



# TPC Benchmark™ C Full Disclosure Report

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

**using**

**Oracle Database 10g Enterprise Edition**

**on**

**SUSE LINUX Enterprise Server 9 for  
Itanium Processor Family**

**First Edition  
June 24, 2005**

## First Edition – June 2005

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The pricing information in this document is believed to accurately reflect the current prices as of the publication date. However, Unisys Corporation, and Oracle Corporation provide no warranty on the pricing information in this document.

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

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

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## **Overview**

This report documents the methodology and results of the TPC Benchmark C (TPC-C) conducted on the Unisys Corporation ES7000 Aries 420 Enterprise Server (16P). The operating system on the server was SUSE LINUX Enterprise Server 9 for Itanium processor family. 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**

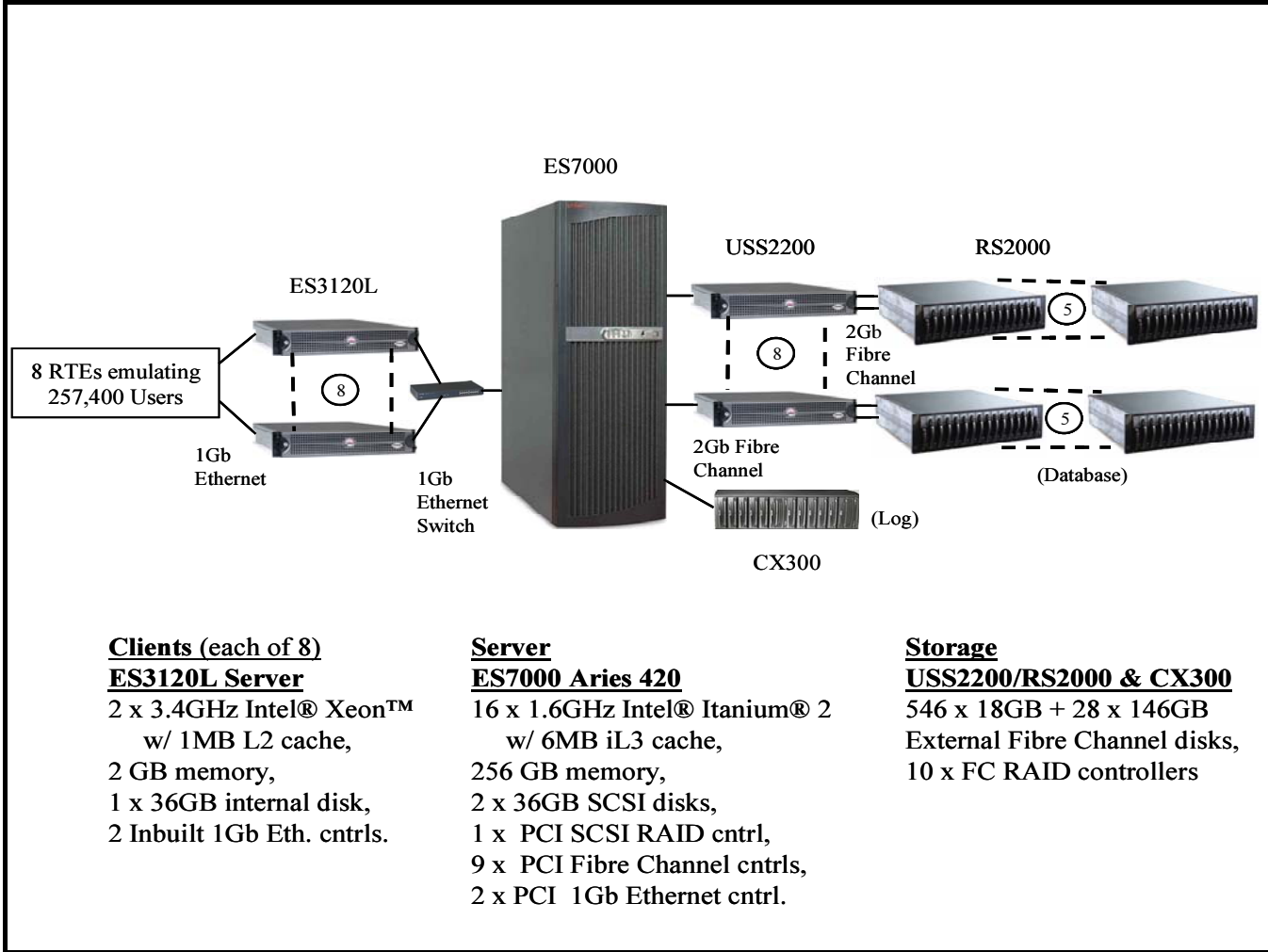
The following pages contain the executive summary results of the benchmark.

## **Auditor**

Lorna Livingtree 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.

<b>UNISYS</b>	<b>ES7000 Aries 420 Enterprise Server</b>		TPC-C Rev. 5.4
			Report Date June 24, 2005
<b>Total System Cost</b>	<b>TPC-C Throughput</b>	<b>Price Performance</b>	<b>Availability Date</b>
<b>\$1,442,995 USD</b>	<b>322,805 tpmC</b>	<b>\$4.48 / tpmC</b>	<b>July 29, 2005</b>

<b>Processors</b>	<b>Database Manager</b>	<b>Operating System</b>	<b>Other Software</b>	<b>Number of Users</b>
16 - Database 16 - Clients	Oracle Database 10g Enterprise Edition	SUSE® Linux® Enterprise Server 9 for Itanium Processors, SPI	Windows Server 2003 w/ IIS 6.0 and COM+ Microsoft Visual C++	<b>257,400</b>



**Clients (each of 8)**

**ES3120L Server**

2 x 3.4GHz Intel® Xeon™  
w/ 1MB L2 cache,  
2 GB memory,  
1 x 36GB internal disk,  
2 Inbuilt 1Gb Eth. cntrls.

**Server**

**ES7000 Aries 420**

16 x 1.6GHz Intel® Itanium® 2  
w/ 6MB iL3 cache,  
256 GB memory,  
2 x 36GB SCSI disks,  
1 x PCI SCSI RAID cntrl,  
9 x PCI Fibre Channel cntrls,  
2 x PCI 1Gb Ethernet cntrl.

**Storage**

**USS2200/RS2000 & CX300**

546 x 18GB + 28 x 146GB  
External Fibre Channel disks,  
10 x FC RAID controllers

System Components	Server		Clients (each of 8)	
	Quantity	Type	Quantity	Type
Processors	16	1.6GHz Intel® Itanium® 2 with 6MB iL3 Cache	2	3.4GHz Intel® Xeon™ Processor, 1MB Lvl 2 Cache
Memory	4	64 GB	2	1 GB
Disk Controllers	9	PCI Fibre Channel	1	Inbuilt SCSI
	1	PCI SCSI RAID (boot media)		
Disk Drives	546	18GB FC (17.1 GB useable)	1	36GB SCSI (34.3 GB useable)
	28	146GB FC (133.7 GB useable)		
	2	36GB boot (34.3 GB useable)		
Total Storage		12.8 TB		34.3 GB
Tape / CD-ROM	1	IDE CD/DVD/CDR-W	1	IDE CD-ROM
Terminals	1	Console Monitor	1	Console Monitor



# ES7000 Aries 420 Enterprise Server

TPC-C Rev. 5.4

Report Date  
June 24, 2005

Description	Part No.	Third Party		Unit Price	Qty.	Extended Price	3-yr.Maint. Price	
		Brand	Price					
<b>Server Hardware:</b>								
SYS: ES7000-420, 16x 1.6GHz/6MB, 128GB Mem.	ES7420167-123		1	\$407,362	1	\$407,362	\$6,984	
1x RAID Controller, 2x 36GB Disk (boot media)	Included							
Sentinel System Management S/W and Media	Included							
36Ux19"x34" cabinet and skins	Included							
MEM: 64GB Memory, 4 GB DIMMs	MEM164-64G		1	\$118,560	2	\$237,120		
MOD: I/F, 2-Slot IO Module, 133MHz	MOD3133-PCI		1	\$1,805	7	\$12,635		
CTRL: Fibre Channel HBA, 1-Port, 64-bit PCI	FCH2340-PCX		1	\$1,853	9	\$16,677		
CTRL: Ethernet, 1000Mb, 1-Port Cu, PCI	ETH33312-PCX		1	\$152	2	\$304		
I/F: Monitor, 17-inch LCD, Kybrd, Mse & Cable	ES70004-UIF		1	\$665	1	\$665		
<b>Server Software:</b>								
O/S: SUSE Linux Entrprs Srvr 9, Supt, Upgds, Drvrs, 1-y SLE96416-PKG			1	\$3,204	3	\$0	\$9,612	
APP: Oracle Database 10g Ent. Edtn, Per Proc, Unlmtd 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	\$6,000	
<b>Server Subtotal</b>						<b>\$994,763</b>	<b>\$22,596</b>	
<b>Storage Hardware:</b>								
DISK: 1.5TB Pkg, 84x 18GB, 15Krpm, + 10% spares *	JBD201815-P84		1	\$28,220	7	\$197,540	Spared	
DISK: 0.2 TB Pkg, 14x 18GB, 15Krpm, + 10% spares *	JBD201815-P14		1	\$7,342	1	\$7,342	Spared	
DISK: 146GB, 10Krpm, 2Gb FC	CXR14610-2GF		1	\$1,463	28	\$40,964		
RCK: FC 2Gb Storage, Standard, Copper/Copper I/F	JBD2002-SA		1	\$3,197	23	\$73,531	\$11,592	
RCK: FC 2Gb Storage, Standard, Optical/Copper I/F	JBD2011-SA		1	\$3,413	16	\$54,608	\$8,640	
CTRL: Symmetric Disk Virt. 2x2GHz, 512MB Mem	RMM20103-ELS		1	\$4,559	8	\$36,472	\$9,312	
CTRL: USS, Fibre Channel HBA, 1-Port, 64-bit PCI	RMM20701-TAR		1	\$1,805	24	\$43,320	\$10,944	
APP: Unisys Storage Sentinel 2200 SDV Software	USS10300-SW		1	\$5,472	1	\$5,472	\$4,068	
APP: Storage Sentinel SDV SW, 10TB License	USS20310-LIC		1	\$25,200	1	\$25,200		
CBL: FC, Copper, HSDC2 Conn's, 0.3m	JBD20003-CCL		1	\$53	23	\$1,219		
CBL: FC, Optical, LC->LC Conn's, 10m + 10% Spares *	GCFAZLL20	3	3	\$38	28	\$1,064	Spared	
RCK: Rack Mount Kit, Disk Enclosure	JBD2001-RMK		1	\$190	39	\$7,410		
CTRL: DPE: 2 RAID Cntrl, 1GB Cache ea., 0 Disk	CX300-DPE		1	\$13,728	1	\$13,728	\$1,440	
RCK: FC 2Gb Storage, Optical I/F, DAE	CX600-DAE		1	\$5,890	1	\$5,890		
SYS MGT: Storage, Navisphere Manager	CXN300-WRK		1	\$2,185	1	\$2,185	\$1,044	
SWTCH: Switch, 10/100/1000Mb Ethernet	GS516-T16		1	\$2,850	1	\$2,850		
SWTCH: Switch, 8-port KVM	SWC81-SXR		1	\$1,520	2	\$3,040	\$2,304	
CBL: Cable, KVM, 12 foot	CBL121-SWC		1	\$143	16	\$2,288		
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	12	\$1,944		
CBL: Power, U.S. (Domestic), C20 - L6-20P	USE1936-LC6		1	\$86	12	\$1,032		
CAB: 36U x 19" x 41" Open Front Cabinet	HRT361941-OFT		1	\$1,425	4	\$5,700		
<b>Storage Subtotal</b>						<b>\$538,595</b>	<b>\$49,344</b>	
<b>Client Hardware:</b>								
SYS: ES3120L w/ 1x 3.4GHz Proc., 0MB Mem	ESL3120-340		1	\$1,881	8	\$15,048	\$14,784	
PROC: 1x 3.4GHz Intel Xeon/1MB Cache	CPL3120341-1MB		1	\$1,065	8	\$8,520		
MEM: 2GB, 2x 1GB DIMMs DDR SDRAM	DIM3120021-2GB		1	\$864	8	\$6,912		
DISK: 36GB 15Krpm U320 3.5 Internal	HDP36115-DC4		1	\$398	8	\$3,184		
RCK: ES3120L Universal Rack Kit	ESL3120-VRL		1	\$331	8	\$2,648		
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	\$1	30	\$30	Spared	
<b>Client Software:</b>								
O/S: Windows Server 2003, Standard Edition, SP1	WSS200304-EN	2	1	\$949	8	\$7,592	\$4,896	
ACC: Microsoft Visual C++ Standard Edition	254-00257	2	2	\$109	1	\$109	Inc. below	
<b>Client Subtotal</b>						<b>\$46,893</b>	<b>\$19,680</b>	
<b>Total USD</b>						<b>\$1,580,251</b>	<b>\$91,620</b>	
						(\$65,200)		
						(\$163,676)		

Note: All prices are effective as of the date of publication  
Oracle Mandatory E-Business Discount (license and support) - 20%  
Computer Resolutions Inc. Volume Cash Discount - 13%

- Notes:**
- \* = 10% spares added in place of onsite service.
  - HW & SW maintenance at 24 x 7 w/ 4 hr. max. response time for spares.
  - 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

**3-Year Cost of Ownership: \$1,442,995 USD**  
**tpmC Rating: 322,805**  
**\$ / tpmC: \$4.48**

Benchmark results and test methodology audited by Lorna Livingtree 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](mailto:pricing@tpc.org). Thank You.

## Numerical Quantities Summary

**MQTh, Computed Maximum Qualified Throughput: 322,805 tpmC**

### Response Times, in seconds

Transaction	90th %ile	Average	Maximum
New-Order	0.42	0.28	1.81
Payment	0.40	0.27	1.99
Order-Status	0.42	0.28	1.69
Delivery (interactive portion)	0.31	0.19	1.52
Delivery (deferred portion)	0.13	0.09	1.63
Stock-Level	0.40	0.26	1.61
Menu	0.31	0.20	2.03

### 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	44.90%
Payment	43.02%
Order-Status	4.02%
Delivery (interactive portion)	4.02%
Stock-Level	4.02%

### Keying / Think Time Times, in seconds

Transaction	Minimum	Average	Maximum
New Order	18.01 / 0.00	18.01 / 12.03	18.03 / 120.31
Payment	3.01 / 0.00	3.01 / 12.03	3.03 / 120.33
Order-Status	2.01 / 0.00	2.01 / 10.06	2.03 / 100.70
Delivery (interactive portion)	2.01 / 0.00	2.01 / 5.06	2.03 / 50.61
Stock-Level	2.01 / 0.00	2.01 / 5.07	2.03 / 50.61

### Test Duration

Ramp up time	119 minutes
Measurement interval (M)	120 minutes
Transactions (all types) completed during measurement interval	86,261,235
Ramp-down time	50 minutes

### Checkpointing:

Number of checkpoints	4
Checkpoint interval	28 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 SUSE LINUX Enterprise Server 9 for Itanium processor family.

## **TPC Benchmark C Overview**

The Transaction Processing Performance Council (TPC) developed The TPC Benchmark™ C Standard Specification Revision 5.4. 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 Corporation 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

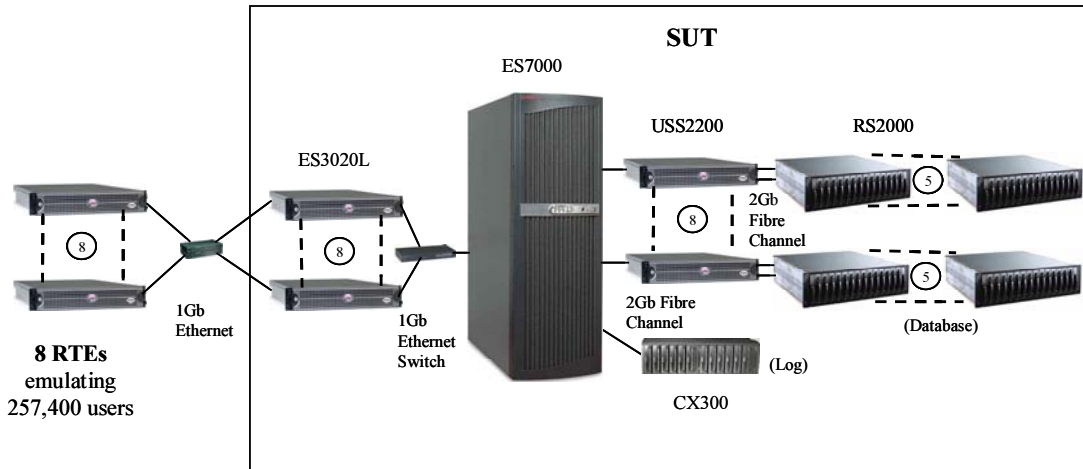
*Diagrams of both measured and priced configurations must be provided, accompanied by a description of the differences. This includes, but is not limited to: (8.1.1.7)*

- *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.

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)**

**ES3120L Server**  
 2 x 3.4GHz Intel® Xeon™  
 w/ 1MB L2 cache,  
 2 GB memory,  
 1 x 36GB internal disk,  
 2 Inbuilt 1Gb Eth. cntrls.

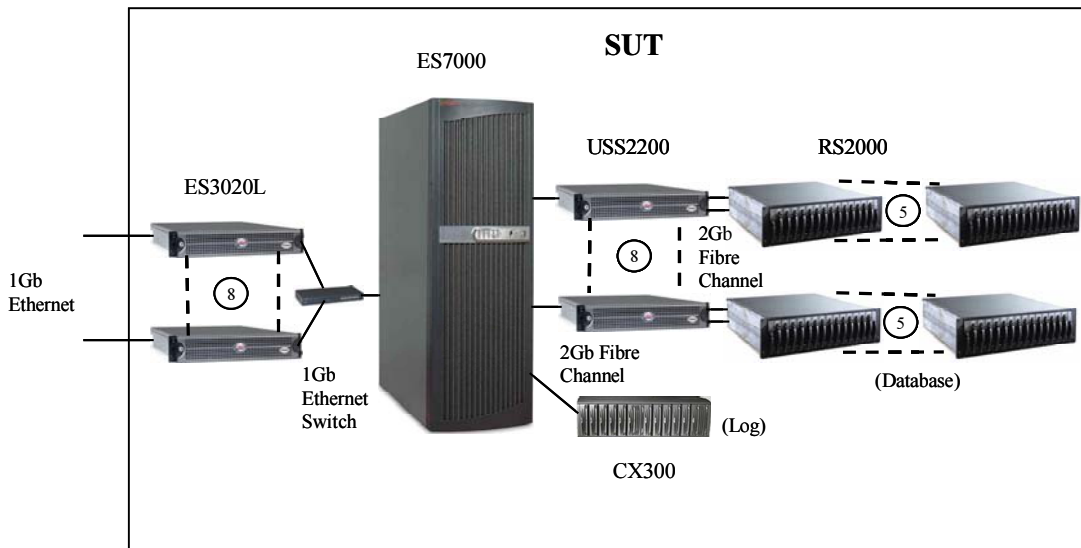
**Server**

**ES7000 Aries 420**  
 16 x 1.6GHz Intel® Itanium® 2  
 w/ 6MB iL3 cache,  
 256 GB memory,  
 2 x 36GB SCSI disks,  
 1 x PCI SCSI RAID cntrl,  
 9 x PCI Fibre Channel cntrls,  
 2 x PCI 1Gb Ethernet cntrl.

**Storage**

**USS2200/RS2000 & CX300**  
 546 x 18GB + 28 x 146GB  
 External Fibre Channel disks,  
 10 x FC RAID controllers

**Figure 0.2: Priced Configuration**



**Clients (each of 8)**

**ES3120L Server**  
 2 x 3.4GHz Intel® Xeon™  
 w/ 1MB L2 cache,  
 2 GB memory,  
 1 x 36GB internal disk,  
 2 Inbuilt 1Gb Eth. cntrls.

**Server**

**ES7000 Aries 420**  
 16 x 1.6GHz Intel® Itanium® 2  
 w/ 6MB iL3 cache,  
 256 GB memory,  
 2 x 36GB SCSI disks,  
 1 x PCI SCSI RAID cntrl,  
 9 x PCI Fibre Channel cntrls,  
 2 x PCI 1Gb Ethernet cntrl.

**Storage**

**USS2200/RS2000 & CX300**  
 546 x 18GB + 28 x 146GB  
 External Fibre Channel disks,  
 10 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 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 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 they were retrieved. 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 257,400 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 257,400 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. Linux and Oracle encountered IO errors due to the missing disk. Errors were recorded in the system log and the RTE logs.
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. The SUT was restarted and the partitions were made using fdisk utility 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 database 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 28,000 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	28,000
District	280,000
Customer	840,000,000
History	840,000,000
Order	840,000,000
New-Order	252,000,000
Order-Line	8,400,315,680
Stock	2,800,000,000
Item	100,000

2,260 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)	2
C_LAST (Run)	87

### 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 546 18GB disks and the transaction log over 28 mirrored 146GB disks for the benchmark configuration. In addition, there were two mirrored 36GB disks in the host server containing SUSE Linux Enterprise Server 9 for Itanium processor family, and Oracle 10g Database code plus the paging file. The tested and priced disk configurations were identical.

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

*A statement must be provided that describes: (8.1.5.3)*

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

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	1	LUN1	/dev/sdbk	0	7 striped	128.40	icust2_0_0, cust_0_0, cust_0_61, stok_0_0, stok_0_61, ord_0_0, iordr2_0_0, temp_0_24
1	1	LUN2	/dev/sdbl	0	7 striped	128.40	icust2_0_1, cust_0_1, cust_0_62, stok_0_1, stok_0_62, ord_0_1, iordr2_0_1, temp_0_25
1	1	LUN3	/dev/sdbm	0	7 striped	128.40	icust2_0_2, cust_0_2, cust_0_63, stok_0_2, stok_0_63, ord_0_2, iordr2_0_2, temp_0_26
1	1	LUN4	/dev/sdbn	0	7 striped	128.40	icust2_0_3, cust_0_3, cust_0_64, stok_0_3, stok_0_64, ord_0_3, iordr2_0_3
1	1	LUN5	/dev/sdbo	0	7 striped	128.40	icust2_0_4, cust_0_4, cust_0_65, stok_0_4, stok_0_65, ord_0_4, iordr2_0_4
1	1	LUN6	/dev/sdbp	0	7 striped	128.40	icust2_0_5, cust_0_5, cust_0_66, stok_0_5, stok_0_66, ord_0_5, iordr2_0_5
1	1	LUN7	/dev/sdbq	0	7 striped	128.40	icust2_0_6, cust_0_6, cust_0_67, stok_0_6, stok_0_67, ord_0_6, iordr2_0_6
1	1	LUN8	/dev/sdbr	0	7 striped	128.40	icust2_0_7, cust_0_7, cust_0_68, stok_0_7, stok_0_68, ord_0_7, iordr2_0_7
1	1	LUN9	/dev/sdbs	0	7 striped	128.40	icust2_0_8, cust_0_8, cust_0_69, stok_0_8, stok_0_69, ord_0_8, iordr2_0_8
1	1	LUN10	/dev/sdbt	0	7 striped	128.40	icust2_0_9, cust_0_9, cust_0_70, stok_0_9, stok_0_70, ord_0_9, iordr2_0_9
2	2	LUN1	/dev/sdbu	0	7 striped	128.40	icust2_0_10, cust_0_10, cust_0_71, stok_0_10, stok_0_71, ord_0_10, iordr2_0_10
2	2	LUN2	/dev/sdbv	0	7 striped	128.40	icust2_0_11, cust_0_11, cust_0_72, stok_0_11, stok_0_72, ord_0_11, iordr2_0_11
2	2	LUN3	/dev/sdbw	0	7 striped	128.40	icust2_0_12, cust_0_12, cust_0_63, stok_0_12, stok_0_63, ord_0_12, iordr2_0_12
2	2	LUN4	/dev/sdbx	0	7 striped	128.40	icust2_0_13, cust_0_13, cust_0_74, stok_0_13, stok_0_74, ord_0_13, iordr2_0_13
2	2	LUN5	/dev/sdbx	0	7 striped	128.40	icust2_0_14, cust_0_14, cust_0_75, stok_0_14, stok_0_75, ord_0_14, iordr2_0_14
2	2	LUN6	/dev/sdbz	0	7 striped	128.40	icust2_0_15, cust_0_15, cust_0_76, stok_0_15, stok_0_15, stok_0_76, ord_0_15, iordr2_0_15
2	2	LUN7	/dev/sdca	0	7 striped	128.40	icust2_0_16, cust_0_16, cust_0_77, stok_0_16, stok_0_77, ord_0_16, iordr2_0_16
2	2	LUN8	/dev/sdcb	0	7 striped	128.40	icust2_0_17, cust_0_17, cust_0_78, stok_0_17, stok_0_78, ord_0_17, iordr2_0_17
2	2	LUN9	/dev/sdcc	0	7 striped	128.40	icust2_0_18, cust_0_18, cust_0_79, stok_0_18, stok_0_79, ord_0_18, iordr2_0_18
2	2	LUN10	/dev/sdcd	0	7 striped	128.40	icust2_0_19, cust_0_19, cust_0_80, stok_0_19, stok_0_80, ord_0_19, iordr2_0_19
3	3	LUN1	/dev/sdce	0	7 striped	128.40	icust2_0_20, cust_0_20, cust_0_81, stok_0_20, stok_0_81, ord_0_20, iordr2_0_20
3	3	LUN2	/dev/sdcf	0	7 striped	128.40	icust2_0_21, cust_0_21, cust_0_82, stok_0_21, stok_0_82, ord_0_21, iordr2_0_21
3	3	LUN3	/dev/sdcg	0	7 striped	128.40	icust2_0_22, cust_0_22, cust_0_83, stok_0_22, stok_0_83, ord_0_22, iordr2_0_22
3	3	LUN4	/dev/sdch	0	7 striped	128.40	icust2_0_23, cust_0_23, cust_0_84, stok_0_23, stok_0_84, ord_0_23, iordr2_0_23, temp_0_0
3	3	LUN5	/dev/sdci	0	7 striped	128.40	icust2_0_24, cust_0_24, cust_0_85, stok_0_24, stok_0_85, ord_0_24, iordr2_0_24, temp_0_1
3	3	LUN6	/dev/sdcj	0	7 striped	128.40	icust2_0_25, cust_0_25, cust_0_86, stok_0_25, stok_0_86, ord_0_25, iordr2_0_25, temp_0_2
3	3	LUN7	/dev/sdck	0	7 striped	128.40	icust2_0_26, cust_0_26, cust_0_87, stok_0_26, stok_0_87, ord_0_26, iordr2_0_26, temp_0_3

Table 4.3: Disk Configuration (Continued)

External Disk Configuration							
HBA	USS	Logical Unit #	Drive #	RAID Level	Striping	Size (GB)	Database files
3	3	LUN8	/dev/sdcl	0	7 striped	128.40	icust2_0_27, cust_0_27, cust_0_88, stok_0_27, stok_0_88, ordr_0_27, iordr2_0_27, temp_0_4
3	3	LUN9	/dev/sdcm	0	7 striped	128.40	icust2_0_28, cust_0_28, cust_0_89, stok_0_28, stok_0_89, ordr_0_28, iordr2_0_28, temp_0_5
3	3	LUN10	/dev/sdcn	0	7 striped	128.40	icust2_0_29, cust_0_29, cust_0_90, stok_0_29, stok_0_90, ordr_0_29, iordr2_0_29, temp_0_6
4	4	LUN1	/dev/sdco	0	7 striped	128.40	icust2_0_30, cust_0_30, cust_0_91, stok_0_30, stok_0_91, ordr_0_30, iordr2_0_30, temp_0_7
4	4	LUN2	/dev/sdcp	0	7 striped	128.40	icust2_0_31, cust_0_31, cust_0_92, stok_0_31, stok_0_92, ordr_0_31, iordr2_0_31, temp_0_8
4	4	LUN3	/dev/sdcq	0	7 striped	128.40	icust2_0_32, cust_0_32, cust_0_93, stok_0_32, stok_0_93, ordr_0_32, iordr2_0_32, temp_0_9
4	4	LUN4	/dev/sdcr	0	7 striped	128.40	icust2_0_33, cust_0_33, cust_0_94, stok_0_33, stok_0_94, ordr_0_33, iordr2_0_33, temp_0_10
4	4	LUN5	/dev/sdcs	0	7 striped	128.40	icust2_0_34, cust_0_34, cust_0_95, stok_0_34, stok_0_95, ordr_0_34, iordr2_0_34, temp_0_11
4	4	LUN6	/dev/sdct	0	7 striped	128.40	icust2_0_35, cust_0_35, cust_0_96, stok_0_35, stok_0_96, ordr_0_35, iordr2_0_35, temp_0_12
4	4	LUN7	/dev/sdcu	0	7 striped	128.40	icust2_0_36, cust_0_36, cust_0_97, stok_0_36, stok_0_97, ordr_0_36, iordr2_0_36, iitem_0_0, temp_0_13
4	4	LUN8	/dev/sdcv	0	7 striped	128.40	icust2_0_37, cust_0_37, cust_0_98, stok_0_37, stok_0_98, ordr_0_37, iordr2_0_37, temp_0_14
4	4	LUN9	/dev/sdcw	0	7 striped	128.40	icust2_0_38, cust_0_38, cust_0_99, stok_0_38, stok_0_99, ordr_0_38, iordr2_0_38, temp_0_15
4	4	LUN10	/dev/sdcx	0	7 striped	128.40	icust2_0_39, cust_0_39, cust_100, stok_0_39, stok_0_100, ordr_0_39, iordr2_0_39, temp_0_16
5	5	LUN1	/dev/sdcy	0	7 striped	128.40	icust2_0_40, cust_0_40, cust_0_101, stok_0_40, stok_0_101, ordr_0_40, iordr2_0_40, temp_0_17
5	5	LUN2	/dev/sdcz	0	7 striped	128.40	icust2_0_41, cust_0_41, cust_0_102, stok_0_41, stok_0_102, ordr_0_41, iordr2_0_41, temp_0_18
5	5	LUN3	/dev/sdda	0	7 striped	128.40	icust2_0_42, cust_0_42, cust_0_103, stok_0_42, stok_0_103, ordr_0_42, iordr2_0_42, temp_0_19
5	5	LUN4	/dev/sddb	0	7 striped	128.40	icust2_0_43, cust_0_43, cust_0_104, stok_0_43, stok_0_104, ordr_0_43, iordr2_0_43, temp_0_20
5	5	LUN5	/dev/sddc	0	7 striped	128.40	icust2_0_44, cust_0_44, cust_0_105, stok_0_44, stok_0_105, ordr_0_44, iordr2_0_44, temp_0_21
5	5	LUN6	/dev/sddd	0	7 striped	128.40	icust2_0_45, cust_0_45, cust_0_106, stok_0_45, stok_0_106, ordr_0_45, iordr2_0_45, temp_0_22
5	5	LUN7	/dev/sdde	0	7 striped	128.40	icust2_0_46, cust_0_46, cust_0_107, stok_0_46, stok_0_107, ordr_0_46, iordr2_0_46, temp_0_23
5	5	LUN8	/dev/sddf	0	7 striped	128.40	icust2_0_47, cust_0_47, cust_0_108, stok_0_47, stok_0_108, ordr_0_47, iordr2_0_47, dist_0_0
5	5	LUN9	/dev/sddg	0	7 striped	128.40	icust2_0_48, cust_0_48, cust_0_109, stok_0_48, stok_0_109, ordr_0_48, iordr2_0_48
5	5	LUN10	/dev/sddh	0	7 striped	128.40	icust2_0_49, cust_0_49, cust_0_110, stok_0_49, stok_0_110, ordr_0_49, iordr2_0_49, ware_0_0
6	6	LUN1	/dev/sddi	0	7 striped	128.40	icust2_0_50, cust_0_50, cust_0_111, stok_0_50, stok_0_111, ordr_0_50, iordr2_0_50, temp_0_27
6	6	LUN2	/dev/sddj	0	7 striped	128.40	icust2_0_51, cust_0_51, cust_0_112, stok_0_51, stok_0_112, ordr_0_51, iordr2_0_51, item_0_0
6	6	LUN3	/dev/sddk	0	7 striped	128.40	icust2_0_52, cust_0_52, cust_0_113, stok_0_52, stok_0_113, ordr_0_52, iordr2_0_52, istok_0_15, item_0_1
6	6	LUN4	/dev/sddl	0	7 striped	128.40	icust2_0_53, cust_0_53, cust_0_114, stok_0_53, stok_0_114, ordr_0_53, iordr2_0_53
6	6	LUN5	/dev/sddm	0	7 striped	128.40	icust2_0_54, cust_0_54, cust_0_115, stok_0_54, stok_0_115, ordr_0_54, iordr2_0_54, istok_0_17

Table 4.3: Disk Configuration (Continued)

External Disk Configuration							
HBA	USS	Logical Unit #	Drive #	RAID Level	Striping	Size (GB)	Database files
6	6	LUN6	/dev/sddn	0	7 striped	128.40	icust2_0_55, cust_0_55, cust_0_116, stok_0_55, stok_0_116, ordr_0_55, iordr2_0_55
6	6	LUN7	/dev/sddo	0	7 striped	128.40	icust2_0_56, cust_0_56, cust_0_117, stok_0_56, stok_0_117, ordr_0_56, iordr2_0_56, iware_0_0
6	6	LUN8	/dev/sddp	0	7 striped	128.40	icust2_0_57, cust_0_57, cust_0_118, stok_0_57, stok_0_118, ordr_0_57, iordr2_0_57, iitem_0_0
6	6	LUN9	/dev/sddq	0	7 striped	128.40	icust2_0_58, cust_0_58, cust_0_119, stok_0_58, stok_0_119, ordr_0_58, iordr2_0_58, idist_0_0
6	6	LUN10	/dev/sddr	0	7 striped	128.40	icust2_0_59, cust_0_59, cust_0_120, stok_0_59, stok_0_120, ordr_0_59, iordr2_0_59
7	7	LUN1	/dev/sdds	0	7 striped	128.40	icust2_0_60, cust_0_60, cust_0_121, stok_0_60, stok_0_121, ordr_0_60, iordr2_0_60
7	7	LUN2	/dev/sddt	0	7 striped	128.40	icust1_0_0, system_1, control_001, tpccaux, roll, sp_0
7	7	LUN3	/dev/sddu	0	28 striped	513.80	nord_0_0, nord_0_2, istok_0_0
7	7	LUN4	/dev/sddv	0	28 striped	513.80	nord_0_1, nord_0_3
8	8	LUN1	/dev/sddw	0	28 striped	513.80	hist_0_0, hist_0_2, hist_0_4, hist_0_6, hist_0_8, hist_0_10, hist_0_12, hist_0_14, hist_0_16, hist_0_18, hist_0_20
8	8	LUN2	/dev/sddx	0	28 striped	513.80	hist_0_1, hist_0_3, hist_0_5, hist_0_7, hist_0_9, hist_0_11, hist_0_13, hist_0_15, hist_0_17, hist_0_19, hist_0_21
Log	cx300	LUN1	/dev/sdbi	1/0	14 striped	957.80	log_1_1
Log	cx300	LUN2	/dev/sdbj	1/0	14 striped	1,004.50	log_1_2

Figure 4.1: ES7000 Server HBA-PCI Slot Map

16x1.6GHz Itanium2 Processors													
256GB DDR RAM													
Bridge-0-1							Bridge-0-0						
	QLA2340-7	QLA2340-6			QLA2340-5	QLA2340-4	QLA2340-8			QLA2340-3	QLA2340-2	QLA2340-1	
					NIC-Eth1								
												QLA2340-LOG	
												NIC-Eth0	LSI 320



## 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 322,805.

### 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	0.28	1.81	0.42
Payment	0.27	1.99	0.40
Order Status	0.28	1.69	0.42
Delivery (interactive)	0.19	1.52	0.31
Delivery (deferred)	0.09	1.63	0.13
Stock-Level	0.26	1.61	0.40
Menu	0.20	2.03	0.31

### 5.3. Keying and Think Times

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

**Table 5.2: Keying Times**

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

**Table 5.3: Think Times**

Transaction	Minimum	Average	Maximum
New-Order	0.00	12.03	120.31
Payment	0.00	12.03	120.33
Order Status	0.00	10.06	100.70
Delivery (interactive)	0.00	5.06	50.61
Stock-Level	0.00	5.07	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

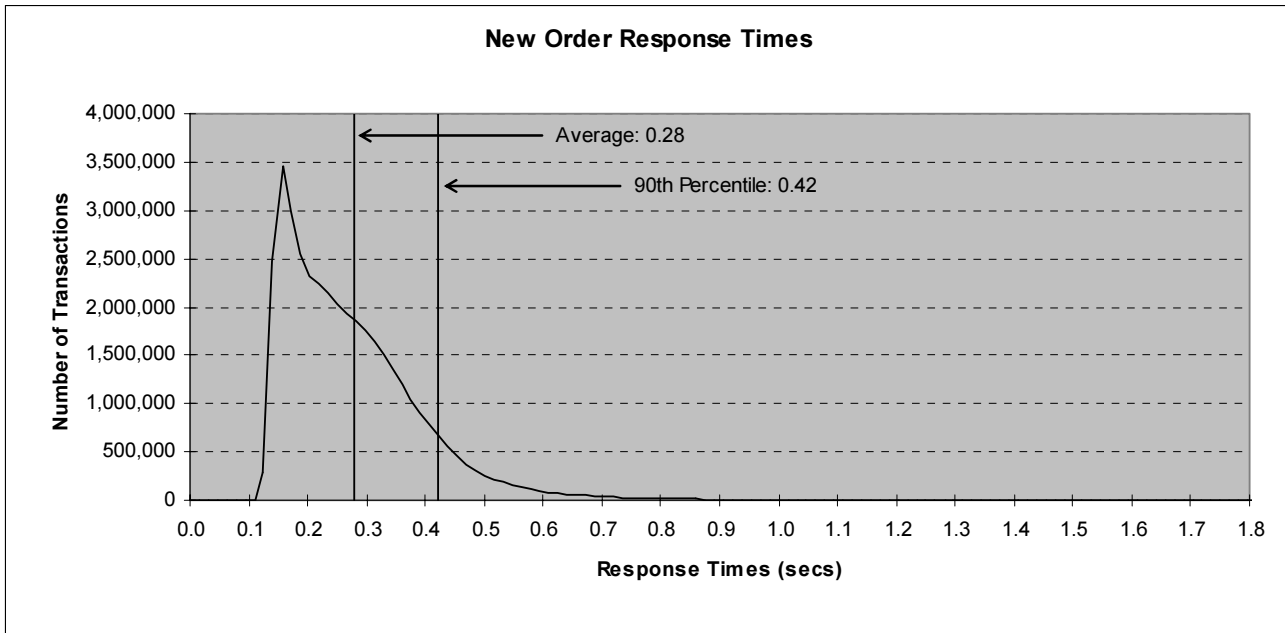
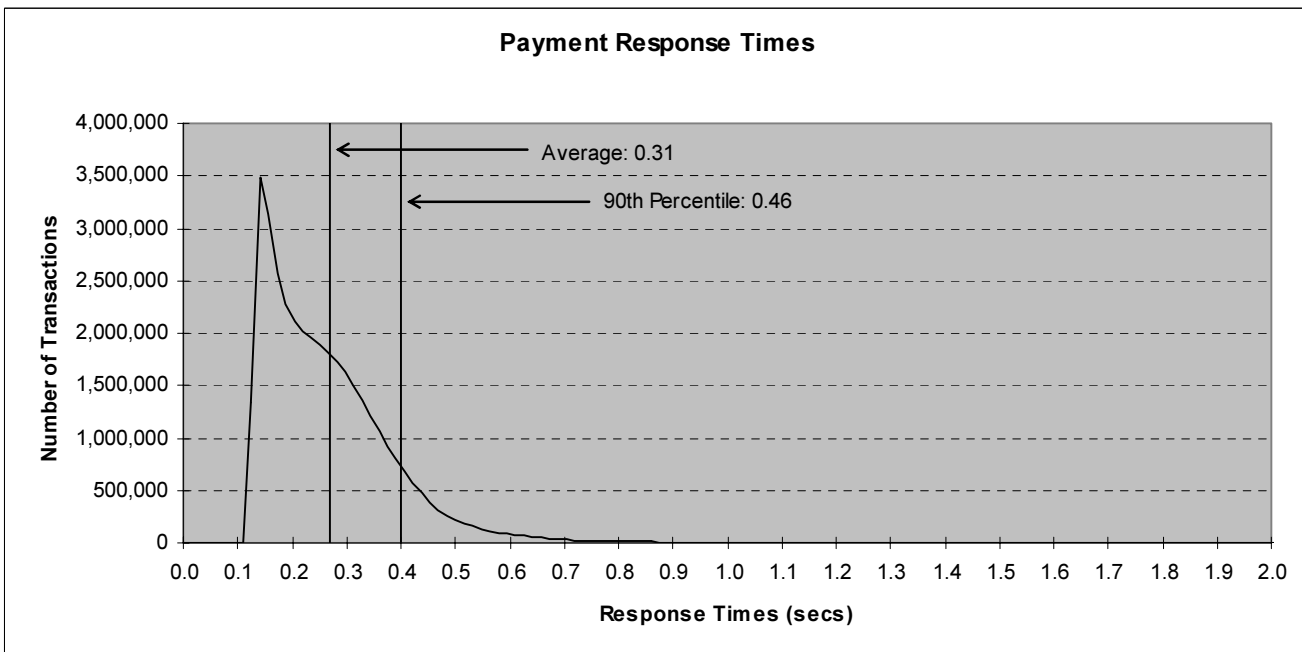
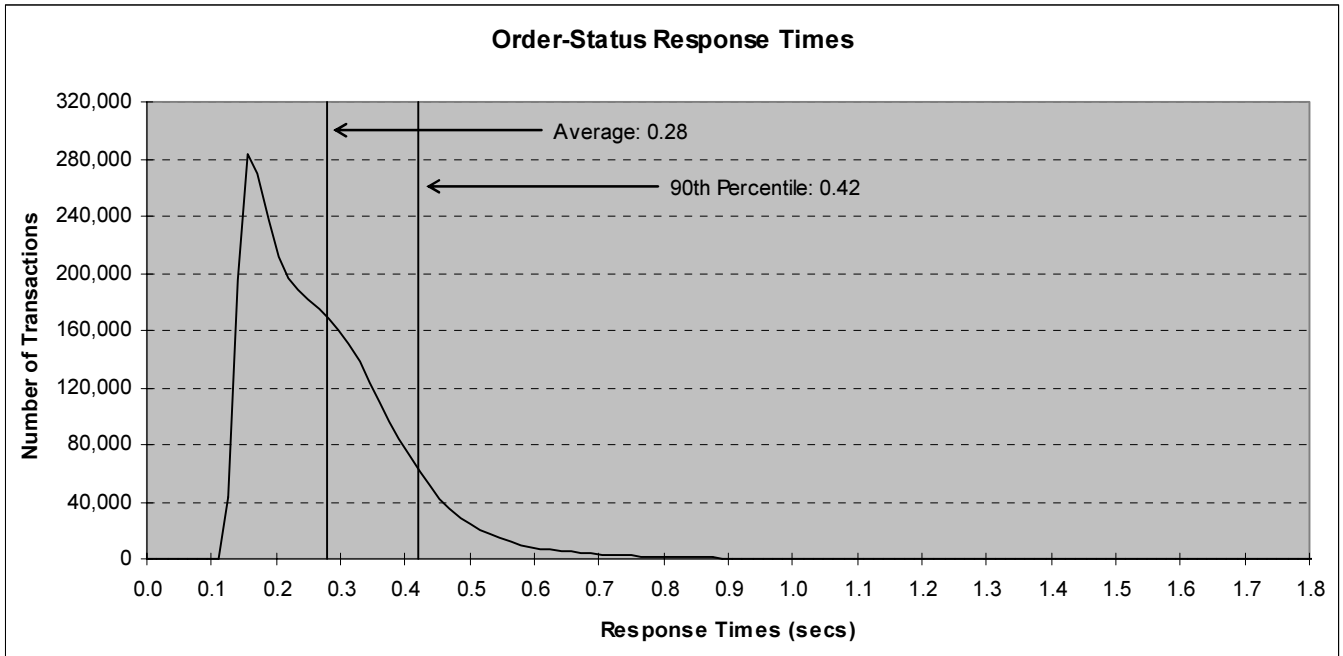


Figure 5.2: Payment Response Time Distribution



**Figure 5.3: Order Status Response Time Distribution**



**Figure 5.4: Delivery Response Time Distribution**

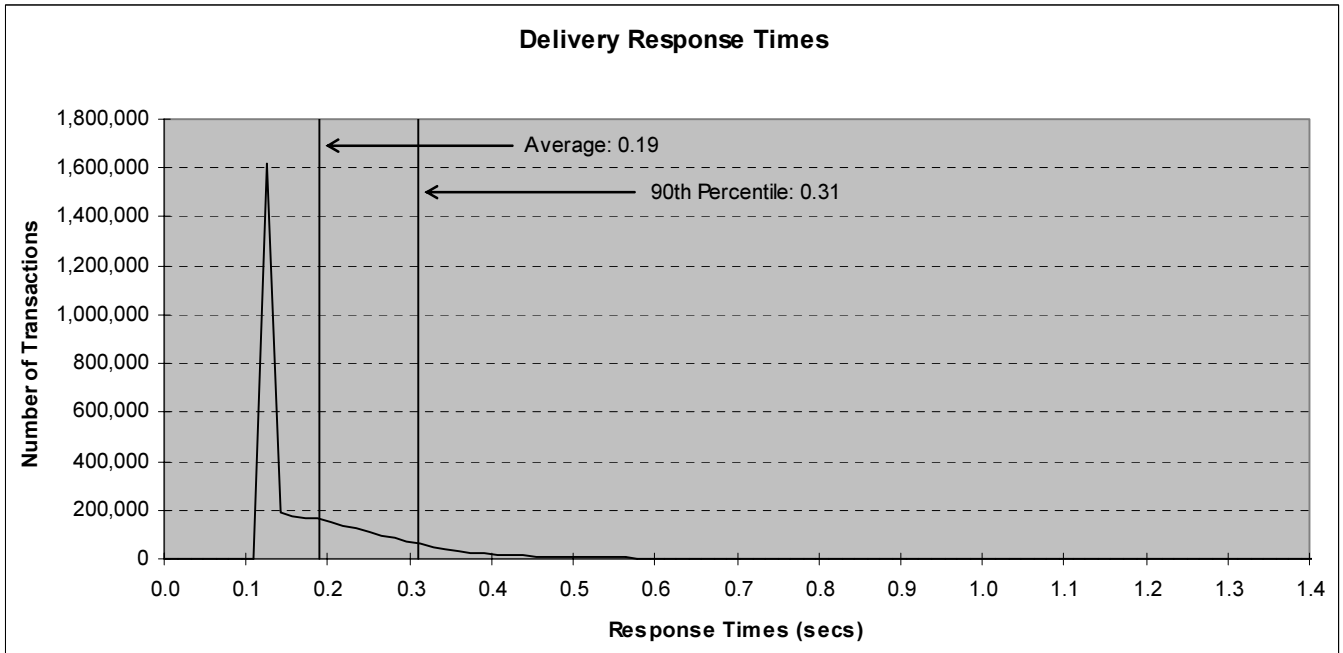
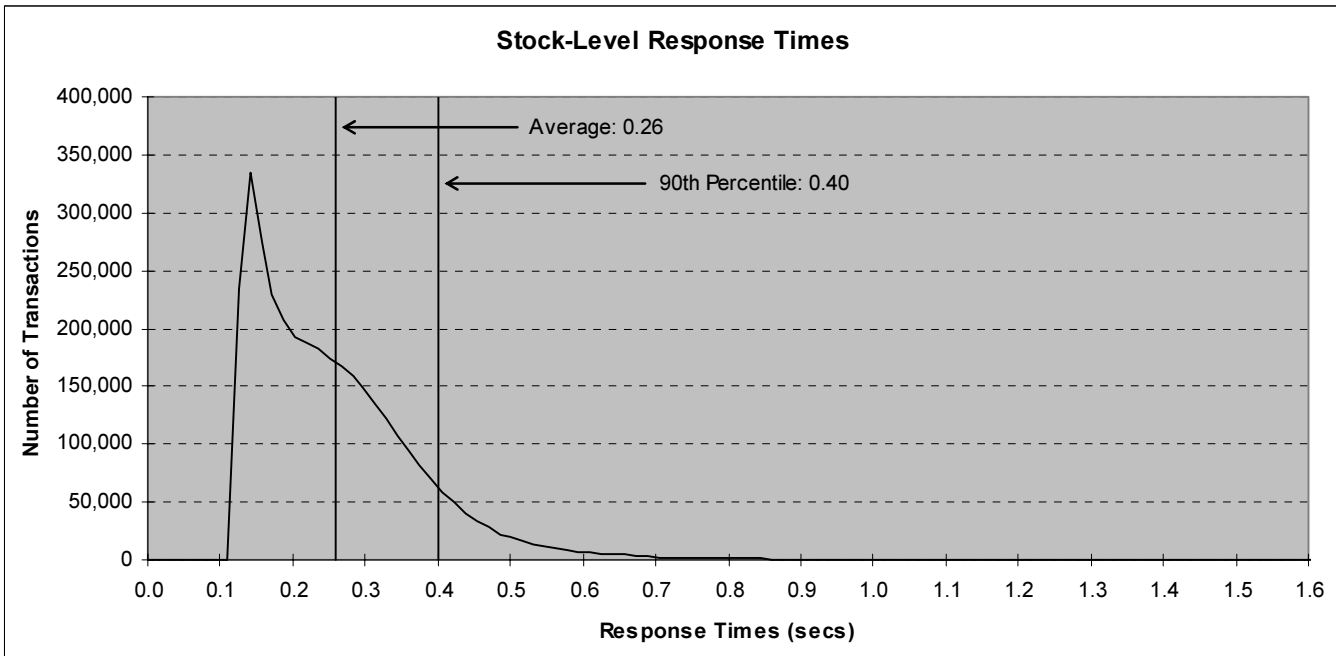


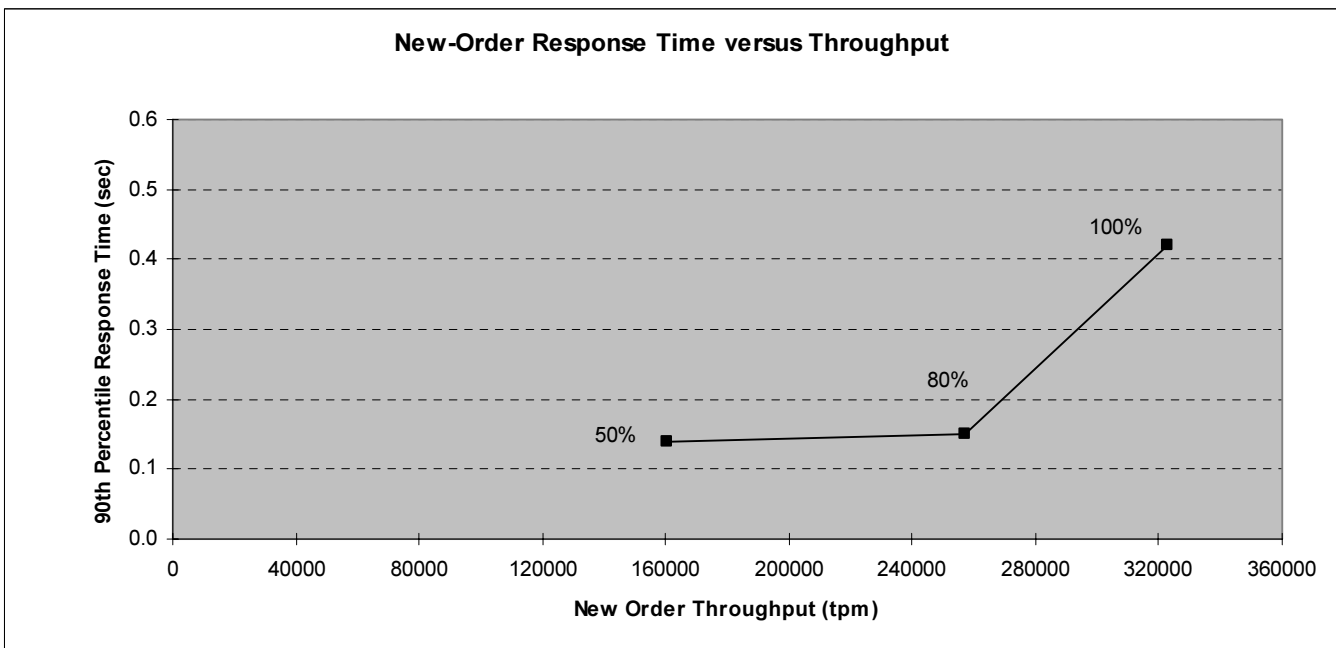
Figure 5.5: Stock Level Response Time Distribution



### 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)

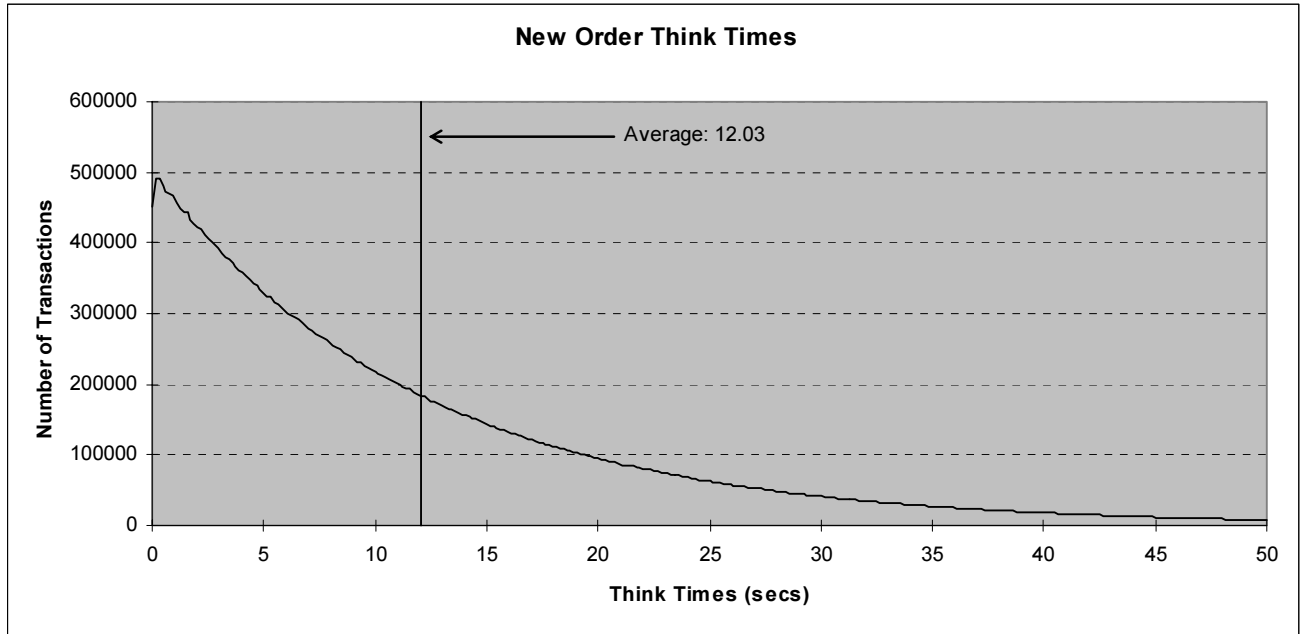
Figure 5.6: New Order Response Time versus Throughput



## 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)

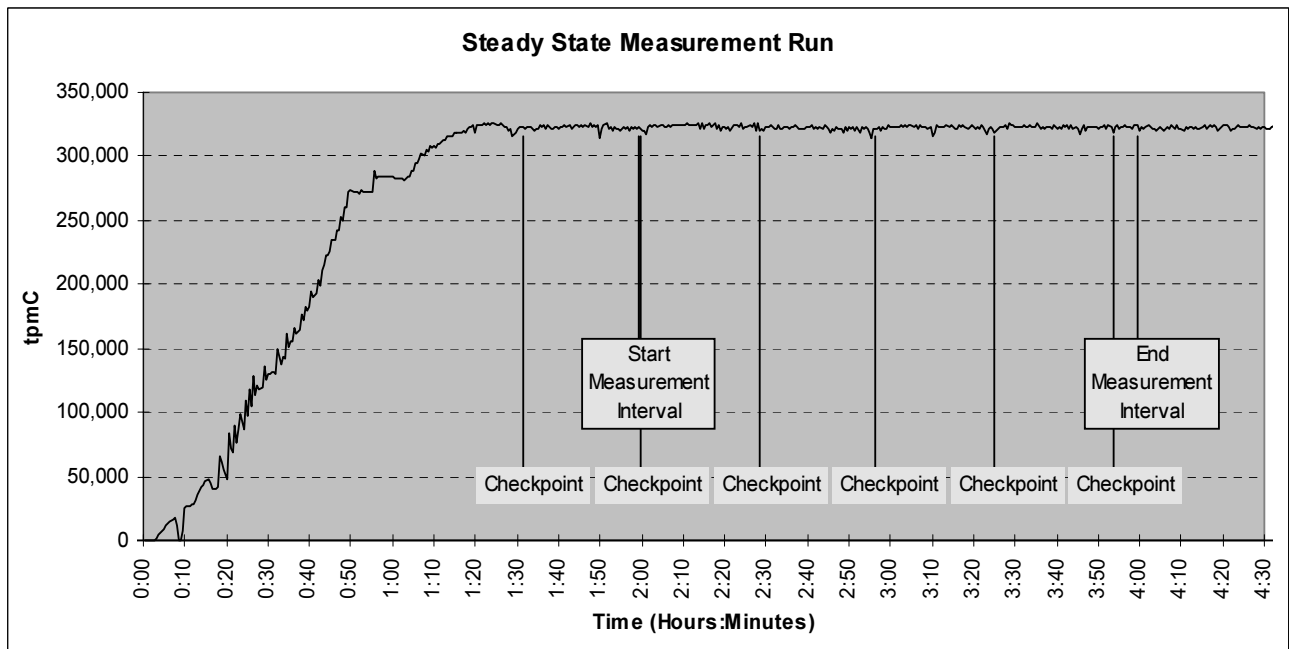
Figure 5.7: New Order Think Time Distribution



## 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**

<b>Transaction Type</b>	<b>Statistic</b>	<b>Value</b>
New Order	Rolled back transactions	1.00%
	Home warehouse	99.00%
	Remote warehouse	1.00%
	Average Items per Order	10.00
Payment	Home warehouse	85.01%
	Remote warehouse	14.99%
	Non-primary key access	60.00%
Order Status	Non-primary key access	60.01%
Delivery	Skipped transactions (Interactive)	0
	Skipped transaction counts (Deferred)	0
	Skipped District counts (Deferred)	0
Transaction Mix	New Order	44.90%
	Payment	43.02%
	Order-Status	4.02%
	Delivery	4.02%
	Stock-Level	4.02%

### 5.13. Checkpoint Statistics

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

There are four checkpoints in the measurement interval. The first checkpoint starts approximately 35 seconds into the measurement interval. The checkpoint interval is 28 minutes (from the start of one to the start of the next) and a checkpoint lasts approximately 25.6 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**

<b>Item</b>	<b>Start</b>	<b>End</b>	<b>Duration</b>
Measurement Interval	1:59:23	3:59:23	7200
1st Checkpoint	1:59:58	2:25:48	1550
2nd Checkpoint	2:28:36	2:53:36	1500
3rd Checkpoint	2:56:22	3:21:56	1534
4th Checkpoint	3:24:47	3:50:40	1553



## 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 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 two 1000 megabit-per-second Ethernet LAN adapters 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.*

*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.*

*System pricing should include subtotals for the following components: Server Hardware, Server Software, Client Hardware, Client Software, and Network Components used for terminal connection*

*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.*

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 annual support costs.

Linux SLES 9 support pricing is based on 3 years 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**

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

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

## 7.2. Availability

*The committed delivery date for general availability (availability date) of products used in the price calculation must be reported. When the priced system includes products with different availability dates, the reported availability date for the priced system must be the date at which all components are committed to be available.*

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.*

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.*

None.

## 7.5. Usage Pricing

*For any usage pricing, the sponsor must disclose:*

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

The component pricing based on usage is shown below:

- One (1) SUSE LINUX Enterprise Server 9 for Itanium processor family license, 16 processor
- One (1) Oracle Database 10g Enterprise Edition license, 16 processor
- Eight (8) Microsoft Windows 2003 Server licenses
- One (1) Unisys Storage Sentinel 10TB 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. (8.1.8.1)*

Copies of this Full Disclosure Report may be downloaded from the Transaction Processing Performance Council web site at [www.tpc.org](http://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. (8.1.8.1)*

Lorna Livingtree, 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.  
P.O. Box 984  
Klamath, CA 95548-0984

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

The attestation letter is shown on the next 2 pages.



**PERFORMANCE METRICS INC.**  
**TPC Certified Auditors**

June 23, 2005

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: SUSE Linux Enterprise Server 9 for Itanium Processors, SP1  
 Transaction Manager: Microsoft COM+ (included in Windows 2003, SP1)

Server: Unisys ES7000 Aries 420 Enterprise Server				
CPU's	Memory	Disks	90% Response	TpmC
16 Intel Itanium 2 @ 1.6 GHz	Main: 256 GB Cache: 6MB each	546 @ 18GB 28 @ 146GB 2 @ 36GB	<b>0.42 sec</b>	<b>322,805</b>
8 Clients: Unisys ES3120L Server				
2 Intel Xeon @ 3.4 GHz	Main: 2 GB Cache: 1MB	1 @ 36GB	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 28,000 warehouses, of which 25,740 were active during the Measured Interval.



**PERFORMANCE METRICS INC.**  
**TPC Certified Auditors**

---

- The ACID properties were successfully demonstrated.
- The durability data loss and log loss tests were performed on a portion of the fully scaled database with 257,400 users and 25,740 active warehouses, running at over 20% 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 257,400 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 2 and 87 respectively.
- The steady state portion of the test was 2 hours (7200 seconds).
- One checkpoint was taken before the measured interval and after steady state was reached.
- Four checkpoints were taken during the measured interval.
- The system pricing was checked for major components and maintenance.

Auditor Notes:

None

Sincerely,



Lorna Livingtree  
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, "%sdelilog%ld", szPath, lMyId);
fpLog = fopen(szLogTitle, "ab");
if (!fpLog)
{
    wsprintf(szDiag,
        "DoDelivery(%ld): LogFile %s Open Failed (%ld)\n",
        lMyId, szLogTitle, GetLastError());
    DiagIoWrite(szDiag, DIAG_ERROR);
    InterlockedDecrement(&lDeliveryActive);
    SetEvent(hDQStart);
    return(1);
};
wsprintf(szDiag, "DoDelivery(%ld): Initialized\n", lMyId);
DiagIoWrite(szDiag, DIAG_FORCE);
SetEvent(hDQStart);

while (!bDQQuit)
{
    EnterCriticalSection(&csDQRead);
    WaitForSingleObject(hDQRead, INFINITE);
    if (bDQQuit)
    {
        LeaveCriticalSection(&csDQRead);
        break;
    };
    pDQSlot = &pDQ[lDQNextRead];
    if (!pDQSlot->bInUse)
    {
        wsprintf(szDiag,
            "DoDelivery(%ld): QSlot for Read Not InUse (%ld)\n",
            lMyId);
        DiagIoWrite(szDiag, DIAG_ERROR);
        LeaveCriticalSection(&csDQRead);

```

```

        break;
    };
    pddEntry = &pDQSlot->ddEntry;
    pdd = (DELIVERY_DATA *) pTMon->pTxnData;
    memcpy(pdd, pddEntry, sizeof(DELIVERY_DATA));
    EnterCriticalSection(&csDQWrite);
    pDQSlot->bInUse = FALSE;
    lDQNextRead++;
    if (lDQNextRead == lDQSize)
    {
        lDQNextRead = 0;
        bDQReport = TRUE;
        lDQReport = lDQNextWrite;
    };
    if (lDQNextRead == lDQNextWrite)
        ResetEvent(hDQRead);
    LeaveCriticalSection(&csDQWrite);
    LeaveCriticalSection(&csDQRead);
    // Process delivery transaction
    iSize = pTMon->iSize;
    hr = pTMon->pIAllTxn->Delivery(&iSize, (unsigned char**) &pTMon-
    >pTxnData);
    if (FAILED(hr))
    {
        wsprintf(szDiag,
            "DoDelivery(%ld): COM Interface Call Failed HRESULT %x\n",
            lMyId, hr);
        DiagIoWrite(szDiag, DIAG_ERROR);
        break;
    };
    pdd = (DELIVERY_DATA *) pTMon->pTxnData;
    GetLocalTime(&pdd->EndTime);
    iElapsed = 9999999;
    if (!pdd->bTPRslt)
        CalculateElapsed(&iElapsed, &pdd->QTime, &pdd->EndTime);
    iInx = wsprintf(szDiag,

"%4.4d/%2.2d/%2.2d, %2.2d:%2.2d:%2.2d:%3.3d, %2.2d:%2.2d:%2.2d:%3.3d, "
"%d, %d, %d, %d, %d, %d, %d, %d, %d, %d, %d\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, "%s\n%s", pDMsgs[0], pDMsgs[1], pDMsgs[2]);
                else
                    fprintf(stdout, "%s\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
}; // 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
#ifdef PLTXN_H
#define PLTXN_H

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

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

#ifdef 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];

OCISmt *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;
OCISmt *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;

OCISmt *curo0;
OCISmt *curo1;
OCISmt *curo2;
OCISmt *curo3;
OCISmt *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
{
    OCISstmt *curpi;
    OCISstmt *curp0;
    OCISstmt *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
{
    OCISstmt *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 OCIEERROR(errp,function)\
    ocierror(__FILE__, __LINE__, (errp), (function));

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

// bind in/out for plsql without indicator and rcode
#define OCIBNDPL(stmp, bndp, errp, sqlvar, 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, ftype, indp, alen, arcode) \
    DISCARD ocierror(__FILE__, __LINE__, (errp), \
        OCIBindByName((stmp), &(bndp), (errp), (text
        *) (sqlvar), strlen((sqlvar)), \
        (progvl), (progvl), (ftype), (indp), (alen), (arcod), 0, 0, \
        OCI_DEFAULT));

// bind in/out for plsql arrays without indicator and rcode
#define OCIBNDPLA(stmp, bndp, errp, sqlvar, 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, ftype) \
    OCIDefineByPos((stmp), &(dfnp), (errp), (pos), (progvl), (progvl), (ftype), \
        0, 0, 0, OCI_DEFAULT);

#define OCIDEF(stmp, dfnp, errp, pos, 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, ftype, indp, alen, arcode) \
    OCIHandleAlloc((stmp), (dvoid**) &(dfnp), OCI_HTYPE_DEFINE, 0, \
        (dvoid**) 0); \
    OCIDefineByPos((stmp), &(dfnp), (errp), (pos), (progvl), \
        (progvl), (ftype), (indp), (alen), \
        (arcod), 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; // TPCC WareHouse Id
#else
    SHORT sWid;
#endif
#ifdef
    SHORT sDId; // TPCC District Id
    struct _timeb tbLastAccess; // Last activity timestamp
} TERM_STATE;

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

```

### 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

```

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

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

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

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

```

```

pTMon->iSize = iTMMMaxSz;
return(FALSE);
}; // TMinic

//=====
//
// 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 TMinic(INT iSetMaxMsg);
VOID TMonTerm(VOID);
BOOL TMinic(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 iTMMMaxMsg = 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 WINAPI DllMain(HANDLE hInst, ULONG ul_reason_for_call,
LPVOID lpReserved)
{
    TPCC_STATE * pTPCC = NULL;
    CHAR szDiag[MAX_DIAG_SZ];
    UINT iTMMMaxSz = 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);
#endif
DiagIoWrite("tpccdll - long w_id", DIAG_FORCE);
#endif

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

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

//=====
//

```

```

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

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

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

//=====
//
// Function name: ThreadDetach
//
//=====
VOID ThreadDetach(TPCC_STATE * pTPCC)
{
    EnterCriticalSection(&csDllMain);
    try
    {
        pTPCC = (TPCC_STATE *) TlsGetValue(dwTlsInx);

```

```

        if (pTPCC != NULL)
        {
            TMDone(&pTPCC->tsTMon);
            fclose(pTPCC->fp);
            free(pTPCC);
            pTPCC = NULL;
            TlsSetValue(dwTlsInx, pTPCC);
        };
    }
    finally
    {
        LeaveCriticalSection(&csDllMain);
    };
}; // ThreadDetach

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

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

    pTPCC = (TPCC_STATE *) TlsGetValue(dwTlsInx);
    if (pTPCC == NULL)
    {
        CHAR szWork[200];
        ThreadAttach(pTPCC, szWork);
        pTPCC = (TPCC_STATE *) TlsGetValue(dwTlsInx);
        if (pTPCC == NULL)
        {
            SendResponse(pECB, szTPCCError, szWork);
            goto HttpXit;
        };
    };
    if (pTPCC->tsTMon.pTxnData == NULL)
        SendResponse(pECB, szTMinicError, pTPCC->szHeader);
    TPCCclear(pTPCC);
    pTPCC->ConnID = pECB->ConnID;
    pTPCC->RecvMsg = pECB->lpszQueryString;

```

```

uRslt = TPCCHandler(pTPCC);
switch (uRslt)
{
    case TPCCSEND:
        SendResponse(pECB,pTPCC->SendMsg,pTPCC->szHeader);
        dwRslt = HSE_STATUS_SUCCESS_AND_KEEP_CONN;
        break;
    case TPCCSENDEND:
        SendResponse(pECB,pTPCC->SendMsg,pTPCC->szHeader);
        break;
    case TPCCENDNOW:
        default:
            break;
}; // switch (TPCCHandler result)

HttpXit:

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

    return(dwRslt);
}; // HttpExtensionProc

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

//=====
//

```

```

// Function name: ReadRegistry
//
// Sets global operational parameters from registry if they exist.
// Otherwise, compiled in defaults apply.
//
// Result:
// FALSE Registry entry found
// TRUE Registry entry does not exist
//
//=====
BOOL ReadRegistry(VOID)
{
    HKEY hkTPCC;
    DWORD dwMax;
    DWORD dwRT;
    INT i;
    CHAR szValue[100];
    if (RegOpenKeyEx(HKEY_LOCAL_MACHINE,"SOFTWARE\\Unisys\\TPCC",0,
        KEY_READ, &hkTPCC) != ERROR_SUCCESS )
        return(TRUE);
    dwMax = sizeof(szValue);
    if (RegQueryValueEx(hkTPCC,"EVENTLOG",0,&dwRT,(BYTE *) &szValue,&dwMax)
        == ERROR_SUCCESS)
    {
        if (abs(atoi(szValue) == 0))
            bSetEventLog = FALSE;
        else
            bSetEventLog = TRUE;
    };
    dwMax = sizeof(szValue);
    if (RegQueryValueEx(hkTPCC,"CONSOLE",0,&dwRT,(BYTE *) &szValue,&dwMax)
        == ERROR_SUCCESS )
    {
        if (abs(atoi(szValue) == 0))
            bSetConsole = FALSE;
        else
            bSetConsole = TRUE;
    };
    dwMax = sizeof(szValue);
    if (RegQueryValueEx(hkTPCC,"DIAGLEVEL",0,&dwRT,(BYTE *)
&szValue,&dwMax)
        == ERROR_SUCCESS )
    {
        i = atoi(szValue);
        if (i < DIAG_FORCE)
            i = DIAG_FORCE;
        else
            if (i > DIAG_INFO)
                i = DIAG_INFO;
            uSetDiagLevel = i;
    };
    dwMax = sizeof(szValue);
    if (RegQueryValueEx(hkTPCC,"MAXTERMS",0,&dwRT,(BYTE *) &szValue,&dwMax)
        == ERROR_SUCCESS )
    {
        iMaxTerms = abs(atoi(szValue));
    };
    dwMax = sizeof(szValue);
    if (RegQueryValueEx(hkTPCC,"DELIVERYTHREADS",0,&dwRT,(BYTE *)
&szValue,&dwMax)
        == ERROR_SUCCESS )

```

```

{
    lSetDThreads = abs(atoi(szValue));
};
dwMax = sizeof(szValue);
if (RegQueryValueEx(hkTPCC, "DQSIZE", 0, &dwRT, (BYTE *) &szValue, &dwMax)
    == ERROR_SUCCESS )
{
    lSetDQSize = abs(atoi(szValue));
};
dwMax = sizeof(szValue);
if (RegQueryValueEx(hkTPCC, "DQPATH", 0, &dwRT, (BYTE *) &szValue, &dwMax)
    == ERROR_SUCCESS )
{
    strcpy(szSetPath, szValue);
};
RegCloseKey(hkTPCC);
return(FALSE);
}; // ReadRegistry

```

## 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

// *****

```

```

// TPCC Service return codes
// *****
#define SVC_BADITEMID 1
#define SVC_NOERROR 0
#define SVCERR_DEADLOCK -1
#define SVCERR_NOCUSTOMER -2
#define SVCERR_NOORDERS -3
#define SVCERR_DBLIB -4
#define SVCERR_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
    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      0

// pTPCC->iFormId - TPCC forms enumeration.
#define FORM_NULL      0
#define FORM_LOGON     1
#define FORM_MENU      2
#define FORM_NEWORDER  3
#define FORM_PAYMENT   4

```

```

#define FORM_DELIVERY      5
#define FORM_ORDERSTATUS  6
#define FORM_STOCKLEVEL   7
#define FORM_EXIT          8
#define FORM_MAX           9

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

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

static CHAR * szFormLogin =
HTTPHdr "<HTML>"
"<HEAD><TITLE>Welcome To TPC-C</TITLE></HEAD><BODY>"
"Please Identify your Warehouse and District for this session.<BR>"
"<FORM ACTION=\\"tpcc.dll\\" METHOD=\\"GET\\">"
"<INPUT TYPE=\\"hidden\\" NAME=\\"STATUSID\\" VALUE=\\"0\\">"
"<INPUT TYPE=\\"hidden\\" NAME=\\"FORMID\\" VALUE=\\"1\\">"
"<INPUT TYPE=\\"hidden\\" NAME=\\"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 * TERMINIDTOKEN = "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);
VOID CheckNumeric(CHAR * pNum);
VOID WriteEventLog(char * pMsg, bool bError);

//=====
//
// Function name: TPCCclear
//
//=====
BOOL TPCCclear(TPCC_STATE * pTPCC)
{
    pTPCC->ConnID = 0;
    pTPCC->sWid = 0;
    pTPCC->sDid = 0;
    pTPCC->iSyncId = 0;
    pTPCC->iTermId = -2;
    pTPCC->uFormId = FORM_NULL;
    pTPCC->iStatusId = 0;

```

```

strcpy(pTPCC->ErrTxt, "");
return(FALSE);
}; // TPCClear

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

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

```

```

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

uRslt = TPCCSEND;

HdlrXit:

return(uRslt);
}; // TPCCHandler

//=====
//
// Function name: ProcessLogin

```



```

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

#ifdef LONG_WID
    if (GetLongKey(&sWId,pIn,"w_id",pTPCC))
#else
    if (GetShortKey(&sWId,pIn,"w_id",pTPCC))
#endif
    {
        FormatLogin(pOut,pTPCC->ErrTxt);
        return(TRUE);
    };
    if (sWId < 1)
    {
        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->pIAAllTxn->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 = &TPCC->tsTMon;
ppd = (PAYMENT_DATA *) pTMon->pTxnData;
ZeroMemory(ppd, sizeof(PAYMENT_DATA));
ppd->w_id = pTPCC->sWid;
// Get and validate DID
if (GetShortKey(&ppd->d_id, pIn, "DID*", pTPCC))
{
    FormatMenu(pOut, pTPCC);
    return(TRUE);
};
if (ppd->d_id < MIN_DID || ppd->d_id > MAX_DID)
{
    wsprintf(pTPCC->ErrTxt, "DID Out of Range(%ld,%ld) - %ld",
        MIN_DID, MAX_DID, ppd->d_id);
    pTPCC->iStatusId = ERR_DID_INVALID;
    FormatMenu(pOut, pTPCC);
    return(TRUE);
};
// Get and validate customer Id and name
if (GetLongKey(&ppd->c_id, pIn, "CID*", pTPCC))
{
    FormatMenu(pOut, pTPCC);
    return(TRUE);
};
if (GetStringKey(ppd->c_last, pIn, "CLT*", pTPCC, NAME_LEN))
{
    FormatMenu(pOut, pTPCC);
    return(TRUE);
};
if (ppd->c_id == 0 && ppd->c_last[0] == 0)
{
    strcpy(pTPCC->ErrTxt, "Error - Customer Id and Name Empty");
    pTPCC->iStatusId = ERR_IDANDNAME_EMPTY;
    FormatMenu(pOut, pTPCC);
    return(TRUE);
};
if (ppd->c_id != 0 && ppd->c_last[0] != 0)
{
    strcpy(pTPCC->ErrTxt,
        "Error - Specify Customer Id or Name, not Both");
    pTPCC->iStatusId = ERR_IDANDNAME_ENTERED;
    FormatMenu(pOut, pTPCC);
    return(TRUE);
};
// Get and validate customer DID
if (GetShortKey(&ppd->c_d_id, pIn, "CDI*", pTPCC))
{
    FormatMenu(pOut, pTPCC);
    return(TRUE);
};
if (ppd->c_d_id < MIN_DID || ppd->c_d_id > MAX_DID)

```

```

    wsprintf(pTPCC->ErrTxt, "Cust DID Out of Range(%ld,%ld) - %ld",
        MIN_DID, MAX_DID, ppd->d_id);
    pTPCC->iStatusId = ERR_DID_INVALID;
    FormatMenu(pOut, pTPCC);
    return(TRUE);
};
// Get and validate customer WID
#ifdef LONG_WID
if (GetLongKey(&ppd->c_w_id, pIn, "CWI*", pTPCC))
#else
if (GetShortKey(&ppd->c_w_id, pIn, "CWI*", pTPCC))
#endif
{
    FormatMenu(pOut, pTPCC);
    return(TRUE);
};
if (ppd->c_w_id < 1)
{
    wsprintf(pTPCC->ErrTxt,
        "Payment Contains Invalid Customer WID %ld",
        ppd->c_w_id);
    pTPCC->iStatusId = ERR_WID_INVALID;
    FormatMenu(pOut, pTPCC);
    return(TRUE);
};
// Get and validate amount
if (GetAmountKey(&ppd->h_amount, pIn, "HAM*", pTPCC))
{
    FormatMenu(pOut, pTPCC);
    return(TRUE);
};
if (ppd->h_amount <= 0)
{
    wsprintf(pTPCC->ErrTxt,
        "Payment Amount Negative or Missing");
    pTPCC->iStatusId = ERR_AMOUNT_INVALID;
    FormatMenu(pOut, pTPCC);
    return(TRUE);
};
iSize = pTMon->iSize;
do
{
    hr = pTMon->pIAllTxn->Payment(&iSize, (unsigned char*)&pTMon-
    >pTxnData);
    if (retCnt > 0) Sleep(1000);
    }while ((FAILED(hr)) && (retCnt++ < INIT_RETRY));

if (FAILED(hr))
{
    pTPCC->iStatusId = ERR_TM_INTERFACE;
    wsprintf(pTPCC->ErrTxt,
        "COM Interface to Payment Call Failed, HRESULT %x",
        hr);
    FormatMenu(pOut, pTPCC);
    return(TRUE);
};
ppd = (PAYMENT_DATA *) pTMon->pTxnData;
if (ppd->bTPRslt)
{
    wsprintf(pTPCC->ErrTxt,
        "Payment Service Returned Error(%ld): %s",

```

```

        ppd->iTPRslt,ppd->execution_status);
pTPCC->iStatusId = ERR_SERVICE_RSLT;
FormatMenu(pOut,pTPCC);
return(TRUE);
};
iInx = FormatRespHdr(pOut,"TPC-C Payment",pTPCC);
FormatString(szZip1,ZIPPIC,ppd->w_zip);
FormatString(szZip2,ZIPPIC,ppd->d_zip);
FormatString(szZip3,ZIPPIC,ppd->c_zip);
FormatString(szWork1,"XXXXXX-XXX-XXX-XXXX",ppd->c_phone);
iInx += 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 += sprintf(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);
    };
    sprintf(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)
    {
        sprintf(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;
        sprintf(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)
    {
        sprintf(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);
    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: %2.2d<BR><BR>"
        "low stock: %3.3ld</PRE><BR><HR>"
        "%s</FORM>%s",
        pTPCC->sWId, pTPCC->sDId, psld->thresh_hold, psld->low_stock,
        szMenuList, HTMLTrailer);

    return(FALSE);
}; // ProcessStockLevel

```

```

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

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

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

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

    bRslt = FALSE;

xit:

    return(bRslt);
}; // GetHidden

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

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

    // Convert command name into command index
    for(u=0; u < CMD_MAX; u++)

```

```

{
    if (!strcmp(szCmds[u],pWork))
        return(u);
};

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

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

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

```



```

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

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

//=====
//
// Function name: GetAmountKey
//

```

```

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

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

```

```

}; // 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
        #endif
    );
}; // FormatMenu

```

```

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

//=====
//
// Function name: FormatPayment
//
//=====
VOID FormatPayment (CHAR * pOut,TPCC_STATE * pTPCC)
{
    INT iInx;
    pTPCC->uFormId = FORM_PAYMENT;
    iInx = FormatFormHdr (pOut, "TPC-C Payment", pTPCC);
    iInx += sprintf (pOut + iInx,
        "<PRE>
        "Date:<BR><BR>"
        "Payment<BR><BR>"
        );
    #ifdef LONG_WID
        "Warehouse: %6.6d",
    #else
        "Warehouse: %4.4d",
    #endif
    pTPCC->sWId);
    strcpy (pOut + iInx,
        "
        District: <INPUT NAME=\ "DID*\ "
        SIZE=1><BR><BR><BR><BR><BR><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><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><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=\"SYNCRID\" VALUE=\"%d\">",
        HTTPHdr, pTitle, pTPCC->uFormId, pTPCC->iTermId, pTPCC->iSyncId)
    );
}; // FormatFormHdr

//=====
//
// Function name: FormatRespHdr

```

```

//
//=====
INT FormatRespHdr (CHAR * pOut,CHAR * pTitle,TPCC_STATE * pTPCC)
{
    return (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=\"SYNCRID\" VALUE=\"%d\">",
        HTTPHdr, pTitle, pTPCC->iStatusId, pTPCC->uFormId,
        pTPCC->iTermId, pTPCC->iSyncId)
    );
}; // FormatRespHdr

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

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

//=====
//
// Function name: CheckNumeric
//

```

```

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

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

    char *pProgId = "Testing";

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

```

## tpcchandler.h

```

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

```

```

#define MAX_MSG_SZ 5000

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

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

```

## tpccproxy.def

```

LIBRARY "tpcc_com_ps"

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*/

#ifdef __tpccproxy_h__
#define __tpccproxy_h__

#ifdef __cplusplus
extern "C"{
#endif

/* Forward Declarations */

#ifdef __ITPCC_FWD_DEFINED__
#define __ITPCC_FWD_DEFINED__
typedef interface ITPCC ITPCC;
#endif /* __ITPCC_FWD_DEFINED__ */

/* header files for imported files */
#include "ocaidl.h"
#include "ocid1.h"

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

#ifdef __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("FEEB6AA2-84B1-11d2-BA47-00C04FBFE08B")
ITPCC : public IUnknown
{
public:
    virtual HRESULT __stdcall NewOrder(
        /* [out][in] */ int __RPC_FAR *iSize,
        /* [size_is][size_is][out][in] */ unsigned char __RPC_FAR
        * __RPC_FAR *pTData) = 0;

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

```

```

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

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

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

    virtual HRESULT __stdcall 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 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 STDMETHODCALLTYPE 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 STDMETHODCALLTYPE 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 STDMETHODCALLTYPE 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 STDMETHODCALLTYPE 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 STDMETHODCALLTYPE 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 "oidl.idl";
import "ocidl.idl";

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

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

```

```

    );

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

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

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

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

```

## tpccsvr.cpp

```

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

#define STRICT
#define _WIN32_WINNT 0x0400
#define _ATL_APARTMENT_THREADED

#include <stdio.h>
#include <atlbase.h>
//You may derive a class from CComModule and use it if you want to
override
//something, but do not change the name of _Module
extern CComModule _Module;

#include <atlcsm.h>
#include <initguid.h>
#include <transact.h>
#include <atlimpl.cpp>
#include <comsvcs.h>

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

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

```



```

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

CComModule _Module;

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

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

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

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

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

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

```

```

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

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

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

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

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

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

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

```

```

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

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

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

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

bool CTPCC_Common::CheckDBError(char * pSource)
{
    RETCODE rc;
    SDWORD lNativeError;

```

```

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

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

    try
    {
        if (SQLAllocHandle(SQL_HANDLE_DBC, henv, &m_hdbc) != SQL_SUCCESS)
        {
            wsprintf(szDiag, "Construct(%ld): Allocate DBC Handle
failed\n", m_lRefId);
            CheckDBError(szDiag);
            return (E_FAIL);
        };
        if (SQLSetConnectOption(m_hdbc, SQL_PACKET_SIZE, 4096) != SQL_SUCCESS)
        {
            wsprintf(szDiag,
            "Construct(%ld): Set Connection Packet Size failed\n",
            m_lRefId);
            CheckDBError(szDiag);
            return (E_FAIL);
        };
        wsprintf(szConnectStr,
        "DRIVER=SQL Server;SERVER=%s;UID=%s;PWD=%s;DATABASE=%s;WSID=%s-
%ld",
        szServer, szUser, szPassword, szDatabase, szMyHost, m_lRefId);
        rc = SQLDriverConnect(m_hdbc, NULL, (SQLCHAR *) szConnectStr,

```

```

        sizeof(szConnectStr), (SQLCHAR * ) szOutStr, sizeof(szOutStr),
        &iOutStrLen, SQL_DRIVER_NOPROMPT);
    if (rc != SQL_SUCCESS && rc != SQL_SUCCESS_WITH_INFO)
    {
        wsprintf(szDiag, "Construct(%ld): Connect failed\n", m_lRefId);
        CheckDBError(szDiag);
        return(E_FAIL);
    };
    if (SQLAllocHandle(SQL_HANDLE_STMT, m_hdbc, &m_hstmt) != SQL_SUCCESS)
    {
        wsprintf(szDiag, "Construct(%ld): Allocate STMT Handle
failed\n", m_lRefId);
        CheckDBError(szDiag);
        return(E_FAIL);
    };

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

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

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

//=====
// FUNCTION: UtilStrCpy
//
// Copies n characters from string pSrc to pDst and places a null
// null character at the end of the destination string. Unlike
// strncpy this function ensures that the result string is always
// null terminated.
//
//=====

```

```

inline static void UtilStrCpy(char * pDest, const unsigned char * pSrc,
int n)
{
    strncpy(pDest, (char *)pSrc, n);
    pDest[n] = '\0';
    return;
}; // UtilStrCpy

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

    m_hstmt = m_hstmtNewOrder;

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

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

```

```

        wprintf(szDiag, "InitNOParams(%ld): Bind Param failed\n", m_lRefId);
        CheckDBError(szDiag);
        return(TRUE);
    };

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

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

    i = 0;
    if (SQLBindCol(m_hstmt, ++i, SQL_C_CHAR, &m_TData.NOData.OL[0].ol_i_name,
        sizeof(m_TData.NOData.OL[0].ol_i_name), NULL) != SQL_SUCCESS
        ||
        SQLBindCol(m_hstmt, ++i, SQL_C_SSHORT, &m_TData.NOData.OL[0].ol_stock,
            0, NULL) != SQL_SUCCESS
        ||
        SQLBindCol(m_hstmt, ++i, SQL_C_CHAR, &m_TData.NOData.OL[0].ol_brand_generic,
            sizeof(m_TData.NOData.OL[0].ol_brand_generic), NULL) !=
        SQL_SUCCESS
        ||
        SQLBindCol(m_hstmt, ++i, SQL_C_DOUBLE, &m_TData.NOData.OL[0].ol_i_price,
            0, NULL) != SQL_SUCCESS
        ||
        SQLBindCol(m_hstmt, ++i, SQL_C_DOUBLE, &m_TData.NOData.OL[0].ol_amount,
            0, NULL) != SQL_SUCCESS
    )
    {

```

```

        wprintf(szDiag, "InitNOParams(%ld): Bind Col OL
failed\n", m_lRefId);
        CheckDBError(szDiag);
        return(TRUE);
    };

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

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

HRESULT CTPCC_Common::NewOrder(int * iSize, UCHAR ** pTData)
{
    NEW_ORDER_DATA * pnod;
    RETCODE rc;
    bool bRetry;

    // 0 1 2
    // 012345678901234567890123456789
    wchar_t szSqlTemplate[] = L"{call tpcc_neworder(?,?,?,?,?,
L"?,?,?,?,?,?,,?,?,,?,?,,",
L"?,?,?,?,?,?,,?,?,,?,?,,",
L"?,?,?,?,?,?,,?,?,,?,?,,",
L"?,?,?,?,?,?,,?,?,,?,?,,}";

    int i;

    pnod = (NEW_ORDER_DATA *) *pTData;
    try
    {
        m_hstmt = m_hstmtNewOrder;
        m_bTPRslt = TRUE;

```

```

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

```

```

};
break;
};
// move to the next resultset
if (SQLMoreResults(m_hstmt) == SQL_ERROR)
{
    char szDiag[100];
    wsprintf(szDiag,"NewOrder(%ld): MoreResults
Ol%d\n",m_lRefId,(i + 1));
    if (CheckDBError(szDiag))
        m_iTPRslt = SVCERR_ODBC;
    else
        bRetry = TRUE;
    break;
};
};
m_TData.NOData.total_amount += m_TData.NOData.Ol[i].ol_amount;
}; // for o_ol_cnt
if (m_iTPRslt == SVCERR_ODBC)
    break;
if (bRetry)
    continue;
// associate the column bindings for the second result set
if (SQLSetStmtAttrW(m_hstmt,SQL_ATTR_APP_ROW_DESC,
    m_descNewOrderCols2,SQL_IS_POINTER) != SQL_SUCCESS)
{
    char szDiag[100];
    wsprintf(szDiag,"NewOrder(%ld): SetStmtAttr
NOCols2\n",m_lRefId);
    if (CheckDBError(szDiag))
    {
        m_iTPRslt = SVCERR_ODBC;
        break;
    };
    continue;
};
if (SQLFetch(m_hstmt) == SQL_ERROR)
{
    char szDiag[100];
    wsprintf(szDiag,"NewOrder(%ld): Fetch\n",m_lRefId);
    if (CheckDBError(szDiag))
    {
        m_iTPRslt = SVCERR_ODBC;
        break;
    };
    continue;
};
SQLFreeStmt(m_hstmt,SQL_CLOSE);
if (m_no_commit_flag == 1)
{
    m_TData.NOData.total_amount *=
        ((1 + m_TData.NOData.w_tax + m_TData.NOData.d_tax) *
        (1 - m_TData.NOData.c_discount));
    m_bTPRslt = FALSE;
    m_iTPRslt = SVC_NOERROR;
}
else
    m_iTPRslt = SVC_BADITEMID;
break;
}; // for m_iMaxRetry
memcpy(pnod,&m_TData.NOData, sizeof(NEW_ORDER_DATA));
pnod->bTPRslt = m_bTPRslt;
pnod->iTPRslt = m_iTPRslt;
}

```

```

if (!m_bTPRslt)
{
    strcpy(pnod->execution_status, "Transaction committed.");
    return(S_OK);
};
if (m_iTPRslt == SVC_BADITEMID)
{
    strcpy(pnod->execution_status, "Item number is not valid.");
    return(S_OK);
};
if (m_iTPRslt == SVCERR_DEADLOCK)
    sprintf(pnod->execution_status, "Hit retry
max(%d).", m_iMaxRetry);
else
    strcpy(pnod->execution_status, "DBTranAbort, Check Input Data");
return(S_OK);
}

catch (...)
{
    char szDiag[300];
    sprintf(szDiag, "NewOrder(%ld): Unhandled exception\n", m_lRefId);
    WriteEventLog(szDiag, TRUE);
    m_bCanBePooled = FALSE;
    pnod->bTPRslt = TRUE;
    pnod->iTPRslt = SVCERR_EXCEPTION;
    strcpy(pnod->execution_status, "Error, Unhandled exception");
    return(S_OK);
};
}; // NewOrder

bool CTGCC_Common::InitPYParams(void)
{
    int i;
    char szDiag[300];
    if (SQLAllocHandle(SQL_HANDLE_STMT, m_hdbc, &m_hstmtPayment) !=
SQL_SUCCESS)
    {
        sprintf(szDiag, "InitPYParams(%ld): Allocate Stmt Handle
failed\n", m_lRefId);
        CheckDBError(szDiag);
        return(TRUE);
    };
    m_hstmt = m_hstmtPayment;
    i = 0;
#ifdef LONG_WID
    if
(SQLBindParameter(m_hstmt, ++i, SQL_PARAM_INPUT, SQL_C_SLONG, SQL_INTEGER,
0, 0, &m_TData.PYData.w_id, 0, NULL) != SQL_SUCCESS
||
SQLBindParameter(m_hstmt, ++i, SQL_PARAM_INPUT, SQL_C_SLONG, SQL_INTEGER,
#else
    if
(SQLBindParameter(m_hstmt, ++i, SQL_PARAM_INPUT, SQL_C_SSHORT, SQL_SMALLINT,
0, 0, &m_TData.PYData.w_id, 0, NULL) != SQL_SUCCESS
||
SQLBindParameter(m_hstmt, ++i, SQL_PARAM_INPUT, SQL_C_SSHORT, SQL_SMALLINT,
#endif
0, 0, &m_TData.PYData.c_w_id, 0, NULL) != SQL_SUCCESS
||
SQLBindParameter(m_hstmt, ++i, SQL_PARAM_INPUT, SQL_C_DOUBLE, SQL_NUMERIC,
6, 2, &m_TData.PYData.h_amount, 0, NULL) != SQL_SUCCESS

```

```

||
SQLBindParameter(m_hstmt, ++i, SQL_PARAM_INPUT, SQL_C_UTINYINT, SQL_TINYINT,
0, 0, &m_TData.PYData.d_id, 0, NULL) != SQL_SUCCESS
||
SQLBindParameter(m_hstmt, ++i, SQL_PARAM_INPUT, SQL_C_UTINYINT, SQL_TINYINT,
0, 0, &m_TData.PYData.c_d_id, 0, NULL) != SQL_SUCCESS
||
SQLBindParameter(m_hstmt, ++i, SQL_PARAM_INPUT, SQL_C_SLONG, SQL_INTEGER,
0, 0, &m_TData.PYData.c_id, 0, NULL) != SQL_SUCCESS
||
SQLBindParameter(m_hstmt, ++i, SQL_PARAM_INPUT, SQL_C_CHAR, SQL_CHAR,
sizeof(m_TData.PYData.c_last), 0, &m_TData.PYData.c_last,
sizeof(m_TData.PYData.c_last), NULL) != SQL_SUCCESS
}
{
    sprintf(szDiag, "InitPYParams(%ld): Bind Param
failed\n", m_lRefId);
    CheckDBError(szDiag);
    return(TRUE);
};
i = 0;
if (SQLBindCol(m_hstmt, ++i, SQL_C_SLONG, &m_TData.PYData.
c_id, 0, NULL) != SQL_SUCCESS
||
SQLBindCol(m_hstmt, ++i, SQL_C_CHAR, &m_TData.PYData.c_last,
sizeof(m_TData.PYData.c_last), NULL) != SQL_SUCCESS
||
SQLBindCol(m_hstmt, ++i, SQL_C_TYPE_TIMESTAMP, &m_TData.PYData.h_date,
0, NULL) != SQL_SUCCESS
||
SQLBindCol(m_hstmt, ++i, SQL_C_CHAR, &m_TData.PYData.w_street_1,
sizeof(m_TData.PYData.w_street_1), NULL) != SQL_SUCCESS
||
SQLBindCol(m_hstmt, ++i, SQL_C_CHAR, &m_TData.PYData.w_street_2,
sizeof(m_TData.PYData.w_street_2), NULL) != SQL_SUCCESS
||
SQLBindCol(m_hstmt, ++i, SQL_C_CHAR, &m_TData.PYData.w_city,
sizeof(m_TData.PYData.w_city), NULL) != SQL_SUCCESS
||
SQLBindCol(m_hstmt, ++i, SQL_C_CHAR, &m_TData.PYData.w_state,
sizeof(m_TData.PYData.w_state), NULL) != SQL_SUCCESS
||
SQLBindCol(m_hstmt, ++i, SQL_C_CHAR, &m_TData.PYData.w_zip,
sizeof(m_TData.PYData.w_zip), NULL) != SQL_SUCCESS
||
SQLBindCol(m_hstmt, ++i, SQL_C_CHAR, &m_TData.PYData.d_street_1,
sizeof(m_TData.PYData.d_street_1), NULL) != SQL_SUCCESS
||
SQLBindCol(m_hstmt, ++i, SQL_C_CHAR, &m_TData.PYData.d_street_2,
sizeof(m_TData.PYData.d_street_2), NULL) != SQL_SUCCESS
||
SQLBindCol(m_hstmt, ++i, SQL_C_CHAR, &m_TData.PYData.d_city,
sizeof(m_TData.PYData.d_city), NULL) != SQL_SUCCESS
||
SQLBindCol(m_hstmt, ++i, SQL_C_CHAR, &m_TData.PYData.d_state,
sizeof(m_TData.PYData.d_state), NULL) != SQL_SUCCESS
||
SQLBindCol(m_hstmt, ++i, SQL_C_CHAR, &m_TData.PYData.d_zip,
sizeof(m_TData.PYData.d_zip), NULL) != SQL_SUCCESS
||
SQLBindCol(m_hstmt, ++i, SQL_C_CHAR, &m_TData.PYData.c_first,
sizeof(m_TData.PYData.c_first), NULL) != SQL_SUCCESS
||
SQLBindCol(m_hstmt, ++i, SQL_C_CHAR, &m_TData.PYData.c_middle,
sizeof(m_TData.PYData.c_middle), NULL) != SQL_SUCCESS
||
SQLBindCol(m_hstmt, ++i, SQL_C_CHAR, &m_TData.PYData.c_street_1,
sizeof(m_TData.PYData.c_street_1), NULL) != SQL_SUCCESS
||
SQLBindCol(m_hstmt, ++i, SQL_C_CHAR, &m_TData.PYData.c_street_2,
sizeof(m_TData.PYData.c_street_2), NULL) != SQL_SUCCESS
||
SQLBindCol(m_hstmt, ++i, SQL_C_CHAR, &m_TData.PYData.c_city,
sizeof(m_TData.PYData.c_city), NULL) != SQL_SUCCESS
||
SQLBindCol(m_hstmt, ++i, SQL_C_CHAR, &m_TData.PYData.c_state,
sizeof(m_TData.PYData.c_state), NULL) != SQL_SUCCESS
||
SQLBindCol(m_hstmt, ++i, SQL_C_CHAR, &m_TData.PYData.c_zip,
sizeof(m_TData.PYData.c_zip), NULL) != SQL_SUCCESS

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

HRESULT CTPCC_Common::Payment(int * iSize,UCHAR ** pTData)
{
    PAYMENT_DATA * ppd;
    RETCODE rc;
    ppd = (PAYMENT_DATA *) *pTData;
    try
    {
        m_hstmt = m_hstmtPayment;
        m_bTPRslt = TRUE;
        m_iTPRslt = SVCERR_DEADLOCK;
        if (ppd->c_id != 0)
            ppd->c_last[0] = 0;
        memcpy(&m_TData.PYData,ppd,sizeof(PAYMENT_DATA));
        for (m_iTryCount = 1; m_iTryCount <= m_iMaxRetry; m_iTryCount++)
        {
            rc = SQLExecDirectW(m_hstmt,(SQLWCHAR *)L"call
tpcc_payment(?,?,?,?,,?)",SQL_NTS);
            if (rc != SQL_SUCCESS && rc != SQL_SUCCESS_WITH_INFO)
            {
                char szDiag[100];
                wsprintf(szDiag,"Payment(%ld): Execute Direct\n",m_lRefId);
                if (CheckDBError(szDiag))
                {
                    m_iTPRslt = SVCERR_ODBC;
                    break;
                };
                continue;
            };
            if (SQLFetch(m_hstmt) == SQL_ERROR)
            {
                char szDiag[100];
                wsprintf(szDiag,"Payment(%ld): Fetch\n",m_lRefId);
                if (CheckDBError(szDiag))
                {
                    m_iTPRslt = SVCERR_ODBC;
                    break;
                };
            };
        };
    };
};

```

```

        continue;
    };
SQLFreeStmt(m_hstmt,SQL_CLOSE);
if (m_TData.PYData.c_id == 0)
    m_iTPRslt = SVCERR_NOCUSTOMER;
else
    {
        m_bTPRslt = FALSE;
        m_iTPRslt = SVC_NOERROR;
    }
break;
}; // for m_iMaxRetry
memcpy(ppd,&m_TData.PYData,sizeof(PAYMENT_DATA));
ppd->bTPRslt = m_bTPRslt;
ppd->iTPRslt = m_iTPRslt;
if (!m_bTPRslt)
    {
        strcpy(ppd->execution_status,"Transaction committed.");
        return(S_OK);
    };
if (m_iTPRslt == SVCERR_NOCUSTOMER)
    {
        strcpy(ppd->execution_status,"Invalid Customer id,name.");
        return(S_OK);
    };
if (m_iTPRslt == SVCERR_DEADLOCK)
    wsprintf(ppd->execution_status,"Hit retry max(%d).",m_iMaxRetry);
else
    strcpy(ppd->execution_status,"DBTranAbort, Check Input Data");
return(S_OK);
}

catch (...)
{
    char szDiag[300];
    wsprintf(szDiag,"Payment(%ld): Unhandled exception\n",m_lRefId);
    WriteEventLog(szDiag,TRUE);
    m_bCanBePooled = FALSE;
    ppd->bTPRslt = TRUE;
    ppd->iTPRslt = SVCERR_EXCEPTION;
    strcpy(ppd->execution_status,"Error, Unhandled exception");
    return(S_OK);
}; // Payment

bool CTPCC_Common::InitDLParams(void)
{
    int i;
    char szDiag[300];
    if (SQLAllocHandle(SQL_HANDLE_STMT,m_hdbc,&m_hstmtDelivery) !=
SQL_SUCCESS)
    {
        wsprintf(szDiag,"InitDLParams(%ld): Allocate Stmt Handle
failed\n",m_lRefId);
        CheckDBError(szDiag);
        return(TRUE);
    };
    m_hstmt = m_hstmtDelivery;
    i = 0;
#ifdef LONG_WID
    if
(SQLBindParameter(m_hstmt,++i,SQL_PARAM_INPUT,SQL_C_SLONG,SQL_INTEGER,

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

HRESULT CTPCC_Common::Delivery(int * iSize, UCHAR ** pTData)
{
    DELIVERY_DATA * pdd;
    RETCODE rc;
    pdd = (DELIVERY_DATA *) *pTData;
    try
    {
        m_hstmt = m_hstmtDelivery;
        m_bTPRslt = TRUE;
        m_iTPRslt = SVCERR_DEADLOCK;
        memcpy(&m_TData.DLData, pdd, sizeof(DELIVERY_DATA));
        for (m_iTryCount = 1; m_iTryCount <= m_iMaxRetry; m_iTryCount++)
        {
            rc = SQLExecDirectW(m_hstmt, (SQLWCHAR *)L"call
tpcc_delivery(?,?)", SQL_NTS);
            if (rc != SQL_SUCCESS && rc != SQL_SUCCESS_WITH_INFO)
            {
                char szDiag[100];
                wsprintf(szDiag, "Delivery(%ld): Execute Direct\n", m_lRefId);
                if (CheckDBError(szDiag))
                {
                    m_iTPRslt = SVCERR_ODBC;
                    break;
                };
                continue;
            };
            if (SQLFetch(m_hstmt) == SQL_ERROR )
            {
                char szDiag[100];
                wsprintf(szDiag, "Delivery(%ld): Fetch\n", m_lRefId);
                if (CheckDBError(szDiag))

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```

        {
            m_iTPRslt = SVCERR_ODBC;
            break;
        };
        continue;
    };
    SQLFreeStmt(m_hstmt, SQL_CLOSE);
    m_bTPRslt = FALSE;
    m_iTPRslt = SVC_NOERROR;
    break;
}; // for m_iMaxRetry
memcpy(pdd, &m_TData.DLData, sizeof(DELIVERY_DATA));
pdd->bTPRslt = m_bTPRslt;
pdd->iTPRslt = m_iTPRslt;
return(S_OK);
}

catch (...)
{
    char szDiag[300];
    wsprintf(szDiag, "Delivery(%ld): Unhandled exception\n", m_lRefId);
    WriteEventLog(szDiag, TRUE);
    m_bCanBePooled = FALSE;
    pdd->bTPRslt = TRUE;
    pdd->iTPRslt = SVCERR_EXCEPTION;
    return(S_OK);
};

}; // Delivery

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

    m_hstmt = m_hstmtOrderStatus;

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

    i = 0;
#ifdef LONG_WID
    if
    (SQLBindParameter(m_hstmt, ++i, SQL_PARAM_INPUT, SQL_C_SLONG, SQL_INTEGER,

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

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

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

```

```

  };

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

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

  return(FALSE);
}; // InitOSParams

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

  posd = (ORDER_STATUS_DATA *) *pTData;
  try
  {
    m_hstmt = m_hstmtOrderStatus;
    m_bTPRslt = TRUE;
    m_iTPRslt = SVCERR_DEADLOCK;
    if (SQLSetStmtAttrW(m_hstmt, SQL_ATTR_APP_ROW_DESC,
      m_descOrderStatusCols1, SQL_IS_POINTER) != SQL_SUCCESS)
    {
      char szDiag[100];
      wsprintf(szDiag, "OrderStatus(%ld): SetStmtAttr
OSCols1\n", m_lRefId);
      CheckDBError(szDiag);
      posd->bTPRslt = TRUE;
      posd->iTPRslt = SVCERR_ODBC;
      strcpy(posd->execution_status, "Error, SetStmt OSCols1");
      return(S_OK);
    };
  };

```

```

if (posd->c_id != 0)
    posd->c_last[0] = 0;
memcpy(&m_TData.OSData,posd,sizeof(ORDER_STATUS_DATA));
for (m_iTryCount = 1; m_iTryCount <= m_iMaxRetry; m_iTryCount++)
{
    // configure block cursor
    if
    (SQLSetStmtAttrW(m_hstmt,SQL_ATTR_ROW_ARRAY_SIZE,(SQLPOINTER)1,0) !=
SQL_SUCCESS)
    {
        char szDiag[100];
        wsprintf(szDiag,"OrderStatus(%ld): SetStmtAttr
RowArraySize\n",m_lRefId);
        if (CheckDBError(szDiag))
        {
            m_iTPRslt = SVCERR_ODBC;
            break;
        };
        continue;
    };
    rc = SQLExecDirectW(m_hstmt,(SQLWCHAR*)L"{call
tpcc_orderstatus(?,?,?,?)}",SQL_NTS);
    if ( ((rc == SQL_SUCCESS_WITH_INFO) && (m_RowsFetched != 0)) ||
(rc == SQL_ERROR) )
    {
        char szDiag[100];
        wsprintf(szDiag,"OrderStatus(%ld): Execute
Direct\n",m_lRefId);
        if (CheckDBError(szDiag))
        {
            m_iTPRslt = SVCERR_ODBC;
            break;
        };
        continue;
    };
    // configure block cursor
    if (SQLSetStmtAttrW(m_hstmt,SQL_ATTR_ROW_ARRAY_SIZE,
(SQLPOINTER)MAX_OL, 0) != SQL_SUCCESS)
    {
        char szDiag[100];
        wsprintf(szDiag,"OrderStatus(%ld): SetStmtAttr RowArraySize
MAX_OL\n",m_lRefId);
        if (CheckDBError(szDiag))
        {
            m_iTPRslt = SVCERR_ODBC;
            break;
        };
        continue;
    };
    rc = SQLFetchScroll(m_hstmt,SQL_FETCH_NEXT,0);
    if ( ((rc == SQL_SUCCESS_WITH_INFO) && (m_RowsFetched != 0)) ||
(rc == SQL_ERROR) )
    {
        char szDiag[100];
        wsprintf(szDiag,"OrderStatus(%ld): FetchScroll\n",m_lRefId);
        if (CheckDBError(szDiag))
        {
            m_iTPRslt = SVCERR_ODBC;
            break;
        };
        continue;
    };
}

```

```

};
m_TData.OSData.o_ol_cnt = (short)m_RowsFetched;

if (m_TData.OSData.o_ol_cnt != 0)
{
    if
    (SQLSetStmtAttrW(m_hstmt,SQL_ATTR_APP_ROW_DESC,m_descOrderStatusCols2,
SQL_IS_POINTER) != SQL_SUCCESS)
    {
        char szDiag[100];
        wsprintf(szDiag,"OrderStatus(%ld): SetStmtAttr
OSCols2\n",m_lRefId);
        if (CheckDBError(szDiag))
        {
            m_iTPRslt = SVCERR_ODBC;
            break;
        };
        continue;
    };
    if (SQLMoreResults(m_hstmt) == SQL_ERROR)
    {
        char szDiag[100];
        wsprintf(szDiag,"OrderStatus(%ld):
MoreResults\n",m_lRefId);
        if (CheckDBError(szDiag))
        {
            m_iTPRslt = SVCERR_ODBC;
            break;
        };
        continue;
    };
    if (SQLFetch(m_hstmt) == SQL_ERROR)
    {
        char szDiag[100];
        wsprintf(szDiag,"OrderStatus(%ld): Fetch\n",m_lRefId);
        CheckDBError(szDiag);
        if (SQLSetStmtAttrW(m_hstmt,SQL_ATTR_APP_ROW_DESC,
m_descOrderStatusCols1,SQL_IS_POINTER) != SQL_SUCCESS)
        {
            char szDiag[100];
            wsprintf(szDiag,"OrderStatus(%ld): SetStmtAttr (Fetch)
OSCols1\n",m_lRefId);
            CheckDBError(szDiag);
            posd->bTPRslt = TRUE;
            posd->iTPRslt = SVCERR_ODBC;
            strcpy(posd->execution_status,"Error, SetStmt Cols1
Fetch");
            return(S_OK);
        };
        memcpy(&m_TData.OSData,posd,sizeof(ORDER_STATUS_DATA));
        Sleep(20);
        continue;
    };
}; // order lines exist
SQLFreeStmt(m_hstmt,SQL_CLOSE);
if (m_TData.OSData.o_ol_cnt == 0)
    m_iTPRslt = SVCERR_NOORDERS;
else
    if (m_TData.OSData.c_id == 0 && m_TData.OSData.c_last[0] == 0)
        m_iTPRslt = SVCERR_NOCUSTOMER;
    else

```

```

    {
        m_bTPRslt = FALSE;
        m_iTPRslt = SVC_NOERROR;
    };
    break;
}; // for m_iMaxRetry
memcpy(posd, &m_TData.OSData, sizeof(ORDER_STATUS_DATA));
posd->bTPRslt = m_bTPRslt;
posd->iTPRslt = m_iTPRslt;
if (!m_bTPRslt)
{
    strcpy(posd->execution_status, "Transaction committed.");
    return(S_OK);
};
if (m_iTPRslt == SVCERR_NOCUSTOMER)
{
    strcpy(posd->execution_status, "Invalid Customer id,name.");
    return(S_OK);
};
if (m_iTPRslt == SVCERR_NOORDERS)
{
    strcpy(posd->execution_status, "Customer has no orders.");
    return(S_OK);
};
if (m_iTPRslt == SVCERR_DEADLOCK)
    sprintf(posd->execution_status, "Hit retry
max(%d).", m_iMaxRetry);
else
    strcpy(posd->execution_status, "DBTranAbort, Check Input Data");
return(S_OK);
}
catch (...)
{
    char szDiag[300];
    sprintf(szDiag, "OrderStatus(%ld): Unhandled exception\n", m_lRefId);
    WriteEventLog(szDiag, TRUE);
    m_bCanBePooled = FALSE;
    posd->bTPRslt = TRUE;
    posd->iTPRslt = SVCERR_EXCEPTION;
    strcpy(posd->execution_status, "Error, Unhandled exception");
    return(S_OK);
};
}; // Orderstatus

bool CTPCC_Common::InitSLParams(void)
{
    char szDiag[300];
    int i = 0;
    if (SQLAllocHandle(SQL_HANDLE_STMT, m_hdbc, &m_hstmtStockLevel) !=
SQL_SUCCESS)
    {
        sprintf(szDiag, "InitSLParams(%ld): Allocate Stmt Handle
failed\n", m_lRefId);
        CheckDBError(szDiag);
        return(TRUE);
    };
    m_hstmt = m_hstmtStockLevel;
#ifdef LONG_WID
    if
(SQLBindParameter(m_hstmt, ++i, SQL_PARAM_INPUT, SQL_C_SLONG, SQL_INTEGER,
#else

```

```

    if
(SQLBindParameter(m_hstmt, ++i, SQL_PARAM_INPUT, SQL_C_SSHORT, SQL_SMALLINT,
#endif
    0, 0, &m_TData.SLData.w_id, 0, NULL) != SQL_SUCCESS
    ||
SQLBindParameter(m_hstmt, ++i, SQL_PARAM_INPUT, SQL_C_UTINYINT, SQL_TINYINT,
    0, 0, &m_TData.SLData.d_id, 0, NULL) != SQL_SUCCESS
    ||
SQLBindParameter(m_hstmt, ++i, SQL_PARAM_INPUT, SQL_C_SSHORT, SQL_SMALLINT,
    0, 0, &m_TData.SLData.thresh_hold, 0, NULL) != SQL_SUCCESS
)
{
    sprintf(szDiag, "InitSLParams(%ld): Bind Param failed\n", m_lRefId);
    CheckDBError(szDiag);
    return(TRUE);
};
if (SQLBindCol(m_hstmt, 1, SQL_C_SLONG,
&m_TData.SLData.low_stock, 0, NULL) != SQL_SUCCESS)
{
    sprintf(szDiag, "InitSLParams(%ld): Bind Column failed\n", m_lRefId);
    CheckDBError(szDiag);
    return(TRUE);
};
return(FALSE);
}; // InitSLParams

HRESULT CTPCC_Common::StockLevel(int * iSize, UCHAR ** pTData)
{
    STOCK_LEVEL_DATA * pslid;
    RETCODE rc;
    pslid = (STOCK_LEVEL_DATA *) *pTData;
    try
    {
        m_hstmt = m_hstmtStockLevel;
        m_bTPRslt = TRUE;
        m_iTPRslt = SVCERR_DEADLOCK;
        memcpy(&m_TData.SLData, pslid, sizeof(STOCK_LEVEL_DATA));
        for (m_iTryCount = 1; m_iTryCount <= m_iMaxRetry; m_iTryCount++)
        {
            rc = SQLExecDirectW(m_hstmt,
(SQLWCHAR*)L"call tpcc_stocklevel(?, ?, ?)", SQL_NTS);
            if (rc != SQL_SUCCESS && rc != SQL_SUCCESS_WITH_INFO)
            {
                char szDiag[100];
                sprintf(szDiag, "StockLevel(%ld): Execute Direct\n", m_lRefId);
                if (CheckDBError(szDiag))
                {
                    m_iTPRslt = SVCERR_ODBC;
                    break;
                };
                continue;
            };
            if (SQLFetch(m_hstmt) == SQL_ERROR)
            {
                char szDiag[100];
                sprintf(szDiag, "StockLevel(%ld): Fetch\n", m_lRefId);
                if (CheckDBError(szDiag))
                {
                    m_iTPRslt = SVCERR_ODBC;
                    break;
                };
            };
        };
    };
};

```

```

        continue;
    };
    SQLFreeStmt(m_hstmt, SQL_CLOSE);
    m_bTPRslt = FALSE;
    m_iTPRslt = SVC_NOERROR;
    break;
}; // for m_iMaxRetry
memcpy(psld, &m_TData.SLData, sizeof(STOCK_LEVEL_DATA));
psld->bTPRslt = m_bTPRslt;
psld->iTPRslt = m_iTPRslt;
if (!m_bTPRslt)
{
    strcpy(psld->execution_status, "Transaction committed.");
    return(S_OK);
};
if (m_iTPRslt == SVCERR_DEADLOCK)
    sprintf(psld->execution_status, "Hit retry
max(%d).", m_iMaxRetry);
else
    strcpy(psld->execution_status, "DBTranAbort, Check Input Data");
return(S_OK);
}
catch (...)
{
    char szDiag[300];
    sprintf(szDiag, "StockLevel(%ld): Unhandled exception\n", m_lRefId);
    WriteEventLog(szDiag, TRUE);
    m_bCanBePooled = FALSE;
    psld->bTPRslt = TRUE;
    psld->iTPRslt = SVCERR_EXCEPTION;
    strcpy(psld->execution_status, "Error, Unhandled exception");
    return(S_OK);
};
}; // Stocklevel

//=====
//
// Function name: ReadRegistry
//
// Sets global operational parameters from registry if they exist.
// Otherwise, compiled in defaults apply.
//
// Result:
// FALSE Registry entry found
// TRUE Registry entry does not exist
//
//=====
bool ReadRegistry(VOID)
{
    HKEY hkTPCC;
    DWORD dwMax;
    DWORD dwRT;
    CHAR * pszEnvData;
    char szValue[100];
    if (RegOpenKeyEx(HKEY_LOCAL_MACHINE, "SOFTWARE\\Unisys\\TPCC", 0,
        KEY_READ, &hkTPCC) != ERROR_SUCCESS)
        return(TRUE);
    dwMax = sizeof(szValue);
    if (RegQueryValueEx(hkTPCC, "SERVERNAME", 0, &dwRT, (BYTE *)
&szValue, &dwMax)
        == ERROR_SUCCESS)

```

```

        strcpy(szServer, szValue);
    dwMax = sizeof(szValue);
    if (RegQueryValueEx(hkTPCC, "DATABASE", 0, &dwRT, (BYTE *) &szValue, &dwMax)
        == ERROR_SUCCESS)
        strcpy(szDatabase, szValue);
    dwMax = sizeof(szValue);
    if (RegQueryValueEx(hkTPCC, "USER", 0, &dwRT, (BYTE *) &szValue, &dwMax)
        == ERROR_SUCCESS)
        strcpy(szUser, szValue);
    dwMax = sizeof(szValue);
    if (RegQueryValueEx(hkTPCC, "PASSWORD", 0, &dwRT, (BYTE *) &szValue, &dwMax)
        == ERROR_SUCCESS)
        strcpy(szPassword, szValue);
    dwMax = sizeof(szValue);
    if (RegQueryValueEx(hkTPCC, "MAXRETRY", 0, &dwRT, (BYTE *) &szValue, &dwMax)
        == ERROR_SUCCESS)
        iDeadlockRetry = abs(atoi(szValue));
    RegCloseKey(hkTPCC);
    if ((pszEnvData = getenv("WEBINSTANCE")) != NULL)
        strcpy(szServer, pszEnvData);
    if ((pszEnvData = getenv("WEBDATABASE")) != NULL)
        strcpy(szDatabase, pszEnvData);
    if ((pszEnvData = getenv("WEBDRIVERNO")) != NULL)
        iInstance = abs(atoi(pszEnvData));

    return(FALSE);
}; // ReadRegistry

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

```

```
}; // WriteEventLog
```

## 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_tpcSrv;  
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 tkvcinit(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_quant191[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 <<!
    spool addfile_$1.log
    set echo on
    $altersql
    set echo off
    spool off
    exit ;
!
```

### ADDT.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
    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 <<!
    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 ;
```

## CRE\_TAB.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      cre_tab.sql
rem DESCRIPTION
rem      Create temporary tables for consistency tests.
rem =====+
rem Usage:  sqlplus tpcc/tpcc @cre_tab
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;
```

## CREATE\_CACHE\_VIEWS.SQL

```
rem This script creates four views that when queried will return
rem the total number of buffers in the buffer cache and the total
rem number of cloned buffers from each of the database's tablespaces.
rem
rem This assumes that each table and index is in its own tablespace.
rem If this is not the case, another query can be used which uses the
rem database's object tables to decipher the different objects. However,
rem this query is slower.
rem
rem This script assumes 7.3.x. If you are using V7.2.x or below, please
rem replace svrmgrl with sqldba lmode=y.
rem
rem Modification History:
rem
rem wbattist      16-Jun-1996      Create two additional views to keep
rem                                     track of the number of clones in each
rem                                     tablespace.
rem
rem wbattist      24-May-1995      Add the state check for the cbf view
rem                                     to ensure that cloned blocks are not
rem                                     counted.
rem

connect $oracle_dba/$oracle_dba_password;
set echo on;
drop view cbf;
create view cbf as
  select distinct(dbarfil) file#, count(1) blocks
  from x$bh
  where dbarfil > 0 and state <> 3
  group by dbarfil;
drop view cbt;
create view cbt as
  select ts$.name name,sum(cbf.blocks) buffers
  from cbf, file$, ts$
  where cbf.file#=file$.file# and file$.ts#=ts$.ts#
  group by file$.ts#, ts$.name;
drop view cbfcln;
create view cbfcln as
  select distinct(dbarfil) file#, count(1) blocks
  from x$bh
  where dbarfil > 0
  group by dbarfil;
drop view cbtcln;
create view cbtcln as
  select ts$.name name,sum(cbfcln.blocks) buffers
  from cbfcln, file$, ts$
```

```
where cbfcln.file#=file$.file# and file$.ts#=ts$.ts#
group by file$.ts#, ts$.name;
```

```
set echo off;
```

## CREATEDB.SQL

```
/* created automatically by /home/tpc-
c/tpcc28000wh/scripts/buildcreatedb.sh Wed Mar 30 15:53:33 PST 2005 */
spool createdb.log
```

```
set echo on
```

```
shutdown abort
```

```
startup pfile=p_create.ora nomount
create database tpcc
  controlfile reuse
  maxinstances 1
  datafile
    '/oradata/data28000/system1' size 400M reuse
  logfile '/oradata/data28000/log_1_1' size 46592M reuse,
    '/oradata/data28000/log_1_2' size 46592M reuse
  sysaux datafile '/oradata/data28000/tpccaux' size 120M reuse ;
```

```
create undo tablespace undo_1 datafile
  '/oradata/data28000/roll1' size 8096M reuse blocksize 8K;
```

```
set echo off
exit sql.sqlcode
```

## CREATEINDEX\_ICUST1.SQL

```
/* created automatically by /home/tpc-
c/tpcc28000wh/scripts/buildcreateindex.sh Wed Mar 30 15:53:48 PST 2005 */
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 8
  compute statistics
  tablespace icust1_0 ;
  set echo off
  spool off
  exit sql.sqlcode;
```

## CREATEINDEX\_ICUST2.SQL

```
/* created automatically by /home/tpc-
c/tpcc28000wh/scripts/buildcreateindex.sh Wed Mar 30 15:53:49 PST 2005 */
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 16
  compute statistics
  tablespace icust2_0 ;
  set echo off
  spool off
  exit sql.sqlcode;
```

## CREATEINDEX\_IDIST.SQL

```
/* created automatically by /home/tpc-
c/tpcc28000wh/scripts/buildcreateindex.sh Wed Mar 30 15:53:50 PST 2005 */
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 1
  compute statistics
  tablespace idist_0 ;
  set echo off
  spool off
  exit sql.sqlcode;
```

## CREATEINDEX\_IITEM.SQL

```
/* created automatically by /home/tpc-
c/tpcc28000wh/scripts/buildcreateindex.sh Wed Mar 30 15:53:51 PST 2005 */
set timing on
```

```
  set sqlblanklines on
  spool createindex_iitem.log ;
  set echo on ;
  drop index iitem ;
  create unique index iitem on item ( i_id )
  pctfree 5 initrans 4
  storage ( buffer_pool default )
  compute statistics
```

```

tablespace iitem_0 ;
set echo off
spool off
exit sql.sqlcode;

```

### 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\_IORDR2.SQL

```

/* created automatically by /home/tpc-
c/tpcc28000wh/scripts/buildcreateindex.sh Wed Mar 30 15:53:52 PST 2005 */
set timing on
set sqlblanklines on
spool createindex_iordr2.log ;
set echo on ;
drop index iordr2 ;
create unique index iordr2 on ordr ( o_c_id
, o_d_id
, o_w_id
, o_id )
pctfree 25 initrans 4
storage ( buffer_pool default )
parallel 8
compute statistics
tablespace iordr2_0 ;
set echo off
spool off
exit sql.sqlcode;

```

### CREATEINDEX\_ISTOK.SQL

```

/* created automatically by /home/tpc-
c/tpcc28000wh/scripts/buildcreateindex.sh Wed Mar 30 15:53:50 PST 2005 */
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 2
compute statistics
tablespace istok_0 ;
set echo off
spool off
exit sql.sqlcode;

```

### CREATEINDEX\_IWARE.SQL

```

/* created automatically by /home/tpc-
c/tpcc28000wh/scripts/buildcreateindex.sh Wed Mar 30 15:53:48 PST 2005 */
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 1
compute statistics
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 ('plsqli_mon');
IF (s <> 0) THEN
    raise_application_error (-20000, 'Error:' || to_char(s) ||
        ' sending on pipe');
END IF;
END;
/
show errors;

set echo off;

REM
REM end plsqli_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
cd $tpcc_genscripts_dir
$tpcc_sqlplus $tpcc_dba_user_pass @$tpcc_genscripts_dir/createspacestats >
junk 2>&1

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

```

## 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 '${tpcc_disks_location}/sp_0' size 900M
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/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
cd $tpcc_genscripts_dir
$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
@tkvcin.sql
spool off
exit sql.sqlcode;

```

## CREATETABLE\_CUST.SQL

```
/* created automatically by /home/tpc-
c/tpcc28000wh/scripts/buildcreatetable.sh Wed Mar 30 15:53:35 PST 2005 */
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 840000000
hash is ( (c_id * ( 28000 * 10 ) + c_w_id * 10 + c_d_id) )
size 180
pctfree 0  initrans 3
storage ( buffer_pool recycle ) parallel ( degree 16 )
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 char(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/tpc-
c/tpcc28000wh/scripts/buildcreatetable.sh Wed Mar 30 15:53:38 PST 2005 */
```

```
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 280000
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/tpc-
c/tpcc28000wh/scripts/buildcreatetable.sh Wed Mar 30 15:53:39 PST 2005 */
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/tpc-
c/tpcc28000wh/scripts/buildcreatetable.sh Wed Mar 30 15:53:42 PST 2005 */
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/tpc-
c/tpcc28000wh/scripts/buildcreatetable.sh Wed Mar 30 15:53:45 PST 2005 */
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 280000
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/tpc-
c/tpcc28000wh/scripts/buildcreatetable.sh Wed Mar 30 15:53:44 PST 2005 */
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/tpc-
c/tpcc28000wh/scripts/buildcreatetable.sh Wed Mar 30 15:53:43 PST 2005 */
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 280000
  hash is ( (o_w_id - 1) * 10 + o_d_id - 1 )
  size 1490
  tablespace ord_0;

create table odr (
  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 odr_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/tpc-
c/tpcc28000wh/scripts/buildcreatetable.sh Wed Mar 30 15:53:40 PST 2005 */
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 2800000000
hash is ( (s_i_id * 28000 + s_w_id) )
size 256
pctfree 0 initrans 2 maxtrans 2
storage ( buffer_pool keep ) parallel ( degree 16 )
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/tpc-
c/tpcc28000wh/scripts/buildcreatetable.sh Wed Mar 30 15:53:34 PST 2005 */
set timing on
set sqlblanklines on
spool createtable_ware.log
set echo on
drop cluster warecluster including tables ;

create cluster warecluster (
  w_id number
)
single table
hashkeys 28000
hash is ( (w_id - 1) )
size 1448
initrans 2
storage ( buffer_pool default )
tablespace ware_0;

create table ware (
  w_id number
, 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-1.SH

```
#created automatically by /home/tpc-c/tpcc28000wh/scripts/buildcreatets.sh
Wed Mar 30 15:53:21 PST 2005
```

```
# Tablespace ware, ts size 60M (61440K)
# each file 60M (61440K)
# extents 59264K (59264K)
# 1 files
```

```
$tpcc_createts ware 1 1      60M 59264K unix 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 729560M (747069440K)
# each file 5980M (6123520K)
# extents 152916K (152916K)
# 122 files
```

```
$tpcc_createts cust 122 1    5980M 152916K unix 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 580M (593920K)
# each file 580M (593920K)
# extents 583424K (583424K)
# 1 files
```

```
$tpcc_createts dist 1 1      580M 583424K unix 0      123 16 auto t
if expr $? != 0 > /dev/null; then
    echo Creating tablespace for dist failed.  Exiting.
    exit 0
fi
```

```
# Tablespace hist, ts size 88450M (90572800K)
# each file 1450M (1484800K)
# extents 98748K (98748K)
# 61 files
```

```
$tpcc_createts hist 23 1     3846M 196800K unix 0      124 16 auto t
if expr $? != 0 > /dev/null; then
    echo Creating tablespace for hist failed.  Exiting.
    exit 0
fi
```

```
# Tablespace stok, ts size 818620M (838266880K)
# each file 6710M (6871040K)
# extents 171516K (171516K)
# 122 files
```

```
$tpcc_createts stok 122 1    6710M 171516K unix 0      185 16 auto t
if expr $? != 0 > /dev/null; then
    echo Creating tablespace for stok failed.  Exiting.
    exit 0
fi
```

```
# Tablespace item, ts size 20M (20480K)
# each file 20M (20480K)
# extents 16892K (16892K)
# 1 files
```

```
$tpcc_createts item 1 1      20M 16892K unix 0      307 16 auto t
if expr $? != 0 > /dev/null; then
    echo Creating tablespace for item failed.  Exiting.
    exit 0
fi
```

```
# Tablespace ordr, ts size 1277340M (1307996160K)
# each file 20940M (21442560K)
# extents 103056K (103056K)
# 61 files
```

```
$tpcc_createts ordr 61 1    20940M 103056K unix 0      308 16 16K t
if expr $? != 0 > /dev/null; then
    echo Creating tablespace for ordr failed.  Exiting.
    exit 0
fi
```

```
# Tablespace nord, ts size 9520M (9748480K)
# each file 4760M (4874240K)
# extents 486358K (486358K)
# 4 files
```

```
$tpcc_createts nord 4 1      4760M 486358K unix 0      369 16 auto t
if expr $? != 0 > /dev/null; then
    echo Creating tablespace for nord failed.  Exiting.
    exit 0
fi
```

```
# Tablespace iware, ts size 40M (40960K)
# each file 40M (40960K)
# extents 36024K (36024K)
# 1 files
```

```
$tpcc_createts iware 1 1     40M 36024K unix 0      371 16 auto t
if expr $? != 0 > /dev/null; then
    echo Creating tablespace for iware failed.  Exiting.
    exit 0
fi
```

```
# Tablespace icust1, ts size 19820M (20295680K)
# each file 19820M (20295680K)
# extents 158528K (158528K)
# 1 files
```

```
$tpcc_createts icust1 1 1    19820M 158528K unix 0      372 16 16K t
if expr $? != 0 > /dev/null; then
    echo Creating tablespace for icust1 failed.  Exiting.
    exit 0
fi
```

```

# Tablespace icust2, ts size 51240M (52469760K)
# each file 840M (860160K)
# extents 6672K (6672K)
# 61 files

$tpcc_createts icust2 61 1      840M 6672K unix 0      373 16 16K t
if expr $? != 0 > /dev/null; then
    echo Creating tablespace for icust2 failed.  Exiting.
    exit 0
fi

# Tablespace idist, ts size 140M (143360K)
# each file 140M (143360K)
# extents 141024K (141024K)
# 1 files

$tpcc_createts idist 1 1      140M 141024K unix 0      434 16 auto t
if expr $? != 0 > /dev/null; then
    echo Creating tablespace for idist failed.  Exiting.
    exit 0
fi

# Tablespace istok, ts size 58470M (59873280K)
# each file 58470M (59873280K)
# extents 467696K (467696K)
# 1 files

$tpcc_createts istok 1 1      58470M 467696K unix 0      435 16 16K t
if expr $? != 0 > /dev/null; then
    echo Creating tablespace for istok failed.  Exiting.
    exit 0
fi

# Tablespace iitem, ts size 20M (20480K)
# each file 20M (20480K)
# extents 11264K (11264K)
# 1 files

$tpcc_createts iitem 1 1      20M 11264K unix 0      436 16 auto t
if expr $? != 0 > /dev/null; then
    echo Creating tablespace for iitem failed.  Exiting.
    exit 0
fi

# Tablespace iordr2, ts size 57340M (58716160K)
# each file 940M (962560K)
# extents 7456K (7456K)
# 61 files

$tpcc_createts iordr2 61 1      940M 7456K unix 0      437 16 16K t
if expr $? != 0 > /dev/null; then
    echo Creating tablespace for iordr2 failed.  Exiting.
    exit 0
fi

# Tablespace temp, ts size 147010M (150538240K)
# each file 2410M (2467840K)
# extents 205032K (205032K)
# 28 files

$tpcc_createts temp 28 1      5000M 255990K unix 1      498 16 auto t

```

```

if expr $? != 0 > /dev/null; then
    echo Creating tablespace for temp failed.  Exiting.
    exit 0
fi

```

## 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`
    if expr $tpcc_rac_node = $tpcc_np > /dev/null; then
        fileend=$fileno
    fi
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$name" = "xiitem" -o "x$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\>\&1 \&;
    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\_0 `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\_0 `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
            fi
        done
    fi

```

```

        fi
    fi
    fi
else
    $addfile $name\_$_i $fileaddr$name\_$_i\_`expr $j + 1` $filesize
$sisTemp \> junk$filecount 2\>\&1 &
    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`
# Added wait here for all tablespaces to be created
wait
if test $out -ne 0
then
    exit 1;
else
    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 ;

```

## 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 -qt 1
REM then

REM @$ORACLE_HOME/rdbms/admin/catparr

REM fi

spool off
!

#sh $tpcc_scripts/queue.sh

```

## DATA-LINK

```

ln -s /dev/sddt3 control_001
ln -s /dev/sddt5 control_002
ln -s /dev/sdbk2 cust_0_0
ln -s /dev/sdbl2 cust_0_1
ln -s /dev/sdbu2 cust_0_10
ln -s /dev/sdcx3 cust_0_100
ln -s /dev/sdcy3 cust_0_101
ln -s /dev/sdcz3 cust_0_102
ln -s /dev/sdda3 cust_0_103
ln -s /dev/sddb3 cust_0_104
ln -s /dev/sddc3 cust_0_105
ln -s /dev/sddd3 cust_0_106
ln -s /dev/sdde3 cust_0_107
ln -s /dev/sddf3 cust_0_108
ln -s /dev/sddg3 cust_0_109
ln -s /dev/sdbv2 cust_0_11
ln -s /dev/sddh3 cust_0_110
ln -s /dev/sddi3 cust_0_111
ln -s /dev/sddj3 cust_0_112
ln -s /dev/sddk3 cust_0_113
ln -s /dev/sddl3 cust_0_114
ln -s /dev/sddm3 cust_0_115
ln -s /dev/sddn3 cust_0_116
ln -s /dev/sddo3 cust_0_117
ln -s /dev/sddp3 cust_0_118
ln -s /dev/sddq3 cust_0_119

```

```

ln -s /dev/sdbw2 cust_0_12
ln -s /dev/sddr3 cust_0_120
ln -s /dev/sdds3 cust_0_121
ln -s /dev/sdbx2 cust_0_13
ln -s /dev/sdby2 cust_0_14
ln -s /dev/sdbz2 cust_0_15
ln -s /dev/sdca2 cust_0_16
ln -s /dev/sdcb2 cust_0_17
ln -s /dev/sdcc2 cust_0_18
ln -s /dev/sdcd2 cust_0_19
ln -s /dev/sdbm2 cust_0_2
ln -s /dev/sdce2 cust_0_20
ln -s /dev/sdcf2 cust_0_21
ln -s /dev/sdcg2 cust_0_22
ln -s /dev/sdch2 cust_0_23
ln -s /dev/sdci2 cust_0_24
ln -s /dev/sdcj2 cust_0_25
ln -s /dev/sdck2 cust_0_26
ln -s /dev/sdcl2 cust_0_27
ln -s /dev/sdcm2 cust_0_28
ln -s /dev/sdcn2 cust_0_29
ln -s /dev/sdbn2 cust_0_3
ln -s /dev/sdco2 cust_0_30
ln -s /dev/sdcp2 cust_0_31
ln -s /dev/sdcq2 cust_0_32
ln -s /dev/sdcr2 cust_0_33
ln -s /dev/sdcs2 cust_0_34
ln -s /dev/sdct2 cust_0_35
ln -s /dev/sdcu2 cust_0_36
ln -s /dev/sdcv2 cust_0_37
ln -s /dev/sdcw2 cust_0_38
ln -s /dev/sdcx2 cust_0_39
ln -s /dev/sdbo2 cust_0_4
ln -s /dev/sdcy2 cust_0_40
ln -s /dev/sdcz2 cust_0_41
ln -s /dev/sdda2 cust_0_42
ln -s /dev/sddb2 cust_0_43
ln -s /dev/sddc2 cust_0_44
ln -s /dev/sddd2 cust_0_45
ln -s /dev/sdde2 cust_0_46
ln -s /dev/sddf2 cust_0_47
ln -s /dev/sddg2 cust_0_48
ln -s /dev/sddh2 cust_0_49
ln -s /dev/sdbp2 cust_0_5
ln -s /dev/sddi2 cust_0_50
ln -s /dev/sddj2 cust_0_51
ln -s /dev/sddk2 cust_0_52
ln -s /dev/sddl2 cust_0_53
ln -s /dev/sddm2 cust_0_54
ln -s /dev/sddn2 cust_0_55
ln -s /dev/sddo2 cust_0_56
ln -s /dev/sddp2 cust_0_57
ln -s /dev/sddq2 cust_0_58
ln -s /dev/sddr2 cust_0_59
ln -s /dev/sdbq2 cust_0_6
ln -s /dev/sdds2 cust_0_60
ln -s /dev/sdbk3 cust_0_61
ln -s /dev/sdbl3 cust_0_62
ln -s /dev/sdbm3 cust_0_63
ln -s /dev/sdbn3 cust_0_64
ln -s /dev/sdbo3 cust_0_65

```

```
ln -s /dev/sdbp3 cust_0_66
ln -s /dev/sdbq3 cust_0_67
ln -s /dev/sdbr3 cust_0_68
ln -s /dev/sdbs3 cust_0_69
ln -s /dev/sdbr2 cust_0_7
ln -s /dev/sdbt3 cust_0_70
ln -s /dev/sdbu3 cust_0_71
ln -s /dev/sdbv3 cust_0_72
ln -s /dev/sdbw3 cust_0_73
ln -s /dev/sdbx3 cust_0_74
ln -s /dev/sdby3 cust_0_75
ln -s /dev/sdbz3 cust_0_76
ln -s /dev/sdca3 cust_0_77
ln -s /dev/sdcb3 cust_0_78
ln -s /dev/sdcc3 cust_0_79
ln -s /dev/sdbs2 cust_0_8
ln -s /dev/sdcd3 cust_0_80
ln -s /dev/sdce3 cust_0_81
ln -s /dev/sdcf3 cust_0_82
ln -s /dev/sdcg3 cust_0_83
ln -s /dev/sdch3 cust_0_84
ln -s /dev/sdci3 cust_0_85
ln -s /dev/sdcj3 cust_0_86
ln -s /dev/sdck3 cust_0_87
ln -s /dev/sdcl3 cust_0_88
ln -s /dev/sdcm3 cust_0_89
ln -s /dev/sdbt2 cust_0_9
ln -s /dev/sdcn3 cust_0_90
ln -s /dev/sdco3 cust_0_91
ln -s /dev/sdcp3 cust_0_92
ln -s /dev/sdcq3 cust_0_93
ln -s /dev/sdcr3 cust_0_94
ln -s /dev/sdcs3 cust_0_95
ln -s /dev/sdct3 cust_0_96
ln -s /dev/sdcu3 cust_0_97
ln -s /dev/sdcv3 cust_0_98
ln -s /dev/sdcw3 cust_0_99
ln -s /dev/sddu5 dist_0_0
ln -s /dev/sddi9 dist_0_1
ln -s /dev/sddw1 hist_0_0
ln -s /dev/sddx1 hist_0_1
ln -s /dev/sddw7 hist_0_10
ln -s /dev/sddx7 hist_0_11
ln -s /dev/sddw8 hist_0_12
ln -s /dev/sddx8 hist_0_13
ln -s /dev/sddw9 hist_0_14
ln -s /dev/sddx9 hist_0_15
ln -s /dev/sddw10 hist_0_16
ln -s /dev/sddx10 hist_0_17
ln -s /dev/sddw11 hist_0_18
ln -s /dev/sddx11 hist_0_19
ln -s /dev/sddw2 hist_0_2
ln -s /dev/sddw12 hist_0_20
ln -s /dev/sddx12 hist_0_21
ln -s /dev/sddw13 hist_0_22
ln -s /dev/sddx2 hist_0_3
ln -s /dev/sddw3 hist_0_4
ln -s /dev/sddx3 hist_0_5
ln -s /dev/sddw5 hist_0_6
ln -s /dev/sddx5 hist_0_7
ln -s /dev/sddw6 hist_0_8
```

```
ln -s /dev/sddx6 hist_0_9
ln -s /dev/sddt1 icust1_0_0
ln -s /dev/sdbk1 icust2_0_0
ln -s /dev/sdbl1 icust2_0_1
ln -s /dev/sdbul icust2_0_10
ln -s /dev/sdbv1 icust2_0_11
ln -s /dev/sdbw1 icust2_0_12
ln -s /dev/sdbx1 icust2_0_13
ln -s /dev/sdby1 icust2_0_14
ln -s /dev/sdbz1 icust2_0_15
ln -s /dev/sdca1 icust2_0_16
ln -s /dev/sdcb1 icust2_0_17
ln -s /dev/sdcc1 icust2_0_18
ln -s /dev/sdcd1 icust2_0_19
ln -s /dev/sdbm1 icust2_0_2
ln -s /dev/sdce1 icust2_0_20
ln -s /dev/sdcf1 icust2_0_21
ln -s /dev/sdcg1 icust2_0_22
ln -s /dev/sdch1 icust2_0_23
ln -s /dev/sdci1 icust2_0_24
ln -s /dev/sdcj1 icust2_0_25
ln -s /dev/sdck1 icust2_0_26
ln -s /dev/sdcl1 icust2_0_27
ln -s /dev/sdcm1 icust2_0_28
ln -s /dev/sdcn1 icust2_0_29
ln -s /dev/sdbn1 icust2_0_3
ln -s /dev/sdco1 icust2_0_30
ln -s /dev/sdcp1 icust2_0_31
ln -s /dev/sdcq1 icust2_0_32
ln -s /dev/sdcr1 icust2_0_33
ln -s /dev/sdcs1 icust2_0_34
ln -s /dev/sdct1 icust2_0_35
ln -s /dev/sdcu1 icust2_0_36
ln -s /dev/sdcv1 icust2_0_37
ln -s /dev/sdcw1 icust2_0_38
ln -s /dev/sdcx1 icust2_0_39
ln -s /dev/sdbo1 icust2_0_4
ln -s /dev/sddv3 icust2_0_40
ln -s /dev/sdcz1 icust2_0_41
ln -s /dev/sdda1 icust2_0_42
ln -s /dev/sddb1 icust2_0_43
ln -s /dev/sddu6 icust2_0_44
ln -s /dev/sddd1 icust2_0_45
ln -s /dev/sdde1 icust2_0_46
ln -s /dev/sddf1 icust2_0_47
ln -s /dev/sddg1 icust2_0_48
ln -s /dev/sddh1 icust2_0_49
ln -s /dev/sdbp1 icust2_0_5
ln -s /dev/sddi1 icust2_0_50
ln -s /dev/sddj1 icust2_0_51
ln -s /dev/sddk1 icust2_0_52
ln -s /dev/sddl1 icust2_0_53
ln -s /dev/sddm1 icust2_0_54
ln -s /dev/sddn1 icust2_0_55
ln -s /dev/sddo1 icust2_0_56
ln -s /dev/sddp1 icust2_0_57
ln -s /dev/sddq1 icust2_0_58
ln -s /dev/sddr1 icust2_0_59
ln -s /dev/sdbq1 icust2_0_6
ln -s /dev/sdds1 icust2_0_60
ln -s /dev/sdbr1 icust2_0_7
```



```
ln -s /dev/sdbs1 icust2_0_8
ln -s /dev/sdbt1 icust2_0_9
ln -s /dev/sddq9 idist_0_0
ln -s /dev/sddp9 iitem_0_0
ln -s /dev/sdbk8 iordr2_0_0
ln -s /dev/sdbl8 iordr2_0_1
ln -s /dev/sdbu8 iordr2_0_10
ln -s /dev/sdbv8 iordr2_0_11
ln -s /dev/sdbw8 iordr2_0_12
ln -s /dev/sdbx8 iordr2_0_13
ln -s /dev/sdby8 iordr2_0_14
ln -s /dev/sdbz8 iordr2_0_15
ln -s /dev/sdca8 iordr2_0_16
ln -s /dev/sdcb8 iordr2_0_17
ln -s /dev/sdcc8 iordr2_0_18
ln -s /dev/sdcd8 iordr2_0_19
ln -s /dev/sdbm8 iordr2_0_2
ln -s /dev/sdce8 iordr2_0_20
ln -s /dev/sdcf8 iordr2_0_21
ln -s /dev/sdcg8 iordr2_0_22
ln -s /dev/sdch8 iordr2_0_23
ln -s /dev/sdci8 iordr2_0_24
ln -s /dev/sdcj8 iordr2_0_25
ln -s /dev/sdck8 iordr2_0_26
ln -s /dev/sdcl8 iordr2_0_27
ln -s /dev/sdcm8 iordr2_0_28
ln -s /dev/sdcn8 iordr2_0_29
ln -s /dev/sdbn8 iordr2_0_3
ln -s /dev/sdco8 iordr2_0_30
ln -s /dev/sdcp8 iordr2_0_31
ln -s /dev/sdcq8 iordr2_0_32
ln -s /dev/sdcr8 iordr2_0_33
ln -s /dev/sdcs8 iordr2_0_34
ln -s /dev/sdct8 iordr2_0_35
ln -s /dev/sdcu8 iordr2_0_36
ln -s /dev/sdcv8 iordr2_0_37
ln -s /dev/sdcw8 iordr2_0_38
ln -s /dev/sdcx8 iordr2_0_39
ln -s /dev/sdbo8 iordr2_0_4
ln -s /dev/sddv5 iordr2_0_40
ln -s /dev/sdcz8 iordr2_0_41
ln -s /dev/sdda8 iordr2_0_42
ln -s /dev/sddb8 iordr2_0_43
ln -s /dev/sddc8 iordr2_0_44
ln -s /dev/sddd8 iordr2_0_45
ln -s /dev/sdde8 iordr2_0_46
ln -s /dev/sddf8 iordr2_0_47
ln -s /dev/sddg8 iordr2_0_48
ln -s /dev/sddh8 iordr2_0_49
ln -s /dev/sdbp8 iordr2_0_5
ln -s /dev/sddi8 iordr2_0_50
ln -s /dev/sddj8 iordr2_0_51
ln -s /dev/sddk8 iordr2_0_52
ln -s /dev/sddl8 iordr2_0_53
ln -s /dev/sddm8 iordr2_0_54
ln -s /dev/sddn8 iordr2_0_55
ln -s /dev/sddo8 iordr2_0_56
ln -s /dev/sddp8 iordr2_0_57
ln -s /dev/sddq8 iordr2_0_58
ln -s /dev/sddr8 iordr2_0_59
ln -s /dev/sdbq8 iordr2_0_6
```

```
ln -s /dev/sdds8 iordr2_0_60
ln -s /dev/sdbr8 iordr2_0_7
ln -s /dev/sdbs8 iordr2_0_8
ln -s /dev/sdbt8 iordr2_0_9
ln -s /dev/sddu3 istok_0_0
ln -s /dev/sddj9 item_0_0
ln -s /dev/sddk9 item_0_1
ln -s /dev/sddo9 iware_0_0
ln -s /dev/sdbi1 log_1_1
ln -s /dev/sdbj1 log_1_2
ln -s /dev/sddu1 nord_0_0
ln -s /dev/sddv1 nord_0_1
ln -s /dev/sddu2 nord_0_2
ln -s /dev/sddv2 nord_0_3
ln -s /dev/sdbk7 ordr_0_0
ln -s /dev/sdbl7 ordr_0_1
ln -s /dev/sdbu7 ordr_0_10
ln -s /dev/sdbv7 ordr_0_11
ln -s /dev/sdbw7 ordr_0_12
ln -s /dev/sdbx7 ordr_0_13
ln -s /dev/sdby7 ordr_0_14
ln -s /dev/sdbz7 ordr_0_15
ln -s /dev/sdca7 ordr_0_16
ln -s /dev/sdcb7 ordr_0_17
ln -s /dev/sdcc7 ordr_0_18
ln -s /dev/sdcd7 ordr_0_19
ln -s /dev/sdbm7 ordr_0_2
ln -s /dev/sdce7 ordr_0_20
ln -s /dev/sdcf7 ordr_0_21
ln -s /dev/sdcg7 ordr_0_22
ln -s /dev/sdch7 ordr_0_23
ln -s /dev/sdci7 ordr_0_24
ln -s /dev/sdcj7 ordr_0_25
ln -s /dev/sdck7 ordr_0_26
ln -s /dev/sdcl7 ordr_0_27
ln -s /dev/sdcm7 ordr_0_28
ln -s /dev/sdcn7 ordr_0_29
ln -s /dev/sdbn7 ordr_0_3
ln -s /dev/sdco7 ordr_0_30
ln -s /dev/sdcp7 ordr_0_31
ln -s /dev/sdcq7 ordr_0_32
ln -s /dev/sdcr7 ordr_0_33
ln -s /dev/sdcs7 ordr_0_34
ln -s /dev/sdct7 ordr_0_35
ln -s /dev/sdcu7 ordr_0_36
ln -s /dev/sdcv7 ordr_0_37
ln -s /dev/sdcw7 ordr_0_38
ln -s /dev/sdcx7 ordr_0_39
ln -s /dev/sdbo7 ordr_0_4
ln -s /dev/sdcy7 ordr_0_40
ln -s /dev/sdcz7 ordr_0_41
ln -s /dev/sdda7 ordr_0_42
ln -s /dev/sddb7 ordr_0_43
ln -s /dev/sddc7 ordr_0_44
ln -s /dev/sddd7 ordr_0_45
ln -s /dev/sdde7 ordr_0_46
ln -s /dev/sddf7 ordr_0_47
ln -s /dev/sddg7 ordr_0_48
ln -s /dev/sddh7 ordr_0_49
ln -s /dev/sdbp7 ordr_0_5
ln -s /dev/sddi7 ordr_0_50
```

```
ln -s /dev/sddj7 ordr_0_51
ln -s /dev/sddk7 ordr_0_52
ln -s /dev/sddl7 ordr_0_53
ln -s /dev/sddm7 ordr_0_54
ln -s /dev/sddn7 ordr_0_55
ln -s /dev/sddo7 ordr_0_56
ln -s /dev/sddp7 ordr_0_57
ln -s /dev/sddq7 ordr_0_58
ln -s /dev/sddr7 ordr_0_59
ln -s /dev/sdbq7 ordr_0_6
ln -s /dev/sdds7 ordr_0_60
ln -s /dev/sdbr7 ordr_0_7
ln -s /dev/sdbs7 ordr_0_8
ln -s /dev/sdbt7 ordr_0_9
ln -s /dev/sddt7 roll1
ln -s /dev/sddt8 sp_0
ln -s /dev/sdbk5 stok_0_0
ln -s /dev/sdbl5 stok_0_1
ln -s /dev/sdbu5 stok_0_10
ln -s /dev/sddu8 stok_0_100
ln -s /dev/sdcy6 stok_0_101
ln -s /dev/sdcz6 stok_0_102
ln -s /dev/sdda6 stok_0_103
ln -s /dev/sddb6 stok_0_104
ln -s /dev/sddc6 stok_0_105
ln -s /dev/sddd6 stok_0_106
ln -s /dev/sdde6 stok_0_107
ln -s /dev/sddf6 stok_0_108
ln -s /dev/sddg6 stok_0_109
ln -s /dev/sdbv5 stok_0_11
ln -s /dev/sddh6 stok_0_110
ln -s /dev/sddi6 stok_0_111
ln -s /dev/sddj6 stok_0_112
ln -s /dev/sddk6 stok_0_113
ln -s /dev/sddl6 stok_0_114
ln -s /dev/sddm6 stok_0_115
ln -s /dev/sddn6 stok_0_116
ln -s /dev/sddo6 stok_0_117
ln -s /dev/sddp6 stok_0_118
ln -s /dev/sddq6 stok_0_119
ln -s /dev/sdbw5 stok_0_12
ln -s /dev/sddr6 stok_0_120
ln -s /dev/sdds6 stok_0_121
ln -s /dev/sdbx5 stok_0_13
ln -s /dev/sdby5 stok_0_14
ln -s /dev/sdbz5 stok_0_15
ln -s /dev/sdca5 stok_0_16
ln -s /dev/sdcb5 stok_0_17
ln -s /dev/sdcc5 stok_0_18
ln -s /dev/sdcd5 stok_0_19
ln -s /dev/sdbm5 stok_0_2
ln -s /dev/sdce5 stok_0_20
ln -s /dev/sdcf5 stok_0_21
ln -s /dev/sdcg5 stok_0_22
ln -s /dev/sdch5 stok_0_23
ln -s /dev/sdci5 stok_0_24
ln -s /dev/sdcj5 stok_0_25
ln -s /dev/sdck5 stok_0_26
ln -s /dev/sdcl5 stok_0_27
ln -s /dev/sdcm5 stok_0_28
ln -s /dev/sdcn5 stok_0_29
```

```
ln -s /dev/sdbn5 stok_0_3
ln -s /dev/sdco5 stok_0_30
ln -s /dev/sdcp5 stok_0_31
ln -s /dev/sdcq5 stok_0_32
ln -s /dev/sdcr5 stok_0_33
ln -s /dev/sdcs5 stok_0_34
ln -s /dev/sdct5 stok_0_35
ln -s /dev/sdcu5 stok_0_36
ln -s /dev/sdcv5 stok_0_37
ln -s /dev/sdcw5 stok_0_38
ln -s /dev/sdcx5 stok_0_39
ln -s /dev/sdbo5 stok_0_4
ln -s /dev/sdcy5 stok_0_40
ln -s /dev/sdcz5 stok_0_41
ln -s /dev/sdda5 stok_0_42
ln -s /dev/sddb5 stok_0_43
ln -s /dev/sddv7 stok_0_44
ln -s /dev/sddd5 stok_0_45
ln -s /dev/sdde5 stok_0_46
ln -s /dev/sddf5 stok_0_47
ln -s /dev/sddg5 stok_0_48
ln -s /dev/sddt10 stok_0_49
ln -s /dev/sdbp5 stok_0_5
ln -s /dev/sddi5 stok_0_50
ln -s /dev/sddj5 stok_0_51
ln -s /dev/sddk5 stok_0_52
ln -s /dev/sddl5 stok_0_53
ln -s /dev/sddm5 stok_0_54
ln -s /dev/sddn5 stok_0_55
ln -s /dev/sddo5 stok_0_56
ln -s /dev/sddp5 stok_0_57
ln -s /dev/sddq5 stok_0_58
ln -s /dev/sddr5 stok_0_59
ln -s /dev/sdbq5 stok_0_6
ln -s /dev/sdds5 stok_0_60
ln -s /dev/sdbk6 stok_0_61
ln -s /dev/sdbl6 stok_0_62
ln -s /dev/sdbm6 stok_0_63
ln -s /dev/sdbn6 stok_0_64
ln -s /dev/sdbo6 stok_0_65
ln -s /dev/sdbp6 stok_0_66
ln -s /dev/sdbq6 stok_0_67
ln -s /dev/sdbr6 stok_0_68
ln -s /dev/sdbs6 stok_0_69
ln -s /dev/sdbr5 stok_0_7
ln -s /dev/sdbt6 stok_0_70
ln -s /dev/sdbu6 stok_0_71
ln -s /dev/sdbv6 stok_0_72
ln -s /dev/sdbw6 stok_0_73
ln -s /dev/sdbx6 stok_0_74
ln -s /dev/sdby6 stok_0_75
ln -s /dev/sdbz6 stok_0_76
ln -s /dev/sdca6 stok_0_77
ln -s /dev/sdcb6 stok_0_78
ln -s /dev/sdcc6 stok_0_79
ln -s /dev/sdbs5 stok_0_8
ln -s /dev/sdcd6 stok_0_80
ln -s /dev/sdce6 stok_0_81
ln -s /dev/sdcf6 stok_0_82
ln -s /dev/sdcg6 stok_0_83
ln -s /dev/sdch6 stok_0_84
```

```

ln -s /dev/sdci6 stok_0_85
ln -s /dev/sdcj6 stok_0_86
ln -s /dev/sdck6 stok_0_87
ln -s /dev/sdcl6 stok_0_88
ln -s /dev/sdcm6 stok_0_89
ln -s /dev/sdbt5 stok_0_9
ln -s /dev/sdcn6 stok_0_90
ln -s /dev/sdco6 stok_0_91
ln -s /dev/sdcp6 stok_0_92
ln -s /dev/sdcq6 stok_0_93
ln -s /dev/sdcr6 stok_0_94
ln -s /dev/sdcs6 stok_0_95
ln -s /dev/sdct6 stok_0_96
ln -s /dev/sdcu6 stok_0_97
ln -s /dev/sdcv6 stok_0_98
ln -s /dev/sdcw6 stok_0_99
ln -s /dev/sddt2 system_1
ln -s /dev/sdch9 temp_0_0
ln -s /dev/sdci9 temp_0_1
ln -s /dev/sdcr9 temp_0_10
ln -s /dev/sdcs9 temp_0_11
ln -s /dev/sdct9 temp_0_12
ln -s /dev/sdcu9 temp_0_13
ln -s /dev/sdcv9 temp_0_14
ln -s /dev/sdcw9 temp_0_15
ln -s /dev/sdcx9 temp_0_16
ln -s /dev/sdcy9 temp_0_17
ln -s /dev/sdcz9 temp_0_18
ln -s /dev/sdda9 temp_0_19
ln -s /dev/sdcj9 temp_0_2
ln -s /dev/sddb9 temp_0_20
ln -s /dev/sddc9 temp_0_21
ln -s /dev/sddd9 temp_0_22
ln -s /dev/sdde9 temp_0_23
ln -s /dev/sdbn9 temp_0_24
ln -s /dev/sdbk9 temp_0_25
ln -s /dev/sdbl9 temp_0_26
ln -s /dev/sdbm9 temp_0_27
ln -s /dev/sdck9 temp_0_3
ln -s /dev/sdcl9 temp_0_4
ln -s /dev/sdcm9 temp_0_5
ln -s /dev/sdcn9 temp_0_6
ln -s /dev/sdco9 temp_0_7
ln -s /dev/sdcp9 temp_0_8
ln -s /dev/sdcq9 temp_0_9
ln -s /dev/sddt6 tpccaux
ln -s /dev/sddf9 ware_0_0
ln -s /dev/sddg9 ware_0_1

```

## 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
done

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

```

## 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;

```

## 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;
```

## LOADCUST.SH

```
#created automatically by /home/tpc-c/tpcc28000wh/scripts/evenload.sh Wed
Mar 30 15:53:46 PST 2005
rm -f loadcust*.log
cd $tpcc_bench
allprocs=
$tpcc_load -M 28000 -C -1 1 -m 93 >> loadcust0.log 2>&1 &
allprocs="$allprocs ${!}"
$tpcc_load -M 28000 -C -1 94 -m 186 >> loadcust1.log 2>&1 &
allprocs="$allprocs ${!}"
$tpcc_load -M 28000 -C -1 187 -m 279 >> loadcust2.log 2>&1 &
allprocs="$allprocs ${!}"
$tpcc_load -M 28000 -C -1 280 -m 372 >> loadcust3.log 2>&1 &
allprocs="$allprocs ${!}"
$tpcc_load -M 28000 -C -1 373 -m 465 >> loadcust4.log 2>&1 &
allprocs="$allprocs ${!}"
$tpcc_load -M 28000 -C -1 466 -m 558 >> loadcust5.log 2>&1 &
allprocs="$allprocs ${!}"
$tpcc_load -M 28000 -C -1 559 -m 651 >> loadcust6.log 2>&1 &
allprocs="$allprocs ${!}"
$tpcc_load -M 28000 -C -1 652 -m 744 >> loadcust7.log 2>&1 &
allprocs="$allprocs ${!}"
```

```
$tpcc_load -M 28000 -C -1 745 -m 838 >> loadcust8.log 2>&1 &
allprocs="$allprocs ${!}"
$tpcc_load -M 28000 -C -1 839 -m 932 >> loadcust9.log 2>&1 &
allprocs="$allprocs ${!}"
$tpcc_load -M 28000 -C -1 933 -m 1026 >> loadcust10.log 2>&1 &
allprocs="$allprocs ${!}"
$tpcc_load -M 28000 -C -1 1027 -m 1120 >> loadcust11.log 2>&1 &
allprocs="$allprocs ${!}"
$tpcc_load -M 28000 -C -1 1121 -m 1214 >> loadcust12.log 2>&1 &
allprocs="$allprocs ${!}"
$tpcc_load -M 28000 -C -1 1215 -m 1308 >> loadcust13.log 2>&1 &
allprocs="$allprocs ${!}"
$tpcc_load -M 28000 -C -1 1309 -m 1402 >> loadcust14.log 2>&1 &
allprocs="$allprocs ${!}"
$tpcc_load -M 28000 -C -1 1403 -m 1496 >> loadcust15.log 2>&1 &
allprocs="$allprocs ${!}"
$tpcc_load -M 28000 -C -1 1497 -m 1590 >> loadcust16.log 2>&1 &
allprocs="$allprocs ${!}"
$tpcc_load -M 28000 -C -1 1591 -m 1684 >> loadcust17.log 2>&1 &
allprocs="$allprocs ${!}"
$tpcc_load -M 28000 -C -1 1685 -m 1778 >> loadcust18.log 2>&1 &
allprocs="$allprocs ${!}"
$tpcc_load -M 28000 -C -1 1779 -m 1872 >> loadcust19.log 2>&1 &
allprocs="$allprocs ${!}"
$tpcc_load -M 28000 -C -1 1873 -m 1966 >> loadcust20.log 2>&1 &
allprocs="$allprocs ${!}"
$tpcc_load -M 28000 -C -1 1967 -m 2060 >> loadcust21.log 2>&1 &
allprocs="$allprocs ${!}"
$tpcc_load -M 28000 -C -1 2061 -m 2154 >> loadcust22.log 2>&1 &
allprocs="$allprocs ${!}"
$tpcc_load -M 28000 -C -1 2155 -m 2248 >> loadcust23.log 2>&1 &
allprocs="$allprocs ${!}"
$tpcc_load -M 28000 -C -1 2249 -m 2342 >> loadcust24.log 2>&1 &
allprocs="$allprocs ${!}"
$tpcc_load -M 28000 -C -1 2343 -m 2436 >> loadcust25.log 2>&1 &
allprocs="$allprocs ${!}"
$tpcc_load -M 28000 -C -1 2437 -m 2530 >> loadcust26.log 2>&1 &
allprocs="$allprocs ${!}"
$tpcc_load -M 28000 -C -1 2531 -m 2624 >> loadcust27.log 2>&1 &
allprocs="$allprocs ${!}"
$tpcc_load -M 28000 -C -1 2625 -m 2718 >> loadcust28.log 2>&1 &
allprocs="$allprocs ${!}"
$tpcc_load -M 28000 -C -1 2719 -m 2812 >> loadcust29.log 2>&1 &
allprocs="$allprocs ${!}"
$tpcc_load -M 28000 -C -1 2813 -m 2906 >> loadcust30.log 2>&1 &
allprocs="$allprocs ${!}"
$tpcc_load -M 28000 -C -1 2907 -m 3000 >> loadcust31.log 2>&1 &
allprocs="$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
```

## LOADHIST.SH

```
#created automatically by /home/tpc-c/tpcc28000wh/scripts/evenload.sh Wed
Mar 30 15:53:45 PST 2005
rm -f loadhist*.log
cd $tpcc_bench
allprocs=
$tpcc_load -M 28000 -h -b 1 -e 875 >> loadhist0.log 2>&1 &
allprocs="$allprocs ${!}"
$tpcc_load -M 28000 -h -b 876 -e 1750 >> loadhist1.log 2>&1 &
allprocs="$allprocs ${!}"
$tpcc_load -M 28000 -h -b 1751 -e 2625 >> loadhist2.log 2>&1 &
allprocs="$allprocs ${!}"
$tpcc_load -M 28000 -h -b 2626 -e 3500 >> loadhist3.log 2>&1 &
allprocs="$allprocs ${!}"
$tpcc_load -M 28000 -h -b 3501 -e 4375 >> loadhist4.log 2>&1 &
allprocs="$allprocs ${!}"
$tpcc_load -M 28000 -h -b 4376 -e 5250 >> loadhist5.log 2>&1 &
allprocs="$allprocs ${!}"
$tpcc_load -M 28000 -h -b 5251 -e 6125 >> loadhist6.log 2>&1 &
allprocs="$allprocs ${!}"
$tpcc_load -M 28000 -h -b 6126 -e 7000 >> loadhist7.log 2>&1 &
allprocs="$allprocs ${!}"
$tpcc_load -M 28000 -h -b 7001 -e 7875 >> loadhist8.log 2>&1 &
allprocs="$allprocs ${!}"
$tpcc_load -M 28000 -h -b 7876 -e 8750 >> loadhist9.log 2>&1 &
allprocs="$allprocs ${!}"
$tpcc_load -M 28000 -h -b 8751 -e 9625 >> loadhist10.log 2>&1 &
allprocs="$allprocs ${!}"
$tpcc_load -M 28000 -h -b 9626 -e 10500 >> loadhist11.log 2>&1 &
allprocs="$allprocs ${!}"
$tpcc_load -M 28000 -h -b 10501 -e 11375 >> loadhist12.log 2>&1 &
allprocs="$allprocs ${!}"
$tpcc_load -M 28000 -h -b 11376 -e 12250 >> loadhist13.log 2>&1 &
allprocs="$allprocs ${!}"
$tpcc_load -M 28000 -h -b 12251 -e 13125 >> loadhist14.log 2>&1 &
allprocs="$allprocs ${!}"
$tpcc_load -M 28000 -h -b 13126 -e 14000 >> loadhist15.log 2>&1 &
allprocs="$allprocs ${!}"
$tpcc_load -M 28000 -h -b 14001 -e 14875 >> loadhist16.log 2>&1 &
allprocs="$allprocs ${!}"
$tpcc_load -M 28000 -h -b 14876 -e 15750 >> loadhist17.log 2>&1 &
allprocs="$allprocs ${!}"
$tpcc_load -M 28000 -h -b 15751 -e 16625 >> loadhist18.log 2>&1 &
allprocs="$allprocs ${!}"
$tpcc_load -M 28000 -h -b 16626 -e 17500 >> loadhist19.log 2>&1 &
allprocs="$allprocs ${!}"
$tpcc_load -M 28000 -h -b 17501 -e 18375 >> loadhist20.log 2>&1 &
allprocs="$allprocs ${!}"
$tpcc_load -M 28000 -h -b 18376 -e 19250 >> loadhist21.log 2>&1 &
allprocs="$allprocs ${!}"
$tpcc_load -M 28000 -h -b 19251 -e 20125 >> loadhist22.log 2>&1 &
allprocs="$allprocs ${!}"
$tpcc_load -M 28000 -h -b 20126 -e 21000 >> loadhist23.log 2>&1 &
allprocs="$allprocs ${!}"
$tpcc_load -M 28000 -h -b 21001 -e 21875 >> loadhist24.log 2>&1 &
allprocs="$allprocs ${!}"
$tpcc_load -M 28000 -h -b 21876 -e 22750 >> loadhist25.log 2>&1 &
```

```
allprocs="$allprocs ${!}"
$tpcc_load -M 28000 -h -b 22751 -e 23625 >> loadhist26.log 2>&1 &
allprocs="$allprocs ${!}"
$tpcc_load -M 28000 -h -b 23626 -e 24500 >> loadhist27.log 2>&1 &
allprocs="$allprocs ${!}"
$tpcc_load -M 28000 -h -b 24501 -e 25375 >> loadhist28.log 2>&1 &
allprocs="$allprocs ${!}"
$tpcc_load -M 28000 -h -b 25376 -e 26250 >> loadhist29.log 2>&1 &
allprocs="$allprocs ${!}"
$tpcc_load -M 28000 -h -b 26251 -e 27125 >> loadhist30.log 2>&1 &
allprocs="$allprocs ${!}"
$tpcc_load -M 28000 -h -b 27126 -e 28000 >> loadhist31.log 2>&1 &
allprocs="$allprocs ${!}"
error=0
for curproc in $allprocs; do
    wait $curproc
    error=`expr $? + $error`
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/tpc-c/tpcc28000wh/scripts/evenload.sh Wed
Mar 30 15:53:46 PST 2005
rm -f loadnord*.log
cd $tpcc_bench
allprocs=
$tpcc_load -M 28000 -n -b 1 -e 875 >> loadnord0.log 2>&1 &
allprocs="$allprocs ${!}"
$tpcc_load -M 28000 -n -b 876 -e 1750 >> loadnord1.log 2>&1 &
allprocs="$allprocs ${!}"
$tpcc_load -M 28000 -n -b 1751 -e 2625 >> loadnord2.log 2>&1 &
allprocs="$allprocs ${!}"
$tpcc_load -M 28000 -n -b 2626 -e 3500 >> loadnord3.log 2>&1 &
allprocs="$allprocs ${!}"
$tpcc_load -M 28000 -n -b 3501 -e 4375 >> loadnord4.log 2>&1 &
allprocs="$allprocs ${!}"
$tpcc_load -M 28000 -n -b 4376 -e 5250 >> loadnord5.log 2>&1 &
allprocs="$allprocs ${!}"
$tpcc_load -M 28000 -n -b 5251 -e 6125 >> loadnord6.log 2>&1 &
allprocs="$allprocs ${!}"
$tpcc_load -M 28000 -n -b 6126 -e 7000 >> loadnord7.log 2>&1 &
allprocs="$allprocs ${!}"
$tpcc_load -M 28000 -n -b 7001 -e 7875 >> loadnord8.log 2>&1 &
allprocs="$allprocs ${!}"
$tpcc_load -M 28000 -n -b 7876 -e 8750 >> loadnord9.log 2>&1 &
allprocs="$allprocs ${!}"
$tpcc_load -M 28000 -n -b 8751 -e 9625 >> loadnord10.log 2>&1 &
allprocs="$allprocs ${!}"
$tpcc_load -M 28000 -n -b 9626 -e 10500 >> loadnord11.log 2>&1 &
allprocs="$allprocs ${!}"
$tpcc_load -M 28000 -n -b 10501 -e 11375 >> loadnord12.log 2>&1 &
```

```

allprocs="$allprocs ${!}"
$tpcc_load -M 28000 -n -b 11376 -e 12250 >> loadnord13.log 2>&1 &
allprocs="$allprocs ${!}"
$tpcc_load -M 28000 -n -b 12251 -e 13125 >> loadnord14.log 2>&1 &
allprocs="$allprocs ${!}"
$tpcc_load -M 28000 -n -b 13126 -e 14000 >> loadnord15.log 2>&1 &
allprocs="$allprocs ${!}"
$tpcc_load -M 28000 -n -b 14001 -e 14875 >> loadnord16.log 2>&1 &
allprocs="$allprocs ${!}"
$tpcc_load -M 28000 -n -b 14876 -e 15750 >> loadnord17.log 2>&1 &
allprocs="$allprocs ${!}"
$tpcc_load -M 28000 -n -b 15751 -e 16625 >> loadnord18.log 2>&1 &
allprocs="$allprocs ${!}"
$tpcc_load -M 28000 -n -b 16626 -e 17500 >> loadnord19.log 2>&1 &
allprocs="$allprocs ${!}"
$tpcc_load -M 28000 -n -b 17501 -e 18375 >> loadnord20.log 2>&1 &
allprocs="$allprocs ${!}"
$tpcc_load -M 28000 -n -b 18376 -e 19250 >> loadnord21.log 2>&1 &
allprocs="$allprocs ${!}"
$tpcc_load -M 28000 -n -b 19251 -e 20125 >> loadnord22.log 2>&1 &
allprocs="$allprocs ${!}"
$tpcc_load -M 28000 -n -b 20126 -e 21000 >> loadnord23.log 2>&1 &
allprocs="$allprocs ${!}"
$tpcc_load -M 28000 -n -b 21001 -e 21875 >> loadnord24.log 2>&1 &
allprocs="$allprocs ${!}"
$tpcc_load -M 28000 -n -b 21876 -e 22750 >> loadnord25.log 2>&1 &
allprocs="$allprocs ${!}"
$tpcc_load -M 28000 -n -b 22751 -e 23625 >> loadnord26.log 2>&1 &
allprocs="$allprocs ${!}"
$tpcc_load -M 28000 -n -b 23626 -e 24500 >> loadnord27.log 2>&1 &
allprocs="$allprocs ${!}"
$tpcc_load -M 28000 -n -b 24501 -e 25375 >> loadnord28.log 2>&1 &
allprocs="$allprocs ${!}"
$tpcc_load -M 28000 -n -b 25376 -e 26250 >> loadnord29.log 2>&1 &
allprocs="$allprocs ${!}"
$tpcc_load -M 28000 -n -b 26251 -e 27125 >> loadnord30.log 2>&1 &
allprocs="$allprocs ${!}"
$tpcc_load -M 28000 -n -b 27126 -e 28000 >> loadnord31.log 2>&1 &
allprocs="$allprocs ${!}"
error=0
for curproc in $allprocs; do
    wait $curproc
    error=`expr $? + $error`
done
exit `expr $error != 0`

```

## LOADORDRORDL.SH

```

#created automatically by /home/tpc-c/tpcc28000wh/scripts/evenload.sh Wed
Mar 30 15:53:46 PST 2005
rm -f loadordrordl*.log
cd $tpcc_bench
allprocs=
$tpcc_load -M 28000 -o ${tpcc_disks_location}dummy0.dat -b 1 -e 875 >>
loadordrordl0.log 2>&1 &
allprocs="$allprocs ${!}"
$tpcc_load -M 28000 -o ${tpcc_disks_location}dummy1.dat -b 876 -e 1750 >>
loadordrordl1.log 2>&1 &
allprocs="$allprocs ${!}"

```

```

$tpcc_load -M 28000 -o ${tpcc_disks_location}dummy2.dat -b 1751 -e 2625 >>
loadordrordl2.log 2>&1 &
allprocs="$allprocs ${!}"
$tpcc_load -M 28000 -o ${tpcc_disks_location}dummy3.dat -b 2626 -e 3500 >>
loadordrordl3.log 2>&1 &
allprocs="$allprocs ${!}"
$tpcc_load -M 28000 -o ${tpcc_disks_location}dummy4.dat -b 3501 -e 4375 >>
loadordrordl4.log 2>&1 &
allprocs="$allprocs ${!}"
$tpcc_load -M 28000 -o ${tpcc_disks_location}dummy5.dat -b 4376 -e 5250 >>
loadordrordl5.log 2>&1 &
allprocs="$allprocs ${!}"
$tpcc_load -M 28000 -o ${tpcc_disks_location}dummy6.dat -b 5251 -e 6125 >>
loadordrordl6.log 2>&1 &
allprocs="$allprocs ${!}"
$tpcc_load -M 28000 -o ${tpcc_disks_location}dummy7.dat -b 6126 -e 7000 >>
loadordrordl7.log 2>&1 &
allprocs="$allprocs ${!}"
$tpcc_load -M 28000 -o ${tpcc_disks_location}dummy8.dat -b 7001 -e 7875 >>
loadordrordl8.log 2>&1 &
allprocs="$allprocs ${!}"
$tpcc_load -M 28000 -o ${tpcc_disks_location}dummy9.dat -b 7876 -e 8750 >>
loadordrordl9.log 2>&1 &
allprocs="$allprocs ${!}"
$tpcc_load -M 28000 -o ${tpcc_disks_location}dummy10.dat -b 8751 -e 9625
>> loadordrordl10.log 2>&1 &
allprocs="$allprocs ${!}"
$tpcc_load -M 28000 -o ${tpcc_disks_location}dummy11.dat -b 9626 -e 10500
>> loadordrordl11.log 2>&1 &
allprocs="$allprocs ${!}"
$tpcc_load -M 28000 -o ${tpcc_disks_location}dummy12.dat -b 10501 -e 11375
>> loadordrordl12.log 2>&1 &
allprocs="$allprocs ${!}"
$tpcc_load -M 28000 -o ${tpcc_disks_location}dummy13.dat -b 11376 -e 12250
>> loadordrordl13.log 2>&1 &
allprocs="$allprocs ${!}"
$tpcc_load -M 28000 -o ${tpcc_disks_location}dummy14.dat -b 12251 -e 13125
>> loadordrordl14.log 2>&1 &
allprocs="$allprocs ${!}"
$tpcc_load -M 28000 -o ${tpcc_disks_location}dummy15.dat -b 13126 -e 14000
>> loadordrordl15.log 2>&1 &
allprocs="$allprocs ${!}"
$tpcc_load -M 28000 -o ${tpcc_disks_location}dummy16.dat -b 14001 -e 14875
>> loadordrordl16.log 2>&1 &
allprocs="$allprocs ${!}"
$tpcc_load -M 28000 -o ${tpcc_disks_location}dummy17.dat -b 14876 -e 15750
>> loadordrordl17.log 2>&1 &
allprocs="$allprocs ${!}"
$tpcc_load -M 28000 -o ${tpcc_disks_location}dummy18.dat -b 15751 -e 16625
>> loadordrordl18.log 2>&1 &
allprocs="$allprocs ${!}"
$tpcc_load -M 28000 -o ${tpcc_disks_location}dummy19.dat -b 16626 -e 17500
>> loadordrordl19.log 2>&1 &
allprocs="$allprocs ${!}"
$tpcc_load -M 28000 -o ${tpcc_disks_location}dummy20.dat -b 17501 -e 18375
>> loadordrordl20.log 2>&1 &
allprocs="$allprocs ${!}"
$tpcc_load -M 28000 -o ${tpcc_disks_location}dummy21.dat -b 18376 -e 19250
>> loadordrordl21.log 2>&1 &
allprocs="$allprocs ${!}"

```

```

$tpcc_load -M 28000 -o ${tpcc_disks_location}dummy22.dat -b 19251 -e 20125
>> loadordrordl22.log 2>&1 &
allprocs="$allprocs ${!}"
$tpcc_load -M 28000 -o ${tpcc_disks_location}dummy23.dat -b 20126 -e 21000
>> loadordrordl23.log 2>&1 &
allprocs="$allprocs ${!}"
$tpcc_load -M 28000 -o ${tpcc_disks_location}dummy24.dat -b 21001 -e 21875
>> loadordrordl24.log 2>&1 &
allprocs="$allprocs ${!}"
$tpcc_load -M 28000 -o ${tpcc_disks_location}dummy25.dat -b 21876 -e 22750
>> loadordrordl25.log 2>&1 &
allprocs="$allprocs ${!}"
$tpcc_load -M 28000 -o ${tpcc_disks_location}dummy26.dat -b 22751 -e 23625
>> loadordrordl26.log 2>&1 &
allprocs="$allprocs ${!}"
$tpcc_load -M 28000 -o ${tpcc_disks_location}dummy27.dat -b 23626 -e 24500
>> loadordrordl27.log 2>&1 &
allprocs="$allprocs ${!}"
$tpcc_load -M 28000 -o ${tpcc_disks_location}dummy28.dat -b 24501 -e 25375
>> loadordrordl28.log 2>&1 &
allprocs="$allprocs ${!}"
$tpcc_load -M 28000 -o ${tpcc_disks_location}dummy29.dat -b 25376 -e 26250
>> loadordrordl29.log 2>&1 &
allprocs="$allprocs ${!}"
$tpcc_load -M 28000 -o ${tpcc_disks_location}dummy30.dat -b 26251 -e 27125
>> loadordrordl30.log 2>&1 &
allprocs="$allprocs ${!}"
$tpcc_load -M 28000 -o ${tpcc_disks_location}dummy31.dat -b 27126 -e 28000
>> loadordrordl31.log 2>&1 &
allprocs="$allprocs ${!}"
error=0
for curproc in $allprocs; do
    wait $curproc
    error=`expr $? + $error`
done
exit `expr $error != 0`

```

## LOADSTOK.SH

```

#created automatically by /home/tpc-c/tpcc28000wh/scripts/evenload.sh Wed
Mar 30 15:53:47 PST 2005
rm -f loadstok*.log
cd $tpcc_bench
allprocs=
$tpcc_load -M 28000 -S -j 1 -k 3125 >> loadstok0.log 2>&1 &
allprocs="$allprocs ${!}"
$tpcc_load -M 28000 -S -j 3126 -k 6250 >> loadstok1.log 2>&1 &
allprocs="$allprocs ${!}"
$tpcc_load -M 28000 -S -j 6251 -k 9375 >> loadstok2.log 2>&1 &
allprocs="$allprocs ${!}"
$tpcc_load -M 28000 -S -j 9376 -k 12500 >> loadstok3.log 2>&1 &
allprocs="$allprocs ${!}"
$tpcc_load -M 28000 -S -j 12501 -k 15625 >> loadstok4.log 2>&1 &
allprocs="$allprocs ${!}"
$tpcc_load -M 28000 -S -j 15626 -k 18750 >> loadstok5.log 2>&1 &
allprocs="$allprocs ${!}"
$tpcc_load -M 28000 -S -j 18751 -k 21875 >> loadstok6.log 2>&1 &
allprocs="$allprocs ${!}"
$tpcc_load -M 28000 -S -j 21876 -k 25000 >> loadstok7.log 2>&1 &

```

```

allprocs="$allprocs ${!}"
$tpcc_load -M 28000 -S -j 25001 -k 28125 >> loadstok8.log 2>&1 &
allprocs="$allprocs ${!}"
$tpcc_load -M 28000 -S -j 28126 -k 31250 >> loadstok9.log 2>&1 &
allprocs="$allprocs ${!}"
$tpcc_load -M 28000 -S -j 31251 -k 34375 >> loadstok10.log 2>&1 &
allprocs="$allprocs ${!}"
$tpcc_load -M 28000 -S -j 34376 -k 37500 >> loadstok11.log 2>&1 &
allprocs="$allprocs ${!}"
$tpcc_load -M 28000 -S -j 37501 -k 40625 >> loadstok12.log 2>&1 &
allprocs="$allprocs ${!}"
$tpcc_load -M 28000 -S -j 40626 -k 43750 >> loadstok13.log 2>&1 &
allprocs="$allprocs ${!}"
$tpcc_load -M 28000 -S -j 43751 -k 46875 >> loadstok14.log 2>&1 &
allprocs="$allprocs ${!}"
$tpcc_load -M 28000 -S -j 46876 -k 50000 >> loadstok15.log 2>&1 &
allprocs="$allprocs ${!}"
$tpcc_load -M 28000 -S -j 50001 -k 53125 >> loadstok16.log 2>&1 &
allprocs="$allprocs ${!}"
$tpcc_load -M 28000 -S -j 53126 -k 56250 >> loadstok17.log 2>&1 &
allprocs="$allprocs ${!}"
$tpcc_load -M 28000 -S -j 56251 -k 59375 >> loadstok18.log 2>&1 &
allprocs="$allprocs ${!}"
$tpcc_load -M 28000 -S -j 59376 -k 62500 >> loadstok19.log 2>&1 &
allprocs="$allprocs ${!}"
$tpcc_load -M 28000 -S -j 62501 -k 65625 >> loadstok20.log 2>&1 &
allprocs="$allprocs ${!}"
$tpcc_load -M 28000 -S -j 65626 -k 68750 >> loadstok21.log 2>&1 &
allprocs="$allprocs ${!}"
$tpcc_load -M 28000 -S -j 68751 -k 71875 >> loadstok22.log 2>&1 &
allprocs="$allprocs ${!}"
$tpcc_load -M 28000 -S -j 71876 -k 75000 >> loadstok23.log 2>&1 &
allprocs="$allprocs ${!}"
$tpcc_load -M 28000 -S -j 75001 -k 78125 >> loadstok24.log 2>&1 &
allprocs="$allprocs ${!}"
$tpcc_load -M 28000 -S -j 78126 -k 81250 >> loadstok25.log 2>&1 &
allprocs="$allprocs ${!}"
$tpcc_load -M 28000 -S -j 81251 -k 84375 >> loadstok26.log 2>&1 &
allprocs="$allprocs ${!}"
$tpcc_load -M 28000 -S -j 84376 -k 87500 >> loadstok27.log 2>&1 &
allprocs="$allprocs ${!}"
$tpcc_load -M 28000 -S -j 87501 -k 90625 >> loadstok28.log 2>&1 &
allprocs="$allprocs ${!}"
$tpcc_load -M 28000 -S -j 90626 -k 93750 >> loadstok29.log 2>&1 &
allprocs="$allprocs ${!}"
$tpcc_load -M 28000 -S -j 93751 -k 96875 >> loadstok30.log 2>&1 &
allprocs="$allprocs ${!}"
$tpcc_load -M 28000 -S -j 96876 -k 100000 >> loadstok31.log 2>&1 &
allprocs="$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=/oradata/data28000/
```

```
#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.
```

## OPTIONS.SH

```
tpcc_os='unix'  
tpcc_version='ttt'  
tpcc_ldrive='61'  
tpcc_scale='28000'  
tpcc_np='1'  
tpcc_cpu='16'  
tpcc_memsize='409600'  
tpcc_runlen='24'  
tpcc_compress='t'  
tpcc_overflow='t'  
tpcc_defbs='2'
```

```
tpcc_ieee_number='f'  
tpcc_numfiles='0'  
  
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=1-1-1-1-1-1-1-
```

```
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='2'  
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='16K'  
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='16K'  
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='16K'  
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='16K'  
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
```

## 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;
```

## 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`
      if test $ptr -gt $tpcc_np ; then
        ptr=1
      fi
    done
  fi
fi
```

```

    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
else
/bin/sh $tpcc_genscripts_dir/${1}.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 $?

```

## 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_totSPACE;

```

```

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_%' 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_totospace;
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_totospace;
spool off;

```

## 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 "$$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
        tpcc_stok_4_RowPerBlock=14
    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`"
  if test $tpcc_defbs = 4 ; then
    tpcc_stok_rsize="nullauto "$tpcc_stok_rsize" 270`"
  fi
  if expr "x$tpcc_ieee_number" = "xt" >/dev/null; then
    tpcc_stok_rsize=290
  fi
tpcc_stok_cols=`cat <<!
  s_i_id-number
  s_w_id-number
  s_quantity-number
  s_ytd-number
  s_order_cnt-number
  s_remote_cnt-number
  s_data-varchar2(50)
  s_dist_01-char(24)
  s_dist_02-char(24)
  s_dist_03-char(24)
  s_dist_04-char(24)
  s_dist_05-char(24)
  s_dist_06-char(24)
  s_dist_07-char(24)
  s_dist_08-char(24)
  s_dist_09-char(24)
  s_dist_10-char(24)
!
`
else
tpcc_stok_rsize="nullauto "$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 - 1)"
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
  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=tttfffft
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=ordr

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_row_factor=9000
tpcc_nord_2_RowPerBlock=90
tpcc_nord_4_RowPerBlock=210
tpcc_nord_8_RowPerBlock=440
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_bcxpr 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
tpcc_cust_overflow_size=0
if expr x$tpcc_overflow = xt > /dev/null; then
    tpcc_cust_overflow_size=500
    if expr x$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=10
    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=22
    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 "$tpcc_cust_rsize" 180`"
    else
        if expr x$tpcc_ieee_number = xt > /dev/null; then
            tpcc_cust_rsize="nullauto "$tpcc_cust_rsize" 205`"
        else
            tpcc_cust_rsize="nullauto "$tpcc_cust_rsize" 360`"
        fi
    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-char(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=,
        # 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.
        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
    done
}

```

```

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
    name=`echo $curcol | cut -f1 -d-`
    type=`echo $curcol | cut -f2 -d-`
    if expr "x$tpcc_ieee_number" = "xt" >/dev/null; then
      if expr "$name" = "c_balance" \|| "$name" = "d_ytd" \|| "$name" =
"s_ytd" \|| "$name" = "w_ytd" >/dev/null; then
        type="binary_double"
      fi
      if expr "$name" = "c_ytd_payment" \|| "$name" = "c_payment_cnt"
\|| "$name" = "c_delivery_cnt" \|| "$name" = "h_amount" \|| "$name" =
"i_price" \|| "$name" = "ol_amount" \|| "$name" = "ol_quantity" \|| "$name" =
"s_quantity" \|| "$name" = "s_order_cnt" \|| "$name" = "s_remote_cnt" >
/dev/null; then
        type="binary_float"
      fi
    fi
    if expr x$allcols = xt > /dev/null; then
      #
      echo $addcomma $name $type `echo $curcol | cut -f3 -d- | tr . `
      ` $sortsql $compresssql
      echo $addcomma $name $type `echo $curcol | cut -f3 -d- | tr . `
      ` $sortsql
    else
      #
      echo $addcomma $name $type $sortsql $compresssql
      echo $addcomma $name $type $sortsql
    fi
  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 + \( $wareextra / $tpcc_np \)`
    partvalue=`expr 1 + $waredivide`
    if test $partcount = `expr $tpcc_np - 1` ; then
      partvalue="maxvalue"
    fi
    echo $addcomma partition ${1}_${partcount} values less than \(
$partvalue \) 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_iordr2() {
  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 $addcomma partition iordr2_${partcount} values less than `('
$warenum `)'` tablespace iordr2_${partcount}
    addcomma=,
    partcount=`expr $partcount + 1`
  done
  echo `)'`
}

tpcc_ware_tsfileinc=$tpcc_np
tpcc_dist_tsfileinc=$tpcc_np
tpcc_nord_tsfileinc=$tpcc_np
tpcc_aware_tsfileinc=$tpcc_np
tpcc_idist_tsfileinc=$tpcc_np
tpcc_inord_tsfileinc=$tpcc_np
tpcc_item_tsfileinc=1
tpcc_iitem_tsfileinc=1

if test $tpcc_np -eq 1 ; then

```

```
tpcc_iorder2_indices=4-3-2-1-
fi
```

```
tpcc_icust1_2_RowPerBlock=84
tpcc_icust1_4_RowPerBlock=175
tpcc_icust1_8_RowPerBlock=360
tpcc_icust1_16_RowPerBlock=720
```

```
tpcc_icust2_2_RowPerBlock=36
tpcc_icust2_4_RowPerBlock=80
tpcc_icust2_8_RowPerBlock=165
tpcc_icust2_16_RowPerBlock=330
```

```
tpcc_istok_2_RowPerBlock=95
tpcc_istok_4_RowPerBlock=200
tpcc_istok_8_RowPerBlock=405
tpcc_istok_16_RowPerBlock=810
```

```
if expr $tpcc_scale < 501 > /dev/null; then
  tpcc_icust1_index_parallel=`$tpcc_bcexpr $tpcc_cpu \* 2`
  tpcc_icust2_index_parallel=`$tpcc_bcexpr $tpcc_cpu \* 2`
  tpcc_iorder2_index_parallel=`$tpcc_bcexpr $tpcc_cpu \* 2`
  tpcc_istok_index_parallel=`$tpcc_bcexpr $tpcc_cpu \* 2`
else
  tpcc_icust1_index_parallel=`$tpcc_bcexpr $tpcc_cpu \* 4`
  tpcc_icust2_index_parallel=`$tpcc_bcexpr $tpcc_cpu \* 4`
  tpcc_iorder2_index_parallel=`$tpcc_bcexpr $tpcc_cpu \* 4`
  tpcc_istok_index_parallel=`$tpcc_bcexpr $tpcc_cpu \* 4`
fi
```

## 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 inittpcc;
/
show errors
exit
```

## 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 /*+ leading(s) use_nl(i) */
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;
```

## 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);
    COMMIT;
    EXIT;
  EXCEPTION
    WHEN not_serializable OR deadlock OR snapshot_too_old
    THEN
      ROLLBACK;
      :retry := :retry + 1;
  END LOOP;
END;

```

```

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, inittppcc.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
BULK COLLECT INTO :i_price, :i_name, :s_quantity, inittppcc.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, inittppcc.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
BULK COLLECT INTO :i_price, :i_name, :s_quantity, inittppcc.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
BULK COLLECT INTO :i_price, :i_name, :s_quantity, inittppcc.s_dist,
                 :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
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);
inittppcc.s_dist(temp_index + 1) := inittppcc.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;
inittppcc.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, inittppcc.idx1arr(idx),
inittppcc.nulldate,
:ol_i_id(idx), :ol_supply_w_id(idx),
:ol_quantity(idx), :ol_amount(idx),
inittppcc.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    ord_r0;

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
MYSQQLDR=sqldr
MYSQPLUS=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 ord_r_${START}.p"
    echo "mkfifo ord_r_${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 " $MYSQQLDR tpcc/tpcc control=ordrx1.ctl log=ordr${START}.log
bad=ordr${START} ".bad data=$dir_string"ordr_${START}.p
discard=ordr${START}.dsc &"
    echo "proc_ordr${START}=\${!}"

    echo " $MYSQQLDR tpcc/tpcc control=ordlx1.ctl log=ordl${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
```

```

done

START=1
let END=START+INCR

while [ $NUMWAREHOUSE -ge $END ]
do

    echo "wait \$proc_tpccload$START"
    echo "status_proc_tpccload$START=\$?"
    echo "echo \$status_proc_tpccload$START"
    echo " "

    echo "wait \$proc_ordl$START"
    echo "status_proc_ordl$START=\$?"
    echo "echo \$status_proc_ordl$START"
    echo " "

    echo "wait \$proc_tpccload$START"
    echo "status_proc_ordr$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

\*/

#ifndef \_\_dpbcore\_\_  
# define \_\_dpbcore\_\_

```

#include <stdio.h>
#include "dpbpctl.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      DPBETIME.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
*/

#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 */

#ifdef 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(pcntl *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 __dppcntl__
# define __dppcntl__

#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
*/

#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 /* __dpbpctl__ */

                                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 "dpbpctl.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,          /* spawn process */
                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;
} /* End of ORA_NT */

}

#ifdef __STDC__
int dbpgetprty(char *os_pri, char *prty_str, int os_pri_len)
#else
int dbpgetprty(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

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```

/*
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(samtgid);             /* 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_PSX)
#define GET_P_STATS
#endif /* sequent */

```

```

#ifdef aix || defined(AIXRIOS)
#define TIME_W_GETTIME
#define CPU_W_TIMES
#define GETRU_STATS

```

```

#endif /* AIXRIOS */

#ifdef defined(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 defined(TIME_W_GETTIME) || defined(CPU_W_GETTRU) ||
defined(GETRU_STATS)
#include <sys/time.h>
#endif /* TIME_W_GETTIME || CPU_W_GETTRU || GETRU_STATS */

#ifdef defined(CPU_W_GETTRU) || defined(GETRU_STATS)
#include <sys/resource.h>
#endif /* CPU_W_GETTRU || GETRU_STATS */

#ifdef defined(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.LINUX

```

#gcc=/usr/local/bin/gcc
#-----+
#          Copyright (c) 1996 Oracle Corp, Redwood Shores, CA
#          OPEN SYSTEMS PERFORMANCE GROUP
#          All Rights Reserved
#-----+
# FILENAME
#   Makefile
# DESCRIPTION
#   Makefile for batch driver, load program and tx testing.
#-----+
#
# Programs:
#
#   tpcc.exe       : OCI TPC-C generator
#   tpccload.exe  : Database loader for TPC-C
#   single_txn.exe : OCI program to test the TPC-C transactions
#   getrand.exe   :
#   90per.exe     :
#   runtpb.exe    :
#   sleep.exe     :
#   press_return.exe :
#   runid.exe     :
#
all: compile load

#include $(ORACLE_HOME)/bench/buildtools/prefix.mk

#I_SYM=-I
#include $(ORACLE_HOME)/rdbms/lib/env_rdbms.mk

#LINK=/opt/SunProd/SUNWspro6.1/bin/./WS6U1/bin/cc
#CC=/opt/SunProd/SUNWspro6.1/bin/./WS6U1/bin/cc
LINK=/usr/bin/gcc
CC=/usr/bin/gcc

#LDFLAGS=-L$(ORACLE_HOME)/rdbms/lib/ -L$(ORACLE_HOME)/lib/ -dy \
#-L$(ORACLE_HOME)/rdbms/lib/ -L$(ORACLE_HOME)/lib/ \
#$(ORACLE_HOME)/rdbms/lib/defopt.o -lclntsh \
#`cat $(ORACLE_HOME)/lib/sysliblist` \
#-o $@

LDFLAGS=-L$(ORACLE_HOME)/rdbms/lib/ -L$(ORACLE_HOME)/lib/ -dy \
-L$(ORACLE_HOME)/rdbms/lib/ -L$(ORACLE_HOME)/lib/ \
$(ORACLE_HOME)/rdbms/lib/defopt.o -lclntsh \
`cat $(ORACLE_HOME)/lib/sysliblist` \
-L$(ORACLE_HOME)/lib -o $@

#-R$(ORACLE_HOME)/lib -laio -lthread -lposix4 -lkstat -lm -o $@

I_SYM=-I

TARGS=compile cleanup
REMOVE=rm

DPB_LIB_DIR=../lib
DPB_LIB=$(DPB_LIB_DIR)/dpbllibunix.o

```

```

TPCBIN=../bin
INCLUDE=$(I_SYM) $(I_SYM) $(ORACLE_HOME)/rdbms/demo \
 $(I_SYM) $(ORACLE_HOME)/rdbms/public \
 $(I_SYM) $(ORACLE_HOME)/rdbms/include \
 $(I_SYM) $(ORACLE_HOME)/plssql/public \
 $(I_SYM) $(ORACLE_HOME)/network/public \
 $(I_SYM) $(DPB_LIB_DIR)
ITUX=$(I_SYM) $(ROOTDIR)/include

MEMBS=
OBS=tpccload.o c_trans.o c_drv_o7.o c_dump.o tpccpl.o getrand.o 90per.o
report.o errrpt.o sleep.o press_return.o runid.o
CTAN_OBJS=plnew.o plpay.o plord.o pldel.o plsto.o
CTANPOCI_OBJS=plnew.o plpay_oci.o plord.o pldel.o plsto.o
CTANTUX_OBJS=plnew_tux.o plpay.o plord.o pldel_tux.o plsto.o
OTHER_OBJS=c_drv_val.o test_drv.o test_sample.o test_tran.o
single_txn_ran.o
TUX_OBJS=c_drv_tux.o tpccpl_tux.o tpccsvr.o

files:

compile: $(OBS) $(DPB_LIB)
        @-$(DOTARGS)

load: $(TPCBIN)/tpcc.exe $(TPCBIN)/tpccload.exe \
      $(TPCBIN)/single_txn.exe $(TPCBIN)/90per.exe \
      $(TPCBIN)/runtpb.exe $(TPCBIN)/getrand.exe \
      $(TPCBIN)/sleep.exe $(TPCBIN)/runid.exe \
      $(TPCBIN)/single_txn_ran.exe \
      $(TPCBIN)/press_return.exe
        @-$(DOTARGS)

cleanup:
$(REMOVE) $(OBS) $(CTAN_OBJS) $(CTANTUX_OBJS) $(OTHER_OBJS) \
$(TPCBIN)/tpcc.exe $(TPCBIN)/tpccload.exe \
$(TPCBIN)/single_txn.exe $(TPCBIN)/90per.exe \
$(TPCBIN)/runtpb.exe $(TPCBIN)/getrand.exe \
$(TPCBIN)/sleep.exe $(TPCBIN)/runid.exe \
$(TPCBIN)/single_txn_ran.exe \
$(TPCBIN)/press_return.exe \
$(TUX_OBJS)
        @-$(DOTARGS)

$(DPB_LIB):
        ( cd $(DPB_LIB_DIR); $(MAKE) -f Makefile.linux )

report.o: report.c results.h
        $(CC) $(CFLAGS) $(INCLUDE) -c report.c

errrpt.o: errrpt.c results.h
        $(CC) $(CFLAGS) $(INCLUDE) -c errrpt.c

sleep.o: sleep.c
        $(CC) $(CFLAGS) $(INCLUDE) -c sleep.c

press_return.o: press_return.c
        $(CC) $(CFLAGS) $(INCLUDE) -c press_return.c

runid.o: runid.c
        $(CC) $(CFLAGS) $(INCLUDE) -c runid.c

```

```

tpccload.o: tpccload.c tpcc.h
        $(CC) $(CFLAGS) $(INCLUDE) -c tpccload.c

c_drv_o7.o: c_drv_o7.c tpcc.h
        $(CC) $(CFLAGS) $(INCLUDE) -c c_drv_o7.c

c_drv_val.o: c_drv.c tpcc.h
        $(CP) c_drv.c c_drv_val.c
        -$(CC) $(CFLAGS) -DVALIDATE $(INCLUDE) -c c_drv_val.c
        $(REMOVE) c_drv_val.c

c_drv_tux.o: c_drv.c tpcc.h
        $(CP) c_drv.c c_drv_tux.c
        -$(CC) $(CFLAGS) -DTUX $(INCLUDE) $(ITUX) -c c_drv_tux.c
        $(REMOVE) c_drv_tux.c

c_dump.o: c_dump.c tpcc.h
        $(CC) $(CFLAGS) $(INCLUDE) -c c_dump.c

single_txn.o: single_txn.c tpcc.h
        $(CC) $(CFLAGS) $(INCLUDE) -c single_txn.c

single_txn_ran.o: single_txn_ran.c tpcc.h
        $(CC) $(CFLAGS) $(INCLUDE) -c single_txn_ran.c

runtpb.o: runtpb.c
        $(CC) $(CFLAGS) -DORA_AUX $(INCLUDE) -c runtpb.c

c_trans.o: $(CTAN_OBJS)
        $(LD) -r -o $@ $(CTAN_OBJS)

c_trans_tux.o: $(CTANTUX_OBJS)
        $(LD) -r -o $@ $(CTANTUX_OBJS)

tpccpl.o: tpccpl.c tpcc.h
        $(CC) $(CFLAGS) $(INCLUDE) -c tpccpl.c

tpccpl_tux.o: tpccpl.c tpcc.h
        $(CP) tpccpl.c tpccpl_tux.c
        -$(CC) $(CFLAGS) -DTUX $(INCLUDE) $(ITUX) -c tpccpl_tux.c
        $(REMOVE) tpccpl_tux.c

plnew_tux.o: plnew.c tpcc.h
        $(CP) plnew.c plnew_tux.c
        -$(CC) $(CFLAGS) -DTUX $(INCLUDE) $(ITUX) -c plnew_tux.c
        $(REMOVE) plnew_tux.c

plnew.o: plnew.c tpcc.h
        $(CC) $(CFLAGS) $(INCLUDE) -c plnew.c

plpay.o: plpay.c tpcc.h
        $(CC) $(CFLAGS) $(INCLUDE) -c plpay.c

plord.o: plord.c tpcc.h
        $(CC) $(CFLAGS) $(INCLUDE) -c plord.c

pldel_tux.o: pldel.c tpcc.h
        $(CP) pldel.c pldel_tux.c
        -$(CC) $(CFLAGS) -DTUX $(INCLUDE) $(ITUX) -c pldel_tux.c
        $(REMOVE) pldel_tux.c

```

```

pldel.o: pldel.c tpcc.h
    $(CC) $(CFLAGS) $(INCLUDE) -c pldel.c

plsto.o: plsto.c tpcc.h
    $(CC) $(CFLAGS) $(INCLUDE) -c plsto.c

tpccsvr.o: tpccsvr.c tpcc.h
    $(CC) $(CFLAGS) $(INCLUDE) $(ITUX) -c tpccsvr.c

getrand.o: getrand.c
    $(CC) $(CFLAGS) $(INCLUDE) -c getrand.c

90per.o: 90per.c
    $(CC) $(CFLAGS) $(INCLUDE) -c 90per.c

$(TPCBIN)/getrand.exe: getrand.o
    $(LINK) $(LDFLAGS) \
    getrand.o -lc

$(TPCBIN)/sleep.exe: sleep.o
    $(LINK) $(LDFLAGS) \
    sleep.o -lc

$(TPCBIN)/press_return.exe: press_return.o
    $(LINK) $(LDFLAGS) \
    press_return.o -lc

$(TPCBIN)/runid.exe: runid.o
    $(LINK) $(LDFLAGS) \
    runid.o $(DPB_LIB) -lc

$(TPCBIN)/90per.exe: 90per.o
    $(LINK) $(LDFLAGS) \
    90per.o -lc

$(TPCBIN)/tpccload.exe: tpccload.o $(DPB_LIB)
    $(LINK) $(LDFLAGS) \
    tpccload.o $(DPB_LIB) \
    $(SSABED) $(DEF_OPT) $(TTLIBS) -lc

$(TPCBIN)/runtpb.exe: runtpb.o $(DPB_LIB)
    $(LINK) $(LDFLAGS) \
    runtpb.o $(DPB_LIB) \
    $(SSABED) $(DEF_OPT) $(TTLIBS) -lc

$(TPCBIN)/tpcc.exe: c_drv_o7.o c_trans.o tpccpl.o c_dump.o report.o
errrpt.o $(DPB_LIB)
    $(LINK) $(LDFLAGS) \
    c_drv_o7.o c_trans.o tpccpl.o c_dump.o errrpt.o report.o
$(DPB_LIB) \
    $(SSABED) $(DEF_OPT) $(TTLIBS) -lc

$(TPCBIN)/single_txn.exe: single_txn.o $(DPB_LIB) c_trans.o tpccpl.o
c_dump.o
    $(LINK) $(LDFLAGS) \
    single_txn.o c_trans.o tpccpl.o c_dump.o $(DPB_LIB) \
    $(SSABED) $(DEF_OPT) $(TTLIBS) -lc

$(TPCBIN)/single_txn_ran.exe: single_txn_ran.o $(DPB_LIB) c_trans.o
tpccpl.o c_dump.o

```

```

$(LINK) $(LDFLAGS) \
single_txn_ran.o c_trans.o tpccpl.o c_dump.o $(DPB_LIB) \
$(SSABED) $(DEF_OPT) $(TTLIBS) -lc

```

## 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: tpccload.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: tpccload -M <# of wares> [options]
         options: -A load all tables
                  -w load ware table
                  -d load dist table
                  -c load cust table (cluster around c_w_id)
                  -C load cust table (cluster around c_id)
                  -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)
-l <cid#>   beginning cid number (with -C)
-m <cid#>  ending cid number (with -C)
-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
#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 RECOVERR -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 SQLTXTD "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, 30000000, :d_tax, \
3001, :d_name, :d_street_1, :d_street_2, :d_city, :d_state, :d_zip)"

#define SQLTXTCQUERY "select /*+ HASH ( cust ) */ count(*) from cust where
c_w_id = :s_c_w_id and c_d_id = :s_c_d_id and c_id = :s_c_id"

#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 SQLTXTSQUERY "select /*+ HASH ( stok ) */ count(*) from stok where
s_w_id = :s_s_w_id and s_i_id = :s_s_i_id"

#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 SQLTXTO1 "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 SQLTXTO2 "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;
OCIServer *tpcsrv;
OCIError *errhp;
OCISvcCtx *tpcsvc;
OCISession *tpcusr;

OCISmt *curw;
OCISmt *curd;
OCISmt *curc;
OCISmt *curcs;
OCISmt *curh;
OCISmt *curs;
OCISmt *curss;
OCISmt *curi;
OCISmt *curol;
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;

OCIDefine *s_c_ret_bp = (OCIDefine *) 0;
OCIBind *s_c_id_bp = (OCIBind *) 0;
OCIBind *s_c_d_id_bp = (OCIBind *) 0;
OCIBind *s_c_w_id_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;

OCIDefine *s_s_ret_bp = (OCIDefine *) 0;
OCIBind *s_s_i_id_bp = (OCIBind *) 0;
OCIBind *s_s_w_id_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 (cluster around c_w_id\n");
    fprintf (stderr, "\t-C : \tload cust table (cluster around c_id\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-l <cid#> : \tbeginning cid number (with -C)\n");
    fprintf (stderr, "\t-m <cid#> : \tending cid number (with -C)\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 s_c_id;
int s_c_d_id;
int s_c_w_id;
int s_c_count;

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_s_count;
int s_s_i_id;
int s_s_w_id;

int s_i_id[100];
int s_w_id[100];
int s_quantity[100];
char s_dist_01[100][25];
char s_dist_02[100][25];
char s_dist_03[100][25];
char s_dist_04[100][25];
char s_dist_05[100][25];
char s_dist_06[100][25];
char s_dist_07[100][25];
char s_dist_08[100][25];
char s_dist_09[100][25];
char s_dist_10[100][25];
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:AwdcCisShno:b:e:j:k:l:m:g";
int do_A=0;
int do_w=0;
int do_d=0;
int do_i=0;
int do_c=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 aware=0;
int bitem=1;
int eitem=0;
int bcid=1;
int ecid=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 '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 'l': bcid = atoi (*argv++);
        break;
case 'm': ecid = 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 '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': eware = atoi (optarg);
        break;
case 'j': bitem = atoi (optarg);
        break;
case 'k': eitem = atoi (optarg);
        break;
case 'l': bcid = atoi (optarg);
        break;
case 'm': ecid = 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_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_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 (do_C && (do_A || do_c)) {
    fprintf (stderr, "Cluster cust table around c_w_id or c_id?\n");
    myusage ();
}

if (eware <= 0)
    eware = scale;
if (ecid <= 0)
    ecid = CUSTFAC;
if (eitem <= 0)
    eitem = STOCFAC;

if (do_C) {
    if ((bcid < 1) || (bcid > CUSTFAC)) {
        fprintf (stderr, "Invalid beginning cid number: '%d'\n", bcid);
        myusage ();
    }

    if ((ecid < bcid) || (ecid > CUSTFAC)) {
        fprintf (stderr, "Invalid ending cid number: '%d'\n", ecid);
        myusage ();
    }
}

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", eware);
    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);
    OCIServerAttach(tpcsrv, errhp, (text *)0,0,OCI_DEFAULT);
    OCIAttrSet((dvoid *)tpcsvc, OCI_HTYPE_SVCCTX, (dvoid *)tpcsrv,
(ub4)0,OCI_ATTR_SERVER, errhp);
    OCIHandleAlloc((dvoid *)tpcenv, (dvoid **)&tpcusr,
OCI_HTYPE_SESSION, 0 , (dvoid **)0);
    OCIAttrSet((dvoid *)tpcusr, OCI_HTYPE_SESSION, (dvoid *)uid,
(ub4)strlen(uid),OCI_ATTR_USERNAME, errhp);
    OCIAttrSet((dvoid *)tpcusr, OCI_HTYPE_SESSION, (dvoid *)pwd,
(ub4)strlen(pwd),
OCI_ATTR_PASSWORD, errhp);
    OCIERROR(errhp, OCISessionBegin(tpcsvc, errhp, tpcusr,
OCI_CRED_RDBMS, OCI_DEFAULT));

    OCIAttrSet(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) {
        OCIERROR(errhp,OCIHandleAlloc(tpcenv, (dvoid **)&curw),
OCI_HTYPE_STMT, 0, (dvoid**)0));
        OCIERROR(errhp,OCIStmtPrepare(curw, errhp, (text *)SQLTXTW,
strlen((char *)SQLTXTW), (ub4) OCI_NTV_SYNTAX, (ub4)
OCI_DEFAULT));
    }
}

```

```

    if (do_A || do_d) {
        OCIERROR(errhp,OCIHandleAlloc(tpcenv, (dvoid **) (&curd),
OCI_HTYPE_STMT, 0, (dvoid**)0));
        OCIERROR(errhp,OCIStmtPrepare(curd, errhp, (text *)SQLTXTD,
        strlen((char *)SQLTXTD), (ub4) OCI_NTV_SYNTAX, (ub4)
OCI_DEFAULT));
    }

    if (do_A || do_c || do_C) {
        OCIERROR(errhp,OCIHandleAlloc(tpcenv, (dvoid **) (&curc),
OCI_HTYPE_STMT, 0, (dvoid**)0));
        OCIERROR(errhp,OCIStmtPrepare(curc, errhp, (text *)SQLTXTC,
        strlen((char *)SQLTXTC), (ub4) OCI_NTV_SYNTAX, (ub4)
OCI_DEFAULT));
        OCIERROR(errhp,OCIHandleAlloc(tpcenv, (dvoid **) (&curcs),
OCI_HTYPE_STMT, 0, (dvoid**)0));
        OCIERROR(errhp,OCIStmtPrepare(curcs, errhp, (text *)SQLTXTCQUERY,
        strlen((char *)SQLTXTCQUERY), (ub4) OCI_NTV_SYNTAX,
(ub4) OCI_DEFAULT));
    }

    if (do_A || do_h) {
        OCIERROR(errhp,OCIHandleAlloc(tpcenv, (dvoid **) (&curh),
OCI_HTYPE_STMT, 0, (dvoid**)0));
        OCIERROR(errhp,OCIStmtPrepare(curh, errhp, (text *)SQLTXTH,
        strlen((char *)SQLTXTH), (ub4) OCI_NTV_SYNTAX, (ub4)
OCI_DEFAULT));
    }

    if (do_A || do_s || do_S) {
        OCIERROR(errhp,OCIHandleAlloc(tpcenv, (dvoid **) (&curs),
OCI_HTYPE_STMT, 0, (dvoid**)0));
        OCIERROR(errhp,OCIStmtPrepare(curs, errhp, (text *)SQLTXTS,
        strlen((char *)SQLTXTS), (ub4) OCI_NTV_SYNTAX, (ub4)
OCI_DEFAULT));
        OCIERROR(errhp,OCIHandleAlloc(tpcenv, (dvoid **) (&curss),
OCI_HTYPE_STMT, 0, (dvoid**)0));
        OCIERROR(errhp,OCIStmtPrepare(curss, errhp, (text *)SQLTXTSQUERY,
        strlen((char *)SQLTXTSQUERY), (ub4) OCI_NTV_SYNTAX,
(ub4) OCI_DEFAULT));
    }

    if (do_A || do_i) {
        OCIERROR(errhp,OCIHandleAlloc(tpcenv, (dvoid **) (&curi),
OCI_HTYPE_STMT, 0, (dvoid**)0));
        OCIERROR(errhp,OCIStmtPrepare(curi, errhp, (text *)SQLTXTI,
        strlen((char *)SQLTXTI), (ub4) OCI_NTV_SYNTAX, (ub4)
OCI_DEFAULT));
    }

    if (do_A || do_o) {
        int stat;
        char fname[160];
        OCIERROR(errhp,OCIHandleAlloc(tpcenv, (dvoid **) (&cur01),
OCI_HTYPE_STMT, 0, (dvoid**)0));
        DISCARD strcpy(fname,basename);
        DISCARD strcat(fname, "/");
        DISCARD strcat(fname, "benchrun/blocks/load_ordordl.sql");
        stat = sqlfile(fname, stmbuf);
        if (!stat)

```

```

    {
        fprintf(stderr, "unable to open %s \n",fname);
        quit();
        exit(1);
    }
    OCIERROR(errhp,OCIStmtPrepare(curo1, errhp, stmbuf,
        strlen((char *)stmbuf), (ub4) OCI_NTV_SYNTAX, (ub4)
OCI_DEFAULT));
    }

    if (do_A || do_n) {
        OCIERROR(errhp,OCIHandleAlloc(tpcenv, (dvoid **) (&curno),
OCI_HTYPE_STMT, 0, (dvoid**)0));
        OCIERROR(errhp,OCIStmtPrepare(curno, errhp, (text *)SQLTXTNO,
        strlen((char *)SQLTXTNO), (ub4) OCI_NTV_SYNTAX, (ub4)
OCI_DEFAULT));
    }

    /* bind variables */

    /* warehouse */

    if (do_A || do_w) {
        OCIERROR(errhp, OCIBindByName(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));

        OCIERROR(errhp, OCIBindByName(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));

        OCIERROR(errhp, OCIBindByName(curw, &w_street1_bp, errhp, (text
*)":w_street_1",
        strlen(":w_street_1"), (ub1 *)w_street_1, 21,
SQLT_STR,
        (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",
        strlen(":w_street_2"), (ub1 *)w_street_2, 21,
SQLT_STR,
        (dvoid *) 0, (ub2 *)0, (ub2 *)0,
        (ub4) 0, (ub4 *) 0, (ub4) OCI_DEFAULT));

        OCIERROR(errhp, OCIBindByName(curw, &w_city_bp, errhp, (text
*)":w_city",
        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",
        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",
        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",
        strlen(":w_tax"), (ub1 *) & w_tax, sizeof(w_tax),
SQLT_FLT,
        (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",
        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",
        strlen(":d_w_id"), (ub1 *)d_w_id, sizeof(int),
SQLT_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",
        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",
        strlen(":d_street_1"), (ub1 *)d_street_1, 21,
SQLT_STR,
        (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",
        strlen(":d_street_2"), (ub1 *)d_street_2, 21,
SQLT_STR,
        (dvoid *) 0, (ub2 *)0, (ub2 *)0,
        (ub4) 0, (ub4 *) 0, (ub4) OCI_DEFAULT));

OCIERROR(errhp, OCIBindByName(curd, &d_city_bp, errhp, (text
*)":d_city",
        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",
        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",
        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",
        strlen(":d_tax"), (ub1 *)d_tax, sizeof(float),
SQLT_FLT,
        (dvoid *) 0, (ub2 *)0, (ub2 *)0,
        (ub4) 0, (ub4 *) 0, (ub4) OCI_DEFAULT));
}

/* customer */

if (do_A || do_c || do_C) {
OCIERROR(errhp, OCIBindByName(curcs, &s_c_id_bp, errhp, (text
*)":s_c_id",
        strlen(":s_c_id"), (ub1 *)&s_c_id, sizeof(int),
SQLT_INT,
        (dvoid *) 0, (ub2 *)0, (ub2 *)0,
        (ub4) 0, (ub4 *) 0, (ub4) OCI_DEFAULT));

OCIERROR(errhp, OCIBindByName(curcs, &s_c_w_id_bp, errhp, (text
*)":s_c_w_id",
        strlen(":s_c_w_id"), (ub1 *)&s_c_w_id, sizeof(int),
SQLT_INT,
        (dvoid *) 0, (ub2 *)0, (ub2 *)0,
        (ub4) 0, (ub4 *) 0, (ub4) OCI_DEFAULT));

OCIERROR(errhp, OCIBindByName(curcs, &s_c_d_id_bp, errhp, (text
*)":s_c_d_id",
        strlen(":s_c_d_id"), (ub1 *)&s_c_d_id, sizeof(int),
SQLT_INT,
        (dvoid *) 0, (ub2 *)0, (ub2 *)0,
        (ub4) 0, (ub4 *) 0, (ub4) OCI_DEFAULT));

OCIDefineByPos(curcs, &s_c_ret_bp, errhp, 1, &s_c_count, sizeof(int), SQLT_INT, \
0, 0, 0, OCI_DEFAULT);

OCIERROR(errhp, OCIBindByName(curc, &c_id_bp, errhp, (text
*)":c_id",
        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",
        strlen(":c_d_id"), (ub1 *)c_d_id, sizeof(int),
SQLT_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",
        strlen(":c_w_id"), (ub1 *)c_w_id, sizeof(int),
SQLT_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(curss, &s_s_i_id_bp, errhp, (text
*)":s_s_i_id",
        strlen(":s_s_i_id"), (ub1 *)&s_s_i_id, sizeof(int),
SQLT_INT,
        (dvoid *) 0, (ub2 *)0, (ub2 *)0,
        (ub4) 0, (ub4 *) 0, (ub4) OCI_DEFAULT));

        OCIERROR(errhp, OCIBindByName(curss, &s_s_w_id_bp, errhp, (text
*)":s_s_w_id",

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        strlen(":s_s_w_id"), (ub1 *)&s_s_w_id, sizeof(int),
SQLT_INT,
        (dvoid *) 0, (ub2 *)0, (ub2 *)0,
        (ub4) 0, (ub4 *) 0, (ub4) OCI_DEFAULT));

OCIDefineByPos(curss,&s_s_ret_bp,errhp,1,&s_s_count,sizeof(int),SQLT_INT,\
0,0,0,OCI_DEFAULT);

        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",
        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));

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        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));

        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,

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        (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",
        strlen(":h_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_w_id_bp, errhp, (text
*)":h_w_id",
        strlen(":h_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_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",
        strlen(":ol_o_id"), (ub1 *)ol_o_id, sizeof(int),
SQLT_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",
        strlen(":ol_d_id"), (ub1 *)ol_d_id, sizeof(int),
SQLT_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",
        strlen(":ol_w_id"), (ub1 *)ol_w_id, sizeof(int),
SQLT_INT,
        (dvoid *) 0, (ub2 *)ol_w_id_len, (ub2 *)0,
        (ub4) 15*ORDEARR, (ub4 *) &ol_w_id_clen, (ub4)
OCI_DEFAULT));

    OCIERROR(errhp, OCIBindByName(curo1, &ol_number_bp, errhp, (text
*)":ol_number",
        strlen(":ol_number"), (ub1 *)ol_number, sizeof(int),
SQLT_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",
        strlen(":ol_i_id"), (ub1 *)ol_i_id, sizeof(int),
SQLT_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",
        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",
        strlen(":ol_dist_info"), (ub1 *)ol_dist_info, 24,
SQLT_CHR,
        (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",
        strlen(":ol_amount"), (ub1 *)ol_amount, sizeof(int),
SQLT_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",
        strlen(":o_d_id"), (ub1 *)o_d_id, sizeof(int),
SQLT_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",
        strlen(":o_w_id"), (ub1 *)o_w_id, sizeof(int),
SQLT_INT,
        (dvoid *) 0, (ub2 *)o_w_id_len, (ub2 *)0,
        (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_cnt_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 *)&o_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",
        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 = OCISstmtExecute(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);
    }
}

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 = OCISstmtExecute(tpcsvc, curd, errhp, (ub4) DISTARR,
(ub4) 0,
        (CONST OCISnapshot*) 0, (OCISnapshot*) 0,
        (ub4) OCI_DEFAULT | OCI_COMMIT_ON_SUCCESS);
    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);
        OCISstmtPrepare(cur_i, errhp, stmbuf, strlen((char *)stmbuf),
            OCI_NTV_SYNTAX, OCI_DEFAULT);
        OCIERROR(errhp, OCISstmtExecute(tpcsvc, curi,
errhp, 1, 0, 0, 0, OCI_DEFAULT));
        OCIHandleFree(cur_i, 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 ();

s_c_id = 1;
s_c_d_id = 1;
s_c_w_id = bware;

while (s_c_w_id <= eware) {
    status = OCISstmtExecute(tpcsvc, curcs, errhp, (ub4) 1, (ub4) 0,
        (CONST OCISnapshot*) 0, (OCISnapshot*) 0,
        (ub4) OCI_DEFAULT | OCI_COMMIT_ON_SUCCESS);
    if (status != OCI_SUCCESS) {
        OCIERROR(errhp, status);
        quit ();
        exit (1);
    }

    if (s_c_count == 0) {
        s_c_w_id--;
        break;
    }
    else s_c_w_id++;
}

if (s_c_w_id < bware ) s_c_w_id = bware;
else {
    if (s_c_w_id > eware ) s_c_w_id = eware;
    while (s_c_d_id <= DISTFAC) {
        status = OCISstmtExecute(tpcsvc, curcs, errhp, (ub4) 1, (ub4) 0,
            (CONST OCISnapshot*) 0, (OCISnapshot*) 0,
            (ub4) OCI_DEFAULT | OCI_COMMIT_ON_SUCCESS);
        if (status != OCI_SUCCESS) {
            fprintf (stderr, "Select failed\n");
            OCIERROR(errhp, status);
            quit ();
            exit (1);
        }
        if (s_c_count == 0) {
            s_c_d_id--;
            break;
        }
        else s_c_d_id++;
    }
    if (s_c_d_id > DISTFAC) s_c_d_id = DISTFAC;

    while (s_c_id <= CUSTFAC) {
        status = OCISstmtExecute(tpcsvc, curcs, errhp, (ub4) 1, (ub4) 0,
            (CONST OCISnapshot*) 0, (OCISnapshot*) 0,
            (ub4) OCI_DEFAULT | OCI_COMMIT_ON_SUCCESS);
        if (status != OCI_SUCCESS) {
            OCIERROR(errhp, status);
            quit ();
            exit (1);
        }
        if (s_c_count == 0) break;
        else s_c_id++;
    }
}

if (s_c_id > CUSTFAC) {
    if (s_c_d_id == DISTFAC) {
        s_c_d_id=1;

```

```

        s_c_w_id++;
    } else {
        s_c_d_id++;
    }
    s_c_id=1;
}

fprintf (stderr, "start at wid: %d, did: %d, cid: %d\n", s_c_w_id,
s_c_d_id, s_c_id);
cid = s_c_id - 1;
cdid = s_c_d_id;
cwid = s_c_w_id;
nrows = (eware - s_c_w_id + 1) * DISTFAC * CUSTFAC - (s_c_d_id - 1)
* CUSTFAC - s_c_id + 1;
fprintf (stderr, "remaining rows: %d\n", nrows);
loopcount = 0;

for (row = 0; row < nrows; ) {
    for (i = 0; i < CUSTARR && row < nrows; 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 %c 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 = OCIStmtExecute(tpcsvc, curc, 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, 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 < 0 ? 0 : 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 CUSTOMER table (cluster around c_id) |
+-----*/

if (do_C) {
    srand (bcid);
#ifdef ORA_NT
    srand48 (bcid);
#endif

```

```

nrows = (ecid - bcid + 1) * (eware - bware +1) * DISTFAC;

    fprintf (stderr, "Loading/generating customer: c%d - c%d, w%d - w%d
(%d rows)\n",
            bcid, ecid, 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(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);
        fprintf (stderr,"Customer loaded for horizontal partitioning\n");
    }
    else
    {
        fprintf (stderr,"Customer not loaded for horizontal
partitioning\n");
    }
    begin_time = gettime ();
    begin_cpu = getcpu ();

    s_c_id = bcid;
    s_c_d_id = 1;
    s_c_w_id = bware;

    while (s_c_id <= ecid) {
        status = OCIStmtExecute(tpcsvc, curcs, errhp, (ub4) 1, (ub4) 0,
            (CONST OCISnapshot*) 0, (OCISnapshot*) 0,
            (ub4) OCI_DEFAULT | OCI_COMMIT_ON_SUCCESS);
        if (status != OCI_SUCCESS) {
            OCIERROR(errhp, status);
            quit ();
            exit (1);
        }

        if (s_c_count == 0) {
            s_c_id--;
            break;
        }
        else s_c_id++;
    }

    if (s_c_id < bcid ) s_c_id = bcid;
    else {
        if (s_c_id > ecid ) s_c_id = ecid;
        while (s_c_w_id <= eware) {
            status = OCIStmtExecute(tpcsvc, curcs, errhp, (ub4) 1, (ub4) 0,
                (CONST OCISnapshot*) 0, (OCISnapshot*) 0,
                (ub4) OCI_DEFAULT | OCI_COMMIT_ON_SUCCESS);
            if (status != OCI_SUCCESS) {
                fprintf (stderr, "Select failed\n");
                OCIERROR(errhp, status);
                quit ();
                exit (1);
            }
        }
        if (s_c_count == 0) {

```

```

        s_c_w_id--;
        break;
    }
    else s_c_w_id++;
}
if (s_c_w_id > eware) s_c_w_id = eware;
else if (s_c_w_id < bware) s_c_w_id = bware;

while (s_c_d_id <= DISTFAC) {
    status = OCISstmtExecute(tpcsvc, curcs, errhp, (ub4) 1, (ub4) 0,
        (CONST OCISnapshot*) 0, (OCISnapshot*) 0,
        (ub4) OCI_DEFAULT | OCI_COMMIT_ON_SUCCESS);
    if (status != OCI_SUCCESS) {
        OCIERROR(errhp, status);
        quit ();
        exit (1);
    }
    if (s_c_count == 0) break;
    else s_c_d_id++;
}

if (s_c_d_id > DISTFAC) {
    s_c_d_id=1;
    if (s_c_w_id==eware) {
        s_c_w_id=bware;
        s_c_id++;
    }
    else s_c_w_id++;
}

fprintf (stderr, "start at cid: %d, wid: %d, did: %d\n ", s_c_id,
s_c_w_id, s_c_d_id);
cid = s_c_id;
cdid = s_c_d_id-1;
cwid = s_c_w_id;
nrows = (ecid - s_c_id + 1) * (eware - bware + 1) * DISTFAC -
(s_c_w_id - 1) * DISTFAC - s_c_d_id + 1;
fprintf (stderr, "remaining rows: %d\n ", nrows);
loopcount = 0;

for (row = 0; row < nrows; ) {
    for (i = 0; i < CUSTARR && row < nrows; i++, row++) {
        cdid++;
        if (cdid > DISTFAC) {
            /* cycle dist id */
            cdid = 1;
            /* cheap mod */
            cwid++;
            /* shift dist cycle */
            if (cwid > eware) {
                cwid = bware;
                /* shift ware cycle */
                cid++;
            }
        }
        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 %s %C 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) 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, 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 = gettimeofday ();
end_cpu = getcpu ();
fprintf (stderr, "Done. %d rows loaded/generated in %10.2f sec.
(%10.2f cpu)\n\n",
    nrows < 0 ? 0 : 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, SQLTXTHIHA);
        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 = OCIStmtExecute(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, eware, nrows);

    begin_time = gettime ();
    begin_cpu = getcpu ();

    s_s_i_id = 1;
    s_s_w_id = bware;

    while (s_s_w_id <= eware) {
        status = OCIStmtExecute(tpcsvc, curss, errhp, (ub4) 1, (ub4) 0,
            (CONST OCISnapshot*) 0, (OCISnapshot*) 0,
            (ub4) OCI_DEFAULT | OCI_COMMIT_ON_SUCCESS);
        if (status != OCI_SUCCESS) {
            OCIERROR(errhp, status);
            quit ();
            exit (1);
        }
        if (s_s_count == 0) {
            s_s_w_id--;
            break;
        }
        else s_s_w_id++;
    }

    if (s_s_w_id < bware ) s_s_w_id = bware;
    else {
        if (s_s_w_id > eware) s_s_w_id = eware;
        while (s_s_i_id <= STOCFAC) {
            status = OCIStmtExecute(tpcsvc, curss, errhp, (ub4) 1, (ub4) 0,
                (CONST OCISnapshot*) 0, (OCISnapshot*) 0,
                (ub4) OCI_DEFAULT | OCI_COMMIT_ON_SUCCESS);
            if (status != OCI_SUCCESS) {
                OCIERROR(errhp, status);
                quit ();
                exit (1);
            }
        }
        if (s_s_count == 0) {
            break;
        }
    }
}

```

```

        else s_s_i_id++;
    }
}
if (s_s_i_id > STOCFAC) {
    s_s_i_id=1;
    s_s_w_id++;
}

fprintf(stderr,"start at s_i_id: %d, s_w_id: %d\n  ", s_s_i_id,
s_s_w_id);

sid = s_s_i_id - 1;
swid = s_s_w_id;
nrows = (eware - s_s_w_id + 1) * STOCFAC - (s_s_i_id - 1);
fprintf (stderr, "remaining rows: %d\n  ", nrows);
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 (s_dist_01[i], 24, 24);
        randstr (s_dist_02[i], 24, 24);
        randstr (s_dist_03[i], 24, 24);
        randstr (s_dist_04[i], 24, 24);
        randstr (s_dist_05[i], 24, 24);
        randstr (s_dist_06[i], 24, 24);
        randstr (s_dist_07[i], 24, 24);
        randstr (s_dist_08[i], 24, 24);
        randstr (s_dist_09[i], 24, 24);
        randstr (s_dist_10[i], 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], s_dist_01[i],
                    s_dist_02[i],
                    s_dist_03[i], s_dist_04[i], s_dist_05[i],
                    s_dist_06[i],
                    s_dist_07[i], s_dist_08[i], s_dist_09[i],
                    s_dist_10[i],
                    s_data[i]);
        }
        else {
            s_i_id[i] = sid;
            s_w_id[i] = swid;
        }
    }
}

if (gen) {
    fflush (stdout);
}
else {
    /* Changed to STOCKARR to i - alex.ni */
    status = OCISstmtExecute(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 < 0 ? 0 : 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, aware, nrows);

    begin_time = gettime ();
    begin_cpu = getcpu ();

    s_s_i_id = bitem;
    s_s_w_id = bware;

    while (s_s_i_id <= eitem) {
        status = OCISstmtExecute(tpcsvc, curss, errhp, (ub4) 1, (ub4) 0,
            (CONST OCISnapshot*) 0, (OCISnapshot*) 0,
            (ub4) OCI_DEFAULT | OCI_COMMIT_ON_SUCCESS);
        if (status != OCI_SUCCESS) {
            OCIERROR(errhp, status);
            quit ();
            exit (1);
        }
        if (s_s_count == 0) {
            s_s_i_id--;
            break;
        }
        else s_s_i_id++;
    }

    if (s_s_i_id < bitem ) s_s_i_id = bitem;
    else {
        if (s_s_i_id > eitem) s_s_i_id = eitem;

```



```

while (s_s_w_id <= eware) {
    status = OCISstmtExecute(tpcsvc, curss, errhp, (ub4) 1, (ub4) 0,
        (CONST OCISnapshot*) 0, (OCISnapshot*) 0,
        (ub4) OCI_DEFAULT | OCI_COMMIT_ON_SUCCESS);
    if (status != OCI_SUCCESS) {
        OCIERROR(errhp, status);
        quit ();
        exit (1);
    }
    if (s_s_count == 0) {
        break;
    }
    else s_s_w_id++;
}
if (s_s_w_id > eware) {
    s_s_w_id=bware;
    s_s_i_id++;
}

fprintf(stderr,"start at s_i_id: %d, s_w_id: %d\n ", s_s_i_id,
s_s_w_id);

sid = s_s_i_id;
swid = s_s_w_id - 1;
nrows = (eitem - s_s_i_id + 1) * (eware - bware + 1) - (s_s_w_id -
bware);
fprintf (stderr, "remaining rows: %d\n ", nrows);
loopcount = 0;

for (row = 0; row < nrows; ) {
    for (i = 0; i < STOCARR && row < nrows; i++, row++) {
        if (++swid > eware) { /* cheap mod */
            swid = bware;
            sid++;
        }
        s_quantity[i] = (lrand48 () % 91) + 10;
        randstr (s_dist_01[i], 24, 24);
        randstr (s_dist_02[i], 24, 24);
        randstr (s_dist_03[i], 24, 24);
        randstr (s_dist_04[i], 24, 24);
        randstr (s_dist_05[i], 24, 24);
        randstr (s_dist_06[i], 24, 24);
        randstr (s_dist_07[i], 24, 24);
        randstr (s_dist_08[i], 24, 24);
        randstr (s_dist_09[i], 24, 24);
        randstr (s_dist_10[i], 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], s_dist_01[i],
s_dist_02[i],
                s_dist_03[i], s_dist_04[i], s_dist_05[i],
s_dist_06[i],
                s_dist_07[i], s_dist_08[i], s_dist_09[i],
s_dist_10[i],
                s_data[i]);
        }
        else {

```

```

        s_i_id[i] = sid;
        s_w_id[i] = swid;
    }
}
if (gen) {
    fflush (stdout);
}
else {
    status = OCISstmtExecute(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 < 0 ? 0 : 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) {

```

```

        cddid = 1;
        cwid++;          /* shift warehouse cycle */
    }
}
h_c_id[i] = cid;
h_d_id[i] = cddid;
h_w_id[i] = cwid;
randstr (h_data[i], 12, 24);
if (gen) {
    printf ("%d %d %d %d %d %s 1000 %s\n", cid, cddid, cwid,
cddid,
        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;
cddid = 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;
            cddid++;                  /* cheap mod */
            if (cddid > DISTFAC) {
                cddid = 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, cddid, 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, cddid, cwid,
                    randperm3000[cid - 1], sdate, o_ol_cnt[i]);
            }
        }
        else {
            o_id[i] = cid;
            o_d_id[i] = cddid;
            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,
                        cddid, 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,
        cidid, 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] = cidid;
        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;

    OCIERROR(errhp, OCIStmtExecute(tpcsvc, curol, errhp, (ub4) 1,
    (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;
    cidid = 1;
    cwid = bware;
    loopcount = 0;

    for (row = 0; row < nrows; ) {
        for (i = 0; i < NEWOARR; i++, row++) {
            cid++;
            if (cid > NEWOFAC) {
                cid = 1;
                cidid++;
                if (cidid > DISTFAC) {
                    cidid = 1;
                    cwid++;
                }
            }
        }

        if (gen) {
            printf ("%d %d %d\n", cid + 2100, cidid, cwid);
        }
        else {
            no_o_id[i] = cid + 2100;
            no_d_id[i] = cidid;
            no_w_id[i] = cwid;
        }
    }
}

```

```

    }
    if (gen) {
        fflush (stdout);
    }
    else {
        status = OCISmtExecute(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 = 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);
}

/*-----+
| 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);
}

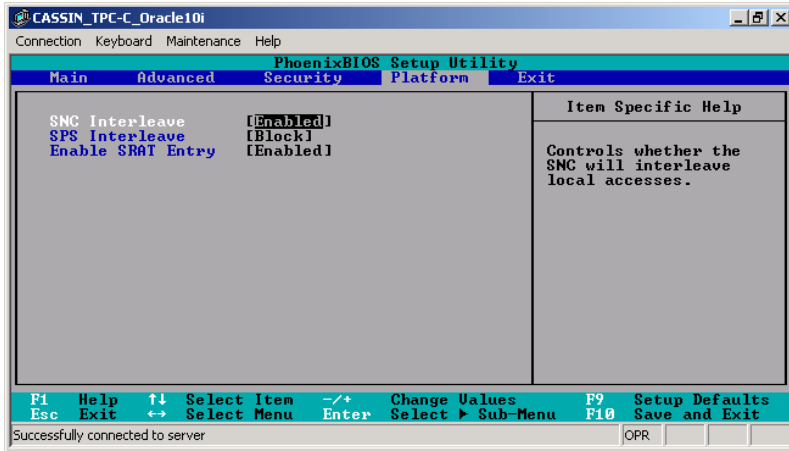
```

```
middle = dpbetime();  
Sleep(2000);  
end = dpbetime();  
printf(" begin = %lu\n middle = %lu\n end = %lu\n",begin,middle,end);  
}
```

# Appendix C - Tunable Parameters

## DATABASE SERVER CONFIGURATION

### Bios NUMA Settings



### CHKCONFIG.TXT

SuSEfirewall2_final	0:off	1:off	2:off	3:off	4:off	5:off	6:off
SuSEfirewall2_init	0:off	1:off	2:off	3:off	4:off	5:off	6:off
SuSEfirewall2_setup	0:off	1:off	2:off	3:off	4:off	5:off	6:off
atd	0:off	1:off	2:off	3:off	4:off	5:off	6:off
autoyast	0:off	1:off	2:off	3:off	4:off	5:off	6:off
boot.clock	0:off	1:off	2:off	3:off	4:off	5:off	6:off
boot.crypto	0:off	1:off	2:off	3:off	4:off	5:off	6:off
boot.device-mapper	0:off	1:off	2:off	3:off	4:off	5:off	6:off
boot.evms	0:off	1:off	2:off	3:off	4:off	5:off	6:off
boot.idedma	0:off	1:off	2:off	3:off	4:off	5:off	6:off
boot.ipconfig	0:off	1:off	2:off	3:off	4:off	5:off	6:off
boot.isapnp	0:off	1:off	2:off	3:off	4:off	5:off	6:off
boot.klog	0:off	1:off	2:off	3:off	4:off	5:off	6:off
boot.ldconfig	0:off	1:off	2:off	3:off	4:off	5:off	6:off
boot.loadmodules	0:off	1:off	2:off	3:off	4:off	5:off	6:off
boot.localfs	0:off	1:off	2:off	3:off	4:off	5:off	6:off
boot.localnet	0:off	1:off	2:off	3:off	4:off	5:off	6:off
boot.md	0:off	1:off	2:off	3:off	4:off	5:off	6:off
boot.proc	0:off	1:off	2:off	3:off	4:off	5:off	6:off
boot.restore_permissions	0:off	1:off	2:off	3:off	4:off	5:off	6:off

boot.rootfsck	0:off	1:off	2:off	3:off	4:off	5:off	6:off
boot.sched	0:off	1:off	2:off	3:off	4:off	5:off	6:off
boot.scpm	0:off	1:off	2:off	3:off	4:off	5:off	6:off
boot.scsidev	0:off	1:off	2:off	3:off	4:off	5:off	6:off
boot.shm	0:off	1:off	2:off	3:off	4:off	5:off	6:off
boot.swap	0:off	1:off	2:off	3:off	4:off	5:off	6:off
boot.sysctl	0:off	1:off	2:off	3:off	4:off	5:off	6:off
boot.udev	0:off	1:off	2:off	3:off	4:off	5:off	6:off
coldplug	0:off	1:on	2:on	3:on	4:off	5:on	6:off
cron	0:off	1:off	2:off	3:off	4:off	5:off	6:off
fbset	0:off	1:on	2:on	3:on	4:off	5:on	6:off
gpm	0:off	1:off	2:off	3:off	4:off	5:off	6:off
hotplug	0:off	1:on	2:on	3:on	4:off	5:on	6:off
hwscan	0:off	1:off	2:on	3:on	4:off	5:on	6:off
kbd	0:off	1:on	2:on	3:on	4:off	5:on	6:off
mdadmd	0:off	1:off	2:off	3:off	4:off	5:off	6:off
network	0:off	1:off	2:on	3:on	4:off	5:on	6:off
nfs	0:off	1:off	2:off	3:off	4:off	5:on	6:off
nfsboot	0:off	1:off	2:off	3:off	4:off	5:off	6:off
portmap	0:off	1:off	2:off	3:off	4:off	5:on	6:off
postfix	0:off	1:off	2:off	3:off	4:off	5:off	6:off
powersaved	0:off	1:off	2:on	3:on	4:off	5:on	6:off
random	0:off	1:off	2:on	3:on	4:off	5:on	6:off
raw	0:off	1:off	2:off	3:off	4:off	5:off	6:off
resmgr	0:off	1:off	2:on	3:off	4:off	5:on	6:off
rpasswd	0:off	1:off	2:off	3:off	4:off	5:off	6:off
rpmconfigcheck	0:off	1:off	2:off	3:off	4:off	5:off	6:off
running_kernel	0:off	1:off	2:on	3:on	4:off	5:on	6:off
salinfo_decode	0:off	1:off	2:on	3:off	4:off	5:on	6:off
saslauthd	0:off	1:off	2:off	3:off	4:off	5:off	6:off
slpd	0:off	1:off	2:off	3:off	4:off	5:on	6:off
sshd	0:off	1:off	2:off	3:on	4:off	5:on	6:off
syslog	0:off	1:off	2:on	3:on	4:off	5:on	6:off
sysstat	0:off	1:off	2:off	3:off	4:off	5:off	6:off
xdm	0:off	1:off	2:off	3:off	4:off	5:on	6:off
xinetd	0:off	1:off	2:off	3:off	4:off	5:off	6:off
xinetd based services:							
chargen:					off		
chargen-udp:					off		
daytime:					off		
daytime-udp:					off		
echo:					off		
echo-udp:					off		
netstat:					off		
servers:					off		
services:					off		
sysstat:					off		
telnet:					on		
time:					off		
time-udp:					off		
vsftpd:					on		

## IRQ.SH

```
echo "00000010" > /proc/irq/62/smp_affinity
echo "00000004" > /proc/irq/63/smp_affinity
echo "00000040" > /proc/irq/64/smp_affinity
echo "00000040" > /proc/irq/65/smp_affinity
echo "00000400" > /proc/irq/67/smp_affinity
echo "00004000" > /proc/irq/68/smp_affinity
echo "00004000" > /proc/irq/69/smp_affinity
echo "00004000" > /proc/irq/70/smp_affinity
echo "00000004" > /proc/irq/71/smp_affinity
echo "00000200" > /proc/irq/51/smp_affinity
echo "00000200" > /proc/irq/66/smp_affinity
```

## LIMITS.CONF

```
# /etc/security/limits.conf
#
#Each line describes a limit for a user in the form:
#
#<domain> <type> <item> <value>
#
#Where:
#<domain> can be:
# - an user name
# - a group name, with @group syntax
# - the wildcard *, for default entry
# - the wildcard %, can be also used with %group syntax,
# for maxlogin limit
#
#<type> can have the two values:
# - "soft" for enforcing the soft limits
# - "hard" for enforcing hard limits
#
#<item> can be one of the following:
# - core - limits the core file size (KB)
# - data - max data size (KB)
# - fsize - maximum filesize (KB)
# - memlock - max locked-in-memory address space (KB)
# - nofile - max number of open files
# - rss - max resident set size (KB)
# - stack - max stack size (KB)
# - cpu - max CPU time (MIN)
# - nproc - max number of processes
# - as - address space limit
# - maxlogins - max number of logins for this user
# - priority - the priority to run user process with
# - locks - max number of file locks the user can hold
#
#<domain> <type> <item> <value>
#
#* soft core 0
#* hard rss 10000
#@student hard nproc 20
```

```
#@faculty soft nproc 20
#@faculty hard nproc 50
#ftp hard nproc 0
#@student - maxlogins 4
oracle soft nofile 840000
oracle hard nofile 1048576
# End of file
```

## LISTENER\_16X.SH

```
# Stop all the listeners just in case
lsnrctl stop listener0
lsnrctl stop listener1
lsnrctl stop listener2
lsnrctl stop listener3

lsnrctl start listener0
lsnrctl start listener1
lsnrctl start listener2
lsnrctl start listener3
cd ./priority
./lsnr-16x-affi.sh
cd ..
```

## LISTENER.ORA

```
#
LISTENER0 =
  (ADDRESS_LIST=
    (ADDRESS=(PROTOCOL=TCP) (HOST=192.158.1.200) (PORT=7521)))
SID_LIST_LISTENER0=
  (SID_LIST=
    (SID_DESC=
      (SID_NAME=tpcc)))

LISTENER1=
  (ADDRESS_LIST=
    (ADDRESS=(PROTOCOL=TCP) (HOST=192.158.1.200) (PORT=7522)))
SID_LIST_LISTENER1=
  (SID_LIST=
    (SID_DESC=
      (SID_NAME=tpcc)))

LISTENER2 =
  (ADDRESS_LIST=
    (ADDRESS=(PROTOCOL=TCP) (HOST=192.158.1.200) (PORT=7523)))
SID_LIST_LISTENER2=
  (SID_LIST=
    (SID_DESC=
      (SID_NAME=tpcc)))

LISTENER3 =
  (ADDRESS_LIST=
```



```
(ADDRESS=(PROTOCOL=tcp)(HOST=192.158.1.200)(PORT=7524))
SID_LIST_LISTENER3=
(SID_LIST=
(SID_DESC=
(SID_NAME=tpcc)))
```

## LSNR-16X-AFFI.SH

```
#set sffinity for 4 lsnr
ls1=`ps aux | grep listener0 | grep -v grep | awk '{print $2}'`
./setaffi111 $ls1 f
ls2=`ps aux | grep listener1 | grep -v grep | awk '{print $2}'`
./setaffi111 $ls2 f0
ls3=`ps aux | grep listener2 | grep -v grep | awk '{print $2}'`
./setaffi111 $ls3 f00
ls4=`ps aux | grep listener3 | grep -v grep | awk '{print $2}'`
./setaffi111 $ls4 f000
```

## ORA10g.ENV

```
#
export ORACLE_HOME=/opt/oracle/ora10g
export ORACLE_BASE=/opt/oracle
export PATH=$PATH:$ORACLE_HOME/bin:.
export
LD_LIBRARY_PATH=$ORACLE_HOME/lib:$ORACLE_HOME/rdbms/lib:/lib:/usr/lib:$LD_
LIBRARY_PATH
export LOG=$ORACLE_HOME/rdbms/log
export BIN=$ORACLE_HOME/rdbms/bin
export TNS_ADMIN=$ORACLE_HOME/network/admin
export ORACLE_SID=tpcc
```

## P\_BUILD.ORA

```
##
compatible = 10.1.0.0.0
db_name = tpcc
control_files = /oradata/data28000/control_001
parallel_max_servers = 100
recovery_parallelism = 40
db_files = 659
db_cache_size = 36533M
db_8k_cache_size = 1600M
db_16k_cache_size = 36533M
dml_locks = 500
statistics_level = basic
log_buffer = 1048576
processes = 400
sessions = 400
```

```
transactions = 400
shared_pool_size = 15600M
cursor_space_for_time = TRUE
db_block_size = 2048
undo_management = auto
undo_retention = 2
_in_memory_undo=false
_undo_autotune=false
plsql_optimize_level=2
_rollback_segment_count=3200
```

```
UNDO TABLESPACE = undo_1
db_4k_cache_size = 20M
_column_compression_factor=175
```

## P\_CREATE.ORA

```
compatible = 10.1.0.0.0
db_name = tpcc
control_files = /oradata/data28000/control_001
db_block_size = 2048
db_cache_size = 36533M
db_8k_cache_size = 10200M
log_buffer = 1048576
db_16k_cache_size = 36533M
undo_management = manual
statistics_level = basic
shared_pool_size = 15600M
_in_memory_undo=false
plsql_optimize_level=2
_column_compression_factor=175
db_4k_cache_size = 20M
_rollback_segment_count=3200
```

## P\_RUN.ORA

```
_ksmg_granule_size = 33554432
_collect_undo_stats = FALSE
_column_compression_factor = 175
_db_cache_pre_warm = FALSE
_db_writer_max_writes = 1024
_db_writer_flush_imu = FALSE
_db_writer_coalesce_write_limit=0
_db_writer_coalesce_area_size=0
_imu_pools = 500
_in_memory_undo = TRUE
_lgwr_async_io = FALSE
_lightweight_hdrs = TRUE
_optimizer_cache_stats = FALSE
_optimizer_cost_model = io
_smu_debug_mode = 1536
_NUMA_pool_size = 1024M
_undo_autotune = FALSE
```

```

aq_tm_processes = 0
compatible = 10.1.0.0.0
control_files = /oradata/data28000/control_001
cursor_space_for_time = TRUE
db_block_size = 2048

```

```

db_16k_cache_size = 81480M
db_4k_cache_size = 512M
db_8k_cache_size = 1024M
db_cache_size = 9000M
db_keep_cache_size = 140000M
db_recycle_cache_size = 18200M
shared_pool_size = 6528M
log_buffer = 20971520

```

```

db_block_checking = FALSE
db_block_checksum = FALSE
db_name = tpcc
db_writer_processes = 4
disk_asynch_io = TRUE
dml_locks = 800
db_files = 600
enqueue_resources = 60000
fast_start_mttr_target = 0
java_pool_size = 0

```

```

log_checkpoints_to_alert = TRUE
log_checkpoint_interval = 0
log_checkpoint_timeout = 0

```

```

parallel_max_servers = 16
pga_aggregate_target = 0
plsql_optimize_level = 2
transactions = 500
processes = 600
sessions = 900
query_rewrite_enabled = false
recovery_parallelism = 16
remote_os_authent = TRUE
statistics_level = basic
timed_statistics = FALSE
trace_enabled = FALSE
undo_management = AUTO
undo_retention = 1
undo_tablespace = undo_1

```

## PARTITIONS.TXT

major	minor	#blocks	name
8	0	35575808	sda
8	1	410607	sda1
8	2	2098176	sda2
8	3	10486784	sda3
8	4	4195328	sda4
8	5	4195328	sda5

8	6	4195328	sda6
8	7	2098176	sda7
8	8	7896047	sda8
67	192	935372032	sdbi
67	193	64460781	sdbi1
67	194	64460812	sdbi2
67	208	980974848	sdbj
67	209	64460781	sdbj1
67	210	64460812	sdbj2
67	224	125440000	sdbk
67	225	1044193	sdbk1
67	226	6450097	sdbk2
67	227	6450097	sdbk3
67	228	1	sdbk4
67	229	7237251	sdbk5
67	230	7237251	sdbk6
67	231	22466871	sdbk7
67	232	1180746	sdbk8
67	233	5381743	sdbk9
67	240	125440000	sdbl
67	241	1044193	sdbl1
67	242	6450097	sdbl2
67	243	6450097	sdbl3
67	244	1	sdbl4
67	245	7237251	sdbl5
67	246	7237251	sdbl6
67	247	22466871	sdbl7
67	248	1180746	sdbl8
67	249	5381743	sdbl9
68	0	125440000	sdbm
68	1	1044193	sdbm1
68	2	6450097	sdbm2
68	3	6450097	sdbm3
68	4	1	sdbm4
68	5	7237251	sdbm5
68	6	7237251	sdbm6
68	7	22466871	sdbm7
68	8	1180746	sdbm8
68	9	5381743	sdbm9
68	16	125440000	sdbn
68	17	1044193	sdbn1
68	18	6450097	sdbn2
68	19	6450097	sdbn3
68	20	1	sdbn4
68	21	7237251	sdbn5
68	22	7237251	sdbn6
68	23	22466871	sdbn7
68	24	1180746	sdbn8
68	25	5381743	sdbn9
68	32	125440000	sdbo
68	33	1044193	sdbo1
68	34	6450097	sdbo2
68	35	6450097	sdbo3
68	36	1	sdbo4
68	37	7237251	sdbo5
68	38	7237251	sdbo6
68	39	22466871	sdbo7
68	40	1180746	sdbo8
68	41	5381743	sdbo9

68	48	125440000	sdbp
68	49	1044193	sdbp1
68	50	6450097	sdbp2
68	51	6450097	sdbp3
68	52	1	sdbp4
68	53	7237251	sdbp5
68	54	7237251	sdbp6
68	55	22466871	sdbp7
68	56	1180746	sdbp8
68	57	5381743	sdbp9
68	64	125440000	sdbq
68	65	1044193	sdbq1
68	66	6450097	sdbq2
68	67	6450097	sdbq3
68	68	1	sdbq4
68	69	7237251	sdbq5
68	70	7237251	sdbq6
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68	83	6450097	sdbrr3
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68	137	5381743	sdbu9
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69	153	5381743	sdcl9
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69	163	6450097	sdcm3
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69	168	1180746	sdcm8
69	169	5381743	sdcm9
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69	177	1044193	sdcn1
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69	179	6450097	sdcn3
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69	183	22466871	sdcn7
69	184	1180746	sdcn8
69	185	5381743	sdcn9
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71	199	5381743	sddu7
71	200	5381743	sddu8
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71	202	5381743	sddu10
71	203	5381743	sddu11
71	204	5381743	sddu12

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71 206 5381743 sddu14
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71 210 5285385 sddv2
71 211 5381775 sddv3
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71 220 5381743 sddv12
71 221 5381743 sddv13
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71 223 5381743 sddv15
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71 226 5381775 sddw2
71 227 5381775 sddw3
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71 246 5381743 sddx6
71 247 5381743 sddx7
71 248 5381743 sddx8
71 249 5381743 sddx9
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71 252 5381743 sddx12
71 253 5381743 sddx13
71 254 5381743 sddx14

```

## MODPROBE.CONF.LOCAL

```

#
# please add local extensions to this file
#
options qla2xxx ql2xmaxqdepth=256 ql2xintrdelaytimer=1

```

## RR.C

```

#include <stdio.h>
#include <unistd.h>
#include <sched.h>
#include <sys/types.h>

main(int argc, char *argv[])
{
    struct sched_param sp;
    int i;

    if (argc < 4) {
        fprintf(stderr, "usage: %s -p <prio> pid...\n", argv[0]);
        exit(-1);
    }

    if (!strcmp("-p", argv[1])) {
        sp.sched_priority = atoi(argv[2]);
    }

    /*
    printf("setting priority to: %d\n", sp.sched_priority);*/
    for (i = 3; i < argc; i++) {
        pid_t pid = atoi(argv[i]);
        if (sched_setscheduler(pid, SCHED_RR, &sp) == -1) {
            perror("sched_setscheduler");
            exit(-1);
        }
    }

    exit(0);
}

```

## RR.SH

```

#!/bin/sh

if [ $# -ne 1 ]
then
    echo "usage: $0 <sleep>"
    exit 1
fi

sleep $1

if [ `ps aux | fgrep -c hugetext` -gt 1 ]
then
    ./rr -p 98 $(ps aux | grep LOCAL=NO | grep -v grep | awk '{print
$2}')
    pid=`fgrep LGWR /opt/oracle/ora10g/rdbms/log/alert_tpsc.log | awk
'{pid=$NF;}END{print substr(pid,4);}'`
    ./rr -p 99 $pid
else

```



```

$2}')
./rr -p 98 $(ps aux | grep ora_dbw | grep -v grep | awk '{print
| awk '{print $2}'))
./rr -p 98 $(ps aux | grep ora_ | grep -v ora_lgwr | grep -v grep
$2}')
./rr -p 98 $(ps aux | grep oracletpcc | grep -v grep | awk '{print
#./rr -p 98 $(ps aux | grep oracle.numa-bin-8 | grep -v grep | awk
'{print $2}'))
./rr -p 99 $(ps aux | grep ora_lgwr | grep -v grep | awk '{print
$2}')
fi

```

## S15TPCC

```

#
echo "100 100000 120 512" > /proc/sys/kernel/sem
echo 0x8000000000 > /proc/sys/kernel/shmmax
echo 0x20000000 > /proc/sys/kernel/shmall
echo 5242880 > /proc/sys/fs/aio-max-nr
echo 1006 > /proc/sys/vm/nr_hugepages
echo 1 > /proc/sys/vm/disable_cap_mlock
ulimit -n 1048576
echo 1048576 > /proc/sys/fs/file-max
echo 33 > /proc/sys/kernel/msgmni
mount none -t hugetlbfs /mnt/htlb
chown oracle:dba /mnt/htlb

```

## SETAFFLC

```

/* setaffi.c */
#include <stdio.h>
#include <stdlib.h>
#include <sched.h>
#include <errno.h>
#include <linux/unistd.h>
#include <sys/types.h>
/*
* provide the proper syscall information if our libc
* is not yet updated.
*/
#undef __NR_sched_setaffinity
#ifdef __NR_sched_setaffinity
#define __NR_sched_setaffinity 1231
#define __NR_sched_getaffinity 1232
unsigned long
sched_setaffinity(pid_t pid, unsigned int len, unsigned long
*user_mask_ptr)
{
return (unsigned long) syscall(__NR_sched_setaffinity, pid, len,
user_mask_ptr);
}
unsigned long

```

```

sched_getaffinity(pid_t pid, unsigned int len, unsigned long
*user_mask_ptr)
{
return (unsigned long) syscall(__NR_sched_getaffinity, pid, len,
user_mask_ptr);
}
#endif
int main(int argc, char * argv[])
{
unsigned long new_mask;
unsigned long junk[10];
unsigned long cur_mask;
unsigned long junk2[10];
unsigned int len = sizeof(new_mask);
pid_t pid;
if (argc != 3) {
printf(" usage: %s <pid> <cpu_mask>\n", argv[0]);
return -1;
}
pid = atol(argv[1]);
sscanf(argv[2], "%x", &new_mask);
if (sched_getaffinity(pid, len, &cur_mask) < 0) {
printf("error: could not get pid %d's affinity. errno=%d\n", pid,errno);
return -1;
}
printf(" pid %d's old affinity: %08lx\n", pid, cur_mask);
if (sched_setaffinity(pid, len, &new_mask)) {
printf("error: could not set pid %d's affinity.\n", pid);
return -1;
}
if (sched_getaffinity(pid, len, &cur_mask) < 0) {
printf("error: could not get pid %d's affinity.\n", pid);
return -1;
}
printf(" pid %d's new affinity: %08lx\n", pid, cur_mask);
return 0;
}

```

## 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 inittpcc;
/
show errors
exit

```

## STORAGE CONFIGURATION INFORMATION

### Database USS Configuration Information

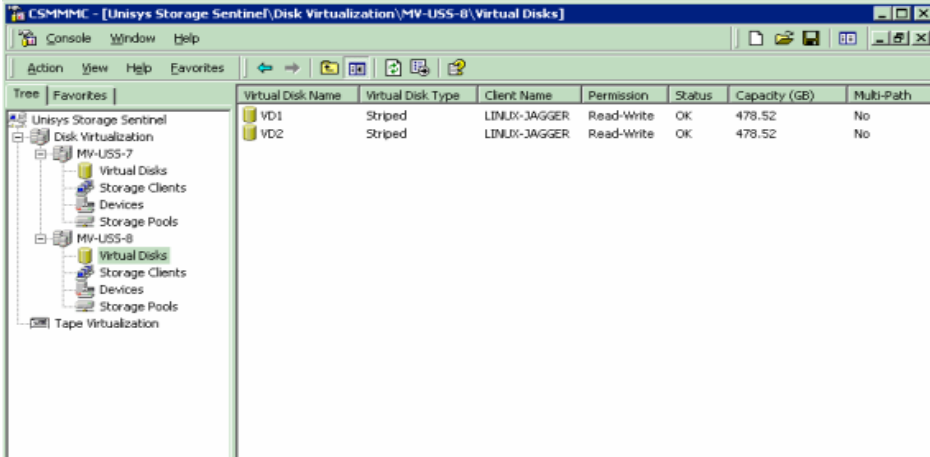
(Common to USS-1 through USS-6)

Virtual Disk Name	Virtual Disk Type	Client Name	Permission	Status
VD1	Striped	LINUX	Read-Write	OK
VD2	Striped	LINUX	Read-Write	OK
VD3	Striped	LINUX	Read-Write	OK
VD4	Striped	LINUX	Read-Write	OK
VD6	Striped	LINUX	Read-Write	OK
VD7	Striped	LINUX	Read-Write	OK
VD8	Striped	LINUX	Read-Write	OK
VD9	Striped	LINUX	Read-Write	OK
VD10	Striped	LINUX	Read-Write	OK

(Common to USS-7 Only)

Virtual Disk Name	Virtual Disk Type	Client Name	Permission	Status	Capacity (GB)	Multi-Path
VD01	Striped	CASSIN	Read-Write	OK	119.63	No
VD03	Striped	CASSIN	Read-Write	OK	478.52	No
VD2	Striped	CASSIN	Read-Write	OK	119.63	No
VD04	Striped	CASSIN	Read-Write	OK	478.52	No

(Common to USS-8 Only)



### 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:              54181
SPB Cache pages:              0
Unassigned Cache Pages:      0
Read Hit Ratio:               N/A
Write Hit Ratio:              0
Prct Dirty Cache Pages =     0
Prct Cache Pages Owned =     0
SPA Read Cache State          Disabled
SPB Read Cache State          Disabled
SPA Write Cache State         Enabled
SPB Write Cache State         Enabled
System Buffer (spA):           454 MB
System Buffer (spB):           454 MB
SPS Test Day:                 Saturday
SPS Test Time:                18:00
SPA Physical Memory Size =    1022
SPB Physical Memory Size =    1022
Physical memory size of Front-End = Switch not supported
Physical memory size of Back-End = Switch not supported
SPA Free Memory Size =        56
SPB Free Memory Size =        56
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 =        512
SPB Write Cache Size =        512
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

```

```

Prefetching: NO
Prefetched data retained      YES

```

```

Read cache configured according to
specified parameters.

```

```

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

```

```

RAID Type:                    RAID1/0
RAIDGroup ID:                 0
State:                         Bound
Stripe Crossing:              0
Element Size:                 256
Current owner:                 SP A
Offset:                        0
Auto-trespass:                DISABLED
Auto-assign:                  DISABLED
Write cache:                   ENABLED
Read cache:                    DISABLED
Idle Threshold:               0
Idle Delay Time:              20
Write Aside Size:             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): 913449
LUN Capacity(Blocks): 1870744064
UID:
60:06:01:60:83:40:0F:00:2E:EB:18:E5:CB:D7:D9:11
Bus 0 Enclosure 0 Disk 6 Queue Length: 0
Bus 0 Enclosure 0 Disk 4 Queue Length: 0
Bus 0 Enclosure 0 Disk 2 Queue Length: 0
Bus 0 Enclosure 0 Disk 0 Queue Length: 0
Bus 0 Enclosure 1 Disk 5 Queue Length: 0
Bus 0 Enclosure 1 Disk 3 Queue Length: 0
Bus 0 Enclosure 1 Disk 1 Queue Length: 0
Bus 0 Enclosure 0 Disk 5 Queue Length: 0
Bus 0 Enclosure 0 Disk 3 Queue Length: 0
Bus 0 Enclosure 0 Disk 1 Queue Length: 0
Bus 0 Enclosure 1 Disk 6 Queue Length: 0
Bus 0 Enclosure 1 Disk 4 Queue Length: 0
Bus 0 Enclosure 1 Disk 2 Queue Length: 0
Bus 0 Enclosure 1 Disk 0 Queue Length: 0
Bus 0 Enclosure 0 Disk 6 Hard Read Errors: 0
Bus 0 Enclosure 0 Disk 4 Hard Read Errors: 0
Bus 0 Enclosure 0 Disk 2 Hard Read Errors: 0
Bus 0 Enclosure 0 Disk 0 Hard Read Errors: 0
Bus 0 Enclosure 1 Disk 5 Hard Read Errors: 0
Bus 0 Enclosure 1 Disk 3 Hard Read Errors: 0
Bus 0 Enclosure 1 Disk 1 Hard Read Errors: 0
Bus 0 Enclosure 0 Disk 5 Hard Read Errors: 0
Bus 0 Enclosure 0 Disk 3 Hard Read Errors: 0
Bus 0 Enclosure 0 Disk 1 Hard Read Errors: 0
Bus 0 Enclosure 1 Disk 6 Hard Read Errors: 0
Bus 0 Enclosure 1 Disk 4 Hard Read Errors: 0
Bus 0 Enclosure 1 Disk 2 Hard Read Errors: 0
Bus 0 Enclosure 1 Disk 0 Hard Read Errors: 0
Bus 0 Enclosure 0 Disk 6 Hard Write Errors: 0
Bus 0 Enclosure 0 Disk 4 Hard Write Errors: 0
Bus 0 Enclosure 0 Disk 2 Hard Write Errors: 0
Bus 0 Enclosure 0 Disk 0 Hard Write Errors: 0
Bus 0 Enclosure 1 Disk 5 Hard Write Errors: 0
Bus 0 Enclosure 1 Disk 3 Hard Write Errors: 0
Bus 0 Enclosure 1 Disk 1 Hard Write Errors: 0
Bus 0 Enclosure 0 Disk 5 Hard Write Errors: 0
Bus 0 Enclosure 0 Disk 3 Hard Write Errors: 0
Bus 0 Enclosure 0 Disk 1 Hard Write Errors: 0
Bus 0 Enclosure 1 Disk 6 Hard Write Errors: 0
Bus 0 Enclosure 1 Disk 4 Hard Write Errors: 0
Bus 0 Enclosure 1 Disk 2 Hard Write Errors: 0
Bus 0 Enclosure 1 Disk 0 Hard Write Errors: 0
Bus 0 Enclosure 0 Disk 6 Soft Read Errors: 0
Bus 0 Enclosure 0 Disk 4 Soft Read Errors: 0
Bus 0 Enclosure 0 Disk 2 Soft Read Errors: 0
Bus 0 Enclosure 0 Disk 0 Soft Read Errors: 0
Bus 0 Enclosure 1 Disk 5 Soft Read Errors: 0
Bus 0 Enclosure 1 Disk 3 Soft Read Errors: 0
Bus 0 Enclosure 1 Disk 1 Soft Read Errors: 0
Bus 0 Enclosure 0 Disk 5 Soft Read Errors: 0
Bus 0 Enclosure 0 Disk 3 Soft Read Errors: 0
Bus 0 Enclosure 0 Disk 1 Soft Read Errors: 0
Bus 0 Enclosure 1 Disk 6 Soft Read Errors: 0
Bus 0 Enclosure 1 Disk 4 Soft Read Errors: 0
Bus 0 Enclosure 1 Disk 2 Soft Read Errors: 0

```

```

Bus 0 Enclosure 1 Disk 0 Soft Read Errors: 0
Bus 0 Enclosure 0 Disk 6 Soft Write Errors: 0
Bus 0 Enclosure 0 Disk 4 Soft Write Errors: 0
Bus 0 Enclosure 0 Disk 2 Soft Write Errors: 0
Bus 0 Enclosure 0 Disk 0 Soft Write Errors: 0
Bus 0 Enclosure 1 Disk 5 Soft Write Errors: 0
Bus 0 Enclosure 1 Disk 3 Soft Write Errors: 0
Bus 0 Enclosure 1 Disk 1 Soft Write Errors: 0
Bus 0 Enclosure 0 Disk 5 Soft Write Errors: 0
Bus 0 Enclosure 0 Disk 3 Soft Write Errors: 0
Bus 0 Enclosure 0 Disk 1 Soft Write Errors: 0
Bus 0 Enclosure 1 Disk 6 Soft Write Errors: 0
Bus 0 Enclosure 1 Disk 4 Soft Write Errors: 0
Bus 0 Enclosure 1 Disk 2 Soft Write Errors: 0
Bus 0 Enclosure 1 Disk 0 Soft Write Errors: 0
Bus 0 Enclosure 0 Disk 6 Enabled
Bus 0 Enclosure 0 Disk 4 Enabled
Bus 0 Enclosure 0 Disk 2 Enabled
Bus 0 Enclosure 0 Disk 0 Enabled
Bus 0 Enclosure 1 Disk 5 Enabled
Bus 0 Enclosure 1 Disk 3 Enabled
Bus 0 Enclosure 1 Disk 1 Enabled
Bus 0 Enclosure 0 Disk 5 Enabled
Bus 0 Enclosure 0 Disk 3 Enabled
Bus 0 Enclosure 0 Disk 1 Enabled
Bus 0 Enclosure 1 Disk 6 Enabled
Bus 0 Enclosure 1 Disk 4 Enabled
Bus 0 Enclosure 1 Disk 2 Enabled
Bus 0 Enclosure 1 Disk 0 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

Prefetching: NO  
Prefetched data retained YES

Read cache configured according to  
specified parameters.

Total Hard Errors: 0  
Total Soft Errors: 0  
Total Queue Length: 0  
Name LUN 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): 957983  
LUN Capacity (Blocks): 1961949696  
UID:

60:06:01:60:83:40:0F:00:AC:74:CE:FA:CB:D7:D9:11  
Bus 0 Enclosure 0 Disk 13 Queue Length: 0  
Bus 0 Enclosure 0 Disk 11 Queue Length: 0  
Bus 0 Enclosure 0 Disk 9 Queue Length: 0  
Bus 0 Enclosure 0 Disk 7 Queue Length: 0  
Bus 0 Enclosure 1 Disk 12 Queue Length: 0  
Bus 0 Enclosure 1 Disk 10 Queue Length: 0  
Bus 0 Enclosure 1 Disk 8 Queue Length: 0  
Bus 0 Enclosure 0 Disk 12 Queue Length: 0  
Bus 0 Enclosure 0 Disk 10 Queue Length: 0  
Bus 0 Enclosure 0 Disk 8 Queue Length: 0  
Bus 0 Enclosure 1 Disk 13 Queue Length: 0  
Bus 0 Enclosure 1 Disk 11 Queue Length: 0  
Bus 0 Enclosure 1 Disk 9 Queue Length: 0  
Bus 0 Enclosure 1 Disk 7 Queue Length: 0  
Bus 0 Enclosure 0 Disk 13 Hard Read Errors: 0  
Bus 0 Enclosure 0 Disk 11 Hard Read Errors: 0  
Bus 0 Enclosure 0 Disk 9 Hard Read Errors: 0  
Bus 0 Enclosure 0 Disk 7 Hard Read Errors: 0

Bus 0 Enclosure 1 Disk 12 Hard Read Errors: 0  
Bus 0 Enclosure 1 Disk 10 Hard Read Errors: 0  
Bus 0 Enclosure 1 Disk 8 Hard Read Errors: 0  
Bus 0 Enclosure 0 Disk 12 Hard Read Errors: 0  
Bus 0 Enclosure 0 Disk 10 Hard Read Errors: 0  
Bus 0 Enclosure 0 Disk 8 Hard Read Errors: 0  
Bus 0 Enclosure 1 Disk 13 Hard Read Errors: 0  
Bus 0 Enclosure 1 Disk 11 Hard Read Errors: 0  
Bus 0 Enclosure 1 Disk 9 Hard Read Errors: 0  
Bus 0 Enclosure 1 Disk 7 Hard Read Errors: 0  
Bus 0 Enclosure 0 Disk 13 Hard Write Errors: 0  
Bus 0 Enclosure 0 Disk 11 Hard Write Errors: 0  
Bus 0 Enclosure 0 Disk 9 Hard Write Errors: 0  
Bus 0 Enclosure 0 Disk 7 Hard Write Errors: 0  
Bus 0 Enclosure 1 Disk 12 Hard Write Errors: 0  
Bus 0 Enclosure 1 Disk 10 Hard Write Errors: 0  
Bus 0 Enclosure 1 Disk 8 Hard Write Errors: 0  
Bus 0 Enclosure 0 Disk 12 Hard Write Errors: 0  
Bus 0 Enclosure 0 Disk 10 Hard Write Errors: 0  
Bus 0 Enclosure 0 Disk 8 Hard Write Errors: 0  
Bus 0 Enclosure 1 Disk 13 Hard Write Errors: 0  
Bus 0 Enclosure 1 Disk 11 Hard Write Errors: 0  
Bus 0 Enclosure 1 Disk 9 Hard Write Errors: 0  
Bus 0 Enclosure 1 Disk 7 Hard Write Errors: 0  
Bus 0 Enclosure 0 Disk 13 Soft Read Errors: 0  
Bus 0 Enclosure 0 Disk 11 Soft Read Errors: 0  
Bus 0 Enclosure 0 Disk 9 Soft Read Errors: 0  
Bus 0 Enclosure 0 Disk 7 Soft Read Errors: 0  
Bus 0 Enclosure 1 Disk 12 Soft Read Errors: 0  
Bus 0 Enclosure 1 Disk 10 Soft Read Errors: 0  
Bus 0 Enclosure 1 Disk 8 Soft Read Errors: 0  
Bus 0 Enclosure 0 Disk 12 Soft Read Errors: 0  
Bus 0 Enclosure 0 Disk 10 Soft Read Errors: 0  
Bus 0 Enclosure 0 Disk 8 Soft Read Errors: 0  
Bus 0 Enclosure 1 Disk 13 Soft Read Errors: 0  
Bus 0 Enclosure 1 Disk 11 Soft Read Errors: 0  
Bus 0 Enclosure 1 Disk 9 Soft Read Errors: 0  
Bus 0 Enclosure 1 Disk 7 Soft Read Errors: 0  
Bus 0 Enclosure 0 Disk 13 Soft Write Errors: 0  
Bus 0 Enclosure 0 Disk 11 Soft Write Errors: 0  
Bus 0 Enclosure 0 Disk 9 Soft Write Errors: 0  
Bus 0 Enclosure 0 Disk 7 Soft Write Errors: 0  
Bus 0 Enclosure 1 Disk 12 Soft Write Errors: 0  
Bus 0 Enclosure 1 Disk 10 Soft Write Errors: 0  
Bus 0 Enclosure 1 Disk 8 Soft Write Errors: 0  
Bus 0 Enclosure 0 Disk 12 Soft Write Errors: 0  
Bus 0 Enclosure 0 Disk 8 Soft Write Errors: 0  
Bus 0 Enclosure 1 Disk 13 Soft Write Errors: 0  
Bus 0 Enclosure 1 Disk 11 Soft Write Errors: 0  
Bus 0 Enclosure 1 Disk 9 Soft Write Errors: 0  
Bus 0 Enclosure 1 Disk 7 Soft Write Errors: 0  
Bus 0 Enclosure 0 Disk 13 Enabled  
Bus 0 Enclosure 0 Disk 11 Enabled  
Bus 0 Enclosure 0 Disk 9 Enabled

```

Bus 0 Enclosure 0 Disk 7 Enabled
Bus 0 Enclosure 1 Disk 12 Enabled
Bus 0 Enclosure 1 Disk 10 Enabled
Bus 0 Enclosure 1 Disk 8 Enabled
Bus 0 Enclosure 0 Disk 12 Enabled
Bus 0 Enclosure 0 Disk 10 Enabled
Bus 0 Enclosure 0 Disk 8 Enabled
Bus 0 Enclosure 1 Disk 13 Enabled
Bus 0 Enclosure 1 Disk 11 Enabled
Bus 0 Enclosure 1 Disk 9 Enabled
Bus 0 Enclosure 1 Disk 7 Enabled
Is Private: NO
Snapshots List: None
MirrorView Name if any: Not Mirrored

```

## Windows Datacenter Server Configuration Information

(Common to 8 clients except for hostname and IP address)

System Information report written at: 06/08/05 10:14:12

System Name: ORACL1

[System Summary]

Item Value

OS Name Microsoft(R) Windows(R) Server 2003, Standard Edition

Version 5.2.3790 Service Pack 1 Build 3790

Other OS Description Not Available

OS Manufacturer Microsoft Corporation

System Name ORACL1

System Manufacturer Unisys System

System Model ES3120L

System Type X86-based PC

Processor x86 Family 15 Model 3 Stepping 4 GenuineIntel ~3391 Mhz

Processor x86 Family 15 Model 3 Stepping 4 GenuineIntel ~3391 Mhz

Processor x86 Family 15 Model 3 Stepping 4 GenuineIntel ~3391 Mhz

Processor x86 Family 15 Model 3 Stepping 4 GenuineIntel ~3391 Mhz

BIOS Version/Date Unisys System A00, 7/22/2004

SMBIOS Version 2.3

Windows Directory C:\WINDOWS

System Directory C:\WINDOWS\system32

Boot Device \Device\HarddiskVolume1

```

Locale United States
Hardware Abstraction Layer Version = "5.2.3790.1830
(srv03_spl_rtm.050324-1447)"
User Name ORACL1\Administrator
Time Zone Pacific Daylight Time
Total Physical Memory 2,047.27 MB
Available Physical Memory 1.73 GB
Total Virtual Memory 3.85 GB
Available Virtual Memory 3.73 GB
Page File Space 2.00 GB
Page File C:\pagefile.sys

```

[Hardware Resources]

[Conflicts/Sharing]

```

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

```

```

Memory Address 0xD8000000-0xD8FFFFFF Intel(R) E7525/E7520/E7320 PCI
Express Root Port A0 - 3595

```

```

Memory Address 0xD8000000-0xD8FFFFFF PCI standard PCI-to-PCI bridge

```

```

I/O Port 0x0000E000-0x0000EFFF Intel(R) E7525/E7520/E7320 PCI
Express Root Port A0 - 3595

```

```

I/O Port 0x0000E000-0x0000EFFF PCI standard PCI-to-PCI bridge

```

```

IRQ 16 Intel(R) E7525/E7520/E7320 PCI Express Root Port A0 - 3595

```

```

IRQ 16 Intel(R) E7525/E7520 PCI Express Root Port B0 - 3597

```

```

IRQ 16 Intel(R) E7520 PCI Express Root Port B1 - 3598

```

```

IRQ 16 Intel(R) E7520 PCI Express Root Port C0 - 3599

```

```

IRQ 16 Standard Universal PCI to USB Host Controller

```

```

IRQ 18 Standard Universal PCI to USB Host Controller

```

```

IRQ 18 RADEON 7000 RADEON VE Family (Microsoft Corporation)

```

```

Memory Address 0xA0000-0xBFFFF PCI bus

```

```

Memory Address 0xA0000-0xBFFFF RADEON 7000 RADEON VE Family
(Microsoft Corporation)

```

```

I/O Port 0x0000C000-0x0000DFFF Intel(R) E7520 PCI Express Root Port
B1 - 3598

```

```

I/O Port 0x0000C000-0x0000DFFF Intel(R) 6700PXH PCI Express-to-PCI
Bridge B - 032A

```

[DMA]

```

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

```

[Forced Hardware]

Device PNP Device ID

[I/O]

Resource	Device	Status
0x00000000-0x00000CF7	PCI bus OK	
0x00000000-0x00000CF7	Direct memory access controller	OK
0x00000D00-0x0000FFFF	PCI bus OK	
0x0000E000-0x0000EFFF	Intel(R) E7525/E7520/E7320 PCI Express Root Port A0 - 3595	OK
0x0000E000-0x0000EFFF	PCI standard PCI-to-PCI bridge	OK
0x0000EC00-0x0000ECFF	LSI Logic PCI-X Ultra320 SCSI Host Adapter	OK
0x0000E800-0x0000E8FF	LSI Logic PCI-X Ultra320 SCSI Host Adapter	OK
0x0000C000-0x0000DFFF	Intel(R) E7520 PCI Express Root Port B1 - 3598	OK
0x0000C000-0x0000DFFF	Intel(R) 6700PXH PCI Express-to-PCI Bridge B - 032A	OK
0x0000D000-0x0000DFFF	Intel(R) 6700PXH PCI Express-to-PCI Bridge A - 0329	OK
0x0000DCC0-0x0000DCFF	Intel(R) PRO/1000 MT Network Connection	OK
0x0000CCC0-0x0000CCFF	Intel(R) PRO/1000 MT Network Connection #2	OK
0x0000ACE0-0x0000ACFF	Standard Universal PCI to USB Host Controller	OK
0x0000ACC0-0x0000ACDF	Standard Universal PCI to USB Host Controller	OK
0x0000ACA0-0x0000ACBF	Standard Universal PCI to USB Host Controller	OK
0x0000BC00-0x0000BCFF	RADEON 7000 RADEON VE Family (Microsoft Corporation)	OK
0x000003B0-0x000003BB	RADEON 7000 RADEON VE Family (Microsoft Corporation)	OK
0x000003C0-0x000003DF	RADEON 7000 RADEON VE Family (Microsoft Corporation)	OK
0x00000A79-0x00000A79	ISAPNP Read Data Port	OK
0x00000279-0x00000279	ISAPNP Read Data Port	OK
0x00000274-0x00000277	ISAPNP Read Data Port	OK
0x00000080-0x0000009F	Direct memory access controller	OK
0x000000C0-0x000000DF	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
0x00000070-0x0000007F	System CMOS/real time clock	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
0x00000800-0x0000087F	System board	OK
0x00000880-0x000008BF	System board	OK

0x000008C0-0x000008DF	System board	OK
0x00000C00-0x00000C0F	System board	OK
0x00000C10-0x00000C1F	System board	OK
0x00000CA0-0x00000CAF	System board	OK
0x00000C20-0x00000C3F	System board	OK
0x000000E0-0x000000E7	System board	OK
0x0000FC00-0x0000FC0F	Intel(R) 82801EB Ultra ATA Storage Controllers - 24DB	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

[IRQs]

Resource	Device	Status
IRQ 9	Microsoft ACPI-Compliant System	OK
IRQ 16	Intel(R) E7525/E7520/E7320 PCI Express Root Port A0 - 3595	OK
IRQ 16	Intel(R) E7525/E7520 PCI Express Root Port B0 - 3597	OK
IRQ 16	Intel(R) E7520 PCI Express Root Port B1 - 3598	OK
IRQ 16	Intel(R) E7520 PCI Express Root Port C0 - 3599	OK
IRQ 16	Standard Universal PCI to USB Host Controller	OK
IRQ 34	LSI Logic PCI-X Ultra320 SCSI Host Adapter	OK
IRQ 33	LSI Logic PCI-X Ultra320 SCSI Host Adapter	OK
IRQ 64	Intel(R) PRO/1000 MT Network Connection	OK
IRQ 65	Intel(R) PRO/1000 MT Network Connection #2	OK
IRQ 19	Standard Universal PCI to USB Host Controller	OK
IRQ 18	Standard Universal PCI to USB Host Controller	OK
IRQ 18	RADEON 7000 RADEON VE Family (Microsoft Corporation)	OK
IRQ 23	Standard Enhanced PCI to USB Host Controller	OK
IRQ 13	Numeric data processor	OK
IRQ 8	System CMOS/real time clock	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 14	Primary IDE Channel	OK
IRQ 15	Secondary IDE Channel	OK

[Memory]

Resource	Device	Status
0xA0000-0xBFFFF	PCI bus	OK
0xA0000-0xBFFFF	RADEON 7000 RADEON VE Family (Microsoft Corporation)	OK
0x80000000-0xFEBFFFFFFF	PCI bus	OK
0xDFC00000-0xDFEFFFFFFF	Intel(R) E7525/E7520/E7320 PCI Express Root Port A0 - 3595	OK
0xD8000000-0xD8FFFFFFF	Intel(R) E7525/E7520/E7320 PCI Express Root Port A0 - 3595	OK
0xD8000000-0xD8FFFFFFF	PCI standard PCI-to-PCI bridge	OK
0xDFD00000-0xDFEFFFFFFF	PCI standard PCI-to-PCI bridge	OK
0xDFDF0000-0xDFDFFFFFFF	LSI Logic PCI-X Ultra320 SCSI Host Adapter	OK
0xDFDE0000-0xDFDEFFFFFFF	LSI Logic PCI-X Ultra320 SCSI Host Adapter	OK

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0xDFDD0000-0xDFDDFFFF LSI Logic PCI-X Ultra320 SCSI Host Adapter OK
0xDFDC0000-0xDFDCFFFF LSI Logic PCI-X Ultra320 SCSI Host Adapter OK
0xDF700000-0xDFBFFFFF Intel(R) E7520 PCI Express Root Port B1 - 3598
OK
0xDFA00000-0xDFBFFFFF Intel(R) 6700PXH PCI Express-to-PCI Bridge A - 0329
OK
0xDFAE0000-0xDFAFFFFF Intel(R) PRO/1000 MT Network Connection OK
0xDF800000-0xDF9FFFFF Intel(R) 6700PXH PCI Express-to-PCI Bridge B - 032A
OK
0xDF8E0000-0xDF8FFFFF Intel(R) PRO/1000 MT Network Connection #2 OK
0xDF600000-0xDF6FFFFF Intel(R) E7520 PCI Express Root Port C0 - 3599
OK
0xDFF00000-0xDFF003FF Standard Enhanced PCI to USB Host Controller OK
0xD0000000-0xD7FFFFFF RADEON 7000 RADEON VE Family (Microsoft
Corporation) OK
0xDF4F0000-0xDF4FFFFF RADEON 7000 RADEON VE Family (Microsoft
Corporation) OK
0xFEBC0000-0xFEBCFFFF Intel(R) 82801EB Ultra ATA Storage Controllers -
24DB OK
0xE0000000-0xEFFFFFFF Motherboard resources OK
0xFED00000-0xFED003FF High precision event timer OK

```

[Components]

[Multimedia]

[Audio Codecs]

CODEC	Manufacturer	Description	Status	File	Version	Size
		Creation Date				
c:\windows\system32\tssoft32.acm	DSP GROUP, INC.		OK			
	C:\WINDOWS\system32\TSSOFT32.ACM	1.01		9.50 KB (9,728 bytes)		
		3/25/2003 11:00 AM				
c:\windows\system32\msaud32.acm	Microsoft Corporation	Windows Media Audio Codec	OK	C:\WINDOWS\system32\MSAUD32.ACM	8.00.00.4487	
		288.00 KB (294,912 bytes)		3/25/2003 11:00 AM		
c:\windows\system32\l3codeca.acm	Fraunhofer Institut	Integrierte Schaltungen IIS	OK	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\sl_anet.acm	Sipro Lab Telecom Inc.	Sipro Lab Telecom Audio Codec	OK	C:\WINDOWS\system32\SL_ANET.ACM	3.02	
		84.00 KB (86,016 bytes)		3/25/2003 11:00 AM		
c:\windows\system32\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\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	

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c:\windows\system32\msg723.acm Microsoft Corporation OK
C:\WINDOWS\system32\MSG723.ACM 5.2.3790.1830 120.00 KB
(122,880 bytes) 5/11/2005 11:05 AM
c:\windows\system32\msadp32.acm Microsoft Corporation OK
C:\WINDOWS\system32\MSADP32.ACM 5.2.3790.0 (srv03_rtm.030324-2048)
14.50 KB (14,848 bytes) 3/25/2003 11:00 AM
c:\windows\system32\msg711.acm Microsoft Corporation OK
C:\WINDOWS\system32\MSG711.ACM 5.2.3790.0 (srv03_rtm.030324-2048)
10.00 KB (10,240 bytes) 3/25/2003 11:00 AM

```

[Video Codecs]

CODEC	Manufacturer	Description	Status	File	Version	Size
		Creation Date				
c:\windows\system32\iyuv_32.dll	Microsoft Corporation		OK			
	C:\WINDOWS\system32\IYUV_32.DLL	5.2.3790.1830		46.50 KB (47,616 bytes)	5/11/2005 11:05 AM	
(srv03_spl_rtm.050324-1447)						
c:\windows\system32\msh261.drv	Microsoft Corporation		OK			
	C:\WINDOWS\system32\MSH261.DRV	5.2.3790.1830		184.00 KB (188,416 bytes)	5/11/2005 11:05 AM	
c:\windows\system32\msyuv.dll	Microsoft Corporation		OK			
	C:\WINDOWS\system32\MSYUV.DLL	5.2.3790.0 (srv03_rtm.030324-2048)		16.50 KB (16,896 bytes)	3/24/2003 5:49 PM	
c:\windows\system32\msvidc32.dll	Microsoft Corporation		OK			
	C:\WINDOWS\system32\MSVIDC32.DLL	5.2.3790.0 (srv03_rtm.030324-2048)		26.50 KB (27,136 bytes)	3/25/2003 11:00 AM	
c:\windows\system32\msh263.drv	Microsoft Corporation		OK			
	C:\WINDOWS\system32\MSH263.DRV	5.2.3790.1830		288.00 KB (294,912 bytes)	5/11/2005 11:05 AM	
c:\windows\system32\tsbyuv.dll	Microsoft Corporation		OK			
	C:\WINDOWS\system32\TSBYUV.DLL	5.2.3790.0 (srv03_rtm.030324-2048)		8.00 KB (8,192 bytes)	3/24/2003 5:50 PM	
c:\windows\system32\msrle32.dll	Microsoft Corporation		OK			
	C:\WINDOWS\system32\MSRLE32.DLL	5.2.3790.0 (srv03_rtm.030324-2048)		10.50 KB (10,752 bytes)	3/25/2003 11:00 AM	

[CD-ROM]

```

Item Value
Drive D:
Description CD-ROM Drive
Media Loaded No
Media Type CD-ROM
Name TEAC CD-224E
Manufacturer (Standard CD-ROM drives)
Status OK
Transfer Rate Not Available
SCSI Target ID 0
PNP Device ID IDE\CDROMTEAC_CD-224E
K.9A_\5&122E1C04&0.0.0
Driver c:\windows\system32\drivers\cdrom.sys (5.2.3790.1830
(srv03_spl_rtm.050324-1447), 51.00 KB (52,224 bytes), 3/25/2003 11:00 AM)

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[Sound Device]

Item Value



[Display]

Item Value  
Name RADEON 7000 RADEON VE Family (Microsoft Corporation)  
PNP Device ID  
PCI\VEN\_1002&DEV\_5159&SUBSYS\_016D1028&REV\_00\4&1F7DBC9F&0&68F0

Adapter Type Radeon 7000 (QY), ATI Technologies Inc. compatible  
Adapter Description RADEON 7000 RADEON VE Family (Microsoft Corporation)  
Adapter RAM 16.00 MB (16,777,216 bytes)  
Installed Drivers ati2dvag.dll  
Driver Version 5.1.2600.0  
INF File atiixpag.inf (ati2mtag\_RV100 section)  
Color Planes 1  
Color Table Entries 4294967296  
Resolution 800 x 600 x 60 hertz  
Bits/Pixel 32  
Memory Address 0xD0000000-0xD7FFFFFFF  
I/O Port 0x0000BC00-0x0000BCFF  
Memory Address 0xDF4F0000-0xDF4FFFFF  
IRQ Channel IRQ 18  
I/O Port 0x000003B0-0x000003BB  
I/O Port 0x000003C0-0x000003DF  
Memory Address 0xA0000-0xBFFFF  
Driver c:\windows\system32\drivers\ati2mtag.sys (6.13.10.6153, 439.63 KB (450,176 bytes), 10/19/2004 12:30 PM)

[Infrared]

Item Value

[Input]

[Keyboard]

Item Value  
Description Standard 101/102-Key or Microsoft Natural PS/2 Keyboard  
Name Enhanced (101- or 102-key)  
Layout 00000409  
PNP Device ID ACPI\PNP0303\4&26DD0F47&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 (5.2.3790.1830 (srv03\_sp1\_rtm.050324-1447), 54.50 KB (55,808 bytes), 3/25/2003 11:00 AM)

[Pointing Device]

Item Value  
Hardware Type PS/2 Compatible Mouse  
Number of Buttons 5  
Status OK  
PNP Device ID ACPI\PNP0F13\4&26DD0F47&0

Power Management Supported No  
Double Click Threshold 6  
Handedness Right Handed Operation  
IRQ Channel IRQ 12  
Driver c:\windows\system32\drivers\i8042prt.sys (5.2.3790.1830 (srv03\_sp1\_rtm.050324-1447), 54.50 KB (55,808 bytes), 3/25/2003 11:00 AM)

[Modem]

Item Value

[Network]

[Adapter]

Item Value  
Name [00000001] RAS Async Adapter  
Adapter Type Not Available  
Product Type RAS Async Adapter  
Installed Yes  
PNP Device ID Not Available  
Last Reset 6/7/2005 4:26 PM  
Index 1  
Service Name AsyncMac  
IP Address Not Available  
IP Subnet Not Available  
Default IP Gateway Not Available  
DHCP Enabled No  
DHCP Server Not Available  
DHCP Lease Expires Not Available  
DHCP Lease Obtained Not Available  
MAC Address Not Available

Name [00000002] WAN Miniport (L2TP)  
Adapter Type Not Available  
Product Type WAN Miniport (L2TP)  
Installed Yes  
PNP Device ID ROOT\MS\_L2TPMINIPORT\0000  
Last Reset 6/7/2005 4:26 PM  
Index 2  
Service Name Rasl2tp  
IP Address Not Available  
IP Subnet Not Available  
Default IP Gateway Not Available  
DHCP Enabled No  
DHCP Server Not Available  
DHCP Lease Expires Not Available  
DHCP Lease Obtained Not Available  
MAC Address Not Available  
Driver c:\windows\system32\drivers\rasl2tp.sys (5.2.3790.1830 (srv03\_sp1\_rtm.050324-1447), 66.00 KB (67,584 bytes), 3/25/2003 11:00 AM)

Name [00000003] WAN Miniport (PPTP)  
Adapter Type Wide Area Network (WAN)  
Product Type WAN Miniport (PPTP)

Installed Yes  
PNP Device ID ROOT\MS\_PPTPMINIPORT\0000  
Last Reset 6/7/2005 4:26 PM  
Index 3  
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\raspttp.sys (5.2.3790.1830  
(srv03\_sp1\_rtm.050324-1447), 61.00 KB (62,464 bytes), 3/25/2003 11:00 AM)

Name [00000004] WAN Miniport (PPPOE)  
Adapter Type Wide Area Network (WAN)  
Product Type WAN Miniport (PPPOE)  
Installed Yes  
PNP Device ID ROOT\MS\_PPPOEMINIPORT\0000  
Last Reset 6/7/2005 4:26 PM  
Index 4  
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 (5.2.3790.1830  
(srv03\_sp1\_rtm.050324-1447), 40.00 KB (40,960 bytes), 3/25/2003 11:00 AM)

Name [00000005] Direct Parallel  
Adapter Type Not Available  
Product Type Direct Parallel  
Installed Yes  
PNP Device ID ROOT\MS\_PTINIPORT\0000  
Last Reset 6/7/2005 4:26 PM  
Index 5  
Service Name Raspti  
IP Address Not Available  
IP Subnet Not Available  
Default IP Gateway Not Available  
DHCP Enabled No  
DHCP Server Not Available  
DHCP Lease Expires Not Available  
DHCP Lease Obtained Not Available  
MAC Address Not Available  
Driver c:\windows\system32\drivers\raspti.sys (5.2.3790.1830  
(srv03\_sp1\_rtm.050324-1447), 19.50 KB (19,968 bytes), 3/25/2003 11:00 AM)

Name [00000006] WAN Miniport (IP)  
Adapter Type Not Available

Product Type WAN Miniport (IP)  
Installed Yes  
PNP Device ID ROOT\MS\_NDISWANIP\0000  
Last Reset 6/7/2005 4:26 PM  
Index 6  
Service Name NdisWan  
IP Address Not Available  
IP Subnet Not Available  
Default IP Gateway Not Available  
DHCP Enabled No  
DHCP Server Not Available  
DHCP Lease Expires Not Available  
DHCP Lease Obtained Not Available  
MAC Address Not Available  
Driver c:\windows\system32\drivers\ndiswan.sys (5.2.3790.1830  
(srv03\_sp1\_rtm.050324-1447), 91.00 KB (93,184 bytes), 3/25/2003 11:00 AM)

Name [00000007] Intel(R) PRO/1000 MT Network Connection  
Adapter Type Ethernet 802.3  
Product Type Intel(R) PRO/1000 MT Network Connection  
Installed Yes  
PNP Device ID  
PCI\VEN\_8086&DEV\_1076&SUBSYS\_016D1028&REV\_05\5&803901B&0&380028  
Last Reset 6/7/2005 4:26 PM  
Index 7  
Service Name E1000  
IP Address 192.158.1.1  
IP Subnet 255.255.255.0  
Default IP Gateway Not Available  
DHCP Enabled No  
DHCP Server Not Available  
DHCP Lease Expires Not Available  
DHCP Lease Obtained Not Available  
MAC Address 00:11:43:58:1C:62  
Memory Address 0xDFAE0000-0xDFAFFFFF  
I/O Port 0x0000DCC0-0x0000DCFF  
IRQ Channel IRQ 64  
Driver c:\windows\system32\drivers\e1000325.sys (7.2.19.1 built by:  
WinDDK, 123.00 KB (125,952 bytes), 10/20/2004 11:10 AM)

Name [00000008] Intel(R) PRO/1000 MT Network Connection  
Adapter Type Ethernet 802.3  
Product Type Intel(R) PRO/1000 MT Network Connection  
Installed Yes  
PNP Device ID  
PCI\VEN\_8086&DEV\_1076&SUBSYS\_016D1028&REV\_05\5&C8E9BA0&0&400228  
Last Reset 6/7/2005 4:26 PM  
Index 8  
Service Name E1000  
IP Address 192.1.1.1  
IP Subnet 255.255.255.0  
Default IP Gateway Not Available  
DHCP Enabled No  
DHCP Server Not Available  
DHCP Lease Expires Not Available  
DHCP Lease Obtained Not Available

MAC Address 00:11:43:58:1C:63  
Memory Address 0xDF8E0000-0xDF8FFFFF  
I/O Port 0x0000CC00-0x0000CCFF  
IRQ Channel IRQ 65  
Driver c:\windows\system32\drivers\ei1000325.sys (7.2.19.1 built by:  
WinDDK, 123.00 KB (125,952 bytes), 10/20/2004 11:10 AM)

[Protocol]

Item Value  
Name MSAFD Tcpip [TCP/IP]  
Connectionless Service No  
Guarantees Delivery Yes  
Guarantees Sequencing Yes  
Maximum Address Size 16 bytes  
Maximum Message Size 0 bytes  
Message Oriented No  
Minimum Address Size 16 bytes  
Pseudo Stream Oriented No  
Supports Broadcasting No  
Supports Connect Data No  
Supports Disconnect Data No  
Supports Encryption No  
Supports Expedited Data Yes  
Supports Graceful Closing Yes  
Supports Guaranteed Bandwidth No  
Supports Multicasting No

Name MSAFD Tcpip [UDP/IP]  
Connectionless Service Yes  
Guarantees Delivery No  
Guarantees Sequencing No  
Maximum Address Size 16 bytes  
Maximum Message Size 63.93 KB (65,467 bytes)  
Message Oriented Yes  
Minimum Address Size 16 bytes  
Pseudo Stream Oriented No  
Supports Broadcasting Yes  
Supports Connect Data No  
Supports Disconnect Data No  
Supports Encryption No  
Supports Expedited Data No  
Supports Graceful Closing No  
Supports Guaranteed Bandwidth No  
Supports Multicasting Yes

Name RSVP UDP Service Provider  
Connectionless Service Yes  
Guarantees Delivery No  
Guarantees Sequencing No  
Maximum Address Size 16 bytes  
Maximum Message Size 63.93 KB (65,467 bytes)  
Message Oriented Yes  
Minimum Address Size 16 bytes  
Pseudo Stream Oriented No  
Supports Broadcasting Yes  
Supports Connect Data No  
Supports Disconnect Data No  
Supports Encryption Yes

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

Name RSVP TCP Service Provider  
Connectionless Service No  
Guarantees Delivery Yes  
Guarantees Sequencing Yes  
Maximum Address Size 16 bytes  
Maximum Message Size 0 bytes  
Message Oriented No  
Minimum Address Size 16 bytes  
Pseudo Stream Oriented No  
Supports Broadcasting No  
Supports Connect Data No  
Supports Disconnect Data No  
Supports Encryption Yes  
Supports Expedited Data Yes  
Supports Graceful Closing Yes  
Supports Guaranteed Bandwidth No  
Supports Multicasting No

Name MSAFD NetBIOS [\Device\NetBT\_Tcpip\_{8D10888B-172C-42DA-9119-F690C6569F08}] 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\_{8D10888B-172C-42DA-9119-F690C6569F08}] DATAGRAM 3  
Connectionless Service Yes  
Guarantees Delivery No  
Guarantees Sequencing No  
Maximum Address Size 20 bytes  
Maximum Message Size 62.50 KB (64,000 bytes)  
Message Oriented Yes  
Minimum Address Size 20 bytes  
Pseudo Stream Oriented No  
Supports Broadcasting Yes  
Supports Connect Data No  
Supports Disconnect Data No  
Supports Encryption No  
Supports Expedited Data No  
Supports Graceful Closing No  
Supports Guaranteed Bandwidth No

Supports Multicasting No

Name MSAFD NetBIOS [\\Device\NetBT\_Tcpip\_{35D335E3-7BFB-4A25-803D-7C9A89A68C20}] 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\_{35D335E3-7BFB-4A25-803D-7C9A89A68C20}] 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\_{2D13871F-65E0-4488-975A-87F4820F3CA7}] 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\_{2D13871F-65E0-4488-975A-87F4820F3CA7}] 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\_{C66855BE-E13A-4E93-B9E8-4AEAB2144A65}] 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\_{C66855BE-E13A-4E93-B9E8-4AEAB2144A65}] DATAGRAM 2  
Connectionless Service Yes  
Guarantees Delivery No  
Guarantees Sequencing No  
Maximum Address Size 20 bytes  
Maximum Message Size 62.50 KB (64,000 bytes)  
Message Oriented Yes  
Minimum Address Size 20 bytes  
Pseudo Stream Oriented No  
Supports Broadcasting Yes  
Supports Connect Data No  
Supports Disconnect Data No  
Supports Encryption No  
Supports Expedited Data No  
Supports Graceful Closing No  
Supports Guaranteed Bandwidth No  
Supports Multicasting No

[WinSock]

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

File c:\windows\system32\wsock32.dll  
Size 22.00 KB (22,528 bytes)  
Version 5.2.3790.0 (srv03\_rtm.030324-2048)

[Ports]

[Serial]

Item Value  
Name Communications Port (COM1)  
Status OK  
PNP Device ID ACPI\PNP0501\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 (5.2.3790.1830  
(srv03\_spl\_rtm.050324-1447), 64.00 KB (65,536 bytes), 3/25/2003 11:00 AM)

[Parallel]

Item Value

[Storage]

[Drives]

Item Value  
Drive C:  
Description Local Fixed Disk  
Compressed No  
File System NTFS  
Size 33.91 GB (36,413,280,256 bytes)  
Free Space 29.03 GB (31,175,036,928 bytes)  
Volume Name  
Volume Serial Number 949181F8

Drive D:  
Description CD-ROM Disc

[Disks]

Item Value  
Description Disk drive  
Manufacturer (Standard disk drives)  
Model SEAGATE ST336753LC 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 33.91 GB (36,413,314,560 bytes)  
Total Cylinders 4,427  
Total Sectors 71,119,755  
Total Tracks 1,128,885  
Tracks/Cylinder 255  
Partition Disk #0, Partition #0  
Partition Size 33.91 GB (36,413,282,304 bytes)  
Partition Starting Offset 32,256 bytes

[SCSI]

Item Value  
Name LSI Logic PCI-X Ultra320 SCSI Host Adapter  
Manufacturer LSI Logic Inc.  
Status OK  
PNP Device ID  
PCI\VEN\_1000&DEV\_0030&SUBSYS\_016D1028&REV\_08\5&39562480&0&280010

I/O Port 0x0000EC00-0x0000ECFF  
 Memory Address 0xDFDF0000-0xDFDFFFFF  
 Memory Address 0xDFDE0000-0xDFDEFFFF  
 IRQ Channel IRQ 34  
 Driver c:\windows\system32\drivers\symmpi.sys (1.10.05.00 (NT.041118-1101), 48.50 KB (49,664 bytes), 3/25/2003 11:00 AM)

Name LSI Logic PCI-X Ultra320 SCSI Host Adapter  
 Manufacturer LSI Logic Inc.  
 Status OK  
 PNP Device ID  
 PCI\VEN\_1000&DEV\_0030&SUBSYS\_016D1028&REV\_08\5&39562480&0&290010

I/O Port 0x0000E800-0x0000E8FF  
 Memory Address 0xDFDD0000-0xDFDDFFFF  
 Memory Address 0xDFDC0000-0xDFDCFFFF  
 IRQ Channel IRQ 33  
 Driver c:\windows\system32\drivers\symmpi.sys (1.10.05.00 (NT.041118-1101), 48.50 KB (49,664 bytes), 3/25/2003 11:00 AM)

[IDE]

Item Value  
 Name Intel(R) 82801EB Ultra ATA Storage Controllers - 24DB  
 Manufacturer Intel  
 Status OK  
 PNP Device ID  
 PCI\VEN\_8086&DEV\_24DB&SUBSYS\_016D1028&REV\_02\3&13C0B0C5&0&F9

I/O Port 0x0000FC00-0x0000FC0F  
 Memory Address 0xFEBFFC00-0xFEBFFFFF  
 Driver c:\windows\system32\drivers\intelide.sys (5.2.3790.1830 (srv03\_sp1\_rtm.050324-1447), 7.50 KB (7,680 bytes), 10/19/2004 12:30 PM)

Name Primary IDE Channel  
 Manufacturer (Standard IDE ATA/ATAPI controllers)  
 Status OK  
 PNP Device ID PCI\VEN\_8086&DEV\_1E0969C8&0&0  
 I/O Port 0x000001F0-0x000001F7  
 I/O Port 0x000003F6-0x000003F6  
 IRQ Channel IRQ 14  
 Driver c:\windows\system32\drivers\atapi.sys (5.2.3790.1830 (srv03\_sp1\_rtm.050324-1447), 93.50 KB (95,744 bytes), 3/25/2003 11:00 AM)

Name Secondary IDE Channel  
 Manufacturer (Standard IDE ATA/ATAPI controllers)  
 Status OK  
 PNP Device ID PCI\VEN\_8086&DEV\_1E0969C8&0&1  
 I/O Port 0x00000170-0x00000177  
 I/O Port 0x00000376-0x00000376  
 IRQ Channel IRQ 15  
 Driver c:\windows\system32\drivers\atapi.sys (5.2.3790.1830 (srv03\_sp1\_rtm.050324-1447), 93.50 KB (95,744 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						
Standard Universal PCI to USB Host Controller	PCI\VEN_8086&DEV_24D2&SUBSYS_016D1028&REV_02\3&13C0B0C5&0&E8						
Standard Universal PCI to USB Host Controller	PCI\VEN_8086&DEV_24D4&SUBSYS_016D1028&REV_02\3&13C0B0C5&0&E9						
Standard Universal PCI to USB Host Controller	PCI\VEN_8086&DEV_24D7&SUBSYS_016D1028&REV_02\3&13C0B0C5&0&EA						
Standard Enhanced PCI to USB Host Controller	PCI\VEN_8086&DEV_24DD&SUBSYS_016D1028&REV_02\3&13C0B0C5&0&EF						
[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
acpiec	ACPIEC	c:\windows\system32\drivers\acpiec.sys	Kernel Driver	No	Disabled	Stopped	OK
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	System	Running	OK
aha154x	Aha154x		Not Available	Kernel Driver	No	Disabled	
aic78u2	aic78u2		Not Available	Kernel Driver	No	Disabled	
aic78xx	aic78xx		Not Available	Kernel Driver	No	Disabled	
aliide	AliIde		Not Available	Kernel Driver	No	Disabled	
asynccmac	RAS Asynchronous Media Driver	c:\windows\system32\drivers\asynccmac.sys	Kernel Driver	No	Manual	Stopped	OK
atapi	Standard IDE/ESDI Hard Disk Controller	c:\windows\system32\drivers\atapi.sys	Kernel Driver	Yes	Boot	Running	OK

atdisk	Atdisk	Not Available	Kernel Driver	No	Disabled		
	Stopped OK	Ignore	No	No			
ati2mtag	ati2mtag		c:\windows\system32\drivers\ati2mtag.sys				
	Kernel Driver	Yes	Manual	Running OK	Ignore	No	Yes
atmarpc	ATM ARP Client Protocol						
	c:\windows\system32\drivers\atmarpc.sys		Kernel Driver	No			
	Manual	Stopped OK	Normal	No	No		
audstub	Audio Stub Driver		c:\windows\system32\drivers\audstub.sys				
	Kernel Driver	Yes	Manual	Running OK	Normal	No	Yes
beep	Beep		c:\windows\system32\drivers\beep.sys	Kernel Driver	Yes		
	System	Running OK	Normal	No	Yes		
cbidf2k	cbidf2k		c:\windows\system32\drivers\cbidf2k.sys	Kernel Driver			
	No	Disabled	Stopped OK	Normal	No	No	
cd20xrnt	cd20xrnt		Not Available	Kernel Driver	No		
	Disabled	Stopped OK	Normal	No	No		
cdfs	Cdfs		c:\windows\system32\drivers\cdfs.sys	File System Driver			
	Yes	Disabled	Running OK	Normal	No	Yes	
cdrom	CD-ROM Driver		c:\windows\system32\drivers\cdrom.sys	Kernel Driver			
	Yes	System	Running OK	Normal	No	Yes	
changer	Changer	Not Available	Kernel Driver	No	System	Stopped OK	
	Ignore	No	No				
clusdisk	Cluster Disk Driver						
	c:\windows\system32\drivers\clusdisk.sys		Kernel Driver	No			
	Disabled	Stopped OK	Normal	No	No		
cmdide	CmdIde	Not Available	Kernel Driver	No	Disabled		
	Stopped OK	Normal	No	No			
cpqarray	Cpqarray		Not Available	Kernel Driver	No		
	Disabled	Stopped OK	Normal	No	No		
cpqarray2	cpqarray2		Not Available	Kernel Driver	No		
	Disabled	Stopped OK	Normal	No	No		
cpqcissm	cpqcissm		Not Available	Kernel Driver	No		
	Disabled	Stopped OK	Normal	No	No		
cpqfcalm	cpqfcalm		Not Available	Kernel Driver	No		
	Disabled	Stopped OK	Normal	No	No		
crcdisk	CRC Disk Filter Driver		c:\windows\system32\drivers\crcdisk.sys				
	Kernel Driver	Yes	Boot	Running OK	Normal	No	Yes
dac960nt	dac960nt		Not Available	Kernel Driver	No		
	Disabled	Stopped OK	Normal	No	No		
dellcerc	dellcerc		Not Available	Kernel Driver	No		
	Disabled	Stopped OK	Normal	No	No		
dfsdriver	DfsDriver		c:\windows\system32\drivers\dfs.sys	File System Driver			
	Yes	Boot	Running OK	Normal	No	Yes	
disk	Disk Driver		c:\windows\system32\drivers\disk.sys	Kernel Driver			
	Yes	Boot	Running OK	Normal	No	Yes	
dmboot	dmboot		c:\windows\system32\drivers\dmboot.sys	Kernel Driver			
	No	Disabled	Stopped OK	Normal	No	No	
dmio	Logical Disk Manager Driver		c:\windows\system32\drivers\dmio.sys				
	Kernel Driver	Yes	Boot	Running OK	Normal	No	Yes
dmload	dmload		c:\windows\system32\drivers\dmload.sys	Kernel Driver			
	Yes	Boot	Running OK	Normal	No	Yes	
dpti2o	dpti2o		Not Available	Kernel Driver	No	Disabled	
	Stopped OK	Normal	No	No			
e1000	Intel(R) PRO/1000 Adapter Driver		c:\windows\system32\drivers\e1000325.sys	Kernel Driver	Yes		
	Manual	Running OK	Normal	No	Yes		

fastfat	Fastfat		c:\windows\system32\drivers\fastfat.sys	File System Driver			
	No	Disabled	Stopped OK	Normal	No	No	
fdc	Floppy Disk Controller Driver		c:\windows\system32\drivers\fdc.sys				
	Kernel Driver	Yes	Manual	Running OK	Normal	No	Yes
fips	Fips		c:\windows\system32\drivers\fips.sys	Kernel Driver	Yes		
	System	Running OK	Normal	No	Yes		
flpydisk	Flpydisk		c:\windows\system32\drivers\flpydisk.sys				
	Kernel Driver	No	System	Stopped OK	Ignore	No	No
fltmgr	FltMgr		c:\windows\system32\drivers\fltmgr.sys	File System Driver			
	Yes	Boot	Running OK	Normal	No	Yes	
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			
hpt3xx	hpt3xx		Not Available	Kernel Driver	No	Disabled	
	Stopped OK	Normal	No	No			
http	HTTP		c:\windows\system32\drivers\http.sys	Kernel Driver	Yes		
	Manual	Running OK	Normal	No	Yes		
i2omgmt	i2omgmt		Not Available	Kernel Driver	No	System	Stopped OK
	Normal	No	No				
i2omp	i2omp		Not Available	Kernel Driver	No	Disabled	
	Stopped OK	Normal	No	No			
i8042prt	i8042 Keyboard and PS/2 Mouse Port Driver						
	c:\windows\system32\drivers\i8042prt.sys	Kernel Driver	Yes				
	System	Running OK	Normal	No	Yes		
iirsp	iirsp		Not Available	Kernel Driver	No	Disabled	
	Stopped OK	Normal	No	No			
imapi	CD-Burning Filter Driver						
	c:\windows\system32\drivers\imapi.sys	Kernel Driver	No	System			
	Stopped OK	Normal	No	No			
intelide	IntelIde		c:\windows\system32\drivers\intelide.sys				
	Kernel Driver	Yes	Boot	Running OK	Normal	No	Yes
intelppm	Intel Processor Driver						
	c:\windows\system32\drivers\intelppm.sys	Kernel Driver	Yes				
	Manual	Running OK	Normal	No	Yes		
ip6fw	IPv6 Windows Firewall Driver						
	c:\windows\system32\drivers\ip6fw.sys	Kernel Driver	No	Manual			
	Stopped OK	Normal	No	No			
ipfilterdriver	IP Traffic Filter Driver						
	c:\windows\system32\drivers\ipfltdrv.sys	Kernel Driver	No				
	Manual	Stopped OK	Normal	No	No		
ipinip	IP in IP Tunnel Driver		c:\windows\system32\drivers\ipinip.sys				
	Kernel Driver	No	Manual	Stopped OK	Normal	No	No
ipnat	IP Network Address Translator						
	c:\windows\system32\drivers\ipnat.sys	Kernel Driver	No	Manual			
	Stopped OK	Normal	No	No			
ipsec	IPSEC driver		c:\windows\system32\drivers\ipsec.sys	Kernel Driver			
	Yes	System	Running OK	Normal	No	Yes	
ipsraidn	ipsraidn		Not Available	Kernel Driver	No		
	Disabled	Stopped OK	Normal	No	No		

irenum	IR Enumerator Service	c:\windows\system32\drivers\irenum.sys	Kernel Driver	No	Manual	Stopped	OK	Normal	No	No
isapnp	PnP ISA/EISA Bus Driver	c:\windows\system32\drivers\isapnp.sys	Kernel Driver	Yes	Boot	Running	OK	Critical	No	Yes
kbdclass	Keyboard Class Driver	c:\windows\system32\drivers\kbdclass.sys	Kernel Driver	Yes	System	Running	OK	Normal	No	Yes
ksecdd	KSecDD	c:\windows\system32\drivers\ksecdd.sys	Kernel Driver	Yes	Boot	Running	OK	Normal	No	Yes
lp6nds35	lp6nds35	Not Available	Kernel Driver	No	Disabled	Stopped	OK	Normal	No	No
mmdd	mmdd	c:\windows\system32\drivers\mmdd.sys	Kernel Driver	Yes	System	Running	OK	Ignore	No	Yes
modem	Modem	c:\windows\system32\drivers\modem.sys	Kernel Driver	No	Manual	Stopped	OK	Ignore	No	No
mouclass	Mouse Class Driver	c:\windows\system32\drivers\mouclass.sys	Kernel Driver	Yes	System	Running	OK	Normal	No	Yes
mountmgr	Mount Point Manager	c:\windows\system32\drivers\mountmgr.sys	Kernel Driver	Yes	Boot	Running	OK	Normal	No	Yes
mraid35x	mraid35x	Not Available	Kernel Driver	No	Disabled	Stopped	OK	Normal	No	No
mrxdav	WebDav Client Redirector	c:\windows\system32\drivers\mrxdav.sys	File System Driver	No	Manual	Stopped	OK	Normal	No	No
mrxsmmb	MRXSMB	c:\windows\system32\drivers\mrxsmmb.sys	File System Driver	Yes	System	Running	OK	Normal	No	Yes
msfs	Msfs	c:\windows\system32\drivers\msfs.sys	File System Driver	Yes	System	Running	OK	Normal	No	Yes
mssmbios	Microsoft System Management BIOS Driver	c:\windows\system32\drivers\mssmbios.sys	Kernel Driver	Yes	Manual	Running	OK	Normal	No	Yes
mup	Mup	c:\windows\system32\drivers\mup.sys	File System Driver	Yes	Boot	Running	OK	Normal	No	Yes
ndis	NDIS System Driver	c:\windows\system32\drivers\ndis.sys	Kernel Driver	Yes	Boot	Running	OK	Normal	No	Yes
ndistapi	Remote Access NDIS TAPI Driver	c:\windows\system32\drivers\ndistapi.sys	Kernel Driver	Yes	Manual	Running	OK	Normal	No	Yes
ndisuio	NDIS Usermode I/O Protocol	c:\windows\system32\drivers\ndisuio.sys	Kernel Driver	No	Manual	Stopped	OK	Normal	No	No
ndiswan	Remote Access NDIS WAN Driver	c:\windows\system32\drivers\ndiswan.sys	Kernel Driver	Yes	Manual	Running	OK	Normal	No	Yes
ndproxy	NDIS Proxy	c:\windows\system32\drivers\ndproxy.sys	Kernel Driver	Yes	Manual	Running	OK	Normal	No	Yes
netbios	NetBIOS Interface	c:\windows\system32\drivers\netbios.sys	File System Driver	Yes	System	Running	OK	Normal	No	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	Stopped	OK	Normal	No	No	Disabled
npfs	Npfs	c:\windows\system32\drivers\npfs.sys	File System Driver	Yes	System	Running	OK	Normal	No	Yes

ntfs	Ntfs	c:\windows\system32\drivers\ntfs.sys	File System Driver	Yes	Disabled	Running	OK	Normal	No	Yes
null	Null	c:\windows\system32\drivers\null.sys	Kernel Driver	Yes	System	Running	OK	Normal	No	Yes
parport	Parport	c:\windows\system32\drivers\parport.sys	Kernel Driver	No	Manual	Stopped	OK	Ignore	No	No
partmgr	Partition Manager	c:\windows\system32\drivers\partmgr.sys	Kernel Driver	Yes	Boot	Running	OK	Normal	No	Yes
pci	PCI Bus Driver	c:\windows\system32\drivers\pci.sys	Kernel Driver	Yes	Boot	Running	OK	Critical	No	Yes
pciide	PCIIde	c:\windows\system32\drivers\pciide.sys	Kernel Driver	Yes	Boot	Running	OK	Normal	No	Yes
pcmcia	Pcmcia	c:\windows\system32\drivers\pcmcia.sys	Kernel Driver	No	Disabled	Stopped	OK	Normal	No	No
pdcomp	PDCOMP	Not Available	Kernel Driver	No	Ignore	No	No	Manual	Stopped	OK
pdframe	PDFRAME	Not Available	Kernel Driver	No	Ignore	No	No	Manual	Stopped	OK
pdreli	PDRELI	Not Available	Kernel Driver	No	Ignore	No	No	Manual	Stopped	OK
pdrframe	PDRFRAME	Not Available	Kernel Driver	No	Manual	Stopped	OK	Ignore	No	No
perc2	perc2	Not Available	Kernel Driver	No	Stopped	OK	Normal	No	No	Disabled
perc2hib	perc2hib	Not Available	Kernel Driver	No	Disabled	Stopped	OK	Normal	No	No
pptpminiport	WAN Miniport (PPTP)	c:\windows\system32\drivers\raspttp.sys	Kernel Driver	Yes	Manual	Running	OK	Normal	No	Yes
processor	Processor Driver	c:\windows\system32\drivers\processr.sys	Kernel Driver	No	Manual	Stopped	OK	Normal	No	No
ptilink	Direct Parallel Link Driver	c:\windows\system32\drivers\ptilink.sys	Kernel Driver	Yes	Manual	Running	OK	Normal	No	Yes
ql1080	ql1080	Not Available	Kernel Driver	No	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



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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 RDPCCD c:\windows\system32\drivers\rdpcdd.sys Kernel Driver
Yes System Running OK Ignore No Yes
rdpdr Terminal Server Device Redirector Driver
c:\windows\system32\drivers\rdpdr.sys Kernel Driver Yes Manual
Running OK Normal No Yes
rdpwd RDPWD c:\windows\system32\drivers\rdpwd.sys Kernel Driver Yes
Manual Running OK Ignore No Yes
redbook Digital CD Audio Playback Filter Driver
c:\windows\system32\drivers\redbook.sys Kernel Driver Yes
System Running OK Normal No Yes
secdrv Secdrv c:\windows\system32\drivers\secdrv.sys Kernel Driver
No Manual Stopped OK Normal No No
serenum Serenum Filter Driver c:\windows\system32\drivers\serenum.sys
Kernel Driver Yes Manual Running OK Normal No Yes
serial Serial port driver c:\windows\system32\drivers\serial.sys
Kernel Driver Yes System Running OK Ignore No Yes
sfloppy Sfloppy c:\windows\system32\drivers\sfloppy.sys Kernel Driver
No System Stopped OK Ignore No No
simbad Simbad Not Available Kernel Driver No Disabled
Stopped OK Normal No No
sparrow Sparrow Not Available Kernel Driver No Disabled
Stopped OK Normal No No
srv Srv c:\windows\system32\drivers\srv.sys File System Driver
Yes Manual Running OK Normal No Yes
swenum Software Bus Driver c:\windows\system32\drivers\swenum.sys
Kernel Driver Yes Manual Running OK Normal No Yes
symc810 symc810 Not Available Kernel Driver No Disabled
Stopped OK Normal No No
symc8xx symc8xx Not Available Kernel Driver No Disabled
Stopped OK Normal No No
symmpi symmpi c:\windows\system32\drivers\symmpi.sys Kernel Driver
Yes Boot Running OK Normal No Yes
sym_hi sym_hi Not Available Kernel Driver No Disabled
Stopped OK Normal No No
sym_u3 sym_u3 Not Available Kernel Driver No Disabled
Stopped OK Normal No No
tcpip TCP/IP Protocol Driver c:\windows\system32\drivers\tcpip.sys Kernel
Driver Yes System Running OK Normal No Yes
tdpipe TDIPIPE 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

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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
usbhci Microsoft USB 2.0 Enhanced Host Controller Miniport Driver
c:\windows\system32\drivers\usbhci.sys Kernel Driver Yes
Manual Running OK Normal No Yes
usbhub USB2 Enabled Hub c:\windows\system32\drivers\usbhub.sys
Kernel Driver Yes Manual Running OK Normal No Yes
usbuhci Microsoft USB Universal Host Controller Miniport Driver
c:\windows\system32\drivers\usbuhci.sys Kernel Driver Yes
Manual Running OK Normal No Yes
vgasave VGA Display Controller. c:\windows\system32\drivers\vga.sys
Kernel Driver Yes System Running OK Ignore No Yes
viaide ViaIde Not Available Kernel Driver No Disabled
Stopped OK Normal No No
volsnap Storage volumes c:\windows\system32\drivers\volsnap.sys
Kernel Driver Yes Boot Running OK Normal No Yes
wanarp Remote Access IP ARP Driver
c:\windows\system32\drivers\wanarp.sys Kernel Driver Yes
Manual Running OK Normal No Yes
wdica 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
Microsoft System Management BIOS Driver No SYSTEM 5.2.3790.1830
10/1/2002 (Standard system devices) machine.inf Not
Available ROOT\SYSTEM\0002
Microcode Update Device No SYSTEM 5.2.3790.0 10/1/2002
(Standard system devices) machine.inf Not Available
ROOT\SYSTEM\0001
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
Terminal Server Mouse Driver No SYSTEM 5.2.3790.0 10/1/2002
(Standard system devices) machine.inf Not Available
ROOT\RDP_MOU\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 Device Redirector No SYSTEM 5.2.3790.0
10/1/2002 (Standard system devices) machine.inf Not
Available ROOT\RDPDR\0000
Direct Parallel No NET 5.2.3790.0 10/1/2002
Microsoft netrasa.inf Not Available
ROOT\MS_PTMINIPOINT\0000

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WAN Miniport (PPTP)	No	NET	5.2.3790.0	10/1/2002	
Microsoft	netrasa.inf		Not Available		
ROOT\MS_PPTPMINIPORT\0000					
WAN Miniport (PPPOE)	No	NET	5.2.3790.0	10/1/2002	
Microsoft	netrasa.inf		Not Available		
ROOT\MS_PPPOEMINIPORT\0000					
WAN Miniport (IP)	No	NET	5.2.3790.0	10/1/2002	
Microsoft	netrasa.inf		Not Available		
ROOT\MS_NDISWANIP\0000					
WAN Miniport (L2TP)	No	NET	5.2.3790.0	10/1/2002	
Microsoft	netrasa.inf		Not Available		
ROOT\MS_L2TPMINIPORT\0000					
Video Codecs system devices)	No	MEDIA	5.2.3790.0	10/1/2002	(Standard wave.inf
			Not Available		ROOT\MEDIA\MS_MMVID
Legacy Video Capture Devices (Standard system devices)	No	MEDIA	5.2.3790.0	10/1/2002	
			Not Available		ROOT\MEDIA\MS_MMVCD
Media Control Devices (Standard system devices)	No	MEDIA	5.2.3790.0	10/1/2002	
			Not Available		ROOT\MEDIA\MS_MMMCI
Legacy Audio Drivers (Standard system devices)	No	MEDIA	5.2.3790.0	10/1/2002	
			Not Available		ROOT\MEDIA\MS_MMDRV
Audio Codecs system devices)	No	MEDIA	5.2.3790.0	10/1/2002	(Standard wave.inf
			Not Available		ROOT\MEDIA\MS_MMACM
Remote Access IP ARP Driver	Not Available	LEGACYDRIVER	Not Available	Not Available	
	Not Available	Not Available	Not Available	Not Available	
ROOT\LEGACY_WANARP\0000					
volsnap	Not Available	LEGACYDRIVER	Not Available	Not Available	Not Available
	Not Available	Not Available	Not Available	Not Available	ROOT\LEGACY_VOLSNAP\0000
VGA Display Controller.	Not Available	LEGACYDRIVER	Not Available	Not Available	Not Available
	Not Available	Not Available	Not Available	Not Available	Not Available
ROOT\LEGACY_VGASAVE\0000					
TDTCP	Not Available	LEGACYDRIVER	Not Available	Not Available	Not Available
	Not Available	Not Available	Not Available	Not Available	ROOT\LEGACY_TDTCP\0000
TCP/IP Protocol Driver	Not Available	LEGACYDRIVER	Not Available	Not Available	Not Available
	Not Available	Not Available	Not Available	Not Available	Not Available
ROOT\LEGACY_TCPIP\0000					
RDPWD	Not Available	LEGACYDRIVER	Not Available	Not Available	Not Available
	Not Available	Not Available	Not Available	Not Available	ROOT\LEGACY_RDPWD\0000
RDPCCD	Not Available	LEGACYDRIVER	Not Available	Not Available	Not Available
	Not Available	Not Available	Not Available	Not Available	ROOT\LEGACY_RDPCCD\0000
Remote Access Auto Connection Driver	Not Available	LEGACYDRIVER	Not Available	Not Available	Not Available
	Not Available	Not Available	Not Available	Not Available	Not Available
ROOT\LEGACY_RASACD\0000					
PCIIde	Not Available	LEGACYDRIVER	Not Available	Not Available	Not Available
	Not Available	Not Available	Not Available	Not Available	ROOT\LEGACY_PCIIDE\0000
Partition Manager	Not Available	LEGACYDRIVER	Not Available	Not Available	Not Available
	Not Available	Not Available	Not Available	Not Available	Not Available
ROOT\LEGACY_PARTMGR\0000					
Null	Not Available	LEGACYDRIVER	Not Available	Not Available	Not Available
	Not Available	Not Available	Not Available	Not Available	Not Available
ROOT\LEGACY_NULL\0000					

NetBios over Tcpip	Not Available	LEGACYDRIVER	Not Available	Not Available	Not Available
	Available	Not Available	Not Available	Not Available	Not Available
ROOT\LEGACY_NETBT\0000					
NDProxy	Not Available	LEGACYDRIVER	Not Available	Not Available	Not Available
	Available	Not Available	Not Available	Not Available	Not Available
ROOT\LEGACY_NDPROXY\0000					
NDIS Usermode I/O Protocol	Not Available	LEGACYDRIVER	Not Available	Not Available	Not Available
	Not Available	Not Available	Not Available	Not Available	Not Available
ROOT\LEGACY_NDISUIO\0000					
Remote Access NDIS TAPI Driver	Not Available	LEGACYDRIVER	Not Available	Not Available	Not Available
	Available	Not Available	Not Available	Not Available	Not Available
ROOT\LEGACY_NDISTAPI\0000					
NDIS System Driver	Not Available	LEGACYDRIVER	Not Available	Not Available	Not Available
	Available	Not Available	Not Available	Not Available	Not Available
ROOT\LEGACY_NDIS\0000					
mountmgr	Not Available	LEGACYDRIVER	Not Available	Not Available	Not Available
	Not Available	Not Available	Not Available	Not Available	Not Available
ROOT\LEGACY_MOUNTMGR\0000					
mnmd	Not Available	LEGACYDRIVER	Not Available	Not Available	Not Available
	Available	Not Available	Not Available	Not Available	Not Available
ROOT\LEGACY_MNMD\0000					
ksecdd	Not Available	LEGACYDRIVER	Not Available	Not Available	Not Available
	Available	Not Available	Not Available	Not Available	Not Available
ROOT\LEGACY_KSECDD\0000					
IPSEC driver	Not Available	LEGACYDRIVER	Not Available	Not Available	Not Available
	Not Available	Not Available	Not Available	Not Available	Not Available
ROOT\LEGACY_IPSEC\0000					
HTTP	Not Available	LEGACYDRIVER	Not Available	Not Available	Not Available
	Available	Not Available	Not Available	Not Available	Not Available
ROOT\LEGACY_HTTP\0000					
Generic Packet Classifier	Not Available	LEGACYDRIVER	Not Available	Not Available	Not Available
	Not Available	Not Available	Not Available	Not Available	Not Available
ROOT\LEGACY_GPC\0000					
Fips	Not Available	LEGACYDRIVER	Not Available	Not Available	Not Available
	Available	Not Available	Not Available	Not Available	Not Available
ROOT\LEGACY_FIPS\0000					
dmload	Not Available	LEGACYDRIVER	Not Available	Not Available	Not Available
	Available	Not Available	Not Available	Not Available	Not Available
ROOT\LEGACY_DMLOAD\0000					
dmboot	Not Available	LEGACYDRIVER	Not Available	Not Available	Not Available
	Available	Not Available	Not Available	Not Available	Not Available
ROOT\LEGACY_DMBOOT\0000					
CRC Disk Filter Driver	Not Available	LEGACYDRIVER	Not Available	Not Available	Not Available
	Available	Not Available	Not Available	Not Available	Not Available
ROOT\LEGACY_CRCDISK\0000					
Beep	Not Available	LEGACYDRIVER	Not Available	Not Available	Not Available
	Available	Not Available	Not Available	Not Available	Not Available
ROOT\LEGACY_BEEP\0000					
AFD Networking Support Environment	Not Available	LEGACYDRIVER	Not Available	Not Available	Not Available
	Available	Not Available	Not Available	Not Available	Not Available
ROOT\LEGACY_AFD\0000					
Generic volume	No	VOLUME	5.2.3790.0	10/1/2002	Microsoft
		volume.inf	Not Available		
STORAGE\VOLUME\1&30A96598&0&SIGNATURE19C019BFOFFSET7E00LENGTH87A66					
9800					
Volume Manager	No	SYSTEM	5.2.3790.0	10/1/2002	(Standard
		machine.inf	Not Available		system devices)
ROOT\FTDISK\0000					
Logical Disk Manager	No	SYSTEM	5.2.3790.0	10/1/2002	
		(Standard system devices)	machine.inf		Not Available
ROOT\DMIO\0000					

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

High precision event timer No SYSTEM 5.2.3790.1830 10/1/2002  
(Standard system devices) machine.inf Not Available  
ACPI\PNP0103\0

Motherboard resources No SYSTEM 5.2.3790.0 10/1/2002  
(Standard system devices) machine.inf Not Available  
ACPI\PNP0C02\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&1E0969C8&0&1

CD-ROM Drive No CDROM 5.2.3790.0 10/1/2002 (Standard CD-  
ROM drives) cdrom.inf Not Available IDE\CDROMTEAC\_CD-  
224E K.9A \5&122E1C04&0&0.0.0

Primary IDE Channel No HDC 5.2.3790.0 10/1/2002  
(Standard IDE ATA/ATAPI controllers) mshdc.inf Not Available  
PCIIDE\IDECHANNEL\4&1E0969C8&0&0

Intel(R) 82801EB Ultra ATA Storage Controllers - 24DB No HDC  
5.2.3790.1830 10/1/2002 Intel mshdc.inf Not Available  
PCI\VEN\_8086&DEV\_24DB&SUBSYS\_016D1028&REV\_02\3&13C0B0C5&0&F9

System board No SYSTEM 5.2.3790.0 10/1/2002 (Standard  
system devices) machine.inf Not Available  
ACPI\PNP0C01\4&26DD0F47&0

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

PS/2 Compatible Mouse No MOUSE 5.2.3790.0 10/1/2002  
Microsoft msmouse.inf Not Available  
ACPI\PNP0F13\4&26DD0F47&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&26DD0F47&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&26DD0F47&0

System timer No SYSTEM 5.2.3790.0 10/1/2002 (Standard  
system devices) machine.inf Not Available  
ACPI\PNP0100\4&26DD0F47&0

System CMOS/real time clock No SYSTEM 5.2.3790.0 10/1/2002  
(Standard system devices) machine.inf Not Available  
ACPI\PNP0B00\4&26DD0F47&0

System speaker No SYSTEM 5.2.3790.0 10/1/2002 (Standard  
system devices) machine.inf Not Available  
ACPI\PNP0800\4&26DD0F47&0

Programmable interrupt controller No SYSTEM 5.2.3790.0  
10/1/2002 (Standard system devices) machine.inf Not  
Available ACPI\PNP0000\4&26DD0F47&0

Numeric data processor No SYSTEM 5.2.3790.0 10/1/2002  
(Standard system devices) machine.inf Not Available  
ACPI\PNP0C04\4&26DD0F47&0

Direct memory access controller No SYSTEM 5.2.3790.0  
10/1/2002 (Standard system devices) machine.inf Not  
Available ACPI\PNP0200\4&26DD0F47&0

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

Intel(R) 82801EB LPC Interface Controller - 24D0 No SYSTEM  
5.2.3790.1830 10/1/2002 Intel machine.inf Not Available  
PCI\VEN\_8086&DEV\_24D0&SUBSYS\_00000000&REV\_02\3&13C0B0C5&0&F8

Plug and Play Monitor No MONITOR 5.1.2001.0 6/6/2001  
(Standard monitor types) monitor.inf Not Available  
DISPLAY\DEL3580\5&1427D6AE&0&10000080&0B&0D

RADEON 7000 RADEON VE Family (Microsoft Corporation) No DISPLAY  
6.13.10.6153 8/8/2002 ATI Technologies Inc. atiixpag.inf  
Not Available  
PCI\VEN\_1002&DEV\_5159&SUBSYS\_016D1028&REV\_00\4&1F7DBC9F&0&68F0

Intel(R) 82801 PCI Bridge - 244E No SYSTEM 5.2.3790.1830  
10/1/2002 Intel machine.inf Not Available  
PCI\VEN\_8086&DEV\_244E&SUBSYS\_00000000&REV\_C2\3&13C0B0C5&0&F0

Generic USB Hub No USB 5.2.3790.0 10/1/2002  
(Generic USB Hub) usb.inf Not Available  
USB\VID\_413C&PID\_A001\5&384A50E3&0&3

USB Root Hub No USB 5.2.3790.0 10/1/2002 (Standard USB  
Host Controller) usbport.inf Not Available  
USB\ROOT\_HUB20\4&2F4BE1E7&0

Standard Enhanced PCI to USB Host Controller No USB 5.2.3790.0  
10/1/2002 (Standard USB Host Controller) usbport.inf  
Not Available  
PCI\VEN\_8086&DEV\_24DD&SUBSYS\_016D1028&REV\_02\3&13C0B0C5&0&EF

USB Root Hub No USB 5.2.3790.0 10/1/2002 (Standard USB  
Host Controller) usbport.inf Not Available  
USB\ROOT\_HUB\4&4C5D87F&0

Standard Universal PCI to USB Host Controller No USB  
5.2.3790.0 10/1/2002 (Standard USB Host Controller)  
usbport.inf Not Available  
PCI\VEN\_8086&DEV\_24D7&SUBSYS\_016D1028&REV\_02\3&13C0B0C5&0&EA

USB Root Hub No USB 5.2.3790.0 10/1/2002 (Standard USB  
Host Controller) usbport.inf Not Available  
USB\ROOT\_HUB\4&198257A8&0

Standard Universal PCI to USB Host Controller No USB  
5.2.3790.0 10/1/2002 (Standard USB Host Controller)  
usbport.inf Not Available  
PCI\VEN\_8086&DEV\_24D4&SUBSYS\_016D1028&REV\_02\3&13C0B0C5&0&E9

USB Root Hub No USB 5.2.3790.0 10/1/2002 (Standard USB  
Host Controller) usbport.inf Not Available  
USB\ROOT\_HUB\4&31AFD2BF&0

Standard Universal PCI to USB Host Controller No USB  
5.2.3790.0 10/1/2002 (Standard USB Host Controller)  
usbport.inf Not Available  
PCI\VEN\_8086&DEV\_24D2&SUBSYS\_016D1028&REV\_02\3&13C0B0C5&0&E8

Intel(R) 6700PXH PCI Express-to-PCI Bridge B - 032A No SYSTEM  
5.2.3790.1830 10/1/2002 Intel machine.inf Not Available  
PCI\VEN\_8086&DEV\_032A&SUBSYS\_00000000&REV\_09\4&AA5CD76&0&0230

Intel(R) 6700PXH PCI Express-to-PCI Bridge A - 0329 No SYSTEM  
5.2.3790.1830 10/1/2002 Intel machine.inf Not Available  
PCI\VEN\_8086&DEV\_0329&SUBSYS\_00000000&REV\_09\4&AA5CD76&0&0030

```

Intel(R) E7520 PCI Express Root Port C0 - 3599 No SYSTEM
5.2.3790.1830 10/1/2002 Intel machine.inf Not Available
PCI\VEN_8086&DEV_3599&SUBSYS_00000000&REV_09\3&13C0B0C5&0&30

Intel(R) PRO/1000 MT Network Connection No NET 7.2.19.1
3/15/2004 Intel oem0.inf Not Available
PCI\VEN_8086&DEV_1076&SUBSYS_016D1028&REV_05\5&C8E9BA0&0&400228

Intel(R) 6700PXH PCI Express-to-PCI Bridge B - 032A No SYSTEM
5.2.3790.1830 10/1/2002 Intel machine.inf Not Available
PCI\VEN_8086&DEV_032A&SUBSYS_00000000&REV_09\4&13C5C3DD&0&0228

Intel(R) PRO/1000 MT Network Connection No NET 7.2.19.1
3/15/2004 Intel oem0.inf Not Available
PCI\VEN_8086&DEV_1076&SUBSYS_016D1028&REV_05\5&803901B&0&380028

Intel(R) 6700PXH PCI Express-to-PCI Bridge A - 0329 No SYSTEM
5.2.3790.1830 10/1/2002 Intel machine.inf Not Available
PCI\VEN_8086&DEV_0329&SUBSYS_00000000&REV_09\4&13C5C3DD&0&0028

Intel(R) E7520 PCI Express Root Port B1 - 3598 No SYSTEM
5.2.3790.1830 10/1/2002 Intel machine.inf Not Available
PCI\VEN_8086&DEV_3598&SUBSYS_00000000&REV_09\3&13C0B0C5&0&28

Intel(R) E7525/E7520 PCI Express Root Port B0 - 3597 No SYSTEM
5.2.3790.1830 10/1/2002 Intel machine.inf Not Available
PCI\VEN_8086&DEV_3597&SUBSYS_00000000&REV_09\3&13C0B0C5&0&20

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_0332&SUBSYS_00000000&REV_06\4&3007CA40&0&0210

LSI Logic PCI-X Ultra320 SCSI Host Adapter No SCSIADAPTER
5.2.3790.0 10/1/2002 LSI Logic Inc. pnpscsi.inf Not
Available
PCI\VEN_1000&DEV_0030&SUBSYS_016D1028&REV_08\5&39562480&0&290010

PE 1x6 Backplane No SYSTEM 5.2.3790.0 10/1/2002 Dell
scsidev.inf Not Available
SCSI\PROCESSOR&VEN_PE/PV&PROD_1X6_SCSI_BP&REV_1.0\6&35B122AC&0&060

Disk drive No DISKDRIVE 5.2.3790.0 10/1/2002
(Standard disk drives) disk.inf Not Available
SCSI\DISK&VEN_SEAGATE&PROD_ST336753LC&REV_DX10\6&35B122AC&0&000

LSI Logic PCI-X Ultra320 SCSI Host Adapter No SCSIADAPTER
5.2.3790.0 10/1/2002 LSI Logic Inc. pnpscsi.inf Not
Available
PCI\VEN_1000&DEV_0030&SUBSYS_016D1028&REV_08\5&39562480&0&280010

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_0330&SUBSYS_00000000&REV_06\4&3007CA40&0&0010

Intel(R) E7525/E7520/E7320 PCI Express Root Port A0 - 3595 No SYSTEM
5.2.3790.1830 10/1/2002 Intel machine.inf Not Available

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PCI\VEN_8086&DEV_3595&SUBSYS_00000000&REV_09\3&13C0B0C5&0&10
Intel(R) E7520 Memory Controller Hub - 3590 No SYSTEM 5.2.3790.1830
10/1/2002 Intel machine.inf Not Available
PCI\VEN_8086&DEV_3590&SUBSYS_00000000&REV_09\3&13C0B0C5&0&00

PCI bus No SYSTEM 5.2.3790.0 10/1/2002 (Standard system
devices) machine.inf Not Available ACPI\PNP0A03\1
Intel Processor No PROCESSOR 5.2.3790.1830 10/1/2002
Intel cpu.inf Not Available ACPI\GENUINEINTEL_-
_X86_FAMILY_15_MODEL_3\3
Intel Processor No PROCESSOR 5.2.3790.1830 10/1/2002
Intel cpu.inf Not Available ACPI\GENUINEINTEL_-
_X86_FAMILY_15_MODEL_3\2
Intel Processor No PROCESSOR 5.2.3790.1830 10/1/2002
Intel cpu.inf Not Available ACPI\GENUINEINTEL_-
_X86_FAMILY_15_MODEL_3\1
Intel Processor No PROCESSOR 5.2.3790.1830 10/1/2002
Intel cpu.inf Not Available ACPI\GENUINEINTEL_-
_X86_FAMILY_15_MODEL_3\0
Microsoft ACPI-Compliant System No SYSTEM 5.2.3790.0
10/1/2002 Microsoft acpi.inf Not Available
ACPI_HAL\PNP0C08\0
ACPI Multiprocessor PC No COMPUTER 5.2.3790.0 10/1/2002
(Standard computers) hal.inf Not Available ROOT\ACPI_HAL\0000
Not Available Not Available Not Available Not Available Not Available
Not Available Not Available Not Available Not Available HTREE\ROOT\0

[Environment Variables]

Variable Value User Name
ClusterLog C:\WINDOWS\Cluster\cluster.log <SYSTEM>
ComSpec %SystemRoot%\system32\cmd.exe <SYSTEM>
NUMBER_OF_PROCESSORS 4 <SYSTEM>
OS Windows_NT <SYSTEM>
Path
C:\Oracle\ora10g\bin;C:\Oracle\ora10g\jre\1.4.2\bin\client;C:\Orac
le\ora10g\jre\1.4.2\bin;%SystemRoot%\system32;%SystemRoot%\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 3 Stepping 4, GenuineIntel
<SYSTEM>
PROCESSOR_LEVEL 15 <SYSTEM>
PROCESSOR_REVISION 0304 <SYSTEM>
TEMP %SystemRoot%\TEMP <SYSTEM>
TMP %SystemRoot%\TEMP <SYSTEM>
windir %SystemRoot% <SYSTEM>
FP_NO_HOST_CHECK NO <SYSTEM>
TEMP %USERPROFILE%\Local Settings\Temp NT AUTHORITY\SYSTEM
TMP %USERPROFILE%\Local Settings\Temp NT AUTHORITY\SYSTEM
TEMP %USERPROFILE%\Local Settings\Temp NT AUTHORITY\LOCAL SERVICE

TMP %USERPROFILE%\Local Settings\Temp NT AUTHORITY\LOCAL SERVICE
TEMP %USERPROFILE%\Local Settings\Temp NT AUTHORITY\NETWORK SERVICE

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TMP      %USERPROFILE%\Local Settings\Temp      NT AUTHORITY\NETWORK SERVICE
LOCAL
  (DESCRIPTION=(ADDRESS=(PROTOCOL=tc) (HOST=192.158.1.200) (PORT=7521
)) (CONNECT_DATA=(SID=TPCC))) ORACL1\Administrator
ORACLE_HOME C:\Oracle\ora10g ORACL1\Administrator
ORACLE_SID  tpcc ORACL1\Administrator
TMP      %USERPROFILE%\Local Settings\Temp      ORACL1\Administrator
TMP      %USERPROFILE%\Local Settings\Temp      ORACL1\Administrator

```

[Print Jobs]

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

[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
Working Set	Start Time	Version	Size	File Date	
system idle process		Not Available	0	0	Not Available
Available	Not Available	Not Available	Not Available	Not Available	Not Available
system	Not Available	4	8	0	1413120
Available	Not Available	Not Available	Not Available	Not Available	Not Available
smss.exe	Not Available	500	11	204800	1413120 6/7/2005 4:26 PM
PM	Not Available	Not Available	Not Available	Not Available	Not Available
csrss.exe	Not Available	580	13	Not Available	Not Available
6/7/2005 4:26 PM	Not Available	Not Available	Not Available	Not Available	Not Available
winlogon.exe	c:\windows\system32\winlogon.exe	652	13	204800	1413120 6/7/2005 4:26 PM
1447)	497.00 KB (508,928 bytes)	5/11/2005 11:04 AM			(srv03_spl_rtm.050324-1447)
services.exe	c:\windows\system32\services.exe	728	9	204800	1413120 6/7/2005 4:26 PM
1447)	107.50 KB (110,080 bytes)	3/25/2003 11:00 AM			(srv03_spl_rtm.050324-1447)
lsass.exe	c:\windows\system32\lsass.exe	756	9	204800	1413120 6/7/2005 4:26 PM
	13.00 KB (13,312 bytes)	3/25/2003 11:00 AM			(srv03_rtm.030324-2048)
svchost.exe	c:\windows\system32\svchost.exe	940	8	204800	1413120 6/7/2005 4:26 PM
1447)	14.00 KB (14,336 bytes)	5/11/2005 11:04 AM			(srv03_spl_rtm.050324-1447)
svchost.exe	Not Available	1080	8	Not Available	Not Available
6/7/2005 4:26 PM	Not Available	Not Available	Not Available	Not Available	Not Available
svchost.exe	c:\windows\system32\svchost.exe	1136	8	204800	1413120 6/7/2005 4:26 PM
1447)	14.00 KB (14,336 bytes)	5/11/2005 11:04 AM			(srv03_spl_rtm.050324-1447)
msdtc.exe	Not Available	1412	8	Not Available	Not Available
6/7/2005 4:26 PM	Not Available	Not Available	Not Available	Not Available	Not Available
mnmsrvc.exe	c:\windows\system32\mnmsrvc.exe	1628	8	204800	1413120 6/7/2005 4:26 PM
bytes)	5/11/2005 11:05 AM	32.00 KB (32,768 bytes)			

```

rundll32.exe c:\windows\system32\rundll32.exe 1644 8 204800
1413120 6/7/2005 4:26 PM 5.2.3790.1830 (srv03_spl_rtm.050324-1447)
34.00 KB (34,816 bytes) 5/11/2005 11:04 AM
svchost.exe Not Available 1692 8 Not Available Not Available
6/7/2005 4:26 PM Not Available Not Available Not Available
svchost.exe c:\windows\system32\svchost.exe 2024 8 204800
1413120 6/7/2005 4:27 PM 5.2.3790.1830 (srv03_spl_rtm.050324-1447)
14.00 KB (14,336 bytes) 5/11/2005 11:04 AM
explorer.exe c:\windows\explorer.exe 536 8 204800
1413120 6/7/2005 4:27 PM 6.00.3790.1830
(srv03_spl_rtm.050324-1447) 1.00 MB (1,050,624 bytes) 5/11/2005
11:05 AM
rhostsvr.exe c:\rhost\rhostsvr.exe 1384 8 204800 1413120
6/7/2005 4:27 PM Not Available 54.50 KB (55,808 bytes)
10/20/2004 12:35 PM
svchost.exe c:\windows\system32\svchost.exe 832 8 204800
1413120 6/7/2005 4:27 PM 5.2.3790.1830 (srv03_spl_rtm.050324-1447)
14.00 KB (14,336 bytes) 5/11/2005 11:04 AM
wmiprvse.exe Not Available 448 8 Not Available Not Available
6/7/2005 4:28 PM Not Available Not Available Not Available
dllhost.exe c:\windows\system32\dllhost.exe 1160 8 204800
1413120 6/7/2005 4:35 PM 5.2.3790.0 (srv03_rtm.030324-2048)
5.50 KB (5,632 bytes) 3/25/2003 11:00 AM
csrss.exe Not Available 1640 13 Not Available Not Available
6/8/2005 10:11 AM Not Available Not Available Not Available
winlogon.exe c:\windows\system32\winlogon.exe 3336 13 204800
1413120 6/8/2005 10:11 AM 5.2.3790.1830 (srv03_spl_rtm.050324-1447)
497.00 KB (508,928 bytes) 5/11/2005 11:04 AM
rdpclip.exe c:\windows\system32\rdpclip.exe 2764 8 204800
1413120 6/8/2005 10:12 AM 5.2.3790.1830 (srv03_spl_rtm.050324-1447)
68.00 KB (69,632 bytes) 5/11/2005 11:04 AM
explorer.exe c:\windows\explorer.exe 2080 8 204800
1413120 6/8/2005 10:12 AM 6.00.3790.1830
(srv03_spl_rtm.050324-1447) 1.00 MB (1,050,624 bytes) 5/11/2005
11:05 AM
helpctr.exe c:\windows\pchealth\helpctr\binaries\helpctr.exe 3524
8 204800 1413120 6/8/2005 10:12 AM 5.2.3790.1830
(srv03_spl_rtm.050324-1447) 778.00 KB (796,672 bytes) 5/11/2005
11:05 AM
helpsvc.exe c:\windows\pchealth\helpctr\binaries\helpsvc.exe 2368
8 204800 1413120 6/8/2005 10:12 AM 5.2.3790.1830
(srv03_spl_rtm.050324-1447) 745.00 KB (762,880 bytes) 5/11/2005
11:05 AM
wmiprvse.exe Not Available 792 8 Not Available Not Available
6/8/2005 10:12 AM Not Available Not Available Not Available
[Loaded Modules]
Name Version Size File Date Manufacturer Path
winlogon 5.2.3790.1830 (srv03_spl_rtm.050324-1447) 497.00 KB
(508,928 bytes) 5/11/2005 11:04 AM Microsoft Corporation
c:\windows\system32\winlogon.exe
ntdll 5.2.3790.1830 (srv03_spl_rtm.050324-1447) 748.50 KB (766,464
bytes) 3/25/2003 11:00 AM Microsoft Corporation
c:\windows\system32\ntdll.dll

```

```

kernel32 5.2.3790.1830 (srv03_sp1_rtm.050324-1447) 1,014.00 KB
(1,038,336 bytes) 5/11/2005 11:05 AM Microsoft Corporation
c:\windows\system32\kernel32.dll
advapi32 5.2.3790.1830 (srv03_sp1_rtm.050324-1447) 605.50 KB
(620,032 bytes) 3/25/2003 11:00 AM Microsoft Corporation
c:\windows\system32\advapi32.dll
rpcrt4 5.2.3790.1830 (srv03_sp1_rtm.050324-1447) 627.00 KB (642,048
bytes) 5/11/2005 11:04 AM Microsoft Corporation
c:\windows\system32\rpcrt4.dll
crypt32 5.2.3790.1830 (srv03_sp1_rtm.050324-1447) 582.00 KB (595,968
bytes) 5/11/2005 11:05 AM Microsoft Corporation
c:\windows\system32\crypt32.dll
msasn1 5.2.3790.1830 (srv03_sp1_rtm.050324-1447) 56.50 KB (57,856
bytes) 5/11/2005 11:05 AM Microsoft Corporation
c:\windows\system32\msasn1.dll
msvcrt 7.0.3790.1830 (srv03_sp1_rtm.050324-1447) 340.50 KB (348,672
bytes) 5/11/2005 11:05 AM Microsoft Corporation
c:\windows\system32\msvcrt.dll
user32 5.2.3790.1830 (srv03_sp1_rtm.050324-1447) 574.50 KB (588,288
bytes) 5/11/2005 11:04 AM Microsoft Corporation
c:\windows\system32\user32.dll
gdi32 5.2.3790.1830 (srv03_sp1_rtm.050324-1447) 273.00 KB (279,552
bytes) 5/11/2005 11:05 AM Microsoft Corporation
c:\windows\system32\gdi32.dll
nddeapi 5.2.3790.0 (srv03_rtm.030324-2048) 16.00 KB (16,384 bytes)
3/25/2003 11:00 AM Microsoft Corporation
c:\windows\system32\nddeapi.dll
profmap 5.2.3790.1830 (srv03_sp1_rtm.050324-1447) 22.50 KB (23,040
bytes) 5/11/2005 11:04 AM Microsoft Corporation
c:\windows\system32\profmap.dll
netapi32 5.2.3790.1830 (srv03_sp1_rtm.050324-1447) 341.50 KB
(349,696 bytes) 5/11/2005 11:05 AM Microsoft Corporation
c:\windows\system32\netapi32.dll
userenv 5.2.3790.1830 (srv03_sp1_rtm.050324-1447) 771.00 KB (789,504
bytes) 3/25/2003 11:00 AM Microsoft Corporation
c:\windows\system32\userenv.dll
psapi 5.2.3790.1830 (srv03_sp1_rtm.050324-1447) 20.00 KB (20,480
bytes) 5/11/2005 11:04 AM Microsoft Corporation
c:\windows\system32\psapi.dll
regapi 5.2.3790.1830 (srv03_sp1_rtm.050324-1447) 55.00 KB (56,320
bytes) 5/11/2005 11:04 AM Microsoft Corporation
c:\windows\system32\regapi.dll
secur32 5.2.3790.1830 (srv03_sp1_rtm.050324-1447) 64.00 KB (65,536
bytes) 5/11/2005 11:04 AM Microsoft Corporation
c:\windows\system32\secur32.dll
setupapi 5.2.3790.1830 (srv03_sp1_rtm.050324-1447) 1.03 MB
(1,079,808 bytes) 3/25/2003 11:00 AM Microsoft Corporation
c:\windows\system32\setupapi.dll
version 5.2.3790.1830 (srv03_sp1_rtm.050324-1447) 18.00 KB (18,432
bytes) 5/11/2005 11:04 AM Microsoft Corporation
c:\windows\system32\version.dll
winsta 5.2.3790.1830 (srv03_sp1_rtm.050324-1447) 54.50 KB (55,808
bytes) 5/11/2005 11:04 AM Microsoft Corporation
c:\windows\system32\winsta.dll
ws2_32 5.2.3790.1830 (srv03_sp1_rtm.050324-1447) 82.00 KB (83,968
bytes) 5/11/2005 11:04 AM Microsoft Corporation
c:\windows\system32\ws2_32.dll

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ws2help 5.2.3790.1830 (srv03_sp1_rtm.050324-1447) 19.50 KB (19,968
bytes) 5/11/2005 11:04 AM Microsoft Corporation
c:\windows\system32\ws2help.dll
msgina 5.2.3790.1830 (srv03_sp1_rtm.050324-1447) 1.16 MB (1,211,904
bytes) 5/11/2005 11:05 AM Microsoft Corporation
c:\windows\system32\msgina.dll
shsvcs 6.00.3790.1830 (srv03_sp1_rtm.050324-1447) 131.50 KB (134,656
bytes) 5/11/2005 11:04 AM Microsoft Corporation
c:\windows\system32\shsvcs.dll
shlwapi 6.00.3790.1830 (srv03_sp1_rtm.050324-1447) 313.50 KB (321,024
bytes) 5/11/2005 11:04 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 5.2.3790.1830 (srv03_sp1_rtm.050324-1447) 138.00 KB (141,312
bytes) 5/11/2005 11:04 AM Microsoft Corporation
c:\windows\system32\sfc_os.dll
wintrust 5.2.3790.1830 (srv03_sp1_rtm.050324-1447) 162.00 KB
(165,888 bytes) 5/11/2005 11:04 AM Microsoft Corporation
c:\windows\system32\wintrust.dll
imagehlp 5.2.3790.1830 (srv03_sp1_rtm.050324-1447) 145.50 KB
(148,992 bytes) 3/25/2003 11:00 AM Microsoft Corporation
c:\windows\system32\imagehlp.dll
ole32 5.2.3790.1830 (srv03_sp1_rtm.050324-1447) 1.19 MB (1,245,184
bytes) 5/11/2005 11:04 AM Microsoft Corporation
c:\windows\system32\ole32.dll
comctl32 6.0 (srv03_sp1_rtm.050324-1447) 1.00 MB (1,051,136
bytes) 3/24/2005 8:41 PM Microsoft Corporation
c:\windows\winsxs\x86_microsoft.windows.common-
controls_6595b64144ccf1df_6.0.3790.1830_x-ww_7ae38ccf\comctl32.dll
winscard 5.2.3790.0 (srv03_rtm.030324-2048) 98.50 KB (100,864
bytes) 3/25/2003 11:00 AM Microsoft Corporation
c:\windows\system32\winscard.dll
wtsapi32 5.2.3790.1830 (srv03_sp1_rtm.050324-1447) 19.00 KB
(19,456 bytes) 5/11/2005 11:04 AM Microsoft Corporation
c:\windows\system32\wtsapi32.dll
winmm 5.2.3790.1830 (srv03_sp1_rtm.050324-1447) 172.50 KB (176,640
bytes) 5/11/2005 11:04 AM Microsoft Corporation
c:\windows\system32\winmm.dll
sxs 5.2.3790.1830 (srv03_sp1_rtm.050324-1447) 743.50 KB (761,344
bytes) 5/11/2005 11:04 AM Microsoft Corporation
c:\windows\system32\sxs.dll
shell32 6.00.3790.1830 (srv03_sp1_rtm.050324-1447) 7.99 MB (8,379,392
bytes) 5/11/2005 11:04 AM Microsoft Corporation
c:\windows\system32\shell32.dll
wldap32 5.2.3790.1830 (srv03_sp1_rtm.050324-1447) 174.50 KB (178,688
bytes) 5/11/2005 11:04 AM Microsoft Corporation
c:\windows\system32\wldap32.dll
cscdll 5.2.3790.1830 (srv03_sp1_rtm.050324-1447) 100.00 KB (102,400
bytes) 5/11/2005 11:05 AM Microsoft Corporation
c:\windows\system32\cscdll.dll
dimsntfy 5.2.3790.1830 (srv03_sp1_rtm.050324-1447) 19.00 KB
(19,456 bytes) 5/11/2005 11:08 AM Microsoft Corporation
c:\windows\system32\dimsntfy.dll
rsaenh 5.2.3790.1830 (srv03_sp1_rtm.050324-1447) 183.98 KB (188,392
bytes) 5/11/2005 11:04 AM Microsoft Corporation
c:\windows\system32\rsaenh.dll

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wlnotify 5.2.3790.1830 (srv03_sp1_rtm.050324-1447) 94.50 KB
(96,768 bytes) 5/11/2005 11:04 AM Microsoft Corporation
c:\windows\system32\wlnotify.dll
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
oleaut32 5.2.3790.1830 543.00 KB (556,032 bytes) 3/25/2003
11:00 AM Microsoft Corporation c:\windows\system32\oleaut32.dll

winpool 5.2.3790.1830 (srv03_sp1_rtm.050324-1447) 147.00 KB
(150,528 bytes) 3/25/2003 11:00 AM Microsoft Corporation
c:\windows\system32\winpool.drv
comctl32 5.82 (srv03_sp1_rtm.050324-1447) 585.00 KB (599,040
bytes) 3/24/2005 8:41 PM Microsoft Corporation
c:\windows\winsxs\x86_microsoft.windows.common-
controls_6595b64144ccf1df_5.82.3790.1830_x-ww_lb6f474a\comctl32.dll
uxtheme 6.00.3790.1830 (srv03_sp1_rtm.050324-1447) 202.00 KB (206,848
bytes) 5/11/2005 11:04 AM Microsoft Corporation
c:\windows\system32\uxtheme.dll
samlib 5.2.3790.1830 (srv03_sp1_rtm.050324-1447) 46.50 KB (47,616
bytes) 3/25/2003 11:00 AM Microsoft Corporation
c:\windows\system32\samlib.dll
clbcatq 2001.12.4720.1830 (srv03_sp1_rtm.050324-1447) 502.50 KB
(514,560 bytes) 5/11/2005 11:05 AM Microsoft Corporation
c:\windows\system32\clbcatq.dll
comres 2001.12.4720.0 (srv03_rtm.030324-2048) 778.00 KB (796,672
bytes) 3/25/2003 11:00 AM Microsoft Corporation
c:\windows\system32\comres.dll
xpsp2res 5.2.3790.1830 (srv03_sp1_rtm.050324-1447) 2.76 MB
(2,897,920 bytes) 5/11/2005 11:08 AM Microsoft Corporation
c:\windows\system32\xpsp2res.dll
cscui 5.2.3790.1830 (srv03_sp1_rtm.050324-1447) 319.50 KB (327,168
bytes) 5/11/2005 11:05 AM Microsoft Corporation
c:\windows\system32\cscui.dll
ntmarta 5.2.3790.1830 (srv03_sp1_rtm.050324-1447) 120.50 KB (123,392
bytes) 5/11/2005 11:04 AM Microsoft Corporation
c:\windows\system32\ntmarta.dll
wbemprox 5.2.3790.1830 (srv03_sp1_rtm.050324-1447) 20.50 KB
(20,992 bytes) 5/11/2005 11:05 AM Microsoft Corporation
c:\windows\system32\wbem\wbemprox.dll
wbemcomn 5.2.3790.1830 (srv03_sp1_rtm.050324-1447) 221.00 KB
(226,304 bytes) 5/11/2005 11:05 AM Microsoft Corporation
c:\windows\system32\wbem\wbemcomn.dll
wbemsvc 5.2.3790.0 (srv03_rtm.030324-2048) 42.50 KB (43,520 bytes)
10/19/2004 7:46 PM Microsoft Corporation
c:\windows\system32\wbem\wbemsvc.dll
fastprox 5.2.3790.1830 (srv03_sp1_rtm.050324-1447) 471.00 KB
(482,304 bytes) 5/11/2005 11:05 AM Microsoft Corporation
c:\windows\system32\wbem\fastprox.dll
msvcpc60 6.05.2144.0 388.00 KB (397,312 bytes) 3/25/2003 11:00 AM
Microsoft Corporation c:\windows\system32\msvcpc60.dll
ntdsapi 5.2.3790.1830 (srv03_sp1_rtm.050324-1447) 71.00 KB (72,704
bytes) 5/11/2005 11:04 AM Microsoft Corporation
c:\windows\system32\ntdsapi.dll
dnsapi 5.2.3790.1830 (srv03_sp1_rtm.050324-1447) 153.50 KB (157,184
bytes) 5/11/2005 11:05 AM Microsoft Corporation
c:\windows\system32\dnsapi.dll

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services 5.2.3790.1830 (srv03_sp1_rtm.050324-1447) 107.50 KB
(110,080 bytes) 3/25/2003 11:00 AM Microsoft Corporation
c:\windows\system32\services.exe
ncobjapi 5.2.3790.1830 (srv03_sp1_rtm.050324-1447) 36.00 KB
(36,864 bytes) 5/11/2005 11:05 AM Microsoft Corporation
c:\windows\system32\ncobjapi.dll
scesrv 5.2.3790.1830 (srv03_sp1_rtm.050324-1447) 327.00 KB (334,848
bytes) 5/11/2005 11:04 AM Microsoft Corporation
c:\windows\system32\scesrv.dll
authz 5.2.3790.1830 (srv03_sp1_rtm.050324-1447) 66.50 KB (68,096
bytes) 5/11/2005 11:05 AM Microsoft Corporation
c:\windows\system32\authz.dll
umpnpgmr 5.2.3790.1830 (srv03_sp1_rtm.050324-1447) 126.50 KB
(129,536 bytes) 5/11/2005 11:04 AM Microsoft Corporation
c:\windows\system32\umpnpgmr.dll
eventlog 5.2.3790.1830 (srv03_sp1_rtm.050324-1447) 67.50 KB
(69,120 bytes) 5/11/2005 11:05 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 5.2.3790.1830 (srv03_sp1_rtm.050324-1447) 803.00 KB (822,272
bytes) 3/25/2003 11:00 AM Microsoft Corporation
c:\windows\system32\lsasrv.dll
samsrv 5.2.3790.1830 (srv03_sp1_rtm.050324-1447) 450.50 KB (461,312
bytes) 3/25/2003 11:00 AM Microsoft Corporation
c:\windows\system32\samsrv.dll
cryptdll 5.2.3790.1830 (srv03_sp1_rtm.050324-1447) 32.00 KB
(32,768 bytes) 5/11/2005 11:05 AM Microsoft Corporation
c:\windows\system32\cryptdll.dll
msprivs 5.2.3790.0 (srv03_rtm.030324-2048) 46.50 KB (47,616 bytes)
3/25/2003 11:00 AM Microsoft Corporation
c:\windows\system32\msprivs.dll
kerberos 5.2.3790.1830 (srv03_sp1_rtm.050324-1447) 340.50 KB
(348,672 bytes) 5/11/2005 11:05 AM Microsoft Corporation
c:\windows\system32\kerberos.dll
msvl_0 5.2.3790.1830 (srv03_sp1_rtm.050324-1447) 141.00 KB (144,384
bytes) 5/11/2005 11:05 AM Microsoft Corporation
c:\windows\system32\msvl_0.dll
iphlpapi 5.2.3790.1830 (srv03_sp1_rtm.050324-1447) 92.50 KB
(94,720 bytes) 5/11/2005 11:05 AM Microsoft Corporation
c:\windows\system32\iphlpapi.dll
netlogon 5.2.3790.1830 (srv03_sp1_rtm.050324-1447) 409.50 KB
(419,328 bytes) 5/11/2005 11:05 AM Microsoft Corporation
c:\windows\system32\netlogon.dll
w32time 5.2.3790.1830 (srv03_sp1_rtm.050324-1447) 222.00 KB (227,328
bytes) 5/11/2005 11:04 AM Microsoft Corporation
c:\windows\system32\w32time.dll
schannel 5.2.3790.1830 (srv03_sp1_rtm.050324-1447) 141.00 KB
(144,384 bytes) 5/11/2005 11:04 AM Microsoft Corporation
c:\windows\system32\schannel.dll
wdigest 5.2.3790.1830 (srv03_sp1_rtm.050324-1447) 74.00 KB (75,776
bytes) 5/11/2005 11:04 AM Microsoft Corporation
c:\windows\system32\wdigest.dll
rassfm 5.2.3790.1830 (srv03_sp1_rtm.050324-1447) 23.00 KB (23,552
bytes) 5/11/2005 11:05 AM Microsoft Corporation
c:\windows\system32\rassfm.dll

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kdcsvc 5.2.3790.1830 (srv03_sp1_rtm.050324-1447) 213.50 KB (218,624
bytes) 5/11/2005 11:05 AM Microsoft Corporation
c:\windows\system32\kdcsvc.dll
ntdsa 5.2.3790.1830 (srv03_sp1_rtm.050324-1447) 1.45 MB (1,516,032
bytes) 5/11/2005 11:04 AM Microsoft Corporation
c:\windows\system32\ntdsa.dll
esent 5.2.3790.1830 (srv03_sp1_rtm.050324-1447) 1,022.50 KB
(1,047,040 bytes) 5/11/2005 11:05 AM Microsoft Corporation
c:\windows\system32\esent.dll
ntdsatq 5.2.3790.1830 (srv03_sp1_rtm.050324-1447) 29.50 KB (30,208
bytes) 5/11/2005 11:04 AM Microsoft Corporation
c:\windows\system32\ntdsatq.dll
mswsock 5.2.3790.1830 (srv03_sp1_rtm.050324-1447) 250.50 KB (256,512
bytes) 5/11/2005 11:05 AM Microsoft Corporation
c:\windows\system32\mswsock.dll
scecli 5.2.3790.1830 (srv03_sp1_rtm.050324-1447) 186.50 KB (190,976
bytes) 5/11/2005 11:04 AM Microsoft Corporation
c:\windows\system32\scecli.dll
ws03res 5.2.3790.1830 (srv03_sp1_rtm.050324-1447) 793.50 KB (812,544
bytes) 5/11/2005 11:08 AM Microsoft Corporation
c:\windows\system32\ws03res.dll
pstorsvc 5.2.3790.0 (srv03_rtm.030324-2048) 24.00 KB (24,576
bytes) 3/25/2003 11:00 AM Microsoft Corporation
c:\windows\system32\pstorsvc.dll
psbase 5.2.3790.1830 (srv03_sp1_rtm.050324-1447) 84.00 KB (86,016
bytes) 5/11/2005 11:04 AM Microsoft Corporation
c:\windows\system32\psbase.dll
dssenh 5.2.3790.1830 (srv03_sp1_rtm.050324-1447) 139.98 KB (143,336
bytes) 5/11/2005 11:05 AM Microsoft Corporation
c:\windows\system32\dssenh.dll
cryptnet 5.131.3790.1830 (srv03_sp1_rtm.050324-1447) 61.00 KB
(62,464 bytes) 5/11/2005 11:05 AM Microsoft Corporation
c:\windows\system32\cryptnet.dll
sensapi 5.2.3790.0 (srv03_rtm.030324-2048) 6.00 KB (6,144 bytes)
3/25/2003 11:00 AM Microsoft Corporation
c:\windows\system32\sensapi.dll
hnetcfg 5.2.3790.1830 (srv03_sp1_rtm.050324-1447) 343.50 KB (351,744
bytes) 5/11/2005 11:05 AM Microsoft Corporation
c:\windows\system32\hnetcfg.dll
wshtcpip 5.2.3790.0 (srv03_rtm.030324-2048) 18.00 KB (18,432
bytes) 3/25/2003 11:00 AM Microsoft Corporation
c:\windows\system32\wshtcpip.dll
svchost 5.2.3790.1830 (srv03_sp1_rtm.050324-1447) 14.00 KB (14,336
bytes) 5/11/2005 11:04 AM Microsoft Corporation
c:\windows\system32\svchost.exe
rpcss 5.2.3790.1830 (srv03_sp1_rtm.050324-1447) 406.00 KB (415,744
bytes) 5/11/2005 11:04 AM Microsoft Corporation
c:\windows\system32\rpcss.dll
wkssvc 5.2.3790.1830 (srv03_sp1_rtm.050324-1447) 130.00 KB (133,120
bytes) 3/25/2003 11:00 AM Microsoft Corporation
c:\windows\system32\wkssvc.dll
wiarpc 5.2.3790.1830 (srv03_sp1_rtm.050324-1447) 32.50 KB (33,280
bytes) 5/11/2005 11:04 AM Microsoft Corporation
c:\windows\system32\wiarpc.dll
aelupsvc 5.2.3790.1830 (srv03_sp1_rtm.050324-1447) 26.00 KB
(26,624 bytes) 5/11/2005 11:08 AM Microsoft Corporation
c:\windows\system32\aelupsvc.dll

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apphelp 5.2.3790.1830 (srv03_sp1_rtm.050324-1447) 146.50 KB (150,016
bytes) 5/11/2005 11:05 AM Microsoft Corporation
c:\windows\system32\apphelp.dll
dmserver 5.2.3790.1830 (srv03_sp1_rtm.050324-1447) 25.50 KB
(26,112 bytes) 5/11/2005 11:05 AM Microsoft Corporation
c:\windows\system32\dmserver.dll
es 2001.12.4720.1830 (srv03_sp1_rtm.050324-1447) 233.00 KB
(238,592 bytes) 5/11/2005 11:05 AM Microsoft Corporation
c:\windows\system32\es.dll
pchsvc 5.2.3790.1830 (srv03_sp1_rtm.050324-1447) 39.00 KB (39,936
bytes) 5/11/2005 11:05 AM Microsoft Corporation
c:\windows\pchealth\helpctr\binaries\pchsvc.dll
srvsvc 5.2.3790.1830 (srv03_sp1_rtm.050324-1447) 93.50 KB (95,744
bytes) 3/25/2003 11:00 AM Microsoft Corporation
c:\windows\system32\srvsvc.dll
seclogon 5.2.3790.1830 (srv03_sp1_rtm.050324-1447) 18.50 KB
(18,944 bytes) 5/11/2005 11:04 AM Microsoft Corporation
c:\windows\system32\seclogon.dll
sens 5.2.3790.1830 (srv03_sp1_rtm.050324-1447) 36.50 KB (37,376
bytes) 5/11/2005 11:04 AM Microsoft Corporation
c:\windows\system32\sens.dll
wmisvc 5.2.3790.1830 (srv03_sp1_rtm.050324-1447) 140.00 KB (143,360
bytes) 5/11/2005 11:05 AM Microsoft Corporation
c:\windows\system32\wbem\wmisvc.dll
vssapi 5.2.3790.1830 (srv03_sp1_rtm.050324-1447) 548.00 KB (561,152
bytes) 5/11/2005 11:04 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 2001.12.4720.1830 (srv03_sp1_rtm.050324-1447) 1.19 MB
(1,248,256 bytes) 5/11/2005 11:05 AM Microsoft Corporation
c:\windows\system32\comsvcs.dll
wbemcore 5.2.3790.1830 (srv03_sp1_rtm.050324-1447) 497.50 KB
(509,440 bytes) 5/11/2005 11:05 AM Microsoft Corporation
c:\windows\system32\wbem\wbemcore.dll
esscli 5.2.3790.1830 (srv03_sp1_rtm.050324-1447) 250.00 KB (256,000
bytes) 5/11/2005 11:05 AM Microsoft Corporation
c:\windows\system32\wbem\esscli.dll
wmiutils 5.2.3790.1830 (srv03_sp1_rtm.050324-1447) 93.50 KB
(95,744 bytes) 5/11/2005 11:05 AM Microsoft Corporation
c:\windows\system32\wbem\wmiutils.dll
repdrvfs 5.2.3790.1830 (srv03_sp1_rtm.050324-1447) 172.50 KB
(176,640 bytes) 5/11/2005 11:05 AM Microsoft Corporation
c:\windows\system32\wbem\repdrvfs.dll
wmiprvsd 5.2.3790.1830 (srv03_sp1_rtm.050324-1447) 404.00 KB
(413,696 bytes) 5/11/2005 11:05 AM Microsoft Corporation
c:\windows\system32\wbem\wmiprvsd.dll
wbemess 5.2.3790.1830 (srv03_sp1_rtm.050324-1447) 271.50 KB (278,016
bytes) 5/11/2005 11:05 AM Microsoft Corporation
c:\windows\system32\wbem\wbemess.dll
netman 5.2.3790.1830 (srv03_sp1_rtm.050324-1447) 258.50 KB (264,704
bytes) 5/11/2005 11:05 AM Microsoft Corporation
c:\windows\system32\netman.dll
mprapi 5.2.3790.1830 (srv03_sp1_rtm.050324-1447) 89.00 KB (91,136
bytes) 5/11/2005 11:05 AM Microsoft Corporation
c:\windows\system32\mprapi.dll
activeds 5.2.3790.1830 (srv03_sp1_rtm.050324-1447) 194.00 KB
(198,656 bytes) 5/11/2005 11:05 AM Microsoft Corporation
c:\windows\system32\activeds.dll

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adslrpc 5.2.3790.1830 (srv03_sp1_rtm.050324-1447) 146.00 KB (149,504
bytes) 5/11/2005 11:05 AM Microsoft Corporation
c:\windows\system32\adslrpc.dll
credui 5.2.3790.1830 (srv03_sp1_rtm.050324-1447) 162.00 KB (165,888
bytes) 5/11/2005 11:05 AM Microsoft Corporation
c:\windows\system32\credui.dll
rtutils 5.2.3790.1830 (srv03_sp1_rtm.050324-1447) 34.50 KB (35,328
bytes) 5/11/2005 11:04 AM Microsoft Corporation
c:\windows\system32\rtutils.dll
netshell 5.2.3790.1830 (srv03_sp1_rtm.050324-1447) 1.73 MB
(1,812,992 bytes) 5/11/2005 11:04 AM Microsoft Corporation
c:\windows\system32\netshell.dll
clusapi 5.2.3790.1830 (srv03_sp1_rtm.050324-1447) 60.00 KB (61,440
bytes) 5/11/2005 11:05 AM Microsoft Corporation
c:\windows\system32\clusapi.dll
rasapi32 5.2.3790.1830 (srv03_sp1_rtm.050324-1447) 239.50 KB
(245,248 bytes) 3/25/2003 11:00 AM Microsoft Corporation
c:\windows\system32\rasapi32.dll
rasman 5.2.3790.1830 (srv03_sp1_rtm.050324-1447) 61.50 KB (62,976
bytes) 3/25/2003 11:00 AM Microsoft Corporation
c:\windows\system32\rasman.dll
tapi32 5.2.3790.1830 (srv03_sp1_rtm.050324-1447) 179.50 KB (183,808
bytes) 5/11/2005 11:04 AM Microsoft Corporation
c:\windows\system32\tapi32.dll
wininet 6.00.3790.1830 (srv03_sp1_rtm.050324-1447) 646.00 KB (661,504
bytes) 5/11/2005 11:04 AM Microsoft Corporation
c:\windows\system32\wininet.dll
wzcsapi 5.2.3790.1830 (srv03_sp1_rtm.050324-1447) 41.00 KB (41,984
bytes) 5/11/2005 11:04 AM Microsoft Corporation
c:\windows\system32\wzcsapi.dll
wzcsvc 5.2.3790.1830 (srv03_sp1_rtm.050324-1447) 364.50 KB (373,248
bytes) 5/11/2005 11:04 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 5.2.3790.1830 (srv03_sp1_rtm.050324-1447) 113.50 KB
(116,224 bytes) 3/25/2003 11:00 AM Microsoft Corporation
c:\windows\system32\dhcpcsvc.dll
netcfgx 5.2.3790.1830 (srv03_sp1_rtm.050324-1447) 763.00 KB (781,312
bytes) 5/11/2005 11:05 AM Microsoft Corporation
c:\windows\system32\netcfgx.dll
winipsec 5.2.3790.1830 (srv03_sp1_rtm.050324-1447) 35.50 KB
(36,352 bytes) 5/11/2005 11:04 AM Microsoft Corporation
c:\windows\system32\winipsec.dll
rasmans 5.2.3790.1830 (srv03_sp1_rtm.050324-1447) 176.00 KB (180,224
bytes) 5/11/2005 11:04 AM Microsoft Corporation
c:\windows\system32\rasmans.dll
rastapi 5.2.3790.1830 (srv03_sp1_rtm.050324-1447) 62.00 KB (63,488
bytes) 3/25/2003 11:00 AM Microsoft Corporation
c:\windows\system32\rastapi.dll
rasppp 5.2.3790.1830 (srv03_sp1_rtm.050324-1447) 205.00 KB (209,920
bytes) 5/11/2005 11:04 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

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raschap 5.2.3790.1830 (srv03_sp1_rtm.050324-1447) 119.50 KB (122,368
bytes) 5/11/2005 11:04 AM Microsoft Corporation
c:\windows\system32\raschap.dll
rastls 5.2.3790.1830 (srv03_sp1_rtm.050324-1447) 180.00 KB (184,320
bytes) 5/11/2005 11:04 AM Microsoft Corporation
c:\windows\system32\rastls.dll
cryptui 5.131.3790.1830 (srv03_sp1_rtm.050324-1447) 496.50 KB (508,416
bytes) 5/11/2005 11:05 AM Microsoft Corporation
c:\windows\system32\cryptui.dll
ipbootp 5.2.3790.1830 (srv03_sp1_rtm.050324-1447) 36.00 KB (36,864
bytes) 5/11/2005 11:05 AM Microsoft Corporation
c:\windows\system32\ipbootp.dll
rasdlg 5.2.3790.1830 (srv03_sp1_rtm.050324-1447) 663.00 KB (678,912
bytes) 3/25/2003 11:00 AM Microsoft Corporation
c:\windows\system32\rasdlg.dll
rasadhlp 5.2.3790.1830 (srv03_sp1_rtm.050324-1447) 7.50 KB (7,680
bytes) 5/11/2005 11:04 AM Microsoft Corporation
c:\windows\system32\rasadhlp.dll
ncprov 5.2.3790.1830 (srv03_sp1_rtm.050324-1447) 46.50 KB (47,616
bytes) 5/11/2005 11:05 AM Microsoft Corporation
c:\windows\system32\wbem\ncprov.dll
actxprxy 6.00.3790.1830 (srv03_sp1_rtm.050324-1447) 96.50 KB
(98,816 bytes) 5/11/2005 11:05 AM Microsoft Corporation
c:\windows\system32\actxprxy.dll
mnmsrvc 5.2.3790.1830 32.00 KB (32,768 bytes) 5/11/2005 11:05 AM
Microsoft Corporation c:\windows\system32\mnmsrvc.exe
nmcom 5.2.3790.1830 76.00 KB (77,824 bytes) 5/11/2005 11:05 AM
Microsoft Corporation c:\program files\netmeeting\nmcom.dll
wsock32 5.2.3790.0 (srv03_rtm.030324-2048) 22.00 KB (22,528 bytes)
3/25/2003 11:00 AM Microsoft Corporation
c:\windows\system32\wsock32.dll
mst120 5.2.3790.1830 268.00 KB (274,432 bytes) 5/11/2005 11:05 AM
Microsoft Corporation c:\program files\netmeeting\mst120.dll
nmas 5.2.3790.1830 224.00 KB (229,376 bytes) 5/11/2005 11:05 AM
Microsoft Corporation c:\program files\netmeeting\nmas.dll
nmasnt 5.2.3790.1830 28.00 KB (28,672 bytes) 5/11/2005 11:05 AM
Microsoft Corporation c:\program files\netmeeting\nmasnt.dll
h323cc 5.2.3790.1830 56.00 KB (57,344 bytes) 5/11/2005 11:05 AM
Microsoft Corporation c:\program files\netmeeting\h323cc.dll
callcont 5.2.3790.1830 376.00 KB (385,024 bytes) 5/11/2005
11:05 AM Microsoft Corporation c:\program
files\netmeeting\callcont.dll
nac 5.2.3790.1830 216.00 KB (221,184 bytes) 5/11/2005 11:05 AM
Microsoft Corporation c:\program files\netmeeting\nac.dll
msacm32 5.2.3790.1830 (srv03_sp1_rtm.050324-1447) 69.50 KB (71,168
bytes) 5/11/2005 11:05 AM Microsoft Corporation
c:\windows\system32\msacm32.dll
msvfw32 5.2.3790.1830 (srv03_sp1_rtm.050324-1447) 117.00 KB (119,808
bytes) 5/11/2005 11:05 AM Microsoft Corporation
c:\windows\system32\msvfw32.dll
dcap32 5.2.3790.1830 40.00 KB (40,960 bytes) 5/11/2005 11:05 AM
Microsoft Corporation c:\program files\netmeeting\dcap32.dll
winrnr 5.2.3790.1830 (srv03_sp1_rtm.050324-1447) 17.00 KB (17,408
bytes) 5/11/2005 11:04 AM Microsoft Corporation
c:\windows\system32\winrnr.dll

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rundll32 5.2.3790.1830 (srv03_sp1_rtm.050324-1447) 34.00 KB
(34,816 bytes) 5/11/2005 11:04 AM Microsoft Corporation
c:\windows\system32\rundll32.exe
msconf 5.2.3790.1830 72.00 KB (73,728 bytes) 5/11/2005 11:05 AM
Microsoft Corporation c:\windows\system32\msconf.dll
termsrv 5.2.3790.1830 (srv03_sp1_rtm.050324-1447) 239.00 KB (244,736
bytes) 5/11/2005 11:04 AM Microsoft Corporation
c:\windows\system32\termsrv.dll
icaapi 5.2.3790.1830 (srv03_sp1_rtm.050324-1447) 12.50 KB (12,800
bytes) 5/11/2005 11:05 AM Microsoft Corporation
c:\windows\system32\icaapi.dll
mstlsapi 5.2.3790.1830 (srv03_sp1_rtm.050324-1447) 116.00 KB
(118,784 bytes) 5/11/2005 11:05 AM Microsoft Corporation
c:\windows\system32\mstlsapi.dll
rdpwsx 5.2.3790.1830 (srv03_sp1_rtm.050324-1447) 101.63 KB (104,072
bytes) 5/11/2005 11:04 AM Microsoft Corporation
c:\windows\system32\rdpwsx.dll
explorer 6.00.3790.1830 (srv03_sp1_rtm.050324-1447) 1.00 MB
(1,050,624 bytes) 5/11/2005 11:05 AM Microsoft Corporation
c:\windows\explorer.exe
browseui 6.00.3790.1830 (srv03_sp1_rtm.050324-1447) 1,009.00 KB
(1,033,216 bytes) 5/11/2005 11:05 AM Microsoft Corporation
c:\windows\system32\browseui.dll
shdocvw 6.00.3790.1830 (srv03_sp1_rtm.050324-1447) 1.43 MB (1,502,720
bytes) 5/11/2005 11:04 AM Microsoft Corporation
c:\windows\system32\shdocvw.dll
themeui 6.00.3790.1830 (srv03_sp1_rtm.050324-1447) 377.50 KB (386,560
bytes) 5/11/2005 11:04 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 6.00.3790.1830 (srv03_sp1_rtm.050324-1447) 673.00 KB (689,152
bytes) 5/11/2005 11:04 AM Microsoft Corporation
c:\windows\system32\urlmon.dll
linkinfo 5.2.3790.1830 (srv03_sp1_rtm.050324-1447) 19.00 KB
(19,456 bytes) 5/11/2005 11:05 AM Microsoft Corporation
c:\windows\system32\linkinfo.dll
ntshrui 6.00.3790.1830 (srv03_sp1_rtm.050324-1447) 140.00 KB (143,360
bytes) 5/11/2005 11:04 AM Microsoft Corporation
c:\windows\system32\ntshrui.dll
webcheck 6.00.3790.1830 (srv03_sp1_rtm.050324-1447) 272.50 KB
(279,040 bytes) 5/11/2005 11:04 AM Microsoft Corporation
c:\windows\system32\webcheck.dll
stobject 5.2.3790.1830 (srv03_sp1_rtm.050324-1447) 120.50 KB
(123,392 bytes) 5/11/2005 11:04 AM Microsoft Corporation
c:\windows\system32\stobject.dll
batmeter 6.00.3790.1830 (srv03_sp1_rtm.050324-1447) 31.50 KB
(32,256 bytes) 5/11/2005 11:05 AM Microsoft Corporation
c:\windows\system32\batmeter.dll
powrprof 6.00.3790.1830 (srv03_sp1_rtm.050324-1447) 16.50 KB
(16,896 bytes) 5/11/2005 11:04 AM Microsoft Corporation
c:\windows\system32\powrprof.dll
drprov 5.2.3790.1830 (srv03_sp1_rtm.050324-1447) 14.00 KB (14,336
bytes) 5/11/2005 11:05 AM Microsoft Corporation
c:\windows\system32\drprov.dll
ntlanman 5.2.3790.1830 (srv03_sp1_rtm.050324-1447) 43.50 KB
(44,544 bytes) 5/11/2005 11:04 AM Microsoft Corporation
c:\windows\system32\ntlanman.dll

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netui0 5.2.3790.0 (srv03_rtm.030324-2048) 75.50 KB (77,312 bytes)
3/25/2003 11:00 AM Microsoft Corporation
c:\windows\system32\netui0.dll
netui1 5.2.3790.0 (srv03_rtm.030324-2048) 184.00 KB (188,416 bytes)
3/25/2003 11:00 AM Microsoft Corporation
c:\windows\system32\netui1.dll
davclnt 5.2.3790.0 (srv03_rtm.030324-2048) 23.50 KB (24,064 bytes)
3/25/2003 11:00 AM Microsoft Corporation
c:\windows\system32\davclnt.dll
rhostsvr Not Available 54.50 KB (55,808 bytes) 10/20/2004
12:35 PM Not Available c:\rhost\rhostsvr.exe
tapisrv 5.2.3790.1830 (srv03_sp1_rtm.050324-1447) 248.50 KB (254,464
bytes) 5/11/2005 11:04 AM Microsoft Corporation
c:\windows\system32\tapisrv.dll
unimdm 5.2.3790.1830 (srv03_sp1_rtm.050324-1447) 203.00 KB (207,872
bytes) 5/11/2005 11:04 AM Microsoft Corporation
c:\windows\system32\unimdm.tsp
uniplat 5.2.3790.1830 (srv03_sp1_rtm.050324-1447) 13.00 KB (13,312
bytes) 5/11/2005 11:04 AM Microsoft Corporation
c:\windows\system32\uniplat.dll
kmddsp 5.2.3790.1830 (srv03_sp1_rtm.050324-1447) 34.50 KB (35,328
bytes) 5/11/2005 11:05 AM Microsoft Corporation
c:\windows\system32\kmddsp.tsp
ndptsp 5.2.3790.1830 (srv03_sp1_rtm.050324-1447) 47.00 KB (48,128
bytes) 5/11/2005 11:05 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 5.2.3790.1830 (srv03_sp1_rtm.050324-1447) 259.50 KB (265,728
bytes) 5/11/2005 11:05 AM Microsoft Corporation
c:\windows\system32\h323.tsp
hidphone 5.2.3790.1830 (srv03_sp1_rtm.050324-1447) 29.50 KB
(30,208 bytes) 5/11/2005 11:05 AM Microsoft Corporation
c:\windows\system32\hidphone.tsp
hid 5.2.3790.1830 (srv03_sp1_rtm.050324-1447) 18.50 KB (18,944
bytes) 5/11/2005 11:05 AM Microsoft Corporation
c:\windows\system32\hid.dll
dllhost 5.2.3790.0 (srv03_rtm.030324-2048) 5.50 KB (5,632 bytes)
3/25/2003 11:00 AM Microsoft Corporation
c:\windows\system32\dllhost.exe
mtxoci 2001.12.4720.1830 (srv03_sp1_rtm.050324-1447) 108.50 KB
(111,104 bytes) 5/11/2005 11:05 AM Microsoft Corporation
c:\windows\system32\mtxoci.dll
oci 10.1.0.2.0 184.00 KB (188,416 bytes) 10/27/2004 1:39 PM
Oracle Corporation c:\oracle\ora10g\bin\oci.dll
txflog 2001.12.4720.1830 (srv03_sp1_rtm.050324-1447) 96.50 KB
(98,816 bytes) 5/11/2005 11:04 AM Microsoft Corporation
c:\windows\system32\txflog.dll
xolehlp 2001.12.4720.1830 (srv03_sp1_rtm.050324-1447) 10.50 KB
(10,752 bytes) 5/11/2005 11:04 AM Microsoft Corporation
c:\windows\system32\xolehlp.dll
msdtcprx 2001.12.4720.1830 (srv03_sp1_rtm.050324-1447) 455.50
KB (466,432 bytes) 5/11/2005 11:05 AM Microsoft Corporation
c:\windows\system32\msdtcprx.dll
mtxclu 2001.12.4720.1830 (srv03_sp1_rtm.050324-1447) 77.00 KB
(78,848 bytes) 5/11/2005 11:05 AM Microsoft Corporation
c:\windows\system32\mtxclu.dll

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resutils 5.2.3790.1830 (srv03_sp1_rtm.050324-1447) 63.50 KB
(65,024 bytes) 5/11/2005 11:04 AM Microsoft Corporation
c:\windows\system32\resutils.dll
catsrv 2001.12.4720.1830 (srv03_sp1_rtm.050324-1447) 273.00 KB
(279,552 bytes) 5/11/2005 11:05 AM Microsoft Corporation
c:\windows\system32\catsrv.dll
clbcatex 2001.12.4720.1830 (srv03_sp1_rtm.050324-1447) 102.50
KB (104,960 bytes) 5/11/2005 11:05 AM Microsoft Corporation
c:\windows\system32\clbcatex.dll
catsrvps 2001.12.4720.1830 (srv03_rtm.030324-2048) 23.50 KB
(24,064 bytes) 10/19/2004 7:46 PM Microsoft Corporation
c:\windows\system32\catsrvps.dll
catsrvut 2001.12.4720.1830 (srv03_sp1_rtm.050324-1447) 608.00
KB (622,592 bytes) 5/11/2005 11:05 AM Microsoft Corporation
c:\windows\system32\catsrvut.dll
mfcsubs 2001.12.4720.0 (srv03_rtm.030324-2048) 21.50 KB (22,016
bytes) 3/25/2003 11:00 AM Microsoft Corporation
c:\windows\system32\mfcsubs.dll
rdpsnd 5.2.3790.0 (srv03_rtm.030324-2048) 18.00 KB (18,432 bytes)
3/25/2003 11:00 AM Microsoft Corporation
c:\windows\system32\rdpsnd.dll
scredir 5.2.3790.1830 (srv03_sp1_rtm.050324-1447) 28.00 KB (28,672
bytes) 5/11/2005 11:04 AM Microsoft Corporation
c:\windows\system32\scredir.dll
msacm32 5.2.3790.1830 (srv03_sp1_rtm.050324-1447) 22.00 KB (22,528
bytes) 5/11/2005 11:05 AM Microsoft Corporation
c:\windows\system32\msacm32.drv
imaadp32 5.2.3790.0 (srv03_rtm.030324-2048) 15.50 KB (15,872
bytes) 3/25/2003 11:00 AM Microsoft Corporation
c:\windows\system32\imaadp32.acm
msadp32 5.2.3790.0 (srv03_rtm.030324-2048) 14.50 KB (14,848 bytes)
3/25/2003 11:00 AM Microsoft Corporation
c:\windows\system32\msadp32.acm
msg711 5.2.3790.0 (srv03_rtm.030324-2048) 10.00 KB (10,240 bytes)
3/25/2003 11:00 AM Microsoft Corporation
c:\windows\system32\msg711.acm
msgsm32 5.2.3790.0 (srv03_rtm.030324-2048) 20.50 KB (20,992 bytes)
3/25/2003 11:00 AM Microsoft Corporation
c:\windows\system32\msgsm32.acm
tssoft32 1.01 9.50 KB (9,728 bytes) 3/25/2003 11:00 AM DSP
GROUP, INC. c:\windows\system32\tssoft32.acm
tsd32 1.03 16.50 KB (16,896 bytes) 3/25/2003 11:00 AM DSP
GROUP, INC. c:\windows\system32\tsd32.dll
msg723 5.2.3790.1830 120.00 KB (122,880 bytes) 5/11/2005 11:05 AM
Microsoft Corporation c:\windows\system32\msg723.acm
msaud32 8.00.00.4487 288.00 KB (294,912 bytes) 3/25/2003 11:00 AM
Microsoft Corporation c:\windows\system32\msaud32.acm
sl_anet 3.02 84.00 KB (86,016 bytes) 3/25/2003 11:00 AM Sipro
Lab Telecom Inc. c:\windows\system32\sl_anet.acm
l3codeca 1, 9, 0, 0305 284.00 KB (290,816 bytes) 3/25/2003
11:00 AM Fraunhofer Institut Integrierte Schaltungen IIS
c:\windows\system32\l3codeca.acm
rdpclip 5.2.3790.1830 (srv03_sp1_rtm.050324-1447) 68.00 KB (69,632
bytes) 5/11/2005 11:04 AM Microsoft Corporation
c:\windows\system32\rdpclip.exe
shdoclc 6.00.3790.0 (srv03_rtm.030324-2048) 588.50 KB (602,624 bytes)
3/25/2003 11:00 AM Microsoft Corporation
c:\windows\system32\shdoclc.dll

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helpctr 5.2.3790.1830 (srv03_sp1_rtm.050324-1447) 778.00 KB (796,672
bytes) 5/11/2005 11:05 AM Microsoft Corporation
c:\windows\pchealth\helpctr\binaries\helpctr.exe
hcappres 5.2.3790.0 (srv03_rtm.030324-2048) 6.50 KB (6,656 bytes)
10/19/2004 7:48 PM Microsoft Corporation
c:\windows\pchealth\helpctr\binaries\hcappres.dll
itss 5.2.3790.1830 (srv03_sp1_rtm.050324-1447) 133.50 KB (136,704
bytes) 5/11/2005 11:05 AM Microsoft Corporation
c:\windows\system32\itss.dll
msxml3 8.70.1104.0 1.06 MB (1,107,456 bytes) 5/11/2005 11:05 AM
Microsoft Corporation c:\windows\system32\msxml3.dll
pchshell 5.2.3790.1830 (srv03_sp1_rtm.050324-1447) 104.50 KB
(107,008 bytes) 5/11/2005 11:05 AM Microsoft Corporation
c:\windows\pchealth\helpctr\binaries\pchshell.dll
mlang 6.00.3790.1830 (srv03_sp1_rtm.050324-1447) 577.50 KB (591,360
bytes) 5/11/2005 11:05 AM Microsoft Corporation
c:\windows\system32\mlang.dll
mshtml 6.00.3790.1830 (srv03_sp1_rtm.050324-1447) 2.96 MB (3,108,864
bytes) 5/11/2005 11:05 AM Microsoft Corporation
c:\windows\system32\mshtml.dll
msls31 3.10.349.0 142.00 KB (145,408 bytes) 5/11/2005 11:05 AM
Microsoft Corporation c:\windows\system32\msls31.dll
msimtf 5.2.3790.1830 (srv03_sp1_rtm.050324-1447) 156.00 KB (159,744
bytes) 5/11/2005 11:05 AM Microsoft Corporation
c:\windows\system32\msimtf.dll
msctf 5.2.3790.1830 (srv03_sp1_rtm.050324-1447) 311.00 KB (318,464
bytes) 5/11/2005 11:05 AM Microsoft Corporation
c:\windows\system32\msctf.dll
jscript 5.6.0.8827 448.00 KB (458,752 bytes) 5/11/2005 11:05 AM
Microsoft Corporation c:\windows\system32\jscript.dll
imm32 5.2.3790.1830 (srv03_sp1_rtm.050324-1447) 108.00 KB (110,592
bytes) 5/11/2005 11:05 AM Microsoft Corporation
c:\windows\system32\imm32.dll
mshtml 6.00.3790.1830 (srv03_sp1_rtm.050324-1447) 454.50 KB
(465,408 bytes) 5/11/2005 11:05 AM Microsoft Corporation
c:\windows\system32\mshtml.dll
vbscript 5.6.0.8827 392.00 KB (401,408 bytes) 5/11/2005
11:04 AM Microsoft Corporation c:\windows\system32\vbscript.dll
msinfo 5.2.3790.1830 (srv03_sp1_rtm.050324-1447) 376.00 KB (385,024
bytes) 5/11/2005 11:05 AM Microsoft Corporation
c:\windows\pchealth\helpctr\binaries\msinfo.dll
mfc42u 6.06.8063.0 1.11 MB (1,163,776 bytes) 5/11/2005 11:05 AM
Microsoft Corporation c:\windows\system32\mfc42u.dll
odbc32 3.526.1830.0 (srv03_sp1_rtm.050324-1447) 240.00 KB (245,760
bytes) 5/11/2005 11:04 AM Microsoft Corporation
c:\windows\system32\odbc32.dll
comdlg32 6.00.3790.1830 (srv03_sp1_rtm.050324-1447) 274.50 KB
(281,088 bytes) 3/25/2003 11:00 AM Microsoft Corporation
c:\windows\system32\comdlg32.dll
odbcint 3.526.1830.0 (srv03_sp1_rtm.050324-1447) 92.00 KB (94,208
bytes) 5/11/2005 11:04 AM Microsoft Corporation
c:\windows\system32\odbcint.dll
riched32 5.2.3790.0 (srv03_rtm.030324-2048) 3.50 KB (3,584 bytes)
3/25/2003 11:00 AM Microsoft Corporation
c:\windows\system32\riched32.dll
riched20 5.31.23.1224 439.00 KB (449,536 bytes) 5/11/2005
11:04 AM Microsoft Corporation c:\windows\system32\riched20.dll

```

helpsvc 5.2.3790.1830 (srv03\_sp1\_rtm.050324-1447) 745.00 KB (762,880 bytes) 5/11/2005 11:05 AM Microsoft Corporation  
 c:\windows\pchealth\helpctr\binaries\helpsvc.exe

[Services]

Display Name	Name	State	Start Mode	Service Type	Path	Error Control
Application Experience	LookupService	Running	Auto	Share Process	c:\windows\system32\svchost.exe -k netsvcs	Normal
Alerter	Alerter	Stopped	Disabled	Share Process	c:\windows\system32\svchost.exe -k localservice	Normal
Application Layer Gateway Service	ALG	Stopped	Manual	Own Process	c:\windows\system32\alg.exe	Normal
Application Management	AppMgmt	Stopped	Manual	Share Process	c:\windows\system32\svchost.exe -k netsvcs	Normal
Windows Audio	AudioSrv	Stopped	Disabled	Share Process	c:\windows\system32\svchost.exe -k netsvcs	Normal
Background Intelligent Transfer Service	BITS	Stopped	Manual	Share Process	c:\windows\system32\svchost.exe -k netsvcs	Normal
Computer Browser	Browser	Stopped	Manual	Share Process	c:\windows\system32\svchost.exe -k netsvcs	Normal
Indexing Service	CiSvc	Stopped	Disabled	Share Process	c:\windows\system32\cisvc.exe	Normal
ClipBook	ClipSrv	Stopped	Disabled	Own Process	c:\windows\system32\clipsrv.exe	Normal
COM+ System Application	COMSysApp	Running	Manual	Own Process	c:\windows\system32\dlhhost.exe /processid:{02d4b3f1-fd88-11d1-960d-00805fc79235}	Normal
Cryptographic Services	CryptSvc	Stopped	Manual	Share Process	c:\windows\system32\svchost.exe -k netsvcs	Normal
DCOM Server Process Launcher	DcomLaunch	Running	Auto	Share Process	c:\windows\system32\svchost.exe -k dcomlaunch	Normal
Distributed File System	Dfs	Stopped	Disabled	Own Process	c:\windows\system32\dfssvc.exe	Normal
DHCP Client	Dhcp	Stopped	Disabled	Share Process	c:\windows\system32\svchost.exe -k networkservice	Normal
Logical Disk Manager Administrative Service	dmadmin	Stopped	Manual	Share Process	c:\windows\system32\dmadmin.exe /com	Normal
Logical Disk Manager	dmserver	Running	Auto	Share Process	c:\windows\system32\svchost.exe -k netsvcs	Normal
DNS Client	Dnscache	Stopped	Disabled	Share Process	c:\windows\system32\svchost.exe -k networkservice	Normal

Error Reporting Service	ERSvc	Stopped	Manual	Share Process	c:\windows\system32\svchost.exe -k winerr	Ignore
Event Log	Eventlog	Running	Auto	Share Process	c:\windows\system32\services.exe	Normal
COM+ Event System	EventSystem	Running	Auto	Share Process	c:\windows\system32\svchost.exe -k netsvcs	Normal
Help and Support	helpsvc	Running	Auto	Share Process	c:\windows\system32\svchost.exe -k netsvcs	Normal
Human Interface Device Access	HidServ	Stopped	Disabled	Share Process	c:\windows\system32\svchost.exe -k netsvcs	Normal
HTTP SSL	HTTPFilter	Stopped	Manual	Share Process	c:\windows\system32\lsass.exe	Normal
IIS Admin Service	IISADMIN	Stopped	Manual	Share Process	c:\windows\system32\inetres\inetinfo.exe	Normal
IMAPI CD-Burning COM Service	ImapiService	Stopped	Disabled	Own Process	c:\windows\system32\imapi.exe	Normal
Intersite Messaging	IsmSrv	Stopped	Disabled	Own Process	c:\windows\system32\ismssrv.exe	Normal
Kerberos Key Distribution Center	kdc	Stopped	Disabled	Share Process	c:\windows\system32\lsass.exe	Normal
Server	lanmanserver	Running	Auto	Share Process	c:\windows\system32\svchost.exe -k netsvcs	Normal
Workstation	lanmanworkstation	Running	Auto	Share Process	c:\windows\system32\svchost.exe -k netsvcs	Normal
License Logging	LicenseService	Stopped	Disabled	Own Process	c:\windows\system32\llssrv.exe	Normal
AUTHORITY\NetworkService						
TCP/IP NetBIOS Helper	LmHosts	Stopped	Manual	Share Process	c:\windows\system32\svchost.exe -k localservice	Normal
AUTHORITY\LocalService						
Messenger	Messenger	Stopped	Disabled	Share Process	c:\windows\system32\svchost.exe -k netsvcs	Normal
NetMeeting Remote Desktop Sharing	mnmsrvc	Running	Auto	Own Process	c:\windows\system32\mnmsrvc.exe	Normal
Distributed Transaction Coordinator	MSDTC	Running	Auto	Own Process	c:\windows\system32\msdtc.exe	Normal
Windows Installer	MSIServer	Stopped	Manual	Share Process	c:\windows\system32\msiexec.exe /v	Normal
Network DDE	NetDDE	Stopped	Disabled	Share Process	c:\windows\system32\netdde.exe	Normal
Network DDE DSDM	NetDDEdsdm	Stopped	Disabled	Share Process	c:\windows\system32\netdde.exe	Normal
Net Logon	Netlogon	Stopped	Manual	Share Process	c:\windows\system32\lsass.exe	Normal

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

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

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

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

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

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

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

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

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

Remote Access Connection Manager RasMan 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 NT

Authority\NetworkService 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

Windows Firewall/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

Windows User Mode Driver Framework UMWdf Stopped Manual Own Process  
 c:\windows\system32\wdfmgr.exe Normal NT

AUTHORITY\LocalService 0

Upload Manager uploadmgr Stopped Manual Share Process  
 c:\windows\system32\svchost.exe -k netsvcs Normal LocalSystem 0

Uninterruptible Power Supply UPS Stopped Manual Own Process  
 c:\windows\system32\ups.exe Normal LocalSystem 0

Virtual Disk Service vds Stopped Manual Own Process  
 c:\windows\system32\vds.exe Normal LocalSystem 0

Volume Shadow Copy VSS Stopped Manual Own Process  
 c:\windows\system32\vssvc.exe Normal LocalSystem 0

Windows Time W32Time Stopped Disabled Share Process  
 c:\windows\system32\svchost.exe -k localservice Normal NT

AUTHORITY\LocalService 0

```

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 wuauerv Stopped Disabled Share Process
c:\windows\system32\svchost.exe -k netsvcs Normal LocalSystem
0
Wireless Configuration WZCSVC Stopped Disabled Share Process
c:\windows\system32\svchost.exe -k netsvcs Normal LocalSystem
0
Network Provisioning Service xmlprov Stopped Manual Share Process
c:\windows\system32\svchost.exe -k netsvcs Normal LocalSystem
0

```

[Program Groups]

Group Name	Name	User Name
Accessories	Default User:Accessories	Default User
Accessories\Accessibility	Default User:Accessories\Accessibility	Default User
Accessories\Entertainment	Default User:Accessories\Entertainment	Default User
Startup	Default User:Startup	Default User
Accessories	All Users:Accessories	All Users
Accessories\Accessibility	All Users:Accessories\Accessibility	All Users
Accessories\Communications	All Users:Accessories\Communications	All Users
Accessories\Entertainment	All Users:Accessories\Entertainment	All Users
Accessories\System Tools	All Users:Accessories\System Tools	All Users
Administrative Tools	All Users:Administrative Tools	All Users
Oracle - OraClient10g_home	All Users:Oracle - OraClient10g_home	All Users
Oracle - OraClient10g_home\Application Development	All Users:Oracle - OraClient10g_home\Application Development	All Users
Oracle - OraClient10g_home\Configuration and Migration Tools	All Users:Oracle - OraClient10g_home\Configuration and Migration Tools	All Users

```

Oracle - OraClient10g_home\Enterprise Management Packs All
Users:Oracle - OraClient10g_home\Enterprise Management Packs All
Users
Oracle - OraClient10g_home\Enterprise Management Packs\Change All
Users:Oracle - OraClient10g_home\Enterprise Management Packs\Change All
Users
Oracle - OraClient10g_home\Integrated Management Tools All
Users:Oracle - OraClient10g_home\Integrated Management Tools All
Users
Oracle - OraClient10g_home\Oracle Installation Products All
Users:Oracle - OraClient10g_home\Oracle Installation Products 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 ORACL1\Administrator:Accessories ORACL1\Administrator
Accessories\Accessibility
ORACL1\Administrator:Accessories\Accessibility
ORACL1\Administrator
Accessories\Entertainment
ORACL1\Administrator:Accessories\Entertainment
ORACL1\Administrator
Administrative Tools ORACL1\Administrator:Administrative Tools
ORACL1\Administrator
Startup ORACL1\Administrator:Startup ORACL1\Administrator

```

[Startup Programs]

Program	Command	User	Name	Location	Startup
desktop	desktop.ini		NT AUTHORITY\SYSTEM		Startup
desktop	desktop.ini		ORACL1\Administrator		Startup
rhost	rhost.lnk		ORACL1\Administrator		Startup
desktop	desktop.ini		.DEFAULT		Startup
desktop	desktop.ini		All Users		Common Startup

[OLE Registration]

Object	Local Server
Sound (OLE2)	sndrec32.exe
Media Clip	mplay32.exe
Video Clip	mplay32.exe /avi
MIDI Sequence	mplay32.exe /mid
Sound	Not Available
Media Clip	Not Available
WordPad Document	"%programfiles%\windows nt\accessories\wordpad.exe"

Windows Media Services DRM Storage object Not Available

Bitmap Image mspaint.exe

[Windows Error Reporting]

Time	Type	Details
------	------	---------

[Internet Settings]

[Internet Explorer]

[ Following are sub-categories of this main category ]  
[Summary]

Item Value  
Version 6.0.3790.1830  
Build 63790.1830  
Application Path C:\Program Files\Internet Explorer  
Language English (United States)  
Active Printer Not Available

Cipher Strength 128-bit  
Content Advisor Disabled  
IEAK Install No

[File Versions]

File	Version	Size	Date	Path	Company
actxprxy.dll	6.0.3790.1830	97 KB	3/24/2005 5:55:26 PM	C:\WINDOWS\system32	Microsoft Corporation
advpack.dll	6.0.3790.1830	98 KB	3/24/2005 5:55:28 PM	C:\WINDOWS\system32	Microsoft Corporation
asctrls.ocx	6.0.3790.0	90 KB	3/25/2003 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	6.0.3790.1830	1,009 KB	3/24/2005 5:56:10 PM	C:\WINDOWS\system32	Microsoft Corporation
cdfview.dll	6.0.3790.1830	149 KB	3/24/2005 5:56:32 PM	C:\WINDOWS\system32	Microsoft Corporation
comctl32.dll	5.82.3790.1830	585 KB	3/24/2005 5:57:56 PM	C:\WINDOWS\system32	Microsoft Corporation
dxttrans.dll	6.3.3790.1830	205 KB	3/24/2005 6:00:58 PM	C:\WINDOWS\system32	Microsoft Corporation
dxtmsft.dll	6.3.3790.1830	355 KB	3/24/2005 6:00:58 PM	C:\WINDOWS\system32	Microsoft Corporation
iecont.dll	<File Missing>	Not Available	Not Available	Not Available	Not Available
iecontl.c.dll	<File Missing>	Not Available	Not Available	Not Available	Not Available
iedkcs32.dll	16.0.3790.1830	324 KB	3/24/2005 6:04:58 PM	C:\WINDOWS\system32	Microsoft Corporation
iepeers.dll	6.0.3790.1830	248 KB	3/24/2005 6:04:58 PM	C:\WINDOWS\system32	Microsoft Corporation
iesetup.dll	6.0.3790.1830	61 KB	3/24/2005 6:04:58 PM	C:\WINDOWS\system32	Microsoft Corporation
ieuinit.inf	Not Available	24 KB	3/24/2005 6:04:58 PM	C:\WINDOWS\system32	Not Available
ieexplore.exe	6.0.3790.1830	92 KB	3/24/2005 6:04:58 PM	C:\Program Files\Internet Explorer	Microsoft Corporation
imgutil.dll	6.0.3790.1830	38 KB	3/24/2005 6:05:04 PM	C:\WINDOWS\system32	Microsoft Corporation
inetcpl.cpl	6.0.3790.1830	358 KB	3/24/2005 6:05:06 PM	C:\WINDOWS\system32	Microsoft Corporation

inetcpl.c.dll	6.0.3790.0	109 KB	3/25/2003 12:00:00 PM	C:\WINDOWS\system32	Microsoft Corporation
inseng.dll	6.0.3790.1830	94 KB	3/24/2005 6:05:06 PM	C:\WINDOWS\system32	Microsoft Corporation
mlang.dll	6.0.3790.1830	578 KB	3/24/2005 6:07:20 PM	C:\WINDOWS\system32	Microsoft Corporation
msencode.dll	2002.10.4.0	112 KB	3/25/2003 12:00:00 PM	C:\WINDOWS\system32	吴星 Q w 物
mshta.exe	6.0.3790.1830	30 KB	3/24/2005 6:07:26 PM	C:\WINDOWS\system32	Microsoft Corporation
mshtml.dll	6.0.3790.1830	3,036 KB	3/24/2005 6:07:26 PM	C:\WINDOWS\system32	Microsoft Corporation
mshtml.tlb	6.0.3790.1830	1,320 KB	3/24/2005 6:07:26 PM	C:\WINDOWS\system32	Microsoft Corporation
mshtml.ed.dll	6.0.3790.1830	455 KB	3/24/2005 6:07:26 PM	C:\WINDOWS\system32	Microsoft Corporation
mshtmlr.dll	6.0.3790.1830	56 KB	3/24/2005 6:07:26 PM	C:\WINDOWS\system32	Microsoft Corporation
msident.dll	6.0.3790.1830	48 KB	3/24/2005 6:07:28 PM	C:\WINDOWS\system32	Microsoft Corporation
msidntld.dll	6.0.3790.0	15 KB	3/25/2003 12:00:00 PM	C:\WINDOWS\system32	Microsoft Corporation
msieftpl.dll	6.0.3790.1830	244 KB	3/24/2005 6:07:28 PM	C:\WINDOWS\system32	Microsoft Corporation
msrating.dll	6.0.3790.1830	144 KB	3/24/2005 6:07:36 PM	C:\WINDOWS\system32	Microsoft Corporation
mstime.dll	6.0.3790.1830	523 KB	3/24/2005 6:07:38 PM	C:\WINDOWS\system32	Microsoft Corporation
occache.dll	6.0.3790.1830	94 KB	3/24/2005 6:08:34 PM	C:\WINDOWS\system32	Microsoft Corporation
proctexe.ocx	6.3.3790.1830	83 KB	3/24/2005 6:12:26 PM	C:\WINDOWS\system32	Intel Corporation
sendmail.dll	6.0.3790.1830	56 KB	3/24/2005 6:13:36 PM	C:\WINDOWS\system32	Microsoft Corporation
shdoclc.dll	6.0.3790.0	589 KB	3/25/2003 12:00:00 PM	C:\WINDOWS\system32	Microsoft Corporation
shdocvw.dll	6.0.3790.1830	1,468 KB	3/24/2005 6:13:36 PM	C:\WINDOWS\system32	Microsoft Corporation
shfolder.dll	6.0.3790.1830	25 KB	3/24/2005 6:13:36 PM	C:\WINDOWS\system32	Microsoft Corporation
shlwapi.dll	6.0.3790.1830	314 KB	3/24/2005 6:13:40 PM	C:\WINDOWS\system32	Microsoft Corporation
tdc.ocx	1.3.0.3130	58 KB	3/25/2003 12:00:00 PM	C:\WINDOWS\system32	Microsoft Corporation
url.dll	6.0.3790.1830	37 KB	3/24/2005 6:26:12 PM	C:\WINDOWS\system32	Microsoft Corporation
urlmon.dll	6.0.3790.1830	673 KB	3/24/2005 6:26:12 PM	C:\WINDOWS\system32	Microsoft Corporation
webcheck.dll	6.0.3790.1830	273 KB	3/24/2005 6:26:16 PM	C:\WINDOWS\system32	Microsoft Corporation
wininet.dll	6.0.3790.1830	646 KB	3/24/2005 6:26:18 PM	C:\WINDOWS\system32	Microsoft Corporation

[Connectivity]

Item Value  
Connection Preference Never dial

## LAN Settings

AutoConfigProxy wininet.dll  
AutoProxyDetectMode Disabled  
AutoConfigURL  
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\Administrator\Local Settings\Temporary Internet Files
Total Disk Space	Not Available
Available Disk Space	Not Available
Maximum Cache Size	Not Available
Available Cache Size	Not Available

[List of Objects]

Program File Status CodeBase  
No cached object information available

[Content]

[ Following are sub-categories of this main category ]  
[Summary]

Item	Value
Content Advisor	Disabled

[Personal Certificates]

Issued To	Issued By	Validity	Signature Algorithm
No personal certificate information available			

[Other People Certificates]

Issued To	Issued By	Validity	Signature Algorithm
No other people certificate information available			

[Publishers]

Name  
No publisher information available

[Security]

Zone	Security Level
My Computer	Custom
Local intranet	Custom
Trusted sites	Custom

Internet	Custom
Restricted sites	Custom

## CLIENT CONFIGURATION

### 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 inittpcc.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 inittpcc.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 = inittpcc.cust_rowid;
select substr(c_data,1, 200)
        INTO :c_data from cust where rowid = inittpcc.cust_rowid;

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
inittpcc.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, inittpcc.ware_name || ' ' ||
inittpcc.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 inittpcc.ware_name,
                :w_street_1, :w_street_2, :w_city, :w_state, :w_zip;

        SELECT rowid

```

```

        BULK COLLECT INTO inittpcc.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;

inittpcc.c_num := sql%rowcount;
inittpcc.cust_rowid := inittpcc.row_id((inittpcc.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 = inittpcc.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 = inittpcc.cust_rowid;
    SELECT substr(c_data,1, 200)
        INTO :c_data from cust where rowid=inittpcc.cust_rowid;

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 inittpcc.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, inittpcc.ware_name || ' ' ||
inittpcc.dist_name);

```

```

EXIT;

EXCEPTION
  WHEN not_serializable OR deadlock OR snapshot_too_old THEN
    ROLLBACK;
    :retry := :retry + 1;
END;

END LOOP;
END;

```

## TNSNAMES.ORA

```

# tnsnames.ora Network Configuration File:
C:\Oracle\ora10g\network\admin\tnsnames.ora
# Generated by Oracle configuration tools.

```

```

tpcc0 =
  (DESCRIPTION =
    (ADDRESS_LIST =
      (ADDRESS = (PROTOCOL = TCP) (HOST = 192.158.1.200) (PORT = 7521))
    )
    (CONNECT_DATA =
      (SERVICE_NAME = tpcc)
    )
  )

```

## 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\HarddiskVolume1
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
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	0xFC000000-0xFCFFFFFF	PCI bus
Memory Address	0xFC000000-0xFCFFFFFF	Intel(R) PRO/100+ Server Adapter (PILA8470B)
Memory Address	0xFD000000-0xFEFFFFFF	PCI bus
Memory Address	0xFD000000-0xFEFFFFFF	RAGE XL PCI Family (Microsoft Corporation)
Memory Address	0xA0000-0xBFFFF	PCI bus
Memory Address	0xA0000-0xBFFFF	RAGE XL PCI Family (Microsoft Corporation)
I/O Port	0x000003B0-0x000003DF	PCI bus
I/O Port	0x000003B0-0x000003DF	RAGE XL PCI Family (Microsoft Corporation)

[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
0x00000E00-0x00000FFF	PCI bus	OK
0x00000ECF8-0x00000ECFF	PCI Function 0	OK
0x00000ECF8-0x00000ECFF	PCI Function 0	OK
0x00000EC80-0x00000ECBF	RAC Virtual UART Port	OK
0x00000ECF4-0x00000ECF7	PCI Function 2	OK
0x00000E800-0x00000E8FF	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

0x0000DCC0-0x0000DCFF 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
0xFE800000-0xFE80FFF	PCI Function 0	OK
0xFE102000-0xFE102FFF	RAC Virtual UART Port	OK
0xFE800000-0xFE80FFF	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
0xFB000000-0xFCFFFFFF	PCI bus	OK
0xFC900000-0xFC9FFFFFF	PCI standard PCI-to-PCI bridge	OK
0xFC9FF000-0xFC9FFFFFF	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
0xFCD00000-0xFCDFFFFFF	PCI bus	OK
0xFCD00000-0xFCDFFFFFF	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 Schaltungen IIS	Fraunhofer IIS MPEG Layer-3 Codec	OK			
		C:\WINDOWS\system32\L3CODECA.ACM		1, 9, 0, 0305		284.00 KB
		(290,816 bytes)		3/25/2003 11:00 AM		
c:\windows\system32\msg711.acm	Microsoft Corporation		OK			
		C:\WINDOWS\system32\MSG711.ACM		5.2.3790.0 (srv03_rtm.030324-2048)		10.00 KB (10,240 bytes)
				3/25/2003 11:00 AM		
c:\windows\system32\sl_anet.acm	Sipro Lab Telecom Inc.	Sipro Lab Telecom Audio Codec	OK			
		C:\WINDOWS\system32\SL_ANET.ACM				3.02
		(84.00 KB (86,016 bytes))		3/25/2003 11:00 AM		
c:\windows\system32\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
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
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

Item	Value
Adapter Description	RAGE XL PCI Family (Microsoft Corporation)
Adapter RAM	8.00 MB (8,388,608 bytes)
Installed Drivers	ati2drad.dll
Driver Version	5.10.3663.6013
INF File	atiixpad.inf (ati2mpad section)
Color Planes	1
Color Table Entries	4294967296
Resolution	800 x 600 x 75 hertz
Bits/Pixel	32
Memory Address	0xFD000000-0xFEBFFFFFFF
I/O Port	0x0000E800-0x0000E8FF
Memory Address	0xFE101000-0xFE101FFF
I/O Port	0x000003B0-0x000003DF
I/O Port	0x000003C0-0x000003DF
Memory Address	0xA0000-0xBFFFFF
Driver	c:\windows\system32\drivers\ati2mpad.sys (5.10.3663.6013, 335.38 KB (343,424 bytes), 7/16/2003 8:39 AM)

[Infrared]

Item	Value
------	-------

[Input]

[Keyboard]

Item	Value
Description	Standard 101/102-Key or Microsoft Natural PS/2 Keyboard

Name	Enhanced (101- or 102-key)
Layout	00000409
PNP Device ID	ACPI\PNP0303\4&25F73A82&0
Number of Function Keys	12
I/O Port	0x00000060-0x00000060
I/O Port	0x00000064-0x00000064
IRQ Channel	IRQ 1
Driver	c:\windows\system32\drivers\i8042prt.sys (5.2.3790.0 (srv03_rtm.030324-2048), 68.50 KB (70,144 bytes), 3/25/2003 11:00 AM)

[Pointing Device]

Item	Value
Hardware Type	PS/2 Compatible Mouse
Number of Buttons	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\_PPTPMINIPORT\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\raspttp.sys (5.2.3790.0  
(srv03\_rtm.030324-2048), 70.50 KB (72,192 bytes), 3/25/2003 11:00 AM)

Name [00000006] WAN Miniport (PPPOE)  
Adapter Type Wide Area Network (WAN)  
Product Type WAN Miniport (PPPOE)  
Installed Yes  
PNP Device ID ROOT\MS\_PPPOEMINIPORT\0000  
Last Reset 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\_PTMINIPORT\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 0xFCD00000-0xFCFFFFF  
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 Tcpip [TCP/IP]  
Connectionless Service No  
Guarantees Delivery Yes  
Guarantees Sequencing Yes  
Maximum Address Size 16 bytes  
Maximum Message Size 0 bytes  
Message Oriented No  
Minimum Address Size 16 bytes  
Pseudo Stream Oriented No  
Supports Broadcasting No  
Supports Connect Data No  
Supports Disconnect Data No  
Supports Encryption No  
Supports Expedited Data Yes  
Supports Graceful Closing Yes  
Supports Guaranteed Bandwidth No  
Supports Multicasting No

Name MSAFD Tcpip [UDP/IP]  
Connectionless Service Yes  
Guarantees Delivery No  
Guarantees Sequencing No  
Maximum Address Size 16 bytes  
Maximum Message Size 63.93 KB (65,467 bytes)  
Message Oriented Yes  
Minimum Address Size 16 bytes  
Pseudo Stream Oriented No

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

Name RSVP UDP Service Provider  
Connectionless Service Yes  
Guarantees Delivery No  
Guarantees Sequencing No  
Maximum Address Size 16 bytes  
Maximum Message Size 63.93 KB (65,467 bytes)  
Message Oriented Yes  
Minimum Address Size 16 bytes  
Pseudo Stream Oriented No  
Supports Broadcasting Yes  
Supports Connect Data No  
Supports Disconnect Data No  
Supports Encryption Yes  
Supports Expedited Data No  
Supports Graceful Closing No  
Supports Guaranteed Bandwidth No  
Supports Multicasting Yes

Name RSVP TCP Service Provider  
Connectionless Service No  
Guarantees Delivery Yes  
Guarantees Sequencing Yes  
Maximum Address Size 16 bytes  
Maximum Message Size 0 bytes  
Message Oriented No  
Minimum Address Size 16 bytes  
Pseudo Stream Oriented No  
Supports Broadcasting No  
Supports Connect Data No  
Supports Disconnect Data No  
Supports Encryption Yes  
Supports Expedited Data Yes  
Supports Graceful Closing Yes  
Supports Guaranteed Bandwidth No  
Supports Multicasting No

Name MSAFD NetBIOS [\Device\NetBT\_Tcpip\_{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&1  
I/O Port 0x000001F0-0x000001F7  
I/O Port 0x000003F6-0x000003F6  
IRQ Channel IRQ 14  
Driver c:\windows\system32\drivers\atapi.sys (5.2.3790.0 (srv03\_rtm.030324-2048), 89.00 KB (91,136 bytes), 3/25/2003 11:00 AM)

Name Secondary IDE Channel  
Manufacturer (Standard IDE ATA/ATAPI controllers)  
Status OK  
PNP Device ID PCIIDE\IDECHANNEL\4&10A8249&0&1  
I/O Port 0x00000170-0x00000177  
I/O Port 0x00000376-0x00000376  
Driver c:\windows\system32\drivers\atapi.sys (5.2.3790.0 (srv03\_rtm.030324-2048), 89.00 KB (91,136 bytes), 3/25/2003 11:00 AM)

[Printing]

Name Driver Port Name Server Name

[Problem Devices]

Device PNP Device ID Error Code

[USB]

Device PNP Device ID  
ServerWorks (RCC) PCI to USB Open Host Controller  
PCI\VEN\_1166&DEV\_0220&SUBSYS\_02201166&REV\_05\3&13C0B0C5&0&7A

USB Root Hub USB\ROOT\_HUB\4&1A0F8909&0

[Software Environment]

[System Drivers]

Name	Description	File	Type	Started	Start Mode	State	Status
	Error Control	Accept	Pause	Accept	Stop		
abiosdsk	Abiosdsk	Not Available	Kernel Driver	No			
	Disabled	Stopped	OK	Ignore	No	No	
acpi	Microsoft ACPI Driver	c:\windows\system32\drivers\acpi.sys	Kernel Driver	Yes	Boot	Running	OK
	Yes	Boot	Running	OK	Normal	No	Yes
acpiec	ACPIEC	c:\windows\system32\drivers\acpiec.sys	Kernel Driver	No	Disabled	Stopped	OK
	No	Disabled	Stopped	OK	Normal	No	No
adpu160m	adpu160m	c:\windows\system32\drivers\adpu160m.sys	Kernel Driver	Yes	Boot	Running	OK
	Kernel Driver	Yes	Boot	Running	OK	Normal	No
	Yes						Yes
adpu320	adpu320	Not Available	Kernel Driver	No		Disabled	
	Stopped	OK	Normal	No	No		
afcnt	afcnt	Not Available	Kernel Driver	No		Disabled	
	Stopped	OK	Normal	No	No		
afd	AFD Networking Support	Environment					
	c:\windows\system32\drivers\afd.sys	Kernel Driver	Yes	Auto			
	Running	OK	Normal	No	Yes		
aha154x	Aha154x	Not Available	Kernel Driver	No		Disabled	
	Stopped	OK	Normal	No	No		
aic78u2	aic78u2	Not Available	Kernel Driver	No		Disabled	
	Stopped	OK	Normal	No	No		
aic78xx	aic78xx	Not Available	Kernel Driver	No		Disabled	
	Stopped	OK	Normal	No	No		
aliide	AliIde	Not Available	Kernel Driver	No		Disabled	
	Stopped	OK	Normal	No	No		
asynctac	RAS Asynchronous Media Driver						
	c:\windows\system32\drivers\asynctac.sys	Kernel Driver	No				
	Manual	Stopped	OK	Normal	No	No	
atapi	Standard IDE/ESDI Hard Disk Controller						
	c:\windows\system32\drivers\atapi.sys	Kernel Driver	Yes	Boot			
	Running	OK	Normal	No	Yes		
atdisk	Atdisk	Not Available	Kernel Driver	No		Disabled	
	Stopped	OK	Ignore	No	No		
ati2mpad	ati2mpad	c:\windows\system32\drivers\ati2mpad.sys	Kernel Driver	Yes	Manual	Running	OK
	Kernel Driver	Yes	Manual	Running	OK	Ignore	No
	Yes						Yes
atmarpc	ATM ARP Client Protocol						
	c:\windows\system32\drivers\atmarpc.sys	Kernel Driver	No				
	Manual	Stopped	OK	Normal	No	No	
audstub	Audio Stub Driver	c:\windows\system32\drivers\audstub.sys	Kernel Driver	Yes	Manual	Running	OK
	Kernel Driver	Yes	Manual	Running	OK	Normal	No
	Yes						Yes
b57w2k	Broadcom NetXtreme Gigabit Ethernet						
	c:\windows\system32\drivers\b57xp32.sys	Kernel Driver	Yes				
	Manual	Running	OK	Normal	No	Yes	

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beep Beep c:\windows\system32\drivers\beep.sys Kernel Driver Yes
System Running OK Normal No Yes
cbidf2k cbidf2k c:\windows\system32\drivers\cbidf2k.sys Kernel Driver
No Disabled Stopped OK Normal No No
cd20xrnt cd20xrnt Not Available Kernel Driver No
Disabled Stopped OK Normal No No
cdfs Cdfs c:\windows\system32\drivers\cdfs.sys File System Driver
Yes Disabled Running OK Normal No Yes
cdrom CD-ROM Driver c:\windows\system32\drivers\cdrom.sys Kernel Driver
Yes System Running OK Normal No Yes
changer Changer Not Available Kernel Driver No System Stopped OK
Ignore No No
clusdisk Cluster Disk Driver
c:\windows\system32\drivers\clusdisk.sys Kernel Driver No
Disabled Stopped OK Normal No No
cmdide CmdIde Not Available Kernel Driver No Disabled
Stopped OK Normal No No
cpqarray Cpqarray Not Available Kernel Driver No
Disabled Stopped OK Normal No No
cpqarray2 cpqarray2 Not Available Kernel Driver No
Disabled Stopped OK Normal No No
cpqcissm cpqcissm Not Available Kernel Driver No
Disabled Stopped OK Normal No No
cpqfcalm cpqfcalm Not Available Kernel Driver No
Disabled Stopped OK Normal No No
crcdisk CRC Disk Filter Driver c:\windows\system32\drivers\crcdisk.sys
Kernel Driver Yes Boot Running OK Normal No Yes

dac960nt dac960nt Not Available Kernel Driver No
Disabled Stopped OK Normal No No
dellcerc dellcerc Not Available Kernel Driver No
Disabled Stopped OK Normal No No
dfsdriver DfsDriver c:\windows\system32\drivers\dfs.sys File
System Driver Yes Boot Running OK Normal No Yes
disk Disk Driver c:\windows\system32\drivers\disk.sys Kernel Driver
Yes Boot Running OK Normal No Yes
dmboot dmboot c:\windows\system32\drivers\dmboot.sys Kernel Driver
No Disabled Stopped OK Normal No No
dmio Logical Disk Manager Driver c:\windows\system32\drivers\dmio.sys
Kernel Driver Yes Boot Running OK Normal No Yes

dmload dmload c:\windows\system32\drivers\dmload.sys Kernel Driver
Yes Boot Running OK Normal No Yes
dpti2o dpti2o Not Available Kernel Driver No Disabled
Stopped OK Normal No No
e100b Intel(R) PRO Adapter Driver
c:\windows\system32\drivers\e100b325.sys Kernel Driver Yes
Manual Running OK Normal No Yes
fastfat Fastfat c:\windows\system32\drivers\fastfat.sys File System
Driver No Disabled Stopped OK Normal No No
fdc Floppy Disk Controller Driver c:\windows\system32\drivers\fdc.sys
Kernel Driver Yes Manual Running OK Normal No Yes

fips Fips c:\windows\system32\drivers\fips.sys Kernel Driver Yes
System Running OK Normal No Yes
flpydisk Floppy Disk Driver
c:\windows\system32\drivers\flpydisk.sys Kernel Driver Yes
Manual Running OK Normal No Yes

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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
hpt3xx hpt3xx Not Available Kernel Driver No Disabled
Stopped OK Normal No No
http HTTP c:\windows\system32\drivers\http.sys Kernel Driver No
Manual Stopped OK Normal No No
i2omgmt i2omgmt Not Available Kernel Driver No System Stopped OK
Normal No No
i2omp i2omp Not Available Kernel Driver No Disabled
Stopped OK Normal No No
i8042prt i8042 Keyboard and PS/2 Mouse Port Driver
c:\windows\system32\drivers\i8042prt.sys Kernel Driver Yes
System Running OK Normal No Yes
iirsp iirsp Not Available Kernel Driver No Disabled
Stopped OK Normal No No
imapi CD-Burning Filter Driver
c:\windows\system32\drivers\imapi.sys Kernel Driver No System
Stopped OK Normal No No
intelide IntelIde Not Available Kernel Driver No
Disabled Stopped OK Normal No No
ipfilterdriver IP Traffic Filter Driver
c:\windows\system32\drivers\ipfltdrv.sys Kernel Driver No
Manual Stopped OK Normal No No
ipinip IP in IP Tunnel Driver c:\windows\system32\drivers\ipinip.sys
Kernel Driver No Manual Stopped OK Normal No No

ipnat IP Network Address Translator
c:\windows\system32\drivers\ipnat.sys Kernel Driver No Manual
Stopped OK Normal No No
ipsec IPSEC driver c:\windows\system32\drivers\ipsec.sys Kernel Driver
Yes System Running OK Normal No Yes
ipsraidn ipsraidn Not Available Kernel Driver No
Disabled Stopped OK Normal No No
irenum IR Enumerator Service c:\windows\system32\drivers\irenum.sys
Kernel Driver No Manual Stopped OK Normal No No

isapnp PnP ISA/EISA Bus Driver
c:\windows\system32\drivers\isapnp.sys Kernel Driver Yes
Boot Running OK Critical No Yes
kbdclass Keyboard Class Driver
c:\windows\system32\drivers\kbdclass.sys Kernel Driver Yes
System Running OK Normal No Yes
ksecdd KSecDD c:\windows\system32\drivers\ksecdd.sys Kernel Driver
Yes Boot Running OK Normal No Yes
lp6nds35 lp6nds35 Not Available Kernel Driver No
Disabled Stopped OK Normal No No
mnmdd mnmdd c:\windows\system32\drivers\mnmdd.sys Kernel Driver Yes
System Running OK Ignore No Yes
modem Modem c:\windows\system32\drivers\modem.sys Kernel Driver No
Manual Stopped OK Ignore No No
mouclass Mouse Class Driver
c:\windows\system32\drivers\mouclass.sys Kernel Driver Yes
System Running OK Normal No Yes

```

mountmgr	Mount Point Manager									
	c:\windows\system32\drivers\mountmgr.sys	Kernel Driver	Yes							
Boot	Running OK	Normal	No	Yes						
mraid35x	mraid35x	Not Available	Kernel Driver	No						
	Disabled	Stopped OK	Normal	No	No					
mrxdav	WebDav Client Redirector									
	c:\windows\system32\drivers\mrxdav.sys	File System Driver								
No	Manual	Stopped OK	Normal	No	No					
mrx smb	MRXSMB	c:\windows\system32\drivers\mrx smb.sys	File System							
Driver	Yes	System Running OK	Normal	No	Yes					
msfs	Msfs	c:\windows\system32\drivers\msfs.sys	File System Driver							
	Yes	System Running OK	Normal	No	Yes					
mup	Mup	c:\windows\system32\drivers\mup.sys	File System Driver							
	Yes	Boot Running OK	Normal	No	Yes					
ndis	NDIS System Driver	c:\windows\system32\drivers\ndis.sys	Kernel							
Driver	Yes	Boot Running OK	Normal	No	Yes					
ndistapi	Remote Access NDIS TAPI Driver									
	c:\windows\system32\drivers\ndistapi.sys	Kernel Driver	Yes							
	Manual	Running OK	Normal	No	Yes					
ndisuio	NDIS Usermode I/O Protocol									
	c:\windows\system32\drivers\ndisuio.sys	Kernel Driver	No							
	Manual	Stopped OK	Normal	No	No					
ndiswan	Remote Access NDIS WAN Driver									
	c:\windows\system32\drivers\ndiswan.sys	Kernel Driver	Yes							
	Manual	Running OK	Normal	No	Yes					
ndproxy	NDIS Proxy	c:\windows\system32\drivers\ndproxy.sys	Kernel							
Driver	Yes	Manual Running OK	Normal	No	Yes					
netbios	NetBIOS Interface	c:\windows\system32\drivers\netbios.sys								
	File System Driver	Yes	System Running OK	Normal	No					
	Yes									
netbt	NetBios over Tcpip	c:\windows\system32\drivers\netbt.sys	Kernel							
Driver	Yes	System Running OK	Normal	No	Yes					
nfrd960	nfrd960	Not Available	Kernel Driver	No	Disabled					
	Stopped OK	Normal	No	No						
npfs	Npfs	c:\windows\system32\drivers\npfs.sys	File System Driver							
	Yes	System Running OK	Normal	No	Yes					
ntfs	Ntfs	c:\windows\system32\drivers\ntfs.sys	File System Driver							
	Yes	Disabled	Running OK	Normal	No	Yes				
null	Null	c:\windows\system32\drivers\null.sys	Kernel Driver	Yes						
	System Running OK	Normal	No	Yes						
parport	Parport	c:\windows\system32\drivers\parport.sys	Kernel Driver							
	No	Manual	Stopped OK	Ignore	No	No				
partmgr	Partition Manager	c:\windows\system32\drivers\partmgr.sys								
	Kernel Driver	Yes	Boot Running OK	Normal	No	Yes				
pci	PCI Bus Driver	c:\windows\system32\drivers\pci.sys	Kernel Driver							
	Yes	Boot Running OK	Critical	No	Yes					
pciide	PCIIde	c:\windows\system32\drivers\pciide.sys	Kernel Driver							
	Yes	Boot Running OK	Normal	No	Yes					
pcmcia	Pcmcia	c:\windows\system32\drivers\pcmcia.sys	Kernel Driver							
	No	Disabled	Stopped OK	Normal	No	No				
pdcomp	PDCOMP	Not Available	Kernel Driver	No	Manual	Stopped OK				
	Ignore	No	No							
pdframe	PDFRAME	Not Available	Kernel Driver	No	Manual	Stopped OK				
	Ignore	No	No							
pdreli	PDRELI	Not Available	Kernel Driver	No	Manual	Stopped OK				
	Ignore	No	No							
pdrframe	PDRFRAME	Not Available	Kernel Driver	No	Manual					
	Stopped OK	Ignore	No	No						

perc2	perc2	Not Available	Kernel Driver	No	Disabled					
	Stopped OK	Normal	No	No						
perc2hib	perc2hib	Not Available	Kernel Driver	No						
	Disabled	Stopped OK	Normal	No	No					
pptpminport	WAN Miniport (PPTP)									
	c:\windows\system32\drivers\rasppptp.sys	Kernel Driver	Yes							
	Manual	Running OK	Normal	No	Yes					
processor	Processor Driver									
	c:\windows\system32\drivers\processr.sys	Kernel Driver	Yes							
	Manual	Running OK	Normal	No	Yes					
ptilink	Direct Parallel Link Driver									
	c:\windows\system32\drivers\ptilink.sys	Kernel Driver	Yes							
	Manual	Running OK	Normal	No	Yes					
ql1080	ql1080	Not Available	Kernel Driver	No	Disabled					
	Stopped OK	Normal	No	No						
ql10wnt	Ql10wnt	Not Available	Kernel Driver	No	Disabled					
	Stopped OK	Normal	No	No						
ql12160	ql12160	Not Available	Kernel Driver	No	Disabled					
	Stopped OK	Normal	No	No						
ql1240	ql1240	Not Available	Kernel Driver	No	Disabled					
	Stopped OK	Normal	No	No						
ql1280	ql1280	Not Available	Kernel Driver	No	Disabled					
	Stopped OK	Normal	No	No						
ql2100	ql2100	Not Available	Kernel Driver	No	Disabled					
	Stopped OK	Normal	No	No						
ql2200	ql2200	Not Available	Kernel Driver	No	Disabled					
	Stopped OK	Normal	No	No						
ql2300	ql2300	Not Available	Kernel Driver	No	Disabled					
	Stopped OK	Normal	No	No						
racser	racser	c:\windows\system32\drivers\racser.sys	Kernel Driver							
	Yes	Manual Running OK	Ignore	No	Yes					
rasacd	Remote Access Auto Connection Driver									
	c:\windows\system32\drivers\rasacd.sys	Kernel Driver	Yes							
	System Running OK	Normal	No	Yes						
rasl2tp	WAN Miniport (L2TP)	c:\windows\system32\drivers\rasl2tp.sys								
	Kernel Driver	Yes	Manual Running OK	Normal	No	Yes				
raspppoe	Remote Access PPPoE Driver									
	c:\windows\system32\drivers\raspppoe.sys	Kernel Driver	Yes							
	Manual	Running OK	Normal	No	Yes					
raspti	Direct Parallel	c:\windows\system32\drivers\raspti.sys								
	Kernel Driver	Yes	Manual Running OK	Normal	No	Yes				
rdbss	Rdbss	c:\windows\system32\drivers\rdbss.sys	File System Driver							
	Yes	System Running OK	Normal	No	Yes					
rdpcdd	RDPCDD	c:\windows\system32\drivers\rdpcdd.sys	Kernel Driver							
	Yes	System Running OK	Ignore	No	Yes					
rdpdr	Terminal Server Device Redirector Driver									
	c:\windows\system32\drivers\rdpdr.sys	Kernel Driver	Yes	Manual						
	Running OK	Normal	No	Yes						
rdpwd	RDPWD	c:\windows\system32\drivers\rdpwd.sys	Kernel Driver	Yes						
	Manual Running OK	Ignore	No	Yes						
redbook	Digital CD Audio Playback Filter Driver									
	c:\windows\system32\drivers\redbook.sys	Kernel Driver	Yes							
	System Running OK	Normal	No	Yes						
secdrv	Secdrv	c:\windows\system32\drivers\secdrv.sys	Kernel Driver							
	No	Manual	Stopped OK	Normal	No	No				

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serenum Serenum Filter Driver c:\windows\system32\drivers\serenum.sys
Kernel Driver Yes Manual Running OK Normal No Yes

serial Serial port driver c:\windows\system32\drivers\serial.sys
Kernel Driver Yes System Running OK Ignore No Yes

sfloppy Sfloppy c:\windows\system32\drivers\sfloppy.sys Kernel Driver
No System Stopped OK Ignore No No
simbad Simbad Not Available Kernel Driver No Disabled
Stopped OK Normal No No
sparrow Sparrow Not Available Kernel Driver No Disabled
Stopped OK Normal No No
srv Srv c:\windows\system32\drivers\srv.sys File System Driver
Yes Manual Running OK Normal No Yes
swenum Software Bus Driver c:\windows\system32\drivers\swenum.sys
Kernel Driver Yes Manual Running OK Normal No Yes

symc810 symc810 Not Available Kernel Driver No Disabled
Stopped OK Normal No No
symc8xx symc8xx Not Available Kernel Driver No Disabled
Stopped OK Normal No No
symmpi symmpi Not Available Kernel Driver No Disabled
Stopped OK Normal No No
sym_hi sym_hi Not Available Kernel Driver No Disabled
Stopped OK Normal No No
sym_u3 sym_u3 Not Available Kernel Driver No Disabled
Stopped OK Normal No No
tcipip TCP/IP Protocol Driver c:\windows\system32\drivers\tcipip.sys Kernel
Driver Yes System Running OK Normal No Yes
tdpipe TDPIPE c:\windows\system32\drivers\tdpipe.sys Kernel Driver
No Manual Stopped OK Ignore No No
tdtcp TDTCP c:\windows\system32\drivers\tdtcp.sys Kernel Driver Yes
Manual Running OK Ignore No Yes
termdd Terminal Device Driver c:\windows\system32\drivers\termdd.sys
Kernel Driver Yes System Running OK Normal No Yes

toside TosIde Not Available Kernel Driver No Disabled
Stopped OK Normal No No
udfs Udfs c:\windows\system32\drivers\udfs.sys File System Driver
No Disabled Stopped OK Normal No No
ultra ultra Not Available Kernel Driver No Disabled
Stopped OK Normal No No
update Microcode Update Driver
c:\windows\system32\drivers\update.sys Kernel Driver Yes
Manual Running OK Normal No Yes
usbhub USB2 Enabled Hub c:\windows\system32\drivers\usbhub.sys
Kernel Driver Yes Manual Running OK Normal No Yes

usbohci Microsoft USB Open Host Controller Miniport Driver
c:\windows\system32\drivers\usbohci.sys Kernel Driver Yes
Manual Running OK Normal No Yes
vgasave VGA Display Controller. c:\windows\system32\drivers\vga.sys
Kernel Driver Yes System Running OK Ignore No Yes

viaide ViaIde Not Available Kernel Driver No Disabled
Stopped OK Normal No No
volsnap Storage volumes c:\windows\system32\drivers\volsnap.sys
Kernel Driver Yes Boot Running OK Normal No Yes

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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

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PCI\VEN_1028&DEV_000D&SUBSYS_000D1028&REV_00\3&13C0B0C5&0&22
RAGE XL PCI Family (Microsoft Corporation) No DISPLAY 5.10.2600.6014
8/8/2001 ATI Technologies Inc. atiixpad.inf Not Available
PCI\VEN_1002&DEV_4752&SUBSYS_01211028&REV_27\3&13C0B0C5&0&70

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 msmouse.inf Not Available
ACPI\PNP0F13\4&25F73A82&0
Communications Port No PORTS 5.2.3790.0 10/1/2002
(Standard port types) msports.inf Not Available ACPI\PNP0501\1
Communications Port No PORTS 5.2.3790.0 10/1/2002
(Standard port types) msports.inf Not Available ACPI\PNP0501\2

System CMOS/real time clock No SYSTEM 5.2.3790.0 10/1/2002
(Standard system devices) machine.inf Not Available
ACPI\PNP0B00\4&25F73A82&0
System board No SYSTEM 5.2.3790.0 10/1/2002 (Standard
system devices) machine.inf Not Available ACPI\PNP0C01\2
CSB5 IDE Controller No HDC 5.2.3790.0 10/1/2002
ServerWorks mshdc.inf Not Available
PCI\VEN_1166&DEV_0212&SUBSYS_02121166&REV_93\3&13C0B0C5&0&79

Primary IDE Channel No HDC 5.2.3790.0 10/1/2002
(Standard IDE ATA/ATAPI controllers) mshdc.inf Not Available
PCIIDE\IDECHANNEL\4&10A8249&0&0

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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

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SCSI\PROCESSOR&VEN_PE/PV&PROD_1X5_SCSI_BP&REV_1.1\5&1F5E3F1F&0&060	IPSEC driver	Not Available	LEGACYDRIVER	Not Available	Not Available
Adaptec AIC-7899 Ultra160 PCI SCSI Card	No	SCSIADAPTER			
5.2.3790.0	10/1/2002	Adaptec pnp SCSI.inf	Not Available		
PCI\VEN_9005&DEV_00CF&SUBSYS_01211028&REV_01\4&22300438&0&3140	ksecdd	Not Available	LEGACYDRIVER	Not Available	Not Available
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	mnmdd	Not Available	LEGACYDRIVER	Not Available	Not Available
PCI bus No	SYSTEM	5.2.3790.0	10/1/2002	(Standard system devices)	
machine.inf	Not Available	ACPI\PNP0A03\3			
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	mountmgr	Not Available	LEGACYDRIVER	Not Available	Not Available
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	NDIS System Driver	Not Available	LEGACYDRIVER	Not Available	Not Available
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	Remote Access NDIS TAPI Driver	Not Available	LEGACYDRIVER	Not Available	Not Available
Logical Disk Manager	No	SYSTEM	5.2.3790.0	10/1/2002	
(Standard system devices)	machine.inf	Not Available			
ROOT\DMIO\0000	Available	Not Available	LEGACYDRIVER	Not Available	Not Available
Volume Manager No	SYSTEM	5.2.3790.0	10/1/2002	(Standard system devices)	
machine.inf	Not Available	ROOT\FDISK\0000			
Generic volume No	VOLUME	5.2.3790.0	10/1/2002	Microsoft	
volume.inf	Not Available	STORAGE\VOLUME\1&30A96598&0&SIGNATURE55805570FFSET7E00LENGTH43CF44			
STORAGE\VOLUME\1&30A96598&0&SIGNATURE55805570FFSET7E00LENGTH43CF44	C00				
AFD Networking Support Environment	Not Available	LEGACYDRIVER	Not Available	Not Available	Not Available
Not Available	Not Available	Not Available	Not Available	Not Available	Not Available
ROOT\LEGACY_AFD\0000	Beep	Not Available	LEGACYDRIVER	Not Available	Not Available
Beep	Not Available	LEGACYDRIVER	Not Available	Not Available	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
CRC Disk Filter Driver	Not Available	LEGACYDRIVER	Not Available	Not Available	Not Available
Not Available	Not Available	Not Available	Not Available	Not Available	Not Available
ROOT\LEGACY_CRCDISK\0000	dmboot	Not Available	LEGACYDRIVER	Not Available	Not Available
dmboot	Not Available	LEGACYDRIVER	Not Available	Not Available	Not Available
Not Available	Not Available	Not Available	Not Available	Not Available	Not Available
ROOT\LEGACY_DMBOOT\0000	dmload	Not Available	LEGACYDRIVER	Not Available	Not Available
dmload	Not Available	LEGACYDRIVER	Not Available	Not Available	Not Available
Not Available	Not Available	Not Available	Not Available	Not Available	Not Available
ROOT\LEGACY_DMLOAD\0000	Fips	Not Available	LEGACYDRIVER	Not Available	Not Available
Fips	Not Available	LEGACYDRIVER	Not Available	Not Available	Not Available
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
Generic Packet Classifier	Not Available	LEGACYDRIVER	Not Available	Not Available	Not Available
Not Available	Not Available	Not Available	Not Available	Not Available	Not Available
ROOT\LEGACY_GPC\0000	HTTP	Not Available	LEGACYDRIVER	Not Available	Not Available
HTTP	Not Available	LEGACYDRIVER	Not Available	Not Available	Not Available
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
IPSEC driver	Not Available	LEGACYDRIVER	Not Available	Not Available	Not Available
Not Available	Not Available	Not Available	Not Available	Not Available	Not Available
ROOT\LEGACY_IPSEC\0000	ksecdd	Not Available	LEGACYDRIVER	Not Available	Not Available
ksecdd	Not Available	LEGACYDRIVER	Not Available	Not Available	Not Available
Not Available	Not Available	Not Available	Not Available	Not Available	Not Available
ROOT\LEGACY_KSECDD\0000	mnmdd	Not Available	LEGACYDRIVER	Not Available	Not Available
mnmdd	Not Available	LEGACYDRIVER	Not Available	Not Available	Not Available
Not Available	Not Available	Not Available	Not Available	Not Available	Not Available
ROOT\LEGACY_MNMDD\0000	mountmgr	Not Available	LEGACYDRIVER	Not Available	Not Available
mountmgr	Not Available	LEGACYDRIVER	Not Available	Not Available	Not Available
Not Available	Not Available	Not Available	Not Available	Not Available	Not Available
ROOT\LEGACY_MOUNTMGR\0000	NDIS System Driver	Not Available	LEGACYDRIVER	Not Available	Not Available
NDIS System Driver	Not Available	LEGACYDRIVER	Not Available	Not Available	Not Available
Not Available	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
Remote Access NDIS TAPI Driver	Not Available	LEGACYDRIVER	Not Available	Not Available	Not Available
Not Available	Not Available	Not Available	Not Available	Not Available	Not Available
ROOT\LEGACY_NDISTAPI\0000	NDIS Usermode I/O Protocol	Not Available	LEGACYDRIVER	Not Available	Not Available
NDIS Usermode I/O Protocol	Not Available	LEGACYDRIVER	Not Available	Not Available	Not Available
Not Available	Not Available	Not Available	Not Available	Not Available	Not Available
ROOT\LEGACY_NDISUIO\0000	NDProxy	Not Available	LEGACYDRIVER	Not Available	Not Available
NDProxy	Not Available	LEGACYDRIVER	Not Available	Not Available	Not Available
Not Available	Not Available	Not Available	Not Available	Not Available	Not Available
ROOT\LEGACY_NDPROXY\0000	NetBios over Tcpip	Not Available	LEGACYDRIVER	Not Available	Not Available
NetBios over Tcpip	Not Available	LEGACYDRIVER	Not Available	Not Available	Not Available
Not Available	Not Available	Not Available	Not Available	Not Available	Not Available
ROOT\LEGACY_NETBT\0000	Null	Not Available	LEGACYDRIVER	Not Available	Not Available
Null	Not Available	LEGACYDRIVER	Not Available	Not Available	Not Available
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
Partition Manager	Not Available	LEGACYDRIVER	Not Available	Not Available	Not Available
Not Available	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
Remote Access Auto Connection Driver	Not Available	LEGACYDRIVER	Not Available	Not Available	Not Available
Not Available	Not Available	Not Available	Not Available	Not Available	Not Available
ROOT\LEGACY_RASACD\0000	RDPCDD	Not Available	LEGACYDRIVER	Not Available	Not Available
RDPCDD	Not Available	LEGACYDRIVER	Not Available	Not Available	Not Available
Not Available	Not Available	Not Available	Not Available	Not Available	Not Available
ROOT\LEGACY_RDPCDD\0000	RDPWD	Not Available	LEGACYDRIVER	Not Available	Not Available
RDPWD	Not Available	LEGACYDRIVER	Not Available	Not Available	Not Available
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
TCP/IP Protocol Driver	Not Available	LEGACYDRIVER	Not Available	Not Available	Not Available
Not Available	Not Available	Not Available	Not Available	Not Available	Not Available
ROOT\LEGACY_TCPIP\0000	TDTCP	Not Available	LEGACYDRIVER	Not Available	Not Available
TDTCP	Not Available	LEGACYDRIVER	Not Available	Not Available	Not Available
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
VGA Display Controller.	Not Available	LEGACYDRIVER	Not Available	Not Available	Not Available
Not Available	Not Available	Not Available	Not Available	Not Available	Not Available
ROOT\LEGACY_VGASAVE\0000	volsnap	Not Available	LEGACYDRIVER	Not Available	Not Available
volsnap	Not Available	LEGACYDRIVER	Not Available	Not Available	Not Available
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
Remote Access IP ARP Driver	Not Available	LEGACYDRIVER	Not Available	Not Available	Not Available
Not Available	Not Available	Not Available	Not Available	Not Available	Not Available
ROOT\LEGACY_WANARP\0000	Audio Codecs	No	MEDIA	5.2.3790.0	10/1/2002
Audio Codecs	No	MEDIA	5.2.3790.0	10/1/2002	(Standard system devices)
Not Available	Not Available	Not Available	Not Available	Not Available	Not Available
ROOT\MEDIA\MS_MMACM	Legacy Audio Drivers	No	MEDIA	5.2.3790.0	10/1/2002
Legacy Audio Drivers	No	MEDIA	5.2.3790.0	10/1/2002	(Standard system devices)
Not Available	Not Available	Not Available	Not Available	Not Available	Not Available
ROOT\MEDIA\MS_MMDRV					

```

Media Control Devices No MEDIA 5.2.3790.0 10/1/2002
(Standard system devices) 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\orc10414\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
------------	-------------	------	--------	-----------

[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
Available		Not Available	Not Available	Not Available	Not Available
system	Not Available	4	8	0	1413120
Available	Not Available	Not Available	Not Available	Not Available	Not Available
smss.exe	Not Available	424	11	204800	1413120 9/30/2003 5:41 PM
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)	5.2.3790.0	(srv03_rtm.030324-2048)	3/25/2003 11:00 AM	
services.exe	c:\windows\system32\services.exe	688	9	204800	1413120 9/30/2003 5:41 PM
	102.00 KB (104,448 bytes)	5.2.3790.0	(srv03_rtm.030324-2048)	3/25/2003 11:00 AM	
lsass.exe	c:\windows\system32\lsass.exe	700	9	204800	1413120 9/30/2003 5:41 PM
	13.00 KB (13,312 bytes)	5.2.3790.0	(srv03_rtm.030324-2048)	3/25/2003 11:00 AM	
svchost.exe	c:\windows\system32\svchost.exe	912	8	204800	1413120 9/30/2003 5:41 PM
	13.00 KB (13,312 bytes)	5.2.3790.0	(srv03_rtm.030324-2048)	3/25/2003 11:00 AM	
svchost.exe	c:\windows\system32\svchost.exe	960	8	204800	1413120 9/30/2003 5:41 PM
	13.00 KB (13,312 bytes)	5.2.3790.0	(srv03_rtm.030324-2048)	3/25/2003 11:00 AM	
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 5.2.3790.0 (srv03_rtm.030324-2048)
32.00 KB (32,768 bytes) 3/25/2003 11:00 AM
svchost.exe Not Available 1116 8 Not Available Not Available
9/30/2003 5:41 PM 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
rhostsvr.exe c:\rhost\rhostsvr.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)	(srv03_rtm.030324-2048)	Microsoft Corporation	c:\windows\system32\winlogon.exe
ntdll	5.2.3790.0	722.50 KB (739,840 bytes)	(srv03_rtm.030324-2048)	Microsoft Corporation	c:\windows\system32\ntdll.dll
kernel32	5.2.3790.0	965.00 KB (988,160 bytes)	(srv03_rtm.030324-2048)	Microsoft Corporation	c:\windows\system32\kernel32.dll
msvcrt	7.0.3790.0	319.50 KB (327,168 bytes)	(srv03_rtm.030324-2048)	Microsoft Corporation	c:\windows\system32\msvcrt.dll
advapi32	5.2.3790.0	559.50 KB (572,928 bytes)	(srv03_rtm.030324-2048)	Microsoft Corporation	c:\windows\system32\advapi32.dll
rpcrt4	5.2.3790.59	642.50 KB (657,920 bytes)	(srv03_gdr.030614-1004)	Microsoft Corporation	c:\windows\system32\rpcrt4.dll
user32	5.2.3790.0	562.00 KB (575,488 bytes)	(srv03_rtm.030324-2048)	Microsoft Corporation	c:\windows\system32\user32.dll
gdi32	5.2.3790.0	263.00 KB (269,312 bytes)	(srv03_rtm.030324-2048)	Microsoft Corporation	c:\windows\system32\gdi32.dll
userenv	5.2.3790.0	732.50 KB (750,080 bytes)	(srv03_rtm.030324-2048)	Microsoft Corporation	c:\windows\system32\userenv.dll

nddeapi	5.2.3790.0	16.00 KB (16,384 bytes)	(srv03_rtm.030324-2048)	Microsoft Corporation	c:\windows\system32\nddeapi.dll
crypt32	5.131.3790.0	598.00 KB (612,352 bytes)	(srv03_rtm.030324-2048)	Microsoft Corporation	c:\windows\system32\crypt32.dll
msasn1	5.2.3790.0	58.00 KB (59,392 bytes)	(srv03_rtm.030324-2048)	Microsoft Corporation	c:\windows\system32\msasn1.dll
secur32	5.2.3790.0	63.00 KB (64,512 bytes)	(srv03_rtm.030324-2048)	Microsoft Corporation	c:\windows\system32\secur32.dll
winsta	5.2.3790.0	51.00 KB (52,224 bytes)	(srv03_rtm.030324-2048)	Microsoft Corporation	c:\windows\system32\winsta.dll
netapi32	5.2.3790.0	317.00 KB (324,608 bytes)	(srv03_rtm.030324-2048)	Microsoft Corporation	c:\windows\system32\netapi32.dll
profmap	5.2.3790.0	22.00 KB (22,528 bytes)	(srv03_rtm.030324-2048)	Microsoft Corporation	c:\windows\system32\profmap.dll
regapi	5.2.3790.0	48.50 KB (49,664 bytes)	(srv03_rtm.030324-2048)	Microsoft Corporation	c:\windows\system32\regapi.dll
ws2_32	5.2.3790.0	87.50 KB (89,600 bytes)	(srv03_rtm.030324-2048)	Microsoft Corporation	c:\windows\system32\ws2_32.dll
ws2help	5.2.3790.0	19.50 KB (19,968 bytes)	(srv03_rtm.030324-2048)	Microsoft Corporation	c:\windows\system32\ws2help.dll
psapi	5.2.3790.0	21.50 KB (22,016 bytes)	(srv03_rtm.030324-2048)	Microsoft Corporation	c:\windows\system32\psapi.dll
version	5.2.3790.0	17.00 KB (17,408 bytes)	(srv03_rtm.030324-2048)	Microsoft Corporation	c:\windows\system32\version.dll
setupapi	5.2.3790.0	1,014.50 KB (1,038,848 bytes)	(srv03_rtm.030324-2048)	Microsoft Corporation	c:\windows\system32\setupapi.dll
msgina	5.2.3790.0	1.14 MB (1,191,936 bytes)	(srv03_rtm.030324-2048)	Microsoft Corporation	c:\windows\system32\msgina.dll
shsvcs	6.00.3790.0	121.50 KB (124,416 bytes)	(srv03_rtm.030324-2048)	Microsoft Corporation	c:\windows\system32\shsvcs.dll
shlwapi	6.00.3790.0	281.00 KB (287,744 bytes)	(srv03_rtm.030324-2048)	Microsoft Corporation	c:\windows\system32\shlwapi.dll
sfc	5.2.3790.0	4.50 KB (4,608 bytes)	(srv03_rtm.030324-2048)	Microsoft Corporation	c:\windows\system32\sfc.dll
sfc_os	5.2.3790.0	133.00 KB (136,192 bytes)	(srv03_rtm.030324-2048)	Microsoft Corporation	c:\windows\system32\sfc_os.dll
wintrust	5.131.3790.0	161.50 KB (165,376 bytes)	(srv03_rtm.030324-2048)	Microsoft Corporation	c:\windows\system32\wintrust.dll

```

ole32 5.2.3790.68 (srv03_gdr.030614-1004) 1.13 MB (1,182,720 bytes)
7/5/2003 1:03 PM Microsoft Corporation
c:\windows\system32\ole32.dll
imagehlp 5.2.3790.0 (srv03_rtm.030324-2048) 142.50 KB (145,920
bytes) 3/25/2003 11:00 AM Microsoft Corporation
c:\windows\system32\imagehlp.dll
comctl32 6.0 (srv03_rtm.030324-2048) 907.00 KB (928,768 bytes)
7/16/2003 8:34 AM Microsoft Corporation
c:\windows\winsxs\x86_microsoft.windows.common-
controls_6595b64144ccf1df_6.0.100.0_x-ww_8417450b\comctl32.dll
winscard 5.2.3790.0 (srv03_rtm.030324-2048) 98.50 KB (100,864
bytes) 3/25/2003 11:00 AM Microsoft Corporation
c:\windows\system32\winscard.dll
wtsapi32 5.2.3790.0 (srv03_rtm.030324-2048) 17.50 KB (17,920
bytes) 3/25/2003 11:00 AM Microsoft Corporation
c:\windows\system32\wtsapi32.dll
sxs 5.2.3790.0 (srv03_rtm.030324-2048) 733.00 KB (750,592 bytes)
3/25/2003 11:00 AM Microsoft Corporation
c:\windows\system32\sxs.dll
wldap32 5.2.3790.0 (srv03_rtm.030324-2048) 158.00 KB (161,792 bytes)
3/25/2003 11:00 AM Microsoft Corporation
c:\windows\system32\wldap32.dll
rsaenh 5.2.3790.0 (srv03_rtm.030324-2048) 176.83 KB (181,072 bytes)
3/25/2003 11:00 AM Microsoft Corporation
c:\windows\system32\rsaenh.dll
cscdll 5.2.3790.0 (srv03_rtm.030324-2048) 99.00 KB (101,376 bytes)
3/25/2003 11:00 AM Microsoft Corporation
c:\windows\system32\cscdll.dll
wlnotify 5.2.3790.0 (srv03_rtm.030324-2048) 87.50 KB (89,600
bytes) 3/25/2003 11:00 AM Microsoft Corporation
c:\windows\system32\wlnotify.dll
winmm 5.2.3790.0 (srv03_rtm.030324-2048) 166.00 KB (169,984 bytes)
3/25/2003 11:00 AM Microsoft Corporation
c:\windows\system32\winmm.dll
winspool 5.2.3790.0 (srv03_rtm.030324-2048) 140.00 KB (143,360
bytes) 3/25/2003 11:00 AM Microsoft Corporation
c:\windows\system32\winspool.drv
mpr 5.2.3790.0 (srv03_rtm.030324-2048) 56.00 KB (57,344 bytes)
3/25/2003 11:00 AM Microsoft Corporation
c:\windows\system32\mpr.dll
shell32 6.00.3790.0 (srv03_rtm.030324-2048) 7.79 MB (8,166,400 bytes)
3/25/2003 11:00 AM Microsoft Corporation
c:\windows\system32\shell32.dll
comctl32 5.82 (srv03_rtm.030324-2048) 561.00 KB (574,464 bytes)
7/16/2003 8:34 AM Microsoft Corporation
c:\windows\winsxs\x86_microsoft.windows.common-
controls_6595b64144ccf1df_5.82.0.0_x-ww_8a69ba05\comctl32.dll
uxtheme 6.00.3790.0 (srv03_rtm.030324-2048) 196.00 KB (200,704 bytes)
3/25/2003 11:00 AM Microsoft Corporation
c:\windows\system32\uxtheme.dll
samlib 5.2.3790.0 (srv03_rtm.030324-2048) 49.00 KB (50,176 bytes)
3/25/2003 11:00 AM Microsoft Corporation
c:\windows\system32\samlib.dll
clbcatq 2001.12.4720.0 (srv03_rtm.030324-2048) 481.00 KB (492,544
bytes) 7/16/2003 3:47 PM Microsoft Corporation
c:\windows\system32\clbcatq.dll
oleaut32 5.2.3790.0 486.00 KB (497,664 bytes) 3/25/2003
11:00 AM Microsoft Corporation c:\windows\system32\oleaut32.dll

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```

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
scesrv 5.2.3790.0 (srv03_rtm.030324-2048) 316.50 KB (324,096 bytes)
3/25/2003 11:00 AM Microsoft Corporation
c:\windows\system32\scesrv.dll
authz 5.2.3790.0 (srv03_rtm.030324-2048) 67.00 KB (68,608 bytes)
3/25/2003 11:00 AM Microsoft Corporation
c:\windows\system32\authz.dll
umpnpgmr 5.2.3790.0 (srv03_rtm.030324-2048) 121.50 KB (124,416
bytes) 3/25/2003 11:00 AM Microsoft Corporation
c:\windows\system32\umpnpgmr.dll
ncobjapi 5.2.3790.0 (srv03_rtm.030324-2048) 34.50 KB (35,328
bytes) 3/25/2003 11:00 AM Microsoft Corporation
c:\windows\system32\ncobjapi.dll
msvcpc60 6.05.2144.0 388.00 KB (397,312 bytes) 3/25/2003 11:00 AM
Microsoft Corporation c:\windows\system32\msvcpc60.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
msv1_0 5.2.3790.0 (srv03_rtm.030324-2048) 127.00 KB (130,048 bytes)
3/25/2003 11:00 AM Microsoft Corporation
c:\windows\system32\msv1_0.dll
netlogon 5.2.3790.0 (srv03_rtm.030324-2048) 409.00 KB (418,816
bytes) 3/25/2003 11:00 AM Microsoft Corporation
c:\windows\system32\netlogon.dll

```

w32time 5.2.3790.0 (srv03\_rtm.030324-2048) 216.00 KB (221,184 bytes)  
 3/25/2003 11:00 AM Microsoft Corporation  
 c:\windows\system32\w32time.dll  
 iphlpapi 5.2.3790.0 (srv03\_rtm.030324-2048) 82.50 KB (84,480 bytes)  
 3/25/2003 11:00 AM Microsoft Corporation  
 c:\windows\system32\iphlpapi.dll  
 schannel 5.2.3790.0 (srv03\_rtm.030324-2048) 149.50 KB (153,088 bytes)  
 3/25/2003 11:00 AM Microsoft Corporation  
 c:\windows\system32\schannel.dll  
 wdigest 5.2.3790.0 (srv03\_rtm.030324-2048) 61.00 KB (62,464 bytes)  
 3/25/2003 11:00 AM Microsoft Corporation  
 c:\windows\system32\wdigest.dll  
 rassfm 5.2.3790.0 (srv03\_rtm.030324-2048) 20.50 KB (20,992 bytes)  
 3/25/2003 11:00 AM Microsoft Corporation  
 c:\windows\system32\rassfm.dll  
 kdcsvc 5.2.3790.0 (srv03\_rtm.030324-2048) 221.00 KB (226,304 bytes)  
 3/25/2003 11:00 AM Microsoft Corporation  
 c:\windows\system32\kdcsvc.dll  
 ntdsa 5.2.3790.0 (srv03\_rtm.030324-2048) 1.45 MB (1,520,640 bytes)  
 3/25/2003 11:00 AM Microsoft Corporation  
 c:\windows\system32\ntdsa.dll  
 ntdsatq 5.2.3790.0 (srv03\_rtm.030324-2048) 32.00 KB (32,768 bytes)  
 3/25/2003 11:00 AM Microsoft Corporation  
 c:\windows\system32\ntdsatq.dll  
 mswsock 5.2.3790.0 (srv03\_rtm.030324-2048) 254.00 KB (260,096 bytes)  
 3/25/2003 11:00 AM Microsoft Corporation  
 c:\windows\system32\mswsock.dll  
 esent 5.2.3790.0 (srv03\_rtm.030324-2048) 1.01 MB (1,056,256 bytes)  
 3/25/2003 11:00 AM Microsoft Corporation  
 c:\windows\system32\esent.dll  
 scecli 5.2.3790.0 (srv03\_rtm.030324-2048) 179.50 KB (183,808 bytes)  
 3/25/2003 11:00 AM Microsoft Corporation  
 c:\windows\system32\scecli.dll  
 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  
 dmserver 5.2.3790.0 (srv03\_rtm.030324-2048) 24.00 KB (24,576 bytes)  
 3/25/2003 11:00 AM Microsoft Corporation  
 c:\windows\system32\dmserver.dll

es 2001.12.4720.0 (srv03\_rtm.030324-2048) 221.50 KB (226,816 bytes)  
 3/25/2003 11:00 AM Microsoft Corporation  
 c:\windows\system32\es.dll  
 srvsvc 5.2.3790.0 (srv03\_rtm.030324-2048) 89.00 KB (91,136 bytes)  
 3/25/2003 11:00 AM Microsoft Corporation  
 c:\windows\system32\srvsvc.dll  
 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

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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
adslsdp 5.2.3790.0 (srv03_rtm.030324-2048) 142.50 KB (145,920 bytes)
3/25/2003 11:00 AM Microsoft Corporation
c:\windows\system32\adslsdp.dll
credui 5.2.3790.0 (srv03_rtm.030324-2048) 159.00 KB (162,816 bytes)
3/25/2003 11:00 AM Microsoft Corporation
c:\windows\system32\credui.dll
rtutils 5.2.3790.0 (srv03_rtm.030324-2048) 32.00 KB (32,768 bytes)
3/25/2003 11:00 AM Microsoft Corporation
c:\windows\system32\rtutils.dll
rasapi32 5.2.3790.0 (srv03_rtm.030324-2048) 227.50 KB (232,960
bytes) 3/25/2003 11:00 AM Microsoft Corporation
c:\windows\system32\rasapi32.dll
rasman 5.2.3790.0 (srv03_rtm.030324-2048) 56.50 KB (57,856 bytes)
3/25/2003 11:00 AM Microsoft Corporation
c:\windows\system32\rasman.dll
tapi32 5.2.3790.0 (srv03_rtm.030324-2048) 175.00 KB (179,200 bytes)
3/25/2003 11:00 AM Microsoft Corporation
c:\windows\system32\tapi32.dll
wzcsvc 5.2.3790.0 (srv03_rtm.030324-2048) 272.50 KB (279,040 bytes)
3/25/2003 4:15 AM Microsoft Corporation
c:\windows\system32\wzcsvc.dll
wmi 5.2.3790.0 (srv03_rtm.030324-2048) 6.50 KB (6,656 bytes)
3/25/2003 11:00 AM Microsoft Corporation
c:\windows\system32\wmi.dll
dhcpcsvc 5.2.3790.0 (srv03_rtm.030324-2048) 101.50 KB (103,936
bytes) 3/25/2003 11:00 AM Microsoft Corporation
c:\windows\system32\dhcpcsvc.dll
wzcsapi 5.2.3790.0 (srv03_rtm.030324-2048) 24.50 KB (25,088 bytes)
3/25/2003 4:15 AM Microsoft Corporation
c:\windows\system32\wzcsapi.dll
netshell 5.2.3790.0 (srv03_rtm.030324-2048) 1.67 MB (1,747,456
bytes) 3/25/2003 11:00 AM Microsoft Corporation
c:\windows\system32\netshell.dll
clusapi 5.2.3790.0 (srv03_rtm.030324-2048) 56.00 KB (57,344 bytes)
3/25/2003 11:00 AM Microsoft Corporation
c:\windows\system32\clusapi.dll
netcfgx 5.2.3790.0 (srv03_rtm.030324-2048) 726.00 KB (743,424 bytes)
3/25/2003 11:00 AM Microsoft Corporation
c:\windows\system32\netcfgx.dll
winipsec 5.2.3790.0 (srv03_rtm.030324-2048) 34.50 KB (35,328
bytes) 3/25/2003 11:00 AM Microsoft Corporation
c:\windows\system32\winipsec.dll
hnetcfg 5.2.3790.0 (srv03_rtm.030324-2048) 243.50 KB (249,344 bytes)
3/25/2003 11:00 AM Microsoft Corporation
c:\windows\system32\hnetcfg.dll
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

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rasmans 5.2.3790.0 (srv03_rtm.030324-2048) 163.50 KB (167,424 bytes)
3/25/2003 11:00 AM Microsoft Corporation
c:\windows\system32\rasmans.dll
rastapi 5.2.3790.0 (srv03_rtm.030324-2048) 57.00 KB (58,368 bytes)
3/25/2003 11:00 AM Microsoft Corporation
c:\windows\system32\rastapi.dll
rasppp 5.2.3790.0 (srv03_rtm.030324-2048) 195.00 KB (199,680 bytes)
3/25/2003 11:00 AM Microsoft Corporation
c:\windows\system32\rasppp.dll
ntlsapi 5.2.3790.0 (srv03_rtm.030324-2048) 8.00 KB (8,192 bytes)
3/25/2003 11:00 AM Microsoft Corporation
c:\windows\system32\ntlsapi.dll
raschap 5.2.3790.0 (srv03_rtm.030324-2048) 106.00 KB (108,544 bytes)
3/25/2003 11:00 AM Microsoft Corporation
c:\windows\system32\raschap.dll
rastls 5.2.3790.0 (srv03_rtm.030324-2048) 155.00 KB (158,720 bytes)
3/25/2003 11:00 AM Microsoft Corporation
c:\windows\system32\rastls.dll
cryptui 5.131.3790.0 (srv03_rtm.030324-2048) 473.50 KB (484,864 bytes)
3/25/2003 11:00 AM Microsoft Corporation
c:\windows\system32\cryptui.dll
ipbootp 5.2.3790.0 (srv03_rtm.030324-2048) 34.50 KB (35,328 bytes)
3/25/2003 11:00 AM Microsoft Corporation
c:\windows\system32\ipbootp.dll
rasdlg 5.2.3790.0 (srv03_rtm.030324-2048) 642.00 KB (657,408 bytes)
3/25/2003 11:00 AM Microsoft Corporation
c:\windows\system32\rasdlg.dll
rasadhlp 5.2.3790.0 (srv03_rtm.030324-2048) 6.50 KB (6,656 bytes)
3/25/2003 11:00 AM Microsoft Corporation
c:\windows\system32\rasadhlp.dll
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
wsock32 5.2.3790.0 (srv03_rtm.030324-2048) 22.00 KB (22,528 bytes)
3/25/2003 11:00 AM Microsoft Corporation
c:\windows\system32\wsock32.dll
mst120 4.4.4000 248.00 KB (253,952 bytes) 7/16/2003 3:50 PM
Microsoft Corporation c:\program files\netmeeting\mst120.dll
nmas 4.4.4000 216.00 KB (221,184 bytes) 7/16/2003 3:50 PM
Microsoft Corporation c:\program files\netmeeting\nmas.dll
nmasnt 4.4.4000 28.00 KB (28,672 bytes) 7/16/2003 3:50 PM
Microsoft Corporation c:\program files\netmeeting\nmasnt.dll
h323cc 4.4.4000 52.00 KB (53,248 bytes) 7/16/2003 3:50 PM
Microsoft Corporation c:\program files\netmeeting\h323cc.dll
callcont 4.4.4000 356.00 KB (364,544 bytes) 7/16/2003 3:50
PM Microsoft Corporation c:\program files\netmeeting\callcont.dll
nac 4.4.4000 208.00 KB (212,992 bytes) 7/16/2003 3:50 PM
Microsoft Corporation c:\program files\netmeeting\nac.dll

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msacm32 5.2.3790.0 (srv03_rtm.030324-2048) 67.50 KB (69,120 bytes)
3/25/2003 11:00 AM Microsoft Corporation
c:\windows\system32\msacm32.dll
msvfw32 5.2.3790.0 (srv03_rtm.030324-2048) 112.50 KB (115,200 bytes)
3/25/2003 11:00 AM Microsoft Corporation
c:\windows\system32\msvfw32.dll
dcap32 4.4.4000 40.00 KB (40,960 bytes) 7/16/2003 3:50 PM
Microsoft Corporation c:\program files\netmeeting\dcap32.dll

winrnrr 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\winrnrr.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

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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
browseui 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\browseui.dll
drprov 5.2.3790.0 (srv03_rtm.030324-2048) 12.50 KB (12,800 bytes)
3/25/2003 11:00 AM Microsoft Corporation
c:\windows\system32\drprov.dll
ntlanman 5.2.3790.0 (srv03_rtm.030324-2048) 41.00 KB (41,984
bytes) 3/25/2003 11:00 AM Microsoft Corporation
c:\windows\system32\ntlanman.dll
netui0 5.2.3790.0 (srv03_rtm.030324-2048) 75.50 KB (77,312 bytes)
3/25/2003 11:00 AM Microsoft Corporation
c:\windows\system32\netui0.dll
netui1 5.2.3790.0 (srv03_rtm.030324-2048) 184.00 KB (188,416 bytes)
3/25/2003 11:00 AM Microsoft Corporation
c:\windows\system32\netui1.dll
davclnt 5.2.3790.0 (srv03_rtm.030324-2048) 23.50 KB (24,064 bytes)
3/25/2003 11:00 AM Microsoft Corporation
c:\windows\system32\davclnt.dll
rhostsrv Not Available 54.50 KB (55,808 bytes) 7/16/2003 4:49
PM Not Available c:\rhost\rhostsrv.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

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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
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	Control Start	Tag ID				
Alerter	Alerter	Stopped Disabled		Share Process		
					c:\windows\system32\svchost.exe -k localservice	Normal NT
AUTHORITY\LocalService		0				
Application Layer Gateway Service			ALG	Stopped Manual	Own Process	
					c:\windows\system32\alg.exe	Normal NT AUTHORITY\LocalService
0						
Application Management	AppMgmt	Stopped Manual		Share Process		
					c:\windows\system32\svchost.exe -k netsvcs	Normal LocalSystem
0						
Windows Audio	AudioSrv	Stopped Disabled		Share Process		
					c:\windows\system32\svchost.exe -k netsvcs	Normal LocalSystem
0						
Background Intelligent Transfer Service				BITS	Stopped Manual	Share Process
					c:\windows\system32\svchost.exe -k netsvcs	Normal LocalSystem
0						
Computer Browser	Browser	Stopped Manual		Share Process		
					c:\windows\system32\svchost.exe -k netsvcs	Normal LocalSystem
0						
Indexing Service	CiSvc	Stopped Disabled		Share Process		
					c:\windows\system32\cisvc.exe	Normal LocalSystem 0
ClipBook	ClipSrv	Stopped Disabled		Own Process		
					c:\windows\system32\clipsrv.exe	Normal LocalSystem 0
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 Disabled		Own Process		
					c:\windows\system32\dfssvc.exe	Normal LocalSystem 0

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



Distributed Transaction Coordinator	MSDTC	Stopped	Manual	Own	Process					Special Administration Console Helper	sacsvr	Stopped	Manual	Share	Process				
c:\windows\system32\msdtc.exe	Normal	NT	AUTHORITY\NetworkService	0						c:\windows\system32\svchost.exe	-k netsvcs	Normal	LocalSystem	0					
Windows Installer	MSIServer	Stopped	Manual	Share	Process					Security Accounts Manager	SamSs	Running	Auto	Share	Process				
c:\windows\system32\msiexec.exe	/v	Normal	LocalSystem	0						c:\windows\system32\lsass.exe	Normal	LocalSystem	0						
Network DDE	NetDDE	Stopped	Disabled	Share	Process					Smart Card SCardSvr		Stopped	Manual	Share	Process				
c:\windows\system32\netdde.exe		Normal	LocalSystem	0						c:\windows\system32\scardsvr.exe	Ignore	NT							
Network DDE DSDM	NetDDEdsdm	Stopped	Disabled	Share	Process					AUTHORITY\LocalService	0								
c:\windows\system32\netdde.exe		Normal	LocalSystem	0						Task Scheduler Schedule		Stopped	Manual	Share	Process				
Net Logon	Netlogon	Stopped	Manual	Share	Process					c:\windows\system32\svchost.exe	-k netsvcs	Normal	LocalSystem	0					
c:\windows\system32\lsass.exe	Normal	LocalSystem	0							Secondary Logon	seclogon	Running	Auto	Share	Process				
Network Connections	Netman	Running	Manual	Share	Process					c:\windows\system32\svchost.exe	-k netsvcs	Ignore	LocalSystem	0					
c:\windows\system32\svchost.exe	-k netsvcs	Normal	LocalSystem	0						System Event Notification	SENS	Running	Auto	Share	Process				
Network Location Awareness (NLA)	Nla	Running	Manual	Share	Process					c:\windows\system32\svchost.exe	-k netsvcs	Normal	LocalSystem	0					
c:\windows\system32\svchost.exe	-k netsvcs	Normal	LocalSystem	0						Internet Connection Firewall (ICF) / Internet Connection Sharing (ICS)	SharedAccess	Stopped	Disabled	Share	Process				
File Replication	NtFrs	Stopped	Manual	Own	Process					c:\windows\system32\svchost.exe	-k netsvcs	Normal	LocalSystem	0					
c:\windows\system32\ntfrs.exe	Ignore	LocalSystem	0							Shell Hardware Detection	ShellHWDetection	Running	Auto	Share	Process				
NT LM Security Support Provider	NtLmSsp	Stopped	Manual	Share	Process					Process	c:\windows\system32\svchost.exe	-k netsvcs	Ignore	LocalSystem	0				
c:\windows\system32\lsass.exe	Normal	LocalSystem	0							Print Spooler	Spooler	Stopped	Manual	Own	Process				
Removable Storage	NtmsSvc	Stopped	Manual	Share	Process					c:\windows\system32\spoolsv.exe	Normal	LocalSystem	0						
c:\windows\system32\svchost.exe	-k netsvcs	Normal	LocalSystem	0						Windows Image Acquisition (WIA)	stisvc	Stopped	Disabled	Share	Process				
Plug and Play	PlugPlay	Running	Auto	Share	Process					Process	c:\windows\system32\svchost.exe	-k imgsvc	Normal	NT					
c:\windows\system32\services.exe	Normal	LocalSystem	0							AUTHORITY\LocalService	0								
IPSEC Services PolicyAgent		Stopped	Disabled	Share	Process					Microsoft Software Shadow Copy Provider	swprv	Stopped	Manual	Own	Process				
c:\windows\system32\lsass.exe	Normal	LocalSystem	0							Process	c:\windows\system32\svchost.exe	-k swprv	Normal	LocalSystem	0				
Protected Storage	ProtectedStorage	Running	Auto	Share	Process					Performance Logs and Alerts	SysmonLog	Stopped	Manual	Own	Process				
c:\windows\system32\lsass.exe	Normal	LocalSystem	0							c:\windows\system32\smlogsvc.exe	Normal	NT							
Remote Access Auto Connection Manager	RasAuto	Stopped	Manual	Share	Process					Authority\NetworkService	0								
c:\windows\system32\svchost.exe	-k netsvcs	Normal	LocalSystem	0						Telephony	TapiSrv	Running	Manual	Share	Process				
Remote Access Connection Manager	RasMan	Running	Manual	Share	Process					c:\windows\system32\svchost.exe	-k tapisrv	Normal	LocalSystem	0					
c:\windows\system32\svchost.exe	-k netsvcs	Normal	LocalSystem	0						Terminal Services	TermService	Running	Manual	Share	Process				
Remote Desktop Help Session Manager	RDSSessMgr	Stopped	Manual	Own	Process					c:\windows\system32\svchost.exe	-k termsvcs	Normal	LocalSystem	0					
Process	c:\windows\system32\sessmgr.exe	Normal	LocalSystem	0						Themes	Themes	Stopped	Disabled	Share	Process				
Routing and Remote Access	RemoteAccess	Stopped	Disabled	Share	Process					c:\windows\system32\svchost.exe	-k netsvcs	Normal	LocalSystem	0					
Process	c:\windows\system32\svchost.exe	-k netsvcs	Normal	LocalSystem	0					Telnet	TlntSvr	Stopped	Disabled	Own	Process				
Remote Registry	RemoteRegistry	Running	Auto	Share	Process					c:\windows\system32\tlntsvr.exe	Normal	NT							
c:\windows\system32\svchost.exe	-k regsvc	Normal	NT							AUTHORITY\LocalService	0								
AUTHORITY\LocalService	0									Distributed Link Tracking Server	TrkSvr	Stopped	Disabled	Share	Process				
Remote Procedure Call (RPC) Locator	RpcLocator	Stopped	Manual	Own	Process					Process	c:\windows\system32\svchost.exe	-k netsvcs	Normal	LocalSystem	0				
Process	c:\windows\system32\locator.exe	Normal	NT							Distributed Link Tracking Client	TrkWks	Stopped	Disabled	Share	Process				
AUTHORITY\NetworkService	0									Process	c:\windows\system32\svchost.exe	-k netsvcs	Normal	LocalSystem	0				
Remote Procedure Call (RPC)	RpcSs	Running	Auto	Share	Process					Terminal Services Session Directory	Tssdis	Stopped	Disabled	Own	Process				
c:\windows\system32\svchost.exe	-k rpcss	Normal	LocalSystem	0						Process	c:\windows\system32\tssdis.exe	Normal	LocalSystem	0					
Resultant Set of Policy Provider	RSoPProv	Stopped	Manual	Share	Process														
Process	c:\windows\system32\rsopprov.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	Startup
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
rhostsvr.exe	c:\rhost\rhostsvr.exe -d\rhost -crhostdldr.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
browsei.c.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
iecontl.c.dll	<File Missing>	Not Available	Not Available	Not Available	Not Available
iedkcs32.dll	16.0.3790.0	300 KB	3/25/2003 12:00:00 PM	C:\WINDOWS\system32	Microsoft Corporation
iepeers.dll	6.0.3790.0	230 KB	3/25/2003 12:00:00 PM	C:\WINDOWS\system32	Microsoft Corporation
iesetup.dll	6.0.3790.0	59 KB	3/25/2003 12:00:00 PM	C:\WINDOWS\system32	Microsoft Corporation
ieuinit.inf	Not Available	20 KB	3/25/2003 12:00:00 PM	C:\WINDOWS\system32	Not Available
iexplore.exe	6.0.3790.0	90 KB	3/25/2003 12:00:00 PM	C:\Program Files\Internet Explorer	Microsoft Corporation
imgutil.dll	5.2.3790.0	35 KB	3/25/2003 12:00:00 PM	C:\WINDOWS\system32	Microsoft Corporation
inetcpl.cpl	6.0.3790.0	303 KB	3/25/2003 12:00:00 PM	C:\WINDOWS\system32	Microsoft Corporation
inetcpl.c.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
mshtmlr.dll	6.0.3790.0	55 KB	3/25/2003 12:00:00 PM	C:\WINDOWS\system32	Microsoft Corporation
msident.dll	6.0.3790.0	47 KB	3/25/2003 12:00:00 PM	C:\WINDOWS\system32	Microsoft Corporation
msidntld.dll	6.0.3790.0	15 KB	3/25/2003 12:00:00 PM	C:\WINDOWS\system32	Microsoft Corporation
msieftp.dll	6.0.3790.0	230 KB	3/25/2003 12:00:00 PM	C:\WINDOWS\system32	Microsoft Corporation
msrating.dll	6.0.3790.0	132 KB	3/25/2003 12:00:00 PM	C:\WINDOWS\system32	Microsoft Corporation
mstime.dll	6.0.3790.0	491 KB	3/25/2003 12:00:00 PM	C:\WINDOWS\system32	Microsoft Corporation
occache.dll	6.0.3790.0	89 KB	3/25/2003 12:00:00 PM	C:\WINDOWS\system32	Microsoft Corporation
proctexe.ocx	6.3.3790.0	78 KB	3/25/2003 12:00:00 PM	C:\WINDOWS\system32	Intel Corporation
sendmail.dll	6.0.3790.0	52 KB	3/25/2003 12:00:00 PM	C:\WINDOWS\system32	Microsoft Corporation
shdoclc.dll	6.0.3790.0	589 KB	3/25/2003 12:00:00 PM	C:\WINDOWS\system32	Microsoft Corporation
shdocvw.dll	6.0.3790.0	1,361 KB	3/25/2003 12:00:00 PM	C:\WINDOWS\system32	Microsoft Corporation
shfolder.dll	6.0.3790.0	23 KB	3/25/2003 12:00:00 PM	C:\WINDOWS\system32	Microsoft Corporation
shlwapi.dll	6.0.3790.0	281 KB	3/25/2003 12:00:00 PM	C:\WINDOWS\system32	Microsoft Corporation
tdc.ocx	1.3.0.3130	58 KB	3/25/2003 12:00:00 PM	C:\WINDOWS\system32	Microsoft Corporation
url.dll	6.0.3790.0	36 KB	3/25/2003 12:00:00 PM	C:\WINDOWS\system32	Microsoft Corporation
urlmon.dll	6.0.3790.0	502 KB	3/25/2003 12:00:00 PM	C:\WINDOWS\system32	Microsoft Corporation
webcheck.dll	6.0.3790.0	262 KB	3/25/2003 12:00:00 PM	C:\WINDOWS\system32	Microsoft Corporation
wininet.dll	6.0.3790.0	609 KB	3/25/2003 12:00:00 PM	C:\WINDOWS\system32	Microsoft Corporation

[Connectivity]

Item Value  
 Connection Preference Never dial

LAN Settings

AutoConfigProxy Not Available  
 AutoProxyDetectMode Disabled  
 AutoConfigURL  
 Proxy Disabled  
 ProxyServer  
 ProxyOverride

[Cache]

[ Following are sub-categories of this main category ]  
[Summary]

Item	Value
Page Refresh Type	Automatic
Temporary Internet Files Folder	C:\Documents and Settings\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 . . . . . : ORACL1  
Primary Dns Suffix . . . . . :  
Node Type . . . . . : Unknown  
IP Routing Enabled. . . . . : No  
WINS Proxy Enabled. . . . . : No

Ethernet adapter RTE:

Connection-specific DNS Suffix . . :  
Description . . . . . : Intel(R) PRO/1000 MT Network  
Connection #2  
Physical Address. . . . . : 00-11-43-58-1C-63  
DHCP Enabled. . . . . : No  
IP Address. . . . . : 192.1.1.1  
Subnet Mask . . . . . : 255.255.255.0  
Default Gateway . . . . . :

Ethernet adapter Admin:

Connection-specific DNS Suffix . . :

Description . . . . . : Intel(R) PRO/1000 MT Network Connection

Physical Address. . . . . : 00-11-43-58-1C-62

DHCP Enabled. . . . . : No

IP Address. . . . . : 192.158.1.1

Subnet Mask . . . . . : 255.255.255.0

Default Gateway . . . . . :

NetBIOS over Tcpi. . . . . : Disabled

Volume in drive C has no label.  
Volume Serial Number is 9491-81F8

Directory of C:\inetpub\wwwroot

10/29/2004 01:11 PM 90,112 tpcc.dll  
1 File(s) 90,112 bytes  
0 Dir(s) 31,176,007,680 bytes free

Volume in drive C has no label.  
Volume Serial Number is 9491-81F8

Directory of C:\inetpub\wwwroot

05/26/2005 09:39 AM 106,496 tpcc\_com\_all.dll  
1 File(s) 106,496 bytes  
0 Dir(s) 31,176,007,680 bytes free

Volume in drive C has no label.  
Volume Serial Number is 9491-81F8

Directory of C:\inetpub\wwwroot

10/29/2004 01:10 PM 24,576 tpcc\_com\_ps.dll  
1 File(s) 24,576 bytes  
0 Dir(s) 31,176,007,680 bytes free

Volume in drive C has no label.  
Volume Serial Number is 9491-81F8

Directory of C:\inetpub\wwwroot\blocks

05/26/2005 11:22 AM <DIR> .  
05/26/2005 11:22 AM <DIR> ..  
05/09/2003 03:55 PM 2,115 load\_ordordl.sql  
10/27/2004 03:08 PM 3,115 paynz.sql  
10/27/2004 03:08 PM 3,305 payz.sql  
05/09/2003 03:55 PM 1,136 tkvcin.in.sql  
07/21/2004 04:23 PM 1,774 tkvcpdel.sql  
07/21/2004 04:23 PM 15,247 tkvcpnew.sql  
05/09/2003 03:55 PM 725 views.sql  
7 File(s) 27,417 bytes  
2 Dir(s) 31,176,007,680 bytes free

## Component Services Configuration

Component Services Configuration

COM+ Component TPCC.AllTxns Settings:

Transactions not supported  
Enable object pooling  
Minimum pool size 37  
Maximum pool size 37  
Creation timeout 120,000  
Enable object construction  
Enable just in time activation  
Concurrency required

## Internet Information Server Parameters

\registry\machine\system\currentcontrolset\services\inetinfo  
Parameters

ListenBackLog = REG\_DWORD 0x00000050  
BandwidthLevel = REG\_DWORD 0xffffffff  
ThreadTimeout = REG\_DWORD 0x00015180  
DisableMemoryCache = REG\_DWORD 0x00000001  
MemoryCacheSize = REG\_DWORD 0x00000000  
PoolThreadLimit = REG\_DWORD 0x00000096  
ObjectCacheTTL = REG\_DWORD 0xffffffff  
MaxConnections = REG\_DWORD 0x0000ffff

Performance

Library = infoctrs.dll  
Open = OpenINFOPerformanceData  
Close = CloseINFOPerformanceData  
Collect = CollectINFOPerformanceData  
PerfIniFile = infoctrs.ini  
Last Counter = REG\_DWORD 0x000009a6  
Last Help = REG\_DWORD 0x000009a7  
First Counter = REG\_DWORD 0x00000966  
First Help = REG\_DWORD 0x00000967  
Object List = 2406  
Library Validation Code = REG\_BINARY 0x00000010 0x05d12400  
0x01c4b6d8 0x00002000 0x00000000

## Oracle Server Parameters

\registry\machine\software\oracle  
inst\_loc = C:\Program Files\Oracle\Inventory  
VOBHOM2.0 = C:\Oracle\ora10g  
KEY\_OraClient10g\_home  
ORACLE\_HOME = C:\Oracle\ora10g  
ORACLE\_HOME\_NAME = OraClient10g\_home  
ORACLE\_GROUP\_NAME = Oracle - OraClient10g\_home  
NLS\_LANG = AMERICAN\_AMERICA.WE8MSWIN1252  
ORACLE\_BUNDLE\_NAME = Enterprise  
OLEDB = C:\Oracle\ora10g\oledb\mesg  
SQLPATH = C:\Oracle\ora10g\dbs  
ORACLE\_HOME\_KEY = SOFTWARE\ORACLE\KEY\_OraClient10g\_home  
OO40 = C:\Oracle\ora10g\oo4o\mesg

```

MSHELP_TOOLS = C:\Oracle\ora10g\MSHELP
ODP.NET
  TraceFileName = C:\ODPNET.trc
  TraceLevel = 0
  TraceOption = 0
OLEDB
  CacheType = Memory
  ChunkSize = 100
  DistribTX = 1
  FetchSize = 100
  OSAuthent = 0
  PLSQLRset = 0
  PwdChgDlg = 1
  SchRstLng = 10000
  UserDefFn = 0
  DisableRetClause = 1
  VCharNull = 1
  TraceCategory = 0
  TraceFileName = c:\OraOLEDB.trc
  TraceLevel = 0
  TraceOption = 0
  SPPrmDefVal = 0
OO4O
  CacheBlocks = 20
  FetchLimit = 100
  FetchSize = 4096
  HelpFile = C:\Oracle\ora10g\oo4o\doc\oraleo.hlp
  PerBlock = 16
  SliceSize = 256
  TempFileDirectory = c:\temp
  OO4O_HOME = C:\Oracle\ora10g\oo4o
Workflow
  Icon Directory = C:\Oracle\ora10g\WF\ICON
  Level = 100
  Version = 2.6.3.0.0
  Languages
    ENU
      Message = C:\Oracle\ora10g\WF\RES\WFus.RES
      Data = C:\Oracle\ora10g\WF\DATA\us
      TemplateDir = C:\Oracle\ora10g\WF\DATA\us
      Help = C:\Oracle\ora10g\WF\RES\us\AWF.HLP

```

## Start World Wide Web Server 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 0x000650053 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:\WINDOWS\System32\inetsrv
      AccessDeniedMessage = Error: Access is Denied.
      ServiceDll = REG_EXPAND_SZ
C:\WINDOWS\system32\inetsrv\iisw3adm.dll
      AcceptExOutStanding = REG_DWORD 0x00000050
      LogFileDirectory = c:\WINDOWS\System32\LogFiles
      CertMapList = c:\WINDOWS\System32\inetsrv\iisrmap.dll
      Filter DLLs =
      ADCLaunch
        AdvancedDataFactory
          RDSSEver.DataFactory
      Script Map
      Virtual Roots
        / = c:\inetpub\wwwroot,,207
        /Scripts = c:\inetpub\scripts,,204
        /IISHelp = c:\WINDOWS\help\iishelp,,201
        /IISAdmin = c:\WINDOWS\System32\inetsrv\iisadmin,,201
        /IISamples = c:\inetpub\iissamples,,201
        /MSADC = c:\program files\common files\system\msadc,,205
        /Printers = c:\WINDOWS\web\printers,,201
      Performance
        Library = w3ctrs.dll
        Open = OpenW3PerformanceData
        Close = CloseW3PerformanceData
        Collect = CollectW3PerformanceData
        PerfIniFile = w3ctrs.ini
        Last Counter = REG_DWORD 0x000008e6
        Last Help = REG_DWORD 0x000008e7
        First Counter = REG_DWORD 0x00000844
        First Help = REG_DWORD 0x00000845
        Object List = 2472 2646
        Library Validation Code = REG_BINARY 0x00000010 0xc18a727c
0x01c026d2 0x00003d10 0x00000000
        WbemAdapFileTime = REG_BINARY 0x00000008 0x964e6000 0x01bf40aa
        WbemAdapFileSize = REG_DWORD 0x00003d10
        WbemAdapStatus = REG_DWORD 0x00000000
      Security [17 1]
        Security = REG_BINARY 0x000000b8 0x80140001 0x000000a0 0x000000ac
0x00000014 0x00000030 0x001c0002 0x00000001 0x00148002 0x000f01ff
0x00000101 0x01000000 0x00000000 0x00700002 0x00000004 0x00180000
0x000201fd 0x00000101 0x05000000 \
          0x00000012 0x006f0074 0x001c0000 0x000f01ff 0x00000201
0x05000000 0x00000020 0x00000220 0x00730072 0x00180000 0x0002018d
0x00000101 0x05000000 0x0000000b 0x00000220 0x001c0000 0x000201fd
0x00000201 0x05000000 0x00000020 \
          0x00000223 0x00730072 0x00000101 0x05000000 0x00000012
0x00000101 0x05000000 0x00000012
      Enum
        0 = Root\LEGACY_W3SVC\0000
        Count = REG_DWORD 0x00000001

```

NextInstance = REG\_DWORD 0x00000001

### **TPCC Application Settings**

\registry\machine\software\unisis  
TPCC

MAXTERMS = 60000  
DELIVERYTHREADS = 30  
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=4492
set WEBPAYMENTPROB=4302
set WEBORDERSTATUSPROB=402
```

```
set WEBDELIVERYPROB=402
set WEBSTOCKLEVELPROB=402

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
INITRSSCALE 500
INITTSSCALE 1000
INITRWID 1,25740
INITFIXEDWID 1
INITCCLAST 87
INITCCID 87
INITCITEMID 87
//
//Configuration Driver 1
//
1 INITIPADDR 192.158.3.1
1 INITIISADDR 192.1.1.1
1 INITIISPORT 80
1 INITBROWSERS 1070
1 INITMYWID 1,107
//
//Configuration Driver 2
//
2 INITIPADDR 192.158.3.1
2 INITIISADDR 192.1.1.1
2 INITIISPORT 80
2 INITBROWSERS 1070
```

```

2 INITMYWID 108,214
//
//Configuration Driver 3
//
3 INITIPADDR 192.158.3.1
3 INITIISADDR 192.1.1.1
3 INITIISPORT 80
3 INITBROWSERS 1070
3 INITMYWID 215,321
//
//Configuration Driver 4
//
4 INITIPADDR 192.158.3.1
4 INITIISADDR 192.1.1.1
4 INITIISPORT 80
4 INITBROWSERS 1070
4 INITMYWID 322,428
//
//Configuration Driver 5
//
5 INITIPADDR 192.158.3.1
5 INITIISADDR 192.1.1.1
5 INITIISPORT 80
5 INITBROWSERS 1070
5 INITMYWID 429,535
//
//Configuration Driver 6
//
6 INITIPADDR 192.158.3.1
6 INITIISADDR 192.1.1.1
6 INITIISPORT 80
6 INITBROWSERS 1070
6 INITMYWID 536,642
//
//Configuration Driver 7
//
7 INITIPADDR 192.158.3.1
7 INITIISADDR 192.1.1.1
7 INITIISPORT 80
7 INITBROWSERS 1070
7 INITMYWID 643,749
//
//Configuration Driver 8
//
8 INITIPADDR 192.158.3.1
8 INITIISADDR 192.1.1.1
8 INITIISPORT 80
8 INITBROWSERS 1070
8 INITMYWID 750,856
//
//Configuration Driver 9
//
9 INITIPADDR 192.158.3.1
9 INITIISADDR 192.1.1.1
9 INITIISPORT 80
9 INITBROWSERS 1070
9 INITMYWID 857,963
//
//Configuration Driver 10

```

```

//
10 INITIPADDR 192.158.3.1
10 INITIISADDR 192.1.1.1
10 INITIISPORT 80
10 INITBROWSERS 1070
10 INITMYWID 964,1070
//
//Configuration Driver 11
//
11 INITIPADDR 192.158.3.1
11 INITIISADDR 192.1.1.1
11 INITIISPORT 80
11 INITBROWSERS 1070
11 INITMYWID 1071,1177
//
//Configuration Driver 12
//
12 INITIPADDR 192.158.3.1
12 INITIISADDR 192.1.1.1
12 INITIISPORT 80
12 INITBROWSERS 1070
12 INITMYWID 1178,1284
//
//Configuration Driver 13
//
13 INITIPADDR 192.158.3.1
13 INITIISADDR 192.1.1.1
13 INITIISPORT 80
13 INITBROWSERS 1070
13 INITMYWID 1285,1391
//
//Configuration Driver 14
//
14 INITIPADDR 192.158.3.1
14 INITIISADDR 192.1.1.1
14 INITIISPORT 80
14 INITBROWSERS 1070
14 INITMYWID 1392,1498
//
//Configuration Driver 15
//
15 INITIPADDR 192.158.3.1
15 INITIISADDR 192.1.1.1
15 INITIISPORT 80
15 INITBROWSERS 1070
15 INITMYWID 1499,1605
//
//Configuration Driver 16
//
16 INITIPADDR 192.158.3.1
16 INITIISADDR 192.1.1.1
16 INITIISPORT 80
16 INITBROWSERS 1070
16 INITMYWID 1606,1712
//
//Configuration Driver 17
//
17 INITIPADDR 192.158.3.1
17 INITIISADDR 192.1.1.1

```

```

17 INITIISPORT 80
17 INITBROWSERS 1070
17 INITMYWID 1713,1819
//
//Configuration Driver 18
//
18 INITIPADDR 192.158.3.1
18 INITIISADDR 192.1.1.1
18 INITIISPORT 80
18 INITBROWSERS 1070
18 INITMYWID 1820,1926
//
//Configuration Driver 19
//
19 INITIPADDR 192.158.3.1
19 INITIISADDR 192.1.1.1
19 INITIISPORT 80
19 INITBROWSERS 1070
19 INITMYWID 1927,2033
//
//Configuration Driver 20
//
20 INITIPADDR 192.158.3.1
20 INITIISADDR 192.1.1.1
20 INITIISPORT 80
20 INITBROWSERS 1070
20 INITMYWID 2034,2140
//
//Configuration Driver 21
//
21 INITIPADDR 192.158.3.1
21 INITIISADDR 192.1.1.1
21 INITIISPORT 80
21 INITBROWSERS 1070
21 INITMYWID 2141,2247
//
//Configuration Driver 22
//
22 INITIPADDR 192.158.3.1
22 INITIISADDR 192.1.1.1
22 INITIISPORT 80
22 INITBROWSERS 1070
22 INITMYWID 2248,2354
//
//Configuration Driver 23
//
23 INITIPADDR 192.158.3.1
23 INITIISADDR 192.1.1.1
23 INITIISPORT 80
23 INITBROWSERS 1070
23 INITMYWID 2355,2461
//
//Configuration Driver 24
//
24 INITIPADDR 192.158.3.1
24 INITIISADDR 192.1.1.1
24 INITIISPORT 80
24 INITBROWSERS 1070
24 INITMYWID 2462,2568

```

```

//
//Configuration Driver 25
//
25 INITIPADDR 192.158.3.1
25 INITIISADDR 192.1.1.1
25 INITIISPORT 80
25 INITBROWSERS 1070
25 INITMYWID 2569,2675
//
//Configuration Driver 26
//
26 INITIPADDR 192.158.3.1
26 INITIISADDR 192.1.1.1
26 INITIISPORT 80
26 INITBROWSERS 1070
26 INITMYWID 2676,2782
//
//Configuration Driver 27
//
27 INITIPADDR 192.158.3.1
27 INITIISADDR 192.1.1.1
27 INITIISPORT 80
27 INITBROWSERS 1070
27 INITMYWID 2783,2889
//
//Configuration Driver 28
//
28 INITIPADDR 192.158.3.1
28 INITIISADDR 192.1.1.1
28 INITIISPORT 80
28 INITBROWSERS 1070
28 INITMYWID 2890,2996
//
//Configuration Driver 29
//
29 INITIPADDR 192.158.3.1
29 INITIISADDR 192.1.1.1
29 INITIISPORT 80
29 INITBROWSERS 1070
29 INITMYWID 2997,3103
//
//Configuration Driver 30
//
30 INITIPADDR 192.158.3.1
30 INITIISADDR 192.1.1.1
30 INITIISPORT 80
30 INITBROWSERS 1070
30 INITMYWID 3104,3210
//
//Configuration Driver 31
//
31 INITIPADDR 192.158.3.2
31 INITIISADDR 192.2.1.1
31 INITIISPORT 80
31 INITBROWSERS 1070
31 INITMYWID 3211,3317
//
//Configuration Driver 32
//

```

```

32 INITIPADDR 192.158.3.2
32 INITIISADDR 192.2.1.1
32 INITIISPORT 80
32 INITBROWSERS 1070
32 INITMYWID 3318,3424
//
//Configuration Driver 33
//
33 INITIPADDR 192.158.3.2
33 INITIISADDR 192.2.1.1
33 INITIISPORT 80
33 INITBROWSERS 1070
33 INITMYWID 3425,3531
//
//Configuration Driver 34
//
34 INITIPADDR 192.158.3.2
34 INITIISADDR 192.2.1.1
34 INITIISPORT 80
34 INITBROWSERS 1070
34 INITMYWID 3532,3638
//
//Configuration Driver 35
//
35 INITIPADDR 192.158.3.2
35 INITIISADDR 192.2.1.1
35 INITIISPORT 80
35 INITBROWSERS 1070
35 INITMYWID 3639,3745
//
//Configuration Driver 36
//
36 INITIPADDR 192.158.3.2
36 INITIISADDR 192.2.1.1
36 INITIISPORT 80
36 INITBROWSERS 1070
36 INITMYWID 3746,3852
//
//Configuration Driver 37
//
37 INITIPADDR 192.158.3.2
37 INITIISADDR 192.2.1.1
37 INITIISPORT 80
37 INITBROWSERS 1070
37 INITMYWID 3853,3959
//
//Configuration Driver 38
//
38 INITIPADDR 192.158.3.2
38 INITIISADDR 192.2.1.1
38 INITIISPORT 80
38 INITBROWSERS 1070
38 INITMYWID 3960,4066
//
//Configuration Driver 39
//
39 INITIPADDR 192.158.3.2
39 INITIISADDR 192.2.1.1
39 INITIISPORT 80

```

```

39 INITBROWSERS 1070
39 INITMYWID 4067,4173
//
//Configuration Driver 40
//
40 INITIPADDR 192.158.3.2
40 INITIISADDR 192.2.1.1
40 INITIISPORT 80
40 INITBROWSERS 1070
40 INITMYWID 4174,4280
//
//Configuration Driver 41
//
41 INITIPADDR 192.158.3.2
41 INITIISADDR 192.2.1.1
41 INITIISPORT 80
41 INITBROWSERS 1070
41 INITMYWID 4281,4387
//
//Configuration Driver 42
//
42 INITIPADDR 192.158.3.2
42 INITIISADDR 192.2.1.1
42 INITIISPORT 80
42 INITBROWSERS 1070
42 INITMYWID 4388,4494
//
//Configuration Driver 43
//
43 INITIPADDR 192.158.3.2
43 INITIISADDR 192.2.1.1
43 INITIISPORT 80
43 INITBROWSERS 1070
43 INITMYWID 4495,4601
//
//Configuration Driver 44
//
44 INITIPADDR 192.158.3.2
44 INITIISADDR 192.2.1.1
44 INITIISPORT 80
44 INITBROWSERS 1070
44 INITMYWID 4602,4708
//
//Configuration Driver 45
//
45 INITIPADDR 192.158.3.2
45 INITIISADDR 192.2.1.1
45 INITIISPORT 80
45 INITBROWSERS 1070
45 INITMYWID 4709,4815
//
//Configuration Driver 46
//
46 INITIPADDR 192.158.3.2
46 INITIISADDR 192.2.1.1
46 INITIISPORT 80
46 INITBROWSERS 1070
46 INITMYWID 4816,4922
//

```

```
//Configuration Driver 47
//
47 INITIPADDR 192.158.3.2
47 INITIISADDR 192.2.1.1
47 INITIISPORT 80
47 INITBROWSERS 1070
47 INITMYWID 4923,5029
//
//Configuration Driver 48
//
48 INITIPADDR 192.158.3.2
48 INITIISADDR 192.2.1.1
48 INITIISPORT 80
48 INITBROWSERS 1070
48 INITMYWID 5030,5136
//
//Configuration Driver 49
//
49 INITIPADDR 192.158.3.2
49 INITIISADDR 192.2.1.1
49 INITIISPORT 80
49 INITBROWSERS 1070
49 INITMYWID 5137,5243
//
//Configuration Driver 50
//
50 INITIPADDR 192.158.3.2
50 INITIISADDR 192.2.1.1
50 INITIISPORT 80
50 INITBROWSERS 1070
50 INITMYWID 5244,5350
//
//Configuration Driver 51
//
51 INITIPADDR 192.158.3.2
51 INITIISADDR 192.2.1.1
51 INITIISPORT 80
51 INITBROWSERS 1070
51 INITMYWID 5351,5457
//
//Configuration Driver 52
//
52 INITIPADDR 192.158.3.2
52 INITIISADDR 192.2.1.1
52 INITIISPORT 80
52 INITBROWSERS 1070
52 INITMYWID 5458,5564
//
//Configuration Driver 53
//
53 INITIPADDR 192.158.3.2
53 INITIISADDR 192.2.1.1
53 INITIISPORT 80
53 INITBROWSERS 1070
53 INITMYWID 5565,5671
//
//Configuration Driver 54
//
54 INITIPADDR 192.158.3.2
```

```
54 INITIISADDR 192.2.1.1
54 INITIISPORT 80
54 INITBROWSERS 1070
54 INITMYWID 5672,5778
//
//Configuration Driver 55
//
55 INITIPADDR 192.158.3.2
55 INITIISADDR 192.2.1.1
55 INITIISPORT 80
55 INITBROWSERS 1070
55 INITMYWID 5779,5885
//
//Configuration Driver 56
//
56 INITIPADDR 192.158.3.2
56 INITIISADDR 192.2.1.1
56 INITIISPORT 80
56 INITBROWSERS 1070
56 INITMYWID 5886,5992
//
//Configuration Driver 57
//
57 INITIPADDR 192.158.3.2
57 INITIISADDR 192.2.1.1
57 INITIISPORT 80
57 INITBROWSERS 1070
57 INITMYWID 5993,6099
//
//Configuration Driver 58
//
58 INITIPADDR 192.158.3.2
58 INITIISADDR 192.2.1.1
58 INITIISPORT 80
58 INITBROWSERS 1070
58 INITMYWID 6100,6206
//
//Configuration Driver 59
//
59 INITIPADDR 192.158.3.2
59 INITIISADDR 192.2.1.1
59 INITIISPORT 80
59 INITBROWSERS 1070
59 INITMYWID 6207,6313
//
//Configuration Driver 60
//
60 INITIPADDR 192.158.3.2
60 INITIISADDR 192.2.1.1
60 INITIISPORT 80
60 INITBROWSERS 1070
60 INITMYWID 6314,6420
//
//Configuration Driver 61
//
61 INITIPADDR 192.158.3.3
61 INITIISADDR 192.3.1.1
61 INITIISPORT 80
61 INITBROWSERS 1080
```

```
61 INITMYWID 6421,6528
//
//Configuration Driver 62
//
62 INITIPADDR 192.158.3.3
62 INITIISADDR 192.3.1.1
62 INITIISPORT 80
62 INITBROWSERS 1080
62 INITMYWID 6529,6636
//
//Configuration Driver 63
//
63 INITIPADDR 192.158.3.3
63 INITIISADDR 192.3.1.1
63 INITIISPORT 80
63 INITBROWSERS 1080
63 INITMYWID 6637,6744
//
//Configuration Driver 64
//
64 INITIPADDR 192.158.3.3
64 INITIISADDR 192.3.1.1
64 INITIISPORT 80
64 INITBROWSERS 1080
64 INITMYWID 6745,6852
//
//Configuration Driver 65
//
65 INITIPADDR 192.158.3.3
65 INITIISADDR 192.3.1.1
65 INITIISPORT 80
65 INITBROWSERS 1080
65 INITMYWID 6853,6960
//
//Configuration Driver 66
//
66 INITIPADDR 192.158.3.3
66 INITIISADDR 192.3.1.1
66 INITIISPORT 80
66 INITBROWSERS 1080
66 INITMYWID 6961,7068
//
//Configuration Driver 67
//
67 INITIPADDR 192.158.3.3
67 INITIISADDR 192.3.1.1
67 INITIISPORT 80
67 INITBROWSERS 1080
67 INITMYWID 7069,7176
//
//Configuration Driver 68
//
68 INITIPADDR 192.158.3.3
68 INITIISADDR 192.3.1.1
68 INITIISPORT 80
68 INITBROWSERS 1080
68 INITMYWID 7177,7284
//
//Configuration Driver 69
```

```
//
69 INITIPADDR 192.158.3.3
69 INITIISADDR 192.3.1.1
69 INITIISPORT 80
69 INITBROWSERS 1080
69 INITMYWID 7285,7392
//
//Configuration Driver 70
//
70 INITIPADDR 192.158.3.3
70 INITIISADDR 192.3.1.1
70 INITIISPORT 80
70 INITBROWSERS 1080
70 INITMYWID 7393,7500
//
//Configuration Driver 71
//
71 INITIPADDR 192.158.3.3
71 INITIISADDR 192.3.1.1
71 INITIISPORT 80
71 INITBROWSERS 1080
71 INITMYWID 7501,7608
//
//Configuration Driver 72
//
72 INITIPADDR 192.158.3.3
72 INITIISADDR 192.3.1.1
72 INITIISPORT 80
72 INITBROWSERS 1080
72 INITMYWID 7609,7716
//
//Configuration Driver 73
//
73 INITIPADDR 192.158.3.3
73 INITIISADDR 192.3.1.1
73 INITIISPORT 80
73 INITBROWSERS 1080
73 INITMYWID 7717,7824
//
//Configuration Driver 74
//
74 INITIPADDR 192.158.3.3
74 INITIISADDR 192.3.1.1
74 INITIISPORT 80
74 INITBROWSERS 1080
74 INITMYWID 7825,7932
//
//Configuration Driver 75
//
75 INITIPADDR 192.158.3.3
75 INITIISADDR 192.3.1.1
75 INITIISPORT 80
75 INITBROWSERS 1080
75 INITMYWID 7933,8040
//
//Configuration Driver 76
//
76 INITIPADDR 192.158.3.3
76 INITIISADDR 192.3.1.1
```

```
76 INITIISPORT 80
76 INITBROWSERS 1080
76 INITMYWID 8041,8148
//
//Configuration Driver 77
//
77 INITIPADDR 192.158.3.3
77 INITIISADDR 192.3.1.1
77 INITIISPORT 80
77 INITBROWSERS 1080
77 INITMYWID 8149,8256
//
//Configuration Driver 78
//
78 INITIPADDR 192.158.3.3
78 INITIISADDR 192.3.1.1
78 INITIISPORT 80
78 INITBROWSERS 1080
78 INITMYWID 8257,8364
//
//Configuration Driver 79
//
79 INITIPADDR 192.158.3.3
79 INITIISADDR 192.3.1.1
79 INITIISPORT 80
79 INITBROWSERS 1080
79 INITMYWID 8365,8472
//
//Configuration Driver 80
//
80 INITIPADDR 192.158.3.3
80 INITIISADDR 192.3.1.1
80 INITIISPORT 80
80 INITBROWSERS 1080
80 INITMYWID 8473,8580
//
//Configuration Driver 81
//
81 INITIPADDR 192.158.3.3
81 INITIISADDR 192.3.1.1
81 INITIISPORT 80
81 INITBROWSERS 1080
81 INITMYWID 8581,8688
//
//Configuration Driver 82
//
82 INITIPADDR 192.158.3.3
82 INITIISADDR 192.3.1.1
82 INITIISPORT 80
82 INITBROWSERS 1080
82 INITMYWID 8689,8796
//
//Configuration Driver 83
//
83 INITIPADDR 192.158.3.3
83 INITIISADDR 192.3.1.1
83 INITIISPORT 80
83 INITBROWSERS 1080
83 INITMYWID 8797,8904
```

```
//
//Configuration Driver 84
//
84 INITIPADDR 192.158.3.3
84 INITIISADDR 192.3.1.1
84 INITIISPORT 80
84 INITBROWSERS 1080
84 INITMYWID 8905,9012
//
//Configuration Driver 85
//
85 INITIPADDR 192.158.3.3
85 INITIISADDR 192.3.1.1
85 INITIISPORT 80
85 INITBROWSERS 1080
85 INITMYWID 9013,9120
//
//Configuration Driver 86
//
86 INITIPADDR 192.158.3.3
86 INITIISADDR 192.3.1.1
86 INITIISPORT 80
86 INITBROWSERS 1080
86 INITMYWID 9121,9228
//
//Configuration Driver 87
//
87 INITIPADDR 192.158.3.3
87 INITIISADDR 192.3.1.1
87 INITIISPORT 80
87 INITBROWSERS 1080
87 INITMYWID 9229,9336
//
//Configuration Driver 88
//
88 INITIPADDR 192.158.3.3
88 INITIISADDR 192.3.1.1
88 INITIISPORT 80
88 INITBROWSERS 1080
88 INITMYWID 9337,9444
//
//Configuration Driver 89
//
89 INITIPADDR 192.158.3.3
89 INITIISADDR 192.3.1.1
89 INITIISPORT 80
89 INITBROWSERS 1080
89 INITMYWID 9445,9552
//
//Configuration Driver 90
//
90 INITIPADDR 192.158.3.3
90 INITIISADDR 192.3.1.1
90 INITIISPORT 80
90 INITBROWSERS 1080
90 INITMYWID 9553,9660
//
//Configuration Driver 91
//
```

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91 INITIPADDR 192.158.3.4
91 INITIISADDR 192.4.1.1
91 INITIISPORT 80
91 INITBROWSERS 1080
91 INITMYWID 9661,9768
//
//Configuration Driver 92
//
92 INITIPADDR 192.158.3.4
92 INITIISADDR 192.4.1.1
92 INITIISPORT 80
92 INITBROWSERS 1080
92 INITMYWID 9769,9876
//
//Configuration Driver 93
//
93 INITIPADDR 192.158.3.4
93 INITIISADDR 192.4.1.1
93 INITIISPORT 80
93 INITBROWSERS 1080
93 INITMYWID 9877,9984
//
//Configuration Driver 94
//
94 INITIPADDR 192.158.3.4
94 INITIISADDR 192.4.1.1
94 INITIISPORT 80
94 INITBROWSERS 1080
94 INITMYWID 9985,10092
//
//Configuration Driver 95
//
95 INITIPADDR 192.158.3.4
95 INITIISADDR 192.4.1.1
95 INITIISPORT 80
95 INITBROWSERS 1080
95 INITMYWID 10093,10200
//
//Configuration Driver 96
//
96 INITIPADDR 192.158.3.4
96 INITIISADDR 192.4.1.1
96 INITIISPORT 80
96 INITBROWSERS 1080
96 INITMYWID 10201,10308
//
//Configuration Driver 97
//
97 INITIPADDR 192.158.3.4
97 INITIISADDR 192.4.1.1
97 INITIISPORT 80
97 INITBROWSERS 1080
97 INITMYWID 10309,10416
//
//Configuration Driver 98
//
98 INITIPADDR 192.158.3.4
98 INITIISADDR 192.4.1.1
98 INITIISPORT 80

```

```

98 INITBROWSERS 1080
98 INITMYWID 10417,10524
//
//Configuration Driver 99
//
99 INITIPADDR 192.158.3.4
99 INITIISADDR 192.4.1.1
99 INITIISPORT 80
99 INITBROWSERS 1080
99 INITMYWID 10525,10632
//
//Configuration Driver 100
//
100 INITIPADDR 192.158.3.4
100 INITIISADDR 192.4.1.1
100 INITIISPORT 80
100 INITBROWSERS 1080
100 INITMYWID 10633,10740
//
//Configuration Driver 101
//
101 INITIPADDR 192.158.3.4
101 INITIISADDR 192.4.1.1
101 INITIISPORT 80
101 INITBROWSERS 1080
101 INITMYWID 10741,10848
//
//Configuration Driver 102
//
102 INITIPADDR 192.158.3.4
102 INITIISADDR 192.4.1.1
102 INITIISPORT 80
102 INITBROWSERS 1080
102 INITMYWID 10849,10956
//
//Configuration Driver 103
//
103 INITIPADDR 192.158.3.4
103 INITIISADDR 192.4.1.1
103 INITIISPORT 80
103 INITBROWSERS 1080
103 INITMYWID 10957,11064
//
//Configuration Driver 104
//
104 INITIPADDR 192.158.3.4
104 INITIISADDR 192.4.1.1
104 INITIISPORT 80
104 INITBROWSERS 1080
104 INITMYWID 11065,11172
//
//Configuration Driver 105
//
105 INITIPADDR 192.158.3.4
105 INITIISADDR 192.4.1.1
105 INITIISPORT 80
105 INITBROWSERS 1080
105 INITMYWID 11173,11280
//

```



```

//Configuration Driver 106
//
106 INITIPADDR 192.158.3.4
106 INITIISADDR 192.4.1.1
106 INITIISPORT 80
106 INITBROWSERS 1080
106 INITMYWID 11281,11388
//
//Configuration Driver 107
//
107 INITIPADDR 192.158.3.4
107 INITIISADDR 192.4.1.1
107 INITIISPORT 80
107 INITBROWSERS 1080
107 INITMYWID 11389,11496
//
//Configuration Driver 108
//
108 INITIPADDR 192.158.3.4
108 INITIISADDR 192.4.1.1
108 INITIISPORT 80
108 INITBROWSERS 1080
108 INITMYWID 11497,11604
//
//Configuration Driver 109
//
109 INITIPADDR 192.158.3.4
109 INITIISADDR 192.4.1.1
109 INITIISPORT 80
109 INITBROWSERS 1080
109 INITMYWID 11605,11712
//
//Configuration Driver 110
//
110 INITIPADDR 192.158.3.4
110 INITIISADDR 192.4.1.1
110 INITIISPORT 80
110 INITBROWSERS 1080
110 INITMYWID 11713,11820
//
//Configuration Driver 111
//
111 INITIPADDR 192.158.3.4
111 INITIISADDR 192.4.1.1
111 INITIISPORT 80
111 INITBROWSERS 1080
111 INITMYWID 11821,11928
//
//Configuration Driver 112
//
112 INITIPADDR 192.158.3.4
112 INITIISADDR 192.4.1.1
112 INITIISPORT 80
112 INITBROWSERS 1080
112 INITMYWID 11929,12036
//
//Configuration Driver 113
//
113 INITIPADDR 192.158.3.4

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113 INITIISADDR 192.4.1.1
113 INITIISPORT 80
113 INITBROWSERS 1080
113 INITMYWID 12037,12144
//
//Configuration Driver 114
//
114 INITIPADDR 192.158.3.4
114 INITIISADDR 192.4.1.1
114 INITIISPORT 80
114 INITBROWSERS 1080
114 INITMYWID 12145,12252
//
//Configuration Driver 115
//
115 INITIPADDR 192.158.3.4
115 INITIISADDR 192.4.1.1
115 INITIISPORT 80
115 INITBROWSERS 1080
115 INITMYWID 12253,12360
//
//Configuration Driver 116
//
116 INITIPADDR 192.158.3.4
116 INITIISADDR 192.4.1.1
116 INITIISPORT 80
116 INITBROWSERS 1080
116 INITMYWID 12361,12468
//
//Configuration Driver 117
//
117 INITIPADDR 192.158.3.4
117 INITIISADDR 192.4.1.1
117 INITIISPORT 80
117 INITBROWSERS 1080
117 INITMYWID 12469,12576
//
//Configuration Driver 118
//
118 INITIPADDR 192.158.3.4
118 INITIISADDR 192.4.1.1
118 INITIISPORT 80
118 INITBROWSERS 1080
118 INITMYWID 12577,12684
//
//Configuration Driver 119
//
119 INITIPADDR 192.158.3.4
119 INITIISADDR 192.4.1.1
119 INITIISPORT 80
119 INITBROWSERS 1080
119 INITMYWID 12685,12792
//
//Configuration Driver 120
//
120 INITIPADDR 192.158.3.4
120 INITIISADDR 192.4.1.1
120 INITIISPORT 80
120 INITBROWSERS 1080

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```
120 INITMYWID 12793,12900
//
//Configuration Driver 121
//
121 INITIPADDR 192.158.3.5
121 INITIISADDR 192.5.1.1
121 INITIISPORT 80
121 INITBROWSERS 1070
121 INITMYWID 12901,13007
//
//Configuration Driver 122
//
122 INITIPADDR 192.158.3.5
122 INITIISADDR 192.5.1.1
122 INITIISPORT 80
122 INITBROWSERS 1070
122 INITMYWID 13008,13114
//
//Configuration Driver 123
//
123 INITIPADDR 192.158.3.5
123 INITIISADDR 192.5.1.1
123 INITIISPORT 80
123 INITBROWSERS 1070
123 INITMYWID 13115,13221
//
//Configuration Driver 124
//
124 INITIPADDR 192.158.3.5
124 INITIISADDR 192.5.1.1
124 INITIISPORT 80
124 INITBROWSERS 1070
124 INITMYWID 13222,13328
//
//Configuration Driver 125
//
125 INITIPADDR 192.158.3.5
125 INITIISADDR 192.5.1.1
125 INITIISPORT 80
125 INITBROWSERS 1070
125 INITMYWID 13329,13435
//
//Configuration Driver 126
//
126 INITIPADDR 192.158.3.5
126 INITIISADDR 192.5.1.1
126 INITIISPORT 80
126 INITBROWSERS 1070
126 INITMYWID 13436,13542
//
//Configuration Driver 127
//
127 INITIPADDR 192.158.3.5
127 INITIISADDR 192.5.1.1
127 INITIISPORT 80
127 INITBROWSERS 1070
127 INITMYWID 13543,13649
//
//Configuration Driver 128
```

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//
128 INITIPADDR 192.158.3.5
128 INITIISADDR 192.5.1.1
128 INITIISPORT 80
128 INITBROWSERS 1070
128 INITMYWID 13650,13756
//
//Configuration Driver 129
//
129 INITIPADDR 192.158.3.5
129 INITIISADDR 192.5.1.1
129 INITIISPORT 80
129 INITBROWSERS 1070
129 INITMYWID 13757,13863
//
//Configuration Driver 130
//
130 INITIPADDR 192.158.3.5
130 INITIISADDR 192.5.1.1
130 INITIISPORT 80
130 INITBROWSERS 1070
130 INITMYWID 13864,13970
//
//Configuration Driver 131
//
131 INITIPADDR 192.158.3.5
131 INITIISADDR 192.5.1.1
131 INITIISPORT 80
131 INITBROWSERS 1070
131 INITMYWID 13971,14077
//
//Configuration Driver 132
//
132 INITIPADDR 192.158.3.5
132 INITIISADDR 192.5.1.1
132 INITIISPORT 80
132 INITBROWSERS 1070
132 INITMYWID 14078,14184
//
//Configuration Driver 133
//
133 INITIPADDR 192.158.3.5
133 INITIISADDR 192.5.1.1
133 INITIISPORT 80
133 INITBROWSERS 1070
133 INITMYWID 14185,14291
//
//Configuration Driver 134
//
134 INITIPADDR 192.158.3.5
134 INITIISADDR 192.5.1.1
134 INITIISPORT 80
134 INITBROWSERS 1070
134 INITMYWID 14292,14398
//
//Configuration Driver 135
//
135 INITIPADDR 192.158.3.5
135 INITIISADDR 192.5.1.1
```

```
135 INITIISPORT 80
135 INITBROWSERS 1070
135 INITMYWID 14399,14505
//
//Configuration Driver 136
//
136 INITIPADDR 192.158.3.5
136 INITIISADDR 192.5.1.1
136 INITIISPORT 80
136 INITBROWSERS 1070
136 INITMYWID 14506,14612
//
//Configuration Driver 137
//
137 INITIPADDR 192.158.3.5
137 INITIISADDR 192.5.1.1
137 INITIISPORT 80
137 INITBROWSERS 1070
137 INITMYWID 14613,14719
//
//Configuration Driver 138
//
138 INITIPADDR 192.158.3.5
138 INITIISADDR 192.5.1.1
138 INITIISPORT 80
138 INITBROWSERS 1070
138 INITMYWID 14720,14826
//
//Configuration Driver 139
//
139 INITIPADDR 192.158.3.5
139 INITIISADDR 192.5.1.1
139 INITIISPORT 80
139 INITBROWSERS 1070
139 INITMYWID 14827,14933
//
//Configuration Driver 140
//
140 INITIPADDR 192.158.3.5
140 INITIISADDR 192.5.1.1
140 INITIISPORT 80
140 INITBROWSERS 1070
140 INITMYWID 14934,15040
//
//Configuration Driver 141
//
141 INITIPADDR 192.158.3.5
141 INITIISADDR 192.5.1.1
141 INITIISPORT 80
141 INITBROWSERS 1070
141 INITMYWID 15041,15147
//
//Configuration Driver 142
//
142 INITIPADDR 192.158.3.5
142 INITIISADDR 192.5.1.1
142 INITIISPORT 80
142 INITBROWSERS 1070
142 INITMYWID 15148,15254
```

```
//
//Configuration Driver 143
//
143 INITIPADDR 192.158.3.5
143 INITIISADDR 192.5.1.1
143 INITIISPORT 80
143 INITBROWSERS 1070
143 INITMYWID 15255,15361
//
//Configuration Driver 144
//
144 INITIPADDR 192.158.3.5
144 INITIISADDR 192.5.1.1
144 INITIISPORT 80
144 INITBROWSERS 1070
144 INITMYWID 15362,15468
//
//Configuration Driver 145
//
145 INITIPADDR 192.158.3.5
145 INITIISADDR 192.5.1.1
145 INITIISPORT 80
145 INITBROWSERS 1070
145 INITMYWID 15469,15575
//
//Configuration Driver 146
//
146 INITIPADDR 192.158.3.5
146 INITIISADDR 192.5.1.1
146 INITIISPORT 80
146 INITBROWSERS 1070
146 INITMYWID 15576,15682
//
//Configuration Driver 147
//
147 INITIPADDR 192.158.3.5
147 INITIISADDR 192.5.1.1
147 INITIISPORT 80
147 INITBROWSERS 1070
147 INITMYWID 15683,15789
//
//Configuration Driver 148
//
148 INITIPADDR 192.158.3.5
148 INITIISADDR 192.5.1.1
148 INITIISPORT 80
148 INITBROWSERS 1070
148 INITMYWID 15790,15896
//
//Configuration Driver 149
//
149 INITIPADDR 192.158.3.5
149 INITIISADDR 192.5.1.1
149 INITIISPORT 80
149 INITBROWSERS 1070
149 INITMYWID 15897,16003
//
//Configuration Driver 150
//
```

```
150 INITIPADDR 192.158.3.5
150 INITIISADDR 192.5.1.1
150 INITIISPORT 80
150 INITBROWSERS 1070
150 INITMYWID 16004,16110
//
//Configuration Driver 151
//
151 INITIPADDR 192.158.3.6
151 INITIISADDR 192.6.1.1
151 INITIISPORT 80
151 INITBROWSERS 1070
151 INITMYWID 16111,16217
//
//Configuration Driver 152
//
152 INITIPADDR 192.158.3.6
152 INITIISADDR 192.6.1.1
152 INITIISPORT 80
152 INITBROWSERS 1070
152 INITMYWID 16218,16324
//
//Configuration Driver 153
//
153 INITIPADDR 192.158.3.6
153 INITIISADDR 192.6.1.1
153 INITIISPORT 80
153 INITBROWSERS 1070
153 INITMYWID 16325,16431
//
//Configuration Driver 154
//
154 INITIPADDR 192.158.3.6
154 INITIISADDR 192.6.1.1
154 INITIISPORT 80
154 INITBROWSERS 1070
154 INITMYWID 16432,16538
//
//Configuration Driver 155
//
155 INITIPADDR 192.158.3.6
155 INITIISADDR 192.6.1.1
155 INITIISPORT 80
155 INITBROWSERS 1070
155 INITMYWID 16539,16645
//
//Configuration Driver 156
//
156 INITIPADDR 192.158.3.6
156 INITIISADDR 192.6.1.1
156 INITIISPORT 80
156 INITBROWSERS 1070
156 INITMYWID 16646,16752
//
//Configuration Driver 157
//
157 INITIPADDR 192.158.3.6
157 INITIISADDR 192.6.1.1
157 INITIISPORT 80
```

```
157 INITBROWSERS 1070
157 INITMYWID 16753,16859
//
//Configuration Driver 158
//
158 INITIPADDR 192.158.3.6
158 INITIISADDR 192.6.1.1
158 INITIISPORT 80
158 INITBROWSERS 1070
158 INITMYWID 16860,16966
//
//Configuration Driver 159
//
159 INITIPADDR 192.158.3.6
159 INITIISADDR 192.6.1.1
159 INITIISPORT 80
159 INITBROWSERS 1070
159 INITMYWID 16967,17073
//
//Configuration Driver 160
//
160 INITIPADDR 192.158.3.6
160 INITIISADDR 192.6.1.1
160 INITIISPORT 80
160 INITBROWSERS 1070
160 INITMYWID 17074,17180
//
//Configuration Driver 161
//
161 INITIPADDR 192.158.3.6
161 INITIISADDR 192.6.1.1
161 INITIISPORT 80
161 INITBROWSERS 1070
161 INITMYWID 17181,17287
//
//Configuration Driver 162
//
162 INITIPADDR 192.158.3.6
162 INITIISADDR 192.6.1.1
162 INITIISPORT 80
162 INITBROWSERS 1070
162 INITMYWID 17288,17394
//
//Configuration Driver 163
//
163 INITIPADDR 192.158.3.6
163 INITIISADDR 192.6.1.1
163 INITIISPORT 80
163 INITBROWSERS 1070
163 INITMYWID 17395,17501
//
//Configuration Driver 164
//
164 INITIPADDR 192.158.3.6
164 INITIISADDR 192.6.1.1
164 INITIISPORT 80
164 INITBROWSERS 1070
164 INITMYWID 17502,17608
//
```

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//Configuration Driver 165
//
165 INITIPADDR 192.158.3.6
165 INITIISADDR 192.6.1.1
165 INITIISPORT 80
165 INITBROWSERS 1070
165 INITMYWID 17609,17715
//
//Configuration Driver 166
//
166 INITIPADDR 192.158.3.6
166 INITIISADDR 192.6.1.1
166 INITIISPORT 80
166 INITBROWSERS 1070
166 INITMYWID 17716,17822
//
//Configuration Driver 167
//
167 INITIPADDR 192.158.3.6
167 INITIISADDR 192.6.1.1
167 INITIISPORT 80
167 INITBROWSERS 1070
167 INITMYWID 17823,17929
//
//Configuration Driver 168
//
168 INITIPADDR 192.158.3.6
168 INITIISADDR 192.6.1.1
168 INITIISPORT 80
168 INITBROWSERS 1070
168 INITMYWID 17930,18036
//
//Configuration Driver 169
//
169 INITIPADDR 192.158.3.6
169 INITIISADDR 192.6.1.1
169 INITIISPORT 80
169 INITBROWSERS 1070
169 INITMYWID 18037,18143
//
//Configuration Driver 170
//
170 INITIPADDR 192.158.3.6
170 INITIISADDR 192.6.1.1
170 INITIISPORT 80
170 INITBROWSERS 1070
170 INITMYWID 18144,18250
//
//Configuration Driver 171
//
171 INITIPADDR 192.158.3.6
171 INITIISADDR 192.6.1.1
171 INITIISPORT 80
171 INITBROWSERS 1070
171 INITMYWID 18251,18357
//
//Configuration Driver 172
//
172 INITIPADDR 192.158.3.6

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172 INITIISADDR 192.6.1.1
172 INITIISPORT 80
172 INITBROWSERS 1070
172 INITMYWID 18358,18464
//
//Configuration Driver 173
//
173 INITIPADDR 192.158.3.6
173 INITIISADDR 192.6.1.1
173 INITIISPORT 80
173 INITBROWSERS 1070
173 INITMYWID 18465,18571
//
//Configuration Driver 174
//
174 INITIPADDR 192.158.3.6
174 INITIISADDR 192.6.1.1
174 INITIISPORT 80
174 INITBROWSERS 1070
174 INITMYWID 18572,18678
//
//Configuration Driver 175
//
175 INITIPADDR 192.158.3.6
175 INITIISADDR 192.6.1.1
175 INITIISPORT 80
175 INITBROWSERS 1070
175 INITMYWID 18679,18785
//
//Configuration Driver 176
//
176 INITIPADDR 192.158.3.6
176 INITIISADDR 192.6.1.1
176 INITIISPORT 80
176 INITBROWSERS 1070
176 INITMYWID 18786,18892
//
//Configuration Driver 177
//
177 INITIPADDR 192.158.3.6
177 INITIISADDR 192.6.1.1
177 INITIISPORT 80
177 INITBROWSERS 1070
177 INITMYWID 18893,18999
//
//Configuration Driver 178
//
178 INITIPADDR 192.158.3.6
178 INITIISADDR 192.6.1.1
178 INITIISPORT 80
178 INITBROWSERS 1070
178 INITMYWID 19000,19106
//
//Configuration Driver 179
//
179 INITIPADDR 192.158.3.6
179 INITIISADDR 192.6.1.1
179 INITIISPORT 80
179 INITBROWSERS 1070

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```
179 INITMYWID 19107,19213
//
//Configuration Driver 180
//
180 INITIPADDR 192.158.3.6
180 INITIISADDR 192.7.1.1
180 INITIISPORT 80
180 INITBROWSERS 1070
180 INITMYWID 19214,19320
//
//Configuration Driver 181
//
181 INITIPADDR 192.158.3.7
181 INITIISADDR 192.7.1.1
181 INITIISPORT 80
181 INITBROWSERS 1070
181 INITMYWID 19321,19427
//
//Configuration Driver 182
//
182 INITIPADDR 192.158.3.7
182 INITIISADDR 192.7.1.1
182 INITIISPORT 80
182 INITBROWSERS 1070
182 INITMYWID 19428,19534
//
//Configuration Driver 183
//
183 INITIPADDR 192.158.3.7
183 INITIISADDR 192.7.1.1
183 INITIISPORT 80
183 INITBROWSERS 1070
183 INITMYWID 19535,19641
//
//Configuration Driver 184
//
184 INITIPADDR 192.158.3.7
184 INITIISADDR 192.7.1.1
184 INITIISPORT 80
184 INITBROWSERS 1070
184 INITMYWID 19642,19748
//
//Configuration Driver 185
//
185 INITIPADDR 192.158.3.7
185 INITIISADDR 192.7.1.1
185 INITIISPORT 80
185 INITBROWSERS 1070
185 INITMYWID 19749,19855
//
//Configuration Driver 186
//
186 INITIPADDR 192.158.3.7
186 INITIISADDR 192.7.1.1
186 INITIISPORT 80
186 INITBROWSERS 1070
186 INITMYWID 19856,19962
//
//Configuration Driver 187
```

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//
187 INITIPADDR 192.158.3.7
187 INITIISADDR 192.7.1.1
187 INITIISPORT 80
187 INITBROWSERS 1070
187 INITMYWID 19963,20069
//
//Configuration Driver 188
//
188 INITIPADDR 192.158.3.7
188 INITIISADDR 192.7.1.1
188 INITIISPORT 80
188 INITBROWSERS 1070
188 INITMYWID 20070,20176
//
//Configuration Driver 189
//
189 INITIPADDR 192.158.3.7
189 INITIISADDR 192.7.1.1
189 INITIISPORT 80
189 INITBROWSERS 1070
189 INITMYWID 20177,20283
//
//Configuration Driver 190
//
190 INITIPADDR 192.158.3.7
190 INITIISADDR 192.7.1.1
190 INITIISPORT 80
190 INITBROWSERS 1070
190 INITMYWID 20284,20390
//
//Configuration Driver 191
//
191 INITIPADDR 192.158.3.7
191 INITIISADDR 192.7.1.1
191 INITIISPORT 80
191 INITBROWSERS 1070
191 INITMYWID 20391,20497
//
//Configuration Driver 192
//
192 INITIPADDR 192.158.3.7
192 INITIISADDR 192.7.1.1
192 INITIISPORT 80
192 INITBROWSERS 1070
192 INITMYWID 20498,20604
//
//Configuration Driver 193
//
193 INITIPADDR 192.158.3.7
193 INITIISADDR 192.7.1.1
193 INITIISPORT 80
193 INITBROWSERS 1070
193 INITMYWID 20605,20711
//
//Configuration Driver 194
//
194 INITIPADDR 192.158.3.7
194 INITIISADDR 192.7.1.1
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194 INITIISPORT 80
194 INITBROWSERS 1070
194 INITMYWID 20712,20818
//
//Configuration Driver 195
//
195 INITIPADDR 192.158.3.7
195 INITIISADDR 192.7.1.1
195 INITIISPORT 80
195 INITBROWSERS 1070
195 INITMYWID 20819,20925
//
//Configuration Driver 196
//
196 INITIPADDR 192.158.3.7
196 INITIISADDR 192.7.1.1
196 INITIISPORT 80
196 INITBROWSERS 1070
196 INITMYWID 20926,21032
//
//Configuration Driver 197
//
197 INITIPADDR 192.158.3.7
197 INITIISADDR 192.7.1.1
197 INITIISPORT 80
197 INITBROWSERS 1070
197 INITMYWID 21033,21139
//
//Configuration Driver 198
//
198 INITIPADDR 192.158.3.7
198 INITIISADDR 192.7.1.1
198 INITIISPORT 80
198 INITBROWSERS 1070
198 INITMYWID 21140,21246
//
//Configuration Driver 199
//
199 INITIPADDR 192.158.3.7
199 INITIISADDR 192.7.1.1
199 INITIISPORT 80
199 INITBROWSERS 1070
199 INITMYWID 21247,21353
//
//Configuration Driver 200
//
200 INITIPADDR 192.158.3.7
200 INITIISADDR 192.7.1.1
200 INITIISPORT 80
200 INITBROWSERS 1070
200 INITMYWID 21354,21460
//
//Configuration Driver 201
//
201 INITIPADDR 192.158.3.7
201 INITIISADDR 192.7.1.1
201 INITIISPORT 80
201 INITBROWSERS 1070
201 INITMYWID 21461,21567
```

```
//
//Configuration Driver 202
//
202 INITIPADDR 192.158.3.7
202 INITIISADDR 192.7.1.1
202 INITIISPORT 80
202 INITBROWSERS 1070
202 INITMYWID 21568,21674
//
//Configuration Driver 203
//
203 INITIPADDR 192.158.3.7
203 INITIISADDR 192.7.1.1
203 INITIISPORT 80
203 INITBROWSERS 1070
203 INITMYWID 21675,21781
//
//Configuration Driver 204
//
204 INITIPADDR 192.158.3.7
204 INITIISADDR 192.7.1.1
204 INITIISPORT 80
204 INITBROWSERS 1070
204 INITMYWID 21782,21888
//
//Configuration Driver 205
//
205 INITIPADDR 192.158.3.7
205 INITIISADDR 192.7.1.1
205 INITIISPORT 80
205 INITBROWSERS 1070
205 INITMYWID 21889,21995
//
//Configuration Driver 206
//
206 INITIPADDR 192.158.3.7
206 INITIISADDR 192.7.1.1
206 INITIISPORT 80
206 INITBROWSERS 1070
206 INITMYWID 21996,22102
//
//Configuration Driver 207
//
207 INITIPADDR 192.158.3.7
207 INITIISADDR 192.7.1.1
207 INITIISPORT 80
207 INITBROWSERS 1070
207 INITMYWID 22103,22209
//
//Configuration Driver 208
//
208 INITIPADDR 192.158.3.7
208 INITIISADDR 192.7.1.1
208 INITIISPORT 80
208 INITBROWSERS 1070
208 INITMYWID 22210,22316
//
//Configuration Driver 209
//
```

```
209 INITIPADDR 192.158.3.7
209 INITIISADDR 192.7.1.1
209 INITIISPORT 80
209 INITBROWSERS 1070
209 INITMYWID 22317,22423
//
//Configuration Driver 210
//
210 INITIPADDR 192.158.3.7
210 INITIISADDR 192.7.1.1
210 INITIISPORT 80
210 INITBROWSERS 1070
210 INITMYWID 22424,22530
//
//Configuration Driver 211
//
211 INITIPADDR 192.158.3.8
211 INITIISADDR 192.8.1.1
211 INITIISPORT 80
211 INITBROWSERS 1070
211 INITMYWID 22531,22637
//
//Configuration Driver 212
//
212 INITIPADDR 192.158.3.8
212 INITIISADDR 192.8.1.1
212 INITIISPORT 80
212 INITBROWSERS 1070
212 INITMYWID 22638,22744
//
//Configuration Driver 213
//
213 INITIPADDR 192.158.3.8
213 INITIISADDR 192.8.1.1
213 INITIISPORT 80
213 INITBROWSERS 1070
213 INITMYWID 22745,22851
//
//Configuration Driver 214
//
214 INITIPADDR 192.158.3.8
214 INITIISADDR 192.8.1.1
214 INITIISPORT 80
214 INITBROWSERS 1070
214 INITMYWID 22852,22958
//
//Configuration Driver 215
//
215 INITIPADDR 192.158.3.8
215 INITIISADDR 192.8.1.1
215 INITIISPORT 80
215 INITBROWSERS 1070
215 INITMYWID 22959,23065
//
//Configuration Driver 216
//
216 INITIPADDR 192.158.3.8
216 INITIISADDR 192.8.1.1
216 INITIISPORT 80
```

```
216 INITBROWSERS 1070
216 INITMYWID 23066,23172
//
//Configuration Driver 217
//
217 INITIPADDR 192.158.3.8
217 INITIISADDR 192.8.1.1
217 INITIISPORT 80
217 INITBROWSERS 1070
217 INITMYWID 23173,23279
//
//Configuration Driver 218
//
218 INITIPADDR 192.158.3.8
218 INITIISADDR 192.8.1.1
218 INITIISPORT 80
218 INITBROWSERS 1070
218 INITMYWID 23280,23386
//
//Configuration Driver 219
//
219 INITIPADDR 192.158.3.8
219 INITIISADDR 192.8.1.1
219 INITIISPORT 80
219 INITBROWSERS 1070
219 INITMYWID 23387,23493
//
//Configuration Driver 220
//
220 INITIPADDR 192.158.3.8
220 INITIISADDR 192.8.1.1
220 INITIISPORT 80
220 INITBROWSERS 1070
220 INITMYWID 23494,23600
//
//Configuration Driver 221
//
221 INITIPADDR 192.158.3.8
221 INITIISADDR 192.8.1.1
221 INITIISPORT 80
221 INITBROWSERS 1070
221 INITMYWID 23601,23707
//
//Configuration Driver 222
//
222 INITIPADDR 192.158.3.8
222 INITIISADDR 192.8.1.1
222 INITIISPORT 80
222 INITBROWSERS 1070
222 INITMYWID 23708,23814
//
//Configuration Driver 223
//
223 INITIPADDR 192.158.3.8
223 INITIISADDR 192.8.1.1
223 INITIISPORT 80
223 INITBROWSERS 1070
223 INITMYWID 23815,23921
//
```



```

//Configuration Driver 224
//
224 INITIPADDR 192.158.3.8
224 INITIISADDR 192.8.1.1
224 INITIISPORT 80
224 INITBROWSERS 1070
224 INITMYWID 23922,24028
//
//Configuration Driver 225
//
225 INITIPADDR 192.158.3.8
225 INITIISADDR 192.8.1.1
225 INITIISPORT 80
225 INITBROWSERS 1070
225 INITMYWID 24029,24135
//
//Configuration Driver 226
//
226 INITIPADDR 192.158.3.8
226 INITIISADDR 192.8.1.1
226 INITIISPORT 80
226 INITBROWSERS 1070
226 INITMYWID 24136,24242
//
//Configuration Driver 227
//
227 INITIPADDR 192.158.3.8
227 INITIISADDR 192.8.1.1
227 INITIISPORT 80
227 INITBROWSERS 1070
227 INITMYWID 24243,24349
//
//Configuration Driver 228
//
228 INITIPADDR 192.158.3.8
228 INITIISADDR 192.8.1.1
228 INITIISPORT 80
228 INITBROWSERS 1070
228 INITMYWID 24350,24456
//
//Configuration Driver 229
//
229 INITIPADDR 192.158.3.8
229 INITIISADDR 192.8.1.1
229 INITIISPORT 80
229 INITBROWSERS 1070
229 INITMYWID 24457,24563
//
//Configuration Driver 230
//
230 INITIPADDR 192.158.3.8
230 INITIISADDR 192.8.1.1
230 INITIISPORT 80
230 INITBROWSERS 1070
230 INITMYWID 24564,24670
//
//Configuration Driver 231
//
231 INITIPADDR 192.158.3.8

```

```

231 INITIISADDR 192.8.1.1
231 INITIISPORT 80
231 INITBROWSERS 1070
231 INITMYWID 24671,24777
//
//Configuration Driver 232
//
232 INITIPADDR 192.158.3.8
232 INITIISADDR 192.8.1.1
232 INITIISPORT 80
232 INITBROWSERS 1070
232 INITMYWID 24778,24884
//
//Configuration Driver 233
//
233 INITIPADDR 192.158.3.8
233 INITIISADDR 192.8.1.1
233 INITIISPORT 80
233 INITBROWSERS 1070
233 INITMYWID 24885,24991
//
//Configuration Driver 234
//
234 INITIPADDR 192.158.3.8
234 INITIISADDR 192.8.1.1
234 INITIISPORT 80
234 INITBROWSERS 1070
234 INITMYWID 24992,25098
//
//Configuration Driver 235
//
235 INITIPADDR 192.158.3.8
235 INITIISADDR 192.8.1.1
235 INITIISPORT 80
235 INITBROWSERS 1070
235 INITMYWID 25099,25205
//
//Configuration Driver 236
//
236 INITIPADDR 192.158.3.8
236 INITIISADDR 192.8.1.1
236 INITIISPORT 80
236 INITBROWSERS 1070
236 INITMYWID 25206,25312
//
//Configuration Driver 237
//
237 INITIPADDR 192.158.3.8
237 INITIISADDR 192.8.1.1
237 INITIISPORT 80
237 INITBROWSERS 1070
237 INITMYWID 25313,25419
//
//Configuration Driver 238
//
238 INITIPADDR 192.158.3.8
238 INITIISADDR 192.8.1.1
238 INITIISPORT 80
238 INITBROWSERS 1070

```

```

238 INITMYWID 25420,25526
//
//Configuration Driver 239
//
239 INITIPADDR 192.158.3.8
239 INITIISADDR 192.8.1.1
239 INITIISPORT 80
239 INITBROWSERS 1070
239 INITMYWID 25527,25633
//
//Configuration Driver 240
//
240 INITIPADDR 192.158.3.8
240 INITIISADDR 192.8.1.1
240 INITIISPORT 80
240 INITBROWSERS 1070
240 INITMYWID 25634,25740

```

## 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(R) PRO/100+ Server Adapter
(PILA8470B)

```

```

Physical Address. . . . . : 00-D0-B7-69-1F-BD
DHCP Enabled. . . . . : No
IP Address. . . . . : 192.158.1.101
Subnet Mask . . . . . : 255.255.255.0
IP Address. . . . . : 192.158.3.1
Subnet Mask . . . . . : 255.255.255.0
Default Gateway . . . . . :

```

### Ethernet adapter DBMS:

```

Media State . . . . . : Media disconnected
Description . . . . . : Broadcom NetXtreme Gigabit Ethernet
Physical Address. . . . . : 00-06-5B-8C-9B-74

```

### Ethernet adapter Client:

```

Connection-specific DNS Suffix . . :
Description . . . . . : Broadcom NetXtreme Gigabit Ethernet
#2
Physical Address. . . . . : 00-06-5B-8C-9B-75
DHCP Enabled. . . . . : No
IP Address. . . . . : 192.1.1.11
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(R) PRO/100+ Server Adapter (PILA8470B)
Physical Address. . . . . : 00-D0-B7-69-25-75
DHCP Enabled. . . . . : No
IP Address. . . . . : 192.158.3.2
Subnet Mask . . . . . : 255.255.255.0
Default Gateway . . . . . :
DNS Servers . . . . . : 127.0.0.1

Ethernet adapter DBMS:

Media State . . . . . : Media disconnected
Description . . . . . : Broadcom NetXtreme Gigabit Ethernet
Physical Address. . . . . : 00-06-5B-8C-9B-72

Ethernet adapter RTE:

Connection-specific DNS Suffix . :

Description . . . . . : Broadcom NetXtreme Gigabit Ethernet #2
Physical Address. . . . . : 00-06-5B-8C-9B-73
DHCP Enabled. . . . . : No
IP Address. . . . . : 192.2.1.11
Subnet Mask . . . . . : 255.255.255.0
Default Gateway . . . . . :
NetBIOS over Tcpi. . . . . : Disabled

C:\webdriver>goto end

C:\rhost>if 'ipconfig' == '' goto usage

C:\rhost>c:

C:\rhost>cd \webdriver

C:\webdriver>call ipconfig /all

Windows IP Configuration

Host Name . . . . . : RTE3
Primary Dns Suffix . . . . . :
Node Type . . . . . : Unknown
IP Routing Enabled. . . . . : No
WINS Proxy Enabled. . . . . : No

Ethernet adapter Admin:

Connection-specific DNS Suffix . :
Description . . . . . : HP NetServer 10/100TX PCI LAN Adapter
Physical Address. . . . . : 00-D0-B7-9E-5E-89
DHCP Enabled. . . . . : No
IP Address. . . . . : 192.158.3.3

```

Subnet Mask . . . . . : 255.255.255.0
Default Gateway . . . . . :

Ethernet adapter DBMS:

Media State . . . . . : Media disconnected
Description . . . . . : Broadcom NetXtreme Gigabit Ethernet
Physical Address. . . . . : 00-06-5B-8C-8B-F8

Ethernet adapter RTE:

Connection-specific DNS Suffix . . :
Description . . . . . : Broadcom NetXtreme Gigabit Ethernet
#2
Physical Address. . . . . : 00-06-5B-8C-8B-F9
DHCP Enabled. . . . . : No
IP Address. . . . . : 192.3.1.11
Subnet Mask . . . . . : 255.255.255.0
Default Gateway . . . . . :
NetBIOS over Tcpi. . . . . : Disabled

C:\webdriver>goto end
C:\rhost>if 'ipconfig' == '' goto usage
C:\rhost>c:
C:\rhost>cd \webdriver
C:\webdriver>call ipconfig /all

Windows IP Configuration

Host Name . . . . . : RTE4
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-EF-72
DHCP Enabled. . . . . : No
IP Address. . . . . : 192.158.3.4
Subnet Mask . . . . . : 255.255.255.0
Default Gateway . . . . . :

Ethernet adapter Client:

Connection-specific DNS Suffix . . :
Description . . . . . : Broadcom NetXtreme Gigabit Ethernet
#2
Physical Address. . . . . : 00-06-5B-8C-7C-11
DHCP Enabled. . . . . : No
IP Address. . . . . : 192.4.1.11
Subnet Mask . . . . . : 255.255.255.0
Default Gateway . . . . . :
NetBIOS over Tcpi. . . . . : Disabled

Ethernet adapter DBMS:

Media State . . . . . : Media disconnected

```

```
Description . . . . . : Broadcom NetXtreme Gigabit Ethernet
Physical Address. . . . . : 00-06-5B-8C-7C-10
```

```
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(R) PRO/100+ Server Adapter
(PILA8470B)
Physical Address. . . . . : 00-D0-B7-69-20-05
DHCP Enabled. . . . . : No
IP Address. . . . . : 192.158.1.200
Subnet Mask . . . . . : 255.255.255.0
IP Address. . . . . : 192.158.3.5
Subnet Mask . . . . . : 255.255.255.0
Default Gateway . . . . . :
NetBIOS over Tcpip. . . . . : Disabled
```

Ethernet adapter DBMS:

```
Media State . . . . . : Media disconnected
Description . . . . . : Broadcom NetXtreme Gigabit Ethernet
Physical Address. . . . . : 00-06-5B-8C-7E-B5
```

Ethernet adapter Client:

```
Connection-specific DNS Suffix . . :
Description . . . . . : Broadcom NetXtreme Gigabit Ethernet
#2
Physical Address. . . . . : 00-06-5B-8C-7E-B6
DHCP Enabled. . . . . : No
IP Address. . . . . : 192.5.1.11
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(R) PRO/100+ Server Adapter
(PILA8470B)
Physical Address. . . . . : 00-D0-B7-69-28-4C
DHCP Enabled. . . . . : No
IP Address. . . . . : 192.158.3.6
Subnet Mask . . . . . : 255.255.255.0
Default Gateway . . . . . :

```

Ethernet adapter Local Area Connection:

```

Media State . . . . . : Media disconnected
Description . . . . . : Broadcom NetXtreme Gigabit Ethernet
Physical Address. . . . . : 00-06-5B-8C-7C-25

```

Ethernet adapter Client:

```

Connection-specific DNS Suffix . . :
Description . . . . . : Broadcom NetXtreme Gigabit Ethernet
#2
Physical Address. . . . . : 00-06-5B-8C-7C-26
DHCP Enabled. . . . . : No
IP Address. . . . . : 192.6.1.11
Subnet Mask . . . . . : 255.255.255.0
Default Gateway . . . . . :

```

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(R) PRO/100+ Server Adapter
(PILA8470B)
Physical Address. . . . . : 00-D0-B7-D3-0C-F5
DHCP Enabled. . . . . : No
IP Address. . . . . : 192.158.3.7
Subnet Mask . . . . . : 255.255.255.0
Default Gateway . . . . . :
NetBIOS over Tcpi. . . . . : Disabled

```

Ethernet adapter DBMS:

```

Media State . . . . . : Media disconnected
Description . . . . . : Broadcom NetXtreme Gigabit Ethernet
Physical Address. . . . . : 00-06-5B-8C-8B-E8

```

Ethernet adapter RTE:

```

Connection-specific DNS Suffix . . . . . :
Description . . . . . : Broadcom NetXtreme Gigabit Ethernet
#2
Physical Address. . . . . : 00-06-5B-8C-8B-E9
DHCP Enabled. . . . . : No
IP Address. . . . . : 192.7.1.11
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(R) PRO/100+ Server Adapter
(PILA8470B)

```

```

Physical Address. . . . . : 00-90-27-94-0B-A5
DHCP Enabled. . . . . : No
IP Address. . . . . : 192.158.3.8
Subnet Mask . . . . . : 255.255.255.0
Default Gateway . . . . . :
NetBIOS over Tcpip. . . . . : Disabled

```

Ethernet adapter DBMS:

```

Media State . . . . . : Media disconnected
Description . . . . . : Broadcom NetXtreme Gigabit Ethernet
Physical Address. . . . . : 00-06-5B-8C-8C-FF

```

Ethernet adapter RTE:

```

Connection-specific DNS Suffix . . . . . :
Description . . . . . : Broadcom NetXtreme Gigabit Ethernet
#2
Physical Address. . . . . : 00-06-5B-8C-8D-00
DHCP Enabled. . . . . : No
IP Address. . . . . : 192.8.1.11
Subnet Mask . . . . . : 255.255.255.0
Default Gateway . . . . . :
NetBIOS over Tcpip. . . . . : Disabled

```

C:\webdriver>goto end

```

Volume in drive \\rtel\c$ has no label.
Volume Serial Number is 7433-AD41

```

Directory of \\rtel\c\$\webdriver

```

06/06/2005  02:33p                94,208 webdriver.exe
               1 File(s)                94,208 bytes
               0 Dir(s) 11,554,537,472 bytes free
Volume in drive \\rte2\c$ has no label.
Volume Serial Number is 7433-AD41

```

Directory of \\rte2\c\$\webdriver  
06/06/2005 02:33p 94,208 webdriver.exe  
1 File(s) 94,208 bytes  
0 Dir(s) 12,198,051,840 bytes free  
Volume in drive \\rte3\c\$ has no label.  
Volume Serial Number is 7433-AD41

Directory of \\rte3\c\$\webdriver  
06/06/2005 02:33p 94,208 webdriver.exe  
1 File(s) 94,208 bytes  
0 Dir(s) 11,247,591,424 bytes free  
Volume in drive \\rte4\c\$ has no label.  
Volume Serial Number is 7433-AD41

Directory of \\rte4\c\$\webdriver  
06/06/2005 02:33p 94,208 webdriver.exe  
1 File(s) 94,208 bytes  
0 Dir(s) 11,946,627,072 bytes free  
Volume in drive \\rte5\c\$ has no label.  
Volume Serial Number is 7433-AD41

Directory of \\rte5\c\$\webdriver  
06/06/2005 02:33p 94,208 webdriver.exe  
1 File(s) 94,208 bytes  
0 Dir(s) 11,249,889,280 bytes free  
Volume in drive \\rte6\c\$ has no label.  
Volume Serial Number is 7433-AD41

Directory of \\rte6\c\$\webdriver  
06/06/2005 02:33p 94,208 webdriver.exe  
1 File(s) 94,208 bytes  
0 Dir(s) 11,177,095,168 bytes free  
Volume in drive \\rte7\c\$ has no label.  
Volume Serial Number is 7433-AD41

Directory of \\rte7\c\$\webdriver  
06/06/2005 02:33p 94,208 webdriver.exe  
1 File(s) 94,208 bytes  
0 Dir(s) 12,158,234,624 bytes free  
Volume in drive \\rte8\c\$ has no label.  
Volume Serial Number is 7433-AD41

Directory of \\rte8\c\$\webdriver  
06/06/2005 02:33p 94,208 webdriver.exe  
1 File(s) 94,208 bytes  
0 Dir(s) 12,127,100,928 bytes free  
Volume in drive I is NAS4  
Volume Serial Number is 6C16-6083

Directory of I:\TPCC\ORATPCC\TPCC Audit

10/29/2004 02:05p 61,440 rapic.exe  
1 File(s) 61,440 bytes  
0 Dir(s) 72,346,447,872 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 " D2 RTE40 " /MIN webdriver.cmd 40  
start " D2 RTE41 " /MIN webdriver.cmd 41  
start " D2 RTE42 " /MIN webdriver.cmd 42  
start " D2 RTE43 " /MIN webdriver.cmd 43  
start " D2 RTE44 " /MIN webdriver.cmd 44  
start " D2 RTE45 " /MIN webdriver.cmd 45  
start " D2 RTE46 " /MIN webdriver.cmd 46  
start " D2 RTE47 " /MIN webdriver.cmd 47  
start " D2 RTE48 " /MIN webdriver.cmd 48  
start " D2 RTE49 " /MIN webdriver.cmd 49  
start " D2 RTE50 " /MIN webdriver.cmd 50
```



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start " D2 RTE51 " /MIN webdriver.cmd 51
start " D2 RTE52 " /MIN webdriver.cmd 52
start " D2 RTE53 " /MIN webdriver.cmd 53
start " D2 RTE54 " /MIN webdriver.cmd 54
start " D2 RTE55 " /MIN webdriver.cmd 55
start " D2 RTE56 " /MIN webdriver.cmd 56
start " D2 RTE57 " /MIN webdriver.cmd 57
start " D2 RTE58 " /MIN webdriver.cmd 58
start " D2 RTE59 " /MIN webdriver.cmd 59
start " D2 RTE60 " /MIN webdriver.cmd 60
start " D3 RTE61 " /MIN webdriver.cmd 61
start " D3 RTE62 " /MIN webdriver.cmd 62
start " D3 RTE63 " /MIN webdriver.cmd 63
start " D3 RTE64 " /MIN webdriver.cmd 64
start " D3 RTE65 " /MIN webdriver.cmd 65
start " D3 RTE66 " /MIN webdriver.cmd 66
start " D3 RTE67 " /MIN webdriver.cmd 67
start " D3 RTE68 " /MIN webdriver.cmd 68
start " D3 RTE69 " /MIN webdriver.cmd 69
start " D3 RTE70 " /MIN webdriver.cmd 70
start " D3 RTE71 " /MIN webdriver.cmd 71
start " D3 RTE72 " /MIN webdriver.cmd 72
start " D3 RTE73 " /MIN webdriver.cmd 73
start " D3 RTE74 " /MIN webdriver.cmd 74
start " D3 RTE75 " /MIN webdriver.cmd 75
start " D3 RTE76 " /MIN webdriver.cmd 76
start " D3 RTE77 " /MIN webdriver.cmd 77
start " D3 RTE78 " /MIN webdriver.cmd 78
start " D3 RTE79 " /MIN webdriver.cmd 79
start " D3 RTE80 " /MIN webdriver.cmd 80
start " D3 RTE81 " /MIN webdriver.cmd 81
start " D3 RTE82 " /MIN webdriver.cmd 82
start " D3 RTE83 " /MIN webdriver.cmd 83
start " D3 RTE84 " /MIN webdriver.cmd 84
start " D3 RTE85 " /MIN webdriver.cmd 85
start " D3 RTE86 " /MIN webdriver.cmd 86
start " D3 RTE87 " /MIN webdriver.cmd 87
start " D3 RTE88 " /MIN webdriver.cmd 88
start " D3 RTE89 " /MIN webdriver.cmd 89
start " D3 RTE90 " /MIN webdriver.cmd 90
start " D4 RTE91 " /MIN webdriver.cmd 91
start " D4 RTE92 " /MIN webdriver.cmd 92
start " D4 RTE93 " /MIN webdriver.cmd 93
start " D4 RTE94 " /MIN webdriver.cmd 94
start " D4 RTE95 " /MIN webdriver.cmd 95
start " D4 RTE96 " /MIN webdriver.cmd 96
start " D4 RTE97 " /MIN webdriver.cmd 97
start " D4 RTE98 " /MIN webdriver.cmd 98
start " D4 RTE99 " /MIN webdriver.cmd 99
start " D4 RTE100 " /MIN webdriver.cmd 100
start " D4 RTE101 " /MIN webdriver.cmd 101
start " D4 RTE102 " /MIN webdriver.cmd 102
start " D4 RTE103 " /MIN webdriver.cmd 103
start " D4 RTE104 " /MIN webdriver.cmd 104
start " D4 RTE105 " /MIN webdriver.cmd 105
start " D4 RTE106 " /MIN webdriver.cmd 106
start " D4 RTE107 " /MIN webdriver.cmd 107
start " D4 RTE108 " /MIN webdriver.cmd 108
start " D4 RTE109 " /MIN webdriver.cmd 109

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start " D4 RTE110 " /MIN webdriver.cmd 110
start " D4 RTE111 " /MIN webdriver.cmd 111
start " D4 RTE112 " /MIN webdriver.cmd 112
start " D4 RTE113 " /MIN webdriver.cmd 113
start " D4 RTE114 " /MIN webdriver.cmd 114
start " D4 RTE115 " /MIN webdriver.cmd 115
start " D4 RTE116 " /MIN webdriver.cmd 116
start " D4 RTE117 " /MIN webdriver.cmd 117
start " D4 RTE118 " /MIN webdriver.cmd 118
start " D4 RTE119 " /MIN webdriver.cmd 119
start " D4 RTE120 " /MIN webdriver.cmd 120
start " D5 RTE121 " /MIN webdriver.cmd 121
start " D5 RTE122 " /MIN webdriver.cmd 122
start " D5 RTE123 " /MIN webdriver.cmd 123
start " D5 RTE124 " /MIN webdriver.cmd 124
start " D5 RTE125 " /MIN webdriver.cmd 125
start " D5 RTE126 " /MIN webdriver.cmd 126
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start " D5 RTE129 " /MIN webdriver.cmd 129
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start " D5 RTE142 " /MIN webdriver.cmd 142
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start " D5 RTE147 " /MIN webdriver.cmd 147
start " D5 RTE148 " /MIN webdriver.cmd 148
start " D5 RTE149 " /MIN webdriver.cmd 149
start " D5 RTE150 " /MIN webdriver.cmd 150
start " D6 RTE151 " /MIN webdriver.cmd 151
start " D6 RTE152 " /MIN webdriver.cmd 152
start " D6 RTE153 " /MIN webdriver.cmd 153
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start " D6 RTE160 " /MIN webdriver.cmd 160
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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

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start " D6 RTE169 " /MIN webdriver.cmd 169  
start " D6 RTE170 " /MIN webdriver.cmd 170  
start " D6 RTE171 " /MIN webdriver.cmd 171  
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start " D8 RTE231 " /MIN webdriver.cmd 231  
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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	28,000	tpmC	322,805	tpmC / W	11.53		
Segment Name	Blocks	Block Size	Required	Daily Growth	Five_Pct	Reqd. with 8H	8H Space(MB)
CUSTCLUSTER	373534720	2048	294,363,300	0	14,718,165	309,081,465	603,675
DB_STAT	460800	2048	460,800	0	0	460,800	900
DISTCLUSTER	348160	2048	291,712	0	14,586	306,298	599
HIST	45290496	2048	25,977,600	4,791,828	0	30,769,428	60,097
ICUST1	1268480	16384	1,159,236	0	57,962	1,217,198	19,019
ICUST2	3279360	16384	2,509,923	0	125,496	2,635,419	41,179
IDIST	92160	2048	70,512	0	3,526	74,038	145
IITEM	10240	2048	5,632	0	282	5,914	12
IORDR2	3669760	16384	1,789,906	0	89,495	1,879,401	29,366
ISTOK	3742080	16384	3,449,258	0	172,463	3,621,721	56,590
ITEMCLUSTER	10240	2048	8,446	0	422	8,868	18
IWARE	20480	2048	18,012	0	901	18,913	37
NORDCLUSTER_QUEUE	9748480	2048	3,161,327	0	158,066	3,319,393	6,484
ORDRCLUSTER_QUEUE	81749760	16384	42,884,178	7,910,415	0	50,794,593	793,666
ROLL_SEG	1036288	8192	1,036,288	0	0	1,036,288	8,096
STOKCLUSTER	420992000	2048	400,404,102	0	20,020,205	420,424,307	821,142
SYSAUX	61440	2048	61,440	0	0	61,440	120
SYSTEM	204800	2048	204,800	0	0	204,800	400
SYS_IQ0000008796\$\$	81749760	16384	186,789	0	9,339	196,128	3,065
SYS_IQ0000009134\$\$	9748480	2048	729,537	0	36,477	766,014	1,497
WARECLUSTER	40960	2048	29,632	0	1,482	31,114	61
<b>Totals</b>							<b>2,446,168</b>
Dynamic Space	720,803	Sum of Hist, Ordcluster (Initial Used space in MB)					
Static Space	1,592,397	(Initial MB+5%) - Dynamic Space					
Daily Growth	132,959.28	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	9,569,954	Static space + 60*(Daily Growth+Daily Spread)					
60 Day GB	9,345.66	Excludes OS, Paging and RDBMS Logs					
Log used	854,034,167	log file (blocks) used during an entire run					
Total N_O Txn	81,124,942	Total count of NEW_ORDER transactions during the entire run					
Log per N_O Txn	10.53	Number of blocks per NEW_ORDER transaction					
8 Hour Log (GB)	777.81	(Log blocks per N_O * Redo Block Size 512 * 60 * tpmC * 8)/(1024*1024*1024)					
<b>Space Usage</b>	<b>GB Reqd.</b>	<b>Disk Size(GB)</b>	<b>Disks Priced</b>	<b>GB Priced</b>			
60 day space	9,345.66	17.09	546	9,330.52	9,330.52		
Logs (with mirror)	1,555.62	131.00	28	3,668.00			
OS, Oracle (with mirror)		34.06	2	68.12			
<b>Total Space</b>	<b>10901.27 GB</b>		<b>576</b>	<b>13066.64 GB</b>	<b>12.8 TB</b>		

<b>Log Space for 8 Hours</b>				<b>tpmC</b>	<b>322,805</b>
<b>Log Calc</b>	<b>Initial (Free Blks)</b>	<b>Final (Free Blks)</b>	<b>Change (Blocks)</b>	<b>Blks/N-O</b>	<b>8-Hr Blocks</b>
<b>Log Blocks Used</b>	123	854034290	854,034,167	<b>10.5274</b>	
<b>SUM(d_next_o_id)</b>	840280000	921404942	81,124,942		

## ***Appendix F - Third-Party Price Quotations***

---

**From:** MaryBeth Pierantoni [mailto:mary.beth.pierantoni@oracle.com]  
**Sent:** Friday, June 10, 2005 11:52 AM  
**To:** Weeks, Glenn O  
**Cc:** Freeman, Rick D; sushil.kumar@oracle.com  
**Subject:** Re: Unisys/Oracle TPC-C 64-bit Linux Result

<b>Product</b>	<b>Price</b>	<b>Qty</b>	<b>Extended Price</b>
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>
<b>TOTAL</b>			<b>\$260,800</b>

Oracle Pricing Contact: MaryBeth Pierantoni, [mary.beth.pierantoni@oracle.com](mailto:mary.beth.pierantoni@oracle.com), 916-315-5081

# COMPUTER RESOLUTIONS®

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

## SALES QUOTE

SQ-20036

Jun 22, 2005

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	Jul 22, 2005	John Palmieri				
Quotation	PO #	Reference	Ship VIA	Page	Printed		
SQ-20036			UPS GROUND	1	06/22/05 16:22		
L Item	Description	Qty	Ship	Price	M	Discount	Amount
1	ES7000-420 Server						
2	ES7420167-123 SYS: ES7000-420, 16X 1.6GHZ/6MB, 128GB	1		407362.00	EA		407362.00
3	MEM164-64G MEM:64GB MEMORY, 4GB DIMMS	2		118560.00	EA		237120.00
4	MOD3133-PCI MOD: I/F, 2-PORT 10 MODUEL, 133 MHZ	7		1805.00	EA		12635.00
5	FCH2340-PCX CTRL:FIBRE CHANNEL HBA, 1 PORT	9		1853.00	EA		16677.00
6	64-bit PCI						
7	ETH33312-PCX LAN HW: GBIT ETH CPR	2		152.00	EA		304.00
8	ES70004-UIF I/F: MONITOR, 17-INCH LDC, KYBRD, MSE	1		665.00	EA		665.00
9	CABLE						
10	USS2200/RS2000 Storage						
11	JBD201815-P84 6 RACKS - 84 X 18GB 15K RPM	7		28220.00	EA		197540.00
12	JBD201815-P14 DISK:0.3TBPDG,14X18GB,15RPM+10%SPARES	1		7342.00	EA		7342.00
13	CXR14610-2GF DISK:146GB,10KRPM,2GB FC, +10%SPARES	28		1463.00	EA		40964.00
14	JBD2002-SA DISK:NON-HA ENCLOSURE WITH 14 DRIVE SLOT	23		3197.00	EA		73531.00
15	JBD2011-SA DISK:NON-HA ENCLOSURE WITH 14 DRIVE SLOT	16		3413.00	EA		54608.00
16	RMM20103-ELS SAN:SYMM DISK VIRT SRVR II-ELS	8		4559.00	EA		36472.00
17	RMM20701-TAR SAN:HBA,ATTO PCI3300	24		1805.00	EA		43320.00
18	USS10300-SW SAN:USS2100 SW & PROD INF	1		5472.00	EA		5472.00
19	USS20310-LIC SAN:USS2200 10 TBYTE LIC	1		25200.00	EA		25200.00
20	JBD20003-CCL DISK:.3 METER 2GB FIBRE CHANNEL COPPER C	23		53.00	EA		1219.00
21	JBD2001-RMK DISK:ENCLOSURE RACK MOUNT KIT FOR 36U RA	39		190.00	EA		7410.00
22	CX300-DPE DPE:2RAID CNTRL, 1GB CACHE EA	1		13728.00	EA		13728.00
23	CX600-DAE RCK:FC 2GB STORAGE, OPTICAL I/F, DAE	1		5890.00	EA		5890.00
24	CXN300-WRK SYS MGT: STORAGE, NAVISPHERE MANAGER	1		2185.00	EA		2185.00
25	GS516-T16 LAN HW:GIGABIT SWITCH, 16P	2		2850.00	EA		5700.00
26	SWC81-SXR ADPTR:8 PORT SWITCH UNIT	2		1520.00	EA		3040.00
27	CBL121-SWC CABLE:12FT SYS TO ADJ RK	16		143.00	EA		2288.00
28	KBR28301-SXR KEYBD:RACK MOUNT KYBD	2		333.00	EA		666.00
						Page 1	
						SubTotal	1201338.00

SALES QUOTE	
SQ-20036	Jun 22, 2005

<b>Customer</b>		<b>Contact</b>		<b>Ship To</b>				
UNISYS CORPORATION 25725 JERONIMO RD MISSION VIEJO CA 92691 UNITED STATES				UNISYS CORPORATION 25725 JERONIMO RD MISSION VIEJO CA 92691 UNITED STATES				
<b>Account</b>	<b>Terms</b>	<b>Due Date</b>	<b>Account Rep</b>	<b>Schedule Date</b>				
UNIMISSI	NET 30	Jul 22, 2005	John Palmieri					
<b>Quotation</b>	<b>PO #</b>	<b>Reference</b>	<b>Ship VIA</b>	<b>Page</b>	<b>Printed</b>			
SQ-20036			UPS GROUND	2	06/22/05 16:22			
<b>L</b>	<b>Item</b>	<b>Description</b>	<b>Qty</b>	<b>Ship</b>	<b>Price</b>	<b>M</b>	<b>Discount</b>	<b>Amount</b>
29	MON2145-LCD	DISPLAY: 1U LCD MONITOR	2		2565.00	EA		5130.00
30	SFR9-PWR	ACC: 9-PLUG POWER STRIP	12		162.00	EA		1944.00
31	USE1936-LC6	PWR CORD:C20/NEMA L6-20P	12		86.00	EA		1032.00
32	HRT361941-OFT	ACC:36U 19X41 OPEN FRT CAB, HRT COLOR	4		1425.00	EA		5700.00
33		ES3120L Servers						
34	ESL3120-340	SYS:ES3120L W/ 1X 3.4GHZ PROC. 0MB MEM	8		1881.00	EA		15048.00
35	CPL3120341-1MB	PROC: 1X 3.4GHZ INTEL XEON/1MB CACHE	8		1065.00	EA		8520.00
36	DIM3120021-2GB	MEM: 2GB, 2X 1GB DIMMS DDR SDRAM	8		864.00	EA		6912.00
37	HDP36115-DC4	DISK:36GB U320 15K CAR	8		398.00	EA		3184.00
38	ESL3120-VRL	ACC: ESL3120 V-RAILS	8		331.00	EA		2648.00
39	WSS200304-EN	O/S:W2003 SERVER ENGLISH	8		949.00	EA		7592.00
40	DISCOUNT	VOLUME CASH DISCOUNT	1		-163676.00	EA		-163676.00
41		Disk come with a 3 year						
42		return-to-factory warranty						
43		7 day replenishment						
44		Quote valid for 90 days.						
45								
							<b>Taxable</b>	0.00
							<b>Tax</b>	0.00
							<b>Exempt</b>	1095372.00
							<b>Total</b>	1095372.00
							<b>Paid</b>	0.00
							<b>Tr Disc</b>	0.00
							<b>Balance</b>	1095372.00
Amount shown in Rate :0.00 of								

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Address http://www.gocables.com/CATS\_Patch\_Cables/index.htm#Standard

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**Standard CAT 5e Patch Cables**

GCP08889  
 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. Speeds up to 350 MHz.

**New!** Extended lengths are now available!

Product Details>>

Part No.	Length	Each	10 or More 25% Off
GCP0888901	1 ft	0.55	0.42
GCP0888903	3 ft	0.73	0.55
GCP0888905	5 ft	0.88	0.66
GCP0888907	7 ft	1.03	0.77
GCP0888910	10 ft	1.26	0.94
GCP0888914	14 ft	1.55	1.16
GCP0888920	20 ft	2.00	1.50
GCP0888925	25 ft	2.37	1.78
GCP0888950	50 ft	4.91	3.68
GCP0888975	75 ft	7.13	5.34
GCP088891C	100 ft	9.38	7.03

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CAT 5e / CAT6 FAQ

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You are here: Home Multimode Fiber Optic Cables

**Multimode Duplex Fiber Optic Patch Cables**

GoCables stocks an exceptional selection and inventory of Fiber Optic Patch Cables. We also offer customization on our fiber optic cables to any length you specify. Fiber Optic Patch Cables in Multimode are available in 50µm and 62.5µm. SC, ST, LC, FC, MT-RJ, E2000 and MU connectors have polished ceramic ferrules for precision and durability. The SC and LC Duplex Patch Cables come equipped with a clip to maintain polarity.

**GCFAZLL**

**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*.

 More Information>>

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

Available Lengths				Add to Cart	
Part #	Cable Length	Unit Price	10 or more		
GCFAZLL01	1 m	26.42	19.82	Click Here	
GCFAZLL02	2 m	27.68	20.76		
GCFAZLL03	3 m	28.94	21.71		
GCFAZLL05	5 m	31.46	23.60		
GCFAZLL10	10 m	37.76	28.32		
GCFAZLL15	15 m	44.06	33.05		
GCFAZLL20	20 m	50.36	37.77		
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Custom Length Cable Pricing					Click Here

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The GoCables production facility is well equipped with Videconn(TM) video inspection scope and monitor for easy detection of scratches, cracks, dirt and any other undesirable conditions during production. Optical fiber inspection scopes are used for final inspection. Polishing of the

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