2	LUN3	11	0	7 striped	119.62	icust2_0_10, cust_0_10, stok_0_106, ordr_0_10, iordr2_0_10, hist_0_6, temp_0_10
1, port 2	2	LUN4	12	0	7 striped	119.62	icust2_0_11, cust_0_11, stok_0_107, ordr_0_11, iordr2_0_11, hist_0_7, temp_0_11
1, port 2	2	LUN5	13	0	7 striped	119.62	icust2_0_12, cust_0_12, stok_0_108, ordr_0_12, iordr2_0_12, hist_0_8, temp_0_12
1, port 2	2	LUN6	14	0	7 striped	119.62	icust2_0_13, cust_0_13, stok_0_24, stok_0_187, ordr_0_13, iordr2_0_13, hist_0_9, temp_0_13
1, port 2	2	LUN7	15	0	7 striped	119.62	icust2_0_14, cust_0_14, stok_0_34, stok_0_110, ordr_0_14, iordr2_0_14, hist_0_10, temp_0_14
1, port 2	2	LUN8	16	0	7 striped	119.62	icust2_0_15, cust_0_15, stok_0_72, stok_0_111, ordr_0_15, iordr2_0_15, hist_0_11, temp_0_15
2, port 1	3	LUN1	17	0	8 striped	136.71	icust2_0_16, cust_0_16, stok_0_23, stok_0_112, ordr_0_16, iordr2_0_16, istok_0_0, temp_0_16
2, port 1	3	LUN2	18	0	8 striped	136.71	icust2_0_17, cust_0_17, stok_0_47, stok_0_113, ordr_0_17, iordr2_0_17, temp_0_17
2, port 1	3	LUN3	19	0	6 striped	102.53	icust2_0_18, cust_0_18, stok_0_114, ordr_0_18, iordr2_0_18, istok_0_2, temp_0_18
2, port 1	3	LUN4	20	0	6 striped	102.53	icust2_0_19, cust_0_19, stok_0_28, stok_0_115, ordr_0_19, iordr2_0_19, temp_0_19
2, port 1	3	LUN5	21	0	8 striped	136.71	icust2_0_20, cust_0_20, stok_0_70, stok_0_116, ordr_0_20, iordr2_0_20, istok_0_4, temp_0_20
2, port 1	3	LUN6	22	0	8 striped	136.71	icust2_0_21, cust_0_21, stok_0_21, stok_0_117, ordr_0_21, iordr2_0_21, temp_0_21
2, port 1	3	LUN7	23	0	6 striped	102.53	icust2_0_22, cust_0_22, stok_0_22, stok_0_124, ordr_0_22, iordr2_0_22, icust1_0_0, temp_0_22
2, port 1	3	LUN8	24	0	6 striped	102.53	icust2_0_23, cust_0_23, stok_0_16, stok_0_119, ordr_0_23, iordr2_0_23, temp_0_23
2, port 2	4	LUN1	25	0	7 striped	119.62	icust2_0_24, cust_0_24, stok_0_13, stok_0_120, ordr_0_24, iordr2_0_24, icust1_0_1, temp_0_24
2, port 2	4	LUN2	26	0	7 striped	119.62	icust2_0_25, cust_0_25, stok_0_25, stok_0_163, ordr_0_25, iordr2_0_25, temp_0_25
2, port 2	4	LUN3	27	0	8 striped	136.71	icust2_0_26, cust_0_26, stok_0_26, stok_0_122, ordr_0_26, iordr2_0_26, icust1_0_2, temp_0_26

Table 4.3: Disk Configuration (Continued)

External Disk Configuration							
HBA	USS	Logical Unit #	Drive #	RAID Level	Striping	Size (GB)	Database files
2, port 2	4	LUN4	28	0	7 striped	119.62	icust2_0_27, cust_0_27, NA-stok_0_27, stok_0_175, ordr_0_27, iordr2_0_27, temp_0_27
2, port 2	4	LUN5	29	0	6 striped	102.53	icust2_0_28, cust_0_28, stok_0_19, stok_0_118, ordr_0_28, iordr2_0_28, icust1_0_3, temp_0_28
2, port 2	4	LUN6	30	0	6 striped	102.53	icust2_0_29, cust_0_29, stok_0_7, stok_0_125, ordr_0_29, iordr2_0_29, temp_0_29
2, port 2	4	LUN7	31	0	6 striped	102.53	icust2_0_30, cust_0_30, stok_0_30, stok_0_126, ordr_0_30, iordr2_0_30, ware_0_0, temp_0_30
2, port 2	4	LUN8	32	0	9 striped	153.80	icust2_0_31, cust_0_31, stok_0_31, stok_0_127, ordr_0_31, iordr2_0_31, temp_0_31
3, port 1	5	LUN1	33	0	7 striped	119.62	icust2_0_32, cust_0_32, stok_0_32, stok_0_128, ordr_0_32, iordr2_0_32, dist_0_0, temp_0_32
3, port 1	5	LUN2	34	0	6 striped	102.53	icust2_0_33, cust_0_33, NA-stok_0_33, stok_0_129, ordr_0_33, iordr2_0_33, temp_0_33
3, port 1	5	LUN3	35	0	9 striped	153.80	icust2_0_34, cust_0_34, stok_0_14, stok_0_130, ordr_0_34, iordr2_0_34, idist_0_0, temp_0_34
3, port 1	5	LUN4	36	0	7 striped	119.62	icust2_0_35, cust_0_35, stok_0_35, stok_0_131, ordr_0_35, iordr2_0_35, item_0_0, temp_0_35
3, port 1	5	LUN5	37	0	7 striped	119.62	icust2_0_36, cust_0_36, stok_0_36, stok_0_132, ordr_0_36, iordr2_0_36, iitem_0_0, temp_0_36
3, port 1	5	LUN6	38	0	7 striped	119.62	icust2_0_37, cust_0_37, stok_0_37, stok_0_133, ordr_0_37, iordr2_0_37, hist_0_12, temp_0_37
3, port 1	5	LUN7	39	0	6 striped	102.53	icust2_0_38, cust_0_38, stok_0_38, stok_0_134, ordr_0_38, iordr2_0_38, hist_0_13, temp_0_38
3, port 1	5	LUN8	40	0	7 striped	119.62	icust2_0_39, cust_0_39, stok_0_39, stok_0_135, ordr_0_39, iordr2_0_39, hist_0_14, temp_0_39
3, port 2	6	LUN1	41	0	7 striped	119.62	icust2_0_40, cust_0_40, stok_0_40, stok_0_136, ordr_0_40, iordr2_0_40, hist_0_15, temp_0_40
3, port 2	6	LUN2	42	0	7 striped	119.62	icust2_0_41, cust_0_41, stok_0_41, stok_0_137, ordr_0_41, iordr2_0_41, hist_0_16, temp_0_41
3, port 2	6	LUN3	43	0	7 striped	119.62	icust2_0_42, cust_0_42, stok_0_42, stok_0_138, ordr_0_42, iordr2_0_42, hist_0_17, temp_0_42
3, port 2	6	LUN4	44	0	7 striped	119.62	icust2_0_43, cust_0_43, stok_0_43, stok_0_139, ordr_0_43, iordr2_0_43, hist_0_18, temp_0_43
3, port 2	6	LUN5	45	0	5 striped	85.44	icust2_0_44, cust_0_44, stok_0_44, stok_0_140, ordr_0_44, iordr2_0_44, hist_0_19, temp_0_44
3, port 2	6	LUN6	46	0	5 striped	85.44	icust2_0_45, cust_0_45, stok_0_141, ordr_0_45, iordr2_0_45, hist_0_20, temp_0_45
3, port 2	6	LUN7	47	0	9 striped	153.80	icust2_0_46, cust_0_46, stok_0_18, stok_0_142, ordr_0_46, iordr2_0_46, hist_0_21, temp_0_46
3, port 2	6	LUN8	48	0	9 striped	153.80	icust2_0_47, cust_0_47, stok_0_17, stok_0_143, ordr_0_47, iordr2_0_47, hist_0_22, temp_0_47
4, port 1	7	LUN1	49	0	7 striped	119.62	icust2_0_48, cust_0_48, stok_0_48, stok_0_144, ordr_0_48, iordr2_0_48, hist_0_23, temp_0_48
4, port 1	7	LUN2	50	0	7 striped	119.62	icust2_0_49, cust_0_49, stok_0_49, stok_0_145, ordr_0_49, iordr2_0_49, temp_0_49
4, port 1	7	LUN3	51	0	7 striped	119.62	icust2_0_50, cust_0_50, stok_0_50, stok_0_146, ordr_0_50, iordr2_0_50, istok_0_12, temp_0_50
4, port 1	7	LUN4	52	0	7 striped	119.62	icust2_0_51, cust_0_51, stok_0_51, stok_0_147, ordr_0_51, iordr2_0_51, temp_0_51
4, port 1	7	LUN5	53	0	7 striped	119.62	icust2_0_52, cust_0_52, stok_0_52, stok_0_148, ordr_0_52, iordr2_0_52, istok_0_15, temp_0_52
4, port 1	7	LUN6	54	0	7 striped	119.62	icust2_0_53, cust_0_53, stok_0_53, stok_0_149, ordr_0_53, iordr2_0_53, temp_0_53
4, port 1	7	LUN7	55	0	7 striped	119.62	icust2_0_54, cust_0_54, stok_0_54, stok_0_150, ordr_0_54, iordr2_0_54, istok_0_17, temp_0_54

Table 4.3: Disk Configuration (Continued)

External Disk Configuration							
HBA	USS	Logical Unit #	Drive #	RAID Level	Striping	Size (GB)	Database files
4, port 1	7	LUN8	56	0	7 striped	119.62	icust2_0_55, cust_0_55, stok_0_55, stok_0_151, ordr_0_55, iordr2_0_55, temp_0_55
4, port 2	8	LUN1	57	0	7 striped	119.62	icust2_0_56, cust_0_56, stok_0_56, stok_0_152, ordr_0_56, iordr2_0_56, istok_0_19, temp_0_56
4, port 2	8	LUN2	58	0	7 striped	119.62	icust2_0_57, cust_0_57, stok_0_57, stok_0_153, ordr_0_57, iordr2_0_57, temp_0_57
4, port 2	8	LUN3	59	0	7 striped	119.62	icust2_0_58, cust_0_58, stok_0_58, stok_0_164, ordr_0_58, iordr2_0_58, istok_0_21, temp_0_58
4, port 2	8	LUN4	60	0	7 striped	119.62	icust2_0_59, cust_0_59, stok_0_59, stok_0_155, ordr_0_59, iordr2_0_59, extra_18, temp_0_59
4, port 2	8	LUN5	61	0	7 striped	119.62	icust2_0_60, cust_0_60, stok_0_60, stok_0_156, ordr_0_60, iordr2_0_60, istok_0_23, temp_0_60
4, port 2	8	LUN6	62	0	7 striped	119.62	icust2_0_61, cust_0_61, stok_0_61, stok_0_157, ordr_0_61, iordr2_0_61, extra_19, temp_0_61
4, port 2	8	LUN7	63	0	7 striped	119.62	icust2_0_62, cust_0_62, stok_0_62, stok_0_158, ordr_0_62, iordr2_0_62, istok_0_13, temp_0_62
4, port 2	8	LUN8	64	0	7 striped	119.62	icust2_0_63, cust_0_63, stok_0_63, stok_0_159, ordr_0_63, iordr2_0_63, extra_20, temp_0_63
5, port 1	9	LUN1	65	0	9 striped	153.80	icust2_0_64, cust_0_64, stok_0_64, stok_0_160, ordr_0_64, iordr2_0_64, istok_0_14, temp_0_64
5, port 1	9	LUN2	66	0	7 striped	119.62	icust2_0_65, cust_0_65, stok_0_65, stok_0_161, ordr_0_65, iordr2_0_65, extra_21, temp_0_65
5, port 1	9	LUN3	67	0	6 striped	102.53	icust2_0_66, cust_0_66, stok_0_66, NA-stok_0_162, ordr_0_66, iordr2_0_66, istok_0_16, temp_0_66
5, port 1	9	LUN4	68	0	6 striped	102.53	icust2_0_67, cust_0_67, stok_0_67, stok_0_121, ordr_0_67, iordr2_0_67, extra_22, temp_0_67
5, port 1	9	LUN5	69	0	7 striped	119.62	icust2_0_68, cust_0_68, stok_0_68, stok_0_154, ordr_0_68, iordr2_0_68, istok_0_18, temp_0_68
5, port 1	9	LUN6	70	0	7 striped	119.62	icust2_0_69, cust_0_69, stok_0_69, stok_0_165, ordr_0_69, iordr2_0_69, extra_23, temp_0_69
5, port 1	9	LUN7	71	0	7 striped	119.62	icust2_0_70, cust_0_70, stok_0_20, stok_0_166, ordr_0_70, iordr2_0_70, istok_0_20, temp_0_70
5, port 1	9	LUN8	72	0	7 striped	119.62	icust2_0_71, cust_0_71, stok_0_8, stok_0_167, ordr_0_71, iordr2_0_71, extra_24, temp_0_71
5, port 2	10	LUN1	73	0	8 striped	136.71	icust2_0_72, cust_0_72, stok_0_15, stok_0_168, ordr_0_72, iordr2_0_72, istok_0_22, temp_0_72
5, port 2	10	LUN2	74	0	9 striped	153.80	icust2_0_73, cust_0_73, stok_0_73, stok_0_169, ordr_0_73, iordr2_0_73, extra_25, temp_0_73
5, port 2	10	LUN3	75	0	7 striped	119.62	icust2_0_74, cust_0_74, stok_0_74, stok_0_170, ordr_0_74, iordr2_0_74, istok_0_1, temp_0_74
5, port 2	10	LUN4	76	0	7 striped	119.62	icust2_0_75, cust_0_75, stok_0_75, stok_0_171, ordr_0_75, iordr2_0_75, extra_26, temp_0_75
5, port 2	10	LUN5	77	0	7 striped	119.62	icust2_0_76, cust_0_76, stok_0_76, stok_0_172, ordr_0_76, iordr2_0_76, istok_0_3, temp_0_76
5, port 2	10	LUN6	78	0	5 striped	85.44	icust2_0_77, cust_0_77, stok_0_77, stok_0_173, ordr_0_77, iordr2_0_77, extra_27, temp_0_77
5, port 2	10	LUN7	79	0	6 striped	102.53	icust2_0_78, cust_0_78, stok_0_78, stok_0_174, ordr_0_78, iordr2_0_78, istok_0_5, temp_0_78
5, port 2	10	LUN8	80	0	7 striped	119.62	icust2_0_79, cust_0_79, stok_0_79, stok_0_123, ordr_0_79, iordr2_0_79, extra_28, temp_0_79
6, port 1	11	LUN1	81	0	7 striped	119.62	icust2_0_80, cust_0_80, stok_0_80, stok_0_176, ordr_0_80, iordr2_0_80, istok_0_7, temp_0_80
6, port 1	11	LUN2	82	0	7 striped	119.62	icust2_0_81, cust_0_81, stok_0_81, stok_0_177, ordr_0_81, iordr2_0_81, extra_29, temp_0_81
6, port 1	11	LUN3	83	0	7 striped	119.62	icust2_0_82, cust_0_82, stok_0_82, stok_0_178, ordr_0_82, iordr2_0_82, istok_0_9, temp_0_82

Table 4.3: Disk Configuration (Continued)

External Disk Configuration							
HBA	USS	Logical Unit #	Drive #	RAID Level	Striping	Size (GB)	Database files
6, port 1	11	LUN4	84	0	7 striped	119.62	icust2_0_83, cust_0_83, stok_0_83, stok_0_179, ordr_0_83, iordr2_0_83, extra_30, temp_0_83
6, port 1	11	LUN5	85	0	7 striped	119.62	icust2_0_84, cust_0_84, stok_0_84, stok_0_180, ordr_0_84, iordr2_0_84, istok_0_11, temp_0_84
6, port 1	11	LUN6	86	0	7 striped	119.62	icust2_0_85, cust_0_85, stok_0_85, stok_0_181, ordr_0_85, iordr2_0_85, extra_31, temp_0_85
6, port 1	11	LUN7	87	0	7 striped	119.62	icust2_0_86, cust_0_86, stok_0_86, stok_0_182, ordr_0_86, iordr2_0_86, istok_0_6, temp_0_86
6, port 1	11	LUN8	88	0	7 striped	119.62	icust2_0_87, cust_0_87, stok_0_87, stok_0_183, ordr_0_87, iordr2_0_87, extra_32, temp_0_87
6, port 2	12	LUN1	89	0	6 striped	102.53	icust2_0_88, cust_0_88, stok_0_88, NA-stok_0_184, ordr_0_88, iordr2_0_88, istok_0_8, temp_0_88
6, port 2	12	LUN2	90	0	6 striped	102.53	icust2_0_89, cust_0_89, stok_0_89, NA-stok_0_185, ordr_0_89, iordr2_0_89, extra_33, temp_0_89
6, port 2	12	LUN3	91	0	7 striped	119.62	icust2_0_90, cust_0_90, stok_0_90, NA-stok_0_186, ordr_0_90, iordr2_0_90, istok_0_10, temp_0_90
6, port 2	12	LUN4	92	0	9 striped	153.80	icust2_0_91, cust_0_91, stok_0_91, stok_0_109, ordr_0_91, iordr2_0_91, extra_34, temp_0_91
6, port 2	12	LUN5	93	0	7 striped	119.62	icust2_0_92, cust_0_92, stok_0_92, stok_0_104, ordr_0_92, iordr2_0_92, NA_system_001, temp_0_92
6, port 2	12	LUN6	94	0	7 striped	119.62	icust2_0_93, cust_0_93, stok_0_93, stok_0_189, ordr_0_93, iordr2_0_93, NA_control_001, temp_0_93
6, port 2	12	LUN7	95	0	7 striped	119.62	icust2_0_94, cust_0_94, stok_0_94, stok_0_190, ordr_0_94, iordr2_0_94, NA_control_002, temp_0_94, aucs.df, nord_0_1
6, port 2	12	LUN8	96	0	7 striped	119.62	iordr2_0_95, NA_aux.df, temp_0_95, system_001, control_001, control_002, roll1
7, port 1	13	LUN1	97	0	28 striped	478.51	stok_0_33, stok_0_10, stok_0_12, stok_0_162, stok_0_6, stok_0_5, stok_0_45, ordr_0_98, dist_0_1
7, port 1	13	LUN2	98	0	28 striped	478.51	stok_0_46, nord_0_0, stok_0_4, stok_0_11, stok_0_186, stok_0_184, stok_0_185, stok_0_27, ordr_0_97, ware_0_1
8, port 1	cx200	LUN1	99	1/0	14 striped	466.23	log_1_1, log_1_3
8, port 1	cx200	LUN2	100	1/0	12 striped	362.35	log_1_2, log_1_4

Figure 4.1: ES7000 Server HBA-PCI Slot Map

4x Itanium 2, 1.5GHz	32GB	PCI Bridge-0-1				PCI Bridge-0-0			
		Bus		Bus		Bus		Bus	
		7	6	5	4	7	6	5	4
				FC HBA #8 - Log	FC HBA #7 - USS13			FC HBA #2 - USS3, 4	FC HBA #1 - USS1, 2
		Bus				Bus			
		3	2	1	0	3	2	1	0
		FC HBA #6 - USS11, 12	FC HBA #5 - USS9, 10				Ethernet 1000XT		
				FC HBA #4 - USS7, 8	FC HBA #3 - USS5, 6				SCSI Raid Cntr (boot)
4x Itanium 2, 1.5GHz	32GB								
4x Itanium 2, 1.5GHz	32GB								

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 291,413.

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	0.43	11.66	0.96
Payment	0.40	12.02	0.93
Order Status	0.43	11.73	0.96
Delivery (interactive)	0.28	10.72	0.75
Delivery (deferred)	0.13	9.94	0.20
Stock-Level	0.45	11.22	1.00
Menu	0.29	10.98	0.75

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	18.08
Payment	3.01	3.01	3.08
Order Status	2.01	2.01	2.06
Delivery (interactive)	2.01	2.01	2.08
Stock-Level	2.01	2.01	2.08

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

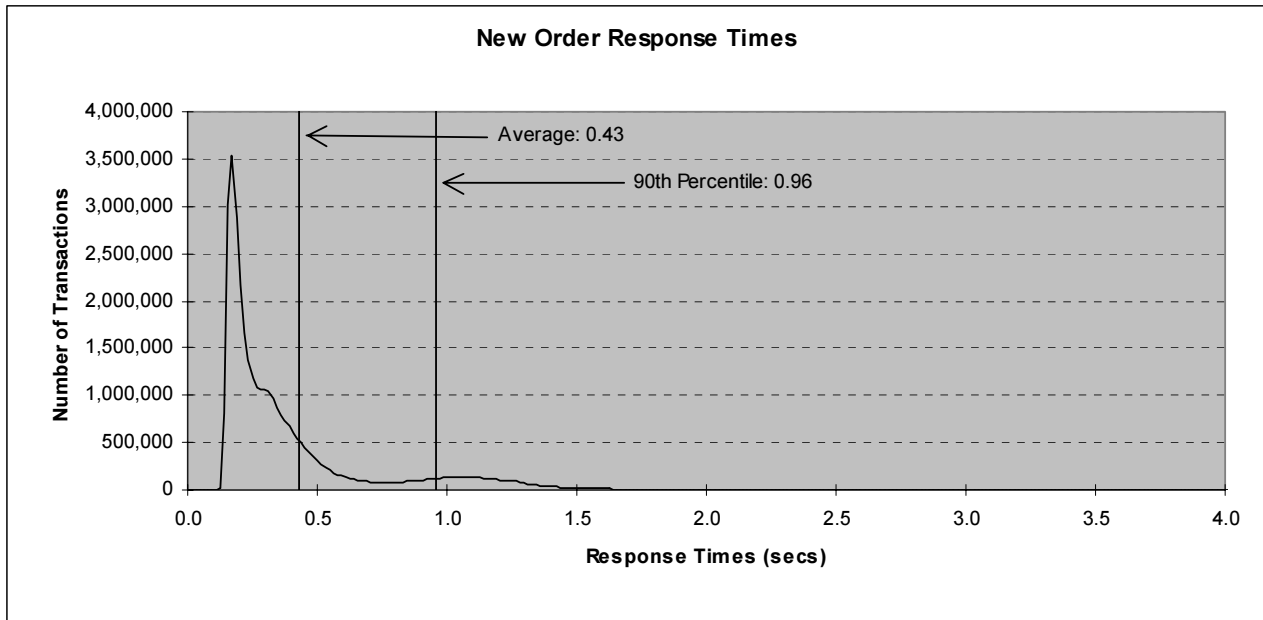


Figure 5.2: Payment Response Time Distribution

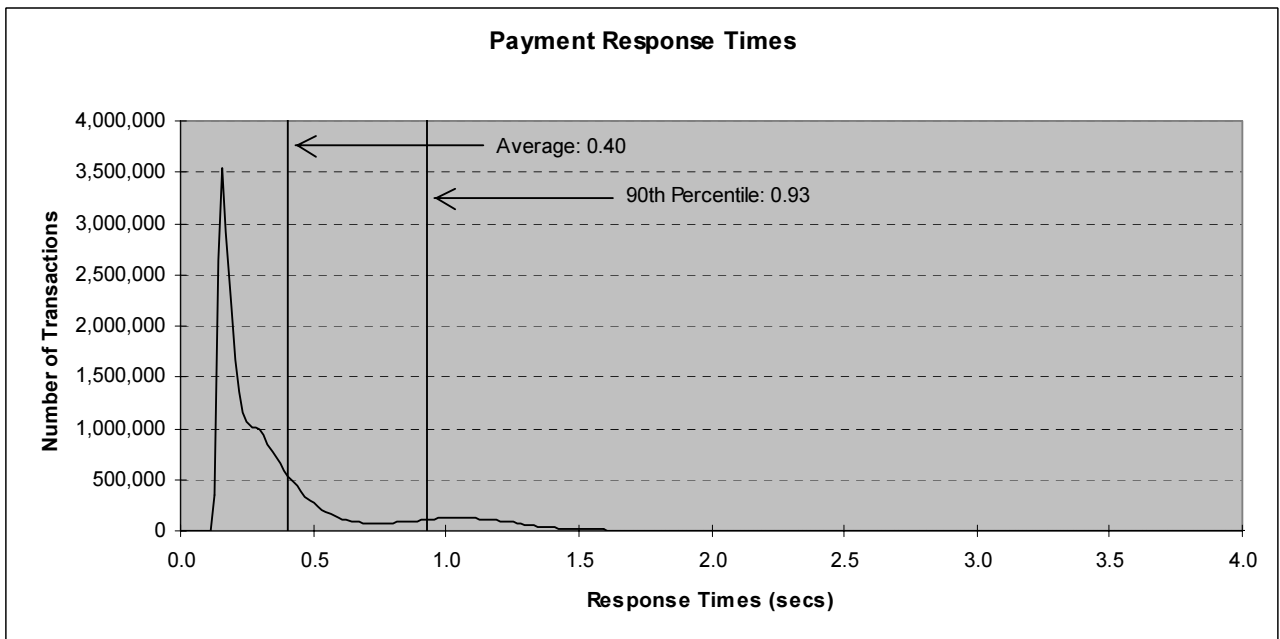


Figure 5.3: Order Status Response Time Distribution

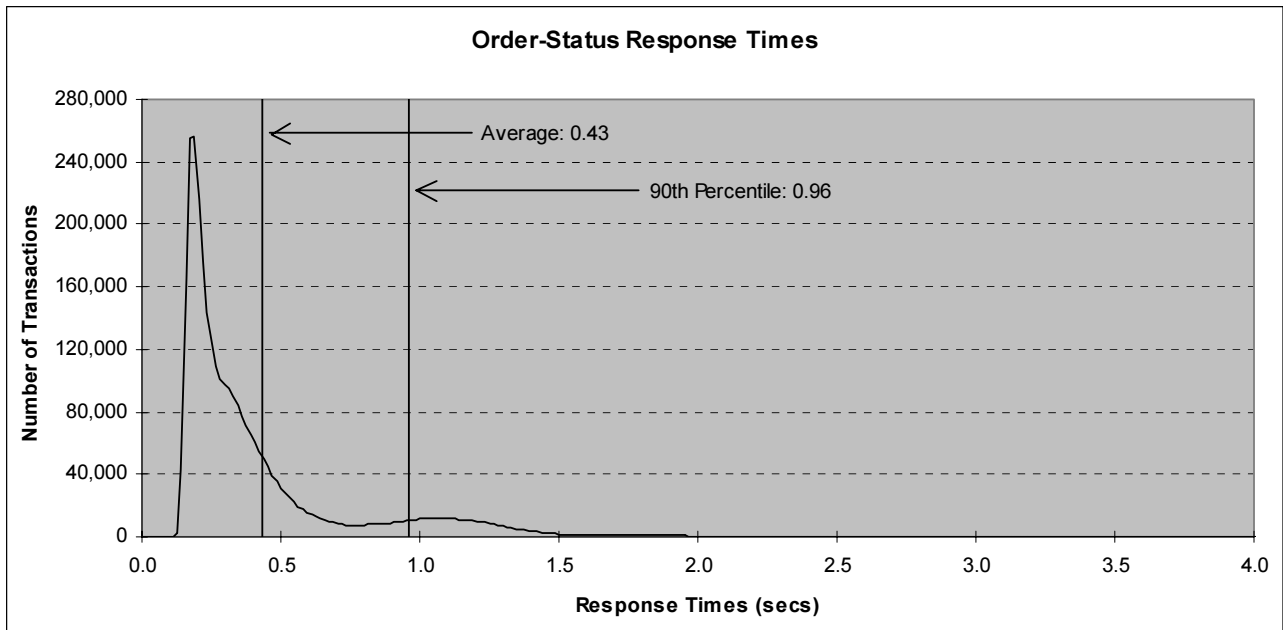


Figure 5.4: Delivery Response Time Distribution

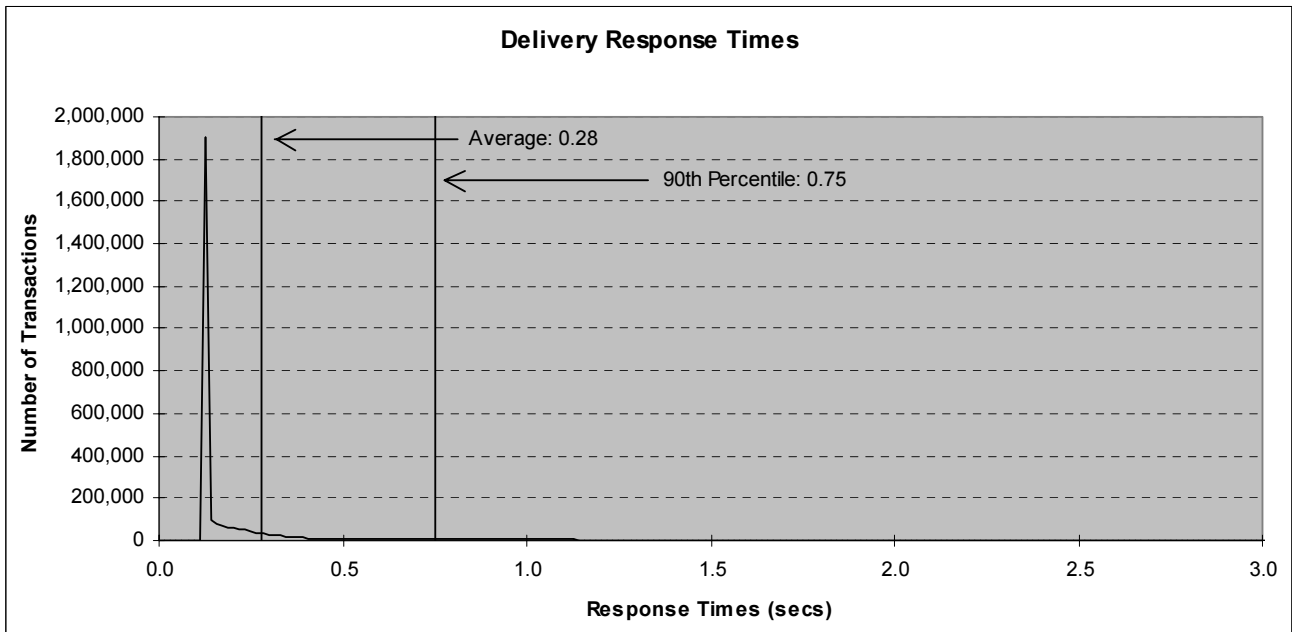
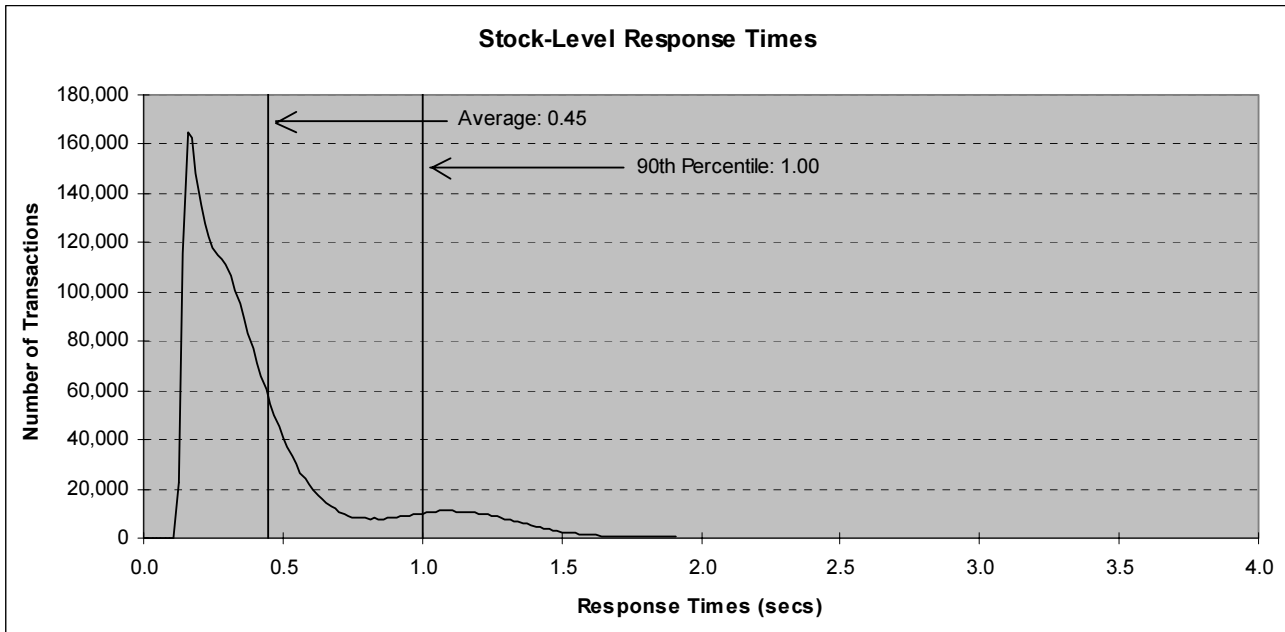


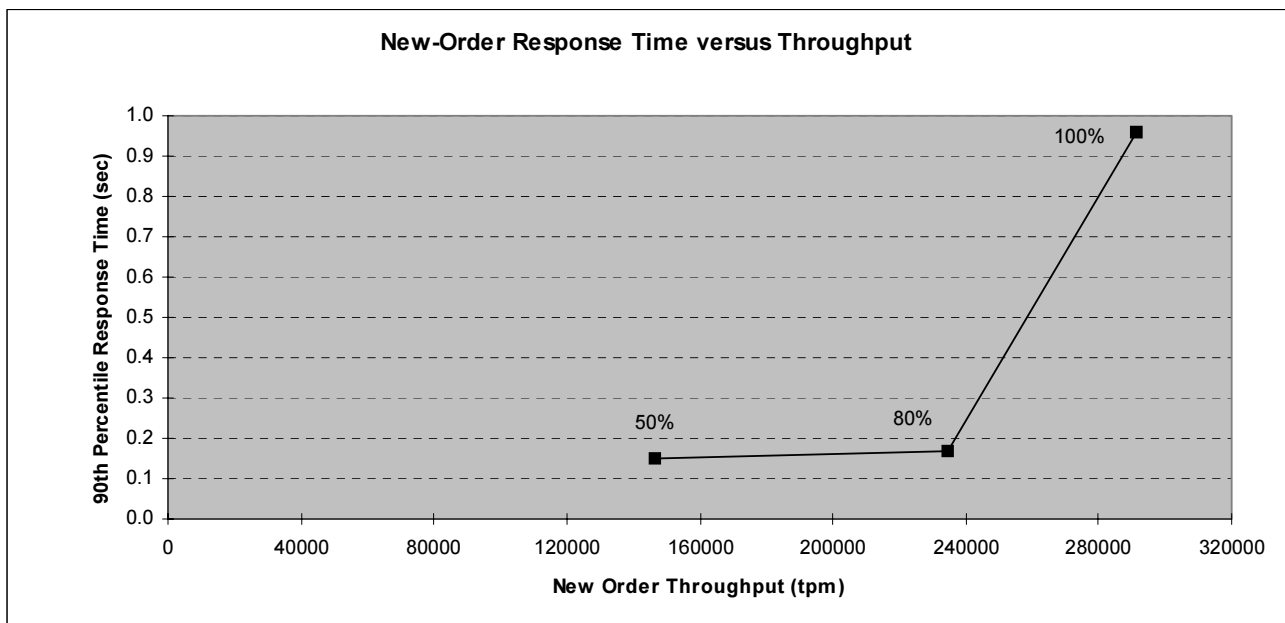
Figure 5.5: Stock Level Response Time Distribution



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)

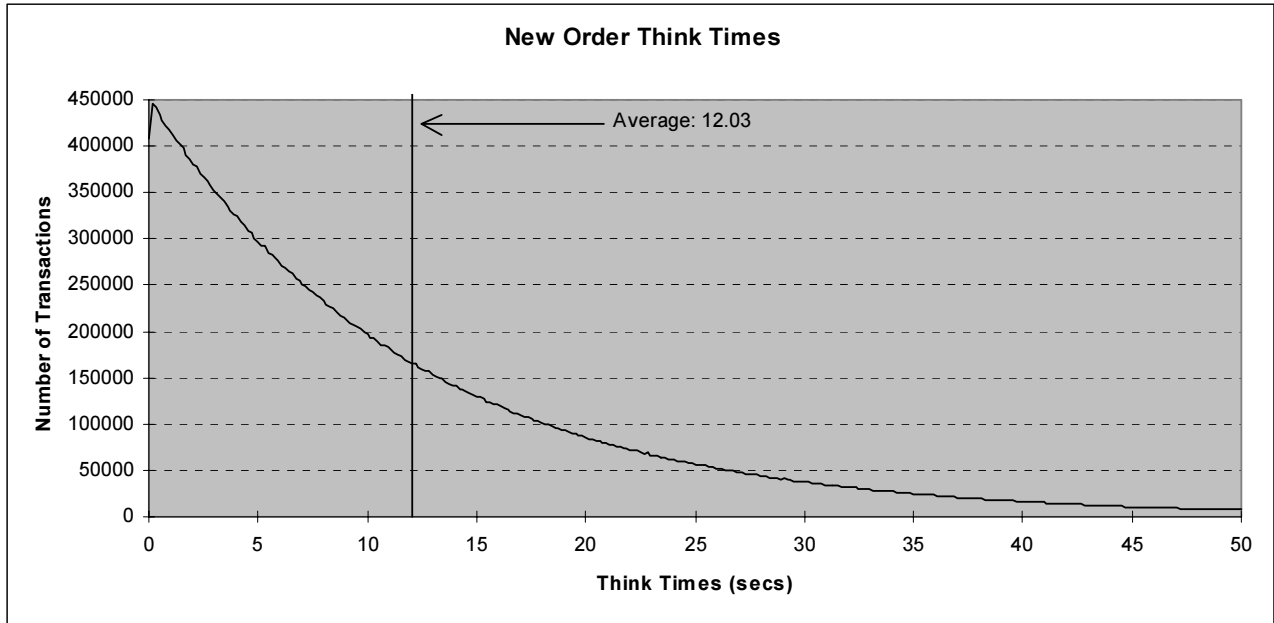
Figure 5.6: New Order Response Time versus Throughput



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)

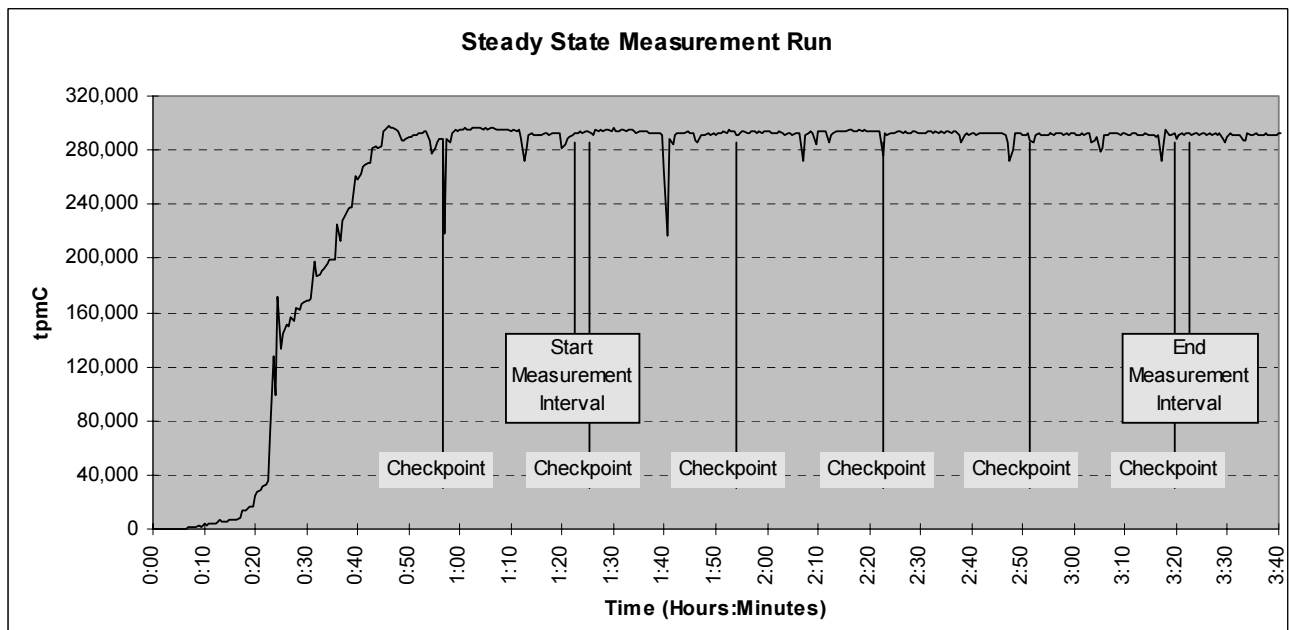
Figure 5.7: New Order Think Time Distribution



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 invokes the Oracle 10g database server, collects the response, and returns the result to the requestor.

To perform checkpoints at specific intervals, the TPCC database log was sized so that log switches could occur at the desired checkpoint interval. Oracle then recorded the start and end of each checkpoint.

At each checkpoint, the Oracle database wrote to disk all database pages in memory that had been updated but not yet physically written to the disk.

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	84.99%
	Remote warehouse	15.01%
	Non-primary key access	60.00%
Order Status	Non-primary key access	59.99%
Delivery	Skipped transactions (Interactive)	0
	Skipped transaction counts (Deferred)	0
	Skipped District counts (Deferred)	0
Transaction Mix	New Order	44.87%
	Payment	43.02%
	Order-Status	4.03%
	Delivery	4.03%
	Stock-Level	4.03%

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 162 seconds into the measurement interval. The checkpoint interval is 29 minutes (from the start of one to the start of the next) and a checkpoint lasts approximately 25.9 minutes.

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

Table 5.5: Checkpoint Start Time and Duration

Item	Start	End	Duration
Measurement Interval	1:22:33	3:22:33	7200
1st Checkpoint	1:25:15	1:51:10	1555
2nd Checkpoint	1:53:54	2:19:50	1556
3rd Checkpoint	2:22:38	2:48:29	1551
4th Checkpoint	2:51:14	3:16:52	1538

6. Clause 6: SUT, Driver & Communications Definition

6.1. Remote Terminal Emulator (RTE) Description

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

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

6.2. Loss of Terminal Connections

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

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

6.3. Emulated Components

It must be demonstrated that the functionality and performance of the components being emulated in the Driver System are equivalent to that of the priced system. The results of the test described in Clause 6.6.3.4 must be disclosed. (8.1.7.3)

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

6.4. Functional Diagrams

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

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

6.5. Network Configuration

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

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

6.6. Network Bandwidth

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

Local area networks (LANs) are used in the priced and tested configurations. The database server contains one 1000 megabit-per-second Ethernet LAN adapter and is connected to each client through a 10/100/1000 megabit-per-second Ethernet switch. Each client contains two 10/100/1000 megabit-per-second inbuilt LAN controllers, one to connect to the database server and one to connect to the RTEs. 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 is given in the Executive Summary near the beginning of this document.

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.

Oracle Corporation support pricing is based on 3 years support costs.

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.

Oracle Corporation provides a Mandatory E-Business discount for the database software and support.

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 v.

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

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 for 64-bit Itanium-based Systems license, 16 processor
- One (1) Oracle Database 10g Enterprise Edition license, 16 processor
- Eight (8) Microsoft Windows 2003 Server licenses
- One (1) Microsoft Visual C++ Standard license
- One (1) Unisys Storage Sentinel 20TB 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 Aries 420 Enterprise Server (16P) representing:

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

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

The attestation letter is shown on the next 2 pages.



PERFORMANCE METRICS INC.
TPC Certified Auditors

May 7, 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 Aries 420 Enterprise Server
Database Manager: Oracle Database 10g Enterprise Edition
Operating System: Microsoft Windows Server 2003, Datacenter Edition for 64-bit
Itanium-based Systems
Transaction Manager: Microsoft COM+ (included in Windows 2003)

Server: Unisys ES7000 Aries 420 Enterprise Server				
CPU's	Memory	Disks	90% Response	TpmC
16 Intel Itanium 2 @ 1.5 GHz	Main: 128 GB Cache: 6 MB (each)	728 @ 18GB 26 @ 73GB 2 @ 36GB	0.96 sec	291,413
8 Clients: Unisys ES3020L Server (see Auditor Notes)				
2 Intel Xeon @ 2.4 GHz	Main: 2 GB Cache: 512KB	1 @ 18GB	Na	Na

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

- The transactions were correctly implemented.
- The database was properly sized and populated.
- The database was properly scaled with 24,000 warehouses, 23,500 of which were active during the Measured Interval.

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Page 1
email: Lorna@PerfMetrics.com

PERFORMANCE METRICS INC.
TPC Certified Auditors

- The ACID properties were successfully demonstrated.
- The durability data loss and log loss tests were performed on the fully scaled database with 220,000 users and 22,000 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 235,000 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 0 and 85 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:

This audit is an incremental audit of the same configuration measured and audited in October, 2003. The performance results are based on a different window from the original benchmark.

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

Sincerely,



Tom Sawyer
Auditor

Appendix A - Client Source

delivery.cpp

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

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

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

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

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

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

    lDeliveryThreads = lSetThreads;
    lDQSize = lSetQSize;
    if (lDQSize <= 0)

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

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

    bDQStarted = TRUE;
    hDQStart = CreateEvent(NULL,TRUE,FALSE,NULL);
    if (!hDQStart)
    {
        wsprintf(szDiag,"DoDQStart: Create Event Failure (%ld)\n",
            GetLastError());
        DiagIoWrite(szDiag,DIAG_ERROR);
        return(TRUE);
    };
    for (i = 0; i < lDeliveryThreads; i++)
    {
        hThread =
            _beginthreadex(NULL,
                0,
                DoDelivery,
```

```

        Unused,
        0,
        &uThread);
if (hThread == 0)
{
    wsprintf(szDiag,
        "DoDQStart: Begin Delivery Thread(%d) Failed(%ld)\n",
        i + 1,errno);
    DiagIoWrite(szDiag,DIAG_ERROR);
    return(TRUE);
};
dwRslt = WaitForSingleObject(hDQStart,60000);
if (dwRslt == WAIT_TIMEOUT)
{
    DiagIoWrite("DoDQStart: Wait Delivery Start Timed
Out\n",DIAG_ERROR);
    return(TRUE);
};
if (lDeliveryActive != (i + 1))
{
    wsprintf(szDiag,
        "DoDQStart: Delivery Thread Initialization Failed(%ld)\n",
        i + 1);
    DiagIoWrite(szDiag,DIAG_ERROR);
    return(TRUE);
};
ResetEvent(hDQStart);
}; // for (lDeliveryThreads)
CloseHandle(hDQStart);
return(FALSE);
}; // DoDQStart

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

```

```

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

//=====
//
// Function name: DoDelivery
//
//=====
UINT WINAPI DoDelivery(void * Unused)
{
    FILE *fpLog;
    char szLogTitle[300];

```

```

bool bFlush = FALSE;
DELIVERY_QUEUE * pDQSlot;
DELIVERY_DATA * pddEntry;
DELIVERY_DATA * pdd;
TMON_STATE tsState;
TMON_STATE * pTMon;
HRESULT hr;
int iSize;
long lMyId;
char szTMErrTxt[500];
char szDiag[MAX_DIAG_SZ];
int iElapsed;
int iInx;
long lDQReport = 0;
bool bDQReport = FALSE;

lMyId = InterlockedIncrement(&lDeliveryActive);
pTMon = &tsState;
pTMon->pIAllTxn = NULL;
pTMon->pTxnData = NULL;
pTMon->pszErrTxt = szTMErrTxt;
if (TMInit(pTMon))
{
    wsprintf(szDiag, "DoDelivery(%ld): TMInit %s\n", lMyId, szTMErrTxt);
    DiagIoWrite(szDiag, DIAG_ERROR);
    InterlockedDecrement(&lDeliveryActive);
    SetEvent(hDQStart);
    return(1);
};
wsprintf(szLogTitle, "%sdellilog%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->bTPRsIt)
        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\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

```

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);

```

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

```

diagio.h

```

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

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

#define DIAGNOSTICS TRUE
#define MAX_DIAG_SZ 2000

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

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

```

Pltxn.h

```
// pltxn.h
//
// Copyright Unisys, 1999
#ifndef PLTXN_H
#define PLTXN_H

#include <oratypes.h>
#include <oci.h>
#include <ocidfn.h>

// *****
// Constants used herein
// *****
#define NITEMS 15
#define ROWIDLEN 20
#define OCIROWLEN 20
#define NDISTS 10
#define ROWIDLEN 20

#ifndef DISCARD
#define DISCARD (void)
#endif

// *****
// SQL query definitions
// *****
#define SQLTXT "alter session set isolation_level = serializable"
#define SQLTXTTRC "alter session set sql_trace = true"
#define SQLTXTTIM "alter session set timed_statistics = true"
#define SQLTXTIMU "alter session set \"_in_memory_undo\" = true"
#define SQLTXTNCP "alter session set
plsql_compiler_flags=anonymous_block_native"

// *****
// **** New Order
// *****
#define NO_SQLTXT2 "BEGIN inittpcc.init_no(:idxlarr); END;"

// *****
// **** Order Status
// *****
#define OS_SQLTXT0 "SELECT rowid FROM cust \
WHERE c_d_id = :d_id AND c_w_id = :w_id AND c_last =
:c_last \
ORDER BY c_last, c_d_id, c_w_id, c_first"

#define OS_SQLTXT1 "SELECT /*+ USE_NL(cust) INDEX_DESC(ordr iordr2) */ \
c_id, c_balance, c_first, c_middle, c_last, \
o_id, o_entry_d, o_carrier_id, o_ol_cnt, ordr.rowid \
FROM cust, ordr \
WHERE cust.rowid = :cust_rowid \
AND o_d_id = c_d_id AND o_w_id = c_w_id AND o_c_id =
c_id \
ORDER BY o_c_id DESC, o_d_id DESC, o_w_id DESC, o_id
DESC"
```

```
#define OS_SQLTXT2 "SELECT /*+ USE_NL(cust) INDEX_DESC (ordr iordr2) */ \
\
c_balance, c_first, c_middle, c_last, \
o_id, o_entry_d, o_carrier_id, o_ol_cnt, ordr.rowid \
FROM cust, ordr \
WHERE c_id = :c_id AND c_d_id = :d_id AND c_w_id = :w_id
\
AND o_d_id = c_d_id AND o_w_id = c_w_id AND o_c_id = c_id
\
ORDER BY o_c_id DESC, o_d_id DESC, o_w_id DESC , o_id
DESC"

#define OS_SQLTXT3 "SELECT /*+ ORDERED USE_NL(ordl) CLUSTER(ordl) */ \
ol_i_id, ol_supply_w_id, ol_quantity, ol_amount,
ol_delivery_d \
FROM ordr, ordl \
WHERE ordr.rowid = :ordr_rowid \
AND o_id = ol_o_id AND ol_d_id = o_d_id AND ol_w_id =
o_w_id"

#define OS_SQLTXT4 "SELECT count(c_last) FROM cust \
WHERE c_d_id = :d_id AND c_w_id = :w_id AND c_last =
:c_last "

// *****
// **** Payment
// *****
#define PY_SQLTXT "BEGIN inittpcc.init_pay; END;"

// *****
// **** Stock Level
// *****

#ifdef PLSQLSTO
#define SL_SQLTXT "BEGIN stocklevel.getstocklevel (:w_id, :d_id,
:threshold, \
:low_stock); END;"
#else
#define SL_SQLTXT "SELECT /*+ nocache(stok) */ count (DISTINCT s_i_id) \
FROM ordl, stok, dist \
WHERE d_id = :d_id AND d_w_id = :w_id AND \
d_id = ol_d_id AND d_w_id = ol_w_id AND \
ol_i_id = s_i_id AND ol_w_id = s_w_id AND \
s_quantity < :threshold AND \
ol_o_id BETWEEN (d_next_o_id - 20) AND (d_next_o_id - 1)
\
order by ol_o_id desc"
#endif

// *****
// **** Delivery
// *****
#define DL_SQLTXT "BEGIN inittpcc.init_del ; END;"

// *****
// Data structures for binding etc
// *****
```

```

// *****
// **** New Order
// *****
struct newctx
{
    ub2 nol_i_id_len[NITEMS];
    ub2 nol_supply_w_id_len[NITEMS];
    ub2 nol_quantity_len[NITEMS];
    ub2 nol_amount_len[NITEMS];
    ub2 s_quantity_len[NITEMS];
    ub2 i_name_len[NITEMS];
    ub2 i_price_len[NITEMS];
    ub2 s_dist_info_len[NITEMS];
    ub2 ol_o_id_len[NITEMS];
    ub2 ol_number_len[NITEMS];
    ub2 s_remote_len[NITEMS];
    ub2 s_quant_len[NITEMS];
    ub2 ol_dist_info_len[NITEMS];
    ub2 s_bg_len[NITEMS];

    int ol_o_id[NITEMS];
    int ol_number[NITEMS];

    int s_remote[NITEMS];
    char s_dist_info[NITEMS][25];

    OCISlmt *curn1;
    OCIBind *ol_i_id_bp;
    OCIBind *ol_supply_w_id_bp;
    OCIBind *i_price_bp;
    OCIBind *i_name_bp;
    OCIBind *s_bg_bp;
    ub4 nol_i_count;
    ub4 nol_s_count;
    ub4 nol_q_count;
    ub4 nol_item_count;
    ub4 nol_name_count;
    ub4 nol_qty_count;
    ub4 nol_bg_count;
    ub4 nol_am_count;
    ub4 s_remote_count;
    OCISlmt *curn2;
    OCIBind *ol_quantity_bp;
    OCIBind *s_remote_bp;
    OCIBind *s_quantity_bp;
    OCIBind *w_id_bp;
    OCIBind *d_id_bp;
    OCIBind *c_id_bp;
    OCIBind *o_all_local_bp;
    OCIBind *o_all_cnt_bp;
    OCIBind *w_tax_bp;
    OCIBind *d_tax_bp;
    OCIBind *o_id_bp;
    OCIBind *c_discount_bp;
    OCIBind *c_credit_bp;
    OCIBind *c_last_bp;
    OCIBind *retries_bp;
    OCIBind *cr_date_bp;
    OCIBind *ol_o_id_bp;

```

```

OCIBind *ol_amount_bp;

    ub2 w_id_len;
    ub2 d_id_len;
    ub2 c_id_len;
    ub2 o_all_local_len;
    ub2 o_ol_cnt_len;
    ub2 w_tax_len;
    ub2 d_tax_len;
    ub2 o_id_len;
    ub2 c_discount_len;
    ub2 c_credit_len;
    ub2 c_last_len;
    ub2 retries_len;
    ub2 cr_date_len;
};
typedef struct newctx newctx;

// *****
// **** Order Status
// *****
struct ordctx
{
    ub2 c_rowid_len[100];
    ub2 ol_supply_w_id_len[NITEMS];
    ub2 ol_i_id_len[NITEMS];
    ub2 ol_quantity_len[NITEMS];
    ub2 ol_amount_len[NITEMS];
    ub2 ol_delivery_d_len[NITEMS];
    ub2 ol_w_id_len;
    ub2 ol_d_id_len;
    ub2 ol_o_id_len;

    ub4 ol_supply_w_id_csize;
    ub4 ol_i_id_csize;
    ub4 ol_quantity_csize;
    ub4 ol_amount_csize;
    ub4 ol_delivery_d_csize;
    ub4 ol_w_id_csize;
    ub4 ol_d_id_csize;
    ub4 ol_o_id_csize;

    OCISlmt *curo0;
    OCISlmt *curo1;
    OCISlmt *curo2;
    OCISlmt *curo3;
    OCISlmt *curo4;
    OCIBind *c_id_bp;
    OCIBind *w_id_bp[4];
    OCIBind *d_id_bp[4];
    OCIBind *c_last_bp[2];
    OCIBind *o_id_bp;
    OCIBind *c_rowid_bp;
    OCIBind *o_rowid_bp;
    OCIDefine *c_rowid_dp;
    OCIDefine *c_last_dp[2];
    OCIDefine *c_id_dp;
    OCIDefine *c_first_dp[2];
    OCIDefine *c_middle_dp[2];
    OCIDefine *c_balance_dp[2];

```

```

OCIDefine *o_rowid_dp[2];
OCIDefine *o_id_dp[2];
OCIDefine *o_entry_d_dp[2];
OCIDefine *o_cr_id_dp[2];
OCIDefine *o_ol_cnt_dp[2];
OCIDefine *ol_d_d_dp;
OCIDefine *ol_i_id_dp;
OCIDefine *ol_supply_w_id_dp;
OCIDefine *ol_quantity_dp;
OCIDefine *ol_amount_dp;
OCIDefine *ol_d_base_dp;
OCIDefine *c_count_dp;
OCIRowid *c_rowid_ptr[100];
OCIRowid *c_rowid_cust;
OCIRowid *o_rowid;
int cs;
int cust_idx;
int norow;
int rcount;
int somerows;
};
typedef struct ordctx ordctx;

struct defctx
{
    boolean reexec;
    ub4 count;
};
typedef struct defctx defctx;

// *****
// **** Payment
// *****
struct payctx
{
    OCISmt *curpi;
    OCISmt *curp0;
    OCISmt *curp1;
    OCIBind *w_id_bp[2];
    ub2 w_id_len;
    OCIBind *d_id_bp[2];
    ub2 d_id_len;
    OCIBind *c_w_id_bp[2];
    ub2 c_w_id_len;
    OCIBind *c_d_id_bp[2];
    ub2 c_d_id_len;
    OCIBind *c_id_bp[2];
    ub2 c_id_len;
    OCIBind *h_amount_bp[2];
    ub2 h_amount_len;
    OCIBind *c_last_bp[2];
    ub2 c_last_len;
    OCIBind *w_street_1_bp[2];
    ub2 w_street_1_len;
    OCIBind *w_street_2_bp[2];
    ub2 w_street_2_len;
    OCIBind *w_city_bp[2];
    ub2 w_city_len;
    OCIBind *w_state_bp[2];
    ub2 w_state_len;
    OCIBind *w_zip_bp[2];

```

```

    ub2 w_zip_len;
    OCIBind *d_street_1_bp[2];
    ub2 d_street_1_len;
    OCIBind *d_street_2_bp[2];
    ub2 d_street_2_len;
    OCIBind *d_city_bp[2];
    ub2 d_city_len;
    OCIBind *d_state_bp[2];
    ub2 d_state_len;
    OCIBind *d_zip_bp[2];
    ub2 d_zip_len;
    OCIBind *c_first_bp[2];
    ub2 c_first_len;
    OCIBind *c_middle_bp[2];
    ub2 c_middle_len;
    OCIBind *c_street_1_bp[2];
    ub2 c_street_1_len;
    OCIBind *c_street_2_bp[2];
    ub2 c_street_2_len;
    OCIBind *c_city_bp[2];
    ub2 c_city_len;
    OCIBind *c_state_bp[2];
    ub2 c_state_len;
    OCIBind *c_zip_bp[2];
    ub2 c_zip_len;
    OCIBind *c_phone_bp[2];
    ub2 c_phone_len;
    OCIBind *c_since_bp[2];
    ub2 c_since_len;
    OCIBind *c_credit_bp[2];
    ub2 c_credit_len;
    OCIBind *c_credit_lim_bp[2];
    ub2 c_credit_lim_len;
    OCIBind *c_discount_bp[2];
    ub2 c_discount_len;
    OCIBind *c_balance_bp[2];
    ub2 c_balance_len;
    OCIBind *c_data_bp[2];
    ub2 c_data_len;
    OCIBind *h_date_bp[2];
    ub2 h_date_len;
    OCIBind *retries_bp[2];
    ub2 retries_len;
    OCIBind *cr_date_bp[2];
    ub2 cr_date_len;
    OCIBind *byln_bp[2];
    ub2 byln_len;
};
typedef struct payctx payctx;

// *****
// **** Stock Level
// *****
struct stoctx
{
    OCISmt *curs;
    OCIBind *w_id_bp;
    OCIBind *d_id_bp;
    OCIBind *threshold_bp;
#ifdef PLSQLSTO
    OCIBind *low_stock_bp;

```

```

#else
    OCIDefine *low_stock_bp;
#endif
    int norow;
};
typedef struct stoctx stoctx;

// *****
// **** Delivery
// *****
struct pldelctx
{
    ub2 del_d_id_len[NDISTS];
    ub2 del_o_id_len[NDISTS];

    ub2 w_id_len;
    ub2 d_id_len[NDISTS];
    ub2 o_c_id_len[NDISTS];
    ub2 sums_len[NDISTS];
    ub2 carrier_id_len;
    ub2 ordcnt_len;
    ub2 del_date_len;

    int del_o_id[NDISTS];
    int del_d_id[NDISTS];
    int o_c_id[NDISTS];
    float sums[NDISTS];
    OCIDate del_date[NDISTS];
    int carrier_id;
    int ordcnt;

    ub4 del_o_id_rcnt;
    ub4 del_d_id_rcnt;
    ub4 o_c_id_rcnt;
    ub4 sums_rcnt;

    int retry;

    OCISmt *curp1;
    OCISmt *curp2;
    OCIBind *w_id_bp;
    OCIBind *d_id_bp;
    OCIBind *o_id_bp;
    OCIBind *o_c_id_bp;
    OCIBind *ordcnt_bp;
    OCIBind *sums_bp;
    OCIBind *del_date_bp;
    OCIBind *carrier_id_bp;
    OCIBind *retry_bp;

    int norow;
};
typedef struct pldelctx pldelctx;

// *****
// Error Macros
// *****
#define OCIERROR(errp,function)\

```

```

    ocierror(__FILE__, __LINE__, (errp), (function));
// *****
// OCI Binding Macros
// *****
#define OCIBND(stmp, bndp, errp, sqlvar, progvl, progvl, ftype)\
    ocierror(__FILE__, __LINE__, (errp), \
        OCIBindByName((stmp), &(bndp), (errp), \
            (text *) (sqlvar), strlen((sqlvar)), \
            (progvl), (progvl), (ftype), 0, 0, 0, 0, OCI_DEFAULT));

// bind arrays for sql
#define
OCIBNDRA(stmp, bndp, errp, sqlvar, progvl, progvl, ftype, indp, alen, arcode) \
    DISCARD ocierror(__FILE__, __LINE__, (errp), \
        OCIBindByName((stmp), &(bndp), (errp), (text
*) (sqlvar), strlen((sqlvar)), \
        (progvl), (progvl), (ftype), (indp), (alen), (arcode), 0, 0, OCI_DEFAULT));

// bind in/out for plsql without indicator and rcode
#define OCIBNDPL(stmp, bndp, errp, sqlvar, progvl, progvl, ftype, alen) \
    DISCARD ocierror(__FILE__, __LINE__, (errp), \
        OCIBindByName((stmp), &(bndp), (errp), (CONST text *) (sqlvar), \
            (sb4)strlen((CONST char *) (sqlvar)), \
            (dvoid*) (progvl), (progvl), (ftype), \
            NULLP(dvoid), (alen), NULLP(ub2), 0, NULLP(ub4), OCI_DEFAULT));

// bind in values for plsql with indicator and rcode
#define OCIBNDR(stmp, bndp, errp, sqlvar, progvl, progvl, ftype, indp, alen, arcode) \
    DISCARD ocierror(__FILE__, __LINE__, (errp), \
        OCIBindByName((stmp), &(bndp), (errp), (text
*) (sqlvar), strlen((sqlvar)), \
        (progvl), (progvl), (ftype), (indp), (alen), (arcode), 0, 0, \
        OCI_DEFAULT));

// bind in/out for plsql arrays without indicator and rcode
#define OCIBNDPLA(stmp, bndp, errp, sqlvar, progvl, progvl, ftype, alen, ms, cu) \
    DISCARD ocierror(__FILE__, __LINE__, (errp), \
        OCIBindByName((stmp), &(bndp), (errp), (CONST text *) (sqlvar), \
            (sb4)strlen((CONST char *) (sqlvar)), (void *) (progvl), \
            (progvl), (ftype), NULL, (alen), NULL, (ms), (cu), OCI_DEFAULT));

#define OCIDEFINE(stmp, dfnp, errp, pos, progvl, progvl, ftype)\
OCIDefineByPos((stmp), &(dfnp), (errp), (pos), (progvl), (progvl), (ftype), \
    0, 0, 0, OCI_DEFAULT);

#define OCIDEF(stmp, dfnp, errp, pos, progvl, progvl, ftype) \
    OCIHandleAlloc((stmp), (dvoid**) &(dfnp), OCI_HTYPE_DEFINE, 0, \
        (dvoid**) 0); \
    OCIDefineByPos((stmp), &(dfnp), (errp), (pos), (progvl), (progvl), \
        (ftype), NULL, NULL, NULL, OCI_DEFAULT); \

#define OCIDFNRA(stmp, dfnp, errp, pos, progvl, progvl, ftype, indp, alen, arcode) \
    OCIHandleAlloc((stmp), (dvoid**) &(dfnp), OCI_HTYPE_DEFINE, 0, \
        (dvoid**) 0); \
    OCIDefineByPos((stmp), &(dfnp), (errp), (pos), (progvl), \

```

```
(progv1), (ftype), (indp), (alen), \
(arcode), OCI_DEFAULT);
```

```
#endif //PLTXN_H
```

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

```

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; // TPC WareHouse Id
#else
    SHORT sWid;
#endif
    SHORT sDId; // TPC 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);
```

timesupp.cpp

```
// timesupp.c
//
// Copyright Unisys, 1997 1998 1999 2000
//

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

//=====
//
// 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: TimebElapsed
//
//=====
TMILLI TimebElapsed(struct _timeb * p_tb1)
{
    struct _timeb tb2;
    _ftime(&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: 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

```

timesupp.h

```

// timesupp.h
//
// Copyright Unisys, 1999

#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;

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);

```

tmon.cpp

```

// tmon.cpp
//
// Copyright Unisys, 1999
//
// needed for CoinitializeEx
#define _WIN32_WINNT 0x0400

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

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

#include "tmon.h"

INT iTMMaxSz;

```

```

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

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

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

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

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

    hr = CoCreateInstance(CLSID_TPCC, NULL, CLSCTX_SERVER, IID_ITPCC,
        (void **) &pTMon->pIAllTxn);
    if (FAILED(hr))
    {
        wsprintf(pTMon->pszErrTxt, "COM Create Instance Failed, HRESULT
%x\n", hr);
        return(TRUE);
    };
    hr = (pTMon->pIAllTxn)->CallSetComplete();
    if (FAILED(hr))
    {
        wsprintf(pTMon->pszErrTxt, "COM Call SetComplete Failed, HRESULT
%x\n", hr);

```

```

        return(TRUE);
    };
    pTMon->pTxnData = (char *) CoTaskMemAlloc(iTMMaxSz);
    if (!pTMon->pTxnData)
    {
        wsprintf(pTMon->pszErrTxt, "COM Allocate TxnData Failed\n");
        return(TRUE);
    };
    pTMon->iSize = iTMMaxSz;
    return(FALSE);
}; // TMinInit

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

```

tmon.h

```

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

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

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

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

```

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

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

//=====
//
// Function name: DllMain
//
//=====
BOOL APIENTRY DllMain(HANDLE hInst, ULONG ul_reason_for_call,
LPVOID lpReserved)

```

```

{
    TPCC_STATE * pTPCC = NULL;
    CHAR szDiag[MAX_DIAG_SZ];
    UINT iTMMaxSz =0;
    switch(ul_reason_for_call)
    {
        case DLL_PROCESS_ATTACH:
            // Process initialization

            InitializeCriticalSection(&csDllMain);
            ReadRegistry();
            DiagIoInit(pTitle,bSetConsole,bSetEventLog,uSetDiagLevel);
            wsprintf(szDiag,
                "(%s) EventLog = %d, Console = %d, DiagLevel = %d\n"
                "MaxTerms = %d\n",
                VERSIONINFO,bSetEventLog,bSetConsole,uSetDiagLevel,iMaxTerms);
            DiagIoWrite(szDiag,DIAG_FORCE);
#ifdef LONG_WID
            DiagIoWrite("tpccdll - long w_id", DIAG_FORCE);
#endif
            dwTlsInx = TlsAlloc();
            if (dwTlsInx == TLS_NULL)
            {
                wsprintf(szDiag,"PAttach(%ld): Tls Alloc Failed (%ld)\n",
                    GetCurrentThreadId(), GetLastError());
                DiagIoWrite(szDiag,DIAG_ERROR);
                return(FALSE);
            };
            if (TermInit(iMaxTerms))
                return(FALSE);
            iTMMaxSz = max(iTMMaxSz,sizeof(NEW_ORDER_DATA));
            iTMMaxSz = max(iTMMaxSz,sizeof(PAYMENT_DATA));
            iTMMaxSz = max(iTMMaxSz,sizeof(ORDER_STATUS_DATA));
            iTMMaxSz = max(iTMMaxSz,sizeof(DELIVERY_DATA));
            iTMMaxSz = max(iTMMaxSz,sizeof(STOCK_LEVEL_DATA));
            iTMMaxSz += 10;
            TMonInit(iTMMaxSz);
            if (DeliveryInit(lSetDThreads,lSetDQSize,szSetPath))
            {
                DeliveryTerm();
                return(FALSE);
            };
            iHHdrLen = strlen(HTTPHdr);
            iCTextLen = strlen(CTEXT);
            break;
        case DLL_THREAD_ATTACH:
            // Move ThreadAttach call to HttpExt since the DllMain call
            // for Thread Attach did not reliably come before the first
            // call to HttpExtProc.
            break;
            case DLL_THREAD_DETACH:
                ThreadDetach(pTPCC);
                break;
            case DLL_PROCESS_DETACH:
                ThreadDetach(pTPCC);
                DeleteCriticalSection(&csDllMain);
                DeliveryTerm();
                TMonTerm();
                TermTerm();
                TlsFree(dwTlsInx);
    }
}

```

```

        dwTlsInx = TLS_NULL;
        DiagIoTerm();
        break;
    };
    return TRUE;
}; // DllMain

//=====
//
// Function name: ThreadAttach
//
// Result:
// FALSE Thread state structure initialized
// TRUE Thread state structure initialization failure
//
//=====
BOOL ThreadAttach(TPCC_STATE * pTPCC, CHAR * pDiag)
{
    EnterCriticalSection(&csDllMain);
    try
    {
        pTPCC = (TPCC_STATE *) calloc(1, sizeof(TPCC_STATE));
        if (pTPCC == NULL)
        {
            wsprintf(pDiag, "ThrAtt(%ld): pTPCC Alloc Failed (%ld)\n",
                GetCurrentThreadId(), GetLastError());
            DiagIoWrite(pDiag, DIAG_ERROR);
            return(TRUE);
        };
        TlsSetValue(dwTlsInx, pTPCC);
        pTPCC->tsTMon.pszErrTxt = pTPCC->ErrTxt;
        if (TMInit(&pTPCC->tsTMon))
        {
            wsprintf(pDiag, "ThrAtt(%ld): TMInit %s\n",
                GetCurrentThreadId(), pTPCC->ErrTxt);
            DiagIoWrite(pDiag, DIAG_ERROR);
            return(TRUE);
        };
    }
    finally
    {
        LeaveCriticalSection(&csDllMain);
    };
    return(FALSE);
}; // ThreadAttach

//=====
//
// Function name: ThreadDetach
//
//=====
VOID ThreadDetach(TPCC_STATE * pTPCC)
{
    EnterCriticalSection(&csDllMain);
    try
    {
        pTPCC = (TPCC_STATE *) TlsGetValue(dwTlsInx);
        if (pTPCC != NULL)
        {
            TMDone(&pTPCC->tsTMon);
            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;
    UINT uRslt;

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

```

```

        break;
    case TPCCSESEND:
        SendResponse(pECB, pTPCC->SendMsg, pTPCC->szHeader);
        break;
    case TPCCENDNOW:
    default:
        break;
}; // switch (TPCCHandler result)

Httpxit:

    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

```

tpcc.def

```

EXPORTS
    GetExtensionVersion
    HttpExtensionProc

```

tpcc.h

```

// *****
// tpcc.h
//
// Copyright Unisys, 2003
// *****

#ifndef TPCC_H
#define TPCC_H

#include <time.h>

#include <stdio.h>
#include <stdlib.h>
#include <windows.h>
#include <ctype.h>
#include <string.h>

// #include <oratypes.h>
// #include <oci.h>
// #include <ocidfn.h>

#define VERSIONINFO "--- 2.0.0 ---"

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

// *****
// TPCCC 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_OCI -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 // = NITEMS
#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"
#define VER7      2
#define NA        -1      /* ANSI SQL NULL */
#define NLT       1      /* length for string null terminator */
#define DEADLOCK  60     /* ORA-00060: deadlock */
#define NO_DATA_FOUND 1403 /* ORA-01403: no data found */
#define NOT_SERIALIZABLE 8177 /* ORA-08177: transaction not serializable */
#define SNAPSHOT_TOO_OLD 1555 /* ORA-01555: snapshot too old */

// *****
// Error codes
// *****
#define RECOVERR -10
#define IRRECERR -20
#define NOERR 111
#define DEL_ERROR -666
#define DEL_DATE_LEN 7
#define NDISTS 10
#define NITEMS 15
#define SQL_BUF_SIZE 16*1024 //8192

#define FULLDATE "dd-mon-yy.hh:mi:ss"
#define SHORTDATE "dd-mm-yyyy"

#ifdef NULLP
#define NULLP(x) (x *)NULL
#endif //NULLP

#define ADR(object) ((ub1 *)&(object))
#define SIZ(object) ((sword)sizeof(object))

// *****
// Interface structures - incoming/outgoing data
// *****
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
} NEW_ORDER_DATA;

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

typedef struct
{
    bool bTPRslt;
    short iTPRslt;
#ifdef LONG_WID
    long w_id;
#else
    short w_id;
#endif
    short d_id;
    long c_id;
    short c_d_id;
#ifdef LONG_WID
    long c_w_id;
#else
    short c_w_id;
#endif
    double h_amount;
    DATEDETAILS h_date;
    char w_street_1[ADDR_LEN + 1];
    char w_street_2[ADDR_LEN + 1];
    char w_city[ADDR_LEN + 1];
    char w_state[STATE_LEN + 1];
    char w_zip[ZIP_LEN + 1];
    char d_street_1[ADDR_LEN + 1];
    char d_street_2[ADDR_LEN + 1];
    char d_city[ADDR_LEN + 1];
    char d_state[STATE_LEN + 1];
    char d_zip[ZIP_LEN + 1];
    char c_first[NAME_LEN + 1];
}

```

```

char c_middle[3];
char c_last[NAME_LEN + 1];
char c_street_1[ADDR_LEN + 1];
char c_street_2[ADDR_LEN + 1];
char c_city[ADDR_LEN + 1];
char c_state[STATE_LEN + 1];
char c_zip[ZIP_LEN + 1];
char c_phone[17];
DATEDETAILS c_since;
char c_credit[3];
double c_credit_lim;
double c_discount;
double c_balance;
char c_data[200+1];
char execution_status[STATUS_LEN];
} PAYMENT_DATA;

```

```

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

```

```

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

```

```

typedef struct
{
    bool bTPRslt;
    short iTPRslt;
#ifdef LONG_WID
    long w_id;
#else
    short w_id;

```

```

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

```

```

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

```

```

#endif //TPCC_H

```

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 10

// 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=\"TERMINID\" 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 * TERMINDTOKEN = "TERMINID=";
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);

//=====
//
// 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 = TPCCSEND; // default error handling
    TERM_STATE * pTerm;

    pTPCC->iStatusId = STATUS_OK;
    if (GetHidden(pTPCC->RecvMsg, &pTPCC->uFormId, &iSyncId, &iTermId))
    {
        uRslt = TPCCSEND;
        FormatLogin(pTPCC->SendMsg, pTPCC->ErrTxt);
        goto HdlrXit;
    };
    if (iTermId > 0)
    {
        pTerm = TermGet(iTermId);
        if (pTerm == NULL)
        {
            uRslt = TPCCSEND;
            strcpy(pTPCC->ErrTxt, "Invalid Term Id");
            FormatLogin(pTPCC->SendMsg, pTPCC->ErrTxt);
            goto HdlrXit;
        };
        pTPCC->sWId = pTerm->sWId;
        pTPCC->sDId = pTerm->sDId;
        pTPCC->iSyncId = pTerm->iSyncId;
        pTPCC->iTermId = pTerm->iTermId;
    };
    uCmdId = GetCmd(pTPCC->RecvMsg, pTPCC->szWork, sizeof(pTPCC->szWork));
    // Except for Submit(log in), sWId must already be set
    if (pTPCC->sWId == 0 && uCmdId != CMD_SUBMIT)
    {
        strcpy(pTPCC->ErrTxt, "Must log in first!");
        FormatLogin(pTPCC->SendMsg, pTPCC->ErrTxt);
        uRslt = TPCCSEND;
        goto HdlrXit;
    };
    // Check for multiple log in attempts
    if (pTPCC->sWId != 0 && uCmdId == CMD_SUBMIT)
    {
        strcpy(pTPCC->ErrTxt, ERRTXT_ALREADY_LOGGEDIN);
        pTPCC->iStatusId = ERR_ALREADY_LOGGEDIN;
        FormatMenu(pTPCC->SendMsg, pTPCC);
        uRslt = TPCCSEND;
        goto HdlrXit;
    };
    // If not logging in, validate hidden fields
    if (uCmdId != CMD_SUBMIT)
    {
        if (iTermId != pTPCC->iTermId || iTermId != iSyncId)
        {
            wsprintf(pTPCC->ErrTxt, "%s: Received %ld, %ld (%ld)",
                ERRTXT_TERMID, iTermId, iSyncId, pTPCC->iTermId);
            pTPCC->iStatusId = ERR_TERMID;
            FormatMenu(pTPCC->SendMsg, pTPCC);
            goto HdlrXit;
        };
    };
};
```

```
// Process the command
switch (uCmdId)
{
    case CMD_SUBMIT:
        ProcessLogin(pTPCC->RecvMsg, pTPCC->SendMsg, pTPCC);
        break;
    case CMD_MENU_FORM:
        FormatMenu(pTPCC->SendMsg, pTPCC);
        break;
    case CMD_PROCESS:
        ProcessForm(pTPCC->RecvMsg, pTPCC->SendMsg, pTPCC);
        break;
    case CMD_NEWORDER_FORM:
        FormatNewOrder(pTPCC->SendMsg, pTPCC);
        break;
    case CMD_PAYMENT_FORM:
        FormatPayment(pTPCC->SendMsg, pTPCC);
        break;
    case CMD_DELIVERY_FORM:
        FormatDelivery(pTPCC->SendMsg, pTPCC);
        break;
    case CMD_ORDERSTATUS_FORM:
        FormatOrderStatus(pTPCC->SendMsg, pTPCC);
        break;
    case CMD_STOCKLEVEL_FORM:
        FormatStockLevel(pTPCC->SendMsg, pTPCC);
        break;
    case CMD_EXIT:
        TermFree(pTPCC->iTermId);
        strcpy(pTPCC->ErrTxt, "Logged Off");
        FormatLogin(pTPCC->SendMsg, pTPCC->ErrTxt);
        goto HdlrXit;
    default:
        strcpy(pTPCC->ErrTxt, ERRTXT_CMD_UNKNOWN);
        pTPCC->iStatusId = ERR_CMD_UNKNOWN;
        if (pTPCC->sWId == 0)
            FormatLogin(pTPCC->SendMsg, pTPCC->ErrTxt);
        else
            FormatMenu(pTPCC->SendMsg, pTPCC);
        break;
}; // switch (uCmdId)

uRslt = TPCCSEND;

HdlrXit:

return(uRslt);
}; // TPCCHandler
//=====
// Function name: ProcessLogin
//
// ProcessLogin extracts WId and DId from the incoming form. Assumes
// log in has not previously completed (sWId == 0 already verified).
//
// Result:
// FALSE - log in successful, sWId and sDId set in pTPCC,
//         pOut contains menu.
// TRUE - log in failed, pOut contains log in form with
```

```

//          error message.
//
//=====
BOOL ProcessLogin(CHAR * pIn,CHAR * pOut,TPCC_STATE * pTPCC)
{
#ifdef LONG_WID
    LONG sWId;
#else
    SHORT sWId;
#endif
    SHORT sDId;
    TERM_STATE * pTerm;

#ifdef LONG_WID
    if (GetLongKey(&sWId,pIn,"w_id",pTPCC))
#else
    if (GetShortKey(&sWId,pIn,"w_id",pTPCC))
#endif
    {
        FormatLogin(pOut,pTPCC->ErrTxt);
        return(TRUE);
    };
    if (sWId < 1)
    {
        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;
    wsprintf(pTPCC->ErrTxt,
        "COM Interface to NewOrder Call Failed, HRESULT %x",
        hr);
    FormatMenu(pOut, pTPCC);
    return(TRUE);
};
pnod = (NEW_ORDER_DATA *) pTMon->pTxnData;

```

```

// Exclude invalid item id case
if (pnod->bTPRslt && pnod->iTPRslt < SVC_NOERROR)
{
    wsprintf(pTPCC->ErrTxt,
        "New Order Service Returned Error(%ld) : %s",
        pnod->iTPRslt, pnod->execution_status);
    pTPCC->iStatusId = ERR_SERVICE_RSLT;
    FormatMenu(pOut, pTPCC);
    return(TRUE);
};
if (pnod->iTPRslt == SVC_BADITEMID)
    pTPCC->iStatusId = INVALID_IID;

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

```

```

        "Execution Status: %24.24s Total: $%8.2f "
        "</PRE><HR><BR>%s</FORM>%s",
        pnod->execution_status, pnod->total_amount,
        szMenuList, HTMLTrailer);
    } // !bTPRslt
    else
    {
        iInx += wsprintf(pOut + iInx,
            "<PRE>
            New Order<BR>"
#ifdef LONG_WID
            "Warehouse: %6.6d District: %2.2d
Date:<BR>"
#else
            "Warehouse: %4.4d District: %2.2d
Date:<BR>"
#endif
            "Customer: %4.4d Name: %-16s Credit: %-2s "
            "%Disc:<BR>"
            "Order Number: %8.8d Number of Lines: W_tax:
D_tax:<BR><BR>"
            " Supp_W Item_Id Item Name Qty Stock B/G
Price Amount<BR>",
            pnod->w_id, pnod->d_id,
            pnod->c_id, pnod->c_last, pnod->c_credit,
            pnod->o_id);
        for(u = 0; u < MAX_OL; u++)
        {
            strcat(pOut + iInx, " <BR>");
            iInx += 5;
        };
        iInx += wsprintf(pOut + iInx,
            "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->stTMon;
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 += sprintf(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 += sprintf(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')
{
    sprintf(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
{
    sprintf(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)
    {
        sprintf(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)
    {
        sprintf(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)
    {
        wsprintf(pTPCC->ErrTxt,"DId Out of Range(%ld,%ld) - %ld",
            MIN_DId,MAX_DId,posd->d_id);
        pTPCC->iStatusId = ERR_DID_INVALID;
        FormatMenu(pOut,pTPCC);
        return(TRUE);
    };
    if (GetLongKey(&posd->c_id,pIn,"CID*",pTPCC))
    {
        FormatMenu(pOut,pTPCC);
        return(TRUE);
    };
    if (GetStringKey(posd->c_last,pIn,"CLT*",pTPCC,NAME_LEN))
    {
        FormatMenu(pOut,pTPCC);

```

```

        return(TRUE);
    };
    if (posd->c_id == 0 && posd->c_last[0] == 0)
    {
        strcpy(pTPCC->ErrTxt,"Error - Customer Id and Name Empty");
        pTPCC->iStatusId = ERR_IDANDNAME_EMPTY;
        FormatMenu(pOut,pTPCC);
        return(TRUE);
    };
    if (posd->c_id != 0 && posd->c_last[0] != 0)
    {
        strcpy(pTPCC->ErrTxt,
            "Error - Specify Customer Id or Name, not Both");
        pTPCC->iStatusId = ERR_IDANDNAME_ENTERED;
        FormatMenu(pOut,pTPCC);
        return(TRUE);
    };
    iSize = pTMon->iSize;
    do
    {
        hr = pTMon->pIAllTxn->OrderStatus(&iSize,(unsigned char**)&pTMon-
            >pTxnData);
        if (retCnt > 0) Sleep(1000);
    }while ((FAILED(hr)) && (retCnt++ < INIT_RETRY));

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

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

        FormatMenu(pOut,pTPCC);
        return(TRUE);
    };
    posd = (ORDER_STATUS_DATA *) pTMon->pTxnData;
    if (posd->bTPRslt)
    {
        wsprintf(pTPCC->ErrTxt,
            "Order Status Service Returned Error(%ld): %s",
            posd->iTPRslt,posd->execution_status);
        pTPCC->iStatusId = ERR_SERVICE_RSLT;
        DiagIoWrite(pTPCC->ErrTxt,DIAG_FORCE);
        FormatMenu(pOut,pTPCC);
        return(TRUE);
    };
    iInx = FormatRespHdr(pOut,"TPC-C Order-Status",pTPCC);
    iInx += wsprintf(pOut + iInx,
        "<PRE>
        Order-Status<BR>"
#ifdef LONG_WID
        "Warehouse: %6.6d District: %2.2d<BR>"
#else
        "Warehouse: %4.4d District: %2.2d<BR>"
#endif
        "Customer: %4.4d Name: %-16s %-2s %-16s<BR>",
        posd->w_id,posd->d_id,
        posd->c_id,posd->c_first,posd->c_middle,posd->c_last);
    iInx += sprintf(pOut + iInx,"Cust-Balance: $%9.2f<BR><BR>",posd-
        >c_balance);
    iInx += wsprintf(pOut + iInx,

```



```

"Order-Number: %8.8d  Entry-Date: %2.2d-%2.2d-%4.4d
%2.2d:%2.2d:%2.2d  Carrier-Number: %2.2d<BR>"
"Supply-W      Item-Id  Qty      Amount      Delivery-Date<BR>",
  posd->o_id, posd->o_entry_d.day, posd->o_entry_d.month,
  posd->o_entry_d.year, posd->o_entry_d.hour,
  posd->o_entry_d.minute, posd->o_entry_d.second,
  posd->o_carrier_id);
for(i = 0; i < posd->o_ol_cnt; i++)
{
  iInx += sprintf(pOut + iInx,
#ifdef LONG_WID
    " %6.6d      %6.6d      %2.2d      $%8.2f      %2.2d-%2.2d-
%4.4d<BR>",
#else
    " %4.4d      %6.6d      %2.2d      $%8.2f      %2.2d-%2.2d-
%4.4d<BR>",
#endif
    posd->OlOrderStatusData[i].ol_supply_w_id,
    posd->OlOrderStatusData[i].ol_i_id,
    posd->OlOrderStatusData[i].ol_quantity,
    posd->OlOrderStatusData[i].ol_amount,
    posd->OlOrderStatusData[i].ol_delivery_d.day,
    posd->OlOrderStatusData[i].ol_delivery_d.month,
    posd->OlOrderStatusData[i].ol_delivery_d.year);
};
wsprintf(pOut + iInx,
  "<BR></PRE><HR><BR>%s</FORM>%s", szMenuList, HTMLTrailer);

return(FALSE);
}; // ProcessOrderStatus

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

  pTMon = &pTPCC->tsTMon;
  psld = (STOCK_LEVEL_DATA *) pTMon->pTxnData;
  ZeroMemory(psld, sizeof(STOCK_LEVEL_DATA));
  psld->w_id = pTPCC->sWId;
  psld->d_id = pTPCC->sDId;
  psld->low_stock = 0;
  psld->execution_status[0] = 0;

```

```

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

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

return(FALSE);
}; // ProcessStockLevel

```

```

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

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

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

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

    bRslt = FALSE;

xit:

    return(bRslt);
}; // GetHidden

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

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

    // Convert command name into command index

```

```

for(u=0; u < CMD_MAX; u++)
{
    if (!strcmp(szCmds[u],pWork))
        return(u);
};

// Command string not found
return(CMD_NULL);
}; // GetCmd

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

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

```

```

}; // GetIntKey

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

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

//=====
//

```

```

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

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

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

```

```

};
return(bInvalid);
}; // GetAmountKey
//=====
//
// Function name: GetKeyValue
// This function parses an HTTP formatted string for specific key
// values. HTTP keys terminate with '='. HTTP values terminate
// with an '&' or '\0'.
//
// Result:
// FALSE - Key found, string value return in pValue
// TRUE - Key not found
//=====
BOOL GetKeyValue(CHAR * pHTML,CHAR * pKey,CHAR * pValue,UINT uMax)
{
    CHAR * ptr;
    if (!(ptr=strstr(pHTML,pKey)))
        return(TRUE);
    if (!(ptr=strchr(ptr,'=')))
        return(TRUE);
    ptr++;
    uMax--;
    while (*ptr && *ptr != '&' && uMax)
    {
        *pValue++ = *ptr++;
        uMax--;
    };
    *pValue = 0;
    return(FALSE);
}; // GetKeyValue
//=====
//
// Function name: FormatLogin
//=====
VOID FormatLogin(CHAR * pOut,CHAR * pAddText)
{
    wsprintf(pOut,"%s<BR>%s<BR>%s",szFormLogin,pAddText,HTMLTrailer);
}; // FormatLogin
//=====
//
// Function name: FormatMenu
//=====
VOID FormatMenu(CHAR * pOut,TPCC_STATE * pTPCC)
{
    wsprintf(pOut,
"%s<HTML><HEAD><TITLE>TPC-C MainMenu</TITLE></HEAD><BODY>"
"Select Desired Transaction.<BR><HR>"
"<FORM ACTION=\"tpcc.dll\"METHOD=\"GET\">"
"<INPUT TYPE=\"hidden\" NAME=\"STATUSID\" VALUE=\"%d\">"
"<INPUT TYPE=\"hidden\" NAME=\"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>"
        "Warehouse: %6.6d",
        #ifdef LONG_WID
        "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);
    sprintf (pOut + iInx,
        "<PRE>
        Delivery<BR>"
        #ifdef LONG_WID
        "Warehouse: %6.6d<BR><BR>"
        #else
        "Warehouse: %4.4d<BR><BR>"
        #endif
        "Carrier Number: <INPUT NAME=\ "OCD*\ " SIZE=1><BR><BR>"
        "Execution Status:<BR></PRE><HR>"
        "<INPUT TYPE=\ "submit\ "NAME=\ "CMD\ " VALUE=\ "Process\ ">"
        "<INPUT TYPE=\ "submit\ "NAME=\ "CMD\ " VALUE=\ "Menu\ ">"
        "</FORM></BODY></HTML>",
        pTPCC->sWId);
}; // FormatDelivery

//=====
//
// Function name: FormatOrderStatus
//
//=====
VOID FormatOrderStatus (CHAR * pOut, TPCC_STATE * pTPCC)
{
    INT iInx;
    pTPCC->uFormId = FORM_ORDERSTATUS;
    iInx = FormatFormHdr (pOut, "TPC-C Order-Status", pTPCC);
    sprintf (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);
    sprintf (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 (sprintf (pOut,
    "%s<HTML><HEAD><TITLE>%s</TITLE></HEAD>"
    "<FORM ACTION=\"tpcc.dll\" METHOD=\"GET\">"
    "<INPUT TYPE=\"hidden\" NAME=\"PI*\" VALUE=\"\">"
    "<INPUT TYPE=\"hidden\" NAME=\"STATUSID\" VALUE=\"%0\">"
    "<INPUT TYPE=\"hidden\" NAME=\"FORMID\" VALUE=\"%d\">"
    "<INPUT TYPE=\"hidden\" NAME=\"TERMIN\" VALUE=\"%d\">"
    "<INPUT TYPE=\"hidden\" NAME=\"SYNCID\" VALUE=\"%d\">",
    HTTPHdr,pTitle,pTPCC->uFormId,pTPCC->iTermId,pTPCC->iSyncId)
    );
};

```

```

}; // FormatFormHdr

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

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

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

```

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

tpcchandler.h

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

#define MAX_MSG_SZ 5000

typedef struct
{
    LPVOID ConnID; // Active Connection Id
#ifdef LONG_WID
    LONG sWid; // TPC WareHouse Id
#else
    SHORT sWid; // TPC WareHouse Id
#endif
    SHORT sDId; // TPC District Id
    INT iSyncId; // TPC Sync Id
    INT iTermId; // TPC Term Id
    UINT uFormId; // TPC Form Id
    INT iStatusId; // TPC 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
} TPC_STATE;

BOOL TPCCclear(TPC_STATE * pTPCC);
UINT TPCHandler(TPC_STATE * pTPCC);
```

tpccproxy.def

```
LIBRARY "tpcc_com_ps"
May 2004
```

```
DESCRIPTION 'Proxy/Stub DLL'

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

tpccproxy.h

```
/* this ALWAYS GENERATED file contains the definitions for the interfaces
*/
```

```
/* File created by MIDL compiler version 3.01.75 */
/* at Wed Nov 13 15:24:05 2002
```

```
*/
/* Compiler settings for .\tpccproxy.idl:
    Oicf (OptLev=i2), W1, Zp8, env=Win32, ms_ext, c_ext
    error checks: none
```

```
*/
//@@MIDL_FILE_HEADING( )
#include "rpc.h"
#include "rpcndr.h"
#ifdef COM_NO_WINDOWS_H
#include "windows.h"
#include "ole2.h"
#endif /*COM_NO_WINDOWS_H*/
```

```
#ifndef __tpccproxy_h__
#define __tpccproxy_h__
```

```
#ifdef __cplusplus
extern "C"{
#endif
```

```
/* Forward Declarations */
```

```
#ifndef __ITPCC_FWD_DEFINED__
#define __ITPCC_FWD_DEFINED__
typedef interface ITpcc ITpcc;
#endif /* __ITPCC_FWD_DEFINED__ */
```

```
/* header files for imported files */
#include "oidl.h"
#include "ocidl.h"
```

```
void __RPC_FAR * __RPC_USER MIDL_user_allocate(size_t);
void __RPC_USER MIDL_user_free( void __RPC_FAR * );
```

```
#ifndef __ITPCC_INTERFACE_DEFINED__
#define __ITPCC_INTERFACE_DEFINED__
```

```
/******
```

```

* Generated header for interface: ITPCC
* at Wed Nov 13 15:24:05 2002
* using MIDL 3.01.75
*****/
/* [unique] [helpstring] [uuid] [object] */

EXTERN_C const IID IID_ITPCC;

#if defined(__cplusplus) && !defined(CINTERFACE)

    interface DECLSPEC_UUID("FEEE6AA2-84B1-11d2-BA47-00C04FBFE08B")
    ITPCC : public IUnknown
    {
    public:
        virtual HRESULT STDMETHODCALLTYPE NewOrder(
            /* [out][in] */ int __RPC_FAR *iSize,
            /* [size_is][size_is][out][in] */ unsigned char __RPC_FAR
            * __RPC_FAR *pTData) = 0;

        virtual HRESULT STDMETHODCALLTYPE Payment(
            /* [out][in] */ int __RPC_FAR *iSize,
            /* [size_is][size_is][out][in] */ unsigned char __RPC_FAR
            * __RPC_FAR *pTData) = 0;

        virtual HRESULT STDMETHODCALLTYPE Delivery(
            /* [in] */ int __RPC_FAR *iSize,
            /* [size_is][size_is][out][in] */ unsigned char __RPC_FAR
            * __RPC_FAR *pTData) = 0;

        virtual HRESULT STDMETHODCALLTYPE StockLevel(
            /* [out][in] */ int __RPC_FAR *iSize,
            /* [size_is][size_is][out][in] */ unsigned char __RPC_FAR
            * __RPC_FAR *pTData) = 0;

        virtual HRESULT STDMETHODCALLTYPE OrderStatus(
            /* [out][in] */ int __RPC_FAR *iSize,
            /* [size_is][size_is][out][in] */ unsigned char __RPC_FAR
            * __RPC_FAR *pTData) = 0;

        virtual HRESULT STDMETHODCALLTYPE CallSetComplete( void) = 0;

    };

#else /* C style interface */

    typedef struct ITPCCVtbl
    {
        BEGIN_INTERFACE

        HRESULT ( STDMETHODCALLTYPE __RPC_FAR *QueryInterface )(
            ITPCC __RPC_FAR * This,
            /* [in] */ REFIID riid,
            /* [iid_is][out] */ void __RPC_FAR * __RPC_FAR *ppvObject);

        ULONG ( STDMETHODCALLTYPE __RPC_FAR *AddRef )(
            ITPCC __RPC_FAR * This);

        ULONG ( STDMETHODCALLTYPE __RPC_FAR *Release )(
            ITPCC __RPC_FAR * This);

    };

```

```

        HRESULT ( STDMETHODCALLTYPE __RPC_FAR *NewOrder )(
            ITPCC __RPC_FAR * This,
            /* [out][in] */ int __RPC_FAR *iSize,
            /* [size_is][size_is][out][in] */ unsigned char __RPC_FAR
            * __RPC_FAR *pTData);

        HRESULT ( STDMETHODCALLTYPE __RPC_FAR *Payment )(
            ITPCC __RPC_FAR * This,
            /* [out][in] */ int __RPC_FAR *iSize,
            /* [size_is][size_is][out][in] */ unsigned char __RPC_FAR
            * __RPC_FAR *pTData);

        HRESULT ( STDMETHODCALLTYPE __RPC_FAR *Delivery )(
            ITPCC __RPC_FAR * This,
            /* [in] */ int __RPC_FAR *iSize,
            /* [size_is][size_is][out][in] */ unsigned char __RPC_FAR
            * __RPC_FAR *pTData);

        HRESULT ( STDMETHODCALLTYPE __RPC_FAR *StockLevel )(
            ITPCC __RPC_FAR * This,
            /* [out][in] */ int __RPC_FAR *iSize,
            /* [size_is][size_is][out][in] */ unsigned char __RPC_FAR
            * __RPC_FAR *pTData);

        HRESULT ( STDMETHODCALLTYPE __RPC_FAR *OrderStatus )(
            ITPCC __RPC_FAR * This,
            /* [out][in] */ int __RPC_FAR *iSize,
            /* [size_is][size_is][out][in] */ unsigned char __RPC_FAR
            * __RPC_FAR *pTData);

        HRESULT ( STDMETHODCALLTYPE __RPC_FAR *CallSetComplete )(
            ITPCC __RPC_FAR * This);

    END_INTERFACE
} ITPCCVtbl;

interface ITPCC
{
    CONST_VTBL struct ITPCCVtbl __RPC_FAR *lpVtbl;
};

#ifdef COBJMACROS

#define ITPCC_QueryInterface(This,riid,ppvObject) \
    (This)->lpVtbl->QueryInterface(This,riid,ppvObject)

#define ITPCC_AddRef(This) \
    (This)->lpVtbl->AddRef(This)

#define ITPCC_Release(This) \
    (This)->lpVtbl->Release(This)

#define ITPCC_NewOrder(This,iSize,pTData) \
    (This)->lpVtbl->NewOrder(This,iSize,pTData)

#define ITPCC_Payment(This,iSize,pTData) \

```



```

        (This)->lpVtbl -> Payment (This, iSize, pTData)
#define ITPCC_Delivery(This, iSize, pTData) \
        (This)->lpVtbl -> Delivery (This, iSize, pTData)
#define ITPCC_StockLevel(This, iSize, pTData) \
        (This)->lpVtbl -> StockLevel (This, iSize, pTData)
#define ITPCC_OrderStatus(This, iSize, pTData) \
        (This)->lpVtbl -> OrderStatus (This, iSize, pTData)
#define ITPCC_CallSetComplete(This) \
        (This)->lpVtbl -> CallSetComplete (This)
#endif /* COBJMACROS */

#endif /* C style interface */

HRESULT __stdcall ITPCC_NewOrder_Proxy(
    ITPCC __RPC_FAR * This,
    /* [out][in] */ int __RPC_FAR *iSize,
    /* [size_is][size_is][out][in] */ unsigned char __RPC_FAR * __RPC_FAR
    *pTData);

void __RPC_STUB ITPCC_NewOrder_Stub(
    IRpcStubBuffer *This,
    IRpcChannelBuffer * pRpcChannelBuffer,
    PRPC_MESSAGE pRpcMessage,
    DWORD * _pdwStubPhase);

HRESULT __stdcall ITPCC_Payment_Proxy(
    ITPCC __RPC_FAR * This,
    /* [out][in] */ int __RPC_FAR *iSize,
    /* [size_is][size_is][out][in] */ unsigned char __RPC_FAR * __RPC_FAR
    *pTData);

void __RPC_STUB ITPCC_Payment_Stub(
    IRpcStubBuffer *This,
    IRpcChannelBuffer * pRpcChannelBuffer,
    PRPC_MESSAGE pRpcMessage,
    DWORD * _pdwStubPhase);

HRESULT __stdcall ITPCC_Delivery_Proxy(
    ITPCC __RPC_FAR * This,
    /* [in] */ int __RPC_FAR *iSize,
    /* [size_is][size_is][out][in] */ unsigned char __RPC_FAR * __RPC_FAR
    *pTData);

void __RPC_STUB ITPCC_Delivery_Stub(
    IRpcStubBuffer *This,
    IRpcChannelBuffer * pRpcChannelBuffer,
    PRPC_MESSAGE pRpcMessage,

```

```

    DWORD * _pdwStubPhase);

HRESULT __stdcall ITPCC_StockLevel_Proxy(
    ITPCC __RPC_FAR * This,
    /* [out][in] */ int __RPC_FAR *iSize,
    /* [size_is][size_is][out][in] */ unsigned char __RPC_FAR * __RPC_FAR
    *pTData);

void __RPC_STUB ITPCC_StockLevel_Stub(
    IRpcStubBuffer *This,
    IRpcChannelBuffer * pRpcChannelBuffer,
    PRPC_MESSAGE pRpcMessage,
    DWORD * _pdwStubPhase);

HRESULT __stdcall ITPCC_OrderStatus_Proxy(
    ITPCC __RPC_FAR * This,
    /* [out][in] */ int __RPC_FAR *iSize,
    /* [size_is][size_is][out][in] */ unsigned char __RPC_FAR * __RPC_FAR
    *pTData);

void __RPC_STUB ITPCC_OrderStatus_Stub(
    IRpcStubBuffer *This,
    IRpcChannelBuffer * pRpcChannelBuffer,
    PRPC_MESSAGE pRpcMessage,
    DWORD * _pdwStubPhase);

HRESULT __stdcall ITPCC_CallSetComplete_Proxy(
    ITPCC __RPC_FAR * This);

void __RPC_STUB ITPCC_CallSetComplete_Stub(
    IRpcStubBuffer *This,
    IRpcChannelBuffer * pRpcChannelBuffer,
    PRPC_MESSAGE pRpcMessage,
    DWORD * _pdwStubPhase);

#endif /* __ITPCC_INTERFACE_DEFINED__ */

/* Additional Prototypes for ALL interfaces */

/* end of Additional Prototypes */

#ifdef __cplusplus
}
#endif

#endif

// 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 STDMETHODCALLTYPE CallSetComplete
    (
    );

}; // interface ITPCC

//*****
// tpccsvr.cpp

```

tpccsvr.cpp

```

//*****
#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 "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] = "D242Server";
char szMyHost[MAX_COMPUTERNAME_LENGTH + 1];
char szUser[32] = "tpcc";
char szPassword[32] = "tpcc";
char szDatabase[32] = "tpcc";
int iDeadlockRetry = 5;

long lCount = 0;
long lActive = 0;

//*****
// Utility functions
//*****
bool ReadRegistry(VOID);
void WriteEventLog(char * pMsg, bool bError);
int ocierror(char *fname, int lineno, OCIError *errhp, sword status);
char *basename(const char *name);

#define SQLTXT "alter session set isolation_level = serializable"

```

```

//*****
// DllMain - The 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;

                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);
                    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);
};

// *****
// registers object, typelib and all interfaces in typelib
// *****
STDAPI DllRegisterServer(void)
{
    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);

    wsprintf(szDiag,"CTPCC_Common: Initialized %ld\n",m_lRefId);
    WriteEventLog(szDiag,FALSE);
};

// *****
// *****
STDMETHODIMP CTPCC_Common::Construct(IDispatch * pUnk)
{
    char szDiag[300];

```

```

try
{
    if (TPCinit(m_lRefId,szUser,szPassword,szDatabase) ==
false)
    {
        wsprintf(szDiag,"DllMain(%s): TPCinit Failed\n"
"ServerName=%s,DB=%s,User=%s,PW=%s,Retries=%d\n",
VERSIONINFO,szServer,szDatabase,szUser,szPassword,iDeadlockRetry);
        WriteEventLog(szDiag,TRUE);
        return(E_FAIL);
    }
    else
    {
        wsprintf(szDiag,"DllMain(%s): TPCinit Success\n"
"ServerName=%s,DB=%s,User=%s,PW=%s,Retries=%d\n",
VERSIONINFO,szServer,szDatabase,szUser,szPassword,iDeadlockRetry);
        WriteEventLog(szDiag,FALSE);
    }
}
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

// *****
// *****
CTPCC_Common::~CTPCC_Common()
{
    char szDiag[300];

    TPCexit();

    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;
};

// *****
// TPCinit

```

```

// *****
bool CTPCC_Common::TPCinit(int id,char *uid,char *pwd,char *dbserver)
{
    text stmbuf[100];

    //proc no = id;
    OCIInitialize(OCI_DEFAULT|OCI_OBJECT, (dvoid *)0,0,0,0);
    OCIEnvInit(&m_tpcEnv, OCI_DEFAULT, 0, (dvoid **)0);
    OCIHandleAlloc((dvoid *)m_tpcEnv, (dvoid **)&m_tpcSrv,
OCI_HTYPE_SERVER, 0, (dvoid **)0);
    OCIHandleAlloc((dvoid *)m_tpcEnv, (dvoid **)&m_errHp, OCI_HTYPE_ERROR,
0, (dvoid **)0);
    OCIHandleAlloc((dvoid *)m_tpcEnv, (dvoid **)&m_tpcSvc,
OCI_HTYPE_SVCCTX, 0, (dvoid **)0);

    OCIERROR(m_errHp,OCIServerAttach(m_tpcSrv, m_errHp, (text
*)"tpcc",strlen("tpcc"),OCI_DEFAULT));
    OCIAttrSet((dvoid *)m_tpcSvc, OCI_HTYPE_SVCCTX, (dvoid *)m_tpcSrv,
(ub4)0,OCI_ATTR_SERVER, m_errHp);
    OCIHandleAlloc((dvoid *)m_tpcEnv, (dvoid **)&m_tpcUsr,
OCI_HTYPE_SESSION, 0, (dvoid **)0);
    OCIAttrSet((dvoid *)m_tpcUsr, OCI_HTYPE_SESSION, (dvoid *)uid,
(ub4)strlen(uid),OCI_ATTR_USERNAME, m_errHp);
    OCIAttrSet((dvoid *)m_tpcUsr, OCI_HTYPE_SESSION, (dvoid *)pwd,
(ub4)strlen(pwd),
OCI_ATTR_PASSWORD, m_errHp);

    OCISessionBegin(m_tpcSvc, m_errHp, m_tpcUsr, OCI_CRED_RDBMS,
OCI_DEFAULT);
    OCIAttrSet(m_tpcSvc, OCI_HTYPE_SVCCTX, m_tpcUsr, 0, OCI_ATTR_SESSION,
m_errHp);

    // run all transaction in serializable mode
    OCIHandleAlloc(m_tpcEnv, (dvoid **)&m_curi, OCI_HTYPE_STMT, 0,
(dvoid **)0);
    sprintf((char *) stmbuf, SQLTXMT);
    OCIStmtPrepare(m_curi, m_errHp, stmbuf, strlen((char *)stmbuf),
OCI_NTV_SYNTAX, OCI_DEFAULT);
    if (ocierror(_FILE_,_LINE_,m_errHp,OCIStmtExecute(m_tpcSvc, m_curi,
m_errHp,1,0,0,0,OCI_DEFAULT)) != RECOVER)
    {
        OCIHandleFree(m_curi, OCI_HTYPE_STMT);
        TPCexit();
        return (false);
    };
    OCIHandleFree(m_curi, OCI_HTYPE_STMT);

    if (getenv("USE_IMU"))
    {
        WriteEventLog("Use in_memory_undo", FALSE);
        OCIHandleAlloc(m_tpcEnv, (dvoid **)&m_curi, OCI_HTYPE_STMT, 0,
(dvoid **)0);
        sprintf((char *) stmbuf, SQLTXTIMU);
        OCIStmtPrepare(m_curi, m_errHp, stmbuf, strlen((char *)stmbuf),
OCI_NTV_SYNTAX, OCI_DEFAULT);
        OCIERROR(m_errHp,OCIStmtExecute(m_tpcSvc, m_curi,
m_errHp,1,0,0,0,OCI_DEFAULT));
        OCIHandleFree(m_curi, OCI_HTYPE_STMT);
    }

    if (getenv("USE_NCOMP"))

```

```

    {
        WriteEventLog("Use NCOMP", FALSE);
        OCIHandleAlloc(m_tpcEnv, (dvoid **)&m_curi, OCI_HTYPE_STMT, 0,
(dvoid**)0);
        sprintf ((char *) stmbuf, SQLTXTNCP);
        OCIStmtPrepare(m_curi, m_errHp, stmbuf, strlen((char *)stmbuf),
OCI_NTV_SYNTAX, OCI_DEFAULT);
        OCIERROR(m_errHp,OCIStmtExecute(m_tpcSvc, m_curi,
m_errHp,1,0,0,0,OCI_DEFAULT));
        OCIHandleFree(m_curi, OCI_HTYPE_STMT);
    }

/* This is done in cvdrv.c
if (tracelevel == 2)
{
    OCIHandleAlloc(tpcenv, (dvoid **)&curi, OCI_HTYPE_STMT, 0,
(dvoid**)0);
    memset(stmbuf,0,100);
    sprintf ((char *) stmbuf, SQLTXTRC);
    OCIStmtPrepare(curi, errhp, stmbuf, strlen((char *)stmbuf),
OCI_NTV_SYNTAX, OCI_DEFAULT);
    OCIERROR(errhp, OCIStmtExecute(tpcsvc, curi,
errhp,1,0,0,0,OCI_DEFAULT));
    OCIHandleFree((dvoid *)curi, OCI_HTYPE_STMT);
}
*/
/*
if (tracelevel == 3)
{
    OCIHandleAlloc(tpcenv, (dvoid **)&curi, OCI_HTYPE_STMT, 0,
(dvoid**)0);
    memset(stmbuf,0,100);
    sprintf ((char *) stmbuf, SQLTXTTIM);
    OCIStmtPrepare(curi, errhp, stmbuf, strlen((char *)stmbuf),
OCI_NTV_SYNTAX, OCI_DEFAULT);
    OCIERROR(errhp, OCIStmtExecute(tpcsvc, curi,
errhp,1,0,0,0,OCI_DEFAULT));
    OCIHandleFree((dvoid *)curi, OCI_HTYPE_STMT);
}
*/
m_logon = 1;

OCIERROR(m_errHp,OCIDateSysDate(m_errHp,&cr_date));

if (tkvcninit() == false ||
tkvcpinit() == false ||
tkvcdinit() == false ||
tkvcoinit() == false ||
tkvcsinit() == false)
{
    TPCexit ();
    return (false);
}

return (true);
}; // TPCinit

// *****
// TPCexit
// *****

```

```

void CTPCC_Common::TPCexit()
{
    tkvcndone();
    tkvcpdone();
    tkvcddone();
    tkvcodone();

    OCIHandleFree((dvoid *)m_tpcUsr, OCI_HTYPE_SESSION);
    OCIHandleFree((dvoid *)m_tpcSvc, OCI_HTYPE_SVCCTX);
    OCIHandleFree((dvoid *)m_errHp, OCI_HTYPE_ERROR);
    OCIHandleFree((dvoid *)m_tpcSrv, OCI_HTYPE_SERVER);
    OCIHandleFree((dvoid *)m_tpcEnv, OCI_HTYPE_ENV);
}; // TPCexit

// *****
// New Order
// *****
HRESULT CTPCC_Common::NewOrder(int * iSize,UCHAR ** pTData)
{
    m_pnod = (NEW_ORDER_DATA *)*pTData;
    TPCnew();
    m_pnod->bTPRslt = (m_pnod->iTPRslt != SVC_NOERROR);

    return(S_OK);
}

// *****
// TPCnew
// *****
void CTPCC_Common::TPCnew ()
{
    w_id = m_pnod->w_id;
    d_id = m_pnod->d_id;
    c_id = m_pnod->c_id;

    for (int i = 0; i < 15; i++)
    {
        nol_i_id[i] = m_pnod->ol[i].ol_i_id;
        nol_supply_w_id[i] = m_pnod->ol[i].ol_supply_w_id;
        nol_quantity[i] = m_pnod->ol[i].ol_quantity;
    }

    //m_retries = 0;
    OCIERROR(m_errHp,OCIDateSysDate(m_errHp,&cr_date));
    m_pnod->iTPRslt = tkvcn();
    if (m_pnod->iTPRslt < SVC_NOERROR)
    {
        if (m_pnod->iTPRslt == SVCERR_NOCUSTOMER)
            strcpy(m_pnod->execution_status,"Invalid Customer Id");
        else
            strcpy(m_pnod->execution_status,"Irrecov See ErrorLog");
    }
    else
    {
        ConvertDate(&cr_date,&m_pnod->o_entry_d);
        m_pnod->o_id = o_id;
        m_pnod->o_ol_cnt = o_ol_cnt;
        strncpy(m_pnod->c_last,c_last,17);
        strncpy(m_pnod->c_credit,c_credit,2);
    }
}

```

```

m_pnod->c_discount = c_discount;
m_pnod->w_tax = w_tax;
m_pnod->d_tax = d_tax;
m_pnod->total_amount = total_amount;

for (i = 0; i < o_ol_cnt; i++)
{
    strncpy(m_pnod->Ol[i].ol_i_name, i_name[i], 25);
    m_pnod->Ol[i].ol_stock = s_quantity[i];
    m_pnod->Ol[i].ol_brand_generic[0] = brand_generic[i][0];
    m_pnod->Ol[i].ol_brand_generic[1] = '\0';
    m_pnod->Ol[i].ol_i_price = (float)(i_price[i])/100;
    m_pnod->Ol[i].ol_amount = (float)(nol_amount[i])/100;
}
if (m_pnod->iTPRslt == SVC_BADITEMID)
    strcpy(m_pnod->execution_status, "Item number is not valid");
else
    strcpy(m_pnod->execution_status, "Transaction committed.");
}; // TPCnew

// *****
// Payment
// *****
HRESULT CTPCC_Common::Payment(int * iSize, UCHAR **pTData)
{
    m_ppd = (PAYMENT_DATA *) *pTData;
    TPCpay();
    m_ppd->bTPRslt = (m_ppd->iTPRslt != SVC_NOERROR);

    return(S_OK);
}; // Payment

void CTPCC_Common::TPCpay()
{
    w_id = m_ppd->w_id;
    d_id = m_ppd->d_id;
    c_w_id = m_ppd->c_w_id;
    c_d_id = m_ppd->c_d_id;
    h_amount = (int) (m_ppd->h_amount * 100);
    OCIERROR(m_errHp, OCIDateSysDate(m_errHp, &cr_date));
    if (m_ppd->c_id == 0)
    {
        c_id = 0;
        strncpy(c_last, m_ppd->c_last, 17);
        bylastname = TRUE;
    }
    else
    {
        c_id = m_ppd->c_id;
        strcpy(c_last, " ");
        bylastname = FALSE;
    };

    //m_retries = 0;
    m_ppd->iTPRslt = tkvcp();
    if (m_ppd->iTPRslt < SVC_NOERROR)
    {
        if (m_ppd->iTPRslt == SVCERR_NOCUSTOMER)
            strcpy(m_ppd->execution_status, "Invalid Customer Name or
Number");

```

```

else
    strcpy(m_ppd->execution_status, "Irrecov See ErrorLog");
}
else
{
    ConvertDate(&cr_date, &m_ppd->h_date);
    ConvertDate(&c_since, &m_ppd->c_since);
    strncpy (m_ppd->w_street_1, w_street_1, 21);
    strncpy (m_ppd->w_street_2, w_street_2, 21);
    strncpy (m_ppd->w_city, w_city, 21);
    strncpy (m_ppd->w_state, w_state, 3);
    strncpy (m_ppd->w_zip, w_zip, 10);
    strncpy (m_ppd->d_street_1, d_street_1, 21);
    strncpy (m_ppd->d_street_2, d_street_2, 21);
    strncpy (m_ppd->d_city, d_city, 21);
    strncpy (m_ppd->d_state, d_state, 3);
    strncpy (m_ppd->d_zip, d_zip, 10);
    m_ppd->c_id = c_id;
    strncpy (m_ppd->c_first, c_first, 17);
    strncpy (m_ppd->c_middle, c_middle, 3);
    strncpy (m_ppd->c_last, c_last, 17);
    strncpy (m_ppd->c_street_1, c_street_1, 21);
    strncpy (m_ppd->c_street_2, c_street_2, 21);
    strncpy (m_ppd->c_city, c_city, 21);
    strncpy (m_ppd->c_state, c_state, 3);
    strncpy (m_ppd->c_zip, c_zip, 10);
    strncpy (m_ppd->c_phone, c_phone, 17);
    strncpy (m_ppd->c_credit, c_credit, 2);
    m_ppd->c_credit_lim = (float)(c_credit_lim)/100;
    m_ppd->c_discount = c_discount;
    m_ppd->c_balance = (float)(c_balance)/100;
    strncpy(m_ppd->c_data, c_data, 201);

    strcpy(m_ppd->execution_status, "Transaction committed.");
}
}; // TPCpay

// *****
// Delivery
// *****
HRESULT CTPCC_Common::Delivery(int * iSize, UCHAR ** pTData)
{
    m_pdd = (DELIVERY_DATA *) *pTData;
    TPCdel();
    m_pdd->bTPRslt = (m_pdd->iTPRslt != SVC_NOERROR);

    return(S_OK);
}; // Delivery

void CTPCC_Common::TPCdel()
{
    w_id = m_pdd->w_id;
    o_carrier_id = m_pdd->o_carrier_id;
    // m_pdd->iComplete = 0;
    OCIERROR(m_errHp, OCIDateSysDate(m_errHp, &cr_date));
    //m_retries = 0;

    m_pdd->iTPRslt = tkvcd();

    if (m_pdd->iTPRslt < SVC_NOERROR)

```

```

{
    if (m_pdd->iTPRslt != DEL_ERROR)
    {
        if (m_pdd->iTPRslt != RECOVER)
            m_pdd->iTPRslt = IRRECERR;
        //      strcpy(m_pdd->execution_status, "Irrecov");
    }
}
else
{
    GetLocalTime(&m_pdd->EndTime);
    for (int i = 0; i < 10; i++)
        m_pdd->o_id[i] = del_o_id[i];

//      m_pdd->iComplete = 1;
//      strcpy(m_pdd->execution_status, "Transaction committed.");
}
}; // TPCdel

// *****
// Order Status
// *****
HRESULT CTPCC_Common::OrderStatus(int * iSize, UCHAR ** pData)
{
    m_posd = (ORDER_STATUS_DATA *) *pData;
    TPCord();
    m_posd->bTPRslt = (m_posd->iTPRslt != SVC_NOERROR);

    return(S_OK);
}; // Orderstatus

void CTPCC_Common::TPCord ()
{
    w_id = m_posd->w_id;
    d_id = m_posd->d_id;
    if (m_posd->c_id == 0)
    {
        c_id = 0;
        strncpy(c_last, m_posd->c_last, 17);
        bylastname = TRUE;
    }
    else
    {
        c_id = m_posd->c_id;
        strcpy(c_last, " ");
        bylastname = FALSE;
    }
};

//m_retries = 0;

m_posd->iTPRslt = tkvco();

if (m_posd->iTPRslt < SVC_NOERROR)
{
    if (m_posd->iTPRslt == SVCERR_NOCUSTOMER)
        strcpy(m_posd->execution_status, "Invalid Customer Name or
Number");
    else
        strcpy(m_posd->execution_status, "Irrecov See ErrorLog");
}

```

```

else
{
    ConvertDate(&o_entry_d_base, &m_posd->o_entry_d);
    m_posd->c_id = c_id;
    strncpy(m_posd->c_last, c_last, 17);
    strncpy(m_posd->c_first, c_first, 17);
    strncpy(m_posd->c_middle, c_middle, 3);

    m_posd->c_balance = c_balance/100;
    m_posd->o_id = o_id;
    if (o_carrier_id == 11)
        m_posd->o_carrier_id = 0;
    else
        m_posd->o_carrier_id = o_carrier_id;
    m_posd->o_ol_cnt = o_ol_cnt;
    for (int i = 0; i < o_ol_cnt; i++)
    {
        ConvertDate(&ol_delivery_d[i], &m_posd-
>OlOrderStatusData[i].ol_delivery_d);
        m_posd->OlOrderStatusData[i].ol_supply_w_id = ol_supply_w_id[i];
        m_posd->OlOrderStatusData[i].ol_i_id = ol_i_id[i];
        m_posd->OlOrderStatusData[i].ol_quantity = ol_quantity[i];
        m_posd->OlOrderStatusData[i].ol_amount =
(float) (ol_amount[i])/100;
    }
}; // TPCord

// *****
// Stock Level
// *****
HRESULT CTPCC_Common::StockLevel(int * iSize, UCHAR ** pData)
{
    m_pslid = (STOCK_LEVEL_DATA *) *pData;
    TPCsto();
    m_pslid->bTPRslt = (m_pslid->iTPRslt != SVC_NOERROR);

    return(S_OK);
}

void CTPCC_Common::TPCsto()
{
    w_id = m_pslid->w_id;
    d_id = m_pslid->d_id;
    threshold = m_pslid->thresh_hold;

    //m_retries = 0;

    m_pslid->iTPRslt = tkvcs();

    if (m_pslid->iTPRslt < SVC_NOERROR)
        strcpy(m_pslid->execution_status, "Irrecov See ErrorLog");
    else
        m_pslid->low_stock = low_stock;
}; // TPCsto

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

```

```

// *****
// **** New Order (plnew.c)
// *****
bool CTPCC_Common::tkvcninit()
{
    text stmbuf[SQL_BUF_SIZE];

    m_nctx = (newctx *) malloc (sizeof(newctx));
    DISCARD memset (m_nctx, (char)0, sizeof(newctx));
    m_nctx->w_id_len = sizeof(w_id);
    m_nctx->d_id_len = sizeof(d_id);
    m_nctx->c_id_len = sizeof(c_id);
    m_nctx->o_all_local_len = sizeof(o_all_local);
    m_nctx->o_ol_cnt_len = sizeof(o_ol_cnt);
    m_nctx->w_tax_len = 0;
    m_nctx->d_tax_len = 0;
    m_nctx->o_id_len = sizeof(o_id);
    m_nctx->c_discount_len = 0;
    m_nctx->c_credit_len = 0;
    m_nctx->c_last_len = 0;
    m_nctx->retries_len = sizeof(retries);
    m_nctx->cr_date_len = sizeof(cr_date);

    /* open first cursor */
    DISCARD OCIERROR(m_errHp,OCIHandleAlloc(m_tpcEnv, (dvoid **) (&m_nctx-
>curn1),
        OCI_HTYPE_STMT, 0, (dvoid**)0));
    sqlfile("c:/Inetpub/wwwroot/blocks/tkvcpnew.sql",stmbuf);
    DISCARD OCIERROR(m_errHp,OCIStmtPrepare(m_nctx->curn1, m_errHp, stmbuf,
        strlen((char *)stmbuf), OCI_NTV_SYNTAX, OCI_DEFAULT));

    /* bind variables */
    OCIBNDPL(m_nctx->curn1, m_nctx->w_id_bp, m_errHp,
":w_id",ADR(w_id),SIZ(w_id),
        SQLT_INT, &m_nctx->w_id_len);
    OCIBNDPL(m_nctx->curn1, m_nctx->d_id_bp, m_errHp,
":d_id",ADR(d_id),SIZ(d_id),
        SQLT_INT, &m_nctx->d_id_len);
    OCIBNDPL(m_nctx->curn1, m_nctx->c_id_bp, m_errHp,
":c_id",ADR(c_id),SIZ(c_id),
        SQLT_INT, &m_nctx->c_id_len);
    OCIBNDPL(m_nctx->curn1, m_nctx->o_all_local_bp, m_errHp, ":o_all_local",
        ADR(o_all_local), SIZ(o_all_local),SQLT_INT, &m_nctx-
>o_all_local_len);
    OCIBNDPL(m_nctx->curn1, m_nctx->o_all_cnt_bp, m_errHp,
":o_ol_cnt",ADR(o_ol_cnt),
        SIZ(o_ol_cnt),SQLT_INT, &m_nctx->o_ol_cnt_len);
    OCIBNDPL(m_nctx->curn1, m_nctx->w_tax_bp, m_errHp,
":w_tax",ADR(w_tax),SIZ(w_tax),
        SQLT_FLT, &m_nctx->w_tax_len);
    OCIBNDPL(m_nctx->curn1, m_nctx->d_tax_bp, m_errHp,
":d_tax",ADR(d_tax),SIZ(d_tax),
        SQLT_FLT, &m_nctx->d_tax_len);
    OCIBNDPL(m_nctx->curn1, m_nctx->o_id_bp, m_errHp,
":o_id",ADR(o_id),SIZ(o_id),
        SQLT_INT, &m_nctx->o_id_len);
    OCIBNDPL(m_nctx->curn1, m_nctx->c_discount_bp, m_errHp, ":c_discount",
        ADR(c_discount), SIZ(c_discount),SQLT_FLT, &m_nctx-
>c_discount_len);

```

```

    OCIBNDPL(m_nctx->curn1, m_nctx->c_credit_bp, m_errHp,
":c_credit",c_credit,
        SIZ(c_credit),SQLT_CHR, &m_nctx->c_credit_len);
    OCIBNDPL(m_nctx->curn1, m_nctx->c_last_bp, m_errHp,
":c_last",c_last,SIZ(c_last),
        SQLT_STR, &m_nctx->c_last_len);
    OCIBNDPL(m_nctx->curn1, m_nctx->retries_bp, m_errHp,
":retry",ADR(retries),
        SIZ(retries),SQLT_INT, &m_nctx->retries_len);
    OCIBNDPL(m_nctx->curn1, m_nctx->cr_date_bp, m_errHp,
":cr_date",&cr_date,
        SIZ(OCIDate), SQLT_ODT, &m_nctx->cr_date_len);

    OCIBNDPLA(m_nctx->curn1, m_nctx->ol_i_id_bp,m_errHp,":ol_i_id",nol_i_id,
        SIZ(int), SQLT_INT, m_nctx->nol_i_id_len,NITEMS,&m_nctx-
>nol_i_count);
    OCIBNDPLA(m_nctx->curn1, m_nctx->ol_supply_w_id_bp, m_errHp,
":ol_supply_w_id",
        nol_supply_w_id,SIZ(int),SQLT_INT, m_nctx->nol_supply_w_id_len,
        NITEMS, &m_nctx->nol_s_count);
    OCIBNDPLA(m_nctx->curn1, m_nctx->ol_quantity_bp,m_errHp,":ol_quantity",
        nol_quantity, SIZ(int),SQLT_INT,m_nctx->nol_quantity_len,
        NITEMS,&m_nctx->nol_q_count);
    OCIBNDPLA(m_nctx->curn1, m_nctx-
>i_price_bp,m_errHp,":i_price",i_price,SIZ(int),
        SQLT_INT, m_nctx->i_price_len, NITEMS, &m_nctx-
>nol_item_count);
    OCIBNDPLA(m_nctx->curn1, m_nctx->i_name_bp,m_errHp,":i_name",i_name,
        SIZ(i_name[0]),SQLT_STR, m_nctx->i_name_len,NITEMS,
        &m_nctx->nol_name_count);
    OCIBNDPLA(m_nctx->curn1, m_nctx-
>s_quantity_bp,m_errHp,":s_quantity",s_quantity,
        SIZ(int), SQLT_INT,m_nctx->s_quant_len,NITEMS,&m_nctx-
>nol_qty_count);
    OCIBNDPLA(m_nctx->curn1, m_nctx-
>s_bg_bp,m_errHp,":brand_generic",brand_generic,
        SIZ(char), SQLT_CHR,m_nctx->s_bg_len,NITEMS,&m_nctx-
>nol_bg_count);
    OCIBNDPLA(m_nctx->curn1, m_nctx-
>ol_amount_bp,m_errHp,":ol_amount",nol_amount,
        SIZ(int),SQLT_INT, m_nctx->nol_amount_len,NITEMS,&m_nctx-
>nol_am_count);
    OCIBNDPLA(m_nctx->curn1, m_nctx->s_remote_bp,m_errHp,":s_remote",m_nctx-
>s_remote,
        SIZ(int),SQLT_INT, m_nctx->s_remote_len,NITEMS,&m_nctx-
>s_remote_count);

    /* open second cursor */
    DISCARD OCIERROR(m_errHp,OCIHandleAlloc(m_tpcEnv, (dvoid **) (&m_nctx-
>curn2),
        OCI_HTYPE_STMT, 0, (dvoid**)0));
    DISCARD sprintf ((char *) stmbuf, NO_SQLTXT2);
    DISCARD OCIERROR(m_errHp,OCIStmtPrepare(m_nctx->curn2, m_errHp, stmbuf,
        strlen((char *)stmbuf), OCI_NTV_SYNTAX, OCI_DEFAULT));

    /* execute second cursor to init newinit package */
    {
        int idxlarr[NITEMS];
        OCIBind *idxlarr_bp;
        ub2 idxlarr_len[NITEMS];

```



```

//ub2 idxlarr_rcode[NITEMS];
sb2 idxlarr_ind[NITEMS];
ub4 idxlarr_count;
ub2 idx;

for (idx = 0; idx < NITEMS; idx++) {
    idxlarr[idx] = idx + 1;
    idxlarr_ind[idx] = TRUE;
    idxlarr_len[idx] = sizeof(int);
}
idxlarr_count = NITEMS;
o_ol_cnt = NITEMS;

/* Bind array */
OCIBNDPLA(m_nctx->curn2, idxlarr_bp,m_errHp,":idxlarr",idxlarr,
          SIZ(int), SQLT_INT, idxlarr_len, NITEMS,&idxlarr_count);

    execstatus = OCISstmtExecute(m_tpcSvc,m_nctx->curn2,m_errHp,1,0,
                                NULLP(CONST
OCISnapshot),NULLP(OCISnapshot),OCI_DEFAULT);
    if(execstatus != OCI_SUCCESS)
    {
        OCITransRollback(m_tpcSvc,m_errHp,OCI_DEFAULT);
        errcode = OCIERROR(m_errHp,execstatus);
        return(false);
    }
}
return(true);
}

int CTPCC_Common::tkvcn()
{
    int i;
    int rcount;

retry:

    // number of invalid items
    status = 0;

    // get number of order lines, and check if all are local
    o_ol_cnt = NITEMS;
    o_all_local = 1;

    for (i = 0; i < NITEMS; i++)
    {
        if (nol_i_id[i] == 0)
        {
            o_ol_cnt = i;
            break;
        }

        if (nol_supply_w_id[i] != w_id)
        {
            m_nctx->s_remote[i] = 1;
            o_all_local = 0;
        }
        else
        {

```

```

        m_nctx->s_remote[i] = 0;
    }
}

m_nctx->w_id_len = sizeof(w_id);
m_nctx->d_id_len = sizeof(d_id);
m_nctx->c_id_len = sizeof(c_id);
m_nctx->o_all_local_len = sizeof(o_all_local);
m_nctx->o_ol_cnt_len = sizeof(o_ol_cnt);
m_nctx->w_tax_len = 0;
m_nctx->d_tax_len = 0;
m_nctx->o_id_len = sizeof(o_id);
m_nctx->c_discount_len = 0;
m_nctx->c_credit_len = 0;
m_nctx->c_last_len = 0;
m_nctx->retries_len = sizeof(retries);
m_nctx->cr_date_len = sizeof(cr_date);

// this is the row count
rcount = o_ol_cnt;
m_nctx->nol_i_cnt = o_ol_cnt;
m_nctx->nol_q_count = o_ol_cnt;
m_nctx->nol_s_count = o_ol_cnt;
m_nctx->s_remote_count = o_ol_cnt;

m_nctx->nol_qty_count = 0;
m_nctx->nol_bg_count = 0;
m_nctx->nol_item_count = 0;
m_nctx->nol_name_count = 0;
m_nctx->nol_am_count = 0;

// initialization for array operations
for (i = 0; i < o_ol_cnt; i++)
{
    m_nctx->ol_number[i] = i + 1;
    m_nctx->nol_i_id_len[i] = sizeof(int);
    m_nctx->nol_supply_w_id_len[i] = sizeof(int);
    m_nctx->nol_quantity_len[i] = sizeof(int);
    m_nctx->nol_amount_len[i] = sizeof(int);
    m_nctx->ol_o_id_len[i] = sizeof(int);
    m_nctx->ol_number_len[i] = sizeof(int);
    m_nctx->ol_dist_info_len[i] = m_nctx->s_dist_info_len[i];
    m_nctx->s_remote_len[i] = sizeof(int);
    m_nctx->s_quant_len[i] = sizeof(int);
    m_nctx->i_name_len[i]=0;
    m_nctx->s_bg_len[i] = 0;
}

for (i = o_ol_cnt; i < NITEMS; i++)
{
    m_nctx->nol_i_id_len[i] = 0;
    m_nctx->nol_supply_w_id_len[i] = 0;
    m_nctx->nol_quantity_len[i] = 0;
    m_nctx->nol_amount_len[i] = 0;
    m_nctx->ol_o_id_len[i] = 0;
    m_nctx->ol_number_len[i] = 0;
    m_nctx->ol_dist_info_len[i] = 0;
    m_nctx->s_remote_len[i] = 0;
    m_nctx->s_quant_len[i] = 0;
    m_nctx->i_name_len[i]=0;

```

```

    m_nctx->s_bg_len[i] = 0;
}

execstatus = OCISmtExecute(m_tpcSvc,m_nctx->curn1,m_errHp,1,0,0,0,
    OCI_DEFAULT | OCI_COMMIT_ON_SUCCESS);

if(execstatus != OCI_SUCCESS)
{
    OCITransRollback(m_tpcSvc,m_errHp,OCI_DEFAULT);
    errcode = OCIERROR(m_errHp,execstatus);
    if (errcode == OCI_NO_DATA)
        return(SVCERR_NOCUSTOMER);

    if((errcode == NOT_SERIALIZABLE) || (errcode == RECOVER) || (errcode
== SNAPSHOT_TOO_OLD))
    {
        retries++;
        goto retry;
    }
    else
    {
        return(SVCERR_OCI);
    }
}

// did the txn succeed ?
if (rcount != o_ol_cnt)
{
    status = rcount - o_ol_cnt;
    o_ol_cnt = rcount;
}

total_amount = 0.0;
for (i = 0; i < o_ol_cnt; i++)
{
    total_amount += nol_amount[i];
}

total_amount *= (float)(1 - c_discount) * (float)(1.0 + d_tax + w_tax);
total_amount = total_amount/100;

if (status)
    return(SVC_BADITEMID);

return(SVC_NOERROR);
}

void CTPCC_Common::tkvcndone ()
{
    if (m_nctx)
    {
        DISCARD OCIHandleFree((dvoid *)m_nctx->curn1,OCI_HTYPE_STMT);
        DISCARD OCIHandleFree((dvoid *)m_nctx->curn2,OCI_HTYPE_STMT);
        free (m_nctx);
    }
}

// *****
// **** Order Status (plord.c)
// *****
bool CTPCC_Common::tkvcinit ()

```

```

{
    int i;
    text stmbuf[SQL_BUF_SIZE];

    m_octx = (ordctx *) malloc (sizeof(ordctx));
    DISCARD memset(m_octx, (char)0, sizeof(ordctx));
    m_octx->cs = 1;
    m_octx->norow = 0;
    m_octx->somerows = 10;
    /* get the rowid handles */
    OCIERROR(m_errHp, OCIDescriptorAlloc((dvoid *)m_tpcEnv, (dvoid
**) &m_octx->o_rowid,
        (ub4)OCI_DTYPE_ROWID, (size_t) 0, (dvoid **)0));
    for(i=0;i<100;i++) {
        DISCARD OCIERROR(m_errHp, OCIDescriptorAlloc(m_tpcEnv,
            (dvoid**) &m_octx->c_rowid_ptr[i],
OCI_DTYPE_ROWID,0, (dvoid**)0));
    }

    //DISCARD OCIERROR(m_errHp,
    // OCIHandleAlloc(m_tpcEnv, (dvoid**) &m_octx-
>curo0,OCI_HTYPE_STMT,0, (dvoid**)0));
    DISCARD OCIERROR(m_errHp,
        OCIHandleAlloc(m_tpcEnv, (dvoid**) &m_octx-
>curo0,OCI_HTYPE_STMT,0, (dvoid**)0));
    DISCARD OCIERROR(m_errHp,
        OCIHandleAlloc(m_tpcEnv, (dvoid**) &m_octx-
>curo1,OCI_HTYPE_STMT,0, (dvoid**)0));
    DISCARD OCIERROR(m_errHp,
        OCIHandleAlloc(m_tpcEnv, (dvoid**) &m_octx-
>curo2,OCI_HTYPE_STMT,0, (dvoid**)0));
    DISCARD OCIERROR(m_errHp,
        OCIHandleAlloc(m_tpcEnv, (dvoid**) &m_octx-
>curo3,OCI_HTYPE_STMT,0, (dvoid**)0));
    DISCARD OCIERROR(m_errHp,
        OCIHandleAlloc(m_tpcEnv, (dvoid**) &m_octx-
>curo4,OCI_HTYPE_STMT,0, (dvoid**)0));

    /* c_id = 0, use find customer by lastname. Get an array or rowid's
back*/
    DISCARD sprintf((char *) stmbuf, OS_SQLTXT0);
    DISCARD OCIERROR(m_errHp,
        OCISmtPrepare(m_octx->curo0,m_errHp,stmbuf, (ub4) strlen((char
*) stmbuf),
            OCI_NTV_SYNTAX,OCI_DEFAULT));
    DISCARD OCIERROR(m_errHp,
        OCIAttrSet(m_octx->curo0,OCI_HTYPE_STMT,&m_octx->norow,0,
            OCI_ATTR_PREFETCH_ROWS,m_errHp));
    /* get order/customer info back based on rowid */
    DISCARD sprintf((char *) stmbuf, OS_SQLTXT1);
    DISCARD OCIERROR(m_errHp,
        OCISmtPrepare(m_octx->curo1,m_errHp,stmbuf, (ub4) strlen((char
*) stmbuf),
            OCI_NTV_SYNTAX,OCI_DEFAULT));
    DISCARD OCIERROR(m_errHp,
        OCIAttrSet(m_octx->curo1,OCI_HTYPE_STMT,&m_octx->norow,0,
            OCI_ATTR_PREFETCH_ROWS,m_errHp));

    /* c_id == 0, use lastname to find customer */
    DISCARD sprintf((char *) stmbuf, OS_SQLTXT2);

```

```

DISCARD OCIERROR(m_errHp,
OCIStmtPrepare(m_octx->curo2,m_errHp,stmbuf,(ub4)strlen((char
*)stmbuf),
OCI_NTV_SYNTAX,OCI_DEFAULT));
DISCARD OCIERROR(m_errHp,
OCIAttrSet(m_octx->curo2,OCI_HTYPE_STMT,&m_octx->norow,0,
OCI_ATTR_PREFETCH_ROWS,m_errHp));
DISCARD sprintf((char *) stmbuf, OS_SQLTXT3);
DISCARD OCIERROR(m_errHp,
OCIStmtPrepare(m_octx->curo3,m_errHp,stmbuf,(ub4)strlen((char
*)stmbuf),
OCI_NTV_SYNTAX,OCI_DEFAULT));
DISCARD OCIERROR(m_errHp,
OCIAttrSet(m_octx->curo3,OCI_HTYPE_STMT,&m_octx->norow,0,
OCI_ATTR_PREFETCH_ROWS,m_errHp));
DISCARD sprintf((char *) stmbuf, OS_SQLTXT4);
DISCARD OCIERROR(m_errHp,
OCIStmtPrepare(m_octx->curo4,m_errHp,stmbuf,(ub4)strlen((char
*)stmbuf),
OCI_NTV_SYNTAX,OCI_DEFAULT));
DISCARD OCIERROR(m_errHp,
OCIAttrSet(m_octx->curo4,OCI_HTYPE_STMT,&m_octx->norow,0,
OCI_ATTR_PREFETCH_ROWS,m_errHp));

for (i = 0; i < NITEMS; i++)
{
m_octx->ol_supply_w_id_len[i] = sizeof(int);
m_octx->ol_i_id_len[i] = sizeof(int);
m_octx->ol_quantity_len[i] = sizeof(int);
m_octx->ol_amount_len[i] = sizeof(int);
m_octx->ol_delivery_d_len[i] = sizeof(ol_d_base[0]);
}
m_octx->ol_supply_w_id_csize = NITEMS;
m_octx->ol_i_id_csize = NITEMS;
m_octx->ol_quantity_csize = NITEMS;
m_octx->ol_amount_csize = NITEMS;
m_octx->ol_delivery_d_csize = NITEMS;
m_octx->ol_w_id_csize = NITEMS;
m_octx->ol_o_id_csize = NITEMS;
m_octx->ol_d_id_csize = NITEMS;
m_octx->ol_w_id_len = sizeof(int);
m_octx->ol_d_id_len = sizeof(int);
m_octx->ol_o_id_len = sizeof(int);

/* bind variables */

/* c_id (customer id) is not known */
OCIBND(m_octx->curo0,m_octx->w_id_bp[0],m_errHp,":w_id",ADR(w_id),
SIZ(int),SQLT_INT);
OCIBND(m_octx->curo0,m_octx->d_id_bp[0],m_errHp,":d_id",ADR(d_id),
SIZ(int),SQLT_INT);
OCIBND(m_octx->curo0,m_octx->c_last_bp[0],m_errHp,":c_last",c_last,
SIZ(c_last),SQLT_STR);
OCIDFNRA(m_octx->curo0,m_octx->c_rowid_dp,m_errHp,1,m_octx-
>c_rowid_ptr,
SIZ(OCIRowid*),SQLT_RDD,NULL,m_octx->c_rowid_len,NULL);

OCIBND(m_octx->curo1,m_octx->c_rowid_bp,m_errHp,":cust_rowid",

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&m_octx->c_rowid_ptr[m_octx->cust_idx],
sizeof(m_octx->c_rowid_ptr[0]),SQLT_RDD);
OCIDEF(m_octx->curo1,m_octx-
>c_id_dp,m_errHp,1,ADR(c_id),SIZ(int),SQLT_INT);
OCIDEF(m_octx->curo1,m_octx->c_balance_dp[0],m_errHp,2,ADR(c_balance),
SIZ(double),SQLT_FLT);
OCIDEF(m_octx->curo1,m_octx-
>c_first_dp[0],m_errHp,3,c_first,SIZ(c_first)-1,
SQLT_CHR);
OCIDEF(m_octx->curo1,m_octx->c_middle_dp[0],m_errHp,4,c_middle,
SIZ(c_middle)-1,SQLT_AFC);
OCIDEF(m_octx->curo1,m_octx->c_last_dp[0],m_errHp,5,c_last,SIZ(c_last)-
1,
SQLT_CHR);
OCIDEF(m_octx->curo1,m_octx-
>o_id_dp[0],m_errHp,6,ADR(o_id),SIZ(int),SQLT_INT);
OCIDEF(m_octx->curo1,m_octx->o_entry_d_dp[0],m_errHp,7,
&o_entry_d_base,SIZ(OCIDate),SQLT_ODT);
OCIDEF(m_octx->curo1,m_octx->o_cr_id_dp[0],m_errHp,8,ADR(o_carrier_id),
SIZ(int),SQLT_INT);
OCIDEF(m_octx->curo1,m_octx->o_ol_cnt_dp[0],m_errHp,9,ADR(o_ol_cnt),
SIZ(int),SQLT_INT);
OCIDEF(m_octx->curo1,m_octx->o_rowid_dp[0],m_errHp,10,ADR(m_octx-
>o_rowid),
SIZ(OCIRowid*),SQLT_RDD);

/* Bind for third cursor , no-zero customer id */
OCIBND(m_octx->curo2,m_octx->w_id_bp[1],m_errHp,":w_id",ADR(w_id),
SIZ(int),SQLT_INT);
OCIBND(m_octx->curo2,m_octx->d_id_bp[1],m_errHp,":d_id",ADR(d_id),
SIZ(int),SQLT_INT);
OCIBND(m_octx->curo2,m_octx->c_id_bp,m_errHp,":c_id",ADR(c_id),
SIZ(int),SQLT_INT);
OCIDEF(m_octx->curo2,m_octx->c_balance_dp[1],m_errHp,1,ADR(c_balance),
SIZ(double),SQLT_FLT);
OCIDEF(m_octx->curo2,m_octx-
>c_first_dp[1],m_errHp,2,c_first,SIZ(c_first)-1,
SQLT_CHR);
OCIDEF(m_octx->curo2,m_octx->c_middle_dp[1],m_errHp,3,c_middle,
SIZ(c_middle)-1,SQLT_AFC);
OCIDEF(m_octx->curo2,m_octx->c_last_dp[1],m_errHp,4,c_last,SIZ(c_last)-
1,
SQLT_CHR);
OCIDEF(m_octx->curo2,m_octx-
>o_id_dp[1],m_errHp,5,ADR(o_id),SIZ(int),SQLT_INT);
OCIDEF(m_octx->curo2,m_octx->o_entry_d_dp[1],m_errHp,6,
&o_entry_d_base,
SIZ(OCIDate),SQLT_ODT);
OCIDEF(m_octx->curo2,m_octx-
>o_cr_id_dp[1],m_errHp,7,ADR(o_carrier_id),
SIZ(int),SQLT_INT);
OCIDEF(m_octx->curo2,m_octx->o_ol_cnt_dp[1],m_errHp,8,ADR(o_ol_cnt),
SIZ(int),SQLT_INT);
OCIDEF(m_octx->curo2,m_octx->o_rowid_dp[1],m_errHp,9,ADR(m_octx-
>o_rowid),
SIZ(OCIRowid*),SQLT_RDD);

OCIBND(m_octx->curo3,m_octx->o_rowid_bp,m_errHp,":ordr_rowid",
&m_octx->o_rowid,SIZ(OCIRowid*),SQLT_RDD);

```

```

    OCIDFNRA(m_octx->curo3, m_octx->ol_i_id_dp, m_errHp, 1,
ol_i_id,SIZ(int),SQLT_INT,
    NULL,m_octx->ol_i_id_len, NULL);
    OCIDFNRA(m_octx->curo3,m_octx->ol_supply_w_id_dp,m_errHp,2,
ol_supply_w_id,
    SIZ(int),SQLT_INT, NULL,
    m_octx->ol_supply_w_id_len, NULL);
    OCIDFNRA(m_octx->curo3, m_octx->ol_quantity_dp,m_errHp,3,
ol_quantity,SIZ(int),
    SQLT_INT, NULL,m_octx->ol_quantity_len, NULL);
    OCIDFNRA(m_octx->curo3,m_octx->ol_amount_dp,m_errHp,4,ol_amount,
SIZ(int),
    SQLT_INT,NULL, m_octx->ol_amount_len, NULL);
    OCIDFNRA(m_octx->curo3,m_octx-
>ol_d_base_dp,m_errHp,5,ol_d_base,SIZ(OCIDate),
    SQLT_ODT, NULL,m_octx->ol_delivery_d_len,NULL);

    OCIBND(m_octx->curo4,m_octx->w_id_bp[3],m_errHp,":w_id",ADR(w_id),
    SIZ(int),SQLT_INT);
    OCIBND(m_octx->curo4,m_octx->d_id_bp[3],m_errHp,":d_id",ADR(d_id),
    SIZ(int),SQLT_INT);
    OCIBND(m_octx->curo4,m_octx->c_last_bp[1],m_errHp,":c_last",c_last,
    SIZ(c_last), SQLT_STR);
    OCIDEF(m_octx->curo4,m_octx->c_count_dp,m_errHp,1,ADR(m_octx-
>rcount),SIZ(int),
    SQLT_INT);

    //OCIDateSetDate(&ord_null_date,(sb2)1811,(ub1)1,(ub1)1);
    //OCIDateSetTime(&ord_null_date,(ub1)0,(ub1)0,(ub1)0);
    return (true);
}

int CTPCC_Common::tkvco ()
{
    int i;
    int rcount;

    for (i = 0; i < NITEMS; i++)
    {
        m_octx->ol_supply_w_id_len[i] = sizeof(int);
        m_octx->ol_i_id_len[i] = sizeof(int);
        m_octx->ol_quantity_len[i] = sizeof(int);
        m_octx->ol_amount_len[i] = sizeof(int);
        m_octx->ol_delivery_d_len[i] = sizeof(OCIDate);
    }
    m_octx->ol_supply_w_id_csize = NITEMS;
    m_octx->ol_i_id_csize = NITEMS;
    m_octx->ol_quantity_csize = NITEMS;
    m_octx->ol_amount_csize = NITEMS;
    m_octx->ol_delivery_d_csize = NITEMS;
retry:
    if(bylastname)
    {
        cbctx.reexec = FALSE;
        execstatus=OCISstmtExecute(m_tpcSvc,m_octx->curo0,m_errHp,100,0,
            NULLP(CONST OCISnapshot),NULLP(OCISnapshot),OCI_DEFAULT);
        // will get OCI_NO_DATA if <100 found
        if ((execstatus != OCI_NO_DATA) && (execstatus != OCI_SUCCESS))
        {

```

```

        errcode=OCIERROR(m_errHp, execstatus);
        if((errcode == NOT_SERIALIZABLE) || (errcode == RECOVER))
        {
            DISCARD OCITransCommit(m_tpcSvc,m_errHp,OCI_DEFAULT);
            retries++;
            goto retry;
        }
    }
    else
    {
        return SVCERR_OCI;
    }
}
if (execstatus == OCI_NO_DATA) // there are no more rows
{
    // get rowcount, find middle one
    DISCARD OCISAttrGet(m_octx->curo0,OCI_HTYPE_STMT,&rcount,NULL,
        OCI_ATTR_ROW_COUNT,m_errHp);

    if (rcount <1)
    {
        WriteEventLog("Order status rcount < 1", true);
        return (SVCERR_OCI);
    }
    m_octx->cust_idx=(rcount+1)/2 ;
}
else
{
    //count the number of rows
    execstatus=OCISstmtExecute(m_tpcSvc,m_octx->curo4,m_errHp,1,0,
        NULLP(CONST
OCISnapshot),NULLP(OCISnapshot),OCI_DEFAULT);
    if ((execstatus != OCI_NO_DATA) && (execstatus != OCI_SUCCESS))
    {
        if ((errcode == NOT_SERIALIZABLE) || (errcode == RECOVER))
        {
            DISCARD OCITransCommit(m_tpcSvc,m_errHp,OCI_DEFAULT);
            retries++;
            goto retry;
        }
    }
    else
    {
        return SVCERR_OCI;
    }
}
if (m_octx->rcount+1 < 2*10 )
    m_octx->cust_idx=(m_octx->rcount+1)/2 ;
else
{
    cbctx.reexec = TRUE;
    cbctx.count = (m_octx->rcount+1)/2 ;
    execstatus=OCISstmtExecute(m_tpcSvc,m_octx-
>curo0,m_errHp,cbctx.count,
        0,NULLP(CONST OCISnapshot),
        NULLP(OCISnapshot),OCI_DEFAULT);
    // will get OCI_NO_DATA if <100 found
    if (cbctx.count > 0)
    {
        return (SVCERR_OCI);
    }
}
if ((execstatus != OCI_NO_DATA) && (execstatus != OCI_SUCCESS))
{

```

```

        errcode=OCIERROR(m_errHp, execstatus);
        if((errcode == NOT_SERIALIZABLE) || (errcode == RECOVER))
        {
            DISCARD OCITransCommit(m_tpcSvc,m_errHp,OCI_DEFAULT);
            retries++;
            goto retry;
        }
        else
        {
            return SVCERR_OCI;
        }
    }
    m_octx->cust_idx=0 ;
}

execstatus=OCISmtExecute(m_tpcSvc,m_octx->curo1,m_errHp,1,0,
        NULLP(CONST
OCISnapshot),NULLP(OCISnapshot),OCI_DEFAULT);
if (execstatus != OCI_SUCCESS)
{
    errcode=OCIERROR(m_errHp,execstatus);
    DISCARD OCITransCommit(m_tpcSvc,m_errHp,OCI_DEFAULT);
    if((errcode == NOT_SERIALIZABLE) || (errcode == RECOVER))
    {
        retries++;
        goto retry;
    }
    else
    {
        return SVCERR_OCI;
    }
}
else
{
    execstatus=OCISmtExecute(m_tpcSvc,m_octx->curo2,m_errHp,1,0,
        NULLP(CONST OCISnapshot),NULLP(OCISnapshot),
        OCI_DEFAULT);
    if (execstatus != OCI_SUCCESS)
    {
        errcode=OCIERROR(m_errHp,execstatus);
        DISCARD OCITransCommit(m_tpcSvc,m_errHp,OCI_DEFAULT);
        if((errcode == NOT_SERIALIZABLE) || (errcode == RECOVER))
        {
            retries++;
            goto retry;
        }
        else
        {
            return SVCERR_OCI;
        }
    }
}
m_octx->ol_w_id_len = sizeof(int);
m_octx->ol_d_id_len = sizeof(int);
m_octx->ol_o_id_len = sizeof(int);

execstatus = OCISmtExecute(m_tpcSvc,m_octx->curo3,m_errHp,o_ol_cnt,0,
        NULLP(CONST OCISnapshot),NULLP(OCISnapshot),

```

```

        OCI_DEFAULT | OCI_COMMIT_ON_SUCCESS);
if (execstatus != OCI_SUCCESS)
{
    errcode=OCIERROR(m_errHp,execstatus);
    DISCARD OCITransCommit(m_tpcSvc,m_errHp,OCI_DEFAULT);
    if((errcode == NOT_SERIALIZABLE) || (errcode == RECOVER))
    {
        retries++;
        goto retry;
    }
    else
    {
        return SVCERR_OCI;
    }
}

for (i = 0; i < o_ol_cnt; i++)
{
    memcpy(&ol_delivery_d[i],&ol_d_base[i],sizeof(OCIDate));
};

return (SVC_NOERROR);
}

// *****
// *****
void CTPCC_Common::tkvcodone()
{
    if (m_octx)
        free (m_octx);
}

// *****
// **** Payment (plpay.c)
// *****
bool CTPCC_Common::tkvcpinit(void)
{
    text stmbuf[SQL_BUF_SIZE];
    m_pctx = (payctx *)malloc(sizeof(payctx));
    memset(m_pctx, (char)0, sizeof(payctx));

    /* cursor for init */
    DISCARD OCIERROR(m_errHp,OCIHandleAlloc(m_tpcEnv, (dvoid **)&(m_pctx->curpi)),
        OCI_HTYPE_STMT,0, (dvoid**)0));

    DISCARD OCIERROR(m_errHp,OCIHandleAlloc(m_tpcEnv, (dvoid **)&(m_pctx->curp0)),
        OCI_HTYPE_STMT,0, (dvoid**)0));
    DISCARD OCIERROR(m_errHp,OCIHandleAlloc(m_tpcEnv, (dvoid **)&(m_pctx->curp1)),
        OCI_HTYPE_STMT,0, (dvoid**)0));

    /* build the init statement and execute it */

    sprintf ((char*)stmbuf, PY_SQLTXT);
    DISCARD OCIERROR(m_errHp,OCISmtPrepare(m_pctx->curpi, m_errHp, stmbuf,
        strlen((char *)stmbuf), OCI_NTV_SYNTAX, OCI_DEFAULT));

```

```

DISCARD OCIERROR(m_errHp, OCISstmtExecute(m_tpcSvc,m_pctx->curpi,m_errHp,1,0,
NULLP(CONST
OCISnapshot),NULLP(OCISnapshot),OCI_DEFAULT));

/* customer id != 0, go by last name */

sqlfile("c:/Inetpub/wwwroot/blocks/paynz.sql",stmbuf);
DISCARD OCIERROR(m_errHp,OCISstmtPrepare(m_pctx->curp0, m_errHp, stmbuf,
strlen((char *)stmbuf), OCI_NT_V_SYNTAX, OCI_DEFAULT));

/* customer id == 0, go by last name */

sqlfile("c:/Inetpub/wwwroot/blocks/payz.sql",stmbuf); /* sqlfile opens
$/bench/.c:/Inetpub/wwwroot/blocks/... */
DISCARD OCIERROR(m_errHp,OCISstmtPrepare(m_pctx->curp1, m_errHp, stmbuf,
strlen((char *)stmbuf), OCI_NT_V_SYNTAX, OCI_DEFAULT));

m_pctx->w_id_len = SIZ(w_id);
m_pctx->d_id_len = SIZ(d_id);
m_pctx->c_w_id_len = SIZ(c_w_id);
m_pctx->c_d_id_len = SIZ(c_d_id);
m_pctx->c_id_len = 0;
m_pctx->h_amount_len = SIZ(h_amount);
m_pctx->c_last_len = 0;
m_pctx->w_street_1_len = 0;
m_pctx->w_street_2_len = 0;
m_pctx->w_city_len = 0;
m_pctx->w_state_len = 0;
m_pctx->w_zip_len = 0;
m_pctx->d_street_1_len = 0;
m_pctx->d_street_2_len = 0;
m_pctx->d_city_len = 0;
m_pctx->d_state_len = 0;
m_pctx->d_zip_len = 0;
m_pctx->c_first_len = 0;
m_pctx->c_middle_len = 0;
m_pctx->c_street_1_len = 0;
m_pctx->c_street_2_len = 0;
m_pctx->c_city_len = 0;
m_pctx->c_state_len = 0;
m_pctx->c_zip_len = 0;
m_pctx->c_phone_len = 0;
m_pctx->c_since_len = 0;
m_pctx->c_credit_len = 0;
m_pctx->c_credit_lim_len = 0;
m_pctx->c_discount_len = 0;
m_pctx->c_balance_len = sizeof(double);
m_pctx->c_data_len = 0;
m_pctx->h_date_len = 0;
m_pctx->retries_len =SIZ(retries) ;
m_pctx->cr_date_len = 7;

/* bind variables */
OCIENDPL(m_pctx->curp0, m_pctx->w_id_bp[0],
m_errHp,":w_id",ADR(w_id),SIZ(int),
SQLT_INT, NULL);
OCIENDPL(m_pctx->curp0, m_pctx->d_id_bp[0],
m_errHp,":d_id",ADR(d_id),SIZ(int),
SQLT_INT, NULL);

```

```

OCIENDPL(m_pctx->curp0, m_pctx->c_w_id_bp[0],
m_errHp,":c_w_id",ADR(c_w_id),SIZ(int),
SQLT_INT);
OCIENDPL(m_pctx->curp0, m_pctx->c_d_id_bp[0],
m_errHp,":c_d_id",ADR(c_d_id),SIZ(int),
SQLT_INT);
OCIENDPL(m_pctx->curp0, m_pctx->c_id_bp[0],
m_errHp,":c_id",ADR(c_id),SIZ(int),
SQLT_INT);
OCIENDPL(m_pctx->curp0, m_pctx->h_amount_bp[0],
m_errHp,":h_amount",ADR(h_amount),
SIZ(int),SQLT_INT, &m_pctx->h_amount_len);
OCIENDPL(m_pctx->curp0, m_pctx->c_last_bp[0],
m_errHp,":c_last",c_last,SIZ(c_last),
SQLT_STR, &m_pctx->c_last_len);
OCIENDPL(m_pctx->curp0, m_pctx->w_street_1_bp[0],
m_errHp,":w_street_1",w_street_1,
SIZ(w_street_1),SQLT_STR, &m_pctx->w_street_1_len);
OCIENDPL(m_pctx->curp0, m_pctx->w_street_2_bp[0],
m_errHp,":w_street_2",w_street_2,
SIZ(w_street_2),SQLT_STR, &m_pctx->w_street_2_len);
OCIENDPL(m_pctx->curp0, m_pctx->w_city_bp[0],
m_errHp,":w_city",w_city,SIZ(w_city),
SQLT_STR, &m_pctx->w_city_len);
OCIENDPL(m_pctx->curp0, m_pctx->w_state_bp[0],
m_errHp,":w_state",w_state,
SIZ(w_state), SQLT_STR, &m_pctx->w_state_len);
OCIENDPL(m_pctx->curp0, m_pctx->w_zip_bp[0],
m_errHp,":w_zip",w_zip,SIZ(w_zip),
SQLT_STR, &m_pctx->w_zip_len);
OCIENDPL(m_pctx->curp0, m_pctx->d_street_1_bp[0],
m_errHp,":d_street_1",d_street_1,
SIZ(d_street_1),SQLT_STR, &m_pctx->d_street_1_len);
OCIENDPL(m_pctx->curp0, m_pctx->d_street_2_bp[0],
m_errHp,":d_street_2",d_street_2,
SIZ(d_street_2),SQLT_STR, &m_pctx->d_street_2_len);
OCIENDPL(m_pctx->curp0, m_pctx->d_city_bp[0],
m_errHp,":d_city",d_city,SIZ(d_city),
SQLT_STR, &m_pctx->d_city_len);
OCIENDPL(m_pctx->curp0, m_pctx->d_state_bp[0],
m_errHp,":d_state",d_state,
SIZ(d_state), SQLT_STR, &m_pctx->d_state_len);
OCIENDPL(m_pctx->curp0, m_pctx->d_zip_bp[0],
m_errHp,":d_zip",d_zip,SIZ(d_zip),
SQLT_STR, &m_pctx->d_zip_len);
OCIENDPL(m_pctx->curp0, m_pctx->c_first_bp[0],
m_errHp,":c_first",c_first,
SIZ(c_first), SQLT_STR, &m_pctx->c_first_len);
OCIENDPL(m_pctx->curp0, m_pctx->c_middle_bp[0],
m_errHp,":c_middle",c_middle,2,
SQLT_AFC, &m_pctx->c_middle_len);
OCIENDPL(m_pctx->curp0, m_pctx->c_street_1_bp[0],
m_errHp,":c_street_1",c_street_1,
SIZ(c_street_1),SQLT_STR, &m_pctx->c_street_1_len);
OCIENDPL(m_pctx->curp0, m_pctx->c_street_2_bp[0],
m_errHp,":c_street_2",c_street_2,
SIZ(c_street_2),SQLT_STR, &m_pctx->c_street_2_len);
OCIENDPL(m_pctx->curp0, m_pctx->c_city_bp[0],
m_errHp,":c_city",c_city,SIZ(c_city),
SQLT_STR, &m_pctx->c_city_len);

```

```

OCIBNDPL(m_pctx->curp0, m_pctx->c_state_bp[0],
m_errHp,":c_state",c_state,
      SIZ(c_state), SQLT_STR, &m_pctx->c_state_len);
OCIBNDPL(m_pctx->curp0, m_pctx->c_zip_bp[0],
m_errHp,":c_zip",c_zip,SIZ(c_zip),
      SQLT_STR,&m_pctx->c_zip_len);
OCIBNDPL(m_pctx->curp0, m_pctx->c_phone_bp[0],
m_errHp,":c_phone",c_phone,
      SIZ(c_phone), SQLT_STR, &m_pctx->c_phone_len);
OCIBNDPL(m_pctx->curp0, m_pctx->c_since_bp[0],
m_errHp,":c_since",&c_since,
      SIZ(OCIDate), SQLT_ODT, &m_pctx->c_since_len);
OCIBNDPL(m_pctx->curp0, m_pctx->c_credit_bp[0],
m_errHp,":c_credit",c_credit,
      SIZ(c_credit),SQLT_CHR, &m_pctx->c_credit_len);
OCIBNDPL(m_pctx->curp0, m_pctx->c_credit_lim_bp[0],
m_errHp,":c_credit_lim",
      ADR(c_credit_lim),SIZ(int), SQLT_INT, &m_pctx-
>c_credit_lim_len);
OCIBNDPL(m_pctx->curp0, m_pctx->c_discount_bp[0],
m_errHp,":c_discount",
      ADR(c_discount),SIZ(c_discount), SQLT_FLT, &m_pctx-
>c_discount_len);
OCIBNDPL(m_pctx->curp0, m_pctx->c_balance_bp[0], m_errHp,":c_balance",
      ADR(c_balance), SIZ(double),SQLT_FLT, &m_pctx->c_balance_len);
OCIBNDPL(m_pctx->curp0, m_pctx->c_data_bp[0],
m_errHp,":c_data",c_data,SIZ(c_data),
      SQLT_STR, &m_pctx->c_data_len);
/*
OCIBNDR(m_pctx->curp0, m_pctx->h_date_bp,
m_errHp,":h_date",h_date,SIZ(h_date),
      SQLT_STR, &m_pctx->h_date_ind, &m_pctx->h_date_len, &m_pctx-
>h_date_rc);
*/
OCIBNDPL(m_pctx->curp0, m_pctx->retries_bp[0],
m_errHp,":retry",ADR(retries),
      SIZ(int), SQLT_INT, &m_pctx->retries_len);
OCIBNDPL(m_pctx->curp0, m_pctx->cr_date_bp[0],
m_errHp,":cr_date",ADR(cr_date),
      SIZ(OCIDate),SQLT_ODT, &m_pctx->cr_date_len);

/* ---- Binds for the second cursor */
OCIBNDPL(m_pctx->curp1, m_pctx->w_id_bp[1],
m_errHp,":w_id",ADR(w_id),SIZ(int),
      SQLT_INT, &m_pctx->w_id_len);
OCIBNDPL(m_pctx->curp1, m_pctx->d_id_bp[1],
m_errHp,":d_id",ADR(d_id),SIZ(int),
      SQLT_INT, &m_pctx->d_id_len);
OCIBND(m_pctx->curp1, m_pctx->c_w_id_bp[1],
m_errHp,":c_w_id",ADR(c_w_id),SIZ(int),
      SQLT_INT);
OCIBND(m_pctx->curp1, m_pctx->c_d_id_bp[1],
m_errHp,":c_d_id",ADR(c_d_id),SIZ(int),
      SQLT_INT);
OCIBNDPL(m_pctx->curp1, m_pctx->c_id_bp[1],
m_errHp,":c_id",ADR(c_id),SIZ(int),
      SQLT_INT, &m_pctx->c_id_len);
OCIBNDPL(m_pctx->curp1, m_pctx->h_amount_bp[1],
m_errHp,":h_amount",ADR(h_amount),
      SIZ(int),SQLT_INT, &m_pctx->h_amount_len);

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OCIBND(m_pctx->curp1, m_pctx->c_last_bp[1],
m_errHp,":c_last",c_last,SIZ(c_last),
      SQLT_STR);
OCIBNDPL(m_pctx->curp1, m_pctx->w_street_1_bp[1],
m_errHp,":w_street_1",w_street_1,
      SIZ(w_street_1),SQLT_STR, &m_pctx->w_street_1_len);
OCIBNDPL(m_pctx->curp1, m_pctx->w_street_2_bp[1],
m_errHp,":w_street_2",w_street_2,
      SIZ(w_street_2),SQLT_STR, &m_pctx->w_street_2_len);
OCIBNDPL(m_pctx->curp1, m_pctx->w_city_bp[1],
m_errHp,":w_city",w_city,SIZ(w_city),
      SQLT_STR, &m_pctx->w_city_len);
OCIBNDPL(m_pctx->curp1, m_pctx->w_state_bp[1],
m_errHp,":w_state",w_state,
      SIZ(w_state), SQLT_STR, &m_pctx->w_state_len);
OCIBNDPL(m_pctx->curp1, m_pctx->w_zip_bp[1],
m_errHp,":w_zip",w_zip,SIZ(w_zip),
      SQLT_STR, &m_pctx->w_zip_len);
OCIBNDPL(m_pctx->curp1, m_pctx->d_street_1_bp[1],
m_errHp,":d_street_1",d_street_1,
      SIZ(d_street_1),SQLT_STR, &m_pctx->d_street_1_len);
OCIBNDPL(m_pctx->curp1, m_pctx->d_street_2_bp[1],
m_errHp,":d_street_2",d_street_2,
      SIZ(d_street_2),SQLT_STR, &m_pctx->d_street_2_len);
OCIBNDPL(m_pctx->curp1, m_pctx->d_city_bp[1],
m_errHp,":d_city",d_city,SIZ(d_city),
      SQLT_STR, &m_pctx->d_city_len);
OCIBNDPL(m_pctx->curp1, m_pctx->d_state_bp[1],
m_errHp,":d_state",d_state,
      SIZ(d_state), SQLT_STR, &m_pctx->d_state_len);
OCIBNDPL(m_pctx->curp1, m_pctx->d_zip_bp[1],
m_errHp,":d_zip",d_zip,SIZ(d_zip),
      SQLT_STR, &m_pctx->d_zip_len);
OCIBNDPL(m_pctx->curp1, m_pctx->c_first_bp[1],
m_errHp,":c_first",c_first,
      SIZ(c_first), SQLT_STR, &m_pctx->c_first_len);
OCIBNDPL(m_pctx->curp1, m_pctx->c_middle_bp[1],
m_errHp,":c_middle",c_middle,2,
      SQLT_AFC, &m_pctx->c_middle_len);

OCIBNDPL(m_pctx->curp1, m_pctx->c_street_1_bp[1],
m_errHp,":c_street_1",c_street_1,
      SIZ(c_street_1),SQLT_STR, &m_pctx->c_street_1_len);
OCIBNDPL(m_pctx->curp1, m_pctx->c_street_2_bp[1],
m_errHp,":c_street_2",c_street_2,
      SIZ(c_street_2),SQLT_STR, &m_pctx->c_street_2_len);
OCIBNDPL(m_pctx->curp1, m_pctx->c_city_bp[1], m_errHp,":c_city",c_city,
      SIZ(c_city),SQLT_STR, &m_pctx->c_city_len);
OCIBNDPL(m_pctx->curp1, m_pctx->c_state_bp[1],
m_errHp,":c_state",c_state,
      SIZ(c_state), SQLT_STR, &m_pctx->c_state_len);
OCIBNDPL(m_pctx->curp1, m_pctx->c_zip_bp[1],
m_errHp,":c_zip",c_zip,SIZ(c_zip),
      SQLT_STR, &m_pctx->c_zip_len);
OCIBNDPL(m_pctx->curp1, m_pctx->c_phone_bp[1],
m_errHp,":c_phone",c_phone,
      SIZ(c_phone), SQLT_STR, &m_pctx->c_phone_len);
OCIBNDPL(m_pctx->curp1, m_pctx->c_since_bp[1],
m_errHp,":c_since",&c_since,
      SIZ(OCIDate), SQLT_ODT, &m_pctx->c_since_len);

```

```

    OCIBNDPL(m_pctx->curp1, m_pctx->c_credit_bp[1],
m_errHp,":c_credit",c_credit,
    SIZ(c_credit),SQLT_CHR, &m_pctx->c_credit_len);
    OCIBNDPL(m_pctx->curp1, m_pctx->c_credit_lim_bp[1],
m_errHp,":c_credit_lim",
    ADR(c_credit_lim),SIZ(int), SQLT_INT, &m_pctx-
>c_credit_lim_len);
    OCIBNDPL(m_pctx->curp1, m_pctx->c_discount_bp[1],
m_errHp,":c_discount",
    ADR(c_discount),SIZ(c_discount), SQLT_FLT, &m_pctx-
>c_discount_len);
    OCIBNDPL(m_pctx->curp1, m_pctx->c_balance_bp[1], m_errHp,":c_balance",
    ADR(c_balance), SIZ(double),SQLT_FLT, &m_pctx->c_balance_len);
    OCIBNDPL(m_pctx->curp1, m_pctx->c_data_bp[1],
m_errHp,":c_data",c_data,SIZ(c_data),
    SQLT_STR, &m_pctx->c_data_len);
/*
    OCIBNDR(m_pctx->curp1, m_pctx->h_date_bp1,
m_errHp,":h_date",h_date,SIZ(h_date),
    SQLT_STR, &m_pctx->h_date_ind, &m_pctx->h_date_len, &m_pctx-
>h_date_rc);
*/
    OCIBNDPL(m_pctx->curp1, m_pctx->retries_bp[1],
m_errHp,":retry",ADR(retries),
    SIZ(int), SQLT_INT, &m_pctx->retries_len);
    OCIBNDPL(m_pctx->curp1, m_pctx->cr_date_bp[1],
m_errHp,":cr_date",ADR(cr_date),
    SIZ(OCIDate),SQLT_ODT, &m_pctx->cr_date_len);

    return (true);
}

// *****
// *****
int CTPCC_Common::tkvcp ()
{
retry:

    m_pctx->w_id_len = SIZ(w_id);
    m_pctx->d_id_len = SIZ(d_id);
    m_pctx->c_w_id_len = 0;
    m_pctx->c_d_id_len = 0;
    m_pctx->c_id_len = 0;
    m_pctx->h_amount_len = SIZ(h_amount);
    m_pctx->c_last_len = SIZ(c_last);
    m_pctx->w_street_1_len = 0;
    m_pctx->w_street_2_len = 0;
    m_pctx->w_city_len = 0;
    m_pctx->w_state_len = 0;
    m_pctx->w_zip_len = 0;
    m_pctx->d_street_1_len = 0;
    m_pctx->d_street_2_len = 0;
    m_pctx->d_city_len = 0;
    m_pctx->d_state_len = 0;
    m_pctx->d_zip_len = 0;
    m_pctx->c_first_len = 0;
    m_pctx->c_middle_len = 0;
    m_pctx->c_street_1_len = 0;
    m_pctx->c_street_2_len = 0;
    m_pctx->c_city_len = 0;
    m_pctx->c_state_len = 0;

```

```

m_pctx->c_zip_len = 0;
m_pctx->c_phone_len = 0;
m_pctx->c_since_len = 0;
m_pctx->c_credit_len = 0;
m_pctx->c_credit_lim_len = 0;
m_pctx->c_discount_len = 0;
m_pctx->c_balance_len = sizeof(double);
m_pctx->c_data_len = 0;
m_pctx->h_date_len = 0;
m_pctx->retries_len = SIZ(retries);
m_pctx->cr_date_len = 7;

if(bylastname)
{
    execstatus=OCIStmtExecute(m_tpcSvc,m_pctx->curp1,m_errHp,1,0,
        NULLP(CONST OCI_Snapshot),NULLP(OCI_Snapshot),
        OCI_DEFAULT|OCI_COMMIT_ON_SUCCESS);
}
else
{
    execstatus=OCIStmtExecute(m_tpcSvc,m_pctx->curp0,m_errHp,1,0,
        NULLP(CONST OCI_Snapshot),NULLP(OCI_Snapshot),
        OCI_DEFAULT|OCI_COMMIT_ON_SUCCESS);
}

if(execstatus != OCI_SUCCESS)
{
    OCITransRollback(m_tpcSvc,m_errHp,OCI_DEFAULT);
    errcode = OCIERROR(m_errHp,execstatus);
    if(errcode == NOT_SERIALIZABLE)
    {
        retries++;
        goto retry;
    }
    else if (errcode == RECOVERERR)
    {
        retries++;
        goto retry;
    }
    else if (errcode == SNAPSHOT_TOO_OLD)
    {
        retries++;
        goto retry;
    }
    else
    {
        return SVCERR_OCI;
    }
}
return SVC_NOERROR;
}

// *****
// *****
void CTPCC_Common::tkvcpdone ()
{
    if(m_pctx)
        free(m_pctx);
}

// *****

```



```

// **** Stock Level (plsto.c)
// *****
bool CTPCC_Common::tkvcsinit()
{
    text stmbuf[SQL_BUF_SIZE];
    m_sctx = (stoctx *)malloc(sizeof(stoctx));
    memset(m_sctx, (char)0, sizeof(stoctx));

    m_sctx->norow=0;

    OCIERROR(m_errHp,
        OCIHandleAlloc(m_tpcEnv, (dvoid**)&m_sctx-
>curs,OCI_HTYPE_STMT,0,(dvoid**)0));
    sprintf ((char *) stmbuf, SL_SQLTXT);
    OCIERROR(m_errHp,OCIStmtPrepare(m_sctx-
>curs,m_errHp,stmbuf,strlen((char *)stmbuf),
        OCI_NTV_SYNTAX,OCI_DEFAULT));
#ifdef PLSQLSTO
    OCIERROR(m_errHp,
        OCIAttrSet(m_sctx->curs,OCI_HTYPE_STMT,(dvoid*)&m_sctx->norow,0,
        OCI_ATTR_PREFETCH_ROWS,m_errHp));
#endif

    /* bind variables */

    OCIWND(m_sctx->curs,m_sctx->w_id_bp,m_errHp, ":w_id",
ADR(w_id),sizeof(int),
        SQLT_INT);
    OCIWND(m_sctx->curs,m_sctx->d_id_bp,m_errHp, ":d_id",
ADR(d_id),sizeof(int),
        SQLT_INT);
    OCIWND(m_sctx->curs,m_sctx->threshold_bp,m_errHp, ":threshold",
ADR(threshold),
        sizeof(int),SQLT_INT);
#ifdef PLSQLSTO
    OCIWND(m_sctx->curs,m_sctx->low_stock_bp,m_errHp,":low_stock" ,
ADR(low_stock),
        sizeof(int), SQLT_INT);
#else
    OCIDFND(m_sctx->curs,m_sctx->low_stock_bp,m_errHp, 1, ADR(low_stock),
        sizeof(int), SQLT_INT);
#endif

    return (true);
}

// *****
// *****
int CTPCC_Common::tkvcs ()
{
    retry:
        execstatus= OCIStmtExecute(m_tpcSvc,m_sctx->curs,m_errHp,1,0,0,0,
            OCI_COMMIT_ON_SUCCESS | OCI_DEFAULT);
        if (execstatus != OCI_SUCCESS)
        {
            errcode=OCIERROR(m_errHp,execstatus);
            OCITransCommit(m_tpcSvc,m_errHp,OCI_DEFAULT);
            if((errcode == NOT_SERIALIZABLE) || (errcode == RECOVER))
                || (errcode == SNAPSHOT_TOO_OLD)

```

```

        {
            retries++;
            goto retry;
        }
        else
        {
            return(SVCERR_OCI);
        }
    }
    return(SVC_NOERROR);
}

// *****
// *****
void CTPCC_Common::tkvcsdone()
{
    if(m_sctx)
        free(m_sctx);
}

// *****
// **** Delivery (pldel.c)
// *****
bool CTPCC_Common::tkvcdinit(void)
{
    text stmbuf[SQL_BUF_SIZE];

    m_pldctx = (pldelctx *) malloc (sizeof(pldelctx));
    DISCARD memset(m_pldctx, (char)0, (ub4)sizeof(pldelctx));
    /* Initialize */
    DISCARD OCIHandleAlloc(m_tpcEnv, (dvoid**)&m_pldctx->curp1,
OCI_HTYPE_STMT, 0,
        (dvoid**)0);
    DISCARD sprintf ((char *) stmbuf, DL_SQLTXT);
    DISCARD OCIStmtPrepare(m_pldctx->curp1, m_errHp, stmbuf,
        (ub4) strlen((char *)stmbuf),
        OCI_NTV_SYNTAX, OCI_DEFAULT);
    DISCARD OCIERROR(m_errHp,
        OCIStmtExecute(m_tpcSvc,m_pldctx-
>curp1,m_errHp,1,0,NULLP(OCISnapshot),
        NULLP(OCISnapshot), OCI_DEFAULT));

    DISCARD OCIHandleAlloc(m_tpcEnv, (dvoid**) &m_pldctx->curp2,
OCI_HTYPE_STMT,
        0, (dvoid**)0);
    sqlfile("c:/Inetpub/wwwroot/blocks/tkvcpsdel.sql", stmbuf);
    DISCARD OCIStmtPrepare(m_pldctx->curp2, m_errHp, stmbuf,
        (ub4) strlen((char *)stmbuf), OCI_NTV_SYNTAX,
OCI_DEFAULT);
    OCIWNDPL(m_pldctx->curp2, m_pldctx->w_id_bp , m_errHp,":w_id",
        ADR(w_id), SIZ(int), SQLT_INT,&m_pldctx->w_id_len);
    OCIWNDPL(m_pldctx->curp2, m_pldctx->ordcnt_bp , m_errHp,":ordcnt",
        ADR(m_pldctx->ordcnt), SIZ(int), SQLT_INT,&m_pldctx-
>ordcnt_len);
    OCIWNDPL(m_pldctx->curp2, m_pldctx->del_date_bp,m_errHp,":now",
        m_pldctx->del_date, SIZ(OCIDate), SQLT_ODT,&m_pldctx-
>del_date_len);
    OCIWNDPL(m_pldctx->curp2, m_pldctx->carrier_id_bp , m_errHp,

```

```

        ":carrier_id", ADR(o_carrier_id), SIZ(int),
        SQLT_INT, &m_pldctx->carrier_id_len);

    OCIBNDPLA(m_pldctx->curp2, m_pldctx->d_id_bp, m_errHp,":d_id",
        m_pldctx->del_d_id, SIZ(int),SQLT_INT, m_pldctx-
>del_d_id_len,
        NDISTS, &m_pldctx->del_d_id_rcnt);
    OCIBNDPLA(m_pldctx->curp2, m_pldctx->o_id_bp, m_errHp,":order_id",
        m_pldctx->del_o_id,SIZ(int),SQLT_INT, m_pldctx-
>del_o_id_len,NDISTS,
        &m_pldctx->del_o_id_rcnt);
    OCIBNDPLA(m_pldctx->curp2, m_pldctx->sums_bp, m_errHp,"sums",
        m_pldctx->sums,SIZ(int),SQLT_INT, m_pldctx-
>sums_len,NDISTS,
        &m_pldctx->sums_rcnt);
    OCIBNDPLA(m_pldctx->curp2, m_pldctx->o_c_id_bp, m_errHp,":o_c_id",
        m_pldctx->o_c_id,SIZ(int),SQLT_INT, m_pldctx-
>o_c_id_len,NDISTS,
        &m_pldctx->o_c_id_rcnt);
    OCIBND(m_pldctx->curp2, m_pldctx->retry_bp , m_errHp,":retry",
        ADR(m_pldctx->retry), SIZ(int),SQLT_INT);

    return(true);
}

// *****
// *****
int CTPCC_Common::tkvcd (void)
{
    int i;
    unsigned int u;

    m_pldctx->w_id_len = sizeof (int);
    m_pldctx->carrier_id_len = sizeof (int);
    for (i = 0; i < NDISTS; i++)
    {
        m_pldctx->del_o_id_len[i] = sizeof(int);
        del_o_id[i] = 0;
    }
    m_pldctx->del_date_len = DEL_DATE_LEN;
    DISCARD memcpy(&m_pldctx->del_date,&cr_date,sizeof(OCIDate));

    m_pldctx->retry=0;

    DISCARD OCIERROR(m_errHp,
        OCISmtExecute(m_tpcSvc,m_pldctx->curp2,m_errHp,1,0,NULLP(CONST
OCISnapshot),
        NULLP(OCISnapshot),OCI_DEFAULT));
    for (i = 0; i < NDISTS; i++)
    {
        del_o_id[i] = 0;
    }
    for (u = 0; u < m_pldctx->del_o_id_rcnt; u++)
        del_o_id[m_pldctx->del_d_id[u] - 1] = m_pldctx->del_o_id[u];

    return (SVC_NOERROR);
}

void CTPCC_Common::tkvcdone (void)
{

```

```

    if (m_pldctx)
        free(m_pldctx);
}

// *****
// Utility Functions
// *****

// *****
// *****
void CTPCC_Common::ConvertDate(OCIDate * oradt,DATEDETAILS * pdd)
{
    OCIDateGetTime(oradt, &pdd->hour, &pdd->minute, &pdd->second);
    OCIDateGetDate(oradt, &pdd->year, &pdd->month, &pdd->day)
        return;
};

// *****
// *****
int CTPCC_Common::sqlfile(char *fnam,text *linebuf)
{
    int nulpt = 0;
    char szDiag[128];
    FILE *fd = fopen(fnam,"r");
    if (!fd)
    {
        wsprintf(szDiag, "fopen on %s failed %d\n",fnam,fd);
        WriteEventLog(szDiag, true);
        exit(-1);
    }

    while (fgets((char *)linebuf+nulpt, SQL_BUF_SIZE,fd)
    {
        nulpt = strlen((char *)linebuf);
    }
    return(nulpt);
}; // sqlfile

// *****
// 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

// *****
// 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 sem_curity identifier
            2, // # of substitution strings
            0, // no binary data
            (LPCTSTR *) pDMsgs, // address of string array
            NULL); // address of binary data
        DeregisterEventSource(hEventLog);
    };
};

```

```

    return;
}; // WriteEventLog
// *****
// ocierror
// *****
int ocierror(char *fname, int lineno, OCIError *errhp, sword status)
{
    char szDiag[512];
    char szDiag2[512];
    text errbuf[512];
    sb4 errcode;
    sb4 lstat;
    ub4 recno=2;

    int retcode = RECOVERR;

    switch (status)
    {
    case OCI_SUCCESS:
        return retcode;
        break;
    case OCI_SUCCESS_WITH_INFO:
        lstat = OCIErrorGet (errhp, recno++, (text *) NULL, &errcode,
errbuf,
            (ub4) sizeof(errbuf), OCI_HTYPE_ERROR);
        wsprintf(szDiag,"OCI_SUCCESS_WITH_INFO - %s\n",errbuf);
        break;
    case OCI_NEED_DATA:
        wsprintf(szDiag,"OCI_NEED_DATA\n");
        retcode = IRRECERR;
        break;
    case OCI_NO_DATA:
        wsprintf(szDiag,"OCI_NO_DATA\n");
        retcode = IRRECERR;
        break;
    case OCI_ERROR:
        lstat = OCIErrorGet (errhp, (ub4) 1, (text *) NULL, &errcode,
errbuf,
            (ub4) sizeof(errbuf), OCI_HTYPE_ERROR);
        if (errcode == NOT_SERIALIZABLE)
        {
            wsprintf(szDiag,"NOT_SERIALIZABLE\n");
            retcode = errcode;
            break;
        }
        if (errcode == SNAPSHOT_TOO_OLD)
        {
            wsprintf(szDiag,"SNAPSHOT_TOO_OLD\n");
            retcode = errcode;
            break;
        }
        while (lstat != OCI_NO_DATA)
        {
            lstat = OCIErrorGet (errhp, recno++, (text *) NULL, &errcode,
errbuf,
            (ub4) sizeof(errbuf), OCI_HTYPE_ERROR);
            wsprintf(szDiag,"OCI_ERROR - %s\n", errbuf);
        }
    }
};

```

```

        retcode = errcode;
        break;
    case OCI_INVALID_HANDLE:
        wsprintf(szDiag, "OCI_INVALID_HANDLE\n");
        WriteEventLog(szDiag, FALSE);
//    TPCexit();
        exit(-1);
        break;
    case OCI_STILL_EXECUTING:
        wsprintf(szDiag, "OCI_STILL_EXECUTING\n");
        retcode = IRRECERR;
        break;
    case OCI_CONTINUE:
        wsprintf(szDiag, "IRRECERR\n");
        retcode = IRRECERR;
        break;
    default:
        wsprintf(szDiag, "ocierror - default: %ld\n", status);
        retcode = IRRECERR;
        break;
}

wsprintf(szDiag2, "%s, %d - %s\n", basename(fname), lineno, szDiag);
WriteEventLog(szDiag2, TRUE);
return retcode;
}

char *basename(const char *name)
{
    char *base;

    base = strrchr(name, '/');

    return base ? base + 1 : (char *)name;
}

```

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.h

```

//*****
// tpccsvr.h
//
// Copyright Unisys, 2003
//*****
#ifndef TPCCSVR_H

```

```

#define TPCCSVR_H
#include "pltxn.h"

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:
    char m_szDiag[256];

    bool m_bByLastName;
    bool m_bCanBePooled;
    long m_lRefId;
    int m_iMaxRetry;
    int m_iTryCount;
    bool m_logon;
    bool m_procNo;

    int m_errcode;
    int m_execstatus;

    int errcode;
    int execstatus;
    int m_no_commit_flag;

    NEW_ORDER_DATA *m_pnod;
    PAYMENT_DATA *m_ppd;
    DELIVERY_DATA *m_pdd;
    ORDER_STATUS_DATA *m_posd;

```

```

STOCK_LEVEL_DATA *m_pslid;

OCIEnv *m_tpcEnv;
OCIError *m_errHp;
OCISvcCtx *m_tpcSvc;
OCISession *m_tpcUsr;
OCIStmt *m_curi;

//New Order
newctx *m_nctx;
//Order Status
ordctx *m_octx;
defctx cbctx;
//Payment
payctx *m_pctx;
//Stock
stoctx *m_sctx;
//Delivery
pldelctx *m_pldctx;

bool TPCinit(int id,char * uid,char * pwd,char * dbserver);
void TPCexit(void);

void TPCnew();
void TPCpay();
void TPCdel();
void TPCord();
void TPCsto();

bool tkvcninit(void);
bool tkvcpinit(void);
bool tkvcdinit(void);
bool tkvcoinit(void);
bool tkvcsinit(void);

int tkvcn();
int tkvcp();
int tkvcd();
int tkvco();
int tkvcs();

void tkvcndone(void);
void tkvcpdone(void);
void tkvcddone(void);
void tkvcodone(void);
void tkvcsdone(void);

void ConvertDate(OCIDate * oradt,DATEDETAILS * pdd);
int sqlfile(char *fnam,text *linebuf);

// for stock-level transaction
int w_id;
int d_id;
int c_id;
int threshold;
int low_stock;

```

```

// for delivery transaction
int del_o_id[10];
int retries;

// for order-status transaction
int bylastname;
char c_last[17];
char c_first[17];
char c_middle[3];
double c_balance;
int o_id;
text o_entry_d[20];
ub4 datelen;
int o_carrier_id;
int o_ol_cnt;
int ol_supply_w_id[15];
int ol_i_id[15];
int ol_quantity[15];
int ol_amount[15];
ub4 ol_del_len[15];
OCIDate ol_delivery_d[15];
OCIRowid *o_rowid;

// for payment transaction
int c_w_id;
int c_d_id;
int h_amount;
char w_street_1[21];
char w_street_2[21];
char w_city[21];
char w_state[3];
char w_zip[10];
char d_street_1[21];
char d_street_2[21];
char d_city[21];
char d_state[3];
char d_zip[10];
char c_street_1[21];
char c_street_2[21];
char c_city[21];
char c_state[3];
char c_zip[10];
char c_phone[17];
ub4 sincelen;
text c_since_d[11];
float c_discount;
char c_credit[3];
int c_credit_lim;
char c_data[201];
ub4 hlen;
text h_date[20];

// for new order transaction
int nol_i_id[15];
int nol_supply_w_id[15];
int nol_quantity[15];
int nol_quant10[15];
int nol_quant19[15];
int nol_ytdqty[15];

```

```

int nol_amount[15];
int o_all_local;
float w_tax;
float d_tax;
float total_amount;
char i_name[15][25];
int s_quantity[15];
char brand_gen[15];
int i_price[15];
char brand_generic[15][1];
int status;

OCIDate cr_date;
OCIDate c_since;
OCIDate o_entry_d_base;
OCIDate ol_d_base[15];
dvoid *xmem;
}; // 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

#endif //TPCCSVR_H

```

tpccsvr.idl

```

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

interface TPCC;

import "oidl.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;
};

};

```

Appendix B - Database Design

Build Scripts

ADDFILE.SH

```
#!/bin/sh
# $1 = tablespace name
# $2 = filename
# $3 = size
# $4 = temporary ts (1) or not (0)
# global variable $tpcc_listfiles, does not execute sql

if expr x$tpcc_listfiles = xt > /dev/null; then
    echo $2 $3 >> $tpcc_bench/files.dat
    exit 0
fi

if expr $4 = 1 > /dev/null; then
    altersql="alter tablespace $1 add tempfile '$2' size $3 reuse;"
else
    altersql="alter tablespace $1 add datafile '$2' size $3 reuse autoextend
on;"
fi

$tpcc_sqlplus $tpcc_user_pass <<!
# sqlplus /nolog <<!
# connect sys/oracle as sysdba
    spool addfile_$1.log
    set echo on
    $altersql
    set echo off
    spool off
    exit ;
!
```

ADDTS.SH

```
#!/bin/sh
# $1 = tablespace name
# $2 = filename
# $3 = size
# $4 = uniform size
# $5 = block size
# $6 = temporary ts (1) or not (0)
# $7 = bitmapped manage (t) or not (f) or (d) for dictionary
# global variable $tpcc_listfiles, does not execute sql

if expr x$tpcc_listfiles = xt > /dev/null; then
    echo $2 $3 >> $tpcc_bench/files.dat
    exit 0
fi

if expr $5 = auto > /dev/null; then
```

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```
    bssql=
else
    bssql="blocksize $5"
fi

if expr $6 = 1 > /dev/null; then
    createsql="create temporary tablespace $1 tempfile '$2' size $3 reuse
extent management local uniform size $4;"
else
    if expr x$7 = xt > /dev/null; then
        createsql="create tablespace $1 datafile '$2' size $3 reuse extent
management local uniform size $4 segment space management auto $bssql
nologging ;"
    else
        if expr x$7 = xd > /dev/null; then
            createsql="create tablespace $1 datafile '$2' size $3 reuse extent
management dictionary nologging $bssql;"
        else
            createsql="create tablespace $1 datafile '$2' size $3 reuse extent
management local uniform size $4 segment space management manual $bssql
nologging ;"
        fi
    fi
fi

$tpcc_sqlplus $tpcc_user_pass <<!
# sqlplus /nolog <<!
# connect sys/oracle as sysdba
    spool createts_$1.log
    set echo on
    drop tablespace $1 including contents;
    $createsql
    set echo off
    spool off
    exit ;
!
```

ANALYZE.SH

```
#!/bin/sh
$tpcc_sqlplus $tpcc_user_pass @${tpcc_sql_dir}/analyze >
$tpcc_log_dir/junk 2>&1

# this one tends to fail if indices aren't made, which is legal, so
# always exit without error.

exit 0
```

ANALYZE.SQL

```
spool analyze.log;
set echo on;

connect tpcc/tpcc
```

```

execute dbms_stats.GATHER_TABLE_STATS (OWNNAME=>'TPCC', -
TABNAME=>'STOK', -
PARTNAME=>NULL, -
ESTIMATE_PERCENT=>1, -
BLOCK_SAMPLE=>TRUE, -
METHOD_OPT=>'FOR ALL COLUMNS SIZE
1', -
DEGREE=>10, -
GRANULARITY=>'DEFAULT', -
CASCADE=>TRUE);

execute dbms_stats.GATHER_TABLE_STATS (OWNNAME=>'TPCC', -
TABNAME=>'CUST', -
PARTNAME=>NULL, -
ESTIMATE_PERCENT=>1, -
BLOCK_SAMPLE=>TRUE, -
METHOD_OPT=>'FOR ALL COLUMNS SIZE
1', -
DEGREE=>10, -
GRANULARITY=>'DEFAULT', -
CASCADE=>TRUE);

execute dbms_stats.GATHER_TABLE_STATS (OWNNAME=>'TPCC', -
TABNAME=>'ORDR', -
PARTNAME=>NULL, -
ESTIMATE_PERCENT=>1, -
BLOCK_SAMPLE=>TRUE, -
METHOD_OPT=>'FOR ALL COLUMNS SIZE
1', -
DEGREE=>10, -
GRANULARITY=>'DEFAULT', -
CASCADE=>TRUE);

execute dbms_stats.GATHER_TABLE_STATS (OWNNAME=>'TPCC', -
TABNAME=>'ORDL', -
PARTNAME=>NULL, -
ESTIMATE_PERCENT=>1, -
BLOCK_SAMPLE=>TRUE, -
METHOD_OPT=>'FOR ALL COLUMNS SIZE
1', -
DEGREE=>10, -
GRANULARITY=>'DEFAULT', -
CASCADE=>TRUE);

execute dbms_stats.GATHER_TABLE_STATS (OWNNAME=>'TPCC', -
TABNAME=>'NORD', -
PARTNAME=>NULL, -
ESTIMATE_PERCENT=>1, -
BLOCK_SAMPLE=>TRUE, -
METHOD_OPT=>'FOR ALL COLUMNS SIZE
1', -
DEGREE=>10, -
GRANULARITY=>'DEFAULT', -
CASCADE=>TRUE);

execute dbms_stats.GATHER_TABLE_STATS (OWNNAME=>'TPCC', -
TABNAME=>'HIST', -
PARTNAME=>NULL, -
ESTIMATE_PERCENT=>1, -
BLOCK_SAMPLE=>TRUE, -
METHOD_OPT=>'FOR ALL COLUMNS SIZE
1', -
DEGREE=>10, -
GRANULARITY=>'DEFAULT', -
CASCADE=>TRUE);

execute dbms_stats.GATHER_TABLE_STATS (OWNNAME=>'TPCC', -
TABNAME=>'DIST', -
PARTNAME=>NULL, -
ESTIMATE_PERCENT=>1, -
BLOCK_SAMPLE=>TRUE, -
METHOD_OPT=>'FOR ALL COLUMNS SIZE
1', -
DEGREE=>10, -
GRANULARITY=>'DEFAULT', -
CASCADE=>TRUE);

execute dbms_stats.GATHER_TABLE_STATS (OWNNAME=>'TPCC', -
TABNAME=>'ITEM', -
PARTNAME=>NULL, -
ESTIMATE_PERCENT=>10, -
BLOCK_SAMPLE=>TRUE, -
METHOD_OPT=>'FOR ALL COLUMNS SIZE
1', -
DEGREE=>1, -
GRANULARITY=>'DEFAULT', -
CASCADE=>TRUE);

execute dbms_stats.GATHER_TABLE_STATS (OWNNAME=>'TPCC', -
TABNAME=>'WARE', -
PARTNAME=>NULL, -
ESTIMATE_PERCENT=>10, -
BLOCK_SAMPLE=>TRUE, -
METHOD_OPT=>'FOR ALL COLUMNS SIZE
1', -
DEGREE=>10, -
GRANULARITY=>'DEFAULT', -
CASCADE=>TRUE);

set echo off;
spool off;

exit sql.sqlcode;

ASSIGNTEMP.SH

#!/bin/sh

echo Assigning temporary tablespace to user tpcc...
$tpcc_sqlplus $tpcc_dba_user_pass @$tpcc_sql_dir/assigntemp > junk 2>&1
if test $? -ne 0
then
    exit 1;
else
    exit 0;
fi

```


ASSIGNTEMP.SQL

```
spool assigntemp.log;

set echo on;

alter user tpcc temporary tablespace temp_0;

set echo off;
spool off;

exit ;
```

BCEXPRESS.SH

```
#!/bin/sh
# send command line to bc
echo "$*" | bc
```

CREATEDB.SQL

```
/* created automatically by
/home/roagrawa/unisys/24000wh/scripts/buildcreatedb.sh Mon Aug 4 16:13:01
PDT 2003 */
spool createdb.log

set echo on

shutdown abort

startup pfile=p_create.ora nomount
create database tpcc
  controlfile reuse
  maxinstances 1
  datafile
    '\\.\system_001' size 200M reuse
  logfile '\\.\log_1_1' size 7999M reuse,
    '\\.\log_1_2' size 7999M reuse
  sysaux datafile '\\.\aucs.df' size 120M reuse ;

create undo tablespace undo_1 datafile
  '\\.\roll1' size 8096M reuse blocksize 8K;

set echo off
exit sql.sqlcode
```

CREATEINDEX_ICUST1.SQL

```
/* created automatically by
/home/roagrawa/unisys/24000wh/scripts/buildcreateindex.sh Mon Aug 4
16:13:53 PDT 2003 */
set timing on
```

```
set sqlblanklines on
spool createindex_icust1.log ;
set echo on ;
drop index icust1 ;
  create unique index icust1 on cust ( c_w_id
, c_d_id
, c_id )
  pctfree 1 initrans 3
  storage ( buffer_pool default )
  parallel 32
  tablespace icust1_0 ;
set echo off
spool off
exit sql.sqlcode;
```

CREATEINDEX_ICUST2.SQL

```
/* created automatically by
/home/roagrawa/unisys/24000wh/scripts/buildcreateindex.sh Mon Aug 4
16:13:54 PDT 2003 */
set timing on
set sqlblanklines on
spool createindex_icust2.log ;
set echo on ;
drop index icust2 ;
  create unique index icust2 on cust ( c_last
, c_w_id
, c_d_id
, c_first
, c_id )
  pctfree 1 initrans 3
  storage ( buffer_pool default )
  parallel 32
  tablespace icust2_0 ;
set echo off
spool off
exit sql.sqlcode;
```

CREATEINDEX_IDIST.SQL

```
/* created automatically by
/home/roagrawa/unisys/24000wh/scripts/buildcreateindex.sh Mon Aug 4
16:13:56 PDT 2003 */
set timing on
set sqlblanklines on
spool createindex_idist.log ;
set echo on ;
drop index idist ;
  create unique index idist on dist ( d_w_id
, d_id )
  pctfree 5 initrans 3
  storage ( buffer_pool default )
  parallel 12
  tablespace idist_0 ;
set echo off
spool off
exit sql.sqlcode;
```

CREATEINDEX_ITEM.SQL

```
/* created automatically by
/home/roagrawa/unisys/24000wh/scripts/buildcreateindex.sh Mon Aug 4
16:14:00 PDT 2003 */
set timing on
set sqlblanklines on
spool createindex_item.log ;
set echo on ;
drop index iitem ;
create unique index iitem on item ( i_id )
pctfree 5 initrans 4
storage ( buffer_pool default )
parallel
tablespace iitem_0 ;
set echo off
spool off
exit sql.sqlcode;
```

CREATEINDEX_INORD.SQL

```
/* created automatically by
/home/roagrawa/unisys/24000wh/scripts/buildcreateindex.sh Mon Aug 4
16:14:07 PDT 2003 */
set timing on
exit 0;
```

CREATEINDEX_IORDL.SQL

```
/* created automatically by
/home/roagrawa/unisys/24000wh/scripts/buildcreateindex.sh Mon Aug 4
16:14:06 PDT 2003 */
set timing on
exit 0;
```

CREATEINDEX_IORDR1.SQL

```
/* created automatically by
/home/roagrawa/unisys/24000wh/scripts/buildcreateindex.sh Mon Aug 4
16:14:02 PDT 2003 */
set timing on
exit 0;
```

CREATEINDEX_IORDR2.SQL

```
/* created automatically by
/home/roagrawa/unisys/24000wh/scripts/buildcreateindex.sh Mon Aug 4
16:14:04 PDT 2003 */
set timing on
set sqlblanklines on
spool createindex_iordr2.log ;
```

```
set echo on ;
drop index iordr2 ;
create unique index iordr2 on ordr ( o_w_id
, o_d_id
, o_c_id
, o_id )
pctfree 25 initrans 4
storage ( buffer_pool default )
parallel 32
tablespace iordr2_0 ;
set echo off
spool off
exit sql.sqlcode;
```

CREATEINDEX_ISTOK.SQL

```
/* created automatically by
/home/roagrawa/unisys/24000wh/scripts/buildcreateindex.sh Mon Aug 4
16:13:58 PDT 2003 */
set timing on
set sqlblanklines on
spool createindex_istok.log ;
set echo on ;
drop index istok ;
create unique index istok on stok ( s_i_id
, s_w_id )
pctfree 1 initrans 3
storage ( buffer_pool default )
parallel 32
tablespace istok_0 ;
set echo off
spool off
exit sql.sqlcode;
```

CREATEINDEXIWARE.SQL

```
/* created automatically by
/home/roagrawa/unisys/24000wh/scripts/buildcreateindex.sh Mon Aug 4
16:13:52 PDT 2003 */
set timing on
set sqlblanklines on
spool createindex_iware.log ;
set echo on ;
drop index iware ;
create unique index iware on ware ( w_id )
pctfree 1 initrans 3
storage ( buffer_pool default )
parallel
tablespace iware_0 ;
set echo off
spool off
exit sql.sqlcode;
```

CREATEMISC.SH

```
#!/bin/sh

$tpcc_sqlplus $tpcc_sqlplus_args << !
$tpcc_internal_connect

spool createmisc.log
set echo on;
alter user tpcc temporary tablespace system;
grant execute on dbms_lock to public;
grant execute on dbms_pipe to public;
grant select on v_\\$parameter to public;

REM
REM begin plsql_mon.sql
REM

connect tpcc/tpcc;
set echo on;
CREATE OR REPLACE PACKAGE plsql_mon_pack
IS
    PROCEDURE print
    (
        info          VARCHAR2
    );
END;
/
show errors;

CREATE OR REPLACE PACKAGE BODY plsql_mon_pack
IS
    PROCEDURE print
    (
        info          VARCHAR2
    )
    IS
        s              NUMBER;
    BEGIN
        dbms_pipe.pack_message (info);
        s := dbms_pipe.send_message ('plsql_mon');
        IF (s <> 0) THEN
            raise_application_error (-20000, 'Error:' || to_char(s) ||
                ' sending on pipe');
        END IF;
    END;
END;
/
show errors;

set echo off;

REM
REM end plsql_mon.sql
REM

REM
REM begin cre_tab.sql
REM

connect tpcc/tpcc;
set echo on;

drop table temp_o1;
drop table temp_no;
drop table temp_o2;
drop table temp_ol;
drop table tpcc_audit_tab;

create table temp_o1 (
    o_w_id integer,
    o_d_id integer,
    o_o_id integer);

create table temp_no (
    no_w_id integer,
    no_d_id integer,
    no_o_id integer);

create table temp_o2 (
    o_w_id integer,
    o_d_id integer,
    o_count integer);

create table temp_ol (
    ol_w_id integer,
    ol_d_id integer,
    ol_count integer);

create table tpcc_audit_tab (starttime date);

delete from tpcc_audit_tab;

set echo off;

REM
REM end cre_tab.sql
REM

REM
REM begin views.sql
REM

connect tpcc/tpcc;
set echo on;

create or replace view wh_cust
(w_id, w_tax, c_id, c_d_id, c_w_id, c_discount, c_last, c_credit)
as select w.w_id, w.w_tax,
          c.c_id, c.c_d_id, c.c_w_id, c.c_discount, c.c_last, c.c_credit
   from cust c, ware w
  where w.w_id = c.c_w_id;

create or replace view wh_dist
(w_id, d_id, d_tax, d_next_o_id, w_tax )
as select w.w_id, d.d_id, d.d_tax, d.d_next_o_id, w.w_tax
   from dist d, ware w
  where w.w_id = d.d_w_id;

create or replace view stock_item
(i_id, s_w_id, i_price, i_name, i_data, s_data, s_quantity,
```

```

s_order_cnt, s_ytd, s_remote_cnt,
s_dist_01, s_dist_02, s_dist_03, s_dist_04, s_dist_05,
s_dist_06, s_dist_07, s_dist_08, s_dist_09, s_dist_10)
as
select i.i_id, s_w_id, i.i_price, i.i_name, i.i_data, s_data, s_quantity,
s_order_cnt, s_ytd, s_remote_cnt,
s_dist_01, s_dist_02, s_dist_03, s_dist_04, s_dist_05,
s_dist_06, s_dist_07, s_dist_08, s_dist_09, s_dist_10
from stok s, item i
where i.i_id = s.s_i_id;

```

```
set echo off;
```

```

REM
REM end views.sql
REM

```

```

REM
REM begin dml.sql
REM
connect tpcc/tpcc;
set echo on;

```

```

alter table ware disable table lock;
alter table dist disable table lock;
alter table cust disable table lock;
alter table hist disable table lock;
alter table item disable table lock;
alter table stok disable table lock;
alter table ordr disable table lock;
alter table nord disable table lock;
alter table ordl disable table lock;

```

```
set echo off;
```

```

REM
REM end dml.sql
REM

```

```

REM
REM begin extent.sql
REM

```

```
$$SYS_CONNECTION_STRING
```

```
@$tpcc_sql_dir/extent
```

```
@$tpcc_sql_dir/freeext
```

```
exit sql.sqlcode;
```

```
!
```

CREATESPACESTATS.SH

```

#!/bin/sh
$tpcc_sqlplus $tpcc_dba_user_pass @$tpcc_genscripts_dir/createspacestats >
junk 2>&1

```

```

if test $? -ne 0
then
exit 1;
else
exit 0;
fi

```

CREATESPACESTATS.SQL

```

@/home/roagrawa/unisys/24000wh/scripts/sql/space_init
@/home/roagrawa/unisys/24000wh/scripts/sql/space_get 12 10
@/home/roagrawa/unisys/24000wh/scripts/sql/space_rpt
spool off
exit sql.sqlcode;

```

CREATESTATS.SH

```
#!/bin/sh
```

```

cstat=c_stat
if test $tpcc_np -gt 1 ; then
cstat=c_stat_rac
fi

```

```

$tpcc_sqlplus $tpcc_sqlplus_args << !
$tpcc_internal_connect

```

```

REM
REM create tablespace for statspack user sp begin
REM

```

```
spool createstats.log
```

```

set echo on
drop tablespace sp_0 including contents;
create tablespace sp_0 datafile '\\\\.\sp_0' size 4100M reuse
autoextend on extent management local uniform size 1M nologging ;
spool off

```

```

REM
REM create tablespace for statspack user sp end
REM

```

```

REM
REM begin now call spcreate to create statspack sp package
REM

```

```
$tpcc_internal_connect
```

```
define default_tablespace='sp_0'
```

```
define temporary_tablespace='temp_0'
```

```

@$ORACLE_HOME/rdbms/admin/spdrop
@$ORACLE_HOME/rdbms/admin/spcreate
perfstat

```

```
REM note that the last thing (after spcreate) is the perfstat password.
REM since we're not worried about security, perfstat will do.
```

```
REM
REM tpcc stat table for NT, it is not working so I comment it out
REM shui.lau@oracle.com it is better to use perfmon
REM
```

```
@$tpcc_sql_dir/cs_tpcc
@$tpcc_sql_dir/cs_cpu
@$tpcc_sql_dir/cs_os
@$tpcc_sql_dir/cs_proc
@$tpcc_sql_dir/cs_thread
```

```
REM
REM tpcc result table for unix and NT
REM
```

```
@$tpcc_sql_dir/${cstat}
@$tpcc_sql_dir/pst_c
```

```
!
```

CREATESTOREDPROCS.SH

```
#!/bin/sh
$tpcc_sqlplus $tpcc_user_pass @$${tpcc_genscripts_dir}/createstoreprocs >
junk 2>&1

if test $? -ne 0
then
    exit 1;
else
    exit 0;
fi
```

CREATESTOREDPROCS.SQL

```
spool createstoreprocs.log
@/home/roagrawa/unisys/24000wh/scripts/sql/tkvcin.in.sql
spool off
exit sql.sqlcode;
```

CREATETABLE_CUST.SQL

```
/* created automatically by
/home/roagrawa/unisys/24000wh/scripts/buildcreatetable.sh Mon Aug 4
16:13:07 PDT 2003 */
set timing on
set sqlblanklines on
spool createtable_cust.log
set echo on
drop cluster custcluster including tables ;
```

```
create cluster custcluster (
    c_id number
    , c_d_id number
    , c_w_id number
)
single table
hashkeys 720000000
hash is ( (c_id * ( 24000 * 10 ) + c_w_id * 10 + c_d_id) )
size 350
pctfree 0 initrans 3
storage ( buffer_pool recycle )
tablespace cust_0;
```

```
create table cust (
    c_id number
    , c_d_id number
    , c_w_id number
    , c_discount number
    , c_credit char(2)
    , c_last varchar2(16)
    , c_first varchar2(16)
    , c_credit_lim number
    , c_balance number
    , c_ytd_payment number
    , c_payment_cnt number
    , c_delivery_cnt number
    , c_street_1 varchar2(20)
    , c_street_2 varchar2(20)
    , c_city varchar2(20)
    , c_state char(2)
    , c_zip char(9)
    , c_phone char(16)
    , c_since date
    , c_middle char(2)
    , c_data varchar2(500)
)
```

```
cluster custcluster (
    c_id
    , c_d_id
    , c_w_id
);
set echo off
spool off
exit sql.sqlcode;
```

CREATETABLE_DIST.SQL

```
/* created automatically by
/home/roagrawa/unisys/24000wh/scripts/buildcreatetable.sh Mon Aug 4
16:13:15 PDT 2003 */
set timing on
set sqlblanklines on
spool createtable_dist.log
set echo on
drop cluster distcluster including tables ;

create cluster distcluster (
    d_id number
    , d_w_id number
```

```

)
single table
hashkeys 240000
hash is ( ((d_w_id * 10) + d_id) )
size 1448
  initrans 4
storage ( buffer_pool default )
tablespace dist_0;

create table dist (
  d_id number
, d_w_id number
, d_ytd number
, d_next_o_id number
, d_tax number
, d_name varchar2(10)
, d_street_1 varchar2(20)
, d_street_2 varchar2(20)
, d_city varchar2(20)
, d_state char(2)
, d_zip char(9)
)
cluster distcluster (
  d_id
, d_w_id
);
  set echo off
  spool off
  exit sql.sqlcode;

```

CREATETABLE_HIST.SQL

```

/* created automatically by
/home/roagrawa/unisys/24000wh/scripts/buildcreatetable.sh Mon Aug 4
16:13:20 PDT 2003 */
set timing on
  set sqlblanklines on
  spool createtable_hist.log
  set echo on
  drop table hist ;

create table hist (
  h_c_id number
, h_c_d_id number
, h_c_w_id number
, h_d_id number
, h_w_id number
, h_date date
, h_amount number
, h_data varchar2(24)
)
  pctfree 5  initrans 4
-- storage ( buffer_pool recycle )
  tablespace hist_0 ;
  set echo off
  spool off
  exit sql.sqlcode;

```

CREATETABLE_ITEM.SQL

```

/* created automatically by
/home/roagrawa/unisys/24000wh/scripts/buildcreatetable.sh Mon Aug 4
16:13:30 PDT 2003 */
set timing on
  set sqlblanklines on
  spool createtable_item.log
  set echo on
  drop cluster itemcluster including tables ;

create cluster itemcluster (
  i_id number(6,0)
)
  single table
  hashkeys 100000
  hash is ( (i_id) )
  size 120
  pctfree 0  initrans 3
  storage ( buffer_pool keep )
  tablespace item_0;

create table item (
  i_id number(6,0)
, i_name varchar2(24)
, i_price number
, i_data varchar2(50)
, i_im_id number
)
cluster itemcluster (
  i_id
);
  set echo off
  spool off
  exit sql.sqlcode;

```

CREATETABLE_NORD.SQL

```

/* created automatically by
/home/roagrawa/unisys/24000wh/scripts/buildcreatetable.sh Mon Aug 4
16:13:38 PDT 2003 */
set timing on
  set sqlblanklines on
  spool createtable_nord.log
  set echo on
  drop cluster nordcluster_queue including tables ;

create cluster nordcluster_queue (
  no_w_id number
, no_d_id number
, no_o_id number SORT
)
  hashkeys 240000
  hash is ( (no_w_id - 1) * 10 + no_d_id - 1 )
  size 190
  tablespace nord_0;

create table nord (

```

```

    no_w_id number
, no_d_id number
, no_o_id number sort
, constraint nord_uk primary key ( no_w_id
, no_d_id
, no_o_id )
)
cluster nordcluster_queue (
    no_w_id
, no_d_id
, no_o_id
);
set echo off
spool off
exit sql.sqlcode;

```

CREATETABLE_ORDL.SQL

```

/* created automatically by
/home/roagrawa/unisys/24000wh/scripts/buildcreatetable.sh Mon Aug 4
16:13:36 PDT 2003 */
set timing on
set sqlblanklines on
spool createtable_ordl.log
set echo on
create table ordl (
    ol_w_id number
, ol_d_id number
, ol_o_id number sort
, ol_number number sort
, ol_i_id number
, ol_delivery_d date
, ol_amount number
, ol_supply_w_id number
, ol_quantity number
, ol_dist_info char(24)
, constraint ordl_uk primary key (ol_w_id, ol_d_id, ol_o_id, ol_number)
)) CLUSTER ordcluster_queue(ol_w_id, ol_d_id, ol_o_id, ol_number) ;
set echo off
spool off
exit sql.sqlcode;

```

CREATETABLE_ORDR.SQL

```

/* created automatically by
/home/roagrawa/unisys/24000wh/scripts/buildcreatetable.sh Mon Aug 4
16:13:33 PDT 2003 */
set timing on
set sqlblanklines on
spool createtable_ordr.log
set echo on
drop cluster ordcluster_queue including tables ;

create cluster ordcluster_queue (
    o_w_id number
, o_d_id number
, o_id number SORT

```

```

, o_number number SORT
)

hashkeys 240000
hash is ( (o_w_id - 1) * 10 + o_d_id - 1 )
size 1490
tablespace ordr_0;

create table ordr (
    o_id number sort
, o_w_id number
, o_d_id number
, o_c_id number
, o_carrier_id number
, o_ol_cnt number
, o_all_local number
, o_entry_d date
, constraint ordr_uk primary key ( o_w_id
, o_d_id
, o_id )
)
cluster ordcluster_queue (
    o_w_id
, o_d_id
, o_id
);
set echo off
spool off
exit sql.sqlcode;

```

CREATETABLE_STOK.SQL

```

/* created automatically by
/home/roagrawa/unisys/24000wh/scripts/buildcreatetable.sh Mon Aug 4
16:13:23 PDT 2003 */
set timing on
set sqlblanklines on
spool createtable_stok.log
set echo on
drop cluster stokcluster including tables ;

create cluster stokcluster (
    s_i_id number
, s_w_id number
)
single table
hashkeys 2400000000
hash is ( (s_i_id * 24000 + s_w_id) )
size 350
pctfree 0 initrans 3
storage ( buffer_pool keep )
tablespace stok_0;

create table stok (
    s_i_id number
, s_w_id number
, s_quantity number
, s_ytd number
, s_order_cnt number

```

```

, s_remote_cnt number
, s_data varchar2(50)
, s_dist_01 char(24)
, s_dist_02 char(24)
, s_dist_03 char(24)
, s_dist_04 char(24)
, s_dist_05 char(24)
, s_dist_06 char(24)
, s_dist_07 char(24)
, s_dist_08 char(24)
, s_dist_09 char(24)
, s_dist_10 char(24)
)
cluster stokcluster (
  s_i_id
, s_w_id
);
  set echo off
  spool off
  exit sql.sqlcode;

```

CREATETABLE_WARE.SQL

```

/* created automatically by
/home/roagrawa/unisys/24000wh/scripts/buildcreatetable.sh Mon Aug 4
16:13:02 PDT 2003 */
set timing on
  set sqlblanklines on
  spool createtable_ware.log
  set echo on
  drop cluster warecluster including tables ;

create cluster warecluster (
  w_id number(5,0)
)
single table
hashkeys 24000
hash is ( (w_id) )
size 1448
  initrans 2
storage ( buffer_pool default )
tablespace ware_0;

create table ware (
  w_id number(5,0)
, w_ytd number
, w_tax number
, w_name varchar2(10)
, w_street_1 varchar2(20)
, w_street_2 varchar2(20)
, w_city varchar2(20)
, w_state char(2)
, w_zip char(9)
)
cluster warecluster (
  w_id
);
  set echo off
  spool off

```

```
exit sql.sqlcode;
```

CREATETS.SH

```

#!/bin/sh
#NOTE - ANY CHANGES MUST BE MADE TO CREATETS.KSH AS WELL.
# createts.sh [name] [no. of file] [no. of partition] [filesize]
[ext_size]
#
# [unix/nt] [1: temporary ts / 0: others] [filecount] [no of
cpu]
#
# [blocksize] [t: bitmapped / f: manual manage / d: dictionary
]

name=$1
fileno=$2
noofts=$3
filesize=$4
extsize=$5
ver=$6
isTemp=$7
filecount=$8
para=`expr $9 \* 2`
#blocksize=${10} sh bug workaround
blocksize=`echo $@ | cut -d' ' -f10`
#autospace=${11} sh bug workaround
autospace=`echo $@ | cut -d' ' -f11`

addts=$tpcc_scripts/addts.sh
addfile=$tpcc_scripts/addfile.sh

if expr "x$tpcc createts_print" = "xt" > /dev/null ; then
  createtsout=${tpcc_genscripts_dir}/createts_node${tpcc_rac_node}.sh
  fileavg=`expr $fileno / $tpcc_np`

  if test $noofts -gt 1 ; then
    avg_ts_node=`expr $noofts / $tpcc_np`
    if test "x$tpcc_rac_createts_phase" = "x1" ; then
      fileavg=$avg_ts_node
    else
      if test "x$tpcc_rac_createts_phase" = "x2" ; then
        fileavg=`expr $fileavg - $avg_ts_node`
      fi
    fi
  fi

  fileend=`expr $fileavg \* $tpcc_rac_node`
  filestart=`expr $fileend - $fileavg`
fi

if test $ver = unix;
then
  fileaddr=$tpcc_disks_location;
elif test $ver = nt;
then
  fileaddr=\\\\.\\.\\;
fi

filecounter=0
i=0

```



```

while test $i -lt $noofts; do

    filecount=`expr $filecount + 1`;
    if expr "x$tpcc_createts_print" = "xt" > /dev/null ; then
        if test "x$tpcc_rac_createts_phase" = "x1" ; then
            if test "x$name" = "xitem" -o "x$name" = "xtemp" -o "x$name" =
"xresttbl" ; then
                if test $tpcc_rac_node = 1 ; then
                    echo $addts $name\_ $i $fileaddr$name\_ $i\_0 $filesize $extsize
$blocksize $isTemp $autospace \& >> $createtsout
                    rac_count=`expr $rac_count + 1`
                    if test "$rac_count" = "$para" ; then
                        rac_count=0
                        echo wait >> $createtsout
                    fi
                fi
            else
                if test $filecounter -ge $filestart -a $filecounter -lt $fileend ;
then
                    echo $addts $name\_ $i $fileaddr$name\_ $i\_0 $filesize $extsize
$blocksize $isTemp $autospace \& >> $createtsout
                    rac_count=`expr $rac_count + 1`
                    if test "$rac_count" = "$para" ; then
                        rac_count=0
                        echo wait >> $createtsout
                    fi
                fi
            fi
        else
            $addts $name\_ $i $fileaddr$name\_ $i\_0 $filesize $extsize $blocksize
$isTemp $autospace \> junk$filecount 2\>\&l \&;
            fi
        eval "proc$filecount=$!"
        filecounter=`expr $filecounter + 1`

        p=`expr $filecount % $para`;
        if test $p = 0;
        then
            k=`expr $filecount - $para + 1`;
            if test $k -le $8;
            then
                k=`expr $8 + 1`;
            fi
            while test $k -le $filecount ; do
#                wait `eval echo '$proc'$k`
                wait
                eval "proc$k=$?"
                k=`expr $k + 1`;
            done
            fi

            i=`expr $i + 1`;

        done

        p=`expr $filecount % $para`
        if test $p != 0;
        then
            k=`expr $filecount - $p + 1`;
            if test $k -le $8;

```

```

then
    k=`expr $8 + 1`;
fi
while test $k -le $filecount; do
#    wait `eval echo '$proc'$k`
    wait
    eval "proc$k=$?"
    k=`expr $k + 1`
done
fi

if test "x$tpcc_createts_print" = "xt" -a "x$tpcc_rac_createts_phase" =
"x1" ; then
    echo $rac_count
    exit 0
fi

if test "x$tpcc_createts_print" = "xt" -a $noofts -gt 1 -a
"x$tpcc_rac_createts_phase" = "x2" ; then
    filecounter=0
fi

filecount=0
fileperts=`expr $fileno / $noofts - 1`
if test $fileperts -gt 0 ;
then
    i=0
    while test $i -lt $noofts ; do
        j=0;
        while test $j -lt $fileperts ;do

            filecount=`expr $filecount + 1`;
            if expr "x$tpcc_createts_print" = "xt" > /dev/null ; then
                if test "x$tpcc_rac_createts_phase" = "x2" ; then
                    if test "x$name" = "xitem" -o "x$name" = "xtemp" -o "x$name" =
"xresttbl" ; then
                        if test $tpcc_rac_node = 1 ; then
                            echo $addfile $name\_ $i $fileaddr$name\_ $i\_ `expr $j + 1`
$filesize $isTemp \& >> $createtsout
                            rac_count=`expr $rac_count + 1`
                            if test "$rac_count" = "$para" ; then
                                rac_count=0
                                echo wait >> $createtsout
                            fi
                        fi
                    else
                        if test $filecounter -ge $filestart -a $filecounter -lt
$fileend ; then
                            echo $addfile $name\_ $i $fileaddr$name\_ $i\_ `expr $j + 1`
$filesize $isTemp \& >> $createtsout
                            rac_count=`expr $rac_count + 1`
                            if test "$rac_count" = "$para" ; then
                                rac_count=0
                                echo wait >> $createtsout
                            fi
                        fi
                    fi
                fi
            else
                $addfile $name\_ $i $fileaddr$name\_ $i\_ `expr $j + 1` $filesize
$isTemp \> junk$filecount 2\>\&l \&;

```

```

fi
eval "proc$filecount=$!"

filecounter=`expr $filecounter + 1`

p=`expr $filecount % $para`;
if test $p = 0;
then
k=`expr $filecount - $para + 1`;
if test $k -le $8;
then
k=`expr $8 + 1`;
fi
while test $k -le $filecount ; do
# wait `eval echo '$proc'$k`
wait
eval "proc$k=$?"
k=`expr $k + 1`;
done
fi

j=`expr $j + 1`
done

i=`expr $i + 1`
done

p=`expr $filecount % $para`
if test $p != 0;
then
k=`expr $filecount - $p + 1`;
if test $k -le $8;
then
k=`expr $8 + 1`;
fi
while test $k -le $filecount; do
# wait `eval echo '$proc'$k`
wait
eval "proc$k=$?"
k=`expr $k + 1`
done
fi
fi

if test "x$tpcc_createts_print" = "xt" ; then
echo $rac_count
fi

i=`expr $8 + 1`
proc=0
while test $i -le $filecount ;do
eval 'process=$proc'"$i"
proc=`expr $proc + $process`
i=`expr $i + 1`
done

out=`expr $proc % 127`

if test $out -ne 0
then
exit 1;

```

```

else
exit 0;
fi

```

CREATETS_GEN.SH

```

#created automatically by
/home/roagrawa/unisys/24000wh/scripts/buildcreatets.sh Mon Aug 4 16:11:35
PDT 2003
# Tablespace ware, ts size 59M (60000K)
# each file 70M (71680K)
# extents 69632K (69632K)
# 1 files

$tpcc_createts ware 1 1          70M 69632K nt 0          0 16 auto t
if expr $? != 0 > /dev/null; then
echo Creating tablespace for ware failed.  Exiting.
exit 0
fi
# Tablespace cust, ts size 713G (747070312K)
# each file 7610M (7792640K)
# extents 148814K (148814K)
# 96 files

$tpcc_createts cust 96 1          7610M 148814K nt 0          1 16 auto t
if expr $? != 0 > /dev/null; then
echo Creating tablespace for cust failed.  Exiting.
exit 0
fi
# Tablespace dist, ts size 586M (600000K)
# each file 600M (614400K)
# extents 612352K (612352K)
# 1 files

$tpcc_createts dist 1 1          600M 612352K nt 0          97 16 auto t
if expr $? != 0 > /dev/null; then
echo Creating tablespace for dist failed.  Exiting.
exit 0
fi
# Tablespace hist, ts size 52G (54227250K)
# each file 2450M (2500000K)
# extents 99750K (99750K)
# 24 files

$tpcc_createts hist 24 1          2450M 99750K nt 0          98 16 auto t
if expr $? != 0 > /dev/null; then
echo Creating tablespace for hist failed.  Exiting.
exit 0
fi
# Tablespace stok, ts size 978G (1025390625K)
# each file 5230M (5355520K)
# extents 204918K (204918K)
# 192 files

$tpcc_createts stok 192 1          5230M 204918K nt 0          194 16 auto t
if expr $? != 0 > /dev/null; then
echo Creating tablespace for stok failed.  Exiting.
exit 0
fi

```

```

# Tablespace item, ts size 16M (15868K)
# each file 30M (30720K)
# extents 28672K (28672K)
# 1 files

$tpcc_createts item 1 1      30M 28672K nt 0      386 16 auto t
  if expr $? != 0 > /dev/null; then
    echo Creating tablespace for item failed.  Exiting.
    exit 0
  fi
# Tablespace ordr, ts size 667G (698546250K)
# each file 7120M (7290880K)
# extents 100224K (100224K)
# 96 files

$tpcc_createts ordr 96 1    7120M 100224K nt 0      387 16 16K t
  if expr $? != 0 > /dev/null; then
    echo Creating tablespace for ordr failed.  Exiting.
    exit 0
  fi
# Tablespace nord, ts size 8G (7926750K)
# each file 7750M (7936000K)
# extents 100706K (100706K)
# 1 files

$tpcc_createts nord 1 1    7750M 100706K nt 0      483 16 auto t
  if expr $? != 0 > /dev/null; then
    echo Creating tablespace for nord failed.  Exiting.
    exit 0
  fi
# Tablespace iware, ts size 30M (30000K)
# each file 40M (40960K)
# extents 38K (38K)
# 1 files

$tpcc_createts iware 1 1   40M 38K nt 0      484 16 auto t
  if expr $? != 0 > /dev/null; then
    echo Creating tablespace for iware failed.  Exiting.
    exit 0
  fi
# Tablespace icust1, ts size 22G (22080000K)
# each file 5391M (5520000K)
# extents 68200K (68200K)
# 4 files

$tpcc_createts icust1 4 1   5391M 68200K nt 0      485 16 auto t
  if expr $? != 0 > /dev/null; then
    echo Creating tablespace for icust1 failed.  Exiting.
    exit 0
  fi
# Tablespace icust2, ts size 132G (137730000K)
# each file 1410M (1443840K)
# extents 1339K (1339K)
# 96 files

$tpcc_createts icust2 96 1  1410M 1339K nt 0      581 16 auto t
  if expr $? != 0 > /dev/null; then
    echo Creating tablespace for icust2 failed.  Exiting.
    exit 0
  fi
# Tablespace idist, ts size 118M (120000K)

```

```

# each file 130M (133120K)
# extents 123K (123K)
# 1 files

$tpcc_createts idist 1 1    130M 123K nt 0      677 16 auto t
  if expr $? != 0 > /dev/null; then
    echo Creating tablespace for idist failed.  Exiting.
    exit 0
  fi
# Tablespace istok, ts size 60G (62700000K)
# each file 2560M (2615000K)
# extents 53998K (53998K)
# 24 files

$tpcc_createts istok 24 1   2560M 53998K nt 0      678 16 auto t
  if expr $? != 0 > /dev/null; then
    echo Creating tablespace for istok failed.  Exiting.
    exit 0
  fi
# Tablespace iitem, ts size 3M (2560K)
# each file 10M (10240K)
# extents 137K (137K)
# 1 files

$tpcc_createts iitem 1 1    10M 137K nt 0      774 16 auto t
  if expr $? != 0 > /dev/null; then
    echo Creating tablespace for iitem failed.  Exiting.
    exit 0
  fi
# Tablespace iordr2, ts size 33G (34245000K)
# each file 360M (368640K)
# extents 342K (342K)
# 96 files

$tpcc_createts iordr2 96 1   360M 342K nt 0      775 16 auto t
  if expr $? != 0 > /dev/null; then
    echo Creating tablespace for iordr2 failed.  Exiting.
    exit 0
  fi
# Tablespace temp, ts size 263G (275460000K)
# each file 2810M (2877440K)
# extents 1437184K (1437184K)
# 96 files

$tpcc_createts temp 96 1    2810M 1437184K nt 1      871 16 auto t
  if expr $? != 0 > /dev/null; then
    echo Creating tablespace for temp failed.  Exiting.
    exit 0
  fi

CREATEUSER.SH

#!/bin/sh

echo Creating user tpcc...
$tpcc_sqlplus $tpcc_dba_user_pass @$tpcc_sql_dir/createuser > junk 2>&1
if test $? -ne 0
then

```

```

exit 1;
else
exit 0;
fi

```

CREATEUSER.SQL

```

spool createusertpcc.log;

set echo on;

create user tpcc identified by tpcc;

grant dba to tpcc;

set echo off;
spool off;

exit ;

```

DB_LINKS.TXT

```

icust2_0_0      \device\harddisk1\partition1
cust_0_0        \device\harddisk1\partition2
stok_0_0        \device\harddisk1\partition3
stok_0_96       \device\harddisk1\partition4
ordr_0_0        \device\harddisk1\partition5
iordr2_0_0      \device\harddisk1\partition6
extra_1         \device\harddisk1\partition7
temp_0_0        \device\harddisk1\partition8
icust2_0_1      \device\harddisk2\partition1
cust_0_1        \device\harddisk2\partition2
stok_0_1        \device\harddisk2\partition3
stok_0_97       \device\harddisk2\partition4
ordr_0_1        \device\harddisk2\partition5
iordr2_0_1      \device\harddisk2\partition6
extra_2         \device\harddisk2\partition7
temp_0_1        \device\harddisk2\partition8
icust2_0_2      \device\harddisk3\partition1
cust_0_2        \device\harddisk3\partition2
stok_0_2        \device\harddisk3\partition3
stok_0_98       \device\harddisk3\partition4
ordr_0_2        \device\harddisk3\partition5
iordr2_0_2      \device\harddisk3\partition6
extra_3         \device\harddisk3\partition7
temp_0_2        \device\harddisk3\partition8
icust2_0_3      \device\harddisk4\partition1
cust_0_3        \device\harddisk4\partition2
stok_0_3        \device\harddisk4\partition3
stok_0_99       \device\harddisk4\partition4
ordr_0_3        \device\harddisk4\partition5
iordr2_0_3      \device\harddisk4\partition6
iware_0_0       \device\harddisk4\partition7
temp_0_3        \device\harddisk4\partition8
icust2_0_4      \device\harddisk5\partition1
cust_0_4        \device\harddisk5\partition2
NA-stok_0_4     \device\harddisk5\partition3
stok_0_100     \device\harddisk5\partition4

```

```

ordr_0_4        \device\harddisk5\partition5
iordr2_0_4      \device\harddisk5\partition6
hist_0_0        \device\harddisk5\partition7
temp_0_4        \device\harddisk5\partition8
icust2_0_5      \device\harddisk6\partition1
cust_0_5        \device\harddisk6\partition2
NA-stok_0_5     \device\harddisk6\partition3
stok_0_101     \device\harddisk6\partition4
ordr_0_5        \device\harddisk6\partition5
iordr2_0_5      \device\harddisk6\partition6
hist_0_1        \device\harddisk6\partition7
temp_0_5        \device\harddisk6\partition8
icust2_0_6      \device\harddisk7\partition1
cust_0_6        \device\harddisk7\partition2
NA-stok_0_6     \device\harddisk7\partition3
stok_0_102     \device\harddisk7\partition4
ordr_0_6        \device\harddisk7\partition5
iordr2_0_6      \device\harddisk7\partition6
hist_0_2        \device\harddisk7\partition7
temp_0_6        \device\harddisk7\partition8
icust2_0_7      \device\harddisk8\partition1
cust_0_7        \device\harddisk8\partition2
stok_0_29       \device\harddisk8\partition3
stok_0_103     \device\harddisk8\partition4
ordr_0_7        \device\harddisk8\partition5
iordr2_0_7      \device\harddisk8\partition6
hist_0_3        \device\harddisk8\partition7
temp_0_7        \device\harddisk8\partition8
icust2_0_8      \device\harddisk9\partition1
cust_0_8        \device\harddisk9\partition2
stok_0_71       \device\harddisk9\partition3
stok_0_188     \device\harddisk9\partition4
ordr_0_8        \device\harddisk9\partition5
iordr2_0_8      \device\harddisk9\partition6
hist_0_4        \device\harddisk9\partition7
temp_0_8        \device\harddisk9\partition8
icust2_0_9      \device\harddisk10\partition1
cust_0_9        \device\harddisk10\partition2
stok_0_9        \device\harddisk10\partition3
stok_0_105     \device\harddisk10\partition4
ordr_0_9        \device\harddisk10\partition5
iordr2_0_9      \device\harddisk10\partition6
hist_0_5        \device\harddisk10\partition7
temp_0_9        \device\harddisk10\partition8
icust2_0_10     \device\harddisk11\partition1
cust_0_10       \device\harddisk11\partition2
NA-stok_0_10    \device\harddisk11\partition3
stok_0_106     \device\harddisk11\partition4
ordr_0_10       \device\harddisk11\partition5
iordr2_0_10     \device\harddisk11\partition6
hist_0_6        \device\harddisk11\partition7
temp_0_10       \device\harddisk11\partition8
icust2_0_11     \device\harddisk12\partition1
cust_0_11       \device\harddisk12\partition2
NA-stok_0_11    \device\harddisk12\partition3
stok_0_107     \device\harddisk12\partition4
ordr_0_11       \device\harddisk12\partition5
iordr2_0_11     \device\harddisk12\partition6
hist_0_7        \device\harddisk12\partition7
temp_0_11       \device\harddisk12\partition8
icust2_0_12     \device\harddisk13\partition1

```

cust_0_12 \device\harddisk13\partition2
 NA-stok_0_12 \device\harddisk13\partition3
 stok_0_108 \device\harddisk13\partition4
 ordr_0_12 \device\harddisk13\partition5
 iordr2_0_12 \device\harddisk13\partition6
 hist_0_8 \device\harddisk13\partition7
 temp_0_12 \device\harddisk13\partition8
 icust2_0_13 \device\harddisk14\partition1
 cust_0_13 \device\harddisk14\partition2
 stok_0_24 \device\harddisk14\partition3
 stok_0_187 \device\harddisk14\partition4
 ordr_0_13 \device\harddisk14\partition5
 iordr2_0_13 \device\harddisk14\partition6
 hist_0_9 \device\harddisk14\partition7
 temp_0_13 \device\harddisk14\partition8
 icust2_0_14 \device\harddisk15\partition1
 cust_0_14 \device\harddisk15\partition2
 stok_0_34 \device\harddisk15\partition3
 stok_0_110 \device\harddisk15\partition4
 ordr_0_14 \device\harddisk15\partition5
 iordr2_0_14 \device\harddisk15\partition6
 hist_0_10 \device\harddisk15\partition7
 temp_0_14 \device\harddisk15\partition8
 icust2_0_15 \device\harddisk16\partition1
 cust_0_15 \device\harddisk16\partition2
 stok_0_72 \device\harddisk16\partition3
 stok_0_111 \device\harddisk16\partition4
 ordr_0_15 \device\harddisk16\partition5
 iordr2_0_15 \device\harddisk16\partition6
 hist_0_11 \device\harddisk16\partition7
 temp_0_15 \device\harddisk16\partition8
 icust2_0_16 \device\harddisk25\partition1
 cust_0_16 \device\harddisk25\partition2
 stok_0_23 \device\harddisk25\partition3
 stok_0_112 \device\harddisk25\partition4
 ordr_0_16 \device\harddisk25\partition5
 iordr2_0_16 \device\harddisk25\partition6
 istok_0_0 \device\harddisk25\partition7
 temp_0_16 \device\harddisk25\partition8
 icust2_0_17 \device\harddisk26\partition1
 cust_0_17 \device\harddisk26\partition2
 stok_0_47 \device\harddisk26\partition3
 stok_0_113 \device\harddisk26\partition4
 ordr_0_17 \device\harddisk26\partition5
 iordr2_0_17 \device\harddisk26\partition6
 extra_4 \device\harddisk26\partition7
 temp_0_17 \device\harddisk26\partition8
 icust2_0_18 \device\harddisk27\partition1
 cust_0_18 \device\harddisk27\partition2
 NA_stok_0_46 \device\harddisk27\partition3
 stok_0_114 \device\harddisk27\partition4
 ordr_0_18 \device\harddisk27\partition5
 iordr2_0_18 \device\harddisk27\partition6
 istok_0_2 \device\harddisk27\partition7
 temp_0_18 \device\harddisk27\partition8
 icust2_0_19 \device\harddisk28\partition1
 cust_0_19 \device\harddisk28\partition2
 stok_0_28 \device\harddisk28\partition3
 stok_0_115 \device\harddisk28\partition4
 ordr_0_19 \device\harddisk28\partition5
 iordr2_0_19 \device\harddisk28\partition6

extra_5 \device\harddisk28\partition7
 temp_0_19 \device\harddisk28\partition8
 icust2_0_20 \device\harddisk29\partition1
 cust_0_20 \device\harddisk29\partition2
 stok_0_70 \device\harddisk29\partition3
 stok_0_116 \device\harddisk29\partition4
 ordr_0_20 \device\harddisk29\partition5
 iordr2_0_20 \device\harddisk29\partition6
 istok_0_4 \device\harddisk29\partition7
 temp_0_20 \device\harddisk29\partition8
 icust2_0_21 \device\harddisk30\partition1
 cust_0_21 \device\harddisk30\partition2
 stok_0_21 \device\harddisk30\partition3
 stok_0_117 \device\harddisk30\partition4
 ordr_0_21 \device\harddisk30\partition5
 iordr2_0_21 \device\harddisk30\partition6
 extra_6 \device\harddisk30\partition7
 temp_0_21 \device\harddisk30\partition8
 icust2_0_22 \device\harddisk31\partition1
 cust_0_22 \device\harddisk31\partition2
 stok_0_22 \device\harddisk31\partition3
 stok_0_124 \device\harddisk31\partition4
 ordr_0_22 \device\harddisk31\partition5
 iordr2_0_22 \device\harddisk31\partition6
 icust1_0_0 \device\harddisk31\partition7
 temp_0_22 \device\harddisk31\partition8
 icust2_0_23 \device\harddisk32\partition1
 cust_0_23 \device\harddisk32\partition2
 stok_0_16 \device\harddisk32\partition3
 stok_0_119 \device\harddisk32\partition4
 ordr_0_23 \device\harddisk32\partition5
 iordr2_0_23 \device\harddisk32\partition6
 extra_7 \device\harddisk32\partition7
 temp_0_23 \device\harddisk32\partition8
 icust2_0_24 \device\harddisk17\partition1
 cust_0_24 \device\harddisk17\partition2
 stok_0_13 \device\harddisk17\partition3
 stok_0_120 \device\harddisk17\partition4
 ordr_0_24 \device\harddisk17\partition5
 iordr2_0_24 \device\harddisk17\partition6
 icust1_0_1 \device\harddisk17\partition7
 temp_0_24 \device\harddisk17\partition8
 icust2_0_25 \device\harddisk18\partition1
 cust_0_25 \device\harddisk18\partition2
 stok_0_25 \device\harddisk18\partition3
 stok_0_163 \device\harddisk18\partition4
 ordr_0_25 \device\harddisk18\partition5
 iordr2_0_25 \device\harddisk18\partition6
 extra_8 \device\harddisk18\partition7
 temp_0_25 \device\harddisk18\partition8
 icust2_0_26 \device\harddisk19\partition1
 cust_0_26 \device\harddisk19\partition2
 stok_0_26 \device\harddisk19\partition3
 stok_0_122 \device\harddisk19\partition4
 ordr_0_26 \device\harddisk19\partition5
 iordr2_0_26 \device\harddisk19\partition6
 icust1_0_2 \device\harddisk19\partition7
 temp_0_26 \device\harddisk19\partition8
 icust2_0_27 \device\harddisk20\partition1
 cust_0_27 \device\harddisk20\partition2
 NA-stok_0_27 \device\harddisk20\partition3

stok_0_175 \device\harddisk20\partition4
 ordr_0_27 \device\harddisk20\partition5
 iordr2_0_27 \device\harddisk20\partition6
 extra_9 \device\harddisk20\partition7
 temp_0_27 \device\harddisk20\partition8
 icust2_0_28 \device\harddisk21\partition1
 cust_0_28 \device\harddisk21\partition2
 stok_0_19 \device\harddisk21\partition3
 stok_0_118 \device\harddisk21\partition4
 ordr_0_28 \device\harddisk21\partition5
 iordr2_0_28 \device\harddisk21\partition6
 icust1_0_3 \device\harddisk21\partition7
 temp_0_28 \device\harddisk21\partition8
 icust2_0_29 \device\harddisk22\partition1
 cust_0_29 \device\harddisk22\partition2
 stok_0_7 \device\harddisk22\partition3
 stok_0_125 \device\harddisk22\partition4
 ordr_0_29 \device\harddisk22\partition5
 iordr2_0_29 \device\harddisk22\partition6
 extra_10 \device\harddisk22\partition7
 temp_0_29 \device\harddisk22\partition8
 icust2_0_30 \device\harddisk23\partition1
 cust_0_30 \device\harddisk23\partition2
 stok_0_30 \device\harddisk23\partition3
 stok_0_126 \device\harddisk23\partition4
 ordr_0_30 \device\harddisk23\partition5
 iordr2_0_30 \device\harddisk23\partition6
 ware_0_0 \device\harddisk23\partition7
 temp_0_30 \device\harddisk23\partition8
 icust2_0_31 \device\harddisk24\partition1
 cust_0_31 \device\harddisk24\partition2
 stok_0_31 \device\harddisk24\partition3
 stok_0_127 \device\harddisk24\partition4
 ordr_0_31 \device\harddisk24\partition5
 iordr2_0_31 \device\harddisk24\partition6
 extra_11 \device\harddisk24\partition7
 temp_0_31 \device\harddisk24\partition8
 icust2_0_32 \device\harddisk41\partition1
 cust_0_32 \device\harddisk41\partition2
 stok_0_32 \device\harddisk41\partition3
 stok_0_128 \device\harddisk41\partition4
 ordr_0_32 \device\harddisk41\partition5
 iordr2_0_32 \device\harddisk41\partition6
 dist_0_0 \device\harddisk41\partition7
 temp_0_32 \device\harddisk41\partition8
 icust2_0_33 \device\harddisk42\partition1
 cust_0_33 \device\harddisk42\partition2
 NA-stok_0_33 \device\harddisk42\partition3
 stok_0_129 \device\harddisk42\partition4
 ordr_0_33 \device\harddisk42\partition5
 iordr2_0_33 \device\harddisk42\partition6
 extra_12 \device\harddisk42\partition7
 temp_0_33 \device\harddisk42\partition8
 icust2_0_34 \device\harddisk43\partition1
 cust_0_34 \device\harddisk43\partition2
 stok_0_14 \device\harddisk43\partition3
 stok_0_130 \device\harddisk43\partition4
 ordr_0_34 \device\harddisk43\partition5
 iordr2_0_34 \device\harddisk43\partition6
 idist_0_0 \device\harddisk43\partition7
 temp_0_34 \device\harddisk43\partition8

icust2_0_35 \device\harddisk44\partition1
 cust_0_35 \device\harddisk44\partition2
 stok_0_35 \device\harddisk44\partition3
 stok_0_131 \device\harddisk44\partition4
 ordr_0_35 \device\harddisk44\partition5
 iordr2_0_35 \device\harddisk44\partition6
 item_0_0 \device\harddisk44\partition7
 temp_0_35 \device\harddisk44\partition8
 icust2_0_36 \device\harddisk45\partition1
 cust_0_36 \device\harddisk45\partition2
 stok_0_36 \device\harddisk45\partition3
 stok_0_132 \device\harddisk45\partition4
 ordr_0_36 \device\harddisk45\partition5
 iordr2_0_36 \device\harddisk45\partition6
 item_0_0 \device\harddisk45\partition7
 temp_0_36 \device\harddisk45\partition8
 icust2_0_37 \device\harddisk46\partition1
 cust_0_37 \device\harddisk46\partition2
 stok_0_37 \device\harddisk46\partition3
 stok_0_133 \device\harddisk46\partition4
 ordr_0_37 \device\harddisk46\partition5
 iordr2_0_37 \device\harddisk46\partition6
 hist_0_12 \device\harddisk46\partition7
 temp_0_37 \device\harddisk46\partition8
 icust2_0_38 \device\harddisk47\partition1
 cust_0_38 \device\harddisk47\partition2
 stok_0_38 \device\harddisk47\partition3
 stok_0_134 \device\harddisk47\partition4
 ordr_0_38 \device\harddisk47\partition5
 iordr2_0_38 \device\harddisk47\partition6
 hist_0_13 \device\harddisk47\partition7
 temp_0_38 \device\harddisk47\partition8
 icust2_0_39 \device\harddisk48\partition1
 cust_0_39 \device\harddisk48\partition2
 stok_0_39 \device\harddisk48\partition3
 stok_0_135 \device\harddisk48\partition4
 ordr_0_39 \device\harddisk48\partition5
 iordr2_0_39 \device\harddisk48\partition6
 hist_0_14 \device\harddisk48\partition7
 temp_0_39 \device\harddisk48\partition8
 icust2_0_40 \device\harddisk33\partition1
 cust_0_40 \device\harddisk33\partition2
 stok_0_40 \device\harddisk33\partition3
 stok_0_136 \device\harddisk33\partition4
 ordr_0_40 \device\harddisk33\partition5
 iordr2_0_40 \device\harddisk33\partition6
 hist_0_15 \device\harddisk33\partition7
 temp_0_40 \device\harddisk33\partition8
 icust2_0_41 \device\harddisk34\partition1
 cust_0_41 \device\harddisk34\partition2
 stok_0_41 \device\harddisk34\partition3
 stok_0_137 \device\harddisk34\partition4
 ordr_0_41 \device\harddisk34\partition5
 iordr2_0_41 \device\harddisk34\partition6
 hist_0_16 \device\harddisk34\partition7
 temp_0_41 \device\harddisk34\partition8
 icust2_0_42 \device\harddisk35\partition1
 cust_0_42 \device\harddisk35\partition2
 stok_0_42 \device\harddisk35\partition3
 stok_0_138 \device\harddisk35\partition4
 ordr_0_42 \device\harddisk35\partition5

iordr2_0_42 \device\harddisk35\partition6
hist_0_17 \device\harddisk35\partition7
temp_0_42 \device\harddisk35\partition8
icust2_0_43 \device\harddisk36\partition1
cust_0_43 \device\harddisk36\partition2
stok_0_43 \device\harddisk36\partition3
stok_0_139 \device\harddisk36\partition4
ordr_0_43 \device\harddisk36\partition5
iordr2_0_43 \device\harddisk36\partition6
hist_0_18 \device\harddisk36\partition7
temp_0_43 \device\harddisk36\partition8
icust2_0_44 \device\harddisk37\partition1
cust_0_44 \device\harddisk37\partition2
stok_0_44 \device\harddisk37\partition3
stok_0_140 \device\harddisk37\partition4
ordr_0_44 \device\harddisk37\partition5
iordr2_0_44 \device\harddisk37\partition6
hist_0_19 \device\harddisk37\partition7
temp_0_44 \device\harddisk37\partition8
icust2_0_45 \device\harddisk38\partition1
cust_0_45 \device\harddisk38\partition2
NA-stok_0_45 \device\harddisk38\partition3
stok_0_141 \device\harddisk38\partition4
ordr_0_45 \device\harddisk38\partition5
iordr2_0_45 \device\harddisk38\partition6
hist_0_20 \device\harddisk38\partition7
temp_0_45 \device\harddisk38\partition8
icust2_0_46 \device\harddisk39\partition1
cust_0_46 \device\harddisk39\partition2
stok_0_18 \device\harddisk39\partition3
stok_0_142 \device\harddisk39\partition4
ordr_0_46 \device\harddisk39\partition5
iordr2_0_46 \device\harddisk39\partition6
hist_0_21 \device\harddisk39\partition7
temp_0_46 \device\harddisk39\partition8
icust2_0_47 \device\harddisk40\partition1
cust_0_47 \device\harddisk40\partition2
stok_0_17 \device\harddisk40\partition3
stok_0_143 \device\harddisk40\partition4
ordr_0_47 \device\harddisk40\partition5
iordr2_0_47 \device\harddisk40\partition6
hist_0_22 \device\harddisk40\partition7
temp_0_47 \device\harddisk40\partition8
icust2_0_48 \device\harddisk57\partition1
cust_0_48 \device\harddisk57\partition2
stok_0_48 \device\harddisk57\partition3
stok_0_144 \device\harddisk57\partition4
ordr_0_48 \device\harddisk57\partition5
iordr2_0_48 \device\harddisk57\partition6
hist_0_23 \device\harddisk57\partition7
temp_0_48 \device\harddisk57\partition8
icust2_0_49 \device\harddisk58\partition1
cust_0_49 \device\harddisk58\partition2
stok_0_49 \device\harddisk58\partition3
stok_0_145 \device\harddisk58\partition4
ordr_0_49 \device\harddisk58\partition5
iordr2_0_49 \device\harddisk58\partition6
extra_13 \device\harddisk58\partition7
temp_0_49 \device\harddisk58\partition8
icust2_0_50 \device\harddisk59\partition1
cust_0_50 \device\harddisk59\partition2

stok_0_50 \device\harddisk59\partition3
stok_0_146 \device\harddisk59\partition4
ordr_0_50 \device\harddisk59\partition5
iordr2_0_50 \device\harddisk59\partition6
istok_0_12 \device\harddisk59\partition7
temp_0_50 \device\harddisk59\partition8
icust2_0_51 \device\harddisk60\partition1
cust_0_51 \device\harddisk60\partition2
stok_0_51 \device\harddisk60\partition3
stok_0_147 \device\harddisk60\partition4
ordr_0_51 \device\harddisk60\partition5
iordr2_0_51 \device\harddisk60\partition6
extra_14 \device\harddisk60\partition7
temp_0_51 \device\harddisk60\partition8
icust2_0_52 \device\harddisk61\partition1
cust_0_52 \device\harddisk61\partition2
stok_0_52 \device\harddisk61\partition3
stok_0_148 \device\harddisk61\partition4
ordr_0_52 \device\harddisk61\partition5
iordr2_0_52 \device\harddisk61\partition6
istok_0_15 \device\harddisk61\partition7
temp_0_52 \device\harddisk61\partition8
icust2_0_53 \device\harddisk62\partition1
cust_0_53 \device\harddisk62\partition2
stok_0_53 \device\harddisk62\partition3
stok_0_149 \device\harddisk62\partition4
ordr_0_53 \device\harddisk62\partition5
iordr2_0_53 \device\harddisk62\partition6
extra_15 \device\harddisk62\partition7
temp_0_53 \device\harddisk62\partition8
icust2_0_54 \device\harddisk63\partition1
cust_0_54 \device\harddisk63\partition2
stok_0_54 \device\harddisk63\partition3
stok_0_150 \device\harddisk63\partition4
ordr_0_54 \device\harddisk63\partition5
iordr2_0_54 \device\harddisk63\partition6
istok_0_17 \device\harddisk63\partition7
temp_0_54 \device\harddisk63\partition8
icust2_0_55 \device\harddisk64\partition1
cust_0_55 \device\harddisk64\partition2
stok_0_55 \device\harddisk64\partition3
stok_0_151 \device\harddisk64\partition4
ordr_0_55 \device\harddisk64\partition5
iordr2_0_55 \device\harddisk64\partition6
extra_16 \device\harddisk64\partition7
temp_0_55 \device\harddisk64\partition8
icust2_0_56 \device\harddisk49\partition1
cust_0_56 \device\harddisk49\partition2
stok_0_56 \device\harddisk49\partition3
stok_0_152 \device\harddisk49\partition4
ordr_0_56 \device\harddisk49\partition5
iordr2_0_56 \device\harddisk49\partition6
istok_0_19 \device\harddisk49\partition7
temp_0_56 \device\harddisk49\partition8
icust2_0_57 \device\harddisk50\partition1
cust_0_57 \device\harddisk50\partition2
stok_0_57 \device\harddisk50\partition3
stok_0_153 \device\harddisk50\partition4
ordr_0_57 \device\harddisk50\partition5
iordr2_0_57 \device\harddisk50\partition6
extra_17 \device\harddisk50\partition7

temp_0_57 \device\harddisk50\partition8
 icust2_0_58 \device\harddisk51\partition1
 cust_0_58 \device\harddisk51\partition2
 stok_0_58 \device\harddisk51\partition3
 stok_0_164 \device\harddisk51\partition4
 ordr_0_58 \device\harddisk51\partition5
 iordr2_0_58 \device\harddisk51\partition6
 istok_0_21 \device\harddisk51\partition7
 temp_0_58 \device\harddisk51\partition8
 icust2_0_59 \device\harddisk52\partition1
 cust_0_59 \device\harddisk52\partition2
 stok_0_59 \device\harddisk52\partition3
 stok_0_155 \device\harddisk52\partition4
 ordr_0_59 \device\harddisk52\partition5
 iordr2_0_59 \device\harddisk52\partition6
 extra_18 \device\harddisk52\partition7
 temp_0_59 \device\harddisk52\partition8
 icust2_0_60 \device\harddisk53\partition1
 cust_0_60 \device\harddisk53\partition2
 stok_0_60 \device\harddisk53\partition3
 stok_0_156 \device\harddisk53\partition4
 ordr_0_60 \device\harddisk53\partition5
 iordr2_0_60 \device\harddisk53\partition6
 istok_0_23 \device\harddisk53\partition7
 temp_0_60 \device\harddisk53\partition8
 icust2_0_61 \device\harddisk54\partition1
 cust_0_61 \device\harddisk54\partition2
 stok_0_61 \device\harddisk54\partition3
 stok_0_157 \device\harddisk54\partition4
 ordr_0_61 \device\harddisk54\partition5
 iordr2_0_61 \device\harddisk54\partition6
 extra_19 \device\harddisk54\partition7
 temp_0_61 \device\harddisk54\partition8
 icust2_0_62 \device\harddisk55\partition1
 cust_0_62 \device\harddisk55\partition2
 stok_0_62 \device\harddisk55\partition3
 stok_0_158 \device\harddisk55\partition4
 ordr_0_62 \device\harddisk55\partition5
 iordr2_0_62 \device\harddisk55\partition6
 istok_0_13 \device\harddisk55\partition7
 temp_0_62 \device\harddisk55\partition8
 icust2_0_63 \device\harddisk56\partition1
 cust_0_63 \device\harddisk56\partition2
 stok_0_63 \device\harddisk56\partition3
 stok_0_159 \device\harddisk56\partition4
 ordr_0_63 \device\harddisk56\partition5
 iordr2_0_63 \device\harddisk56\partition6
 extra_20 \device\harddisk56\partition7
 temp_0_63 \device\harddisk56\partition8
 icust2_0_64 \device\harddisk73\partition1
 cust_0_64 \device\harddisk73\partition2
 stok_0_64 \device\harddisk73\partition3
 stok_0_160 \device\harddisk73\partition4
 ordr_0_64 \device\harddisk73\partition5
 iordr2_0_64 \device\harddisk73\partition6
 istok_0_14 \device\harddisk73\partition7
 temp_0_64 \device\harddisk73\partition8
 icust2_0_65 \device\harddisk74\partition1
 cust_0_65 \device\harddisk74\partition2
 stok_0_65 \device\harddisk74\partition3
 stok_0_161 \device\harddisk74\partition4

ordr_0_65 \device\harddisk74\partition5
 iordr2_0_65 \device\harddisk74\partition6
 extra_21 \device\harddisk74\partition7
 temp_0_65 \device\harddisk74\partition8
 icust2_0_66 \device\harddisk75\partition1
 cust_0_66 \device\harddisk75\partition2
 stok_0_66 \device\harddisk75\partition3
 NA-stok_0_162 \device\harddisk75\partition4
 ordr_0_66 \device\harddisk75\partition5
 iordr2_0_66 \device\harddisk75\partition6
 istok_0_16 \device\harddisk75\partition7
 temp_0_66 \device\harddisk75\partition8
 icust2_0_67 \device\harddisk76\partition1
 cust_0_67 \device\harddisk76\partition2
 stok_0_67 \device\harddisk76\partition3
 stok_0_121 \device\harddisk76\partition4
 ordr_0_67 \device\harddisk76\partition5
 iordr2_0_67 \device\harddisk76\partition6
 extra_22 \device\harddisk76\partition7
 temp_0_67 \device\harddisk76\partition8
 icust2_0_68 \device\harddisk77\partition1
 cust_0_68 \device\harddisk77\partition2
 stok_0_68 \device\harddisk77\partition3
 stok_0_154 \device\harddisk77\partition4
 ordr_0_68 \device\harddisk77\partition5
 iordr2_0_68 \device\harddisk77\partition6
 istok_0_18 \device\harddisk77\partition7
 temp_0_68 \device\harddisk77\partition8
 icust2_0_69 \device\harddisk78\partition1
 cust_0_69 \device\harddisk78\partition2
 stok_0_69 \device\harddisk78\partition3
 stok_0_165 \device\harddisk78\partition4
 ordr_0_69 \device\harddisk78\partition5
 iordr2_0_69 \device\harddisk78\partition6
 extra_23 \device\harddisk78\partition7
 temp_0_69 \device\harddisk78\partition8
 icust2_0_70 \device\harddisk79\partition1
 cust_0_70 \device\harddisk79\partition2
 stok_0_20 \device\harddisk79\partition3
 stok_0_166 \device\harddisk79\partition4
 ordr_0_70 \device\harddisk79\partition5
 iordr2_0_70 \device\harddisk79\partition6
 istok_0_20 \device\harddisk79\partition7
 temp_0_70 \device\harddisk79\partition8
 icust2_0_71 \device\harddisk80\partition1
 cust_0_71 \device\harddisk80\partition2
 stok_0_8 \device\harddisk80\partition3
 stok_0_167 \device\harddisk80\partition4
 ordr_0_71 \device\harddisk80\partition5
 iordr2_0_71 \device\harddisk80\partition6
 extra_24 \device\harddisk80\partition7
 temp_0_71 \device\harddisk80\partition8
 icust2_0_72 \device\harddisk65\partition1
 cust_0_72 \device\harddisk65\partition2
 stok_0_15 \device\harddisk65\partition3
 stok_0_168 \device\harddisk65\partition4
 ordr_0_72 \device\harddisk65\partition5
 iordr2_0_72 \device\harddisk65\partition6
 istok_0_22 \device\harddisk65\partition7
 temp_0_72 \device\harddisk65\partition8
 icust2_0_73 \device\harddisk66\partition1

cust_0_73 \device\harddisk66\partition2
 stok_0_73 \device\harddisk66\partition3
 stok_0_169 \device\harddisk66\partition4
 ordr_0_73 \device\harddisk66\partition5
 iordr2_0_73 \device\harddisk66\partition6
 extra_25 \device\harddisk66\partition7
 temp_0_73 \device\harddisk66\partition8
 icust2_0_74 \device\harddisk67\partition1
 cust_0_74 \device\harddisk67\partition2
 stok_0_74 \device\harddisk67\partition3
 stok_0_170 \device\harddisk67\partition4
 ordr_0_74 \device\harddisk67\partition5
 iordr2_0_74 \device\harddisk67\partition6
 istok_0_1 \device\harddisk67\partition7
 temp_0_74 \device\harddisk67\partition8
 icust2_0_75 \device\harddisk68\partition1
 cust_0_75 \device\harddisk68\partition2
 stok_0_75 \device\harddisk68\partition3
 stok_0_171 \device\harddisk68\partition4
 ordr_0_75 \device\harddisk68\partition5
 iordr2_0_75 \device\harddisk68\partition6
 extra_26 \device\harddisk68\partition7
 temp_0_75 \device\harddisk68\partition8
 icust2_0_76 \device\harddisk69\partition1
 cust_0_76 \device\harddisk69\partition2
 stok_0_76 \device\harddisk69\partition3
 stok_0_172 \device\harddisk69\partition4
 ordr_0_76 \device\harddisk69\partition5
 iordr2_0_76 \device\harddisk69\partition6
 istok_0_3 \device\harddisk69\partition7
 temp_0_76 \device\harddisk69\partition8
 icust2_0_77 \device\harddisk70\partition1
 cust_0_77 \device\harddisk70\partition2
 stok_0_77 \device\harddisk70\partition3
 stok_0_173 \device\harddisk70\partition4
 ordr_0_77 \device\harddisk70\partition5
 iordr2_0_77 \device\harddisk70\partition6
 extra_27 \device\harddisk70\partition7
 temp_0_77 \device\harddisk70\partition8
 icust2_0_78 \device\harddisk71\partition1
 cust_0_78 \device\harddisk71\partition2
 stok_0_78 \device\harddisk71\partition3
 stok_0_174 \device\harddisk71\partition4
 ordr_0_78 \device\harddisk71\partition5
 iordr2_0_78 \device\harddisk71\partition6
 istok_0_5 \device\harddisk71\partition7
 temp_0_78 \device\harddisk71\partition8
 icust2_0_79 \device\harddisk72\partition1
 cust_0_79 \device\harddisk72\partition2
 stok_0_79 \device\harddisk72\partition3
 stok_0_123 \device\harddisk72\partition4
 ordr_0_79 \device\harddisk72\partition5
 iordr2_0_79 \device\harddisk72\partition6
 extra_28 \device\harddisk72\partition7
 temp_0_79 \device\harddisk72\partition8
 icust2_0_80 \device\harddisk81\partition1
 cust_0_80 \device\harddisk81\partition2
 stok_0_80 \device\harddisk81\partition3
 stok_0_176 \device\harddisk81\partition4
 ordr_0_80 \device\harddisk81\partition5
 iordr2_0_80 \device\harddisk81\partition6

istok_0_7 \device\harddisk81\partition7
 temp_0_80 \device\harddisk81\partition8
 icust2_0_81 \device\harddisk82\partition1
 cust_0_81 \device\harddisk82\partition2
 stok_0_81 \device\harddisk82\partition3
 stok_0_177 \device\harddisk82\partition4
 ordr_0_81 \device\harddisk82\partition5
 iordr2_0_81 \device\harddisk82\partition6
 extra_29 \device\harddisk82\partition7
 temp_0_81 \device\harddisk82\partition8
 icust2_0_82 \device\harddisk83\partition1
 cust_0_82 \device\harddisk83\partition2
 stok_0_82 \device\harddisk83\partition3
 stok_0_178 \device\harddisk83\partition4
 ordr_0_82 \device\harddisk83\partition5
 iordr2_0_82 \device\harddisk83\partition6
 istok_0_9 \device\harddisk83\partition7
 temp_0_82 \device\harddisk83\partition8
 icust2_0_83 \device\harddisk84\partition1
 cust_0_83 \device\harddisk84\partition2
 stok_0_83 \device\harddisk84\partition3
 stok_0_179 \device\harddisk84\partition4
 ordr_0_83 \device\harddisk84\partition5
 iordr2_0_83 \device\harddisk84\partition6
 extra_30 \device\harddisk84\partition7
 temp_0_83 \device\harddisk84\partition8
 icust2_0_84 \device\harddisk85\partition1
 cust_0_84 \device\harddisk85\partition2
 stok_0_84 \device\harddisk85\partition3
 stok_0_180 \device\harddisk85\partition4
 ordr_0_84 \device\harddisk85\partition5
 iordr2_0_84 \device\harddisk85\partition6
 istok_0_11 \device\harddisk85\partition7
 temp_0_84 \device\harddisk85\partition8
 icust2_0_85 \device\harddisk86\partition1
 cust_0_85 \device\harddisk86\partition2
 stok_0_85 \device\harddisk86\partition3
 stok_0_181 \device\harddisk86\partition4
 ordr_0_85 \device\harddisk86\partition5
 iordr2_0_85 \device\harddisk86\partition6
 extra_31 \device\harddisk86\partition7
 temp_0_85 \device\harddisk86\partition8
 icust2_0_86 \device\harddisk87\partition1
 cust_0_86 \device\harddisk87\partition2
 stok_0_86 \device\harddisk87\partition3
 stok_0_182 \device\harddisk87\partition4
 ordr_0_86 \device\harddisk87\partition5
 iordr2_0_86 \device\harddisk87\partition6
 istok_0_6 \device\harddisk87\partition7
 temp_0_86 \device\harddisk87\partition8
 icust2_0_87 \device\harddisk88\partition1
 cust_0_87 \device\harddisk88\partition2
 stok_0_87 \device\harddisk88\partition3
 stok_0_183 \device\harddisk88\partition4
 ordr_0_87 \device\harddisk88\partition5
 iordr2_0_87 \device\harddisk88\partition6
 extra_32 \device\harddisk88\partition7
 temp_0_87 \device\harddisk88\partition8
 icust2_0_88 \device\harddisk89\partition1
 cust_0_88 \device\harddisk89\partition2
 stok_0_88 \device\harddisk89\partition3

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NA-stok_0_184 \device\harddisk89\partition4
ordr_0_88 \device\harddisk89\partition5
iordr2_0_88 \device\harddisk89\partition6
istok_0_8 \device\harddisk89\partition7
temp_0_88 \device\harddisk89\partition8
icust2_0_89 \device\harddisk90\partition1
cust_0_89 \device\harddisk90\partition2
stok_0_89 \device\harddisk90\partition3
NA-stok_0_185 \device\harddisk90\partition4
ordr_0_89 \device\harddisk90\partition5
iordr2_0_89 \device\harddisk90\partition6
extra_33 \device\harddisk90\partition7
temp_0_89 \device\harddisk90\partition8
icust2_0_90 \device\harddisk91\partition1
cust_0_90 \device\harddisk91\partition2
stok_0_90 \device\harddisk91\partition3
NA-stok_0_186 \device\harddisk91\partition4
ordr_0_90 \device\harddisk91\partition5
iordr2_0_90 \device\harddisk91\partition6
istok_0_10 \device\harddisk91\partition7
temp_0_90 \device\harddisk91\partition8
icust2_0_91 \device\harddisk92\partition1
cust_0_91 \device\harddisk92\partition2
stok_0_91 \device\harddisk92\partition3
stok_0_109 \device\harddisk92\partition4
ordr_0_91 \device\harddisk92\partition5
iordr2_0_91 \device\harddisk92\partition6
extra_34 \device\harddisk92\partition7
temp_0_91 \device\harddisk92\partition8
icust2_0_92 \device\harddisk93\partition1
cust_0_92 \device\harddisk93\partition2
stok_0_92 \device\harddisk93\partition3
stok_0_104 \device\harddisk93\partition4
ordr_0_92 \device\harddisk93\partition5
iordr2_0_92 \device\harddisk93\partition6
NA_system_001 \device\harddisk93\partition7
temp_0_92 \device\harddisk93\partition8
icust2_0_93 \device\harddisk94\partition1
cust_0_93 \device\harddisk94\partition2
stok_0_93 \device\harddisk94\partition3
stok_0_189 \device\harddisk94\partition4
ordr_0_93 \device\harddisk94\partition5
iordr2_0_93 \device\harddisk94\partition6
NA_control_001 \device\harddisk94\partition7
temp_0_93 \device\harddisk94\partition8
icust2_0_94 \device\harddisk95\partition1
cust_0_94 \device\harddisk95\partition2
stok_0_94 \device\harddisk95\partition3
stok_0_190 \device\harddisk95\partition4
ordr_0_94 \device\harddisk95\partition5
iordr2_0_94 \device\harddisk95\partition6
NA_control_002 \device\harddisk95\partition7
temp_0_94 \device\harddisk95\partition8
sp_0 \device\harddisk95\partition9
aucs.df \device\harddisk95\partition10
nord_0_1 \device\harddisk95\partition11
icust2_0_95 \device\harddisk96\partition1
cust_0_95 \device\harddisk96\partition2
stok_0_95 \device\harddisk96\partition3
stok_0_191 \device\harddisk96\partition4
ordr_0_95 \device\harddisk96\partition5

```

```

iordr2_0_95 \device\harddisk96\partition6
NA_aux.df \device\harddisk96\partition7
temp_0_95 \device\harddisk96\partition8
system_001 \device\harddisk96\partition9
control_001 \device\harddisk96\partition10
control_002 \device\harddisk96\partition11
roll1 \device\harddisk96\partition12
stok_0_33 \device\harddisk97\partition1
stok_0_10 \device\harddisk97\partition2
stok_0_12 \device\harddisk97\partition3
stok_0_162 \device\harddisk97\partition4
stok_0_6 \device\harddisk97\partition5
stok_0_5 \device\harddisk97\partition6
stok_0_45 \device\harddisk97\partition7
stok_0_46 \device\harddisk98\partition1
nord_0_0 \device\harddisk98\partition2
stok_0_4 \device\harddisk98\partition3
stok_0_11 \device\harddisk98\partition4
stok_0_186 \device\harddisk98\partition5
stok_0_184 \device\harddisk98\partition6
stok_0_185 \device\harddisk98\partition7
stok_0_27 \device\harddisk98\partition8
log_1_1 \device\harddisk99\partition1
log_1_3 \device\harddisk99\partition2
log_1_2 \device\harddisk100\partition1
log_1_4 \device\harddisk100\partition2

```

DDVIEW.SH

```

#!/bin/sh

$tpcc_sqlplus $tpcc_sqlplus_args << !
$tpcc_internal_connect

spool ddview.log

REM
REM In an ade/nde view we might need to run standard.sql and dbmsstdx
manually
REM catalog and catproc suppose to take care of it
REM

@$ORACLE_HOME/plsql/admin/standard
@$ORACLE_HOME/rdbms/admin/dbmsstdx

@$ORACLE_HOME/rdbms/admin/catalog
@$ORACLE_HOME/rdbms/admin/catproc

REM
REM In an ade/nde view we might need to run pupbld manually
REM catalog and catproc suppose to take care of it
REM

connect system/manager
REM @$ORACLE_HOME/sqlplus/admin/pupbld

REM

```

```

REM Oracle
REM

REM if test $NUMBER_ORACLE_NODE -gt 1
REM then

REM @$ORACLE_HOME/rdbms/admin/catparr

REM fi

spool off
!

#sh $tpcc_scripts/queue.sh

```

DML.SQL

```

REM=====+
REM      Copyright (c) 1996 Oracle Corp, Redwood Shores, CA
REM      OPEN SYSTEMS PERFORMANCE GROUP
REM      All Rights Reserved
REM=====+
REM FILENAME
REM      dml.sql
REM DESCRIPTION
REM      Disable table locks for TPC-C tables.
REM USAGE
REM      sqlplus tpcc/tpcc dml.sql
REM=====+

# connect tpcc/tpcc;
set echo on;

alter table ware disable table lock;
alter table dist disable table lock;
alter table cust disable table lock;
alter table hist disable table lock;
alter table item disable table lock;
alter table stok disable table lock;
alter table ordr disable table lock;
alter table nord disable table lock;
alter table ordl disable table lock;

set echo off;

connect $oracle_dba/$oracle_dba_password;

```

DRIVER.SH

```

#!/bin/sh

. ./stepenv.sh

if expr $# \< 1 > /dev/null; then
echo "$0 <starting stepname> <optional: only>"
echo OR use:

```

```

echo "$0 buildcreate - to build the database creation scripts"
echo "$0 create      - to create the database (after buildcreate)"
echo "$0 steps       - to list individual steps"
exit 1
fi

if expr x$1 = xsteps > /dev/null; then
echo stepnames are from creation scripts: $tpcc_create_steps
echo
echo or running steps: $tpcc_steps
echo "use the 'only' option to only do that step (otherwise all steps
after will also be executed.)"
echo " (e.g. $0 listfiles only)"
echo "use the 'through' option to do a sequence of steps (inclusively.)"
echo " (e.g. $0 shutdowndb through startupdb-p_build)"
exit 1
fi

startstep=$1
controlcmd=$2
endstep=$3

# Aliases for special steps
if test $startstep = buildcreate; then
startstep=`echo $tpcc_create_steps | cut -d' ' -f1`
fi

if test $startstep = create; then
startstep=`echo $tpcc_steps | cut -d' ' -f1`
fi

if test "x$controlcmd" = x; then
endstep=
# Since endstep is null it won't match any other steps, so we keep
going.
elif test "x$controlcmd" = xonly; then
controlcmd=only
# this is allowed
elif test "x$controlcmd" = xthrough; then
actualstep=f
for step in $tpcc_create_steps $tpcc_steps ; do
if test "x$step" = "x$endstep"; then
actualstep=t
fi
done
if test $actualstep = f; then
echo "Invalid step $endstep. Use $0 steps to show steps."
exit 1
fi
else
echo "Invalid syntax. Use $0 by itself for help."
exit 1
fi

echo Starting from step: $startstep

dostep=f
for step in $tpcc_create_steps $tpcc_steps ; do
if expr $step = $startstep > /dev/null; then
dostep=t
fi

```

```

if expr $dostep = t > /dev/null; then
  echo $step
  cd $tpcc_bench
  $tpcc_scripts/`echo $step | cut -d- -f1`.sh `echo $step | sed -e's/-
*$/-/' | cut -d- -f2- | sed -e's/-/ /g`\`
  lasterror=$?
  cd $tpcc_bench
  if test -n "`find $tpcc_bench/scripts -name '*.log'`; then
    mv -f *.log `find $tpcc_bench/scripts -name '*.log'\`
$tpcc_bench/log/
  else
    mv -f *.log $tpcc_bench/log/
  fi

  if expr $lasterror != 0 > /dev/null; then
    if expr $lasterror != 99 > /dev/null; then
      echo Step $step failed. Stopping driver.
      exit 1
    else
      echo Step $step has completed and requested stop. Stopping
driver.
      exit 0
    fi
  fi
  if test "x$controlcmd" = xonly; then
    exit 0
  fi
  if test "x$endstep" = "x$step"; then
    echo The driver reached the last desired step. Stopping driver.
    exit 0
  fi
fi
done

if expr $dostep = f > /dev/null; then
  echo No such step: $1
fi

```

ESTSIZE.SH

```

#!/bin/sh
# round down closest k or m from number of kilobytes.

# fairly small, doesn't really matter
amount=$1
if $tpcc_isneg ` $tpcc_bcexpr $amount - 10000 `; then
  echo ${amount}K
  exit 0;
fi;

# convert to megs, then trunc to nearest 100
amount=` $tpcc_bcexpr \(` $amount + 1023 \) / 1024 `
amount=` $tpcc_bcexpr \(` $amount + 9 \) / 10 `
amount=` $tpcc_bcexpr $amount \* 10 `

echo ${amount}M
exit 0;

```

EVENLOAD.SH

```

#!/bin/sh
#evenly load using tpcc load, following parameters:
#$1 name of the table to load- this is used to choose where to log.
#$2 the number of things to load
#$3 the starting flag (usually b or j)
#$4 the ending flag (usually e or k)
#$5 the flag to load (h for history , c for cust, S for stock, etc.
#$6 if true, add dummy (only used for -o so far.)
#$7 the command to be used, if not $tpcc_load

command=$7
if test -z "$command"; then
command='$tpcc_load'
fi

tablename=$1
# write out to file to load later
if expr "x$tpcc_rac_load" = "xt" > /dev/null ; then
  loadout=$tpcc_genscripts_dir/load${tablename}_node${tpcc_rac_node}.sh
else
  loadout=$tpcc_genscripts_dir/load${tablename}.sh
fi
rm -f ${loadout}
echo \#created automatically by $0 `date` > $loadout
echo "rm -f load${tablename}.log" >> $loadout
echo 'cd $tpcc_bench' >> $loadout

numloaders=` $tpcc_bcexpr 2 \* $tpcc_cpu `

if expr "x$tpcc_rac_load" = "xt" > /dev/null ; then
  numloaders=` $tpcc_bcexpr $tpcc_np \* $tpcc_cpu \* 2 `
fi

if expr $numloaders \> $2 > /dev/null; then
  numloaders=$2
fi

  numloaders=` $tpcc_bcexpr $tpcc_np \* $tpcc_cpu \* 2 `

echo "allprocs=" >> $loadout
curstuff=1
stuffextra=`expr $2 \% $numloaders`
stuffinc=`expr $2 / $numloaders`
curloader=0

if expr "x$tpcc_rac_load" = "xt" > /dev/null ; then
  warepernode=` $tpcc_bcexpr $2 / $tpcc_np `
  procpnode=` $tpcc_bcexpr $tpcc_cpu \* 2 `
  curstuff=` $tpcc_bcexpr $warepernode \* \(` $tpcc_rac_node - 1 \) + 1 `
  stuffinc=`expr $warepernode / $procpnode`
  stuffextra=`expr $warepernode \% $procpnode`
  curloader=` $tpcc_bcexpr $procpnode \* \(` $tpcc_rac_node - 1 \) + 1 `
  endloader=` $tpcc_bcexpr $procpnode \* $tpcc_rac_node + 1 `

  while expr $curloader \< $endloader > /dev/null ; do

    newstuff=`expr $curstuff + $stuffinc + \(` $stuffextra / $procpnode
\)`

```

```

if expr x$6 = xt > /dev/null; then
  if expr $tpcc_os = unix > /dev/null; then
    adddummy=\${tpcc_disks_location}dummy${curloader}.dat
  else
    # is this what we actually want to do? check nt stuff
    adddummy=\\\\\\\\.\\\\\\dummy${curloader}.dat
  fi
else
  adddummy=
fi
echo "$command -M $tpcc_scale -$5 $adddummy -$3 $curstuff -$4 `expr
$newstuff - 1` >> load${tablename}${curloader}.log 2>&1 &" >> $loadout
echo 'allprocs="$allprocs ${!}"' >> $loadout

curstuff=$newstuff
stuffextra=`expr $stuffextra + 1`
curloader=`expr 1 + $curloader`
done

else
while expr $curloader \< $numloaders > /dev/null; do
  newstuff=`expr $curstuff + $stuffinc + \( $stuffextra / $numloaders
\)`
  if expr x$6 = xt > /dev/null; then
    if expr $tpcc_os = unix > /dev/null; then
      adddummy=\${tpcc_disks_location}dummy${curloader}.dat
    else
      # is this what we actually want to do? check nt stuff
      adddummy=\\\\\\\\.\\\\\\dummy${curloader}.dat
    fi
  else
    adddummy=
  fi
  echo "$command -M $tpcc_scale -$5 $adddummy -$3 $curstuff -$4 `expr
$newstuff - 1` >> load${tablename}${curloader}.log 2>&1 &" >> $loadout
  echo 'allprocs="$allprocs ${!}"' >> $loadout
  curstuff=$newstuff

  stuffextra=`expr $stuffextra + 1`
  curloader=`expr 1 + $curloader`
done
fi

cat >> $loadout <<!
error=0
for curproc in \${allprocs}; do
  wait \${curproc}
  error=`expr \${?} + \${error}`
done
exit `expr \${error} != 0`
!

exit 0

```

EXTENT.SQL

REM Copyright (c) 1994 Oracle Corp, Belmont, CA

```

REM OPEN SYSTEMS PERFORMANCE GROUP
REM All Rights Reserved
REM=====
REM FILENAME
REM extent.sql
REM DESCRIPTION
REM List all extents in all the TPCC tablespaces.
REM
REM Usage: sqlplus 'sys/change_on_install as sysdba' @extent
REM=====*/
set space 2
set pagesize 2000
set echo off
set termout off
set verify off
set feedback off
spool extent.rpt
select substr(e.tablespace_name,1,8) tspace,
  substr(segment_name,1,11) segment, substr(segment_type,1,15) type,
  substr(extent_id,1,5) eid, substr(file_id,1,5) fid, blocks,
  blocks * t.block_size / 1048576 size_MB
from dba_extents e, dba_tablespaces t
where owner = 'TPCC' AND ( segment_type = 'INDEX' OR
  segment_type = 'INDEX PARTITION' OR segment_type = 'CLUSTER'
  OR segment_type = 'TABLE' OR segment_type = 'TABLE PARTITION')
  AND e.tablespace_name <> 'SYSTEM'
  AND e.tablespace_name = t.tablespace_name
order by e.tablespace_name, segment_name, extent_id, file_id;

select substr(e.tablespace_name,1,8) tspace,
  substr(segment_name,1,11) segment,
  sum(blocks) tot_blk, sum(blocks) * t.block_size / 1048576 size_MB
from dba_extents e, dba_tablespaces t
where owner = 'TPCC' AND ( segment_type = 'INDEX' OR
  segment_type = 'INDEX PARTITION' OR segment_type = 'CLUSTER'
  OR segment_type = 'TABLE' OR segment_type = 'TABLE PARTITION')
  AND e.tablespace_name <> 'SYSTEM'
  AND e.tablespace_name = t.tablespace_name
group by e.tablespace_name, segment_name, t.block_size
order by e.tablespace_name, segment_name;
spool off;

```

EXTRACTCOLS.SH

```

#!/bin/sh

extractcols(){
  table=$1
  tablecols=`tp $table cols`

  lines=`echo "$tablecols" | sed -e's/^ *//'| cut -d'-' -f1 |\
  sed -e's/\(.*\)"/\1"/, /'| tr -s '\n' ' ' `
  echo "tablecols['${table}'] = [${lines} | sed -e's/, $/;/'"
}

defaultcols(){
  table=$1
  tableinds=`tp $table indices`

```

```

indarr=`echo "$tableinds" | sed -e's/\([0-9][0-9]*\)/\1,/g'`
echo "tableinds['${table}'] = [${indarr};" | sed -e's/--/g' | sed -
e's/,/]//' | sed -e's/\[no\]/[]/g'
}

. ../stepenv.sh
. $tpcc_scripts/taledata.sh
for table in $tpcc_table_list; do
    extractcols $table
done

for table in $tpcc_table_list $tpcc_index_list; do
    defaultcols $table

```

FREEEXT.SQL

```

REM=====+
REM          Copyright (c) 1994 Oracle Corp, Belmont, CA
REM          OPEN SYSTEMS PERFORMANCE GROUP
REM          All Rights Reserved
REM=====+
REM FILENAME
REM     freeext.sql
REM DESCRIPTION
REM     List all free extents in all the TPCC tablespace
REM
REM Usage: sqlplus 'sys/change_on_install as sysdba' @freeext
REM=====*/
    set space 2
    set pagesize 2000
    set echo off
    set termout off
    set verify off
    set feedback off
    spool freeextent.rpt
    select substr(e.tablespace_name,1,8) tspace, file_id, block_id,
blocks,
        blocks * t.block_size / 1048576 size_MB
    from dba_free_space e, dba_tablespaces t
    where e.tablespace_name = t.tablespace_name
    order by e.tablespace_name, file_id, block_id;

    select substr(e.tablespace_name,1,8) tspace, sum(blocks) tot_blk,
        sum(blocks) * t.block_size / 1048576 size_MB
    from dba_free_space e, dba_tablespaces t
    where e.tablespace_name = t.tablespace_name
    group by e.tablespace_name, t.block_size
    order by e.tablespace_name;

```

FROMKILOBYTES.SH

```

#!/bin/sh
# round up to k, m, g, t from number of kilobytes.

```

```

amount=$1
if $tpcc_isneg ` $tpcc_bcexpr $amount - 1024 `; then
    echo ${amount}K
    exit 0;
fi;
amount=` $tpcc_bcexpr \( $amount + 1023 \) / 1024 `
if $tpcc_isneg ` $tpcc_bcexpr $amount - 1024 `; then
    echo ${amount}M
    exit 0;
fi;
amount=` $tpcc_bcexpr \( $amount + 1023 \) / 1024 `
echo ${amount}G

```

ISNEG.SH

```

#!/bin/sh
# exit true if negative, else false

if test ` $tpcc_bcexpr "$*" | cut -b1 ` = -; then
    exit 0
else
    exit 1
fi

```

ICM.SH

```

#!/bin/sh
# echo the lcm of two numbers

if expr $2 \> $1 > /dev/null; then
    set $2 $1
# now $1 is guaranteed to be bigger
fi

lcm=$1
while expr \( \( $lcm % $1 \) + \( $lcm % $2 \) \) \> 0 > /dev/null; do
    lcm=`expr $lcm + $1`
done

echo $lcm

```

LISTFILES.SH

```

#!/bin/sh
# Write out tablespace files to files.dat so the person in
# charge of the test can relink them.

#automatically export
set -a
tpcc_listfiles=t

rm -f $tpcc_bench/files.dat
cd $tpcc_bench

```

```

echo "#generated automatically by files.dat `date`" >>
$tpcc_bench/files.dat
$tpcc_scripts/runscript.sh createts
cat >> $tpcc_bench/files.dat <<!
${tpcc_disks_location}aux.df $tpcc_sysaux_size
${tpcc_disks_location}control_001 25M
${tpcc_disks_location}control_002 25M
${tpcc_disks_location}sp_0 $tpcc_statspack_size
!

i=1
while test $i -le $tpcc_np; do
  cat >> $tpcc_bench/files.dat <<!
  ${tpcc_disks_location}log_${i}_1 $tpcc_logfile_size
  ${tpcc_disks_location}log_${i}_2 $tpcc_logfile_size
  !
  i=`expr $i + 1`;
done

i=1
while test $i -le $tpcc_np; do
  cat >> $tpcc_bench/files.dat <<!
  ${tpcc_disks_location}system_${i} $tpcc_system_size
  !
  i=`expr $i + 1`;
done

i=1
while test $i -le $tpcc_np; do
  cat >> $tpcc_bench/files.dat <<!
  ${tpcc_disks_location}roll${i} $tpcc_undo_size
  !
  i=`expr $i + 1`;
done

tpcc_listfiles=f
#automatic export off
set +a

echo List of files written to $tpcc_bench/files.dat.  Stopping driver.

exit 99

```

LOADCUST.SH

```

#created automatically by
/home/roagrawa/unisys/24000wh/scripts/evenload.sh Mon Aug 4 16:13:46 PDT
2003
rm -f loadcust*.log
cd $tpcc_bench
allprocs=
$tpcc_load -M 24000 -c -b 1 -e 2000 >> loadcust0.log 2>&1 &
allprocs="$allprocs ${!}"
$tpcc_load -M 24000 -c -b 2001 -e 4000 >> loadcust1.log 2>&1 &
allprocs="$allprocs ${!}"
$tpcc_load -M 24000 -c -b 4001 -e 6000 >> loadcust2.log 2>&1 &
allprocs="$allprocs ${!}"
$tpcc_load -M 24000 -c -b 6001 -e 8000 >> loadcust3.log 2>&1 &

```

```

allprocs="$allprocs ${!}"
$tpcc_load -M 24000 -c -b 8001 -e 10000 >> loadcust4.log 2>&1 &
allprocs="$allprocs ${!}"
$tpcc_load -M 24000 -c -b 10001 -e 12000 >> loadcust5.log 2>&1 &
allprocs="$allprocs ${!}"
$tpcc_load -M 24000 -c -b 12001 -e 14000 >> loadcust6.log 2>&1 &
allprocs="$allprocs ${!}"
$tpcc_load -M 24000 -c -b 14001 -e 16000 >> loadcust7.log 2>&1 &
allprocs="$allprocs ${!}"
$tpcc_load -M 24000 -c -b 16001 -e 18000 >> loadcust8.log 2>&1 &
allprocs="$allprocs ${!}"
$tpcc_load -M 24000 -c -b 18001 -e 20000 >> loadcust9.log 2>&1 &
allprocs="$allprocs ${!}"
$tpcc_load -M 24000 -c -b 20001 -e 22000 >> loadcust10.log 2>&1 &
allprocs="$allprocs ${!}"
$tpcc_load -M 24000 -c -b 22001 -e 24000 >> loadcust11.log 2>&1 &
allprocs="$allprocs ${!}"
error=0
for curproc in $allprocs; do
  wait $curproc
  error=`expr $? + $error`
done
exit `expr $error != 0`

```

LOADDIST.SH

```

cd $tpcc_bench
$tpcc_load -M $tpcc_scale -d > loaddist.log 2>&1

```

LOADFIXORDRORDL.SH

```

#created automatically by
/home/roagrawa/unisys/24000wh/scripts/evenload.sh Mon Aug 4 16:13:49 PDT
2003
rm -f loadfixordrordl*.log
cd $tpcc_bench
allprocs=
$tpcc_updateordrordl -M 24000 -o -b 389 -e 2000 >> loadfixordrordl0_b.log
2>&1 &
allprocs="$allprocs ${!}"
$tpcc_updateordrordl -M 24000 -o -b 2371 -e 4000 >>
loadfixordrordl1_b.log 2>&1 &
allprocs="$allprocs ${!}"
$tpcc_updateordrordl -M 24000 -o -b 4371 -e 6000 >>
loadfixordrordl2_b.log 2>&1 &
allprocs="$allprocs ${!}"
$tpcc_updateordrordl -M 24000 -o -b 6371 -e 8000 >>
loadfixordrordl3_b.log 2>&1 &
allprocs="$allprocs ${!}"
$tpcc_updateordrordl -M 24000 -o -b 8371 -e 10000 >>
loadfixordrordl4_b.log 2>&1 &
allprocs="$allprocs ${!}"
$tpcc_updateordrordl -M 24000 -o -b 10356 -e 12000 >>
loadfixordrordl5_b.log 2>&1 &
allprocs="$allprocs ${!}"
$tpcc_updateordrordl -M 24000 -o -b 12356 -e 14000 >>
loadfixordrordl6_b.log 2>&1 &

```

```

allprocs="$allprocs ${!}"
$tpcc_updateordrordl -M 24000 -o -b 14356 -e 16000 >>
loadfixordrordl7_b.log 2>&1 &
allprocs="$allprocs ${!}"
$tpcc_updateordrordl -M 24000 -o -b 16356 -e 18000 >>
loadfixordrordl8_b.log 2>&1 &
allprocs="$allprocs ${!}"
$tpcc_updateordrordl -M 24000 -o -b 18356 -e 20000 >>
loadfixordrordl9_b.log 2>&1 &
allprocs="$allprocs ${!}"
$tpcc_updateordrordl -M 24000 -o -b 20356 -e 22000 >>
loadfixordrordl10_b.log 2>&1 &
allprocs="$allprocs ${!}"
$tpcc_updateordrordl -M 24000 -o -b 22356 -e 24000 >>
loadfixordrordl11_b.log 2>&1 &
allprocs="$allprocs ${!}"
error=0
for curproc in $allprocs; do
    wait $curproc
    error=`expr $? + $error`
done
exit `expr $error != 0`

```

LOADHIST.SH

```

#created automatically by
/home/roagrawa/unisys/24000wh/scripts/evenload.sh Mon Aug 4 16:13:41 PDT
2003
rm -f loadhist*.log
cd $tpcc_bench
allprocs=
$tpcc_load -M 24000 -h -b 1 -e 2000 >> loadhist0.log 2>&1 &
allprocs="$allprocs ${!}"
$tpcc_load -M 24000 -h -b 2001 -e 4000 >> loadhist1.log 2>&1 &
allprocs="$allprocs ${!}"
$tpcc_load -M 24000 -h -b 4001 -e 6000 >> loadhist2.log 2>&1 &
allprocs="$allprocs ${!}"
$tpcc_load -M 24000 -h -b 6001 -e 8000 >> loadhist3.log 2>&1 &
allprocs="$allprocs ${!}"
$tpcc_load -M 24000 -h -b 8001 -e 10000 >> loadhist4.log 2>&1 &
allprocs="$allprocs ${!}"
$tpcc_load -M 24000 -h -b 10001 -e 12000 >> loadhist5.log 2>&1 &
allprocs="$allprocs ${!}"
$tpcc_load -M 24000 -h -b 12001 -e 14000 >> loadhist6.log 2>&1 &
allprocs="$allprocs ${!}"
$tpcc_load -M 24000 -h -b 14001 -e 16000 >> loadhist7.log 2>&1 &
allprocs="$allprocs ${!}"
$tpcc_load -M 24000 -h -b 16001 -e 18000 >> loadhist8.log 2>&1 &
allprocs="$allprocs ${!}"
$tpcc_load -M 24000 -h -b 18001 -e 20000 >> loadhist9.log 2>&1 &
allprocs="$allprocs ${!}"
$tpcc_load -M 24000 -h -b 20001 -e 22000 >> loadhist10.log 2>&1 &
allprocs="$allprocs ${!}"
$tpcc_load -M 24000 -h -b 22001 -e 24000 >> loadhist11.log 2>&1 &
allprocs="$allprocs ${!}"
error=0
for curproc in $allprocs; do
    wait $curproc
    error=`expr $? + $error`
done

```

```

done
exit `expr $error != 0`

```

LOADITEM.SH

```

cd $tpcc_bench
$tpcc_load -M $tpcc_scale -i > loaditem.log 2>&1

```

LOADNORD.SH

```

#created automatically by
/home/roagrawa/unisys/24000wh/scripts/evenload.sh Mon Aug 4 16:13:42 PDT
2003
rm -f loadnord*.log
cd $tpcc_bench
allprocs=
$tpcc_load -M 24000 -n -b 1 -e 2000 >> loadnord0.log 2>&1 &
allprocs="$allprocs ${!}"
$tpcc_load -M 24000 -n -b 2001 -e 4000 >> loadnord1.log 2>&1 &
allprocs="$allprocs ${!}"
$tpcc_load -M 24000 -n -b 4001 -e 6000 >> loadnord2.log 2>&1 &
allprocs="$allprocs ${!}"
$tpcc_load -M 24000 -n -b 6001 -e 8000 >> loadnord3.log 2>&1 &
allprocs="$allprocs ${!}"
$tpcc_load -M 24000 -n -b 8001 -e 10000 >> loadnord4.log 2>&1 &
allprocs="$allprocs ${!}"
$tpcc_load -M 24000 -n -b 10001 -e 12000 >> loadnord5.log 2>&1 &
allprocs="$allprocs ${!}"
$tpcc_load -M 24000 -n -b 12001 -e 14000 >> loadnord6.log 2>&1 &
allprocs="$allprocs ${!}"
$tpcc_load -M 24000 -n -b 14001 -e 16000 >> loadnord7.log 2>&1 &
allprocs="$allprocs ${!}"
$tpcc_load -M 24000 -n -b 16001 -e 18000 >> loadnord8.log 2>&1 &
allprocs="$allprocs ${!}"
$tpcc_load -M 24000 -n -b 18001 -e 20000 >> loadnord9.log 2>&1 &
allprocs="$allprocs ${!}"
$tpcc_load -M 24000 -n -b 20001 -e 22000 >> loadnord10.log 2>&1 &
allprocs="$allprocs ${!}"
$tpcc_load -M 24000 -n -b 22001 -e 24000 >> loadnord11.log 2>&1 &
allprocs="$allprocs ${!}"
error=0
for curproc in $allprocs; do
    wait $curproc
    error=`expr $? + $error`
done
exit `expr $error != 0`

```

LOADORDRORDL.SH

```

#created automatically by
/home/roagrawa/unisys/24000wh/scripts/evenload.sh Mon Aug 4 16:13:44 PDT
2003
rm -f loadordrordl*.log
cd $tpcc_bench
allprocs=

```



```

$tpcc_load -M 24000 -o \\.\dummy0.dat -b 1 -e 1500 >> loadordrordl0.log
2>&1 &
allprocs="$allprocs ${!}"
$tpcc_load -M 24000 -o \\.\dummy1.dat -b 1501 -e 3000 >> loadordrordl1.log
2>&1 &
allprocs="$allprocs ${!}"
$tpcc_load -M 24000 -o \\.\dummy2.dat -b 3001 -e 4500 >> loadordrordl2.log
2>&1 &
allprocs="$allprocs ${!}"
$tpcc_load -M 24000 -o \\.\dummy3.dat -b 4501 -e 6000 >> loadordrordl3.log
2>&1 &
allprocs="$allprocs ${!}"
$tpcc_load -M 24000 -o \\.\dummy4.dat -b 6001 -e 7500 >> loadordrordl4.log
2>&1 &
allprocs="$allprocs ${!}"
$tpcc_load -M 24000 -o \\.\dummy5.dat -b 7501 -e 9000 >> loadordrordl5.log
2>&1 &
allprocs="$allprocs ${!}"
$tpcc_load -M 24000 -o \\.\dummy6.dat -b 9001 -e 10500 >>
loadordrordl6.log 2>&1 &
allprocs="$allprocs ${!}"
$tpcc_load -M 24000 -o \\.\dummy7.dat -b 10501 -e 12000 >>
loadordrordl7.log 2>&1 &
allprocs="$allprocs ${!}"
$tpcc_load -M 24000 -o \\.\dummy8.dat -b 12001 -e 13500 >>
loadordrordl8.log 2>&1 &
allprocs="$allprocs ${!}"
$tpcc_load -M 24000 -o \\.\dummy9.dat -b 13501 -e 15000 >>
loadordrordl9.log 2>&1 &
allprocs="$allprocs ${!}"
$tpcc_load -M 24000 -o \\.\dummy10.dat -b 15001 -e 16500 >>
loadordrordl10.log 2>&1 &
allprocs="$allprocs ${!}"
$tpcc_load -M 24000 -o \\.\dummy11.dat -b 16501 -e 18000 >>
loadordrordl11.log 2>&1 &
allprocs="$allprocs ${!}"
$tpcc_load -M 24000 -o \\.\dummy12.dat -b 18001 -e 19500 >>
loadordrordl12.log 2>&1 &
allprocs="$allprocs ${!}"
$tpcc_load -M 24000 -o \\.\dummy13.dat -b 19501 -e 21000 >>
loadordrordl13.log 2>&1 &
allprocs="$allprocs ${!}"
$tpcc_load -M 24000 -o \\.\dummy14.dat -b 21001 -e 22500 >>
loadordrordl14.log 2>&1 &
allprocs="$allprocs ${!}"
$tpcc_load -M 24000 -o \\.\dummy15.dat -b 22501 -e 24000 >>
loadordrordl15.log 2>&1 &
allprocs="$allprocs ${!}"
error=0
for curproc in $allprocs; do
    wait $curproc
    error=`expr $? + $error`
done
exit `expr $error != 0`

```

LOADSTOK.SH

```

#created automatically by
/home/roagrawa/unisys/24000wh/scripts/evenload.sh Mon Aug 4 16:13:47 PDT
2003
rm -f loadstok*.log
cd $tpcc_bench
allprocs=
$tpcc_load -M 24000 -S -j 1 -k 6250 >> loadstok0.log 2>&1 &
allprocs="$allprocs ${!}"
$tpcc_load -M 24000 -S -j 6251 -k 12500 >> loadstok1.log 2>&1 &
allprocs="$allprocs ${!}"
$tpcc_load -M 24000 -S -j 12501 -k 18750 >> loadstok2.log 2>&1 &
allprocs="$allprocs ${!}"
$tpcc_load -M 24000 -S -j 18751 -k 25000 >> loadstok3.log 2>&1 &
allprocs="$allprocs ${!}"
$tpcc_load -M 24000 -S -j 25001 -k 31250 >> loadstok4.log 2>&1 &
allprocs="$allprocs ${!}"
$tpcc_load -M 24000 -S -j 31251 -k 37500 >> loadstok5.log 2>&1 &
allprocs="$allprocs ${!}"
$tpcc_load -M 24000 -S -j 37501 -k 43750 >> loadstok6.log 2>&1 &
allprocs="$allprocs ${!}"
$tpcc_load -M 24000 -S -j 43751 -k 50000 >> loadstok7.log 2>&1 &
allprocs="$allprocs ${!}"
$tpcc_load -M 24000 -S -j 50001 -k 56250 >> loadstok8.log 2>&1 &
allprocs="$allprocs ${!}"
$tpcc_load -M 24000 -S -j 56251 -k 62500 >> loadstok9.log 2>&1 &
allprocs="$allprocs ${!}"
$tpcc_load -M 24000 -S -j 62501 -k 68750 >> loadstok10.log 2>&1 &
allprocs="$allprocs ${!}"
$tpcc_load -M 24000 -S -j 68751 -k 75000 >> loadstok11.log 2>&1 &
allprocs="$allprocs ${!}"
$tpcc_load -M 24000 -S -j 75001 -k 81250 >> loadstok12.log 2>&1 &
allprocs="$allprocs ${!}"
$tpcc_load -M 24000 -S -j 81251 -k 87500 >> loadstok13.log 2>&1 &
allprocs="$allprocs ${!}"
$tpcc_load -M 24000 -S -j 87501 -k 93750 >> loadstok14.log 2>&1 &
allprocs="$allprocs ${!}"
$tpcc_load -M 24000 -S -j 93751 -k 100000 >> loadstok15.log 2>&1 &
allprocs="$allprocs ${!}"
error=0
for curproc in $allprocs; do
    wait $curproc
    error=`expr $? + $error`
done
exit `expr $error != 0`

```

LOADWARE.SH

```

cd $tpcc_bench
$tpcc_load -M $tpcc_scale -w > loadware.log 2>&1

```

LOCALOPTIONS.SH

```

#LOCAL OPTION FILE- You must fill these in
# before the driver will work.

```

```

#oracle sid to use for the run
ORACLE_SID=tpcc

#folder location of the database files (or links to raw partitions)
#tpcc_disks_location=/location/of/db/files

#FOR NT
tpcc_disks_location=\\\\.\\

#FOR RAC

#node id
#tpcc_rac_id=1

# How many createts_node*.sh will be run in this node, started from
tpcc_rac_id
# eq. if tpcc_rac_id is 3 and tpcc_rac_createts_count is 2
# createts_node3.sh and createts_node4.sh will be executed

#tpcc_rac_createts_count=1

#locations of various files used in the generation scripts.
#(you can usually leave these alone.)
tpcc_sql_dir=${tpcc_bench}/scripts/sql
tpcc_log_dir=${tpcc_bench}/log
tpcc_genscripts_dir=${tpcc_bench}/scripts/generated

#Once you have filled all the options, comment
#out or delete this line.
#tpcc_no_options=t

```

NOTNEG.SH

```

#!/bin/sh
# echo the first and second params provided $2 is greater than -1.

if expr $2 \> -1 > /dev/null; then
    echo $1 $2
else
    echo
fi

```

OPTIONS.SH

```

tpcc_os='nt'
tpcc_version='ttt'
tpcc_ldrive='96'
tpcc_scale='24000'
tpcc_np='1'
tpcc_cpu='16'

```

```

tpcc_memsize='131072'
tpcc_runlen='25'
tpcc_compress='f'
tpcc_overflow='t'
tpcc_defbs='2'

tpcc_cust_imp='cluster'
tpcc_cust_size='calc'
tpcc_cust_ext='calc'
tpcc_cust_nf='calc'
tpcc_cust_bs='auto'
tpcc_cust_used='-1'
tpcc_cust_free='0'
tpcc_cust_trans='3'
tpcc_cust_autospace='t'
tpcc_cust_flg='43'
tpcc_cust_fl='22'
tpcc_cust_rsize='auto'
tpcc_cust_hkey='auto'
tpcc_cust_hash='auto'
tpcc_cust_bpool='recycle'
tpcc_cust_indices=3-2-1-

tpcc_dist_imp='cluster'
tpcc_dist_size='calc'
tpcc_dist_ext='calc'
tpcc_dist_nf='calc'
tpcc_dist_bs='auto'
tpcc_dist_used='-1'
tpcc_dist_free='-1'
tpcc_dist_trans='4'
tpcc_dist_autospace='t'
tpcc_dist_flg='43'
tpcc_dist_fl='22'
tpcc_dist_rsize='auto'
tpcc_dist_hkey='auto'
tpcc_dist_hash='auto'
tpcc_dist_bpool='default'
tpcc_dist_indices=2-1-

tpcc_hist_imp='table'
tpcc_hist_size='1791'
tpcc_hist_ext='calc'
tpcc_hist_nf='calc'
tpcc_hist_bs='auto'
tpcc_hist_used='-1'
tpcc_hist_free='5'
tpcc_hist_trans='4'
tpcc_hist_autospace='t'
tpcc_hist_flg='43'
tpcc_hist_fl='22'
tpcc_hist_rsize='auto'
tpcc_hist_hkey='auto'
tpcc_hist_hash='auto'
tpcc_hist_bpool='recycle'
tpcc_hist_indices=no

tpcc_item_imp='cluster'
tpcc_item_size='calc'
tpcc_item_ext='calc'
tpcc_item_nf='calc'

```

```

tpcc_item_bs='auto'
tpcc_item_used='-1'
tpcc_item_free='0'
tpcc_item_trans='3'
tpcc_item_autospace='t'
tpcc_item_flg='43'
tpcc_item_fl='22'
tpcc_item_rsize='auto'
tpcc_item_hkey='auto'
tpcc_item_hash='auto'
tpcc_item_bpool='keep'
tpcc_item_indices=1-

tpcc_nord_imp='queue'
tpcc_nord_size='178'
tpcc_nord_ext='calc'
tpcc_nord_nf='calc'
tpcc_nord_bs='auto'
tpcc_nord_used='-1'
tpcc_nord_free='5'
tpcc_nord_trans='4'
tpcc_nord_autospace='t'
tpcc_nord_flg='43'
tpcc_nord_fl='22'
tpcc_nord_rsize='auto'
tpcc_nord_hkey='auto'
tpcc_nord_hash='auto'
tpcc_nord_bpool='default'
tpcc_nord_indices=1-2-3-

tpcc_ordl_imp='queue'
tpcc_ordl_size='21775'
tpcc_ordl_ext='calc'
tpcc_ordl_nf='calc'
tpcc_ordl_bs='16K'
tpcc_ordl_used='-1'
tpcc_ordl_free='5'
tpcc_ordl_trans='4'
tpcc_ordl_autospace='t'
tpcc_ordl_flg='43'
tpcc_ordl_fl='22'
tpcc_ordl_rsize='auto'
tpcc_ordl_hkey='auto'
tpcc_ordl_hash='auto'
tpcc_ordl_bpool='default'
tpcc_ordl_indices=1-2-3-4-

tpcc_ordr_imp='queue'
tpcc_ordr_size='1206'
tpcc_ordr_ext='calc'
tpcc_ordr_nf='calc'
tpcc_ordr_bs='16K'
tpcc_ordr_used='-1'
tpcc_ordr_free='5'
tpcc_ordr_trans='4'
tpcc_ordr_autospace='t'
tpcc_ordr_flg='43'
tpcc_ordr_fl='22'
tpcc_ordr_rsize='auto'
tpcc_ordr_hkey='auto'
tpcc_ordr_hash='auto'

```

```

tpcc_ordr_bpool='default'
tpcc_ordr_indices=2-3-1-

tpcc_stok_imp='cluster'
tpcc_stok_size='calc'
tpcc_stok_ext='calc'
tpcc_stok_nf='calc'
tpcc_stok_bs='auto'
tpcc_stok_used='-1'
tpcc_stok_free='0'
tpcc_stok_trans='3'
tpcc_stok_autospace='t'
tpcc_stok_flg='43'
tpcc_stok_fl='22'
tpcc_stok_rsize='auto'
tpcc_stok_hkey='auto'
tpcc_stok_hash='auto'
tpcc_stok_bpool='keep'
tpcc_stok_indices=1-2-

tpcc_ware_imp='cluster'
tpcc_ware_size='calc'
tpcc_ware_ext='calc'
tpcc_ware_nf='calc'
tpcc_ware_bs='auto'
tpcc_ware_used='-1'
tpcc_ware_free='-1'
tpcc_ware_trans='2'
tpcc_ware_autospace='t'
tpcc_ware_flg='43'
tpcc_ware_fl='22'
tpcc_ware_rsize='auto'
tpcc_ware_hkey='auto'
tpcc_ware_hash='auto'
tpcc_ware_bpool='default'
tpcc_ware_indices=1-

tpcc_icust1_imp='index'
tpcc_icust1_size='736'
tpcc_icust1_ext='calc'
tpcc_icust1_nf='calc'
tpcc_icust1_bs='auto'
tpcc_icust1_used='-1'
tpcc_icust1_free='1'
tpcc_icust1_trans='3'
tpcc_icust1_autospace='t'
tpcc_icust1_flg='43'
tpcc_icust1_fl='22'
tpcc_icust1_rsize='auto'
tpcc_icust1_hkey='auto'
tpcc_icust1_hash='auto'
tpcc_icust1_bpool='default'
tpcc_icust1_indices=3-2-1-

tpcc_icust2_imp='index'
tpcc_icust2_size='4591'
tpcc_icust2_ext='calc'
tpcc_icust2_nf='calc'
tpcc_icust2_bs='auto'
tpcc_icust2_used='-1'
tpcc_icust2_free='1'

```

tpcc_icust2_trans='3'
tpcc_icust2_autospace='t'
tpcc_icust2_flg='43'
tpcc_icust2_fl='22'
tpcc_icust2_rsize='auto'
tpcc_icust2_hkey='auto'
tpcc_icust2_hash='auto'
tpcc_icust2_bpool='default'
tpcc_icust2_indices=6-3-2-7-1-

tpcc_idist_imp='index'
tpcc_idist_size='4'
tpcc_idist_ext='calc'
tpcc_idist_nf='calc'
tpcc_idist_bs='auto'
tpcc_idist_used='-1'
tpcc_idist_free='5'
tpcc_idist_trans='3'
tpcc_idist_autospace='t'
tpcc_idist_flg='43'
tpcc_idist_fl='22'
tpcc_idist_rsize='auto'
tpcc_idist_hkey='auto'
tpcc_idist_hash='auto'
tpcc_idist_bpool='default'
tpcc_idist_indices=2-1-

tpcc_iitem_imp='index'
tpcc_iitem_size='2048'
tpcc_iitem_ext='calc'
tpcc_iitem_nf='calc'
tpcc_iitem_bs='auto'
tpcc_iitem_used='-1'
tpcc_iitem_free='5'
tpcc_iitem_trans='4'
tpcc_iitem_autospace='t'
tpcc_iitem_flg='43'
tpcc_iitem_fl='22'
tpcc_iitem_rsize='auto'
tpcc_iitem_hkey='auto'
tpcc_iitem_hash='auto'
tpcc_iitem_bpool='default'
tpcc_iitem_indices=1-

tpcc_inord_imp='none'
tpcc_inord_size='229'
tpcc_inord_ext='calc'
tpcc_inord_nf='calc'
tpcc_inord_bs='auto'
tpcc_inord_used='-1'
tpcc_inord_free='5'
tpcc_inord_trans='4'
tpcc_inord_autospace='t'
tpcc_inord_flg='43'
tpcc_inord_fl='22'
tpcc_inord_rsize='auto'
tpcc_inord_hkey='auto'
tpcc_inord_hash='auto'
tpcc_inord_bpool='default'
tpcc_inord_indices=1-2-3-

tpcc_iordl_imp='none'
tpcc_iordl_size='8072'
tpcc_iordl_ext='calc'
tpcc_iordl_nf='calc'
tpcc_iordl_bs='auto'
tpcc_iordl_used='-1'
tpcc_iordl_free='5'
tpcc_iordl_trans='4'
tpcc_iordl_autospace='t'
tpcc_iordl_flg='43'
tpcc_iordl_fl='22'
tpcc_iordl_rsize='auto'
tpcc_iordl_hkey='auto'
tpcc_iordl_hash='auto'
tpcc_iordl_bpool='default'
tpcc_iordl_indices=1-2-3-4-

tpcc_iordr1_imp='none'
tpcc_iordr1_size='703'
tpcc_iordr1_ext='calc'
tpcc_iordr1_nf='calc'
tpcc_iordr1_bs='auto'
tpcc_iordr1_used='-1'
tpcc_iordr1_free='1'
tpcc_iordr1_trans='3'
tpcc_iordr1_autospace='t'
tpcc_iordr1_flg='43'
tpcc_iordr1_fl='22'
tpcc_iordr1_rsize='auto'
tpcc_iordr1_hkey='auto'
tpcc_iordr1_hash='auto'
tpcc_iordr1_bpool='default'
tpcc_iordr1_indices=2-3-1-

tpcc_iordr2_imp='index'
tpcc_iordr2_size='1135'
tpcc_iordr2_ext='calc'
tpcc_iordr2_nf='calc'
tpcc_iordr2_bs='auto'
tpcc_iordr2_used='-1'
tpcc_iordr2_free='25'
tpcc_iordr2_trans='4'
tpcc_iordr2_autospace='t'
tpcc_iordr2_flg='43'
tpcc_iordr2_fl='22'
tpcc_iordr2_rsize='auto'
tpcc_iordr2_hkey='auto'
tpcc_iordr2_hash='auto'
tpcc_iordr2_bpool='default'
tpcc_iordr2_indices=2-3-4-1-

tpcc_istok_imp='index'
tpcc_istok_size='2090'
tpcc_istok_ext='calc'
tpcc_istok_nf='calc'
tpcc_istok_bs='auto'
tpcc_istok_used='-1'
tpcc_istok_free='1'
tpcc_istok_trans='3'
tpcc_istok_autospace='t'
tpcc_istok_flg='43'

```

tpcc_istok_fl='22'
tpcc_istok_rsize='auto'
tpcc_istok_hkey='auto'
tpcc_istok_hash='auto'
tpcc_istok_bpool='default'
tpcc_istok_indices=1-2-

```

```

tpcc_iware_imp='index'
tpcc_iware_size='1'
tpcc_iware_ext='calc'
tpcc_iware_nf='calc'
tpcc_iware_bs='auto'
tpcc_iware_used='-1'
tpcc_iware_free='1'
tpcc_iware_trans='3'
tpcc_iware_autospace='t'
tpcc_iware_flg='43'
tpcc_iware_fl='22'
tpcc_iware_rsize='auto'
tpcc_iware_hkey='auto'
tpcc_iware_hash='auto'
tpcc_iware_bpool='default'
tpcc_iware_indices=1-

```

```

tpcc_temp_imp='temp'
tpcc_temp_size='16145'
tpcc_temp_ext='calc'
tpcc_temp_nf='calc'
tpcc_temp_bs='auto'
tpcc_temp_used='-1'
tpcc_temp_free='0'
tpcc_temp_trans='3'
tpcc_temp_autospace='t'
tpcc_temp_flg='43'
tpcc_temp_fl='22'
tpcc_temp_rsize='auto'
tpcc_temp_hkey='auto'
tpcc_temp_hash='auto'
tpcc_temp_bpool='default'
tpcc_temp_indices=no

```

ORST_CRE.SQL

```

rem
rem
rem =====+
rem      Copyright (c) 1996 Oracle Corp, Redwood Shores, CA
rem      OPEN SYSTEMS PERFORMANCE GROUP
rem      All Rights Reserved
rem =====+
rem FILENAME
rem      orst_cre.sql
rem DESCRIPTION
rem      Drop and Create Tables for Oracle Statistics
rem =====*/
rem
rem Usage: sqlplus internal/internal @orst_cre.sql
rem
rem      connect $oracle_dba/$oracle_dba_password;

```

```

rem      SET ECHO ON;
rem      SET TERMOUT OFF;

DROP TABLE save_sysstat;
DROP TABLE save_latch;
DROP TABLE save_rollstat;
DROP TABLE save_filestat;
DROP TABLE save_rowcache;
DROP TABLE save_parameter;
DROP TABLE save_wait;
DROP TABLE save_fwait;
DROP TABLE save_event;
DROP TABLE save_lockact;
DROP TABLE save_fping;
DROP TABLE save_fping2;
DROP TABLE save_ping;
DROP TABLE save_ping2;
DROP TABLE save_blkping;
DROP TABLE save_blkping2;
DROP TABLE save_kclwait;
DROP TABLE save_sqlarea;
DROP TABLE save_time;
DROP TABLE save_dfile;
DROP TABLE save_rsrc;
DROP TABLE save_circuit;
DROP TABLE save_dispatcher;
DROP TABLE save_queue;
DROP TABLE save_server;

DROP TABLE tmp_sysstat;
DROP TABLE tmp_latch;
DROP TABLE tmp_filestat;
DROP TABLE tmp_rollstat;
DROP TABLE tmp_rowcache;
DROP TABLE tmp_wait;
DROP TABLE tmp_fwait;
DROP TABLE tmp_event;
DROP TABLE tmp_fping;
DROP TABLE tmp_fping2;
DROP TABLE tmp_kclwait;
DROP TABLE blockclass;
DROP TABLE tmp_lockact;
DROP TABLE zero_lockact;
DROP TABLE tmp_sqlarea;
DROP TABLE tmp_time;
DROP TABLE tmp_circuit;
DROP TABLE tmp_dispatcher;
DROP TABLE tmp_queue;
DROP TABLE tmp_server;
DROP TABLE tmp_rsrc;

rem
rem save_sysstat corresponds to v$sysstat and v$statname
rem
rem      CREATE TABLE save_sysstat
rem      (
rem          hid          NUMBER,
rem          run          NUMBER,
rem          name         VARCHAR2(64),
rem          statistic#   NUMBER,
rem          value        NUMBER

```

```

);
rem
rem save_latch corresponds to v$latch and v$latchname
rem
CREATE TABLE save_latch
(
  hid          NUMBER,
  run          NUMBER,
  name         VARCHAR2(64),
  latch#       NUMBER,
  gets         NUMBER,
  misses       NUMBER,
  sleeps       NUMBER,
  immediate_gets NUMBER,
  immediate_misses NUMBER
);
rem
rem save_rollstat corresponds to v$rollstat and v$rollname
rem
CREATE TABLE save_rollstat
(
  hid          NUMBER,
  run          NUMBER,
  name         VARCHAR2(30),
  USN          NUMBER,
  EXTENTS      NUMBER,
  RSSIZE       NUMBER,
  WRITES       NUMBER,
  XACTS        NUMBER,
  GETS         NUMBER,
  WAITS        NUMBER,
  OPTSIZE      NUMBER,
  HWMSIZE      NUMBER,
  SHRINKS      NUMBER,
  WRAPS        NUMBER,
  EXTENDS      NUMBER,
  AVESHINK     NUMBER,
  AVEACTIVE    NUMBER
);
rem
rem save_filestat corresponds to v$filestat and v$dbfile;
rem
CREATE TABLE save_filestat
(
  hid          NUMBER,
  run          NUMBER,
  FILE#        NUMBER,
  PHYRDS       NUMBER,
  PHYWRTS      NUMBER,
  PHYBLKRD     NUMBER,
  PHYBLKWRT    NUMBER,
  READTIM      NUMBER,
  WRITETIM     NUMBER,
  NAME         VARCHAR2(257)
);
rem

```

```

rem save_rowcache corresponds to v$rowcache
rem
CREATE TABLE save_rowcache
(
  hid          NUMBER,
  run          NUMBER,
  cache#       NUMBER,
  type         VARCHAR2(11),
  subordinate# NUMBER,
  parameter    VARCHAR2(32),
  count        NUMBER,
  usage        NUMBER,
  fixed        NUMBER,
  gets         NUMBER,
  getmisses    NUMBER,
  scans        NUMBER,
  scanmisses   NUMBER,
  scancompletes NUMBER,
  modifications NUMBER,
  flushes      NUMBER
);
rem
rem Create table to hold values in v$parameter
rem
CREATE TABLE save_parameter
(
  hid          NUMBER,
  run          NUMBER,
  NAME         VARCHAR2(64),
  VALUE        VARCHAR2(512)
);
rem
rem save_wait corresponds to v$wait_stat
rem
CREATE TABLE save_wait
(
  hid          NUMBER,
  run          NUMBER,
  class        VARCHAR2(18),
  count        NUMBER,
  time         NUMBER
);
rem
rem save_fwait corresponds to X$KCBFWAIT
rem
CREATE TABLE save_fwait
(
  hid          NUMBER,
  run          NUMBER,
  addr         VARCHAR2(20),
  indx         NUMBER,
  count        NUMBER,
  time         NUMBER
);
rem
rem save_event corresponds to v$system_event

```

```

rem
CREATE TABLE save_event
(
  hid          NUMBER,
  run          NUMBER,
  event        VARCHAR2(64),
  total_waits  NUMBER,
  time_waited  NUMBER,
  average_wait NUMBER
);

rem
rem save_lockact corresponds to v$lock_activity
rem
CREATE TABLE save_lockact
(
  hid          NUMBER,
  run          NUMBER,
  from_val     VARCHAR2(4),
  to_val       VARCHAR2(4),
  action_val   VARCHAR2(51),
  counter      NUMBER
);

rem
rem save_fping corresponds to file_ping
rem
CREATE TABLE save_fping
(
  hid          NUMBER,
  run          NUMBER,
  file_id      NUMBER,
  file_name    VARCHAR2(257),
  ts_name      VARCHAR2(30),
  x_to_n       NUMBER
);

rem
rem save_fping2 corresponds to file_ping with extended ping stats
rem
CREATE TABLE save_fping2
(
  hid          NUMBER,
  run          NUMBER,
  file_id      NUMBER,
  file_name    VARCHAR2(257),
  ts_name      VARCHAR2(30),
  x2n          NUMBER,
  x2s          NUMBER,
  x2ssx        NUMBER,
  s2n          NUMBER,
  cic          NUMBER,
  crt          NUMBER,
  hping        NUMBER,
  sping        NUMBER
);

rem
rem save_ping corresponds to v$ping
rem
CREATE TABLE save_ping

```

```

(
  hid          NUMBER,
  run          NUMBER,
  tablespace_name VARCHAR2(30),
  file_name    VARCHAR2(257),
  kind         VARCHAR2(12),
  status       VARCHAR2(4),
  xnc          NUMBER
);

rem
rem save_ping2 corresponds to v$ping with extended ping stats
rem
CREATE TABLE save_ping2
(
  hid          NUMBER,
  run          NUMBER,
  tablespace_name VARCHAR2(30),
  file#        NUMBER,
  kind         VARCHAR2(12),
  status       VARCHAR2(4),
  hping        NUMBER,
  sping        NUMBER
);

rem
rem save_blkping corresponds to v$ping
rem
CREATE TABLE save_blkping
(
  hid          NUMBER,
  run          NUMBER,
  tablespace_name VARCHAR2(30),
  file_name    VARCHAR2(257),
  kind         VARCHAR2(12),
  block#       NUMBER,
  status       VARCHAR2(4),
  xnc          NUMBER
);

rem
rem save_blkping2 corresponds to v$ping with extended ping stats
rem
CREATE TABLE save_blkping2
(
  hid          NUMBER,
  run          NUMBER,
  tablespace_name VARCHAR2(30),
  file#        NUMBER,
  kind         VARCHAR2(12),
  block#       NUMBER,
  status       VARCHAR2(4),
  hping        NUMBER,
  sping        NUMBER,
  lock_element_addr RAW(4)
);

rem
rem save_kclwait corresponds to v$kclwait
rem
CREATE TABLE save_kclwait

```

```

        (
            hid          NUMBER,
            run          NUMBER,
            indx         NUMBER,
            pings        NUMBER,
            hpings       NUMBER,
            spings       NUMBER,
            wpings       NUMBER
        );

rem
rem save_sqlarea corresponds to v$sqlarea
rem
CREATE TABLE save_sqlarea
(
    hid          NUMBER,
    run          NUMBER,
    sql_text     VARCHAR2(1000),
    executions   NUMBER,
    buffer_gets  NUMBER,
    disk_reads   NUMBER,
    serializable_aborts  NUMBER
);

rem
rem save_time records duration of each run
rem
CREATE TABLE save_time
(
    hid          NUMBER,
    run          NUMBER,
    rtime        NUMBER
);

rem
rem save_dfile maps oracle datafile to physical disks and nodes
rem
CREATE TABLE save_dfile
(
    file#        NUMBER,
    group#       NUMBER,
    gname        VARCHAR2(20),
    node#        NUMBER,
    nname        VARCHAR2(20),
    disk#        NUMBER,
    dname        VARCHAR2(20)
);

rem
rem save_rsrc corresponds to v$rsrc_consumer_group
rem
CREATE TABLE save_rsrc
(
    hid          NUMBER,
    run          NUMBER,
    NAME         VARCHAR2(32),
    ACTIVE_SESSIONS  NUMBER,
    EXECUTION_WAITERS  NUMBER,
    REQUESTS      NUMBER,
    CPU_WAIT_TIME NUMBER,
    CPU_WAITS     NUMBER,

```

```

    CONSUMED_CPU_TIME  NUMBER,
    YIELDS             NUMBER,
    SESSIONS_QUEUED    NUMBER
);

CREATE TABLE save_circuit
(
    hid          NUMBER,
    run          NUMBER,
    circuit       raw(4),
    msg0         NUMBER,
    msg1         NUMBER,
    msgs         NUMBER,
    bytes        NUMBER,
    breaks       NUMBER
);

CREATE TABLE save_dispatcher
(
    hid          NUMBER,
    run          NUMBER,
    paddr        raw(4),
    msgs         NUMBER,
    bytes        NUMBER,
    breaks       NUMBER,
    idle         NUMBER,
    busy         NUMBER
);

CREATE TABLE save_server
(
    hid          NUMBER,
    run          NUMBER,
    name         VARCHAR2(20),
    msgs         NUMBER,
    bytes        NUMBER,
    breaks       NUMBER,
    idle         NUMBER,
    busy         NUMBER,
    requests     NUMBER
);

CREATE TABLE save_queue
(
    hid          NUMBER,
    run          NUMBER,
    paddr        raw(4),
    wait         NUMBER,
    totalq       NUMBER
);

rem
rem tmp_sysstat corresponds to v$sysstat
rem
CREATE TABLE tmp_sysstat
(
    hid          NUMBER,
    state        VARCHAR2(10),
    statistic#   NUMBER,
    value        NUMBER
);

```



```

rem
rem tmp_latch corresponds to v$latch
rem
CREATE TABLE tmp_latch
(
  hid          NUMBER,
  state        VARCHAR2(10),
  latch#       NUMBER,
  gets         NUMBER,
  misses       NUMBER,
  sleeps       NUMBER,
  immediate_gets NUMBER,
  immediate_misses NUMBER
);

rem
rem tmp_filestat corresponds to v$filestat
rem
CREATE TABLE tmp_filestat
(
  hid          NUMBER,
  state        VARCHAR2(10),
  FILE#        NUMBER,
  PHYRDS       NUMBER,
  PHYWRTS      NUMBER,
  PHYBLKRD     NUMBER,
  PHYBLKWRT    NUMBER,
  READTIM      NUMBER,
  WRITETIM     NUMBER
);

rem
rem tmp_rollstat corresponds to v$rollstat
rem
CREATE TABLE tmp_rollstat
(
  hid          NUMBER,
  state        VARCHAR2(10),
  USN          NUMBER,
  EXTENTS      NUMBER,
  RSSIZE       NUMBER,
  WRITES       NUMBER,
  XACTS        NUMBER,
  GETS         NUMBER,
  WAITS        NUMBER,
  OPTSIZE      NUMBER,
  HWMSIZE      NUMBER,
  SHRINKS      NUMBER,
  WRAPS        NUMBER,
  EXTENDS      NUMBER,
  AVESHINK     NUMBER,
  AVEACTIVE    NUMBER
);

rem
rem tmp_rowcache corresponds to v$rowcache
rem
CREATE TABLE tmp_rowcache
(

```

```

  hid          NUMBER,
  state        VARCHAR2(10),
  cache#       NUMBER,
  type         VARCHAR2(11),
  subordinate# NUMBER,
  parameter    VARCHAR2(32),
  count        NUMBER,
  usage        NUMBER,
  fixed        NUMBER,
  gets         NUMBER,
  getmisses    NUMBER,
  scans        NUMBER,
  scanmisses   NUMBER,
  scancompletes NUMBER,
  modifications NUMBER,
  flushes      NUMBER
);

rem
rem tmp_wait corresponds to v$wait_stat
rem
CREATE TABLE tmp_wait
(
  hid          NUMBER,
  state        VARCHAR2(10),
  class        VARCHAR2(18),
  count        NUMBER,
  time         NUMBER
);

rem
rem tmp_fwait corresponds to X$KCBFWAIT
rem
CREATE TABLE tmp_fwait
(
  hid          NUMBER,
  state        VARCHAR2(10),
  addr         VARCHAR2(20),
  indx         NUMBER,
  count        NUMBER,
  time         NUMBER
);

rem
rem tmp_event corresponds to v$system_event
rem
CREATE TABLE tmp_event
(
  hid          NUMBER,
  state        VARCHAR2(10),
  event        VARCHAR2(64),
  total_waits  NUMBER,
  time_waited  NUMBER,
  average_wait NUMBER
);

rem
rem tmp_fping corresponds to file_ping
rem
CREATE TABLE tmp_fping
(

```

```

        hid          NUMBER,
        state        VARCHAR2(10),
        file_id      NUMBER,
        file_name    VARCHAR2(257),
        ts_name      VARCHAR2(30),
        x_to_n       NUMBER
    );

rem
rem tmp_fping2 corresponds to file_ping with extended ping stats
rem
    CREATE TABLE tmp_fping2
    (
        hid          NUMBER,
        state        VARCHAR2(10),
        file_id      NUMBER,
        file_name    VARCHAR2(257),
        ts_name      VARCHAR2(30),
        x2n          NUMBER,
        x2s          NUMBER,
        x2ssx        NUMBER,
        s2n          NUMBER,
        cic          NUMBER,
        crt          NUMBER,
        hpings       NUMBER,
        spings       NUMBER,
        wpings       NUMBER
    );

rem
rem tmp_kclwait corresponds to v$kclwait
rem
    CREATE TABLE tmp_kclwait
    (
        hid          NUMBER,
        state        VARCHAR2(10),
        indx         NUMBER,
        pings        NUMBER,
        hpings       NUMBER,
        spings       NUMBER,
        wpings       NUMBER
    );

rem
rem blockclass contains mapping from KCBC index to text
rem
    CREATE TABLE blockclass
    (
        indx         NUMBER,
        name         VARCHAR2(24)
    );

INSERT INTO blockclass VALUES (0, 'NONE');
INSERT INTO blockclass VALUES (1, 'DATA');
INSERT INTO blockclass VALUES (2, 'SORT');
INSERT INTO blockclass VALUES (3, 'SAVE UNDO');
INSERT INTO blockclass VALUES (4, 'SEG HDR');
INSERT INTO blockclass VALUES (5, 'SAVE UNDO SEG HDR');
INSERT INTO blockclass VALUES (6, 'FREE LIST|EXTENT MAP');
INSERT INTO blockclass VALUES (7, 'UNDO HDR');
INSERT INTO blockclass VALUES (8, 'UNDO');
INSERT INTO blockclass VALUES (9, 'UNDO HDR');

```

```

INSERT INTO blockclass VALUES (10, 'UNDO');

rem Are there more...???

rem
rem tmp_lockact corresponds to v$lock_activity
rem
    CREATE TABLE tmp_lockact
    (
        hid          NUMBER,
        state        VARCHAR2(10),
        from_val     VARCHAR2(4),
        to_val       VARCHAR2(4),
        action_val   VARCHAR2(51),
        counter      NUMBER
    );

rem
rem zero_lockact corresponds to v$lock_activity with no activity
rem
    CREATE TABLE zero_lockact
    (
        from_val     VARCHAR2(4),
        to_val       VARCHAR2(4),
        action_val   VARCHAR2(51),
        counter      NUMBER
    );

INSERT INTO zero_lockact (from_val, to_val, action_val, counter) VALUES
('NULL', 'S', 'Lock buffers for read',
0);

INSERT INTO zero_lockact (from_val, to_val, action_val, counter) VALUES
('NULL', 'X', 'Lock buffers for write',
0);

INSERT INTO zero_lockact (from_val, to_val, action_val, counter) VALUES
('S', 'NULL', 'Make buffers CR (no write)',
0);

INSERT INTO zero_lockact (from_val, to_val, action_val, counter) VALUES
('S', 'X', 'Upgrade read lock to write',
0);

INSERT INTO zero_lockact (from_val, to_val, action_val, counter) VALUES
('X', 'NULL', 'Make buffers CR (write dirty buffers)',
0);

INSERT INTO zero_lockact (from_val, to_val, action_val, counter) VALUES
('X', 'S', 'Downgrade write lock to read (write dirty buffers)',
0);

INSERT INTO zero_lockact (from_val, to_val, action_val, counter) VALUES
('X', 'SSX', 'Write transaction table/undo blocks',
0);

INSERT INTO zero_lockact (from_val, to_val, action_val, counter) VALUES
('SSX', 'NULL', 'Transaction table/undo blocks (write dirty
buffers)', 0);

INSERT INTO zero_lockact (from_val, to_val, action_val, counter) VALUES

```

```

('SSX', 'S', 'Make transaction table/undo block available share',
0);

INSERT INTO zero_lockact (from_val, to_val, action_val, counter) VALUES
('SSX', 'X', 'Rearm transaction table write mechanism',
0);

rem
rem tmp_sqlarea corresponds to v$sqlarea
rem
CREATE TABLE tmp_sqlarea
(
hid NUMBER,
state VARCHAR2(10),
sql_text VARCHAR2(1000),
executions NUMBER,
buffer_gets NUMBER,
disk_reads NUMBER,
serializable_aborts NUMBER
);

rem
rem tmp_time records begin and end time
rem
CREATE TABLE tmp_time
(
hid NUMBER,
state VARCHAR2(10),
timestamp DATE
);

CREATE TABLE tmp_circuit
(
hid NUMBER,
state VARCHAR2(10),
circuit raw(4),
msg0 NUMBER,
msg1 NUMBER,
msgs NUMBER,
bytes NUMBER,
breaks NUMBER
);

CREATE TABLE tmp_dispatcher
(
hid NUMBER,
state VARCHAR2(10),
paddr raw(4),
msgs NUMBER,
bytes NUMBER,
breaks NUMBER,
idle NUMBER,
busy NUMBER
);

CREATE TABLE tmp_server
(
hid NUMBER,
state VARCHAR2(10),
name VARCHAR2(20),
msgs NUMBER,

```

```

bytes NUMBER,
breaks NUMBER,
idle NUMBER,
busy NUMBER,
requests NUMBER
);

```

```

CREATE TABLE tmp_queue
(
hid NUMBER,
state VARCHAR2(10),
paddr raw(4),
wait NUMBER,
totalq NUMBER
);

```

```

rem
rem tmp_rsrc corresponds to v$rsrc_consumer_group
rem

```

```

CREATE TABLE tmp_rsrc
(
hid NUMBER,
state VARCHAR2(10),
NAME VARCHAR2(32),
ACTIVE_SESSIONS NUMBER,
EXECUTION_WAITERS NUMBER,
REQUESTS NUMBER,
CPU_WAIT_TIME NUMBER,
CPU_WAITS NUMBER,
CONSUMED_CPU_TIME NUMBER,
YIELDS NUMBER,
SESSIONS_QUEUED NUMBER
);

```

```

COMMIT;
SET ECHO OFF;

```

P_BUILD.ORA

```

compatible = 10.0.0.0.0
db_name = tpcc
control_files = \\.\control_001
parallel_max_servers = 100
recovery_parallelism = 40
db_files = 824
db_cache_size = 8288M
# db_cache_size = 12288M
db_8k_cache_size = 4096M
db_4k_cache_size = 8096M
db_16k_cache_size = 8288M
dml_locks = 500
log_buffer = 1048576
processes = 100
sessions = 100
transactions = 100
shared_pool_size = 150M
cursor_space_for_time = TRUE
db_block_size = 2048
undo_management = auto
undo_retention = 2

```

```
_in_memory_undo=false
plsql_optimize_level=2
```

```
UNDO_TABLESPACE = undo_1
# event = "10298 trace name context forever, level 1"
# aq_tm_processes=0
db_block_checking = TRUE
db_block_checksum = TRUE
_db_block_check_for_debug = TRUE
_db_writer_max_writes = 1024
```

P_CREATE.ORA

```
compatible = 10.0.0.0.0
db_name = tpcc
control_files = \\.\control_001
db_block_size = 2048
db_cache_size = 12288M
db_8k_cache_size = 4096M
log_buffer = 1048576
db_16k_cache_size = 12288M
undo_management = manual
_in_memory_undo=false
plsql_optimize_level=2
```

PLSQL_MON.SQL

```
rem
rem =====
rem          Copyright (c) 1995 Oracle Corp, Redwood Shores, CA
rem          OPEN SYSTEMS PERFORMANCE GROUP
rem          All Rights Reserved
rem =====
rem FILENAME
rem   plsql_mon.sql
rem DESCRIPTION
rem   SQL script to create a stored package for PL/SQL stored
rem   procedures to dump messages.
rem =====
rem Usage:   sqlplus tpcc/tpcc @plsql_mon
rem
```

```
connect tpcc/tpcc;
set echo on;
CREATE OR REPLACE PACKAGE plsql_mon_pack
IS
  PROCEDURE print
  (
    info          VARCHAR2
  );
END;
/
show errors;

CREATE OR REPLACE PACKAGE BODY plsql_mon_pack
```

```
IS
PROCEDURE print
(
  info          VARCHAR2
)
IS
  s              NUMBER;
BEGIN
  dbms_pipe.pack_message (info);
  s := dbms_pipe.send_message ('plsql_mon');
  IF (s <> 0) THEN
    raise_application_error (-20000, 'Error:' || to_char(s) ||
      ' sending on pipe');
  END IF;
END;
END;
/
show errors;

set echo off;
```

PST_C.SQL

```
rem
rem
rem =====
rem          Copyright (c) 1992 Oracle Corp, Belmont, CA
rem          OPEN SYSTEMS PERFORMANCE GROUP
rem          All Rights Reserved
rem =====
rem FILENAME
rem   pst_c.sql
rem DESCRIPTION
rem   Create Table for OS Specific Process Stats
rem =====*/
rem
rem Tables for Unix-specific process statistics
rem
rem Usage: sqlplus internal/internal @pst_c
rem
rem
rem   connect tpcc/tpcc;
rem   set echo on;
rem   DROP TABLE proc_resource;
rem   DROP TABLE os_stat;
rem
rem Resource usage for a process.
rem
rem   CREATE TABLE proc_resource
rem   (
rem     config          VARCHAR2(10),
rem     run              NUMBER,
rem     proc             NUMBER,
rem     child            NUMBER,
rem     user_cpu_ms     NUMBER,
rem     system_cpu_ms   NUMBER,
rem     maxrss           NUMBER,
```

```

pagein      NUMBER,
reclaim     NUMBER,
zerofill    NUMBER,
pffincr     NUMBER,
pffdecr     NUMBER,
swap        NUMBER,
syscall     NUMBER,
volcsw      NUMBER,
involcsw    NUMBER,
signal      NUMBER,
lread       NUMBER,
lwrite      NUMBER,
bread       NUMBER,
bwrite      NUMBER,
phread      NUMBER,
phwrite     NUMBER
);

rem
rem OS statistics.
rem These results are from the measurement interval only.
rem

```

```

CREATE TABLE os_stat
(
  config      VARCHAR2(10),
  run         NUMBER,
  hid         NUMBER,
  syscall     NUMBER,
  intr        NUMBER,
  cswitch    NUMBER,
  pagefault   NUMBER,
  usr         NUMBER,
  sys         NUMBER,
  idl         NUMBER,
  wio         NUMBER
);

set echo off;

```

QUEUE.SH

```

sqlplus 'sys/change_on_install as sysdba' << !

create or replace package dbms_queue authid current_user as

TYPE queue_col_name is RECORD
(
  name          varchar2(30)
);

TYPE queue_col_data is RECORD
(
  key_col       raw(4000)
);

TYPE queue_key_data IS TABLE OF queue_col_data;
TYPE queue_key_name is TABLE of queue_col_name;

```

```

procedure upd_position( schema IN varchar2,
                       queue_name IN varchar2,
                       key IN queue_key_data,
                       name IN queue_key_name);
end;
/
drop public synonym dbms_queue;
create public synonym dbms_queue for sys.dbms_queue;
grant execute on dbms_queue to dba;
create or replace library dbms_queue_lib trusted as static;
/

@?/rdbms/admin/prvtqueu.plb
@dbmsqueue

exit;

!

```

REQUIRE_VARS.SH

```

#!/bin/sh
# make sure each environment variable argument is defined.

for var in $* ; do
  if test -z "`eval echo \\$$var`"; then
    echo Missing variable: $var - exiting.
    exit 0
  fi
done
exit 1

```

RUNSCRIPT.SH

```

#!/bin/sh
# run a script from the script directory.
# go to log directory so we don't leave a mess in the bench dir.
cd $tpcc_bench/log

if test $tpcc_np -gt 1 ; then
  if test "$1" = "createts" ; then
    ptr=$tpcc_rac_id
    count=0
    total=$tpcc_rac_createts_count
    if test "x$tpcc_rac_createts_count" = "x" ; then
      total=$tpcc_np
    fi
    if test $total -gt $tpcc_np ; then
      total=$tpcc_np
    fi
    if expr x$tpcc_listfiles = xt > /dev/null; then
      ptr=1
      total=$tpcc_np
    fi
    while test $count -lt $total ; do
      /bin/sh $tpcc_genscripts_dir/createts_node${ptr}.sh
      ptr=`expr $ptr + 1`
    done
  fi
fi

```

```

    if test $ptr -gt $tpcc_np ; then
        ptr=1
    fi
    count=`expr $count + 1`
done
else
    if test "$1" = "loadordrordl" ; then
        /bin/sh $tpcc_genscripts_dir/loadordrordl_node${tpcc_rac_id}.sh
    else
        if test "$1" = "loadnord" ; then
            /bin/sh $tpcc_genscripts_dir/loadnord_node${tpcc_rac_id}.sh
        fi
    fi
fi
else
    /bin/sh $tpcc_genscripts_dir/${1}.sh
fi
exit $?

```

RUNSQL.SH

```

#!/bin/sh
# run a sql script from the script directory.
# go to log directory so we don't leave a mess in the bench dir.
cd $tpcc_bench/log
$tpcc_sqlplus $tpcc_user_pass @$tpcc_genscripts_dir/${1}
exit $?

```

RUNSQLLOCAL.SH

```

#!/bin/sh
# run a sql script from the script directory.
$tpcc_sqlplus '/ as sysdba' @$tpcc_genscripts_dir/${1}
exit $?

```

SHUTDOWNDB.SH

```

#!/bin/sh

echo "Shutting down database..."

$tpcc_sqlplus $tpcc_sqlplus_args << !
$tpcc_internal_connect

spool shutdowndb.log;

set echo on;

alter system switch logfile;
alter system switch logfile;

shutdown immediate;

set echo off;
spool off;

```

```

exit
!

```

SPACE_GET.SQL

```

REM=====+
REM          Copyright (c) 1995 Oracle Corp, Redwood Shores, CA
REM          OPEN SYSTEMS PERFORMANCE GROUP
REM          All Rights Reserved
REM=====+
REM FILENAME
REM          space_get.sql
REM DESCRIPTION
REM          Get sizes of tables, indexes and tablespaces.
REM Usage: sqlplus 'sys/change_on_install as sysdba' @space_get [<tpm> <#
of warehouses>]
REM=====*/

set echo on;
delete from tpcc_data;
delete from tpcc_space;
delete from tpcc_totospace;

insert into tpcc_data
select substr(segment_name,1,18), substr(segment_type,1,15),
       sum(blocks), t.block_size,
       round(sum(blocks) * 0.05), 0,
       sum(blocks) + round(sum(blocks) * 0.05)
from   dba_extents e, dba_tablespaces t
where  owner = 'TPCC' AND ( segment_type = 'INDEX' OR
segment_type = 'INDEX PARTITION' OR segment_type = 'CLUSTER'
OR segment_type = 'TABLE' OR segment_type = 'TABLE PARTITION')
AND e.tablespace_name <> 'SYSTEM' AND e.tablespace_name <>
'SP_0'
AND e.tablespace_name = t.tablespace_name
group by segment_name, segment_type, t.block_size;

insert into tpcc_data
select 'SYSTEM', 'SYS', sum(blocks), t.block_size, 0, 0, sum(blocks)
from   dba_data_files f, dba_tablespaces t
where  f.tablespace_name = 'SYSTEM' and t.tablespace_name =
f.tablespace_name
group by t.block_size;

insert into tpcc_data
select 'SYSAUX', 'SYS', sum(blocks), t.block_size, 0, 0, sum(blocks)
from   dba_data_files f, dba_tablespaces t
where  f.tablespace_name = 'SYSAUX' and t.tablespace_name =
f.tablespace_name
group by t.block_size;

insert into tpcc_data
select 'ROLL_SEG', 'SYS', sum(blocks), t.block_size, 0, 0,
sum(blocks)
from   dba_data_files f, dba_tablespaces t
where  f.tablespace_name like '%UNDO_1%' and f.tablespace_name =
t.tablespace_name
group by f.tablespace_name, t.block_size;

```

```

insert into tpcc_data
  select 'DB_STAT', 'SYS', sum(blocks), t.block_size, 0, 0,
sum(blocks)
  from dba_data_files f, dba_tablespaces t
  where f.tablespace_name like '%SP_0%' and f.tablespace_name =
t.tablespace_name
  group by f.tablespace_name, t.block_size;

update tpcc_data
  set five_pct = 0,
  daily_grow = round(blocks * &&1 / 62.5 / &&2),
  total = blocks + round(blocks * &&1 / 62.5 / &&2)
  where segment = 'HIST' OR segment = 'ORDRCLUSTER_QUEUE' OR
  segment = 'IORDL';

insert into tpcc_space
  select substr(ex$.name,1,18), sum(sp$.sz_blocks), sp$.block_size, 0, 0,
0, 0
  from
  (select f.tablespace_name , sum(blocks) sz_blocks, t.block_size
block_size
  from dba_data_files f, dba_tablespaces t
  where f.tablespace_name <> 'SYSTEM' and f.tablespace_name =
t.tablespace_name
  group by f.tablespace_name, t.block_size
  ) sp$,
  (select distinct tablespace_name, segment_name name
  from dba_extents
  where owner = 'TPCC'
  and (segment_type = 'CLUSTER' or segment_type = 'TABLE'
  or segment_type = 'TABLE PARTITION' or segment_type = 'INDEX'
  or segment_type = 'INDEX PARTITION')
  and tablespace_name <> 'SYSTEM'
  ) ex$
  where sp$.tablespace_name = ex$.tablespace_name
  group by ex$.name, sp$.block_size;

insert into tpcc_space
  select substr(f.tablespace_name,1,18), sum(blocks), t.block_size, 0, 0,
0, 0
  from dba_data_files f, dba_tablespaces t
  where (f.tablespace_name = 'SYSTEM' or f.tablespace_name = 'SYSAUX')
  and f.tablespace_name = t.tablespace_name
  group by f.tablespace_name, t.block_size;

insert into tpcc_space
  select 'ROLL_SEG', sum(blocks), t.block_size, 0, 0, 0, 0
  from dba_data_files f, dba_tablespaces t
  where f.tablespace_name = 'UNDO_1' and f.tablespace_name =
t.tablespace_name
  group by f.tablespace_name, t.block_size;

insert into tpcc_space
  select 'DB_STAT', sum(blocks), t.block_size, 0, 0, 0, 0
  from dba_data_files f, dba_tablespaces t
  where f.tablespace_name = 'SP_0' and f.tablespace_name =
t.tablespace_name
  group by f.tablespace_name, t.block_size;

update tpcc_space

```

```

  set required =
  (
  select sum(total)
  from tpcc_data
  where tpcc_data.segment = tpcc_space.segment
  )
  where segment in
  (
  select segment from tpcc_data
  );

update tpcc_space
  set static =
  (
  select sum(total)
  from tpcc_data
  where tpcc_data.segment = tpcc_space.segment
  )
  where segment in
  (
  select segment from tpcc_data
  );

update tpcc_space
  set static = 0,
  dynamic =
  (
  select sum(blocks)
  from tpcc_data
  where tpcc_data.segment = tpcc_space.segment
  )
  where segment in ('HIST', 'ORDRCLUSTER_QUEUE', 'IORDL');

update tpcc_space
  set oversize = blocks - required;

insert into tpcc_totSPACE
  select &&1, &&2, sum(static * block_size)/1024, sum(dynamic *
block_size)/1024, sum(oversize * block_size)/1024, 0, 0, 0
  from tpcc_space;

update tpcc_totSPACE
  set daily_grow =
  (
  select sum(daily_grow * block_size)/1024
  from tpcc_data
  );

update tpcc_totSPACE
  set space60 = static + 60 * daily_grow;
set echo off;

```

SPACE_INIT.SQL

```

REM=====+
REM FILENAME
REM      space_init.sql
REM DESCRIPTION
REM      Create tables for space calculations.

```

```

REM Usage: sqlplus 'sys/change_on_install as sysdba' @space_init.sql
REM=====*/
set echo on;
drop table tpcc_data;
drop table tpcc_space;
drop table tpcc_totSPACE;
create table tpcc_data (
  segment    varchar2(18),
  type       varchar2(15),
  blocks     number,
  block_size number,
  five_pct   number,
  daily_grow number,
  total      number
);
create table tpcc_space (
  segment    varchar2(18),
  blocks     number,
  block_size number,
  required   number,
  static     number,
  dynamic    number,
  oversize   number
);
create table tpcc_totSPACE (
  tpm        number,
  nware      number,
  static     number,
  dynamic    number,
  oversize   number,
  daily_grow number,
  daily_spre number,
  space60    number
);
create unique index itpcc_data on tpcc_data (segment);
create unique index itpcc_space on tpcc_space (segment);
set echo off;

```

SPACE_RPT.SQL

```

REM=====+
REM          Copyright (c) 1995 Oracle Corp, Redwood Shores, CA
REM          OPEN SYSTEMS PERFORMANCE GROUP
REM          All Rights Reserved
REM=====+
REM FILENAME
REM   space_rpt.sql
REM DESCRIPTION
REM   Generate space report and save it in space.rpt
REM Usage: sqlplus 'sys/change_on_install as sysdba' @space_rpt.sql
REM=====*/
set space 2
set pagesize 2000
set echo off
set termout off
set verify off
set feedback off
set pagesize 60 linesize 120

```

```

spool space.rpt
select tpm, nware from tpcc_totSPACE;
select * from tpcc_data order by segment;
select * from tpcc_space order by segment;
select static, dynamic, oversize, daily_grow, daily_spre, space60
  from tpcc_totSPACE;
spool off;

```

STARTUPDB.SH

```

#!/bin/sh

echo "Starting up database using $1..."

init_file=${1}.ora

if test $tpcc_np -gt 1 ; then
  init_file=build_init_${tpcc_rac_id}.ora
fi

$tpcc_sqlplus $tpcc_sqlplus_args << !
$tpcc_internal_connect

spool startdb.log

set echo on

startup pfile=$init_file open

spool off
set echo off
exit sql.sqlcode
!

```

STEPENV.SH

```

# forces any env variables we set to be exported
set -a
tpcc_kit=t
tpcc_bench=c:/tpcc24000
tpcc_scripts=$tpcc_bench/scripts
tpcc_require=$tpcc_scripts/require_vars.sh
tpcc_lcm=$tpcc_scripts/lcm.sh
tpcc_tokilobytes=$tpcc_scripts/tokilobytes.sh
tpcc_fromkilobytes=$tpcc_scripts/fromkilobytes.sh
tpcc_estsize=$tpcc_scripts/estsize.sh
tpcc_notneg=$tpcc_scripts/notneg.sh
tpcc_isneg=$tpcc_scripts/isneg.sh

# need a better way to check for bc, may
# resort to checking each directory in path
# if this doesn't work
#11/7/02 - alex.ni this is causing too many problems
#because systems have bc in some odd place. typically
#mangled cygwin installs w/ mksnt/cygwin mixes

```



```

# if test -x /usr/bin/bc -o -x /bin/bc; then
tpcc_bcexpr=$tpcc_scripts/bcexpr.sh
#else
#tpcc_bcexpr=expr
#fi

# the ksh version is a bit faster, so we want
# to use it if we have ksh.  Otherwise we have
# a compatible version.
# if test -x /bin/ksh; then
#tpcc_createts=$tpcc_scripts/createts.ksh
#else
tpcc_createts=$tpcc_scripts/createts.sh
#fi

tpcc_tabledata=$tpcc_scripts/tabledata.sh
tpcc_load=$tpcc_bench/benchrun/bin/tpccload.exe
tpcc_createtablespace=$tpcc_scripts/createtablespace.sh

##
tpcc_sqlplus=cat
tpcc_sqlplus_args='/nolog'
tpcc_internal_connect='connect / as sysdba'
tpcc_user_pass='tpcc/tpcc'
tpcc_dba_user_pass='system/manager'
oracle_dba=system
oracle_dba_password=manager
tpcc_sqlplus_args=
tpcc_user_pass=
tpcc_sqlplus=sqlplus
tpcc_user_pass='tpcc/tpcc'

# import options generated by gui
. ${tpcc_bench}/options.sh

# 8gb oracle filesize limit (in k)
tpcc_fsize_limit_k=8388608
# 2gb - 1k oracle extent limit (in k)
tpcc_extent_limit_k=2097151

# Runlen calculations should be in hours, but
# this was the old calculation, which assumed
# minutes, and also 8 times:
# tpcc_runlen=`$tpcc_bcexpr 8 \* 60 \* $tpcc_runlen`
# we just want to keep the value as it is.

tpcc_system_size=200M
tpcc_logfile_size=`$tpcc_bcexpr 20 + \( $tpcc_scale \)`M

tpcc_undo_size=`$tpcc_bcexpr 2 \* $tpcc_scale`
if test $tpcc_undo_size -gt 8096; then
    tpcc_undo_size=8096
fi
tpcc_undo_size="${tpcc_undo_size}M"

tpcc_undo_bs=8K

tpcc_statspack_size=`$tpcc_bcexpr 1 \* $tpcc_scale`
if test $tpcc_statspack_size -gt 2048; then
    tpcc_statspack_size=2048

```

```

fi
tpcc_statspack_size="${tpcc_statspack_size}M"

tpcc_sysaux_size=120M

# fixed table params

# table list (note temp is always at the end since it may use numbers from
# other tables, and it's not included in these lists)
tpcc_table_list='ware cust dist hist stok item ordr ordl nord'
tpcc_index_list='iware icust1 icust2 idist istok iitem iordr1 iordr2 iordl
inord'
# for these I use average row length, calculated from multi-blocksize
# stats.
# we figure out how many new rows we will gain in a run (in
# createtablespace.sh)
# and add that much to the base tablespace size.
tpcc_hist_growth=51
tpcc_ordr_growth=35
tpcc_nord_growth=13
#tpcc_ordl_growth=660
tpcc_ordl_growth=900

# i started indices at 1/10th... need an exact figure
tpcc_iordr1_growth=20
tpcc_iordr2_growth=20
tpcc_iordl_growth=66
tpcc_inord_growth=2

tpcc_item_growth=0
tpcc_iitem_growth=0
tpcc_temp_growth=0

tpcc_cust_growth=regular
tpcc_icust1_growth=regular
tpcc_icust2_growth=regular

tpcc_stok_growth=regular
tpcc_istok_growth=regular

tpcc_ware_growth=regular
tpcc_iware_growth=regular

tpcc_dist_growth=regular
tpcc_idist_growth=regular

# minimum size of temp tablespace
tpcc_tempts_min=10240

# for Linux, set appropriate tablespace heuristics
# to set high io tables to have 64 files, and minimize
# others.
if expr $tpcc_os = linux > /dev/null; then
# for table in $tpcc_table_list $tpcc_index_list temp; do
#     eval "tpcc_${table}_tsfileinc=1"
# done
    tpcc_os=unix

# tpcc_stok_tsfileinc=64
# tpcc_cust_tsfileinc=64
# tpcc_iordl2_tsfileinc=16

```

```

# tpcc_icust2_tsfileinc=16
# tpcc_iordl_tsfileinc=16
else
#in case someone changes out of linux, and the shell is stuck
  for table in $tpcc_table_list $tpcc_index_list temp; do
    eval "tpcc_${table}_tsfileinc="
  done
fi
  tpcc_stok_tsfileinc=
  tpcc_cust_tsfileinc=
  tpcc_iordl2_tsfileinc=
  tpcc_icust2_tsfileinc=
  tpcc_iordl_tsfileinc=
#fi

# import local options
. ${tpcc_bench}/localoptions.sh

if expr `echo x$tpcc_no_options` = xt > /dev/null; then
  echo Please modify ${tpcc_bench}/localoptions.sh to configure the
  generator.
  exit 1
fi

tpcc_fixordrordl=${tpcc_genscripts_dir}/loadfixordrordl.sh
tpcc_updateordrordl=${tpcc_scripts}/updateordrordl.sh

#tp- get table param. (that is, $tpcc_tablename_tableparam)
tp(){
  eval echo \""\${tpcc}_${1}_${2}""
}

# automatically generated variables
if expr `echo $tpcc_version | cut -b1` = t > /dev/null; then
  tpcc_auto_undo=t
else
  tpcc_auto_undo=f
fi
if expr `echo $tpcc_version | cut -b2` = t > /dev/null; then
  tpcc_autospace_avail=t
else
  tpcc_autospace_avail=f
fi
if expr `echo $tpcc_version | cut -b3` = t > /dev/null; then
  tpcc_queue_avail=t
  tpcc_use_sysaux=t
else
  tpcc_queue_avail=f
  tpcc_use_sysaux=f
fi

# for NT, ORACLE does not like $variables in sql scripts, so we must
# hardcode these things for it.
if test x$tpcc_os = xnt; then
  tpcc_hardcode=t
else
  tpcc_hardcode=f
fi

# if this is unset we need to make sure it's something anyway

```

```

if test x$tpcc_defbs = x; then
  tpcc_defbs=2
fi

# used for loading program
if test x$tpcc_hash_overflow = xt; then
  tpcc_hash_overflow=t
else
  unset tpcc_hash_overflow
fi
if test x$tpcc_overflow = xt; then
  tpcc_hash_overflow=t
else
  unset tpcc_hash_overflow
fi

tpcc_create_steps="buildora buildcreatets buildcreatedb \
buildcreatetable-ware buildcreatetable-cust buildcreatetable-dist
buildcreatetable-hist buildcreatetable-stok buildcreatetable-item
buildcreatetable-ordr buildcreatetable-ordl buildcreatetable-nord \
buildloadware buildloadaddit buildloaditem buildloadhist buildloadnord
buildloadordrordl buildloadcust buildloadstok buildfixoo \
buildcreateindex-iware buildcreateindex-icust1 buildcreateindex-icust2
buildcreateindex-idist buildcreateindex-istok buildcreateindex-iitem
buildcreateindex-iordr1 buildcreateindex-iordr2 buildcreateindex-iordl
buildcreateindex-inord \
buildstoreprocsql buildspacestats listfiles
"

# remove runscript-loadfixordrordl - shuang, 030626

tpcc_steps="runsqllocal-createdb shutdowndb startupdb-p_build createuser
runscript-createts assigntemp ddview \
runsql-createtable_ware runsql-createtable_cust runsql-createtable_dist
runsql-createtable_hist runsql-createtable_stok runsql-createtable_item
runsql-createtable_ordr runsql-createtable_ordl runsql-createtable_nord \
runscript-loadware runscript-loadaddit runscript-loaditem runscript-
loadhist runscript-loadnord runscript-loadordrordl runscript-loadcust
runscript-loadstok \
runsql-createindex_iware runsql-createindex_icust1 runsql-
createindex_icust2 runsql-createindex_idist runsql-createindex_istok
runsql-createindex_iitem runsql-createindex_iordr1 runsql-
createindex_iordr2 runsql-createindex_iordl runsql-createindex_inord \
analyze runscript-loadfixordrordl createstats createstoredprocs
createspacestats createmisc"

# no longer automatically exports env variables
set +a

# check for problems with configuration
badconf=
for table in $tpcc_table_list; do
  if expr `tp $table imp` = queue > /dev/null; then
    if expr $tpcc_queue_avail = f > /dev/null; then
      echo Table $table may not be a queue, since queues are
      echo are unavailable in the selected Oracle version.
      badconf=t
    fi
  fi
fi

```

```

    if expr $tpcc_autospace_avail = f \& `tp $stable autospace` = t >
/dev/null; then
    echo Table $stable may not use bitmapped space management
    echo since it is not available in the selected Oracle version.
    badconf=t
    fi
done

if test -n "$badconf"; then
    exit 1
fi

# make sure we have everything
if $tpcc_require ORACLE_SID \
    tpcc_tokilobytes tpcc_createts tpcc_lcm\
    tpcc_sqlplus tpcc_internal_connect\
    tpcc_np tpcc_cpu tpcc_os tpcc_runlen tpcc_ldrive tpcc_scale
tpcc_disks_location tpcc_auto_undo tpcc_tempts_min\
    tpcc_system_size tpcc_logfile_size\
    tpcc_undo_size tpcc_undo_bs\
    oracle_dba oracle_dba_password tpcc_dba_user_pass
then exit 1; fi

if test x$tpcc_hardcode != xt; then
    tpcc_disks_location=${tpcc_disks_location}/
# tpcc_sql_dir='$tpcc_sql_dir'
# tpcc_statspack_size='$tpcc_statspack_size'
# tpcc_genscripts_dir='$tpcc_genscripts_dir'
fi

```

TABLEDATA.SH

```

# tabledata- (not a script) data and functions for
# getting columns and info for creating tables and indices.

# forces any env variables we set to be exported
set -a

# note- clustcols will be an option- move to stepenv file!

#tp- get table param. (that is, $tpcc_tablename_tableparam)
tp(){
    eval echo \""$tpcc_$1_$2""
}

#nullauto- check if $1 null or auto, if not echo it, otherwise echo $2.
nullauto(){
    if expr "x$1" = x \ | "x$1" = xauto \ | "x$1" = xno > /dev/null; then
        echo "$2"
    else
        echo "$1"
    fi
}

tpcc_item_warecol=none
tpcc_item_clustcols=t
tpcc_item_hkey="\nullauto "$tpcc_item_hkey" 100000`"

if test $tpcc_np -gt 1 ; then

```

```

    tpcc_item_hash_def="(i_id + 1)"
else
    tpcc_item_hash_def="(i_id)"
fi

tpcc_item_hash="\nullauto "$tpcc_item_hash" "$tpcc_item_hash_def`"
tpcc_item_rsize="\nullauto "$tpcc_item_rsize" 120`"
#The actual size of item needs to be a little bigger just because
#it's around boundary size for hash clusters.
tpcc_item_crsz=130

tpcc_item_cols=`cat <<!
    i_id-number(6,0)
    i_name-varchar2(24)
    i_price-number
    i_data-varchar2(50)
    i_im_id-number
!`

tpcc_iitem_cols=$tpcc_item_cols
tpcc_iitem_warecol=none
tpcc_iitem_indexon=item

tpcc_stok_row_factor=100000
tpcc_stok_rac_storage=t
tpcc_stok_2_RowPerBlock=5
if expr x$tpcc_compress = xt > /dev/null; then
    tpcc_stok_2_RowPerBlock=7
fi

tpcc_stok_4_RowPerBlock=11
if expr x$tpcc_overflow = xt > /dev/null; then
    if expr x$tpcc_compress = xt > /dev/null; then
        tpcc_stok_4_RowPerBlock=15
    fi
fi

tpcc_stok_8_RowPerBlock=23
if expr x$tpcc_overflow = xt > /dev/null; then
    if expr x$tpcc_compress = xt > /dev/null; then
        tpcc_stok_8_RowPerBlock=32
    fi
fi

if expr x$tpcc_compress = xt > /dev/null; then
    tpcc_stok_compress=fffffffftttttttttt
    tpcc_stok_rsize="\nullauto "$tpcc_stok_rsize" 256`"
tpcc_stok_cols=`cat <<!
    s_i_id-number
    s_w_id-number
    s_quantity-number
    s_ytd-number
    s_order_cnt-number
    s_remote_cnt-number
    s_data-varchar2(50)
    s_dist_01-varchar2(24)
    s_dist_02-varchar2(24)
    s_dist_03-varchar2(24)

```

```

s_dist_04-varchar2(24)
s_dist_05-varchar2(24)
s_dist_06-varchar2(24)
s_dist_07-varchar2(24)
s_dist_08-varchar2(24)
s_dist_09-varchar2(24)
s_dist_10-varchar2(24)
!
\
else
tpcc_stok_rsize="\nullauto "$tpcc_stok_rsize" 350`"
tpcc_stok_cols=`cat <<!
s_i_id-number
s_w_id-number
s_quantity-number
s_ytd-number
s_order_cnt-number
s_remote_cnt-number
s_data-varchar2(50)
s_dist_01-char(24)
s_dist_02-char(24)
s_dist_03-char(24)
s_dist_04-char(24)
s_dist_05-char(24)
s_dist_06-char(24)
s_dist_07-char(24)
s_dist_08-char(24)
s_dist_09-char(24)
s_dist_10-char(24)
!
\
fi
tpcc_stok_clustcols=tt
tpcc_stok_hkey_def=`$tpcc_bcexpr 100000 \\\* $tpcc_scale`
tpcc_stok_hkey="\nullauto "$tpcc_stok_hkey" "$tpcc_stok_hkey_def`"
if expr $tpcc_stok_imp = parttable \|| $tpcc_stok_imp = partiot \|| $tpcc_np
\> 1 > /dev/null; then
tmpdiv=`expr $tpcc_scale / $tpcc_np`
tpcc_stok_hash_def="(abs(s_i_id - 1) * $tmpdiv + mod((s_w_id - 1),
$tmpdiv) + trunc((s_w_id - 1) / $tmpdiv) * $tmpdiv * 100000)"
else
tpcc_stok_hash_def="(s_i_id * $tpcc_scale + s_w_id)"
fi
tpcc_stok_hash="\nullauto "$tpcc_stok_hash" "$tpcc_stok_hash_def`"

tpcc_stok_warecol=s_w_id

tpcc_istok_cols=$tpcc_stok_cols
tpcc_istok_warecol=$tpcc_stok_warecol
tpcc_istok_indexon=stok

tpcc_ware_row_factor=1
tpcc_ware_2_RowPerBlock=1
tpcc_ware_4_RowPerBlock=1
tpcc_ware_8_RowPerBlock=1
tpcc_ware_rac_storage=t
tpcc_ware_clustcols=t
tpcc_ware_hkey="\nullauto "$tpcc_ware_hkey" "$tpcc_scale`"

if test $tpcc_np -gt 1 ; then
tpcc_ware_hash_def="(w_id - 1)"

```

```

else
tpcc_ware_hash_def="(w_id)"
fi

tpcc_ware_hash="\nullauto "$tpcc_ware_hash" "$tpcc_ware_hash_def`"

#now we want default for ware to be auto (one block always)
#tpcc_ware_rsize="\nullauto "$tpcc_ware_rsize" 1536`"
tpcc_ware_rsize="\nullauto "$tpcc_ware_rsize" auto`"

tpcc_ware_warecol=none
tpcc_ware_cols=`cat <<!
w_id-number(5,0)
w_ytd-number
w_tax-number
w_name-varchar2(10)
w_street_1-varchar2(20)
w_street_2-varchar2(20)
w_city-varchar2(20)
w_state-char(2)
w_zip-char(9)
!
\

tpcc_iware_cols=$tpcc_ware_cols
tpcc_iware_warecol=none
tpcc_iware_indexon=ware

tpcc_dist_row_factor=10
tpcc_dist_2_RowPerBlock=1
tpcc_dist_4_RowPerBlock=1
tpcc_dist_8_RowPerBlock=1
tpcc_dist_rac_storage=t
tpcc_dist_clustcols=tt
tpcc_dist_hkey_def=`$tpcc_bcexpr 10 \\\* $tpcc_scale`
tpcc_dist_hkey="\nullauto "$tpcc_dist_hkey" "$tpcc_dist_hkey_def`"

if test $tpcc_np -gt 1 ; then
tpcc_dist_hash_def="((d_w_id - 1) * 10) + d_id)"
else
tpcc_dist_hash_def="((d_w_id * 10) + d_id)"
fi

tpcc_dist_hash="\nullauto "$tpcc_dist_hash" "$tpcc_dist_hash_def`"
#tpcc_dist_rsize="\nullauto "$tpcc_dist_rsize" 1536`"
tpcc_dist_rsize="\nullauto "$tpcc_dist_rsize" auto`"
tpcc_dist_warecol=d_w_id
tpcc_dist_cols=`cat <<!
d_id-number
d_w_id-number
d_ytd-number
d_next_o_id-number
d_tax-number
d_name-varchar2(10)
d_street_1-varchar2(20)
d_street_2-varchar2(20)
d_city-varchar2(20)
d_state-char(2)
d_zip-char(9)
!
\

```

```

tpcc_idist_cols=$tpcc_dist_cols
tpcc_idist_warecol=d_w_id
tpcc_idist_indexon=dist

#NOTE- needs to change SQL code
tpcc_ordr_clustcols=tttffffft
tpcc_ordr_queuesort=2t-3t-1tt-9tt-
tpcc_ordr_queueenames=2-3-1-
#NOTE- check if this is right for hash keys
tpcc_ordr_hkey_def=`$tpcc_bcexpr 10 \* $tpcc_scale`
tpcc_ordr_hkey="nullauto "$tpcc_ordr_hkey" "$tpcc_ordr_hkey_def`"
tpcc_ordr_hash="nullauto "$tpcc_ordr_hash" '(o_w_id - 1) * 10 + o_d_id - 1`"
tpcc_ordr_rsize="nullauto "$tpcc_ordr_rsize" 1490`"
tpcc_ordr_warecol=o_w_id

if expr $tpcc_ordr_imp = queue > /dev/null; then
# buildcreatetable sets cols to this after tablecols
# are fetched from normal ord_r_cols, so we can get the
# o_number field out for queuesort. (bit of a hack, but
# it would be difficult to redo it another way)
tpcc_ordr_qcols=`cat <<!
o_id-number
o_w_id-number
o_d_id-number
o_c_id-number
o_carrier_id-number
o_ol_cnt-number
o_all_local-number
o_entry_d-date
o_number-number
!`
tpcc_ordr_cols=`cat <<!
o_id-number-sort
o_w_id-number
o_d_id-number
o_c_id-number
o_carrier_id-number
o_ol_cnt-number
o_all_local-number
o_entry_d-date
!`
else
tpcc_ordr_cols=`cat <<!
o_id-number
o_w_id-number
o_d_id-number
o_c_id-number
o_carrier_id-number
o_ol_cnt-number
o_all_local-number
o_entry_d-date
!`
fi

tpcc_iordr1_warecol=$tpcc_ordr_warecol

```

```

tpcc_iordr1_cols=$tpcc_ordr_cols
tpcc_iordr1_indexon=ordr

tpcc_iordr2_warecol=$tpcc_ordr_warecol
tpcc_iordr2_cols=$tpcc_ordr_cols
tpcc_iordr2_indexon=ordr

#ordl uses ord_r's cluster, so we represent this
#with another variable
tpcc_ordl_usecluster=', constraint ordl_uk primary key (ol_w_id, ol_d_id,
ol_o_id, ol_number )) CLUSTER ord_rcluster_queue(ol_w_id, ol_d_id,
ol_o_id, ol_number) '
tpcc_ordl_othercluster=ord_r

tpcc_ordl_warecol=ol_w_id
if test $tpcc_ordl_imp = queue; then
tpcc_ordl_cols=`cat <<!
ol_w_id-number
ol_d_id-number
ol_o_id-number-sort
ol_number-number-sort
ol_i_id-number
ol_delivery_d-date
ol_amount-number
ol_supply_w_id-number
ol_quantity-number
ol_dist_info-char(24)
!`
else
tpcc_ordl_cols=`cat <<!
ol_w_id-number
ol_d_id-number
ol_o_id-number
ol_number-number
ol_i_id-number
ol_delivery_d-date
ol_amount-number
ol_supply_w_id-number
ol_quantity-number
ol_dist_info-char(24)
!`
fi

tpcc_iordl_cols=$tpcc_ordl_cols
tpcc_iordl_warecol=$tpcc_ordl_warecol
tpcc_iordl_indexon=ordl

tpcc_nord_clustcols=ttt
tpcc_nord_queuesort=1t-2t-3tt-
tpcc_nord_queueenames=1-2-3-
#NOTE- check if this is right for hash keys
tpcc_nord_hkey_def=`$tpcc_bcexpr 10 \* $tpcc_scale`
tpcc_nord_hkey="nullauto "$tpcc_nord_hkey" "$tpcc_nord_hkey_def`"
tpcc_nord_hash="nullauto "$tpcc_nord_hash" '(no_w_id - 1) * 10 + no_d_id - 1`"
tpcc_nord_rsize="nullauto "$tpcc_nord_rsize" 190`"
tpcc_nord_warecol=no_w_id
tpcc_nord_qcols=`cat <<!

```

```

no_w_id-number
no_d_id-number
no_o_id-number
! \

tpcc_nord_cols=`cat <<!
no_w_id-number
no_d_id-number
no_o_id-number-sort
! \

tpcc_inord_cols=$tpcc_nord_cols
tpcc_inord_warecol=$tpcc_nord_warecol
tpcc_inord_indexon=nord

#we regardless of overflow or compress we always want the
#size calculation for cust to be the same.

tpcc_cust_row_factor=30000
tpcc_cust_2_RowPerBlock=2
if expr x$tpcc_overflow = xt > /dev/null; then
    if expr x$tpcc_compress = xt > /dev/null; then
        tpcc_cust_2_RowPerBlock=11
    else
        tpcc_cust_2_RowPerBlock=5
    fi
fi

tpcc_cust_4_RowPerBlock=4
if expr x$tpcc_overflow = xt > /dev/null; then
    if expr x$tpcc_compress = xt > /dev/null; then
        tpcc_cust_4_RowPerBlock=23
    else
        tpcc_cust_4_RowPerBlock=11
    fi
fi

tpcc_cust_8_RowPerBlock=9
if expr x$tpcc_overflow = xt > /dev/null; then
    if expr x$tpcc_compress = xt > /dev/null; then
        tpcc_cust_8_RowPerBlock=47
    else
        tpcc_cust_8_RowPerBlock=23
    fi
fi

tpcc_cust_rac_storage=t
tpcc_cust_crsize=850

if expr x$tpcc_overflow = xt > /dev/null; then
    if expr x$tpcc_compress = xt > /dev/null; then
        tpcc_cust_compress=ffffffffftttfffff
        tpcc_cust_rsize="`nullauto "$tpcc_cust_rsize" 180`"
    else
        tpcc_cust_rsize="`nullauto "$tpcc_cust_rsize" 350`"
    fi
fi

tpcc_cust_cols=`cat <<!
c_id-number

```

```

c_d_id-number
c_w_id-number
c_discount-number
c_credit-char(2)
c_last-varchar2(16)
c_first-varchar2(16)
c_credit_lim-number
c_balance-number
c_ytd_payment-number
c_payment_cnt-number
c_delivery_cnt-number
c_street_1-varchar2(20)
c_street_2-varchar2(20)
c_city-varchar2(20)
c_state-char(2)
c_zip-char(9)
c_phone-char(16)
c_since-date
c_middle-char(2)
c_data-varchar2(500)
! \
else
    tpcc_cust_rsize="`nullauto "$tpcc_cust_rsize" 850`"
tpcc_cust_cols=`cat <<!
c_id-number
c_d_id-number
c_w_id-number
c_discount-number
c_credit-char(2)
c_last-varchar2(16)
c_first-varchar2(16)
c_credit_lim-number
c_balance-number
c_ytd_payment-number
c_payment_cnt-number
c_delivery_cnt-number
c_street_1-varchar2(20)
c_street_2-varchar2(20)
c_city-varchar2(20)
c_state-char(2)
c_zip-char(9)
c_phone-char(16)
c_since-date
c_middle-char(2)
c_data-varchar2(500)
! \
fi

tpcc_cust_clustcols=ttt
tpcc_cust_hkey_def=`$tpcc_bcexpr 30000 \* $tpcc_scale`
tpcc_cust_hkey="`nullauto "$tpcc_cust_hkey" "$tpcc_cust_hkey_def`"
if expr $tpcc_np > 1 > /dev/null; then
    tpcc_cust_hash_def="(c_w_id * 30000 + c_id * 10 + c_d_id - 30011)"
else
    tpcc_cust_hash_def="(c_id * ( $tpcc_scale * 10 ) + c_w_id * 10 +
c_d_id)"
fi
tpcc_cust_hash="`nullauto "$tpcc_cust_hash" "$tpcc_cust_hash_def`"
tpcc_cust_warecol=c_w_id

```

```

tpcc_icust1_cols=$tpcc_cust_cols
tpcc_icust1_warecol=$tpcc_cust_warecol
tpcc_icust1_indexon=cust

tpcc_icust2_cols=$tpcc_cust_cols
tpcc_icust2_warecol=$tpcc_cust_warecol
tpcc_icust2_indexon=cust

tpcc_hist_warecol=h_w_id
tpcc_hist_cols=`cat <<!
    h_c_id-number
    h_c_d_id-number
    h_c_w_id-number
    h_d_id-number
    h_w_id-number
    h_date-date
    h_amount-number
    h_data-varchar2(24)
!
`

set +a

#indexnames- with columns for table $1, pull out the desired indices
#and echo each. Also allowed in format, two characters after the
#index specifying if type and SORT should be listed as well-
#example 1t-4t-2tt-3tt gives the type on each, but only SORT on the
#two entries.
#echos blank if cannot index.
indexnames(){
    tabcols=`tp $1 cols`
    if expr x$2 = xno \|| x$2 = x > /dev/null; then
        echo ""
    else
        colsleft=$2
        addcomma=
        while test -n "$colsleft"; do
            desiredcol=`echo $colsleft | cut -f1 -d-`
            yestype=x`echo $desiredcol | cut -b2`
            yessort=x`echo $desiredcol | cut -b3`
            desiredcol=`echo $desiredcol | cut -b1`

            desiredcol=`echo $tabcols | cut -d' ' -f$desiredcol`
            if expr $yestype = xt > /dev/null; then
                firstcol=`echo $desiredcol | cut -f1 -d-`
                desiredcol="$firstcol `echo $desiredcol | cut -f2 -d-`"
            else
                desiredcol=`echo $desiredcol | cut -f1 -d-`
            fi
            if expr $yessort = xt > /dev/null; then
                desiredcol="$desiredcol SORT"
            fi

            echo $addcomma `echo $desiredcol | cut -f1 -d-`
            addcomma=
        done
        # on some systems, we have "lastcol" instead of "lastcol-" like we want
        # due to cut's behavior.
        # we can make it work on these systems by making sure the - is in.
    fi
}

```

```

        colsleft=`echo $colsleft | grep -`
        colsleft=`echo $colsleft | cut -f2- -d-`
    done
    fi
}

#colize- get columns desired for table $1, print with commas between.
#second argument is a string like tttfft, representing
#which columns are to be displayed.
# $3 true if only name should be printed, otherwise name and value are
printed
# $4 has all columns that need to have SORT after them (for queue)
# $5 has all the columns that need to have compress after them (for hash
tables)
colize(){
    if expr $2 = all > /dev/null; then
        allcols=t
    else
        enabledcols=$2
    fi
    sortcols=$4
    compresscols=$5

    tabcols=`tp $1 cols`
    addcomma=
    for curcol in $tabcols ; do
        if expr x`echo $sortcols | cut -b1` = xt > /dev/null; then
            sortsql=SQL
        else
            sortsql=
        fi

        if expr x`echo $compresscols | cut -b1` = xt > /dev/null; then
            compresssql=compress
        else
            compresssql=
        fi

        if expr x`echo $enabledcols | cut -b1` = xt \|| x$allcols = xt >
/dev/null; then
            if expr x$3 = xt > /dev/null; then
                echo $addcomma `echo $curcol | cut -f1 -d-`
            else
                if expr x$allcols = xt > /dev/null; then
                    echo $addcomma `echo $curcol | cut -f1 -d-` `echo $curcol | cut
-f2 -d-` `echo $curcol | cut -f3 -d- | tr . ' '` $sortsql $compresssql
                else
                    echo $addcomma `echo $curcol | cut -f1 -d-` `echo $curcol | cut
-f2 -d-` $sortsql $compresssql
                fi
            fi
            addcomma=,
            enabledcols=`echo $enabledcols | cut -b2-`
            sortcols=`echo $sortcols | cut -b2-`
            compresscols=`echo $compresscols | cut -b2-`
        done
    }

#createpart- create the sql to generate partitions based on warehouse.
createpart(){

```

```

warecol=`tp $1 warecol`

#check if unavailable for partitioning
if test -z "$warecol"; then
    exit 1
fi
if expr $warecol = none > /dev/null; then
    exit 1
fi

echo "partition by range( $warecol ) ("

partcount=0
waredivide=0
wareinc=`expr $tpcc_scale / $tpcc_np`
wareextra=`expr $tpcc_scale \% $tpcc_np`
addcomma=
while expr $partcount \< $tpcc_np > /dev/null; do
    waredivide=`expr $wareinc + $waredivide + \( $wareextra / $tpcc_np \)`

    echo $addcomma partition ${1}_${partcount} values less than \( `expr 1 +
$waredivide` \) tablespace ${1}_${partcount}
    addcomma=,

    wareextra=`expr $wareextra + 1`
    partcount=`expr $partcount + 1`
done
echo ')'
}

#createindexpart- create the sql to generate partitions based on
warehouse,
# this time for indices (so no calculation is required.)
createindexpart(){
    echo 'local ('
    partcount=0
    addcomma=
    while expr $partcount \< $tpcc_np > /dev/null; do
        echo $addcomma partition ${1}_${partcount} tablespace ${1}_${partcount}
        addcomma=,
        partcount=`expr $partcount + 1`
    done
    echo ')'
}

createindexpart_rac_iorder2() {
    echo 'global partition by range (o_w_id) ('
    partcount=0
    warepernode=`expr $tpcc_bcexpr $tpcc_scale / $tpcc_np`
    addcomma=
    warenum=1
    while expr $partcount \< $tpcc_np > /dev/null; do
        warenum=`expr $warenum + $warepernode`
        echo $addcomma partition iorder2_${partcount} values less than '('
$warenum ')' tablespace iorder2_${partcount}
        addcomma=,
        partcount=`expr $partcount + 1`
    done
    echo ')'
}

```

```

tpcc_ware_tsfileinc=$tpcc_np
tpcc_dist_tsfileinc=$tpcc_np
tpcc_nord_tsfileinc=$tpcc_np
tpcc_iware_tsfileinc=$tpcc_np
tpcc_idist_tsfileinc=$tpcc_np
tpcc_inord_tsfileinc=$tpcc_np
tpcc_item_tsfileinc=1
tpcc_iitem_tsfileinc=1

```

TKVCININ.SQL

```

-- The initnew package for storing variables used in the
-- New Order anonymous block

```

```

CREATE OR REPLACE PACKAGE inittpcc
AS
    TYPE intarray IS TABLE OF INTEGER INDEX BY BINARY_INTEGER;
    TYPE distarray IS TABLE OF VARCHAR(24) INDEX BY BINARY_INTEGER;
    nulldate      DATE;
    TYPE rowidarray IS TABLE OF ROWID INDEX BY PLS_INTEGER;
    s_dist          distarray;
    idxlarr         intarray;
    s_remote        intarray;
    dist            intarray;
    row_id          rowidarray;
    cust_rowid      rowid;
    dist_name       VARCHAR2(11);
    ware_name       VARCHAR2(11);
    c_num           PLS_INTEGER;

    PROCEDURE init_no(idxarr intarray);
    PROCEDURE init_del;
    PROCEDURE init_pay;
END inittpcc;
/
show errors;

CREATE OR REPLACE PACKAGE BODY inittpcc AS
    PROCEDURE init_no(idxarr intarray)
    IS
    BEGIN
        -- initialize null date
        nulldate := TO_DATE('01-01-1811', 'MM-DD-YYYY');
        idxlarr := idxarr;
    END init_no;

    PROCEDURE init_del
    IS
    BEGIN
        FOR i IN 1 .. 10 LOOP
            dist(i) := i;
        END LOOP;
    END init_del;

    PROCEDURE init_pay IS
    BEGIN
        NULL;
    END init_pay;

```



```

END inittppcc;
/
show errors
exit

```

TOKILOBYTES.SH

```

#!/bin/sh
# convert k, m, g, t into kilobytes, echo result
# no units means kilobytes is assumed.

amount=`echo $1 | sed -e's/^\(.*\)\(.\)/\1/'`
unit=`echo $1 | sed -e's/^\(.*\)\(.\)/\1/'`
if expr $unit = k \| $unit = K> /dev/null; then
    result=$amount
elif expr $unit = m \| $unit = M> /dev/null; then
    result=`$tpcc_bcexpr $amount \* 1024`
elif expr $unit = g \| $unit = G> /dev/null; then
    result=`$tpcc_bcexpr $amount \* 1024 \* 1024`
elif expr $unit = t \| $unit = T> /dev/null; then
    result=`$tpcc_bcexpr $amount \* 1024 \* 1024 \* 1024`
else
    #assume it's already correct.
    result=$result
fi

if test -n "$result"; then
    echo $result
else
    #check if it's still valid
    echo $1
    expr $1 + 0 > /dev/null
    exit $?
fi

```

UPDATEORDRORDL.SH

```

#!/bin/sh
$tpcc_sqlplus $tpcc_user_pass <<!
set serveroutput on size 80000

declare
    wid number;
    did number;
    oid number;
begin
    for wid in ${5}..${7} loop
        for did in 1..10 loop
            for oid in 1..2100 loop
                update ordr set o_entry_d=sysdate
                    where o_w_id = wid and o_d_id = did and o_id = oid;
                update ordl set ol_delivery_d = sysdate
                    where ol_w_id = wid and ol_d_id = did and ol_o_id =
oid;
                commit;
            end loop;
        end loop;
    end loop;
end loop;

```

```

end loop;
    dbms_output.put_line(wid || 'warehouses finished');
end loop;
end;
/

exit 0
!

```

VIEWS.SQL

```

connect tpcc/tpcc;
set echo on;

create or replace view wh_cust
(w_id, w_tax, c_id, c_d_id, c_w_id, c_discount, c_last, c_credit)
as select w.w_id, w.w_tax,
        c.c_id, c.c_d_id, c.c_w_id, c.c_discount, c.c_last, c.c_credit
    from cust c, ware w
    where w.w_id = c.c_w_id;

create or replace view wh_dist
(w_id, d_id, d_tax, d_next_o_id, w_tax )
as select w.w_id, d.d_id, d.d_tax, d.d_next_o_id, w.w_tax
    from dist d, ware w
    where w.w_id = d.d_w_id;

create or replace view stock_item
(i_id, s_w_id, i_price, i_name, i_data, s_data, s_quantity,
s_order_cnt, s_ytd, s_remote_cnt,
s_dist_01, s_dist_02, s_dist_03, s_dist_04, s_dist_05,
s_dist_06, s_dist_07, s_dist_08, s_dist_09, s_dist_10)
as
select i.i_id, s.w_id, i.i_price, i.i_name, i.i_data, s_data, s_quantity,
s_order_cnt, s_ytd, s_remote_cnt,
s_dist_01, s_dist_02, s_dist_03, s_dist_04, s_dist_05,
s_dist_06, s_dist_07, s_dist_08, s_dist_09, s_dist_10
    from stok s, item i
    where i.i_id = s.s_i_id;

set echo off;

```

WAIT_STAT.SQL

```

spool event_dump.txt

set pagesize 2000
set linesize 200
set verify off

column event format A35

select event, count(*) from v$session_wait where wait_time = 0
group by event
order by count(*) desc;

```

```

set linesize 400
set pagesize 10000
select event, p1text, p1,p2text,p2,p3text,p3 from v$session_wait where
wait_time=0;

spool off

```

LOAD_ORDORDL.SQL

```

-- anonymous block for loading order/orderline

DECLARE
  order_idx      PLS_INTEGER;
  order_rows     PLS_INTEGER;
  ordl_rows      PLS_INTEGER;
  ordl_idx       PLS_INTEGER;
  ordl_idx_hi    PLS_INTEGER;
  local_idx      PLS_INTEGER;
BEGIN
  order_rows := :order_rows;
  ordl_rows  := :ordl_rows;
  order_idx  := 1;
  ordl_idx   := 1;

  WHILE (order_idx <= order_rows) LOOP

    INSERT INTO ordr (O_ID, O_D_ID, O_W_ID, O_C_ID, O_ENTRY_D,
                    O_CARRIER_ID, O_OL_CNT, O_ALL_LOCAL)
      VALUES (:o_id(order_idx), :o_d_id(order_idx),
              :o_c_id(order_idx), SYSDATE,
              :o_carrier_id(order_idx),
              :o_ol_cnt(order_idx), 1);

    ordl_idx_hi := ordl_idx + :o_ol_cnt(order_idx) - 1;

    IF ( :o_id(order_idx) < 2101 ) THEN
      FORALL local_idx IN ordl_idx .. ordl_idx_hi
        INSERT INTO ordl (OL_O_ID, OL_D_ID, OL_W_ID, OL_NUMBER,
                        OL_DELIVERY_D, OL_I_ID, OL_SUPPLY_W_ID,
                        OL_QUANTITY,
                        OL_AMOUNT, OL_DIST_INFO)
          VALUES (:ol_o_id(local_idx), :ol_d_id(local_idx),
                  :ol_w_id(local_idx), :ol_number(local_idx),
                  SYSDATE, :ol_i_id(local_idx),
                  :ol_supply_w_id(local_idx), 5, 0,
                  :ol_dist_info(local_idx));
    ELSE
      FORALL local_idx IN ordl_idx .. ordl_idx_hi
        INSERT INTO ordl (OL_O_ID, OL_D_ID, OL_W_ID, OL_NUMBER,
                        OL_DELIVERY_D, OL_I_ID, OL_SUPPLY_W_ID,
                        OL_QUANTITY,
                        OL_AMOUNT, OL_DIST_INFO)
          VALUES (:ol_o_id(local_idx), :ol_d_id(local_idx),
                  :ol_w_id(local_idx), :ol_number(local_idx),

```

```

to_date('01-Jan-1811'), :ol_i_id(local_idx),
:ol_supply_w_id(local_idx), 5,
:ol_amount(local_idx),
:ol_dist_info(local_idx));
  END IF;
  ordl_idx := ordl_idx_hi + 1;
  order_idx := order_idx + 1;
END LOOP;
END;

```

PAYNZ.SQL

```

DECLARE /* paynz */
  not_serializable EXCEPTION;
  PRAGMA EXCEPTION_INIT(not_serializable,-8177);
  deadlock          EXCEPTION;
  PRAGMA EXCEPTION_INIT(deadlock,-60);
  snapshot_too_old  EXCEPTION;
  PRAGMA EXCEPTION_INIT(snapshot_too_old,-1555);
BEGIN
  LOOP BEGIN
    UPDATE ware
      SET w_ytd = w_ytd + :h_amount
      WHERE w_id = :w_id
    RETURNING w_name, w_street_1, w_street_2, w_city, w_state, w_zip
      INTO inittppc.ware_name, :w_street_1, :w_street_2, :w_city,
      :w_state, :w_zip;

    UPDATE cust
      SET c_balance = c_balance - :h_amount,
          c_ytd_payment = c_ytd_payment + :h_amount,
          c_payment_cnt = c_payment_cnt+1
      WHERE c_id = :c_id AND c_d_id = :c_d_id AND
            c_w_id = :c_w_id
    RETURNING rowid, c_first, c_middle, c_last, 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
      INTO inittppc.cust_rowid, :c_first, :c_middle, :c_last,
      :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;

    IF SQL%NOTFOUND THEN
      raise NO_DATA_FOUND;
    END IF;

    IF :c_credit = 'BC' THEN
      UPDATE cust
        SET c_data = substr ((to_char (:c_id) || ' ' ||
                              to_char (:c_d_id) || ' ' ||
                              to_char (:c_w_id) || ' ' ||
                              to_char (:d_id) || ' ' ||
                              to_char (:w_id) || ' ' ||
                              to_char (:h_amount/100, '9999.99') ||
                              ' | ')
                              || c_data, 1, 500)

```

```

        WHERE rowid = inittppcc.cust_rowid
RETURNING substr(c_data,1, 200)
        INTO :c_data;

END IF;

UPDATE dist
    SET d_ytd = d_ytd + :h_amount
    WHERE d_id = :d_id
        AND d_w_id = :w_id
RETURNING d_name, d_street_1, d_street_2, d_city, d_state, d_zip
        INTO
inittppcc.dist_name, :d_street_1, :d_street_2, :d_city, :d_state,
        :d_zip;
IF SQL%NOTFOUND THEN
    raise NO_DATA_FOUND;
END IF;

INSERT INTO hist (h_c_id, h_c_d_id, h_c_w_id, h_d_id, h_w_id,
                h_amount, h_date, h_data)
VALUES
    (:c_id, :c_d_id, :c_w_id, :d_id, :w_id, :h_amount,
     :cr_date, inittppcc.ware_name || ' ' ||
inittppcc.dist_name);
EXIT;

EXCEPTION
    WHEN not_serializable OR deadlock OR snapshot_too_old THEN
        ROLLBACK;
        :retry := :retry + 1;
END;

END LOOP;
END;

```

PAYZ.SQL

```

DECLARE /* payz */
    not_serializable          EXCEPTION;
PRAGMA EXCEPTION_INIT(not_serializable, -8177);
    deadlock                  EXCEPTION;
PRAGMA EXCEPTION_INIT(deadlock, -60);
    snapshot_too_old          EXCEPTION;
PRAGMA EXCEPTION_INIT(snapshot_too_old, -1555);
BEGIN
    LOOP BEGIN
        UPDATE ware
            SET w_ytd = w_ytd+ :h_amount
            WHERE w_id = :w_id
            RETURNING w_name,
                w_street_1, w_street_2, w_city, w_state, w_zip
            INTO inittppcc.ware_name,
                :w_street_1, :w_street_2, :w_city, :w_state, :w_zip;

        SELECT rowid
        BULK COLLECT INTO inittppcc.row_id
        FROM cust

```

```

        WHERE c_d_id = :c_d_id AND c_w_id = :c_w_id AND c_last = :c_last
ORDER BY c_last, c_d_id, c_w_id, c_first;

inittppcc.c_num := sql%rowcount;
inittppcc.cust_rowid := inittppcc.row_id((inittppcc.c_num) / 2);

UPDATE cust
    SET c_balance = c_balance - :h_amount,
        c_ytd_payment = c_ytd_payment+ :h_amount,
        c_payment_cnt = c_payment_cnt+1
WHERE rowid = inittppcc.cust_rowid
RETURNING
    c_id, c_first, c_middle, c_last, 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
    INTO :c_id, :c_first, :c_middle, :c_last,
        :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;

:c_data := ' ';
IF :c_credit = 'BC' THEN
    UPDATE cust
        SET c_data = substr ((to_char (:c_id) || ' ' ||
                                to_char (:c_d_id) || ' ' ||
                                to_char (:c_w_id) || ' ' ||
                                to_char (:d_id) || ' ' ||
                                to_char (:w_id) || ' ' ||
                                to_char (:h_amount/100, '9999.99') ||
' | ')
                                || c_data, 1, 500)
        WHERE rowid = inittppcc.cust_rowid
        RETURNING substr(c_data,1, 200)
        INTO :c_data;

END IF;

UPDATE dist
    SET d_ytd = d_ytd+ :h_amount
    WHERE d_id = :d_id
        AND d_w_id = :w_id
RETURNING d_name, d_street_1, d_street_2, d_city,
        d_state, d_zip
    INTO inittppcc.dist_name, :d_street_1, :d_street_2, :d_city,
        :d_state, :d_zip;

IF SQL%NOTFOUND
THEN
    raise NO_DATA_FOUND;
END IF;

INSERT INTO hist (h_c_id, h_c_d_id, h_c_w_id, h_d_id, h_w_id,
                h_amount, h_date, h_data)
VALUES (:c_id, :c_d_id, :c_w_id, :d_id, :w_id, :h_amount,
     :cr_date, inittppcc.ware_name || ' ' ||
inittppcc.dist_name);

EXIT;

EXCEPTION

```

```

        WHEN not_serializable OR deadlock OR snapshot_too_old THEN
            ROLLBACK;
            :retry := :retry + 1;
    END;

    END LOOP;
END;

```

TKVCPDEL.SQL

```

declare
    TYPE numarray IS TABLE OF NUMBER INDEX BY BINARY_INTEGER;
    TYPE numlist is varray (10) of number;
    dist numarray;
    amt numarray;
    cnt pls_integer;

    not_serializable EXCEPTION;
    PRAGMA EXCEPTION_INIT(not_serializable, -8177);
    deadlock EXCEPTION;
    PRAGMA EXCEPTION_INIT(deadlock, -60);
    snapshot_too_old EXCEPTION;
    PRAGMA EXCEPTION_INIT(snapshot_too_old, -1555);

BEGIN
    LOOP BEGIN
        FORALL d IN 1..10
            DELETE FROM nord N
                WHERE no_d_id = inittpcc.dist(d)
                    AND no_w_id = :w_id
                    AND no_o_id = (select min (no_o_id)
                                from nord
                                where no_d_id = N.no_d_id
                                    and no_w_id = N.no_w_id)
            RETURNING no_d_id, no_o_id BULK COLLECT INTO :d_id, :order_id;

        :ordcnt := SQL%ROWCOUNT;

        FORALL o in 1.. :ordcnt
            UPDATE ordr SET o_carrier_id = :carrier_id
                WHERE o_id = :order_id (o)
                    AND o_d_id = :d_id(o)
                    AND o_w_id = :w_id
            RETURNING o_c_id BULK COLLECT INTO :o_c_id;

        FORALL o in 1.. :ordcnt
            UPDATE ordl SET ol_delivery_d = :now
                WHERE ol_w_id = :w_id
                    AND ol_d_id = :d_id(o)
                    AND ol_o_id = :order_id(o)
            RETURNING sum(ol_amount) BULK COLLECT INTO :sums;

        FORALL c IN 1.. :ordcnt
            UPDATE cust
                SET c_balance = c_balance + :sums(c),
                    c_delivery_cnt = c_delivery_cnt + 1
                WHERE c_w_id = :w_id
                    AND c_d_id = :d_id(c)
                    AND c_id = :o_c_id(c);
    END LOOP;
END;

```

```

COMMIT;
EXIT;
EXCEPTION
    WHEN not_serializable OR deadlock OR snapshot_too_old
    THEN
        ROLLBACK;
        :retry := :retry + 1;
    END;

    END LOOP; -- for retry
END;

```

TKVCPNEW_ISO.SQL

```

-- New Order Anonymous block

DECLARE
    idx PLS_INTEGER;
    dummy_local PLS_INTEGER;
    cache_ol_cnt PLS_INTEGER;
    node_num VARCHAR2(10);
    not_serializable EXCEPTION;
    PRAGMA EXCEPTION_INIT(not_serializable, -8177);
    deadlock EXCEPTION;
    PRAGMA EXCEPTION_INIT(deadlock, -60);
    snapshot_too_old EXCEPTION;
    PRAGMA EXCEPTION_INIT(snapshot_too_old, -1555);
    PROCEDURE u1 IS
    BEGIN
        FORALL idx IN 1 .. cache_ol_cnt
            UPDATE stock_item
                SET s_order_cnt = s_order_cnt + 1,
                    s_ytd = s_ytd + :ol_quantity(idx),
                    s_remote_cnt = s_remote_cnt + :s_remote(idx),
                    s_quantity = (CASE WHEN s_quantity < :ol_quantity (idx) + 10
                                    THEN s_quantity + 91
                                    ELSE s_quantity
                                END) - :ol_quantity(idx)
                WHERE i_id = :ol_i_id(idx)
                    AND s_w_id = :ol_supply_w_id(idx)
            RETURNING i_price, i_name, s_quantity, s_dist_01,
                i_price* :ol_quantity(idx),
                CASE WHEN i_data NOT LIKE '%ORIGINAL%'
                    THEN 'G'
                    ELSE (CASE WHEN s_data NOT LIKE '%ORIGINAL%'
                        THEN 'G'
                        ELSE 'B'
                    END)
            END
            BULK COLLECT INTO :i_price, :i_name, :s_quantity, inittpcc.s_dist,
                :ol_amount, :brand_generic;
    END u1;

    PROCEDURE u2 IS
    BEGIN
        FORALL idx IN 1 .. cache_ol_cnt
            UPDATE stock_item
                SET s_order_cnt = s_order_cnt + 1,

```

```

s_ytd = s_ytd + :ol_quantity(idx),
s_remote_cnt = s_remote_cnt + :s_remote(idx),
s_quantity = (CASE WHEN s_quantity < :ol_quantity (idx) + 10
                THEN s_quantity +91
                ELSE s_quantity
                END) - :ol_quantity(idx)
WHERE i_id = :ol_i_id(idx)
AND s_w_id = :ol_supply_w_id(idx)
RETURNING i_price, i_name, s_quantity, s_dist_02,
          i_price*:ol_quantity(idx),
          CASE WHEN i_data NOT LIKE '%ORIGINAL%'
                THEN 'G'
                ELSE (CASE WHEN s_data NOT LIKE '%ORIGINAL%'
                          THEN 'G'
                          ELSE 'B'
                          END)
          END
BULK COLLECT INTO :i_price, :i_name, :s_quantity, inittpcc.s_dist,
                  :ol_amount,:brand_generic;
END u2;

PROCEDURE u3 IS
BEGIN
FORALL idx IN 1 .. cache_ol_cnt
UPDATE stock_item
SET s_order_cnt = s_order_cnt + 1,
s_ytd = s_ytd + :ol_quantity(idx),
s_remote_cnt = s_remote_cnt + :s_remote(idx),
s_quantity = (CASE WHEN s_quantity < :ol_quantity (idx) + 10
                THEN s_quantity +91
                ELSE s_quantity
                END) - :ol_quantity(idx)
WHERE i_id = :ol_i_id(idx)
AND s_w_id = :ol_supply_w_id(idx)
RETURNING i_price, i_name, s_quantity, s_dist_03,
          i_price*:ol_quantity(idx),
          CASE WHEN i_data NOT LIKE '%ORIGINAL%'
                THEN 'G'
                ELSE (CASE WHEN s_data NOT LIKE '%ORIGINAL%'
                          THEN 'G'
                          ELSE 'B'
                          END)
          END
END
BULK COLLECT INTO :i_price, :i_name, :s_quantity, inittpcc.s_dist,
                  :ol_amount,:brand_generic;
END u3;

PROCEDURE u4 IS
BEGIN
FORALL idx IN 1 .. cache_ol_cnt
UPDATE stock_item
SET s_order_cnt = s_order_cnt + 1,
s_ytd = s_ytd + :ol_quantity(idx),
s_remote_cnt = s_remote_cnt + :s_remote(idx),
s_quantity = (CASE WHEN s_quantity < :ol_quantity (idx) + 10
                THEN s_quantity +91
                ELSE s_quantity
                END) - :ol_quantity(idx)
WHERE i_id = :ol_i_id(idx)
AND s_w_id = :ol_supply_w_id(idx)
RETURNING i_price, i_name, s_quantity, s_dist_04,
          i_price*:ol_quantity(idx),
          CASE WHEN i_data NOT LIKE '%ORIGINAL%'
                THEN 'G'
                ELSE (CASE WHEN s_data NOT LIKE '%ORIGINAL%'
                          THEN 'G'
                          ELSE 'B'
                          END)
          END
END
BULK COLLECT INTO :i_price, :i_name, :s_quantity, inittpcc.s_dist,
                  :ol_amount,:brand_generic;
END u4;

```

```

          i_price*:ol_quantity(idx),
CASE WHEN i_data NOT LIKE '%ORIGINAL%'
THEN 'G'
ELSE (CASE WHEN s_data NOT LIKE '%ORIGINAL%'
            THEN 'G'
            ELSE 'B'
            END)
END
BULK COLLECT INTO :i_price, :i_name, :s_quantity, inittpcc.s_dist,
                  :ol_amount,:brand_generic;
END u4;

PROCEDURE u5 IS
BEGIN
FORALL idx IN 1 .. cache_ol_cnt
UPDATE stock_item
SET s_order_cnt = s_order_cnt + 1,
s_ytd = s_ytd + :ol_quantity(idx),
s_remote_cnt = s_remote_cnt + :s_remote(idx),
s_quantity = (CASE WHEN s_quantity < :ol_quantity (idx) + 10
                THEN s_quantity +91
                ELSE s_quantity
                END) - :ol_quantity(idx)
WHERE i_id = :ol_i_id(idx)
AND s_w_id = :ol_supply_w_id(idx)
RETURNING i_price, i_name, s_quantity, s_dist_05,
          i_price*:ol_quantity(idx),
          CASE WHEN i_data NOT LIKE '%ORIGINAL%'
                THEN 'G'
                ELSE (CASE WHEN s_data NOT LIKE '%ORIGINAL%'
                          THEN 'G'
                          ELSE 'B'
                          END)
          END
END
BULK COLLECT INTO :i_price, :i_name, :s_quantity, inittpcc.s_dist,
                  :ol_amount,:brand_generic;
END u5;

PROCEDURE u6 IS
BEGIN
FORALL idx IN 1 .. cache_ol_cnt
UPDATE stock_item
SET s_order_cnt = s_order_cnt + 1,
s_ytd = s_ytd + :ol_quantity(idx),
s_remote_cnt = s_remote_cnt + :s_remote(idx),
s_quantity = (CASE WHEN s_quantity < :ol_quantity (idx) + 10
                THEN s_quantity +91
                ELSE s_quantity
                END) - :ol_quantity(idx)
WHERE i_id = :ol_i_id(idx)
AND s_w_id = :ol_supply_w_id(idx)
RETURNING i_price, i_name, s_quantity, s_dist_06,
          i_price*:ol_quantity(idx),
          CASE WHEN i_data NOT LIKE '%ORIGINAL%'
                THEN 'G'
                ELSE (CASE WHEN s_data NOT LIKE '%ORIGINAL%'
                          THEN 'G'
                          ELSE 'B'
                          END)
          END
END
BULK COLLECT INTO :i_price, :i_name, :s_quantity, inittpcc.s_dist,
                  :ol_amount,:brand_generic;
END u6;

```

```

                                :ol_amount,:brand_generic;
END u6;

PROCEDURE u7 IS
BEGIN
  FORALL idx IN 1 .. cache_ol_cnt
    UPDATE stock_item
      SET s_order_cnt = s_order_cnt + 1,
          s_ytd = s_ytd + :ol_quantity(idx),
          s_remote_cnt = s_remote_cnt + :s_remote(idx),
          s_quantity = (CASE WHEN s_quantity < :ol_quantity (idx) + 10
                          THEN s_quantity +91
                          ELSE s_quantity
                          END) - :ol_quantity(idx)
    WHERE i_id = :ol_i_id(idx)
    AND s_w_id = :ol_supply_w_id(idx)
    RETURNING i_price, i_name, s_quantity, s_dist_07,
              i_price*:ol_quantity(idx),
              CASE WHEN i_data NOT LIKE '%ORIGINAL%'
                THEN 'G'
                ELSE (CASE WHEN s_data NOT LIKE '%ORIGINAL%'
                        THEN 'G'
                        ELSE 'B'
                        END)
              END
    END
  BULK COLLECT INTO :i_price, :i_name, :s_quantity, inittpcc.s_dist,
                    :ol_amount,:brand_generic;
END u7;

PROCEDURE u8 IS
BEGIN
  FORALL idx IN 1 .. cache_ol_cnt
    UPDATE stock_item
      SET s_order_cnt = s_order_cnt + 1,
          s_ytd = s_ytd + :ol_quantity(idx),
          s_remote_cnt = s_remote_cnt + :s_remote(idx),
          s_quantity = (CASE WHEN s_quantity < :ol_quantity (idx) + 10
                          THEN s_quantity +91
                          ELSE s_quantity
                          END) - :ol_quantity(idx)
    WHERE i_id = :ol_i_id(idx)
    AND s_w_id = :ol_supply_w_id(idx)
    RETURNING i_price, i_name, s_quantity, s_dist_08,
              i_price*:ol_quantity(idx),
              CASE WHEN i_data NOT LIKE '%ORIGINAL%'
                THEN 'G'
                ELSE (CASE WHEN s_data NOT LIKE '%ORIGINAL%'
                        THEN 'G'
                        ELSE 'B'
                        END)
              END
    END
  BULK COLLECT INTO :i_price, :i_name, :s_quantity, inittpcc.s_dist,
                    :ol_amount,:brand_generic;
END u8;

PROCEDURE u9 IS
BEGIN
  FORALL idx IN 1 .. cache_ol_cnt
    UPDATE stock_item
      SET s_order_cnt = s_order_cnt + 1,
          s_ytd = s_ytd + :ol_quantity(idx),

```

```

          s_remote_cnt = s_remote_cnt + :s_remote(idx),
          s_quantity = (CASE WHEN s_quantity < :ol_quantity (idx) + 10
                          THEN s_quantity +91
                          ELSE s_quantity
                          END) - :ol_quantity(idx)
    WHERE i_id = :ol_i_id(idx)
    AND s_w_id = :ol_supply_w_id(idx)
    RETURNING i_price, i_name, s_quantity, s_dist_09,
              i_price*:ol_quantity(idx),
              CASE WHEN i_data NOT LIKE '%ORIGINAL%'
                THEN 'G'
                ELSE (CASE WHEN s_data NOT LIKE '%ORIGINAL%'
                        THEN 'G'
                        ELSE 'B'
                        END)
              END
    END
  BULK COLLECT INTO :i_price, :i_name, :s_quantity, inittpcc.s_dist,
                    :ol_amount,:brand_generic;
END u9;

PROCEDURE u10 IS
BEGIN
  FORALL idx IN 1 .. cache_ol_cnt
    UPDATE stock_item
      SET s_order_cnt = s_order_cnt + 1,
          s_ytd = s_ytd + :ol_quantity(idx),
          s_remote_cnt = s_remote_cnt + :s_remote(idx),
          s_quantity = (CASE WHEN s_quantity < :ol_quantity (idx) + 10
                          THEN s_quantity +91
                          ELSE s_quantity
                          END) - :ol_quantity(idx)
    WHERE i_id = :ol_i_id(idx)
    AND s_w_id = :ol_supply_w_id(idx)
    RETURNING i_price, i_name, s_quantity, s_dist_10,
              i_price*:ol_quantity(idx),
              CASE WHEN i_data NOT LIKE '%ORIGINAL%'
                THEN 'G'
                ELSE (CASE WHEN s_data NOT LIKE '%ORIGINAL%'
                        THEN 'G'
                        ELSE 'B'
                        END)
              END
    END
  BULK COLLECT INTO :i_price, :i_name, :s_quantity, inittpcc.s_dist,
                    :ol_amount,:brand_generic;
END u10;

PROCEDURE fix_items IS
  rows_lost          PLS_INTEGER;
  max_index          PLS_INTEGER;
  temp_index        PLS_INTEGER;
BEGIN
  idx := 1;
  rows_lost := 0;
  max_index := dummy_local;

  WHILE (max_index != cache_ol_cnt) LOOP

    WHILE (idx <= sql%rowcount AND
           sql%bulk_rowcount(idx + rows_lost) = 1)
      LOOP
        idx := idx + 1;

```

```

END LOOP;

temp_index := max_index;
WHILE (temp_index >= idx + rows_lost) LOOP
    :ol_amount(temp_index + 1) := :ol_amount(temp_index);
    :i_price(temp_index + 1) := :i_price(temp_index);
    :i_name(temp_index + 1) := :i_name(temp_index);
    :s_quantity(temp_index + 1) := :s_quantity(temp_index);
    inittpcc.s_dist(temp_index + 1) := inittpcc.s_dist(temp_index);
    :brand_generic(temp_index + 1) := :brand_generic(temp_index);
    temp_index := temp_index - 1;
END LOOP;

IF (idx + rows_lost <= cache_ol_cnt) THEN
    :i_price(idx + rows_lost) := 0;
    :i_name(idx + rows_lost) := 'NO ITEM';
    :s_quantity(idx + rows_lost) := 0;
    inittpcc.s_dist(idx + rows_lost) := NULL;
    :brand_generic(idx + rows_lost) := ' ';
    :ol_amount(idx + rows_lost) := 0;
    rows_lost := rows_lost + 1;
    max_index := max_index + 1;
END IF;

END LOOP;
END fix_items;

BEGIN
    SELECT substr(value,1,5)
        INTO node_num
        FROM v$parameter
        WHERE name = 'instance_number';

    plsql_mon_pack.print ('New Order T1 started at ' ||
        to_char (sysdate, 'HH24:MI:SS') || ' on node '
        ||
        node_num);

    LOOP BEGIN
        cache_ol_cnt := :o_ol_cnt;

        UPDATE dist SET d_next_o_id = d_next_o_id + 1
            WHERE d_id = :d_id AND d_w_id = :w_id
            RETURNING d_tax, d_next_o_id-1
            INTO :d_tax, :o_id;

        SELECT c_discount, c_last, c_credit, w_tax
            INTO :c_discount, :c_last, :c_credit, :w_tax
            FROM cust, ware
            WHERE c_id = :c_id AND c_d_id = :d_id AND c_w_id = w_id
            AND w_id = :w_id;

        INSERT INTO nord (no_o_id, no_d_id, no_w_id)
            VALUES (:o_id, :d_id, :w_id);

        INSERT INTO ordr (o_id, o_d_id, o_w_id, o_c_id, o_entry_d,
            o_carrier_id, o_ol_cnt, o_all_local)
            VALUES (:o_id, :d_id, :w_id, :c_id,
            :cr_date, 11, :o_ol_cnt, :o_all_local);

```

```

-- copying :d_id in local variable is important - lots of instr.
dummy_local := :d_id;

IF (dummy_local < 6) THEN
    IF (dummy_local < 3) THEN
        IF (dummy_local = 1) THEN
            u1;
        ELSE
            u2;
        END IF;
    ELSE
        IF (dummy_local = 3) THEN
            u3;
        ELSIF (dummy_local = 4) then
            u4;
        ELSE
            u5;
        END IF;
    END IF;
ELSE
    IF (dummy_local < 8) THEN
        IF (dummy_local = 6) THEN
            u6;
        ELSE
            u7;
        END IF;
    ELSE
        IF (dummy_local = 8) THEN
            u8;
        ELSIF (dummy_local = 9) then
            u9;
        ELSE
            u10;
        END IF;
    END IF;
END IF;

dummy_local := sql%rowcount;

IF (dummy_local != cache_ol_cnt ) THEN fix_items; END IF;

FORALL idx IN 1..dummy_local
    INSERT INTO ordl
        (ol_o_id, ol_d_id, ol_w_id, ol_number, ol_delivery_d, ol_i_id,
        ol_supply_w_id, ol_quantity, ol_amount, ol_dist_info)
    VALUES (:o_id, :d_id, :w_id, inittpcc.idx1arr(idx),
    inittpcc.nulldate,
        :ol_i_id(idx), :ol_supply_w_id(idx),
        :ol_quantity(idx), :ol_amount(idx),
    inittpcc.s_dist(idx));

    plsql_mon_pack.print ('New Order T1 sleeps before commit/abort at
    || to_char (sysdate, 'HH24:MI:SS'));

    dbms_lock.sleep (1);
    dbms_lock.sleep (30);

    IF (dummy_local != :o_ol_cnt) THEN
        :o_ol_cnt := dummy_local;
        plsql_mon_pack.print ('New Order T1 wakes up at ' ||

```

```

                to_char (sysdate, 'HH24:MI:SS'));
ROLLBACK;
ELSE
  plsql_mon_pack.print ('New Order T1 wakes up at ' ||
                        to_char (sysdate, 'HH24:MI:SS'));
COMMIT;
END IF;

EXIT;

EXCEPTION
  WHEN not_serializable OR deadlock OR snapshot_too_old THEN
    ROLLBACK;
    :retry := :retry + 1;
END;
END LOOP;
END;

```

CR_TB_ORDL.SQL

```

spool cr_tb_ordl.log
set echo on;
drop table ordl;

set timing on;

create table ordl (
  ol_w_id      ,
  ol_d_id      ,
  ol_o_id      ,
  ol_number    ,
  ol_i_id      ,
  ol_delivery_d ,
  ol_amount    ,
  ol_supply_w_id ,
  ol_quantity  ,
  ol_dist_info ,
  constraint iordl primary key (ol_w_id, ol_d_id, ol_o_id,
ol_number)
)
organization index
  initrans 4
  parallel 16
  tablespace ordl_0 as
select
  ol_w_id      ,
  ol_d_id      ,
  ol_o_id      ,
  ol_number    ,
  ol_i_id      ,
  ol_delivery_d ,
  ol_amount    ,
  ol_supply_w_id ,
  ol_quantity  ,
  ol_dist_info
from ordlx;

```

```

spool off;
set echo off;
exit;

```

CR_TB_ORDL_TEMP.SQL

```

spool cr_tb_ordl_temp.log
set echo on;
drop table ordl;

set timing on;

create table ordl (
  ol_w_id      number,
  ol_d_id      number,
  ol_o_id      number,
  ol_number    number,
  ol_i_id      number,
  ol_delivery_d date,
  ol_amount    number,
  ol_supply_w_id number,
  ol_quantity  number,
  ol_dist_info char(24)
)
  initrans 4
  parallel 16
  tablespace ordl_0 ;

```

```

spool off;
set echo off;
exit;

```

CR_TB_ORDLX.SQL

```

spool cr_tb_ordlx.log
set echo on;
drop table ordlx;

set timing on;

create table ordlx (
  ol_w_id      number,
  ol_d_id      number,
  ol_o_id      number,
  ol_number    number,
  ol_i_id      number,
  ol_delivery_d date,
  ol_amount    number,
  ol_supply_w_id number,
  ol_quantity  number,
  ol_dist_info char(24)
)
  initrans 4
  parallel 16

```



```
tablespace ordlx_0 ;
```

```
spool off;  
set echo off;  
exit;
```

CR_TB_ORDR.SQL

```
set echo on  
spool cr_tb_ordr.log
```

```
create table ordr (  
    o_id          number,  
    o_w_id        number,  
    o_d_id        number,  
    o_c_id        number,  
    o_carrier_id  number,  
    o_ol_cnt      number,  
    o_all_local   number,  
    o_entry_d     date  
)  
initrans      3  
pctused       94  
pctfree       5  
tablespace    ordr_0;
```

```
spool off
```

GENLOADSCRIPT.SH

```
#!/ksh  
usage()  
{  
    echo ""  
    echo "Usage: $PROGNAME <NUMBER_OF_WAREHOUSE> <INCREMENT>"  
    echo ""  
    exit 1;  
}
```

```
case $# in  
    0)    usage;  
         ;;  
    1)    usage;  
         ;;  
    2)    NUMWAREHOUSE=$1  
         INCR=$2  
         ;;  
    *)    usage  
         ;;  
esac
```

```
MYTPCCLOAD=tpccload  
MYSQLLDR=sqlldr  
MYSQLPLUS=sqlplus
```

```
START=1  
let END=START+INCR  
NO_PROC=1
```

```
while [ $NUMWAREHOUSE -ge $END ]  
do
```

```
    echo "rm ordl_${START}.p"  
    echo "mkfifo ordl_${START}.p"  
    echo " "  
    echo "rm ordr_${START}.p"  
    echo "mkfifo ordr_${START}.p"  
    echo " "  
    let START=END+1  
    let END=START+INCR
```

```
done
```

```
START=1  
let END=START+INCR
```

```
if [ [ $OS = "" ] ]  
then  
    dir_string="./"  
else  
    dir_string=".\"  
fi;
```

```
while [ $NUMWAREHOUSE -ge $END ]  
do
```

```
    echo " $MYSQLLDR tpcc/tpcc control=ordrx1.ctl log=ordr${START}.log  
bad=ordr${START} ".bad data=$dir_string"ordr_${START}.p  
discard=ordr${START}.dsc &"  
    echo "proc_ordr${START}=\${!}"
```

```
    echo " $MYSQLLDR tpcc/tpcc control=ordlx1.ctl log=ordl${START}.log  
bad=ordl${START} ".bad data=$dir_string"ordl_${START}.p  
discard=ordl${START}.dsc &"  
    echo "proc_ordl${START}=\${!}"
```

```
    echo "$MYTPCCLOAD -M $NUMWAREHOUSE -b $START -e $END -o  
$dir_string"ordl_${START}.p -g $dir_string"ordr_${START}.p &"  
    echo "proc_tpccload${START}=\${!}"
```

```
    echo " "  
    echo " "  
    echo "sleep 5"  
    echo " "
```

```

echo " "

let START=END+1
let END=START+INCR

done

START=1
let END=START+INCR

while [ $NUMWAREHOUSE -ge $END ]
do

    echo "wait \${proc_tpcclload}$START"
    echo "status_proc_tpcclload$START=\${?}"
    echo "echo \${status_proc_tpcclload}$START"
    echo " "

    echo "wait \${proc_ordl}$START"
    echo "status_proc_ordl$START=\${?}"
    echo "echo \${status_proc_ordl}$START"
    echo " "

    echo "wait \${proc_tpcclload}$START"
    echo "status_proc_ordr$START=\${?}"
    echo "echo \${status_proc_ordr}$START"
    echo " "

    let START=END+1
    let END=START+INCR

done

echo "$MYSQLPLUS tpcc/tpcc @cr_tb_ordl.sql &"
echo "proc_SQLPLUS=\${!}"
echo "wait \${proc_SQLPLUS}"
echo "status_proc_SQLPLUS=\${?}"
echo "echo \${status_proc_SQLPLUS}"

```

Loader Source Code

90PER.C

```

#ifdef RCSID
static char *RCSid =
    "$Header: 90per.c 7030100.1 96/04/02 17:54:10 plai Generic<base> $"
    "Copyr (c) 1995 Oracle";

```

```

#endif /* RCSID */

/*=====
|           Copyright (c) 1996 Oracle Corp, Redwood Shores, CA
|           OPEN SYSTEMS PERFORMANCE GROUP
|           All Rights Reserved
|=====
| FILENAME
|           90per.c
| DESCRIPTION
|           Get 90 percentile response time.
|=====*/

#include <stdio.h>
#include <stdlib.h>

void main (argc, argv)

int argc;
char *argv[];

{

    char iline[1024];
    int nbuck;
    double buckint;
    int *bucks;
    int total;
    int i, j;
    char *str;

    if (argc != 3) {
        fprintf (stderr, "Usage: %s <bucket interval> <# of buckets>\n",
            argv[0]);
        exit (1);
    }
    buckint = atof (argv[1]);
    nbuck = atoi (argv[2]);
    if (buckint <= 0.0) {
        fprintf (stderr, "Error: <bucket interval> must be > 0.0\n");
        exit (1);
    }
    if (nbuck <= 0) {
        fprintf (stderr, "Error: <# of buckets> must be > 0\n");
        exit (1);
    }

    if ((bucks = (int *) malloc (sizeof (int) * nbuck)) == NULL) {
        fprintf (stderr, "Error: can't allocate %d bytes\n",
            sizeof (int) * nbuck);
        exit (1);
    }
    for (i = 0; i < nbuck; i++)
        bucks[i] = 0;

    while (gets (iline)) {
        str = iline;
        while (str && (*str != '\0') && (*str == ' '))
            str++;
    }

```

```

for (i = 0; i < 4; i++) {
    while (str && (*str != '\0') && (*str != ' '))
        str++;
    while (str && (*str != '\0') && (*str == ' '))
        str++;
}
for (i = 0; i < nbuck; i++) {
    j = 0;
    if (str && (*str != '\0'))
        if (sscanf (str, "%d", &j) != 1)
            break;
    bucks[i] += j;
    while (str && (*str != '\0') && (*str != ' '))
        str++;
    while (str && (*str != '\0') && (*str == ' '))
        str++;
}
}

for (i = 1; i < nbuck; i++)
    bucks[i] = bucks[i - 1] + bucks[i];
total = bucks[nbuck - 1];

for (i = 0; i < nbuck; i++) {
    if ((bucks[i] * 100.0 / total) >= 90.0) {
        printf ("%f\n", (i + 1) * buckint);
        break;
    }
}

if (bucks)
    free (bucks);
exit (0);
}

```

DPBCORE.H

/* Copyright (c) Oracle Corporation 1993, 1992. All Rights Reserved. */

/*
NAME DPBCORE.H

DESCRIPTION
Header for CORE function

NOTES
Desktop Performance Group

MODIFIED (MM/DD/YY)
B Moriarty 06/02/95 - add dpbetime() for accurate elapsed time
measure
B Moriarty 05/26/95 - add dpboradt() for new reporting
B Moriarty 05/10/95 - add dpbcpu() for tpcc
C Kelly 04/21/94 - add dpbinpgm() and dpbxtpgm() for Netware NLMs
C Kelly 02/24/93 - add dpbfsync()
B Moriarty 11/12/93 - add dpbgetprty()
R Keller 10/18/93 - add dpbprty()
R Keller 03/06/92 - initial version

```

*/
#ifdef __dpbcore__
#define __dpbcore__

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

#ifdef __STDC__
/* ANSI C
int dpbfsync(FILE *); /* fsync for ACID
*/
int dpbgetprty(char *,char *,int); /* get O/S priority
*/
void dpbinpgm(void); /* pgm. init. function
*/
unsigned long dpbpchk(pcntl *); /* check on forked process
*/
unsigned long dpbproc(char *[], pcntl *); /* spawn/fork new process
*/
int dpbprty(char *); /* set O/S priority
*/
clock_t dpbtimef(void); /* get time
*/
clock_t dpbcpu(void); /* get CPU time
*/
void dpbwait(clock_t); /* wait routine in
millisec */
void dpbxtpgm(void); /* pgm exit routine
*/
int dpboradt(char *); /* sys date time in ora
form*/
clock_t dpbetime(void); /* elapsed time
*/
#else
/* K&R C
int dpbfsync(); /* fsync for ACID
*/
int dpbgetprty(); /* get O/S priority
*/
void dpbinpgm(); /* pgm. init. function
*/
unsigned long dpbpchk(); /* check on forked process
*/
unsigned long dpbproc(); /* spawn/fork new process
*/
int dpbprty(); /* set O/S priority
*/
clock_t dpbtimef(); /* get time
*/
clock_t dpbcpu(); /* get cpu time
*/
void dpbwait(); /* wait routine in
millisec */
void dpbxtpgm(); /* pgm exit routine
*/
int dpboradt(); /* sys date time in ora
form*/

```

```

clock_t      dpbetime();          /* elapsed time
*/
#endif /* __STDC__ */

#endif /* __dpbcore__ */

```

DPBCPU.C

/* Copyright (c) Oracle Corporation 1993. All Rights Reserved. */

```

/*
NAME      DPBTIME.C

DESCRIPTION
    Get time in seconds.

NOTES
    Desktop Performance Group

MODIFIED      (MM/DD/YY)
    bmoriart   05/10/95 - V4.7 Convert from double to clock_t
    MBHULLAR   02/06/95 - V4.5
*/

```

```

#ifdef ORA_NT
#include <windows.h>
#include <time.h>

```

```

clock_t dpbcpu(void)
{
    clock_t begin_cpu;

    begin_cpu = clock();
    return(begin_cpu);
}
#endif /* ORA_NT */

```

DPBETIME.C

/* Copyright (c) Oracle Corporation 1995. All Rights Reserved. */

```

/*
NAME      DPBETIME.C

DESCRIPTION
    Get elapsed time in 10ths of milliseconds as a clock_t.

NOTES
    Desktop Performance Group

MODIFIED      (MM/DD/YY)
    B Moriarty 06/02/95 - V4.8 Initial Version
*/

```

```

/*
NAME      DPBETIME.C

DESCRIPTION
    Get elapsed time in 10ths of milliseconds as a clock_t.

NOTES
    Desktop Performance Group

```

```

MODIFIED      (MM/DD/YY)
    B Moriarty 06/02/95 - V4.8 Initial Version
*/

```

*/

```

#ifdef ORA_OS2
#endif /* ORA_OS2 */

#ifdef ORA_NT
#include <windows.h>
#include <sys\types.h>
#include <time.h>
#include <stdio.h>

BOOL First = TRUE;
LARGE_INTEGER ICount;          /* Initial Time */
LARGE_INTEGER Tptms;          /* Ticks per tenth of millisecond */
#endif /* ORA_NT */

#ifdef __STDC__
clock_t dpbetime(void)
#else
clock_t dpbetime()
#endif /* __STDC__ */
{
#ifdef ORA_NT

    LARGE_INTEGER PFreq;          /* Ticks per Second */
    LARGE_INTEGER PCount;        /* Ticks Since 1970 */
    clock_t etime;               /* Elapsed time in tenths of milliseconds */

    if (First) {
        if (!QueryPerformanceFrequency(&PFreq))
            return((clock_t)-1);
        if (!QueryPerformanceCounter(&ICount))
            return((clock_t)-1);
        Tptms.QuadPart = PFreq.QuadPart / 10000;
        First = FALSE;
        return((clock_t)0);
    }
    if (!QueryPerformanceCounter(&PCount))
        return((clock_t)-1);
    etime = (clock_t) ((PCount.QuadPart - ICount.QuadPart) /
Tptms.QuadPart);
    return(etime);
#endif /* ORA_NT */
}

```

DPBFSYNC.C

/* Copyright (c) Oracle Corporation 1993, 1992. All Rights Reserved. */

```

/*
NAME      DPBFSYNC.C

DESCRIPTION

    Flush o/s buffers to disk for a file.

    Calling fclose() or fflush() is not enough. These calls will only
flush

```

the buffer in the FILE structure by making a write() call to the o/s, and the o/s will probably place these data in its own disk buffers. dpbfsync() will cause the o/s disk buffers for a file to be written to disk.

This function should normally be called *after* an fflush() is done, or you will miss the data that is buffered in the FILE structure.

NOTES

Desktop Performance Group

MODIFIED (MM/DD/YY)
C Kelly 02/24/94 - V4.4 initial version
*/

```
#include <stdio.h>
```

```
#ifndef ORA_OS2
int dpbfsync(FILE *fp)
{
    return 0;
}
#endif /* ORA_OS2 */
```

```
#ifndef ORA_NT
# include <windows.h>

int dpbfsync(FILE *fp)
{
    if (FlushFileBuffers((HANDLE)(fp->_file)) == FALSE)
    {
        return 1;
    };

    return 0;
}
#endif /* ORA_NT */
```

```
#ifndef ORA_AUX

int dpbfsync(fp)
FILE *fp;
{
    if (fsync(fp->_file) == -1)
    {
        return 1;
    };

    return 0;
}
#endif /* ORA_AUX */
```

```
#ifndef ORA_NW
int dpbfsync(FILE *fp)
{
    return 0;
}
#endif /* ORA_NW */
```

```
#ifndef ORA_DOS
int dpbfsync(FILE *fp)
{
    return 0;
}
#endif /* ORA_DOS */
```

```
#ifndef ORA_MAC
#endif /* ORA_MAC */
```

DPBINPGM.C

/* Copyright (c) Oracle Corporation 1994. All Rights Reserved. */

```
/*
NAME    DPBINPGM.C
```

```
DESCRIPTION
    Routine that performs any o/s specific program initialization.
```

```
NOTES
    Desktop Performance Group
```

```
MODIFIED (MM/DD/YY)
    C Kelly 04/21/94 - V4.4 created to support Netware NLMs
```

*/

```
#ifndef ORA_NW
#include <process.h>
#include <library.h>

extern int samtid;
extern int samtgid;

#else /* ORA_NW */
#endif /* ORA_NW */
```

```
#ifdef __STDC__
void dpbinpgm(void)
#else
void dpbinpgm()
```

```

#endif /* __STDC__ */
{
# ifdef ORA_NW

    samtid = GetThreadID(); /* get this program's thread id */
    samtgid = GetThreadGroupID(); /* get this program's thread group id */

# else /* ORA_NW */

    return; /* do nothing for everything else */

# endif /* ORA_NW */
}

```

DPBORADT.C

/* Copyright (c) Oracle Corporation 1993. All Rights Reserved. */

```

/*
NAME    DPBORADT.C

```

DESCRIPTION

```

Get System Date and Time and
Return in Oracle External SQLT_DAT (Date) Format
Returns 1-JAN-2000 00:00:00
when not implemented or when conversion fails

```

NOTES

Desktop Performance Group

```

MODIFIED      (MM/DD/YY)
bmoriart      05/26/95 - V4.8 Created
*/

```

```

#ifdef ORA_NT
# include <windows.h>
#endif /* ORA_NT */

```

```

#ifdef __STDC__
void dpboradt(char *oradt)
#else
void dpboradt(oradt)
unsigned char *oradt;
#endif /* __STDC__ */
{
    char cnvrtOK=TRUE;

```

```

# ifdef ORA_NT
    SYSTEMTIME lpst;

    GetLocalTime(&lpst);
    *oradt = (unsigned char)(lpst.wYear / 100) + 100;
    if (*oradt < 119 || *oradt > 120) cnvrtOK=FALSE;
    *(++oradt) = (unsigned char)(lpst.wYear % 100) + 100;
    if (*oradt < 100 || *oradt > 199) cnvrtOK=FALSE;
    *(++oradt) = (unsigned char)(lpst.wMonth);
    if (*oradt < 1 || *oradt > 12) cnvrtOK=FALSE;
    *(++oradt) = (unsigned char)(lpst.wDay);
    if (*oradt < 1 || *oradt > 31) cnvrtOK=FALSE;

```

```

    *(++oradt) = (unsigned char)(lpst.wHour) + 1;
    if (*oradt < 1 || *oradt > 24) cnvrtOK=FALSE;
    *(++oradt) = (unsigned char)(lpst.wMinute) + 1;
    if (*oradt < 1 || *oradt > 60) cnvrtOK=FALSE;
    *(++oradt) = (unsigned char)(lpst.wSecond) + 1;
    if (*oradt < 1 || *oradt > 60) cnvrtOK=FALSE;
#else /* ORA_NT */
    cnvrtOK = FALSE;
#endif /* ORA_NT */

    if(!cnvrtOK) { /* Use 1-JAN-2000 00:00:00 */
        *oradt++ = 120;
        *oradt++ = 100;
        *oradt++ = 1;
        *oradt++ = 1;
        *oradt++ = 1;
        *oradt++ = 1;
        *oradt++ = 1;
        *oradt++ = 1;
    }
    return; /* do nothing for everything else */
}

```

DPBPCHK.C

/* Copyright (c) Oracle Corporation 1993, 1992. All Rights Reserved. */

```

/*
NAME    DPBPCHK.C

```

DESCRIPTION

Check New Process

NOTES

Desktop Performance Group

```

MODIFIED      (MM/DD/YY)
W Brumiller   02/08/93 - Correct error handling for NT
R Keller      01/08/92 - Initial version

```

```

*/

```

```

#include "dpbpctl.h"

```

```

#ifdef ORA_OS2 /* IBM OS/2 2.0
*/
# define INCL_DOSPROCESS /*
*/
# include <os2.h> /*
*/

```

```

unsigned long dpbpchk(pcctl *info)
{
    ULONG pid;
    APIRET rc;

```

```

rc = DosWaitChild(DCWA_PROCESS,
                 DCWW_WAIT,
                 &info->rcodes,
                 &pid,
                 0);

return(info->rcodes.codeResult);
};
#endif /* ORA_OS2 */

```

```

#ifdef ORA_NT
#include <windows.h>

```

```

int dpbpchk(pcntl *info)
{
    DWORD rc;

    if (WaitForSingleObject(info->proc_info.hProcess, INFINITE) ==
        0xFFFFFFFF)
    {
        return -1;
    };

    if (GetExitCodeProcess(info->proc_info.hProcess, &rc) == FALSE)
    {
        return -1;
    };

    (void)CloseHandle(info->proc_info.hProcess);
    (void)CloseHandle(info->proc_info.hThread);

    return((int)rc);
}
#endif /* ORA_NT */

```

```

#ifdef ORA_AUX
#include <errno.h>

```

```

int dpbpchk(info)
pcntl *info;
{
    extern int errno;
    int byte_mask;
    int status;
    int high_byte;
    int child;
    int i;

    byte_mask = 255; /* low order 8 bits are 1, bits 8..31 are 0 */

    do
    {
        child = wait(&status);

```

```

        if (errno != ECHILD)
        {
            high_byte = ((status & (byte_mask << 8)) >> 8);
        };
    } while (errno != ECHILD);

    return high_byte;
}
#endif /* ORA_AUX */

```

DPBPCNTL.H

/* Copyright (c) Oracle Corporation 1993, 1992. All Rights Reserved. */

```

/*
NAME      DPBPCNTL.H

```

```

DESCRIPTION
    OSD structures for process control

```

```

NOTES
    Desktop Performance Group

```

```

MODIFIED      (MM/DD/YY)
    R Keller      02/03/93 - initial version

```

*/

```

#ifdef __dpbpctl__
#define __dpbpctl__

```

```

#ifdef ORA_OS2 /* IBM OS/2 2.x

```

```

*/
#define INCL_DOSPROCESS
#include <os2.h>
typedef struct _pcntl
{
    RESULTCODES rcodes;
} pcntl;
#endif /* ORA_OS2 */
*/

```

/* IBM OS/2 2.x

```

#ifdef ORA_NT /* Microsoft Windows NT

```

```

*/
#include <windows.h>
*/
typedef struct _pcntl
{
    PROCESS_INFORMATION proc_info;
} pcntl;
#endif /* ORA_NT */
*/

```

/* Microsoft Windows NT

/* Microsoft Windows NT

```

#ifdef ORA_AUX                                /* Apple A/UX
*/
typedef struct _pcntl
{
    int dummy;
} pcntl;
#endif /* ORA_AUX */                          /* Apple A/UX
*/

#ifdef ORA_NW                                  /* Novell Netware
*/
typedef struct _pcntl
{
    int dummy;
} pcntl;
#endif /* ORA_NW */                          /* Novell Netware
*/

#endif /* __dppcntl__ */

                                DPBPROC.C

/* Copyright (c) Oracle Corporation 1993, 1992. All Rights Reserved. */

/*
NAME      DPBPROC.C

DESCRIPTION
    Create New Process

NOTES
    Desktop Performance Group

MODIFIED      (MM/DD/YY)
    W Brumiller 02/08/93 - Add flags for minimized window under NT
    R Keller    01/08/92 - Initial version

*/

#include "dppcntl.h"

#ifdef ORA_OS2                                /* IBM OS/2 2.0
*/
# define INCL_DOSPROCESS
# include <os2.h>                             /*
*/
# include <stdlib.h>                          /*
*/
# include <string.h>                          /*
*/

```

```

unsigned long dpbproc(char *i_argv[], pcntl *info)
{
    char *args;
    char *args2;
    char load_error[100];
    char pgm[44];
    APIRET rc;
    int i;

    args2 = args = (char *)malloc(128);

    strcpy(args, i_argv[0]);
    strcpy(pgm, i_argv[0]);
    strcat(pgm, ".exe");

    args2 += strlen(args) + 1;

    if (i_argv[1] != NULL)
    {
        strcpy(args2, i_argv[1]);
        for (i = 2; i_argv[i] != NULL; i++)
        {
            strcat(args2, " ");
            strcat(args2, i_argv[i]);
        }
    }
    else
    {
        *args2 = '\0';
    }

    rc = DosExecPgm(load_error,
                    sizeof(load_error),
                    EXEC_ASYNCRESULT,
                    args,
                    0,
                    &info->rcodes,
                    pgm);

    free(args);

    return rc;
}
#endif /* ORA_OS2 */

#ifdef ORA_NT                                  /* Microsoft Windows NT
*/
#include <windows.h>
#include <stdlib.h>                             /*
*/
#include <string.h>                             /*
*/

int dpbproc(char *i_argv[], pcntl *info)
{
    BOOL rc;
    int i;

```



```

char *args;
STARTUPINFO start_info;

args = (char *)malloc(128);

memset(&start_info, 0x0, sizeof(STARTUPINFO));
start_info.cb = sizeof(STARTUPINFO);
start_info.lpTitle = i_argv[0];
start_info.dwFlags = STARTF_USESHOWWINDOW;
start_info.wShowWindow = SW_SHOWMINNOACTIVE;

strcpy(args, i_argv[0]);          /* get first str */

for (i = 1; i_argv[i] != NULL; i++)
{
    strcat(args, " ");
    strcat(args, i_argv[i]);
};

if ((rc = CreateProcess(NULL,          // image name
                        args,          // command line
                        NULL,          // process security attr
                        NULL,          // thread security attr
                        TRUE,          // inherit handles
                        CREATE_NEW_CONSOLE, // creation flags
                        NULL,          // environment blocks
                        NULL,          // current directory
                        &start_info,
                        &info->proc_info)) == FALSE)
{
    return rc;
};

return 0;
};

#endif /* ORA_NT */

#ifdef ORA_AUX
#include <stdio.h>
#include <stdlib.h>
#include <sys/types.h>

int dpbproc(arg_list, info)
char *arg_list[];
pcntl *info;
{
    char *path = (char *)malloc(strlen(arg_list[0]) + 3);
    pid_t child;

    sprintf(path, "./%s", arg_list[0]);

    if ((child = fork()) == (pid_t)-1)
    {
        free(path);
        return -1;
    }
}

```

```

else if (child == (pid_t)0)
{
    return execv(path, arg_list);
}
else
{
    free(path);
    return 0;
};
}
#endif /* ORA_AUX */

```

DPBPRTY.C

/* Copyright (c) Oracle Corporation 1993. All Rights Reserved. */

```

/*
NAME      DPBPRTY.C
DESCRIPTION
    Set O/S Priority.
NOTES
    Desktop Performance Group
MODIFIED      (MM/DD/YY)
MBHULLAR     03/25/94 - Change prty_str[1] to case statement
B Moriarty   11/11/93 - Add Get Priority
R Keller     10/18/93 - Redesign
R Keller     10/16/93 - Initial version
*/

```

```

#ifdef ORA_OS2
#include <string.h>
#include <sys\types.h>
#endif /* ORA_OS2 */

```

```

#ifdef ORA_NW
#endif /* ORA_NW */

```

```

#ifdef ORA_NT
#include <windows.h>
#include <string.h>
#define REALCLASS 'R'
#define HIGHCLASS 'H'
#define NORMALCLASS 'N'
#define IDLECLASS 'I'
#endif /* ORA_NT */

```

```

#ifdef ORA_AUX
#endif /* ORA_AUX */

```

```

#ifdef __STDC__

```

```

int dpbprty(char *prty_str)
#else
int dpbprty(prty_str)
char *prty_str;
#endif
{
#ifdef ORA_OS2
    return 0;
#endif /* ORA_OS2 */

#ifdef ORA_AUX
    return 0;
#endif /* ORA_AUX */

#ifdef ORA_NW
    return 0;
#endif /* ORA_NW */

#ifdef ORA_NT

    HANDLE this_process, this_thread;

    DWORD class;

    int prios;

    if ( (strlen(prty_str) > 2) || prty_str[0] == '0')
    {
        return(0);                /* return if invalid length or 0 */
    };

    this_process = GetCurrentProcess();

    switch (prty_str[0])
    {
    case IDLECLASS:
    case 'i':
        class = IDLE_PRIORITY_CLASS;
        break;

    case NORMALCLASS:
    case 'n':
        class = NORMAL_PRIORITY_CLASS;
        break;

    case HIGHCLASS:
    case 'h':
        class = HIGH_PRIORITY_CLASS;
        break;

    case REALCLASS:
    case 'r':
        class = REALTIME_PRIORITY_CLASS;
        break;
    };

    if (!SetPriorityClass(this_process, class))
    {
        return(1);
    };

```

```

this_thread = GetCurrentThread();
switch(prty_str[1])
{
    case '1':
        prios = THREAD_PRIORITY_IDLE;
        break;

    case '2':
        prios = THREAD_PRIORITY_LOWEST;
        break;

    case '3':
        prios = THREAD_PRIORITY_BELOW_NORMAL;
        break;

    case '4':
        prios = THREAD_PRIORITY_NORMAL;
        break;

    case '5':
        prios = THREAD_PRIORITY_ABOVE_NORMAL;
        break;

    case '6':
        prios = THREAD_PRIORITY_HIGHEST;
        break;

    case '7':
        prios = THREAD_PRIORITY_TIME_CRITICAL;
        break;

    default:
        break;
} /* End of switch statement */

if (!SetThreadPriority(this_thread, prios))
{
    return(2);
}

return 0;
# endif /* ORA_NT */
}

#ifdef __STDC__
int dpbgetprty(char *os_pri, char *prty_str, int os_pri_len)
#else
int dpbgetprty(os_pri, prty_str, os_pri_len)
char *os_pri;
char *prty_str;
int os_pri_len;
#endif /* __STDC__ */
{
#ifdef ORA_OS2
    strncpy(os_pri,prty_str,(size_t)os_pri_len);

```

```

return 0;
#endif /* ORA_OS2 */

#ifdef ORA_AUX
    strncpy(os_pri,prty_str,os_pri_len);
    return 0;
#endif /* ORA_AUX */

#ifdef ORA_NW
    strncpy(os_pri, prty_str, os_pri_len);
    return 0;
#endif /* ORA_NW */

#ifdef ORA_NT

HANDLE this_process, this_thread;
DWORD pclass;
int tpri;

this_process = GetCurrentProcess();
pclass = GetPriorityClass(this_process);

switch (pclass)
{
case IDLE_PRIORITY_CLASS:
    strcpy(os_pri,"I");
    break;

case NORMAL_PRIORITY_CLASS:
    strcpy(os_pri,"N");
    break;

case HIGH_PRIORITY_CLASS:
    strcpy(os_pri,"H");
    break;

case REALTIME_PRIORITY_CLASS:
    strcpy(os_pri,"R");
    break;

default:
    strcpy(os_pri,"?");
    break;
};

this_thread=GetCurrentThread();
tpri=GetThreadPriority(this_thread);
switch (tpri)
{
case THREAD_PRIORITY_IDLE:
    strcat(os_pri,"1");
    break;

case THREAD_PRIORITY_LOWEST:
    strcat(os_pri,"2");
    break;

case THREAD_PRIORITY_BELOW_NORMAL:
    strcat(os_pri,"3");
    break;

```

```

case THREAD_PRIORITY_NORMAL:
    strcat(os_pri,"4");
    break;

case THREAD_PRIORITY_ABOVE_NORMAL:
    strcat(os_pri,"5");
    break;

case THREAD_PRIORITY_HIGHEST:
    strcat(os_pri,"6");
    break;

case THREAD_PRIORITY_TIME_CRITICAL:
    strcat(os_pri,"7");
    break;

default:
    strcat(os_pri,"?");
    break;
};

return 0;
#endif /* ORA_NT */
}

```

DPBTIMEF.C

/* Copyright (c) Oracle Corporation 1993, 1992. All Rights Reserved. */

/*

NAME DPBTIMEF.C

DESCRIPTION

Get time in seconds as a clock_t.

NOTES

Desktop Performance Group

MODIFIED

(MM/DD/YY)

B Moriarty	02/14/95	-	V4.6 fix NT & OS/2
C Kelly	01/20/94	-	V4.4 added Netware support
C Kelly	02/05/93	-	V3.1 added A/UX support
R Keller	03/02/92	-	V3.0

*/

```

#ifdef ORA_OS2
#define ORA_PC
#endif /* ORA_OS2 */

```

```

#ifdef ORA_NT
#define ORA_PC
#endif /* ORA_NT */

```

```

#ifdef ORA_PC
#include <sys/types.h>

```

```

# include <sys/timeb.h>
# include <stdio.h>
# include <time.h>

# ifdef __STDC__
clock_t dpbtimef(void)
# else
clock_t dpbtimef()
# endif /* __STDC__ */
{
    struct timeb buf;

    ftime(&buf);
    return((clock_t) (buf.time));
}
#endif /* ORA_PC */

#ifdef ORA_AUX
# include <sys/time.h>
double dpbtimef()
{
    struct timeval t;
    int rc;

    do
    {
        rc = gettimeofday(&t, (struct timezone *)0);
    } while (rc != 0);

    return (((double)t.tv_sec) + (((double)t.tv_usec)/1000000));
}
#endif

#ifdef ORA_NW
# include <time.h>
double dpbtimef()
{
    return (double)time(NULL); /* there is no function with greater
precision */
}
#endif /* ORA_NW */

#ifdef ORA_MAC
# include <types.h>
# include <OSUtils.h>

double dpbtimef()
{
    unsigned long secs;
    GetDateTime(&secs);
    return((double) secs);
}
#endif /* ORA_MAC */

```

DPBWAIT.C

```

/* Copyright (c) Oracle Corporation 1993. All Rights Reserved. */
/*
NAME    DPBWAIT.C

DESCRIPTION
    Wait for n milliseconds.

NOTES
    Desktop Performance Group

MODIFIED      (MM/DD/YY)
R Keller      03/02/92 - V3.0
*/

#ifdef ORA_OS2
# define INCL_DOS
# include <os2.h>
# include <time.h>

void dpbwait(clock_t i)
{
    DosSleep(i);
}
#endif /* ORA_OS2 */

#ifdef ORA_NW
# include <process.h>
void dpbwait(long i)
{
    delay((unsigned)i);
};
#endif /* ORA_NW */

#ifdef ORA_AUX
void dpbwait(wait_time)
long wait_time;
{
    unsigned secs = (unsigned)(wait_time / 1000);

    while (secs)
    {
        secs = sleep(secs);
    };
}
#endif /* ORA_AUX */

#ifdef ORA_NT
# include <windows.h>

```

```

void dpbwait(long i)
{
    Sleep(i);
}
#endif /* ORA_NT */

#ifdef ORA_DOS
#include <time.h>

void dpbwait(long i)
{
    long current_time;
    long target_time;

    current_time = time(NULL);
    target_time = current_time + i/1000;

    while (current_time < target_time)
    {
        current_time = time(NULL);
    };
}
#endif /* ORA_DOS */

```

DPBXTPGM.C

/* Copyright (c) Oracle Corporation 1994. All Rights Reserved. */

```

/*
NAME      DPBXTPGM.C

DESCRIPTION
    Routine that performs any o/s specific program exit operations.

NOTES
    Desktop Performance Group

MODIFIED      (MM/DD/YY)
    C Kelly    04/21/94 - V4.4 created to support Netware NLMs
*/

```

```

#ifdef ORA_NW
#include <process.h>
#include <library.h>

extern int samtid;
extern int samtgid;

#else /* ORA_NW */
#endif /* ORA_NW */

```

```

#ifdef __STDC__

```

```

void dpbxtpgm(void)
#else
void dpbxtpgm()
#endif /* __STDC__ */
{
#ifdef ORA_NW

/*
** Cleanup code for NetWare.
** This routine will cleanup any Oracle connection should the module
** be unexpectedly unloaded.
*/

    int oldtgid;

    oldtgid = SetThreadGroupID(samtgid); /* switch to this NLM's thread
group */
    OraClientExit(samtid);               /* cleanup Oracle connection */
    SetThreadGroupID(oldtgid);          /* reset the thread group */

#else /* ORA_NW */

    return; /* do nothing for everything else */

#endif /* ORA_NW */
}

```

GETRAND.C

```

#ifdef RCSID
static char *RCSid =
    "$Header: getrand.c 7010000.1 95/01/04 19:12:43 plai Generic<base> $"
    "Copyr (c) 1994 Oracle";
#endif /* RCSID */

```

```

/*=====+
|           Copyright (c) 1994 Oracle Corp, Redwood Shores, CA
|           OPEN SYSTEMS PERFORMANCE GROUP
|           All Rights Reserved
|=====+
| FILENAME
|     getrand.c
| DESCRIPTION
|     Generate a random number between 0 and <max_num>.
|     Usage: getrand <max_num>
|=====+*/

```

```

#include <stdio.h>
#include <stdlib.h>
#ifdef ORA_NT
#include <process.h>
#endif

void main (argc, argv)
int argc;

```

```

char *argv[];

{
    int max_num;

    if (argc < 2) {
        fprintf (stderr, "Usage: %s <max_num>\n", argv[0]);
        exit (1);
    }
    max_num = atoi (argv[1]);
    if (max_num < 0) {
        fprintf (stderr, "Error: invalid <max_num> %d\n", max_num);
        exit (1);
    }
    srand (getpid ());
    printf ("%d", (int) (rand () % (max_num + 1)));
    exit (0);
}

```

GETTIME.C

```

#ifndef RCSID
static char *RCSid =
    "$Header: gettime.c 7030100.1 96/05/21 15:31:36 plai Generic<base> $"
    "Copyr (c) 1993 Oracle";
#endif /* RCSID */

```

```

/*=====+
|           Copyright (c) 1996 Oracle Corp, Redwood Shores, CA           |
|           OPEN SYSTEMS PERFORMANCE GROUP                               |
|           All Rights Reserved                                           |
+=====+
FILENAME
    gettime.c

ROUTINES
    gettime
    getcpu

DESCRIPTION
    get wall clock time.
    get cpu time.

NOTES
    Both routines return time in seconds as a double.
+=====+*/

/*
** Options:
**     TIME_W_TIMES:      implement gettime() with times().
**     TIME_W_GETTIME:   implement gettime() with gettimeofday().
**     CPU_W_TIMES:      implement getcpu() with times().
**     CPU_W_GETTRU:     implement getcpu() with getrusage().
**     GETRU_STATS:      collect getrusage statistics
**     GET_P_STATS:      collect get_process_stats statistics
*/

```

```

#ifdef sequent || defined(SEQ_P SX)
#define GET_P_STATS

```

```

#endif /* sequent */

#ifdef aix || defined(AIXRIOS)
#define TIME_W_GETTIME
#define CPU_W_TIMES
#define GETRU_STATS
#endif /* AIXRIOS */

#ifdef a_osf || defined(A_OSF)
#define TIME_W_GETTIME
#define CPU_W_GETTRU
#define GETRU_STATS
#endif /* AIXRIOS */

#ifdef !defined(TIME_W_GETTIME) && !defined(TIME_W_TIMES)
#define TIME_W_TIMES
#endif

#ifdef !defined(CPU_W_GETTRU) && !defined(CPU_W_TIMES)
#define CPU_W_TIMES
#endif

#ifdef GET_P_STATS
#ifdef GETRU_STATS
#undef GETRU_STATS
#endif
#endif

#ifdef TIME_W_GETTIME || defined(CPU_W_GETTRU) ||
defined(GETRU_STATS)
#include <sys/time.h>
#endif /* TIME_W_GETTIME || CPU_W_GETTRU || GETRU_STATS */

#ifdef CPU_W_GETTRU || defined(GETRU_STATS)
#include <sys/resource.h>
#endif /* CPU_W_GETTRU || GETRU_STATS */

#ifdef TIME_W_TIMES || defined(CPU_W_TIMES)
#include <sys/types.h>
#include <sys/times.h>
#include <sys/param.h> /* most systems define HZ here */
#endif /* TIME_W_TIMES or CPU_W_TIMES */

#ifdef GET_P_STATS
#include <sys/types.h>
#include <sys/procstats.h>
#endif /* GET_P_STATS */

#include <stdio.h>

#ifdef GETRU_STATS
struct rusage selfru;
struct rusage kidsru;
#endif /* GETRU_STATS */

#ifdef GET_P_STATS
struct process_stats selfru;
struct process_stats kidsru;
#endif /* GET_P_STATS */

```

```

void getwait(clock_t secs)
{
    printf("sleep = %lu\n", (secs/1000) / HZ);
    printf("hz = %lu\n", HZ);
    sleep((secs/1000) / HZ);
}

clock_t getetime()
{
    struct tms buf;

    return ((times (&buf) / HZ)*10000);
}

double gettime ()
{
#ifdef TIME_W_GETTIME
    struct timeval tv;

    (void) gettimeofday (&tv, (struct timezone *) 0);
    return ((double) tv.tv_sec + (1.0e-6 * (double) tv.tv_usec));
#endif /* TIME_W_GETTIME */

#ifdef TIME_W_TIMES
    struct tms buf;

    return ((double) times (&buf) / HZ);
#endif /* TIME_W_TIMES */
}

double getcpu ()
{
#ifdef CPU_W_TIMES
    struct tms buf;

    (void) times (&buf);
    return (((double) buf.tms_utime + (double) buf.tms_stime) / HZ);
#endif /* CPU_W_TIMES */

#ifdef CPU_W_GETRU
    struct rusage ru;
    double usecs;

    (void) getrusage (0, &ru);
    usecs = 1.0e-6 * (double) (ru.ru_utime.tv_usec + ru.ru_stime.tv_usec);
    return ((double) (ru.ru_utime.tv_sec + ru.ru_stime.tv_sec) + usecs);
#endif /* CPU_W_GETRU */
}

```

```

getru (fp, kids, config, runname, proc_no)
FILE *fp;
int kids;
char *config;
char *runname;
int proc_no;

{
#ifdef GETRU_STATS
    struct rusage ru;

    fprintf (fp, "%-10.10s %-10.10s %10d %10d ", config, runname, proc_no,
kids);
    getrusage (kids ? RUSAGE_CHILDREN : RUSAGE_SELF, &ru);
    print_ru (fp, &ru);
    fprintf (fp, "\n");
#endif /* GETRU_STATS */

#ifdef GET_P_STATS
    timeval_t tv;
    struct process_stats ru;

    fprintf (fp, "%-10.10s %-10.10s %10d %10d ", config, runname, proc_no,
kids);
    if (kids)
        get_process_stats (&tv, PS_SELF, (struct process_stats *) 0, &ru);
    else
        get_process_stats (&tv, PS_SELF, &ru, (struct process_stats *) 0);
    print_ru (fp, &ru);
    fprintf (fp, "\n");
#endif /* GET_P_STATS */
}

getrul (kids)
int kids;

{
#ifdef GETRU_STATS
    if (kids) {
        memset (&kidsru, 0, sizeof (kidsru));
        getrusage (RUSAGE_CHILDREN, &kidsru);
    }
    else {
        memset (&selfru, 0, sizeof (selfru));
        getrusage (RUSAGE_SELF, &selfru);
    }
#endif /* GETRU_STATS */

#ifdef GET_P_STATS
    timeval_t tv;

    if (kids) {
        memset (&kidsru, 0, sizeof (kidsru));

```

```

        get_process_stats (&tv, PS_SELF, (struct process_stats *) 0,
&kidsru);
    }
    else {
        memset (&selfru, 0, sizeof (selfru));
        get_process_stats (&tv, PS_SELF, &selfru, (struct process_stats *)
0);
    }
#endif /* GET_P_STATS */

}

getru2 (fp, kids, config, runname, proc_no)

FILE *fp;
int kids;
char *config;
char *runname;
int proc_no;

{

#ifdef GETRU_STATS
    struct rusage ru;

    fprintf (fp, "%-10.10s %-10.10s %10d %10d ", config, runname, proc_no,
kids);
    getrusage (kids ? RUSAGE_CHILDREN : RUSAGE_SELF, &ru);
    if (kids)
        diffru (&ru, &kidsru);
    else
        diffru (&ru, &selfru);
    print_ru (fp, &ru);
    fprintf (fp, "\n");
#endif /* GETRU_STATS */

#ifdef GET_P_STATS
    timeval_t tv;
    struct process_stats ru;

    fprintf (fp, "%-10.10s %-10.10s %10d %10d ", config, runname, proc_no,
kids);
    if (kids)
        get_process_stats (&tv, PS_SELF, (struct process_stats *) 0, &ru);
    else
        get_process_stats (&tv, PS_SELF, &ru, (struct process_stats *) 0);
    if (kids)
        diffru (&ru, &kidsru);
    else
        diffru (&ru, &selfru);
    print_ru (fp, &ru);
    fprintf (fp, "\n");
#endif /* GET_P_STATS */

}

#ifdef GETRU_STATS
print_ru (fp, ru)

```

```

FILE *fp;
struct rusage *ru;

{

    fprintf (fp, "%10ld ", ru->ru_utime.tv_sec * 1000 +
(ru->ru_utime.tv_usec/1000));
    fprintf (fp, "%10ld ", ru->ru_stime.tv_sec * 1000 +
(ru->ru_stime.tv_usec/1000));
    fprintf (fp, "%10ld ", ru->ru_maxrss);
    fprintf (fp, "%10ld ", ru->ru_majflt);
    fprintf (fp, "%10ld ", ru->ru_minflt);
    fprintf (fp, "%10ld ", 0);
    fprintf (fp, "%10ld ", 0);
    fprintf (fp, "%10ld ", 0);
    fprintf (fp, "%10ld ", ru->ru_nswap);
    fprintf (fp, "%10ld ", 0);
    fprintf (fp, "%10ld ", ru->ru_nvcsw);
    fprintf (fp, "%10ld ", ru->ru_nivcsw);
    fprintf (fp, "%10ld ", ru->ru_nsignals);
    fprintf (fp, "%10ld ", 0);
    fprintf (fp, "%10ld ", 0);
    fprintf (fp, "%10ld ", ru->ru_inblock);
    fprintf (fp, "%10ld ", ru->ru_oublock);
    fprintf (fp, "%10ld ", 0);
    fprintf (fp, "%10ld", 0);

}

diffru (ru2, ru)

struct rusage *ru2;
struct rusage *ru;

{

    ru2->ru_utime.tv_sec -= ru->ru_utime.tv_sec;
    ru2->ru_utime.tv_usec -= ru->ru_utime.tv_usec;
    ru2->ru_stime.tv_sec -= ru->ru_stime.tv_sec;
    ru2->ru_stime.tv_usec -= ru->ru_stime.tv_usec;
    ru2->ru_maxrss -= ru->ru_maxrss;
    ru2->ru_ixrss -= ru->ru_ixrss;
    ru2->ru_idrss -= ru->ru_idrss;
    ru2->ru_minflt -= ru->ru_minflt;
    ru2->ru_majflt -= ru->ru_majflt;
    ru2->ru_nswap -= ru->ru_nswap;
    ru2->ru_inblock -= ru->ru_inblock;
    ru2->ru_oublock -= ru->ru_oublock;
    ru2->ru_msgsnd -= ru->ru_msgsnd;
    ru2->ru_msgrcv -= ru->ru_msgrcv;
    ru2->ru_nsignals -= ru->ru_nsignals;
    ru2->ru_nvcsw -= ru->ru_nvcsw;
    ru2->ru_nivcsw -= ru->ru_nivcsw;

}

#endif /* GETRU_STATS */

```



```

#ifdef GET_P_STATS
print_ru (fp, ps)

FILE *fp;
struct process_stats *ps;

{
    fprintf (fp, "%lu ", ps->ps_utime.tv_sec * 1000 +
              (ps->ps_utime.tv_usec/1000));
    fprintf (fp, "%lu ", ps->ps_stime.tv_sec * 1000 +
              (ps->ps_stime.tv_usec/1000));
    fprintf (fp, "%lu ", ps->ps_maxrss);
    fprintf (fp, "%lu ", ps->ps_pagein);
    fprintf (fp, "%lu ", ps->ps_reclaim);
    fprintf (fp, "%lu ", ps->ps_zerofill);
    fprintf (fp, "%lu ", ps->ps_pffincr);
    fprintf (fp, "%lu ", ps->ps_pffdecr);
    fprintf (fp, "%lu ", ps->ps_swap);
    fprintf (fp, "%lu ", ps->ps_syscall);
    fprintf (fp, "%lu ", ps->ps_volcsw);
    fprintf (fp, "%lu ", ps->ps_involcsw);
    fprintf (fp, "%lu ", ps->ps_signal);
    fprintf (fp, "%lu ", ps->ps_lread);
    fprintf (fp, "%lu ", ps->ps_lwrite);
    fprintf (fp, "%lu ", ps->ps_bread);
    fprintf (fp, "%lu ", ps->ps_bwrite);
    fprintf (fp, "%lu ", ps->ps_phread);
    fprintf (fp, "%lu", ps->ps_phwrite);
}

```

```
diffru (ru2, ru)
```

```

struct process_stats *ru2;
struct process_stats *ru;

```

```

{
    ru2->ps_utime.tv_sec -= ru->ps_utime.tv_sec;
    ru2->ps_utime.tv_usec -= ru->ps_utime.tv_usec;
    ru2->ps_stime.tv_sec -= ru->ps_stime.tv_sec;
    ru2->ps_stime.tv_usec -= ru->ps_stime.tv_usec;
    ru2->ps_maxrss -= ru->ps_maxrss;
    ru2->ps_pagein -= ru->ps_pagein;
    ru2->ps_reclaim -= ru->ps_reclaim;
    ru2->ps_zerofill -= ru->ps_zerofill;
    ru2->ps_pffincr -= ru->ps_pffincr;
    ru2->ps_pffdecr -= ru->ps_pffdecr;
    ru2->ps_swap -= ru->ps_swap;
    ru2->ps_syscall -= ru->ps_syscall;
    ru2->ps_volcsw -= ru->ps_volcsw;
    ru2->ps_involcsw -= ru->ps_involcsw;
    ru2->ps_signal -= ru->ps_signal;
    ru2->ps_lread -= ru->ps_lread;
    ru2->ps_lwrite -= ru->ps_lwrite;
    ru2->ps_bread -= ru->ps_bread;
    ru2->ps_bwrite -= ru->ps_bwrite;
}

```

```

ru2->ps_phread -= ru->ps_phread;
ru2->ps_phwrite -= ru->ps_phwrite;
}
#endif /* GET_P_STATS */

```

MAKEFILE.NT

```

#
# Copyright (c) 1997 Oracle Corp, Redwood Shores, CA
# All Rights Reserved
#
# FILE: Makefile
# DESCRIPTION: Builds TPCC Load/Test executables
# CREATED: 02 July 97
# MODIFIED:
# rmook 02/04/98 added perf counter stuff
# jdavison 2/4/98 changes for ops
# rmook 11/20/97 setup enhancements
# rmook 11/20/97 8.0.4 edits (oci.lib)
#
CPU = i386

# !IF "$(CFG)" != "TUXEDO" && "$(CFG)" != "TOPEND"
# !MESSAGE Invalid configuration "$(CFG)" specified.
# !MESSAGE You can specify a configuration when running NMAKE
# !MESSAGE by defining the macro CFG on the command line. For example:
# !MESSAGE
# !MESSAGE NMAKE /f "Makefile" CFG="TUXEDO"
# !MESSAGE
# !MESSAGE Possible choices for configuration are:
# !MESSAGE
# !MESSAGE TUXEDO - for tuxedo build
# !MESSAGE TOPEND - for topend build
# !MESSAGE
# !ERROR An invalid configuration is specified.
# !ENDIF

CLIB_DIR = c:\Program Files\Microsoft SDK\Lib\IA64

SOURCE_DIR = $(TPCCBENCH)\source\server

OCI_SUB = oci
OCI_INCLUDE = $(ORACLE_HOME)\$(OCI_SUB)\include
#OCI_LIB_HOME = $(ORACLE_HOME)\$(OCI_SUB)\lib\msvc
OCI_LIB = $(ORACLE_HOME)\lib\oci.lib

DPB_LIB_DIR = ..\lib
DPB_LIB = $(DPB_LIB_DIR)\dpbnt.lib

!IF "$(CFG)" == "TUXEDO"
COMMON_LIB_DIR = C:\inetpub\wwwroot
COMMON_LIB = $(COMMON_LIB_DIR)\common_files.lib
!ELSE
COMMON_LIB_DIR = C:\inetpub\wwwroot
# COMMON_LIB =

```

```

COMMON_LIB      = common_files.lib

!ENDIF

# Visual C++ libraries
SOCKETS_LIB     = "$(CLIB_DIR)\wsock32.lib"
ADVAPI_LIB     = "$(CLIB_DIR)\advapi32.lib"

CL              = ecl
CFLAGS         = -c -W3 -Wp64
COPT           = -O2 -Gf -G2
#CDEBUG        = -Od -Z7 -Ge

!IF "$(CFG)" == "TUXEDO"
TM_CFLAGS = /DTUX /D_CONSOLE /DWIN32 /D_TMSTHEADS /IC:\TUXEDO\include
!ENDIF

!IF "$(CFG)" == "TOPEND"
TM_CFLAGS = /DTOP
!ENDIF

TM_CFLAGS =

ORA_DEFINES    = /DORACLE /DOCI /DORA_NT
ORA_INCLUDES   = /I$(OCI_INCLUDE) /I$(DPB_LIB_DIR)

CL_OPS         = $(CFLAGS) $(COPT) $(CDEBUG) $(ORA_DEFINES) $(TM_CFLAGS)
$(ORA_INCLUDES)

LINK           = link
#LFLAGS        = /debug:full /debugtype:cv /pdb:none

LIBRARIAN     = lib

#
# Private C compilation rule.
#
.c.obj:
    @$ (CL) $(CL_OPS) /Fo$@ $*.c

#
# Destination for executables.
#
BIN_DIR       = ..\..\bin

#
# Rule for building an "exe" in $(BIN_DIR) and using object files in
current
# directory.
#
{ }.obj{ $(BIN_DIR) }.exe:
    @$ (LINK) /NOD libc.lib oldnames.lib kernel32.lib $(LFLAGS) /map
/OUT:$@ $(DPB_LIB) $(OCI_LIB) $**

all: $(COMMON_LIB)
    $(DPB_LIB)
        $(BIN_DIR)\tpccload.exe \
        $(BIN_DIR)\tpcc.exe \
        $(BIN_DIR)\getrand.exe \
        $(BIN_DIR)\90per.exe \
        $(BIN_DIR)\runtpb.exe \

```

```

$(BIN_DIR)\ntstat.exe \
$(BIN_DIR)\single_txn.exe \
$(BIN_DIR)\sleep.exe \
$(BIN_DIR)\press_return.exe \
$(BIN_DIR)\runid.exe

c_trnsnt.lib: plnew.obj plpay.obj plord.obj pldel.obj plsto.obj
    @$ (LIBRARIAN) /out:$@ $**

$(DPB_LIB):
    cd $(DPB_LIB_DIR)
#    $(MAKE) -f makefile.intel )
    $(MAKE) -f Makefile.nt
    cd $(SOURCE_DIR)

$(COMMON_LIB): plnew.obj plpay.obj plord.obj pldel.obj plsto.obj \
    errrpt.obj report.obj tpccpl.obj
    @$ (LIBRARIAN) /out:$@ $**

press_return.obj: press_return.c

runid.obj: runid.c

tpccload.obj: tpccload.c tpcc.h

c_drv_o7.obj: c_drv_o7.c tpcc.h tpcc_info.h results.h perf.h

perf.obj: perf.c perf.h

single_txn.obj: single_txn.c tpcc.h tpcc_info.h results.h

sleep.obj: sleep.c

c_dump.obj: c_dump.c tpcc.h tpcc_info.h

test_drv.obj: test_drv.c tpcc.h tpcc_info.h

test_trn.obj: test_trn.c tpcc.h tpcc_info.h

tpccpl.obj: tpccpl.c tpcc.h tpcc_info.h tpccpl.h

plnew.obj: plnew.c tpcc.h tpccpl.h
plpay.obj: plpay.c tpcc.h tpccpl.h
plord.obj: plord.c tpcc.h tpccpl.h
pldel.obj: pldel.c tpcc.h tpccpl.h
plsto.obj: plsto.c tpcc.h tpccpl.h

report.obj: report.c results.h

errrpt.obj: errrpt.c

#tpccsvr.obj: tpccsvr.c tpcc.h tpcc_info.h

getrand.obj: getrand.c

90per.obj: 90per.c

runtpb.obj: runtpb.c

$(BIN_DIR)\tpccload.exe: tpccload.obj

```

```

#$(BIN_DIR)\test_drv.exe: test_drv.obj c_drv_o7.obj c_dump.obj errrpt.obj
perf.obj $(SOCKETS_LIB)

#$(BIN_DIR)\test_trn.exe: test_trn.obj c_trnsnt.lib $(ADVAPI_LIB)
tpccpl.obj c_dump.obj errrpt.obj

$(BIN_DIR)\tpcc.exe: c_drv_o7.obj c_trnsnt.lib tpccpl.obj c_dump.obj
report.obj perf.obj errrpt.obj $(DPB_LIB) $(OCI_LIB) $(SOCKETS_LIB)
$(ADVAPI_LIB)
$(LINK) /NOD libc.lib oldnames.lib kernel32.lib $(LFLAGS) /OUT:$@
**

$(BIN_DIR)\single_txn.exe: single_txn.obj c_trnsnt.lib tpccpl.obj
c_dump.obj \
report.obj errrpt.obj $(DPB_LIB) $(OCI_LIB) $(SOCKETS_LIB)
$(ADVAPI_LIB)
@$ (LINK) /NOD libc.lib oldnames.lib kernel32.lib $(LFLAGS) /OUT:$@
**

$(BIN_DIR)\getrand.exe: getrand.obj

$(BIN_DIR)\90per.exe: 90per.obj

$(BIN_DIR)\runtpb.exe: runtpb.obj

$(BIN_DIR)\sleep.exe: sleep.obj

$(BIN_DIR)\press_return.exe: press_return.obj

ntstat.obj: ntstat.c counter.h counters.h
@$ (CL) $(CL_OPS) /DORACLE_PROCESS /Fo$@ $*.c

ins_stat.obj: ins_stat.c counter.h

$(BIN_DIR)\ntstat.exe: ntstat.obj ins_stat.obj $(ADVAPI_LIB)

clean:
@for %f in ( *.obj *.lib $(BIN_DIR)\*.exe ) do if exist %f del %f
@for %f in ( *.obj *.lib ) do if exist $(DPB_LIB_DIR)\%f del
$(DPB_LIB_DIR)\%f

```

ORDLX1.CTL

```

--
-- $Header: ordline.ctl 7030100.1 95/08/07 15:54:11 plai Generic<base> $
Copyr (c) 1994 Oracle
--
-- =====+
--          Copyright (c) 1994 Oracle Corp, Redwood Shores, CA
--          OPEN SYSTEMS PERFORMANCE GROUP
--          All Rights Reserved
-- =====+
-- FILENAME
--   ordline.ctl
-- DESCRIPTION
--   This is a SQL*Loader control file. It is used for
--   loading order lines to the tpcc database.
-- USAGE
--   sqlldr[st] <user_name>/<password> <SQL*Loader control file>

```

```

-- =====*/
OPTIONS (DIRECT = TRUE, PARALLEL = TRUE)

UNRECOVERABLE

LOAD DATA
APPEND

INTO TABLE ordlx

APPEND
FIELDS TERMINATED BY WHITESPACE OPTIONALLY ENCLOSED BY '''
(
  ol_o_id          integer external,
  ol_d_id          integer external,
  ol_w_id          integer external,
  ol_number        integer external,
  ol_delivery_d    date,
  ol_i_id          integer external,
  ol_supply_w_id  integer external,
  ol_quantity      integer external,
  ol_amount        integer external,
  ol_dist_info    char(24)
)

                                ORDRX1.CTL

--
-- $Header: order.ctl 7030100.1 95/08/07 15:54:01 plai Generic<base> $
Copyr (c) 1994 Oracle
--
-- =====+
--          Copyright (c) 1994 Oracle Corp, Redwood Shores, CA
--          OPEN SYSTEMS PERFORMANCE GROUP
--          All Rights Reserved
-- =====+
-- FILENAME
--   order.ctl
-- DESCRIPTION
--   This is a SQL*Loader control file. It is used for
--   loading orders to the tpcc database.
-- USAGE
--   sqlldr[st] <user_name>/<password> <SQL*Loader control file>
-- =====*/

OPTIONS (DIRECT = TRUE, PARALLEL = TRUE)

UNRECOVERABLE

LOAD DATA
APPEND

INTO TABLE ordr
APPEND
FIELDS TERMINATED BY WHITESPACE OPTIONALLY ENCLOSED BY '''
(
  o_id            integer external,
  o_d_id          integer external,
  o_w_id          integer external,

```

```

o_c_id      integer external,
o_entry_d   date,
o_carrier_id integer external,
o_ol_cnt    integer external,
o_all_local integer external
)

```

TPCCLOAD.C

```

#ifdef RCSID
static char *RCSid =
"$Header: tpcclload.c 7030100.1 96/05/13 16:20:36 plai Generic<base> $"
Copyr (c) 1993 Oracle";
#endif /* RCSID */

```

```

/*=====
      Copyright (c) 1994 Oracle Corp, Redwood Shores, CA
      OPEN SYSTEMS PERFORMANCE GROUP
      All Rights Reserved
=====*/
FILENAME
tpccload.c
DESCRIPTION
Load or generate TPC-C database tables.
Usage: tpcclload -M <# of wares> [options]
      options: -A load all tables
              -w load ware table
              -d load dist table
              -c load cust table
              -i load item table
              -s load stok table (cluster around s_w_id)
              -S load stok table (cluster around s_i_id)
              -h load hist table
              -n load new-order table
              -o <oline file> load order and order-line table
              -b <ware#> beginning ware number
              -e <ware#> ending ware number
              -j <item#> beginning item number (with -S)
              -k <item#> ending item number (with -S)
              -g generate rows to standard output
=====*/

```

```

#include <stdio.h>
#include <stdlib.h>
#include <string.h>
#include <time.h>
#include <sys/types.h>
#include "tpcc.h"

```

```

#ifdef ORA_NT
#undef boolean
#include <process.h>
#include "dpbcore.h"
# define gettime dpbtimef
# define getcpu dpbcpu
#define lrand48() ((long)rand() <<15 | rand())
#ifdef __STDC__
# define PROTO(args) args
#else

```

```

# define PROTO(args) ()
#endif
#endif

#define DISTARR 10 /* dist insert array size */
#define CUSTARR 100 /* cust insert array size */
#define STOCARR 100 /* stok insert array size */
#define ITEMARR 100 /* item insert array size */
#define HISTARR 100 /* hist insert array size */
#define ORDEARR 100 /* order insert array size */
#define NEWOARR 100 /* new order insert array size */

#define DISTFAC 10 /* max. dist id */
#define CUSTFAC 3000 /* max. cust id */
#define STOCFAC 100000 /* max. stok id */
#define ITEMFAC 100000 /* max. item id */
#define HISTFAC 30000 /* history / warehouse */
#define ORDEFAC 3000 /* order / district */
#define NEWOFAC 900 /* new order / district */

#define C 0 /* constant in non-uniform dist. eqt. */
#define CNUM1 1 /* first constant in non-uniform dist. eqt. */
#define CNUM2 2 /* second constant in non-uniform dist. eqt. */
#define CNUM3 3 /* third constant in non-uniform dist. eqt. */

#define SEED 2 /* seed for random functions */

#define NOT_SERIALIZABLE 8177 /* ORA-08177: transaction not serializable */
#define SNAPSHOT_TOO_OLD 1555 /* ORA-01555: snapshot too old */
#define RECOVERERR -10
#define IRRECERR -20

#define SQLTXTW "INSERT INTO ware (w_id, w_ytd, w_tax, w_name, w_street_1, w_street_2, w_city, w_state, w_zip) VALUES (:w_id, 30000000, :w_tax, :w_name, :w_street_1, \ :w_street_2, :w_city, :w_state, :w_zip)"

#define SQLXTXD "INSERT INTO dist (d_id, d_w_id, d_ytd, d_tax, d_next_o_id, d_name, d_street_1, d_street_2, d_city, d_state, d_zip) VALUES (:d_id, :d_w_id,3000000, :d_tax, \ 3001, :d_name, :d_street_1, :d_street_2, :d_city, :d_state, :d_zip)"

#define SQLTXTC "INSERT INTO cust (C_ID, C_D_ID, C_W_ID, C_FIRST, C_MIDDLE, C_LAST, 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, C_YTD_PAYMENT, C_PAYMENT_CNT, C_DELIVERY_CNT, C_DATA) VALUES (:c_id, :c_d_id, :c_w_id, \ :c_first, 'OE', :c_last, :c_street_1, :c_street_2, :c_city, :c_state, \ :c_zip, :c_phone, SYSDATE, :c_credit, 5000000, :c_discount, -1000, 1000, 1, \ 0, :c_data)"

#define SQLTXTH "INSERT INTO hist (h_c_id, h_c_d_id, h_c_w_id, h_d_id, h_w_id, h_date, h_amount, h_data) VALUES (:h_c_id, :h_c_d_id, :h_c_w_id, \ :h_d_id, :h_w_id, SYSDATE, 1000, :h_data)"

#define SQLTXTS "INSERT INTO stok (s_i_id, s_w_id, s_quantity,s_dist_01, s_dist_02, s_dist_03, s_dist_04, s_dist_05 , s_dist_06, s_dist_07,

```

```

s_dist_08, s_dist_09, s_dist_10, s_ytd, s_order_cnt, s_remote_cnt, s_data)
\
VALUES (:s_i_id, :s_w_id, :s_quantity, \
:s_dist_01, :s_dist_02, :s_dist_03, :s_dist_04, :s_dist_05, :s_dist_06,
\
:s_dist_07, :s_dist_08, :s_dist_09, :s_dist_10, 0, 0, 0, :s_data)" \

#define SQLTXTI "INSERT INTO item (I_ID,I_IM_ID,I_NAME,I_PRICE,I_DATA)
VALUES (:i_id, :i_im_id, :i_name, :i_price, \
:i_data)"

#define SQLTXTO1 "INSERT INTO ordr (O_ID,
O_D_ID,O_W_ID,O_C_ID,O_ENTRY_D,O_CARRIER_ID,O_OL_CNT,O_ALL_LOCAL) \
VALUES (:o_id, :o_d_id, :o_w_id, :o_c_id, \
SYSDATE, :o_carrier_id, :o_ol_cnt, 1)"

#define SQLTXTO2 "INSERT INTO ordr (O_ID,
O_D_ID,O_W_ID,O_C_ID,O_ENTRY_D,O_CARRIER_ID,O_OL_CNT,O_ALL_LOCAL) \
VALUES (:o_id, :o_d_id, :o_w_id, :o_c_id, \
SYSDATE, 11, :o_ol_cnt, 1)"

#define SQLTXTO11 "INSERT INTO ordl (OL_O_ID, OL_D_ID, OL_W_ID, OL_NUMBER,
OL_DELIVERY_D, OL_I_ID, OL_SUPPLY_W_ID, OL_QUANTITY, OL_AMOUNT,
OL_DIST_INFO) \
VALUES (:ol_o_id, :ol_d_id, \
:ol_w_id, :ol_number, SYSDATE, :ol_i_id, :ol_supply_w_id, 5, 0, \
:ol_dist_info)"

#define SQLTXTO12 "INSERT INTO ordl (OL_O_ID, OL_D_ID, OL_W_ID, OL_NUMBER,
OL_DELIVERY_D, OL_I_ID, OL_SUPPLY_W_ID, OL_QUANTITY, OL_AMOUNT,
OL_DIST_INFO) \
VALUES (:ol_o_id, :ol_d_id, \
:ol_w_id, :ol_number, to_date('01-Jan-1811'), :ol_i_id,
:ol_supply_w_id, 5, :ol_amount, \
:ol_dist_info)"

#define SQLTXTNO "INSERT INTO nord (no_o_id, no_d_id, no_w_id) VALUES
(:no_o_id, :no_d_id, :no_w_id)"

#define SQLTXTENHA "alter session set \"_enable_hash_overflow\"=true"
#define SQLTXTDIHA "alter session set \"_enable_hash_overflow\"=false"

static char *lastname[] = {
"BAR",
"OUGHT",
"ABLE",
"PRI",
"PRES",
"ESE",
"ANTI",
"CALLY",
"ATION",
"EING"
};

char num9[10];
char num16[17];
char str2[3];
char str24[15][25];
int randperm3000[3000];

void initperm();
void randstr();
void randdatastr();
void randnum();
void randlastname (char*, int);
int NURand();
void sysdate();

OCIEnv *tpcenv;
OCIError *errhp;
OCIError *errhp;
OCISvcCtx *tpcsvc;
OCISession *tpcusr;

OCISmt *curv;
OCISmt *curd;
OCISmt *curc;
OCISmt *curh;
OCISmt *curs;
OCISmt *curi;
OCISmt *curo1;
OCISmt *curo2;
OCISmt *curol1;
OCISmt *curol2;
OCISmt *curno;

OCIBind *w_id_bp = (OCIBind *) 0;
OCIBind *w_name_bp = (OCIBind *) 0;
OCIBind *w_street1_bp = (OCIBind *) 0;
OCIBind *w_street2_bp = (OCIBind *) 0;
OCIBind *w_city_bp = (OCIBind *) 0;
OCIBind *w_state_bp = (OCIBind *) 0;
OCIBind *w_zip_bp = (OCIBind *) 0;
OCIBind *w_tax_bp = (OCIBind *) 0;

OCIBind *d_id_bp = (OCIBind *) 0;
OCIBind *d_w_id_bp = (OCIBind *) 0;
OCIBind *d_name_bp = (OCIBind *) 0;
OCIBind *d_street1_bp = (OCIBind *) 0;
OCIBind *d_street2_bp = (OCIBind *) 0;
OCIBind *d_city_bp = (OCIBind *) 0;
OCIBind *d_state_bp = (OCIBind *) 0;
OCIBind *d_zip_bp = (OCIBind *) 0;
OCIBind *d_tax_bp = (OCIBind *) 0;

OCIBind *c_id_bp = (OCIBind *) 0;
OCIBind *c_d_id_bp = (OCIBind *) 0;
OCIBind *c_w_id_bp = (OCIBind *) 0;
OCIBind *c_first_bp = (OCIBind *) 0;
OCIBind *c_last_bp = (OCIBind *) 0;
OCIBind *c_street1_bp = (OCIBind *) 0;
OCIBind *c_street2_bp = (OCIBind *) 0;
OCIBind *c_city_bp = (OCIBind *) 0;
OCIBind *c_state_bp = (OCIBind *) 0;
OCIBind *c_zip_bp = (OCIBind *) 0;
OCIBind *c_phone_bp = (OCIBind *) 0;
OCIBind *c_discount_bp = (OCIBind *) 0;
OCIBind *c_credit_bp = (OCIBind *) 0;
OCIBind *c_data_bp = (OCIBind *) 0;

OCIBind *i_id_bp = (OCIBind *) 0;

```

```

OCIBind *i_im_id_bp = (OCIBind *) 0;
OCIBind *i_name_bp = (OCIBind *) 0;
OCIBind *i_price_bp = (OCIBind *) 0;
OCIBind *i_data_bp = (OCIBind *) 0;

OCIBind *s_i_id_bp = (OCIBind *) 0;
OCIBind *s_w_id_bp = (OCIBind *) 0;
OCIBind *s_quantity_bp = (OCIBind *) 0;
OCIBind *s_dist_01_bp = (OCIBind *) 0;
OCIBind *s_dist_02_bp = (OCIBind *) 0;
OCIBind *s_dist_03_bp = (OCIBind *) 0;
OCIBind *s_dist_04_bp = (OCIBind *) 0;
OCIBind *s_dist_05_bp = (OCIBind *) 0;
OCIBind *s_dist_06_bp = (OCIBind *) 0;
OCIBind *s_dist_07_bp = (OCIBind *) 0;
OCIBind *s_dist_08_bp = (OCIBind *) 0;
OCIBind *s_dist_09_bp = (OCIBind *) 0;
OCIBind *s_dist_10_bp = (OCIBind *) 0;
OCIBind *s_data_bp = (OCIBind *) 0;

OCIBind *h_c_id_bp = (OCIBind *) 0;
OCIBind *h_c_d_id_bp = (OCIBind *) 0;
OCIBind *h_c_w_id_bp = (OCIBind *) 0;
OCIBind *h_d_id_bp = (OCIBind *) 0;
OCIBind *h_w_id_bp = (OCIBind *) 0;
OCIBind *h_data_bp = (OCIBind *) 0;

OCIBind *ol_o_id_bp = (OCIBind *) 0;
OCIBind *ol_d_id_bp = (OCIBind *) 0;
OCIBind *ol_w_id_bp = (OCIBind *) 0;
OCIBind *ol_i_id_bp = (OCIBind *) 0;
OCIBind *ol_number_bp = (OCIBind *) 0;
OCIBind *ol_supply_w_id_bp = (OCIBind *) 0;
OCIBind *ol_dist_info_bp = (OCIBind *) 0;
OCIBind *ol_amount_bp = (OCIBind *) 0;

OCIBind *o_id_bp = (OCIBind *) 0;
OCIBind *o_d_id_bp = (OCIBind *) 0;
OCIBind *o_w_id_bp = (OCIBind *) 0;
OCIBind *o_c_id_bp = (OCIBind *) 0;
OCIBind *o_carrier_id_bp = (OCIBind *) 0;
OCIBind *o_ol_cnt_bp = (OCIBind *) 0;
OCIBind *o_ocnt_bp = (OCIBind *) 0;
OCIBind *o_olcnt_bp = (OCIBind *) 0;

OCIBind *no_o_id_bp = (OCIBind *) 0;
OCIBind *no_d_id_bp = (OCIBind *) 0;
OCIBind *no_w_id_bp = (OCIBind *) 0;

void myusage()
{
    fprintf (stderr, "\n");
    fprintf (stderr, "Usage:\t\ttpccload -M <multiplier> [options]\n");
    fprintf (stderr, "options:\n");
    fprintf (stderr, "\t-A :\tload all tables\n");
    fprintf (stderr, "\t-w :\tload ware table\n");
    fprintf (stderr, "\t-d :\tload dist table\n");
    fprintf (stderr, "\t-c :\tload cust table\n");
    fprintf (stderr, "\t-i :\tload item table\n");
    fprintf (stderr, "\t-s :\tload stok table (cluster around s_w_id)\n");

```

```

    fprintf (stderr, "\t-S :\tload stok table (cluster around s_i_id)\n");
    fprintf (stderr, "\t-h :\tload hist table\n");
    fprintf (stderr, "\t-n :\tload new-order table\n");
    fprintf (stderr, "\t-o <oline file> :\tload order and order-line
table\n");
    fprintf (stderr, "\t-b <ware#> :\tbeginning ware number\n");
    fprintf (stderr, "\t-e <ware#> :\tending ware number\n");
    fprintf (stderr, "\t-j <item#> :\tbeginning item number (with -S)\n");
    fprintf (stderr, "\t-k <item#> :\tending item number (with -S)\n");
    fprintf (stderr, "\t-g :\tgenerate rows to standard output\n");
    fprintf (stderr, "\t\t$tpcc_bench must be set to the location of the
kit\n");
    fprintf (stderr, "\n");
    exit(1);
}

int sqlfile(fnam,linebuf)
char *fnam;
text *linebuf;
{
    FILE *fd;
    int nulpt = 0;
    char realfile[512];

    sprintf(realfile,"%s",fnam);
    fd = fopen(realfile,"r");
    if (!fd)
    {
        return (0);
    }
    while (fgets((char *)linebuf+nulpt, SQL_BUF_SIZE, fd))
    {
        nulpt = strlen((char *)linebuf);
    }
    return(nulpt);
}

void quit()
{
    OCIERROR(errhp,OCISESSIONEND ( tpcsvc,errhp, tpcusr, OCI_DEFAULT));
    OCIERROR(errhp,OCISERVERDETACH ( tpcsrv, errhp, OCI_DEFAULT));
    OCIHandleFree((dvoid *)tpcusr, OCI_HTYPE_SESSION);
    OCIHandleFree((dvoid *)tpcsvc, OCI_HTYPE_SVCCTX);
    OCIHandleFree((dvoid *)errhp, OCI_HTYPE_ERROR);
    OCIHandleFree((dvoid *)tpcsrv, OCI_HTYPE_SERVER);
    OCIHandleFree((dvoid *)tpcenv, OCI_HTYPE_ENV);
}

void main (argc, argv)
int argc;
char *argv[];
{
    char *uid="tpcc";
    char *pwd="tpcc";
    int scale=0;
    int i, j;
    int loop;
    int loopcount;
    int cid;
    int dwid;
    int cdid;

```

```

int cwid;
int sid;
int swid;
int olcnt;
int nrows;
int row;

int w_id;
char w_name[11];
char w_street_1[21];
char w_street_2[21];
char w_city[21];
char w_state[2];
char w_zip[9];
float w_tax;

int d_id[10];
int d_w_id[10];
char d_name[10][11];
char d_street_1[10][21];
char d_street_2[10][21];
char d_city[10][21];
char d_state[10][2];
char d_zip[10][9];
float d_tax[10];

int c_id[100];
int c_d_id[100];
int c_w_id[100];
char c_first[100][17];
char c_last[100][17];
char c_street_1[100][21];
char c_street_2[100][21];
char c_city[100][21];
char c_state[100][2];
char c_zip[100][9];
char c_phone[100][16];
char c_credit[100][2];
float c_discount[100];
char c_data[100][501];

int i_id[100];
int i_im_id[100];
int i_price[100];
char i_name[100][25];
char i_data[100][51];

int s_i_id[100];
int s_w_id[100];
int s_quantity[100];
char s_dist_01[100][24];
char s_dist_02[100][24];
char s_dist_03[100][24];
char s_dist_04[100][24];
char s_dist_05[100][24];
char s_dist_06[100][24];
char s_dist_07[100][24];
char s_dist_08[100][24];
char s_dist_09[100][24];
char s_dist_10[100][24];
char s_data[100][51];

```

```

int h_w_id[100];
int h_d_id[100];
int h_c_id[100];
char h_data[100][25];

int o_id[100];
int o_d_id[100];
int o_w_id[100];
int o_c_id[100];
int o_carrier_id[100];
int o_ol_cnt[100];

int ol_o_id[1500];
int ol_d_id[1500];
int ol_w_id[1500];
int ol_number[1500];
int ol_i_id[1500];
int ol_supply_w_id[1500];
int ol_amount[1500];
char ol_dist_info[1500][24];
int o_cnt;
int ol_cnt;

ub2 ol_o_id_len[1500];
ub2 ol_d_id_len[1500];
ub2 ol_w_id_len[1500];
ub2 ol_number_len[1500];
ub2 ol_i_id_len[1500];
ub2 ol_supply_w_id_len[1500];
ub2 ol_dist_info_len[1500];
ub2 ol_amount_len[1500];

ub4 ol_o_id_clen;
ub4 ol_d_id_clen;
ub4 ol_w_id_clen;
ub4 ol_number_clen;
ub4 ol_i_id_clen;
ub4 ol_supply_w_id_clen;
ub4 ol_dist_info_clen;
ub4 ol_amount_clen;

ub2 o_id_len[100];
ub2 o_d_id_len[100];
ub2 o_w_id_len[100];
ub2 o_c_id_len[100];
ub2 o_carrier_id_len[100];
ub2 o_ol_cnt_len[100];

ub4 o_id_clen;
ub4 o_d_id_clen;
ub4 o_w_id_clen;
ub4 o_c_id_clen;
ub4 o_carrier_id_clen;
ub4 o_ol_cnt_clen;

text stmbuf[16*1024];

int no_o_id[100];
int no_d_id[100];
int no_w_id[100];

```

```

char sdate[30];

#ifdef ORA_NT
clock_t begin_time, end_time;
clock_t begin_cpu, end_cpu;

char *arg_ptr, **end_args;
#else
double begin_time, end_time;
double begin_cpu, end_cpu;
double gettime(), getcpu();

extern int getopt();
extern char *optarg;
extern int optind, opterr;
int opt;
#endif

char *argstr="M:AwdcisShno:b:e:j:k:g";
int do_A=0;
int do_w=0;
int do_d=0;
int do_i=0;
int do_c=0;
int do_s=0;
int do_S=0;
int do_h=0;
int do_o=0;
int do_n=0;
int gen=0;
int bware=1;
int eware=0;
int bitem=1;
int eitem=0;

FILE *olfp=NULL;
char olfname[100];
char* basename;
int status;
#ifdef ORA_NT
char fname[100];
FILE *logfile;
#endif /* ORA_NT */

/*-----+
| Parse command line -- look for scale factor.
+-----*/

if (argc == 1) {
    myusage ();
}

#ifdef ORA_NT
end_args = argv + argc;
for (++argv; argv < end_args; )
{
    arg_ptr = *argv++;

    if (*arg_ptr != '-')
    {

```

```

        myusage ();
    } else
    {
        switch (arg_ptr[1]) {
            case '?': myusage ();
                break;
            case 'M': scale = atoi (*argv++);
                break;
            case 'A': do_A = 1;
                break;
            case 'w': do_w = 1;
                break;
            case 'd': do_d = 1;
                break;
            case 'c': do_c = 1;
                break;
            case 'i': do_i = 1;
                break;
            case 's': do_s = 1;
                break;
            case 'S': do_S = 1;
                break;
            case 'h': do_h = 1;
                break;
            case 'n': do_n = 1;
                break;
            case 'o': do_o = 1;
                strcpy (olfname, *argv++);
                break;
            case 'b': bware = atoi (*argv++);
                break;
            case 'e': eware = atoi (*argv++);
                break;
            case 'j': bitem = atoi (*argv++);
                break;
            case 'k': eitem = atoi (*argv++);
                break;
            case 'g': gen = 1;
                strcpy (fname, *argv++);
                break;
            case 'l': logfile=fopen(*argv+,"w");
                break;
            default: fprintf (stderr, "THIS SHOULD NEVER HAPPEN!!\n");
                fprintf (stderr, "(reached default case in getopt
                ())\n");
                myusage ();
        }
    }
}

#else

while ((opt = getopt (argc, argv, argstr)) != -1) {
    switch (opt) {
        case '?': myusage ();
            break;
        case 'M': scale = atoi (optarg);
            break;
        case 'A': do_A = 1;
            break;

```



```

    case 'w': do_w = 1;
                break;
    case 'd': do_d = 1;
                break;
    case 'c': do_c = 1;
                break;
    case 'i': do_i = 1;
                break;
    case 's': do_s = 1;
                break;
    case 'S': do_S = 1;
                break;
    case 'h': do_h = 1;
                break;
    case 'n': do_n = 1;
                break;
    case 'o': do_o = 1;
                strcpy (olfname, optarg);
                break;
    case 'b': bware = atoi (optarg);
                break;
    case 'e': aware = atoi (optarg);
                break;
    case 'j': bitem = atoi (optarg);
                break;
    case 'k': eitem = atoi (optarg);
                break;
    case 'g': gen = 1;
                break;
    default: fprintf (stderr, "THIS SHOULD NEVER HAPPEN!!!\n");
            fprintf (stderr, "(reached default case in getopt
())\n");
                myusage ();
        }
    }
# endif /* ORA_NT */

/*-----*
| Rudimentary error checking |
*-----*/

    if (scale < 1) {
        fprintf (stderr, "Invalid scale factor: '%d'\n", scale);
        myusage ();
    }

    if (!(do_A || do_w || do_d || do_c || do_i || do_s || do_S || do_h ||
do_o ||
        do_n)) {
        fprintf (stderr, "What should I load???\n");
        myusage ();
    }

    if (gen && (do_A || (do_w + do_d + do_c + do_i + do_s + do_S + do_h +
do_o +
        do_n > 1))) {
        fprintf (stderr, "Can only generate table one at a time\n");
        myusage ();
    }

```

```

    if (do_S && (do_A || do_s)) {
        fprintf (stderr, "Cluster stock table around s_w_id or s_i_id?\n");
        myusage ();
    }

    if (eware <= 0)
        aware = scale;
    if (eitem <= 0)
        eitem = STOCFAC;

    if (do_S) {
        if ((bitem < 1) || (bitem > STOCFAC)) {
            fprintf (stderr, "Invalid beginning item number: '%d'\n", bitem);
            myusage ();
        }

        if ((eitem < bitem) || (eitem > STOCFAC)) {
            fprintf (stderr, "Invalid ending item number: '%d'\n", eitem);
            myusage ();
        }
    }

    if (do_o) {
        if ((basename = getenv ("tpcc_bench")) == NULL)
        {
            fprintf (stderr, "$tpcc_bench is not set");
            myusage ();
        }
    }

    if ((bware < 1) || (bware > scale)) {
        fprintf (stderr, "Invalid beginning warehouse number: '%d'\n",
bware);
        myusage ();
    }

    if ((eware < bware) || (eware > scale)) {
        fprintf (stderr, "Invalid ending warehouse number: '%d'\n", aware);
        myusage ();
    }

    if (gen && do_o) {
        if ((olfp = fopen (olfname, "w")) == NULL) {
            fprintf (stderr, "Can't open '%s' for writing order lines\n",
olfname);
            myusage ();
        }
    }

/*-----+
| Prepare to insert into database. |
+-----*/

    sysdate (sdate);
    if (!gen) {

        /* log on to Oracle */

        OCIInitialize(OCI_DEFAULT|OCI_OBJECT, (dvoid *)0,0,0,0);
        OCIEnvInit(&tpcenv, OCI_DEFAULT, 0, (dvoid **)0);
    }

```

```

OCIHandleAlloc((dvoid *)tpcenv, (dvoid **)&tpcsrv, OCI_HTYPE_SERVER,
0, (dvoid **)0);
OCIHandleAlloc((dvoid *)tpcenv, (dvoid **)&errhp, OCI_HTYPE_ERROR, 0
, (dvoid **)0);
OCIHandleAlloc((dvoid *)tpcenv, (dvoid **)&tpcsvc, OCI_HTYPE_SVCCTX,
0, (dvoid **)0);
OCI_SERVER_ATTACH(tpcsrv, errhp, (text *)0, 0, OCI_DEFAULT);
OCI_ATTR_SET((dvoid *)tpcsvc, OCI_HTYPE_SVCCTX, (dvoid *)tpcsrv,
(ub4)0, OCI_ATTR_SERVER, errhp);
OCIHandleAlloc((dvoid *)tpcenv, (dvoid **)&tpcusr,
OCI_HTYPE_SESSION, 0, (dvoid **)0);
OCI_ATTR_SET((dvoid *)tpcusr, OCI_HTYPE_SESSION, (dvoid *)uid,
(ub4)strlen(uid), OCI_ATTR_USERNAME, errhp);
OCI_ATTR_SET((dvoid *)tpcusr, OCI_HTYPE_SESSION, (dvoid *)pwd,
(ub4)strlen(pwd),
OCI_ATTR_PASSWORD, errhp);
OCI_ERROR(errhp, OCI_SESSION_BEGIN(tpcsvc, errhp, tpcusr,
OCI_CRED_RDBMS, OCI_DEFAULT));

OCI_ATTR_SET(tpcsvc, OCI_HTYPE_SVCCTX, tpcusr, 0, OCI_ATTR_SESSION,
errhp);

fprintf(stderr, "\nConnected to Oracle userid '%s/%s'.\n", uid,
pwd);

/* open cursors and parse statement */
if (do_A || do_w) {
OCI_ERROR(errhp, OCI_HANDLE_ALLOC(tpcenv, (dvoid **)&curw,
OCI_HTYPE_STMT, 0, (dvoid **)0));
OCI_ERROR(errhp, OCI_STMT_PREPARE(curw, errhp, (text *)SQLTXTW,
strlen((char *)SQLTXTW), (ub4)OCI_NT_V_SYNTAX, (ub4)
OCI_DEFAULT));
}

if (do_A || do_d) {
OCI_ERROR(errhp, OCI_HANDLE_ALLOC(tpcenv, (dvoid **)&curd,
OCI_HTYPE_STMT, 0, (dvoid **)0));
OCI_ERROR(errhp, OCI_STMT_PREPARE(curd, errhp, (text *)SQLTXTD,
strlen((char *)SQLTXTD), (ub4)OCI_NT_V_SYNTAX, (ub4)
OCI_DEFAULT));
}

if (do_A || do_c) {
OCI_ERROR(errhp, OCI_HANDLE_ALLOC(tpcenv, (dvoid **)&curc,
OCI_HTYPE_STMT, 0, (dvoid **)0));
OCI_ERROR(errhp, OCI_STMT_PREPARE(curc, errhp, (text *)SQLTXTC,
strlen((char *)SQLTXTC), (ub4)OCI_NT_V_SYNTAX, (ub4)
OCI_DEFAULT));
}

if (do_A || do_h) {
OCI_ERROR(errhp, OCI_HANDLE_ALLOC(tpcenv, (dvoid **)&curh,
OCI_HTYPE_STMT, 0, (dvoid **)0));
OCI_ERROR(errhp, OCI_STMT_PREPARE(curh, errhp, (text *)SQLTXTH,
strlen((char *)SQLTXTH), (ub4)OCI_NT_V_SYNTAX, (ub4)
OCI_DEFAULT));
}

if (do_A || do_s || do_S) {
OCI_ERROR(errhp, OCI_HANDLE_ALLOC(tpcenv, (dvoid **)&curs,
OCI_HTYPE_STMT, 0, (dvoid **)0));

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```

OCI_ERROR(errhp, OCI_STMT_PREPARE(curs, errhp, (text *)SQLTXTS,
strlen((char *)SQLTXTS), (ub4)OCI_NT_V_SYNTAX, (ub4)
OCI_DEFAULT));
}

if (do_A || do_i) {
OCI_ERROR(errhp, OCI_HANDLE_ALLOC(tpcenv, (dvoid **)&curi,
OCI_HTYPE_STMT, 0, (dvoid **)0));
OCI_ERROR(errhp, OCI_STMT_PREPARE(curi, errhp, (text *)SQLTXTI,
strlen((char *)SQLTXTI), (ub4)OCI_NT_V_SYNTAX, (ub4)
OCI_DEFAULT));
}

if (do_A || do_o) {
int stat;
char fname[160];
OCI_ERROR(errhp, OCI_HANDLE_ALLOC(tpcenv, (dvoid **)&curol,
OCI_HTYPE_STMT, 0, (dvoid **)0));
DISCARD strcpy(fname, basename);
DISCARD strcat(fname, "/");
DISCARD strcat(fname, "benchrun/blocks/load_ordord1.sql");
stat = sqlfile(fname, stmbuf);
if (!stat)
{
fprintf(stderr, "unable to open %s\n", fname);
quit();
exit(1);
}
OCI_ERROR(errhp, OCI_STMT_PREPARE(curol, errhp, stmbuf,
strlen((char *)stmbuf), (ub4)OCI_NT_V_SYNTAX, (ub4)
OCI_DEFAULT));
}

if (do_A || do_n) {
OCI_ERROR(errhp, OCI_HANDLE_ALLOC(tpcenv, (dvoid **)&curno,
OCI_HTYPE_STMT, 0, (dvoid **)0));
OCI_ERROR(errhp, OCI_STMT_PREPARE(curno, errhp, (text *)SQLXTNO,
strlen((char *)SQLXTNO), (ub4)OCI_NT_V_SYNTAX, (ub4)
OCI_DEFAULT));
}

/* bind variables */
/* warehouse */
if (do_A || do_w) {
OCI_ERROR(errhp, OCI_BIND_BY_NAME(curw, &w_id_bp, errhp, (text
*)":w_id", strlen(":w_id"),
(ub1 *)&w_id, sizeof(w_id), SQLT_INT, (dvoid *)0,
(ub2 *)0, (ub2 *)0,
(ub4)0, (ub4 *)0, (ub4)OCI_DEFAULT));

OCI_ERROR(errhp, OCI_BIND_BY_NAME(curw, &w_name_bp, errhp, (text
*)":w_name", strlen(":w_name"),
(ub1 *)w_name, 11, SQLT_STR, (dvoid *)0, (ub2 *)0,
(ub2 *)0,
(ub4)0, (ub4 *)0, (ub4)OCI_DEFAULT));

OCI_ERROR(errhp, OCI_BIND_BY_NAME(curw, &w_street1_bp, errhp, (text
*)":w_street_1",

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SQLT_STR,          strlen(":w_street_1"), (ub1 *)w_street_1, 21,
                  (dvoid *) 0, (ub2 *)0, (ub2 *)0,
                  (ub4) 0, (ub4 *) 0, (ub4) OCI_DEFAULT));
OCIERROR(errhp, OCIBindByName(curw, &w_street2_bp, errhp, (text
*)":w_street_2",
SQLT_STR,          strlen(":w_street_2"), (ub1 *)w_street_2, 21,
                  (dvoid *) 0, (ub2 *)0, (ub2 *)0,
                  (ub4) 0, (ub4 *) 0, (ub4) OCI_DEFAULT));
OCIERROR(errhp, OCIBindByName(curw, &w_city_bp, errhp, (text
*)":w_city",
SQLT_STR,          strlen(":w_city"), (ub1 *)w_city, 21, SQLT_STR,
                  (dvoid *) 0, (ub2 *)0, (ub2 *)0,
                  (ub4) 0, (ub4 *) 0, (ub4) OCI_DEFAULT));
OCIERROR(errhp, OCIBindByName(curw, &w_state_bp, errhp, (text
*)":w_state",
SQLT_STR,          strlen(":w_state"), (ub1 *)w_state, 2, SQLT_CHR,
                  (dvoid *) 0, (ub2 *)0, (ub2 *)0,
                  (ub4) 0, (ub4 *) 0, (ub4) OCI_DEFAULT));
OCIERROR(errhp, OCIBindByName(curw, &w_zip_bp, errhp, (text
*)":w_zip",
SQLT_STR,          strlen(":w_zip"), (ub1 *)w_zip, 9, SQLT_CHR,
                  (dvoid *) 0, (ub2 *)0, (ub2 *)0,
                  (ub4) 0, (ub4 *) 0, (ub4) OCI_DEFAULT));
OCIERROR(errhp, OCIBindByName(curw, &w_tax_bp, errhp, (text
*)":w_tax",
SQLT_FLT,          strlen(":w_tax"), (ub1 *) & w_tax, sizeof(w_tax),
                  (dvoid *) 0, (ub2 *)0, (ub2 *)0,
                  (ub4) 0, (ub4 *) 0, (ub4) OCI_DEFAULT));
}
/* district */
if (do_A || do_d) {
OCIERROR(errhp, OCIBindByName(curd, &d_id_bp, errhp, (text
*)":d_id",
SQLT_INT,          strlen(":d_id"), (ub1 *)d_id, sizeof(int), SQLT_INT,
                  (dvoid *) 0, (ub2 *)0, (ub2 *)0,
                  (ub4) 0, (ub4 *) 0, (ub4) OCI_DEFAULT));
OCIERROR(errhp, OCIBindByName(curd, &d_w_id_bp, errhp, (text
*)":d_w_id",
SQLT_INT,          strlen(":d_w_id"), (ub1 *)d_w_id, sizeof(int),
                  (dvoid *) 0, (ub2 *)0, (ub2 *)0,
                  (ub4) 0, (ub4 *) 0, (ub4) OCI_DEFAULT));
OCIERROR(errhp, OCIBindByName(curd, &d_name_bp, errhp, (text
*)":d_name",
SQLT_STR,          strlen(":d_name"), (ub1 *)d_name, 11, SQLT_STR,
                  (dvoid *) 0, (ub2 *)0, (ub2 *)0,
                  (ub4) 0, (ub4 *) 0, (ub4) OCI_DEFAULT));

```

```

OCIERROR(errhp, OCIBindByName(curd, &d_street1_bp, errhp, (text
*)":d_street_1",
SQLT_STR,          strlen(":d_street_1"), (ub1 *)d_street_1, 21,
                  (dvoid *) 0, (ub2 *)0, (ub2 *)0,
                  (ub4) 0, (ub4 *) 0, (ub4) OCI_DEFAULT));
OCIERROR(errhp, OCIBindByName(curd, &d_street2_bp, errhp, (text
*)":d_street_2",
SQLT_STR,          strlen(":d_street_2"), (ub1 *)d_street_2, 21,
                  (dvoid *) 0, (ub2 *)0, (ub2 *)0,
                  (ub4) 0, (ub4 *) 0, (ub4) OCI_DEFAULT));
OCIERROR(errhp, OCIBindByName(curd, &d_city_bp, errhp, (text
*)":d_city",
SQLT_STR,          strlen(":d_city"), (ub1 *)d_city, 21, SQLT_STR,
                  (dvoid *) 0, (ub2 *)0, (ub2 *)0,
                  (ub4) 0, (ub4 *) 0, (ub4) OCI_DEFAULT));
OCIERROR(errhp, OCIBindByName(curd, &d_state_bp, errhp, (text
*)":d_state",
SQLT_STR,          strlen(":d_state"), (ub1 *)d_state, 2, SQLT_CHR,
                  (dvoid *) 0, (ub2 *)0, (ub2 *)0,
                  (ub4) 0, (ub4 *) 0, (ub4) OCI_DEFAULT));
OCIERROR(errhp, OCIBindByName(curd, &d_zip_bp, errhp, (text
*)":d_zip",
SQLT_STR,          strlen(":d_zip"), (ub1 *)d_zip, 9, SQLT_CHR,
                  (dvoid *) 0, (ub2 *)0, (ub2 *)0,
                  (ub4) 0, (ub4 *) 0, (ub4) OCI_DEFAULT));
OCIERROR(errhp, OCIBindByName(curd, &d_tax_bp, errhp, (text
*)":d_tax",
SQLT_FLT,          strlen(":d_tax"), (ub1 *)d_tax, sizeof(float),
                  (dvoid *) 0, (ub2 *)0, (ub2 *)0,
                  (ub4) 0, (ub4 *) 0, (ub4) OCI_DEFAULT));
}
/* customer */
if (do_A || do_c) {
OCIERROR(errhp, OCIBindByName(curc, &c_id_bp, errhp, (text
*)":c_id",
SQLT_INT,          strlen(":c_id"), (ub1 *)c_id, sizeof(int), SQLT_INT,
                  (dvoid *) 0, (ub2 *)0, (ub2 *)0,
                  (ub4) 0, (ub4 *) 0, (ub4) OCI_DEFAULT));
OCIERROR(errhp, OCIBindByName(curc, &c_d_id_bp, errhp, (text
*)":c_d_id",
SQLT_INT,          strlen(":c_d_id"), (ub1 *)c_d_id, sizeof(int),
                  (dvoid *) 0, (ub2 *)0, (ub2 *)0,
                  (ub4) 0, (ub4 *) 0, (ub4) OCI_DEFAULT));
OCIERROR(errhp, OCIBindByName(curc, &c_w_id_bp, errhp, (text
*)":c_w_id",
SQLT_INT,          strlen(":c_w_id"), (ub1 *)c_w_id, sizeof(int),
                  (dvoid *) 0, (ub2 *)0, (ub2 *)0,

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        (ub4) 0, (ub4 *) 0, (ub4) OCI_DEFAULT));

    OCIERROR(errhp, OCIBindByName(curc, &c_first_bp, errhp, (text
*)":c_first",
        strlen(":c_first"), (ub1 *)c_first, 17, SQLT_STR,
        (dvoid *) 0, (ub2 *)0, (ub2 *)0,
        (ub4) 0, (ub4 *) 0, (ub4) OCI_DEFAULT));

    OCIERROR(errhp, OCIBindByName(curc, &c_last_bp, errhp, (text
*)":c_last",
        strlen(":c_last"), (ub1 *)c_last, 17, SQLT_STR,
        (dvoid *) 0, (ub2 *)0, (ub2 *)0,
        (ub4) 0, (ub4 *) 0, (ub4) OCI_DEFAULT));

    OCIERROR(errhp, OCIBindByName(curc, &c_street1_bp, errhp, (text
*)":c_street_1",
        strlen(":c_street_1"), (ub1 *)c_street_1, 21,
SQLT_STR,
        (dvoid *) 0, (ub2 *)0, (ub2 *)0,
        (ub4) 0, (ub4 *) 0, (ub4) OCI_DEFAULT));

    OCIERROR(errhp, OCIBindByName(curc, &c_street2_bp, errhp, (text
*)":c_street_2",
        strlen(":c_street_2"), (ub1 *)c_street_2, 21,
SQLT_STR,
        (dvoid *) 0, (ub2 *)0, (ub2 *)0,
        (ub4) 0, (ub4 *) 0, (ub4) OCI_DEFAULT));

    OCIERROR(errhp, OCIBindByName(curc, &c_city_bp, errhp, (text
*)":c_city",
        strlen(":c_city"), (ub1 *)c_city, 21, SQLT_STR,
        (dvoid *) 0, (ub2 *)0, (ub2 *)0,
        (ub4) 0, (ub4 *) 0, (ub4) OCI_DEFAULT));

    OCIERROR(errhp, OCIBindByName(curc, &c_state_bp, errhp, (text
*)":c_state",
        strlen(":c_state"), (ub1 *)c_state, 2, SQLT_CHR,
        (dvoid *) 0, (ub2 *)0, (ub2 *)0,
        (ub4) 0, (ub4 *) 0, (ub4) OCI_DEFAULT));

    OCIERROR(errhp, OCIBindByName(curc, &c_zip_bp, errhp, (text
*)":c_zip",
        strlen(":c_zip"), (ub1 *)c_zip, 9, SQLT_CHR,
        (dvoid *) 0, (ub2 *)0, (ub2 *)0,
        (ub4) 0, (ub4 *) 0, (ub4) OCI_DEFAULT));

    OCIERROR(errhp, OCIBindByName(curc, &c_phone_bp, errhp, (text
*)":c_phone",
        strlen(":c_phone"), (ub1 *)c_phone, 16, SQLT_CHR,
        (dvoid *) 0, (ub2 *)0, (ub2 *)0,
        (ub4) 0, (ub4 *) 0, (ub4) OCI_DEFAULT));

    OCIERROR(errhp, OCIBindByName(curc, &c_credit_bp, errhp, (text
*)":c_credit",
        strlen(":c_credit"), (ub1 *)c_credit, 2, SQLT_CHR,
        (dvoid *) 0, (ub2 *)0, (ub2 *)0,
        (ub4) 0, (ub4 *) 0, (ub4) OCI_DEFAULT));

    OCIERROR(errhp, OCIBindByName(curc, &c_discount_bp, errhp, (text
*)":c_discount",

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        strlen(":c_discount"), (ub1 *)c_discount,
sizeof(float), SQLT_FLT,
        (dvoid *) 0, (ub2 *)0, (ub2 *)0,
        (ub4) 0, (ub4 *) 0, (ub4) OCI_DEFAULT));

    OCIERROR(errhp, OCIBindByName(curc, &c_data_bp, errhp, (text
*)":c_data",
        strlen(":c_data"), (ub1 *)c_data, 501, SQLT_STR,
        (dvoid *) 0, (ub2 *)0, (ub2 *)0,
        (ub4) 0, (ub4 *) 0, (ub4) OCI_DEFAULT));
    }
    /* item */

    if (do_A || do_i) {
        OCIERROR(errhp, OCIBindByName(curi, &i_id_bp, errhp, (text
*)":i_id",
        strlen(":i_id"), (ub1 *)i_id, sizeof(int), SQLT_INT,
        (dvoid *) 0, (ub2 *)0, (ub2 *)0,
        (ub4) 0, (ub4 *) 0, (ub4) OCI_DEFAULT));

        OCIERROR(errhp, OCIBindByName(curi, &i_im_id_bp, errhp, (text
*)":i_im_id",
        strlen(":i_im_id"), (ub1 *)i_im_id, sizeof(int),
SQLT_INT,
        (dvoid *) 0, (ub2 *)0, (ub2 *)0,
        (ub4) 0, (ub4 *) 0, (ub4) OCI_DEFAULT));

        OCIERROR(errhp, OCIBindByName(curi, &i_name_bp, errhp, (text
*)":i_name",
        strlen(":i_name"), (ub1 *)i_name, 25, SQLT_STR,
        (dvoid *) 0, (ub2 *)0, (ub2 *)0,
        (ub4) 0, (ub4 *) 0, (ub4) OCI_DEFAULT));

        OCIERROR(errhp, OCIBindByName(curi, &i_price_bp, errhp, (text
*)":i_price",
        strlen(":i_price"), (ub1 *)i_price, sizeof(int),
SQLT_INT,
        (dvoid *) 0, (ub2 *)0, (ub2 *)0,
        (ub4) 0, (ub4 *) 0, (ub4) OCI_DEFAULT));

        OCIERROR(errhp, OCIBindByName(curi, &i_data_bp, errhp, (text
*)":i_data",
        strlen(":i_data"), (ub1 *)i_data, 51, SQLT_STR,
        (dvoid *) 0, (ub2 *)0, (ub2 *)0,
        (ub4) 0, (ub4 *) 0, (ub4) OCI_DEFAULT));
    }

    /* stock */

    if (do_A || do_s || do_S) {
        OCIERROR(errhp, OCIBindByName(curs, &s_i_id_bp, errhp, (text
*)":s_i_id",
        strlen(":s_i_id"), (ub1 *)s_i_id, sizeof(int),
SQLT_INT,
        (dvoid *) 0, (ub2 *)0, (ub2 *)0,
        (ub4) 0, (ub4 *) 0, (ub4) OCI_DEFAULT));

        OCIERROR(errhp, OCIBindByName(curs, &s_w_id_bp, errhp, (text
*)":s_w_id",

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        strlen(":s_w_id"), (ub1 *)s_w_id, sizeof(int),
SQLT_INT,
        (dvoid *) 0, (ub2 *)0, (ub2 *)0,
        (ub4) 0, (ub4 *) 0, (ub4) OCI_DEFAULT));

        OCIERROR(errhp, OCIBindByName(curs, &s_quantity_bp, errhp, (text
*)":s_quantity",
        strlen(":s_quantity"), (ub1 *)s_quantity,
sizeof(int), SQLT_INT,
        (dvoid *) 0, (ub2 *)0, (ub2 *)0,
        (ub4) 0, (ub4 *) 0, (ub4) OCI_DEFAULT));

        OCIERROR(errhp, OCIBindByName(curs, &s_dist_01_bp, errhp, (text
*)":s_dist_01",
        strlen(":s_dist_01"), (ub1 *)s_dist_01, 24,
SQLT_CHR,
        (dvoid *) 0, (ub2 *)0, (ub2 *)0,
        (ub4) 0, (ub4 *) 0, (ub4) OCI_DEFAULT));

        OCIERROR(errhp, OCIBindByName(curs, &s_dist_02_bp, errhp, (text
*)":s_dist_02",
        strlen(":s_dist_02"), (ub1 *)s_dist_02, 24,
SQLT_CHR,
        (dvoid *) 0, (ub2 *)0, (ub2 *)0,
        (ub4) 0, (ub4 *) 0, (ub4) OCI_DEFAULT));

        OCIERROR(errhp, OCIBindByName(curs, &s_dist_03_bp, errhp, (text
*)":s_dist_03",
        strlen(":s_dist_03"), (ub1 *)s_dist_03, 24,
SQLT_CHR,
        (dvoid *) 0, (ub2 *)0, (ub2 *)0,
        (ub4) 0, (ub4 *) 0, (ub4) OCI_DEFAULT));

        OCIERROR(errhp, OCIBindByName(curs, &s_dist_04_bp, errhp, (text
*)":s_dist_04",
        strlen(":s_dist_04"), (ub1 *)s_dist_04, 24,
SQLT_CHR,
        (dvoid *) 0, (ub2 *)0, (ub2 *)0,
        (ub4) 0, (ub4 *) 0, (ub4) OCI_DEFAULT));

        OCIERROR(errhp, OCIBindByName(curs, &s_dist_05_bp, errhp, (text
*)":s_dist_05",
        strlen(":s_dist_05"), (ub1 *)s_dist_05, 24,
SQLT_CHR,
        (dvoid *) 0, (ub2 *)0, (ub2 *)0,
        (ub4) 0, (ub4 *) 0, (ub4) OCI_DEFAULT));

        OCIERROR(errhp, OCIBindByName(curs, &s_dist_06_bp, errhp, (text
*)":s_dist_06",
        strlen(":s_dist_06"), (ub1 *)s_dist_06, 24,
SQLT_CHR,
        (dvoid *) 0, (ub2 *)0, (ub2 *)0,
        (ub4) 0, (ub4 *) 0, (ub4) OCI_DEFAULT));

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        OCIERROR(errhp, OCIBindByName(curs, &s_dist_07_bp, errhp, (text
*)":s_dist_07",
        strlen(":s_dist_07"), (ub1 *)s_dist_07, 24,
SQLT_CHR,
        (dvoid *) 0, (ub2 *)0, (ub2 *)0,
        (ub4) 0, (ub4 *) 0, (ub4) OCI_DEFAULT));

        OCIERROR(errhp, OCIBindByName(curs, &s_dist_08_bp, errhp, (text
*)":s_dist_08",
        strlen(":s_dist_08"), (ub1 *)s_dist_08, 24,
SQLT_CHR,
        (dvoid *) 0, (ub2 *)0, (ub2 *)0,
        (ub4) 0, (ub4 *) 0, (ub4) OCI_DEFAULT));

        OCIERROR(errhp, OCIBindByName(curs, &s_dist_09_bp, errhp, (text
*)":s_dist_09",
        strlen(":s_dist_09"), (ub1 *)s_dist_09, 24,
SQLT_CHR,
        (dvoid *) 0, (ub2 *)0, (ub2 *)0,
        (ub4) 0, (ub4 *) 0, (ub4) OCI_DEFAULT));

        OCIERROR(errhp, OCIBindByName(curs, &s_dist_10_bp, errhp, (text
*)":s_dist_10",
        strlen(":s_dist_10"), (ub1 *)s_dist_10, 24,
SQLT_CHR,
        (dvoid *) 0, (ub2 *)0, (ub2 *)0,
        (ub4) 0, (ub4 *) 0, (ub4) OCI_DEFAULT));

        OCIERROR(errhp, OCIBindByName(curs, &s_data_bp, errhp, (text
*)":s_data",
        strlen(":s_data"), (ub1 *)s_data, 51, SQLT_STR,
        (dvoid *) 0, (ub2 *)0, (ub2 *)0,
        (ub4) 0, (ub4 *) 0, (ub4) OCI_DEFAULT));
    }

    /* history */
    if (do_A || do_h) {
        OCIERROR(errhp, OCIBindByName(curh, &h_c_id_bp, errhp, (text
*)":h_c_id",
        strlen(":h_c_id"), (ub1 *)h_c_id, sizeof(int),
SQLT_INT,
        (dvoid *) 0, (ub2 *)0, (ub2 *)0,
        (ub4) 0, (ub4 *) 0, (ub4) OCI_DEFAULT));

        OCIERROR(errhp, OCIBindByName(curh, &h_c_d_id_bp, errhp, (text
*)":h_c_d_id",
        strlen(":h_c_d_id"), (ub1 *)h_d_id, sizeof(int),
SQLT_INT,
        (dvoid *) 0, (ub2 *)0, (ub2 *)0,
        (ub4) 0, (ub4 *) 0, (ub4) OCI_DEFAULT));

        OCIERROR(errhp, OCIBindByName(curh, &h_c_w_id_bp, errhp, (text
*)":h_c_w_id",
        strlen(":h_c_w_id"), (ub1 *)h_w_id, sizeof(int),
SQLT_INT,
        (dvoid *) 0, (ub2 *)0, (ub2 *)0,
        (ub4) 0, (ub4 *) 0, (ub4) OCI_DEFAULT));
    }

```

```

OCIERROR(errhp, OCIBindByName(curh, &h_d_id_bp, errhp, (text
*)":h_d_id",
SQLT_INT,
        strlen(":h_d_id"), (ub1 *)h_d_id, sizeof(int),
        (dvoid *) 0, (ub2 *)0, (ub2 *)0,
        (ub4) 0, (ub4 *) 0, (ub4) OCI_DEFAULT));

OCIERROR(errhp, OCIBindByName(curh, &h_w_id_bp, errhp, (text
*)":h_w_id",
SQLT_INT,
        strlen(":h_w_id"), (ub1 *)h_w_id, sizeof(int),
        (dvoid *) 0, (ub2 *)0, (ub2 *)0,
        (ub4) 0, (ub4 *) 0, (ub4) OCI_DEFAULT));

OCIERROR(errhp, OCIBindByName(curh, &h_data_bp, errhp, (text
*)":h_data",
        strlen(":h_data"), (ub1 *)h_data, 25, SQLT_STR,
        (dvoid *) 0, (ub2 *)0, (ub2 *)0,
        (ub4) 0, (ub4 *) 0, (ub4) OCI_DEFAULT));
}
/* order and order_line (delivered) */
if (do_A || do_o) {
    for (i = 0; i < ORDEARR; i++) {
        o_id_len[i] = sizeof(int);
        o_d_id_len[i] = sizeof(int);
        o_w_id_len[i] = sizeof(int);
        o_c_id_len[i] = sizeof(int);
        o_carrier_id_len[i] = sizeof(int);
        o_ol_cnt_len[i] = sizeof(int);
    }
    OCIERROR(errhp, OCIBindByName(curo1, &ol_o_id_bp, errhp, (text
*)":ol_o_id",
SQLT_INT,
        strlen(":ol_o_id"), (ub1 *)ol_o_id, sizeof(int),
        (dvoid *) 0, (ub2 *)ol_o_id_len, (ub2 *)0,
        (ub4) 15*ORDEARR, (ub4 *)&ol_o_id_clen, (ub4)
OCI_DEFAULT));
    OCIERROR(errhp, OCIBindByName(curo1, &ol_d_id_bp, errhp, (text
*)":ol_d_id",
SQLT_INT,
        strlen(":ol_d_id"), (ub1 *)ol_d_id, sizeof(int),
        (dvoid *) 0, (ub2 *)ol_d_id_len, (ub2 *)0,
        (ub4) 15*ORDEARR, (ub4 *) &ol_d_id_clen, (ub4)
OCI_DEFAULT));
    OCIERROR(errhp, OCIBindByName(curo1, &ol_w_id_bp, errhp, (text
*)":ol_w_id",
SQLT_INT,
        strlen(":ol_w_id"), (ub1 *)ol_w_id, sizeof(int),
        (dvoid *) 0, (ub2 *)ol_w_id_len, (ub2 *)0,
        (ub4) 15*ORDEARR, (ub4 *) &ol_w_id_clen, (ub4)
OCI_DEFAULT));
}

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```

OCIERROR(errhp, OCIBindByName(curo1, &ol_number_bp, errhp, (text
*)":ol_number",
SQLT_INT,
        strlen(":ol_number"), (ub1 *)ol_number, sizeof(int),
        (dvoid *) 0, (ub2 *)ol_number_len, (ub2 *)0,
        (ub4) 15*ORDEARR, (ub4 *) &ol_number_clen, (ub4)
OCI_DEFAULT));
OCIERROR(errhp, OCIBindByName(curo1, &ol_i_id_bp, errhp, (text
*)":ol_i_id",
SQLT_INT,
        strlen(":ol_i_id"), (ub1 *)ol_i_id, sizeof(int),
        (dvoid *) 0, (ub2 *)ol_i_id_len, (ub2 *)0,
        (ub4) 15*ORDEARR, (ub4 *) &ol_i_id_clen, (ub4)
OCI_DEFAULT));
OCIERROR(errhp, OCIBindByName(curo1, &ol_supply_w_id_bp, errhp,
(text *)":ol_supply_w_id",
        strlen(":ol_supply_w_id"), (ub1 *)ol_supply_w_id,
sizeof(int), SQLT_INT,
        (dvoid *) 0, (ub2 *)ol_supply_w_id_len, (ub2 *)0,
        (ub4) 15*ORDEARR, (ub4 *) &ol_supply_w_id_clen,
(ub4) OCI_DEFAULT));
OCIERROR(errhp, OCIBindByName(curo1, &ol_dist_info_bp, errhp,
(text *)":ol_dist_info",
SQLT_CHR,
        strlen(":ol_dist_info"), (ub1 *)ol_dist_info, 24,
        (dvoid *) 0, (ub2 *)ol_dist_info_len, (ub2 *)0,
        (ub4) 15*ORDEARR, (ub4 *) &ol_dist_info_clen, (ub4)
OCI_DEFAULT));
OCIERROR(errhp, OCIBindByName(curo1, &ol_amount_bp, errhp, (text
*)":ol_amount",
SQLT_INT,
        strlen(":ol_amount"), (ub1 *)ol_amount, sizeof(int),
        (dvoid *) 0, (ub2 *)ol_amount_len, (ub2 *)0,
        (ub4) 15*ORDEARR, (ub4 *) &ol_amount_clen, (ub4)
OCI_DEFAULT));
OCIERROR(errhp, OCIBindByName(curo1, &o_id_bp, errhp, (text
*)":o_id",
        strlen(":o_id"), (ub1 *)o_id, sizeof(int), SQLT_INT,
        (dvoid *) 0, (ub2 *)o_id_len, (ub2 *)0,
        (ub4) ORDEARR, (ub4 *) &o_id_clen, (ub4)
OCI_DEFAULT));
OCIERROR(errhp, OCIBindByName(curo1, &o_d_id_bp, errhp, (text
*)":o_d_id",
SQLT_INT,
        strlen(":o_d_id"), (ub1 *)o_d_id, sizeof(int),
        (dvoid *) 0, (ub2 *)o_d_id_len, (ub2 *)0,
        (ub4) ORDEARR, (ub4 *) &o_d_id_clen, (ub4)
OCI_DEFAULT));
OCIERROR(errhp, OCIBindByName(curo1, &o_w_id_bp, errhp, (text
*)":o_w_id",
SQLT_INT,
        strlen(":o_w_id"), (ub1 *)o_w_id, sizeof(int),
        (dvoid *) 0, (ub2 *)o_w_id_len, (ub2 *)0,

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        (ub4) ORDEARR, (ub4 *) &o_w_id_clen, (ub4)
OCI_DEFAULT));

        OCIERROR(errhp, OCIBindByName(curo1, &o_c_id_bp, errhp, (text
*)":o_c_id",
        strlen(":o_c_id"), (ub1 *)o_c_id, sizeof(int),
SQLT_INT,
        (dvoid *) 0, (ub2 *)o_c_id_len, (ub2 *)0,
        (ub4) ORDEARR, (ub4 *) &o_c_id_clen, (ub4)
OCI_DEFAULT));

        OCIERROR(errhp, OCIBindByName(curo1, &o_carrier_id_bp, errhp,
(text *)":o_carrier_id",
        strlen(":o_carrier_id"), (ub1 *)o_carrier_id,
sizeof(int), SQLT_INT,
        (dvoid *) 0, (ub2 *)o_carrier_id_len, (ub2 *)0,
        (ub4) ORDEARR, (ub4 *) &o_carrier_id_clen, (ub4)
OCI_DEFAULT));

        OCIERROR(errhp, OCIBindByName(curo1, &o_ol_cnt_bp, errhp, (text
*)":o_ol_cnt",
        strlen(":o_ol_cnt"), (ub1 *)o_ol_cnt, sizeof(int),
SQLT_INT,
        (dvoid *) 0, (ub2 *)o_ol_cnt_len, (ub2 *)0,
        (ub4) ORDEARR, (ub4 *) &o_ol_cnt_clen, (ub4)
OCI_DEFAULT));

        OCIERROR(errhp, OCIBindByName(curo1, &o_ocnt_bp, errhp, (text
*)":order_rows",
        strlen(":order_rows"), (ub1 *)&o_cnt, sizeof(int),
SQLT_INT,
        (dvoid *) 0, (ub2 *)0, (ub2 *)0,
        (ub4) 0, (ub4 *) 0, (ub4) OCI_DEFAULT));

        OCIERROR(errhp, OCIBindByName(curo1, &o_olcnt_bp, errhp, (text
*)":ordl_rows",
        strlen(":ordl_rows"), (ub1 *)&ol_cnt, sizeof(int),
SQLT_INT,
        (dvoid *) 0, (ub2 *)0, (ub2 *)0,
        (ub4) 0, (ub4 *) 0, (ub4) OCI_DEFAULT));
    }
    /* new order */
    if (do_A || do_n) {
        OCIERROR(errhp, OCIBindByName(curno, &no_o_id_bp, errhp, (text
*)":no_o_id",
        strlen(":no_o_id"), (ub1 *)no_o_id, sizeof(int),
SQLT_INT,
        (dvoid *) 0, (ub2 *)0, (ub2 *)0,
        (ub4) 0, (ub4 *) 0, (ub4) OCI_DEFAULT));

        OCIERROR(errhp, OCIBindByName(curno, &no_d_id_bp, errhp, (text
*)":no_d_id",
        strlen(":no_d_id"), (ub1 *)no_d_id, sizeof(int),
SQLT_INT,
        (dvoid *) 0, (ub2 *)0, (ub2 *)0,
        (ub4) 0, (ub4 *) 0, (ub4) OCI_DEFAULT));

        OCIERROR(errhp, OCIBindByName(curno, &no_w_id_bp, errhp, (text
*)":no_w_id",

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        strlen(":no_w_id"), (ub1 *)no_w_id, sizeof(int),
SQLT_INT,
        (dvoid *) 0, (ub2 *)0, (ub2 *)0,
        (ub4) 0, (ub4 *) 0, (ub4) OCI_DEFAULT));
    }
}

/*-----+
| Initialize random number generator |
+-----*/

    srand (SEED);
#ifdef ORA_NT
    srand48 (SEED);
#endif
    initperm ();

/*-----+
| Load the WAREHOUSE table. |
+-----*/

    if (do_A || do_w) {
        nrows = aware - bware + 1;

        fprintf (stderr, "Loading/generating warehouse: w%d - w%d (%d
rows)\n",
                bware, aware, nrows);

        begin_time = gettime ();
        begin_cpu = getcpu ();

        for (loop = bware; loop <= aware; loop++) {

            w_tax = (float) ((lrand48 () % 2001) * 0.0001);
            randstr (w_name, 6, 10);
            randstr (w_street_1, 10, 20);
            randstr (w_street_2, 10, 20);
            randstr (w_city, 10, 20);
            randstr (str2, 2, 2);
            randnum (num9, 9);
            num9[4] = num9[5] = num9[6] = num9[7] = num9[8] = '1';

            if (gen) {
                printf ("%d 30000000 %6.4f %s %s %s %s %s %s\n", loop, w_tax,
                    w_name, w_street_1, w_street_2, w_city, str2, num9);
                fflush (stdout);
            }
            else {
                w_id = loop;
                strncpy (w_state, str2, 2);
                strncpy (w_zip, num9, 9);

                status = OCISmtExecute(tpcsvc, curw, errhp, (ub4) 1, (ub4) 0,
                    (CONST OCISnapshot*) 0, (OCISnapshot*) 0,
                    (ub4) OCI_DEFAULT | OCI_COMMIT_ON_SUCCESS);
                if (status != OCI_SUCCESS) {
                    fprintf (stderr, "Error at ware %d\n", loop);
                    OCIERROR(errhp, status);
                    quit ();
                    exit (1);
                }
            }
        }
    }

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    }
}

end_time = gettime ();
end_cpu = getcpu ();
fprintf (stderr, "Done.  %d rows loaded/generated in %10.2f sec.
(%10.2f cpu)\n\n",
        nrows, end_time - begin_time, end_cpu - begin_cpu);
}

/*-----+
| Load the DISTRICT table. |
+-----*/

if (do_A || do_d) {
    nrows = (eware - bware + 1) * DISTFAC;

    fprintf (stderr, "Loading/generating district: w%d - w%d (%d
rows)\n",
            bware, eware, nrows);

    begin_time = gettime ();
    begin_cpu = getcpu ();

    dwid = bware - 1;

    for (row = 0; row < nrows; ) {
        dwid++;

        for (i = 0; i < DISTARR; i++, row++) {
            d_tax[i] = (float) ((lrand48 () % 2001) * 0.0001);
            randstr (d_name[i], 6, 10);
            randstr (d_street_1[i], 10, 20);
            randstr (d_street_2[i], 10, 20);
            randstr (d_city[i], 10, 20);
            randstr (str2, 2, 2);
            randnum (num9, 9);
            num9[4] = num9[5] = num9[6] = num9[7] = num9[8] = '1';

            if (gen) {
                printf ("%d %d 3000000 %6.4f 3001 %s %s %s %s %s\n",
                    i + 1, dwid, d_tax[i], d_name[i], d_street_1[i],
                    d_street_2[i], d_city[i], str2, num9 );
            }
            else {
                d_id[i] = i + 1;
                d_w_id[i] = dwid;
                strncpy (d_state[i], str2, 2);
                strncpy (d_zip[i], num9, 9);
            }
        }

        if (gen) {
            fflush (stdout);
        }
        else {
            status = OCIStmtExecute(tpcsvc, curd, errhp, (ub4) DISTARR,
(ub4) 0,
                (CONST OCISnapshot*) 0, (OCISnapshot*) 0,
                (ub4) OCI_DEFAULT | OCI_COMMIT_ON_SUCCESS);

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        if (status != OCI_SUCCESS) {
            fprintf (stderr, "Aborted at ware %d, dist 1\n", dwid);
            OCIERROR(errhp, status);
            quit ();
            exit (1);
        }
    }
}

end_time = gettime ();
end_cpu = getcpu ();
fprintf (stderr, "Done.  %d rows loaded/generated in %10.2f sec.
(%10.2f cpu)\n\n",
        nrows, end_time - begin_time, end_cpu - begin_cpu);
}

/*-----+
| Load the CUSTOMER table. |
+-----*/

if (do_A || do_c) {
    nrows = (eware - bware + 1) * CUSTFAC * DISTFAC;

    fprintf (stderr, "Loading/generating customer: w%d - w%d (%d rows)\n
",
            bware, eware, nrows);

    if (getenv("tpcc_hash_overflow")) {
        fprintf(stderr,"Hash overflow is enabled\n");
        OCIHandleAlloc(tpcenv, (dvoid **)&curi, OCI_HTYPE_STMT, 0,
(dvoid**)0);
        sprintf ((char *) stmbuf, SQLTXTENHA);
        OCIStmtPrepare(cur, errhp, stmbuf, strlen((char *)stmbuf),
OCI_NTV_SYNTAX, OCI_DEFAULT);
        OCIERROR(errhp,OCIStmtExecute(tpcsvc, curi,
errhp,1,0,0,0,OCI_DEFAULT));
        OCIHandleFree(cur, OCI_HTYPE_STMT);
        fprintf (stderr,"Customer loaded for horizontal partitioning\n");
    }
    else
    {
        fprintf (stderr,"Customer not loaded for horizontal
partitioning\n");
    }
    begin_time = gettime ();
    begin_cpu = getcpu ();

    cid = 0;
    cdid = 1;
    cwid = bware;
    loopcount = 0;

    for (row = 0; row < nrows; ) {
        for (i = 0; i < CUSTARR; i++, row++) {
            cid++;
            if (cid > CUSTFAC) {
                /* cycle cust id */
                cid = 1;
                /* cheap mod */
                cdid++;
                /* shift dist cycle */
                if (cdid > DISTFAC) {
                    cdid = 1;

```



```

        cwid++;          /* shift ware cycle */
    }
}
c_id[i] = cid;
c_d_id[i] = cdid;
c_w_id[i] = cwid;
if (cid <= 1000)
    randlastname (c_last[i], cid - 1);
else
    randlastname (c_last[i], NURand (255, 0, 999, CNUM1));
c_credit[i][1] = 'C';
if (lrand48 () % 10)
    c_credit[i][0] = 'G';
else
    c_credit[i][0] = 'B';
c_discount[i] = (float)((lrand48 () % 5001) * 0.0001);
randstr (c_first[i], 8, 16);
randstr (c_street_1[i], 10, 20);
randstr (c_street_2[i], 10, 20);
randstr (c_city[i], 10, 20);
randstr (str2, 2, 2);
randnum (num9, 9);
num9[4] = num9[5] = num9[6] = num9[7] = num9[8] = '1';
randnum (num16, 16);
randstr (c_data[i], 300, 500);

if (gen) {
    printf ("%d %d %d %s OE %s %s %s %s %s %s %s %s %cC 5000000
%6.4f -1000 1000 1 0 %s\n",
        cid, cdid, cwid, c_first[i], c_last[i],
        c_street_1[i], c_street_2[i], c_city[i], str2,
        num9,
        num16, sdate, c_credit[i][0], c_discount[i],
        c_data[i]);
}
else {
    strncpy (c_state[i], str2, 2);
    strncpy (c_zip[i], num9, 9);
    strncpy (c_phone[i], num16, 16);
}
}

if (gen) {
    fflush (stdout);
}
else {
    status = OCISstmtExecute(tpcsvc, curc, errhp, (ub4) CUSTARR,
(ub4) 0,
        (CONST OCISnapshot*) 0, (OCISnapshot*) 0,
        (ub4) OCI_DEFAULT | OCI_COMMIT_ON_SUCCESS);

    if (status != OCI_SUCCESS) {
        fprintf (stderr, "Aborted at w_id %d, d_id %d, c_id
%d\n",
            c_w_id[0], c_d_id[0], c_id[0]);
        OCIERROR(errhp, status);
        quit ();
        exit (1);
    }
}
}

```

```

    if ((++loopcount) % 50)
        fprintf (stderr, ".");
    else
        fprintf (stderr, " %d rows committed\n ", row);
}

end_time = gettime ();
end_cpu = getcpu ();
fprintf (stderr, "Done. %d rows loaded/generated in %10.2f sec.
(%10.2f cpu)\n\n",
    nrows, end_time - begin_time, end_cpu - begin_cpu);
if (getenv("tpcc_hash_overflow")) {
    fprintf(stderr, "Hash overflow is disabled\n");
    OCIHandleAlloc(tpcenv, (dvoid **)&curi, OCI_HTYPE_STMT, 0,
(dvoid**)0);
    sprintf ((char *) stmbuf, SQLTXTDIHA);
    OCIStmtPrepare(curi, errhp, stmbuf, strlen((char *)stmbuf),
OCI_NTV_SYNTAX, OCI_DEFAULT);
    OCIERROR(errhp, OCIStmtExecute(tpcsvc, curi,
errhp, 1, 0, 0, 0, OCI_DEFAULT));
    OCIHandleFree(curi, OCI_HTYPE_STMT);
}
}

/*-----+
| Load the ITEM table.
+-----*/

if (do_A || do_i) {
    nrows = ITEMFAC;

    fprintf (stderr, "Loading/generating item: (%d rows)\n ", nrows);

    begin_time = gettime ();
    begin_cpu = getcpu ();

    loopcount = 0;

    for (row = 0; row < nrows; ) {
        for (i = 0; i < ITEMARR; i++, row++) {
            i_im_id[i] = (lrand48 () % 10000) + 1;
            i_price[i] = ((lrand48 () % 9901) + 100);
            randstr (i_name[i], 14, 24);
            randdatastr (i_data[i], 26, 50);

            if (gen) {
                printf ("%d %d %s %d %s\n", row + 1, i_im_id[i], i_name[i],
                    i_price[i], i_data[i]);
            }
            else {
                i_id[i] = row + 1;
            }
        }
    }

    if (gen) {
        fflush (stdout);
    }
    else {
        status = OCISstmtExecute(tpcsvc, curi, errhp, (ub4) ITEMARR,
(ub4) 0,

```

```

        (CONST OCISnapshot*) 0, (OCISnapshot*) 0,
        (ub4) OCI_DEFAULT | OCI_COMMIT_ON_SUCCESS);
if (status != OCI_SUCCESS) {
    fprintf (stderr, "Aborted at i_id %d\n", i_id[0]);
    OCIERROR(errhp, status);
    quit ();
    exit (1);
}
}

if ((++loopcount) % 50)
    fprintf (stderr, ".");
else
    fprintf (stderr, " %d rows committed\n", row);
}

end_time = gettime ();
end_cpu = getcpu ();
fprintf (stderr, "Done.  %d rows loaded/generated in %10.2f sec.
(%10.2f cpu)\n\n",
        nrows, end_time - begin_time, end_cpu - begin_cpu);
}

/*-----+
| Load the STOCK table.                               |
+-----*/

if (do_A || do_s) {

    nrows = (eware - bware + 1) * STOCFAC;

    fprintf (stderr, "Loading/generating stock: w%d - w%d (%d rows)\n",
            bware, aware, nrows);

    begin_time = gettime ();
    begin_cpu = getcpu ();

    sid = 0;
    swid = bware;
    loopcount = 0;

    for (row = 0; row < nrows; ) {
        /* added row < nrows condition on next line - alex.ni */
        for (i = 0; (i < STOCARR) && (row < nrows); i++, row++) {
            if (++sid > STOCFAC) {          /* cheap mod */
                sid = 1;
                swid++;
            }
            s_quantity[i] = (lrand48 () % 91) + 10;
            randstr (str24[0], 24, 24);
            randstr (str24[1], 24, 24);
            randstr (str24[2], 24, 24);
            randstr (str24[3], 24, 24);
            randstr (str24[4], 24, 24);
            randstr (str24[5], 24, 24);
            randstr (str24[6], 24, 24);
            randstr (str24[7], 24, 24);
            randstr (str24[8], 24, 24);
            randstr (str24[9], 24, 24);

```

```

        randdatastr (s_data[i], 26, 50);

        if (gen) {
            printf ("%d %d %d %s %s %s %s %s %s %s %s %s 0 0 0
%s\n",
                    sid, swid, s_quantity[i], str24[0], str24[1],
                    str24[2],
                    str24[3], str24[4], str24[5], str24[6], str24[7],
                    str24[8], str24[9], s_data[i]);
        }
        else {
            s_i_id[i] = sid;
            s_w_id[i] = swid;
            strncpy (s_dist_01[i], str24[0], 24);
            strncpy (s_dist_02[i], str24[1], 24);
            strncpy (s_dist_03[i], str24[2], 24);
            strncpy (s_dist_04[i], str24[3], 24);
            strncpy (s_dist_05[i], str24[4], 24);
            strncpy (s_dist_06[i], str24[5], 24);
            strncpy (s_dist_07[i], str24[6], 24);
            strncpy (s_dist_08[i], str24[7], 24);
            strncpy (s_dist_09[i], str24[8], 24);
            strncpy (s_dist_10[i], str24[9], 24);
        }
    }

    if (gen) {
        fflush (stdout);
    }
    else {
        /* Changed to STOCKARR to i - alex.ni */
        status = OCISmtExecute(tpcsvc, curs, errhp, (ub4) i, (ub4) 0,
            (CONST OCISnapshot*) 0, (OCISnapshot*) 0,
            (ub4) OCI_DEFAULT | OCI_COMMIT_ON_SUCCESS);
        if (status != OCI_SUCCESS) {
            fprintf (stderr, "Aborted at w_id %d, s_i_id %d\n",
                s_w_id[0], s_i_id[0]);
            OCIERROR(errhp, status);
            quit ();
            exit (1);
        }
    }

    if ((++loopcount) % 50)
        fprintf (stderr, ".");
    else
        fprintf (stderr, " %d rows committed\n", row);
}

end_time = gettime ();
end_cpu = getcpu ();
fprintf (stderr, "Done.  %d rows loaded/generated in %10.2f sec.
(%10.2f cpu)\n\n",
        nrows, end_time - begin_time, end_cpu - begin_cpu);
}

/*-----+
| Load the STOCK table (cluster around s_i_id).       |
+-----*/

if (do_S) {

```

```

nrows = (eitem - bitem + 1) * (eware - bware + 1);
fprintf (stderr, "Loading/generating stock: i%d - i%d, w%d - w%d (%d
rows)\n ",
        bitem, eitem, bware, eware, nrows);

begin_time = gettime ();
begin_cpu = getcpu ();

sid = bitem;
swid = bware - 1;
loopcount = 0;

for (row = 0; row < nrows; ) {
    for (i = 0; i < STOCARR; i++, row++) {
        if (++swid > eware) { /* cheap mod */
            swid = bware;
            sid++;
        }
        s_quantity[i] = (lrand48 () % 91) + 10;
        randstr (str24[0], 24, 24);
        randstr (str24[1], 24, 24);
        randstr (str24[2], 24, 24);
        randstr (str24[3], 24, 24);
        randstr (str24[4], 24, 24);
        randstr (str24[5], 24, 24);
        randstr (str24[6], 24, 24);
        randstr (str24[7], 24, 24);
        randstr (str24[8], 24, 24);
        randstr (str24[9], 24, 24);
        randdatastr (s_data[i], 26, 50);

        if (gen) {
            printf ("%d %d %d %s %s %s %s %s %s %s %s %s %s 0 0 0
%s\n",
                    sid, swid, s_quantity[i], str24[0], str24[1],
                    str24[3], str24[4], str24[5], str24[6], str24[7],
                    str24[8], str24[9], s_data[i]);
        }
        else {
            s_i_id[i] = sid;
            s_w_id[i] = swid;
            strncpy (s_dist_01[i], str24[0], 24);
            strncpy (s_dist_02[i], str24[1], 24);
            strncpy (s_dist_03[i], str24[2], 24);
            strncpy (s_dist_04[i], str24[3], 24);
            strncpy (s_dist_05[i], str24[4], 24);
            strncpy (s_dist_06[i], str24[5], 24);
            strncpy (s_dist_07[i], str24[6], 24);
            strncpy (s_dist_08[i], str24[7], 24);
            strncpy (s_dist_09[i], str24[8], 24);
            strncpy (s_dist_10[i], str24[9], 24);
        }
    }
}

if (gen) {
    fflush (stdout);
}
else {

```

```

        status = OCIStmtExecute(tpcsvc, curs, errhp, (ub4) STOCARR,
(ub4) 0,
        (CONST OCISnapshot*) 0, (OCISnapshot*) 0,
        (ub4) OCI_DEFAULT | OCI_COMMIT_ON_SUCCESS);
        if (status != OCI_SUCCESS) {
            fprintf (stderr, "Aborted at w_id %d, s_i_id %d\n",
s_w_id[0], s_i_id[0]);
            OCIERROR(errhp, status);
            quit ();
            exit (1);
        }
    }

    if ((++loopcount) % 50)
        fprintf (stderr, ".");
    else
        fprintf (stderr, " %d rows committed\n ", row);
}

end_time = gettime ();
end_cpu = getcpu ();
fprintf (stderr, "Done. %d rows loaded/generated in %10.2f sec.
(%10.2f cpu)\n\n",
        nrows, end_time - begin_time, end_cpu - begin_cpu);
}

/*-----+
| Load the HISTORY table. |
+-----*/

if (do_A || do_h) {
    nrows = (eware - bware + 1) * HISTFAC;

    fprintf (stderr, "Loading/generating history: w%d - w%d (%d rows)\n
",
            bware, eware, nrows);

    begin_time = gettime ();
    begin_cpu = getcpu ();

    cid = 0;
    cdid = 1;
    cwid = bware;
    loopcount = 0;

    for (row = 0; row < nrows; ) {
        for (i = 0; i < HISTARR; i++, row++) {
            cid++;
            if (cid > CUSTFAC) { /* cycle cust id */
                cid = 1; /* cheap mod */
                cdid++; /* shift district cycle */
            }
            if (cdid > DISTFAC) {
                cdid = 1; /* shift warehouse cycle */
                cwid++;
            }
        }
        h_c_id[i] = cid;
        h_d_id[i] = cdid;
        h_w_id[i] = cwid;
        randstr (h_data[i], 12, 24);
        if (gen) {

```

```

        printf ("%d %d %d %d %d %s 1000 %s\n", cid, cdid, cwid,
cdid,
                cwid, sdate, h_data[i]);
    }
}
if (gen) {
    fflush (stdout);
}
else {
    status = OCISmtExecute(tpcsvc, curh, errhp, (ub4) HISTARR,
(ub4) 0,
                (CONST OCISnapshot*) 0, (OCISnapshot*) 0,
                (ub4) OCI_DEFAULT | OCI_COMMIT_ON_SUCCESS);
    if (status != OCI_SUCCESS) {
        fprintf (stderr, "Aborted at w_id %d, d_id %d, c_id
%d\n",
                h_w_id[0], h_d_id[0], h_c_id[0]);
        OCIERROR(errhp, status);
        quit ();
        exit (1);
    }
}
if ((++loopcount) % 50)
    fprintf (stderr, ".");
else
    fprintf (stderr, " %d rows committed\n ", row);
}

end_time = gettime ();
end_cpu = getcpu ();
fprintf (stderr, "Done.  %d rows loaded/generated in %10.2f sec.
(%10.2f cpu)\n\n",
        nrows, end_time - begin_time, end_cpu - begin_cpu);
}

/*-----+
| Load the ORDERS and ORDER-LINE table.          |
+-----*/

if (do_A || do_o) {
    int batch_olcnt;

    nrows = (eware - bware + 1) * ORDEFAC * DISTFAC;

    fprintf (stderr, "Loading/generating orders and order-line: w%d -
w%d (%d ord, ~%d ordl)\n ",
            bware, aware, nrows, nrows * 10);

    begin_time = gettime ();
    begin_cpu = getcpu ();

    cid = 0;
    cdid = 1;
    cwid = bware;
    loopcount = 0;

    for (row = 0; row < nrows; ) {

```

```

batch_olcnt = 0;
for (i = 0; i < ORDEARR; i++, row++) {
    cid++;
    if (cid > ORDEFAC) {          /* cycle cust id */
        cid = 1;                /* cheap mod */
        cdid++;                 /* shift district cycle */
        if (cdid > DISTFAC) {
            cdid = 1;
            cwid++;             /* shift warehouse cycle */
        }
    }
    o_carrier_id[i] = lrand48 () % 10 + 1;
    o_ol_cnt[i] = olcnt = lrand48 () % 11 + 5;

    if (gen) {
        if (cid < 2101) {
            printf ("%d %d %d %d %s %d %d 1\n", cid, cdid, cwid,
                    randperm3000[cid - 1], sdate, o_carrier_id[i],
                    o_ol_cnt[i]);
        }
        else {
            /* set carrierid to 11 instead of null */
            printf ("%d %d %d %d %s 11 %d 1\n", cid, cdid, cwid,
                    randperm3000[cid - 1], sdate, o_ol_cnt[i]);
        }
    }
    else {
        o_id[i] = cid;
        o_d_id[i] = cdid;
        o_w_id[i] = cwid;
        o_c_id[i] = randperm3000[cid - 1];
        if (cid >= 2101) {
            o_carrier_id[i] = 11;
        }
    }
}

for (j = 0; j < o_ol_cnt[i]; j++, batch_olcnt++) {
    ol_i_id[batch_olcnt] = sid = lrand48 () % 100000 + 1;
    if (cid < 2101)
        ol_amount[batch_olcnt] = 0;
    else
        ol_amount[batch_olcnt] = (lrand48 () % 999999 + 1) ;
    randstr (str24[j], 24, 24);

    if (gen) {
        if (cid < 2101) {
            fprintf (olfp, "%d %d %d %d %s %d %d 5 %ld %s\n",
cid,
                    cdid, cwid, j + 1, sdate,
ol_i_id[batch_olcnt], cwid,
                    ol_amount[batch_olcnt], str24[j]);
        }
        else {
            /* Insert a default date instead of null date */
            fprintf (olfp, "%d %d %d %d 01-Jan-1811 %d %d 5 %ld
%s\n", cid,
                    cdid, cwid, j + 1, ol_i_id[batch_olcnt],
cwid,
                    ol_amount[batch_olcnt], str24[j]);
        }
    }
}

```

```

    }
    else {
        ol_o_id[batch_olcnt] = cid;
        ol_d_id[batch_olcnt] = cdid;
        ol_w_id[batch_olcnt] = cwid;
        ol_number[batch_olcnt] = j + 1;
        ol_supply_w_id[batch_olcnt] = cwid;
        strncpy (ol_dist_info[batch_olcnt], str24[j], 24);
    }
}
if (gen) {
    fflush (olfp);
}
}

o_cnt = ORDEARR;
ol_cnt = batch_olcnt;

for (j = 0; j < batch_olcnt; j++) {
    ol_o_id_len[j] = sizeof(int);
    ol_d_id_len[j] = sizeof(int);
    ol_w_id_len[j] = sizeof(int);
    ol_number_len[j] = sizeof(int);
    ol_i_id_len[j] = sizeof(int);
    ol_supply_w_id_len[j] = sizeof(int);
    ol_dist_info_len[j] = 24;
    ol_amount_len[j] = sizeof(int);
}
for (j = batch_olcnt; j < 15*ORDEARR; j++) {
    ol_o_id_len[j] = 0;
    ol_d_id_len[j] = 0;
    ol_w_id_len[j] = 0;
    ol_number_len[j] = 0;
    ol_i_id_len[j] = 0;
    ol_supply_w_id_len[j] = 0;
    ol_dist_info_len[j] = 0;
    ol_amount_len[j] = 0;
}

o_id_clen = ORDEARR;
o_d_id_clen = ORDEARR;
o_w_id_clen = ORDEARR;
o_c_id_clen = ORDEARR;
o_carrier_id_clen = ORDEARR;
o_ol_cnt_clen = ORDEARR;

ol_o_id_clen = batch_olcnt;
ol_d_id_clen = batch_olcnt;
ol_w_id_clen = batch_olcnt;
ol_number_clen = batch_olcnt;
ol_i_id_clen = batch_olcnt;
ol_supply_w_id_clen = batch_olcnt;
ol_dist_info_clen = batch_olcnt;
ol_amount_clen = batch_olcnt;

(ub4) 0,
        (CONST OCISnapshot*) 0, (OCISnapshot*) 0,
        (ub4) OCI_DEFAULT | OCI_COMMIT_ON_SUCCESS );

if ((++loopcount) % 50) {

```

```

        fprintf (stderr, ".");
    } else {
        fprintf (stderr, " %d orders committed\n", row);
    }
}

end_time = gettime ();
end_cpu = getcpu ();
fprintf (stderr, "Done. %d orders loaded/generated in %10.2f sec.
(%10.2f cpu)\n\n",
        nrows, end_time - begin_time, end_cpu - begin_cpu);
}

/*-----+
| Load the NEW-ORDER table. |
+-----*/

if (do_A || do_n) {
    nrows = (eware - bware + 1) * NEWOFAC * DISTFAC;

    fprintf (stderr, "Loading/generating new-order: w%d - w%d (%d
rows)\n",
            bware, eware, nrows);

    begin_time = gettime ();
    begin_cpu = getcpu ();

    cid = 0;
    cdid = 1;
    cwid = bware;
    loopcount = 0;

    for (row = 0; row < nrows; ) {
        for (i = 0; i < NEWOARR; i++, row++) {
            cid++;
            if (cid > NEWOFAC) {
                cid = 1;
                cdid++;
                if (cdid > DISTFAC) {
                    cdid = 1;
                    cwid++;
                }
            }

            if (gen) {
                printf ("%d %d %d\n", cid + 2100, cdid, cwid);
            }
            else {
                no_o_id[i] = cid + 2100;
                no_d_id[i] = cdid;
                no_w_id[i] = cwid;
            }
        }
    }

    if (gen) {
        fflush (stdout);
    }
    else {
        status = OCISstmtExecute(tpcsvc, curno, errhp, (ub4) NEWOARR,
(ub4) 0,

```

```

                                (CONST OCISnapshot*) 0, (OCISnapshot*)
0,                                (ub4) OCI_DEFAULT |
OCI_COMMIT_ON_SUCCESS);
    if (status != OCI_SUCCESS) {
        fprintf (stderr, "Aborted at w_id %d, d_id %d, o_id %d\n",
cwid, cdid, cid + 2100);
        OCIERROR(errhp, status);
        quit ();
        exit (1);
    }

    if ((++loopcount) % 45)
        fprintf (stderr, ".");
    else
        fprintf (stderr, " %d rows committed\n", row);
}

end_time = gettimeofday ();
end_cpu = getcpu ();
fprintf (stderr, "Done.  %d rows loaded/generated in %10.2f sec.
(%10.2f cpu)\n\n",
        nrows, end_time - begin_time, end_cpu - begin_cpu);
}

/*-----+
| clean up and exit. |
+-----*/

if (olfp)
    fclose (olfp);
if (!gen)
    quit ();
exit (0);
}

void initperm ()
{
    int i;
    int pos;
    int temp;

    /* init randperm3000 */

    for (i = 0; i < 3000; i++)
        randperm3000[i] = i + 1;
    for (i = 3000; i > 0; i--) {
        pos = lrand48 () % i;
        temp = randperm3000[i - 1];
        randperm3000[i - 1] = randperm3000[pos];
        randperm3000[pos] = temp;
    }
}

void randstr (str, x, y)
char *str;
int x;
int y;
{

```

```

int i, j;
int len;

len = (lrand48 () % (y - x + 1)) + x;
for (i = 0; i < len; i++) {
    j = lrand48 () % 62;
    if (j < 26)
        str[i] = (char) (j + 'a');
    else if (j < 52)
        str[i] = (char) (j - 26 + 'A');
    else
        str[i] = (char) (j - 52 + '0');
}
str[len] = '\0';
}

void randdatastr (str, x, y)
char *str;
int x;
int y;
{
    int i, j;
    int len;
    int pos;

    len = (lrand48 () % (y - x + 1)) + x;
    for (i = 0; i < len; i++) {
        j = lrand48 () % 62;
        if (j < 26)
            str[i] = (char) (j + 'a');
        else if (j < 52)
            str[i] = (char) (j - 26 + 'A');
        else
            str[i] = (char) (j - 52 + '0');
    }
    str[len] = '\0';
    if ((lrand48 () % 10) == 0) {
        pos = (lrand48 () % (len - 8));
        str[pos] = 'O';
        str[pos + 1] = 'R';
        str[pos + 2] = 'I';
        str[pos + 3] = 'G';
        str[pos + 4] = 'I';
        str[pos + 5] = 'N';
        str[pos + 6] = 'A';
        str[pos + 7] = 'L';
    }
}

void randnum (str, len)
char *str;
int len;
{
    int i;

    for (i = 0; i < len; i++)
        str[i] = (char) (lrand48 () % 10 + '0');
    str[len] = '\0';
}

```

```

void randlastname (str, id)
char *str;
int id;
{
    id = id % 1000;
    strcpy (str, lastname[id / 100]);
    strcat (str, lastname[(id / 10) % 10]);
    strcat (str, lastname[id % 10]);
}

int NURand (A, x, y, cnum)
int A, x, y, cnum;
{
    int a, b;

    a = lrand48 () % (A + 1);
    b = (lrand48 () % (y - x + 1)) + x;
    return (((a | b) + cnum) % (y - x + 1)) + x;
}

void sysdate (sdate)
char *sdate;
{
    time_t tp;
    struct tm *tmptr;

    time (&tp);
    tmptr = localtime (&tp);
    strftime (sdate, 29, "%d-%b-%Y", tmptr);
}

int ocierror(fname, lineno, errhp, status)
char *fname;
int lineno;
OCIError *errhp;
sword status;
{
    text errbuf[512];
    sb4 errcode;
    sb4 lstat;
    ub4 recno=2;

    switch (status) {
    case OCI_SUCCESS:
        break;
    case OCI_SUCCESS_WITH_INFO:
        fprintf(stderr, "Module %s Line %d\n", fname, lineno);
        fprintf(stderr, "Error - OCI_SUCCESS_WITH_INFO\n");
        lstat = OCIErrorGet (errhp, recno++, (text *) NULL, &errcode, errbuf,
            (ub4) sizeof(errbuf), OCI_HTYPE_ERROR);
        fprintf(stderr, "Error - %s\n", errbuf);
        break;
    case OCI_NEED_DATA:
        fprintf(stderr, "Module %s Line %d\n", fname, lineno);
        fprintf(stderr, "Error - OCI_NEED_DATA\n");
        return (IRRECERR);
    case OCI_NO_DATA:
        fprintf(stderr, "Module %s Line %d\n", fname, lineno);
        fprintf(stderr, "Error - OCI_NO_DATA\n");
}

```

```

        return (IRRECERR);
    case OCI_ERROR:
        lstat = OCIErrorGet (errhp, (ub4) 1,
            (text *) NULL, &errcode, errbuf,
            (ub4) sizeof(errbuf), OCI_HTYPE_ERROR);
        if (errcode == NOT_SERIALIZABLE) return (errcode);
        if (errcode == SNAPSHOT_TOO_OLD) return (errcode);
        while (lstat != OCI_NO_DATA)
        {
            fprintf(stderr, "Module %s Line %d\n", fname, lineno);
            fprintf(stderr, "Error - %s\n", errbuf);
            lstat = OCIErrorGet (errhp, recno++, (text *) NULL, &errcode,
                errbuf,
                (ub4) sizeof(errbuf), OCI_HTYPE_ERROR);
        }
        return (errcode);
    case OCI_INVALID_HANDLE:
        fprintf(stderr, "Module %s Line %d\n", fname, lineno);
        fprintf(stderr, "Error - OCI_INVALID_HANDLE\n");
        exit(-1);
    case OCI_STILL_EXECUTING:
        fprintf(stderr, "Module %s Line %d\n", fname, lineno);
        fprintf(stderr, "Error - OCI_STILL_EXECUTE\n");
        return (IRRECERR);
    case OCI_CONTINUE:
        fprintf(stderr, "Module %s Line %d\n", fname, lineno);
        fprintf(stderr, "Error - OCI_CONTINUE\n");
        return (IRRECERR);
    default:
        fprintf(stderr, "Module %s Line %d\n", fname, lineno);
        fprintf(stderr, "Status - %s\n", status);
        return (IRRECERR);
    }
}
return (RECOVER);
}

```

TSTETIME.C

```

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

clock_t dpbetime();

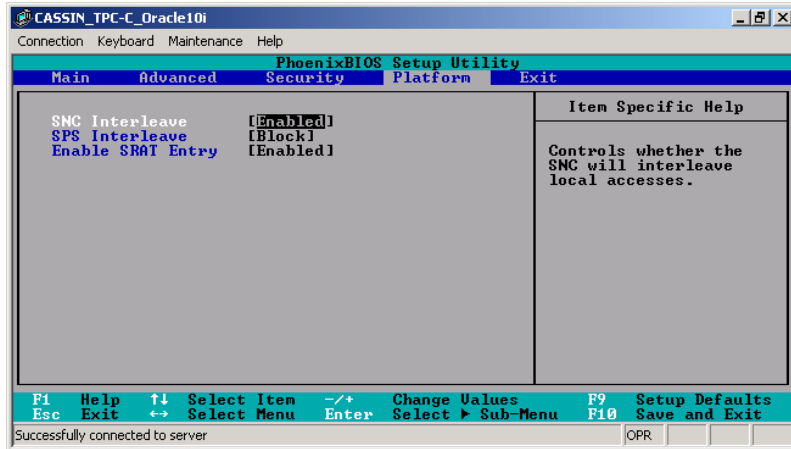
main()
{
    clock_t begin, middle, end;

    begin = dpbetime();
    Sleep(2000);
    middle = dpbetime();
    Sleep(2000);
    end = dpbetime();
    printf(" begin = %lu\n middle = %lu\n end = %lu\n", begin, middle, end);
}

```


Appendix C - Tunable Parameters

Bios NUMA Settings



```
db_cache_size = 8096M
db_files = 750
db_keep_cache_size = 78000M
shared_pool_size = 2000M
db_name = tpcc
db_recycle_cache_size = 15400M
db_writer_processes = 4
dml_locks = 500
fast_start_mttr_target = 0
log_buffer = 33554432
# log_buffer = 20971520
# log_checkpoint_interval = 63000000
log_checkpoint_interval = 0
log_checkpoint_timeout = 0
log_checkpoints_to_alert = TRUE
max_dump_file_size = 1M
pga_aggregate_target = 0
parallel_max_servers = 40
parallel_min_servers = 0
processes = 550
recovery_parallelism = 20
remote_login_passwordfile = SHARED
replication_dependency_tracking = FALSE
sort_area_size = 65525
sessions = 800
statistics_level = basic
timed_statistics = FALSE
undo_management = AUTO
undo_retention = 0
undo_tablespace = undo_1
aq_tm_processes = 0
```

Oracle Startup Parameters

P_RUN.ORA

```
_cursor_cache_frame_bind_memory = TRUE
_db_cache_pre_warm = FALSE
_db_writer_flush_imu = FALSE
_smu_debug_mode = 1536
_db_writer_max_writes = 1024
_imu_pools = 480
_lgwr_async_io = FALSE
_optimizer_cache_stats = FALSE
_optimizer_cost_model = io
_two_pass = FALSE
_transaction_auditing = FALSE
_use_realfree_heap = FALSE
compatible = 10.0.0.0.0
control_files = \\.\control_001
cursor_space_for_time = TRUE
db_16k_cache_size = 15010M
db_8k_cache_size = 1024M
db_block_checking = FALSE
db_block_checksum = FALSE
db_block_size = 2048
```

SQLNET.ORA

```
sqlnet.authentication_services=(NTS)
```

LISTENER.ORA

```
listener=(ADDRESS_LIST=(ADDRESS=(PROTOCOL=TCP) (HOST=192.158.91.158) (PORT=1521)))
SID_LIST_listener =
(SID_LIST=
(SID_DESC=
(SID_NAME=tpcc)
(ORACLE_HOME=c:\oracle\orcl0414)
)
)
```

Oracle Client Parameter File

```
TPCC =  
(DESCRIPTION=(ADDRESS=(PROTOCOL=tcp)(HOST=192.158.91.158)(PORT=1521))(CONNECT_DATA=(SID=TPCC)))
```

Storage Configuration Information

Log DPE-Cache Configuration

SP Read Cache State	Disabled
SP Write Cache State	Enabled
Cache Page size:	8
Write Cache Mirrored:	YES
Low Watermark:	15
High Watermark:	85
SPA Cache pages:	25349
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):	275 MB
System Buffer (spB):	275 MB
SPS Test Day:	Saturday
SPS Test Time:	18:00
SPA Physical Memory Size =	512
SPB Physical Memory Size =	512
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 =	237
SPB Write Cache Size =	237
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): 371052  
LUN Capacity(Blocks): 759914496
```

```
UID:  
60:06:01:F3:95:0C:00:00:33:DF:DD:46:FE:82:D7:11
```

```
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 8 Queue Length: 0
```

```

Bus 0 Enclosure 0 Disk 10 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 9 Queue Length: 0
Bus 0 Enclosure 0 Disk 11 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 8 Hard Read Errors: 0
Bus 0 Enclosure 0 Disk 10 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 9 Hard Read Errors: 0
Bus 0 Enclosure 0 Disk 11 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 8 Hard Write Errors: 0
Bus 0 Enclosure 0 Disk 10 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 9 Hard Write Errors: 0
Bus 0 Enclosure 0 Disk 11 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 8 Soft Read Errors: 0
Bus 0 Enclosure 0 Disk 10 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 9 Soft Read Errors: 0
Bus 0 Enclosure 0 Disk 11 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 8 Soft Write Errors: 0
Bus 0 Enclosure 0 Disk 10 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 9 Soft Write Errors: 0
Bus 0 Enclosure 0 Disk 11 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 8 Enabled
Bus 0 Enclosure 0 Disk 10 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
Bus 0 Enclosure 0 Disk 9 Enabled
Bus 0 Enclosure 0 Disk 11 Enabled
Is Private: NO
Snapshots List: None
MirrorView Name if any: Not Mirrored

```

Lun 1

```

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 1
Minimum latency reads N/A

```

```

RAID Type: RAID1/0
RAIDGroup ID: 1
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): 477428
LUN Capacity(Blocks): 977772544
UID:
60:06:01:F3:95:0C:00:00:34:DF:DD:46:FE:82:D7:11
Bus 0 Enclosure 0 Disk 12 Queue Length: 0
Bus 0 Enclosure 0 Disk 14 Queue Length: 0
Bus 0 Enclosure 1 Disk 1 Queue Length: 0
Bus 0 Enclosure 1 Disk 3 Queue Length: 0
Bus 0 Enclosure 1 Disk 5 Queue Length: 0
Bus 0 Enclosure 1 Disk 7 Queue Length: 0
Bus 0 Enclosure 1 Disk 9 Queue Length: 0
Bus 0 Enclosure 0 Disk 13 Queue Length: 0
Bus 0 Enclosure 1 Disk 0 Queue Length: 0
Bus 0 Enclosure 1 Disk 2 Queue Length: 0
Bus 0 Enclosure 1 Disk 4 Queue Length: 0
Bus 0 Enclosure 1 Disk 6 Queue Length: 0
Bus 0 Enclosure 1 Disk 8 Queue Length: 0
Bus 0 Enclosure 1 Disk 10 Queue Length: 0
Bus 0 Enclosure 0 Disk 12 Hard Read Errors: 0
Bus 0 Enclosure 0 Disk 14 Hard Read Errors: 0
Bus 0 Enclosure 1 Disk 1 Hard Read Errors: 0
Bus 0 Enclosure 1 Disk 3 Hard Read Errors: 0
Bus 0 Enclosure 1 Disk 5 Hard Read Errors: 0
Bus 0 Enclosure 1 Disk 7 Hard Read Errors: 0
Bus 0 Enclosure 1 Disk 9 Hard Read Errors: 0
Bus 0 Enclosure 0 Disk 13 Hard Read Errors: 0
Bus 0 Enclosure 1 Disk 0 Hard Read Errors: 0
Bus 0 Enclosure 1 Disk 2 Hard Read Errors: 0
Bus 0 Enclosure 1 Disk 4 Hard Read Errors: 0
Bus 0 Enclosure 1 Disk 6 Hard Read Errors: 0
Bus 0 Enclosure 1 Disk 8 Hard Read Errors: 0
Bus 0 Enclosure 1 Disk 10 Hard Read Errors: 0
Bus 0 Enclosure 0 Disk 12 Hard Write Errors: 0
Bus 0 Enclosure 0 Disk 14 Hard Write Errors: 0
Bus 0 Enclosure 1 Disk 1 Hard Write Errors: 0
Bus 0 Enclosure 1 Disk 3 Hard Write Errors: 0
Bus 0 Enclosure 1 Disk 5 Hard Write Errors: 0
Bus 0 Enclosure 1 Disk 7 Hard Write Errors: 0
Bus 0 Enclosure 1 Disk 9 Hard Write Errors: 0
Bus 0 Enclosure 0 Disk 13 Hard Write Errors: 0
Bus 0 Enclosure 1 Disk 0 Hard Write Errors: 0
Bus 0 Enclosure 1 Disk 2 Hard Write Errors: 0
Bus 0 Enclosure 1 Disk 4 Hard Write Errors: 0
Bus 0 Enclosure 1 Disk 6 Hard Write Errors: 0
Bus 0 Enclosure 1 Disk 8 Hard Write Errors: 0

```

```

Bus 0 Enclosure 1 Disk 10 Hard Write Errors: 0
Bus 0 Enclosure 0 Disk 12 Soft Read Errors: 0
Bus 0 Enclosure 0 Disk 14 Soft Read Errors: 0
Bus 0 Enclosure 1 Disk 1 Soft Read Errors: 0
Bus 0 Enclosure 1 Disk 3 Soft Read Errors: 0
Bus 0 Enclosure 1 Disk 5 Soft Read Errors: 0
Bus 0 Enclosure 1 Disk 7 Soft Read Errors: 0
Bus 0 Enclosure 1 Disk 9 Soft Read Errors: 0
Bus 0 Enclosure 0 Disk 13 Soft Read Errors: 0
Bus 0 Enclosure 1 Disk 0 Soft Read Errors: 0
Bus 0 Enclosure 1 Disk 2 Soft Read Errors: 0
Bus 0 Enclosure 1 Disk 4 Soft Read Errors: 0
Bus 0 Enclosure 1 Disk 6 Soft Read Errors: 0
Bus 0 Enclosure 1 Disk 8 Soft Read Errors: 0
Bus 0 Enclosure 1 Disk 10 Soft Read Errors: 0
Bus 0 Enclosure 0 Disk 12 Soft Write Errors: 0
Bus 0 Enclosure 0 Disk 14 Soft Write Errors: 0
Bus 0 Enclosure 1 Disk 1 Soft Write Errors: 0
Bus 0 Enclosure 1 Disk 3 Soft Write Errors: 0
Bus 0 Enclosure 1 Disk 5 Soft Write Errors: 0
Bus 0 Enclosure 1 Disk 7 Soft Write Errors: 0
Bus 0 Enclosure 1 Disk 9 Soft Write Errors: 0
Bus 0 Enclosure 0 Disk 13 Soft Write Errors: 0
Bus 0 Enclosure 1 Disk 0 Soft Write Errors: 0
Bus 0 Enclosure 1 Disk 2 Soft Write Errors: 0
Bus 0 Enclosure 1 Disk 4 Soft Write Errors: 0
Bus 0 Enclosure 1 Disk 6 Soft Write Errors: 0
Bus 0 Enclosure 1 Disk 8 Soft Write Errors: 0
Bus 0 Enclosure 1 Disk 10 Soft Write Errors: 0
Bus 0 Enclosure 0 Disk 12 Enabled
Bus 0 Enclosure 0 Disk 14 Enabled
Bus 0 Enclosure 1 Disk 1 Enabled
Bus 0 Enclosure 1 Disk 3 Enabled
Bus 0 Enclosure 1 Disk 5 Enabled
Bus 0 Enclosure 1 Disk 7 Enabled
Bus 0 Enclosure 1 Disk 9 Enabled
Bus 0 Enclosure 0 Disk 13 Enabled
Bus 0 Enclosure 1 Disk 0 Enabled
Bus 0 Enclosure 1 Disk 2 Enabled
Bus 0 Enclosure 1 Disk 4 Enabled
Bus 0 Enclosure 1 Disk 6 Enabled
Bus 0 Enclosure 1 Disk 8 Enabled
Bus 0 Enclosure 1 Disk 10 Enabled
Is Private: NO
Snapshots List: None

```

MirrorView Name if any: Not Mirrored

Intelligent Fibre Channel Adapter Utility Settings

Setting tuning values to IOPs			
IOP No.	Max LUN Queue Depth	Max Target Queue Depth	IIDelay
0	127	255	16
1	127	255	16
2	127	255	16
3	127	255	16
4	127	255	16
5	127	255	16
6	127	255	16
7	127	255	0

Windows Datacenter Server Configuration Information

System Information report written at: 10/10/03 12:54:51
System Name: MV-CASSIN8
[System Summary]

Item	Value
OS Name	Microsoft(R) Windows(R) Server 2003, Datacenter Edition
Version	5.2.3790 Build 3790
OS Manufacturer	Microsoft Corporation
System Name	MV-CASSIN8
System Manufacturer	UNISYS
System Model	ES7000/130
System Type	Itanium (TM) -based System
Processor	ia64 Family 31 Model 1 Stepping 5 GenuineIntel ~1500 Mhz
Processor	ia64 Family 31 Model 1 Stepping 5 GenuineIntel ~1500 Mhz
Processor	ia64 Family 31 Model 1 Stepping 5 GenuineIntel ~1500 Mhz
Processor	ia64 Family 31 Model 1 Stepping 5 GenuineIntel ~1500 Mhz
Processor	ia64 Family 31 Model 1 Stepping 5 GenuineIntel ~1500 Mhz
Processor	ia64 Family 31 Model 1 Stepping 5 GenuineIntel ~1500 Mhz
Processor	ia64 Family 31 Model 1 Stepping 5 GenuineIntel ~1500 Mhz
Processor	ia64 Family 31 Model 1 Stepping 5 GenuineIntel ~1500 Mhz
Processor	ia64 Family 31 Model 1 Stepping 5 GenuineIntel ~1500 Mhz
Processor	ia64 Family 31 Model 1 Stepping 5 GenuineIntel ~1500 Mhz

Processor ia64 Family 31 Model 1 Stepping 5 GenuineIntel ~1500 Mhz
Processor ia64 Family 31 Model 1 Stepping 5 GenuineIntel ~1500 Mhz
Processor ia64 Family 31 Model 1 Stepping 5 GenuineIntel ~1500 Mhz
Processor ia64 Family 31 Model 1 Stepping 5 GenuineIntel ~1500 Mhz
Processor ia64 Family 31 Model 1 Stepping 5 GenuineIntel ~1500 Mhz

BIOS Version/Date Phoenix Technologies LTD BIOS Release 2.0.142, 8/13/2003
SMBIOS Version 2.3
Windows Directory C:\WINDOWS
System Directory C:\WINDOWS\system32
Boot Device \Device\HarddiskVolumel
Locale United States
Hardware Abstraction Layer Version = "5.2.3790.0 (srv03_rtm.030324-2048)"
User Name MV-CASSIN8\Administrator
Time Zone Pacific Daylight Time
Total Physical Memory 131,062.66 MB
Available Physical Memory 5.38 GB
Total Virtual Memory 260.08 GB
Available Virtual Memory 15.34 GB
Page File Space 132.09 GB
Page File C:\pagefile.sys

[Hardware Resources]

[Conflicts/Sharing]

Resource	Device	
I/O Port	0x00000000-0x00001FFF	PCI bus
I/O Port	0x00000000-0x00001FFF	Direct memory access controller
I/O Port	0x000003C0-0x000003DF	DEC 21152 PCI to PCI bridge
I/O Port	0x000003C0-0x000003DF	Console Manager Video Driver
Memory Address	0xF4000000-0xFDFFFFFF	PCI bus
Memory Address	0xF4000000-0xFDFFFFFF	DEC 21152 PCI to PCI bridge
Memory Address	0xF4000000-0xFDFFFFFF	Console Manager control device
I/O Port	0x00002000-0x0000FFFF	PCI bus
I/O Port	0x00002000-0x0000FFFF	Intel(r) 82870 Hub Interface to PCI Bridges
Memory Address	0xE2E00000-0xE2EFFFFFF	Intel(r) 82870 Hub Interface to PCI Bridges
Memory Address	0xE2E00000-0xE2EFFFFFF	PCI standard PCI-to-PCI bridge
Memory Address	0xEAE00000-0xEAEFFFFFF	Intel(r) 82870 Hub Interface to PCI Bridges

Memory Address 0xEAE00000-0xEAEFFFFFF PCI standard PCI-to-PCI bridge

Memory Address 0xE8000000-0xECFFFFFF PCI bus
Memory Address 0xE8000000-0xECFFFFFF Intel(r) 82870 Hub Interface to PCI Bridges
Memory Address 0xE8000000-0xECFFFFFF PCI standard PCI-to-PCI bridge

Memory Address 0xE8000000-0xECFFFFFF Unisys Intelligent Fibre Channel Fabric Bus Adapter

Memory Address 0xE6F00000-0xE6FFFFFF Intel(r) 82870 Hub Interface to PCI Bridges
Memory Address 0xE6F00000-0xE6FFFFFF PCI standard PCI-to-PCI bridge

Memory Address 0xEAF00000-0xEAFFFFFFFF Intel(r) 82870 Hub Interface to PCI Bridges
Memory Address 0xEAF00000-0xEAFFFFFFFF PCI standard PCI-to-PCI bridge

Memory Address 0xEFE00000-0xEFEFFFFFF Intel(r) 82870 Hub Interface to PCI Bridges
Memory Address 0xEFE00000-0xEFEFFFFFF PCI standard PCI-to-PCI bridge

Memory Address 0xE0800000-0xE0FFFFFF Intel(r) 82870 Hub Interface to PCI Bridges
Memory Address 0xE0800000-0xE0FFFFFF PCI standard PCI-to-PCI bridge

Memory Address 0xE0800000-0xE0FFFFFF Unisys Intelligent Fibre Channel Fabric Bus Adapter

Memory Address 0xE2F00000-0xE2FFFFFF Intel(r) 82870 Hub Interface to PCI Bridges
Memory Address 0xE2F00000-0xE2FFFFFF PCI standard PCI-to-PCI bridge

Memory Address 0xE0000000-0xE3FFFFFF PCI bus
Memory Address 0xE0000000-0xE3FFFFFF Intel(r) 82870 Hub Interface to PCI Bridges
Memory Address 0xE0000000-0xE3FFFFFF PCI standard PCI-to-PCI bridge

Memory Address 0xE0000000-0xE3FFFFFF Unisys Intelligent Fibre Channel Fabric Bus Adapter

Memory Address 0xE4000000-0xE7FFFFFF PCI bus
Memory Address 0xE4000000-0xE7FFFFFF Intel(r) 82870 Hub Interface to PCI Bridges
Memory Address 0xE4000000-0xE7FFFFFF PCI standard PCI-to-PCI bridge

Memory Address 0xE4000000-0xE7FFFFFF Unisys Intelligent Fibre Channel Fabric Bus Adapter

Memory Address 0xE8800000-0xE8FFFFFF Intel(r) 82870 Hub Interface to PCI Bridges
Memory Address 0xE8800000-0xE8FFFFFF PCI standard PCI-to-PCI bridge

Memory Address 0xE8800000-0xE8FFFFFF Unisys Intelligent Fibre Channel Fabric Bus Adapter

Memory Address 0xED000000-0xEFFFFFFF PCI bus
Memory Address 0xED000000-0xEFFFFFFF Intel(r) 82870 Hub Interface to PCI Bridges
Memory Address 0xED000000-0xEFFFFFFF PCI standard PCI-to-PCI bridge

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

Memory Address 0xA0000-0xFFFFF PCI bus
Memory Address 0xA0000-0xFFFFF DEC 21152 PCI to PCI bridge
Memory Address 0xA0000-0xFFFFF Console Manager Video Driver

Memory Address 0xEFF00000-0xEFFFFFFF Intel(r) 82870 Hub Interface to PCI Bridges
Memory Address 0xEFF00000-0xEFFFFFFF PCI standard PCI-to-PCI bridge

I/O Port 0x000003B0-0x000003BB DEC 21152 PCI to PCI bridge
I/O Port 0x000003B0-0x000003BB Console Manager Video Driver

Memory Address 0xF8000000-0xFBFFFFFF DEC 21152 PCI to PCI bridge
Memory Address 0xF8000000-0xFBFFFFFF Console Manager Video Driver

Memory Address 0xE6E00000-0xE6EFFFFFF Intel(r) 82870 Hub Interface to PCI Bridges
Memory Address 0xE6E00000-0xE6EFFFFFF PCI standard PCI-to-PCI bridge

Memory Address 0xE4800000-0xE4FFFFFF Intel(r) 82870 Hub Interface to PCI Bridges
Memory Address 0xE4800000-0xE4FFFFFF PCI standard PCI-to-PCI bridge

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

Memory Address 0xED800000-0xEDFFFFFF Intel(r) 82870 Hub Interface to PCI Bridges
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

[Forced Hardware]

Device PNP Device ID

[I/O]

Resource	Device	Status
0x00000000-0x00001FFF	PCI bus	OK

```

0x00000000-0x00001FFF Direct memory access controller OK
0x00001800-0x0000181F Intel(r) 82801DB/DBM USB Universal Host Controller
- 24C2 OK
0x000003B0-0x000003BB DEC 21152 PCI to PCI bridge OK
0x000003B0-0x000003BB Console Manager Video Driver OK
0x000003C0-0x000003DF DEC 21152 PCI to PCI bridge OK
0x000003C0-0x000003DF Console Manager Video Driver OK
0x00000010-0x0000001F Motherboard resources OK
0x00000024-0x00000025 Motherboard resources OK
0x00000028-0x00000029 Motherboard resources OK
0x0000002C-0x0000002D Motherboard resources OK
0x00000030-0x00000031 Motherboard resources OK
0x00000034-0x00000035 Motherboard resources OK
0x00000038-0x00000039 Motherboard resources OK
0x0000003C-0x0000003D Motherboard resources OK
0x00000050-0x00000053 Motherboard resources OK
0x00000072-0x00000077 Motherboard resources OK
0x00000080-0x00000080 Motherboard resources OK
0x00000090-0x0000009F Motherboard resources OK
0x000000A4-0x000000A5 Motherboard resources OK
0x000000A8-0x000000A9 Motherboard resources OK
0x000000AC-0x000000AD Motherboard resources OK
0x000000B0-0x000000B5 Motherboard resources OK
0x000000B8-0x000000B9 Motherboard resources OK
0x000000BC-0x000000BD Motherboard resources OK
0x00001000-0x0000107F Motherboard resources OK
0x00001180-0x000011BF Motherboard resources OK
0x0000002E-0x0000002F Motherboard resources OK
0x000004D0-0x000004D1 Motherboard resources OK
0x00000081-0x0000008F Direct memory access controller OK
0x000000C0-0x000000DF Direct memory access controller OK
0x000000F0-0x000000FE Numeric data processor OK
0x00000020-0x00000021 Programmable interrupt controller OK
0x000000A0-0x000000A1 Programmable interrupt controller OK
0x00000070-0x00000071 System CMOS/real time clock OK
0x00000061-0x00000061 System speaker OK
0x00000040-0x00000043 System timer OK
0x000003F8-0x000003FF Communications Port (COM1) 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
0x00001820-0x0000182F Intel(r) 82801DB Ultra ATA Storage Controller-24CB
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
0x00002000-0x0000FFFF PCI bus OK
0x00002000-0x0000FFFF Intel(r) 82870 Hub Interface to PCI Bridges OK

0x00002CE0-0x00002CFF Intel(R) PRO/1000 XT Server Adapter OK

```

[IRQs]

```

Resource Device Status
IRQ 9 Microsoft ACPI-Compliant System OK
IRQ 16 Intel(r) 82801DB/DBM USB Universal Host Controller - 24C2 OK

```

```

IRQ 21 Console Manager control device OK
IRQ 13 Numeric data processor OK
IRQ 8 System CMOS/real time clock OK
IRQ 0 System timer OK
IRQ 4 Communications Port (COM1) OK
IRQ 12 PS/2 Compatible Mouse OK
IRQ 1 Standard 101/102-Key or Microsoft Natural PS/2 Keyboard OK

```

```

IRQ 14 Primary IDE Channel OK
IRQ 15 Secondary IDE Channel OK
IRQ 48 LSI Logic MegaRAID Elite 1650/1700 RAID Controller OK
IRQ 96 Intel(R) PRO/1000 XT Server Adapter OK
IRQ 148 Unisys Intelligent Fibre Channel Fabric Bus Adapter OK
IRQ 120 Unisys Intelligent Fibre Channel Fabric Bus Adapter OK
IRQ 244 Unisys Intelligent Fibre Channel Fabric Bus Adapter OK
IRQ 216 Unisys Intelligent Fibre Channel Fabric Bus Adapter OK
IRQ 292 Unisys Intelligent Fibre Channel Fabric Bus Adapter OK
IRQ 264 Unisys Intelligent Fibre Channel Fabric Bus Adapter OK
IRQ 340 Unisys Intelligent Fibre Channel Fabric Bus Adapter OK
IRQ 312 Unisys Intelligent Fibre Channel Fabric Bus Adapter OK

```

[Memory]

```

Resource Device Status
0xA0000-0xFFFF PCI bus OK
0xA0000-0xFFFF DEC 21152 PCI to PCI bridge OK
0xA0000-0xFFFF Console Manager Video Driver OK
0xF4000000-0xFDFFFFFFFF PCI bus OK
0xF4000000-0xFDFFFFFFFF DEC 21152 PCI to PCI bridge OK
0xF4000000-0xFDFFFFFFFF Console Manager control device OK
0xF8000000-0xFBFFFFFFF DEC 21152 PCI to PCI bridge OK
0xF8000000-0xFBFFFFFFF Console Manager Video Driver OK
0xFBFFFFFFF-0xFBFFFFFFF Console Manager Video Driver OK
0xFDFFFFC00-0xFDFFFFFFFF Intel(r) 82801DB Ultra ATA Storage Controller-24CB
OK
0xF1000000-0xF3FFFFFFF PCI bus OK
0xF1F00000-0xF1FFFFFFF Intel(r) 82870 Hub Interface to PCI Bridges OK
0xF1FF0000-0xF1FFFFFFF LSI Logic MegaRAID Elite 1650/1700 RAID Controller
OK
0xF0000000-0xF0FFFFFFF PCI bus OK
0xF0F00000-0xF0FFFFFFF Intel(r) 82870 Hub Interface to PCI Bridges OK
0xF0FE0000-0xF0FFFFFFF Intel(R) PRO/1000 XT Server Adapter OK
0xF0FC0000-0xF0FDFFFF Intel(R) PRO/1000 XT Server Adapter OK
0xED000000-0xFFFFFFFF PCI bus OK
0xED000000-0xFFFFFFFF Intel(r) 82870 Hub Interface to PCI Bridges OK
0xED000000-0xFFFFFFFF PCI standard PCI-to-PCI bridge OK
0xED000000-0xFFFFFFFF Unisys Intelligent Fibre Channel Fabric Bus Adapter
OK
0xEFF00000-0xEFFFFFFF Intel(r) 82870 Hub Interface to PCI Bridges OK
0xEFF00000-0xEFFFFFFF PCI standard PCI-to-PCI bridge OK
0xED800000-0xEDFFFFFFF Intel(r) 82870 Hub Interface to PCI Bridges OK
0xED800000-0xEDFFFFFFF PCI standard PCI-to-PCI bridge OK
0xED800000-0xEDFFFFFFF Unisys Intelligent Fibre Channel Fabric Bus Adapter
OK

```

```

0xEFFFF000-0xEFFFFFFF Unisys Intelligent Fibre Channel Fabric Bus Adapter OK
0xEFE00000-0xEFEFFFFFF Intel(r) 82870 Hub Interface to PCI Bridges OK
0xEFE00000-0xEFEFFFFFF PCI standard PCI-to-PCI bridge OK
0xEFEFF000-0xEFEFFFFFF Unisys Intelligent Fibre Channel Fabric Bus Adapter OK
0xE8000000-0xECFFFFFF PCI bus OK
0xE8000000-0xECFFFFFF Intel(r) 82870 Hub Interface to PCI Bridges OK
0xE8000000-0xECFFFFFF PCI standard PCI-to-PCI bridge OK
0xE8000000-0xECFFFFFF Unisys Intelligent Fibre Channel Fabric Bus Adapter OK
0xEAF00000-0xEAFFFFFFFF Intel(r) 82870 Hub Interface to PCI Bridges OK
0xEAF00000-0xEAFFFFFFFF PCI standard PCI-to-PCI bridge OK
0xE8800000-0xE8FFFFFF Intel(r) 82870 Hub Interface to PCI Bridges OK
0xE8800000-0xE8FFFFFF PCI standard PCI-to-PCI bridge OK
0xE8800000-0xE8FFFFFF Unisys Intelligent Fibre Channel Fabric Bus Adapter OK
0xEAFF0000-0xEAFFFFFFFF Unisys Intelligent Fibre Channel Fabric Bus Adapter OK
0xEAE00000-0xEAEFFFFFF Intel(r) 82870 Hub Interface to PCI Bridges OK
0xEAE00000-0xEAEFFFFFF PCI standard PCI-to-PCI bridge OK
0xEAEFF000-0xEAEFFFFFF Unisys Intelligent Fibre Channel Fabric Bus Adapter OK
0xE4000000-0xE7FFFFFF PCI bus OK
0xE4000000-0xE7FFFFFF Intel(r) 82870 Hub Interface to PCI Bridges OK
0xE4000000-0xE7FFFFFF PCI standard PCI-to-PCI bridge OK
0xE4000000-0xE7FFFFFF Unisys Intelligent Fibre Channel Fabric Bus Adapter OK
0xE6F00000-0xE6FFFFFF Intel(r) 82870 Hub Interface to PCI Bridges OK
0xE6F00000-0xE6FFFFFF PCI standard PCI-to-PCI bridge OK
0xE4800000-0xE4FFFFFF Intel(r) 82870 Hub Interface to PCI Bridges OK
0xE4800000-0xE4FFFFFF PCI standard PCI-to-PCI bridge OK
0xE4800000-0xE4FFFFFF Unisys Intelligent Fibre Channel Fabric Bus Adapter OK
0xE6FFF000-0xE6FFFFFF Unisys Intelligent Fibre Channel Fabric Bus Adapter OK
0xE6E00000-0xE6EFFFFFF Intel(r) 82870 Hub Interface to PCI Bridges OK
0xE6E00000-0xE6EFFFFFF PCI standard PCI-to-PCI bridge OK
0xE6EFF000-0xE6EFFFFFF Unisys Intelligent Fibre Channel Fabric Bus Adapter OK
0xE0000000-0xE3FFFFFF PCI bus OK
0xE0000000-0xE3FFFFFF Intel(r) 82870 Hub Interface to PCI Bridges OK
0xE0000000-0xE3FFFFFF PCI standard PCI-to-PCI bridge OK
0xE0000000-0xE3FFFFFF Unisys Intelligent Fibre Channel Fabric Bus Adapter OK
0xE2F00000-0xE2FFFFFF Intel(r) 82870 Hub Interface to PCI Bridges OK
0xE2F00000-0xE2FFFFFF PCI standard PCI-to-PCI bridge OK

```

```

0xE0800000-0xE0FFFFFF Intel(r) 82870 Hub Interface to PCI Bridges OK
0xE0800000-0xE0FFFFFF PCI standard PCI-to-PCI bridge OK
0xE0800000-0xE0FFFFFF Unisys Intelligent Fibre Channel Fabric Bus Adapter OK
0xE2FFF000-0xE2FFFFFF Unisys Intelligent Fibre Channel Fabric Bus Adapter OK
0xE2E00000-0xE2EFFFF Intel(r) 82870 Hub Interface to PCI Bridges OK
0xE2E00000-0xE2EFFFF PCI standard PCI-to-PCI bridge OK
0xE2EFF000-0xE2EFFFF Unisys Intelligent Fibre Channel Fabric Bus Adapter OK
[Components]
[Multimedia]
[Audio Codecs]
CODEC Manufacturer Description Status File Version Size
Creation Date
c:\windows\system32\msgsm32.acm Microsoft Corporation OK
C:\WINDOWS\system32\MSGSM32.ACM 5.2.3790.0 (srv03_rtm.030324-
2048) 66.50 KB (68,096 bytes) 3/25/2003 4:00 AM
c:\windows\system32\tssoft32.acm DSP GROUP, INC. OK
C:\WINDOWS\system32\TSSOFT32.ACM 1.01 29.00 KB (29,696
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) 49.00 KB (50,176 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) 33.00 KB (33,792 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) 55.00 KB (56,320 bytes) 3/25/2003 4:00 AM
[Video Codecs]
CODEC Manufacturer Description Status File Version Size
Creation Date
c:\windows\system32\msvidc32.dll Microsoft Corporation OK
C:\WINDOWS\system32\MSVIDC32.DLL 5.2.3790.0 (srv03_rtm.030324-
2048) 67.00 KB (68,608 bytes) 3/25/2003 4:00 AM
c:\windows\system32\mrle32.dll Microsoft Corporation OK
C:\WINDOWS\system32\MSRLE32.DLL 5.2.3790.0 (srv03_rtm.030324-
2048) 24.50 KB (25,088 bytes) 3/25/2003 4:00 AM
[CD-ROM]
Item Value
Drive D:
Description CD-ROM Drive
Media Loaded No
Media Type CD-ROM

```


Name TEAC CD-W216E
Manufacturer (Standard CD-ROM drives)
Status OK
Transfer Rate Not Available
SCSI Target ID 0
PNP Device ID IDE\CDROMTEAC_CD-
W216E_____1.0A_____\5&241BC95A&0&0.0.0

[Sound Device]

Item Value

[Display]

Item Value
Name Console Manager Video Driver
PNP Device ID
PCI\VEN_1013&DEV_00D6&SUBSYS_80D61018&REV_03\5&F1487C6&0&1008F0

Adapter Type Cirrus Logic 5465, Unisys Corporation compatible
Adapter Description Console Manager Video Driver
Adapter RAM 2.00 MB (2,097,152 bytes)
Installed Drivers unesconf.dll
Driver Version 6.0.3.31
INF File oem3.inf (unescons section)
Color Planes 1
Color Table Entries 256
Resolution 800 x 600 x 72 hertz
Bits/Pixel 8
Memory Address 0xF8000000-0xFBFFFFFF
Memory Address 0xFBFF0000-0xFBFFFFFF
I/O Port 0x000003B0-0x000003BB
I/O Port 0x000003C0-0x000003DF
Memory Address 0xA0000-0xFFFF

[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\14
Number of Function Keys 12
I/O Port 0x00000060-0x00000060
I/O Port 0x00000064-0x00000064
IRQ Channel IRQ 1

[Pointing Device]

Item Value

Hardware Type PS/2 Compatible Mouse
Number of Buttons 2
Status OK
PNP Device ID ACPI\PNP0F13\14
Power Management Supported No
Double Click Threshold 6
Handedness Right Handed Operation
IRQ Channel IRQ 12

[Modem]

Item Value

[Network]

[Adapter]

Item Value
Name [00000001] Intel(R) PRO/1000 XT Server Adapter
Adapter Type Ethernet 802.3
Product Type Intel(R) PRO/1000 XT Server Adapter
Installed Yes
PNP Device ID
PCI\VEN_8086&DEV_1008&SUBSYS_11078086&REV_02\4&19D0D624&0&08E8

Last Reset 10/9/2003 7:48 PM
Index 1
Service Name E1000
IP Address 192.158.91.158
IP Subnet 255.255.255.0
Default IP Gateway Not Available
DHCP Enabled No
DHCP Server Not Available
DHCP Lease Expires Not Available
DHCP Lease Obtained Not Available
MAC Address 00:02:B3:9F:B0:D9
Memory Address 0xF0FE0000-0xF0FFFFFF
Memory Address 0xF0FC0000-0xF0FDFFFF
I/O Port 0x00002CE0-0x00002CFF
IRQ Channel IRQ 96

Name [00000002] RAS Async Adapter
Adapter Type Not Available
Product Type RAS Async Adapter
Installed Yes
PNP Device ID Not Available
Last Reset 10/9/2003 7:48 PM
Index 2
Service Name AsyncMac
IP Address Not Available
IP Subnet Not Available
Default IP Gateway Not Available
DHCP Enabled No
DHCP Server Not Available
DHCP Lease Expires Not Available
DHCP Lease Obtained Not Available
MAC Address Not Available

Name [00000003] WAN Miniport (L2TP)
 Adapter Type Not Available
 Product Type WAN Miniport (L2TP)
 Installed Yes
 PNP Device ID ROOT\MS_L2TPMINIPORT\0000
 Last Reset 10/9/2003 7:48 PM
 Index 3
 Service Name Rasl2tp
 IP Address Not Available
 IP Subnet Not Available
 Default IP Gateway Not Available
 DHCP Enabled No
 DHCP Server Not Available
 DHCP Lease Expires Not Available
 DHCP Lease Obtained Not Available
 MAC Address Not Available

Name [00000004] WAN Miniport (PPTP)
 Adapter Type Wide Area Network (WAN)
 Product Type WAN Miniport (PPTP)
 Installed Yes
 PNP Device ID ROOT\MS_PPTPMINIPORT\0000
 Last Reset 10/9/2003 7:48 PM
 Index 4
 Service Name PptpMiniport
 IP Address Not Available
 IP Subnet Not Available
 Default IP Gateway Not Available
 DHCP Enabled No
 DHCP Server Not Available
 DHCP Lease Expires Not Available
 DHCP Lease Obtained Not Available
 MAC Address 50:50:54:50:30:30

Name [00000005] WAN Miniport (PPPOE)
 Adapter Type Wide Area Network (WAN)
 Product Type WAN Miniport (PPPOE)
 Installed Yes
 PNP Device ID ROOT\MS_PPPOEMINIPORT\0000
 Last Reset 10/9/2003 7:48 PM
 Index 5
 Service Name RasPppoe
 IP Address Not Available
 IP Subnet Not Available
 Default IP Gateway Not Available
 DHCP Enabled No
 DHCP Server Not Available
 DHCP Lease Expires Not Available
 DHCP Lease Obtained Not Available
 MAC Address 33:50:6F:45:30:30

Name [00000006] Direct Parallel
 Adapter Type Not Available
 Product Type Direct Parallel
 Installed Yes
 PNP Device ID ROOT\MS_PTMINIPORT\0000
 Last Reset 10/9/2003 7:48 PM
 Index 6

Service Name Raspti
 IP Address Not Available
 IP Subnet Not Available
 Default IP Gateway Not Available
 DHCP Enabled No
 DHCP Server Not Available
 DHCP Lease Expires Not Available
 DHCP Lease Obtained Not Available
 MAC Address Not Available

Name [00000007] WAN Miniport (IP)
 Adapter Type Not Available
 Product Type WAN Miniport (IP)
 Installed Yes
 PNP Device ID ROOT\MS_NDISWANIP\0000
 Last Reset 10/9/2003 7:48 PM
 Index 7
 Service Name NdisWan
 IP Address Not Available
 IP Subnet Not Available
 Default IP Gateway Not Available
 DHCP Enabled No
 DHCP Server Not Available
 DHCP Lease Expires Not Available
 DHCP Lease Obtained Not Available
 MAC Address Not Available

[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

[WinSock]

Item Value
 File c:\windows\system32\wsock32.dll
 Size 23.00 KB (23,552 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\15
 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

[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 33.71 GB (36,199,456,768 bytes)
Free Space 7.22 GB (7,747,211,264 bytes)
Volume Name
Volume Serial Number 8C03184C

Drive D:
Description CD-ROM Disc

Drive Z:
Description Network Connection
Provider Name \\192.158.91.159\c\$

[Disks]

Item Value
Description Unisys Intelligent Fibre Channel Fabric Disk Driver
Manufacturer Unisys Corporation
Model DGC RAID 10 0099
Bytes/Sector 512
Media Loaded Yes
Media Type Fixed hard disk
Partitions 2
SCSI Bus 0
SCSI Logical Unit 0
SCSI Port 0
SCSI Target ID 0
Sectors/Track 63
Size 362.35 GB (389,072,194,560 bytes)
Total Cylinders 47,302
Total Sectors 759,906,630
Total Tracks 12,062,010
Tracks/Cylinder 255
Partition Disk #100, Partition #0
Partition Size 7.84 GB (8,414,429,184 bytes)
Partition Starting Offset 32,256 bytes
Partition Disk #100, Partition #1
Partition Size 53.71 GB (57,675,663,360 bytes)
Partition Starting Offset 8,414,461,440 bytes

Description Unisys Intelligent Fibre Channel Fabric Disk Driver
Manufacturer Unisys Corporation
Model DGC RAID 10 0099
Bytes/Sector 512
Media Loaded Yes
Media Type Fixed hard disk
Partitions 2
SCSI Bus 0
SCSI Logical Unit 0
SCSI Port 0
SCSI Target ID 1
Sectors/Track 63
Size 466.23 GB (500,615,216,640 bytes)
Total Cylinders 60,863
Total Sectors 977,764,095
Total Tracks 15,520,065
Tracks/Cylinder 255
Partition Disk #99, Partition #0
Partition Size 7.84 GB (8,414,429,184 bytes)
Partition Starting Offset 32,256 bytes

Partition Disk #99, Partition #1
Partition Size 53.71 GB (57,675,663,360 bytes)
Partition Starting Offset 8,414,461,440 bytes

Description Disk drive
Manufacturer (Standard disk drives)
Model MEGARAID LD 0 MEGARAID SCSI Disk Device
Bytes/Sector 512
Media Loaded No
Media Type Fixed hard disk
Partitions Not Available
SCSI Bus 3
SCSI Logical Unit 0
SCSI Port 3
SCSI Target ID 0
Sectors/Track 63
Size 34.18 GB (36,701,199,360 bytes)
Total Cylinders 4,462
Total Sectors 71,682,030
Total Tracks 1,137,810
Tracks/Cylinder 255
Partition Disk #0, Partition #0
Partition Size 352.96 MB (370,105,344 bytes)
Partition Starting Offset 32,256 bytes
Partition Disk #0, Partition #1
Partition Size 33.71 GB (36,199,457,280 bytes)
Partition Starting Offset 501,742,080 bytes

Description Unisys Intelligent Fibre Channel Fabric Disk Driver
Manufacturer Unisys Corporation
Model UNISYS VirtualStorage 01.0
Bytes/Sector 512
Media Loaded Yes
Media Type Fixed hard disk
Partitions 9
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 #64, Partition #0
Partition Size 1.39 GB (1,496,968,704 bytes)
Partition Starting Offset 8,257,536 bytes
Partition Disk #64, Partition #1
Partition Size 7.44 GB (7,986,714,624 bytes)
Partition Starting Offset 1,505,258,496 bytes
Partition Disk #64, Partition #2
Partition Size 5.12 GB (5,494,454,784 bytes)
Partition Starting Offset 9,492,005,376 bytes
Partition Disk #64, Partition #3
Partition Size 5.12 GB (5,494,454,784 bytes)
Partition Starting Offset 14,986,492,416 bytes
Partition Disk #64, Partition #4
Partition Size 6.96 GB (7,476,747,264 bytes)

Partition Starting Offset 20,480,979,456 bytes
 Partition Disk #64, Partition #5
 Partition Size 368.65 MB (386,555,904 bytes)
 Partition Starting Offset 27,957,758,976 bytes
 Partition Disk #64, Partition #6
 Partition Size 203.92 MB (213,825,024 bytes)
 Partition Starting Offset 28,344,347,136 bytes
 Partition Disk #64, Partition #7
 Partition Size 2.75 GB (2,952,843,264 bytes)
 Partition Starting Offset 28,558,204,416 bytes
 Partition Disk #64, Partition #8
 Partition Size 90.28 GB (96,934,892,544 bytes)
 Partition Starting Offset 31,511,079,936 bytes

Description Unisys Intelligent Fibre Channel Fabric Disk Driver
 Manufacturer Unisys Corporation
 Model UNISYS VirtualStorage 01.0
 Bytes/Sector 512
 Media Loaded Yes
 Media Type Fixed hard disk
 Partitions 9
 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 #63, Partition #0
 Partition Size 1.39 GB (1,496,968,704 bytes)
 Partition Starting Offset 8,257,536 bytes
 Partition Disk #63, Partition #1
 Partition Size 7.44 GB (7,986,714,624 bytes)
 Partition Starting Offset 1,505,258,496 bytes
 Partition Disk #63, Partition #2
 Partition Size 5.12 GB (5,494,454,784 bytes)
 Partition Starting Offset 9,492,005,376 bytes
 Partition Disk #63, Partition #3
 Partition Size 5.12 GB (5,494,454,784 bytes)
 Partition Starting Offset 14,986,492,416 bytes
 Partition Disk #63, Partition #4
 Partition Size 6.96 GB (7,476,747,264 bytes)
 Partition Starting Offset 20,480,979,456 bytes
 Partition Disk #63, Partition #5
 Partition Size 368.65 MB (386,555,904 bytes)
 Partition Starting Offset 27,957,758,976 bytes
 Partition Disk #63, Partition #6
 Partition Size 2.50 GB (2,689,634,304 bytes)
 Partition Starting Offset 28,344,347,136 bytes
 Partition Disk #63, Partition #7
 Partition Size 2.75 GB (2,952,843,264 bytes)
 Partition Starting Offset 31,034,013,696 bytes
 Partition Disk #63, Partition #8
 Partition Size 87.97 GB (94,459,083,264 bytes)
 Partition Starting Offset 33,986,889,216 bytes

Description Unisys Intelligent Fibre Channel Fabric Disk Driver
 Manufacturer Unisys Corporation
 Model UNISYS VirtualStorage 01.0
 Bytes/Sector 512
 Media Loaded Yes
 Media Type Fixed hard disk
 Partitions 9
 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 #62, Partition #0
 Partition Size 1.39 GB (1,496,968,704 bytes)
 Partition Starting Offset 8,257,536 bytes
 Partition Disk #62, Partition #1
 Partition Size 7.44 GB (7,986,714,624 bytes)
 Partition Starting Offset 1,505,258,496 bytes
 Partition Disk #62, Partition #2
 Partition Size 5.12 GB (5,494,454,784 bytes)
 Partition Starting Offset 9,492,005,376 bytes
 Partition Disk #62, Partition #3
 Partition Size 5.12 GB (5,494,454,784 bytes)
 Partition Starting Offset 14,986,492,416 bytes
 Partition Disk #62, Partition #4
 Partition Size 6.96 GB (7,476,747,264 bytes)
 Partition Starting Offset 20,480,979,456 bytes
 Partition Disk #62, Partition #5
 Partition Size 368.65 MB (386,555,904 bytes)
 Partition Starting Offset 27,957,758,976 bytes
 Partition Disk #62, Partition #6
 Partition Size 203.92 MB (213,825,024 bytes)
 Partition Starting Offset 28,344,347,136 bytes
 Partition Disk #62, Partition #7
 Partition Size 2.75 GB (2,952,843,264 bytes)
 Partition Starting Offset 28,558,204,416 bytes
 Partition Disk #62, Partition #8
 Partition Size 90.28 GB (96,934,892,544 bytes)
 Partition Starting Offset 31,511,079,936 bytes

Description Unisys Intelligent Fibre Channel Fabric Disk Driver
 Manufacturer Unisys Corporation
 Model UNISYS VirtualStorage 01.0
 Bytes/Sector 512
 Media Loaded Yes
 Media Type Fixed hard disk
 Partitions 9
 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 #61, Partition #0
 Partition Size 1.39 GB (1,496,968,704 bytes)
 Partition Starting Offset 8,257,536 bytes
 Partition Disk #61, Partition #1
 Partition Size 7.44 GB (7,986,714,624 bytes)
 Partition Starting Offset 1,505,258,496 bytes
 Partition Disk #61, Partition #2
 Partition Size 5.12 GB (5,494,454,784 bytes)
 Partition Starting Offset 9,492,005,376 bytes
 Partition Disk #61, Partition #3
 Partition Size 5.12 GB (5,494,454,784 bytes)
 Partition Starting Offset 14,986,492,416 bytes
 Partition Disk #61, Partition #4
 Partition Size 6.96 GB (7,476,747,264 bytes)
 Partition Starting Offset 20,480,979,456 bytes
 Partition Disk #61, Partition #5
 Partition Size 368.65 MB (386,555,904 bytes)
 Partition Starting Offset 27,957,758,976 bytes
 Partition Disk #61, Partition #6
 Partition Size 2.50 GB (2,689,634,304 bytes)
 Partition Starting Offset 28,344,347,136 bytes
 Partition Disk #61, Partition #7
 Partition Size 2.75 GB (2,952,843,264 bytes)
 Partition Starting Offset 31,034,013,696 bytes
 Partition Disk #61, Partition #8
 Partition Size 87.97 GB (94,459,083,264 bytes)
 Partition Starting Offset 33,986,889,216 bytes

Description Unisys Intelligent Fibre Channel Fabric Disk Driver
 Manufacturer Unisys Corporation
 Model UNISYS VirtualStorage 01.0
 Bytes/Sector 512
 Media Loaded Yes
 Media Type Fixed hard disk
 Partitions 9
 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 #60, Partition #0
 Partition Size 1.39 GB (1,496,968,704 bytes)
 Partition Starting Offset 8,257,536 bytes
 Partition Disk #60, Partition #1
 Partition Size 7.44 GB (7,986,714,624 bytes)
 Partition Starting Offset 1,505,258,496 bytes
 Partition Disk #60, Partition #2
 Partition Size 5.12 GB (5,494,454,784 bytes)
 Partition Starting Offset 9,492,005,376 bytes
 Partition Disk #60, Partition #3
 Partition Size 5.12 GB (5,494,454,784 bytes)

Partition Starting Offset 14,986,492,416 bytes
 Partition Disk #60, Partition #4
 Partition Size 6.96 GB (7,476,747,264 bytes)
 Partition Starting Offset 20,480,979,456 bytes
 Partition Disk #60, Partition #5
 Partition Size 368.65 MB (386,555,904 bytes)
 Partition Starting Offset 27,957,758,976 bytes
 Partition Disk #60, Partition #6
 Partition Size 203.92 MB (213,825,024 bytes)
 Partition Starting Offset 28,344,347,136 bytes
 Partition Disk #60, Partition #7
 Partition Size 2.75 GB (2,952,843,264 bytes)
 Partition Starting Offset 28,558,204,416 bytes
 Partition Disk #60, Partition #8
 Partition Size 90.28 GB (96,934,892,544 bytes)
 Partition Starting Offset 31,511,079,936 bytes

Description Unisys Intelligent Fibre Channel Fabric Disk Driver
 Manufacturer Unisys Corporation
 Model UNISYS VirtualStorage 01.0
 Bytes/Sector 512
 Media Loaded Yes
 Media Type Fixed hard disk
 Partitions 9
 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 #59, Partition #0
 Partition Size 1.39 GB (1,496,968,704 bytes)
 Partition Starting Offset 8,257,536 bytes
 Partition Disk #59, Partition #1
 Partition Size 7.44 GB (7,986,714,624 bytes)
 Partition Starting Offset 1,505,258,496 bytes
 Partition Disk #59, Partition #2
 Partition Size 5.12 GB (5,494,454,784 bytes)
 Partition Starting Offset 9,492,005,376 bytes
 Partition Disk #59, Partition #3
 Partition Size 5.12 GB (5,494,454,784 bytes)
 Partition Starting Offset 14,986,492,416 bytes
 Partition Disk #59, Partition #4
 Partition Size 6.96 GB (7,476,747,264 bytes)
 Partition Starting Offset 20,480,979,456 bytes
 Partition Disk #59, Partition #5
 Partition Size 368.65 MB (386,555,904 bytes)
 Partition Starting Offset 27,957,758,976 bytes
 Partition Disk #59, Partition #6
 Partition Size 2.50 GB (2,689,634,304 bytes)
 Partition Starting Offset 28,344,347,136 bytes
 Partition Disk #59, Partition #7
 Partition Size 2.75 GB (2,952,843,264 bytes)
 Partition Starting Offset 31,034,013,696 bytes
 Partition Disk #59, Partition #8

Partition Size 87.97 GB (94,459,083,264 bytes)
Partition Starting Offset 33,986,889,216 bytes

Description Unisys Intelligent Fibre Channel Fabric Disk Driver
Manufacturer Unisys Corporation
Model UNISYS VirtualStorage 01.0
Bytes/Sector 512
Media Loaded Yes
Media Type Fixed hard disk
Partitions 9
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 #58, Partition #0
Partition Size 1.39 GB (1,496,968,704 bytes)
Partition Starting Offset 8,257,536 bytes
Partition Disk #58, Partition #1
Partition Size 7.44 GB (7,986,714,624 bytes)
Partition Starting Offset 1,505,258,496 bytes
Partition Disk #58, Partition #2
Partition Size 5.12 GB (5,494,454,784 bytes)
Partition Starting Offset 9,492,005,376 bytes
Partition Disk #58, Partition #3
Partition Size 5.12 GB (5,494,454,784 bytes)
Partition Starting Offset 14,986,492,416 bytes
Partition Disk #58, Partition #4
Partition Size 6.96 GB (7,476,747,264 bytes)
Partition Starting Offset 20,480,979,456 bytes
Partition Disk #58, Partition #5
Partition Size 368.65 MB (386,555,904 bytes)
Partition Starting Offset 27,957,758,976 bytes
Partition Disk #58, Partition #6
Partition Size 2.40 GB (2,574,480,384 bytes)
Partition Starting Offset 28,344,347,136 bytes
Partition Disk #58, Partition #7
Partition Size 2.75 GB (2,952,843,264 bytes)
Partition Starting Offset 30,918,859,776 bytes
Partition Disk #58, Partition #8
Partition Size 88.08 GB (94,574,237,184 bytes)
Partition Starting Offset 33,871,735,296 bytes

Description Unisys Intelligent Fibre Channel Fabric Disk Driver
Manufacturer Unisys Corporation
Model UNISYS VirtualStorage 01.0
Bytes/Sector 512
Media Loaded Yes
Media Type Fixed hard disk
Partitions 9
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 #57, Partition #0
Partition Size 1.39 GB (1,496,968,704 bytes)
Partition Starting Offset 8,257,536 bytes
Partition Disk #57, Partition #1
Partition Size 7.44 GB (7,986,714,624 bytes)
Partition Starting Offset 1,505,258,496 bytes
Partition Disk #57, Partition #2
Partition Size 5.12 GB (5,494,454,784 bytes)
Partition Starting Offset 9,492,005,376 bytes
Partition Disk #57, Partition #3
Partition Size 5.12 GB (5,494,454,784 bytes)
Partition Starting Offset 14,986,492,416 bytes
Partition Disk #57, Partition #4
Partition Size 6.96 GB (7,476,747,264 bytes)
Partition Starting Offset 20,480,979,456 bytes
Partition Disk #57, Partition #5
Partition Size 368.65 MB (386,555,904 bytes)
Partition Starting Offset 27,957,758,976 bytes
Partition Disk #57, Partition #6
Partition Size 2.40 GB (2,574,480,384 bytes)
Partition Starting Offset 28,344,347,136 bytes
Partition Disk #57, Partition #7
Partition Size 2.75 GB (2,952,843,264 bytes)
Partition Starting Offset 30,918,859,776 bytes
Partition Disk #57, Partition #8
Partition Size 88.08 GB (94,574,237,184 bytes)
Partition Starting Offset 33,871,735,296 bytes

Description Unisys Intelligent Fibre Channel Fabric Disk Driver
Manufacturer Unisys Corporation
Model UNISYS VirtualStorage 01.0
Bytes/Sector 512
Media Loaded Yes
Media Type Fixed hard disk
Partitions 9
SCSI Bus 0
SCSI Logical Unit 0
SCSI Port 0
SCSI Target ID 84
Sectors/Track 63
Size 119.62 GB (128,445,972,480 bytes)
Total Cylinders 15,616
Total Sectors 250,871,040
Total Tracks 3,982,080
Tracks/Cylinder 255
Partition Disk #16, Partition #0
Partition Size 1.39 GB (1,496,968,704 bytes)
Partition Starting Offset 8,257,536 bytes
Partition Disk #16, Partition #1
Partition Size 7.44 GB (7,986,714,624 bytes)
Partition Starting Offset 1,505,258,496 bytes
Partition Disk #16, Partition #2
Partition Size 5.12 GB (5,494,454,784 bytes)

Partition Starting Offset 9,492,005,376 bytes
 Partition Disk #16, Partition #3
 Partition Size 5.12 GB (5,494,454,784 bytes)
 Partition Starting Offset 14,986,492,416 bytes
 Partition Disk #16, Partition #4
 Partition Size 6.96 GB (7,476,747,264 bytes)
 Partition Starting Offset 20,480,979,456 bytes
 Partition Disk #16, Partition #5
 Partition Size 368.65 MB (386,555,904 bytes)
 Partition Starting Offset 27,957,758,976 bytes
 Partition Disk #16, Partition #6
 Partition Size 2.40 GB (2,574,480,384 bytes)
 Partition Starting Offset 28,344,347,136 bytes
 Partition Disk #16, Partition #7
 Partition Size 2.75 GB (2,952,843,264 bytes)
 Partition Starting Offset 30,918,859,776 bytes
 Partition Disk #16, Partition #8
 Partition Size 88.08 GB (94,574,237,184 bytes)
 Partition Starting Offset 33,871,735,296 bytes

Description Unisys Intelligent Fibre Channel Fabric Disk Driver
 Manufacturer Unisys Corporation
 Model UNISYS VirtualStorage 01.0
 Bytes/Sector 512
 Media Loaded Yes
 Media Type Fixed hard disk
 Partitions 9
 SCSI Bus 0
 SCSI Logical Unit 0
 SCSI Port 0
 SCSI Target ID 85
 Sectors/Track 63
 Size 119.62 GB (128,445,972,480 bytes)
 Total Cylinders 15,616
 Total Sectors 250,871,040
 Total Tracks 3,982,080
 Tracks/Cylinder 255
 Partition Disk #15, Partition #0
 Partition Size 1.39 GB (1,496,968,704 bytes)
 Partition Starting Offset 8,257,536 bytes
 Partition Disk #15, Partition #1
 Partition Size 7.44 GB (7,986,714,624 bytes)
 Partition Starting Offset 1,505,258,496 bytes
 Partition Disk #15, Partition #2
 Partition Size 5.12 GB (5,494,454,784 bytes)
 Partition Starting Offset 9,492,005,376 bytes
 Partition Disk #15, Partition #3
 Partition Size 5.12 GB (5,494,454,784 bytes)
 Partition Starting Offset 14,986,492,416 bytes
 Partition Disk #15, Partition #4
 Partition Size 6.96 GB (7,476,747,264 bytes)
 Partition Starting Offset 20,480,979,456 bytes
 Partition Disk #15, Partition #5
 Partition Size 368.65 MB (386,555,904 bytes)
 Partition Starting Offset 27,957,758,976 bytes
 Partition Disk #15, Partition #6
 Partition Size 2.40 GB (2,574,480,384 bytes)
 Partition Starting Offset 28,344,347,136 bytes
 Partition Disk #15, Partition #7

Partition Size 2.75 GB (2,952,843,264 bytes)
 Partition Starting Offset 30,918,859,776 bytes
 Partition Disk #15, Partition #8
 Partition Size 88.08 GB (94,574,237,184 bytes)
 Partition Starting Offset 33,871,735,296 bytes

Description Unisys Intelligent Fibre Channel Fabric Disk Driver
 Manufacturer Unisys Corporation
 Model UNISYS VirtualStorage 01.0
 Bytes/Sector 512
 Media Loaded Yes
 Media Type Fixed hard disk
 Partitions 9
 SCSI Bus 0
 SCSI Logical Unit 0
 SCSI Port 0
 SCSI Target ID 86
 Sectors/Track 63
 Size 119.62 GB (128,445,972,480 bytes)
 Total Cylinders 15,616
 Total Sectors 250,871,040
 Total Tracks 3,982,080
 Tracks/Cylinder 255
 Partition Disk #14, Partition #0
 Partition Size 1.39 GB (1,496,968,704 bytes)
 Partition Starting Offset 8,257,536 bytes
 Partition Disk #14, Partition #1
 Partition Size 7.44 GB (7,986,714,624 bytes)
 Partition Starting Offset 1,505,258,496 bytes
 Partition Disk #14, Partition #2
 Partition Size 5.12 GB (5,494,454,784 bytes)
 Partition Starting Offset 9,492,005,376 bytes
 Partition Disk #14, Partition #3
 Partition Size 5.12 GB (5,494,454,784 bytes)
 Partition Starting Offset 14,986,492,416 bytes
 Partition Disk #14, Partition #4
 Partition Size 6.96 GB (7,476,747,264 bytes)
 Partition Starting Offset 20,480,979,456 bytes
 Partition Disk #14, Partition #5
 Partition Size 368.65 MB (386,555,904 bytes)
 Partition Starting Offset 27,957,758,976 bytes
 Partition Disk #14, Partition #6
 Partition Size 2.40 GB (2,574,480,384 bytes)
 Partition Starting Offset 28,344,347,136 bytes
 Partition Disk #14, Partition #7
 Partition Size 2.75 GB (2,952,843,264 bytes)
 Partition Starting Offset 30,918,859,776 bytes
 Partition Disk #14, Partition #8
 Partition Size 88.08 GB (94,574,237,184 bytes)
 Partition Starting Offset 33,871,735,296 bytes

Description Unisys Intelligent Fibre Channel Fabric Disk Driver
 Manufacturer Unisys Corporation
 Model UNISYS VirtualStorage 01.0
 Bytes/Sector 512
 Media Loaded Yes
 Media Type Fixed hard disk
 Partitions 9
 SCSI Bus 0


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SCSI Logical Unit      0
SCSI Port              0
SCSI Target ID        87
Sectors/Track         63
Size                  119.62 GB (128,445,972,480 bytes)
Total Cylinders        15,616
Total Sectors          250,871,040
Total Tracks           3,982,080
Tracks/Cylinder        255
Partition              Disk #13, Partition #0
Partition Size         1.39 GB (1,496,968,704 bytes)
Partition Starting Offset 8,257,536 bytes
Partition              Disk #13, Partition #1
Partition Size         7.44 GB (7,986,714,624 bytes)
Partition Starting Offset 1,505,258,496 bytes
Partition              Disk #13, Partition #2
Partition Size         5.12 GB (5,494,454,784 bytes)
Partition Starting Offset 9,492,005,376 bytes
Partition              Disk #13, Partition #3
Partition Size         5.12 GB (5,494,454,784 bytes)
Partition Starting Offset 14,986,492,416 bytes
Partition              Disk #13, Partition #4
Partition Size         6.96 GB (7,476,747,264 bytes)
Partition Starting Offset 20,480,979,456 bytes
Partition              Disk #13, Partition #5
Partition Size         368.65 MB (386,555,904 bytes)
Partition Starting Offset 27,957,758,976 bytes
Partition              Disk #13, Partition #6
Partition Size         2.40 GB (2,574,480,384 bytes)
Partition Starting Offset 28,344,347,136 bytes
Partition              Disk #13, Partition #7
Partition Size         2.75 GB (2,952,843,264 bytes)
Partition Starting Offset 30,918,859,776 bytes
Partition              Disk #13, Partition #8
Partition Size         88.08 GB (94,574,237,184 bytes)
Partition Starting Offset 33,871,735,296 bytes

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Description      Unisys Intelligent Fibre Channel Fabric Disk Driver
Manufacturer      Unisys Corporation
Model             UNISYS VirtualStorage 01.0
Bytes/Sector      512
Media Loaded      Yes
Media Type        Fixed hard disk
Partitions        9
SCSI Bus          0
SCSI Logical Unit 0
SCSI Port         0
SCSI Target ID   88
Sectors/Track    63
Size             119.62 GB (128,445,972,480 bytes)
Total Cylinders  15,616
Total Sectors    250,871,040
Total Tracks     3,982,080
Tracks/Cylinder  255
Partition        Disk #12, Partition #0
Partition Size   1.39 GB (1,496,968,704 bytes)
Partition Starting Offset 8,257,536 bytes
Partition        Disk #12, Partition #1
Partition Size   7.44 GB (7,986,714,624 bytes)

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Partition Starting Offset 1,505,258,496 bytes
Partition              Disk #12, Partition #2
Partition Size         5.12 GB (5,494,454,784 bytes)
Partition Starting Offset 9,492,005,376 bytes
Partition              Disk #12, Partition #3
Partition Size         5.12 GB (5,494,454,784 bytes)
Partition Starting Offset 14,986,492,416 bytes
Partition              Disk #12, Partition #4
Partition Size         6.96 GB (7,476,747,264 bytes)
Partition Starting Offset 20,480,979,456 bytes
Partition              Disk #12, Partition #5
Partition Size         368.65 MB (386,555,904 bytes)
Partition Starting Offset 27,957,758,976 bytes
Partition              Disk #12, Partition #6
Partition Size         2.40 GB (2,574,480,384 bytes)
Partition Starting Offset 28,344,347,136 bytes
Partition              Disk #12, Partition #7
Partition Size         2.75 GB (2,952,843,264 bytes)
Partition Starting Offset 30,918,859,776 bytes
Partition              Disk #12, Partition #8
Partition Size         88.08 GB (94,574,237,184 bytes)
Partition Starting Offset 33,871,735,296 bytes

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Description      Unisys Intelligent Fibre Channel Fabric Disk Driver
Manufacturer      Unisys Corporation
Model             UNISYS VirtualStorage 01.0
Bytes/Sector      512
Media Loaded      Yes
Media Type        Fixed hard disk
Partitions        9
SCSI Bus          0
SCSI Logical Unit 0
SCSI Port         0
SCSI Target ID   89
Sectors/Track    63
Size             119.62 GB (128,445,972,480 bytes)
Total Cylinders  15,616
Total Sectors    250,871,040
Total Tracks     3,982,080
Tracks/Cylinder  255
Partition        Disk #11, Partition #0
Partition Size   1.39 GB (1,496,968,704 bytes)
Partition Starting Offset 8,257,536 bytes
Partition        Disk #11, Partition #1
Partition Size   7.44 GB (7,986,714,624 bytes)
Partition Starting Offset 1,505,258,496 bytes
Partition        Disk #11, Partition #2
Partition Size   5.12 GB (5,494,454,784 bytes)
Partition Starting Offset 9,492,005,376 bytes
Partition        Disk #11, Partition #3
Partition Size   5.12 GB (5,494,454,784 bytes)
Partition Starting Offset 14,986,492,416 bytes
Partition        Disk #11, Partition #4
Partition Size   6.96 GB (7,476,747,264 bytes)
Partition Starting Offset 20,480,979,456 bytes
Partition        Disk #11, Partition #5
Partition Size   368.65 MB (386,555,904 bytes)
Partition Starting Offset 27,957,758,976 bytes
Partition        Disk #11, Partition #6

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Partition Size 2.40 GB (2,574,480,384 bytes)
 Partition Starting Offset 28,344,347,136 bytes
 Partition Disk #11, Partition #7
 Partition Size 2.75 GB (2,952,843,264 bytes)
 Partition Starting Offset 30,918,859,776 bytes
 Partition Disk #11, Partition #8
 Partition Size 88.08 GB (94,574,237,184 bytes)
 Partition Starting Offset 33,871,735,296 bytes

Description Unisys Intelligent Fibre Channel Fabric Disk Driver
 Manufacturer Unisys Corporation
 Model UNISYS VirtualStorage 01.0
 Bytes/Sector 512
 Media Loaded Yes
 Media Type Fixed hard disk
 Partitions 9
 SCSI Bus 0
 SCSI Logical Unit 0
 SCSI Port 0
 SCSI Target ID 90
 Sectors/Track 63
 Size 119.62 GB (128,445,972,480 bytes)
 Total Cylinders 15,616
 Total Sectors 250,871,040
 Total Tracks 3,982,080
 Tracks/Cylinder 255
 Partition Disk #10, Partition #0
 Partition Size 1.39 GB (1,496,968,704 bytes)
 Partition Starting Offset 8,257,536 bytes
 Partition Disk #10, Partition #1
 Partition Size 7.44 GB (7,986,714,624 bytes)
 Partition Starting Offset 1,505,258,496 bytes
 Partition Disk #10, Partition #2
 Partition Size 5.12 GB (5,494,454,784 bytes)
 Partition Starting Offset 9,492,005,376 bytes
 Partition Disk #10, Partition #3
 Partition Size 5.12 GB (5,494,454,784 bytes)
 Partition Starting Offset 14,986,492,416 bytes
 Partition Disk #10, Partition #4
 Partition Size 6.96 GB (7,476,747,264 bytes)
 Partition Starting Offset 20,480,979,456 bytes
 Partition Disk #10, Partition #5
 Partition Size 368.65 MB (386,555,904 bytes)
 Partition Starting Offset 27,957,758,976 bytes
 Partition Disk #10, Partition #6
 Partition Size 2.40 GB (2,574,480,384 bytes)
 Partition Starting Offset 28,344,347,136 bytes
 Partition Disk #10, Partition #7
 Partition Size 2.75 GB (2,952,843,264 bytes)
 Partition Starting Offset 30,918,859,776 bytes
 Partition Disk #10, Partition #8
 Partition Size 88.08 GB (94,574,237,184 bytes)
 Partition Starting Offset 33,871,735,296 bytes

Description Unisys Intelligent Fibre Channel Fabric Disk Driver
 Manufacturer Unisys Corporation
 Model UNISYS VirtualStorage 01.0
 Bytes/Sector 512
 Media Loaded Yes

Media Type Fixed hard disk
 Partitions 9
 SCSI Bus 0
 SCSI Logical Unit 0
 SCSI Port 0
 SCSI Target ID 91
 Sectors/Track 63
 Size 119.62 GB (128,445,972,480 bytes)
 Total Cylinders 15,616
 Total Sectors 250,871,040
 Total Tracks 3,982,080
 Tracks/Cylinder 255
 Partition Disk #9, Partition #0
 Partition Size 1.39 GB (1,496,968,704 bytes)
 Partition Starting Offset 8,257,536 bytes
 Partition Disk #9, Partition #1
 Partition Size 7.44 GB (7,986,714,624 bytes)
 Partition Starting Offset 1,505,258,496 bytes
 Partition Disk #9, Partition #2
 Partition Size 5.12 GB (5,494,454,784 bytes)
 Partition Starting Offset 9,492,005,376 bytes
 Partition Disk #9, Partition #3
 Partition Size 5.12 GB (5,494,454,784 bytes)
 Partition Starting Offset 14,986,492,416 bytes
 Partition Disk #9, Partition #4
 Partition Size 6.96 GB (7,476,747,264 bytes)
 Partition Starting Offset 20,480,979,456 bytes
 Partition Disk #9, Partition #5
 Partition Size 368.65 MB (386,555,904 bytes)
 Partition Starting Offset 27,957,758,976 bytes
 Partition Disk #9, Partition #6
 Partition Size 2.40 GB (2,574,480,384 bytes)
 Partition Starting Offset 28,344,347,136 bytes
 Partition Disk #9, Partition #7
 Partition Size 2.75 GB (2,952,843,264 bytes)
 Partition Starting Offset 30,918,859,776 bytes
 Partition Disk #9, Partition #8
 Partition Size 88.08 GB (94,574,237,184 bytes)
 Partition Starting Offset 33,871,735,296 bytes

Description Unisys Intelligent Fibre Channel Fabric Disk Driver
 Manufacturer Unisys Corporation
 Model UNISYS VirtualStorage 01.0
 Bytes/Sector 512
 Media Loaded Yes
 Media Type Fixed hard disk
 Partitions 9
 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 #56, Partition #0
 Partition Size 1.39 GB (1,496,968,704 bytes)

Partition Starting Offset 8,257,536 bytes
 Partition Disk #56, Partition #1
 Partition Size 7.44 GB (7,986,714,624 bytes)
 Partition Starting Offset 1,505,258,496 bytes
 Partition Disk #56, Partition #2
 Partition Size 5.12 GB (5,494,454,784 bytes)
 Partition Starting Offset 9,492,005,376 bytes
 Partition Disk #56, Partition #3
 Partition Size 5.12 GB (5,494,454,784 bytes)
 Partition Starting Offset 14,986,492,416 bytes
 Partition Disk #56, Partition #4
 Partition Size 6.96 GB (7,476,747,264 bytes)
 Partition Starting Offset 20,480,979,456 bytes
 Partition Disk #56, Partition #5
 Partition Size 368.65 MB (386,555,904 bytes)
 Partition Starting Offset 27,957,758,976 bytes
 Partition Disk #56, Partition #6
 Partition Size 502.00 MB (526,385,664 bytes)
 Partition Starting Offset 28,344,347,136 bytes
 Partition Disk #56, Partition #7
 Partition Size 2.75 GB (2,952,843,264 bytes)
 Partition Starting Offset 28,870,765,056 bytes
 Partition Disk #56, Partition #8
 Partition Size 89.99 GB (96,622,331,904 bytes)
 Partition Starting Offset 31,823,640,576 bytes

Description Unisys Intelligent Fibre Channel Fabric Disk Driver
 Manufacturer Unisys Corporation
 Model UNISYS VirtualStorage 01.0
 Bytes/Sector 512
 Media Loaded Yes
 Media Type Fixed hard disk
 Partitions 9
 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 #55, Partition #0
 Partition Size 1.39 GB (1,496,968,704 bytes)
 Partition Starting Offset 8,257,536 bytes
 Partition Disk #55, Partition #1
 Partition Size 7.44 GB (7,986,714,624 bytes)
 Partition Starting Offset 1,505,258,496 bytes
 Partition Disk #55, Partition #2
 Partition Size 5.12 GB (5,494,454,784 bytes)
 Partition Starting Offset 9,492,005,376 bytes
 Partition Disk #55, Partition #3
 Partition Size 5.12 GB (5,494,454,784 bytes)
 Partition Starting Offset 14,986,492,416 bytes
 Partition Disk #55, Partition #4
 Partition Size 6.96 GB (7,476,747,264 bytes)
 Partition Starting Offset 20,480,979,456 bytes
 Partition Disk #55, Partition #5

Partition Size 368.65 MB (386,555,904 bytes)
 Partition Starting Offset 27,957,758,976 bytes
 Partition Disk #55, Partition #6
 Partition Size 2.50 GB (2,689,634,304 bytes)
 Partition Starting Offset 28,344,347,136 bytes
 Partition Disk #55, Partition #7
 Partition Size 2.75 GB (2,952,843,264 bytes)
 Partition Starting Offset 31,034,013,696 bytes
 Partition Disk #55, Partition #8
 Partition Size 87.97 GB (94,459,083,264 bytes)
 Partition Starting Offset 33,986,889,216 bytes

Description Unisys Intelligent Fibre Channel Fabric Disk Driver
 Manufacturer Unisys Corporation
 Model UNISYS VirtualStorage 01.0
 Bytes/Sector 512
 Media Loaded Yes
 Media Type Fixed hard disk
 Partitions 9
 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 #54, Partition #0
 Partition Size 1.39 GB (1,496,968,704 bytes)
 Partition Starting Offset 8,257,536 bytes
 Partition Disk #54, Partition #1
 Partition Size 7.44 GB (7,986,714,624 bytes)
 Partition Starting Offset 1,505,258,496 bytes
 Partition Disk #54, Partition #2
 Partition Size 5.12 GB (5,494,454,784 bytes)
 Partition Starting Offset 9,492,005,376 bytes
 Partition Disk #54, Partition #3
 Partition Size 5.12 GB (5,494,454,784 bytes)
 Partition Starting Offset 14,986,492,416 bytes
 Partition Disk #54, Partition #4
 Partition Size 6.96 GB (7,476,747,264 bytes)
 Partition Starting Offset 20,480,979,456 bytes
 Partition Disk #54, Partition #5
 Partition Size 368.65 MB (386,555,904 bytes)
 Partition Starting Offset 27,957,758,976 bytes
 Partition Disk #54, Partition #6
 Partition Size 502.00 MB (526,385,664 bytes)
 Partition Starting Offset 28,344,347,136 bytes
 Partition Disk #54, Partition #7
 Partition Size 2.75 GB (2,952,843,264 bytes)
 Partition Starting Offset 28,870,765,056 bytes
 Partition Disk #54, Partition #8
 Partition Size 89.99 GB (96,622,331,904 bytes)
 Partition Starting Offset 31,823,640,576 bytes
 Description Unisys Intelligent Fibre Channel Fabric Disk Driver
 Manufacturer Unisys Corporation

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Model UNISYS VirtualStorage 01.0
Bytes/Sector 512
Media Loaded Yes
Media Type Fixed hard disk
Partitions 9
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 #53, Partition #0
Partition Size 1.39 GB (1,496,968,704 bytes)
Partition Starting Offset 8,257,536 bytes
Partition Disk #53, Partition #1
Partition Size 7.44 GB (7,986,714,624 bytes)
Partition Starting Offset 1,505,258,496 bytes
Partition Disk #53, Partition #2
Partition Size 5.12 GB (5,494,454,784 bytes)
Partition Starting Offset 9,492,005,376 bytes
Partition Disk #53, Partition #3
Partition Size 5.12 GB (5,494,454,784 bytes)
Partition Starting Offset 14,986,492,416 bytes
Partition Disk #53, Partition #4
Partition Size 6.96 GB (7,476,747,264 bytes)
Partition Starting Offset 20,480,979,456 bytes
Partition Disk #53, Partition #5
Partition Size 368.65 MB (386,555,904 bytes)
Partition Starting Offset 27,957,758,976 bytes
Partition Disk #53, Partition #6
Partition Size 2.50 GB (2,689,634,304 bytes)
Partition Starting Offset 28,344,347,136 bytes
Partition Disk #53, Partition #7
Partition Size 2.75 GB (2,952,843,264 bytes)
Partition Starting Offset 31,034,013,696 bytes
Partition Disk #53, Partition #8
Partition Size 87.97 GB (94,459,083,264 bytes)
Partition Starting Offset 33,986,889,216 bytes

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Description Unisys Intelligent Fibre Channel Fabric Disk Driver
Manufacturer Unisys Corporation
Model UNISYS VirtualStorage 01.0
Bytes/Sector 512
Media Loaded Yes
Media Type Fixed hard disk
Partitions 9
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

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Tracks/Cylinder 255
Partition Disk #52, Partition #0
Partition Size 1.39 GB (1,496,968,704 bytes)
Partition Starting Offset 8,257,536 bytes
Partition Disk #52, Partition #1
Partition Size 7.44 GB (7,986,714,624 bytes)
Partition Starting Offset 1,505,258,496 bytes
Partition Disk #52, Partition #2
Partition Size 5.12 GB (5,494,454,784 bytes)
Partition Starting Offset 9,492,005,376 bytes
Partition Disk #52, Partition #3
Partition Size 5.12 GB (5,494,454,784 bytes)
Partition Starting Offset 14,986,492,416 bytes
Partition Disk #52, Partition #4
Partition Size 6.96 GB (7,476,747,264 bytes)
Partition Starting Offset 20,480,979,456 bytes
Partition Disk #52, Partition #5
Partition Size 368.65 MB (386,555,904 bytes)
Partition Starting Offset 27,957,758,976 bytes
Partition Disk #52, Partition #6
Partition Size 1.47 GB (1,579,221,504 bytes)
Partition Starting Offset 28,344,347,136 bytes
Partition Disk #52, Partition #7
Partition Size 2.75 GB (2,952,843,264 bytes)
Partition Starting Offset 29,923,600,896 bytes
Partition Disk #52, Partition #8
Partition Size 89.01 GB (95,569,496,064 bytes)
Partition Starting Offset 32,876,476,416 bytes

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Description Unisys Intelligent Fibre Channel Fabric Disk Driver
Manufacturer Unisys Corporation
Model UNISYS VirtualStorage 01.0
Bytes/Sector 512
Media Loaded Yes
Media Type Fixed hard disk
Partitions 9
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 #51, Partition #0
Partition Size 1.39 GB (1,496,968,704 bytes)
Partition Starting Offset 8,257,536 bytes
Partition Disk #51, Partition #1
Partition Size 7.44 GB (7,986,714,624 bytes)
Partition Starting Offset 1,505,258,496 bytes
Partition Disk #51, Partition #2
Partition Size 5.12 GB (5,494,454,784 bytes)
Partition Starting Offset 9,492,005,376 bytes
Partition Disk #51, Partition #3
Partition Size 5.12 GB (5,494,454,784 bytes)
Partition Starting Offset 14,986,492,416 bytes
Partition Disk #51, Partition #4

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Partition Size 6.96 GB (7,476,747,264 bytes)
 Partition Starting Offset 20,480,979,456 bytes
 Partition Disk #51, Partition #5
 Partition Size 368.65 MB (386,555,904 bytes)
 Partition Starting Offset 27,957,758,976 bytes
 Partition Disk #51, Partition #6
 Partition Size 2.50 GB (2,689,634,304 bytes)
 Partition Starting Offset 28,344,347,136 bytes
 Partition Disk #51, Partition #7
 Partition Size 2.75 GB (2,952,843,264 bytes)
 Partition Starting Offset 31,034,013,696 bytes
 Partition Disk #51, Partition #8
 Partition Size 87.97 GB (94,459,083,264 bytes)
 Partition Starting Offset 33,986,889,216 bytes

Description Unisys Intelligent Fibre Channel Fabric Disk Driver
 Manufacturer Unisys Corporation
 Model UNISYS VirtualStorage 01.0
 Bytes/Sector 512
 Media Loaded Yes
 Media Type Fixed hard disk
 Partitions 9
 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 #50, Partition #0
 Partition Size 1.39 GB (1,496,968,704 bytes)
 Partition Starting Offset 8,257,536 bytes
 Partition Disk #50, Partition #1
 Partition Size 7.44 GB (7,986,714,624 bytes)
 Partition Starting Offset 1,505,258,496 bytes
 Partition Disk #50, Partition #2
 Partition Size 5.12 GB (5,494,454,784 bytes)
 Partition Starting Offset 9,492,005,376 bytes
 Partition Disk #50, Partition #3
 Partition Size 5.12 GB (5,494,454,784 bytes)
 Partition Starting Offset 14,986,492,416 bytes
 Partition Disk #50, Partition #4
 Partition Size 6.96 GB (7,476,747,264 bytes)
 Partition Starting Offset 20,480,979,456 bytes
 Partition Disk #50, Partition #5
 Partition Size 368.65 MB (386,555,904 bytes)
 Partition Starting Offset 27,957,758,976 bytes
 Partition Disk #50, Partition #6
 Partition Size 1.47 GB (1,579,221,504 bytes)
 Partition Starting Offset 28,344,347,136 bytes
 Partition Disk #50, Partition #7
 Partition Size 2.75 GB (2,952,843,264 bytes)
 Partition Starting Offset 29,923,600,896 bytes
 Partition Disk #50, Partition #8
 Partition Size 89.01 GB (95,569,496,064 bytes)
 Partition Starting Offset 32,876,476,416 bytes

Description Unisys Intelligent Fibre Channel Fabric Disk Driver
 Manufacturer Unisys Corporation
 Model UNISYS VirtualStorage 01.0
 Bytes/Sector 512
 Media Loaded Yes
 Media Type Fixed hard disk
 Partitions 9
 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 #49, Partition #0
 Partition Size 1.39 GB (1,496,968,704 bytes)
 Partition Starting Offset 8,257,536 bytes
 Partition Disk #49, Partition #1
 Partition Size 7.44 GB (7,986,714,624 bytes)
 Partition Starting Offset 1,505,258,496 bytes
 Partition Disk #49, Partition #2
 Partition Size 5.12 GB (5,494,454,784 bytes)
 Partition Starting Offset 9,492,005,376 bytes
 Partition Disk #49, Partition #3
 Partition Size 5.12 GB (5,494,454,784 bytes)
 Partition Starting Offset 14,986,492,416 bytes
 Partition Disk #49, Partition #4
 Partition Size 6.96 GB (7,476,747,264 bytes)
 Partition Starting Offset 20,480,979,456 bytes
 Partition Disk #49, Partition #5
 Partition Size 368.65 MB (386,555,904 bytes)
 Partition Starting Offset 27,957,758,976 bytes
 Partition Disk #49, Partition #6
 Partition Size 2.50 GB (2,689,634,304 bytes)
 Partition Starting Offset 28,344,347,136 bytes
 Partition Disk #49, Partition #7
 Partition Size 2.75 GB (2,952,843,264 bytes)
 Partition Starting Offset 31,034,013,696 bytes
 Partition Disk #49, Partition #8
 Partition Size 87.97 GB (94,459,083,264 bytes)
 Partition Starting Offset 33,986,889,216 bytes

Description Unisys Intelligent Fibre Channel Fabric Disk Driver
 Manufacturer Unisys Corporation
 Model UNISYS VirtualStorage 01.0
 Bytes/Sector 512
 Media Loaded Yes
 Media Type Fixed hard disk
 Partitions 9
 SCSI Bus 0
 SCSI Logical Unit 0
 SCSI Port 0
 SCSI Target ID 52
 Sectors/Track 63
 Size 153.81 GB (165,147,171,840 bytes)

Total Cylinders 20,078
 Total Sectors 322,553,070
 Total Tracks 5,119,890
 Tracks/Cylinder 255
 Partition Disk #48, Partition #0
 Partition Size 1.39 GB (1,496,968,704 bytes)
 Partition Starting Offset 8,257,536 bytes
 Partition Disk #48, Partition #1
 Partition Size 7.44 GB (7,986,714,624 bytes)
 Partition Starting Offset 1,505,258,496 bytes
 Partition Disk #48, Partition #2
 Partition Size 5.12 GB (5,494,454,784 bytes)
 Partition Starting Offset 9,492,005,376 bytes
 Partition Disk #48, Partition #3
 Partition Size 5.12 GB (5,494,454,784 bytes)
 Partition Starting Offset 14,986,492,416 bytes
 Partition Disk #48, Partition #4
 Partition Size 6.96 GB (7,476,747,264 bytes)
 Partition Starting Offset 20,480,979,456 bytes
 Partition Disk #48, Partition #5
 Partition Size 368.65 MB (386,555,904 bytes)
 Partition Starting Offset 27,957,758,976 bytes
 Partition Disk #48, Partition #6
 Partition Size 2.40 GB (2,574,480,384 bytes)
 Partition Starting Offset 28,344,347,136 bytes
 Partition Disk #48, Partition #7
 Partition Size 2.75 GB (2,952,843,264 bytes)
 Partition Starting Offset 30,918,859,776 bytes
 Partition Disk #48, Partition #8
 Partition Size 122.26 GB (131,275,436,544 bytes)
 Partition Starting Offset 33,871,735,296 bytes

Description Unisys Intelligent Fibre Channel Fabric Disk Driver
 Manufacturer Unisys Corporation
 Model UNISYS VirtualStorage 01.0
 Bytes/Sector 512
 Media Loaded Yes
 Media Type Fixed hard disk
 Partitions 9
 SCSI Bus 0
 SCSI Logical Unit 0
 SCSI Port 0
 SCSI Target ID 53
 Sectors/Track 63
 Size 153.81 GB (165,147,171,840 bytes)
 Total Cylinders 20,078
 Total Sectors 322,553,070
 Total Tracks 5,119,890
 Tracks/Cylinder 255
 Partition Disk #47, Partition #0
 Partition Size 1.39 GB (1,496,968,704 bytes)
 Partition Starting Offset 8,257,536 bytes
 Partition Disk #47, Partition #1
 Partition Size 7.44 GB (7,986,714,624 bytes)
 Partition Starting Offset 1,505,258,496 bytes
 Partition Disk #47, Partition #2
 Partition Size 5.12 GB (5,494,454,784 bytes)
 Partition Starting Offset 9,492,005,376 bytes
 Partition Disk #47, Partition #3

Partition Size 5.12 GB (5,494,454,784 bytes)
 Partition Starting Offset 14,986,492,416 bytes
 Partition Disk #47, Partition #4
 Partition Size 6.96 GB (7,476,747,264 bytes)
 Partition Starting Offset 20,480,979,456 bytes
 Partition Disk #47, Partition #5
 Partition Size 368.65 MB (386,555,904 bytes)
 Partition Starting Offset 27,957,758,976 bytes
 Partition Disk #47, Partition #6
 Partition Size 2.40 GB (2,574,480,384 bytes)
 Partition Starting Offset 28,344,347,136 bytes
 Partition Disk #47, Partition #7
 Partition Size 2.75 GB (2,952,843,264 bytes)
 Partition Starting Offset 30,918,859,776 bytes
 Partition Disk #47, Partition #8
 Partition Size 122.26 GB (131,275,436,544 bytes)
 Partition Starting Offset 33,871,735,296 bytes

Description Unisys Intelligent Fibre Channel Fabric Disk Driver
 Manufacturer Unisys Corporation
 Model UNISYS VirtualStorage 01.0
 Bytes/Sector 512
 Media Loaded Yes
 Media Type Fixed hard disk
 Partitions 9
 SCSI Bus 0
 SCSI Logical Unit 0
 SCSI Port 0
 SCSI Target ID 54
 Sectors/Track 63
 Size 85.44 GB (91,744,773,120 bytes)
 Total Cylinders 11,154
 Total Sectors 179,189,010
 Total Tracks 2,844,270
 Tracks/Cylinder 255
 Partition Disk #46, Partition #0
 Partition Size 1.39 GB (1,496,968,704 bytes)
 Partition Starting Offset 8,257,536 bytes
 Partition Disk #46, Partition #1
 Partition Size 7.44 GB (7,986,714,624 bytes)
 Partition Starting Offset 1,505,258,496 bytes
 Partition Disk #46, Partition #2
 Partition Size 5.12 GB (5,494,454,784 bytes)
 Partition Starting Offset 9,492,005,376 bytes
 Partition Disk #46, Partition #3
 Partition Size 5.12 GB (5,494,454,784 bytes)
 Partition Starting Offset 14,986,492,416 bytes
 Partition Disk #46, Partition #4
 Partition Size 6.96 GB (7,476,747,264 bytes)
 Partition Starting Offset 20,480,979,456 bytes
 Partition Disk #46, Partition #5
 Partition Size 368.65 MB (386,555,904 bytes)
 Partition Starting Offset 27,957,758,976 bytes
 Partition Disk #46, Partition #6
 Partition Size 2.40 GB (2,574,480,384 bytes)
 Partition Starting Offset 28,344,347,136 bytes
 Partition Disk #46, Partition #7
 Partition Size 2.75 GB (2,952,843,264 bytes)
 Partition Starting Offset 30,918,859,776 bytes

Partition Disk #46, Partition #8
Partition Size 53.90 GB (57,873,037,824 bytes)
Partition Starting Offset 33,871,735,296 bytes

Description Unisys Intelligent Fibre Channel Fabric Disk Driver
Manufacturer Unisys Corporation
Model UNISYS VirtualStorage 01.0
Bytes/Sector 512
Media Loaded Yes
Media Type Fixed hard disk
Partitions 9
SCSI Bus 0
SCSI Logical Unit 0
SCSI Port 0
SCSI Target ID 55
Sectors/Track 63
Size 85.44 GB (91,744,773,120 bytes)
Total Cylinders 11,154
Total Sectors 179,189,010
Total Tracks 2,844,270
Tracks/Cylinder 255
Partition Disk #45, Partition #0
Partition Size 1.39 GB (1,496,968,704 bytes)
Partition Starting Offset 8,257,536 bytes
Partition Disk #45, Partition #1
Partition Size 7.44 GB (7,986,714,624 bytes)
Partition Starting Offset 1,505,258,496 bytes
Partition Disk #45, Partition #2
Partition Size 5.12 GB (5,494,454,784 bytes)
Partition Starting Offset 9,492,005,376 bytes
Partition Disk #45, Partition #3
Partition Size 5.12 GB (5,494,454,784 bytes)
Partition Starting Offset 14,986,492,416 bytes
Partition Disk #45, Partition #4
Partition Size 6.96 GB (7,476,747,264 bytes)
Partition Starting Offset 20,480,979,456 bytes
Partition Disk #45, Partition #5
Partition Size 368.65 MB (386,555,904 bytes)
Partition Starting Offset 27,957,758,976 bytes
Partition Disk #45, Partition #6
Partition Size 2.40 GB (2,574,480,384 bytes)
Partition Starting Offset 28,344,347,136 bytes
Partition Disk #45, Partition #7
Partition Size 2.75 GB (2,952,843,264 bytes)
Partition Starting Offset 30,918,859,776 bytes
Partition Disk #45, Partition #8
Partition Size 53.90 GB (57,873,037,824 bytes)
Partition Starting Offset 33,871,735,296 bytes

Description Unisys Intelligent Fibre Channel Fabric Disk Driver
Manufacturer Unisys Corporation
Model UNISYS VirtualStorage 01.0
Bytes/Sector 512
Media Loaded Yes
Media Type Fixed hard disk
Partitions 9
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 #44, Partition #0
Partition Size 1.39 GB (1,496,968,704 bytes)
Partition Starting Offset 8,257,536 bytes
Partition Disk #44, Partition #1
Partition Size 7.44 GB (7,986,714,624 bytes)
Partition Starting Offset 1,505,258,496 bytes
Partition Disk #44, Partition #2
Partition Size 5.12 GB (5,494,454,784 bytes)
Partition Starting Offset 9,492,005,376 bytes
Partition Disk #44, Partition #3
Partition Size 5.12 GB (5,494,454,784 bytes)
Partition Starting Offset 14,986,492,416 bytes
Partition Disk #44, Partition #4
Partition Size 6.96 GB (7,476,747,264 bytes)
Partition Starting Offset 20,480,979,456 bytes
Partition Disk #44, Partition #5
Partition Size 368.65 MB (386,555,904 bytes)
Partition Starting Offset 27,957,758,976 bytes
Partition Disk #44, Partition #6
Partition Size 2.40 GB (2,574,480,384 bytes)
Partition Starting Offset 28,344,347,136 bytes
Partition Disk #44, Partition #7
Partition Size 2.75 GB (2,952,843,264 bytes)
Partition Starting Offset 30,918,859,776 bytes
Partition Disk #44, Partition #8
Partition Size 88.08 GB (94,574,237,184 bytes)
Partition Starting Offset 33,871,735,296 bytes

Description Unisys Intelligent Fibre Channel Fabric Disk Driver
Manufacturer Unisys Corporation
Model UNISYS VirtualStorage 01.0
Bytes/Sector 512
Media Loaded Yes
Media Type Fixed hard disk
Partitions 9
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 #43, Partition #0
Partition Size 1.39 GB (1,496,968,704 bytes)
Partition Starting Offset 8,257,536 bytes
Partition Disk #43, Partition #1
Partition Size 7.44 GB (7,986,714,624 bytes)
Partition Starting Offset 1,505,258,496 bytes
Partition Disk #43, Partition #2

Partition Size 5.12 GB (5,494,454,784 bytes)
 Partition Starting Offset 9,492,005,376 bytes
 Partition Disk #43, Partition #3
 Partition Size 5.12 GB (5,494,454,784 bytes)
 Partition Starting Offset 14,986,492,416 bytes
 Partition Disk #43, Partition #4
 Partition Size 6.96 GB (7,476,747,264 bytes)
 Partition Starting Offset 20,480,979,456 bytes
 Partition Disk #43, Partition #5
 Partition Size 368.65 MB (386,555,904 bytes)
 Partition Starting Offset 27,957,758,976 bytes
 Partition Disk #43, Partition #6
 Partition Size 2.40 GB (2,574,480,384 bytes)
 Partition Starting Offset 28,344,347,136 bytes
 Partition Disk #43, Partition #7
 Partition Size 2.75 GB (2,952,843,264 bytes)
 Partition Starting Offset 30,918,859,776 bytes
 Partition Disk #43, Partition #8
 Partition Size 88.08 GB (94,574,237,184 bytes)
 Partition Starting Offset 33,871,735,296 bytes

Description Unisys Intelligent Fibre Channel Fabric Disk Driver
 Manufacturer Unisys Corporation
 Model UNISYS VirtualStorage 01.0
 Bytes/Sector 512
 Media Loaded Yes
 Media Type Fixed hard disk
 Partitions 9
 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 #42, Partition #0
 Partition Size 1.39 GB (1,496,968,704 bytes)
 Partition Starting Offset 8,257,536 bytes
 Partition Disk #42, Partition #1
 Partition Size 7.44 GB (7,986,714,624 bytes)
 Partition Starting Offset 1,505,258,496 bytes
 Partition Disk #42, Partition #2
 Partition Size 5.12 GB (5,494,454,784 bytes)
 Partition Starting Offset 9,492,005,376 bytes
 Partition Disk #42, Partition #3
 Partition Size 5.12 GB (5,494,454,784 bytes)
 Partition Starting Offset 14,986,492,416 bytes
 Partition Disk #42, Partition #4
 Partition Size 6.96 GB (7,476,747,264 bytes)
 Partition Starting Offset 20,480,979,456 bytes
 Partition Disk #42, Partition #5
 Partition Size 368.65 MB (386,555,904 bytes)
 Partition Starting Offset 27,957,758,976 bytes
 Partition Disk #42, Partition #6
 Partition Size 2.40 GB (2,574,480,384 bytes)
 Partition Starting Offset 28,344,347,136 bytes

Partition Disk #42, Partition #7
 Partition Size 2.75 GB (2,952,843,264 bytes)
 Partition Starting Offset 30,918,859,776 bytes
 Partition Disk #42, Partition #8
 Partition Size 88.08 GB (94,574,237,184 bytes)
 Partition Starting Offset 33,871,735,296 bytes

Description Unisys Intelligent Fibre Channel Fabric Disk Driver
 Manufacturer Unisys Corporation
 Model UNISYS VirtualStorage 01.0
 Bytes/Sector 512
 Media Loaded Yes
 Media Type Fixed hard disk
 Partitions 9
 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 #41, Partition #0
 Partition Size 1.39 GB (1,496,968,704 bytes)
 Partition Starting Offset 8,257,536 bytes
 Partition Disk #41, Partition #1
 Partition Size 7.44 GB (7,986,714,624 bytes)
 Partition Starting Offset 1,505,258,496 bytes
 Partition Disk #41, Partition #2
 Partition Size 5.12 GB (5,494,454,784 bytes)
 Partition Starting Offset 9,492,005,376 bytes
 Partition Disk #41, Partition #3
 Partition Size 5.12 GB (5,494,454,784 bytes)
 Partition Starting Offset 14,986,492,416 bytes
 Partition Disk #41, Partition #4
 Partition Size 6.96 GB (7,476,747,264 bytes)
 Partition Starting Offset 20,480,979,456 bytes
 Partition Disk #41, Partition #5
 Partition Size 368.65 MB (386,555,904 bytes)
 Partition Starting Offset 27,957,758,976 bytes
 Partition Disk #41, Partition #6
 Partition Size 2.40 GB (2,574,480,384 bytes)
 Partition Starting Offset 28,344,347,136 bytes
 Partition Disk #41, Partition #7
 Partition Size 2.75 GB (2,952,843,264 bytes)
 Partition Starting Offset 30,918,859,776 bytes
 Partition Disk #41, Partition #8
 Partition Size 88.08 GB (94,574,237,184 bytes)
 Partition Starting Offset 33,871,735,296 bytes

Description Unisys Intelligent Fibre Channel Fabric Disk Driver
 Manufacturer Unisys Corporation
 Model UNISYS VirtualStorage 01.0
 Bytes/Sector 512
 Media Loaded Yes
 Media Type Fixed hard disk
 Partitions 9


```

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 #72, Partition #0
Partition Size   1.39 GB (1,496,968,704 bytes)
Partition Starting Offset 8,257,536 bytes
Partition        Disk #72, Partition #1
Partition Size   7.44 GB (7,986,714,624 bytes)
Partition Starting Offset 1,505,258,496 bytes
Partition        Disk #72, Partition #2
Partition Size   5.12 GB (5,494,454,784 bytes)
Partition Starting Offset 9,492,005,376 bytes
Partition        Disk #72, Partition #3
Partition Size   5.12 GB (5,494,454,784 bytes)
Partition Starting Offset 14,986,492,416 bytes
Partition        Disk #72, Partition #4
Partition Size   6.96 GB (7,476,747,264 bytes)
Partition Starting Offset 20,480,979,456 bytes
Partition        Disk #72, Partition #5
Partition Size   368.65 MB (386,555,904 bytes)
Partition Starting Offset 27,957,758,976 bytes
Partition        Disk #72, Partition #6
Partition Size   502.00 MB (526,385,664 bytes)
Partition Starting Offset 28,344,347,136 bytes
Partition        Disk #72, Partition #7
Partition Size   2.75 GB (2,952,843,264 bytes)
Partition Starting Offset 28,870,765,056 bytes
Partition        Disk #72, Partition #8
Partition Size   89.99 GB (96,622,331,904 bytes)
Partition Starting Offset 31,823,640,576 bytes

```

```

Description      Unisys Intelligent Fibre Channel Fabric Disk Driver
Manufacturer      Unisys Corporation
Model             UNISYS VirtualStorage 01.0
Bytes/Sector      512
Media Loaded      Yes
Media Type        Fixed hard disk
Partitions        9
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 #71, Partition #0
Partition Size   1.39 GB (1,496,968,704 bytes)
Partition Starting Offset 8,257,536 bytes
Partition        Disk #71, Partition #1

```

```

Partition Size   7.44 GB (7,986,714,624 bytes)
Partition Starting Offset 1,505,258,496 bytes
Partition        Disk #71, Partition #2
Partition Size   5.12 GB (5,494,454,784 bytes)
Partition Starting Offset 9,492,005,376 bytes
Partition        Disk #71, Partition #3
Partition Size   5.12 GB (5,494,454,784 bytes)
Partition Starting Offset 14,986,492,416 bytes
Partition        Disk #71, Partition #4
Partition Size   6.96 GB (7,476,747,264 bytes)
Partition Starting Offset 20,480,979,456 bytes
Partition        Disk #71, Partition #5
Partition Size   368.65 MB (386,555,904 bytes)
Partition Starting Offset 27,957,758,976 bytes
Partition        Disk #71, Partition #6
Partition Size   2.50 GB (2,689,634,304 bytes)
Partition Starting Offset 28,344,347,136 bytes
Partition        Disk #71, Partition #7
Partition Size   2.75 GB (2,952,843,264 bytes)
Partition Starting Offset 31,034,013,696 bytes
Partition        Disk #71, Partition #8
Partition Size   87.97 GB (94,459,083,264 bytes)
Partition Starting Offset 33,986,889,216 bytes

```

```

Description      Unisys Intelligent Fibre Channel Fabric Disk Driver
Manufacturer      Unisys Corporation
Model             UNISYS VirtualStorage 01.0
Bytes/Sector      512
Media Loaded      Yes
Media Type        Fixed hard disk
Partitions        9
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 #70, Partition #0
Partition Size   1.39 GB (1,496,968,704 bytes)
Partition Starting Offset 8,257,536 bytes
Partition        Disk #70, Partition #1
Partition Size   7.44 GB (7,986,714,624 bytes)
Partition Starting Offset 1,505,258,496 bytes
Partition        Disk #70, Partition #2
Partition Size   5.12 GB (5,494,454,784 bytes)
Partition Starting Offset 9,492,005,376 bytes
Partition        Disk #70, Partition #3
Partition Size   5.12 GB (5,494,454,784 bytes)
Partition Starting Offset 14,986,492,416 bytes
Partition        Disk #70, Partition #4
Partition Size   6.96 GB (7,476,747,264 bytes)
Partition Starting Offset 20,480,979,456 bytes
Partition        Disk #70, Partition #5
Partition Size   368.65 MB (386,555,904 bytes)
Partition Starting Offset 27,957,758,976 bytes

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Partition Disk #70, Partition #6
 Partition Size 502.00 MB (526,385,664 bytes)
 Partition Starting Offset 28,344,347,136 bytes
 Partition Disk #70, Partition #7
 Partition Size 2.75 GB (2,952,843,264 bytes)
 Partition Starting Offset 28,870,765,056 bytes
 Partition Disk #70, Partition #8
 Partition Size 89.99 GB (96,622,331,904 bytes)
 Partition Starting Offset 31,823,640,576 bytes

Description Unisys Intelligent Fibre Channel Fabric Disk Driver
 Manufacturer Unisys Corporation
 Model UNISYS VirtualStorage 01.0
 Bytes/Sector 512
 Media Loaded Yes
 Media Type Fixed hard disk
 Partitions 9
 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 #69, Partition #0
 Partition Size 1.39 GB (1,496,968,704 bytes)
 Partition Starting Offset 8,257,536 bytes
 Partition Disk #69, Partition #1
 Partition Size 7.44 GB (7,986,714,624 bytes)
 Partition Starting Offset 1,505,258,496 bytes
 Partition Disk #69, Partition #2
 Partition Size 5.12 GB (5,494,454,784 bytes)
 Partition Starting Offset 9,492,005,376 bytes
 Partition Disk #69, Partition #3
 Partition Size 5.12 GB (5,494,454,784 bytes)
 Partition Starting Offset 14,986,492,416 bytes
 Partition Disk #69, Partition #4
 Partition Size 6.96 GB (7,476,747,264 bytes)
 Partition Starting Offset 20,480,979,456 bytes
 Partition Disk #69, Partition #5
 Partition Size 368.65 MB (386,555,904 bytes)
 Partition Starting Offset 27,957,758,976 bytes
 Partition Disk #69, Partition #6
 Partition Size 2.50 GB (2,689,634,304 bytes)
 Partition Starting Offset 28,344,347,136 bytes
 Partition Disk #69, Partition #7
 Partition Size 2.75 GB (2,952,843,264 bytes)
 Partition Starting Offset 31,034,013,696 bytes
 Partition Disk #69, Partition #8
 Partition Size 87.97 GB (94,459,083,264 bytes)
 Partition Starting Offset 33,986,889,216 bytes

Description Unisys Intelligent Fibre Channel Fabric Disk Driver
 Manufacturer Unisys Corporation
 Model UNISYS VirtualStorage 01.0
 Bytes/Sector 512

Media Loaded Yes
 Media Type Fixed hard disk
 Partitions 9
 SCSI Bus 0
 SCSI Logical Unit 0
 SCSI Port 0
 SCSI Target ID 32
 Sectors/Track 63
 Size 102.53 GB (110,095,372,800 bytes)
 Total Cylinders 13,385
 Total Sectors 215,030,025
 Total Tracks 3,413,175
 Tracks/Cylinder 255
 Partition Disk #68, Partition #0
 Partition Size 1.39 GB (1,496,968,704 bytes)
 Partition Starting Offset 8,257,536 bytes
 Partition Disk #68, Partition #1
 Partition Size 7.44 GB (7,986,714,624 bytes)
 Partition Starting Offset 1,505,258,496 bytes
 Partition Disk #68, Partition #2
 Partition Size 5.12 GB (5,494,454,784 bytes)
 Partition Starting Offset 9,492,005,376 bytes
 Partition Disk #68, Partition #3
 Partition Size 5.12 GB (5,494,454,784 bytes)
 Partition Starting Offset 14,986,492,416 bytes
 Partition Disk #68, Partition #4
 Partition Size 6.96 GB (7,476,747,264 bytes)
 Partition Starting Offset 20,480,979,456 bytes
 Partition Disk #68, Partition #5
 Partition Size 368.65 MB (386,555,904 bytes)
 Partition Starting Offset 27,957,758,976 bytes
 Partition Disk #68, Partition #6
 Partition Size 203.92 MB (213,825,024 bytes)
 Partition Starting Offset 28,344,347,136 bytes
 Partition Disk #68, Partition #7
 Partition Size 2.75 GB (2,952,843,264 bytes)
 Partition Starting Offset 28,558,204,416 bytes
 Partition Disk #68, Partition #8
 Partition Size 73.19 GB (78,584,292,864 bytes)
 Partition Starting Offset 31,511,079,936 bytes

Description Unisys Intelligent Fibre Channel Fabric Disk Driver
 Manufacturer Unisys Corporation
 Model UNISYS VirtualStorage 01.0
 Bytes/Sector 512
 Media Loaded Yes
 Media Type Fixed hard disk
 Partitions 9
 SCSI Bus 0
 SCSI Logical Unit 0
 SCSI Port 0
 SCSI Target ID 33
 Sectors/Track 63
 Size 102.53 GB (110,095,372,800 bytes)
 Total Cylinders 13,385
 Total Sectors 215,030,025
 Total Tracks 3,413,175
 Tracks/Cylinder 255
 Partition Disk #67, Partition #0

Partition Size 1.39 GB (1,496,968,704 bytes)
 Partition Starting Offset 8,257,536 bytes
 Partition Disk #67, Partition #1
 Partition Size 7.44 GB (7,986,714,624 bytes)
 Partition Starting Offset 1,505,258,496 bytes
 Partition Disk #67, Partition #2
 Partition Size 5.12 GB (5,494,454,784 bytes)
 Partition Starting Offset 9,492,005,376 bytes
 Partition Disk #67, Partition #3
 Partition Size 5.12 GB (5,494,454,784 bytes)
 Partition Starting Offset 14,986,492,416 bytes
 Partition Disk #67, Partition #4
 Partition Size 6.96 GB (7,476,747,264 bytes)
 Partition Starting Offset 20,480,979,456 bytes
 Partition Disk #67, Partition #5
 Partition Size 368.65 MB (386,555,904 bytes)
 Partition Starting Offset 27,957,758,976 bytes
 Partition Disk #67, Partition #6
 Partition Size 2.50 GB (2,689,634,304 bytes)
 Partition Starting Offset 28,344,347,136 bytes
 Partition Disk #67, Partition #7
 Partition Size 2.75 GB (2,952,843,264 bytes)
 Partition Starting Offset 31,034,013,696 bytes
 Partition Disk #67, Partition #8
 Partition Size 70.88 GB (76,108,483,584 bytes)
 Partition Starting Offset 33,986,889,216 bytes

Description Unisys Intelligent Fibre Channel Fabric Disk Driver
 Manufacturer Unisys Corporation
 Model UNISYS VirtualStorage 01.0
 Bytes/Sector 512
 Media Loaded Yes
 Media Type Fixed hard disk
 Partitions 9
 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 #66, Partition #0
 Partition Size 1.39 GB (1,496,968,704 bytes)
 Partition Starting Offset 8,257,536 bytes
 Partition Disk #66, Partition #1
 Partition Size 7.44 GB (7,986,714,624 bytes)
 Partition Starting Offset 1,505,258,496 bytes
 Partition Disk #66, Partition #2
 Partition Size 5.12 GB (5,494,454,784 bytes)
 Partition Starting Offset 9,492,005,376 bytes
 Partition Disk #66, Partition #3
 Partition Size 5.12 GB (5,494,454,784 bytes)
 Partition Starting Offset 14,986,492,416 bytes
 Partition Disk #66, Partition #4
 Partition Size 6.96 GB (7,476,747,264 bytes)
 Partition Starting Offset 20,480,979,456 bytes

Partition Disk #66, Partition #5
 Partition Size 368.65 MB (386,555,904 bytes)
 Partition Starting Offset 27,957,758,976 bytes
 Partition Disk #66, Partition #6
 Partition Size 203.92 MB (213,825,024 bytes)
 Partition Starting Offset 28,344,347,136 bytes
 Partition Disk #66, Partition #7
 Partition Size 2.75 GB (2,952,843,264 bytes)
 Partition Starting Offset 28,558,204,416 bytes
 Partition Disk #66, Partition #8
 Partition Size 90.28 GB (96,934,892,544 bytes)
 Partition Starting Offset 31,511,079,936 bytes

Description Unisys Intelligent Fibre Channel Fabric Disk Driver
 Manufacturer Unisys Corporation
 Model UNISYS VirtualStorage 01.0
 Bytes/Sector 512
 Media Loaded Yes
 Media Type Fixed hard disk
 Partitions 9
 SCSI Bus 0
 SCSI Logical Unit 0
 SCSI Port 0
 SCSI Target ID 35
 Sectors/Track 63
 Size 153.81 GB (165,147,171,840 bytes)
 Total Cylinders 20,078
 Total Sectors 322,553,070
 Total Tracks 5,119,890
 Tracks/Cylinder 255
 Partition Disk #65, Partition #0
 Partition Size 1.39 GB (1,496,968,704 bytes)
 Partition Starting Offset 8,257,536 bytes
 Partition Disk #65, Partition #1
 Partition Size 7.44 GB (7,986,714,624 bytes)
 Partition Starting Offset 1,505,258,496 bytes
 Partition Disk #65, Partition #2
 Partition Size 5.12 GB (5,494,454,784 bytes)
 Partition Starting Offset 9,492,005,376 bytes
 Partition Disk #65, Partition #3
 Partition Size 5.12 GB (5,494,454,784 bytes)
 Partition Starting Offset 14,986,492,416 bytes
 Partition Disk #65, Partition #4
 Partition Size 6.96 GB (7,476,747,264 bytes)
 Partition Starting Offset 20,480,979,456 bytes
 Partition Disk #65, Partition #5
 Partition Size 368.65 MB (386,555,904 bytes)
 Partition Starting Offset 27,957,758,976 bytes
 Partition Disk #65, Partition #6
 Partition Size 2.50 GB (2,689,634,304 bytes)
 Partition Starting Offset 28,344,347,136 bytes
 Partition Disk #65, Partition #7
 Partition Size 2.75 GB (2,952,843,264 bytes)
 Partition Starting Offset 31,034,013,696 bytes
 Partition Disk #65, Partition #8
 Partition Size 122.15 GB (131,160,282,624 bytes)
 Partition Starting Offset 33,986,889,216 bytes

Description Unisys Intelligent Fibre Channel Fabric Disk Driver

Manufacturer Unisys Corporation
 Model UNISYS VirtualStorage 01.0
 Bytes/Sector 512
 Media Loaded Yes
 Media Type Fixed hard disk
 Partitions 9
 SCSI Bus 0
 SCSI Logical Unit 0
 SCSI Port 0
 SCSI Target ID 68
 Sectors/Track 63
 Size 153.81 GB (165,147,171,840 bytes)
 Total Cylinders 20,078
 Total Sectors 322,553,070
 Total Tracks 5,119,890
 Tracks/Cylinder 255
 Partition Disk #32, Partition #0
 Partition Size 1.39 GB (1,496,968,704 bytes)
 Partition Starting Offset 8,257,536 bytes
 Partition Disk #32, Partition #1
 Partition Size 7.44 GB (7,986,714,624 bytes)
 Partition Starting Offset 1,505,258,496 bytes
 Partition Disk #32, Partition #2
 Partition Size 5.12 GB (5,494,454,784 bytes)
 Partition Starting Offset 9,492,005,376 bytes
 Partition Disk #32, Partition #3
 Partition Size 5.12 GB (5,494,454,784 bytes)
 Partition Starting Offset 14,986,492,416 bytes
 Partition Disk #32, Partition #4
 Partition Size 6.96 GB (7,476,747,264 bytes)
 Partition Starting Offset 20,480,979,456 bytes
 Partition Disk #32, Partition #5
 Partition Size 368.65 MB (386,555,904 bytes)
 Partition Starting Offset 27,957,758,976 bytes
 Partition Disk #32, Partition #6
 Partition Size 15.66 MB (16,418,304 bytes)
 Partition Starting Offset 28,344,347,136 bytes
 Partition Disk #32, Partition #7
 Partition Size 2.75 GB (2,952,843,264 bytes)
 Partition Starting Offset 28,360,797,696 bytes
 Partition Disk #32, Partition #8
 Partition Size 124.64 GB (133,833,498,624 bytes)
 Partition Starting Offset 31,313,673,216 bytes

Description Unisys Intelligent Fibre Channel Fabric Disk Driver
 Manufacturer Unisys Corporation
 Model UNISYS VirtualStorage 01.0
 Bytes/Sector 512
 Media Loaded Yes
 Media Type Fixed hard disk
 Partitions 9
 SCSI Bus 0
 SCSI Logical Unit 0
 SCSI Port 0
 SCSI Target ID 69
 Sectors/Track 63
 Size 102.53 GB (110,095,372,800 bytes)
 Total Cylinders 13,385
 Total Sectors 215,030,025

Total Tracks 3,413,175
 Tracks/Cylinder 255
 Partition Disk #31, Partition #0
 Partition Size 1.39 GB (1,496,968,704 bytes)
 Partition Starting Offset 8,257,536 bytes
 Partition Disk #31, Partition #1
 Partition Size 7.44 GB (7,986,714,624 bytes)
 Partition Starting Offset 1,505,258,496 bytes
 Partition Disk #31, Partition #2
 Partition Size 5.12 GB (5,494,454,784 bytes)
 Partition Starting Offset 9,492,005,376 bytes
 Partition Disk #31, Partition #3
 Partition Size 5.12 GB (5,494,454,784 bytes)
 Partition Starting Offset 14,986,492,416 bytes
 Partition Disk #31, Partition #4
 Partition Size 6.96 GB (7,476,747,264 bytes)
 Partition Starting Offset 20,480,979,456 bytes
 Partition Disk #31, Partition #5
 Partition Size 368.65 MB (386,555,904 bytes)
 Partition Starting Offset 27,957,758,976 bytes
 Partition Disk #31, Partition #6
 Partition Size 5.28 GB (5,667,185,664 bytes)
 Partition Starting Offset 28,344,347,136 bytes
 Partition Disk #31, Partition #7
 Partition Size 2.75 GB (2,952,843,264 bytes)
 Partition Starting Offset 34,011,565,056 bytes
 Partition Disk #31, Partition #8
 Partition Size 68.11 GB (73,130,932,224 bytes)
 Partition Starting Offset 36,964,440,576 bytes

Description Unisys Intelligent Fibre Channel Fabric Disk Driver
 Manufacturer Unisys Corporation
 Model UNISYS VirtualStorage 01.0
 Bytes/Sector 512
 Media Loaded Yes
 Media Type Fixed hard disk
 Partitions 9
 SCSI Bus 0
 SCSI Logical Unit 0
 SCSI Port 0
 SCSI Target ID 70
 Sectors/Track 63
 Size 102.53 GB (110,095,372,800 bytes)
 Total Cylinders 13,385
 Total Sectors 215,030,025
 Total Tracks 3,413,175
 Tracks/Cylinder 255
 Partition Disk #30, Partition #0
 Partition Size 1.39 GB (1,496,968,704 bytes)
 Partition Starting Offset 8,257,536 bytes
 Partition Disk #30, Partition #1
 Partition Size 7.44 GB (7,986,714,624 bytes)
 Partition Starting Offset 1,505,258,496 bytes
 Partition Disk #30, Partition #2
 Partition Size 5.12 GB (5,494,454,784 bytes)
 Partition Starting Offset 9,492,005,376 bytes
 Partition Disk #30, Partition #3
 Partition Size 5.12 GB (5,494,454,784 bytes)
 Partition Starting Offset 14,986,492,416 bytes

Partition Disk #30, Partition #4
 Partition Size 6.96 GB (7,476,747,264 bytes)
 Partition Starting Offset 20,480,979,456 bytes
 Partition Disk #30, Partition #5
 Partition Size 368.65 MB (386,555,904 bytes)
 Partition Starting Offset 27,957,758,976 bytes
 Partition Disk #30, Partition #6
 Partition Size 203.92 MB (213,825,024 bytes)
 Partition Starting Offset 28,344,347,136 bytes
 Partition Disk #30, Partition #7
 Partition Size 2.75 GB (2,952,843,264 bytes)
 Partition Starting Offset 28,558,204,416 bytes
 Partition Disk #30, Partition #8
 Partition Size 73.19 GB (78,584,292,864 bytes)
 Partition Starting Offset 31,511,079,936 bytes

Description Unisys Intelligent Fibre Channel Fabric Disk Driver
 Manufacturer Unisys Corporation
 Model UNISYS VirtualStorage 01.0
 Bytes/Sector 512
 Media Loaded Yes
 Media Type Fixed hard disk
 Partitions 9
 SCSI Bus 0
 SCSI Logical Unit 0
 SCSI Port 0
 SCSI Target ID 71
 Sectors/Track 63
 Size 102.53 GB (110,095,372,800 bytes)
 Total Cylinders 13,385
 Total Sectors 215,030,025
 Total Tracks 3,413,175
 Tracks/Cylinder 255
 Partition Disk #29, Partition #0
 Partition Size 1.39 GB (1,496,968,704 bytes)
 Partition Starting Offset 8,257,536 bytes
 Partition Disk #29, Partition #1
 Partition Size 7.44 GB (7,986,714,624 bytes)
 Partition Starting Offset 1,505,258,496 bytes
 Partition Disk #29, Partition #2
 Partition Size 5.12 GB (5,494,454,784 bytes)
 Partition Starting Offset 9,492,005,376 bytes
 Partition Disk #29, Partition #3
 Partition Size 5.12 GB (5,494,454,784 bytes)
 Partition Starting Offset 14,986,492,416 bytes
 Partition Disk #29, Partition #4
 Partition Size 6.96 GB (7,476,747,264 bytes)
 Partition Starting Offset 20,480,979,456 bytes
 Partition Disk #29, Partition #5
 Partition Size 368.65 MB (386,555,904 bytes)
 Partition Starting Offset 27,957,758,976 bytes
 Partition Disk #29, Partition #6
 Partition Size 2.50 GB (2,689,634,304 bytes)
 Partition Starting Offset 28,344,347,136 bytes
 Partition Disk #29, Partition #7
 Partition Size 2.75 GB (2,952,843,264 bytes)
 Partition Starting Offset 31,034,013,696 bytes
 Partition Disk #29, Partition #8
 Partition Size 70.88 GB (76,108,483,584 bytes)

Partition Starting Offset 33,986,889,216 bytes

Description Unisys Intelligent Fibre Channel Fabric Disk Driver
 Manufacturer Unisys Corporation
 Model UNISYS VirtualStorage 01.0
 Bytes/Sector 512
 Media Loaded Yes
 Media Type Fixed hard disk
 Partitions 9
 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 #28, Partition #0
 Partition Size 1.39 GB (1,496,968,704 bytes)
 Partition Starting Offset 8,257,536 bytes
 Partition Disk #28, Partition #1
 Partition Size 7.44 GB (7,986,714,624 bytes)
 Partition Starting Offset 1,505,258,496 bytes
 Partition Disk #28, Partition #2
 Partition Size 5.12 GB (5,494,454,784 bytes)
 Partition Starting Offset 9,492,005,376 bytes
 Partition Disk #28, Partition #3
 Partition Size 5.12 GB (5,494,454,784 bytes)
 Partition Starting Offset 14,986,492,416 bytes
 Partition Disk #28, Partition #4
 Partition Size 6.96 GB (7,476,747,264 bytes)
 Partition Starting Offset 20,480,979,456 bytes
 Partition Disk #28, Partition #5
 Partition Size 368.65 MB (386,555,904 bytes)
 Partition Starting Offset 27,957,758,976 bytes
 Partition Disk #28, Partition #6
 Partition Size 101.94 MB (106,896,384 bytes)
 Partition Starting Offset 28,344,347,136 bytes
 Partition Disk #28, Partition #7
 Partition Size 2.75 GB (2,952,843,264 bytes)
 Partition Starting Offset 28,451,275,776 bytes
 Partition Disk #28, Partition #8
 Partition Size 90.38 GB (97,041,821,184 bytes)
 Partition Starting Offset 31,404,151,296 bytes

Description Unisys Intelligent Fibre Channel Fabric Disk Driver
 Manufacturer Unisys Corporation
 Model UNISYS VirtualStorage 01.0
 Bytes/Sector 512
 Media Loaded Yes
 Media Type Fixed hard disk
 Partitions 9
 SCSI Bus 0
 SCSI Logical Unit 0
 SCSI Port 0
 SCSI Target ID 73
 Sectors/Track 63

Size 136.71 GB (146,796,572,160 bytes)
 Total Cylinders 17,847
 Total Sectors 286,712,055
 Total Tracks 4,550,985
 Tracks/Cylinder 255
 Partition Disk #27, Partition #0
 Partition Size 1.39 GB (1,496,968,704 bytes)
 Partition Starting Offset 8,257,536 bytes
 Partition Disk #27, Partition #1
 Partition Size 7.44 GB (7,986,714,624 bytes)
 Partition Starting Offset 1,505,258,496 bytes
 Partition Disk #27, Partition #2
 Partition Size 5.12 GB (5,494,454,784 bytes)
 Partition Starting Offset 9,492,005,376 bytes
 Partition Disk #27, Partition #3
 Partition Size 5.12 GB (5,494,454,784 bytes)
 Partition Starting Offset 14,986,492,416 bytes
 Partition Disk #27, Partition #4
 Partition Size 6.96 GB (7,476,747,264 bytes)
 Partition Starting Offset 20,480,979,456 bytes
 Partition Disk #27, Partition #5
 Partition Size 368.65 MB (386,555,904 bytes)
 Partition Starting Offset 27,957,758,976 bytes
 Partition Disk #27, Partition #6
 Partition Size 2.50 GB (2,689,634,304 bytes)
 Partition Starting Offset 28,344,347,136 bytes
 Partition Disk #27, Partition #7
 Partition Size 2.75 GB (2,952,843,264 bytes)
 Partition Starting Offset 31,034,013,696 bytes
 Partition Disk #27, Partition #8
 Partition Size 105.06 GB (112,809,682,944 bytes)
 Partition Starting Offset 33,986,889,216 bytes

Description Unisys Intelligent Fibre Channel Fabric Disk Driver
 Manufacturer Unisys Corporation
 Model UNISYS VirtualStorage 01.0
 Bytes/Sector 512
 Media Loaded Yes
 Media Type Fixed hard disk
 Partitions 9
 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 #26, Partition #0
 Partition Size 1.39 GB (1,496,968,704 bytes)
 Partition Starting Offset 8,257,536 bytes
 Partition Disk #26, Partition #1
 Partition Size 7.44 GB (7,986,714,624 bytes)
 Partition Starting Offset 1,505,258,496 bytes
 Partition Disk #26, Partition #2
 Partition Size 5.12 GB (5,494,454,784 bytes)
 Partition Starting Offset 9,492,005,376 bytes

Partition Disk #26, Partition #3
 Partition Size 5.12 GB (5,494,454,784 bytes)
 Partition Starting Offset 14,986,492,416 bytes
 Partition Disk #26, Partition #4
 Partition Size 6.96 GB (7,476,747,264 bytes)
 Partition Starting Offset 20,480,979,456 bytes
 Partition Disk #26, Partition #5
 Partition Size 368.65 MB (386,555,904 bytes)
 Partition Starting Offset 27,957,758,976 bytes
 Partition Disk #26, Partition #6
 Partition Size 15.66 MB (16,418,304 bytes)
 Partition Starting Offset 28,344,347,136 bytes
 Partition Disk #26, Partition #7
 Partition Size 2.75 GB (2,952,843,264 bytes)
 Partition Starting Offset 28,360,797,696 bytes
 Partition Disk #26, Partition #8
 Partition Size 90.46 GB (97,132,299,264 bytes)
 Partition Starting Offset 31,313,673,216 bytes

Description Unisys Intelligent Fibre Channel Fabric Disk Driver
 Manufacturer Unisys Corporation
 Model UNISYS VirtualStorage 01.0
 Bytes/Sector 512
 Media Loaded Yes
 Media Type Fixed hard disk
 Partitions 9
 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 #25, Partition #0
 Partition Size 1.39 GB (1,496,968,704 bytes)
 Partition Starting Offset 8,257,536 bytes
 Partition Disk #25, Partition #1
 Partition Size 7.44 GB (7,986,714,624 bytes)
 Partition Starting Offset 1,505,258,496 bytes
 Partition Disk #25, Partition #2
 Partition Size 5.12 GB (5,494,454,784 bytes)
 Partition Starting Offset 9,492,005,376 bytes
 Partition Disk #25, Partition #3
 Partition Size 5.12 GB (5,494,454,784 bytes)
 Partition Starting Offset 14,986,492,416 bytes
 Partition Disk #25, Partition #4
 Partition Size 6.96 GB (7,476,747,264 bytes)
 Partition Starting Offset 20,480,979,456 bytes
 Partition Disk #25, Partition #5
 Partition Size 368.65 MB (386,555,904 bytes)
 Partition Starting Offset 27,957,758,976 bytes
 Partition Disk #25, Partition #6
 Partition Size 2.50 GB (2,689,634,304 bytes)
 Partition Starting Offset 28,344,347,136 bytes
 Partition Disk #25, Partition #7
 Partition Size 2.75 GB (2,952,843,264 bytes)

Partition Starting Offset 31,034,013,696 bytes
Partition Disk #25, Partition #8
Partition Size 87.97 GB (94,459,083,264 bytes)
Partition Starting Offset 33,986,889,216 bytes

Description Unisys Intelligent Fibre Channel Fabric Disk Driver
Manufacturer Unisys Corporation
Model UNISYS VirtualStorage 01.0
Bytes/Sector 512
Media Loaded Yes
Media Type Fixed hard disk
Partitions 9
SCSI Bus 0

SCSI Logical Unit 0
SCSI Port 0
SCSI Target ID 76
Sectors/Track 63
Size 102.53 GB (110,095,372,800 bytes)
Total Cylinders 13,385
Total Sectors 215,030,025
Total Tracks 3,413,175
Tracks/Cylinder 255

Partition Disk #24, Partition #0
Partition Size 1.39 GB (1,496,968,704 bytes)
Partition Starting Offset 8,257,536 bytes
Partition Disk #24, Partition #1
Partition Size 7.44 GB (7,986,714,624 bytes)
Partition Starting Offset 1,505,258,496 bytes
Partition Disk #24, Partition #2
Partition Size 5.12 GB (5,494,454,784 bytes)
Partition Starting Offset 9,492,005,376 bytes
Partition Disk #24, Partition #3
Partition Size 5.12 GB (5,494,454,784 bytes)
Partition Starting Offset 14,986,492,416 bytes
Partition Disk #24, Partition #4
Partition Size 6.96 GB (7,476,747,264 bytes)
Partition Starting Offset 20,480,979,456 bytes
Partition Disk #24, Partition #5
Partition Size 368.65 MB (386,555,904 bytes)
Partition Starting Offset 27,957,758,976 bytes
Partition Disk #24, Partition #6
Partition Size 203.92 MB (213,825,024 bytes)
Partition Starting Offset 28,344,347,136 bytes
Partition Disk #24, Partition #7
Partition Size 2.75 GB (2,952,843,264 bytes)
Partition Starting Offset 28,558,204,416 bytes
Partition Disk #24, Partition #8
Partition Size 73.19 GB (78,584,292,864 bytes)
Partition Starting Offset 31,511,079,936 bytes

Description Unisys Intelligent Fibre Channel Fabric Disk Driver
Manufacturer Unisys Corporation
Model UNISYS VirtualStorage 01.0
Bytes/Sector 512
Media Loaded Yes
Media Type Fixed hard disk
Partitions 9
SCSI Bus 0
SCSI Logical Unit 0

SCSI Port 0
SCSI Target ID 77
Sectors/Track 63
Size 102.53 GB (110,095,372,800 bytes)
Total Cylinders 13,385
Total Sectors 215,030,025
Total Tracks 3,413,175
Tracks/Cylinder 255

Partition Disk #23, Partition #0
Partition Size 1.39 GB (1,496,968,704 bytes)
Partition Starting Offset 8,257,536 bytes
Partition Disk #23, Partition #1
Partition Size 7.44 GB (7,986,714,624 bytes)
Partition Starting Offset 1,505,258,496 bytes
Partition Disk #23, Partition #2
Partition Size 5.12 GB (5,494,454,784 bytes)
Partition Starting Offset 9,492,005,376 bytes
Partition Disk #23, Partition #3
Partition Size 5.12 GB (5,494,454,784 bytes)
Partition Starting Offset 14,986,492,416 bytes
Partition Disk #23, Partition #4
Partition Size 6.96 GB (7,476,747,264 bytes)
Partition Starting Offset 20,480,979,456 bytes
Partition Disk #23, Partition #5
Partition Size 368.65 MB (386,555,904 bytes)
Partition Starting Offset 27,957,758,976 bytes
Partition Disk #23, Partition #6
Partition Size 78.41 MB (82,220,544 bytes)
Partition Starting Offset 28,344,347,136 bytes
Partition Disk #23, Partition #7
Partition Size 2.75 GB (2,952,843,264 bytes)
Partition Starting Offset 28,426,599,936 bytes
Partition Disk #23, Partition #8
Partition Size 73.31 GB (78,715,897,344 bytes)
Partition Starting Offset 31,379,475,456 bytes

Description Unisys Intelligent Fibre Channel Fabric Disk Driver
Manufacturer Unisys Corporation
Model UNISYS VirtualStorage 01.0
Bytes/Sector 512
Media Loaded Yes
Media Type Fixed hard disk
Partitions 9
SCSI Bus 0
SCSI Logical Unit 0
SCSI Port 0
SCSI Target ID 78
Sectors/Track 63
Size 136.71 GB (146,796,572,160 bytes)
Total Cylinders 17,847
Total Sectors 286,712,055
Total Tracks 4,550,985
Tracks/Cylinder 255

Partition Disk #22, Partition #0
Partition Size 1.39 GB (1,496,968,704 bytes)
Partition Starting Offset 8,257,536 bytes
Partition Disk #22, Partition #1
Partition Size 7.44 GB (7,986,714,624 bytes)
Partition Starting Offset 1,505,258,496 bytes

Partition Disk #22, Partition #2
 Partition Size 5.12 GB (5,494,454,784 bytes)
 Partition Starting Offset 9,492,005,376 bytes
 Partition Disk #22, Partition #3
 Partition Size 5.12 GB (5,494,454,784 bytes)
 Partition Starting Offset 14,986,492,416 bytes
 Partition Disk #22, Partition #4
 Partition Size 6.96 GB (7,476,747,264 bytes)
 Partition Starting Offset 20,480,979,456 bytes
 Partition Disk #22, Partition #5
 Partition Size 368.65 MB (386,555,904 bytes)
 Partition Starting Offset 27,957,758,976 bytes
 Partition Disk #22, Partition #6
 Partition Size 15.66 MB (16,418,304 bytes)
 Partition Starting Offset 28,344,347,136 bytes
 Partition Disk #22, Partition #7
 Partition Size 2.75 GB (2,952,843,264 bytes)
 Partition Starting Offset 28,360,797,696 bytes
 Partition Disk #22, Partition #8
 Partition Size 107.55 GB (115,482,898,944 bytes)
 Partition Starting Offset 31,313,673,216 bytes

Description Unisys Intelligent Fibre Channel Fabric Disk Driver
 Manufacturer Unisys Corporation
 Model UNISYS VirtualStorage 01.0
 Bytes/Sector 512
 Media Loaded Yes
 Media Type Fixed hard disk
 Partitions 9
 SCSI Bus 0
 SCSI Logical Unit 0
 SCSI Port 0
 SCSI Target ID 79
 Sectors/Track 63
 Size 136.71 GB (146,796,572,160 bytes)
 Total Cylinders 17,847
 Total Sectors 286,712,055
 Total Tracks 4,550,985
 Tracks/Cylinder 255
 Partition Disk #21, Partition #0
 Partition Size 1.39 GB (1,496,968,704 bytes)
 Partition Starting Offset 8,257,536 bytes
 Partition Disk #21, Partition #1
 Partition Size 7.44 GB (7,986,714,624 bytes)
 Partition Starting Offset 1,505,258,496 bytes
 Partition Disk #21, Partition #2
 Partition Size 5.12 GB (5,494,454,784 bytes)
 Partition Starting Offset 9,492,005,376 bytes
 Partition Disk #21, Partition #3
 Partition Size 5.12 GB (5,494,454,784 bytes)
 Partition Starting Offset 14,986,492,416 bytes
 Partition Disk #21, Partition #4
 Partition Size 6.96 GB (7,476,747,264 bytes)
 Partition Starting Offset 20,480,979,456 bytes
 Partition Disk #21, Partition #5
 Partition Size 368.65 MB (386,555,904 bytes)
 Partition Starting Offset 27,957,758,976 bytes
 Partition Disk #21, Partition #6
 Partition Size 5.28 GB (5,667,185,664 bytes)

Partition Starting Offset 28,344,347,136 bytes
 Partition Disk #21, Partition #7
 Partition Size 2.75 GB (2,952,843,264 bytes)
 Partition Starting Offset 34,011,565,056 bytes
 Partition Disk #21, Partition #8
 Partition Size 102.29 GB (109,832,131,584 bytes)
 Partition Starting Offset 36,964,440,576 bytes

Description Unisys Intelligent Fibre Channel Fabric Disk Driver
 Manufacturer Unisys Corporation
 Model UNISYS VirtualStorage 01.0
 Bytes/Sector 512
 Media Loaded Yes
 Media Type Fixed hard disk
 Partitions 9
 SCSI Bus 0
 SCSI Logical Unit 0
 SCSI Port 0
 SCSI Target ID 80
 Sectors/Track 63
 Size 102.53 GB (110,095,372,800 bytes)
 Total Cylinders 13,385
 Total Sectors 215,030,025
 Total Tracks 3,413,175
 Tracks/Cylinder 255
 Partition Disk #20, Partition #0
 Partition Size 1.39 GB (1,496,968,704 bytes)
 Partition Starting Offset 8,257,536 bytes
 Partition Disk #20, Partition #1
 Partition Size 7.44 GB (7,986,714,624 bytes)
 Partition Starting Offset 1,505,258,496 bytes
 Partition Disk #20, Partition #2
 Partition Size 5.12 GB (5,494,454,784 bytes)
 Partition Starting Offset 9,492,005,376 bytes
 Partition Disk #20, Partition #3
 Partition Size 5.12 GB (5,494,454,784 bytes)
 Partition Starting Offset 14,986,492,416 bytes
 Partition Disk #20, Partition #4
 Partition Size 6.96 GB (7,476,747,264 bytes)
 Partition Starting Offset 20,480,979,456 bytes
 Partition Disk #20, Partition #5
 Partition Size 368.65 MB (386,555,904 bytes)
 Partition Starting Offset 27,957,758,976 bytes
 Partition Disk #20, Partition #6
 Partition Size 15.66 MB (16,418,304 bytes)
 Partition Starting Offset 28,344,347,136 bytes
 Partition Disk #20, Partition #7
 Partition Size 2.75 GB (2,952,843,264 bytes)
 Partition Starting Offset 28,360,797,696 bytes
 Partition Disk #20, Partition #8
 Partition Size 73.37 GB (78,781,699,584 bytes)
 Partition Starting Offset 31,313,673,216 bytes

Description Unisys Intelligent Fibre Channel Fabric Disk Driver
 Manufacturer Unisys Corporation
 Model UNISYS VirtualStorage 01.0
 Bytes/Sector 512
 Media Loaded Yes
 Media Type Fixed hard disk

Partitions 9
 SCSI Bus 0
 SCSI Logical Unit 0
 SCSI Port 0
 SCSI Target ID 81
 Sectors/Track 63
 Size 102.53 GB (110,095,372,800 bytes)
 Total Cylinders 13,385
 Total Sectors 215,030,025
 Total Tracks 3,413,175
 Tracks/Cylinder 255
 Partition Disk #19, Partition #0
 Partition Size 1.39 GB (1,496,968,704 bytes)
 Partition Starting Offset 8,257,536 bytes
 Partition Disk #19, Partition #1
 Partition Size 7.44 GB (7,986,714,624 bytes)
 Partition Starting Offset 1,505,258,496 bytes
 Partition Disk #19, Partition #2
 Partition Size 5.12 GB (5,494,454,784 bytes)
 Partition Starting Offset 9,492,005,376 bytes
 Partition Disk #19, Partition #3
 Partition Size 5.12 GB (5,494,454,784 bytes)
 Partition Starting Offset 14,986,492,416 bytes
 Partition Disk #19, Partition #4
 Partition Size 6.96 GB (7,476,747,264 bytes)
 Partition Starting Offset 20,480,979,456 bytes
 Partition Disk #19, Partition #5
 Partition Size 368.65 MB (386,555,904 bytes)
 Partition Starting Offset 27,957,758,976 bytes
 Partition Disk #19, Partition #6
 Partition Size 5.28 GB (5,667,185,664 bytes)
 Partition Starting Offset 28,344,347,136 bytes
 Partition Disk #19, Partition #7
 Partition Size 2.75 GB (2,952,843,264 bytes)
 Partition Starting Offset 34,011,565,056 bytes
 Partition Disk #19, Partition #8
 Partition Size 68.11 GB (73,130,932,224 bytes)
 Partition Starting Offset 36,964,440,576 bytes

Description Unisys Intelligent Fibre Channel Fabric Disk Driver
 Manufacturer Unisys Corporation
 Model UNISYS VirtualStorage 01.0
 Bytes/Sector 512
 Media Loaded Yes
 Media Type Fixed hard disk
 Partitions 9
 SCSI Bus 0
 SCSI Logical Unit 0
 SCSI Port 0
 SCSI Target ID 82
 Sectors/Track 63
 Size 136.71 GB (146,796,572,160 bytes)
 Total Cylinders 17,847
 Total Sectors 286,712,055
 Total Tracks 4,550,985
 Tracks/Cylinder 255
 Partition Disk #18, Partition #0
 Partition Size 1.39 GB (1,496,968,704 bytes)
 Partition Starting Offset 8,257,536 bytes

Partition Disk #18, Partition #1
 Partition Size 7.44 GB (7,986,714,624 bytes)
 Partition Starting Offset 1,505,258,496 bytes
 Partition Disk #18, Partition #2
 Partition Size 5.12 GB (5,494,454,784 bytes)
 Partition Starting Offset 9,492,005,376 bytes
 Partition Disk #18, Partition #3
 Partition Size 5.12 GB (5,494,454,784 bytes)
 Partition Starting Offset 14,986,492,416 bytes
 Partition Disk #18, Partition #4
 Partition Size 6.96 GB (7,476,747,264 bytes)
 Partition Starting Offset 20,480,979,456 bytes
 Partition Disk #18, Partition #5
 Partition Size 368.65 MB (386,555,904 bytes)
 Partition Starting Offset 27,957,758,976 bytes
 Partition Disk #18, Partition #6
 Partition Size 15.66 MB (16,418,304 bytes)
 Partition Starting Offset 28,344,347,136 bytes
 Partition Disk #18, Partition #7
 Partition Size 2.75 GB (2,952,843,264 bytes)
 Partition Starting Offset 28,360,797,696 bytes
 Partition Disk #18, Partition #8
 Partition Size 107.55 GB (115,482,898,944 bytes)
 Partition Starting Offset 31,313,673,216 bytes

Description Unisys Intelligent Fibre Channel Fabric Disk Driver
 Manufacturer Unisys Corporation
 Model UNISYS VirtualStorage 01.0
 Bytes/Sector 512
 Media Loaded Yes
 Media Type Fixed hard disk
 Partitions 9
 SCSI Bus 0
 SCSI Logical Unit 0
 SCSI Port 0
 SCSI Target ID 83
 Sectors/Track 63
 Size 136.71 GB (146,796,572,160 bytes)
 Total Cylinders 17,847
 Total Sectors 286,712,055
 Total Tracks 4,550,985
 Tracks/Cylinder 255
 Partition Disk #17, Partition #0
 Partition Size 1.39 GB (1,496,968,704 bytes)
 Partition Starting Offset 8,257,536 bytes
 Partition Disk #17, Partition #1
 Partition Size 7.44 GB (7,986,714,624 bytes)
 Partition Starting Offset 1,505,258,496 bytes
 Partition Disk #17, Partition #2
 Partition Size 5.12 GB (5,494,454,784 bytes)
 Partition Starting Offset 9,492,005,376 bytes
 Partition Disk #17, Partition #3
 Partition Size 5.12 GB (5,494,454,784 bytes)
 Partition Starting Offset 14,986,492,416 bytes
 Partition Disk #17, Partition #4
 Partition Size 6.96 GB (7,476,747,264 bytes)
 Partition Starting Offset 20,480,979,456 bytes
 Partition Disk #17, Partition #5
 Partition Size 368.65 MB (386,555,904 bytes)

Partition Starting Offset 27,957,758,976 bytes
 Partition Disk #17, Partition #6
 Partition Size 5.28 GB (5,667,185,664 bytes)
 Partition Starting Offset 28,344,347,136 bytes
 Partition Disk #17, Partition #7
 Partition Size 2.75 GB (2,952,843,264 bytes)
 Partition Starting Offset 34,011,565,056 bytes
 Partition Disk #17, Partition #8
 Partition Size 102.29 GB (109,832,131,584 bytes)
 Partition Starting Offset 36,964,440,576 bytes

Description Unisys Intelligent Fibre Channel Fabric Disk Driver
 Manufacturer Unisys Corporation
 Model UNISYS VirtualStorage 01.0
 Bytes/Sector 512
 Media Loaded Yes
 Media Type Fixed hard disk
 Partitions 9
 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 #80, Partition #0
 Partition Size 1.39 GB (1,496,968,704 bytes)
 Partition Starting Offset 8,257,536 bytes
 Partition Disk #80, Partition #1
 Partition Size 7.44 GB (7,986,714,624 bytes)
 Partition Starting Offset 1,505,258,496 bytes
 Partition Disk #80, Partition #2
 Partition Size 5.12 GB (5,494,454,784 bytes)
 Partition Starting Offset 9,492,005,376 bytes
 Partition Disk #80, Partition #3
 Partition Size 5.12 GB (5,494,454,784 bytes)
 Partition Starting Offset 14,986,492,416 bytes
 Partition Disk #80, Partition #4
 Partition Size 6.96 GB (7,476,747,264 bytes)
 Partition Starting Offset 20,480,979,456 bytes
 Partition Disk #80, Partition #5
 Partition Size 368.65 MB (386,555,904 bytes)
 Partition Starting Offset 27,957,758,976 bytes
 Partition Disk #80, Partition #6
 Partition Size 203.92 MB (213,825,024 bytes)
 Partition Starting Offset 28,344,347,136 bytes
 Partition Disk #80, Partition #7
 Partition Size 2.75 GB (2,952,843,264 bytes)
 Partition Starting Offset 28,558,204,416 bytes
 Partition Disk #80, Partition #8
 Partition Size 90.28 GB (96,934,892,544 bytes)
 Partition Starting Offset 31,511,079,936 bytes

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

Bytes/Sector 512
 Media Loaded Yes
 Media Type Fixed hard disk
 Partitions 9
 SCSI Bus 0
 SCSI Logical Unit 0
 SCSI Port 0
 SCSI Target ID 21
 Sectors/Track 63
 Size 102.53 GB (110,095,372,800 bytes)
 Total Cylinders 13,385
 Total Sectors 215,030,025
 Total Tracks 3,413,175
 Tracks/Cylinder 255
 Partition Disk #79, Partition #0
 Partition Size 1.39 GB (1,496,968,704 bytes)
 Partition Starting Offset 8,257,536 bytes
 Partition Disk #79, Partition #1
 Partition Size 7.44 GB (7,986,714,624 bytes)
 Partition Starting Offset 1,505,258,496 bytes
 Partition Disk #79, Partition #2
 Partition Size 5.12 GB (5,494,454,784 bytes)
 Partition Starting Offset 9,492,005,376 bytes
 Partition Disk #79, Partition #3
 Partition Size 5.12 GB (5,494,454,784 bytes)
 Partition Starting Offset 14,986,492,416 bytes
 Partition Disk #79, Partition #4
 Partition Size 6.96 GB (7,476,747,264 bytes)
 Partition Starting Offset 20,480,979,456 bytes
 Partition Disk #79, Partition #5
 Partition Size 368.65 MB (386,555,904 bytes)
 Partition Starting Offset 27,957,758,976 bytes
 Partition Disk #79, Partition #6
 Partition Size 2.50 GB (2,689,634,304 bytes)
 Partition Starting Offset 28,344,347,136 bytes
 Partition Disk #79, Partition #7
 Partition Size 2.75 GB (2,952,843,264 bytes)
 Partition Starting Offset 31,034,013,696 bytes
 Partition Disk #79, Partition #8
 Partition Size 70.88 GB (76,108,483,584 bytes)
 Partition Starting Offset 33,986,889,216 bytes

Description Unisys Intelligent Fibre Channel Fabric Disk Driver
 Manufacturer Unisys Corporation
 Model UNISYS VirtualStorage 01.0
 Bytes/Sector 512
 Media Loaded Yes
 Media Type Fixed hard disk
 Partitions 9
 SCSI Bus 0
 SCSI Logical Unit 0
 SCSI Port 0
 SCSI Target ID 22
 Sectors/Track 63
 Size 85.44 GB (91,744,773,120 bytes)
 Total Cylinders 11,154
 Total Sectors 179,189,010
 Total Tracks 2,844,270
 Tracks/Cylinder 255

Partition Disk #78, Partition #0
 Partition Size 1.39 GB (1,496,968,704 bytes)
 Partition Starting Offset 8,257,536 bytes
 Partition Disk #78, Partition #1
 Partition Size 7.44 GB (7,986,714,624 bytes)
 Partition Starting Offset 1,505,258,496 bytes
 Partition Disk #78, Partition #2
 Partition Size 5.12 GB (5,494,454,784 bytes)
 Partition Starting Offset 9,492,005,376 bytes
 Partition Disk #78, Partition #3
 Partition Size 5.12 GB (5,494,454,784 bytes)
 Partition Starting Offset 14,986,492,416 bytes
 Partition Disk #78, Partition #4
 Partition Size 6.96 GB (7,476,747,264 bytes)
 Partition Starting Offset 20,480,979,456 bytes
 Partition Disk #78, Partition #5
 Partition Size 368.65 MB (386,555,904 bytes)
 Partition Starting Offset 27,957,758,976 bytes
 Partition Disk #78, Partition #6
 Partition Size 203.92 MB (213,825,024 bytes)
 Partition Starting Offset 28,344,347,136 bytes
 Partition Disk #78, Partition #7
 Partition Size 2.75 GB (2,952,843,264 bytes)
 Partition Starting Offset 28,558,204,416 bytes
 Partition Disk #78, Partition #8
 Partition Size 56.10 GB (60,233,693,184 bytes)
 Partition Starting Offset 31,511,079,936 bytes

Description Unisys Intelligent Fibre Channel Fabric Disk Driver
 Manufacturer Unisys Corporation
 Model UNISYS VirtualStorage 01.0
 Bytes/Sector 512
 Media Loaded Yes
 Media Type Fixed hard disk
 Partitions 9
 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 #77, Partition #0
 Partition Size 1.39 GB (1,496,968,704 bytes)
 Partition Starting Offset 8,257,536 bytes
 Partition Disk #77, Partition #1
 Partition Size 7.44 GB (7,986,714,624 bytes)
 Partition Starting Offset 1,505,258,496 bytes
 Partition Disk #77, Partition #2
 Partition Size 5.12 GB (5,494,454,784 bytes)
 Partition Starting Offset 9,492,005,376 bytes
 Partition Disk #77, Partition #3
 Partition Size 5.12 GB (5,494,454,784 bytes)
 Partition Starting Offset 14,986,492,416 bytes
 Partition Disk #77, Partition #4
 Partition Size 6.96 GB (7,476,747,264 bytes)

Partition Starting Offset 20,480,979,456 bytes
 Partition Disk #77, Partition #5
 Partition Size 368.65 MB (386,555,904 bytes)
 Partition Starting Offset 27,957,758,976 bytes
 Partition Disk #77, Partition #6
 Partition Size 2.50 GB (2,689,634,304 bytes)
 Partition Starting Offset 28,344,347,136 bytes
 Partition Disk #77, Partition #7
 Partition Size 2.75 GB (2,952,843,264 bytes)
 Partition Starting Offset 31,034,013,696 bytes
 Partition Disk #77, Partition #8
 Partition Size 87.97 GB (94,459,083,264 bytes)
 Partition Starting Offset 33,986,889,216 bytes

Description Unisys Intelligent Fibre Channel Fabric Disk Driver
 Manufacturer Unisys Corporation
 Model UNISYS VirtualStorage 01.0
 Bytes/Sector 512
 Media Loaded Yes
 Media Type Fixed hard disk
 Partitions 9
 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 #76, Partition #0
 Partition Size 1.39 GB (1,496,968,704 bytes)
 Partition Starting Offset 8,257,536 bytes
 Partition Disk #76, Partition #1
 Partition Size 7.44 GB (7,986,714,624 bytes)
 Partition Starting Offset 1,505,258,496 bytes
 Partition Disk #76, Partition #2
 Partition Size 5.12 GB (5,494,454,784 bytes)
 Partition Starting Offset 9,492,005,376 bytes
 Partition Disk #76, Partition #3
 Partition Size 5.12 GB (5,494,454,784 bytes)
 Partition Starting Offset 14,986,492,416 bytes
 Partition Disk #76, Partition #4
 Partition Size 6.96 GB (7,476,747,264 bytes)
 Partition Starting Offset 20,480,979,456 bytes
 Partition Disk #76, Partition #5
 Partition Size 368.65 MB (386,555,904 bytes)
 Partition Starting Offset 27,957,758,976 bytes
 Partition Disk #76, Partition #6
 Partition Size 203.92 MB (213,825,024 bytes)
 Partition Starting Offset 28,344,347,136 bytes
 Partition Disk #76, Partition #7
 Partition Size 2.75 GB (2,952,843,264 bytes)
 Partition Starting Offset 28,558,204,416 bytes
 Partition Disk #76, Partition #8
 Partition Size 90.28 GB (96,934,892,544 bytes)
 Partition Starting Offset 31,511,079,936 bytes

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Description    Unisys Intelligent Fibre Channel Fabric Disk Driver
Manufacturer   Unisys Corporation
Model UNISYS  VirtualStorage 01.0
Bytes/Sector   512
Media Loaded   Yes
Media Type     Fixed hard disk
Partitions     9
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 #75, Partition #0
Partition Size 1.39 GB (1,496,968,704 bytes)
Partition Starting Offset 8,257,536 bytes
Partition      Disk #75, Partition #1
Partition Size 7.44 GB (7,986,714,624 bytes)
Partition Starting Offset 1,505,258,496 bytes
Partition      Disk #75, Partition #2
Partition Size 5.12 GB (5,494,454,784 bytes)
Partition Starting Offset 9,492,005,376 bytes
Partition      Disk #75, Partition #3
Partition Size 5.12 GB (5,494,454,784 bytes)
Partition Starting Offset 14,986,492,416 bytes
Partition      Disk #75, Partition #4
Partition Size 6.96 GB (7,476,747,264 bytes)
Partition Starting Offset 20,480,979,456 bytes
Partition      Disk #75, Partition #5
Partition Size 368.65 MB (386,555,904 bytes)
Partition Starting Offset 27,957,758,976 bytes
Partition      Disk #75, Partition #6
Partition Size 2.50 GB (2,689,634,304 bytes)
Partition Starting Offset 28,344,347,136 bytes
Partition      Disk #75, Partition #7
Partition Size 2.75 GB (2,952,843,264 bytes)
Partition Starting Offset 31,034,013,696 bytes
Partition      Disk #75, Partition #8
Partition Size 87.97 GB (94,459,083,264 bytes)
Partition Starting Offset 33,986,889,216 bytes

```

```

Description    Unisys Intelligent Fibre Channel Fabric Disk Driver
Manufacturer   Unisys Corporation
Model UNISYS  VirtualStorage 01.0
Bytes/Sector   512
Media Loaded   Yes
Media Type     Fixed hard disk
Partitions     9
SCSI Bus       0
SCSI Logical Unit 0
SCSI Port      0
SCSI Target ID 26
Sectors/Track  63
Size 153.81 GB (165,147,171,840 bytes)
Total Cylinders 20,078

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Total Sectors 322,553,070
Total Tracks  5,119,890
Tracks/Cylinder 255
Partition      Disk #74, Partition #0
Partition Size 1.39 GB (1,496,968,704 bytes)
Partition Starting Offset 8,257,536 bytes
Partition      Disk #74, Partition #1
Partition Size 7.44 GB (7,986,714,624 bytes)
Partition Starting Offset 1,505,258,496 bytes
Partition      Disk #74, Partition #2
Partition Size 5.12 GB (5,494,454,784 bytes)
Partition Starting Offset 9,492,005,376 bytes
Partition      Disk #74, Partition #3
Partition Size 5.12 GB (5,494,454,784 bytes)
Partition Starting Offset 14,986,492,416 bytes
Partition      Disk #74, Partition #4
Partition Size 6.96 GB (7,476,747,264 bytes)
Partition Starting Offset 20,480,979,456 bytes
Partition      Disk #74, Partition #5
Partition Size 368.65 MB (386,555,904 bytes)
Partition Starting Offset 27,957,758,976 bytes
Partition      Disk #74, Partition #6
Partition Size 203.92 MB (213,825,024 bytes)
Partition Starting Offset 28,344,347,136 bytes
Partition      Disk #74, Partition #7
Partition Size 2.75 GB (2,952,843,264 bytes)
Partition Starting Offset 28,558,204,416 bytes
Partition      Disk #74, Partition #8
Partition Size 124.46 GB (133,636,091,904 bytes)
Partition Starting Offset 31,511,079,936 bytes

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```

Description    Unisys Intelligent Fibre Channel Fabric Disk Driver
Manufacturer   Unisys Corporation
Model UNISYS  VirtualStorage 01.0
Bytes/Sector   512
Media Loaded   Yes
Media Type     Fixed hard disk
Partitions     9
SCSI Bus       0
SCSI Logical Unit 0
SCSI Port      0
SCSI Target ID 27
Sectors/Track  63
Size 136.71 GB (146,796,572,160 bytes)
Total Cylinders 17,847
Total Sectors  286,712,055
Total Tracks   4,550,985
Tracks/Cylinder 255
Partition      Disk #73, Partition #0
Partition Size 1.39 GB (1,496,968,704 bytes)
Partition Starting Offset 8,257,536 bytes
Partition      Disk #73, Partition #1
Partition Size 7.44 GB (7,986,714,624 bytes)
Partition Starting Offset 1,505,258,496 bytes
Partition      Disk #73, Partition #2
Partition Size 5.12 GB (5,494,454,784 bytes)
Partition Starting Offset 9,492,005,376 bytes
Partition      Disk #73, Partition #3
Partition Size 5.12 GB (5,494,454,784 bytes)

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Partition Starting Offset 14,986,492,416 bytes
 Partition Disk #73, Partition #4
 Partition Size 6.96 GB (7,476,747,264 bytes)
 Partition Starting Offset 20,480,979,456 bytes
 Partition Disk #73, Partition #5
 Partition Size 368.65 MB (386,555,904 bytes)
 Partition Starting Offset 27,957,758,976 bytes
 Partition Disk #73, Partition #6
 Partition Size 2.50 GB (2,689,634,304 bytes)
 Partition Starting Offset 28,344,347,136 bytes
 Partition Disk #73, Partition #7
 Partition Size 2.75 GB (2,952,843,264 bytes)
 Partition Starting Offset 31,034,013,696 bytes
 Partition Disk #73, Partition #8
 Partition Size 105.06 GB (112,809,682,944 bytes)
 Partition Starting Offset 33,986,889,216 bytes

Description Unisys Intelligent Fibre Channel Fabric Disk Driver
 Manufacturer Unisys Corporation
 Model UNISYS VirtualStorage 01.0
 Bytes/Sector 512
 Media Loaded Yes
 Media Type Fixed hard disk
 Partitions 13
 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 #96, Partition #0
 Partition Size 1.39 GB (1,496,968,704 bytes)
 Partition Starting Offset 8,257,536 bytes
 Partition Disk #96, Partition #1
 Partition Size 7.44 GB (7,986,714,624 bytes)
 Partition Starting Offset 1,505,258,496 bytes
 Partition Disk #96, Partition #2
 Partition Size 5.12 GB (5,494,454,784 bytes)
 Partition Starting Offset 9,492,005,376 bytes
 Partition Disk #96, Partition #3
 Partition Size 5.12 GB (5,494,454,784 bytes)
 Partition Starting Offset 14,986,492,416 bytes
 Partition Disk #96, Partition #4
 Partition Size 6.96 GB (7,476,747,264 bytes)
 Partition Starting Offset 20,480,979,456 bytes
 Partition Disk #96, Partition #5
 Partition Size 368.65 MB (386,555,904 bytes)
 Partition Starting Offset 27,957,758,976 bytes
 Partition Disk #96, Partition #6
 Partition Size 133.32 MB (139,797,504 bytes)
 Partition Starting Offset 28,344,347,136 bytes
 Partition Disk #96, Partition #7
 Partition Size 2.75 GB (2,952,843,264 bytes)
 Partition Starting Offset 28,484,176,896 bytes
 Partition Disk #96, Partition #8

Partition Size 211.76 MB (222,050,304 bytes)
 Partition Starting Offset 31,437,052,416 bytes
 Partition Disk #96, Partition #9
 Partition Size 39.19 MB (41,094,144 bytes)
 Partition Starting Offset 31,659,134,976 bytes
 Partition Disk #96, Partition #10
 Partition Size 39.19 MB (41,094,144 bytes)
 Partition Starting Offset 31,700,261,376 bytes
 Partition Disk #96, Partition #11
 Partition Size 7.92 GB (8,504,907,264 bytes)
 Partition Starting Offset 31,741,387,776 bytes
 Partition Disk #96, Partition #12
 Partition Size 82.14 GB (88,199,645,184 bytes)
 Partition Starting Offset 40,246,327,296 bytes

Description Unisys Intelligent Fibre Channel Fabric Disk Driver
 Manufacturer Unisys Corporation
 Model UNISYS VirtualStorage 01.0
 Bytes/Sector 512
 Media Loaded Yes
 Media Type Fixed hard disk
 Partitions 12
 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 #95, Partition #0
 Partition Size 1.39 GB (1,496,968,704 bytes)
 Partition Starting Offset 8,257,536 bytes
 Partition Disk #95, Partition #1
 Partition Size 7.44 GB (7,986,714,624 bytes)
 Partition Starting Offset 1,505,258,496 bytes
 Partition Disk #95, Partition #2
 Partition Size 5.12 GB (5,494,454,784 bytes)
 Partition Starting Offset 9,492,005,376 bytes
 Partition Disk #95, Partition #3
 Partition Size 5.12 GB (5,494,454,784 bytes)
 Partition Starting Offset 14,986,492,416 bytes
 Partition Disk #95, Partition #4
 Partition Size 6.96 GB (7,476,747,264 bytes)
 Partition Starting Offset 20,480,979,456 bytes
 Partition Disk #95, Partition #5
 Partition Size 368.65 MB (386,555,904 bytes)
 Partition Starting Offset 27,957,758,976 bytes
 Partition Disk #95, Partition #6
 Partition Size 39.19 MB (41,094,144 bytes)
 Partition Starting Offset 28,344,347,136 bytes
 Partition Disk #95, Partition #7
 Partition Size 2.75 GB (2,952,843,264 bytes)
 Partition Starting Offset 28,385,473,536 bytes
 Partition Disk #95, Partition #8
 Partition Size 4.01 GB (4,310,014,464 bytes)
 Partition Starting Offset 31,338,349,056 bytes

Partition Disk #95, Partition #9
 Partition Size 133.32 MB (139,797,504 bytes)
 Partition Starting Offset 35,648,395,776 bytes
 Partition Disk #95, Partition #10
 Partition Size 7.58 GB (8,134,769,664 bytes)
 Partition Starting Offset 35,788,225,536 bytes
 Partition Disk #95, Partition #11
 Partition Size 78.72 GB (84,522,945,024 bytes)
 Partition Starting Offset 43,923,027,456 bytes

Description Unisys Intelligent Fibre Channel Fabric Disk Driver
 Manufacturer Unisys Corporation
 Model UNISYS VirtualStorage 01.0
 Bytes/Sector 512
 Media Loaded Yes
 Media Type Fixed hard disk
 Partitions 9
 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 #94, Partition #0
 Partition Size 1.39 GB (1,496,968,704 bytes)
 Partition Starting Offset 8,257,536 bytes
 Partition Disk #94, Partition #1
 Partition Size 7.44 GB (7,986,714,624 bytes)
 Partition Starting Offset 1,505,258,496 bytes
 Partition Disk #94, Partition #2
 Partition Size 5.12 GB (5,494,454,784 bytes)
 Partition Starting Offset 9,492,005,376 bytes
 Partition Disk #94, Partition #3
 Partition Size 5.12 GB (5,494,454,784 bytes)
 Partition Starting Offset 14,986,492,416 bytes
 Partition Disk #94, Partition #4
 Partition Size 6.96 GB (7,476,747,264 bytes)
 Partition Starting Offset 20,480,979,456 bytes
 Partition Disk #94, Partition #5
 Partition Size 368.65 MB (386,555,904 bytes)
 Partition Starting Offset 27,957,758,976 bytes
 Partition Disk #94, Partition #6
 Partition Size 39.19 MB (41,094,144 bytes)
 Partition Starting Offset 28,344,347,136 bytes
 Partition Disk #94, Partition #7
 Partition Size 2.75 GB (2,952,843,264 bytes)
 Partition Starting Offset 28,385,473,536 bytes
 Partition Disk #94, Partition #8
 Partition Size 90.44 GB (97,107,623,424 bytes)
 Partition Starting Offset 31,338,349,056 bytes

Description Unisys Intelligent Fibre Channel Fabric Disk Driver
 Manufacturer Unisys Corporation
 Model UNISYS VirtualStorage 01.0
 Bytes/Sector 512

Media Loaded Yes
 Media Type Fixed hard disk
 Partitions 9
 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 #93, Partition #0
 Partition Size 1.39 GB (1,496,968,704 bytes)
 Partition Starting Offset 8,257,536 bytes
 Partition Disk #93, Partition #1
 Partition Size 7.44 GB (7,986,714,624 bytes)
 Partition Starting Offset 1,505,258,496 bytes
 Partition Disk #93, Partition #2
 Partition Size 5.12 GB (5,494,454,784 bytes)
 Partition Starting Offset 9,492,005,376 bytes
 Partition Disk #93, Partition #3
 Partition Size 5.12 GB (5,494,454,784 bytes)
 Partition Starting Offset 14,986,492,416 bytes
 Partition Disk #93, Partition #4
 Partition Size 6.96 GB (7,476,747,264 bytes)
 Partition Starting Offset 20,480,979,456 bytes
 Partition Disk #93, Partition #5
 Partition Size 368.65 MB (386,555,904 bytes)
 Partition Starting Offset 27,957,758,976 bytes
 Partition Disk #93, Partition #6
 Partition Size 211.76 MB (222,050,304 bytes)
 Partition Starting Offset 28,344,347,136 bytes
 Partition Disk #93, Partition #7
 Partition Size 2.75 GB (2,952,843,264 bytes)
 Partition Starting Offset 28,566,429,696 bytes
 Partition Disk #93, Partition #8
 Partition Size 90.27 GB (96,926,667,264 bytes)
 Partition Starting Offset 31,519,305,216 bytes

Description Unisys Intelligent Fibre Channel Fabric Disk Driver
 Manufacturer Unisys Corporation
 Model UNISYS VirtualStorage 01.0
 Bytes/Sector 512
 Media Loaded Yes
 Media Type Fixed hard disk
 Partitions 9
 SCSI Bus 0
 SCSI Logical Unit 0
 SCSI Port 0
 SCSI Target ID 8
 Sectors/Track 63
 Size 153.81 GB (165,147,171,840 bytes)
 Total Cylinders 20,078
 Total Sectors 322,553,070
 Total Tracks 5,119,890
 Tracks/Cylinder 255
 Partition Disk #92, Partition #0

Partition Size 1.39 GB (1,496,968,704 bytes)
 Partition Starting Offset 8,257,536 bytes
 Partition Disk #92, Partition #1
 Partition Size 7.44 GB (7,986,714,624 bytes)
 Partition Starting Offset 1,505,258,496 bytes
 Partition Disk #92, Partition #2
 Partition Size 5.12 GB (5,494,454,784 bytes)
 Partition Starting Offset 9,492,005,376 bytes
 Partition Disk #92, Partition #3
 Partition Size 5.12 GB (5,494,454,784 bytes)
 Partition Starting Offset 14,986,492,416 bytes
 Partition Disk #92, Partition #4
 Partition Size 6.96 GB (7,476,747,264 bytes)
 Partition Starting Offset 20,480,979,456 bytes
 Partition Disk #92, Partition #5
 Partition Size 368.65 MB (386,555,904 bytes)
 Partition Starting Offset 27,957,758,976 bytes
 Partition Disk #92, Partition #6
 Partition Size 203.92 MB (213,825,024 bytes)
 Partition Starting Offset 28,344,347,136 bytes
 Partition Disk #92, Partition #7
 Partition Size 2.75 GB (2,952,843,264 bytes)
 Partition Starting Offset 28,558,204,416 bytes
 Partition Disk #92, Partition #8
 Partition Size 124.46 GB (133,636,091,904 bytes)
 Partition Starting Offset 31,511,079,936 bytes

Description Unisys Intelligent Fibre Channel Fabric Disk Driver
 Manufacturer Unisys Corporation
 Model UNISYS VirtualStorage 01.0
 Bytes/Sector 512
 Media Loaded Yes
 Media Type Fixed hard disk
 Partitions 9
 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 #91, Partition #0
 Partition Size 1.39 GB (1,496,968,704 bytes)
 Partition Starting Offset 8,257,536 bytes
 Partition Disk #91, Partition #1
 Partition Size 7.44 GB (7,986,714,624 bytes)
 Partition Starting Offset 1,505,258,496 bytes
 Partition Disk #91, Partition #2
 Partition Size 5.12 GB (5,494,454,784 bytes)
 Partition Starting Offset 9,492,005,376 bytes
 Partition Disk #91, Partition #3
 Partition Size 5.12 GB (5,494,454,784 bytes)
 Partition Starting Offset 14,986,492,416 bytes
 Partition Disk #91, Partition #4
 Partition Size 6.96 GB (7,476,747,264 bytes)
 Partition Starting Offset 20,480,979,456 bytes

Partition Disk #91, Partition #5
 Partition Size 368.65 MB (386,555,904 bytes)
 Partition Starting Offset 27,957,758,976 bytes
 Partition Disk #91, Partition #6
 Partition Size 2.50 GB (2,689,634,304 bytes)
 Partition Starting Offset 28,344,347,136 bytes
 Partition Disk #91, Partition #7
 Partition Size 2.75 GB (2,952,843,264 bytes)
 Partition Starting Offset 31,034,013,696 bytes
 Partition Disk #91, Partition #8
 Partition Size 87.97 GB (94,459,083,264 bytes)
 Partition Starting Offset 33,986,889,216 bytes

Description Unisys Intelligent Fibre Channel Fabric Disk Driver
 Manufacturer Unisys Corporation
 Model UNISYS VirtualStorage 01.0
 Bytes/Sector 512
 Media Loaded Yes
 Media Type Fixed hard disk
 Partitions 9
 SCSI Bus 0
 SCSI Logical Unit 0
 SCSI Port 0
 SCSI Target ID 10
 Sectors/Track 63
 Size 102.53 GB (110,095,372,800 bytes)
 Total Cylinders 13,385
 Total Sectors 215,030,025
 Total Tracks 3,413,175
 Tracks/Cylinder 255
 Partition Disk #90, Partition #0
 Partition Size 1.39 GB (1,496,968,704 bytes)
 Partition Starting Offset 8,257,536 bytes
 Partition Disk #90, Partition #1
 Partition Size 7.44 GB (7,986,714,624 bytes)
 Partition Starting Offset 1,505,258,496 bytes
 Partition Disk #90, Partition #2
 Partition Size 5.12 GB (5,494,454,784 bytes)
 Partition Starting Offset 9,492,005,376 bytes
 Partition Disk #90, Partition #3
 Partition Size 5.12 GB (5,494,454,784 bytes)
 Partition Starting Offset 14,986,492,416 bytes
 Partition Disk #90, Partition #4
 Partition Size 6.96 GB (7,476,747,264 bytes)
 Partition Starting Offset 20,480,979,456 bytes
 Partition Disk #90, Partition #5
 Partition Size 368.65 MB (386,555,904 bytes)
 Partition Starting Offset 27,957,758,976 bytes
 Partition Disk #90, Partition #6
 Partition Size 203.92 MB (213,825,024 bytes)
 Partition Starting Offset 28,344,347,136 bytes
 Partition Disk #90, Partition #7
 Partition Size 2.75 GB (2,952,843,264 bytes)
 Partition Starting Offset 28,558,204,416 bytes
 Partition Disk #90, Partition #8
 Partition Size 73.19 GB (78,584,292,864 bytes)
 Partition Starting Offset 31,511,079,936 bytes

Description Unisys Intelligent Fibre Channel Fabric Disk Driver

Manufacturer Unisys Corporation
 Model UNISYS VirtualStorage 01.0
 Bytes/Sector 512
 Media Loaded Yes
 Media Type Fixed hard disk
 Partitions 9
 SCSI Bus 0
 SCSI Logical Unit 0
 SCSI Port 0
 SCSI Target ID 11
 Sectors/Track 63
 Size 102.53 GB (110,095,372,800 bytes)
 Total Cylinders 13,385
 Total Sectors 215,030,025
 Total Tracks 3,413,175
 Tracks/Cylinder 255
 Partition Disk #89, Partition #0
 Partition Size 1.39 GB (1,496,968,704 bytes)
 Partition Starting Offset 8,257,536 bytes
 Partition Disk #89, Partition #1
 Partition Size 7.44 GB (7,986,714,624 bytes)
 Partition Starting Offset 1,505,258,496 bytes
 Partition Disk #89, Partition #2
 Partition Size 5.12 GB (5,494,454,784 bytes)
 Partition Starting Offset 9,492,005,376 bytes
 Partition Disk #89, Partition #3
 Partition Size 5.12 GB (5,494,454,784 bytes)
 Partition Starting Offset 14,986,492,416 bytes
 Partition Disk #89, Partition #4
 Partition Size 6.96 GB (7,476,747,264 bytes)
 Partition Starting Offset 20,480,979,456 bytes
 Partition Disk #89, Partition #5
 Partition Size 368.65 MB (386,555,904 bytes)
 Partition Starting Offset 27,957,758,976 bytes
 Partition Disk #89, Partition #6
 Partition Size 2.50 GB (2,689,634,304 bytes)
 Partition Starting Offset 28,344,347,136 bytes
 Partition Disk #89, Partition #7
 Partition Size 2.75 GB (2,952,843,264 bytes)
 Partition Starting Offset 31,034,013,696 bytes
 Partition Disk #89, Partition #8
 Partition Size 70.88 GB (76,108,483,584 bytes)
 Partition Starting Offset 33,986,889,216 bytes

Description Unisys Intelligent Fibre Channel Fabric Disk Driver
 Manufacturer Unisys Corporation
 Model UNISYS VirtualStorage 01.0
 Bytes/Sector 512
 Media Loaded Yes
 Media Type Fixed hard disk
 Partitions 9
 SCSI Bus 0
 SCSI Logical Unit 0
 SCSI Port 0
 SCSI Target ID 92
 Sectors/Track 63
 Size 119.62 GB (128,445,972,480 bytes)
 Total Cylinders 15,616
 Total Sectors 250,871,040

Total Tracks 3,982,080
 Tracks/Cylinder 255
 Partition Disk #8, Partition #0
 Partition Size 1.39 GB (1,496,968,704 bytes)
 Partition Starting Offset 8,257,536 bytes
 Partition Disk #8, Partition #1
 Partition Size 7.44 GB (7,986,714,624 bytes)
 Partition Starting Offset 1,505,258,496 bytes
 Partition Disk #8, Partition #2
 Partition Size 5.12 GB (5,494,454,784 bytes)
 Partition Starting Offset 9,492,005,376 bytes
 Partition Disk #8, Partition #3
 Partition Size 5.12 GB (5,494,454,784 bytes)
 Partition Starting Offset 14,986,492,416 bytes
 Partition Disk #8, Partition #4
 Partition Size 6.96 GB (7,476,747,264 bytes)
 Partition Starting Offset 20,480,979,456 bytes
 Partition Disk #8, Partition #5
 Partition Size 368.65 MB (386,555,904 bytes)
 Partition Starting Offset 27,957,758,976 bytes
 Partition Disk #8, Partition #6
 Partition Size 2.40 GB (2,574,480,384 bytes)
 Partition Starting Offset 28,344,347,136 bytes
 Partition Disk #8, Partition #7
 Partition Size 2.75 GB (2,952,843,264 bytes)
 Partition Starting Offset 30,918,859,776 bytes
 Partition Disk #8, Partition #8
 Partition Size 88.08 GB (94,574,237,184 bytes)
 Partition Starting Offset 33,871,735,296 bytes

Description Unisys Intelligent Fibre Channel Fabric Disk Driver
 Manufacturer Unisys Corporation
 Model UNISYS VirtualStorage 01.0
 Bytes/Sector 512
 Media Loaded Yes
 Media Type Fixed hard disk
 Partitions 9
 SCSI Bus 0
 SCSI Logical Unit 0
 SCSI Port 0
 SCSI Target ID 93
 Sectors/Track 63
 Size 119.62 GB (128,445,972,480 bytes)
 Total Cylinders 15,616
 Total Sectors 250,871,040
 Total Tracks 3,982,080
 Tracks/Cylinder 255
 Partition Disk #7, Partition #0
 Partition Size 1.39 GB (1,496,968,704 bytes)
 Partition Starting Offset 8,257,536 bytes
 Partition Disk #7, Partition #1
 Partition Size 7.44 GB (7,986,714,624 bytes)
 Partition Starting Offset 1,505,258,496 bytes
 Partition Disk #7, Partition #2
 Partition Size 5.12 GB (5,494,454,784 bytes)
 Partition Starting Offset 9,492,005,376 bytes
 Partition Disk #7, Partition #3
 Partition Size 5.12 GB (5,494,454,784 bytes)
 Partition Starting Offset 14,986,492,416 bytes

Partition Disk #7, Partition #4
 Partition Size 6.96 GB (7,476,747,264 bytes)
 Partition Starting Offset 20,480,979,456 bytes
 Partition Disk #7, Partition #5
 Partition Size 368.65 MB (386,555,904 bytes)
 Partition Starting Offset 27,957,758,976 bytes
 Partition Disk #7, Partition #6
 Partition Size 2.40 GB (2,574,480,384 bytes)
 Partition Starting Offset 28,344,347,136 bytes
 Partition Disk #7, Partition #7
 Partition Size 2.75 GB (2,952,843,264 bytes)
 Partition Starting Offset 30,918,859,776 bytes
 Partition Disk #7, Partition #8
 Partition Size 88.08 GB (94,574,237,184 bytes)
 Partition Starting Offset 33,871,735,296 bytes

Description Unisys Intelligent Fibre Channel Fabric Disk Driver
 Manufacturer Unisys Corporation
 Model UNISYS VirtualStorage 01.0
 Bytes/Sector 512
 Media Loaded Yes
 Media Type Fixed hard disk
 Partitions 9
 SCSI Bus 0
 SCSI Logical Unit 0
 SCSI Port 0
 SCSI Target ID 94
 Sectors/Track 63
 Size 119.62 GB (128,445,972,480 bytes)
 Total Cylinders 15,616
 Total Sectors 250,871,040
 Total Tracks 3,982,080
 Tracks/Cylinder 255
 Partition Disk #6, Partition #0
 Partition Size 1.39 GB (1,496,968,704 bytes)
 Partition Starting Offset 8,257,536 bytes
 Partition Disk #6, Partition #1
 Partition Size 7.44 GB (7,986,714,624 bytes)
 Partition Starting Offset 1,505,258,496 bytes
 Partition Disk #6, Partition #2
 Partition Size 5.12 GB (5,494,454,784 bytes)
 Partition Starting Offset 9,492,005,376 bytes
 Partition Disk #6, Partition #3
 Partition Size 5.12 GB (5,494,454,784 bytes)
 Partition Starting Offset 14,986,492,416 bytes
 Partition Disk #6, Partition #4
 Partition Size 6.96 GB (7,476,747,264 bytes)
 Partition Starting Offset 20,480,979,456 bytes
 Partition Disk #6, Partition #5
 Partition Size 368.65 MB (386,555,904 bytes)
 Partition Starting Offset 27,957,758,976 bytes
 Partition Disk #6, Partition #6
 Partition Size 2.40 GB (2,574,480,384 bytes)
 Partition Starting Offset 28,344,347,136 bytes
 Partition Disk #6, Partition #7
 Partition Size 2.75 GB (2,952,843,264 bytes)
 Partition Starting Offset 30,918,859,776 bytes
 Partition Disk #6, Partition #8
 Partition Size 88.08 GB (94,574,237,184 bytes)

Partition Starting Offset 33,871,735,296 bytes

Description Unisys Intelligent Fibre Channel Fabric Disk Driver
 Manufacturer Unisys Corporation
 Model UNISYS VirtualStorage 01.0
 Bytes/Sector 512
 Media Loaded Yes
 Media Type Fixed hard disk
 Partitions 9
 SCSI Bus 0
 SCSI Logical Unit 0
 SCSI Port 0
 SCSI Target ID 95
 Sectors/Track 63
 Size 119.62 GB (128,445,972,480 bytes)
 Total Cylinders 15,616
 Total Sectors 250,871,040
 Total Tracks 3,982,080
 Tracks/Cylinder 255
 Partition Disk #5, Partition #0
 Partition Size 1.39 GB (1,496,968,704 bytes)
 Partition Starting Offset 8,257,536 bytes
 Partition Disk #5, Partition #1
 Partition Size 7.44 GB (7,986,714,624 bytes)
 Partition Starting Offset 1,505,258,496 bytes
 Partition Disk #5, Partition #2
 Partition Size 5.12 GB (5,494,454,784 bytes)
 Partition Starting Offset 9,492,005,376 bytes
 Partition Disk #5, Partition #3
 Partition Size 5.12 GB (5,494,454,784 bytes)
 Partition Starting Offset 14,986,492,416 bytes
 Partition Disk #5, Partition #4
 Partition Size 6.96 GB (7,476,747,264 bytes)
 Partition Starting Offset 20,480,979,456 bytes
 Partition Disk #5, Partition #5
 Partition Size 368.65 MB (386,555,904 bytes)
 Partition Starting Offset 27,957,758,976 bytes
 Partition Disk #5, Partition #6
 Partition Size 2.40 GB (2,574,480,384 bytes)
 Partition Starting Offset 28,344,347,136 bytes
 Partition Disk #5, Partition #7
 Partition Size 2.75 GB (2,952,843,264 bytes)
 Partition Starting Offset 30,918,859,776 bytes
 Partition Disk #5, Partition #8
 Partition Size 88.08 GB (94,574,237,184 bytes)
 Partition Starting Offset 33,871,735,296 bytes

Description Unisys Intelligent Fibre Channel Fabric Disk Driver
 Manufacturer Unisys Corporation
 Model UNISYS VirtualStorage 01.0
 Bytes/Sector 512
 Media Loaded Yes
 Media Type Fixed hard disk
 Partitions 9
 SCSI Bus 0
 SCSI Logical Unit 0
 SCSI Port 0
 SCSI Target ID 96
 Sectors/Track 63

Size 119.62 GB (128,445,972,480 bytes)
 Total Cylinders 15,616
 Total Sectors 250,871,040
 Total Tracks 3,982,080
 Tracks/Cylinder 255
 Partition Disk #4, Partition #0
 Partition Size 1.39 GB (1,496,968,704 bytes)
 Partition Starting Offset 8,257,536 bytes
 Partition Disk #4, Partition #1
 Partition Size 7.44 GB (7,986,714,624 bytes)
 Partition Starting Offset 1,505,258,496 bytes
 Partition Disk #4, Partition #2
 Partition Size 5.12 GB (5,494,454,784 bytes)
 Partition Starting Offset 9,492,005,376 bytes
 Partition Disk #4, Partition #3
 Partition Size 5.12 GB (5,494,454,784 bytes)
 Partition Starting Offset 14,986,492,416 bytes
 Partition Disk #4, Partition #4
 Partition Size 6.96 GB (7,476,747,264 bytes)
 Partition Starting Offset 20,480,979,456 bytes
 Partition Disk #4, Partition #5
 Partition Size 368.65 MB (386,555,904 bytes)
 Partition Starting Offset 27,957,758,976 bytes
 Partition Disk #4, Partition #6
 Partition Size 47.03 MB (49,319,424 bytes)
 Partition Starting Offset 28,344,347,136 bytes
 Partition Disk #4, Partition #7
 Partition Size 2.75 GB (2,952,843,264 bytes)
 Partition Starting Offset 28,393,698,816 bytes
 Partition Disk #4, Partition #8
 Partition Size 90.43 GB (97,099,398,144 bytes)
 Partition Starting Offset 31,346,574,336 bytes

Description Unisys Intelligent Fibre Channel Fabric Disk Driver
 Manufacturer Unisys Corporation
 Model UNISYS VirtualStorage 01.0
 Bytes/Sector 512
 Media Loaded Yes
 Media Type Fixed hard disk
 Partitions 9
 SCSI Bus 0
 SCSI Logical Unit 0
 SCSI Port 0
 SCSI Target ID 97
 Sectors/Track 63
 Size 119.62 GB (128,445,972,480 bytes)
 Total Cylinders 15,616
 Total Sectors 250,871,040
 Total Tracks 3,982,080
 Tracks/Cylinder 255
 Partition Disk #3, Partition #0
 Partition Size 1.39 GB (1,496,968,704 bytes)
 Partition Starting Offset 8,257,536 bytes
 Partition Disk #3, Partition #1
 Partition Size 7.44 GB (7,986,714,624 bytes)
 Partition Starting Offset 1,505,258,496 bytes
 Partition Disk #3, Partition #2
 Partition Size 5.12 GB (5,494,454,784 bytes)
 Partition Starting Offset 9,492,005,376 bytes

Partition Disk #3, Partition #3
 Partition Size 5.12 GB (5,494,454,784 bytes)
 Partition Starting Offset 14,986,492,416 bytes
 Partition Disk #3, Partition #4
 Partition Size 6.96 GB (7,476,747,264 bytes)
 Partition Starting Offset 20,480,979,456 bytes
 Partition Disk #3, Partition #5
 Partition Size 368.65 MB (386,555,904 bytes)
 Partition Starting Offset 27,957,758,976 bytes
 Partition Disk #3, Partition #6
 Partition Size 15.66 MB (16,418,304 bytes)
 Partition Starting Offset 28,344,347,136 bytes
 Partition Disk #3, Partition #7
 Partition Size 2.75 GB (2,952,843,264 bytes)
 Partition Starting Offset 28,360,797,696 bytes
 Partition Disk #3, Partition #8
 Partition Size 90.46 GB (97,132,299,264 bytes)
 Partition Starting Offset 31,313,673,216 bytes

Description Unisys Intelligent Fibre Channel Fabric Disk Driver
 Manufacturer Unisys Corporation
 Model UNISYS VirtualStorage 01.0
 Bytes/Sector 512
 Media Loaded Yes
 Media Type Fixed hard disk
 Partitions 9
 SCSI Bus 0
 SCSI Logical Unit 0
 SCSI Port 0
 SCSI Target ID 98
 Sectors/Track 63
 Size 119.62 GB (128,445,972,480 bytes)
 Total Cylinders 15,616
 Total Sectors 250,871,040
 Total Tracks 3,982,080
 Tracks/Cylinder 255
 Partition Disk #2, Partition #0
 Partition Size 1.39 GB (1,496,968,704 bytes)
 Partition Starting Offset 8,257,536 bytes
 Partition Disk #2, Partition #1
 Partition Size 7.44 GB (7,986,714,624 bytes)
 Partition Starting Offset 1,505,258,496 bytes
 Partition Disk #2, Partition #2
 Partition Size 5.12 GB (5,494,454,784 bytes)
 Partition Starting Offset 9,492,005,376 bytes
 Partition Disk #2, Partition #3
 Partition Size 5.12 GB (5,494,454,784 bytes)
 Partition Starting Offset 14,986,492,416 bytes
 Partition Disk #2, Partition #4
 Partition Size 6.96 GB (7,476,747,264 bytes)
 Partition Starting Offset 20,480,979,456 bytes
 Partition Disk #2, Partition #5
 Partition Size 368.65 MB (386,555,904 bytes)
 Partition Starting Offset 27,957,758,976 bytes
 Partition Disk #2, Partition #6
 Partition Size 15.66 MB (16,418,304 bytes)
 Partition Starting Offset 28,344,347,136 bytes
 Partition Disk #2, Partition #7
 Partition Size 2.75 GB (2,952,843,264 bytes)

Partition Starting Offset 28,360,797,696 bytes
Partition Disk #2, Partition #8
Partition Size 90.46 GB (97,132,299,264 bytes)
Partition Starting Offset 31,313,673,216 bytes

Description Unisys Intelligent Fibre Channel Fabric Disk Driver
Manufacturer Unisys Corporation
Model UNISYS VirtualStorage 01.0
Bytes/Sector 512
Media Loaded Yes
Media Type Fixed hard disk
Partitions 9
SCSI Bus 0
SCSI Logical Unit 0
SCSI Port 0
SCSI Target ID 99
Sectors/Track 63
Size 119.62 GB (128,445,972,480 bytes)
Total Cylinders 15,616
Total Sectors 250,871,040
Total Tracks 3,982,080
Tracks/Cylinder 255
Partition Disk #1, Partition #0
Partition Size 1.39 GB (1,496,968,704 bytes)
Partition Starting Offset 8,257,536 bytes
Partition Disk #1, Partition #1
Partition Size 7.44 GB (7,986,714,624 bytes)
Partition Starting Offset 1,505,258,496 bytes
Partition Disk #1, Partition #2
Partition Size 5.12 GB (5,494,454,784 bytes)
Partition Starting Offset 9,492,005,376 bytes
Partition Disk #1, Partition #3
Partition Size 5.12 GB (5,494,454,784 bytes)
Partition Starting Offset 14,986,492,416 bytes
Partition Disk #1, Partition #4
Partition Size 6.96 GB (7,476,747,264 bytes)
Partition Starting Offset 20,480,979,456 bytes
Partition Disk #1, Partition #5
Partition Size 368.65 MB (386,555,904 bytes)
Partition Starting Offset 27,957,758,976 bytes
Partition Disk #1, Partition #6
Partition Size 15.66 MB (16,418,304 bytes)
Partition Starting Offset 28,344,347,136 bytes
Partition Disk #1, Partition #7
Partition Size 2.75 GB (2,952,843,264 bytes)
Partition Starting Offset 28,360,797,696 bytes
Partition Disk #1, Partition #8
Partition Size 90.46 GB (97,132,299,264 bytes)
Partition Starting Offset 31,313,673,216 bytes

Description Unisys Intelligent Fibre Channel Fabric Disk Driver
Manufacturer Unisys Corporation
Model UNISYS VirtualStorage 01.0
Bytes/Sector 512
Media Loaded Yes
Media Type Fixed hard disk
Partitions 20
SCSI Bus 0
SCSI Logical Unit 0

SCSI Port 0
SCSI Target ID 2
Sectors/Track 63
Size 478.51 GB (513,800,340,480 bytes)
Total Cylinders 62,466
Total Sectors 1,003,516,290
Total Tracks 15,928,830
Tracks/Cylinder 255
Partition Disk #98, Partition #0
Partition Size 5.12 GB (5,494,454,784 bytes)
Partition Starting Offset 8,257,536 bytes
Partition Disk #98, Partition #1
Partition Size 7.57 GB (8,126,544,384 bytes)
Partition Starting Offset 5,502,744,576 bytes
Partition Disk #98, Partition #2
Partition Size 5.12 GB (5,494,454,784 bytes)
Partition Starting Offset 13,629,321,216 bytes
Partition Disk #98, Partition #3
Partition Size 5.12 GB (5,494,454,784 bytes)
Partition Starting Offset 19,123,808,256 bytes
Partition Disk #98, Partition #4
Partition Size 5.12 GB (5,494,454,784 bytes)
Partition Starting Offset 24,618,295,296 bytes
Partition Disk #98, Partition #5
Partition Size 5.12 GB (5,494,454,784 bytes)
Partition Starting Offset 30,112,782,336 bytes
Partition Disk #98, Partition #6
Partition Size 5.12 GB (5,494,454,784 bytes)
Partition Starting Offset 35,607,269,376 bytes
Partition Disk #98, Partition #7
Partition Size 5.12 GB (5,494,454,784 bytes)
Partition Starting Offset 41,101,756,416 bytes
Partition Disk #98, Partition #8
Partition Size 6.96 GB (7,476,747,264 bytes)
Partition Starting Offset 46,596,243,456 bytes
Partition Disk #98, Partition #9
Partition Size 78.41 MB (82,220,544 bytes)
Partition Starting Offset 54,073,022,976 bytes
Partition Disk #98, Partition #10
Partition Size 203.92 MB (213,825,024 bytes)
Partition Starting Offset 54,155,275,776 bytes
Partition Disk #98, Partition #11
Partition Size 5.12 GB (5,494,454,784 bytes)
Partition Starting Offset 54,369,133,056 bytes
Partition Disk #98, Partition #12
Partition Size 5.12 GB (5,494,454,784 bytes)
Partition Starting Offset 59,863,620,096 bytes
Partition Disk #98, Partition #13
Partition Size 5.12 GB (5,494,454,784 bytes)
Partition Starting Offset 65,358,107,136 bytes
Partition Disk #98, Partition #14
Partition Size 5.12 GB (5,494,454,784 bytes)
Partition Starting Offset 70,852,594,176 bytes
Partition Disk #98, Partition #15
Partition Size 5.12 GB (5,494,454,784 bytes)
Partition Starting Offset 76,347,081,216 bytes
Partition Disk #98, Partition #16
Partition Size 5.12 GB (5,494,454,784 bytes)
Partition Starting Offset 81,841,568,256 bytes

Partition Disk #98, Partition #17
 Partition Size 5.12 GB (5,494,454,784 bytes)
 Partition Starting Offset 87,336,055,296 bytes
 Partition Disk #98, Partition #18
 Partition Size 6.96 GB (7,476,747,264 bytes)
 Partition Starting Offset 92,830,542,336 bytes
 Partition Disk #98, Partition #19
 Partition Size 627.51 MB (657,990,144 bytes)
 Partition Starting Offset 100,307,321,856 bytes

Description Unisys Intelligent Fibre Channel Fabric Disk Driver
 Manufacturer Unisys Corporation
 Model UNISYS VirtualStorage 01.0
 Bytes/Sector 512
 Media Loaded Yes
 Media Type Fixed hard disk
 Partitions 26
 SCSI Bus 0
 SCSI Logical Unit 0
 SCSI Port 0
 SCSI Target ID 3
 Sectors/Track 63
 Size 478.51 GB (513,800,340,480 bytes)
 Total Cylinders 62,466
 Total Sectors 1,003,516,290
 Total Tracks 15,928,830
 Tracks/Cylinder 255

Partition Disk #97, Partition #0
 Partition Size 5.12 GB (5,494,454,784 bytes)
 Partition Starting Offset 8,257,536 bytes
 Partition Disk #97, Partition #1
 Partition Size 5.12 GB (5,494,454,784 bytes)
 Partition Starting Offset 5,502,744,576 bytes
 Partition Disk #97, Partition #2
 Partition Size 5.12 GB (5,494,454,784 bytes)
 Partition Starting Offset 10,997,231,616 bytes
 Partition Disk #97, Partition #3
 Partition Size 5.12 GB (5,494,454,784 bytes)
 Partition Starting Offset 16,491,718,656 bytes
 Partition Disk #97, Partition #4
 Partition Size 5.12 GB (5,494,454,784 bytes)
 Partition Starting Offset 21,986,205,696 bytes
 Partition Disk #97, Partition #5
 Partition Size 5.12 GB (5,494,454,784 bytes)
 Partition Starting Offset 27,480,692,736 bytes
 Partition Disk #97, Partition #6
 Partition Size 5.12 GB (5,494,454,784 bytes)
 Partition Starting Offset 32,975,179,776 bytes
 Partition Disk #97, Partition #7
 Partition Size 6.96 GB (7,476,747,264 bytes)
 Partition Starting Offset 38,469,666,816 bytes
 Partition Disk #97, Partition #8
 Partition Size 627.51 MB (657,990,144 bytes)
 Partition Starting Offset 45,946,446,336 bytes
 Partition Disk #97, Partition #9
 Partition Size 203.92 MB (213,825,024 bytes)
 Partition Starting Offset 46,604,468,736 bytes
 Partition Disk #97, Partition #10
 Partition Size 1.39 GB (1,496,968,704 bytes)

Partition Starting Offset 46,818,326,016 bytes
 Partition Disk #97, Partition #11
 Partition Size 7.44 GB (7,986,714,624 bytes)
 Partition Starting Offset 48,315,326,976 bytes
 Partition Disk #97, Partition #12
 Partition Size 5.12 GB (5,494,454,784 bytes)
 Partition Starting Offset 56,302,073,856 bytes
 Partition Disk #97, Partition #13
 Partition Size 5.12 GB (5,494,454,784 bytes)
 Partition Starting Offset 61,796,560,896 bytes
 Partition Disk #97, Partition #14
 Partition Size 6.96 GB (7,476,747,264 bytes)
 Partition Starting Offset 67,291,047,936 bytes
 Partition Disk #97, Partition #15
 Partition Size 368.65 MB (386,555,904 bytes)
 Partition Starting Offset 74,767,827,456 bytes
 Partition Disk #97, Partition #16
 Partition Size 2.50 GB (2,689,634,304 bytes)
 Partition Starting Offset 75,154,415,616 bytes
 Partition Disk #97, Partition #17
 Partition Size 2.75 GB (2,952,843,264 bytes)
 Partition Starting Offset 77,844,082,176 bytes
 Partition Disk #97, Partition #18
 Partition Size 1.39 GB (1,496,968,704 bytes)
 Partition Starting Offset 80,796,957,696 bytes
 Partition Disk #97, Partition #19
 Partition Size 7.44 GB (7,986,714,624 bytes)
 Partition Starting Offset 82,293,958,656 bytes
 Partition Disk #97, Partition #20
 Partition Size 5.12 GB (5,494,454,784 bytes)
 Partition Starting Offset 90,280,705,536 bytes
 Partition Disk #97, Partition #21
 Partition Size 5.12 GB (5,494,454,784 bytes)
 Partition Starting Offset 95,775,192,576 bytes
 Partition Disk #97, Partition #22
 Partition Size 6.96 GB (7,476,747,264 bytes)
 Partition Starting Offset 101,269,679,616 bytes
 Partition Disk #97, Partition #23
 Partition Size 368.65 MB (386,555,904 bytes)
 Partition Starting Offset 108,746,459,136 bytes
 Partition Disk #97, Partition #24
 Partition Size 5.28 GB (5,667,185,664 bytes)
 Partition Starting Offset 109,133,047,296 bytes
 Partition Disk #97, Partition #25
 Partition Size 2.75 GB (2,952,843,264 bytes)
 Partition Starting Offset 114,800,265,216 bytes

Description Unisys Intelligent Fibre Channel Fabric Disk Driver
 Manufacturer Unisys Corporation
 Model UNISYS VirtualStorage 01.0
 Bytes/Sector 512
 Media Loaded Yes
 Media Type Fixed hard disk
 Partitions 9
 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 #88, Partition #0
 Partition Size 1.39 GB (1,496,968,704 bytes)
 Partition Starting Offset 8,257,536 bytes
 Partition Disk #88, Partition #1
 Partition Size 7.44 GB (7,986,714,624 bytes)
 Partition Starting Offset 1,505,258,496 bytes
 Partition Disk #88, Partition #2
 Partition Size 5.12 GB (5,494,454,784 bytes)
 Partition Starting Offset 9,492,005,376 bytes
 Partition Disk #88, Partition #3
 Partition Size 5.12 GB (5,494,454,784 bytes)
 Partition Starting Offset 14,986,492,416 bytes
 Partition Disk #88, Partition #4
 Partition Size 6.96 GB (7,476,747,264 bytes)
 Partition Starting Offset 20,480,979,456 bytes
 Partition Disk #88, Partition #5
 Partition Size 368.65 MB (386,555,904 bytes)
 Partition Starting Offset 27,957,758,976 bytes
 Partition Disk #88, Partition #6
 Partition Size 203.92 MB (213,825,024 bytes)
 Partition Starting Offset 28,344,347,136 bytes
 Partition Disk #88, Partition #7
 Partition Size 2.75 GB (2,952,843,264 bytes)
 Partition Starting Offset 28,558,204,416 bytes
 Partition Disk #88, Partition #8
 Partition Size 90.28 GB (96,934,892,544 bytes)
 Partition Starting Offset 31,511,079,936 bytes

Description Unisys Intelligent Fibre Channel Fabric Disk Driver
 Manufacturer Unisys Corporation
 Model UNISYS VirtualStorage 01.0
 Bytes/Sector 512
 Media Loaded Yes
 Media Type Fixed hard disk
 Partitions 9
 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 #87, Partition #0
 Partition Size 1.39 GB (1,496,968,704 bytes)
 Partition Starting Offset 8,257,536 bytes
 Partition Disk #87, Partition #1
 Partition Size 7.44 GB (7,986,714,624 bytes)
 Partition Starting Offset 1,505,258,496 bytes
 Partition Disk #87, Partition #2
 Partition Size 5.12 GB (5,494,454,784 bytes)
 Partition Starting Offset 9,492,005,376 bytes

Partition Disk #87, Partition #3
 Partition Size 5.12 GB (5,494,454,784 bytes)
 Partition Starting Offset 14,986,492,416 bytes
 Partition Disk #87, Partition #4
 Partition Size 6.96 GB (7,476,747,264 bytes)
 Partition Starting Offset 20,480,979,456 bytes
 Partition Disk #87, Partition #5
 Partition Size 368.65 MB (386,555,904 bytes)
 Partition Starting Offset 27,957,758,976 bytes
 Partition Disk #87, Partition #6
 Partition Size 2.50 GB (2,689,634,304 bytes)
 Partition Starting Offset 28,344,347,136 bytes
 Partition Disk #87, Partition #7
 Partition Size 2.75 GB (2,952,843,264 bytes)
 Partition Starting Offset 31,034,013,696 bytes
 Partition Disk #87, Partition #8
 Partition Size 87.97 GB (94,459,083,264 bytes)
 Partition Starting Offset 33,986,889,216 bytes

Description Unisys Intelligent Fibre Channel Fabric Disk Driver
 Manufacturer Unisys Corporation
 Model UNISYS VirtualStorage 01.0
 Bytes/Sector 512
 Media Loaded Yes
 Media Type Fixed hard disk
 Partitions 9
 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 #86, Partition #0
 Partition Size 1.39 GB (1,496,968,704 bytes)
 Partition Starting Offset 8,257,536 bytes
 Partition Disk #86, Partition #1
 Partition Size 7.44 GB (7,986,714,624 bytes)
 Partition Starting Offset 1,505,258,496 bytes
 Partition Disk #86, Partition #2
 Partition Size 5.12 GB (5,494,454,784 bytes)
 Partition Starting Offset 9,492,005,376 bytes
 Partition Disk #86, Partition #3
 Partition Size 5.12 GB (5,494,454,784 bytes)
 Partition Starting Offset 14,986,492,416 bytes
 Partition Disk #86, Partition #4
 Partition Size 6.96 GB (7,476,747,264 bytes)
 Partition Starting Offset 20,480,979,456 bytes
 Partition Disk #86, Partition #5
 Partition Size 368.65 MB (386,555,904 bytes)
 Partition Starting Offset 27,957,758,976 bytes
 Partition Disk #86, Partition #6
 Partition Size 203.92 MB (213,825,024 bytes)
 Partition Starting Offset 28,344,347,136 bytes
 Partition Disk #86, Partition #7
 Partition Size 2.75 GB (2,952,843,264 bytes)

Partition Starting Offset 28,558,204,416 bytes
Partition Disk #86, Partition #8
Partition Size 90.28 GB (96,934,892,544 bytes)
Partition Starting Offset 31,511,079,936 bytes

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

Bytes/Sector 512
Media Loaded Yes
Media Type Fixed hard disk
Partitions 9
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 #85, Partition #0
Partition Size 1.39 GB (1,496,968,704 bytes)
Partition Starting Offset 8,257,536 bytes
Partition Disk #85, Partition #1
Partition Size 7.44 GB (7,986,714,624 bytes)
Partition Starting Offset 1,505,258,496 bytes
Partition Disk #85, Partition #2
Partition Size 5.12 GB (5,494,454,784 bytes)
Partition Starting Offset 9,492,005,376 bytes
Partition Disk #85, Partition #3
Partition Size 5.12 GB (5,494,454,784 bytes)
Partition Starting Offset 14,986,492,416 bytes
Partition Disk #85, Partition #4
Partition Size 6.96 GB (7,476,747,264 bytes)
Partition Starting Offset 20,480,979,456 bytes
Partition Disk #85, Partition #5
Partition Size 368.65 MB (386,555,904 bytes)
Partition Starting Offset 27,957,758,976 bytes
Partition Disk #85, Partition #6
Partition Size 2.50 GB (2,689,634,304 bytes)
Partition Starting Offset 28,344,347,136 bytes
Partition Disk #85, Partition #7
Partition Size 2.75 GB (2,952,843,264 bytes)
Partition Starting Offset 31,034,013,696 bytes
Partition Disk #85, Partition #8
Partition Size 87.97 GB (94,459,083,264 bytes)
Partition Starting Offset 33,986,889,216 bytes

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

Bytes/Sector 512
Media Loaded Yes
Media Type Fixed hard disk
Partitions 9
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 #84, Partition #0
Partition Size 1.39 GB (1,496,968,704 bytes)
Partition Starting Offset 8,257,536 bytes
Partition Disk #84, Partition #1
Partition Size 7.44 GB (7,986,714,624 bytes)
Partition Starting Offset 1,505,258,496 bytes
Partition Disk #84, Partition #2
Partition Size 5.12 GB (5,494,454,784 bytes)
Partition Starting Offset 9,492,005,376 bytes
Partition Disk #84, Partition #3
Partition Size 5.12 GB (5,494,454,784 bytes)
Partition Starting Offset 14,986,492,416 bytes
Partition Disk #84, Partition #4
Partition Size 6.96 GB (7,476,747,264 bytes)
Partition Starting Offset 20,480,979,456 bytes
Partition Disk #84, Partition #5
Partition Size 368.65 MB (386,555,904 bytes)
Partition Starting Offset 27,957,758,976 bytes
Partition Disk #84, Partition #6
Partition Size 203.92 MB (213,825,024 bytes)
Partition Starting Offset 28,344,347,136 bytes
Partition Disk #84, Partition #7
Partition Size 2.75 GB (2,952,843,264 bytes)
Partition Starting Offset 28,558,204,416 bytes
Partition Disk #84, Partition #8
Partition Size 90.28 GB (96,934,892,544 bytes)
Partition Starting Offset 31,511,079,936 bytes

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

Bytes/Sector 512
Media Loaded Yes
Media Type Fixed hard disk
Partitions 9
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 #83, Partition #0
Partition Size 1.39 GB (1,496,968,704 bytes)
Partition Starting Offset 8,257,536 bytes
Partition Disk #83, Partition #1
Partition Size 7.44 GB (7,986,714,624 bytes)
Partition Starting Offset 1,505,258,496 bytes

Partition Disk #83, Partition #2
 Partition Size 5.12 GB (5,494,454,784 bytes)
 Partition Starting Offset 9,492,005,376 bytes
 Partition Disk #83, Partition #3
 Partition Size 5.12 GB (5,494,454,784 bytes)
 Partition Starting Offset 14,986,492,416 bytes
 Partition Disk #83, Partition #4
 Partition Size 6.96 GB (7,476,747,264 bytes)
 Partition Starting Offset 20,480,979,456 bytes
 Partition Disk #83, Partition #5
 Partition Size 368.65 MB (386,555,904 bytes)
 Partition Starting Offset 27,957,758,976 bytes
 Partition Disk #83, Partition #6
 Partition Size 2.50 GB (2,689,634,304 bytes)
 Partition Starting Offset 28,344,347,136 bytes
 Partition Disk #83, Partition #7
 Partition Size 2.75 GB (2,952,843,264 bytes)
 Partition Starting Offset 31,034,013,696 bytes
 Partition Disk #83, Partition #8
 Partition Size 87.97 GB (94,459,083,264 bytes)
 Partition Starting Offset 33,986,889,216 bytes

Description Unisys Intelligent Fibre Channel Fabric Disk Driver
 Manufacturer Unisys Corporation
 Model UNISYS VirtualStorage 01.0
 Bytes/Sector 512
 Media Loaded Yes
 Media Type Fixed hard disk
 Partitions 9
 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 #82, Partition #0
 Partition Size 1.39 GB (1,496,968,704 bytes)
 Partition Starting Offset 8,257,536 bytes
 Partition Disk #82, Partition #1
 Partition Size 7.44 GB (7,986,714,624 bytes)
 Partition Starting Offset 1,505,258,496 bytes
 Partition Disk #82, Partition #2
 Partition Size 5.12 GB (5,494,454,784 bytes)
 Partition Starting Offset 9,492,005,376 bytes
 Partition Disk #82, Partition #3
 Partition Size 5.12 GB (5,494,454,784 bytes)
 Partition Starting Offset 14,986,492,416 bytes
 Partition Disk #82, Partition #4
 Partition Size 6.96 GB (7,476,747,264 bytes)
 Partition Starting Offset 20,480,979,456 bytes
 Partition Disk #82, Partition #5
 Partition Size 368.65 MB (386,555,904 bytes)
 Partition Starting Offset 27,957,758,976 bytes
 Partition Disk #82, Partition #6
 Partition Size 203.92 MB (213,825,024 bytes)

Partition Starting Offset 28,344,347,136 bytes
 Partition Disk #82, Partition #7
 Partition Size 2.75 GB (2,952,843,264 bytes)
 Partition Starting Offset 28,558,204,416 bytes
 Partition Disk #82, Partition #8
 Partition Size 90.28 GB (96,934,892,544 bytes)
 Partition Starting Offset 31,511,079,936 bytes

Description Unisys Intelligent Fibre Channel Fabric Disk Driver
 Manufacturer Unisys Corporation
 Model UNISYS VirtualStorage 01.0
 Bytes/Sector 512
 Media Loaded Yes
 Media Type Fixed hard disk
 Partitions 9
 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 #81, Partition #0
 Partition Size 1.39 GB (1,496,968,704 bytes)
 Partition Starting Offset 8,257,536 bytes
 Partition Disk #81, Partition #1
 Partition Size 7.44 GB (7,986,714,624 bytes)
 Partition Starting Offset 1,505,258,496 bytes
 Partition Disk #81, Partition #2
 Partition Size 5.12 GB (5,494,454,784 bytes)
 Partition Starting Offset 9,492,005,376 bytes
 Partition Disk #81, Partition #3
 Partition Size 5.12 GB (5,494,454,784 bytes)
 Partition Starting Offset 14,986,492,416 bytes
 Partition Disk #81, Partition #4
 Partition Size 6.96 GB (7,476,747,264 bytes)
 Partition Starting Offset 20,480,979,456 bytes
 Partition Disk #81, Partition #5
 Partition Size 368.65 MB (386,555,904 bytes)
 Partition Starting Offset 27,957,758,976 bytes
 Partition Disk #81, Partition #6
 Partition Size 2.50 GB (2,689,634,304 bytes)
 Partition Starting Offset 28,344,347,136 bytes
 Partition Disk #81, Partition #7
 Partition Size 2.75 GB (2,952,843,264 bytes)
 Partition Starting Offset 31,034,013,696 bytes
 Partition Disk #81, Partition #8
 Partition Size 87.97 GB (94,459,083,264 bytes)
 Partition Starting Offset 33,986,889,216 bytes

Description Unisys Intelligent Fibre Channel Fabric Disk Driver
 Manufacturer Unisys Corporation
 Model UNISYS VirtualStorage 01.0
 Bytes/Sector 512
 Media Loaded Yes
 Media Type Fixed hard disk

```

Partitions          9
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 #40, Partition #0
Partition Size     1.39 GB (1,496,968,704 bytes)
Partition Starting Offset 8,257,536 bytes
Partition          Disk #40, Partition #1
Partition Size     7.44 GB (7,986,714,624 bytes)
Partition Starting Offset 1,505,258,496 bytes
Partition          Disk #40, Partition #2
Partition Size     5.12 GB (5,494,454,784 bytes)
Partition Starting Offset 9,492,005,376 bytes
Partition          Disk #40, Partition #3
Partition Size     5.12 GB (5,494,454,784 bytes)
Partition Starting Offset 14,986,492,416 bytes
Partition          Disk #40, Partition #4
Partition Size     6.96 GB (7,476,747,264 bytes)
Partition Starting Offset 20,480,979,456 bytes
Partition          Disk #40, Partition #5
Partition Size     368.65 MB (386,555,904 bytes)
Partition Starting Offset 27,957,758,976 bytes
Partition          Disk #40, Partition #6
Partition Size     2.40 GB (2,574,480,384 bytes)
Partition Starting Offset 28,344,347,136 bytes
Partition          Disk #40, Partition #7
Partition Size     2.75 GB (2,952,843,264 bytes)
Partition Starting Offset 30,918,859,776 bytes
Partition          Disk #40, Partition #8
Partition Size     88.08 GB (94,574,237,184 bytes)
Partition Starting Offset 33,871,735,296 bytes

```

```

Description        Unisys Intelligent Fibre Channel Fabric Disk Driver
Manufacturer       Unisys Corporation
Model              UNISYS VirtualStorage 01.0
Bytes/Sector       512
Media Loaded       Yes
Media Type         Fixed hard disk
Partitions         9
SCSI Bus           0
SCSI Logical Unit   0
SCSI Port          0
SCSI Target ID     61
Sectors/Track      63
Size               102.53 GB (110,095,372,800 bytes)
Total Cylinders    13,385
Total Sectors      215,030,025
Total Tracks       3,413,175
Tracks/Cylinder    255
Partition          Disk #39, Partition #0
Partition Size     1.39 GB (1,496,968,704 bytes)
Partition Starting Offset 8,257,536 bytes

```

```

Partition          Disk #39, Partition #1
Partition Size     7.44 GB (7,986,714,624 bytes)
Partition Starting Offset 1,505,258,496 bytes
Partition          Disk #39, Partition #2
Partition Size     5.12 GB (5,494,454,784 bytes)
Partition Starting Offset 9,492,005,376 bytes
Partition          Disk #39, Partition #3
Partition Size     5.12 GB (5,494,454,784 bytes)
Partition Starting Offset 14,986,492,416 bytes
Partition          Disk #39, Partition #4
Partition Size     6.96 GB (7,476,747,264 bytes)
Partition Starting Offset 20,480,979,456 bytes
Partition          Disk #39, Partition #5
Partition Size     368.65 MB (386,555,904 bytes)
Partition Starting Offset 27,957,758,976 bytes
Partition          Disk #39, Partition #6
Partition Size     2.40 GB (2,574,480,384 bytes)
Partition Starting Offset 28,344,347,136 bytes
Partition          Disk #39, Partition #7
Partition Size     2.75 GB (2,952,843,264 bytes)
Partition Starting Offset 30,918,859,776 bytes
Partition          Disk #39, Partition #8
Partition Size     70.99 GB (76,223,637,504 bytes)
Partition Starting Offset 33,871,735,296 bytes

```

```

Description        Unisys Intelligent Fibre Channel Fabric Disk Driver
Manufacturer       Unisys Corporation
Model              UNISYS VirtualStorage 01.0
Bytes/Sector       512
Media Loaded       Yes
Media Type         Fixed hard disk
Partitions         9
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 #38, Partition #0
Partition Size     1.39 GB (1,496,968,704 bytes)
Partition Starting Offset 8,257,536 bytes
Partition          Disk #38, Partition #1
Partition Size     7.44 GB (7,986,714,624 bytes)
Partition Starting Offset 1,505,258,496 bytes
Partition          Disk #38, Partition #2
Partition Size     5.12 GB (5,494,454,784 bytes)
Partition Starting Offset 9,492,005,376 bytes
Partition          Disk #38, Partition #3
Partition Size     5.12 GB (5,494,454,784 bytes)
Partition Starting Offset 14,986,492,416 bytes
Partition          Disk #38, Partition #4
Partition Size     6.96 GB (7,476,747,264 bytes)
Partition Starting Offset 20,480,979,456 bytes
Partition          Disk #38, Partition #5
Partition Size     368.65 MB (386,555,904 bytes)

```


Partition Starting Offset 27,957,758,976 bytes
 Partition Disk #38, Partition #6
 Partition Size 2.40 GB (2,574,480,384 bytes)
 Partition Starting Offset 28,344,347,136 bytes
 Partition Disk #38, Partition #7
 Partition Size 2.75 GB (2,952,843,264 bytes)
 Partition Starting Offset 30,918,859,776 bytes
 Partition Disk #38, Partition #8
 Partition Size 88.08 GB (94,574,237,184 bytes)
 Partition Starting Offset 33,871,735,296 bytes

Description Unisys Intelligent Fibre Channel Fabric Disk Driver
 Manufacturer Unisys Corporation
 Model UNISYS VirtualStorage 01.0
 Bytes/Sector 512
 Media Loaded Yes
 Media Type Fixed hard disk
 Partitions 9
 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 #37, Partition #0
 Partition Size 1.39 GB (1,496,968,704 bytes)
 Partition Starting Offset 8,257,536 bytes
 Partition Disk #37, Partition #1
 Partition Size 7.44 GB (7,986,714,624 bytes)
 Partition Starting Offset 1,505,258,496 bytes
 Partition Disk #37, Partition #2
 Partition Size 5.12 GB (5,494,454,784 bytes)
 Partition Starting Offset 9,492,005,376 bytes
 Partition Disk #37, Partition #3
 Partition Size 5.12 GB (5,494,454,784 bytes)
 Partition Starting Offset 14,986,492,416 bytes
 Partition Disk #37, Partition #4
 Partition Size 6.96 GB (7,476,747,264 bytes)
 Partition Starting Offset 20,480,979,456 bytes
 Partition Disk #37, Partition #5
 Partition Size 368.65 MB (386,555,904 bytes)
 Partition Starting Offset 27,957,758,976 bytes
 Partition Disk #37, Partition #6
 Partition Size 23.50 MB (24,643,584 bytes)
 Partition Starting Offset 28,344,347,136 bytes
 Partition Disk #37, Partition #7
 Partition Size 2.75 GB (2,952,843,264 bytes)
 Partition Starting Offset 28,369,022,976 bytes
 Partition Disk #37, Partition #8
 Partition Size 90.45 GB (97,124,073,984 bytes)
 Partition Starting Offset 31,321,898,496 bytes

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

Bytes/Sector 512
 Media Loaded Yes
 Media Type Fixed hard disk
 Partitions 9
 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 #36, Partition #0
 Partition Size 1.39 GB (1,496,968,704 bytes)
 Partition Starting Offset 8,257,536 bytes
 Partition Disk #36, Partition #1
 Partition Size 7.44 GB (7,986,714,624 bytes)
 Partition Starting Offset 1,505,258,496 bytes
 Partition Disk #36, Partition #2
 Partition Size 5.12 GB (5,494,454,784 bytes)
 Partition Starting Offset 9,492,005,376 bytes
 Partition Disk #36, Partition #3
 Partition Size 5.12 GB (5,494,454,784 bytes)
 Partition Starting Offset 14,986,492,416 bytes
 Partition Disk #36, Partition #4
 Partition Size 6.96 GB (7,476,747,264 bytes)
 Partition Starting Offset 20,480,979,456 bytes
 Partition Disk #36, Partition #5
 Partition Size 368.65 MB (386,555,904 bytes)
 Partition Starting Offset 27,957,758,976 bytes
 Partition Disk #36, Partition #6
 Partition Size 39.19 MB (41,094,144 bytes)
 Partition Starting Offset 28,344,347,136 bytes
 Partition Disk #36, Partition #7
 Partition Size 2.75 GB (2,952,843,264 bytes)
 Partition Starting Offset 28,385,473,536 bytes
 Partition Disk #36, Partition #8
 Partition Size 90.44 GB (97,107,623,424 bytes)
 Partition Starting Offset 31,338,349,056 bytes

Description Unisys Intelligent Fibre Channel Fabric Disk Driver
 Manufacturer Unisys Corporation
 Model UNISYS VirtualStorage 01.0
 Bytes/Sector 512
 Media Loaded Yes
 Media Type Fixed hard disk
 Partitions 9
 SCSI Bus 0
 SCSI Logical Unit 0
 SCSI Port 0
 SCSI Target ID 65
 Sectors/Track 63
 Size 153.81 GB (165,147,171,840 bytes)
 Total Cylinders 20,078
 Total Sectors 322,553,070
 Total Tracks 5,119,890
 Tracks/Cylinder 255

Partition Disk #35, Partition #0
 Partition Size 1.39 GB (1,496,968,704 bytes)
 Partition Starting Offset 8,257,536 bytes
 Partition Disk #35, Partition #1
 Partition Size 7.44 GB (7,986,714,624 bytes)
 Partition Starting Offset 1,505,258,496 bytes
 Partition Disk #35, Partition #2
 Partition Size 5.12 GB (5,494,454,784 bytes)
 Partition Starting Offset 9,492,005,376 bytes
 Partition Disk #35, Partition #3
 Partition Size 5.12 GB (5,494,454,784 bytes)
 Partition Starting Offset 14,986,492,416 bytes
 Partition Disk #35, Partition #4
 Partition Size 6.96 GB (7,476,747,264 bytes)
 Partition Starting Offset 20,480,979,456 bytes
 Partition Disk #35, Partition #5
 Partition Size 368.65 MB (386,555,904 bytes)
 Partition Starting Offset 27,957,758,976 bytes
 Partition Disk #35, Partition #6
 Partition Size 141.17 MB (148,022,784 bytes)
 Partition Starting Offset 28,344,347,136 bytes
 Partition Disk #35, Partition #7
 Partition Size 2.75 GB (2,952,843,264 bytes)
 Partition Starting Offset 28,492,402,176 bytes
 Partition Disk #35, Partition #8
 Partition Size 124.52 GB (133,701,894,144 bytes)
 Partition Starting Offset 31,445,277,696 bytes

Description Unisys Intelligent Fibre Channel Fabric Disk Driver
 Manufacturer Unisys Corporation
 Model UNISYS VirtualStorage 01.0
 Bytes/Sector 512
 Media Loaded Yes
 Media Type Fixed hard disk
 Partitions 9
 SCSI Bus 0
 SCSI Logical Unit 0
 SCSI Port 0
 SCSI Target ID 66
 Sectors/Track 63
 Size 102.53 GB (110,095,372,800 bytes)
 Total Cylinders 13,385
 Total Sectors 215,030,025
 Total Tracks 3,413,175
 Tracks/Cylinder 255
 Partition Disk #34, Partition #0
 Partition Size 1.39 GB (1,496,968,704 bytes)
 Partition Starting Offset 8,257,536 bytes
 Partition Disk #34, Partition #1
 Partition Size 7.44 GB (7,986,714,624 bytes)
 Partition Starting Offset 1,505,258,496 bytes
 Partition Disk #34, Partition #2
 Partition Size 5.12 GB (5,494,454,784 bytes)
 Partition Starting Offset 9,492,005,376 bytes
 Partition Disk #34, Partition #3
 Partition Size 5.12 GB (5,494,454,784 bytes)
 Partition Starting Offset 14,986,492,416 bytes
 Partition Disk #34, Partition #4
 Partition Size 6.96 GB (7,476,747,264 bytes)

Partition Starting Offset 20,480,979,456 bytes
 Partition Disk #34, Partition #5
 Partition Size 368.65 MB (386,555,904 bytes)
 Partition Starting Offset 27,957,758,976 bytes
 Partition Disk #34, Partition #6
 Partition Size 101.94 MB (106,896,384 bytes)
 Partition Starting Offset 28,344,347,136 bytes
 Partition Disk #34, Partition #7
 Partition Size 2.75 GB (2,952,843,264 bytes)
 Partition Starting Offset 28,451,275,776 bytes
 Partition Disk #34, Partition #8
 Partition Size 73.29 GB (78,691,221,504 bytes)
 Partition Starting Offset 31,404,151,296 bytes

Description Unisys Intelligent Fibre Channel Fabric Disk Driver
 Manufacturer Unisys Corporation
 Model UNISYS VirtualStorage 01.0
 Bytes/Sector 512
 Media Loaded Yes
 Media Type Fixed hard disk
 Partitions 9
 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 #33, Partition #0
 Partition Size 1.39 GB (1,496,968,704 bytes)
 Partition Starting Offset 8,257,536 bytes
 Partition Disk #33, Partition #1
 Partition Size 7.44 GB (7,986,714,624 bytes)
 Partition Starting Offset 1,505,258,496 bytes
 Partition Disk #33, Partition #2
 Partition Size 5.12 GB (5,494,454,784 bytes)
 Partition Starting Offset 9,492,005,376 bytes
 Partition Disk #33, Partition #3
 Partition Size 5.12 GB (5,494,454,784 bytes)
 Partition Starting Offset 14,986,492,416 bytes
 Partition Disk #33, Partition #4
 Partition Size 6.96 GB (7,476,747,264 bytes)
 Partition Starting Offset 20,480,979,456 bytes
 Partition Disk #33, Partition #5
 Partition Size 368.65 MB (386,555,904 bytes)
 Partition Starting Offset 27,957,758,976 bytes
 Partition Disk #33, Partition #6
 Partition Size 627.51 MB (657,990,144 bytes)
 Partition Starting Offset 28,344,347,136 bytes
 Partition Disk #33, Partition #7
 Partition Size 2.75 GB (2,952,843,264 bytes)
 Partition Starting Offset 29,002,369,536 bytes
 Partition Disk #33, Partition #8
 Partition Size 89.86 GB (96,490,727,424 bytes)
 Partition Starting Offset 31,955,245,056 bytes

[SCSI]

Item Value
Name LSI Logic MegaRAID Elite 1650/1700 RAID Controller
Manufacturer LSI Logic Corp.,
Status OK
PNP Device ID PCI\VEN_101E&DEV_1960&SUBSYS_0494101E&REV_01\4&2EB60AC4&0&08E8
Memory Address 0xF1FF0000-0xF1FFFFFF
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\5&29449711&0&0010E8
Memory Address 0xED800000-0xEDFFFFFF
Memory Address 0xEFFF0000-0xEFFFFFFF
IRQ Channel IRQ 148
Name Unisys Intelligent Fibre Channel Fabric Bus Adapter
Manufacturer Unisys Corporation
Status OK
PNP Device ID PCI\VEN_11AB&DEV_4620&SUBSYS_C0FC1018&REV_12\5&10B868FB&0&0008F8
Memory Address 0xED000000-0xEFFFFFFF
Memory Address 0xEFEFF000-0xEFEFFFFFFF
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\5&29772CDD&0&0010E8
Memory Address 0xE8800000-0xE8FFFFFF
Memory Address 0xEAFF0000-0xEAFFFFFF
IRQ Channel IRQ 244
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\5&2B2CC0E6&0&0008F8
Memory Address 0xE8000000-0xECFFFFFF
Memory Address 0xEAEFF000-0xEAEFFFFF
IRQ Channel IRQ 216
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\5&26795D10&0&0010E8
Memory Address 0xE4800000-0xE4FFFFFF

Memory Address 0xE6FFF000-0xE6FFFFFF
IRQ Channel IRQ 292
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\5&20DEF3&0&0008F8
Memory Address 0xE4000000-0xE7FFFFFF
Memory Address 0xE6EFF000-0xE6EFFFFF
IRQ Channel IRQ 264
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\5&1CEE6A2&0&0010E8
Memory Address 0xE0800000-0xE0FFFFFF
Memory Address 0xE2FFF000-0xE2FFFFFF
IRQ Channel IRQ 340
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\5&EF23ABD&0&0008F8
Memory Address 0xE0000000-0xE3FFFFFF
Memory Address 0xE2EFF000-0xE2EFFFFF
IRQ Channel IRQ 312
[IDE]
Item Value
Name Intel(r) 82801DB Ultra ATA Storage Controller-24CB
Manufacturer Intel
Status OK
PNP Device ID PCI\VEN_8086&DEV_24CB&SUBSYS_0D801018&REV_01\3&19E45801&0&F9
I/O Port 0x00001820-0x0000182F
Memory Address 0xFDFFFC00-0xFDFFFFFF
Name Primary IDE Channel
Manufacturer (Standard IDE ATA/ATAPI controllers)
Status OK
PNP Device ID PCIIDE\IDECHANNEL\4&170F438F&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&170F438F&0&1
I/O Port 0x00000170-0x00000177
I/O Port 0x00000376-0x00000376

IRQ Channel IRQ 15

[Printing]

Name Driver Port Name Server Name

[Problem Devices]

Device PNP Device ID Error Code

Intel(r) 82870 Hub Interface to PCI Bridges

PCI\VEN_8086&DEV_1460&SUBSYS_00000000&REV_03\3&23FF515D&0&E8

This device is not working properly because Windows cannot load the drivers required for this device.

Intel(r) 82870 Hub Interface to PCI Bridges

PCI\VEN_8086&DEV_1460&SUBSYS_00000000&REV_03\3&23FF515D&0&F8

This device is not working properly because Windows cannot load the drivers required for this device.

[USB]

Device PNP Device ID

Intel(r) 82801DB/DBM USB Universal Host Controller - 24C2

PCI\VEN_8086&DEV_24C2&SUBSYS_0D801018&REV_01\3&19E45801&0&E8

USB Root Hub USB\ROOT_HUB\4&2201EBDC&0

[Software Environment]

[System Drivers]

Name	Description	File	Type	Started	Start Mode	State	Status
abiosdsk	Abiosdsk		Not Available	Kernel Driver	No		
acpi	Microsoft ACPI Driver	c:\windows\system32\drivers\acpi.sys	Kernel Driver	Yes	Boot	Running OK	Normal No Yes
acpiec	ACPIEC	c:\windows\system32\drivers\acpiec.sys	Kernel Driver	No	Disabled	Stopped OK	Normal No No
adpu160m	adpu160m		Not Available	Kernel Driver	No		
adpu320	adpu320		Not Available	Kernel Driver	No	Disabled	
afcnt	afcnt		Not Available	Kernel Driver	No	Disabled	
afd	AFD Networking Support Environment	c:\windows\system32\drivers\afd.sys	Kernel Driver	Yes	Auto	Running OK	Normal No Yes
aic78u2	aic78u2		Not Available	Kernel Driver	No	Disabled	
aic78xx	aic78xx		Not Available	Kernel Driver	No	Disabled	
aliide	AliIde		Not Available	Kernel Driver	No	Disabled	
asynmac	RAS Asynchronous Media Driver	c:\windows\system32\drivers\asynmac.sys	Kernel Driver	No		Manual Stopped OK	Normal No No

ataapi	Standard IDE/ESDI Hard Disk Controller	c:\windows\system32\drivers\ataapi.sys	Kernel Driver	Yes	Boot	Running OK	Normal No Yes
atdisk	Atdisk		Not Available	Kernel Driver	No	Disabled	
atmarpc	ATM ARP Client Protocol	c:\windows\system32\drivers\atmarpc.sys	Kernel Driver	No		Manual Stopped OK	Normal No No
audstub	Audio Stub Driver	c:\windows\system32\drivers\audstub.sys	Kernel Driver	Yes	Manual	Running OK	Normal No Yes
beep	Beep	c:\windows\system32\drivers\beep.sys	Kernel Driver	Yes		System Running OK	Normal No Yes
cbidf2k	cbidf2k	c:\windows\system32\drivers\cbidf2k.sys	Kernel Driver			No	Disabled Stopped OK Normal No No
cdfs	Cdfs	c:\windows\system32\drivers\cdfs.sys	File System Driver	Yes	Disabled	Running OK	Normal No Yes
cdrom	CD-ROM Driver	c:\windows\system32\drivers\cdrom.sys	Kernel Driver	Yes	System	Running OK	Normal No Yes
changer	Changer		Not Available	Kernel Driver	No	System Stopped OK	
clusdisk	Cluster Disk Driver	c:\windows\system32\drivers\clusdisk.sys	Kernel Driver	No		Disabled	Stopped OK Normal No No
cmdide	CmdIde		Not Available	Kernel Driver	No	Disabled	
cpqarry2	cpqarry2		Not Available	Kernel Driver	No	Disabled	Stopped OK Normal No No
cpqcissm	cpqcissm		Not Available	Kernel Driver	No	Disabled	Stopped OK Normal No No
cpqfcalm	cpqfcalm		Not Available	Kernel Driver	No	Disabled	Stopped OK Normal No No
crcdisk	CRC Disk Filter Driver	c:\windows\system32\drivers\crcdisk.sys	Kernel Driver	Yes	Boot	Running OK	Normal No Yes
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
e1000	Intel(R) PRO/1000 Device Driver	c:\windows\system32\drivers\e1000645.sys	Kernel Driver	Yes	Manual	Running OK	Normal No Yes
e100b	Intel(R) PRO Adapter Driver	c:\windows\system32\drivers\e100b645.sys	Kernel Driver	No	Manual	Stopped OK	Normal No No
elxsl12	elxsl12	c:\windows\system32\drivers\elxsl12.sys	Kernel Driver	Yes	Boot	Running OK	Normal No Yes
em	em	\\??\c:\windows\system32\drivers\em.sys	Kernel Driver	No	Manual	Stopped OK	Normal No No
escon	Console Manager Control Device	c:\windows\system32\drivers\escon.sys	Kernel Driver	Yes	Boot	Running OK	Normal No Yes

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esvuart Console Manager Network Connection
c:\windows\system32\drivers\esvuart.sys Kernel Driver No
Auto Stopped OK Normal No No
fastfat Fastfat c:\windows\system32\drivers\fastfat.sys File System
Driver Yes Disabled Running OK Normal No Yes
fdc Fdc c:\windows\system32\drivers\fdc.sys Kernel Driver No
System Stopped OK Ignore No No
fips Fips c:\windows\system32\drivers\fips.sys Kernel Driver Yes
System Running OK Normal No Yes
flpydisk Flpydisk c:\windows\system32\drivers\flpydisk.sys
Kernel Driver No System Stopped OK Ignore No No
ftdisk Volume Manager Driver c:\windows\system32\drivers\ftdisk.sys
Kernel Driver Yes Boot Running OK Normal No Yes

gpc Generic Packet Classifier
c:\windows\system32\drivers\msgpc.sys Kernel Driver Yes Manual
Running OK Normal No Yes
hpn hpn Not Available Kernel Driver No Disabled
Stopped OK Normal No No
http HTTP c:\windows\system32\drivers\http.sys Kernel Driver No
Manual Stopped OK Normal No No
i2omgmt i2omgmt Not Available Kernel Driver No System Stopped OK
Normal No No
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
imapi CD-Burning Filter Driver
c:\windows\system32\drivers\imapi.sys Kernel Driver Yes System
Running OK Normal No Yes
intelide IntelIde c:\windows\system32\drivers\intelide.sys
Kernel Driver Yes Boot Running OK Normal No Yes

ipfilterdriver IP Traffic Filter Driver
c:\windows\system32\drivers\ipfltdrv.sys Kernel Driver No
Manual Stopped OK Normal No No
ipinip IP in IP Tunnel Driver c:\windows\system32\drivers\ipinip.sys
Kernel Driver No Manual Stopped OK Normal No No

ipnat IP Network Address Translator
c:\windows\system32\drivers\ipnat.sys Kernel Driver No Manual
Stopped OK Normal No No
ipsec IPSEC driver c:\windows\system32\drivers\ipsec.sys Kernel Driver
Yes System Running OK Normal No Yes
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 c:\windows\system32\drivers\lp6nds35.sys
Kernel Driver Yes Boot Running OK Normal No Yes

mmd mmd c:\windows\system32\drivers\mmd.sys Kernel Driver Yes
Manual Running OK Normal No Yes
mnmdd mnmdd Not Available Kernel Driver No System Stopped OK
Ignore No No
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 c:\windows\system32\drivers\mraid35x.sys
Kernel Driver Yes Boot Running OK Normal No Yes

mrxdav WebDav Client Redirector
c:\windows\system32\drivers\mrxdav.sys File System Driver
No Manual Stopped OK Normal No No
mrxsmb MRXSMB c:\windows\system32\drivers\mrxsmb.sys File System
Driver Yes System Running OK Normal No Yes
msfs Msfs c:\windows\system32\drivers\msfs.sys File System Driver
Yes System Running OK Normal No Yes
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

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partmgr	Partition Manager	c:\windows\system32\drivers\partmgr.sys	Kernel Driver	Yes	Boot	Running OK	Normal	No	Yes
pci	PCI Bus Driver	c:\windows\system32\drivers\pci.sys	Kernel Driver	Yes	Boot	Running OK	Critical	No	Yes
pciide	PCIIde	c:\windows\system32\drivers\pciide.sys	Kernel Driver	Yes	Boot	Running OK	Normal	No	Yes
pciinfo	pciinfo	c:\windows\system32\drivers\pciinfo.sys	Kernel Driver	No	Manual	Stopped OK	Normal	No	No
pcmcia	Pcmcia	c:\windows\system32\drivers\pcmcia.sys	Kernel Driver	No	Disabled	Stopped OK	Normal	No	No
pdcomp	PDCOMP	Not Available	Kernel Driver	No	Ignore	No	Manual	Stopped OK	Yes
pdframe	PDFRAME	Not Available	Kernel Driver	No	Ignore	No	Manual	Stopped OK	Yes
pdreli	PDRELI	Not Available	Kernel Driver	No	Ignore	No	Manual	Stopped OK	Yes
pdrframe	PDRFRAME	Not Available	Kernel Driver	No	Ignore	No	Manual	Stopped OK	Yes
pptpminiport	WAN Miniport (PPTP)	c:\windows\system32\drivers\raspttp.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	Stopped OK	Normal	No	No	Disabled
ql10wnt	Ql10wnt	Not Available	Kernel Driver	No	Stopped OK	Normal	No	No	Disabled
ql12160	ql12160	Not Available	Kernel Driver	No	Stopped OK	Normal	No	No	Disabled
ql1240	ql1240	Not Available	Kernel Driver	No	Stopped OK	Normal	No	No	Disabled
ql1280	ql1280	Not Available	Kernel Driver	No	Stopped OK	Normal	No	No	Disabled
ql2100	ql2100	Not Available	Kernel Driver	No	Stopped OK	Normal	No	No	Disabled
ql2200	ql2200	Not Available	Kernel Driver	No	Stopped OK	Normal	No	No	Disabled
ql2300	ql2300	Not Available	Kernel Driver	No	Stopped OK	Normal	No	No	Disabled
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
rasppoe	Remote Access PPPOE Driver	c:\windows\system32\drivers\rasppoe.sys	Kernel Driver	Yes	Manual	Running OK	Normal	No	Yes
raspti	Direct Parallel	c:\windows\system32\drivers\raspti.sys	Kernel Driver	Yes	Manual	Running OK	Normal	No	Yes
rdbss	Rdbss	c:\windows\system32\drivers\rdbss.sys	File System Driver	Yes	System	Running OK	Normal	No	Yes
rdpcdd	RDPCDD	c:\windows\system32\drivers\rdpcdd.sys	Kernel Driver	Yes	System	Running OK	Ignore	No	Yes
rdpdr	Terminal Server Device Redirector Driver	c:\windows\system32\drivers\rdpdr.sys	Kernel Driver	Yes	Manual	Running OK	Normal	No	Yes
rdpwd	RDPWD	c:\windows\system32\drivers\rdpwd.sys	Kernel Driver	No	Manual	Stopped OK	Ignore	No	No
redbook	Digital CD Audio Playback Filter Driver	c:\windows\system32\drivers\redbook.sys	Kernel Driver	Yes	System	Running OK	Normal	No	Yes
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	High-Capacity Floppy Disk Drive	c:\windows\system32\drivers\sfloppy.sys	Kernel Driver	Yes	Manual	Running OK	Normal	No	Yes
simbad	Simbad	Not Available	Kernel Driver	No	Stopped OK	Normal	No	No	Disabled
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
symc8xx	symc8xx	Not Available	Kernel Driver	No	Stopped OK	Normal	No	No	Disabled
symmpi	symmpi	Not Available	Kernel Driver	No	Stopped OK	Normal	No	No	Disabled
sym_hi	sym_hi	Not Available	Kernel Driver	No	Stopped OK	Normal	No	No	Disabled
sym_u3	sym_u3	Not Available	Kernel Driver	No	Stopped OK	Normal	No	No	Disabled
tbs	Tbs	c:\windows\system32\drivers\tbs.sys	Kernel Driver	Yes	System	Running OK	Ignore	No	Yes
tcpip	TCP/IP Protocol Driver	c:\windows\system32\drivers\tcpip.sys	Kernel Driver	Yes	System	Running OK	Normal	No	Yes
tdpipe	TDPIPE	c:\windows\system32\drivers\tdpipe.sys	Kernel Driver	No	Manual	Stopped OK	Ignore	No	No
tdtcp	TDTCP	c:\windows\system32\drivers\tdtcp.sys	Kernel Driver	No	Manual	Stopped OK	Ignore	No	No
termdd	Terminal Device Driver	c:\windows\system32\drivers\termdd.sys	Kernel Driver	Yes	System	Running OK	Normal	No	Yes
toside	TosIde	Not Available	Kernel Driver	No	Stopped OK	Normal	No	No	Disabled
udfs	Udfs	c:\windows\system32\drivers\udfs.sys	File System Driver	No	Disabled	Stopped OK	Normal	No	No
unescons	Console Manager Video Driver	c:\windows\system32\drivers\unescons.sys	Kernel Driver	Yes	Manual	Running OK	Ignore	No	Yes
usbhub	USB2 Enabled Hub	c:\windows\system32\drivers\usbhub.sys	Kernel Driver	Yes	Manual	Running OK	Normal	No	Yes
usbuhci	Microsoft USB Universal Host Controller Miniport Driver	c:\windows\system32\drivers\usbuhci.sys	Kernel Driver	Yes	Manual	Running OK	Normal	No	Yes

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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

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[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 IA64-based 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				
PCI bus No	SYSTEM	5.2.3790.0	10/1/2002	(Standard system devices)
machine.inf	Not Available	ACPI\PNP0A03\14		
Intel(r) 82801DB/DBM USB Universal Host Controller - 24C2	No	USB		
5.2.3790.0	10/1/2002	Intel usbport.inf	Not Available	
PCI\VEN_8086&DEV_24C2&SUBSYS_0D801018&REV_01\3&19E45801&0&E8				
USB Root Hub (Standard USB Host Controller)	No	USB	5.2.3790.0	10/1/2002
usbport.inf	Not Available			
USB\ROOT_HUB\4&2201EBDC&0				
Intel(R) 82801DB PCI Bridge - 244E	No	SYSTEM	5.2.3790.0	
10/1/2002	Intel	machine.inf	Not Available	
PCI\VEN_8086&DEV_244E&SUBSYS_00000000&REV_81\3&19E45801&0&F0				
DEC 21152 PCI to PCI bridge (DEC)	No	SYSTEM	5.2.3790.0	10/1/2002
machine.inf	Not Available			
PCI\VEN_1011&DEV_0024&SUBSYS_00000000&REV_03\4&866A31E&0&08F0				
PCI standard PCI-to-PCI bridge (Standard system devices)	No	SYSTEM	5.2.3790.0	
10/1/2002	machine.inf	Not Available		
Available				
PCI\VEN_8086&DEV_0960&SUBSYS_00000000&REV_05\5&F1487C6&0&0008F0				
Console Manager control device	No	SYSTEM	6.0.3.31	
1/10/2003	Unisys Corporation	oem2.inf	Not Available	
PCI\VEN_8086&DEV_1960&SUBSYS_C2001018&REV_05\5&F1487C6&0&0108F0				
Console Manager Video Driver	No	DISPLAY	6.0.3.31	1/10/2003
Unisys Corporation	oem3.inf	Not Available		

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PCI\VEN_1013&DEV_00D6&SUBSYS_80D61018&REV_03\5&F1487C6&0&1008F0
Default Monitor No MONITOR 5.1.2001.0 6/6/2001
(Standard monitor types) monitor.inf Not Available
DISPLAY\DEFAULT_MONITOR\6&3BD89D0&0&11223344&02&02
Intel(r) 82801DB LPC Interface Controller - 24C0 No SYSTEM
5.2.3790.0 10/1/2002 Intel machine.inf Not Available
PCI\VEN_8086&DEV_24C0&SUBSYS_00000000&REV_01\3&19E45801&0&F8

Motherboard resources No SYSTEM 5.2.3790.0 10/1/2002
(Standard system devices) machine.inf Not Available
ACPI\PNP0C02\F
Direct memory access controller No SYSTEM 5.2.3790.0
10/1/2002 (Standard system devices) machine.inf Not
Available ACPI\PNP0200\1E
Numeric data processor No SYSTEM 5.2.3790.0 10/1/2002
(Standard system devices) machine.inf Not Available
ACPI\PNP0C04\14
Programmable interrupt controller No SYSTEM 5.2.3790.0
10/1/2002 (Standard system devices) machine.inf Not
Available ACPI\PNP0000\14
System CMOS/real time clock No SYSTEM 5.2.3790.0 10/1/2002
(Standard system devices) machine.inf Not Available
ACPI\PNP0B00\14
System speaker No SYSTEM 5.2.3790.0 10/1/2002 (Standard
system devices) machine.inf Not Available ACPI\PNP0800\14

System timer No SYSTEM 5.2.3790.0 10/1/2002 (Standard
system devices) machine.inf Not Available ACPI\PNP0100\14

Generic Bus No SYSTEM 5.2.3790.0 10/1/2002 (Standard
system devices) machine.inf Not Available ACPI\PNP0A05\2
Communications Port No PORTS 5.2.3790.0 10/1/2002
(Standard port types) mports.inf Not Available
ACPI\PNP0501\15
PS/2 Compatible Mouse No MOUSE 5.2.3790.0 10/1/2002
Microsoft mouse.inf Not Available ACPI\PNP0F13\14

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\14
Intel(r) 82801DB Ultra ATA Storage Controller-24CB No HDC
5.2.3790.0 10/1/2002 Intel mshdc.inf Not Available
PCI\VEN_8086&DEV_24CB&SUBSYS_0D801018&REV_01\3&19E45801&0&F9

Primary IDE Channel No HDC 5.2.3790.0 10/1/2002
(Standard IDE ATA/ATAPI controllers) mshdc.inf Not Available
PCIIDE\IDECHANNEL\4&170F438F&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-
W216E_____1.0A_____5&241BC95A&0&0.0.0
High-Capacity Floppy Disk Drive No FLOPPYDISK 5.2.3790.0
10/1/2002 (Standard floppy disk drives) flpydisk.inf Not
Available IDE\DISKMATSHITA_LS-
120/240_00_____H045____\38313832484D304131303035202020202020
020
Secondary IDE Channel No HDC 5.2.3790.0 10/1/2002
(Standard IDE ATA/ATAPI controllers) mshdc.inf Not Available
PCIIDE\IDECHANNEL\4&170F438F&0&1

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PCI bus No SYSTEM 5.2.3790.0 10/1/2002 (Standard system devices) machine.inf Not Available ACPI\PNP0A03\15
Intel(r) 82870 I/OxAPIC Interrupt Controller No SYSTEM 5.2.3790.0 10/1/2002 Intel machine.inf Not Available
PCI\VEN_8086&DEV_1461&SUBSYS_00000000&REV_03\3&2C9E08A6&0&E0

Intel(r) 82870 Hub Interface to PCI Bridges No SYSTEM 5.2.3790.0 10/1/2002 Intel machine.inf Not Available
PCI\VEN_8086&DEV_1460&SUBSYS_00000000&REV_03\3&2C9E08A6&0&E8

LSI Logic MegaRAID Elite 1650/1700 RAID Controller No SCISIADAPTER 6.32.2.64 2/6/2003 LSI Logic Corp., oem1.inf Not Available
PCI\VEN_101E&DEV_1960&SUBSYS_0494101E&REV_01\4&2EB60AC4&0&08E8

LSI Logic MegaRAID Virtual Device No SYSTEM 6.32.2.64 2/6/2003 LSI Logic Corp. oem0.inf Not Available
SCSI\OTHER&VEN__RAID&PROD__DUMMYDEVICE&REV_0000\5&70F355A&0&2390

Disk drive No DISKDRIVE 5.2.3790.0 10/1/2002 (Standard disk drives) disk.inf Not Available
SCSI\DISK&VEN_MEGARAID&PROD_LD_0_MEGARAID&REV_5\5&70F355A&0&300

Intel(r) 82870 I/OxAPIC Interrupt Controller No SYSTEM 5.2.3790.0 10/1/2002 Intel machine.inf Not Available
PCI\VEN_8086&DEV_1461&SUBSYS_00000000&REV_03\3&2C9E08A6&0&F0

Intel(r) 82870 Hub Interface to PCI Bridges No SYSTEM 5.2.3790.0 10/1/2002 Intel machine.inf Not Available
PCI\VEN_8086&DEV_1460&SUBSYS_00000000&REV_03\3&2C9E08A6&0&F8

PCI bus No SYSTEM 5.2.3790.0 10/1/2002 (Standard system devices) machine.inf Not Available ACPI\PNP0A03\16
Intel(r) 82870 I/OxAPIC Interrupt Controller No SYSTEM 5.2.3790.0 10/1/2002 Intel machine.inf Not Available
PCI\VEN_8086&DEV_1461&SUBSYS_00000000&REV_03\3&3BCEF44&0&E0

Intel(r) 82870 Hub Interface to PCI Bridges No SYSTEM 5.2.3790.0 10/1/2002 Intel machine.inf Not Available
PCI\VEN_8086&DEV_1460&SUBSYS_00000000&REV_03\3&3BCEF44&0&E8

Intel(R) PRO/1000 XT Server Adapter No NET 6.3.6.31 10/1/2002 Intel netel1000.inf Not Available
PCI\VEN_8086&DEV_1008&SUBSYS_11078086&REV_02\4&19D0D624&0&08E8

Intel(r) 82870 I/OxAPIC Interrupt Controller No SYSTEM 5.2.3790.0 10/1/2002 Intel machine.inf Not Available
PCI\VEN_8086&DEV_1461&SUBSYS_00000000&REV_03\3&3BCEF44&0&F0

Intel(r) 82870 Hub Interface to PCI Bridges No SYSTEM 5.2.3790.0 10/1/2002 Intel machine.inf Not Available
PCI\VEN_8086&DEV_1460&SUBSYS_00000000&REV_03\3&3BCEF44&0&F8

PCI bus No SYSTEM 5.2.3790.0 10/1/2002 (Standard system devices) machine.inf Not Available ACPI\PNP0A03\17
Intel(r) 82870 I/OxAPIC Interrupt Controller No SYSTEM 5.2.3790.0 10/1/2002 Intel machine.inf Not Available
PCI\VEN_8086&DEV_1461&SUBSYS_00000000&REV_03\3&36B90202&0&E0

Intel(r) 82870 Hub Interface to PCI Bridges No SYSTEM 5.2.3790.0 10/1/2002 Intel machine.inf Not Available
PCI\VEN_8086&DEV_1460&SUBSYS_00000000&REV_03\3&36B90202&0&E8

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\4&C81318E&0&10E8

Unisys Intelligent Fibre Channel Fabric Bus Adapter No SCISIADAPTER 2.48.0.17 6/18/2003 Unisys Corporation oem6.inf Not Available
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STORAGE\VOLUME\1&30A96598&0&SIGNATUREF9FB5CCBOFFSET74BE94200LENGTH	9EE00			
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volume.inf	Not Available			
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Generic volume No	VOLUME 5.2.3790.0	10/1/2002	Microsoft	
volume.inf	Not Available			
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Generic volume No	VOLUME 5.2.3790.0	10/1/2002	Microsoft	
volume.inf	Not Available			
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Generic volume No	VOLUME 5.2.3790.0	10/1/2002	Microsoft	
volume.inf	Not Available			
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Generic volume No	VOLUME 5.2.3790.0	10/1/2002	Microsoft	
volume.inf	Not Available			
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volume.inf	Not Available			
STORAGE\VOLUME\1&30A96598&0&SIGNATURE610F2157OFFSET4C4C2F200LENGTH	1BDA61C00			
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Generic volume No	VOLUME 5.2.3790.0	10/1/2002	Microsoft	
volume.inf	Not Available			
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170A6000	Generic volume No	VOLUME 5.2.3790.0	10/1/2002	Microsoft
Generic volume No	VOLUME 5.2.3790.0	10/1/2002	Microsoft	
volume.inf	Not Available			
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2730C00	Generic volume No	VOLUME 5.2.3790.0	10/1/2002	Microsoft
Generic volume No	VOLUME 5.2.3790.0	10/1/2002	Microsoft	
volume.inf	Not Available			
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B000D000	Generic volume No	VOLUME 5.2.3790.0	10/1/2002	Microsoft
Generic volume No	VOLUME 5.2.3790.0	10/1/2002	Microsoft	
volume.inf	Not Available			
STORAGE\VOLUME\1&30A96598&0&SIGNATURE610F2157OFFSET74BE94200LENGTH	100E59A00			
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Generic volume No	VOLUME 5.2.3790.0	10/1/2002	Microsoft	
volume.inf	Not Available			

STORAGE\VOLUME\1&30A96598&0&SIGNATUREB6600F01OFFSET763EF2400LENGTH
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1477EBA00

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volume.inf Not Available
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volume.inf Not Available
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volume.inf Not Available
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Generic volume No VOLUME 5.2.3790.0 10/1/2002 Microsoft
volume.inf Not Available
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volume.inf Not Available
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volume.inf Not Available

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1477EBA00
Generic volume No VOLUME 5.2.3790.0 10/1/2002 Microsoft
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Generic volume No VOLUME 5.2.3790.0 10/1/2002 Microsoft
volume.inf Not Available
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1477EBA00
Generic volume No VOLUME 5.2.3790.0 10/1/2002 Microsoft
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volume.inf Not Available
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volume.inf Not Available
STORAGE\VOLUME\1&30A96598&0&SIGNATURE8518B067OFFSETC9BE7EE00LENGTH
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volume.inf Not Available
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volume.inf Not Available
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volume.inf Not Available
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volume.inf Not Available
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volume.inf Not Available
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D6DBCC800
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Available Not Available Not Available Not Available Not Available
ROOT\LEGACY_AFD\0000
Beep Not Available LEGACYDRIVER Not Available Not Available Not
Available Not Available LEGACYDRIVER Not Available ROOT\LEGACY_BEEP\0000
CRC Disk Filter Driver Not Available LEGACYDRIVER Not Available Not
Available Not Available Not Available Not Available
ROOT\LEGACY_CRCDISK\0000
dmboot Not Available LEGACYDRIVER Not Available Not Available Not
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elxsl2 Not Available LEGACYDRIVER Not Available Not Available Not
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em Not Available LEGACYDRIVER Not Available Not Available Not
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Fips Not Available LEGACYDRIVER Not Available Not Available Not
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Generic Packet Classifier Not Available LEGACYDRIVER Not Available
Not Available Not Available Not Available Not Available
ROOT\LEGACY_GPC\0000
IPSEC driver Not Available LEGACYDRIVER Not Available Not Available
Not Available Not Available Not Available
ROOT\LEGACY_IPSEC\0000

ksecdd Not Available LEGACYDRIVER Not Available Not Available Not Available Not Available
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lp6nds35 Not Available LEGACYDRIVER Not Available Not Available Not Available
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mountmgr Not Available LEGACYDRIVER Not Available Not Available Not Available
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NDIS System Driver Not Available LEGACYDRIVER Not Available Not Available Not Available
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Remote Access NDIS TAPI Driver Not Available LEGACYDRIVER Not Available Not Available
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NDIS Usermode I/O Protocol Not Available LEGACYDRIVER Not Available Not Available Not Available
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NDProxy Not Available LEGACYDRIVER Not Available Not Available Not Available Not Available
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NetBios over Tcpip Not Available LEGACYDRIVER Not Available Not Available Not Available
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Null Not Available LEGACYDRIVER Not Available Not Available Not Available Not Available
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Partition Manager Not Available LEGACYDRIVER Not Available Not Available Not Available Not Available
 Available Not Available Not Available Not Available
 ROOT\LEGACY_PARTMGR\0000

PCIIde Not Available LEGACYDRIVER Not Available Not Available Not Available Not Available
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pciinfo Not Available LEGACYDRIVER Not Available Not Available Not Available Not Available
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Remote Access Auto Connection Driver Not Available LEGACYDRIVER Not Available Not Available
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RDPCCD Not Available LEGACYDRIVER Not Available Not Available Not Available Not Available
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RDPWD Not Available LEGACYDRIVER Not Available Not Available Not Available Not Available
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Tbs Not Available LEGACYDRIVER Not Available Not Available Not Available Not Available
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TCP/IP Protocol Driver Not Available LEGACYDRIVER Not Available Not Available Not Available
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volsnap Not Available LEGACYDRIVER Not Available Not Available Not Available Not Available
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Remote Access IP ARP Driver Not Available LEGACYDRIVER Not Available Not Available Not Available
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Audio Codecs No MEDIA 5.2.3790.0 10/1/2002 (Standard system devices) wave.inf Not Available ROOT\MEDIA\MS_MMACM

Legacy Audio Drivers No MEDIA 5.2.3790.0 10/1/2002 (Standard system devices) wave.inf Not Available
 ROOT\MEDIA\MS_MMDRV

Media Control Devices No MEDIA 5.2.3790.0 10/1/2002 (Standard system devices) wave.inf Not Available
 ROOT\MEDIA\MS_MMMCI

Legacy Video Capture Devices No MEDIA 5.2.3790.0 10/1/2002 (Standard system devices) wave.inf Not Available
 ROOT\MEDIA\MS_MMVCD

Video Codecs No MEDIA 5.2.3790.0 10/1/2002 (Standard 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
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WAN Miniport (IP) No NET 5.2.3790.0 10/1/2002
 Microsoft netrasa.inf Not Available
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WAN Miniport (PPPOE) No NET 5.2.3790.0 10/1/2002
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WAN Miniport (PPTP) No NET 5.2.3790.0 10/1/2002
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Direct Parallel No NET 5.2.3790.0 10/1/2002
 Microsoft netrasa.inf Not Available
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Terminal Server Device Redirector No SYSTEM 5.2.3790.0 10/1/2002 (Standard system devices) machine.inf Not Available
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Terminal Server Keyboard Driver No SYSTEM 5.2.3790.0 10/1/2002 (Standard system devices) machine.inf Not Available
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Terminal Server Mouse Driver No SYSTEM 5.2.3790.0 10/1/2002 (Standard system devices) machine.inf Not Available
 ROOT\RDP_MOU\0000

Plug and Play Software Device Enumerator No SYSTEM 5.2.3790.0 10/1/2002 (Standard system devices) machine.inf Not Available
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Unisys Intelligent Fibre Channel Fabric Bus Enumerator No SYSTEM 2.48.0.44 7/31/2003 Unisys Corporation oem5.inf Not Available
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Unisys Intelligent Fibre Channel Fabric Disk Driver No DISKDRIVE 2.48.0.7 7/31/2003 Unisys Corporation oem8.inf Not Available
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Unisys Intelligent Fibre Channel Fabric Disk Driver No DISKDRIVE 2.48.0.7 7/31/2003 Unisys Corporation oem8.inf Not Available
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Unisys Intelligent Fibre Channel Fabric Disk Driver No DISKDRIVE 2.48.0.7 7/31/2003 Unisys Corporation oem8.inf Not Available


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Unisys Intelligent Fibre Channel Fabric Disk Driver No    DISKDRIVE
2.51.0.7          9/19/2003      Unisys Corporation  oem12.inf
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Unisys Intelligent Fibre Channel Fabric Disk Driver No    DISKDRIVE
2.48.0.7          7/31/2003      Unisys Corporation  oem8.inf
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Unisys Intelligent Fibre Channel Fabric Disk Driver No    DISKDRIVE
2.48.0.7          7/31/2003      Unisys Corporation  oem8.inf
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[Environment Variables]

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Variable      Value      User Name
BISTRO_GLOBAL_CACHE_DIR      C:\Program Files
(x86)\Intel\VTune\CGGlbCache <SYSTEM>
ClusterLog      C:\WINDOWS\Cluster\cluster.log      <SYSTEM>
ComSpec %SystemRoot%\system32\cmd.exe <SYSTEM>
INTEL_LICENSE_FILE      C:\Program Files (x86)\Common Files\Intel\Licenses
<SYSTEM>
NUMBER_OF_PROCESSORS      16      <SYSTEM>
OS      Windows NT      <SYSTEM>
Path      C:\Program Files (x86)\Intel\VTune\CGGlbCache;C:\Program Files
(x86)\Intel\VTune\Analyzer\Bin;C:\Program Files
(x86)\Intel\VTune\Shared\Bin;C:\Program Files
(x86)\Intel\VTune\Analyzer\Bin64;C:\Program Files
(x86)\Intel\VTune\Shared\Bin64;%SystemRoot%\system32;%SystemRoot%;%SystemR
oot%\System32\Wbem;C:\Cygwin\bin;C:\oracle\orcl0414\bin;C:\oracle\orcl0414
\bin_dbv      <SYSTEM>
PATHEXT .COM;.EXE;.BAT;.CMD;.VBS;.VBE;.JS;.JSE;.WSF;.WSH      <SYSTEM>

PROCESSOR_ARCHITECTURE IA64      <SYSTEM>
PROCESSOR_IDENTIFIER      ia64 Family 31 Model 1 Stepping 5, GenuineIntel
<SYSTEM>
PROCESSOR_LEVEL      31      <SYSTEM>
PROCESSOR_REVISION      0105      <SYSTEM>
TEMP      %SystemRoot%\TEMP      <SYSTEM>
TMP      %SystemRoot%\TEMP      <SYSTEM>
windir %SystemRoot%      <SYSTEM>
TMP      %USERPROFILE%\Local Settings\Temp      NT AUTHORITY\SYSTEM
TMP      %USERPROFILE%\Local Settings\Temp      NT AUTHORITY\SYSTEM
ORACLE_HOME      C:\oracle\orcl0414      MV-CASSIN8\Administrator
ORACLE_SID      TPC3      MV-CASSIN8\Administrator
TEMP      %USERPROFILE%\Local Settings\Temp      MV-CASSIN8\Administrator

TMP      %USERPROFILE%\Local Settings\Temp      MV-CASSIN8\Administrator

tpcc_hash_overflow      t      MV-CASSIN8\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:	\\192.158.91.159\c\$	Disk	Persistent	Connection MV-CASSIN8\Administrator

[Running Tasks]

Name	Path	Process ID	Priority	Min Working Set	Max Working Set
Working Set	Start Time	Version Size	File Date		
system idle process	Not Available	0	0	Not Available	Not Available
Available	Not Available	Not Available	Not Available	Not Available	Not Available
system	Not Available	4	8	0	2826240
Available	Not Available	Not Available	Not Available	Not Available	Not Available
smss.exe	Not Available	556	11	409600	2826240
PM	Not Available	Not Available	Not Available	Not Available	Not Available
csrss.exe	Not Available	608	13	Not Available	Not Available
	10/9/2003 7:50 PM	Not Available	Not Available	Not Available	Not Available
winlogon.exe	c:\windows\system32\winlogon.exe	632	13	409600	
	2826240 10/9/2003 7:50 PM	5.2.3790.0 (srv03_rtm.030324-2048)			
	618.00 KB (632,832 bytes)	3/25/2003 4:00 AM			
services.exe	c:\windows\system32\services.exe	676	9	409600	
	2826240 10/9/2003 7:50 PM	5.2.3790.0 (srv03_rtm.030324-2048)			
	286.00 KB (292,864 bytes)	3/25/2003 4:00 AM			
lsass.exe	c:\windows\system32\lsass.exe	688	9	409600	
	2826240 10/9/2003 7:50 PM	5.2.3790.0 (srv03_rtm.030324-2048)			
	15.00 KB (15,360 bytes)	3/25/2003 4:00 AM			
svchost.exe	c:\windows\system32\svchost.exe	892	8	409600	
	2826240 10/9/2003 7:50 PM	5.2.3790.0 (srv03_rtm.030324-2048)			
	32.50 KB (33,280 bytes)	3/25/2003 4:00 AM			
svchost.exe	c:\windows\system32\svchost.exe	932	8	409600	
	2826240 10/9/2003 7:50 PM	5.2.3790.0 (srv03_rtm.030324-2048)			
	32.50 KB (33,280 bytes)	3/25/2003 4:00 AM			
esconmgr.exe	c:\windows\system32\esconmgr.exe	1008	24	409600	
	2826240 10/9/2003 7:50 PM	6.0.3.31		155.50 KB (159,232	
bytes)	7/15/2003 10:02 AM				
mapservant.exe	c:\windows\system32\mapservant.exe	1044	8	409600	
	2826240 10/9/2003 7:50 PM	4.0.510.0		176.06 KB (180,283	
bytes)	7/23/2003 11:27 AM				
wmiprvse.exe	Not Available	1340	8	Not Available	Not Available
	10/9/2003 7:51 PM	Not Available	Not Available	Not Available	Not Available
explorer.exe	c:\windows\explorer.exe	1544	8	409600	
	2826240 10/9/2003 7:52 PM	6.00.3790.0 (srv03_rtm.030324-2048)			
	1.63 MB (1,704,960 bytes)	3/25/2003 4:00 AM			
mmc.exe	c:\windows\system32\mmc.exe	1744	8	409600	2826240
	10/9/2003 7:52 PM	5.2.3790.0 (srv03_rtm.030324-2048)		2.48	
MB (2,598,912 bytes)	3/25/2003 4:00 AM				


```

cmd.exe c:\windows\system32\cmd.exe 1884 8 409600 2826240
10/9/2003 7:53 PM 5.2.3790.0 (srv03_rtm.030324-2048) 493.50
KB (505,344 bytes) 3/25/2003 4:00 AM
cmd.exe c:\windows\system32\cmd.exe 1896 8 409600 2826240
10/9/2003 7:53 PM 5.2.3790.0 (srv03_rtm.030324-2048) 493.50
KB (505,344 bytes) 3/25/2003 4:00 AM
sqlplus.exe c:\oracle\orcl0414\bin\sqlplus.exe 1936 8 409600
2826240 10/9/2003 7:54 PM Not Available 1.32 MB (1,379,840
bytes) 9/27/2003 9:49 PM
taskmgr.exe c:\windows\system32\taskmgr.exe 1964 13 409600
2826240 10/9/2003 7:55 PM 5.2.3790.0 (srv03_rtm.030324-2048)
311.50 KB (318,976 bytes) 3/25/2003 4:00 AM
oracle.exe c:\oracle\orcl0414\bin\oracle.exe 468 8 409600
2826240 10/9/2003 10:55 PM Not Available 124.11 MB
(130,138,624 bytes) 9/27/2003 9:48 PM
tnslsnr.exe c:\oracle\orcl0414\bin\tnslsnr.exe 1932 8 409600
2826240 10/9/2003 10:55 PM Not Available 388.00 KB (397,312
bytes) 9/27/2003 9:49 PM
sqlplus.exe c:\oracle\orcl0414\bin\sqlplus.exe 1508 8 409600
2826240 10/9/2003 11:01 PM Not Available 1.32 MB (1,379,840
bytes) 9/27/2003 9:49 PM
mmc.exe c:\windows\system32\mmc.exe 2128 8 409600 2826240
10/10/2003 10:00 AM 5.2.3790.0 (srv03_rtm.030324-2048) 2.48
MB (2,598,912 bytes) 3/25/2003 4:00 AM
vds.exe c:\windows\system32\vds.exe 2228 8 409600 2826240
10/10/2003 10:00 AM 5.2.3790.0 (srv03_rtm.030324-2048) 543.50
KB (556,544 bytes) 3/25/2003 4:00 AM
dmadmin.exe c:\windows\system32\dmadmin.exe 2308 8 409600
2826240 10/10/2003 10:00 AM 5.2.3790.0 (srv03_rtm.030324-2048)
643.50 KB (658,944 bytes) 3/25/2003 4:00 AM
helpctr.exe c:\windows\pchealth\helpctr\binaries\helpctr.exe 3424
8 409600 2826240 10/10/2003 12:47 PM 5.2.3790.0
(srv03_rtm.030324-2048) 1.97 MB (2,066,432 bytes) 8/12/2003 8:43
AM
wmiprvse.exe Not Available 3564 8 Not Available Not Available
10/10/2003 12:47 PM Not Available Not Available Not Available
helpsvc.exe c:\windows\pchealth\helpctr\binaries\helpsvc.exe 3612
8 409600 2826240 10/10/2003 12:47 PM 5.2.3790.0
(srv03_rtm.030324-2048) 2.18 MB (2,289,152 bytes) 8/12/2003 8:43
AM

```

[Loaded Modules]

```

Name Version Size File Date Manufacturer Path
winlogon 5.2.3790.0 (srv03_rtm.030324-2048) 618.00 KB (632,832
bytes) 3/25/2003 4:00 AM Microsoft Corporation
c:\windows\system32\winlogon.exe
ntdll 5.2.3790.0 (srv03_rtm.030324-2048) 1.45 MB (1,524,224 bytes)
3/25/2003 4:00 AM Microsoft Corporation
c:\windows\system32\ntdll.dll
kernel32 5.2.3790.0 (srv03_rtm.030324-2048) 1.76 MB (1,850,368
bytes) 3/25/2003 4:00 AM Microsoft Corporation
c:\windows\system32\kernel32.dll
msvcrt 7.0.3790.0 (srv03_rtm.030324-2048) 873.50 KB (894,464 bytes)
3/25/2003 4:00 AM Microsoft Corporation
c:\windows\system32\msvcrt.dll

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advapi32 5.2.3790.0 (srv03_rtm.030324-2048) 1.32 MB (1,383,424
bytes) 3/25/2003 4:00 AM Microsoft Corporation
c:\windows\system32\advapi32.dll
rpcrt4 5.2.3790.59 (srv03_gdr.030614-1005) 2.03 MB (2,127,872 bytes)
7/5/2003 1:05 PM Microsoft Corporation
c:\windows\system32\rpcrt4.dll
user32 5.2.3790.0 (srv03_rtm.030324-2048) 1.31 MB (1,372,672 bytes)
3/25/2003 4:00 AM Microsoft Corporation
c:\windows\system32\user32.dll
gdi32 5.2.3790.0 (srv03_rtm.030324-2048) 783.00 KB (801,792 bytes)
3/25/2003 4:00 AM Microsoft Corporation
c:\windows\system32\gdi32.dll
userenv 5.2.3790.0 (srv03_rtm.030324-2048) 1.46 MB (1,536,000 bytes)
3/25/2003 4:00 AM Microsoft Corporation
c:\windows\system32\userenv.dll
nddeapi 5.2.3790.0 (srv03_rtm.030324-2048) 39.50 KB (40,448 bytes)
3/25/2003 4:00 AM Microsoft Corporation
c:\windows\system32\nddeapi.dll
crypt32 5.131.3790.0 (srv03_rtm.030324-2048) 1.50 MB (1,576,448 bytes)
3/25/2003 4:00 AM Microsoft Corporation
c:\windows\system32\crypt32.dll
msasn1 5.2.3790.0 (srv03_rtm.030324-2048) 153.50 KB (157,184 bytes)
3/25/2003 4:00 AM Microsoft Corporation
c:\windows\system32\msasn1.dll
secur32 5.2.3790.0 (srv03_rtm.030324-2048) 166.50 KB (170,496 bytes)
3/25/2003 4:00 AM Microsoft Corporation
c:\windows\system32\secur32.dll
winsta 5.2.3790.0 (srv03_rtm.030324-2048) 138.50 KB (141,824 bytes)
3/25/2003 4:00 AM Microsoft Corporation
c:\windows\system32\winsta.dll
netapi32 5.2.3790.0 (srv03_rtm.030324-2048) 832.00 KB (851,968
bytes) 3/25/2003 4:00 AM Microsoft Corporation
c:\windows\system32\netapi32.dll
profmap 5.2.3790.0 (srv03_rtm.030324-2048) 55.50 KB (56,832 bytes)
3/25/2003 4:00 AM Microsoft Corporation
c:\windows\system32\profmap.dll
regapi 5.2.3790.0 (srv03_rtm.030324-2048) 124.00 KB (126,976 bytes)
3/25/2003 4:00 AM Microsoft Corporation
c:\windows\system32\regapi.dll
ws2_32 5.2.3790.0 (srv03_rtm.030324-2048) 228.50 KB (233,984 bytes)
3/25/2003 4:00 AM Microsoft Corporation
c:\windows\system32\ws2_32.dll
ws2help 5.2.3790.0 (srv03_rtm.030324-2048) 49.50 KB (50,688 bytes)
3/25/2003 4:00 AM Microsoft Corporation
c:\windows\system32\ws2help.dll
msgina 5.2.3790.0 (srv03_rtm.030324-2048) 1.35 MB (1,417,728 bytes)
3/25/2003 4:00 AM Microsoft Corporation
c:\windows\system32\msgina.dll
shsvcs 6.00.3790.0 (srv03_rtm.030324-2048) 321.50 KB (329,216 bytes)
3/25/2003 4:00 AM Microsoft Corporation
c:\windows\system32\shsvcs.dll
shlwapi 6.00.3790.0 (srv03_rtm.030324-2048) 722.00 KB (739,328 bytes)
3/25/2003 4:00 AM Microsoft Corporation
c:\windows\system32\shlwapi.dll
sfc 5.2.3790.0 (srv03_rtm.030324-2048) 7.50 KB (7,680 bytes)
3/25/2003 4:00 AM Microsoft Corporation
c:\windows\system32\sfc.dll

```

sfc_os 5.2.3790.0 (srv03_rtm.030324-2048) 257.00 KB (263,168 bytes)
 3/25/2003 4:00 AM Microsoft Corporation
 c:\windows\system32\sfc_os.dll

wintrust 5.131.3790.0 (srv03_rtm.030324-2048) 451.50 KB (462,336 bytes)
 3/25/2003 4:00 AM Microsoft Corporation
 c:\windows\system32\wintrust.dll

ole32 5.2.3790.68 (srv03_gdr.030614-1005) 3.38 MB (3,549,184 bytes)
 7/5/2003 1:05 PM Microsoft Corporation
 c:\windows\system32\ole32.dll

imagehlp 5.2.3790.0 (srv03_rtm.030324-2048) 128.50 KB (131,584 bytes)
 3/25/2003 4:00 AM Microsoft Corporation
 c:\windows\system32\imagehlp.dll

comctl32 6.0 (srv03_rtm.030324-2048) 2.18 MB (2,285,056 bytes)
 8/12/2003 1:27 AM Microsoft Corporation
 c:\windows\winsxs\ia64_microsoft.windows.common-controls_6595b64144ccf1df_6.0.100.0_x-ww_b3722bab\comctl32.dll

version 5.2.3790.0 (srv03_rtm.030324-2048) 44.00 KB (45,056 bytes)
 3/25/2003 4:00 AM Microsoft Corporation
 c:\windows\system32\version.dll

winscard 5.2.3790.0 (srv03_rtm.030324-2048) 291.50 KB (298,496 bytes)
 3/25/2003 4:00 AM Microsoft Corporation
 c:\windows\system32\wincard.dll

wtsapi32 5.2.3790.0 (srv03_rtm.030324-2048) 47.50 KB (48,640 bytes)
 3/25/2003 4:00 AM Microsoft Corporation
 c:\windows\system32\wtsapi32.dll

sxs 5.2.3790.0 (srv03_rtm.030324-2048) 1.77 MB (1,860,608 bytes)
 3/25/2003 4:00 AM Microsoft Corporation
 c:\windows\system32\sxs.dll

wldap32 5.2.3790.0 (srv03_rtm.030324-2048) 412.50 KB (422,400 bytes)
 3/25/2003 4:00 AM Microsoft Corporation
 c:\windows\system32\wldap32.dll

cscdll 5.2.3790.0 (srv03_rtm.030324-2048) 211.00 KB (216,064 bytes)
 3/25/2003 4:00 AM Microsoft Corporation
 c:\windows\system32\cscdll.dll

wlnotify 5.2.3790.0 (srv03_rtm.030324-2048) 218.00 KB (223,232 bytes)
 3/25/2003 4:00 AM Microsoft Corporation
 c:\windows\system32\wlnotify.dll

winmm 5.2.3790.0 (srv03_rtm.030324-2048) 404.00 KB (413,696 bytes)
 3/25/2003 4:00 AM Microsoft Corporation
 c:\windows\system32\winmm.dll

winspool 5.2.3790.0 (srv03_rtm.030324-2048) 399.50 KB (409,088 bytes)
 3/25/2003 4:00 AM Microsoft Corporation
 c:\windows\system32\winspool.drv

setupapi 5.2.3790.0 (srv03_rtm.030324-2048) 1.90 MB (1,991,168 bytes)
 3/25/2003 4:00 AM Microsoft Corporation
 c:\windows\system32\setupapi.dll

mpr 5.2.3790.0 (srv03_rtm.030324-2048) 163.00 KB (166,912 bytes)
 3/25/2003 4:00 AM Microsoft Corporation
 c:\windows\system32\mpr.dll

shell32 6.00.3790.0 (srv03_rtm.030324-2048) 12.35 MB (12,953,088 bytes)
 3/25/2003 4:00 AM Microsoft Corporation
 c:\windows\system32\shell32.dll

comctl32 5.82 (srv03_rtm.030324-2048) 1.55 MB (1,621,504 bytes)
 8/12/2003 1:27 AM Microsoft Corporation
 c:\windows\winsxs\ia64_microsoft.windows.common-controls_6595b64144ccf1df_5.82.0.0_x-ww_b9c4a0a5\comctl32.dll

uxtheme 6.00.3790.0 (srv03_rtm.030324-2048) 527.50 KB (540,160 bytes)
 3/25/2003 4:00 AM Microsoft Corporation
 c:\windows\system32\uxtheme.dll

samlib 5.2.3790.0 (srv03_rtm.030324-2048) 106.00 KB (108,544 bytes)
 3/25/2003 4:00 AM Microsoft Corporation
 c:\windows\system32\samlib.dll

cscui 5.2.3790.0 (srv03_rtm.030324-2048) 574.00 KB (587,776 bytes)
 3/25/2003 4:00 AM Microsoft Corporation
 c:\windows\system32\cscui.dll

drprov 5.2.3790.0 (srv03_rtm.030324-2048) 26.50 KB (27,136 bytes)
 3/25/2003 4:00 AM Microsoft Corporation
 c:\windows\system32\drprov.dll

ntlanman 5.2.3790.0 (srv03_rtm.030324-2048) 108.00 KB (110,592 bytes)
 3/25/2003 4:00 AM Microsoft Corporation
 c:\windows\system32\ntlanman.dll

netui0 5.2.3790.0 (srv03_rtm.030324-2048) 181.50 KB (185,856 bytes)
 3/25/2003 4:00 AM Microsoft Corporation
 c:\windows\system32\netui0.dll

netui1 5.2.3790.0 (srv03_rtm.030324-2048) 482.00 KB (493,568 bytes)
 3/25/2003 4:00 AM Microsoft Corporation
 c:\windows\system32\netui1.dll

davclnt 5.2.3790.0 (srv03_rtm.030324-2048) 59.00 KB (60,416 bytes)
 3/25/2003 4:00 AM Microsoft Corporation
 c:\windows\system32\davclnt.dll

mprui 5.2.3790.0 (srv03_rtm.030324-2048) 97.00 KB (99,328 bytes)
 3/25/2003 4:00 AM Microsoft Corporation
 c:\windows\system32\mprui.dll

netui2 5.2.3790.0 (srv03_rtm.030324-2048) 761.50 KB (779,776 bytes)
 3/25/2003 4:00 AM Microsoft Corporation
 c:\windows\system32\netui2.dll

comdlg32 6.00.3790.0 (srv03_rtm.030324-2048) 706.00 KB (722,944 bytes)
 3/25/2003 4:00 AM Microsoft Corporation
 c:\windows\system32\comdlg32.dll

netmsg 5.2.3790.0 (srv03_rtm.030324-2048) 177.50 KB (181,760 bytes)
 3/25/2003 4:00 AM Microsoft Corporation
 c:\windows\system32\netmsg.dll

oleaut32 5.2.3790.0 (3,739,136 bytes) 3/25/2003 4:00 AM
 Microsoft Corporation c:\windows\system32\oleaut32.dll

clbcatq 2001.12.4720.0 (srv03_rtm.030324-2048) 1.23 MB (1,292,800 bytes)
 8/12/2003 8:41 AM Microsoft Corporation
 c:\windows\system32\clbcatq.dll

comres 2001.12.4720.0 (srv03_rtm.030324-2048) 779.50 KB (798,208 bytes)
 3/25/2003 4:00 AM Microsoft Corporation
 c:\windows\system32\comres.dll

ntmarta 5.2.3790.0 (srv03_rtm.030324-2048) 343.50 KB (351,744 bytes)
 3/25/2003 4:00 AM Microsoft Corporation
 c:\windows\system32\ntmarta.dll

wbemprox 5.2.3790.0 (srv03_rtm.030324-2048) 46.00 KB (47,104 bytes)
 8/12/2003 8:41 AM Microsoft Corporation
 c:\windows\system32\wbem\wbemprox.dll

wbemcomn 5.2.3790.0 (srv03_rtm.030324-2048) 598.50 KB (612,864 bytes)
 3/25/2003 4:00 AM Microsoft Corporation
 c:\windows\system32\wbem\wbemcomn.dll

wbemsvc 5.2.3790.0 (srv03_rtm.030324-2048) 62.50 KB (64,000 bytes)
 8/12/2003 8:41 AM Microsoft Corporation
 c:\windows\system32\wbem\wbemsvc.dll

fastprox 5.2.3790.0 (srv03_rtm.030324-2048) 1.51 MB (1,580,544 bytes)
 8/12/2003 8:41 AM Microsoft Corporation
 c:\windows\system32\wbem\fastprox.dll

msvcpe60 6.10.2240.8 941.50 KB (964,096 bytes) 3/25/2003 4:00 AM
 Microsoft Corporation c:\windows\system32\msvcpe60.dll

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ntdsapi 5.2.3790.0 (srv03_rtm.030324-2048) 181.50 KB (185,856 bytes)
3/25/2003 4:00 AM Microsoft Corporation
c:\windows\system32\ntdsapi.dll
dnsapi 5.2.3790.0 (srv03_rtm.030324-2048) 404.00 KB (413,696 bytes)
3/25/2003 4:00 AM Microsoft Corporation
c:\windows\system32\dnsapi.dll
services 5.2.3790.0 (srv03_rtm.030324-2048) 286.00 KB (292,864
bytes) 3/25/2003 4:00 AM Microsoft Corporation
c:\windows\system32\services.exe
scesrv 5.2.3790.0 (srv03_rtm.030324-2048) 765.00 KB (783,360 bytes)
3/25/2003 4:00 AM Microsoft Corporation
c:\windows\system32\scesrv.dll
authz 5.2.3790.0 (srv03_rtm.030324-2048) 202.50 KB (207,360 bytes)
3/25/2003 4:00 AM Microsoft Corporation
c:\windows\system32\authz.dll
umpnpgmr 5.2.3790.0 (srv03_rtm.030324-2048) 314.50 KB (322,048
bytes) 3/25/2003 4:00 AM Microsoft Corporation
c:\windows\system32\umpnpgmr.dll
ncobjapi 5.2.3790.0 (srv03_rtm.030324-2048) 118.50 KB (121,344
bytes) 3/25/2003 4:00 AM Microsoft Corporation
c:\windows\system32\ncobjapi.dll
eventlog 5.2.3790.0 (srv03_rtm.030324-2048) 157.00 KB (160,768
bytes) 3/25/2003 4:00 AM Microsoft Corporation
c:\windows\system32\eventlog.dll
psapi 5.2.3790.0 (srv03_rtm.030324-2048) 48.00 KB (49,152 bytes)
3/25/2003 4:00 AM Microsoft Corporation
c:\windows\system32\psapi.dll
lsass 5.2.3790.0 (srv03_rtm.030324-2048) 15.00 KB (15,360 bytes)
3/25/2003 4:00 AM Microsoft Corporation
c:\windows\system32\lsass.exe
lsasrv 5.2.3790.0 (srv03_rtm.030324-2048) 1.94 MB (2,033,664 bytes)
3/25/2003 4:00 AM Microsoft Corporation
c:\windows\system32\lsasrv.dll
samsrv 5.2.3790.0 (srv03_rtm.030324-2048) 1,005.00 KB (1,029,120 bytes)
3/25/2003 4:00 AM Microsoft Corporation
c:\windows\system32\samsrv.dll
cryptdll 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\cryptdll.dll
msprivs 5.2.3790.0 (srv03_rtm.030324-2048) 46.00 KB (47,104 bytes)
3/25/2003 4:00 AM Microsoft Corporation
c:\windows\system32\msprivs.dll
kerberos 5.2.3790.0 (srv03_rtm.030324-2048) 876.00 KB (897,024
bytes) 3/25/2003 4:00 AM Microsoft Corporation
c:\windows\system32\kerberos.dll
msv1_0 5.2.3790.0 (srv03_rtm.030324-2048) 333.50 KB (341,504 bytes)
3/25/2003 4:00 AM Microsoft Corporation
c:\windows\system32\msv1_0.dll
netlogon 5.2.3790.0 (srv03_rtm.030324-2048) 936.50 KB (958,976
bytes) 3/25/2003 4:00 AM Microsoft Corporation
c:\windows\system32\netlogon.dll
w32time 5.2.3790.0 (srv03_rtm.030324-2048) 540.50 KB (553,472 bytes)
3/25/2003 4:00 AM Microsoft Corporation
c:\windows\system32\w32time.dll
iphlpapi 5.2.3790.0 (srv03_rtm.030324-2048) 223.00 KB (228,352
bytes) 3/25/2003 4:00 AM Microsoft Corporation
c:\windows\system32\iphlpapi.dll

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schannel 5.2.3790.0 (srv03_rtm.030324-2048) 468.50 KB (479,744
bytes) 3/25/2003 4:00 AM Microsoft Corporation
c:\windows\system32\schannel.dll
wdigest 5.2.3790.0 (srv03_rtm.030324-2048) 161.50 KB (165,376 bytes)
3/25/2003 4:00 AM Microsoft Corporation
c:\windows\system32\wdigest.dll
rsaenh 5.2.3790.0 (srv03_rtm.030324-2048) 371.83 KB (380,752 bytes)
3/25/2003 4:00 AM Microsoft Corporation
c:\windows\system32\rsaenh.dll
rassfm 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\rassfm.dll
kdcsvc 5.2.3790.0 (srv03_rtm.030324-2048) 571.50 KB (585,216 bytes)
3/25/2003 4:00 AM Microsoft Corporation
c:\windows\system32\kdcsvc.dll
ntdsa 5.2.3790.0 (srv03_rtm.030324-2048) 3.82 MB (4,008,448 bytes)
3/25/2003 4:00 AM Microsoft Corporation
c:\windows\system32\ntdsa.dll
ntdsatq 5.2.3790.0 (srv03_rtm.030324-2048) 80.50 KB (82,432 bytes)
3/25/2003 4:00 AM Microsoft Corporation
c:\windows\system32\ntdsatq.dll
mwssock 5.2.3790.0 (srv03_rtm.030324-2048) 671.00 KB (687,104 bytes)
3/25/2003 4:00 AM Microsoft Corporation
c:\windows\system32\mwssock.dll
esent 5.2.3790.0 (srv03_rtm.030324-2048) 2.48 MB (2,605,056 bytes)
3/25/2003 4:00 AM Microsoft Corporation
c:\windows\system32\esent.dll
scecli 5.2.3790.0 (srv03_rtm.030324-2048) 467.50 KB (478,720 bytes)
3/25/2003 4:00 AM Microsoft Corporation
c:\windows\system32\scecli.dll
wshtcpip 5.2.3790.0 (srv03_rtm.030324-2048) 38.00 KB (38,912
bytes) 3/25/2003 4:00 AM Microsoft Corporation
c:\windows\system32\wshtcpip.dll
pstorsvc 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\pstorsvc.dll
psbase 5.2.3790.0 (srv03_rtm.030324-2048) 162.50 KB (166,400 bytes)
3/25/2003 4:00 AM Microsoft Corporation
c:\windows\system32\psbase.dll
dssenh 5.2.3790.0 (srv03_rtm.030324-2048) 319.33 KB (326,992 bytes)
3/25/2003 4:00 AM Microsoft Corporation
c:\windows\system32\dssenh.dll
svchost 5.2.3790.0 (srv03_rtm.030324-2048) 32.50 KB (33,280 bytes)
3/25/2003 4:00 AM Microsoft Corporation
c:\windows\system32\svchost.exe
rpcss 5.2.3790.68 (srv03_gdr.030614-1005) 645.50 KB (660,992 bytes)
7/5/2003 1:05 PM Microsoft Corporation
c:\windows\system32\rpcss.dll
wkssvc 5.2.3790.0 (srv03_rtm.030324-2048) 304.00 KB (311,296 bytes)
3/25/2003 4:00 AM Microsoft Corporation
c:\windows\system32\wkssvc.dll
dmserver 5.2.3790.0 (srv03_rtm.030324-2048) 45.50 KB (46,592
bytes) 3/25/2003 4:00 AM Microsoft Corporation
c:\windows\system32\dmserver.dll
es 2001.12.4720.0 (srv03_rtm.030324-2048) 637.50 KB (652,800
bytes) 3/25/2003 4:00 AM Microsoft Corporation
c:\windows\system32\es.dll

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srvsvc 5.2.3790.0 (srv03_rtm.030324-2048) 188.00 KB (192,512 bytes)
3/25/2003 4:00 AM Microsoft Corporation
c:\windows\system32\srvsvc.dll
seclogon 5.2.3790.0 (srv03_rtm.030324-2048) 41.50 KB (42,496
bytes) 3/25/2003 4:00 AM Microsoft Corporation
c:\windows\system32\seclogon.dll
sens 5.2.3790.0 (srv03_rtm.030324-2048) 90.50 KB (92,672 bytes)
3/25/2003 4:00 AM Microsoft Corporation
c:\windows\system32\sens.dll
wmisvc 5.2.3790.0 (srv03_rtm.030324-2048) 408.50 KB (418,304 bytes)
8/12/2003 8:41 AM Microsoft Corporation
c:\windows\system32\wbem\wmisvc.dll
vssapi 5.2.3790.0 (srv03_rtm.030324-2048) 1.28 MB (1,339,904 bytes)
3/25/2003 4:00 AM Microsoft Corporation
c:\windows\system32\vssapi.dll
atl 3.00.2282 348.00 KB (356,352 bytes) 3/25/2003 4:00 AM
Microsoft Corporation c:\windows\system32\atl.dll
comsvcs 2001.12.4720.0 (srv03_rtm.030324-2048) 2.96 MB (3,106,816
bytes) 8/12/2003 8:41 AM Microsoft Corporation
c:\windows\system32\comsvcs.dll
wbemcore 5.2.3790.0 (srv03_rtm.030324-2048) 1.64 MB (1,723,904
bytes) 8/12/2003 8:41 AM Microsoft Corporation
c:\windows\system32\wbem\wbemcore.dll
esscli 5.2.3790.0 (srv03_rtm.030324-2048) 919.50 KB (941,568 bytes)
8/12/2003 8:41 AM Microsoft Corporation
c:\windows\system32\wbem\esscli.dll
wmiutils 5.2.3790.0 (srv03_rtm.030324-2048) 285.00 KB (291,840
bytes) 8/12/2003 8:41 AM Microsoft Corporation
c:\windows\system32\wbem\wmiutils.dll
repdrvfs 5.2.3790.0 (srv03_rtm.030324-2048) 595.50 KB (609,792
bytes) 8/12/2003 8:41 AM Microsoft Corporation
c:\windows\system32\wbem\repdrvfs.dll
wmiprvsd 5.2.3790.0 (srv03_rtm.030324-2048) 1.38 MB (1,443,328
bytes) 8/12/2003 8:41 AM Microsoft Corporation
c:\windows\system32\wbem\wmiprvsd.dll
wbemess 5.2.3790.0 (srv03_rtm.030324-2048) 976.50 KB (999,936 bytes)
8/12/2003 8:41 AM Microsoft Corporation
c:\windows\system32\wbem\wbemess.dll
ncprov 5.2.3790.0 (srv03_rtm.030324-2048) 133.50 KB (136,704 bytes)
8/12/2003 8:41 AM Microsoft Corporation
c:\windows\system32\wbem\ncprov.dll
wiarpc 5.2.3790.0 (srv03_rtm.030324-2048) 67.50 KB (69,120 bytes)
3/25/2003 4:00 AM Microsoft Corporation
c:\windows\system32\wiarpc.dll
netman 5.2.3790.0 (srv03_rtm.030324-2048) 591.00 KB (605,184 bytes)
3/25/2003 4:00 AM Microsoft Corporation
c:\windows\system32\netman.dll
mprapi 5.2.3790.0 (srv03_rtm.030324-2048) 238.00 KB (243,712 bytes)
3/25/2003 4:00 AM Microsoft Corporation
c:\windows\system32\mprapi.dll
activeds 5.2.3790.0 (srv03_rtm.030324-2048) 543.50 KB (556,544
bytes) 3/25/2003 4:00 AM Microsoft Corporation
c:\windows\system32\activeds.dll
adslrpc 5.2.3790.0 (srv03_rtm.030324-2048) 312.00 KB (319,488 bytes)
3/25/2003 4:00 AM Microsoft Corporation
c:\windows\system32\adslrpc.dll
credui 5.2.3790.0 (srv03_rtm.030324-2048) 288.00 KB (294,912 bytes)
3/25/2003 4:00 AM Microsoft Corporation
c:\windows\system32\credui.dll

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rtutils 5.2.3790.0 (srv03_rtm.030324-2048) 81.50 KB (83,456 bytes)
3/25/2003 4:00 AM Microsoft Corporation
c:\windows\system32\rtutils.dll
rasapi32 5.2.3790.0 (srv03_rtm.030324-2048) 589.50 KB (603,648
bytes) 3/25/2003 4:00 AM Microsoft Corporation
c:\windows\system32\rasapi32.dll
rasman 5.2.3790.0 (srv03_rtm.030324-2048) 154.50 KB (158,208 bytes)
3/25/2003 4:00 AM Microsoft Corporation
c:\windows\system32\rasman.dll
tapi32 5.2.3790.0 (srv03_rtm.030324-2048) 493.00 KB (504,832 bytes)
3/25/2003 4:00 AM Microsoft Corporation
c:\windows\system32\tapi32.dll
wzcsvc 5.2.3790.0 (srv03_rtm.030324-2048) 608.50 KB (623,104 bytes)
3/25/2003 5:19 AM Microsoft Corporation
c:\windows\system32\wzcsvc.dll
wmi 5.2.3790.0 (srv03_rtm.030324-2048) 5.00 KB (5,120 bytes)
3/25/2003 4:00 AM Microsoft Corporation
c:\windows\system32\wmi.dll
dhcpcsvc 5.2.3790.0 (srv03_rtm.030324-2048) 279.50 KB (286,208
bytes) 3/25/2003 4:00 AM Microsoft Corporation
c:\windows\system32\dhcpcsvc.dll
wzcsapi 5.2.3790.0 (srv03_rtm.030324-2048) 49.50 KB (50,688 bytes)
3/25/2003 5:19 AM Microsoft Corporation
c:\windows\system32\wzcsapi.dll
netshell 5.2.3790.0 (srv03_rtm.030324-2048) 2.65 MB (2,779,648
bytes) 3/25/2003 4:00 AM Microsoft Corporation
c:\windows\system32\netshell.dll
clusapi 5.2.3790.0 (srv03_rtm.030324-2048) 165.50 KB (169,472 bytes)
3/25/2003 4:00 AM Microsoft Corporation
c:\windows\system32\clusapi.dll
hnetcfg 5.2.3790.0 (srv03_rtm.030324-2048) 764.00 KB (782,336 bytes)
3/25/2003 4:00 AM Microsoft Corporation
c:\windows\system32\hnetcfg.dll
wininet 6.0.3790.0 (srv03_rtm.030324-2048) 1.43 MB (1,500,672 bytes)
3/25/2003 4:00 AM Microsoft Corporation
c:\windows\system32\wininet.dll
rasdlg 5.2.3790.0 (srv03_rtm.030324-2048) 1.35 MB (1,420,800 bytes)
3/25/2003 4:00 AM Microsoft Corporation
c:\windows\system32\rasdlg.dll
rasadhlp 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\rasadhlp.dll
ntlsapi 5.2.3790.0 (srv03_rtm.030324-2048) 14.50 KB (14,848 bytes)
3/25/2003 4:00 AM Microsoft Corporation
c:\windows\system32\ntlsapi.dll
pchsvc 5.2.3790.0 (srv03_rtm.030324-2048) 94.50 KB (96,768 bytes)
8/12/2003 8:43 AM Microsoft Corporation
c:\windows\pchealth\helpctr\binaries\pchsvc.dll
wbemcons 5.2.3790.0 (srv03_rtm.030324-2048) 237.50 KB (243,200
bytes) 8/12/2003 8:41 AM Microsoft Corporation
c:\windows\system32\wbem\wbemcons.dll
esconmgr 6.0.3.31 155.50 KB (159,232 bytes) 7/15/2003
10:02 AM Unisys Corporation c:\windows\system32\esconmgr.exe
MapServant 4.0.510.0 176.06 KB (180,283 bytes) 7/23/2003
11:27 AM Unisys Corporation c:\windows\system32\mapservant.exe

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wow64 5.2.3790.0 (srv03_rtm.030324-2048) 438.50 KB (449,024 bytes)
 3/25/2003 4:00 AM Microsoft Corporation
 c:\windows\system32\wow64.dll

wow64win 5.2.3790.0 (srv03_rtm.030324-2048) 514.50 KB (526,848 bytes)
 3/25/2003 4:00 AM Microsoft Corporation
 c:\windows\system32\wow64win.dll

wow64cpu 5.2.3790.0 (srv03_rtm.030324-2048) 38.00 KB (38,912 bytes)
 3/25/2003 4:00 AM Microsoft Corporation
 c:\windows\system32\wow64cpu.dll

explorer 6.00.3790.0 (srv03_rtm.030324-2048) 1.63 MB (1,704,960 bytes)
 3/25/2003 4:00 AM Microsoft Corporation
 c:\windows\explorer.exe

browseui 6.00.3790.0 (srv03_rtm.030324-2048) 2.42 MB (2,536,960 bytes)
 3/25/2003 4:00 AM Microsoft Corporation
 c:\windows\system32\browseui.dll

shdocvw 6.00.3790.41 (srv03_gdr.030426-1446) 3.20 MB (3,359,744 bytes)
 5/27/2003 9:41 PM Microsoft Corporation
 c:\windows\system32\shdocvw.dll

apphelp 5.2.3790.0 (srv03_rtm.030324-2048) 262.50 KB (268,800 bytes)
 3/25/2003 4:00 AM Microsoft Corporation
 c:\windows\system32\apphelp.dll

themeui 6.00.3790.0 (srv03_rtm.030324-2048) 823.00 KB (842,752 bytes)
 3/25/2003 4:00 AM Microsoft Corporation
 c:\windows\system32\themeui.dll

msimg32 5.2.3790.0 (srv03_rtm.030324-2048) 7.00 KB (7,168 bytes)
 3/25/2003 4:00 AM Microsoft Corporation
 c:\windows\system32\msimg32.dll

actxprxy 6.00.3790.0 (srv03_rtm.030324-2048) 230.00 KB (235,520 bytes)
 3/25/2003 4:00 AM Microsoft Corporation
 c:\windows\system32\actxprxy.dll

linkinfo 5.2.3790.0 (srv03_rtm.030324-2048) 42.00 KB (43,008 bytes)
 3/25/2003 4:00 AM Microsoft Corporation
 c:\windows\system32\linkinfo.dll

ntshrui 6.00.3790.0 (srv03_rtm.030324-2048) 233.50 KB (239,104 bytes)
 3/25/2003 4:00 AM Microsoft Corporation
 c:\windows\system32\ntshrui.dll

urlmon 6.00.3790.9 (srv03_gdr.030426-1446) 1.21 MB (1,271,296 bytes)
 5/27/2003 9:41 PM Microsoft Corporation
 c:\windows\system32\urlmon.dll

webcheck 6.00.3790.0 (srv03_rtm.030324-2048) 664.50 KB (680,448 bytes)
 3/25/2003 4:00 AM Microsoft Corporation
 c:\windows\system32\webcheck.dll

wsock32 5.2.3790.0 (srv03_rtm.030324-2048) 23.00 KB (23,552 bytes)
 3/25/2003 4:00 AM Microsoft Corporation
 c:\windows\system32\wsock32.dll

stobject 5.2.3790.0 (srv03_rtm.030324-2048) 178.00 KB (182,272 bytes)
 3/25/2003 4:00 AM Microsoft Corporation
 c:\windows\system32\stobject.dll

batmeter 6.00.3790.0 (srv03_rtm.030324-2048) 55.50 KB (56,832 bytes)
 3/25/2003 4:00 AM Microsoft Corporation
 c:\windows\system32\batmeter.dll

powrprof 6.00.3790.0 (srv03_rtm.030324-2048) 36.00 KB (36,864 bytes)
 3/25/2003 4:00 AM Microsoft Corporation
 c:\windows\system32\powrprof.dll

printui 5.2.3790.0 (srv03_rtm.030324-2048) 1.09 MB (1,142,784 bytes)
 3/25/2003 4:00 AM Microsoft Corporation
 c:\windows\system32\printui.dll

cfgmgr32 5.2.3790.0 (srv03_rtm.030324-2048) 16.00 KB (16,384 bytes)
 3/25/2003 4:00 AM Microsoft Corporation
 c:\windows\system32\cfgmgr32.dll

shdoclc 6.00.3790.0 (srv03_rtm.030324-2048) 588.00 KB (602,112 bytes)
 3/25/2003 4:00 AM Microsoft Corporation
 c:\windows\system32\shdoclc.dll

mmc 5.2.3790.0 (srv03_rtm.030324-2048) 2.48 MB (2,598,912 bytes)
 3/25/2003 4:00 AM Microsoft Corporation
 c:\windows\system32\mmc.exe

mfc42u 6.00.3014.0 3.34 MB (3,506,176 bytes) 3/25/2003 4:00 AM
 Microsoft Corporation c:\windows\system32\mfc42u.dll

oleacc 4.2.5406.0 (srv03_rtm.030324-2048) 485.00 KB (496,640 bytes)
 3/25/2003 4:00 AM Microsoft Corporation
 c:\windows\system32\oleacc.dll

mmcbase 5.2.3790.0 (srv03_rtm.030324-2048) 139.00 KB (142,336 bytes)
 3/25/2003 4:00 AM Microsoft Corporation
 c:\windows\system32\mmcbase.dll

mmcndmgr 5.2.3790.0 (srv03_rtm.030324-2048) 3.10 MB (3,248,640 bytes)
 3/25/2003 4:00 AM Microsoft Corporation
 c:\windows\system32\mmcndmgr.dll

msxml3 8.40.9419.0 3.42 MB (3,590,656 bytes) 3/25/2003 4:00 AM
 Microsoft Corporation c:\windows\system32\msxml3.dll

filemgmt 5.2.3790.0 (srv03_rtm.030324-2048) 914.00 KB (935,936 bytes)
 3/25/2003 4:00 AM Microsoft Corporation
 c:\windows\system32\filemgmt.dll

snmpsnap 5.2.3790.0 (srv03_rtm.030324-2048) 540.50 KB (553,472 bytes)
 3/25/2003 4:00 AM Microsoft Corporation
 c:\windows\system32\snmpsnap.dll

servdeps 5.2.3790.0 (srv03_rtm.030324-2048) 139.50 KB (142,848 bytes)
 8/12/2003 8:41 AM Microsoft Corporation
 c:\windows\system32\servdeps.dll

mmfutil 5.2.3790.0 (srv03_rtm.030324-2048) 25.00 KB (25,600 bytes)
 8/12/2003 8:41 AM Microsoft Corporation
 c:\windows\system32\mmfutil.dll

mshtml 6.00.3790.0 (srv03_rtm.030324-2048) 7.83 MB (8,208,384 bytes)
 3/25/2003 4:00 AM Microsoft Corporation
 c:\windows\system32\mshtml.dll

mlang 6.00.3790.0 (srv03_rtm.030324-2048) 799.00 KB (818,176 bytes)
 3/25/2003 4:00 AM Microsoft Corporation
 c:\windows\system32\mlang.dll

msimtf 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\msimtf.dll

msctf 5.2.3790.0 (srv03_rtm.030324-2048) 924.50 KB (946,688 bytes)
 3/25/2003 4:00 AM Microsoft Corporation
 c:\windows\system32\msctf.dll

jscrip 5.6.0.8515 1.21 MB (1,268,736 bytes) 3/25/2003 4:00 AM
 Microsoft Corporation c:\windows\system32\jscrip.dll

msls31 3.10.349.0 448.00 KB (458,752 bytes) 3/25/2003 4:00 AM
 Microsoft Corporation c:\windows\system32\msls31.dll

imm32 5.2.3790.0 (srv03_rtm.030324-2048) 307.50 KB (314,880 bytes)
 3/25/2003 4:00 AM Microsoft Corporation
 c:\windows\system32\imm32.dll

mshtml 6.00.3790.0 (srv03_rtm.030324-2048) 1.34 MB (1,408,512 bytes)
 3/25/2003 4:00 AM Microsoft Corporation
 c:\windows\system32\mshtml.dll

imgutil 5.2.3790.0 (srv03_rtm.030324-2048) 101.00 KB (103,424 bytes)
 3/25/2003 4:00 AM Microsoft Corporation
 c:\windows\system32\imgutil.dll

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cmd 5.2.3790.0 (srv03_rtm.030324-2048) 493.50 KB (505,344 bytes)
3/25/2003 4:00 AM Microsoft Corporation
c:\windows\system32\cmd.exe
sqlplus Not Available 1.32 MB (1,379,840 bytes) 9/27/2003 9:49 PM
Not Available c:\oracle\orcl0414\bin\sqlplus.exe
oraclient10 5.35 MB (5,611,520 bytes) 9/27/2003 9:49 PM
Oracle Corporation c:\oracle\orcl0414\bin\oraclient10.dll

oracore10 10.1.0.0.0 BETA 1.98 MB (2,072,576 bytes)
9/27/2003 9:49 PM Oracle Corporation
c:\oracle\orcl0414\bin\oracore10.dll
oranls10 10.0.0.0.0 Production 1.40 MB (1,469,952 bytes)
9/27/2003 9:49 PM Oracle Corporation
c:\oracle\orcl0414\bin\oranls10.dll
oraunls10 10.0.0.0.0 Production 145.50 KB (148,992 bytes)
9/27/2003 9:49 PM Oracle Corporation
c:\oracle\orcl0414\bin\oraunls10.dll
orauts 10.0.0.0.0 284.00 KB (290,816 bytes) 9/27/2003 9:49 PM
Oracle Corporation c:\oracle\orcl0414\bin\orauts.dll
oravsn10 18.00 KB (18,432 bytes) 9/27/2003 9:49 PM
Oracle Corporation c:\oracle\orcl0414\bin\oravsn10.dll
oracommon10 1.67 MB (1,753,600 bytes) 9/27/2003 9:49 PM
Oracle Corporation c:\oracle\orcl0414\bin\oracommon10.dll

orageneric10 10.97 MB (11,498,496 bytes) 9/27/2003 9:49 PM
Oracle Corporation c:\oracle\orcl0414\bin\orageneric10.dll

orasnls10 10.0.0.0.0 Production 161.50 KB (165,376 bytes)
9/27/2003 9:49 PM Oracle Corporation
c:\oracle\orcl0414\bin\orasnls10.dll
oraxml10 2.26 MB (2,370,048 bytes) 9/27/2003 9:49 PM
Oracle Corporation c:\oracle\orcl0414\bin\oraxml10.dll
oraxsd10 514.50 KB (526,848 bytes) 9/27/2003 9:49 PM
Oracle Corporation c:\oracle\orcl0414\bin\oraxsd10.dll
orannzsb10 9.2.0.1.0 Production 2.83 MB (2,962,432 bytes)
9/27/2003 9:49 PM Oracle Corporation
c:\oracle\orcl0414\bin\orannzsb10.dll
oran10 9.2.0.1.0 Production 2.69 MB (2,823,680 bytes) 9/27/2003 9:49
PM Oracle Corporation c:\oracle\orcl0414\bin\oran10.dll
oran10 9.2.0.1.0 Production 480.50 KB (492,032 bytes) 9/27/2003 9:49
PM Oracle Corporation c:\oracle\orcl0414\bin\oran10.dll
oranldap10 9.2.0.1.0 Production 120.00 KB (122,880 bytes)
9/27/2003 9:49 PM Oracle Corporation
c:\oracle\orcl0414\bin\oranldap10.dll
oraldapclnt10 10.0.0.0.0 754.00 KB (772,096 bytes) 9/27/2003 9:49
PM Oracle Corporation c:\oracle\orcl0414\bin\oraldapclnt10.dll

orancrypt10 9.2.0.1.0 Production 184.50 KB (188,928 bytes)
9/27/2003 9:49 PM Oracle Corporation
c:\oracle\orcl0414\bin\orancrypt10.dll
oranro10 9.2.0.1.0 Production 794.50 KB (813,568 bytes)
9/27/2003 9:49 PM Oracle Corporation
c:\oracle\orcl0414\bin\oranro10.dll
orantcp10 9.2.0.1.0 Production 135.50 KB (138,752 bytes)
9/27/2003 9:49 PM Oracle Corporation
c:\oracle\orcl0414\bin\orantcp10.dll
oranhst10 9.2.0.1.0 Production 21.50 KB (22,016 bytes)
9/27/2003 9:49 PM Oracle Corporation
c:\oracle\orcl0414\bin\oranhst10.dll

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oranoname10 9.2.0.1.0 Production 20.50 KB (20,992 bytes)
9/27/2003 9:49 PM Oracle Corporation
c:\oracle\orcl0414\bin\oranoname10.dll
orancds10 9.2.0.1.0 Production 17.50 KB (17,920 bytes)
9/27/2003 9:49 PM Oracle Corporation
c:\oracle\orcl0414\bin\orancds10.dll
orantns10 9.2.0.1.0 Production 29.00 KB (29,696 bytes)
9/27/2003 9:49 PM Oracle Corporation
c:\oracle\orcl0414\bin\orantns10.dll
orapls10 9.2.0.0.0 Beta 7.86 MB (8,243,712 bytes) 9/27/2003 9:49
PM Oracle Corporation c:\oracle\orcl0414\bin\orapls10.dll
oraslax10 8 38.50 KB (39,424 bytes) 9/27/2003 9:49 PM
Oracle Corporation c:\oracle\orcl0414\bin\oraslax10.dll
oraplpl10 9.2.0.0.0 Beta 1.45 MB (1,523,200 bytes) 9/27/2003 9:49
PM Oracle Corporation c:\oracle\orcl0414\bin\oraplpl10.dll
orahasgen10 10.0.0.0.0 494.00 KB (505,856 bytes) 9/27/2003 9:49
PM Oracle Corporation c:\oracle\orcl0414\bin\orahasgen10.dll

oraocr10 10.0.0.0.0 234.00 KB (239,616 bytes) 9/27/2003 9:49
PM Oracle Corporation c:\oracle\orcl0414\bin\oraocr10.dll
oraocrb10 10.0.0.0.0 138.00 KB (141,312 bytes) 9/27/2003 9:49
PM Oracle Corporation c:\oracle\orcl0414\bin\oraocrb10.dll
orasql10 9.2.0.1.0 Production 601.00 KB (615,424 bytes)
9/27/2003 9:49 PM Oracle Corporation
c:\oracle\orcl0414\bin\orasql10.dll
oranbeq10 9.2.0.1.0 Production 49.50 KB (50,688 bytes)
9/27/2003 9:49 PM Oracle Corporation
c:\oracle\orcl0414\bin\oranbeq10.dll
security 5.2.3790.0 (srv03_rtm.030324-2048) 7.00 KB (7,168 bytes)
3/25/2003 4:00 AM Microsoft Corporation
c:\windows\system32\security.dll
taskmgr 5.2.3790.0 (srv03_rtm.030324-2048) 311.50 KB (318,976 bytes)
3/25/2003 4:00 AM Microsoft Corporation
c:\windows\system32\taskmgr.exe
oracle Not Available 124.11 MB (130,138,624 bytes) 9/27/2003 9:48 PM
Not Available c:\oracle\orcl0414\bin\oracle.exe
oraodm10 10.1.0.0.0 20.00 KB (20,480 bytes) 9/27/2003 9:49
PM Oracle Corporation c:\oracle\orcl0414\bin\oraodm10.dll
orajox10 Not Available 10.20 MB (10,696,704 bytes) 9/27/2003 9:49
PM Not Available c:\oracle\orcl0414\bin\orajox10.dll
oransgr10 9.2.0.1.0 Production 70.00 KB (71,680 bytes)
9/27/2003 9:49 PM Oracle Corporation
c:\oracle\orcl0414\bin\oransgr10.dll
oraimr10 10, 0, 0, 1 111.00 KB (113,664 bytes) 9/27/2003 9:49
PM Oracle Corporation c:\oracle\orcl0414\bin\oraimr10.dll
dbghelp 5.2.3790.0 (srv03_rtm.030324-2048) 2.11 MB (2,216,448 bytes)
3/25/2003 4:00 AM Microsoft Corporation
c:\windows\system32\dbghelp.dll
winnr 5.2.3790.0 (srv03_rtm.030324-2048) 39.00 KB (39,936 bytes)
3/25/2003 4:00 AM Microsoft Corporation
c:\windows\system32\winnr.dll
tnslsnr Not Available 388.00 KB (397,312 bytes) 9/27/2003 9:49 PM
Not Available c:\oracle\orcl0414\bin\tnslsnr.exe
oranms 9.2.0.0.0 36.50 KB (37,376 bytes) 9/27/2003 9:49 PM
Oracle Corporation c:\oracle\orcl0414\bin\oranms.dll
oranmsp 9.2.0.0.0 151.00 KB (154,624 bytes) 9/27/2003 9:49 PM
Oracle Corporation c:\oracle\orcl0414\bin\oranmsp.dll

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oranipcl0 9.2.0.1.0 Production 55.00 KB (56,320 bytes)
9/27/2003 9:49 PM Oracle Corporation
c:\oracle\orcl0414\bin\oranipcl0.dll
cmprops 5.2.3790.0 (srv03_rtm.030324-2048) 455.00 KB (465,920 bytes)
8/12/2003 8:41 AM Microsoft Corporation
c:\windows\system32\cmprops.dll
ntmsmgr 5.2.3790.0 (srv03_rtm.030324-2048) 1.18 MB (1,241,088 bytes)
3/25/2003 4:00 AM Microsoft Corporation
c:\windows\system32\ntmsmgr.dll
ntmsapi 5.2.3790.0 (srv03_rtm.030324-2048) 118.00 KB (120,832 bytes)
3/25/2003 4:00 AM Microsoft Corporation
c:\windows\system32\ntmsapi.dll
els 5.2.3790.0 (srv03_rtm.030324-2048) 504.50 KB (516,608 bytes)
3/25/2003 4:00 AM Microsoft Corporation
c:\windows\system32\els.dll
dfrgsnap 5.2.3790.0 (srv03_rtm.030324-2048) 97.00 KB (99,328
bytes) 3/25/2003 4:00 AM Microsoft Corp. and Executive Software
International, Inc. c:\windows\system32\dfrgsnap.dll
dfrgres 5.2.3790.0 (srv03_rtm.030324-2048) 50.00 KB (51,200 bytes)
3/25/2003 4:00 AM Microsoft Corp. and Executive Software
International, Inc. c:\windows\system32\dfrgres.dll
mycomput 5.2.3790.0 (srv03_rtm.030324-2048) 266.00 KB (272,384
bytes) 3/25/2003 4:00 AM Microsoft Corporation
c:\windows\system32\mycomput.dll
wbemcntl 5.2.3790.0 (srv03_rtm.030324-2048) 511.50 KB (523,776
bytes) 8/12/2003 8:41 AM Microsoft Corporation
c:\windows\system32\wbem\wbemcntl.dll
localsec 5.2.3790.0 (srv03_rtm.030324-2048) 638.50 KB (653,824
bytes) 3/25/2003 4:00 AM Microsoft Corporation
c:\windows\system32\localsec.dll
smlogcfg 5.2.3790.0 (srv03_rtm.030324-2048) 995.50 KB (1,019,392
bytes) 3/25/2003 4:00 AM Microsoft Corporation
c:\windows\system32\smlogcfg.dll
pdh 5.2.3790.0 (srv03_rtm.030324-2048) 727.50 KB (744,960 bytes)
3/25/2003 4:00 AM Microsoft Corporation
c:\windows\system32\pdh.dll
odbc32 3.525.1022.0 (srv03_rtm.030324-2048) 620.00 KB (634,880 bytes)
3/25/2003 4:00 AM Microsoft Corporation
c:\windows\system32\odbc32.dll
odbcbc 2000.085.1022.0 (srv03_rtm.030324-2048) 48.00 KB (49,152
bytes) 3/25/2003 4:00 AM Microsoft Corporation
c:\windows\system32\odbcbc.dll
odbcint 3.525.1022.0 (srv03_rtm.030324-2048) 88.00 KB (90,112 bytes)
3/25/2003 4:00 AM Microsoft Corporation
c:\windows\system32\odbcint.dll
dmskmg 5.2.3790.0 (srv03_rtm.030324-2048) 515.00 KB (527,360
bytes) 3/25/2003 4:00 AM Microsoft Corporation
c:\windows\system32\dmskmg.dll
dmutil 5.2.3790.0 (srv03_rtm.030324-2048) 71.50 KB (73,216 bytes)
3/25/2003 12:50 AM Microsoft Corporation
c:\windows\system32\dmutil.dll
dmskres 5.2.3790.0 (srv03_rtm.030324-2048) 115.00 KB (117,760
bytes) 3/25/2003 4:00 AM Microsoft Corporation
c:\windows\system32\dmskres.dll
devmgr 5.2.3790.0 (srv03_rtm.030324-2048) 603.50 KB (617,984 bytes)
3/25/2003 4:00 AM Microsoft Corporation
c:\windows\system32\devmgr.dll

```

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rasuser 5.2.3790.0 (srv03_rtm.030324-2048) 489.00 KB (500,736 bytes)
3/25/2003 4:00 AM Microsoft Corporation
c:\windows\system32\rasuser.dll
dsprop 5.2.3790.0 (srv03_rtm.030324-2048) 337.00 KB (345,088 bytes)
3/25/2003 4:00 AM Microsoft Corporation
c:\windows\system32\dsprop.dll
dsuiext 5.2.3790.0 (srv03_rtm.030324-2048) 222.00 KB (227,328 bytes)
3/25/2003 4:00 AM Microsoft Corporation
c:\windows\system32\dsuiext.dll
mprsnap 5.2.3790.0 (srv03_rtm.030324-2048) 2.72 MB (2,848,768 bytes)
3/25/2003 4:00 AM Microsoft Corporation
c:\windows\system32\mprsnap.dll
rtrfiltr 5.2.3790.0 (srv03_rtm.030324-2048) 230.00 KB (235,520
bytes) 3/25/2003 4:00 AM Microsoft Corporation
c:\windows\system32\rtrfiltr.dll
riched32 5.2.3790.0 (srv03_rtm.030324-2048) 5.00 KB (5,120 bytes)
3/25/2003 4:00 AM Microsoft Corporation
c:\windows\system32\riched32.dll
riched20 5.31.23.1218 1.25 MB (1,313,280 bytes) 3/25/2003 4:00
AM Microsoft Corporation c:\windows\system32\riched20.dll
adsnt 5.2.3790.0 (srv03_rtm.030324-2048) 749.50 KB (767,488 bytes)
3/25/2003 4:00 AM Microsoft Corporation
c:\windows\system32\adsnt.dll
dmdlgs 5.2.3790.0 (srv03_rtm.030324-2048) 670.50 KB (686,592 bytes)
3/25/2003 4:00 AM Microsoft Corporation
c:\windows\system32\dmdlgs.dll
dmview 5.2.3790.0 (srv03_rtm.030324-2048) 207.00 KB (211,968 bytes)
3/25/2003 4:00 AM Microsoft Corporation
c:\windows\system32\dmview.ocx
vds_ps 5.2.3790.0 (srv03_rtm.030324-2048) 31.00 KB (31,744 bytes)
3/25/2003 4:00 AM Microsoft Corporation
c:\windows\system32\vds_ps.dll
dmvdsitf 5.2.3790.0 (srv03_rtm.030324-2048) 321.00 KB (328,704
bytes) 3/25/2003 4:00 AM Microsoft Corporation
c:\windows\system32\dmvdsitf.dll
vds 5.2.3790.0 (srv03_rtm.030324-2048) 543.50 KB (556,544 bytes)
3/25/2003 4:00 AM Microsoft Corporation
c:\windows\system32\vds.exe
osuninst 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\osuninst.dll
vdsutil 5.2.3790.0 (srv03_rtm.030324-2048) 98.00 KB (100,352 bytes)
3/25/2003 4:00 AM Microsoft Corporation
c:\windows\system32\vdsutil.dll
vdsbas 5.2.3790.0 (srv03_rtm.030324-2048) 321.50 KB (329,216 bytes)
3/25/2003 4:00 AM Microsoft Corporation
c:\windows\system32\vdsbas.dll
fmifs 5.2.3790.0 (srv03_rtm.030324-2048) 53.00 KB (54,272 bytes)
3/25/2003 4:00 AM Microsoft Corporation
c:\windows\system32\fmifs.dll
ulib 5.2.3790.0 (srv03_rtm.030324-2048) 448.50 KB (459,264 bytes)
3/25/2003 4:00 AM Microsoft Corporation
c:\windows\system32\ulib.dll
ifsutil 5.2.3790.0 (srv03_rtm.030324-2048) 214.00 KB (219,136 bytes)
3/25/2003 4:00 AM Microsoft Corporation
c:\windows\system32\ifsutil.dll
vdsdyndr 5.2.3790.0 (srv03_rtm.030324-2048) 710.50 KB (727,552
bytes) 3/25/2003 4:00 AM Microsoft Corporation
c:\windows\system32\vdsdyndr.dll

```

```

dmintf 5.2.3790.0 (srv03_rtm.030324-2048) 25.00 KB (25,600 bytes)
3/25/2003 4:00 AM Microsoft Corporation
c:\windows\system32\dmintf.dll
dmadmin 5.2.3790.0 (srv03_rtm.030324-2048) 643.50 KB (658,944 bytes)
3/25/2003 4:00 AM Microsoft Corporation
c:\windows\system32\dmadmin.exe
helpctr 5.2.3790.0 (srv03_rtm.030324-2048) 1.97 MB (2,066,432 bytes)
8/12/2003 8:43 AM Microsoft Corporation
c:\windows\pchealth\helpctr\binaries\helpctr.exe
hcappres 5.2.3790.0 (srv03_rtm.030324-2048) 6.00 KB (6,144 bytes)
8/12/2003 8:43 AM Microsoft Corporation
c:\windows\pchealth\helpctr\binaries\hcappres.dll
itss 5.2.3790.0 (srv03_rtm.030324-2048) 349.00 KB (357,376 bytes)
3/25/2003 4:00 AM Microsoft Corporation
c:\windows\system32\itss.dll
pchshell 5.2.3790.0 (srv03_rtm.030324-2048) 277.50 KB (284,160
bytes) 8/12/2003 8:43 AM Microsoft Corporation
c:\windows\pchealth\helpctr\binaries\pchshell.dll
vbscript 5.6.0.8515 1.06 MB (1,110,016 bytes) 3/25/2003 4:00
AM Microsoft Corporation c:\windows\system32\vbscript.dll
mfc42 6.00.3014.0 3.36 MB (3,526,656 bytes) 3/25/2003 4:00 AM
Microsoft Corporation c:\windows\system32\mfc42.dll
msinfo 5.2.3790.0 (srv03_rtm.030324-2048) 1.20 MB (1,257,984 bytes)
8/12/2003 8:43 AM Microsoft Corporation
c:\windows\pchealth\helpctr\binaries\msinfo.dll
helpsvc 5.2.3790.0 (srv03_rtm.030324-2048) 2.18 MB (2,289,152 bytes)
8/12/2003 8:43 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 local service	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\dlhhost.exe /processid:{02d4b3f1-fd88-11d1-960d-00805fc79235}	Normal LocalSystem 0

```

Cryptographic Services CryptSvc Stopped Manual Share Process
c:\windows\system32\svchost.exe -k netsvcs Normal LocalSystem
0
Distributed File System Dfs Stopped Manual Own Process
c:\windows\system32\dfssvc.exe Normal LocalSystem 0
DHCP Client Dhcp Stopped Manual Share Process
c:\windows\system32\svchost.exe -k networkservice Normal NT
AUTHORITY\NetworkService 0
Logical Disk Manager Administrative Service dmadmin Running 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
Console Manager Network Connection Co-Installer ESCOINST
Stopped Manual Own Process c:\windows\system32\escoinst.dll
Normal LocalSystem 0
Console Manager ESCONMGR Running Auto Own Process
c:\windows\system32\esconmgr.exe Normal LocalSystem 0
Event Log Eventlog Running Auto Share Process
c:\windows\system32\services.exe Normal LocalSystem 0
COM+ Event System EventSystem Running Manual Share Process
c:\windows\system32\svchost.exe -k netsvcs Normal LocalSystem
0
Help and Support helpsvc Running Manual Share Process
c:\windows\system32\svchost.exe -k netsvcs Normal LocalSystem
0
Human Interface Device Access HidServ Stopped Disabled Share Process
c:\windows\system32\svchost.exe -k netsvcs Normal LocalSystem
0
HTTP SSL HTTPFilter Stopped Manual Share Process
c:\windows\system32\lsass.exe Normal LocalSystem 0
IAS Jet Database Access IASJet Stopped Manual Share Process
c:\windows\syswow64\svchost.exe -k iasjet Normal LocalSystem
0
IMAPI CD-Burning COM Service ImapiService Stopped Disabled Own
Process c:\windows\system32\imapi.exe Normal LocalSystem 0
Intersite Messaging IsmServ Stopped Disabled Own Process
c:\windows\system32\ismsserv.exe Normal LocalSystem 0
Kerberos Key Distribution Center kdc Stopped Disabled Share
Process c:\windows\system32\lsass.exe Normal LocalSystem 0
Server lanmanserver Running Auto Share Process
c:\windows\system32\svchost.exe -k netsvcs Normal LocalSystem
0
Workstation lanmanworkstation Running Auto Share Process
c:\windows\system32\svchost.exe -k netsvcs Normal LocalSystem
0

```


License Logging	LicenseService	Stopped	Disabled	Own Process
c:\windows\system32\llssrv.exe Normal NT				
AUTHORITY\NetworkService	0			
TCP/IP NetBIOS Helper	LmHosts	Stopped	Manual	Share Process
c:\windows\system32\svchost.exe -k localservice Normal NT				
AUTHORITY\LocalService	0			
mapservant	mapservant	Running	Auto	Own Process
c:\windows\system32\mapservant.exe Normal LocalSystem 0				
Messenger	Messenger	Stopped	Disabled	Share Process
c:\windows\system32\svchost.exe -k netsvcs Normal LocalSystem 0				
Distributed Transaction Coordinator	MSDTC	Stopped	Manual	Own Process
c:\windows\system32\msdtc.exe Normal NT AUTHORITY\NetworkService 0				
Windows Installer	MSIServer	Stopped	Manual	Share Process
c:\windows\system32\msiexec.exe /v Normal LocalSystem 0				
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				
OracleServiceTPCC	OracleServiceTPCC	Running	Manual	Own Process
c:\oracle\orcl0414\bin\oracle.exe tpcc Normal LocalSystem 0				
OracleTNSListener	OracleTNSListener	Running	Manual	Own Process
c:\oracle\orcl0414\bin\ttnslnr Normal LocalSystem 0				
OracleTNSListenerlistener2	OracleTNSListenerlistener2	Stopped	Manual	Own Process
c:\oracle\orcl0414\bin\ttnslnr Normal LocalSystem 0				
OracleTNSListenerlistener3	OracleTNSListenerlistener3	Stopped	Manual	Own Process
c:\oracle\orcl0414\bin\ttnslnr Normal LocalSystem 0				
OracleTNSListenerlistener4	OracleTNSListenerlistener4	Stopped	Manual	Own Process
c:\oracle\orcl0414\bin\ttnslnr Normal LocalSystem 0				
Plug and Play	PlugPlay	Running	Auto	Share Process
c:\windows\system32\services.exe Normal LocalSystem 0				
IPSEC Services PolicyAgent	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	Stopped	Manual	Share Process
c:\windows\system32\svchost.exe -k regsvc Normal NT AUTHORITY\LocalService 0				
Remote Procedure Call (RPC) Locator	RpcLocator	Stopped	Manual	Own Process
c:\windows\system32\locator.exe Normal NT AUTHORITY\NetworkService 0				
Remote Procedure Call (RPC)	RpcSs	Running	Auto	Share Process
c:\windows\system32\svchost -k rpcss Normal LocalSystem 0				
Resultant Set of Policy Provider	RSOPProv	Stopped	Manual	Share Process
c:\windows\system32\rsopprov.exe Normal LocalSystem 0				
Special Administration Console Helper	sacsrv	Stopped	Manual	Share Process
c:\windows\system32\svchost.exe -k netsvcs Normal LocalSystem 0				
Security Accounts Manager	SamSs	Running	Auto	Share Process
c:\windows\system32\lsass.exe Normal LocalSystem 0				
Smart Card	SCardSvr	Stopped	Manual	Share Process
c:\windows\system32\scardsvr.exe Ignore NT AUTHORITY\LocalService 0				
Task Scheduler	Schedule	Stopped	Manual	Share Process
c:\windows\system32\svchost.exe -k netsvcs Normal LocalSystem 0				
Secondary Logon	seclogon	Running	Auto	Share Process
c:\windows\system32\svchost.exe -k netsvcs Ignore LocalSystem 0				
System Event Notification	SENS	Running	Auto	Share Process
c:\windows\system32\svchost.exe -k netsvcs Normal LocalSystem 0				
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 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
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 Manual 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 Running Manual Own Process
c:\windows\system32\vds.exe Normal LocalSystem 0
Volume Shadow Copy VSS Stopped Manual Own Process
c:\windows\system32\vssvc.exe Normal LocalSystem 0
Windows Time W32Time Stopped Manual Share Process
c:\windows\system32\svchost.exe -k netsvcs Normal LocalSystem
0
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
Windows Management Instrumentation Driver Extensions Wmi Stopped Manual
Share Process c:\windows\system32\svchost.exe -k netsvcs Normal
LocalSystem 0
WMI Performance Adapter WmiApSrv Stopped Manual Own Process
c:\windows\system32\wbem\wmiaprv.exe Normal LocalSystem 0

Automatic Updates wuauserv Stopped Manual Share Process
c:\windows\system32\svchost.exe -k netsvcs Normal LocalSystem
0
Wireless Configuration WZCSVC Stopped Manual Share Process
c:\windows\system32\svchost.exe -k netsvcs Normal LocalSystem
0

```

[Program Groups]

```

Group Name Name User Name
Accessories Default User:Accessories Default User
Accessories\Accessibility Default User:Accessories\Accessibility
Default User

```

```

Accessories\Entertainment Default User:Accessories\Entertainment
Default User
Startup Default User:Startup Default User
Accessories All Users:Accessories All Users
Accessories\Accessibility All Users:Accessories\Accessibility All
Users
Accessories\Communications All Users:Accessories\Communications All
Users
Accessories\Entertainment All Users:Accessories\Entertainment All
Users
Accessories\System Tools All Users:Accessories\System Tools All
Users
Administrative Tools All Users:Administrative Tools All Users
Intel(R) VTune(TM) Performance Analyzer All Users:Intel(R) VTune(TM)
Performance Analyzer 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-CASSIN8\Administrator:Accessories MV-
CASSIN8\Administrator
Accessories\Accessibility MV-
CASSIN8\Administrator:Accessories\Accessibility MV-
CASSIN8\Administrator
Accessories\Entertainment MV-
CASSIN8\Administrator:Accessories\Entertainment MV-
CASSIN8\Administrator
Administrative Tools MV-CASSIN8\Administrator:Administrative Tools
MV-CASSIN8\Administrator
Startup MV-CASSIN8\Administrator:Startup MV-CASSIN8\Administrator

[Startup Programs]

Program Command User Name Location
desktop desktop.ini NT AUTHORITY\SYSTEM Startup
desktop desktop.ini MV-CASSIN8\Administrator Startup
desktop desktop.ini .DEFAULT Startup
desktop desktop.ini All Users Common Startup
KernelFaultCheck %systemroot%\system32\dumprep 0 -k All Users
HKLM\SOFTWARE\Microsoft\Windows\CurrentVersion\Run

[OLE Registration]

Object Local Server
Sound (OLE2) sndrec32.exe
Media Clip mplay32.exe
Video Clip mplay32.exe /avi
MIDI Sequence mplay32.exe /mid
Sound Not Available
Media Clip Not Available
WordPad Document "%programfiles%\windows nt\accessories\wordpad.exe"

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	230 KB	3/25/2003 5:00:00 AM	C:\WINDOWS\system32	Microsoft Corporation
advpack.dll	6.0.3790.0	240 KB	3/25/2003 5:00:00 AM	C:\WINDOWS\system32	Microsoft Corporation
asctrls.ocx	6.0.3790.0	219 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	2,478 KB	3/25/2003 5:00:00 AM	C:\WINDOWS\system32	Microsoft Corporation
cdfview.dll	6.0.3790.0	292 KB	3/25/2003 5:00:00 AM	C:\WINDOWS\system32	Microsoft Corporation
comctl32.dll	5.82.3790.0	1,584 KB	3/25/2003 5:00:00 AM	C:\WINDOWS\system32	Microsoft Corporation
dxttrans.dll	6.3.3790.0	562 KB	3/25/2003 5:00:00 AM	C:\WINDOWS\system32	Microsoft Corporation
dxtmsft.dll	6.3.3790.0	918 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	676 KB	3/25/2003 5:00:00 AM	C:\WINDOWS\system32	Microsoft Corporation
iepeers.dll	6.0.3790.0	652 KB	3/25/2003 5:00:00 AM	C:\WINDOWS\system32	Microsoft Corporation
iesetup.dll	6.0.3790.0	89 KB	3/25/2003 5:00:00 AM	C:\WINDOWS\system32	Microsoft Corporation
ieuinit.inf	Not Available	20 KB	3/25/2003 5:00:00 AM	C:\WINDOWS\system32	Not Available

iexplore.exe	6.0.3790.0	102 KB	3/25/2003 5:00:00 AM	C:\Program	Microsoft Corporation
Files\Internet Explorer					
imgutil.dll	5.2.3790.0	101 KB	3/25/2003 5:00:00 AM	C:\WINDOWS\system32	Microsoft Corporation
inetcpl.cpl	6.0.3790.0	589 KB	3/25/2003 5:00:00 AM	C:\WINDOWS\system32	Microsoft Corporation
inetcpl.dll	6.0.3790.0	108 KB	3/25/2003 5:00:00 AM	C:\WINDOWS\system32	Microsoft Corporation
inseng.dll	6.0.3790.0	213 KB	3/25/2003 5:00:00 AM	C:\WINDOWS\system32	Microsoft Corporation
mlang.dll	6.0.3790.0	799 KB	3/25/2003 5:00:00 AM	C:\WINDOWS\system32	Microsoft Corporation
msencode.dll	<File Missing>	Not Available	Not Available	Not Available	Not Available
mshta.exe	6.0.3790.0	59 KB	3/25/2003 5:00:00 AM	C:\WINDOWS\system32	Microsoft Corporation
mshtml.dll	6.0.3790.0	8,016 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
mshtmlled.dll	6.0.3790.0	1,376 KB	3/25/2003 5:00:00 AM	C:\WINDOWS\system32	Microsoft Corporation
mshtmler.dll	6.0.3790.0	56 KB	3/25/2003 5:00:00 AM	C:\WINDOWS\system32	Microsoft Corporation
msident.dll	6.0.3790.0	128 KB	3/25/2003 5:00:00 AM	C:\WINDOWS\system32	Microsoft Corporation
msidntld.dll	6.0.3790.0	14 KB	3/25/2003 5:00:00 AM	C:\WINDOWS\system32	Microsoft Corporation
msieftpl.dll	6.0.3790.0	536 KB	3/25/2003 5:00:00 AM	C:\WINDOWS\system32	Microsoft Corporation
msrating.dll	6.0.3790.0	379 KB	3/25/2003 5:00:00 AM	C:\WINDOWS\system32	Microsoft Corporation
mstime.dll	6.0.3790.0	1,621 KB	3/25/2003 5:00:00 AM	C:\WINDOWS\system32	Microsoft Corporation
occache.dll	6.0.3790.0	201 KB	3/25/2003 5:00:00 AM	C:\WINDOWS\system32	Microsoft Corporation
proctexe.ocx	<File Missing>	Not Available	Not Available	Not Available	Not Available
sendmail.dll	6.0.3790.0	97 KB	3/25/2003 5:00:00 AM	C:\WINDOWS\system32	Microsoft Corporation
shdoclc.dll	6.0.3790.0	588 KB	3/25/2003 5:00:00 AM	C:\WINDOWS\system32	Microsoft Corporation
shdocvw.dll	6.0.3790.41	3,281 KB	5/27/2003 9:41:24 PM	C:\WINDOWS\system32	Microsoft Corporation
shfolder.dll	6.0.3790.0	37 KB	3/25/2003 5:00:00 AM	C:\WINDOWS\system32	Microsoft Corporation
shlwapi.dll	6.0.3790.0	722 KB	3/25/2003 5:00:00 AM	C:\WINDOWS\system32	Microsoft Corporation
tdc.ocx	1.3.0.3130	177 KB	3/25/2003 5:00:00 AM	C:\WINDOWS\system32	Microsoft Corporation
url.dll	6.0.3790.0	45 KB	3/25/2003 5:00:00 AM	C:\WINDOWS\system32	Microsoft Corporation
urlmon.dll	6.0.3790.9	1,242 KB	5/27/2003 9:41:24 PM	C:\WINDOWS\system32	Microsoft Corporation
webcheck.dll	6.0.3790.0	665 KB	3/25/2003 5:00:00 AM	C:\WINDOWS\system32	Microsoft Corporation
wininet.dll	6.0.3790.0	1,466 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\LocalService\Local Settings\Temporary Internet Files
Total Disk Space	Not Available
Available Disk Space	Not Available
Maximum Cache Size	Not Available
Available Cache Size	Not Available

[List of Objects]

Program File	Status	CodeBase
No cached object information available		

[Content]

[Following are sub-categories of this main category]
[Summary]

Item	Value
Content Advisor	Disabled

[Personal Certificates]

Issued To	Issued By	Validity	Signature	Algorithm
No personal certificate information available				

[Other People Certificates]

Issued To	Issued By	Validity	Signature	Algorithm
No other people certificate information available				

[Publishers]

Name
No publisher information available

[Security]

Zone	Security Level
My Computer	Custom
Local intranet	Medium-low
Trusted sites	Low
Internet	Medium
Restricted sites	High

Windows Datacenter Server Registry Information

Software\Oracle

Windows Registry Editor Version 5.00

[HKEY_LOCAL_MACHINE\SOFTWARE\Oracle]

[HKEY_LOCAL_MACHINE\SOFTWARE\Oracle\HOME0414]

```
"ORACLE_HOME"="c:\oracle\orcl0414"
"ORACLE_SID"="TPCC"
"tpcc_disks_location"="\\.\."
"tpcc_log_location"="\\.\."
"ORACLE_PRIORITY"="LGWR:highest;DEF:above_normal"
"ORACLE_DSGABSIZE"="64"
"ORACLE_DSGALPAGE"="1"
"ORA_TPCC_AUTOSTART"=hex(2):46,00,41,00,4c,00,53,00,45,00,00,00
"ORA_TPCC_SHUTDOWN"=hex(2):54,00,52,00,55,00,45,00,00,00
"ORA_TPCC_SHUTDOWNNTYPE"=hex(2):69,00,00,00
"ORA_TPCC_SHUTDOWN_TIMEOUT"=hex(2):33,00,30,00,00,00
"ORA_AFMASK_LISTENER"="FFFF"
"ORA_LPENABLE"="1"
```

Services\OracleTNSListener

Windows Registry Editor Version 5.00

[HKEY_LOCAL_MACHINE\SYSTEM\CurrentControlSet\Services\OracleTNSListener]

```
"Type"=dword:00000010
"Start"=dword:00000003
"ErrorControl"=dword:00000001
"ImagePath"=hex(2):43,00,3a,00,5c,00,6f,00,72,00,61,00,63,00,6c,00,65,00,5c,00,5c,00,30,00,34,00,31,00,34,00,5c,00,42,00,49,00,4e,00,5c,00,54,00,4e,00,53,00,4c,00,53,00,4e,00,52,00,20,00,00,00
"DisplayName"="OracleTNSListener"
"ObjectName"="LocalSystem"
```



```
05,12,00,00,00,00,00,18,00,ff,01,0f,00,01,02,00,00,00,00,00,05,20,00,00,00,
,\
20,02,00,00,00,00,14,00,8d,01,02,00,01,01,00,00,00,00,00,05,0b,00,00,00,00,
,\
00,18,00,fd,01,02,00,01,02,00,00,00,00,00,05,20,00,00,00,23,02,00,00,01,01,
,\
00,00,00,00,00,05,12,00,00,00,01,01,00,00,00,00,00,05,12,00,00,00
```

```
[HKEY_LOCAL_MACHINE\SYSTEM\CurrentControlSet\Services\ifba\Enum]
"0"="SCSI\ProcessorUNISYS_FC76222-
P64_v2_\\6&1a4bc41&0&B004560B00080010"
"Count"=dword:00000010
"NextInstance"=dword:00000010
"1"="SCSI\ProcessorUNISYS_FC76222-
P64_v2_\\6&1a4bc41&0&B104560B00080010"
"2"="SCSI\ProcessorUNISYS_FC76222-
P64_v2_\\6&4ae7be2&0&5406560B00080010"
"3"="SCSI\ProcessorUNISYS_FC76222-
P64_v2_\\6&4ae7be2&0&5506560B00080010"
"4"="SCSI\ProcessorUNISYS_FC76222-
P64_v2_\\6&1534bb95&0&E804560B00080010"
"5"="SCSI\ProcessorUNISYS_FC76222-
P64_v2_\\6&1534bb95&0&E904560B00080010"
"6"="SCSI\ProcessorUNISYS_FC76222-
P64_v2_\\6&1e55eedf&0&7008560B00080010"
"7"="SCSI\ProcessorUNISYS_FC76222-
P64_v2_\\6&1e55eedf&0&7108560B00080010"
"8"="SCSI\ProcessorUNISYS_FC76222-
P64_v2_\\6&396b6f12&0&B804560B00080010"
"9"="SCSI\ProcessorUNISYS_FC76222-
P64_v2_\\6&396b6f12&0&B904560B00080010"
"10"="SCSI\ProcessorUNISYS_FC76222-
P64_v2_\\6&7cf0138&0&2409560B00080010"
"11"="SCSI\ProcessorUNISYS_FC76222-
P64_v2_\\6&7cf0138&0&2509560B00080010"
"12"="SCSI\ProcessorUNISYS_FC76222-
P64_v2_\\6&52e9464&0&FC04560B00080010"
"13"="SCSI\ProcessorUNISYS_FC76222-
P64_v2_\\6&52e9464&0&FD04560B00080010"
"14"="SCSI\ProcessorUNISYS_FC76222-
P64_v2_\\6&a620eee&0&9C04560B00080010"
"15"="SCSI\ProcessorUNISYS_FC76222-
P64_v2_\\6&a620eee&0&9D04560B00080010"
```

CurrentControlSet\Services\ifdisk

Windows Registry Editor Version 5.00

```
[HKEY_LOCAL_MACHINE\SYSTEM\CurrentControlSet\Services\ifdisk]
"Type"=dword:00000001
"Start"=dword:00000003
"ErrorControl"=dword:00000001
"ImagePath"=hex(2):73,00,79,00,73,00,74,00,65,00,6d,00,33,00,32,00,5c,00,4
4,00,\
```

```
52,00,49,00,56,00,45,00,52,00,53,00,5c,00,69,00,66,00,64,00,69,00,73,00,6b
,\
00,2e,00,73,00,79,00,73,00,00,00
"DisplayName"="Unisys Intelligent Fibre Channel Fabric Disk Driver"
[HKEY_LOCAL_MACHINE\SYSTEM\CurrentControlSet\Services\ifdisk\Security]
"Security"=hex:01,00,14,80,90,00,00,00,9c,00,00,00,14,00,00,00,30,00,00,00
,02,\
00,1c,00,01,00,00,00,02,80,14,00,ff,01,0f,00,01,01,00,00,00,00,00,01,00,00
,\
00,00,02,00,60,00,04,00,00,00,00,00,14,00,fd,01,02,00,01,01,00,00,00,00,00
,\
05,12,00,00,00,00,00,18,00,ff,01,0f,00,01,02,00,00,00,00,00,05,20,00,00,00
,\
20,02,00,00,00,00,14,00,8d,01,02,00,01,01,00,00,00,00,00,05,0b,00,00,00,00
,\
00,18,00,fd,01,02,00,01,02,00,00,00,00,00,05,20,00,00,00,23,02,00,00,01,01
,\
00,00,00,00,00,05,12,00,00,00,01,01,00,00,00,00,00,05,12,00,00,00
```

```
[HKEY_LOCAL_MACHINE\SYSTEM\CurrentControlSet\Services\ifdisk\Enum]
"0"="SCSI\Disk&Ven_UNISYS_VirtualStorage_01.0\1&79f5d87&0&A53F00861000
00100000000000000000000000000000"
"Count"=dword:00000064
"NextInstance"=dword:00000064
"1"="SCSI\Disk&Ven_UNISYS_VirtualStorage_01.0\1&79f5d87&0&A53F00861000
00100000000000000000000000000000"
"2"="SCSI\Disk&Ven_UNISYS_VirtualStorage_01.0\1&79f5d87&0&A53F00861000
00100000000000000000000000000000"
"3"="SCSI\Disk&Ven_UNISYS_VirtualStorage_01.0\1&79f5d87&0&A53F00861000
00100000000000000000000000000000"
"4"="SCSI\Disk&Ven_UNISYS_VirtualStorage_01.0\1&79f5d87&0&A53F00861000
00100000000000000000000000000000"
"5"="SCSI\Disk&Ven_UNISYS_VirtualStorage_01.0\1&79f5d87&0&A53F00861000
00100000000000000000000000000000"
"6"="SCSI\Disk&Ven_UNISYS_VirtualStorage_01.0\1&79f5d87&0&A53F00861000
00100000000000000000000000000000"
"7"="SCSI\Disk&Ven_UNISYS_VirtualStorage_01.0\1&79f5d87&0&A53F00861000
00100000000000000000000000000000"
"8"="SCSI\Disk&Ven_UNISYS_VirtualStorage_01.0\1&79f5d87&0&1D4000861000
00100000000000000000000000000000"
"9"="SCSI\Disk&Ven_UNISYS_VirtualStorage_01.0\1&79f5d87&0&1D4000861000
00100000000000000000000000000000"
"10"="SCSI\Disk&Ven_UNISYS_VirtualStorage_01.0\1&79f5d87&0&1D4000861000
00010000000000000000000000000000"
"11"="SCSI\Disk&Ven_UNISYS_VirtualStorage_01.0\1&79f5d87&0&1D4000861000
00010000000000000000000000000000"
"12"="SCSI\Disk&Ven_UNISYS_VirtualStorage_01.0\1&79f5d87&0&1D4000861000
00010000000000000000000000000000"
"13"="SCSI\Disk&Ven_UNISYS_VirtualStorage_01.0\1&79f5d87&0&1D4000861000
00010000000000000000000000000000"
"14"="SCSI\Disk&Ven_UNISYS_VirtualStorage_01.0\1&79f5d87&0&1D4000861000
00010000000000000000000000000000"
```


"73"="SCSI\\Disk&Ven_UNISYS_VirtualStorage__01.0\\1&79f5d87&0&9B3F0086100
0001000000000000007000"
"74"="SCSI\\Disk&Ven_UNISYS_VirtualStorage__01.0\\1&79f5d87&0&9B3F0086100
0001000000000000006000"
"75"="SCSI\\Disk&Ven_UNISYS_VirtualStorage__01.0\\1&79f5d87&0&9B3F0086100
0001000000000000005000"
"76"="SCSI\\Disk&Ven_UNISYS_VirtualStorage__01.0\\1&79f5d87&0&9B3F0086100
0001000000000000004000"
"77"="SCSI\\Disk&Ven_UNISYS_VirtualStorage__01.0\\1&79f5d87&0&9B3F0086100
0001000000000000003000"
"78"="SCSI\\Disk&Ven_UNISYS_VirtualStorage__01.0\\1&79f5d87&0&9B3F0086100
0001000000000000002000"
"79"="SCSI\\Disk&Ven_UNISYS_VirtualStorage__01.0\\1&79f5d87&0&9B3F0086100
0001000000000000001000"
"80"="SCSI\\Disk&Ven_UNISYS_VirtualStorage__01.0\\1&79f5d87&0&DB3F0086100
0001000000000000008000"
"81"="SCSI\\Disk&Ven_UNISYS_VirtualStorage__01.0\\1&79f5d87&0&DB3F0086100
0001000000000000007000"
"82"="SCSI\\Disk&Ven_UNISYS_VirtualStorage__01.0\\1&79f5d87&0&DB3F0086100
0001000000000000006000"
"83"="SCSI\\Disk&Ven_UNISYS_VirtualStorage__01.0\\1&79f5d87&0&DB3F0086100
0001000000000000005000"
"84"="SCSI\\Disk&Ven_UNISYS_VirtualStorage__01.0\\1&79f5d87&0&DB3F0086100
0001000000000000004000"
"85"="SCSI\\Disk&Ven_UNISYS_VirtualStorage__01.0\\1&79f5d87&0&DB3F0086100
0001000000000000003000"
"86"="SCSI\\Disk&Ven_UNISYS_VirtualStorage__01.0\\1&79f5d87&0&DB3F0086100
0001000000000000002000"
"87"="SCSI\\Disk&Ven_UNISYS_VirtualStorage__01.0\\1&79f5d87&0&DB3F0086100
0001000000000000001000"
"88"="SCSI\\Disk&Ven_UNISYS_VirtualStorage__01.0\\1&79f5d87&0&A13F0086100
0001000000000000008000"
"89"="SCSI\\Disk&Ven_UNISYS_VirtualStorage__01.0\\1&79f5d87&0&A13F0086100
0001000000000000007000"
"90"="SCSI\\Disk&Ven_UNISYS_VirtualStorage__01.0\\1&79f5d87&0&A13F0086100
0001000000000000006000"
"91"="SCSI\\Disk&Ven_UNISYS_VirtualStorage__01.0\\1&79f5d87&0&A13F0086100
0001000000000000005000"
"92"="SCSI\\Disk&Ven_UNISYS_VirtualStorage__01.0\\1&79f5d87&0&A13F0086100
0001000000000000004000"
"93"="SCSI\\Disk&Ven_UNISYS_VirtualStorage__01.0\\1&79f5d87&0&A13F0086100
0001000000000000003000"
"94"="SCSI\\Disk&Ven_UNISYS_VirtualStorage__01.0\\1&79f5d87&0&A13F0086100
0001000000000000002000"
"95"="SCSI\\Disk&Ven_UNISYS_VirtualStorage__01.0\\1&79f5d87&0&A13F0086100
0001000000000000001000"
"96"="SCSI\\Disk&Ven_UNISYS_VirtualStorage__01.0\\1&79f5d87&0&D73F0086100
00010000000000000002000"
"97"="SCSI\\Disk&Ven_UNISYS_VirtualStorage__01.0\\1&79f5d87&0&D73F0086100
00010000000000000001000"
"98"="SCSI\\Disk&Ven_DGC_____RAID_10_____0099\\1&79f5d87&0&A7242010600
1065000000000000001000"
"99"="SCSI\\Disk&Ven_DGC_____RAID_10_____0099\\1&79f5d87&0&A7242010600
1065000000000000000000"

CurrentControlSet\Services\IfIp

Windows Registry Editor Version 5.00

```
[HKEY_LOCAL_MACHINE\SYSTEM\CurrentControlSet\Services\IfIp]
"Type"=dword:00000001
"Start"=dword:00000000
"ErrorControl"=dword:00000001
"Tag"=dword:00000006
"ImagePath"=hex(2):73,00,79,00,73,00,74,00,65,00,6d,00,33,00,32,00,5c,00,44,00,\
52,00,49,00,56,00,45,00,52,00,53,00,5c,00,49,00,66,00,49,00,70,00,2e,00,73,\
00,79,00,73,00,00,00
"DisplayName"="Unisys Intelligent Fibre Channel Fabric Bus Enumerator"
"Group"="Boot Bus Extender"
```

```
[HKEY_LOCAL_MACHINE\SYSTEM\CurrentControlSet\Services\IfIp\Security]
"Security"=hex:01,00,14,80,90,00,00,00,9c,00,00,00,14,00,00,00,30,00,00,00,\
00,1c,00,01,00,00,00,02,80,14,00,ff,01,0f,00,01,01,00,00,00,00,00,01,00,00,\
00,00,02,00,60,00,04,00,00,00,00,00,14,00,fd,01,02,00,01,01,00,00,00,00,00,\
05,12,00,00,00,00,00,18,00,ff,01,0f,00,01,02,00,00,00,00,00,05,20,00,00,00,\
20,02,00,00,00,00,14,00,8d,01,02,00,01,01,00,00,00,00,00,05,0b,00,00,00,00,\
00,18,00,fd,01,02,00,01,02,00,00,00,00,00,05,20,00,00,00,23,02,00,00,01,01,\
00,00,00,00,00,05,12,00,00,00,01,01,00,00,00,00,00,00,05,12,00,00,00
```

```
[HKEY_LOCAL_MACHINE\SYSTEM\CurrentControlSet\Services\IfIp\Enum]
"0"="Root\\SYSTEM\\0001"
"Count"=dword:00000001
"NextInstance"=dword:00000001
```

CurrentControlSet\Services\ifxp

Windows Registry Editor Version 5.00

```
[HKEY_LOCAL_MACHINE\SYSTEM\CurrentControlSet\Services\ifxp]
"Type"=dword:00000001
"Start"=dword:00000000
"ErrorControl"=dword:00000001
"Tag"=dword:00000021
"ImagePath"=hex(2):73,00,79,00,73,00,74,00,65,00,6d,00,33,00,32,00,5c,00,44,00,\
```



```

52,00,49,00,56,00,45,00,52,00,53,00,5c,00,69,00,66,00,78,00,70,00,2e,00,73
,\
  00,79,00,73,00,00,00
"DisplayName"="Unisys Intelligent Fibre Channel Fabric Bus Adapter"
"Group"="SCSI Miniport"

[HKEY_LOCAL_MACHINE\SYSTEM\CurrentControlSet\Services\ifxp\Parameters]

[HKEY_LOCAL_MACHINE\SYSTEM\CurrentControlSet\Services\ifxp\Parameters\PnpI
nterface]
"5"=dword:00000001

[HKEY_LOCAL_MACHINE\SYSTEM\CurrentControlSet\Services\ifxp\Security]
"Security"=hex:01,00,14,80,90,00,00,00,9c,00,00,00,14,00,00,00,30,00,00,00
,02,\
00,1c,00,01,00,00,00,02,80,14,00,ff,01,0f,00,01,01,00,00,00,00,01,00,00
,\
00,00,02,00,60,00,04,00,00,00,00,00,14,00,fd,01,02,00,01,01,00,00,00,00
,\
05,12,00,00,00,00,00,18,00,ff,01,0f,00,01,02,00,00,00,00,00,05,20,00,00,00
,\
20,02,00,00,00,00,14,00,8d,01,02,00,01,01,00,00,00,00,00,05,0b,00,00,00,00
,\
00,18,00,fd,01,02,00,01,02,00,00,00,00,00,05,20,00,00,00,23,02,00,00,01,01
,\
  00,00,00,00,00,05,12,00,00,00,01,01,00,00,00,00,00,05,12,00,00,00

[HKEY_LOCAL_MACHINE\SYSTEM\CurrentControlSet\Services\ifxp\Enum]
"0"="PCI\VEN_11AB&DEV_4620&SUBSYS_C0FC1018&REV_12\5&29449711&0&0010E8"
"Count"=dword:00000008
"NextInstance"=dword:00000008
"1"="PCI\VEN_11AB&DEV_4620&SUBSYS_C0FC1018&REV_12\5&10b868fb&0&0008F8"
"2"="PCI\VEN_11AB&DEV_4620&SUBSYS_C0FC1018&REV_12\5&29772cdd&0&0010E8"
"3"="PCI\VEN_11AB&DEV_4620&SUBSYS_C0FC1018&REV_12\5&2b2cc0e6&0&0008F8"
"4"="PCI\VEN_11AB&DEV_4620&SUBSYS_C0FC1018&REV_12\5&26795d10&0&0010E8"
"5"="PCI\VEN_11AB&DEV_4620&SUBSYS_C0FC1018&REV_12\5&20defcf3&0&0008F8"
"6"="PCI\VEN_11AB&DEV_4620&SUBSYS_C0FC1018&REV_12\5&1cee6a2&0&0010E8"
"7"="PCI\VEN_11AB&DEV_4620&SUBSYS_C0FC1018&REV_12\5&ef23abd&0&0008F8"

```

CurrentControlSet\Control\Class\NIC

Windows Registry Editor Version 5.00

```

[HKEY_LOCAL_MACHINE\SYSTEM\CurrentControlSet\Control\Class\{4D36E972-E325-
11CE-BFC1-08002bE10318}\0001]
"PciScanMethod"="3"
"TxIntDelay"="224"
"MWIEnable"="1"
"CustomMessages"="0"
"DmaFairness"="0"

```

```

"MulticastFilterType"="0"
"VlanFiltering"="1"
"QtagSwControlled"="0"
"TransmitMode"="0"
"AutoNegAdvertised"="47"
"MaxFrameSize"="1514"
"Characteristics"=dword:00000084
"BusType"="5"
"ComponentId"="pci\ven_8086&dev_1008&subsys_11078086"
"ChecksumRxIp"="1"
"ChecksumRxTcp"="1"
"ChecksumTxIp"="1"
"ChecksumTxTcp"="1"
"FlowControl"="3"
"NumCoalesceBuffers"="128"
"NumRxDescriptors"="256"
"NumTxDescriptors"="256"
"ReportTxEarly"="1"
"SpeedDuplex"="0"
"TaggingMode"="0"
"TcpSegmentation"="1"
"InfPath"="netel000.inf"
"InfSection"="E1008Copper.ndi"
"InfSectionExt"=".NTIA64"
"ProviderName"="Microsoft"
"DriverDateData"=hex:00,40,2a,7c,dd,68,c2,01
"DriverDate"="10-1-2002"
"DriverVersion"="6.3.6.31"
"MatchingDeviceId"="pci\ven_8086&dev_1008&subsys_11078086"
"DriverDesc"="Intel(R) PRO/1000 XT Server Adapter"
"NetCfgInstanceId"="{540DC53F-B221-4D04-B60E-B1330A94213B}"

[HKEY_LOCAL_MACHINE\SYSTEM\CurrentControlSet\Control\Class\{4D36E972-E325-
11CE-BFC1-08002bE10318}\0001\Linkage]
"RootDevice"=hex(7):7b,00,35,00,34,00,30,00,44,00,43,00,35,00,33,00,46,00,
2d,\
00,42,00,32,00,32,00,31,00,2d,00,34,00,44,00,30,00,34,00,2d,00,42,00,36,00
,\
30,00,45,00,2d,00,42,00,31,00,33,00,33,00,30,00,41,00,39,00,34,00,32,00,31
,\
  00,33,00,42,00,7d,00,00,00,00,00
"UpperBind"=hex(7):52,00,61,00,73,00,50,00,70,00,70,00,6f,00,65,00,00,00,4
e,00,\
64,00,69,00,73,00,75,00,69,00,6f,00,00,00,54,00,63,00,70,00,69,00,70,00,00
,\
  00,00,00
"Export"=hex(7):5c,00,44,00,65,00,76,00,69,00,63,00,65,00,5c,00,7b,00,35,0
0,34,\
00,30,00,44,00,43,00,35,00,33,00,46,00,2d,00,42,00,32,00,32,00,31,00,2d,00
,\
34,00,44,00,30,00,34,00,2d,00,42,00,36,00,30,00,45,00,2d,00,42,00,31,00,33
,\
00,33,00,30,00,41,00,39,00,34,00,32,00,31,00,33,00,42,00,7d,00,00,00,00,00

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[HKEY_LOCAL_MACHINE\SYSTEM\CurrentControlSet\Control\Class\{4D36E972-E325-11CE-BFC1-08002bE10318}\0001\Ndi]
"Service"="E1000"

[HKEY_LOCAL_MACHINE\SYSTEM\CurrentControlSet\Control\Class\{4D36E972-E325-11CE-BFC1-08002bE10318}\0001\Ndi\Interfaces]
"UpperRange"="ndis5"
"LowerRange"="ethernet"

[HKEY_LOCAL_MACHINE\SYSTEM\CurrentControlSet\Control\Class\{4D36E972-E325-11CE-BFC1-08002bE10318}\0001\Ndi\Params]

[HKEY_LOCAL_MACHINE\SYSTEM\CurrentControlSet\Control\Class\{4D36E972-E325-11CE-BFC1-08002bE10318}\0001\Ndi\Params\ChecksumRxIp]
"ParamDesc"="Offload Receive IP Checksum"
"default"="1"
"type"="enum"

[HKEY_LOCAL_MACHINE\SYSTEM\CurrentControlSet\Control\Class\{4D36E972-E325-11CE-BFC1-08002bE10318}\0001\Ndi\Params\ChecksumRxIp\Enum]
"0"="Off"
"1"="On"

[HKEY_LOCAL_MACHINE\SYSTEM\CurrentControlSet\Control\Class\{4D36E972-E325-11CE-BFC1-08002bE10318}\0001\Ndi\Params\ChecksumRxTcp]
"ParamDesc"="Offload Receive TCP Checksum"
"default"="1"
"type"="enum"

[HKEY_LOCAL_MACHINE\SYSTEM\CurrentControlSet\Control\Class\{4D36E972-E325-11CE-BFC1-08002bE10318}\0001\Ndi\Params\ChecksumRxTcp\Enum]
"0"="Off"
"1"="On"

[HKEY_LOCAL_MACHINE\SYSTEM\CurrentControlSet\Control\Class\{4D36E972-E325-11CE-BFC1-08002bE10318}\0001\Ndi\Params\ChecksumTxIp]
"ParamDesc"="Offload Transmit IP Checksum"
"default"="1"
"type"="enum"

[HKEY_LOCAL_MACHINE\SYSTEM\CurrentControlSet\Control\Class\{4D36E972-E325-11CE-BFC1-08002bE10318}\0001\Ndi\Params\ChecksumTxIp\Enum]
"0"="Off"
"1"="On"

[HKEY_LOCAL_MACHINE\SYSTEM\CurrentControlSet\Control\Class\{4D36E972-E325-11CE-BFC1-08002bE10318}\0001\Ndi\Params\ChecksumTxTcp]
"ParamDesc"="Offload Transmit TCP Checksum"
"default"="1"
"type"="enum"

[HKEY_LOCAL_MACHINE\SYSTEM\CurrentControlSet\Control\Class\{4D36E972-E325-11CE-BFC1-08002bE10318}\0001\Ndi\Params\ChecksumTxTcp\Enum]
"0"="Off"
"1"="On"

[HKEY_LOCAL_MACHINE\SYSTEM\CurrentControlSet\Control\Class\{4D36E972-E325-11CE-BFC1-08002bE10318}\0001\Ndi\Params\FlowControl]
"ParamDesc"="Flow Control"
"default"="3"
"type"="enum"

[HKEY_LOCAL_MACHINE\SYSTEM\CurrentControlSet\Control\Class\{4D36E972-E325-11CE-BFC1-08002bE10318}\0001\Ndi\Params\FlowControl\Enum]
"0"="Off"
"1"="Respond"
"2"="Generate"
"3"="Both On"
"255"="Hardware Default"

[HKEY_LOCAL_MACHINE\SYSTEM\CurrentControlSet\Control\Class\{4D36E972-E325-11CE-BFC1-08002bE10318}\0001\Ndi\Params\NetworkAddress]
"ParamDesc"="Locally Administered Address"
"Default"=""
"type"="edit"
"LimitText"="12"
"UpperCase"="1"
"optional"="1"

[HKEY_LOCAL_MACHINE\SYSTEM\CurrentControlSet\Control\Class\{4D36E972-E325-11CE-BFC1-08002bE10318}\0001\Ndi\Params\NumCoalesceBuffers]
"ParamDesc"="Number of Coalesce Buffers"
"default"="128"
"min"="16"
"max"="768"
"step"="1"
"Base"="10"
"type"="int"

[HKEY_LOCAL_MACHINE\SYSTEM\CurrentControlSet\Control\Class\{4D36E972-E325-11CE-BFC1-08002bE10318}\0001\Ndi\Params\NumRxDescriptors]
"ParamDesc"="Number of Receive Buffers"
"default"="256"
"min"="80"
"max"="4096"
"step"="8"
"Base"="10"
"type"="int"

[HKEY_LOCAL_MACHINE\SYSTEM\CurrentControlSet\Control\Class\{4D36E972-E325-11CE-BFC1-08002bE10318}\0001\Ndi\Params\NumTxDescriptors]
"ParamDesc"="Number of Transmit Descriptors"
"default"="256"
"min"="80"
"max"="4096"
"step"="8"
"Base"="10"
"type"="int"

[HKEY_LOCAL_MACHINE\SYSTEM\CurrentControlSet\Control\Class\{4D36E972-E325-11CE-BFC1-08002bE10318}\0001\Ndi\Params\ReportTxEarly]
"ParamDesc"="Fast Transmit Completion"
"default"="1"
"type"="enum"

[HKEY_LOCAL_MACHINE\SYSTEM\CurrentControlSet\Control\Class\{4D36E972-E325-11CE-BFC1-08002bE10318}\0001\Ndi\Params\ReportTxEarly\Enum]

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"0"="Off"
"1"="On"

[HKEY_LOCAL_MACHINE\SYSTEM\CurrentControlSet\Control\Class\{4D36E972-E325-11CE-BFC1-08002bE10318}\0001\Ndi\Params\SpeedDuplex]
"ParamDesc"="Link Speed & Duplex"
"default"="0"
"type"="enum"

[HKEY_LOCAL_MACHINE\SYSTEM\CurrentControlSet\Control\Class\{4D36E972-E325-11CE-BFC1-08002bE10318}\0001\Ndi\Params\SpeedDuplex\Enum]
"0"="Auto Detect"
"1"="10Mbps/Half Duplex"
"2"="10Mbps/Full Duplex"
"3"="100Mbps/Half Duplex"
"4"="100Mbps/Full Duplex"

[HKEY_LOCAL_MACHINE\SYSTEM\CurrentControlSet\Control\Class\{4D36E972-E325-11CE-BFC1-08002bE10318}\0001\Ndi\Params\TaggingMode]
"ParamDesc"="QoS Packet Tagging"
"default"="0"
"type"="enum"

[HKEY_LOCAL_MACHINE\SYSTEM\CurrentControlSet\Control\Class\{4D36E972-E325-11CE-BFC1-08002bE10318}\0001\Ndi\Params\TaggingMode\Enum]
"0"="Off"
"1"="On"

[HKEY_LOCAL_MACHINE\SYSTEM\CurrentControlSet\Control\Class\{4D36E972-E325-11CE-BFC1-08002bE10318}\0001\Ndi\Params\TcpSegmentation]
"ParamDesc"="Offload TCP Segmentation"
"default"="1"
"type"="enum"

[HKEY_LOCAL_MACHINE\SYSTEM\CurrentControlSet\Control\Class\{4D36E972-E325-11CE-BFC1-08002bE10318}\0001\Ndi\Params\TcpSegmentation\Enum]
"0"="Off"
"1"="On"

[HKEY_LOCAL_MACHINE\SYSTEM\CurrentControlSet\Control\Class\{4D36E972-E325-11CE-BFC1-08002bE10318}\0001\PROSetNdi]

[HKEY_LOCAL_MACHINE\SYSTEM\CurrentControlSet\Control\Class\{4D36E972-E325-11CE-BFC1-08002bE10318}\0001\PROSetNdi\NdiExt]

[HKEY_LOCAL_MACHINE\SYSTEM\CurrentControlSet\Control\Class\{4D36E972-E325-11CE-BFC1-08002bE10318}\0001\PROSetNdi\NdiExt\Params]

[HKEY_LOCAL_MACHINE\SYSTEM\CurrentControlSet\Control\Class\{4D36E972-E325-11CE-BFC1-08002bE10318}\0001\PROSetNdi\NdiExt\Params\ChecksumRxIp]
"MiniHelp"="Allows the adapter to compute the IP checksum of incoming packets. This improves IP transmit performance."

[HKEY_LOCAL_MACHINE\SYSTEM\CurrentControlSet\Control\Class\{4D36E972-E325-11CE-BFC1-08002bE10318}\0001\PROSetNdi\NdiExt\Params\ChecksumTxTcp]
"MiniHelp"="Allows the adapter to verify the TCP or UDP checksum of incoming packets. This improves TCP and UDP receive performance."

[HKEY_LOCAL_MACHINE\SYSTEM\CurrentControlSet\Control\Class\{4D36E972-E325-11CE-BFC1-08002bE10318}\0001\PROSetNdi\NdiExt\Params\ChecksumTxIp]
"MiniHelp"="Allows the adapter to compute the IP checksum of outgoing packets. This improves IP transmit performance."

[HKEY_LOCAL_MACHINE\SYSTEM\CurrentControlSet\Control\Class\{4D36E972-E325-11CE-BFC1-08002bE10318}\0001\PROSetNdi\NdiExt\Params\ChecksumTxTcp]
"MiniHelp"="Allows the adapter to compute the TCP or UDP checksum of outgoing packets. This improves TCP and UDP transmit performance."

[HKEY_LOCAL_MACHINE\SYSTEM\CurrentControlSet\Control\Class\{4D36E972-E325-11CE-BFC1-08002bE10318}\0001\PROSetNdi\NdiExt\Params\FlowControl]
"MiniHelp"="IEEE 802.3x flow control. Helps to prevent packets from being dropped and can improve overall network performance."

[HKEY_LOCAL_MACHINE\SYSTEM\CurrentControlSet\Control\Class\{4D36E972-E325-11CE-BFC1-08002bE10318}\0001\PROSetNdi\NdiExt\Params\NetworkAddress]
"MiniHelp"="Allows you to change the adapter's MAC address."

[HKEY_LOCAL_MACHINE\SYSTEM\CurrentControlSet\Control\Class\{4D36E972-E325-11CE-BFC1-08002bE10318}\0001\PROSetNdi\NdiExt\Params\NumCoalesceBuffers]
"MiniHelp"="Number of buffers available for transmit acceleration."

[HKEY_LOCAL_MACHINE\SYSTEM\CurrentControlSet\Control\Class\{4D36E972-E325-11CE-BFC1-08002bE10318}\0001\PROSetNdi\NdiExt\Params\NumRxDescriptors]
"MiniHelp"="The number of receive buffers and descriptors that the driver allocates for received packets."

[HKEY_LOCAL_MACHINE\SYSTEM\CurrentControlSet\Control\Class\{4D36E972-E325-11CE-BFC1-08002bE10318}\0001\PROSetNdi\NdiExt\Params\NumTxDescriptors]
"MiniHelp"="The number of hardware resources in memory used to send packets."

[HKEY_LOCAL_MACHINE\SYSTEM\CurrentControlSet\Control\Class\{4D36E972-E325-11CE-BFC1-08002bE10318}\0001\PROSetNdi\NdiExt\Params\ReportTxEarly]
"MiniHelp"="This will free the transmit resources as soon as the DMA is complete."

[HKEY_LOCAL_MACHINE\SYSTEM\CurrentControlSet\Control\Class\{4D36E972-E325-11CE-BFC1-08002bE10318}\0001\PROSetNdi\NdiExt\Params\SpeedDuplex]
"ExposeLevel"="3"
"MiniHelp"="When Auto-Negotiation is disabled what speed and duplex the adapter will run at. Note gigabit speeds are not forcible."

[HKEY_LOCAL_MACHINE\SYSTEM\CurrentControlSet\Control\Class\{4D36E972-E325-11CE-BFC1-08002bE10318}\0001\PROSetNdi\NdiExt\Params\TcpSegmentation]
"MiniHelp"="Allows the adapter to offload the task of segmenting TCP messages and improves CPU utilization."

[HKEY_LOCAL_MACHINE\SYSTEM\CurrentControlSet\Control\Class\{4D36E972-E325-11CE-BFC1-08002bE10318}\0001\PROSetNdi\Params]

[HKEY_LOCAL_MACHINE\SYSTEM\CurrentControlSet\Control\Class\{4D36E972-E325-11CE-BFC1-08002bE10318}\0001\PROSetNdi\Params\AutoNegAdvertised]
"ParamDesc"="Negotiable Speeds and Duplexes"
"MiniHelp"="This can be used to restrict the speeds and duplexes advertised to a link partner during autonegotiation."
"default"="47"
"type"="bitfield"

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"ExposeLevel"="3"

[HKEY_LOCAL_MACHINE\SYSTEM\CurrentControlSet\Control\Class\{4D36E972-E325-11CE-BFC1-08002bE10318}\0001\PROSetNdi\Params\AutoNegAdvertised\Enum

"1"="Advertise 10 Half"
"2"="Advertise 10 Full"
"4"="Advertise 100 Half"
"8"="Advertise 100 Full"
"32"="Advertise 1000 Full"
"47"="Advertise Speed Default"

[HKEY_LOCAL_MACHINE\SYSTEM\CurrentControlSet\Control\Class\{4D36E972-E325-11CE-BFC1-08002bE10318}\0001\PROSetNdi\Params\MaxFrameSize]

"ParamDesc"="Jumbo Frames"
"MiniHelp"="Enables sending larger Ethernet packets on Gigabit networks. See Help for more information."
"default"="1514"
"type"="enum"

[HKEY_LOCAL_MACHINE\SYSTEM\CurrentControlSet\Control\Class\{4D36E972-E325-11CE-BFC1-08002bE10318}\0001\PROSetNdi\Params\MaxFrameSize\Enum

"1514"="Disabled"
"4088"="4088 Bytes"
"9014"="9014 Bytes (Alteon)"
"16128"="16128 Bytes"

[HKEY_LOCAL_MACHINE\SYSTEM\CurrentControlSet\Control\Class\{4D36E972-E325-11CE-BFC1-08002bE10318}\0001\PROSetNdi\Params\TaggingMode]

"MiniHelp"="Send and receive IEEE Tagged frames (802.3ac/802.1p/802.1Q) ."

CurrentControlSet\Services\PartMgr

Windows Registry Editor Version 5.00

[HKEY_LOCAL_MACHINE\SYSTEM\CurrentControlSet\Services\PartMgr]

"DisplayName"="Partition Manager"
"ErrorControl"=dword:00000001
"Group"="System Bus Extender"
"Start"=dword:00000000
"Tag"=dword:00000005
"Type"=dword:00000001
"EnableCounterForIoctl1"=dword:00000001

[HKEY_LOCAL_MACHINE\SYSTEM\CurrentControlSet\Services\PartMgr\Enum

"0"="Root\LEGACY_PARTMGR\0000"
"Count"=dword:00000066
"NextInstance"=dword:00000066
"1"="SCSI\Disk&Ven_MEGARAID&Prod_LD_0_MEGARAID&Rev_\5&70f355a&0&300"
"2"="SCSI\Disk&Ven_UNISYS_VirtualStorage__01.0\1&79f5d87&0&A53F0086100001000000000000008000"
"3"="SCSI\Disk&Ven_UNISYS_VirtualStorage__01.0\1&79f5d87&0&A53F0086100001000000000000007000"
"4"="SCSI\Disk&Ven_UNISYS_VirtualStorage__01.0\1&79f5d87&0&A53F0086100001000000000000006000"
"5"="SCSI\Disk&Ven_UNISYS_VirtualStorage__01.0\1&79f5d87&0&A53F0086100001000000000000005000"

"6"="SCSI\Disk&Ven_UNISYS_VirtualStorage__01.0\1&79f5d87&0&A53F0086100001000000000000004000"
"7"="SCSI\Disk&Ven_UNISYS_VirtualStorage__01.0\1&79f5d87&0&A53F0086100001000000000000003000"
"8"="SCSI\Disk&Ven_UNISYS_VirtualStorage__01.0\1&79f5d87&0&A53F0086100001000000000000002000"
"9"="SCSI\Disk&Ven_UNISYS_VirtualStorage__01.0\1&79f5d87&0&A53F0086100001000000000000001000"
"10"="SCSI\Disk&Ven_UNISYS_VirtualStorage__01.0\1&79f5d87&0&1D400861000010000000000000008000"
"11"="SCSI\Disk&Ven_UNISYS_VirtualStorage__01.0\1&79f5d87&0&1D400861000010000000000000007000"
"12"="SCSI\Disk&Ven_UNISYS_VirtualStorage__01.0\1&79f5d87&0&1D4008610000100000000000006000"
"13"="SCSI\Disk&Ven_UNISYS_VirtualStorage__01.0\1&79f5d87&0&1D4008610000100000000000005000"
"14"="SCSI\Disk&Ven_UNISYS_VirtualStorage__01.0\1&79f5d87&0&1D4008610000100000000000004000"
"15"="SCSI\Disk&Ven_UNISYS_VirtualStorage__01.0\1&79f5d87&0&1D4008610000100000000000003000"
"16"="SCSI\Disk&Ven_UNISYS_VirtualStorage__01.0\1&79f5d87&0&1D4008610000100000000000002000"
"17"="SCSI\Disk&Ven_UNISYS_VirtualStorage__01.0\1&79f5d87&0&1D4008610000100000000000001000"
"18"="SCSI\Disk&Ven_UNISYS_VirtualStorage__01.0\1&79f5d87&0&6F4008610000100000000000008000"
"19"="SCSI\Disk&Ven_UNISYS_VirtualStorage__01.0\1&79f5d87&0&6F4008610000100000000000007000"
"20"="SCSI\Disk&Ven_UNISYS_VirtualStorage__01.0\1&79f5d87&0&6F4008610000100000000000006000"
"21"="SCSI\Disk&Ven_UNISYS_VirtualStorage__01.0\1&79f5d87&0&6F4008610000100000000000005000"
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"23"="SCSI\Disk&Ven_UNISYS_VirtualStorage__01.0\1&79f5d87&0&6F4008610000100000000000003000"
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"25"="SCSI\Disk&Ven_UNISYS_VirtualStorage__01.0\1&79f5d87&0&6F4008610000100000000000001000"
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"27"="SCSI\Disk&Ven_UNISYS_VirtualStorage__01.0\1&79f5d87&0&6D4008610000100000000000007000"
"28"="SCSI\Disk&Ven_UNISYS_VirtualStorage__01.0\1&79f5d87&0&6D4008610000100000000000006000"
"29"="SCSI\Disk&Ven_UNISYS_VirtualStorage__01.0\1&79f5d87&0&6D4008610000100000000000005000"
"30"="SCSI\Disk&Ven_UNISYS_VirtualStorage__01.0\1&79f5d87&0&6D4008610000100000000000004000"
"31"="SCSI\Disk&Ven_UNISYS_VirtualStorage__01.0\1&79f5d87&0&6D4008610000100000000000003000"
"32"="SCSI\Disk&Ven_UNISYS_VirtualStorage__01.0\1&79f5d87&0&6D4008610000100000000000002000"
"33"="SCSI\Disk&Ven_UNISYS_VirtualStorage__01.0\1&79f5d87&0&6D4008610000100000000000001000"
"34"="SCSI\Disk&Ven_UNISYS_VirtualStorage__01.0\1&79f5d87&0&DD3F0086100001000000000000008000"


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"93"="SCSI\\Disk&Ven_UNISYS_VirtualStorage__01.0\\1&79f5d87&0&A13F0086100
000100000000000000005000"
"94"="SCSI\\Disk&Ven_UNISYS_VirtualStorage__01.0\\1&79f5d87&0&A13F0086100
000100000000000000004000"
"95"="SCSI\\Disk&Ven_UNISYS_VirtualStorage__01.0\\1&79f5d87&0&A13F0086100
000100000000000000003000"
"96"="SCSI\\Disk&Ven_UNISYS_VirtualStorage__01.0\\1&79f5d87&0&A13F0086100
000100000000000000002000"
"97"="SCSI\\Disk&Ven_UNISYS_VirtualStorage__01.0\\1&79f5d87&0&A13F0086100
000100000000000000001000"
"98"="SCSI\\Disk&Ven_UNISYS_VirtualStorage__01.0\\1&79f5d87&0&D73F0086100
000100000000000000002000"
"99"="SCSI\\Disk&Ven_UNISYS_VirtualStorage__01.0\\1&79f5d87&0&D73F0086100
000100000000000000001000"
"100"="SCSI\\Disk&Ven_DGC_____RAID_10_____0099\\1&79f5d87&0&A724201060
010650000000000000001000"
"101"="SCSI\\Disk&Ven_DGC_____RAID_10_____0099\\1&79f5d87&0&A724201060
010650000000000000000000"

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```

Available Physical Memory      1.78 GB
Total Virtual Memory          5.85 GB
Available Virtual Memory      5.57 GB
Page File Space               3.86 GB
Page File                     C:\pagefile.sys

[Hardware Resources]

[Conflicts/Sharing]

Resource      Device
I/O Port 0x0000A000-0x0000AFFF      PCI bus
I/O Port 0x0000A000-0x0000AFFF      PCI standard PCI-to-PCI bridge

I/O Port 0x00000000-0x000003AF      PCI bus
I/O Port 0x00000000-0x000003AF      Direct memory access controller

Memory Address 0xFCD00000-0xFCFFFFFF PCI bus
Memory Address 0xFCD00000-0xFCFFFFFF Intel(R) PRO/100+ Server Adapter
(PILA8470B)

Memory Address 0xFD000000-0xFEBFFFFFF PCI bus
Memory Address 0xFD000000-0xFEBFFFFFF RAGE XL PCI Family (Microsoft
Corporation)

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

I/O Port 0x000003B0-0x000003DF      PCI bus
I/O Port 0x000003B0-0x000003DF      RAGE XL PCI Family (Microsoft
Corporation)

[DMA]

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

[Forced Hardware]

Device PNP Device ID

[I/O]

Resource      Device Status
0x00000000-0x000003AF PCI bus OK
0x00000000-0x000003AF Direct memory access controller      OK
0x000003B0-0x000003DF PCI bus OK
0x000003B0-0x000003DF RAGE XL PCI Family (Microsoft Corporation)      OK

0x000003E0-0x00000CF7 PCI bus OK
0x00000D00-0x00000FFF PCI bus OK
0x0000E000-0x0000EFFF PCI bus OK

```

Windows 2003 Server Client Configuration Information

(Common to 8 clients except for System Name, IP Address & MAC Address)

System Information report written at: 09/30/03 17:44:14
System Name: CMPCL01
[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 CMPCL01
System Manufacturer UNISYS Corp.
System Model ES3020L
System Type X86-based PC
Processor x86 Family 15 Model 2 Stepping 9 GenuineIntel ~2390 Mhz

Processor x86 Family 15 Model 2 Stepping 9 GenuineIntel ~2390 Mhz

Processor x86 Family 15 Model 2 Stepping 9 GenuineIntel ~2390 Mhz

Processor x86 Family 15 Model 2 Stepping 9 GenuineIntel ~2390 Mhz

BIOS Version/Date Dell Computer Corporation A10, 5/21/2003
SMBIOS Version 2.3
Windows Directory C:\WINDOWS
System Directory C:\WINDOWS\system32
Boot Device \Device\HarddiskVolumel
Locale United States
Hardware Abstraction Layer Version = "5.2.3790.0 (srv03_rtm.030324-
2048)"
User Name CMPCL01\Administrator
Time Zone Pacific Daylight Time
Total Physical Memory 2,048.00 MB

```

0x0000ECF8-0x0000ECFF	PCI Function 0 OK	
0x0000ECE8-0x0000ECEF	PCI Function 0 OK	
0x0000EC80-0x0000ECBF	RAC Virtual UART Port OK	
0x0000ECF4-0x0000ECF7	PCI Function 2 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
0x0000A000-0x0000AFFF	PCI bus	OK
0x0000A000-0x0000AFFF	PCI standard PCI-to-PCI bridge	OK
0x0000AC00-0x0000ACFF	Adaptec AIC-7899 Ultra160 PCI SCSI Card	OK
0x0000A800-0x0000A8FF	Adaptec AIC-7899 Ultra160 PCI SCSI Card	OK
0x0000C000-0x0000CFFF	PCI bus	OK
0x0000D000-0x0000DFFF	PCI bus	OK
0x0000DC00-0x0000DCFF	Intel(R) PRO/100+ Server Adapter (PILA8470B)	OK

[IRQs]

Resource	Device	Status
IRQ 9	Microsoft ACPI-Compliant System	OK
IRQ 11	PCI Function 0	OK
IRQ 23	RAC Virtual UART Port	OK
IRQ 7	PCI Function 2	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 10	ServerWorks (RCC) PCI to USB Open Host Controller	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	OK
IRQ 29	Broadcom NetXtreme Gigabit Ethernet #2	OK
IRQ 20	Intel(R) PRO/100+ Server Adapter (PILA8470B)	OK

[Memory]

Resource	Device	Status
0xA0000-0xBFFFF	PCI bus	OK
0xA0000-0xBFFFF	RAGE XL PCI Family (Microsoft Corporation)	OK
0xD0000-0xE7FFF	PCI bus	OK
0xFD000000-0xFEFFFFFF	PCI bus	OK
0xFD000000-0xFEFFFFFF	RAGE XL PCI Family (Microsoft Corporation)	OK
0xFEB80000-0xFEB80FFF	PCI Function 0	OK
0xFE102000-0xFE102FFF	RAC Virtual UART Port	OK
0xFEB00000-0xFEB7FFFF	RAC Virtual UART Port	OK
0xFE101000-0xFE101FFF	RAGE XL PCI Family (Microsoft Corporation)	OK
0xFE100000-0xFE100FFF	ServerWorks (RCC) PCI to USB Open Host Controller	OK
0xFB000000-0xFCAFFFFFF	PCI bus	OK
0xFC900000-0xFCAFFFFFF	PCI standard PCI-to-PCI bridge	OK
0xFC99FF00-0xFC99FFFF	Adaptec AIC-7899 Ultra160 PCI SCSI Card	OK
0xFC9FE000-0xFC9FEFFF	Adaptec AIC-7899 Ultra160 PCI SCSI Card	OK
0xFCB00000-0xFCCFFFFFF	PCI bus	OK
0xFCC10000-0xFCC1FFFF	Broadcom NetXtreme Gigabit Ethernet	OK
0xFCC00000-0xFCC0FFFF	Broadcom NetXtreme Gigabit Ethernet #2	OK
0xFCD00000-0xFCFFFFFF	PCI bus	OK
0xFCD00000-0xFCFFFFFF	Intel(R) PRO/100+ Server Adapter (PILA8470B)	OK
0xFCF00000-0xFCF00FFF	Intel(R) PRO/100+ Server Adapter (PILA8470B)	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)	7/16/2003 3:50 PM					
c:\windows\system32\msadp32.acm	Microsoft Corporation		OK			
	C:\WINDOWS\system32\MSADP32.ACM		5.2.3790.0 (srv03_rtm.030324-			
2048)	14.50 KB (14,848 bytes)		3/25/2003 11:00 AM			
c:\windows\system32\l3codeca.acm	Fraunhofer Institut Integrierte		OK			
Schaltungen IIS	Fraunhofer IIS MPEG Layer-3 Codec					
	C:\WINDOWS\system32\L3CODECA.ACM		1, 9, 0, 0305		284.00	KB
(290,816 bytes)	3/25/2003 11:00 AM					
c:\windows\system32\msg711.acm	Microsoft Corporation		OK			
	C:\WINDOWS\system32\MSG711.ACM		5.2.3790.0 (srv03_rtm.030324-			
2048)	10.00 KB (10,240 bytes)		3/25/2003 11:00 AM			
c:\windows\system32\sl_anet.acm	Sipro Lab Telecom Inc. Sipro Lab		OK			
Telecom Audio Codec	OK	C:\WINDOWS\system32\SL_ANET.ACM		3.02		
	84.00 KB (86,016 bytes)		3/25/2003 11:00 AM			
c:\windows\system32\msgsm32.acm	Microsoft Corporation		OK			
	C:\WINDOWS\system32\MSGSM32.ACM		5.2.3790.0 (srv03_rtm.030324-			
2048)	20.50 KB (20,992 bytes)		3/25/2003 11:00 AM			
c:\windows\system32\tssoft32.acm	DSP GROUP, INC.		OK			
	C:\WINDOWS\system32\TSSOFT32.ACM		1.01		9.50	KB (9,728 bytes)
	3/25/2003 11:00 AM					
c:\windows\system32\imaadp32.acm	Microsoft Corporation		OK			
	C:\WINDOWS\system32\IMAADP32.ACM		5.2.3790.0 (srv03_rtm.030324-			
2048)	15.50 KB (15,872 bytes)		3/25/2003 11:00 AM			
c:\windows\system32\msaud32.acm	Microsoft Corporation	Windows Media				
Audio Codec	OK	C:\WINDOWS\system32\MSAUD32.ACM		8.00.00.4487		
	288.00 KB (294,912 bytes)		3/25/2003 11:00 AM			

[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\mrle32.dll	Microsoft Corporation		OK			
	C:\WINDOWS\system32\MRLE32.DLL		5.2.3790.0 (srv03_rtm.030324-			
2048)	10.50 KB (10,752 bytes)		3/25/2003 11:00 AM			
c:\windows\system32\msvidc32.dll	Microsoft Corporation		OK			
	C:\WINDOWS\system32\MSVIDC32.DLL		5.2.3790.0 (srv03_rtm.030324-			
2048)	26.50 KB (27,136 bytes)		3/25/2003 11:00 AM			
c:\windows\system32\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\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\tsbyuv.dll	Microsoft Corporation		OK			
	C:\WINDOWS\system32\TSBYUV.DLL		5.2.3790.0 (srv03_rtm.030324-			
2048)	8.00 KB (8,192 bytes)		3/24/2003 5:50 PM			
c:\windows\system32\msh261.drv	Microsoft Corporation		OK			
	C:\WINDOWS\system32\MSH261.DRV		4.4.4000		180.00	KB
(184,320 bytes)	7/16/2003 3:50 PM					

[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	0xA0000-0xBFFFF
Driver	c:\windows\system32\drivers\ati2mpad.sys (5.10.3663.6013, 335.38 KB (343,424 bytes), 7/16/2003 8:39 AM)

[Infrared]

Item	Value
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[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 3
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 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 9/30/2003 5:41 PM
Index 1
Service Name b57w2k
IP Address 192.158.91.1
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:80:97
Memory Address 0xFCC10000-0xFCC1FFFF
IRQ Channel IRQ 28

Driver c:\windows\system32\drivers\b57xp32.sys (6.64.0.0 built by:
WinDDK, 171.25 KB (175,360 bytes), 9/25/2003 5:01 PM)

Name [00000002] 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 9/30/2003 5:41 PM
Index 2
Service Name b57w2k
IP Address 192.1.1.11
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 0xFCC00000-0xFCC0FFFF
IRQ Channel IRQ 29

Driver c:\windows\system32\drivers\b57xp32.sys (6.64.0.0 built by:
WinDDK, 171.25 KB (175,360 bytes), 9/25/2003 5:01 PM)

Name [00000003] RAS Async Adapter
Adapter Type Not Available
Product Type RAS Async Adapter
Installed Yes
PNP Device ID Not Available
Last Reset 9/30/2003 5:41 PM
Index 3
Service Name AsyncMac
IP Address Not Available
IP Subnet Not Available
Default IP Gateway Not Available
DHCP Enabled No
DHCP Server Not Available
DHCP Lease Expires Not Available
DHCP Lease Obtained Not Available
MAC Address Not Available

Name [00000004] WAN Miniport (L2TP)
Adapter Type Not Available
Product Type WAN Miniport (L2TP)
Installed Yes
PNP Device ID ROOT\MS_L2TPMINIPORT\0000
Last Reset 9/30/2003 5:41 PM
Index 4
Service Name Rasl2tp
IP Address Not Available
IP Subnet Not Available
Default IP Gateway Not Available
DHCP Enabled No
DHCP Server Not Available
DHCP Lease Expires Not Available
DHCP Lease Obtained Not Available
MAC Address Not Available

Driver c:\windows\system32\drivers\rasl2tp.sys (5.2.3790.0
(srv03_rtm.030324-2048), 77.00 KB (78,848 bytes), 3/25/2003 11:00 AM)

Name [00000005] WAN Miniport (PPTP)
Adapter Type Wide Area Network (WAN)
Product Type WAN Miniport (PPTP)
Installed Yes
PNP Device ID ROOT\MS_PPTPMINIPOINT\0000
Last Reset 9/30/2003 5:41 PM
Index 5
Service Name PptpMiniport
IP Address Not Available
IP Subnet Not Available
Default IP Gateway Not Available
DHCP Enabled No
DHCP Server Not Available
DHCP Lease Expires Not Available
DHCP Lease Obtained Not Available
MAC Address 50:50:54:50:30:30
Driver c:\windows\system32\drivers\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 9/30/2003 5:41 PM
Index 6
Service Name RasPppoe
IP Address Not Available
IP Subnet Not Available
Default IP Gateway Not Available
DHCP Enabled No
DHCP Server Not Available
DHCP Lease Expires Not Available
DHCP Lease Obtained Not Available
MAC Address 33:50:6F:45:30:30
Driver c:\windows\system32\drivers\raspppoe.sys (5.2.3790.0
(srv03_rtm.030324-2048), 38.00 KB (38,912 bytes), 3/25/2003 11:00 AM)

Name [00000007] Direct Parallel
Adapter Type Not Available
Product Type Direct Parallel
Installed Yes
PNP Device ID ROOT\MS_PTIMINIPOINT\0000
Last Reset 9/30/2003 5:41 PM
Index 7
Service Name Raspti
IP Address Not Available
IP Subnet Not Available
Default IP Gateway Not Available
DHCP Enabled No
DHCP Server Not Available
DHCP Lease Expires Not Available
DHCP Lease Obtained Not Available

MAC Address Not Available
Driver c:\windows\system32\drivers\raspti.sys (5.2.3790.0
(srv03_rtm.030324-2048), 18.50 KB (18,944 bytes), 3/25/2003 11:00 AM)

Name [00000008] WAN Miniport (IP)
Adapter Type Not Available
Product Type WAN Miniport (IP)
Installed Yes
PNP Device ID ROOT\MS_NDISWANIP\0000
Last Reset 9/30/2003 5:41 PM
Index 8
Service Name NdisWan
IP Address Not Available
IP Subnet Not Available
Default IP Gateway Not Available
DHCP Enabled No
DHCP Server Not Available
DHCP Lease Expires Not Available
DHCP Lease Obtained Not Available
MAC Address Not Available
Driver c:\windows\system32\drivers\ndiswan.sys (5.2.3790.0
(srv03_rtm.030324-2048), 96.50 KB (98,816 bytes), 3/25/2003 11:00 AM)

Name [00000009] cLAN Host Adapter
Adapter Type Not Available
Product Type cLAN Host Adapter
Installed Yes
PNP Device ID Not Available
Last Reset 9/30/2003 5:41 PM
Index 9
Service Name GNINDIS
IP Address Not Available
IP Subnet Not Available
Default IP Gateway Not Available
DHCP Enabled Yes
DHCP Server Not Available
DHCP Lease Expires Not Available
DHCP Lease Obtained Not Available
MAC Address Not Available

Name [00000010] HP NetServer 10/100TX PCI LAN Adapter
Adapter Type Not Available
Product Type HP NetServer 10/100TX PCI LAN Adapter
Installed Yes
PNP Device ID Not Available
Last Reset 9/30/2003 5:41 PM
Index 10
Service Name E100B
IP Address Not Available
IP Subnet Not Available
Default IP Gateway Not Available
DHCP Enabled No
DHCP Server Not Available
DHCP Lease Expires Not Available
DHCP Lease Obtained Not Available
MAC Address Not Available

Name [00000011] Intel(R) PRO/100+ Server Adapter (PILA8470B)
 Adapter Type Ethernet 802.3
 Product Type Intel(R) PRO/100+ Server Adapter (PILA8470B)
 Installed Yes
 PNP Device ID PCI\VEN_8086&DEV_1229&SUBSYS_100C8086&REV_08\3&1070020&0&40

Last Reset 9/30/2003 5:41 PM
 Index 11
 Service Name E100B
 IP Address 192.158.2.1
 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:D0:B7:3C:DD:DF
 Memory Address 0xFCF00000-0xFCF00FFF
 I/O Port 0x0000DCC0-0x0000DCFF
 Memory Address 0xFCD00000-0xFCFFFFFF
 IRQ Channel IRQ 20
 Driver c:\windows\system32\drivers\e100b325.sys (6.6.8.1 built by:
 WinDDK, 138.50 KB (141,824 bytes), 8/25/2003 12:30 PM)

[Protocol]

Item Value
 Name MSAFD Tcpi [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 Tcpi [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_Tcpi_{F288224F-89DA-4DC5-9E55-D10F145B7ABF}] 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_{F288224F-89DA-4DC5-9E55-D10F145B7ABF}] 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_{A06C0A57-6EEE-49EB-AC5C-61B79521F4A6}] 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_{A06C0A57-6EEE-49EB-AC5C-61B79521F4A6}] 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_{2875F475-8082-40AD-BEF6-F61A61F8AD70}] 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_{2875F475-8082-40AD-BEF6-F61A61F8AD70}] 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_{A7D092D4-798F-46AD-9AF3-D50F1EF9FB3F}] 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_{A7D092D4-798F-46AD-9AF3-D50F1EF9FB3F}] 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_{2382CB34-8270-44D4-B672-233CC1568F18}] SEQPACKET 2
Connectionless Service No
Guarantees Delivery Yes
Guarantees Sequencing Yes
Maximum Address Size 20 bytes

Maximum Message Size 62.50 KB (64,000 bytes)
Message Oriented Yes
Minimum Address Size 20 bytes
Pseudo Stream Oriented No
Supports Broadcasting No
Supports Connect Data No
Supports Disconnect Data No
Supports Encryption No
Supports Expedited Data No
Supports Graceful Closing No
Supports Guaranteed Bandwidth No
Supports Multicasting No

Name MSAFD NetBIOS [\Device\NetBT_Tcpip_{2382CB34-8270-44D4-B672-233CC1568F18}] DATAGRAM 2
Connectionless Service Yes
Guarantees Delivery No
Guarantees Sequencing No
Maximum Address Size 20 bytes
Maximum Message Size 62.50 KB (64,000 bytes)
Message Oriented Yes
Minimum Address Size 20 bytes
Pseudo Stream Oriented No
Supports Broadcasting Yes
Supports Connect Data No
Supports Disconnect Data No
Supports Encryption No
Supports Expedited Data No
Supports Graceful Closing No
Supports Guaranteed Bandwidth No
Supports Multicasting No

Name MSAFD NetBIOS [\Device\NetBT_Tcpip_{6DD7A721-5093-4121-86B6-C903B9FA7030}] SEQPACKET 3
Connectionless Service No
Guarantees Delivery Yes
Guarantees Sequencing Yes
Maximum Address Size 20 bytes
Maximum Message Size 62.50 KB (64,000 bytes)
Message Oriented Yes
Minimum Address Size 20 bytes
Pseudo Stream Oriented No
Supports Broadcasting No
Supports Connect Data No
Supports Disconnect Data No
Supports Encryption No
Supports Expedited Data No
Supports Graceful Closing No
Supports Guaranteed Bandwidth No
Supports Multicasting No

Name MSAFD NetBIOS [\Device\NetBT_Tcpip_{6DD7A721-5093-4121-86B6-C903B9FA7030}] DATAGRAM 3
Connectionless Service Yes
Guarantees Delivery No
Guarantees Sequencing No
Maximum Address Size 20 bytes
Maximum Message Size 62.50 KB (64,000 bytes)
Message Oriented Yes

```

Minimum Address Size 20 bytes
Pseudo Stream Oriented No
Supports Broadcasting Yes
Supports Connect Data No
Supports Disconnect Data No
Supports Encryption No
Supports Expedited Data No
Supports Graceful Closing No
Supports Guaranteed Bandwidth No
Supports Multicasting No

```

[WinSock]

```

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

```

```

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

```

[Ports]

[Serial]

```

Item Value
Name RAC Virtual UART Port
Status OK
PNP Device ID
PCI\VEN_1028&DEV_0008&SUBSYS_00081028&REV_00\3&13C0B0C5&0&21

```

```

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
Memory Address 0xFE102000-0xFE102FFF
I/O Port 0x0000EC80-0x0000ECBF
Memory Address 0xFEB00000-0xFEB7FFFF
IRQ Channel IRQ 23
Driver c:\windows\system32\drivers\racser.sys (5.2.3663.0 built by:
WinDDK, 56.13 KB (57,472 bytes), 9/25/2003 4:41 PM)

```

```

Name Communications Port (COM1)
Status OK
PNP Device ID ACPI\PNP0501\1
Maximum Input Buffer Size 0
Maximum Output Buffer Size No
Settable Baud Rate Yes
Settable Data Bits Yes
Settable Flow Control Yes
Settable Parity Yes
Settable Parity Check Yes
Settable Stop Bits Yes
Settable RLSD Yes
Supports RLSD Yes
Supports 16 Bit Mode No
Supports Special Characters No
Baud Rate 9600
Bits/Byte 8
Stop Bits 1
Parity None
Busy No
Abort Read/Write on Error No
Binary Mode Enabled Yes
Continue Xmit on XOff No
CTS Outflow Control No
Discard NULL Bytes No
DSR Outflow Control 0
DSR Sensitivity 0
DTR Flow Control Type Enable
EOF Character 0
Error Replace Character 0
Error Replacement Enabled No
Event Character 0
Parity Check Enabled No
RTS Flow Control Type Enable
XOff Character 19
XOffXmit Threshold 512
XOn Character 17
XOnXmit Threshold 2048
XOnXOff InFlow Control 0
XOnXOff OutFlow Control 0

```

I/O Port 0x000003F8-0x000003FF
IRQ Channel IRQ 4
Driver c:\windows\system32\drivers\serial.sys (5.2.3790.0
(srv03_rtm.030324-2048), 76.00 KB (77,824 bytes), 3/25/2003 11:00 AM)

Name Communications Port (COM2)

Status OK
PNP Device ID ACPI\PNP0501\2
Maximum Input Buffer Size 0
Maximum Output Buffer Size No
Settable Baud Rate Yes
Settable Data Bits Yes
Settable Flow Control Yes
Settable Parity Yes
Settable Parity Check Yes
Settable Stop Bits Yes
Settable RLSD Yes
Supports RLSD Yes
Supports 16 Bit Mode No
Supports Special Characters No
Baud Rate 9600
Bits/Byte 8
Stop Bits 1
Parity None
Busy No
Abort Read/Write on Error No
Binary Mode Enabled Yes
Continue XMit on XOff No
CTS Outflow Control No
Discard NULL Bytes No
DSR Outflow Control 0
DSR Sensitivity 0
DTR Flow Control Type Enable
EOF Character 0
Error Replace Character 0
Error Replacement Enabled No
Event Character 0
Parity Check Enabled No
RTS Flow Control Type Enable
XOff Character 19
XOffXMit Threshold 512
XOn Character 17
XOnXMit Threshold 2048
XOnXOff InFlow Control 0
XOnXOff OutFlow Control 0
I/O Port 0x000002F8-0x000002FF
IRQ Channel IRQ 3
Driver c:\windows\system32\drivers\serial.sys (5.2.3790.0
(srv03_rtm.030324-2048), 76.00 KB (77,824 bytes), 3/25/2003 11:00 AM)

[Parallel]

Item Value

[Storage]

[Drives]

Item Value
Drive A:
Description 3 1/2 Inch Floppy Drive
Drive C:
Description Local Fixed Disk
Compressed No
File System NTFS
Size 16.95 GB (18,202,509,312 bytes)
Free Space 11.05 GB (11,865,845,760 bytes)
Volume Name
Volume Serial Number 7433AD41
Drive D:
Description CD-ROM Disc

[Disks]

Item Value
Description Disk drive
Manufacturer (Standard disk drives)
Model FUJITSU MAN3184MC 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 0x0000AC00-0x0000ACFF
Memory Address 0xFC9FF000-0xFC9FFFFF
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 0x0000A800-0x0000A8FF
 Memory Address 0xFC9FE000-0xFC9FEFFF
 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\ataapi.sys (5.2.3790.0
 (srv03_rtm.030324-2048), 89.00 KB (91,136 bytes), 3/25/2003 11:00 AM)

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

[Printing]

Name Driver Port Name Server Name

[Problem Devices]

Device PNP Device ID Error Code

[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 Driver	Yes	Boot	Running	OK
acpiec	ACPIEC	c:\windows\system32\drivers\acpiec.sys	Kernel Driver	No	Disabled	Stopped	OK
adpu160m	adpu160m	c:\windows\system32\drivers\adpu160m.sys	Kernel Driver	Yes	Boot	Running	OK
adpu320	adpu320	Not Available	Kernel Driver	No	Disabled	Stopped	OK
afcnt	afcnt	Not Available	Kernel Driver	No	Disabled	Stopped	OK
afd	AFD Networking Support Environment	c:\windows\system32\drivers\afd.sys	Kernel Driver	Yes	Auto	Running	OK
aha154x	Aha154x	Not Available	Kernel Driver	No	Disabled	Stopped	OK
aic78u2	aic78u2	Not Available	Kernel Driver	No	Disabled	Stopped	OK
aic78xx	aic78xx	Not Available	Kernel Driver	No	Disabled	Stopped	OK
aliide	AliIde	Not Available	Kernel Driver	No	Disabled	Stopped	OK
asyncmac	RAS Asynchronous Media Driver	c:\windows\system32\drivers\asyncmac.sys	Kernel Driver	No	Manual	Stopped	OK
ataapi	Standard IDE/ESDI Hard Disk Controller	c:\windows\system32\drivers\ataapi.sys	Kernel Driver	Yes	Boot	Running	OK
atdisk	Atdisk	Not Available	Kernel Driver	No	Disabled	Stopped	OK
ati2mpad	ati2mpad	c:\windows\system32\drivers\ati2mpad.sys	Kernel Driver	Yes	Manual	Running	OK
atmarpc	ATM ARP Client Protocol	c:\windows\system32\drivers\atmarpc.sys	Kernel Driver	No	Manual	Stopped	OK
audstub	Audio Stub Driver	c:\windows\system32\drivers\audstub.sys	Kernel Driver	Yes	Manual	Running	OK
b57w2k	Broadcom NetXtreme Gigabit Ethernet	c:\windows\system32\drivers\b57xp32.sys	Kernel Driver	Yes	Manual	Running	OK
beep	Beep	c:\windows\system32\drivers\beep.sys	Kernel Driver	Yes	System	Running	OK


```

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 TDDPIPE c:\windows\system32\drivers\tdpipe.sys Kernel Driver
No Manual Stopped OK Ignore No No
tdtcp TDTCP c:\windows\system32\drivers\tdtcp.sys Kernel Driver Yes
Manual Running OK Ignore No Yes
termdd Terminal Device Driver c:\windows\system32\drivers\termdd.sys
Kernel Driver Yes System Running OK Normal No Yes

toside TosIde Not Available Kernel Driver No Disabled
Stopped OK Normal No No
udfs Udfs c:\windows\system32\drivers\udfs.sys File System Driver
No Disabled Stopped OK Normal No No
ultra ultra Not Available Kernel Driver No Disabled
Stopped OK Normal No No
update Microcode Update Driver
c:\windows\system32\drivers\update.sys Kernel Driver Yes
Manual Running OK Normal No Yes
usbhub USB2 Enabled Hub c:\windows\system32\drivers\usbhub.sys
Kernel Driver Yes Manual Running OK Normal No Yes

usbohci Microsoft USB Open Host Controller Miniport Driver
c:\windows\system32\drivers\usbohci.sys Kernel Driver Yes
Manual Running OK Normal No Yes
vgasave VGA Display Controller. c:\windows\system32\drivers\vga.sys
Kernel Driver Yes System Running OK Ignore No Yes

viaide ViaIde Not Available Kernel Driver No Disabled
Stopped OK Normal No No
volsnap Storage volumes c:\windows\system32\drivers\volsnap.sys
Kernel Driver Yes Boot Running OK Normal No Yes

wanarp Remote Access IP ARP Driver
c:\windows\system32\drivers\wanarp.sys Kernel Driver Yes
Manual Running OK Normal No Yes

```

```

wdica WDICA Not Available Kernel Driver No Manual Stopped OK
Ignore No No
wlbs Network Load Balancing c:\windows\system32\drivers\wlbs.sys Kernel
Driver No Manual Stopped OK Normal No No

[Signed Drivers]
Device Name Signed Device Class Driver Version Driver Date
Manufacturer INF Name Driver Name Device ID
Not Available Not Available Not Available Not Available Not Available
Not Available Not Available Not Available HTREE\ROOT\0
ACPI Multiprocessor PC No COMPUTER 5.2.3790.0 10/1/2002
(Standard computers) hal.inf Not Available ROOT\ACPI_HAL\0000

Microsoft ACPI-Compliant System No SYSTEM 5.2.3790.0
10/1/2002 Microsoft acpi.inf Not Available
ACPI_HAL\PNP0C08\0
Processor No PROCESSOR 5.2.3790.0 10/1/2002
(Standard processor types) cpu.inf Not Available
ACPI\GENUINEINTEL - X86_FAMILY_15_MODEL_2\0
Processor No PROCESSOR 5.2.3790.0 10/1/2002
(Standard processor types) cpu.inf Not Available
ACPI\GENUINEINTEL - X86_FAMILY_15_MODEL_2\1
Processor No PROCESSOR 5.2.3790.0 10/1/2002
(Standard processor types) cpu.inf Not Available
ACPI\GENUINEINTEL - X86_FAMILY_15_MODEL_2\2
Processor No PROCESSOR 5.2.3790.0 10/1/2002
(Standard processor types) cpu.inf Not Available
ACPI\GENUINEINTEL - X86_FAMILY_15_MODEL_2\3
PCI bus No SYSTEM 5.2.3790.0 10/1/2002 (Standard system
devices) machine.inf Not Available ACPI\PNP0A03\1
ServerWorks (RCC) CMIC_LE Processor to PCI Bridge(*) No SYSTEM
5.2.3790.0 10/1/2002 ServerWorks (RCC) machine.inf
Not Available
PCI\VEN_1166&DEV_0014&SUBSYS_00000000&REV_32\3&13C0B0C5&0&00
ServerWorks (RCC) CMIC_LE Processor to PCI Bridge(*) No SYSTEM
5.2.3790.0 10/1/2002 ServerWorks (RCC) machine.inf
Not Available
PCI\VEN_1166&DEV_0014&SUBSYS_00000000&REV_00\3&13C0B0C5&0&01
ServerWorks (RCC) CMIC_LE Processor to PCI Bridge(*) No SYSTEM
5.2.3790.0 10/1/2002 ServerWorks (RCC) machine.inf
Not Available
PCI\VEN_1166&DEV_0014&SUBSYS_00000000&REV_00\3&13C0B0C5&0&02
PCI Function 0 No DELLSERIALDEVICE 3.0.0.1 1/23/2003 DELL
COMPUTER oem2.inf Not Available
PCI\VEN_1028&DEV_000C&SUBSYS_000C1028&REV_00\3&13C0B0C5&0&20
RAC Virtual UART Port No DELLSERIALDEVICE 3.0.0.1 1/23/2003
DELL oem1.inf Not Available
PCI\VEN_1028&DEV_0008&SUBSYS_00081028&REV_00\3&13C0B0C5&0&21
PCI Function 2 No DELLSERIALDEVICE 3.0.0.1 1/23/2003 DELL
COMPUTER oem3.inf Not Available
PCI\VEN_1028&DEV_000D&SUBSYS_000D1028&REV_00\3&13C0B0C5&0&22

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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

Default Monitor No MONITOR 5.1.2001.0 6/6/2001
(Standard monitor types) monitor.inf Not Available
DISPLAY\DEFAULT_MONITOR\4&2664298A&0&80000000&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 mouse.inf Not Available
ACPI\PNP0F13\4&25F73A82&0

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

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

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

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

CSB5 IDE Controller No HDC 5.2.3790.0 10/1/2002
ServerWorks mshdc.inf Not Available
PCI\VEN_1166&DEV_0212&SUBSYS_02121166&REV_93\3&13C0B0C5&0&79

Primary IDE Channel No HDC 5.2.3790.0 10/1/2002
(Standard IDE ATA/ATAPI controllers) mshdc.inf Not Available
PCIIDE\IDECHANNEL\4&10A8249&0&0

CD-ROM Drive No CDROM 5.2.3790.0 10/1/2002 (Standard CD-
ROM drives) cdrom.inf Not Available IDE\CDROMTEAC_CD-
224E_____K.9A_____5&3125DC91&0&0.0.0

Secondary IDE Channel No HDC 5.2.3790.0 10/1/2002
(Standard IDE ATA/ATAPI controllers) mshdc.inf Not Available
PCIIDE\IDECHANNEL\4&10A8249&0&1

ServerWorks (RCC) PCI to USB Open Host Controller No 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_05\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_05\3&13C0B0C5&0&8A

PCI bus No SYSTEM 5.2.3790.0 10/1/2002 (Standard system
devices) machine.inf Not Available ACPI\PNP0A03\5

PCI standard PCI-to-PCI bridge No SYSTEM 5.2.3790.0
10/1/2002 (Standard system devices) machine.inf Not
Available PCI\VEN_8086&DEV_0309&SUBSYS_00000000&REV_01\3&474B838&0&40

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

Disk drive No DISKDRIVE 5.2.3790.0 10/1/2002
(Standard disk drives) disk.inf Not Available
SCSI\DISK&VEN_FUJITSU&PROD_MAN3184MC&REV_5508\5&1F5E3F1F&0&000

PE 1x5 Backplane No SYSTEM 5.2.3790.0 10/1/2002 Dell
scsidev.inf Not Available
SCSI\PROCESSOR&VEN_PE/PV&PROD_1X5_SCSI_BP&REV_1.1\5&1F5E3F1F&0&060

Adaptec AIC-7899 Ultra160 PCI SCSI Card No SCSIADAPTER
5.2.3790.0 10/1/2002 Adaptec pnp SCSI.inf Not Available

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PCI\VEN_9005&DEV_00CF&SUBSYS_01211028&REV_01\4&22300438&0&3140
PCI bus No      SYSTEM 5.2.3790.0    10/1/2002    (Standard system
devices)      machine.inf  Not Available  ACPI\PNP0A03\4
Broadcom NetXtreme Gigabit Ethernet No      NET      2.91.0.0
10/1/2002      Broadcom    netb57xp.inf  Not Available
PCI\VEN_14E4&DEV_16A7&SUBSYS_01211028&REV_02\3&172E68DD&0&30
Broadcom NetXtreme Gigabit Ethernet No      NET      2.91.0.0
10/1/2002      Broadcom    netb57xp.inf  Not Available
PCI\VEN_14E4&DEV_16A7&SUBSYS_01211028&REV_02\3&172E68DD&0&40
PCI bus No      SYSTEM 5.2.3790.0    10/1/2002    (Standard system
devices)      machine.inf  Not Available  ACPI\PNP0A03\3
PCI bus No      SYSTEM 5.2.3790.0    10/1/2002    (Standard system
devices)      machine.inf  Not Available  ACPI\PNP0A03\2
Intel(R) PRO/100+ Server Adapter (PILA8470B) No      NET      6.6.8.1
10/1/2002      Intel    net557.inf    Not Available
PCI\VEN_8086&DEV_1229&SUBSYS_100C8086&REV_08\3&1070020&0&40
ACPI Fixed Feature Button No      SYSTEM 5.2.3790.0    10/1/2002
(Standard system devices) machine.inf  Not Available
ACPI\FIXEDBUTTON\2&DABA3FF&0
Logical Disk Manager No      SYSTEM 5.2.3790.0    10/1/2002
(Standard system devices) machine.inf  Not Available
ROOT\DMIO\0000
Volume Manager No      SYSTEM 5.2.3790.0    10/1/2002    (Standard
system devices) machine.inf  Not Available  ROOT\FTDISK\0000
Generic volume No      VOLUME 5.2.3790.0    10/1/2002    Microsoft
volume.inf      Not Available
STORAGE\VOLUME\1&30A96598&0&SIGNATURE55805570FFSET7E00LENGTH43CF44
C00
AFD Networking Support Environment Not Available LEGACYDRIVER Not
Available      Not Available Not Available Not Available Not Available
ROOT\LEGACY_AFD\0000
Beep Not Available LEGACYDRIVER Not Available Not Available Not
Available      Not Available Not Available Not Available Not Available
ROOT\LEGACY_BEEP\0000
CRC Disk Filter Driver Not Available LEGACYDRIVER Not Available Not
Available      Not Available Not Available Not Available
ROOT\LEGACY_CRCDISK\0000
dmboot Not Available LEGACYDRIVER Not Available Not Available Not
Available      Not Available Not Available Not Available
ROOT\LEGACY_DMBOOT\0000
dmload Not Available LEGACYDRIVER Not Available Not Available Not
Available      Not Available Not Available Not Available
ROOT\LEGACY_DMLOAD\0000
Fips Not Available LEGACYDRIVER Not Available Not Available Not
Available      Not Available Not Available Not Available
ROOT\LEGACY_FIPS\0000
Generic Packet Classifier Not Available LEGACYDRIVER Not Available
Not Available  Not Available Not Available Not Available
ROOT\LEGACY_GPC\0000
HTTP Not Available LEGACYDRIVER Not Available Not Available Not
Available      Not Available Not Available Not Available
ROOT\LEGACY_HTTP\0000
IPSEC driver Not Available LEGACYDRIVER Not Available Not Available
Not Available  Not Available Not Available Not Available
ROOT\LEGACY_IPSEC\0000
ksecdd Not Available LEGACYDRIVER Not Available Not Available Not
Available      Not Available Not Available Not Available
ROOT\LEGACY_KSECDD\0000

```

```

mnmdd Not Available LEGACYDRIVER Not Available Not Available Not
Available      Not Available Not Available Not Available
ROOT\LEGACY_MNMDD\0000
mountmgr Not Available LEGACYDRIVER Not Available Not Available
Not Available  Not Available Not Available
ROOT\LEGACY_MOUNTMGR\0000
NDIS System Driver Not Available LEGACYDRIVER Not Available Not
Available      Not Available Not Available Not Available
ROOT\LEGACY_NDIS\0000
Remote Access NDIS TAPI Driver Not Available LEGACYDRIVER Not
Available      Not Available Not Available Not Available
ROOT\LEGACY_NDISTAPI\0000
NDIS Usermode I/O Protocol Not Available LEGACYDRIVER Not Available
Not Available  Not Available Not Available Not Available
ROOT\LEGACY_NDISUIO\0000
NDProxy Not Available LEGACYDRIVER Not Available Not Available Not
Available      Not Available Not Available Not Available
ROOT\LEGACY_NDPROXY\0000
NetBios over Tcpi Not Available LEGACYDRIVER Not Available Not
Available      Not Available Not Available Not Available
ROOT\LEGACY_NETBT\0000
Null Not Available LEGACYDRIVER Not Available Not Available Not
Available      Not Available Not Available Not Available
ROOT\LEGACY_NULL\0000
Partition Manager Not Available LEGACYDRIVER Not Available Not
Available      Not Available Not Available Not Available
ROOT\LEGACY_PARTMGR\0000
Remote Access Auto Connection Driver Not Available LEGACYDRIVER Not
Available      Not Available Not Available Not Available
ROOT\LEGACY_RASACD\0000
RDPCDD Not Available LEGACYDRIVER Not Available Not Available Not
Available      Not Available Not Available Not Available
ROOT\LEGACY_RDPCDD\0000
RDPWD Not Available LEGACYDRIVER Not Available Not Available Not
Available      Not Available Not Available Not Available
ROOT\LEGACY_RDPWD\0000
TCP/IP Protocol Driver Not Available LEGACYDRIVER Not Available Not
Available      Not Available Not Available Not Available
ROOT\LEGACY_TCPIP\0000
TDTCP Not Available LEGACYDRIVER Not Available Not Available Not
Available      Not Available Not Available Not Available
ROOT\LEGACY_TDTCP\0000
VGA Display Controller. Not Available LEGACYDRIVER Not Available
Not Available  Not Available Not Available Not Available
ROOT\LEGACY_VGASAVE\0000
volsnap Not Available LEGACYDRIVER Not Available Not Available Not
Available      Not Available Not Available 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_MMCM
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_MOU\0000
Plug and Play Software Device Enumerator No SYSTEM 5.2.3790.0
10/1/2002 (Standard system devices) machine.inf Not
Available ROOT\SYSTEM\0000
Microcode Update Device No SYSTEM 5.2.3790.0 10/1/2002
(Standard system devices) machine.inf Not Available
ROOT\SYSTEM\0001

```

[Environment Variables]

```

Variable Value User Name
ClusterLog C:\WINDOWS\Cluster\cluster.log <SYSTEM>
ComSpec %SystemRoot%\system32\cmd.exe <SYSTEM>
NUMBER_OF_PROCESSORS 4 <SYSTEM>
OS Windows_NT <SYSTEM>
Path C:\oracle\orcl0414\bin;%SystemRoot%\system32;%SystemRoot%;%SystemR
oot%\System32\Wbem <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 9, GenuineIntel
<SYSTEM>
PROCESSOR_LEVEL 15 <SYSTEM>
PROCESSOR_REVISION 0209 <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
LOCAL
(DESCRIPTION=(ADDRESS=(PROTOCOL=tcp)(HOST=192.158.91.158)(PORT=152
1))(CONNECT_DATA=(SID=TPCC))) CMPCL01\Administrator
ORACLE_HOME C:\ORACLE\ORCL0414 CMPCL01\Administrator
ORACLE_SID TPCC CMPCL01\Administrator
TEMP %USERPROFILE%\Local Settings\Temp CMPCL01\Administrator
TMP %USERPROFILE%\Local Settings\Temp CMPCL01\Administrator

```

[Print Jobs]

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

[Network Connections]

Local Name	Remote Name	Type	Status	User Name
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[Running Tasks]

Name	Path	Process ID	Priority	Min Working Set	Max
Working Set	Start Time	Version	Size	File Date	
system idle process	Not Available	0	0	Not Available	Not Available
Available	Not Available	Not Available	Not Available	Not Available	Not Available
system	Not Available	4	8	0	1413120 Not Available Not
Available	Not Available	Not Available	Not Available	Not Available	Not Available
smss.exe	Not Available	424	11	204800	1413120 9/30/2003 5:41
PM	Not Available	Not Available	Not Available	Not Available	Not Available
csrss.exe	Not Available	620	13	Not Available	Not Available
	9/30/2003 5:41 PM	Not Available	Not Available	Not Available	Not Available
winlogon.exe	c:\windows\system32\winlogon.exe	644	13	204800	1413120 9/30/2003 5:41 PM
	536.50 KB (549,376 bytes)	3/25/2003 11:00 AM	5.2.3790.0 (srv03_rtm.030324-2048)		
services.exe	c:\windows\system32\services.exe	688	9	204800	1413120 9/30/2003 5:41 PM
	102.00 KB (104,448 bytes)	3/25/2003 11:00 AM	5.2.3790.0 (srv03_rtm.030324-2048)		
lsass.exe	c:\windows\system32\lsass.exe	700	9	204800	1413120 9/30/2003 5:41 PM
	13.00 KB (13,312 bytes)	3/25/2003 11:00 AM	5.2.3790.0 (srv03_rtm.030324-2048)		
svchost.exe	c:\windows\system32\svchost.exe	912	8	204800	1413120 9/30/2003 5:41 PM
	13.00 KB (13,312 bytes)	3/25/2003 11:00 AM	5.2.3790.0 (srv03_rtm.030324-2048)		
svchost.exe	c:\windows\system32\svchost.exe	960	8	204800	1413120 9/30/2003 5:41 PM
	13.00 KB (13,312 bytes)	3/25/2003 11:00 AM	5.2.3790.0 (srv03_rtm.030324-2048)		
mnmsrvc.exe	c:\windows\system32\mnmsrvc.exe	1044	8	204800	1413120 9/30/2003 5:41 PM
	bytes) 7/16/2003 3:50 PM	4.4.4000	32.00 KB (32,768		
rundll32.exe	c:\windows\system32\rundll32.exe	1084	8	204800	1413120 9/30/2003 5:41 PM
	32.00 KB (32,768 bytes)	3/25/2003 11:00 AM	5.2.3790.0 (srv03_rtm.030324-2048)		
svchost.exe	Not Available	1116	8	Not Available	Not Available
	9/30/2003 5:41 PM	Not Available	Not Available	Not Available	Not Available

```

svchost.exe c:\windows\system32\svchost.exe 1200 8 204800
1413120 9/30/2003 5:41 PM 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 1508 8 204800
1413120 9/30/2003 5:42 PM 6.00.3790.0 (srv03_rtm.030324-2048)
1,008.50 KB (1,032,704 bytes) 3/25/2003 11:00 AM
rhostsrvr.exe c:\rhost\rhostsrvr.exe 1632 8 204800 1413120
9/30/2003 5:42 PM Not Available 54.50 KB (55,808 bytes)
7/16/2003 4:49 PM
svchost.exe c:\windows\system32\svchost.exe 1732 8 204800
1413120 9/30/2003 5:42 PM 5.2.3790.0 (srv03_rtm.030324-2048)
13.00 KB (13,312 bytes) 3/25/2003 11:00 AM
msinfo32.exe c:\program files\common files\microsoft
shared\msinfo\msinfo32.exe 980 8 204800 1413120 9/30/2003 5:43
PM 5.2.3790.0 (srv03_rtm.030324-2048) 40.50 KB (41,472 bytes)
7/16/2003 3:50 PM
wmiprvse.exe Not Available 1080 8 Not Available Not Available
9/30/2003 5:43 PM Not Available Not Available Not Available
wmiprvse.exe Not Available 1356 8 Not Available Not Available
9/30/2003 5:43 PM Not Available Not Available Not Available

```

[Loaded Modules]

Name	Version	Size	File Date	Manufacturer	Path
winlogon	5.2.3790.0	536.50 KB (549,376 bytes)	3/25/2003 11:00 AM	Microsoft Corporation	c:\windows\system32\winlogon.exe
ntdll	5.2.3790.0	722.50 KB (739,840 bytes)	3/25/2003 11:00 AM	Microsoft Corporation	c:\windows\system32\ntdll.dll
kernel32	5.2.3790.0	965.00 KB (988,160 bytes)	3/25/2003 11:00 AM	Microsoft Corporation	c:\windows\system32\kernel32.dll
msvcrt	7.0.3790.0	319.50 KB (327,168 bytes)	3/25/2003 11:00 AM	Microsoft Corporation	c:\windows\system32\msvcrt.dll
advapi32	5.2.3790.0	559.50 KB (572,928 bytes)	3/25/2003 11:00 AM	Microsoft Corporation	c:\windows\system32\advapi32.dll
rpcrt4	5.2.3790.59	642.50 KB (657,920 bytes)	7/5/2003 1:03 PM	Microsoft Corporation	c:\windows\system32\rpcrt4.dll
user32	5.2.3790.0	562.00 KB (575,488 bytes)	3/25/2003 11:00 AM	Microsoft Corporation	c:\windows\system32\user32.dll
gdi32	5.2.3790.0	263.00 KB (269,312 bytes)	3/25/2003 11:00 AM	Microsoft Corporation	c:\windows\system32\gdi32.dll
userenv	5.2.3790.0	732.50 KB (750,080 bytes)	3/25/2003 11:00 AM	Microsoft Corporation	c:\windows\system32\userenv.dll
nddeapi	5.2.3790.0	16.00 KB (16,384 bytes)	3/25/2003 11:00 AM	Microsoft Corporation	c:\windows\system32\nddeapi.dll
crypt32	5.131.3790.0	598.00 KB (612,352 bytes)	3/25/2003 11:00 AM	Microsoft Corporation	c:\windows\system32\crypt32.dll

```

msasn1 5.2.3790.0 (srv03_rtm.030324-2048) 58.00 KB (59,392 bytes)
3/25/2003 11:00 AM Microsoft Corporation
c:\windows\system32\msasn1.dll
secur32 5.2.3790.0 (srv03_rtm.030324-2048) 63.00 KB (64,512 bytes)
3/25/2003 11:00 AM Microsoft Corporation
c:\windows\system32\secur32.dll
winsta 5.2.3790.0 (srv03_rtm.030324-2048) 51.00 KB (52,224 bytes)
3/25/2003 11:00 AM Microsoft Corporation
c:\windows\system32\winsta.dll
netapi32 5.2.3790.0 (srv03_rtm.030324-2048) 317.00 KB (324,608
bytes) 3/25/2003 11:00 AM Microsoft Corporation
c:\windows\system32\netapi32.dll
profmap 5.2.3790.0 (srv03_rtm.030324-2048) 22.00 KB (22,528 bytes)
3/25/2003 11:00 AM Microsoft Corporation
c:\windows\system32\profmap.dll
regapi 5.2.3790.0 (srv03_rtm.030324-2048) 48.50 KB (49,664 bytes)
3/25/2003 11:00 AM Microsoft Corporation
c:\windows\system32\regapi.dll
ws2_32 5.2.3790.0 (srv03_rtm.030324-2048) 87.50 KB (89,600 bytes)
3/25/2003 11:00 AM Microsoft Corporation
c:\windows\system32\ws2_32.dll
ws2help 5.2.3790.0 (srv03_rtm.030324-2048) 19.50 KB (19,968 bytes)
3/25/2003 11:00 AM Microsoft Corporation
c:\windows\system32\ws2help.dll
psapi 5.2.3790.0 (srv03_rtm.030324-2048) 21.50 KB (22,016 bytes)
3/25/2003 11:00 AM Microsoft Corporation
c:\windows\system32\psapi.dll
version 5.2.3790.0 (srv03_rtm.030324-2048) 17.00 KB (17,408 bytes)
3/25/2003 11:00 AM Microsoft Corporation
c:\windows\system32\version.dll
setupapi 5.2.3790.0 (srv03_rtm.030324-2048) 1,014.50 KB
(1,038,848 bytes) 3/25/2003 11:00 AM Microsoft Corporation
c:\windows\system32\setupapi.dll
msgina 5.2.3790.0 (srv03_rtm.030324-2048) 1.14 MB (1,191,936 bytes)
3/25/2003 11:00 AM Microsoft Corporation
c:\windows\system32\msgina.dll
shsvcs 6.00.3790.0 (srv03_rtm.030324-2048) 121.50 KB (124,416 bytes)
3/25/2003 11:00 AM Microsoft Corporation
c:\windows\system32\shsvcs.dll
shlwapi 6.00.3790.0 (srv03_rtm.030324-2048) 281.00 KB (287,744 bytes)
3/25/2003 11:00 AM Microsoft Corporation
c:\windows\system32\shlwapi.dll
sfc 5.2.3790.0 (srv03_rtm.030324-2048) 4.50 KB (4,608 bytes)
3/25/2003 11:00 AM Microsoft Corporation
c:\windows\system32\sfc.dll
sfc_os 5.2.3790.0 (srv03_rtm.030324-2048) 133.00 KB (136,192 bytes)
3/25/2003 11:00 AM Microsoft Corporation
c:\windows\system32\sfc_os.dll
wintrust 5.131.3790.0 (srv03_rtm.030324-2048) 161.50 KB (165,376
bytes) 3/25/2003 11:00 AM Microsoft Corporation
c:\windows\system32\wintrust.dll
ole32 5.2.3790.68 (srv03_gdr.030614-1004) 1.13 MB (1,182,720 bytes)
7/5/2003 1:03 PM Microsoft Corporation
c:\windows\system32\ole32.dll
imagehlp 5.2.3790.0 (srv03_rtm.030324-2048) 142.50 KB (145,920
bytes) 3/25/2003 11:00 AM Microsoft Corporation
c:\windows\system32\imagehlp.dll
comctl32 6.0 (srv03_rtm.030324-2048) 907.00 KB (928,768 bytes)
7/16/2003 8:34 AM Microsoft Corporation

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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
winpool 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\winpool.drv
mpr 5.2.3790.0 (srv03_rtm.030324-2048) 56.00 KB (57,344 bytes)
3/25/2003 11:00 AM Microsoft Corporation
c:\windows\system32\mpr.dll
shell32 6.00.3790.0 (srv03_rtm.030324-2048) 7.79 MB (8,166,400 bytes)
3/25/2003 11:00 AM Microsoft Corporation
c:\windows\system32\shell32.dll
comctl32 5.82 (srv03_rtm.030324-2048) 561.00 KB (574,464 bytes)
7/16/2003 8:34 AM Microsoft Corporation
c:\windows\winsxs\x86_microsoft.windows.common-
controls_6595b64144ccf1df_5.82.0.0_x-ww_8a69ba05\comctl32.dll
uxtheme 6.00.3790.0 (srv03_rtm.030324-2048) 196.00 KB (200,704 bytes)
3/25/2003 11:00 AM Microsoft Corporation
c:\windows\system32\uxtheme.dll
samlib 5.2.3790.0 (srv03_rtm.030324-2048) 49.00 KB (50,176 bytes)
3/25/2003 11:00 AM Microsoft Corporation
c:\windows\system32\samlib.dll
clbcatq 2001.12.4720.0 (srv03_rtm.030324-2048) 481.00 KB (492,544
bytes) 7/16/2003 3:47 PM Microsoft Corporation
c:\windows\system32\clbcatq.dll
oleaut32 5.2.3790.0 486.00 KB (497,664 bytes) 3/25/2003
11:00 AM Microsoft Corporation c:\windows\system32\oleaut32.dll

comres 2001.12.4720.0 (srv03_rtm.030324-2048) 778.00 KB (796,672
bytes) 3/25/2003 11:00 AM Microsoft Corporation
c:\windows\system32\comres.dll
cscui 5.2.3790.0 (srv03_rtm.030324-2048) 305.00 KB (312,320 bytes)
3/25/2003 11:00 AM Microsoft Corporation
c:\windows\system32\cscui.dll

```

```

ntmarta 5.2.3790.0 (srv03_rtm.030324-2048) 114.00 KB (116,736 bytes)
3/25/2003 11:00 AM Microsoft Corporation
c:\windows\system32\ntmarta.dll
services 5.2.3790.0 (srv03_rtm.030324-2048) 102.00 KB (104,448
bytes) 3/25/2003 11:00 AM Microsoft Corporation
c:\windows\system32\services.exe
scserv 5.2.3790.0 (srv03_rtm.030324-2048) 316.50 KB (324,096 bytes)
3/25/2003 11:00 AM Microsoft Corporation
c:\windows\system32\scserv.dll
authz 5.2.3790.0 (srv03_rtm.030324-2048) 67.00 KB (68,608 bytes)
3/25/2003 11:00 AM Microsoft Corporation
c:\windows\system32\authz.dll
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
msvc60 6.05.2144.0 388.00 KB (397,312 bytes) 3/25/2003 11:00 AM
Microsoft Corporation c:\windows\system32\msvc60.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
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
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
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
msvl_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\msvl_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

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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
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
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
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
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
dmsserver 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\dmsserver.dll
es 2001.12.4720.0 (srv03_rtm.030324-2048) 221.50 KB (226,816
bytes) 3/25/2003 11:00 AM Microsoft Corporation
c:\windows\system32\es.dll
srvsvc 5.2.3790.0 (srv03_rtm.030324-2048) 89.00 KB (91,136 bytes)
3/25/2003 11:00 AM Microsoft Corporation
c:\windows\system32\srvsvc.dll

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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
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
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
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
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
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
wbemsvc 5.2.3790.0 (srv03_rtm.030324-2048) 42.50 KB (43,520 bytes)
7/16/2003 3:46 PM Microsoft Corporation
c:\windows\system32\wbem\wbemsvc.dll
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
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
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

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adslrpc 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\adslrpc.dll
credui 5.2.3790.0 (srv03_rtm.030324-2048) 159.00 KB (162,816 bytes)
3/25/2003 11:00 AM Microsoft Corporation
c:\windows\system32\credui.dll
rtutils 5.2.3790.0 (srv03_rtm.030324-2048) 32.00 KB (32,768 bytes)
3/25/2003 11:00 AM Microsoft Corporation
c:\windows\system32\rtutils.dll
rasapi32 5.2.3790.0 (srv03_rtm.030324-2048) 227.50 KB (232,960
bytes) 3/25/2003 11:00 AM Microsoft Corporation
c:\windows\system32\rasapi32.dll
rasman 5.2.3790.0 (srv03_rtm.030324-2048) 56.50 KB (57,856 bytes)
3/25/2003 11:00 AM Microsoft Corporation
c:\windows\system32\rasman.dll
tapi32 5.2.3790.0 (srv03_rtm.030324-2048) 175.00 KB (179,200 bytes)
3/25/2003 11:00 AM Microsoft Corporation
c:\windows\system32\tapi32.dll
wzcsvc 5.2.3790.0 (srv03_rtm.030324-2048) 272.50 KB (279,040 bytes)
3/25/2003 4:15 AM Microsoft Corporation
c:\windows\system32\wzcsvc.dll
wmi 5.2.3790.0 (srv03_rtm.030324-2048) 6.50 KB (6,656 bytes)
3/25/2003 11:00 AM Microsoft Corporation
c:\windows\system32\wmi.dll
dhcpcsvc 5.2.3790.0 (srv03_rtm.030324-2048) 101.50 KB (103,936
bytes) 3/25/2003 11:00 AM Microsoft Corporation
c:\windows\system32\dhcpcsvc.dll
wzcsapi 5.2.3790.0 (srv03_rtm.030324-2048) 24.50 KB (25,088 bytes)
3/25/2003 4:15 AM Microsoft Corporation
c:\windows\system32\wzcsapi.dll
netshell 5.2.3790.0 (srv03_rtm.030324-2048) 1.67 MB (1,747,456
bytes) 3/25/2003 11:00 AM Microsoft Corporation
c:\windows\system32\netshell.dll
clusapi 5.2.3790.0 (srv03_rtm.030324-2048) 56.00 KB (57,344 bytes)
3/25/2003 11:00 AM Microsoft Corporation
c:\windows\system32\clusapi.dll
netcfgx 5.2.3790.0 (srv03_rtm.030324-2048) 726.00 KB (743,424 bytes)
3/25/2003 11:00 AM Microsoft Corporation
c:\windows\system32\netcfgx.dll
winipsec 5.2.3790.0 (srv03_rtm.030324-2048) 34.50 KB (35,328
bytes) 3/25/2003 11:00 AM Microsoft Corporation
c:\windows\system32\winipsec.dll
hnetcfg 5.2.3790.0 (srv03_rtm.030324-2048) 243.50 KB (249,344 bytes)
3/25/2003 11:00 AM Microsoft Corporation
c:\windows\system32\hnetcfg.dll
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
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
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

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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
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
wbemcons 5.2.3790.0 (srv03_rtm.030324-2048) 69.00 KB (70,656
bytes) 7/16/2003 3:46 PM Microsoft Corporation
c:\windows\system32\wbem\wbemcons.dll
mnmsrvc 4.4.4000 32.00 KB (32,768 bytes) 7/16/2003 3:50 PM
Microsoft Corporation c:\windows\system32\mnmsrvc.exe
nmcom 4.4.4000 72.00 KB (73,728 bytes) 7/16/2003 3:50 PM
Microsoft Corporation c:\program files\netmeeting\nmcom.dll
wssock32 5.2.3790.0 (srv03_rtm.030324-2048) 22.00 KB (22,528 bytes)
3/25/2003 11:00 AM Microsoft Corporation
c:\windows\system32\wssock32.dll
mst120 4.4.4000 248.00 KB (253,952 bytes) 7/16/2003 3:50 PM
Microsoft Corporation c:\program files\netmeeting\mst120.dll
nmas 4.4.4000 216.00 KB (221,184 bytes) 7/16/2003 3:50 PM
Microsoft Corporation c:\program files\netmeeting\nmas.dll
nmasnt 4.4.4000 28.00 KB (28,672 bytes) 7/16/2003 3:50 PM
Microsoft Corporation c:\program files\netmeeting\nmasnt.dll
h323cc 4.4.4000 52.00 KB (53,248 bytes) 7/16/2003 3:50 PM
Microsoft Corporation c:\program files\netmeeting\h323cc.dll
callcont 4.4.4000 356.00 KB (364,544 bytes) 7/16/2003 3:50
PM Microsoft Corporation c:\program files\netmeeting\callcont.dll
nac 4.4.4000 208.00 KB (212,992 bytes) 7/16/2003 3:50 PM
Microsoft Corporation c:\program files\netmeeting\nac.dll
msacm32 5.2.3790.0 (srv03_rtm.030324-2048) 67.50 KB (69,120 bytes)
3/25/2003 11:00 AM Microsoft Corporation
c:\windows\system32\msacm32.dll
msvfw32 5.2.3790.0 (srv03_rtm.030324-2048) 112.50 KB (115,200 bytes)
3/25/2003 11:00 AM Microsoft Corporation
c:\windows\system32\msvfw32.dll

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dcap32 4.4.4000 40.00 KB (40,960 bytes) 7/16/2003 3:50 PM
 Microsoft Corporation c:\program files\netmeeting\dcap32.dll
 winnrn 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\winnrn.dll
 rundll32 5.2.3790.0 (srv03_rtm.030324-2048) 32.00 KB (32,768
 bytes) 3/25/2003 11:00 AM Microsoft Corporation
 c:\windows\system32\rundll32.exe
 msconf 4.4.4000 68.00 KB (69,632 bytes) 7/16/2003 3:50 PM
 Microsoft Corporation c:\windows\system32\msconf.dll
 termsrv 5.2.3790.0 (srv03_rtm.030324-2048) 216.50 KB (221,696 bytes)
 7/16/2003 3:47 PM Microsoft Corporation
 c:\windows\system32\termsrv.dll
 icaapi 5.2.3790.0 (srv03_rtm.030324-2048) 10.50 KB (10,752 bytes)
 7/16/2003 3:47 PM Microsoft Corporation
 c:\windows\system32\icaapi.dll
 mstlsapi 5.2.3790.0 (srv03_rtm.030324-2048) 104.50 KB (107,008
 bytes) 3/25/2003 11:00 AM Microsoft Corporation
 c:\windows\system32\mstlsapi.dll
 rdpwsx 5.2.3790.0 (srv03_rtm.030324-2048) 80.13 KB (82,056 bytes)
 7/16/2003 3:47 PM Microsoft Corporation
 c:\windows\system32\rdpwsx.dll
 explorer 6.00.3790.0 (srv03_rtm.030324-2048) 1,008.50 KB
 (1,032,704 bytes) 3/25/2003 11:00 AM Microsoft Corporation
 c:\windows\explorer.exe
 browseui 6.00.3790.0 (srv03_rtm.030324-2048) 1.01 MB (1,057,280
 bytes) 3/25/2003 11:00 AM Microsoft Corporation
 c:\windows\system32\browseui.dll
 shdocvw 6.00.3790.0 (srv03_rtm.030324-2048) 1.33 MB (1,393,664 bytes)
 3/25/2003 11:00 AM Microsoft Corporation
 c:\windows\system32\shdocvw.dll
 apphelp 5.2.3790.0 (srv03_rtm.030324-2048) 122.00 KB (124,928 bytes)
 3/25/2003 11:00 AM Microsoft Corporation
 c:\windows\system32\apphelp.dll
 themeui 6.00.3790.0 (srv03_rtm.030324-2048) 360.50 KB (369,152 bytes)
 3/25/2003 11:00 AM Microsoft Corporation
 c:\windows\system32\themeui.dll
 msimg32 5.2.3790.0 (srv03_rtm.030324-2048) 4.50 KB (4,608 bytes)
 3/25/2003 11:00 AM Microsoft Corporation
 c:\windows\system32\msimg32.dll
 urlmon 6.00.3790.0 (srv03_rtm.030324-2048) 501.50 KB (513,536 bytes)
 3/25/2003 11:00 AM Microsoft Corporation
 c:\windows\system32?urlmon.dll
 linkinfo 5.2.3790.0 (srv03_rtm.030324-2048) 16.50 KB (16,896
 bytes) 3/25/2003 11:00 AM Microsoft Corporation
 c:\windows\system32\linkinfo.dll
 ntshrui 6.00.3790.0 (srv03_rtm.030324-2048) 136.00 KB (139,264 bytes)
 3/25/2003 11:00 AM Microsoft Corporation
 c:\windows\system32\ntshrui.dll
 webcheck 6.00.3790.0 (srv03_rtm.030324-2048) 261.50 KB (267,776
 bytes) 3/25/2003 11:00 AM Microsoft Corporation
 c:\windows\system32\webcheck.dll
 stobject 5.2.3790.0 (srv03_rtm.030324-2048) 117.50 KB (120,320
 bytes) 3/25/2003 11:00 AM Microsoft Corporation
 c:\windows\system32\stobject.dll
 batmeter 6.00.3790.0 (srv03_rtm.030324-2048) 28.50 KB (29,184
 bytes) 3/25/2003 11:00 AM Microsoft Corporation
 c:\windows\system32\batmeter.dll

powrprof 6.00.3790.0 (srv03_rtm.030324-2048) 14.50 KB (14,848
 bytes) 3/25/2003 11:00 AM Microsoft Corporation
 c:\windows\system32\powrprof.dll
 printui 5.2.3790.0 (srv03_rtm.030324-2048) 536.50 KB (549,376 bytes)
 3/25/2003 11:00 AM Microsoft Corporation
 c:\windows\system32\printui.dll
 cfgmgr32 5.2.3790.0 (srv03_rtm.030324-2048) 17.50 KB (17,920
 bytes) 3/25/2003 11:00 AM Microsoft Corporation
 c:\windows\system32\cfgmgr32.dll
 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
 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
 netuil 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\netuil.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
 kmddsp 5.2.3790.0 (srv03_rtm.030324-2048) 34.00 KB (34,816 bytes)
 3/25/2003 11:00 AM Microsoft Corporation
 c:\windows\system32\kmddsp.tsp
 ndptsp 5.2.3790.0 (srv03_rtm.030324-2048) 54.50 KB (55,808 bytes)
 3/25/2003 11:00 AM Microsoft Corporation
 c:\windows\system32\ndptsp.tsp
 ipconf 5.2.3790.0 (srv03_rtm.030324-2048) 16.50 KB (16,896 bytes)
 3/25/2003 11:00 AM Microsoft Corporation
 c:\windows\system32\ipconf.tsp
 h323 5.2.3790.0 (srv03_rtm.030324-2048) 250.00 KB (256,000 bytes)
 3/25/2003 11:00 AM Microsoft Corporation
 c:\windows\system32\h323.tsp
 hidphone 5.2.3790.0 (srv03_rtm.030324-2048) 28.00 KB (28,672
 bytes) 3/25/2003 11:00 AM Microsoft Corporation
 c:\windows\system32\hidphone.tsp
 hid 5.2.3790.0 (srv03_rtm.030324-2048) 17.50 KB (17,920 bytes)
 3/24/2003 5:48 PM Microsoft Corporation
 c:\windows\system32\hid.dll
 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

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mfc42u 6.05.3014.0 960.00 KB (983,040 bytes) 3/25/2003 11:00 AM
Microsoft Corporation c:\windows\system32\mfc42u.dll
msinfo 5.2.3790.0 (srv03_rtm.030324-2048) 358.50 KB (367,104 bytes)
7/16/2003 3:50 PM Microsoft Corporation
c:\windows\pchealth\helpctr\binaries\msinfo.dll
comdlg32 6.00.3790.0 (srv03_rtm.030324-2048) 261.00 KB (267,264
bytes) 3/25/2003 11:00 AM Microsoft Corporation
c:\windows\system32\comdlg32.dll
riched32 5.2.3790.0 (srv03_rtm.030324-2048) 3.50 KB (3,584 bytes)
3/25/2003 11:00 AM Microsoft Corporation
c:\windows\system32\riched32.dll
riched20 5.31.23.1218 406.00 KB (415,744 bytes) 3/25/2003
11:00 AM Microsoft Corporation c:\windows\system32\riched20.dll

```

[Services]

Display Name	Name	State	Start Mode	Service Type	Path	Error
Control Start	Name Tag ID					
Alerter	Alerter	Stopped Disabled		Share Process	c:\windows\system32\svchost.exe -k local service	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
Windows Audio	AudioSrv	Stopped Disabled		Share Process	c:\windows\system32\svchost.exe -k netsvcs	Normal LocalSystem
Background Intelligent Transfer Service	BITS	Stopped Manual		Share Process	c:\windows\system32\svchost.exe -k netsvcs	Normal LocalSystem
Computer Browser	Browser	Stopped Manual		Share Process	c:\windows\system32\svchost.exe -k netsvcs	Normal LocalSystem
Indexing Service	CiSvc	Stopped Disabled		Share Process	c:\windows\system32\cisvc.exe	Normal LocalSystem
ClipBook	ClipSrv	Stopped Disabled		Own Process	c:\windows\system32\clipsrv.exe	Normal LocalSystem
COM+ System Application	COMSysApp	Stopped Manual		Own Process	c:\windows\system32\dllhost.exe /processid:{02d4b3f1-fd88-11d1-960d-00805fc79235}	Normal LocalSystem
Cryptographic Services	CryptSvc	Stopped Manual		Share Process	c:\windows\system32\svchost.exe -k netsvcs	Normal LocalSystem
Distributed File System	Dfs	Stopped Disabled		Own Process	c:\windows\system32\dfssvc.exe	Normal LocalSystem
DHCP Client	Dhcp	Stopped Disabled		Share Process	c:\windows\system32\svchost.exe -k network service	Normal NT
AUTHORITY\NetworkService	0					
Logical Disk Manager Administrative Service	dmadmin	Stopped Manual		Share Process	c:\windows\system32\dmadmin.exe /com	Normal LocalSystem

Logical Disk Manager	dmserver	Running Auto		Share Process	c:\windows\system32\svchost.exe -k netsvcs	Normal LocalSystem
DNS Client	Dnscache	Stopped Manual		Share Process	c:\windows\system32\svchost.exe -k network service	Normal NT
AUTHORITY\NetworkService	0					
Error Reporting Service	ERSvc	Stopped Disabled		Share Process	c:\windows\system32\svchost.exe -k winerr	Ignore LocalSystem
Event Log	Eventlog	Running Auto		Share Process	c:\windows\system32\services.exe	Normal LocalSystem
COM+ Event System	EventSystem	Running Manual		Share Process	c:\windows\system32\svchost.exe -k netsvcs	Normal LocalSystem
Help and Support	helpsvc	Stopped Manual		Share Process	c:\windows\system32\svchost.exe -k netsvcs	Normal LocalSystem
Human Interface Device Access	HidServ	Stopped Disabled		Share Process	c:\windows\system32\svchost.exe -k netsvcs	Normal LocalSystem
HTTP SSL	HTTPFilter	Stopped Manual		Share Process	c:\windows\system32\lsass.exe	Normal LocalSystem
IIS Admin Service	IISADMIN	Stopped Manual		Share Process	c:\windows\system32\inetrv\inetinfo.exe	Normal LocalSystem
IMAPI CD-Burning COM Service	ImapiService	Stopped Disabled		Own Process	c:\windows\system32\imapi.exe	Normal LocalSystem
Intersite Messaging	IsmServ	Stopped Disabled		Own Process	c:\windows\system32\ismserv.exe	Normal LocalSystem
Kerberos Key Distribution Center	kdc	Stopped Disabled		Share Process	c:\windows\system32\lsass.exe	Normal LocalSystem
Server	lanmanserver	Running Auto		Share Process	c:\windows\system32\svchost.exe -k netsvcs	Normal LocalSystem
Workstation	lanmanworkstation	Running Auto		Share Process	c:\windows\system32\svchost.exe -k netsvcs	Normal LocalSystem
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 local service	Normal NT
AUTHORITY\LocalService	0					
Messenger	Messenger	Stopped Disabled		Share Process	c:\windows\system32\svchost.exe -k netsvcs	Normal LocalSystem
NetMeeting Remote Desktop Sharing	mnmsrvc	Running Auto		Own Process	c:\windows\system32\mnmsrvc.exe	Normal LocalSystem
Distributed Transaction Coordinator	MSDTC	Stopped Manual		Own Process	c:\windows\system32\msdtc.exe	Normal NT
AUTHORITY\NetworkService	0					
Windows Installer	MSIServer	Stopped Manual		Share Process	c:\windows\system32\msiexec.exe /v	Normal LocalSystem

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	sacsvr	Stopped	Manual	Share Process	
	c:\windows\system32\svchost.exe	-k netsvcs		Normal	LocalSystem 0
Security Accounts Manager	SamSs	Running	Auto	Share Process	
	c:\windows\system32\lsass.exe	Normal		LocalSystem	0

Smart Card	SCardSvr	Stopped	Manual	Share Process	
	c:\windows\system32\scardsvr.exe			Ignore	NT
AUTHORITY\LocalService					0
Task Scheduler	Schedule	Stopped	Manual	Share Process	
	c:\windows\system32\svchost.exe	-k netsvcs		Normal	LocalSystem 0
Secondary Logon	seclogon	Running	Auto	Share Process	
	c:\windows\system32\svchost.exe	-k netsvcs		Ignore	LocalSystem 0
System Event Notification	SENS	Running	Auto	Share Process	
	c:\windows\system32\svchost.exe	-k netsvcs		Normal	LocalSystem 0
Internet Connection Firewall (ICF) / Internet Connection Sharing (ICS)	SharedAccess	Stopped	Disabled	Share Process	
	c:\windows\system32\svchost.exe	-k netsvcs		Normal	LocalSystem 0
Shell Hardware Detection	ShellHWDetection	Running	Auto	Share Process	
	c:\windows\system32\svchost.exe	-k netsvcs		Ignore	LocalSystem 0
Print Spooler	Spooler	Stopped	Manual	Own Process	
	c:\windows\system32\spoolsv.exe			Normal	LocalSystem 0
Windows Image Acquisition (WIA)	stisvc	Stopped	Disabled	Share Process	
	c:\windows\system32\svchost.exe	-k imgsvc		Normal	NT
AUTHORITY\LocalService					0
Microsoft Software Shadow Copy Provider	swprv	Stopped	Manual	Own Process	
	c:\windows\system32\svchost.exe	-k swprv		Normal	LocalSystem 0
Performance Logs and Alerts	SysmonLog	Stopped	Manual	Own Process	
	c:\windows\system32\smlogsvc.exe			Normal	NT
Authority\NetworkService					0
Telephony	TapiSrv	Running	Manual	Share Process	
	c:\windows\system32\svchost.exe	-k tapisrv		Normal	LocalSystem 0
Terminal Services	TermService	Running	Manual	Share Process	
	c:\windows\system32\svchost.exe	-k termsvcs		Normal	LocalSystem 0
Themes	Themes	Stopped	Disabled	Share Process	
	c:\windows\system32\svchost.exe	-k netsvcs		Normal	LocalSystem 0
Telnet	TlntSvr	Stopped	Disabled	Own Process	
	c:\windows\system32\tlntsvr.exe			Normal	NT
AUTHORITY\LocalService					0
Distributed Link Tracking Server	TrkSvr	Stopped	Disabled	Share Process	
	c:\windows\system32\svchost.exe	-k netsvcs		Normal	LocalSystem 0
Distributed Link Tracking Client	TrkWks	Stopped	Disabled	Share Process	
	c:\windows\system32\svchost.exe	-k netsvcs		Normal	LocalSystem 0
Terminal Services Session Directory	Tssdis	Stopped	Disabled	Own Process	
	c:\windows\system32\tssdis.exe			Normal	LocalSystem 0
Upload Manager	uploadmgr	Stopped	Manual	Share Process	
	c:\windows\system32\svchost.exe	-k netsvcs		Normal	LocalSystem 0
Uninterruptible Power Supply	UPS	Stopped	Manual	Own Process	
	c:\windows\system32\ups.exe			Normal	NT
AUTHORITY\LocalService					0

```

Virtual Disk Service vds Stopped Manual Own Process
c:\windows\system32\vds.exe Normal LocalSystem 0
Volume Shadow Copy VSS Stopped Manual Own Process
c:\windows\system32\vssvc.exe Normal LocalSystem 0
Windows Time W32Time Stopped Disabled Share Process
c:\windows\system32\svchost.exe -k netsvcs Normal LocalSystem
0
World Wide Web Publishing Service W3SVC Stopped Manual Share Process
c:\windows\system32\svchost.exe -k iissvcs Normal LocalSystem
0
WebClient WebClient Stopped Disabled Share Process
c:\windows\system32\svchost.exe -k localservice Normal NT
AUTHORITY\LocalService 0
WinHTTP Web Proxy Auto-Discovery Service WinHttpAutoProxySvc
Stopped Manual Share Process c:\windows\system32\svchost.exe -k
localservice Normal NT AUTHORITY\LocalService 0
Windows Management Instrumentation winmgmt Running Auto Share Process
c:\windows\system32\svchost.exe -k netsvcs Ignore LocalSystem
0
Portable Media Serial Number Service WmdmPmSN Stopped Manual Share
Process c:\windows\system32\svchost.exe -k netsvcs Normal LocalSystem
0
Windows Management Instrumentation Driver Extensions Wmi Stopped Manual
Share Process c:\windows\system32\svchost.exe -k netsvcs Normal
LocalSystem 0
WMI Performance Adapter WmiApSrv Stopped Manual Own Process
c:\windows\system32\wbem\wmiapsrv.exe Normal LocalSystem 0

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

[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

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 CMPCL01\Administrator:Accessories CMPCL01\Administrator

Accessories\Accessibility
CMPCL01\Administrator:Accessories\Accessibility
CMPCL01\Administrator
Accessories\Entertainment
CMPCL01\Administrator:Accessories\Entertainment
CMPCL01\Administrator
Administrative Tools CMPCL01\Administrator:Administrative Tools
CMPCL01\Administrator
Startup CMPCL01\Administrator:Startup CMPCL01\Administrator

[Startup Programs]

Program Command User Name Location
desktop desktop.ini NT AUTHORITY\SYSTEM Startup
desktop desktop.ini CMPCL01\Administrator Startup
desktop desktop.ini .DEFAULT Startup
desktop desktop.ini All Users Common Startup
rhostsrv.exe c:\rhost\rhostsrv.exe -d\rhost -crhosthdlr.exe All
Users Common Startup
ShutdownEventCheck %systemroot%\system32\dumpprep 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
DDSContainerCtl Class Not Available
Bitmap Image mspaint.exe

[Windows Error Reporting]

Time Type Details

[Internet Settings]

[Internet Explorer]

[ Following are sub-categories of this main category ]
[Summary]

Item Value
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
browsecl.dll	6.0.3790.0	62 KB	3/25/2003 12:00:00 PM	C:\WINDOWS\system32	Microsoft Corporation
browseui.dll	6.0.3790.0	1,033 KB	3/25/2003 12:00:00 PM	C:\WINDOWS\system32	Microsoft Corporation
cdfview.dll	6.0.3790.0	144 KB	3/25/2003 12:00:00 PM	C:\WINDOWS\system32	Microsoft Corporation
comctl32.dll	5.82.3790.0	561 KB	3/25/2003 12:00:00 PM	C:\WINDOWS\system32	Microsoft Corporation
dxttrans.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
ieunit.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
mshtmler.dll	6.0.3790.0	55 KB	3/25/2003 12:00:00 PM	C:\WINDOWS\system32	Microsoft Corporation
msident.dll	6.0.3790.0	47 KB	3/25/2003 12:00:00 PM	C:\WINDOWS\system32	Microsoft Corporation
msidentld.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\LocalService\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

Hyperthreading Information

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 2003 IP Configuration Information

(Common to 8 clients except for Host Name, Physical Address, and IP Address)

Windows IP Configuration

Host Name : cmplc101
Primary Dns Suffix :
Node Type : Unknown
IP Routing Enabled. : No
WINS Proxy Enabled. : No

Ethernet adapter Admin:

Connection-specific DNS Suffix . . :
Description : Intel(R) PRO/100+ Server Adapter
(PILA8470B)
Physical Address. : 00-D0-B7-3C-DD-DF
DHCP Enabled. : No
IP Address. : 192.158.2.1
Subnet Mask : 255.255.255.0
Default Gateway :
NetBIOS over Tcpip. : Disabled

Ethernet adapter DBMS:

Connection-specific DNS Suffix . . :
Description : Broadcom NetXtreme Gigabit Ethernet
Physical Address. : 00-06-5B-FE-80-97

DHCP Enabled. : No
IP Address. : 192.158.91.1
Subnet Mask : 255.255.255.0
Default Gateway :
NetBIOS over Tcpi. : Disabled

Ethernet adapter RTE:

Connection-specific DNS Suffix . . :
Description : Broadcom NetXtreme Gigabit Ethernet #2
Physical Address. : 00-06-5B-FE-80-98
DHCP Enabled. : No
IP Address. : 192.1.1.11
Subnet Mask : 255.255.255.0
Default Gateway :
NetBIOS over Tcpi. : Disabled

Volume in drive C has no label.
Volume Serial Number is 7433-AD41

Directory of C:\inetpub\wwwroot

09/30/2003 03:12 PM 208,384 tpcc.dll
1 File(s) 208,384 bytes
0 Dir(s) 11,865,849,856 bytes free

Volume in drive C has no label.
Volume Serial Number is 7433-AD41

Directory of C:\inetpub\wwwroot

09/29/2003 09:13 PM 120,832 tpcc_com_all.dll
1 File(s) 120,832 bytes
0 Dir(s) 11,865,849,856 bytes free

Volume in drive C has no label.
Volume Serial Number is 7433-AD41

Directory of C:\inetpub\wwwroot

09/29/2003 09:13 PM 15,872 tpcc_com_ps.dll
1 File(s) 15,872 bytes
0 Dir(s) 11,865,849,856 bytes free

Component Services Configuration

Component Services Configuration

COM+ Component TPCC.AllTxns Settings:

Transactions not supported
Enable object pooling
Minimum pool size 50
Maximum pool size 50
Creation timeout 120,000
Enable object construction
Enable just in time activation
Concurrency required

Internet Information Server Registry Parameters

\registry\machine\system\currentcontrolset\services\inetinfo
Parameters

ListenBackLog = REG_DWORD 0x00000019
BandwidthLevel = REG_DWORD 0xffffffff
ThreadTimeout = REG_DWORD 0x00015180
DisableMemoryCache = REG_DWORD 0x00000001
MemoryCacheSize = REG_DWORD 0x00000000
PoolThreadLimit = REG_DWORD 0x000000c8
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

Oracle Server Registry Parameters

\registry\machine\software\oracle
API = C:\Oracle\orcl0414\db
NLS LANG = NA
OLEDB = C:\Oracle\orcl0414\oledb\msg
OO4O = C:\Oracle\orcl0414\oo4o\msg
ORACLE_GROUP_NAME = Oracle - OraHomeTpcc
ORACLE_HOME = C:\Oracle\Ora10i
ORACLE_HOME_NAME = OraHome0414
VOBHOME2.0 = C:\Oracle\orcl0414

```

inst_loc = C:\Program Files\Oracle\Inventory
HOMETPCC
  ID = 0
  MSHELP_TOOLS = C:\Oracle\Orcl0414\MSHELP
  ORACLE_BASE = C:\Oracle\Orcl0414
  ORACLE_BUNDLE_NAME = Enterprise
  ORACLE_GROUP_NAME = Oracle - OraHome0414
  ORACLE_HOME = C:\Oracle\Orcl0414
  ORACLE_HOME_KEY = Software\ORACLE\HOMETPCC
  ORACLE_HOME_NAME = OraHome0414
  ORACLE_SID = TPCC
  ORAMTS_CONN_POOL_TIMEOUT = 120
  ORAMTS_CP_TRACE_DIR = C:\Oracle\Orcl0414\oramts\Trace
  ORAMTS_CP_TRACE_LEVEL = 0
  ORAMTS_NET_CACHE_MAXFREE = 5
  ORAMTS_NET_CACHE_TIMEOUT = 120000
  ORAMTS_OSCREDS_MATCH_LEVEL = OS_AUTH_LOGIN
  ORAMTS_SESS_TXNTIMETOLIVE = 120
  ORA_TPCC_AUTOSTART = REG_EXPAND_SZ FALSE
  ORA_TPCC_SHUTDOWN = REG_EXPAND_SZ TRUE
  ORA_TPCC_SHUTDOWNNTYPE = REG_EXPAND_SZ i
  ORA_TPCC_SHUTDOWN_TIMEOUT = REG_EXPAND_SZ 30
  SQLPATH = C:\Oracle\Orcl0414\dfs
  SQLPLUS = C:\Oracle\Orcl0414\sqlplus\mesg

```

Start World Wide Web Server Registry Parameters

```

\registry\machine\system\currentcontrolset\services\w3svc
  Type = REG_DWORD 0x00000020
  Start = REG_DWORD 0x00000003
  ErrorControl = REG_DWORD 0x00000001
  ImagePath = REG_EXPAND_SZ %SystemRoot%\System32\svchost.exe -k iissvcs
  DisplayName = World Wide Web Publishing Service
  DependOnService = REG_MULTI_SZ "IISADMIN"
  DependOnGroup = REG_MULTI_SZ
  ObjectName = LocalSystem
  Description = Provides Web connectivity and administration through the
  Internet Information Services snap-in.
  FailureActions = REG_BINARY 0x0000002c 0x00015180 0x00000001
  0x00000000 0x00000003 0x00700061 0x00000001 0x00000001 0x00000001
  0x00000001 0x00000001 0x00000001
  ASP
    NOTE = This is for backward compatibility only.
    Parameters
  Parameters
    MajorVersion = REG_DWORD 0x00000005
    MinorVersion = REG_DWORD 0x00000000
    InstallPath = C:\WINNT\System32\inetsrv
    AccessDeniedMessage = Error: Access is Denied.
    ServiceDll = REG_EXPAND_SZ
  C:\WINDOWS\system32\inetsrv\iisw3adm.dll
  CertMapList = C:\WINNT\System32\inetsrv\iiscrmap.dll
  Filter DLLs =
  LogFileDirectory = C:\WINNT\System32\LogFiles
  AcceptExOutStanding = REG_DWORD 0x00000028
  ADCLaunch
    AdvancedDataFactory

```

```

  RDSServer.DataFactory
  Script Map
  Virtual Roots
    / = c:\inetpub\wwwroot,,207
    /Scripts = c:\inetpub\scripts,,204
    /IISHelp = c:\winnt\help\iishelp,,201
    /IISAdmin = C:\WINNT\System32\inetsrv\iisadmin,,201
    /IISSamples = c:\inetpub\iissamples,,201
    /MSADC = c:\program files\common files\system\msadc,,205
    /Printers = C:\WINNT\web\printers,,201
  Performance
    Library = w3ctrs.dll
    Open = OpenW3PerformanceData
    Close = CloseW3PerformanceData
    Collect = CollectW3PerformanceData
    PerfIniFile = w3ctrs.ini
    Last Counter = REG_DWORD 0x0000008e6
    Last Help = REG_DWORD 0x0000008e7
    First Counter = REG_DWORD 0x000000844
    First Help = REG_DWORD 0x000000845
    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 0x00730072 0x00180000 0x0002018d
  0x00000101 0x05000000 0x0000000b 0x00000220 0x001c0000 0x000201fd
  0x00000201 0x05000000 0x00000020 \
    0x00000223 0x00730072 0x00000101 0x05000000 0x00000012
  0x00000101 0x05000000 0x00000012
  Enum
    0 = Root\LEGACY_W3SVC\0000
    Count = REG_DWORD 0x00000001
    NextInstance = REG_DWORD 0x00000001

```

TPCC Application Settings

```

\registry\machine\software\unisis
  TPCC
    MAXTERMS = 60000
    DELIVERYTHREADS = 25
    SERVERNAME = TPCC
    DATABASE = tpcc

```

Appendix D - RTE Code

Admin Environment

```
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

Driver Environment

```
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=4488
set WEBPAYMENTPROB=4303
set WEBORDERSTATUSPROB=403
set WEBDELIVERYPROB=403
```

```
set WEBSTOCKLEVELPROB=403

set WEBTTNEWORDER=12030
set WEBTTPAYMENT=12030
set WEBTTDELIVERY=5060
set WEBTTORDERSTATUS=10070
set WEBTTSTOCKLEVEL=5060

c:\webdriver\webdriver.exe

goto end

:usage
@ECHO You must supply the following parameters:
@ECHO "webdriver.cmd <driver number>"
pause

:end
exit
```

WebAdmin.cfg

```
//
// Common Driver Configuration
//
INITBASEPORT 4300
INITSYNCMAX 4
INITPAUSE 1
INITRSIZE 2000
INITTSIZE 1000
INITRWID 1,23500
INITFIXEDWID 1
INITCCLAST 85
INITCCID 208
INITCITEMID 208
//
//Configuration Driver 1
//
1 INITIPADDR 192.158.2.101
1 INITIISADDR 192.1.1.11
1 INITIISPORT 80
1 INITBROWSERS 980
1 INITMYWID 1,98
//
//Configuration Driver 2
//
2 INITIPADDR 192.158.2.101
2 INITIISADDR 192.1.1.11
2 INITIISPORT 80
2 INITBROWSERS 980
2 INITMYWID 99,196
//
```

```

//Configuration Driver 3
//
3 INITIPADDR 192.158.2.101
3 INITIISADDR 192.1.1.11
3 INITIISPORT 80
3 INITBROWSERS 980
3 INITMYWID 197,294
//
//Configuration Driver 4
//
4 INITIPADDR 192.158.2.101
4 INITIISADDR 192.1.1.11
4 INITIISPORT 80
4 INITBROWSERS 980
4 INITMYWID 295,392
//
//Configuration Driver 5
//
5 INITIPADDR 192.158.2.101
5 INITIISADDR 192.1.1.11
5 INITIISPORT 80
5 INITBROWSERS 980
5 INITMYWID 393,490
//
//Configuration Driver 6
//
6 INITIPADDR 192.158.2.101
6 INITIISADDR 192.1.1.11
6 INITIISPORT 80
6 INITBROWSERS 980
6 INITMYWID 491,588
//
//Configuration Driver 7
//
7 INITIPADDR 192.158.2.101
7 INITIISADDR 192.1.1.11
7 INITIISPORT 80
7 INITBROWSERS 980
7 INITMYWID 589,686
//
//Configuration Driver 8
//
8 INITIPADDR 192.158.2.101
8 INITIISADDR 192.1.1.11
8 INITIISPORT 80
8 INITBROWSERS 980
8 INITMYWID 687,784
//
//Configuration Driver 9
//
9 INITIPADDR 192.158.2.101
9 INITIISADDR 192.1.1.11
9 INITIISPORT 80
9 INITBROWSERS 980
9 INITMYWID 785,882
//
//Configuration Driver 10
//
10 INITIPADDR 192.158.2.101

```

```

10 INITIISADDR 192.1.1.11
10 INITIISPORT 80
10 INITBROWSERS 980
10 INITMYWID 883,980
//
//Configuration Driver 11
//
11 INITIPADDR 192.158.2.101
11 INITIISADDR 192.1.1.11
11 INITIISPORT 80
11 INITBROWSERS 980
11 INITMYWID 981,1078
//
//Configuration Driver 12
//
12 INITIPADDR 192.158.2.101
12 INITIISADDR 192.1.1.11
12 INITIISPORT 80
12 INITBROWSERS 970
12 INITMYWID 1079,1175
//
//Configuration Driver 13
//
13 INITIPADDR 192.158.2.101
13 INITIISADDR 192.1.1.11
13 INITIISPORT 80
13 INITBROWSERS 980
13 INITMYWID 1176,1273
//
//Configuration Driver 14
//
14 INITIPADDR 192.158.2.101
14 INITIISADDR 192.1.1.11
14 INITIISPORT 80
14 INITBROWSERS 980
14 INITMYWID 1274,1371
//
//Configuration Driver 15
//
15 INITIPADDR 192.158.2.101
15 INITIISADDR 192.1.1.11
15 INITIISPORT 80
15 INITBROWSERS 980
15 INITMYWID 1372,1469
//
//Configuration Driver 16
//
16 INITIPADDR 192.158.2.101
16 INITIISADDR 192.1.1.11
16 INITIISPORT 80
16 INITBROWSERS 980
16 INITMYWID 1470,1567
//
//Configuration Driver 17
//
17 INITIPADDR 192.158.2.101
17 INITIISADDR 192.1.1.11
17 INITIISPORT 80
17 INITBROWSERS 980

```

```
17 INITMYWID 1568,1665
//
//Configuration Driver 18
//
18 INITIPADDR 192.158.2.101
18 INITIISADDR 192.1.1.11
18 INITIISPORT 80
18 INITBROWSERS 980
18 INITMYWID 1666,1763
//
//Configuration Driver 19
//
19 INITIPADDR 192.158.2.101
19 INITIISADDR 192.1.1.11
19 INITIISPORT 80
19 INITBROWSERS 980
19 INITMYWID 1764,1861
//
//Configuration Driver 20
//
20 INITIPADDR 192.158.2.101
20 INITIISADDR 192.1.1.11
20 INITIISPORT 80
20 INITBROWSERS 980
20 INITMYWID 1862,1959
//
//Configuration Driver 21
//
21 INITIPADDR 192.158.2.101
21 INITIISADDR 192.1.1.11
21 INITIISPORT 80
21 INITBROWSERS 980
21 INITMYWID 1960,2057
//
//Configuration Driver 22
//
22 INITIPADDR 192.158.2.101
22 INITIISADDR 192.1.1.11
22 INITIISPORT 80
22 INITBROWSERS 980
22 INITMYWID 2058,2155
//
//Configuration Driver 23
//
23 INITIPADDR 192.158.2.101
23 INITIISADDR 192.1.1.11
23 INITIISPORT 80
23 INITBROWSERS 980
23 INITMYWID 2156,2253
//
//Configuration Driver 24
//
24 INITIPADDR 192.158.2.101
24 INITIISADDR 192.1.1.11
24 INITIISPORT 80
24 INITBROWSERS 970
24 INITMYWID 2254,2350
//
//Configuration Driver 25
```

```
//
25 INITIPADDR 192.158.2.101
25 INITIISADDR 192.1.1.11
25 INITIISPORT 80
25 INITBROWSERS 980
25 INITMYWID 2351,2448
//
//Configuration Driver 26
//
26 INITIPADDR 192.158.2.101
26 INITIISADDR 192.1.1.11
26 INITIISPORT 80
26 INITBROWSERS 980
26 INITMYWID 2449,2546
//
//Configuration Driver 27
//
27 INITIPADDR 192.158.2.101
27 INITIISADDR 192.1.1.11
27 INITIISPORT 80
27 INITBROWSERS 980
27 INITMYWID 2547,2644
//
//Configuration Driver 28
//
28 INITIPADDR 192.158.2.101
28 INITIISADDR 192.1.1.11
28 INITIISPORT 80
28 INITBROWSERS 980
28 INITMYWID 2645,2742
//
//Configuration Driver 29
//
29 INITIPADDR 192.158.2.101
29 INITIISADDR 192.1.1.11
29 INITIISPORT 80
29 INITBROWSERS 980
29 INITMYWID 2743,2840
//
//Configuration Driver 30
//
30 INITIPADDR 192.158.2.101
30 INITIISADDR 192.1.1.11
30 INITIISPORT 80
30 INITBROWSERS 980
30 INITMYWID 2841,2938
//
//Configuration Driver 31
//
31 INITIPADDR 192.158.2.102
31 INITIISADDR 192.2.1.11
31 INITIISPORT 80
31 INITBROWSERS 980
31 INITMYWID 2939,3036
//
//Configuration Driver 32
//
32 INITIPADDR 192.158.2.102
32 INITIISADDR 192.2.1.11
```

```

32 INITIISPORT 80
32 INITBROWSERS 980
32 INITMYWID 3037,3134
//
//Configuration Driver 33
//
33 INITIPADDR 192.158.2.102
33 INITIISADDR 192.2.1.11
33 INITIISPORT 80
33 INITBROWSERS 980
33 INITMYWID 3135,3232
//
//Configuration Driver 34
//
34 INITIPADDR 192.158.2.102
34 INITIISADDR 192.2.1.11
34 INITIISPORT 80
34 INITBROWSERS 980
34 INITMYWID 3233,3330
//
//Configuration Driver 35
//
35 INITIPADDR 192.158.2.102
35 INITIISADDR 192.2.1.11
35 INITIISPORT 80
35 INITBROWSERS 980
35 INITMYWID 3331,3428
//
//Configuration Driver 36
//
36 INITIPADDR 192.158.2.102
36 INITIISADDR 192.2.1.11
36 INITIISPORT 80
36 INITBROWSERS 970
36 INITMYWID 3429,3525
//
//Configuration Driver 37
//
37 INITIPADDR 192.158.2.102
37 INITIISADDR 192.2.1.11
37 INITIISPORT 80
37 INITBROWSERS 980
37 INITMYWID 3526,3623
//
//Configuration Driver 38
//
38 INITIPADDR 192.158.2.102
38 INITIISADDR 192.2.1.11
38 INITIISPORT 80
38 INITBROWSERS 980
38 INITMYWID 3624,3721
//
//Configuration Driver 39
//
39 INITIPADDR 192.158.2.102
39 INITIISADDR 192.2.1.11
39 INITIISPORT 80
39 INITBROWSERS 980
39 INITMYWID 3722,3819

```

```

//
//Configuration Driver 40
//
40 INITIPADDR 192.158.2.102
40 INITIISADDR 192.2.1.11
40 INITIISPORT 80
40 INITBROWSERS 980
40 INITMYWID 3820,3917
//
//Configuration Driver 41
//
41 INITIPADDR 192.158.2.102
41 INITIISADDR 192.2.1.11
41 INITIISPORT 80
41 INITBROWSERS 980
41 INITMYWID 3918,4015
//
//Configuration Driver 42
//
42 INITIPADDR 192.158.2.102
42 INITIISADDR 192.2.1.11
42 INITIISPORT 80
42 INITBROWSERS 980
42 INITMYWID 4016,4113
//
//Configuration Driver 43
//
43 INITIPADDR 192.158.2.102
43 INITIISADDR 192.2.1.11
43 INITIISPORT 80
43 INITBROWSERS 980
43 INITMYWID 4114,4211
//
//Configuration Driver 44
//
44 INITIPADDR 192.158.2.102
44 INITIISADDR 192.2.1.11
44 INITIISPORT 80
44 INITBROWSERS 980
44 INITMYWID 4212,4309
//
//Configuration Driver 45
//
45 INITIPADDR 192.158.2.102
45 INITIISADDR 192.2.1.11
45 INITIISPORT 80
45 INITBROWSERS 980
45 INITMYWID 4310,4407
//
//Configuration Driver 46
//
46 INITIPADDR 192.158.2.102
46 INITIISADDR 192.2.1.11
46 INITIISPORT 80
46 INITBROWSERS 980
46 INITMYWID 4408,4505
//
//Configuration Driver 47
//

```

```
47 INITIPADDR 192.158.2.102
47 INITIISADDR 192.2.1.11
47 INITIISPORT 80
47 INITBROWSERS 980
47 INITMYWID 4506,4603
//
//Configuration Driver 48
//
48 INITIPADDR 192.158.2.102
48 INITIISADDR 192.2.1.11
48 INITIISPORT 80
48 INITBROWSERS 970
48 INITMYWID 4604,4700
//
//Configuration Driver 49
//
49 INITIPADDR 192.158.2.102
49 INITIISADDR 192.2.1.11
49 INITIISPORT 80
49 INITBROWSERS 980
49 INITMYWID 4701,4798
//
//Configuration Driver 50
//
50 INITIPADDR 192.158.2.102
50 INITIISADDR 192.2.1.11
50 INITIISPORT 80
50 INITBROWSERS 980
50 INITMYWID 4799,4896
//
//Configuration Driver 51
//
51 INITIPADDR 192.158.2.102
51 INITIISADDR 192.2.1.11
51 INITIISPORT 80
51 INITBROWSERS 980
51 INITMYWID 4897,4994
//
//Configuration Driver 52
//
52 INITIPADDR 192.158.2.102
52 INITIISADDR 192.2.1.11
52 INITIISPORT 80
52 INITBROWSERS 980
52 INITMYWID 4995,5092
//
//Configuration Driver 53
//
53 INITIPADDR 192.158.2.102
53 INITIISADDR 192.2.1.11
53 INITIISPORT 80
53 INITBROWSERS 980
53 INITMYWID 5093,5190
//
//Configuration Driver 54
//
54 INITIPADDR 192.158.2.102
54 INITIISADDR 192.2.1.11
54 INITIISPORT 80
```

```
54 INITBROWSERS 980
54 INITMYWID 5191,5288
//
//Configuration Driver 55
//
55 INITIPADDR 192.158.2.102
55 INITIISADDR 192.2.1.11
55 INITIISPORT 80
55 INITBROWSERS 980
55 INITMYWID 5289,5386
//
//Configuration Driver 56
//
56 INITIPADDR 192.158.2.102
56 INITIISADDR 192.2.1.11
56 INITIISPORT 80
56 INITBROWSERS 980
56 INITMYWID 5387,5484
//
//Configuration Driver 57
//
57 INITIPADDR 192.158.2.102
57 INITIISADDR 192.2.1.11
57 INITIISPORT 80
57 INITBROWSERS 980
57 INITMYWID 5485,5582
//
//Configuration Driver 58
//
58 INITIPADDR 192.158.2.102
58 INITIISADDR 192.2.1.11
58 INITIISPORT 80
58 INITBROWSERS 980
58 INITMYWID 5583,5680
//
//Configuration Driver 59
//
59 INITIPADDR 192.158.2.102
59 INITIISADDR 192.2.1.11
59 INITIISPORT 80
59 INITBROWSERS 980
59 INITMYWID 5681,5778
//
//Configuration Driver 60
//
60 INITIPADDR 192.158.2.102
60 INITIISADDR 192.2.1.11
60 INITIISPORT 80
60 INITBROWSERS 970
60 INITMYWID 5779,5875
//
//Configuration Driver 61
//
61 INITIPADDR 192.158.2.103
61 INITIISADDR 192.3.1.11
61 INITIISPORT 80
61 INITBROWSERS 980
61 INITMYWID 5876,5973
//
```

```

//Configuration Driver 62
//
62 INITIPADDR 192.158.2.103
62 INITIISADDR 192.3.1.11
62 INITIISPORT 80
62 INITBROWSERS 980
62 INITMYWID 5974,6071
//
//Configuration Driver 63
//
63 INITIPADDR 192.158.2.103
63 INITIISADDR 192.3.1.11
63 INITIISPORT 80
63 INITBROWSERS 980
63 INITMYWID 6072,6169
//
//Configuration Driver 64
//
64 INITIPADDR 192.158.2.103
64 INITIISADDR 192.3.1.11
64 INITIISPORT 80
64 INITBROWSERS 980
64 INITMYWID 6170,6267
//
//Configuration Driver 65
//
65 INITIPADDR 192.158.2.103
65 INITIISADDR 192.3.1.11
65 INITIISPORT 80
65 INITBROWSERS 980
65 INITMYWID 6268,6365
//
//Configuration Driver 66
//
66 INITIPADDR 192.158.2.103
66 INITIISADDR 192.3.1.11
66 INITIISPORT 80
66 INITBROWSERS 980
66 INITMYWID 6366,6463
//
//Configuration Driver 67
//
67 INITIPADDR 192.158.2.103
67 INITIISADDR 192.3.1.11
67 INITIISPORT 80
67 INITBROWSERS 980
67 INITMYWID 6464,6561
//
//Configuration Driver 68
//
68 INITIPADDR 192.158.2.103
68 INITIISADDR 192.3.1.11
68 INITIISPORT 80
68 INITBROWSERS 980
68 INITMYWID 6562,6659
//
//Configuration Driver 69
//
69 INITIPADDR 192.158.2.103

```

```

69 INITIISADDR 192.3.1.11
69 INITIISPORT 80
69 INITBROWSERS 980
69 INITMYWID 6660,6757
//
//Configuration Driver 70
//
70 INITIPADDR 192.158.2.103
70 INITIISADDR 192.3.1.11
70 INITIISPORT 80
70 INITBROWSERS 980
70 INITMYWID 6758,6855
//
//Configuration Driver 71
//
71 INITIPADDR 192.158.2.103
71 INITIISADDR 192.3.1.11
71 INITIISPORT 80
71 INITBROWSERS 980
71 INITMYWID 6856,6953
//
//Configuration Driver 72
//
72 INITIPADDR 192.158.2.103
72 INITIISADDR 192.3.1.11
72 INITIISPORT 80
72 INITBROWSERS 970
72 INITMYWID 6954,7050
//
//Configuration Driver 73
//
73 INITIPADDR 192.158.2.103
73 INITIISADDR 192.3.1.11
73 INITIISPORT 80
73 INITBROWSERS 980
73 INITMYWID 7051,7148
//
//Configuration Driver 74
//
74 INITIPADDR 192.158.2.103
74 INITIISADDR 192.3.1.11
74 INITIISPORT 80
74 INITBROWSERS 980
74 INITMYWID 7149,7246
//
//Configuration Driver 75
//
75 INITIPADDR 192.158.2.103
75 INITIISADDR 192.3.1.11
75 INITIISPORT 80
75 INITBROWSERS 980
75 INITMYWID 7247,7344
//
//Configuration Driver 76
//
76 INITIPADDR 192.158.2.103
76 INITIISADDR 192.3.1.11
76 INITIISPORT 80
76 INITBROWSERS 980

```



```
76 INITMYWID 7345,7442
//
//Configuration Driver 77
//
77 INITIPADDR 192.158.2.103
77 INITIISADDR 192.3.1.11
77 INITIISPORT 80
77 INITBROWSERS 980
77 INITMYWID 7443,7540
//
//Configuration Driver 78
//
78 INITIPADDR 192.158.2.103
78 INITIISADDR 192.3.1.11
78 INITIISPORT 80
78 INITBROWSERS 980
78 INITMYWID 7541,7638
//
//Configuration Driver 79
//
79 INITIPADDR 192.158.2.103
79 INITIISADDR 192.3.1.11
79 INITIISPORT 80
79 INITBROWSERS 980
79 INITMYWID 7639,7736
//
//Configuration Driver 80
//
80 INITIPADDR 192.158.2.103
80 INITIISADDR 192.3.1.11
80 INITIISPORT 80
80 INITBROWSERS 980
80 INITMYWID 7737,7834
//
//Configuration Driver 81
//
81 INITIPADDR 192.158.2.103
81 INITIISADDR 192.3.1.11
81 INITIISPORT 80
81 INITBROWSERS 980
81 INITMYWID 7835,7932
//
//Configuration Driver 82
//
82 INITIPADDR 192.158.2.103
82 INITIISADDR 192.3.1.11
82 INITIISPORT 80
82 INITBROWSERS 980
82 INITMYWID 7933,8030
//
//Configuration Driver 83
//
83 INITIPADDR 192.158.2.103
83 INITIISADDR 192.3.1.11
83 INITIISPORT 80
83 INITBROWSERS 980
83 INITMYWID 8031,8128
//
//Configuration Driver 84
```

```
//
84 INITIPADDR 192.158.2.103
84 INITIISADDR 192.3.1.11
84 INITIISPORT 80
84 INITBROWSERS 970
84 INITMYWID 8129,8225
//
//Configuration Driver 85
//
85 INITIPADDR 192.158.2.103
85 INITIISADDR 192.3.1.11
85 INITIISPORT 80
85 INITBROWSERS 980
85 INITMYWID 8226,8323
//
//Configuration Driver 86
//
86 INITIPADDR 192.158.2.103
86 INITIISADDR 192.3.1.11
86 INITIISPORT 80
86 INITBROWSERS 980
86 INITMYWID 8324,8421
//
//Configuration Driver 87
//
87 INITIPADDR 192.158.2.103
87 INITIISADDR 192.3.1.11
87 INITIISPORT 80
87 INITBROWSERS 980
87 INITMYWID 8422,8519
//
//Configuration Driver 88
//
88 INITIPADDR 192.158.2.103
88 INITIISADDR 192.3.1.11
88 INITIISPORT 80
88 INITBROWSERS 980
88 INITMYWID 8520,8617
//
//Configuration Driver 89
//
89 INITIPADDR 192.158.2.103
89 INITIISADDR 192.3.1.11
89 INITIISPORT 80
89 INITBROWSERS 980
89 INITMYWID 8618,8715
//
//Configuration Driver 90
//
90 INITIPADDR 192.158.2.103
90 INITIISADDR 192.3.1.11
90 INITIISPORT 80
90 INITBROWSERS 980
90 INITMYWID 8716,8813
//
//Configuration Driver 91
//
91 INITIPADDR 192.158.2.104
91 INITIISADDR 192.4.1.11
```

```
91 INITIISPORT 80
91 INITBROWSERS 980
91 INITMYWID 8814,8911
//
//Configuration Driver 92
//
92 INITIPADDR 192.158.2.104
92 INITIISADDR 192.4.1.11
92 INITIISPORT 80
92 INITBROWSERS 980
92 INITMYWID 8912,9009
//
//Configuration Driver 93
//
93 INITIPADDR 192.158.2.104
93 INITIISADDR 192.4.1.11
93 INITIISPORT 80
93 INITBROWSERS 980
93 INITMYWID 9010,9107
//
//Configuration Driver 94
//
94 INITIPADDR 192.158.2.104
94 INITIISADDR 192.4.1.11
94 INITIISPORT 80
94 INITBROWSERS 980
94 INITMYWID 9108,9205
//
//Configuration Driver 95
//
95 INITIPADDR 192.158.2.104
95 INITIISADDR 192.4.1.11
95 INITIISPORT 80
95 INITBROWSERS 980
95 INITMYWID 9206,9303
//
//Configuration Driver 96
//
96 INITIPADDR 192.158.2.104
96 INITIISADDR 192.4.1.11
96 INITIISPORT 80
96 INITBROWSERS 970
96 INITMYWID 9304,9400
//
//Configuration Driver 97
//
97 INITIPADDR 192.158.2.104
97 INITIISADDR 192.4.1.11
97 INITIISPORT 80
97 INITBROWSERS 980
97 INITMYWID 9401,9498
//
//Configuration Driver 98
//
98 INITIPADDR 192.158.2.104
98 INITIISADDR 192.4.1.11
98 INITIISPORT 80
98 INITBROWSERS 980
98 INITMYWID 9499,9596
```

```
//
//Configuration Driver 99
//
99 INITIPADDR 192.158.2.104
99 INITIISADDR 192.4.1.11
99 INITIISPORT 80
99 INITBROWSERS 980
99 INITMYWID 9597,9694
//
//Configuration Driver 100
//
100 INITIPADDR 192.158.2.104
100 INITIISADDR 192.4.1.11
100 INITIISPORT 80
100 INITBROWSERS 980
100 INITMYWID 9695,9792
//
//Configuration Driver 101
//
101 INITIPADDR 192.158.2.104
101 INITIISADDR 192.4.1.11
101 INITIISPORT 80
101 INITBROWSERS 980
101 INITMYWID 9793,9890
//
//Configuration Driver 102
//
102 INITIPADDR 192.158.2.104
102 INITIISADDR 192.4.1.11
102 INITIISPORT 80
102 INITBROWSERS 980
102 INITMYWID 9891,9988
//
//Configuration Driver 103
//
103 INITIPADDR 192.158.2.104
103 INITIISADDR 192.4.1.11
103 INITIISPORT 80
103 INITBROWSERS 980
103 INITMYWID 9989,10086
//
//Configuration Driver 104
//
104 INITIPADDR 192.158.2.104
104 INITIISADDR 192.4.1.11
104 INITIISPORT 80
104 INITBROWSERS 980
104 INITMYWID 10087,10184
//
//Configuration Driver 105
//
105 INITIPADDR 192.158.2.104
105 INITIISADDR 192.4.1.11
105 INITIISPORT 80
105 INITBROWSERS 980
105 INITMYWID 10185,10282
//
//Configuration Driver 106
//
```

```

106 INITIPADDR 192.158.2.104
106 INITIISADDR 192.4.1.11
106 INITIISPORT 80
106 INITBROWSERS 980
106 INITMYWID 10283,10380
//
//Configuration Driver 107
//
107 INITIPADDR 192.158.2.104
107 INITIISADDR 192.4.1.11
107 INITIISPORT 80
107 INITBROWSERS 980
107 INITMYWID 10381,10478
//
//Configuration Driver 108
//
108 INITIPADDR 192.158.2.104
108 INITIISADDR 192.4.1.11
108 INITIISPORT 80
108 INITBROWSERS 970
108 INITMYWID 10479,10575
//
//Configuration Driver 109
//
109 INITIPADDR 192.158.2.104
109 INITIISADDR 192.4.1.11
109 INITIISPORT 80
109 INITBROWSERS 980
109 INITMYWID 10576,10673
//
//Configuration Driver 110
//
110 INITIPADDR 192.158.2.104
110 INITIISADDR 192.4.1.11
110 INITIISPORT 80
110 INITBROWSERS 980
110 INITMYWID 10674,10771
//
//Configuration Driver 111
//
111 INITIPADDR 192.158.2.104
111 INITIISADDR 192.4.1.11
111 INITIISPORT 80
111 INITBROWSERS 980
111 INITMYWID 10772,10869
//
//Configuration Driver 112
//
112 INITIPADDR 192.158.2.104
112 INITIISADDR 192.4.1.11
112 INITIISPORT 80
112 INITBROWSERS 980
112 INITMYWID 10870,10967
//
//Configuration Driver 113
//
113 INITIPADDR 192.158.2.104
113 INITIISADDR 192.4.1.11
113 INITIISPORT 80

```

```

113 INITBROWSERS 980
113 INITMYWID 10968,11065
//
//Configuration Driver 114
//
114 INITIPADDR 192.158.2.104
114 INITIISADDR 192.4.1.11
114 INITIISPORT 80
114 INITBROWSERS 980
114 INITMYWID 11066,11163
//
//Configuration Driver 115
//
115 INITIPADDR 192.158.2.104
115 INITIISADDR 192.4.1.11
115 INITIISPORT 80
115 INITBROWSERS 980
115 INITMYWID 11164,11261
//
//Configuration Driver 116
//
116 INITIPADDR 192.158.2.104
116 INITIISADDR 192.4.1.11
116 INITIISPORT 80
116 INITBROWSERS 980
116 INITMYWID 11262,11359
//
//Configuration Driver 117
//
117 INITIPADDR 192.158.2.104
117 INITIISADDR 192.4.1.11
117 INITIISPORT 80
117 INITBROWSERS 980
117 INITMYWID 11360,11457
//
//Configuration Driver 118
//
118 INITIPADDR 192.158.2.104
118 INITIISADDR 192.4.1.11
118 INITIISPORT 80
118 INITBROWSERS 980
118 INITMYWID 11458,11555
//
//Configuration Driver 119
//
119 INITIPADDR 192.158.2.104
119 INITIISADDR 192.4.1.11
119 INITIISPORT 80
119 INITBROWSERS 980
119 INITMYWID 11556,11653
//
//Configuration Driver 120
//
120 INITIPADDR 192.158.2.104
120 INITIISADDR 192.4.1.11
120 INITIISPORT 80
120 INITBROWSERS 970
120 INITMYWID 11654,11750
//

```

```

//Configuration Driver 121
//
121 INITIPADDR 192.158.2.105
121 INITIISADDR 192.5.1.11
121 INITIISPORT 80
121 INITBROWSERS 980
121 INITMYWID 11751,11848
//
//Configuration Driver 122
//
122 INITIPADDR 192.158.2.105
122 INITIISADDR 192.5.1.11
122 INITIISPORT 80
122 INITBROWSERS 980
122 INITMYWID 11849,11946
//
//Configuration Driver 123
//
123 INITIPADDR 192.158.2.105
123 INITIISADDR 192.5.1.11
123 INITIISPORT 80
123 INITBROWSERS 980
123 INITMYWID 11947,12044
//
//Configuration Driver 124
//
124 INITIPADDR 192.158.2.105
124 INITIISADDR 192.5.1.11
124 INITIISPORT 80
124 INITBROWSERS 980
124 INITMYWID 12045,12142
//
//Configuration Driver 125
//
125 INITIPADDR 192.158.2.105
125 INITIISADDR 192.5.1.11
125 INITIISPORT 80
125 INITBROWSERS 980
125 INITMYWID 12143,12240
//
//Configuration Driver 126
//
126 INITIPADDR 192.158.2.105
126 INITIISADDR 192.5.1.11
126 INITIISPORT 80
126 INITBROWSERS 980
126 INITMYWID 12241,12338
//
//Configuration Driver 127
//
127 INITIPADDR 192.158.2.105
127 INITIISADDR 192.5.1.11
127 INITIISPORT 80
127 INITBROWSERS 980
127 INITMYWID 12339,12436
//
//Configuration Driver 128
//
128 INITIPADDR 192.158.2.105

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128 INITIISADDR 192.5.1.11
128 INITIISPORT 80
128 INITBROWSERS 980
128 INITMYWID 12437,12534
//
//Configuration Driver 129
//
129 INITIPADDR 192.158.2.105
129 INITIISADDR 192.5.1.11
129 INITIISPORT 80
129 INITBROWSERS 980
129 INITMYWID 12535,12632
//
//Configuration Driver 130
//
130 INITIPADDR 192.158.2.105
130 INITIISADDR 192.5.1.11
130 INITIISPORT 80
130 INITBROWSERS 980
130 INITMYWID 12633,12730
//
//Configuration Driver 131
//
131 INITIPADDR 192.158.2.105
131 INITIISADDR 192.5.1.11
131 INITIISPORT 80
131 INITBROWSERS 980
131 INITMYWID 12731,12828
//
//Configuration Driver 132
//
132 INITIPADDR 192.158.2.105
132 INITIISADDR 192.5.1.11
132 INITIISPORT 80
132 INITBROWSERS 970
132 INITMYWID 12829,12925
//
//Configuration Driver 133
//
133 INITIPADDR 192.158.2.105
133 INITIISADDR 192.5.1.11
133 INITIISPORT 80
133 INITBROWSERS 980
133 INITMYWID 12926,13023
//
//Configuration Driver 134
//
134 INITIPADDR 192.158.2.105
134 INITIISADDR 192.5.1.11
134 INITIISPORT 80
134 INITBROWSERS 980
134 INITMYWID 13024,13121
//
//Configuration Driver 135
//
135 INITIPADDR 192.158.2.105
135 INITIISADDR 192.5.1.11
135 INITIISPORT 80
135 INITBROWSERS 980

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```

135 INITMYWID 13122,13219
//
//Configuration Driver 136
//
136 INITIPADDR 192.158.2.105
136 INITIISADDR 192.5.1.11
136 INITIISPORT 80
136 INITBROWSERS 980
136 INITMYWID 13220,13317
//
//Configuration Driver 137
//
137 INITIPADDR 192.158.2.105
137 INITIISADDR 192.5.1.11
137 INITIISPORT 80
137 INITBROWSERS 980
137 INITMYWID 13318,13415
//
//Configuration Driver 138
//
138 INITIPADDR 192.158.2.105
138 INITIISADDR 192.5.1.11
138 INITIISPORT 80
138 INITBROWSERS 980
138 INITMYWID 13416,13513
//
//Configuration Driver 139
//
139 INITIPADDR 192.158.2.105
139 INITIISADDR 192.5.1.11
139 INITIISPORT 80
139 INITBROWSERS 980
139 INITMYWID 13514,13611
//
//Configuration Driver 140
//
140 INITIPADDR 192.158.2.105
140 INITIISADDR 192.5.1.11
140 INITIISPORT 80
140 INITBROWSERS 980
140 INITMYWID 13612,13709
//
//Configuration Driver 141
//
141 INITIPADDR 192.158.2.105
141 INITIISADDR 192.5.1.11
141 INITIISPORT 80
141 INITBROWSERS 980
141 INITMYWID 13710,13807
//
//Configuration Driver 142
//
142 INITIPADDR 192.158.2.105
142 INITIISADDR 192.5.1.11
142 INITIISPORT 80
142 INITBROWSERS 980
142 INITMYWID 13808,13905
//
//Configuration Driver 143

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//
143 INITIPADDR 192.158.2.105
143 INITIISADDR 192.5.1.11
143 INITIISPORT 80
143 INITBROWSERS 980
143 INITMYWID 13906,14003
//
//Configuration Driver 144
//
144 INITIPADDR 192.158.2.105
144 INITIISADDR 192.5.1.11
144 INITIISPORT 80
144 INITBROWSERS 970
144 INITMYWID 14004,14100
//
//Configuration Driver 145
//
145 INITIPADDR 192.158.2.105
145 INITIISADDR 192.5.1.11
145 INITIISPORT 80
145 INITBROWSERS 980
145 INITMYWID 14101,14198
//
//Configuration Driver 146
//
146 INITIPADDR 192.158.2.105
146 INITIISADDR 192.5.1.11
146 INITIISPORT 80
146 INITBROWSERS 980
146 INITMYWID 14199,14296
//
//Configuration Driver 147
//
147 INITIPADDR 192.158.2.105
147 INITIISADDR 192.5.1.11
147 INITIISPORT 80
147 INITBROWSERS 980
147 INITMYWID 14297,14394
//
//Configuration Driver 148
//
148 INITIPADDR 192.158.2.105
148 INITIISADDR 192.5.1.11
148 INITIISPORT 80
148 INITBROWSERS 980
148 INITMYWID 14395,14492
//
//Configuration Driver 149
//
149 INITIPADDR 192.158.2.105
149 INITIISADDR 192.5.1.11
149 INITIISPORT 80
149 INITBROWSERS 980
149 INITMYWID 14493,14590
//
//Configuration Driver 150
//
150 INITIPADDR 192.158.2.105
150 INITIISADDR 192.5.1.11

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150 INITIISPORT 80
150 INITBROWSERS 980
150 INITMYWID 14591,14688
//
//Configuration Driver 151
//
151 INITIPADDR 192.158.2.106
151 INITIISADDR 192.6.1.11
151 INITIISPORT 80
151 INITBROWSERS 980
151 INITMYWID 14689,14786
//
//Configuration Driver 152
//
152 INITIPADDR 192.158.2.106
152 INITIISADDR 192.6.1.11
152 INITIISPORT 80
152 INITBROWSERS 980
152 INITMYWID 14787,14884
//
//Configuration Driver 153
//
153 INITIPADDR 192.158.2.106
153 INITIISADDR 192.6.1.11
153 INITIISPORT 80
153 INITBROWSERS 980
153 INITMYWID 14885,14982
//
//Configuration Driver 154
//
154 INITIPADDR 192.158.2.106
154 INITIISADDR 192.6.1.11
154 INITIISPORT 80
154 INITBROWSERS 980
154 INITMYWID 14983,15080
//
//Configuration Driver 155
//
155 INITIPADDR 192.158.2.106
155 INITIISADDR 192.6.1.11
155 INITIISPORT 80
155 INITBROWSERS 980
155 INITMYWID 15081,15178
//
//Configuration Driver 156
//
156 INITIPADDR 192.158.2.106
156 INITIISADDR 192.6.1.11
156 INITIISPORT 80
156 INITBROWSERS 970
156 INITMYWID 15179,15275
//
//Configuration Driver 157
//
157 INITIPADDR 192.158.2.106
157 INITIISADDR 192.6.1.11
157 INITIISPORT 80
157 INITBROWSERS 980
157 INITMYWID 15276,15373

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//
//Configuration Driver 158
//
158 INITIPADDR 192.158.2.106
158 INITIISADDR 192.6.1.11
158 INITIISPORT 80
158 INITBROWSERS 980
158 INITMYWID 15374,15471
//
//Configuration Driver 159
//
159 INITIPADDR 192.158.2.106
159 INITIISADDR 192.6.1.11
159 INITIISPORT 80
159 INITBROWSERS 980
159 INITMYWID 15472,15569
//
//Configuration Driver 160
//
160 INITIPADDR 192.158.2.106
160 INITIISADDR 192.6.1.11
160 INITIISPORT 80
160 INITBROWSERS 980
160 INITMYWID 15570,15667
//
//Configuration Driver 161
//
161 INITIPADDR 192.158.2.106
161 INITIISADDR 192.6.1.11
161 INITIISPORT 80
161 INITBROWSERS 980
161 INITMYWID 15668,15765
//
//Configuration Driver 162
//
162 INITIPADDR 192.158.2.106
162 INITIISADDR 192.6.1.11
162 INITIISPORT 80
162 INITBROWSERS 980
162 INITMYWID 15766,15863
//
//Configuration Driver 163
//
163 INITIPADDR 192.158.2.106
163 INITIISADDR 192.6.1.11
163 INITIISPORT 80
163 INITBROWSERS 980
163 INITMYWID 15864,15961
//
//Configuration Driver 164
//
164 INITIPADDR 192.158.2.106
164 INITIISADDR 192.6.1.11
164 INITIISPORT 80
164 INITBROWSERS 980
164 INITMYWID 15962,16059
//
//Configuration Driver 165
//

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165 INITIPADDR 192.158.2.106
165 INITIISADDR 192.6.1.11
165 INITIISPORT 80
165 INITBROWSERS 980
165 INITMYWID 16060,16157
//
//Configuration Driver 166
//
166 INITIPADDR 192.158.2.106
166 INITIISADDR 192.6.1.11
166 INITIISPORT 80
166 INITBROWSERS 980
166 INITMYWID 16158,16255
//
//Configuration Driver 167
//
167 INITIPADDR 192.158.2.106
167 INITIISADDR 192.6.1.11
167 INITIISPORT 80
167 INITBROWSERS 980
167 INITMYWID 16256,16353
//
//Configuration Driver 168
//
168 INITIPADDR 192.158.2.106
168 INITIISADDR 192.6.1.11
168 INITIISPORT 80
168 INITBROWSERS 970
168 INITMYWID 16354,16450
//
//Configuration Driver 169
//
169 INITIPADDR 192.158.2.106
169 INITIISADDR 192.6.1.11
169 INITIISPORT 80
169 INITBROWSERS 980
169 INITMYWID 16451,16548
//
//Configuration Driver 170
//
170 INITIPADDR 192.158.2.106
170 INITIISADDR 192.6.1.11
170 INITIISPORT 80
170 INITBROWSERS 980
170 INITMYWID 16549,16646
//
//Configuration Driver 171
//
171 INITIPADDR 192.158.2.106
171 INITIISADDR 192.6.1.11
171 INITIISPORT 80
171 INITBROWSERS 980
171 INITMYWID 16647,16744
//
//Configuration Driver 172
//
172 INITIPADDR 192.158.2.106
172 INITIISADDR 192.6.1.11
172 INITIISPORT 80
```

```
172 INITBROWSERS 980
172 INITMYWID 16745,16842
//
//Configuration Driver 173
//
173 INITIPADDR 192.158.2.106
173 INITIISADDR 192.6.1.11
173 INITIISPORT 80
173 INITBROWSERS 980
173 INITMYWID 16843,16940
//
//Configuration Driver 174
//
174 INITIPADDR 192.158.2.106
174 INITIISADDR 192.6.1.11
174 INITIISPORT 80
174 INITBROWSERS 980
174 INITMYWID 16941,17038
//
//Configuration Driver 175
//
175 INITIPADDR 192.158.2.106
175 INITIISADDR 192.6.1.11
175 INITIISPORT 80
175 INITBROWSERS 980
175 INITMYWID 17039,17136
//
//Configuration Driver 176
//
176 INITIPADDR 192.158.2.106
176 INITIISADDR 192.6.1.11
176 INITIISPORT 80
176 INITBROWSERS 980
176 INITMYWID 17137,17234
//
//Configuration Driver 177
//
177 INITIPADDR 192.158.2.106
177 INITIISADDR 192.6.1.11
177 INITIISPORT 80
177 INITBROWSERS 980
177 INITMYWID 17235,17332
//
//Configuration Driver 178
//
178 INITIPADDR 192.158.2.106
178 INITIISADDR 192.6.1.11
178 INITIISPORT 80
178 INITBROWSERS 980
178 INITMYWID 17333,17430
//
//Configuration Driver 179
//
179 INITIPADDR 192.158.2.106
179 INITIISADDR 192.6.1.11
179 INITIISPORT 80
179 INITBROWSERS 980
179 INITMYWID 17431,17528
//
```

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//Configuration Driver 180
//
180 INITIPADDR 192.158.2.106
180 INITIISADDR 192.7.1.11
180 INITIISPORT 80
180 INITBROWSERS 970
180 INITMYWID 17529,17625
//
//Configuration Driver 181
//
181 INITIPADDR 192.158.2.107
181 INITIISADDR 192.7.1.11
181 INITIISPORT 80
181 INITBROWSERS 980
181 INITMYWID 17626,17723
//
//Configuration Driver 182
//
182 INITIPADDR 192.158.2.107
182 INITIISADDR 192.7.1.11
182 INITIISPORT 80
182 INITBROWSERS 980
182 INITMYWID 17724,17821
//
//Configuration Driver 183
//
183 INITIPADDR 192.158.2.107
183 INITIISADDR 192.7.1.11
183 INITIISPORT 80
183 INITBROWSERS 980
183 INITMYWID 17822,17919
//
//Configuration Driver 184
//
184 INITIPADDR 192.158.2.107
184 INITIISADDR 192.7.1.11
184 INITIISPORT 80
184 INITBROWSERS 980
184 INITMYWID 17920,18017
//
//Configuration Driver 185
//
185 INITIPADDR 192.158.2.107
185 INITIISADDR 192.7.1.11
185 INITIISPORT 80
185 INITBROWSERS 980
185 INITMYWID 18018,18115
//
//Configuration Driver 186
//
186 INITIPADDR 192.158.2.107
186 INITIISADDR 192.7.1.11
186 INITIISPORT 80
186 INITBROWSERS 980
186 INITMYWID 18116,18213
//
//Configuration Driver 187
//
187 INITIPADDR 192.158.2.107

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187 INITIISADDR 192.7.1.11
187 INITIISPORT 80
187 INITBROWSERS 980
187 INITMYWID 18214,18311
//
//Configuration Driver 188
//
188 INITIPADDR 192.158.2.107
188 INITIISADDR 192.7.1.11
188 INITIISPORT 80
188 INITBROWSERS 980
188 INITMYWID 18312,18409
//
//Configuration Driver 189
//
189 INITIPADDR 192.158.2.107
189 INITIISADDR 192.7.1.11
189 INITIISPORT 80
189 INITBROWSERS 980
189 INITMYWID 18410,18507
//
//Configuration Driver 190
//
190 INITIPADDR 192.158.2.107
190 INITIISADDR 192.7.1.11
190 INITIISPORT 80
190 INITBROWSERS 980
190 INITMYWID 18508,18605
//
//Configuration Driver 191
//
191 INITIPADDR 192.158.2.107
191 INITIISADDR 192.7.1.11
191 INITIISPORT 80
191 INITBROWSERS 980
191 INITMYWID 18606,18703
//
//Configuration Driver 192
//
192 INITIPADDR 192.158.2.107
192 INITIISADDR 192.7.1.11
192 INITIISPORT 80
192 INITBROWSERS 970
192 INITMYWID 18704,18800
//
//Configuration Driver 193
//
193 INITIPADDR 192.158.2.107
193 INITIISADDR 192.7.1.11
193 INITIISPORT 80
193 INITBROWSERS 980
193 INITMYWID 18801,18898
//
//Configuration Driver 194
//
194 INITIPADDR 192.158.2.107
194 INITIISADDR 192.7.1.11
194 INITIISPORT 80
194 INITBROWSERS 980

```



```

194 INITMYWID 18899,18996
//
//Configuration Driver 195
//
195 INITIPADDR 192.158.2.107
195 INITIISADDR 192.7.1.11
195 INITIISPORT 80
195 INITBROWSERS 980
195 INITMYWID 18997,19094
//
//Configuration Driver 196
//
196 INITIPADDR 192.158.2.107
196 INITIISADDR 192.7.1.11
196 INITIISPORT 80
196 INITBROWSERS 980
196 INITMYWID 19095,19192
//
//Configuration Driver 197
//
197 INITIPADDR 192.158.2.107
197 INITIISADDR 192.7.1.11
197 INITIISPORT 80
197 INITBROWSERS 980
197 INITMYWID 19193,19290
//
//Configuration Driver 198
//
198 INITIPADDR 192.158.2.107
198 INITIISADDR 192.7.1.11
198 INITIISPORT 80
198 INITBROWSERS 980
198 INITMYWID 19291,19388
//
//Configuration Driver 199
//
199 INITIPADDR 192.158.2.107
199 INITIISADDR 192.7.1.11
199 INITIISPORT 80
199 INITBROWSERS 980
199 INITMYWID 19389,19486
//
//Configuration Driver 200
//
200 INITIPADDR 192.158.2.107
200 INITIISADDR 192.7.1.11
200 INITIISPORT 80
200 INITBROWSERS 980
200 INITMYWID 19487,19584
//
//Configuration Driver 201
//
201 INITIPADDR 192.158.2.107
201 INITIISADDR 192.7.1.11
201 INITIISPORT 80
201 INITBROWSERS 980
201 INITMYWID 19585,19682
//
//Configuration Driver 202

```

```

//
202 INITIPADDR 192.158.2.107
202 INITIISADDR 192.7.1.11
202 INITIISPORT 80
202 INITBROWSERS 980
202 INITMYWID 19683,19780
//
//Configuration Driver 203
//
203 INITIPADDR 192.158.2.107
203 INITIISADDR 192.7.1.11
203 INITIISPORT 80
203 INITBROWSERS 980
203 INITMYWID 19781,19878
//
//Configuration Driver 204
//
204 INITIPADDR 192.158.2.107
204 INITIISADDR 192.7.1.11
204 INITIISPORT 80
204 INITBROWSERS 970
204 INITMYWID 19879,19975
//
//Configuration Driver 205
//
205 INITIPADDR 192.158.2.107
205 INITIISADDR 192.7.1.11
205 INITIISPORT 80
205 INITBROWSERS 980
205 INITMYWID 19976,20073
//
//Configuration Driver 206
//
206 INITIPADDR 192.158.2.107
206 INITIISADDR 192.7.1.11
206 INITIISPORT 80
206 INITBROWSERS 980
206 INITMYWID 20074,20171
//
//Configuration Driver 207
//
207 INITIPADDR 192.158.2.107
207 INITIISADDR 192.7.1.11
207 INITIISPORT 80
207 INITBROWSERS 980
207 INITMYWID 20172,20269
//
//Configuration Driver 208
//
208 INITIPADDR 192.158.2.107
208 INITIISADDR 192.7.1.11
208 INITIISPORT 80
208 INITBROWSERS 980
208 INITMYWID 20270,20367
//
//Configuration Driver 209
//
209 INITIPADDR 192.158.2.107
209 INITIISADDR 192.7.1.11

```

```

209 INITIISPORT 80
209 INITBROWSERS 980
209 INITMYWID 20368,20465
//
//Configuration Driver 210
//
210 INITIPADDR 192.158.2.107
210 INITIISADDR 192.7.1.11
210 INITIISPORT 80
210 INITBROWSERS 980
210 INITMYWID 20466,20563
//
//Configuration Driver 211
//
211 INITIPADDR 192.158.2.108
211 INITIISADDR 192.8.1.11
211 INITIISPORT 80
211 INITBROWSERS 980
211 INITMYWID 20564,20661
//
//Configuration Driver 212
//
212 INITIPADDR 192.158.2.108
212 INITIISADDR 192.8.1.11
212 INITIISPORT 80
212 INITBROWSERS 980
212 INITMYWID 20662,20759
//
//Configuration Driver 213
//
213 INITIPADDR 192.158.2.108
213 INITIISADDR 192.8.1.11
213 INITIISPORT 80
213 INITBROWSERS 980
213 INITMYWID 20760,20857
//
//Configuration Driver 214
//
214 INITIPADDR 192.158.2.108
214 INITIISADDR 192.8.1.11
214 INITIISPORT 80
214 INITBROWSERS 980
214 INITMYWID 20858,20955
//
//Configuration Driver 215
//
215 INITIPADDR 192.158.2.108
215 INITIISADDR 192.8.1.11
215 INITIISPORT 80
215 INITBROWSERS 980
215 INITMYWID 20956,21053
//
//Configuration Driver 216
//
216 INITIPADDR 192.158.2.108
216 INITIISADDR 192.8.1.11
216 INITIISPORT 80
216 INITBROWSERS 970
216 INITMYWID 21054,21150

```

```

//
//Configuration Driver 217
//
217 INITIPADDR 192.158.2.108
217 INITIISADDR 192.8.1.11
217 INITIISPORT 80
217 INITBROWSERS 980
217 INITMYWID 21151,21248
//
//Configuration Driver 218
//
218 INITIPADDR 192.158.2.108
218 INITIISADDR 192.8.1.11
218 INITIISPORT 80
218 INITBROWSERS 980
218 INITMYWID 21249,21346
//
//Configuration Driver 219
//
219 INITIPADDR 192.158.2.108
219 INITIISADDR 192.8.1.11
219 INITIISPORT 80
219 INITBROWSERS 980
219 INITMYWID 21347,21444
//
//Configuration Driver 220
//
220 INITIPADDR 192.158.2.108
220 INITIISADDR 192.8.1.11
220 INITIISPORT 80
220 INITBROWSERS 980
220 INITMYWID 21445,21542
//
//Configuration Driver 221
//
221 INITIPADDR 192.158.2.108
221 INITIISADDR 192.8.1.11
221 INITIISPORT 80
221 INITBROWSERS 980
221 INITMYWID 21543,21640
//
//Configuration Driver 222
//
222 INITIPADDR 192.158.2.108
222 INITIISADDR 192.8.1.11
222 INITIISPORT 80
222 INITBROWSERS 980
222 INITMYWID 21641,21738
//
//Configuration Driver 223
//
223 INITIPADDR 192.158.2.108
223 INITIISADDR 192.8.1.11
223 INITIISPORT 80
223 INITBROWSERS 980
223 INITMYWID 21739,21836
//
//Configuration Driver 224
//

```

```

224 INITIPADDR 192.158.2.108
224 INITIISADDR 192.8.1.11
224 INITIISPORT 80
224 INITBROWSERS 980
224 INITMYWID 21837,21934
//
//Configuration Driver 225
//
225 INITIPADDR 192.158.2.108
225 INITIISADDR 192.8.1.11
225 INITIISPORT 80
225 INITBROWSERS 980
225 INITMYWID 21935,22032
//
//Configuration Driver 226
//
226 INITIPADDR 192.158.2.108
226 INITIISADDR 192.8.1.11
226 INITIISPORT 80
226 INITBROWSERS 980
226 INITMYWID 22033,22130
//
//Configuration Driver 227
//
227 INITIPADDR 192.158.2.108
227 INITIISADDR 192.8.1.11
227 INITIISPORT 80
227 INITBROWSERS 980
227 INITMYWID 22131,22228
//
//Configuration Driver 228
//
228 INITIPADDR 192.158.2.108
228 INITIISADDR 192.8.1.11
228 INITIISPORT 80
228 INITBROWSERS 970
228 INITMYWID 22229,22325
//
//Configuration Driver 229
//
229 INITIPADDR 192.158.2.108
229 INITIISADDR 192.8.1.11
229 INITIISPORT 80
229 INITBROWSERS 980
229 INITMYWID 22326,22423
//
//Configuration Driver 230
//
230 INITIPADDR 192.158.2.108
230 INITIISADDR 192.8.1.11
230 INITIISPORT 80
230 INITBROWSERS 980
230 INITMYWID 22424,22521
//
//Configuration Driver 231
//
231 INITIPADDR 192.158.2.108
231 INITIISADDR 192.8.1.11
231 INITIISPORT 80

```

```

231 INITBROWSERS 980
231 INITMYWID 22522,22619
//
//Configuration Driver 232
//
232 INITIPADDR 192.158.2.108
232 INITIISADDR 192.8.1.11
232 INITIISPORT 80
232 INITBROWSERS 980
232 INITMYWID 22620,22717
//
//Configuration Driver 233
//
233 INITIPADDR 192.158.2.108
233 INITIISADDR 192.8.1.11
233 INITIISPORT 80
233 INITBROWSERS 980
233 INITMYWID 22718,22815
//
//Configuration Driver 234
//
234 INITIPADDR 192.158.2.108
234 INITIISADDR 192.8.1.11
234 INITIISPORT 80
234 INITBROWSERS 980
234 INITMYWID 22816,22913
//
//Configuration Driver 235
//
235 INITIPADDR 192.158.2.108
235 INITIISADDR 192.8.1.11
235 INITIISPORT 80
235 INITBROWSERS 980
235 INITMYWID 22914,23011
//
//Configuration Driver 236
//
236 INITIPADDR 192.158.2.108
236 INITIISADDR 192.8.1.11
236 INITIISPORT 80
236 INITBROWSERS 980
236 INITMYWID 23012,23109
//
//Configuration Driver 237
//
237 INITIPADDR 192.158.2.108
237 INITIISADDR 192.8.1.11
237 INITIISPORT 80
237 INITBROWSERS 980
237 INITMYWID 23110,23207
//
//Configuration Driver 238
//
238 INITIPADDR 192.158.2.108
238 INITIISADDR 192.8.1.11
238 INITIISPORT 80
238 INITBROWSERS 980
238 INITMYWID 23208,23305
//

```

```
//Configuration Driver 239
//
239 INITIPADDR 192.158.2.108
239 INITIISADDR 192.8.1.11
239 INITIISPORT 80
239 INITBROWSERS 980
239 INITMYWID 23306,23403
//
//Configuration Driver 240
//
240 INITIPADDR 192.158.2.108
240 INITIISADDR 192.8.1.11
240 INITIISPORT 80
240 INITBROWSERS 970
240 INITMYWID 23404,23500
```

RTE IP Configuration Information

```
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. . . . . : 192.1.1.2
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. . . . . : 192.1.1.22
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. . . . . : 192.2.1.23
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. . . . . : 192.2.1.24
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. . . . . : 192.3.1.25
Subnet Mask . . . . . : 255.255.255.0
IP Address. . . . . : 192.5.1.2
Subnet Mask . . . . . : 255.255.255.0
Default Gateway . . . . . :
NetBIOS over Tcpip. . . . . : Disabled
```

C:\webdriver>goto end

```
C:\rhost>if 'ipconfig' == '' goto usage
C:\rhost>c:
```

```
C:\rhost>cd \webdriver
C:\webdriver>call ipconfig /all
```

Windows IP Configuration

```
Host Name . . . . . : RTE6
Primary Dns Suffix . . . . . :
Node Type . . . . . : Unknown
IP Routing Enabled. . . . . : No
WINS Proxy Enabled. . . . . : No
```

Ethernet adapter Admin:

```
Connection-specific DNS Suffix . . :
Description . . . . . : Intel 8255x-based PCI Ethernet
Adapter (10/100)
Physical Address. . . . . : 00-06-5B-39-96-6D
DHCP Enabled. . . . . : No
IP Address. . . . . : 192.158.2.106
Subnet Mask . . . . . : 255.255.255.0
IP Address. . . . . : 192.168.93.6
Subnet Mask . . . . . : 255.255.255.0
Default Gateway . . . . . :
NetBIOS over Tcpip. . . . . : Disabled
```

Ethernet adapter Client:

```
Connection-specific DNS Suffix . . :
Description . . . . . : Broadcom NetXtreme Gigabit Ethernet
Physical Address. . . . . : 00-06-5B-39-96-6E
DHCP Enabled. . . . . : No
IP Address. . . . . : 192.3.1.26
Subnet Mask . . . . . : 255.255.255.0
IP Address. . . . . : 192.6.1.2
Subnet Mask . . . . . : 255.255.255.0
Default Gateway . . . . . :
NetBIOS over Tcpip. . . . . : Disabled
```

```
C:\webdriver>goto end
```

```
C:\rhost>if 'ipconfig' == '' goto usage
C:\rhost>c:
C:\rhost>cd \webdriver
C:\webdriver>call ipconfig /all
```

Windows IP Configuration

```
Host Name . . . . . : RTE7
Primary Dns Suffix . . . . . :
Node Type . . . . . : Unknown
IP Routing Enabled. . . . . : No
WINS Proxy Enabled. . . . . : No
```

Ethernet adapter Admin:

```
Connection-specific DNS Suffix . . :
Description . . . . . : Intel 8255x-based PCI Ethernet
Adapter (10/100)
Physical Address. . . . . : 00-06-5B-39-9E-DA
DHCP Enabled. . . . . : No
IP Address. . . . . : 192.158.2.107
Subnet Mask . . . . . : 255.255.255.0
IP Address. . . . . : 192.168.93.7
Subnet Mask . . . . . : 255.255.255.0

Default Gateway . . . . . :
NetBIOS over Tcpip. . . . . : Disabled
```

Ethernet adapter Client:

```
Connection-specific DNS Suffix . . :
Description . . . . . : Broadcom NetXtreme Gigabit Ethernet
Physical Address. . . . . : 00-06-5B-39-9E-DB
DHCP Enabled. . . . . : No
IP Address. . . . . : 192.4.1.27
Subnet Mask . . . . . : 255.255.255.0
IP Address. . . . . : 192.7.1.2
Subnet Mask . . . . . : 255.255.255.0
Default Gateway . . . . . :
NetBIOS over Tcpip. . . . . : Disabled
```

```
C:\webdriver>goto end
```

```
C:\rhost>if 'ipconfig' == '' goto usage
C:\rhost>c:
C:\rhost>cd \webdriver
C:\webdriver>call ipconfig /all
```

Windows IP Configuration

```
Host Name . . . . . : RTE8
Primary Dns Suffix . . . . . :
Node Type . . . . . : Unknown
IP Routing Enabled. . . . . : No
WINS Proxy Enabled. . . . . : No
```

Ethernet adapter Admin:

```
Connection-specific DNS Suffix . . :
Description . . . . . : Intel 8255x-based PCI Ethernet
Adapter (10/100)
Physical Address. . . . . : 00-06-5B-39-1E-64
DHCP Enabled. . . . . : No
IP Address. . . . . : 192.158.2.108
Subnet Mask . . . . . : 255.255.255.0
IP Address. . . . . : 192.168.93.8
Subnet Mask . . . . . : 255.255.255.0
Default Gateway . . . . . :
NetBIOS over Tcpip. . . . . : Disabled
```

Ethernet adapter Client:

```
Connection-specific DNS Suffix . . :
Description . . . . . : Broadcom NetXtreme Gigabit Ethernet
```

```
Physical Address. . . . . : 00-06-5B-39-1E-65
DHCP Enabled. . . . . : No
IP Address. . . . . : 192.4.1.28
Subnet Mask . . . . . : 255.255.255.0
IP Address. . . . . : 192.8.1.2
Subnet Mask . . . . . : 255.255.255.0
Default Gateway . . . . . :
NetBIOS over Tcpip. . . . . : Disabled
```

```
C:\webdriver>goto end
Volume in drive \\rte1\c$ has no label.
Volume Serial Number is EC05-D30B
Directory of \\rte1\c$\webdriver
10/01/2003 06:23p 107,008 webdriver.exe
1 File(s) 107,008 bytes
0 Dir(s) 12,651,225,088 bytes free
Volume in drive \\rte2\c$ has no label.
Volume Serial Number is EC05-D30B
```

```
Directory of \\rte2\c$\webdriver
10/01/2003 06:23p 107,008 webdriver.exe
1 File(s) 107,008 bytes
0 Dir(s) 12,638,539,776 bytes free
Volume in drive \\rte3\c$ has no label.
Volume Serial Number is EC05-D30B
Directory of \\rte3\c$\webdriver
10/01/2003 06:23p 107,008 webdriver.exe
1 File(s) 107,008 bytes
0 Dir(s) 12,656,398,336 bytes free
Volume in drive \\rte4\c$ has no label.
Volume Serial Number is EC05-D30B
```

```
Directory of \\rte4\c$\webdriver
10/01/2003 06:23p 107,008 webdriver.exe
1 File(s) 107,008 bytes
0 Dir(s) 12,658,450,432 bytes free
Volume in drive \\rte5\c$ has no label.
Volume Serial Number is EC05-D30B
```

```
Directory of \\rte5\c$\webdriver
10/01/2003 06:23p 107,008 webdriver.exe
1 File(s) 107,008 bytes
0 Dir(s) 12,658,515,968 bytes free
Volume in drive \\rte6\c$ has no label.
Volume Serial Number is EC05-D30B
```

```
Directory of \\rte6\c$\webdriver
10/01/2003 06:23p 107,008 webdriver.exe
1 File(s) 107,008 bytes
0 Dir(s) 12,659,081,216 bytes free
Volume in drive \\rte7\c$ has no label.
Volume Serial Number is EC05-D30B
```

```
Directory of \\rte7\c$\webdriver
10/01/2003 06:23p 107,008 webdriver.exe
```

```
1 File(s) 107,008 bytes
0 Dir(s) 12,661,415,936 bytes free
Volume in drive \\rte8\c$ has no label.
Volume Serial Number is EC05-D30B
Directory of \\rte8\c$\webdriver
10/01/2003 06:23p 107,008 webdriver.exe
1 File(s) 107,008 bytes
0 Dir(s) 12,660,166,656 bytes free
Volume in drive Y is NAS4
Volume Serial Number is 6C16-6083
Directory of Y:\TPCC\ORATPCC\TPCC Audit\300k
06/04/2003 03:00p 70,144 rapic.exe
1 File(s) 70,144 bytes
0 Dir(s) 39,601,278,976 bytes free
```

Start RTE Cmd

```
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 " D6 RTE158 " /MIN webdriver.cmd 158
start " D6 RTE159 " /MIN webdriver.cmd 159
start " D6 RTE160 " /MIN webdriver.cmd 160
start " D6 RTE161 " /MIN webdriver.cmd 161
start " D6 RTE162 " /MIN webdriver.cmd 162
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
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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 Calculations							
Warehouses	24,000	tpmC	291,413	tpmC / W	12.14		
Segment Name	Blocks	Block Size	Required	Daily Growth	Five Pct	Reqd. with 8H	8H Space(MB)
CUSTCLUSTER	374,046,720	2048	318,685,181	0	15,934,259	334,619,440	653,554
DB_STAT	2,099,200	2048	2,099,200	0	0	2,099,200	4,100
DISTCLUSTER	614,400	2048	306,176	0	15,309	321,485	628
HIST	30,105,600	2048	22,194,375	4,311,820	0	26,506,195	51,770
ICUST1	11,040,768	2048	9,309,300	0	465,465	9,774,765	19,092
ICUST2	69,304,320	2048	19,531,840	0	976,592	20,508,432	40,056
IDIST	66,560	2048	2,728	0	136	2,864	6
IITEM	5,120	2048	966	0	48	1,014	2
IORDR2	17,694,720	2048	14,385,888	0	719,294	15,105,182	29,503
ISTOK	31,457,280	2048	26,702,011	0	1,335,101	28,037,112	54,760
ITEMCLUSTER	15,360	2048	14,336	0	717	15,053	30
IWARE	20,480	2048	228	0	11	239	1
NORDCLUSTER_QUEUE	7,936,000	2048	2,719,062	0	135,953	2,855,015	5,577
ORDRCLUSTER_QUEUE	44,656,640	16384	36,681,984	7,126,405	0	43,808,389	684,507
ROLL_SEG	1,036,288	8192	1,036,288	0	0	1,036,288	8,096
STOKCLUSTER	514,129,920	2048	480,532,710	0	24,026,636	504,559,346	985,468
SYSAUX	61,440	2048	61,440	0	0	61,440	120
SYSTEM	102,400	2048	102,400	0	0	102,400	200
WARECLUSTER	71,680	2048	34,816	0	1,741	36,557	72
Totals							2,537,542
Dynamic Space	616,504	Sum of Hist, Ordrecluster (Initial Used space in MB)					
Static Space	85,178	(Initial MB+5%) - Dynamic Space					
Daily Growth	119,771.60	Total Dynamic {calc. As (Initial Blocks)*tpmC/(WHS*62.5)}					
Daily Spread	0.00	Oracle may be configured so that daily spread is 0					
60 Day MB	7,271,474	Static space + 60*(Daily Growth+Daily Spread)					
60 Day GB	7,101.05	Excludes OS, Paging and RDBMS Logs					
Log used	604,174,125	log file (blocks) used during an entire run					
Total N_O Txn	61,851,977	Total count of NEW_ORDER transactions during the entire run					
Log per N_O Txn	9.77	Number of blocks per NEW_ORDER transaction					
8 Hour Log (GB)	651.52	(Log blocks per N_O * Redo Block Size 512 * 60 * tpmC * 8)/(1024*1024*1024)					
Space Usage	GB Reqd.	Disk Size(GB)	Disks Priced	GB Priced			
60 day space	7,101.05	17.09	728	12,440.70	12,440.70		
Logs (with mirror)	1,303.04	72.00	26	1,872.00			
OS, Oracle (with mirror)		34.06	2	68.12			
Total Space	8404.09 GB		756	14380.82 GB	14.0 TB		

Log Space for 8 Hours				tpmC	291,413
Log Calc	Initial (Free Blks)	Final (Free Blks)	Change (Blocks)	Blks/N-O	8-Hr Blocks
Log Blocks Used	377	604,174,502	604,174,125	9.7681	
SUM(d_next_o_id)	720,240,000	782,091,977	61,851,977		

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 3, 2004

Unisys Corporation
Glenn Weeks
MS237
25725 Jeronimo Road
Mission Viejo, CA 92691

Mr. Weeks:

Here is the information you requested regarding pricing for several Microsoft products to be used in conjunction with your TPC-C benchmark testing.

All pricing shown is in US Dollars (\$).

Part Number	Description	Unit Price	Quantity	Price
P73-00295	Windows Server 2003, Standard Edition <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	8	\$5,904
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: PCglwe0403056397

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

-----Original Message-----

From: MaryBeth Pierantoni [mailto:mary.beth.pierantoni@oracle.com]

Sent: Tuesday, May 04, 2004 3:15 PM

To: Weeks, Glenn O

Subject: Pricing

Product	Price	Qty	Extended Price
Oracle Database 10g Enterprise Edition Per Processor, Unlimited Users, for 3 years	\$20,000	16	\$320,000
Oracle Database Server Support Package for 3 years	\$6,000	1	\$6,000
Oracle Mandatory E-Business Discount			<\$65,200>
TOTAL			\$260,800

Oracle Pricing Contact: MaryBeth Pierantoni, mary.beth.pierantoni@oracle.com, 916-315-5081

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 Fax: 203-384-0473
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 Bridgeport, CT 06605
 www.cril.com

SALES QUOTE

SQ-17490

May 03, 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 02, 2004	Dave Loewenbaum					
Quotation	PO #	Reference	Ship VIA	Page	Printed			
SQ-17490			UPS GROUND	1	05/03/04 15:51			
L Item	Description	Qty	Ship	Price	M	Discount	Amount	
1	ES7000-420 Server							
2	ES7420166-111 SYS:ES7000-420-16X 1.5HZ/64MB, 64-GM MEM	1		287328.00	EA		287328.00	
3	MEM162-32G MEM:16X2GB DIMMS, 32GB	2		31065.00	EA		62130.00	
4	MOD3133-PCI MOD: I/F, 2-PORT 10 MODUEL, 133 MHZ	3		1805.00	EA		5415.00	
5	FC76222-P64 CTRL: 2 GB FC, INTELLIFIBRE	8		2850.00	EA		22800.00	
6	ETH23312-P64 LAN HW:GIGABIT ETH CPR	1		238.00	EA		238.00	
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	USS2200/RS200 Storage							
12	JBD201815-P84 6 RACKS - 84 X 18GB 15K RPM	9		29839.00	EA		268551.00	
13	JBD201815-P56 DISK: 1 TB PKG 56X 18GB DRIVE, 15KRPM	1		22642.00	EA		22642.00	
14	CXR7310-2GF EMC DISK:73 GB, 10K DRIVE, FACT INSTAL	29		1568.00	EA		45472.00	
15	JBD2002-SA DISK:NON-HA ENCLOSURE WITH 14 DRIVE SLOT	26		3010.00	EA		78260.00	
16	JBD2011-SA DISK:NON-HA ENCLOSURE WITH 14 DRIVE SLOT	26		3214.00	EA		83564.00	
17	RMM20103-ELS SAN:SYMM DISK VIRT SRVR II-ELS	13		4559.00	EA		59267.00	
18	RMM20701-TAR SAN:HBA,ATTO PCI3300	39		1805.00	EA		70395.00	
19	USS10300-SW SAN:USS2100 SW & PROD INF	1		5472.00	EA		5472.00	
20	USS20320-LIC SAN:USS2100 20 TBYTE LIC	1		37484.00	EA		37484.00	
21	JBD20003-CCL DISK:.3 METER 2GB FIBRE CHANNEL COPPER C	26		54.00	EA		1404.00	
22	JBD2001-RMK DISK:ENCLOSURE RACK MOUNT KIT FOR 36U RA	52		190.00	EA		9880.00	
23	CX200-DPE EMCDISK:3U DPE, HA, W/SPS, FIELD	1		19000.00	EA		19000.00	
24	CX600-DAE RCK:FC 2GB STORAGE, OPTICAL I/F, DAE	1		7600.00	EA		7600.00	
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	GS516-T16 LAN HW:GIGABIT SWITCH, 16P	1		2850.00	EA		2850.00	
							Page 1	
							SubTotal	1179392.00



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

SALES QUOTE	
SQ-17490	May 03, 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
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UNIMISSI	NET 30	Jun 02, 2004	Dave Loewenbaum	
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Quotation	PO #	Reference	Ship VIA	Page	Printed
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SQ-17490			UPS GROUND	2	05/03/04 15:51
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L	Item	Description	Qty	Ship	Price	M	Discount	Amount
29	SWC81-SXR	ADPTR:8 PORT SWITCH UNIT	3		1520.00	EA		4560.00
30	CBL121-SWC	CABLE:12FT SYS TO ADJ RK	21		143.00	EA		3003.00
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	18		162.00	EA		2916.00
34	USE1936-LC6	PWR CORD:C20/NEMA L6-20P	18		86.00	EA		1548.00
35	HRT361941-OFT	ACC:36U 19X41 OPEN FRT CAB, HRT COLOR	6		1425.00	EA		8550.00
36		ES3020L Servers						
37	ESL30202-240	SVR:ESL3020 2.4GHZ	8		1072.00	EA		8576.00
38	CPL3020242-512	ACC: ESL3020 2.4GHZ 512K 1	8		532.00	EA		4256.00
39	DIM3020042-2GB	DIM3020042-2GB; MEM:2GB 4X512 533FSB MEM	8		1465.00	EA		11720.00
40	HBP3020101-51	DISK:ESL3020 HSBP 1X4 1"	8		265.00	EA		2120.00
41	HDP18115-DC4	DISK:18GB 15KRPM U320	8		333.00	EA		2664.00
42	ESL3020-VRL	ACC:ESL3020 V-RAILS	8		333.00	EA		2664.00
43	GS516-T16	LAN HW:GIGABIT SWITCH, 16P	1		2850.00	EA		2850.00
44								
45	DISCOUNT	LARGE VOLUME CASH DISCOUNT	1		-161280.00	EA		-161280.00
46								
47								
48								
49								
50								
51								

							Taxable	0.00
							Tax	0.00
							Exempt	1079335.00
							Total	1079335.00
							Paid	0.00
							Tr Disc	0.00
							Balance	1079335.00


Amount shown in Rate :0.00 of

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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.


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Part #	Cable Length	Unit Price	5-9 20% Off	10-19 25% Off	20 or more 30% Off	
GCFAZLL01	1 m	43.94	35.15	32.95	30.76	
GCFAZLL02	2 m	45.70	36.56	34.27	31.99	
GCFAZLL03	3 m	47.46	37.97	35.59	33.22	
GCFAZLL05	5 m	50.98	40.78	38.23	35.68	
GCFAZLL10	10 m	59.78	47.82	44.83	41.84	
Custom Length Cable Pricing						

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Standard CAT 5e Patch Cables | FAQ |

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 CAT 5e Patch Cable designed for high performance in a CAT 5e link. CAT 5e Patch Cables come with standard T568B Wiring. Available in 5 colors Black, Blue, Gray, White, and Yellow.

GCPO8889

Part No.	Length	Each	10 - 19 20% Off	20 or More 35% Off
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GCPO888905	5 ft	\$1.22	\$0.98	\$0.79
GCPO888907	7 ft	\$1.53	\$1.22	\$0.99
GCPO888910	10 ft	\$1.09	\$1.59	\$1.29
GCPO888914	14 ft	\$2.00	\$2.08	\$1.69
GCPO888920	20 ft	\$3.52	\$2.82	\$2.29
GCPO888925	25 ft	\$4.29	\$3.43	\$2.79

GCPO8859

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CAT 5 FAQ

Network Cables
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