Hewlett-Packard Company

TPC Benchmark™ C
Full Disclosure Report
for

HP ProLiant ML350 G5

Using
Oracle Database 11g Standard Edition One and
Windows 2003 SP1 R2

First Edition
September 2007

First Edition − September 12, 2007

Hewlett Packard Company (HP) believes that the information in this document is accurate as of the publication date. The information in this document is subject to change without notice. HP assumes no responsibility for any errors that may appear in this document. The pricing information in this document is believed to accurately reflect the current prices as of the publication date. However, HP provides no warranty of the pricing information in this document.

Benchmark results are highly dependent upon workload, specific application requirements, and system 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 were obtained in a rigorously controlled environment. Results obtained in other operating environments may vary significantly. HP does 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.

Parallel Database Cluster Model PDC and ProLiant are registered trademarks of Hewlett Packard Company.

ORACLE 10g, Pro*C, PL/SQL, SQL*Net, SQL*Plus are registered trademarks of Oracle Corporation.

TPC Benchmark is a trademark of the Transaction Processing Performance Council.

All other brand or product names mentioned herein must be considered trademarks or registered trademarks of their respective owners.

Table of Contents

Preface

The TPC Benchmark C was developed by the Transaction Processing Performance Council (TPC). The TPC was founded to define transaction processing benchmarks and to disseminate objective, verifiable performance data to the industry. This full disclosure report is based on the TPC Benchmark C Standard Specifications Version 5.9, released June, 2007.

TPC Benchmark C Overview

The TPC describes this benchmark in Clause 0.1 of the specifications as follows:

TPC Benchmark C is an On Line Transaction Processing (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 of 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.

TPC-C uses terminology and metrics that are similar to other benchmarks, originated by the TPC or others. Such similarity in terminology does not in any way imply that TPC-C results are comparable to other benchmarks. The only benchmark results comparable to TPC-C are other TPC-C results conformant with the same revision.

Despite the fact that this benchmark offers a rich environment that emulates many OLTP applications, 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 other environments are not recommended.

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-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.

HP ProLiant ML350 G5 2.66 GHz C/S with 2 ProLiant ML110G4	TPC-C Version 5.9 Report Date September 12, 2007

Total System Cost	TPC-C Throughput	Price/Performance	Availability Date
$74,556 USD	**102454 tpmC**	**$0.73 USD/ tpmC**	**December 31, 2007**

Processors	Database Manager	Operating System	Other Software	Number of Users
1/4/4 Intel X5355 2.66 GHz QC	Oracle Database 11g Standard Edition One	Windows 2003 Standard x64 Edition SP 1 R2	Microsoft COM+	**81,000**

HP ProLiant ML350 G5 w/ 2.66 GHz processor and 24GB RAM,
2 SMART Array P800 SAS RAID Controllers,
1 SMART Array E200i SAS RAID Controller,
2 X 36GB 10K SFF SAS Drives, and
4 X 146GB 10K SFF SAS Drives in internal bay

4 RTEs simulating 81,000 PCs

1 HP 5642 Rack containing: 4 X MSA 70 StorageWorks Enclosure with 25X 36 GB 15K SFF SAS Drives

2 HP ProLiant ML110 G4 NC110T

System Components	Server		Each Client	
	Quantity	Description	Quantity	Description
Processor	1/4/4	Intel X5355 QC 2.66 GHz 8 MB cache	1	3.0GHz Xeon w/ 256K cache
Memory	24 GB	4x4GB and 4x2GB		1.5GB
Disk Controllers	2	Smart P800 Controller	1	Integrated IDE Controller
	1	Smart E200i Controller		
Disk Drives	4	146 GB 10K SFF SAS drives (log)	1	80 GB ATA Drive
	100	36 GB 15K SFF SAS drives (data)		
	1	36 GB 10K SFF SAS drives (OS)		
Total Storage	3960.6 GB			

Hewlett-Packard Company	HP ProLiant ML350G5	TPC-C Rev. 5.9	
		Report Date	12-Sep-07

Description	Part Number	Pricing	Unit Price	Qty	Extended Price	3 yr. Maint. Price
Server Hardware						
HP ProLiant ML350G5 SFF SAS/SATA Tower CTO Chassis	395570-B21	1	1,013	1	1,013	
HP X5355 ML350G5 FIO Kit	436015-L21	1	1,399	1	1,399	
HP SA E200 64MB Cache FIO Kit	405102-B21	1	99	1	99	
8 GB FBD PC2-5300 2 x 4 GB Kit	397415-B21	1	2,399	1	2,399	
HP 48X CD-ROM ALL (no screws)	384758-B21	1	79	1	79	
8 GB FBD PC2-5300 2 x 4 GB Kit	397415-B21	1	2,399	1	2,399	
4 GB FBD PC2-5300 2 x 2 GB Kit	397413-B21	1	749	2	1,498	
HP Smart Array P800 Controller	381513-B21	1	1,099	2	2,198	
HP NC7170 PCI-X Dp Gigabit Svr Adapter	313881-B21	1	269	1	269	
HP s7540 17in. CRT Monitor	PF997AA#ABA	1	139	1	139	
HP 5642 Pallet Unassembled Rack	358254-B21	1	865	1	865	
T1000 UPS	AF403A	1	395	1	395	
36GB 15Krpm SFF SAS HDD	431933-B21	1	369	100	36,900	
146GB 10K SAS 2.5 HP HDD	431958-B21	1	409	4	1,636	
HP 36GB 10K SAS 2.5 Hot Plug Hard Drive	375859-B21	1	269	1	269	
HP StorageWorks MSA-70 Storage	418800-B21	1	3,199	4	12,796	
HP 3y 4h 24x7 MSA60/70 HW Support	UF303E	1	2,198	4		8,792
HP 3y 4h 24x7 ProLiant ML350 HW Support	U4513E	1	449	1		449
				Subtotal	64,353	9,241
Server Software						
Windows Server 2003, Standard Edition RC 2	P73-02509	3	999	1	999	
Microsoft Problem Resolution Services	N/A	3	245	1		245
Oracle Database 11g Standard Edition One, Unlimited Users , 3 years		2	2,498	1	2,498	
Oracle Premium Support for 3 years		2	1,099	3		3,297
				Subtotal	3,497	3,542
Client Hardware						
HP ML110G4 P915 NHP-SATA US Svr,512MB, NHP 160GB SATA, single port nic,(	417248-001	1	799	2	1,598	
HP 512MB UB PC2-5300 1x512MB Kit	432803-B21	1	69	2	138	
HP NC110T PCIe Gigabit Server Adapter	434905-B21	1	99	2	198	
HP 3y 4h 24x7 ProLiant ML110 HW Support	U4435E	1	366	2		732
				Subtotal	1,934	732
Client Software						
Windows Server 2003, Standard Edition RC 2	P73-02509	3	999	2	1,998	Incl.
Microsoft Visual Studio Standard 2005	127-00012	3	250	1	250	
				Subtotal	2,248	245
User Connectivity						
4 port KVM switch (plus spares)	NW0099	5	66	3	198	
3 foot Cat5E Non Booted Network Patch Cables (plus spares)	415-5003	4	1	4	5	
				Subtotal	203	0
Large Purchase and Net 30 discount (See Note 1)	15.0%	1			($9,943)	($1,496)
				Total	$62,292	$12,264

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 assumptions 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 benchmark pricing specifications. If you find that the stated prices are not available according to these terms, please inform the TPC at pricing@tpc.org. Thank you.

Three-Year Cost of Ownership: USD	$74,556
tpmC Rating:	102,454
$ / tpmC: USD	$0.73

Pricing: 1=HP Direct 800-203-6748 2=Oracle 3= Microsoft 4= http://store.graycables.com 5= www.serversdirect.com

Note 1 = Discount based on HP Direct guidence applies to all lines where pricing = 1

The benchmark results were audited by Lorna Livingtree of Performance Metrics

Numerical Quantities Summary

MQTH, Computed Maximum Qualified Throughput   102454 tpmC

Response Times (in seconds)	Average	90%	Maximum
New-Order	0.202	0.259	1.562
Payment	0.161	0.207	1.907
Order-Status	0.206	0.276	1.859
Delivery (interactive portion)	0.106	0.102	1.557
Delivery (deferred portion)	0.112	0.249	3.240
Stock-Level	0.871	1.208	3.240
Menu	0.106	0.102	1.562

Transaction Mix, in percent of total transaction

New-Order	44.915%
Payment	43.020%
Order-Status	4.020%
Delivery	4.025%
Stock-Level	4.020%

Emulation Delay (in seconds)	Resp.Time	Menu
New-Order	0.10	0.10
Payment	0.10	0.10
Order-Status	0.10	0.10
Delivery (interactive)	0.10	0.10
Stock-Level	0.10	0.10

Keying/Think Times (in seconds)	Min.	Average	Max.
New-Order	18.005/0.00	18.005/12.010	18.013/120.037
Payment	3.010/0.00	3.010/12.011	3.018/120.096
Order-Status	2.010/0.00	2.010/10.011	2.017/100.013
Delivery (interactive)	2.010/0.00	2.010/5.020	2.014/50.153
Stock-Level	2.010/0.00	2.010/5.011	2.016/49.995

Test Duration

Ramp-up time	70 Min. 17 Sec.
Measurement interval	127 minutes
Transactions (all types) completed during measurement interval	28,969,542
Ramp down time	63 Min 43 Sec.

Checkpointing

Number of checkpoints	4
Checkpoint interval	29:04

Abstract

Overview

This report documents the methodology and results of the TPC Benchmark C test conducted on the hp ProLiant ML350 G5. The operating system used for the benchmark was Red Hat Enterprise Linux 4. The DBMS used was Oracle Database 10g Standard Edition One.

TPC Benchmark C 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:

102,454 tpmC
$0.73 USD per tpmC
Available as of December 31, 2007.

Standard and Executive Summary Statements

The following pages contain an executive summary of results for this benchmark.

Auditor

The benchmark configuration, environment and methodology were audited by Lorna Livingtree of Performance Metrics Inc. to verify compliance with the relevant TPC specifications.

General Items

Application Code and Definition Statements

The application 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 output functions.

Appendix A contains all source code implemented in this benchmark.

Test Sponsor

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

This benchmark was sponsored by Hewlett Packard Company. The benchmark was developed and engineered by Hewlett Packard Company and Oracle Corporation. Testing took place at HP Performance Engineering Laboratory in Houston, Texas.

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 by not limited to:

- *Database options*
- *Recover/commit options*
- *Consistency locking options*
- *Operating system and application configuration parameters*

This requirement can be satisfied by providing a full list of all parameters.

Appendix C contains the tunable parameters for the database, the operating system, and the transaction monitor.

Configuration Items

Diagrams of both measured and priced configurations must be provided, accompanied by a description of the differences.
The configuration diagram for both the tested and priced system are the same and included on the following page

Figure 1. Benchmarked and Priced Configuration

HP ProLiant ML350 G5 w/ 2.66 GHz processor and 24GB RAM, 2 SMART Array P800 SAS RAID Controllers, 1 SMART Array E200i SAS RAID Controller, 2 X 36GB 10K SFF SAS Drives, and 4 X 146GB 10K SFF SAS Drives in internal bay

4 RTEs simulating 81,000 PCs

1 HP 5642 Rack containing: 4 X MSA 70 StorageWorks Enclosure with 25X 36 GB 15K SFF SAS Drives

2 HP ProLiant ML110 G4 NC110T
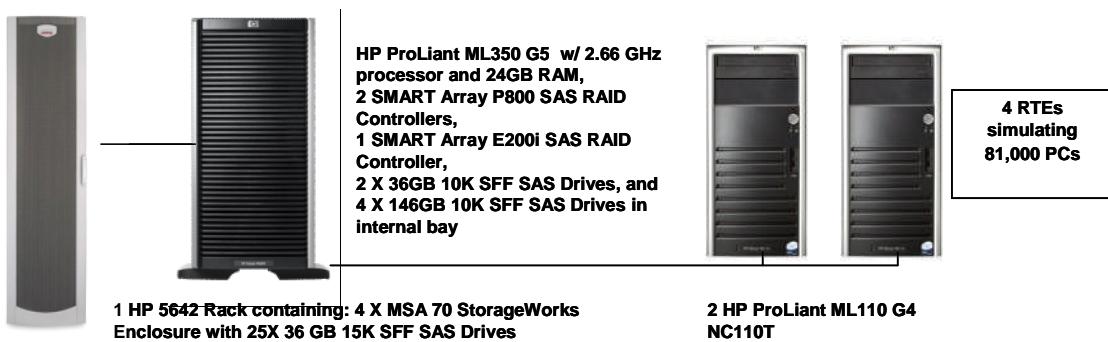
Clause 1 Related Items

Table Definitions
Listing must be provided for all table definition statements and all other statements used to set up the database.
Appendix B contains the code used to define and load the database tables.

Physical Organization of Database
The physical organization of tables and indices within the database must be disclosed.
84 disks used in the benchmark had a capacity of 18.2GB 15K rpm, and 2 disks used in the benchmark had a capacity of 146.8 GB 10K rpm.

Controller	Storage	Unformatted Capacity	Contents
HP SMART Array P800	2xMSA 70 Enclosures containing 50x36 GB 15K rpm SFF SAS disk drives	1,690.00 GB	1/2 Tables and Indexes
HP SMART Array P800	2xMSA 70 Enclosures containing 50x36 GB 15K rpm SFF SAS disk drives	1,690.00 GB	1/2 Tables and Indexes
HP SMART Array E200i	Internal drive bays 1x36 GB 10K rpm SFF SAS disk drive	33.80 GB	O/S
	4x146 GB 10K rpm SFF SAS disk drives	546.80 GB	Databse Logs

Priced Configuration:

All hardware and software remained the same between the benchmarked and priced configurations.

Insert and 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 restrictions 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 minimum key value for these new rows.

All insert and delete functions were verified to be fully operational during the entire benchmark.

Partitioning
While there are a few restrictions placed upon horizontal or vertical partitioning of tables and rows in the TPC-C benchmark, any such partitioning must be disclosed.

None.

Replication, Duplication or Additions
Replication of tables, if used, must be disclosed. Additional and/or duplicated attributes in any table must be disclosed along with a statement on the impact on performance.

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

Clause 2 Related Items

Random Number Generation

The method of verification for the random number generation must be described.

Random numbers were generated using the drand48() and lrand48() UNIX calls. These functions generate pseudo random numbers using the linear congruential algorithm and 48-bit integer arithmetic. The random number generators are initially seeded using the srand48() call.

Input/Output Screen Layout

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

All screen layouts followed the specifications exactly.

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).

The terminal attributes were verified by the auditor manually exercising each specification on a representative ProLiant ML110.

Presentation Manager or Intelligent Terminal

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

Application code running on the client machines implemented the TPC-C user interface. No presentation manager software or intelligent terminal features were used. The source code for the forms applications is listed in Appendix A.

Transaction Statistics

Table 2.1 lists the numerical quantities that Clauses 8.1.3.5 to 8.1.3.11 require.

Table 2. 1 Transaction Statistics

	Statistic	Value
New Order	Home warehouse order lines	99.00%
	Remote warehouse order lines	1.00%
	Rolled back transactions	1.00%
	Average items per order	10.00
Payment	Home warehouse	85.01%
	Remote warehouse	14.99%
	Accessed by last name	60.01%
Order Status	Accessed by last name	60.05%
Delivery	Skipped transactions	None
Transaction Mix	New Order	44.915%
	Payment	43.020%
	Order status	4.020%
	Delivery	4.025%
	Stock level	4.020%

Queuing Mechanism

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

Microsoft COM+ on each client system served as the queuing mechanism to the database. Each delivery request was submitted to Microsoft COM+ asynchronously with control being returned to the client process immediately and the deferred delivery part completing asynchronously.

Clause 3 Related Items

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.

All ACID property tests were successful. The executions are described below.

Atomicity

The system under test must guarantee that the database 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.

Completed Transactions

A row was randomly selected from the warehouse, district and customer tables, and the balances noted. A payment transaction was started with the same warehouse, district and customer identifiers and a known amount. The payment transaction was committed and the rows were verified to contain correctly updated balances.

Aborted Transactions

A row was randomly selected from the warehouse, district and customer tables, and the balances noted. A payment transaction was started with the same warehouse, district and customer identifiers and a known amount. The payment transaction was rolled back and the rows were verified to contain the original balances.

Consistency

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

Consistency conditions one through four were tested using a shell script to issue queries to the database. The results of the queries verified that the database was consistent for all four tests.

A run was executed under full load over two hours with checkpoints.

The shell script was executed again. The result of the same queries verified that the database remained consistent after the run.

Isolation

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

Isolation tests one through nine were executed using shell scripts to issue queries to the database. Each included timestamps to demonstrate the concurrency of operations. The results of the queries were captured to files. The captured files were verified by the auditor to demonstrate the required isolation had been met.

Isolation test 7 followed Case D, where T3 does not stall and no transaction is ROLLED BACK. T4 query of item price verifies to the changed prices of T3.

Durability

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

Durable Media Failure

Durability from media failure was demonstrated on a database scaled for 4000 warehouses. The standard driving mechanism was used to generate the transaction load of 40000 users. The fully scaled database under full load would also have passed the following test.

Loss of Data

To demonstrate recovery from a permanent failure of durable medium containing TPC-C tables, the following steps were executed:

1. A backup of the database was made.
2. The total number of New Orders was determined by the sum of D_NEXT_O_ID of all rows in the DISTRICT table giving the beginning count. Consistency check 3 was verified before run.
3. The RTE was started with 40500 users
4. The test was allowed to run for a minimum of 5 minutes.
5. Removed a disk from an array containing database data.
6. Oracle10g recorded errors about corrupt data on the partition. The database and the RTE were then shut down.
7. The removed disk was replaced from the spares and the logical drives on that array were restored from backup.
8. The database was then started. The database was recovered using the recover command from SQLPLUS. The database was opened and Oracle 10g performed instance recovery.
9. Consistency conditions were executed and verified.
10. Step 2 was repeated and the difference between the first and second counts was noted.
11. An RTE report was generated for the entire run time giving the number of NEW-ORDERS successfully returned to the RTE.
12. The counts in step 10 and 11 were compared and the results verified that all committed transactions had been successfully recovered.
13. Samples were taken from the RTE files and used to query the database to demonstrate successful transactions had corresponding rows in the ORDER table.

Loss of Log

To demonstrate recovery from a permanent failure of durable medium containing TPC-C tables, the following steps were executed:

1. The total number of New Orders was determined by the sum of D_NEXT_O_ID of all rows in the DISTRICT table giving the beginning count. Consistency check 3 was verified before run.
2. The RTE was started with 40500 users.
3. The test was allowed to run for a minimum of 5 minutes.
4. A log disk containing log information was removed.
5. The system continued running because the logs are mirrored.
6. The database and the RTE were then shut down.
7. The database was then started. Consistency conditions were executed and verified.
8. Step 1 was repeated and the difference between the first and second counts was noted.

9. An RTE report was generated for the entire run time giving the number of NEW-ORDERS successfully returned to the RTE.
10. The counts in step 8 and 9 were compared and the results verified that all committed transactions had been successfully recovered.
11. Samples were taken from the RTE files and used to query the database to demonstrate successful transactions had corresponding rows in the ORDER table.

Instantaneous Interruption, Loss of Memory

Because loss of power erases the contents of memory, the instantaneous interruption and the loss of memory tests were combined into a single test. This test was executed on a fully scaled database of 8100 warehouses under a full load of 81000 users. The following steps were executed:

1. The total number of New Orders was determined by the sum of D_NEXT_O_ID of all rows in the DISTRICT table giving the beginning count.
2. The RTE was started with 81000 users.
3. The test was allowed to run for a minimum of 5 minutes.
4. A system crash and loss of memory were induced by turning the computer off. No battery backup or Uninterruptible Power Supply (UPS) were used to preserve the contents of memory.
5. The RTE was shutdown.
6. Power was restored and the system restarted.
7. Oracle10g was restarted and performed an automatic recovery.
8. Consistency conditions were executed and verified.
9. Step 1 was repeated and the difference between the first and second counts was noted.
10. An RTE report was generated for the entire run time giving the number of NEW-ORDERS successfully returned to the RTE.
11. The counts in step 9 and 10 were compared and the results verified that all committed transactions had been successfully recovered.
12. Samples were taken from the RTE files and used to query the database to demonstrate successful transactions had corresponding rows in the ORDER table.

Clause 4 Related Items

Initial Cardinality of Tables

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

Table 4.1 Number of Rows for Server

Table	Occurrences
Warehouse	8500
District	85000
Customer	255000000
History	255000000
Order	255000000
New Order	76500000
Order Line	2550403284
Stock	850000000
Item	100000
Unused Warehouses	400

Database Layout

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

The benchmarked configuration used two SMART Array P800 SAS RAID Controllers, each of which was attached to two MSA 70 StorageWorks Enclosures which contained twentyfive 36 GB 15K rpm SFF SAS disk drives each for the database tables and indexes, and one SMART Array E200i SAS RAID Controllers attached to internal storage bays containing one 36 GB 10K rpm SFF SAS disk drive for the O/S and four 146 GB 10K rpm SFF SAS disk drives for Oracle redo logs. The accelerator caches were enabled for data volumes and were set to 100% write, and the accelerator cache was disabled for the redo log volume, but was enabled for the O/S volume and set at default settings of 50% read and 50% write.

Section 1.2 of this report details the distribution of database tables and logs across all disks. The code that creates the database and tables are included in Appendix B.

Type of Database

A statement must be provided that describes:

1. *The data model implemented by 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 transaction. 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 Edition One is a relational DBMS.

Anonymous block PL/SQL and stored procedures were accessed through the ORACLE Call Interface. Application code is included in Appendix A.

Database Mapping
The mapping of database partitions/replications must be explicitly described.
The database was not replicated. The tables were not partitioned.

60 Day Space
Details of the 60 day space computations along with proof that the database is configured to sustain 8 hours of growth for the dynamic tables (Order, Order-Line, and History) must be disclosed.

SEGMENT	BLOCKS	BLOCK_SIZE	REQUIRED	STATIC	DYNAMIC	OVERSIZE
CUSTCLUSTER	117043200	2048	93836148	93836148	0	23207052
DB_STAT	1048576	2048	1048576	1048576	0	0
DISTCLUSTER	97280	2048	96035	96035	0	1245
HIST	13045760	2048	9186621	0	7701363	3859139
ICUST1	385280	16384	353329	353329	0	31951
ICUST2	7690240	2048	7184574	7184574	0	505666
IDIST	25600	2048	22850	22850	0	2750
IITEM	10240	2048	5914	5914	0	4326
IORDR2	7434240	2048	5200574	5200574	0	2233666
ISTOK	1136000	16384	1080396	1080396	0	55604
ITEMCLUSTER	10240	2048	8868	8868	0	1372
IWARE	10240	2048	6116	6116	0	4124
NORDCLUSTER_QUEUE	1525760	2048	1117898	1117898	0	407862
ORDRCLUSTER_QUEUE	23243520	16384	15232739	0	12769968	8010781
STOKCLUSTER	131399680	2048	127646963	127646963	0	3752717
SYSAUX	61440	2048	61440	61440	0	0
SYSTEM	204800	2048	204800	204800	0	0
SYS_IQ0000011966$$	23243520	16384	47452	47452	0	23196068
SYS_IQ0000011970$$	1525760	2048	159700	159700	0	1366060
WARECLUSTER	15360	2048	10087	10087	0	5273

STATIC	DYNAMIC	OVERSIZE	DAILY_GROW	DAILY_SPRE	SPACE60
496919918	219722214	571412968	42374852	0	3039411038

Disk Capacity	Quantity	Total
33.8	100	3380
136.7	4	546.8

	Space Required	Space Configured
Data	2899	3380
Log	485	546.8

Checkpoint Interval	# checkpoints in 8 hours	Size of Logfile (MB)	Total Space Req'd for 8 hours (MB)
1741	17	14600	496400

Clause 5 Related Items

Throughput

Measured tpmC must be reported

Measured tpmC   102454 tpmC
Price per tpmC $0.73 per tpmC

Response Times

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

Table 5.1: Response Times

Type	Average	Maximum	90th %
New-Order	0.202	2.130	0.259
Payment	0.161	1.907	0.207
Order-Status	0.206	1.859	0.276
Interactive Delivery	0.106	1.557	0.102
Deferred Delivery	0.112	1.438	0.249
Stock-Level	0.871	3.240	1.208
Menu	0.106	1.562	0.102

Keying and Think Times

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

Table 5.2: Keying Times/Think Times

Type	Minimum	Average	Maximum
New-Order	18.005/0.00	18.005/12.010	18.013/120.037
Payment	3.010/0.00	3.010/12.011	3.018/120.096
Order-Status	2.010/0.00	2.010/10.011	2.017/100.013
Interactive Delivery	2.010/0.00	2.010/5.020	2.014/50.153
Stock-Level	2.010/0.00	2.010/5.011	2.016/49.995

Response Time Frequency Distribution Curves and Other Graphs

Response Time frequency distribution curves (see Clause 5.6.1) must be reported for each transaction type.
The performance curve for response times versus throughput (see Clause 5.6.2) must be reported for the New-Order transaction.
Think Time frequency distribution curves (see Clause 5.6.3) must be reported for each transaction type.
Keying Time frequency distribution curves (see Clause 5.6.4) must be reported for each transaction type.
A graph of throughput versus elapsed time (see Clause 5.6.5) must be reported for the New-Order transaction.

Figure 5.1: Response Times Frequency Distribution for New Order Transactions
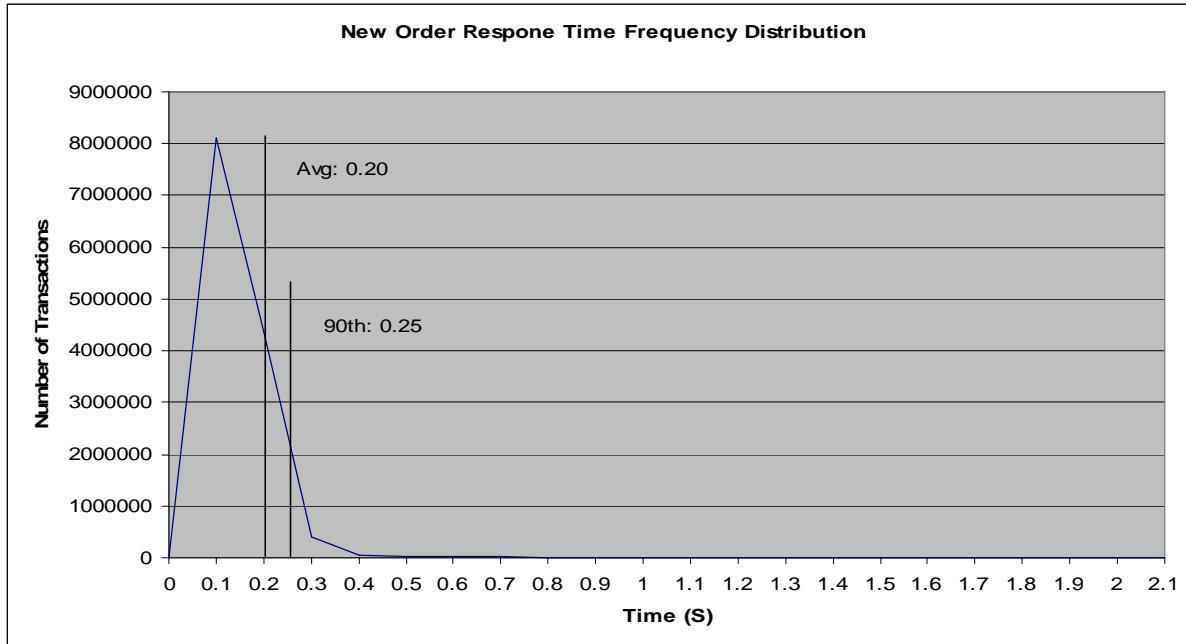
Figure 5.2: Response Times Frequency Distribution for Payment Transactions
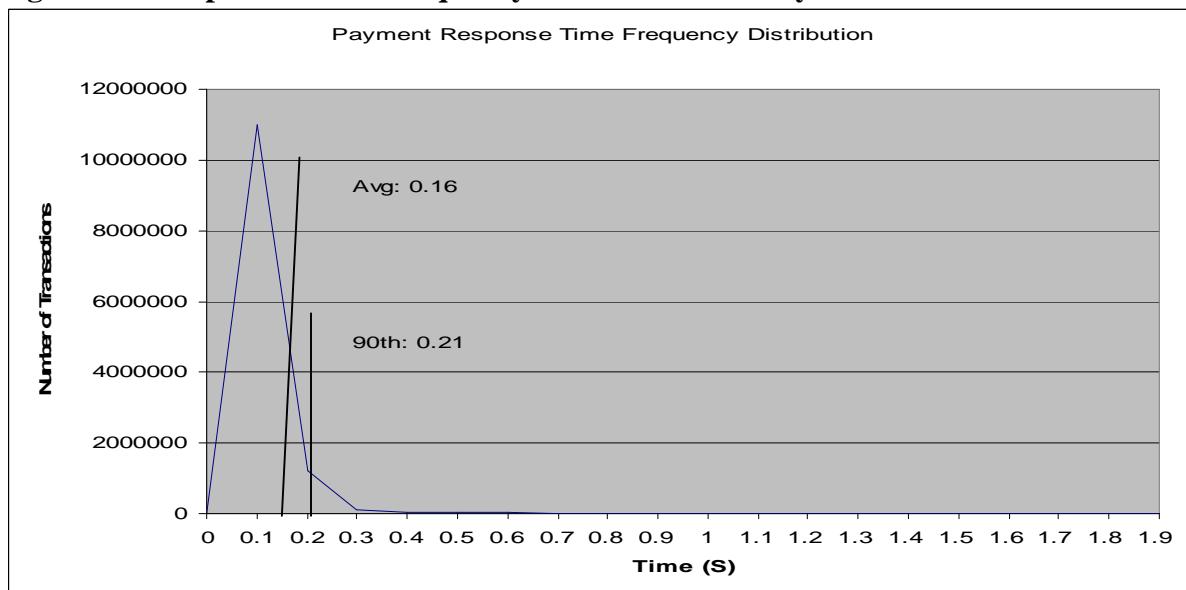
Figure 5.3: Response Times Frequency Distribution for Order Status Transactions

Order Status Response Time Frequency Distribution

Avg: 0.21

90th: 0.28
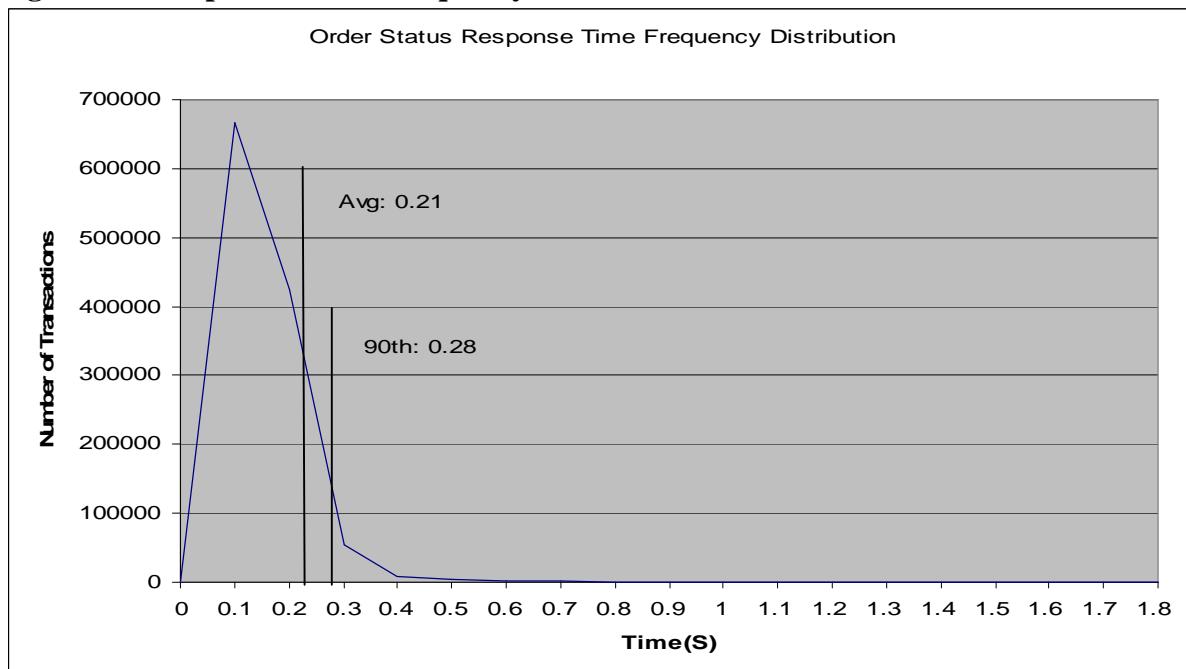
Figure 5.4: Response Times Frequency Distribution for Delivery Transactions

Batch Delivery Response Time Frequency Distribution

Avg: 0.11

90th: 0.25
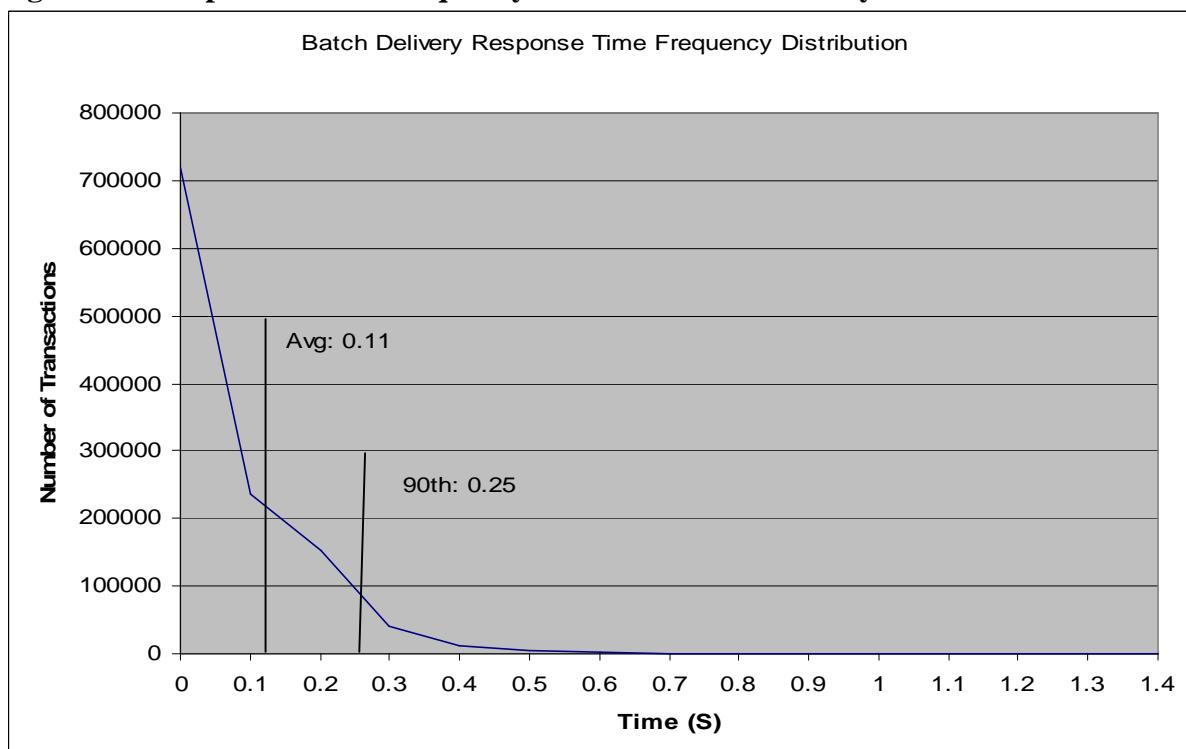
Figure 5.5: Response Times Frequency Distribution for Stock Level Transactions

Stock Level Response Time Frequency Distribution

Avg: 0.87

90th: 1.21
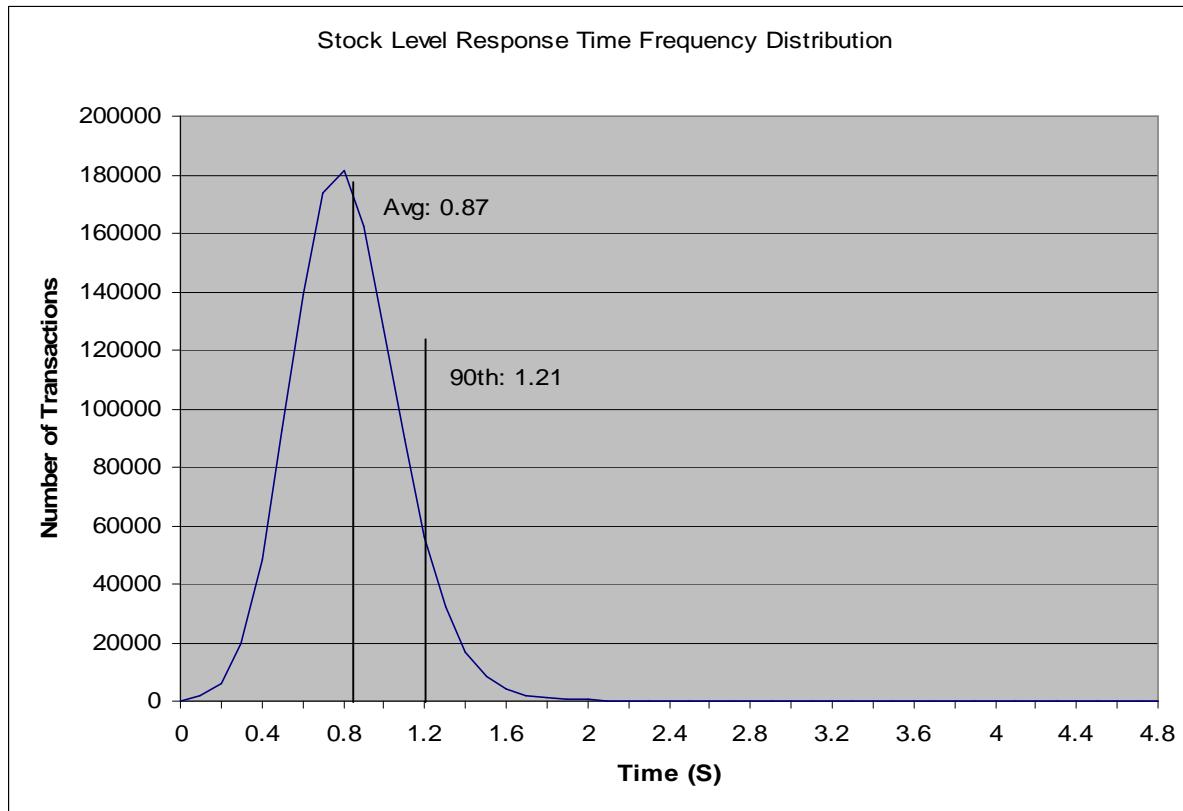
Figure 5.6: Response Time versus Throughput

Response Time vs. Throughput
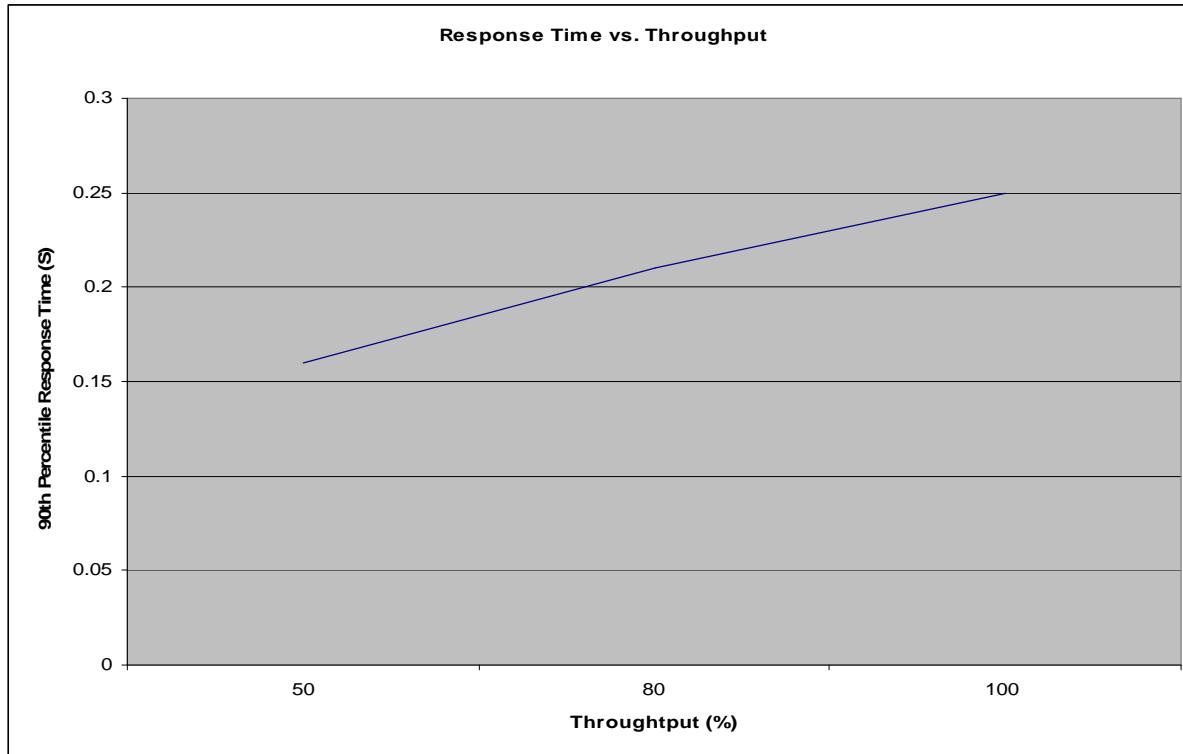
Figure 5.7: Think Times distribution for New Order Transactions

New Order Think Time Distribution

Avg: 12.01
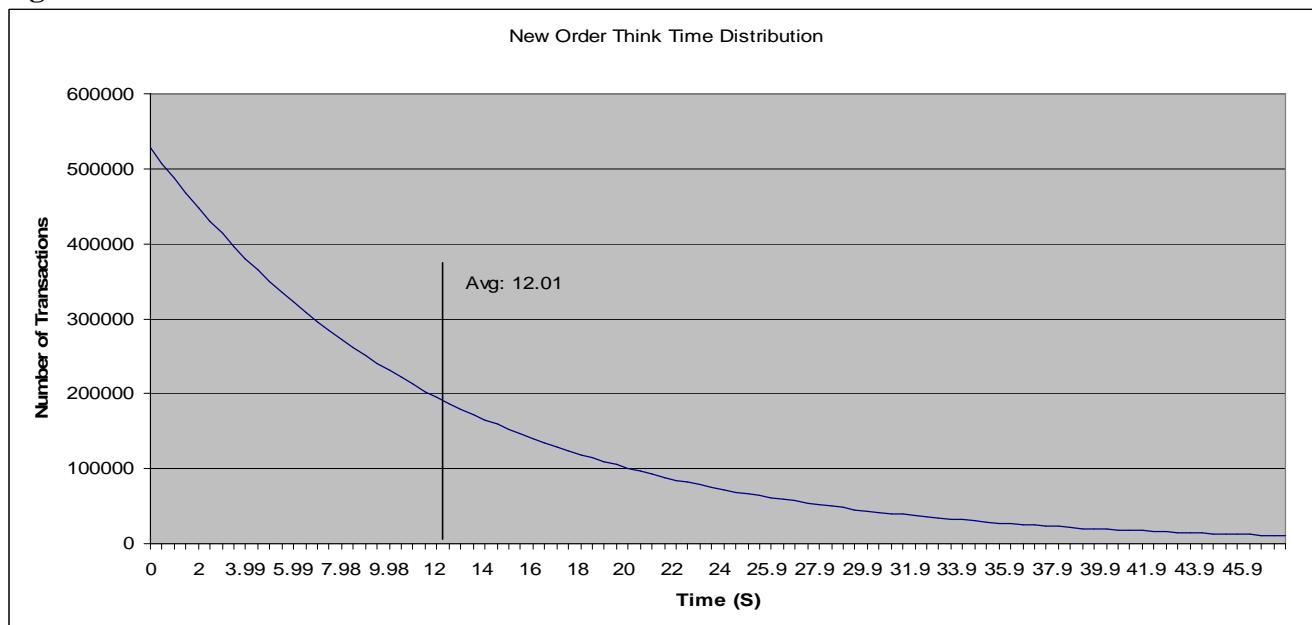
Figure 5.8: Throughput versus Time

tpmC vs. Time

Measurement Interval

Checkpoint
Start Times
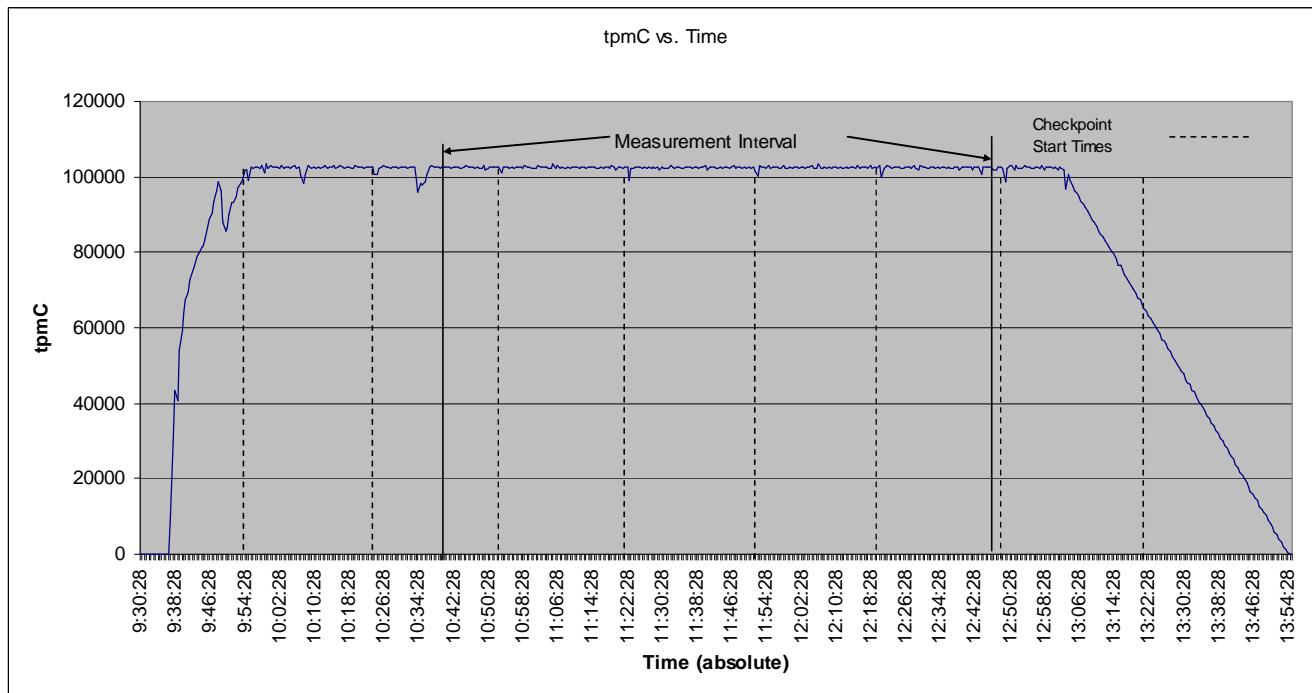
Steady State Determination

The method used to determine that the SUT had reached a steady state prior to commencing the measurement interval must be disclosed.

Steady state was determined using real time monitor utilities from both the operating system and the RTE. Steady state was further confirmed by the throughput data collected during the run and graphed in Figure 5.8.

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.

For each of the TPC Benchmark C transaction types, the following steps are executed. Each emulated user starts an Internet browser and asks to attach to the application on the desired client. The application formats the menus, input forms and data output using HTML (HyperText Markup Language). The HTML strings are transmitted over TCP/IP back to the client, where they can be
displayed by any Web Browser software. The application on the client is run under the control of the Microsoft IIS.

Transactions are submitted by the RTE in accordance with the rules of the TPC-C benchmark. The emulated user chooses a transaction from the menu. The RTE records the time it takes from selecting the menu item to receiving the requested form. Data is generated for input to the form, then the user waits the specified keying time. The submit is sent and the RTE records the time it takes for the transaction to be processed and all the output data to be returned. The user then waits for the randomly generated think time before starting the process over again. All timings taken by the RTE generate a start and end timestamp. Keying and think times are calculated as the difference between end-time of a timing to the start of the next.

The database records transactions in the database tables and the transaction log. Writes to the database may stay in Oracle's in-memory data cache for a while before being written to disk. Checkpoints are initiated once the log files were filled and allowed to roll over.

Measurement Period Duration

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

The reported measured interval was 7200 seconds.

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.

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

Transaction Statistics

The percentage of the total mix for each transaction type must be disclosed. The percentage of New-Order transactions rolled back as a result of invalid item number must be disclosed. The average number of order-lines entered per New-Order transaction must be disclosed. The percentage of remote order lines per New-Order transaction must be disclosed. The percentage of remote Payment transactions must be disclosed. The percentage of customer selections by customer last name in the Payment and Order-Status transactions must be disclosed. The percentage of Delivery transactions skipped due to there being fewer than necessary orders in the New-Order table must be disclosed.

Table 5.3: Transaction Statistics

Statistic		Value
New Order	Home warehouse order lines	99.00%
	Remote warehouse order lines	1.00%
	Rolled back transactions	1.00%
	Average items per order	10.00
Payment	Home warehouse	85.01%
	Remote warehouse	14.99%
	Accessed by last name	60.01%
Order Status	Accessed by last name	60.05%
Delivery	Skipped transactions	0
Transaction Mix	New Order	44.915%
	Payment	43.020%
	Order status	4.020%
	Delivery	4.025%
	Stock level	4.020%

Checkpoint

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.

Oracle database was performed checkpoints at log switches. The database log files were sized such that a log switch would occur approximately every 29 minutes at the desired throughput. One complete checkpoint occurred and a second checkpoint started during the warm-up period. The checkpoint that was started in warm up completed, and four complete checkpoints occurred during the measurement period.

Clause 6 Related Items

RTE Descriptions

If the RTE is commercially available, then its inputs must be specified. Otherwise, a description must be supplied of what inputs (e.g., scripts) to the RTE had been used.

PRTE Software was used to simulate terminal users, generate random data and record response times. This package ran on systems that are distinct from the system under test. PRTE command file used is included in Appendix A.

Emulated Components

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

Due to the large number of PCs and associated hardware that would be required to run these tests, Remote Terminal Emulator was used to emulate the connected PCs and LAN. As configured for this test, the driver software emulates the traffic that would be observed from the users ' PCs connected by Ethernet to the front-end clients using HTTP (HyperText Transfer Protocol)over TCP/IP.

The driver system consisted of 4 ProLiant DL580 servers.

Functional Diagrams

A complete functional diagram of both the benchmark configuration 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.

The diagram in Section 1 shows the tested and priced benchmark configurations.

Networks

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

The bandwidth of the networks used in the tested/priced configuration must be disclosed.

Section 1 of this report contains detailed diagrams of both the benchmark configuration and the priced configuration. In the tested configuration, the server system and two client systems were connected to each other directly.

The drivers systems and client systems were connected using another 1000BaseT Ethernet switch.

Operator Intervention

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

This configuration does not require any operator intervention to sustain eight hours of the reported throughput.

Clause 7 Related Items

System 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 and effective date(s) of price(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.

The details of the hardware and software are reported in the front of this report as part of the executive summary. All third party quotations are included at the end of this report as Appendix D.

Availability, Throughput, and Price Performance

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.

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.

- **Maximum Qualified Throughput   102,454 tpmC**
- **Price per tpmC $0.73 USD per tpmC**
- **Available   December 31, 2007**

Country Specific Pricing

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

This system is being priced for the United States of America.

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:

- Oracle Database 11g Standard Edition One.
- Microsoft Windows 2003 SP 1 R2 Server.

Clause 9 Related Items

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.

This implementation of the TPC Benchmark C was audited by Lorna Livingtree of Performance Metrics Inc.

Performance Metrics, Inc. PO Box 984, Klamath, CA 95548
phone: 707-482-0523 fax: 707-482-0575 email: lornal@perfmetrics.com

Mr. Bryon Georgson
Database Performance Engineer
Hewlett-Packard Company
20555 SH 249
Houston, TX 77070

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

Platform: HP Proliant ML350 G5

Database Manager: Oracle 11g Standard Edition One for Windows x64

Operating System: Microsoft(R) Windows(R) Server 2003 Standard x64 Edition

Transaction Monitor: Microsoft COM+

System Under Test:				
CPU's	Memory	Disks (total)	90% Response	TpmC
1 Intel Xeon quad core @ 2.6 Ghz	Main: 24 GB	100 @ 36 GB 4 @ 146 GB 1 @ 36 GB	0.26	102,454

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 files were properly sized.
- The database was properly scaled with 8,500 warehouses, 8100 of which were active during the measured interval.
- The ACID properties were successfully demonstrated.
- The durable media failure was demonstrated on the full configuration but using only 40,500 active users.
- Input data was generated according to the specified percentages.
- Eight hours of mirrored log space was present on the tested system.
- Eight hours of growth space for the dynamic tables was present on the tested system.
- The data for the 60 days space calculation was verified.
- The steady state portion of the test was 127 minutes.
- There was one complete checkpoint in steady state before the measured interval.
- There were 4 checkpoints started and completed inside the measured interval.
- The system pricing was checked for major components and maintenance.
- Third party quotes were verified for compliance.

Auditor Notes: None

Sincerely,

Lorna Livingtree

Lorna Livingtree
Auditor

Availability of the Full Disclosure Report

The Full Disclosure Report must be readily available to the public at a reasonable charge, similar to the charges for similar documents by the test sponsor. The report must be made available when results are made public. In order to use the phrase "TPC Benchmark™ C", the Full Disclosure Report must have been submitted to the TPC Administrator as well as written permission obtained to distribute same.

Requests for this TPC Benchmark C Full Disclosure Report should be sent to:

Transaction Processing Performance Council
Presidio of San Francisco
Building 572B (surface)
P.O. Box 29920 (mail) San Francisco, CA 94129-0920
Voice: 415-561-6272
Fax: 415-561-6120
Email: info@tpc.org

   or

Hewlett Packard Company
Database Performance Engineering
P.O. Box 692000
Houston, TX 77269-2000

TPC Benchmark C Full Disclosure Reports are available at www.tpc.org

Appendix A: Source Code

```
------------------------
modtpcc/buf.c
------------------------
/*
**
** File:
**
**  buf.c double buffering code to emulate c runtime file reading
**
** Author:
**
**  Bill Carr
**
** Revisions:
**
**   10/04/95 WCarr
**  - Original
**
**
*/

/*#ifdef HISTORY

  02-Jun-97 WCarr Removed use of Mutex objects in favor of critical
        sections.  These prove to be at least one order of
        magnitude faster.

  31-Oct-97 WCarr Fixed a buffer wrap problem where if the data
were
        to end exactly on the buffer end, the code would
        not wrap to the beginning.

        Also added code that causes a writer to block if
        there is no room to write in data.  Fixed the
        timeout code so that a non-blocking read or write
        can function.

  06-Nov-97 WCarr Modified APIs to allow the read and write
operaions
        to supply the timeout values.

        Fixed a bug where the critical section was not
        released when a buffer read or write operation
        timed out.
*/

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

#include <crtdbg.h>
#include <windows.h>

#include "buf.h"

int
bufopen(size_t bufsize, BUFPTR *bufptr)
{
  BUFPTR buf;

  *bufptr = NULL;
  if( NULL == (buf = (BUFPTR) malloc( (sizeof( BUF ) - BUF_MINSIZE)
+ bufsize )))
    return (BUF_MALLOCFAIL);
  buf->freestart = (uchar *) buf->buf;
  buf->storedstart = (uchar *) buf->buf;
  buf->size = bufsize;
  buf->maxplus1 = (uchar *) buf->buf + bufsize;
  buf->full = FALSE;
  buf->blockedreadercount = 0;
  buf->blockedwritercount = 0;
  InitializeCriticalSection( &buf->control );
  if((HANDLE)NULL == (buf->dataready = CreateEvent(NULL, FALSE,
FALSE, NULL))) {
    free(buf);
    return (BUF_CREEVENT);
  }
  if((HANDLE)NULL == (buf->spacefreed = CreateEvent(NULL, FALSE,
FALSE, NULL))){
    free(buf);
    return (BUF_CREEVENT);
  }

  *bufptr = buf;
  return(BUF_SUCCESS);
}

static void
```

```
calcstoredsize(BUFPTR buf, size_t *storedsize, size_t
*storedsizehigh)
{
  if( buf->storedstart < buf->freestart ) {
    *storedsizehigh = *storedsize = buf->freestart - buf-
>storedstart;
  }
  else if( buf->full || buf->storedstart > buf->freestart ) {
    *storedsizehigh = ((uchar *) buf->buf + buf->size) - buf-
>storedstart;
    *storedsize = *storedsizehigh + (buf->freestart - (uchar *)buf-
>buf);
  }
  else {
    *storedsizehigh = *storedsize = 0;
  }
  return;
}

/* bufread.
 * Current implementation mixes two paradigms.  API implies
 * partial read of buffer is possible however implementation
 * insists on a complete read.
 * Possible fixes include:
 *    Add a bufread_complete routine which only returns with
 *    full data.
 *    Return partial data from read and have the caller verify
 *    that they got the data they requested.
 *
 */
int
bufread(void *rbuf, size_t btr, size_t *br, uint timeout, BUFPTR
buf)
{
  size_t storedsize, storedsizehigh;
  DWORD status, last_error;

  if( btr <= 0 )
    return BUF_SUCCESS;

  if( btr > buf->size )
    return BUF_READWAYTOOBIG;

  EnterCriticalSection( &buf->control );
  while( 1 ) {

    /* see if we have enough data to get from the buffer */
    calcstoredsize( buf, &storedsize, &storedsizehigh );
    if( btr <= storedsize )
      break;

    /* not enough data. if no wait, return else block until data
available. */
    if( 0 == timeout ) {
      LeaveCriticalSection( &buf->control );
      return BUF_READTIMEOUT;
    }
    buf->blockedreadercount++;
    LeaveCriticalSection( &buf->control );
    status = WaitForSingleObjectEx( buf->dataready, timeout, TRUE
);
    EnterCriticalSection( &buf->control );
    buf->blockedreadercount--;
    if( WAIT_OBJECT_0 == status )
      continue;
    LeaveCriticalSection( &buf->control );
    if( WAIT_TIMEOUT == status )
      return BUF_READTIMEOUT;
    else if( WAIT_IO_COMPLETION == status )
      return BUF_IOCOMPLETE;
    else {
      last_error = GetLastError( );
      return BUF_READWAITFAILED;
    }
  }

  if( btr <= storedsizehigh ) {
    CopyMemory( rbuf, buf->storedstart, btr );
    buf->storedstart += btr;
    if( buf->storedstart == buf->maxplus1 )
      buf->storedstart = (uchar *) buf->buf;
    else if( buf->storedstart > buf->maxplus1 )
      /* error */
      _ASSERT( FALSE );
  }
  else {
    CopyMemory( rbuf, buf->storedstart, storedsizehigh );
    CopyMemory( (uchar *)rbuf + storedsizehigh, buf->buf, btr -
storedsizehigh);
    buf->storedstart = (uchar *)buf->buf + (btr - storedsizehigh);
  }
  storedsize -= btr;

  if( buf->freestart == buf->storedstart ) {
#ifdef NDEBUG  /* keep messages in the buffer as long a possible
for debugging*/
    buf->freestart = buf->storedstart = (uchar *)buf->buf;
#endif
  }
  buf->full = FALSE;
```

```
  /* if data is in the buffer and a reader is blocked, unblock it
*/
  if(( 0 < storedsize ) && ( 0 != buf->blockedreadercount )) {
    SetEvent( buf->dataready );
  }

  /* see if a writer is blocked and unblock one */
  if( 0 != buf->blockedwritercount ) {
    SetEvent( buf->spacefreed );
  }

  LeaveCriticalSection( &buf->control );

  *br = btr;

  return BUF_SUCCESS;
}

static void calcfreesize(BUFPTR buf, size_t *freesize, size_t
*freesizehigh)
{
  if( buf->storedstart > buf->freestart ) {
    *freesizehigh = *freesize = buf->storedstart - buf->freestart;
  }
  else if( !buf->full && buf->storedstart <= buf->freestart ) {
    *freesizehigh = ((uchar *)buf->buf + buf->size) - buf-
>freestart;
    *freesize = *freesizehigh + (buf->storedstart - (uchar *)buf-
>buf);
  }
  else {
    *freesizehigh = *freesize = 0;
  }
  return;
}

int
bufwrite(const void *wbuf, size_t btw, size_t *bw, uint timeout,
BUFPTR buf)
{
  size_t freesize, freesizehigh;
  DWORD status, last_error;

  if( btw <= 0 )
    return BUF_SUCCESS;

  if( btw > buf->size )
    return BUF_WRITEWAYTOOBIG;

  EnterCriticalSection( &buf->control );
  while( 1 ) {

    /* see if we have enough room to put all data in the buffer */
    calcfreesize( buf, &freesize, &freesizehigh );
    if( !buf->full && btw <= freesize )
      break;

    /* not enough room. if no wait, return else block until space
available. */
    if( 0 == timeout ) {
      LeaveCriticalSection( &buf->control );
      return BUF_WRITETIMEOUT;
    }
    buf->blockedwritercount++;
    LeaveCriticalSection( &buf->control );
    status = WaitForSingleObject( buf->spacefreed, timeout );
    EnterCriticalSection( &buf->control );
    buf->blockedwritercount--;
    if( WAIT_OBJECT_0 == status )
      continue;
    LeaveCriticalSection( &buf->control );
    if( WAIT_TIMEOUT == status )
      return BUF_WRITETIMEOUT;
    else {
      last_error = GetLastError( );
      return BUF_WRITEWAITFAILED;
    }
  }

  if( btw <= freesizehigh ) {
    CopyMemory( buf->freestart, wbuf, btw );
    buf->freestart += btw;
    if( buf->freestart == buf->maxplus1 )
      buf->freestart = (uchar *)buf->buf;
    else if( buf->freestart > buf->maxplus1 )
      /* error */
      _ASSERT( FALSE );
  }
  else {
    CopyMemory( buf->freestart, wbuf, freesizehigh );
    CopyMemory( buf->buf, (uchar *)wbuf + freesizehigh, btw -
freesizehigh );
    buf->freestart = (uchar *)buf->buf + ( btw - freesizehigh );
  }
  freesize -= btw;

  if( buf->freestart == buf->storedstart )
    buf->full = TRUE;

  /* see if a reader is blocked and unblock one */
  if( 0 != buf->blockedreadercount ) {
```

```
    SetEvent( buf->dataready );
  }

  /* if space is available and a writer is blocked, unblock it */
  if(( 0 < freesize ) && ( 0 != buf->blockedwritercount )) {
    SetEvent( buf->spacefreed );
  }

  LeaveCriticalSection( &buf->control );

  *bw = btw;

  return BUF_SUCCESS;
}

void __cdecl bufclose(BUFPTR buf)
{
  DeleteCriticalSection( &buf->control );
  CloseHandle( buf->dataready );
  CloseHandle( buf->spacefreed );
  free( buf );
}
------------------------
modtpcc/buf.h
------------------------
/*
**
** File:
**
**   buf.h double buffering code to emulate c runtime file reading
**
** Author:
**
**   Bill Carr
**
** Revisions:
**
**    10/04/95 WCarr
**    - Original
**
**
*/

/*#ifdef HISTORY

  02-Jun-97 WCarr Removed use of Mutex objects in favor of critical
        sections.  These prove to be at least one order of
        magnitude faster.

*/

#ifndef _buf_h_
#define _buf_h_

#ifndef WIN32_LEAN_AND_MEAN
# define WIN32_LEAN_AND_MEAN
#endif
#include <windows.h>

#define BUF_INFINITE INFINITE

#define BUF_SUCCESS 0
#define BUF_READFAIL 1    /* Read thread exited unexpectedly */
#define BUF_CREEVENT 2    /* internal error Failure to create event
*/
#define BUF_READTIMEOUT 3 /* Reading thread timed out */
#define BUF_WRITETIMEOUT 4  /* Writing thread timed out */
#define BUF_MALLOCFAIL 5  /* failed to allocate needed worksapce */
#define BUF_READWAYTOOBIG 6 /* request larger than whole buffer */
#define BUF_WRITEWAYTOOBIG 7  /* request larger than whole buffer
*/
#define BUF_WRITETOOBIG 8 /* request larger than available space */
#define BUF_READWAITFAILED 9  /* internal error while waiting for
data */
#define BUF_WRITEWAITFAILED 10  /* internal error while waiting to
store */
#define BUF_IOCOMPLETE 11 /* an external async I/O operation
completed */

#define BUF_MINSIZE 4

typedef unsigned int uint;
typedef unsigned char uchar;

struct _buf
{
  uchar *freestart;
  uchar *storedstart;
  size_t size;
  uchar *maxplus1;
  BOOL full;
  int blockedreadercount;
  int blockedwritercount;
  CRITICAL_SECTION control;
  HANDLE dataready;
  HANDLE spacefreed;
  char  buf[BUF_MINSIZE]; /* MUST BE AT END for malloc to succeed
*/
};
typedef struct _buf BUF, *BUFPTR;
```

```
int bufopen(size_t bufsize, BUFPTR *buf);
int bufread(void *rbuf, size_t btr, size_t *br, uint timeout,
BUFPTR buf);
int bufwrite(const void *wbuf, size_t btw, size_t *bw, uint
timeout,BUFPTR buf);
void __cdecl bufclose(BUFPTR);

#endif
-------------------------
modtpcc/modtpcc.cpp
-------------------------
// modtpcc.cpp : Defines the entry point for the DLL application.
//

#include "stdafx.h"
#include "modtpcc.h"
#include <httpext.h>

//#define DEBUG
//#define DELIVERY_MUTEX
#define NEW_ALLOCATE_FORM

BOOL APIENTRY DllMain( HANDLE hModule,
                       DWORD  ul_reason_for_call,
                       LPVOID lpReserved
             )
{
  char string[MAXLEN];
  int i;

  if (ul_reason_for_call == DLL_PROCESS_ATTACH) {
    GetModuleFileName((HMODULE)hModule, DllPath, MAXLEN-1);

    strcpy(origin, DllPath);
    if (DllPath[0]=='\\' && DllPath[1]=='\\' && DllPath[2]=='?' &&
DllPath[3]=='\\')
      strcpy(DllPath, DllPath+4);
    for (i=strlen(DllPath); DllPath[i]!='\\' && i; i--);
    DllPath[i]='\0';
    sprintf(InitFile, "%s\\%s", DllPath, InitName);
    sprintf(DllFile, "%s\\%s", DllPath, DllName);
    sprintf(LogFile, "%s\\%s", DllPath, LogName);
        OCIInitialize(OCI_THREADED|OCI_OBJECT,(dvoid *)0,0,0,0);
    //     sprintf(LogFile, "d:\\%s", LogName);

    /* load DBConnection.dll */

    if ((dllinstance = LoadLibrary(DllFile)) == NULL)
      return FALSE;

    if ((mod_tpcc_neworder=(int (FAR*)(T_neworder_data *))
GetProcAddress((HMODULE)dllinstance, "mod_tpcc_neworder"))==NULL)
      return FALSE;

    if ((mod_tpcc_payment=(int (FAR*)(T_payment_data *))
GetProcAddress((HMODULE)dllinstance, "mod_tpcc_payment"))==NULL)
      return FALSE;

    if ((mod_tpcc_delivery=(int (FAR*)(T_delivery_data *, int))
GetProcAddress((HMODULE)dllinstance, "mod_tpcc_delivery"))==NULL)
      return FALSE;

    if ((mod_tpcc_orderstatus=(int (FAR*)(T_orderstatus_data *))
GetProcAddress((HMODULE)dllinstance,
"mod_tpcc_orderstatus"))==NULL)
      FALSE;

    if ((mod_tpcc_stocklevel=(int (FAR*)(T_stocklevel_data *))
GetProcAddress((HMODULE)dllinstance, "mod_tpcc_stocklevel"))==NULL)
      return FALSE;

    if ((userlog=(void (FAR*)(char * str, ...))
GetProcAddress((HMODULE)dllinstance, "userlog"))==NULL)
      return FALSE;

    if ((initDelLog=(void (FAR*)(int))
GetProcAddress((HMODULE)dllinstance, "initDelLog"))==NULL)
      return FALSE;

    if ((endDelLog=(void (FAR*)(int))
GetProcAddress((HMODULE)dllinstance, "endDelLog"))==NULL)
      return FALSE;

    userlog("load modtpcc.dll, DllPath: %s\n", DllPath);

    if ((TlsPointer = TlsAlloc()) == 0xFFFFFFFF) {
      userlog("Error during TlsAlloc\n");
      return FALSE;
    }
    InitializeCriticalSection(&critical_initDelQueue);
    InitializeCriticalSection(&critical_memory);
    InitializeCriticalSection(&critical_DelQueue_free);
    InitializeCriticalSection(&critical_DelQueue_work);

    /* read ini parameters */
    readInit(string, "DBConnections", Default_DBConnections);
    DBConnections = atoi(string);
    userlog("number of DBConnections is %d\n", DBConnections);

#ifdef NEW_ALLOCATE_FORM
```

```
    readInit(string, "StartTerm", Default_StartTerm);
    userlog("number of Start Term is %s\n", string);
    /* StartTerm starts from 1 */
    if ((StartTerm = atoi(string) ) < 0) {
      userlog("error: Start Term is %d\n", StartTerm);
      return FALSE;
    }

    /* w_id starts from 1, d_id starts from 1 */
    StartTerm+=10;
#endif

    readInit(string, "KMaxterms", Default_Maxterms);
    userlog("number of Max Terms is %s00\n", string);
    /* add one more form for special characters */
    if ((Maxterms = atoi(string) * 100 + 1) <= 1) {
      userlog("number of Max Terms is %d\n", Maxterms - 1);
      return FALSE;
    }
    readInit(string, "DeliveryQueues", Default_DeliveryQueues);
    userlog("number of Delivery Queues is %s\n", string);
    if ((DeliveryQueues = atoi(string)) <= 0) {
      userlog("number of Delivery Queues is %d\n", DeliveryQueues);
      return FALSE;
    }

    readInit(string, "DeliveryThreads", Default_DeliveryThreads);
    userlog("number of Delivery Threads is %s\n", string);
    if ((DeliveryThreads = atoi(string)) <= 0) {
      userlog("number of Delivery Threads is %d\n",
DeliveryThreads);
      return FALSE;
    }
#ifdef USE_DELIVERY_LOG
    initDelLog(DeliveryThreads);
#endif

    modtpcc_ready=1;

  }
  else if (ul_reason_for_call == DLL_PROCESS_DETACH) {
#ifdef USE_DELIVERY_LOG
    endDelLog(DeliveryThreads);
#endif

    if ((TlsFree(TlsPointer)) == NULL) {
      userlog("Error during TlsFree\n");
      return FALSE;
    }
    if (!deleteDelQueue())
    {
      userlog("Error during deleteDelQueue\n");
      return FALSE;
    }
    DeleteCriticalSection(&critical_initDelQueue);
    DeleteCriticalSection(&critical_memory);
    DeleteCriticalSection(&critical_DelQueue_free);
    DeleteCriticalSection(&critical_DelQueue_work);

  DeleteCriticalSection(&(resp_global_pool.form_template_spinlock))
;

  DeleteCriticalSection(&(txn_data_pool.form_template_spinlock));

    int i_type, i_pool;
#define GPOOL txn_global_pool[i_type][i_pool]
    for (i_type = 0; i_type < POOL_TYPE_TXN_MAX; i_type++)
      for (i_pool = 0; i_pool < TXN_TYPE_MAX; i_pool++)

  DeleteCriticalSection(&(GPOOL.form_template_spinlock));
#undef GPOOL
  }

    return TRUE;
}


BOOL WINAPI GetExtensionVersion(HSE_VERSION_INFO *pVer)
{
  pVer->dwExtensionVersion = HSE_VERSION;
  strncpy(pVer->lpszExtensionDesc,
    "IIS ISAPI Extension", HSE_MAX_EXT_DLL_NAME_LEN);
  return TRUE;
}


DWORD WINAPI HttpExtensionProc(EXTENSION_CONTROL_BLOCK *pECB)
{
  if (!modtpcc_ready)
    return FALSE;

  if (!memory_ready) {
    EnterCriticalSection(&critical_memory);
    if (!memory_ready) {
      allocateMemoryPool();
      memory_ready=1;
    }
    LeaveCriticalSection(&critical_memory);
  }
```

```c
  if (!queue_ready) {
    EnterCriticalSection(&critical_initDelQueue);
    if (!queue_ready) {
      if (!initDelQueue()) {
        userlog("init Delivery Queue failed\n");
        LeaveCriticalSection(&critical_initDelQueue);
        return FALSE;
      }
      queue_ready=1;
    }
    LeaveCriticalSection(&critical_initDelQueue);
  }

  return process_query(pECB)==TRUE ? HSE_STATUS_SUCCESS :
HSE_STATUS_ERROR;

/*

  HSE_SEND_HEADER_EX_INFO info = { 0 };

  char szOut[256];
  DWORD nOut;


  nOut = sprintf(szOut, "%s is the input, LogFile:%s, DllPath:%s,
DllFile:%s, origin:%s", pECB->lpszQueryString,LogFile, DllPath,
DllFile, origin);

  char szHeader[256];
  DWORD nHeader = sprintf(szHeader, "Content-Type: text/html\r\n"
"Contest-Length: %d\r\n\r\n", nOut);

  info.pszStatus = "200 OK";
  info.cchStatus = strlen(info.pszStatus);
  info.pszHeader = szHeader;
  info.cchHeader = nHeader;
  info.fKeepConn = false;

  if (!pECB->ServerSupportFunction(pECB->ConnID,
HSE_REQ_SEND_RESPONSE_HEADER_EX, &info, 0, 0))
    return HSE_STATUS_ERROR;

  if (!pECB->WriteClient(pECB->ConnID, szOut, &nOut, HSE_IO_SYNC))
    return HSE_STATUS_ERROR;

  return HSE_STATUS_SUCCESS;
*/
}


/********************************************************************
****************************
* initialize / delete Delivery Queue
*
********************************************************************
***************************/

int deleteDelQueue()
{
  DelQueue_info *ptr = DelQueue_begin, *next;

  DeliveryThreadstop = 1;

  for (int i=0; i<DeliveryThreads; i++) {

    if (!SetEvent(waitDelWork)) {
      userlog("Error on SetEvent(waitDelWork) on
deleteDelQueue\n");
    }

    if (WaitForSingleObject(DelThreadRunning, 100000) !=
WAIT_OBJECT_0) {
      userlog("Delivery Thread is not loaded after 100 seconds\n");
    }
  }

  if (waitAvailableDelQueue != 0) {
    if (!CloseHandle(waitAvailableDelQueue))
      userlog("error on CloseHandle(waitAvailableDelQueue)\n");
    waitAvailableDelQueue = 0;
  }

  if (waitDelWork != 0) {
    if (!CloseHandle(waitDelWork))
      userlog("error on CloseHandle(waitDelWork)\n");
    waitDelWork = 0;
  }

  if (DelThreadRunning != 0) {
    if (!CloseHandle(DelThreadRunning))
      userlog("error on CloseHandle(DelThreadRunning)\n");
    DelThreadRunning = 0;
  }


  while (ptr != NULL) {
    next=ptr->Next;

#ifdef DELIVERY_MUTEX
    CloseHandle(ptr->queue_lock);
```

```c
#endif

    free(ptr->pdata);
    free(ptr);
    ptr=next;
  }

  ptr = DelQueue_free;
  while (ptr != NULL) {
    next=ptr->Next;

#ifdef DELIVERY_MUTEX
    CloseHandle(ptr->queue_lock);
#endif

    free(ptr->pdata);
    free(ptr);
    ptr=next;
  }
  bufclose (deliveryoutput);
  return TRUE;
}


int initDelQueue()
{
  DelQueue_info *ptr, *curr;
  size_t deliverybufsize;
  int i;

  userlog("execute initDelQueue\n");

  for (i=0; i<DeliveryQueues; i++) {
    if ((ptr = (DelQueue_info *) malloc(sizeof(DelQueue_info))) ==
NULL) {
      userlog("malloc error in initDelQueue\n");
      return FALSE;
    }

    ptr->pdata=(T_delivery_data *)malloc(sizeof(T_delivery_data));

#ifdef DELIVERY_MUTEX
    if ((ptr->queue_lock=CreateMutex(NULL, FALSE, NULL))==NULL) {
      userlog("Cannot create mutex on queue lock\n");
      return FALSE;
    }
#endif

    if (!i)
      DelQueue_free=curr=ptr;
    else {
      curr->Next = ptr;
      curr = ptr;
    }
  }

  DelQueue_begin = DelQueue_end = curr->Next = NULL;

  if ((waitAvailableDelQueue = CreateEvent(NULL, FALSE, FALSE,
"Wait Empty Delivery Queue")) == NULL) {
    userlog("Cannot create event : waitAvailableDelQueue\n");
    return FALSE;
  }

  if ((waitDelWork = CreateEvent(NULL, FALSE, FALSE, "Wait Delivery
Work")) == NULL) {
    userlog("Cannot create event : waitDelWork\n");
    return FALSE;
  }

  if ((DelThreadRunning = CreateEvent(NULL, FALSE, FALSE, "Delivery
Thread Running")) == NULL) {
    userlog("Cannot create event : DelThreadRunning\n");
    return FALSE;
  }

  for (i=0; i < DeliveryThreads; i++) {

    if (_beginthread(initDeliveryThread, 0, (void *) &i) == -1) {
      userlog("Error on initDeliveryThread %d\n", i);
      return FALSE;
    }

    /* wait for 100 seconds */
    if (WaitForSingleObject(DelThreadRunning, 100000) !=
WAIT_OBJECT_0) {
      userlog("Delivery Thread (%d) hasn't initialized after 100
seconds\n", i);
      return FALSE;
    }

    userlog("receive Delivery Thread %d confirmation\n", i);
  }
  deliverybufsize=(DeliveryQueues+DeliveryThreads)*sizeof(pT_delive
ry_data);
  if (BUF_SUCCESS != bufopen(deliverybufsize, &deliveryoutput)){
    userlog ("Error opening delivery output buffer pipe\n");
    return FALSE;
  }
```

```
  return TRUE;
}


void initDeliveryThread(void *thread_no)
{
  int thread_number=*((int *)thread_no);
  DelQueue_info *queue_info;
  int buf_status;
  size_t bw;


  if (!SetEvent(DelThreadRunning))
    userlog("SetEvent Error on initDeliveryThread(%d)\n",
thread_number);
  else {

    userlog("Delivery Thread %d is created\n", thread_number);

    while (!DeliveryThreadstop) {
      queue_info = NULL;
      while (!DeliveryThreadstop && queue_info == NULL) {
        queue_info=DequeueDel();
        if (queue_info == NULL) {
          if (WaitForSingleObject(waitDelWork, INFINITE) !=
WAIT_OBJECT_0) {
            userlog("Error on WaitForSingleObject(waitDelQueueWork)
in initDeliveryThread\n");
            endDeliveryThread(thread_number);
            return;
          }
        }
      }

      if (!DeliveryThreadstop) {
        (void)mod_tpcc_delivery(queue_info->pdata, thread_number);

  buf_status=bufwrite(&queue_info,sizeof(pDelQueue_info),&bw,INFINI
TE,deliveryoutput);
        if (BUF_SUCCESS != buf_status)
          userlog ("Error writing the delivery information to
delivery output buffer\n");

//        addFreeDelQueue(queue_info);
      }
    }
  }

  endDeliveryThread(thread_number);
}


void endDeliveryThread(int thread_number)
{
  if (!SetEvent(DelThreadRunning)) {
    userlog("SetEvent Error on endDeliveryThread(%d)\n",
thread_number);
  }
  _endthread();
}


/*********************************************************************
****************************
* Delivery Queue dequeue/enqueue
*
*********************************************************************
****************************/

DelQueue_info *DequeueDel()
{
  DelQueue_info *ptr;

  if (DelQueue_begin == NULL) return NULL;

  EnterCriticalSection(&critical_DelQueue_work);

  if (DelQueue_begin == NULL) {
    LeaveCriticalSection(&critical_DelQueue_work);
    return NULL;
  }

  if (DelQueue_begin == DelQueue_end) {
    ptr = DelQueue_begin;
    DelQueue_begin = DelQueue_end = NULL;
  }
  else {
    ptr = DelQueue_begin;
    DelQueue_begin = DelQueue_begin->Next;
  }

  LeaveCriticalSection(&critical_DelQueue_work);

  return ptr;
}
```

```
void EnqueueDel(DelQueue_info *queue_info)
{
  EnterCriticalSection(&critical_DelQueue_work);
  if (DelQueue_begin == NULL)
    DelQueue_begin=DelQueue_end=queue_info;
  else {
    DelQueue_end->Next = queue_info;
    queue_info->Next = NULL;
    DelQueue_end = queue_info;
  }

  LeaveCriticalSection(&critical_DelQueue_work);
}


void addFreeDelQueue(DelQueue_info *ptr)
{
  EnterCriticalSection(&critical_DelQueue_free);

  if (DelQueue_free==NULL) {
    DelQueue_free = ptr;
    ptr->Next = NULL;
  }
  else {
    ptr->Next = DelQueue_free;
    DelQueue_free = ptr;
  }
#ifdef DEBUG
  useddel--;
  if (useddel != 0 && useddel % 300 == 0)
    userlog("free a del queue: current: %d\n", useddel);
#endif
  LeaveCriticalSection(&critical_DelQueue_free);
  if (!SetEvent(waitAvailableDelQueue))
    userlog("SetEvent Error on addFreeDelQueue\n");
}


DelQueue_info *findFreeDelQueue()
{
  DelQueue_info *ptr=NULL;

  EnterCriticalSection(&critical_DelQueue_free);

  while (ptr==NULL) {
    if (DelQueue_free==NULL) {
      LeaveCriticalSection(&critical_DelQueue_free);
      if (WaitForSingleObject(waitAvailableDelQueue, INFINITE) !=
WAIT_OBJECT_0) {
        userlog("WaitForSingleObject(waitAvailableDelQueue) in
findFreeDelQueue\n");
      }
      userlog("Delivery queue is full, sleep for 10 seconds\n");
#ifdef DEBUG
      userlog("used del queue: %d\n", useddel);
#endif
      /* sleep for 10 seconds */
      Sleep(10000);
      EnterCriticalSection(&critical_DelQueue_free);
    }
    else {
      ptr = DelQueue_free;
      DelQueue_free = DelQueue_free->Next;
#ifdef DEBUG
      useddel++;
      if (useddel % 300 == 0)
        userlog("allocate a del queue current used: %d\n",
useddel);
#endif
    }
  }

  LeaveCriticalSection(&critical_DelQueue_free);

  return ptr;
}


/****************************************************************
****************************
* process query
*
****************************************************************
****************************/

int process_query(EXTENSION_CONTROL_BLOCK *pECB)
{
    int w_id, ld_id, form;
    char *ptr, *cmd;

    form = w_id = ld_id = 0;

    /*
       This process the request_rec http:server/tpcc
    */

    if (strlen(pECB->lpszQueryString) == 0)
    return sendform_welcome(pECB, "Welcome!");
```

```c
        if (getcharvalue(pECB->lpszQueryString, '3', &ptr)) {
            form = *ptr++;
            if (get_wid_did(ptr, &w_id, &ld_id, &ptr) == FALSE) {
        return send_error_message(pECB, 0, INVALID_TERMID, "", w_id,
ld_id, 0);
            }
        } else {
            form = '\0';
        }

        if (getcharvalue(ptr, '0', &cmd) == FALSE)
            return send_error_message(pECB, 0, COMMAND_UNDEFINED, "",
w_id, ld_id, 0);

        if ((form == '\0') && !(CMD_BEGIN(cmd)))
            return send_error_message(pECB, 0,
INVALID_FORM_AND_CMD_NOT_BEGIN, "", w_id, ld_id, 0);

        if (CMD_PROCESS(cmd)) {    /* cmd = Process */

            if (form == 'N') {
        /* New Order transaction */
                return mod_neworder_query(pECB, w_id, ld_id, ptr);
            } else if (form == 'P') {
        /* Payment order transaction */
                return mod_payment_query(pECB, w_id, ld_id, ptr);
            } else if (form == 'D') {
        /* Delivery order transaction */
                return mod_delivery_query(pECB, w_id, ld_id, ptr);
            } else if (form == 'O') {
        /* Order Status order transaction */
                return mod_orderstatus_query(pECB, w_id, ld_id, ptr);
            } else if (form == 'S') {
        /* Stock Level order transaction */
                return mod_stocklevel_query(pECB, w_id, ld_id, ptr);
            } else
            return send_error_message(pECB, 0, INVALID_FORM, "", w_id,
ld_id, 0);
        }
        else if (CMD_BEGIN(cmd))      return mod_begin_cmd(pECB);
        else if (CMD_NEWORDER(cmd))    return mod_neworder_cmd(pECB,
w_id, ld_id);
        else if (CMD_PAYMENT(cmd))      return mod_payment_cmd(pECB,
ld_id);
        else if (CMD_DELIVERY(cmd))    return mod_delivery_cmd(pECB,
w_id, ld_id);
        else if (CMD_ORDERSTATUS(cmd)) return mod_orderstatus_cmd(pECB,
w_id, ld_id);
        else if (CMD_STOCKLEVEL(cmd))  return mod_stocklevel_cmd(pECB,
w_id, ld_id);
        else if (CMD_EXIT(cmd))        return mod_exit_cmd(pECB);
        else if (CMD_MENU(cmd))        return mod_menu_cmd(pECB, w_id,
ld_id);
        else
            return send_error_message(pECB, 0, COMMAND_UNDEFINED, "",
w_id, ld_id, 0);

        return TRUE;
}


int getcharvalue(char *iptr, char key, char **optr)
{
    *optr = iptr;

    while (iptr) {
        if ((key == *iptr) && ('=' == *++iptr)) {
            *optr = ++iptr;
            return TRUE;
        }
        while (iptr) {
            if ('&' == *iptr) {
                iptr++; break;
            }
            iptr++;
        }
    }
    return FALSE;
}


void readInit(char *output, char *parameter, char *default_value)
{
  if (_access(InitFile, 0x00) != NULL) {
     userlog("Cannot access init file: %s\n", InitFile);
     strcpy(output, default_value);
  }
  else
     GetPrivateProfileString("TPCC", parameter, default_value,
output, MAXLEN, InitFile);
}


void allocateMemoryPool()
{
  userlog("Allocate Memory Pool\n");
  allocate_template_pool();
  allocate_response_pool();
```

```c
  allocate_transaction_pool();
}


void allocate_response_pool()
{
   int i;


InitializeCriticalSection(&(resp_global_pool.form_template_spinlock
));
   resp_global_pool.form_template_length = BUF_SIZE;
   resp_global_pool.form_template_size =
resp_global_pool.form_template_length * Maxterms;
   resp_global_pool.form_template_storage = (char
*)malloc(resp_global_pool.form_template_size);
   resp_global_pool.free_slot = 0;
   resp_global_pool.free_list = (int *)malloc((Maxterms - 1) *
sizeof(int));
   for (i = 0; i < (Maxterms - 2); i++) {
      resp_global_pool.free_list[i] = i + 1;
   }
   resp_global_pool.free_list[Maxterms - 2] = -1;
}


void make_txn_form_template(char *input_form, char
*input_form_template,
    char *response_form, char *response_form_template, int
txn_type)
{
    int length;
    /*
        For input form.
     */
    length = sprintf(input_form, FormHeader, mod_name);
    length = build_form_index(input_form, input_form_template,
                form_index[POOL_TYPE_TXN_INPUT][txn_type],
length);
    length = (length + 16) & (~((int)7));

txn_global_pool[POOL_TYPE_TXN_INPUT][txn_type].form_template_length
= length;

    /*
        For output form.
     */
    length = sprintf(response_form, FormHeader, mod_name);
    length = build_form_index(response_form,
response_form_template,
                form_index[POOL_TYPE_TXN_OUTPUT][txn_type],
length);
    length = (length + 128) & (~((int)7));

txn_global_pool[POOL_TYPE_TXN_OUTPUT][txn_type].form_template_lengt
h = length + 100;
    return;
}


int build_form_index(char *form, char *form_template,
                form_index_entry *f_index, int length)
{
    int current_index = 0;
    int i = 0;
    int j = 0;
    int current_length = length;

    while (form_template[i]) {
        if (form_template[i] != '#') {
            form[current_length] = form_template[i];
            i++; current_length++;
        } else {
            j = 0;
            f_index->index = current_length;
            while (form_template[i] == '#') {
                j++;
                form[current_length] = form_template[i];
                i++; current_length++;
            }
            f_index->length = j;
            f_index++; current_index++;
        }
    }
    form[current_length] = '\0'; current_length++;
    return current_length;
}


void allocate_template_pool()
{
#define FORM_PAD 64
#define GPOOL txn_global_pool[i_type][i_pool]

    char DeliveryInput[sizeof(DeliveryFormInput_Template)+FORM_PAD];
    char
OrderStatusInput[sizeof(OrderStatusInput_Template)+FORM_PAD];
```

```c
    char PaymentInput[sizeof(PaymentInput_Template)+FORM_PAD];
    char NewOrderInput[sizeof(NewOrderInput_Template)+FORM_PAD];
    char StockLevelInput[sizeof(StockLevelInput_Template)+FORM_PAD];

    char
DeliveryOutput[sizeof(DeliveryFormOutput_Template)+FORM_PAD];
    char
OrderStatusOutput[sizeof(OrderStatusOutput_Template)+FORM_PAD];
    char PaymentOutput[sizeof(PaymentOutput_Template)+FORM_PAD];
    char NewOrderOutput[sizeof(NewOrderOutput_Template)+FORM_PAD];
    char
StockLevelOutput[sizeof(StockLevelOutput_Template)+FORM_PAD];
    int  i_type, i_pool, i;

    make_txn_form_template(DeliveryInput,
DeliveryFormInput_Template,
        DeliveryOutput, DeliveryFormOutput_Template,
TXN_TYPE_DELIVERY);

    make_txn_form_template(OrderStatusInput,
OrderStatusInput_Template,
        OrderStatusOutput, OrderStatusOutput_Template,
TXN_TYPE_ORDERSTATUS);

    make_txn_form_template(PaymentInput, PaymentInput_Template,
        PaymentOutput, PaymentOutput_Template, TXN_TYPE_PAYMENT);

    make_txn_form_template(NewOrderInput, NewOrderInput_Template,
        NewOrderOutput, NewOrderOutput_Template, TXN_TYPE_NEWORDER);

    make_txn_form_template(StockLevelInput,
StockLevelInput_Template,
        StockLevelOutput, StockLevelOutput_Template,
TXN_TYPE_STOCKLEVEL);

    for (i_type = 0; i_type < POOL_TYPE_TXN_MAX; i_type++) {
        for (i_pool = 0; i_pool < TXN_TYPE_MAX; i_pool++) {
            int  i, form_length;
          InitializeCriticalSection(&(GPOOL.form_template_spinlock));

            GPOOL.form_template_size = Maxterms;
            GPOOL.form_template_storage = (char *)malloc(Maxterms *
GPOOL.form_template_length);
            GPOOL.free_list = (int *)malloc((Maxterms - 1)*
sizeof(int));

            GPOOL.free_slot = 0;
            form_length = GPOOL.form_template_length;

            for (i = 0; i < (Maxterms - 2); i++) {
                GPOOL.free_list[i] = i+1;
            }
            GPOOL.free_list[Maxterms-2] = -1;
        }
    }

    i_type = POOL_TYPE_TXN_INPUT; i_pool = TXN_TYPE_DELIVERY;
    strcpy((char *)(GPOOL.form_template_storage),
        DeliveryInput);

    i_type = POOL_TYPE_TXN_OUTPUT; i_pool = TXN_TYPE_DELIVERY;
    strcpy((char *)(GPOOL.form_template_storage),
        DeliveryOutput);

    i_type = POOL_TYPE_TXN_INPUT; i_pool = TXN_TYPE_STOCKLEVEL;
    strcpy((char *)(GPOOL.form_template_storage),
        StockLevelInput);

    i_type = POOL_TYPE_TXN_OUTPUT; i_pool = TXN_TYPE_STOCKLEVEL;
    strcpy((char *)(GPOOL.form_template_storage),
        StockLevelOutput);

    i_type = POOL_TYPE_TXN_INPUT; i_pool = TXN_TYPE_NEWORDER;
    strcpy((char *)(GPOOL.form_template_storage),
        NewOrderInput);

    i_type = POOL_TYPE_TXN_OUTPUT; i_pool = TXN_TYPE_NEWORDER;
    strcpy((char *)(GPOOL.form_template_storage),
        NewOrderOutput);

    i_type = POOL_TYPE_TXN_INPUT; i_pool = TXN_TYPE_ORDERSTATUS;
    strcpy((char *)(GPOOL.form_template_storage),
        OrderStatusInput);

    i_type = POOL_TYPE_TXN_OUTPUT; i_pool = TXN_TYPE_ORDERSTATUS;
    strcpy((char *)(GPOOL.form_template_storage),
        OrderStatusOutput);

    i_type = POOL_TYPE_TXN_INPUT; i_pool = TXN_TYPE_PAYMENT;
    strcpy((char *)(GPOOL.form_template_storage),
        PaymentInput);

    i_type = POOL_TYPE_TXN_OUTPUT; i_pool = TXN_TYPE_PAYMENT;
    strcpy((char *)(GPOOL.form_template_storage),
        PaymentOutput);

    for (i_type = 0; i_type < POOL_TYPE_TXN_MAX; i_type++) {
        for (i_pool = 0; i_pool < TXN_TYPE_MAX; i_pool++) {
            for (i = 1; i < GPOOL.form_template_size; i++) {
                memcpy((char *)(GPOOL.form_template_storage + i *
GPOOL.form_template_length),
```
```c
                (char *)(GPOOL.form_template_storage),
                GPOOL.form_template_length);
            }
        }
    }

#undef FORM_PAD
#undef GPOOL
}



void allocate_transaction_pool()
{
    int i, pool_size;

    pool_size = 0;
    pool_size = MAX(pool_size, sizeof(T_connect_data));
    pool_size = MAX(pool_size, sizeof(T_delivery_data));
    pool_size = MAX(pool_size, sizeof(T_neworder_data));
    pool_size = MAX(pool_size, sizeof(T_stocklevel_data));
    pool_size = MAX(pool_size, sizeof(T_orderstatus_data));
    pool_size = MAX(pool_size, sizeof(T_payment_data));
    pool_size = MAX(pool_size, sizeof(T_login_data));


InitializeCriticalSection(&(txn_data_pool.form_template_spinlock));
    txn_data_pool.form_template_length = pool_size;
    txn_data_pool.form_template_size =
txn_data_pool.form_template_length * Maxterms;
    txn_data_pool.form_template_storage = (char
*)malloc(txn_data_pool.form_template_size);
    if (txn_data_pool.form_template_storage == 0) {
        userlog ("Failed to allocate template_storage txn_data_pool:
size:%d\nerror number%d\n",txn_data_pool.form_template_size,errno);
    }
    txn_data_pool.free_slot = 0;
    txn_data_pool.free_list = (int *)malloc((Maxterms - 1) *
sizeof(int));
    for (i = 0; i < (Maxterms - 2); i++) {
        txn_data_pool.free_list[i] = i + 1;
    }
    txn_data_pool.free_list[Maxterms - 2] = -1;
}


/*
   This processes the form that provides the w_id and d_id of a
terminal.
*/
int mod_begin_cmd(EXTENSION_CONTROL_BLOCK *pECB)
{
    char *ptr;
    int  w_id, ld_id;

    if ((getcharvalue(pECB->lpszQueryString, '4', &ptr) == FALSE) ||
((w_id = atoi(ptr)) <= 0))
        return sendform_welcome(pECB, "Error: Invalid Warehouse
ID");

    if ((getcharvalue(ptr, '5', &ptr) == FALSE) || ((ld_id =
atoi(ptr)) <= 0) ||  (ld_id > 10))
        return sendform_welcome(pECB, "Error: Invalid District
DID");

    /*
       Perform activities related to database logon etc.
    */

    return sendform_mainmenu(pECB, w_id, ld_id);
}


int mod_exit_cmd(EXTENSION_CONTROL_BLOCK *pECB)
{
    return sendform_welcome(pECB, "Goodbye!");
}


int mod_menu_cmd(EXTENSION_CONTROL_BLOCK *pECB, int w_id, int
ld_id)
{
    return sendform_mainmenu(pECB, w_id, ld_id);
}


int get_wid_did(char *ptr, int *wid, int *did, char **optr)
{
    int total = 0;
    int c, pc;
    int provided = FALSE;

    *wid = *did = 0;
    *optr = ptr;
    pc = (int)(unsigned char) *ptr++;
    if ((pc < '0') || (pc > '9'))
        return FALSE;
    c = (int)(unsigned char) *ptr++;
```

```
    while ((c >= '0') && (c <= '9')) {
       total = 10 * total + (pc - '0');
       pc = c;
       c = (int)(unsigned char) *ptr++;
       provided = TRUE;
    }
    if (provided) {
       *wid = total;
       *did = (int) (pc - '0') + 1;
       *optr = ptr;
       return TRUE;
    }
    return FALSE;
}


int sendform_welcome(EXTENSION_CONTROL_BLOCK *pECB, char *mesg)
{
    char *response;
    int index = -1, ret;

    response = allocate_form(&resp_global_pool, &index);
    sprintf(response, WelcomeForm, mod_name, mesg);
    ret=send_response(pECB, response, strlen(response));
    free_form(&resp_global_pool, response, index);
    return ret;
}


int send_response(EXTENSION_CONTROL_BLOCK *pECB, char *form, int
size)
{
    HSE_SEND_HEADER_EX_INFO info = { 0 };
    char szHeader[256];
    DWORD nOut=size;
    DWORD nHeader = sprintf(szHeader, "Content-Type: text/html\n"
"Content-Length: %d\n" "charset= ISO-8859-1\n\n" , size);

    info.pszStatus = "200 OK";
    info.cchStatus = strlen(info.pszStatus);
    info.pszHeader = szHeader;
    info.cchHeader = nHeader;
    info.fKeepConn = true;

    if (!pECB->ServerSupportFunction(pECB->ConnID,
HSE_REQ_SEND_RESPONSE_HEADER_EX, &info, 0, 0))
    {
      DWORD foo = GetLastError();
      userlog("ServerSupportFunction() returns false: GetLastError:
%d, info.cchHeader: %d, info.cchStatus:
%d",foo,info.cchHeader,info.cchStatus);
      return FALSE;
    }

    if (!pECB->WriteClient(pECB->ConnID, form, &nOut, HSE_IO_SYNC))
    {
      DWORD foo2 = GetLastError();
      userlog("WriteClient returns: false, GetLastError: %d,
ConnID",foo2,pECB->ConnID);
      return FALSE;
    }
/*
char temp[1000];
strncpy(temp,form,size);
temp[strlen(temp)]='\0';
userlog("send: from >>>%s<<<\n",temp);
*/

    return TRUE;

}


char *allocate_form_new(form_template_pool *pool, int index)
{
   int pool_index=index-StartTerm;
   if (pool_index <= Maxterms)
     return (char *)(pool->form_template_storage + pool_index *
pool->form_template_length);
   else
     userlog("allocate_form_new failed max_threads = %d", Maxterms);
   return (char *)0;
}


char *allocate_form(form_template_pool *pool, int *pool_index)
{
   int current;

   EnterCriticalSection(&(pool->form_template_spinlock));
   current = pool->free_slot;
   if (current >= 0) {
     pool->free_slot = pool->free_list[current];
     LeaveCriticalSection(&(pool->form_template_spinlock));
     *pool_index = current;
     return (char *)(pool->form_template_storage + current * pool-
>form_template_length);
```

```
   }
   LeaveCriticalSection(&(pool->form_template_spinlock));
   userlog("allocate_form failed max_threads = %d", Maxterms);
   *pool_index = -1;
   return (char *)0;
}


void free_form(form_template_pool *pool, char *form_template, int
pool_index)
{
    if (! form_template || pool_index < 0 ) return;

    EnterCriticalSection(&(pool->form_template_spinlock));
    pool->free_list[pool_index] = pool->free_slot;
    pool->free_slot = pool_index;
    LeaveCriticalSection(&(pool->form_template_spinlock));
}


int send_error_message(EXTENSION_CONTROL_BLOCK *pECB, int
error_type, int error,
                       char *error_msg, int w_id, int ld_id, void
*context)
{
    char *response;
    char *mesg = "";
    int index = -1, ret;
    T_error_message *err = error_message;

    while (err->error_code) {
        if (err->error_code == error) {
            mesg = err->error_mesg; break;
        }
        err++;
    }
    response = allocate_form(&resp_global_pool, &index);
    sprintf(response, ErrorForm, mod_name, WDID(w_id, ld_id),
error_type, error, mesg, error_msg);
    ret=send_response(pECB, response, strlen(response));
    free_form(&resp_global_pool, response, index);
    return ret;
}


int sendform_mainmenu(EXTENSION_CONTROL_BLOCK *pECB, int w_id, int
ld_id)
{
    char *response;
    int index = -1, ret;

    response = allocate_form(&resp_global_pool, &index);
    sprintf(response, MainForm, mod_name, WDID(w_id, ld_id), "");
    ret=send_response(pECB, response, strlen(response));
    free_form(&resp_global_pool, response, index);
    return ret;
}


int sendform_neworderinput(EXTENSION_CONTROL_BLOCK *pECB, int w_id,
int ld_id)
{
    char *form;
    int index = w_id*10+ld_id, ret;
    form_template_pool *pool;
#define SUBI POOL_TYPE_TXN_INPUT][TXN_TYPE_NEWORDER

    pool = &txn_global_pool[SUBI];

#ifdef NEW_ALLOCATE_FORM
    form  = allocate_form_new(pool, index);
#else
    form  = allocate_form(pool, &index);
#endif

    fill_number(form, WDID(w_id, ld_id),
form_index[SUBI][NO_TERMID].index,
                form_index[SUBI][NO_TERMID].length);
    fill_number(form, w_id, form_index[SUBI][NO_WID].index,
                form_index[SUBI][NO_WID].length);
    ret=send_response(pECB, form, strlen(form));

#ifndef NEW_ALLOCATE_FORM
  free_form(pool, form, index);
#endif

    return ret;
#undef SUBI
}


int sendform_deliveryinput(EXTENSION_CONTROL_BLOCK *pECB, int w_id,
int ld_id)
{
    char *form;
    int index = w_id*10+ld_id, ret;
    form_template_pool *pool;
```

```c
#define SUBI POOL_TYPE_TXN_INPUT][TXN_TYPE_DELIVERY

    pool = &txn_global_pool[SUBI];

#ifdef NEW_ALLOCATE_FORM
    form  = allocate_form_new(pool, index);
#else
    form  = allocate_form(pool, &index);
#endif

    fill_number(form, WDID(w_id, ld_id),
form_index[SUBI][DE_TERMID].index,
                form_index[SUBI][DE_TERMID].length);
    fill_number(form, w_id, form_index[SUBI][DE_WID].index,
                form_index[SUBI][DE_WID].length);
    ret=send_response(pECB, form, strlen(form));

#ifndef NEW_ALLOCATE_FORM
    free_form(pool, form, index);
#endif

    return ret;
#undef SUBI
}



int sendform_stocklevelinput(EXTENSION_CONTROL_BLOCK *pECB, int
w_id, int ld_id)
{
    char *form;
    int index = w_id*10+ld_id, ret;
    form_template_pool *pool;
#define SUBI POOL_TYPE_TXN_INPUT][TXN_TYPE_STOCKLEVEL

    pool = &txn_global_pool[SUBI];

#ifdef NEW_ALLOCATE_FORM
    form  = allocate_form_new(pool, index);
#else
    form  = allocate_form(pool, &index);
#endif

    fill_number(form, WDID(w_id, ld_id),
form_index[SUBI][SL_TERMID].index,
                form_index[SUBI][SL_TERMID].length);
    fill_number(form, w_id, form_index[SUBI][SL_WID].index,
                form_index[SUBI][SL_WID].length);
    fill_number(form, ld_id, form_index[SUBI][SL_DID].index,
                form_index[SUBI][SL_DID].length);
    ret=send_response(pECB, form, strlen(form));

#ifndef NEW_ALLOCATE_FORM
    free_form(pool, form, index);
#endif

    return ret;
#undef SUBI
}



int sendform_paymentinput(EXTENSION_CONTROL_BLOCK *pECB, int w_id,
int ld_id)
{
    char *form;
    int index = w_id*10+ld_id, ret;
    form_template_pool *pool;
#define SUBI POOL_TYPE_TXN_INPUT][TXN_TYPE_PAYMENT

    pool = &txn_global_pool[SUBI];

#ifdef NEW_ALLOCATE_FORM
    form  = allocate_form_new(pool, index);
#else
    form  = allocate_form(pool, &index);
#endif

    fill_number(form, WDID(w_id, ld_id),
form_index[SUBI][PA_INPUT_TERMID].index,
                form_index[SUBI][PA_INPUT_TERMID].length);
    fill_number(form, w_id, form_index[SUBI][PA_INPUT_WID].index,
                form_index[SUBI][PA_INPUT_WID].length);
    ret=send_response(pECB, form, strlen(form));

#ifndef NEW_ALLOCATE_FORM
    free_form(pool, form, index);
#endif

    return ret;
#undef SUBI
}

int sendform_orderstatusinput(EXTENSION_CONTROL_BLOCK *pECB, int
w_id, int ld_id)
{
    char *form;
    int index = w_id*10+ld_id, ret;
    form_template_pool *pool;
#define SUBI POOL_TYPE_TXN_INPUT][TXN_TYPE_ORDERSTATUS
```

```c
    pool = &txn_global_pool[SUBI];

#ifdef NEW_ALLOCATE_FORM
    form  = allocate_form_new(pool, index);
#else
    form  = allocate_form(pool, &index);
#endif

    fill_number(form, WDID(w_id, ld_id),
form_index[SUBI][OS_TERMID].index,
                form_index[SUBI][OS_TERMID].length);
    fill_number(form, w_id, form_index[SUBI][OS_WID].index,
                form_index[SUBI][OS_WID].length);
    ret=send_response(pECB, form, strlen(form));

#ifndef NEW_ALLOCATE_FORM
    free_form(pool, form, index);
#endif

    return ret;
#undef SUBI
}


void fill_string(char *form, char *string, int index, int length,
int *shift)
{
    char *ptr;
    int i;

    for (i=0, ptr=string; i<length && (*ptr)!='\0'; i++, ptr++) {
        form[index+i]=(char)(*ptr);
        switch (*ptr) {
            case '\"' : (*shift)+=5;
                        break;
            case '&'  : (*shift)+=4;
                        break;
            case '>'  : (*shift)+=3;
                        break;
            case '<'  : (*shift)+=3;
                        break;
        }
    }

    for (; i<length; i++)
        form[index+i]=' ';
}

void adjust_form(char *form, int *indexes, int *length, int size,
int formlen, int totalshift)
{
    int ptr, ptr2, ind;

    for (ptr=formlen, ptr2=formlen+totalshift, ind=size-1; ptr>=0;
ptr--) {
        if (ind>=0 && ptr<indexes[ind])
            ind--;
        if (ind<0 || ptr>=indexes[ind]+length[ind])
            form[ptr2--]=form[ptr];
        else if (ptr>=indexes[ind] && ptr<indexes[ind]+length[ind])
            switch (form[ptr]) {
                case '\"' : form[ptr2--]=';'; form[ptr2--]='t'; form[ptr2--
]='o';
                            form[ptr2--]='u'; form[ptr2--]='q'; form[ptr2--
]='&';
                            break;
                case '&'  : form[ptr2--]=';'; form[ptr2--]='p'; form[ptr2--
]='m';
                            form[ptr2--]='a'; form[ptr2--]='&';
                            break;
                case '>'  : form[ptr2--]=';'; form[ptr2--]='t';
                            form[ptr2--]='l'; form[ptr2--]='&';
                            break;
                case '<'  : form[ptr2--]=';'; form[ptr2--]='t';
                            form[ptr2--]='g'; form[ptr2--]='&';
                            break;
                default : form[ptr2--]=form[ptr];
                            break;
            }
    }
}

void fill_float(char *form, double value, int index, int length)
{
    int ptr = index + length - 1, DecPtr = ptr - 2;
    int avalue=abs((int)(value*100.0));
    int is_neg=(value<0.0);
    char asterick[] = "********************";

    if (avalue==0)
        form[ptr--]='0';

    while ((avalue!=0 && ptr>=index) || ptr > DecPtr) {
        form[ptr--]='0' + avalue % 10;
        avalue/=10;
        if (ptr == DecPtr)
            form[ptr--]='.';
    }

    if (ptr < index && (is_neg || avalue!=0 ))
```

```
      memcpy(form+index, asterick, length);
    else {
      if (is_neg)
        form[ptr--]='-';
      while (ptr>=index)
        form[ptr--]=' ';
    }
}

void fill_number(char *form, int value, int index, int length)
{
    char *pstart = (char *)form + index;
    char *pend = pstart + length - 1;
    char asterick[] = "********************";
    int  slen = length;
    int  is_neg, avalue;

    is_neg = (value < 0);
    avalue = abs(value);

    do {
      *pend = (avalue % 10) + '0';
      avalue = avalue / 10;
      if (--length) pend--;
    } while (length);
/*
    if (avalue==0 && length >0) {
      do {
        *pend=' ';
        if (--length) pend--;
      } while (length);
    }
*/
    if (avalue) {
       memcpy(pstart, asterick, slen);
       return;
    }

    if (is_neg) {
      if (*pend == '0') {
          *pend = '-';
      } else {
         memcpy(pstart, asterick, slen);
         return;
      }
    }
}

int parse_query_string(char *iptr, int max_cnt,
                       char *txn_chars, value_index_entry
*txn_vals)
{
    char *ptr = iptr;
    int  key, i;

    for (i = 0; i < max_cnt; i++) {
        key = txn_chars[i];
        txn_vals[i].value = NULL;
        txn_vals[i].length = 0;
        if ((key == *ptr) && ('=' == *++ptr)) {
           txn_vals[i].value = ++ptr;
        }
        while (ptr && ptr[0]!='\0') {
           if ('&' == *ptr) {
              ptr++; break;
           }
           ptr++; txn_vals[i].length++;
        }
    }

    return TRUE;
}

int get_number(char *ptr, int *value)
{
    int c, total;
    int has_value = FALSE;
    int is_neg = FALSE;

    if (*ptr == '-') {
        is_neg = TRUE; ptr++;
    }
    c = (int) (unsigned char) *ptr++;

    total = 0;
    while (( c >= '0') && (c <= '9')) {
        total = 10 * total + (c - '0');
        c = (int) (unsigned char) *ptr++;
        has_value = TRUE;
    }
    if ((c == '\0') || (('&' == c) && has_value)) {
        *value = is_neg?(0-total):total;
        return TRUE;
    }
    *value = 0;
    return FALSE;
}

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

```
* mod transaction output
*
*********************************************************************
****************************/

int mod_neworder_query(EXTENSION_CONTROL_BLOCK *pECB, int w_id, int
ld_id, char *ptr)
{
    T_neworder_data *pdata;
    int index = w_id*10+ld_id, ret;
    int status = SUCCESS;

#ifdef NEW_ALLOCATE_FORM
    pdata = (T_neworder_data *)allocate_form_new(&txn_data_pool,
index);
#else
    pdata = (T_neworder_data *)allocate_form(txn_data_pool,
&index);
#endif

    pdata->w_id = w_id; pdata->ld_id = ld_id; pdata->context = (void
*)pECB;

    status = parse_neworder_query(ptr, pdata);
    if (status != SUCCESS) {
       ret=send_error_message(pECB, 0, status, "", w_id, ld_id, 0);

#ifndef NEW_ALLOCATE_FORM
       free_form(&txn_data_pool, (char *) pdata, index);
#endif

       return ret;
    }

    status = mod_tpcc_neworder(pdata);
    ret=sendform_neworderoutput(status, pdata);

#ifndef NEW_ALLOCATE_FORM
    free_form(&txn_data_pool, (char *) pdata, index);
#endif

    return ret;
}


int mod_delivery_query(EXTENSION_CONTROL_BLOCK *pECB, int w_id, int
ld_id, char *ptr)
{
    DelQueue_info *queue_info;
    int index=-1, ret;
    int status = SUCCESS;
    int ii, buf_status;
    size_t br;
    pDelQueue_info CompletedDeliveries[DELIVERY_RESPONSE_COUNT];

    queue_info = findFreeDelQueue();
    queue_info->pdata->w_id = w_id;
    queue_info->pdata->ld_id = ld_id;
    queue_info->pdata->context = (void *)pECB;

    status = parse_delivery_query(ptr, queue_info->pdata);
    if (status != SUCCESS) {
       ret=send_error_message(pECB, 0, status, "", w_id, ld_id, 0);
       return ret;
    }

    EnqueueDel(queue_info);
    for (ii=0;ii<DELIVERY_RESPONSE_COUNT;ii++) {

buf_status=bufread(&CompletedDeliveries[ii],sizeof(pDelQueue_info),
&br,0,deliveryoutput);
       if (BUF_READTIMEOUT == buf_status)
          CompletedDeliveries[ii]=NULL;
       else if (BUF_SUCCESS != buf_status)
          userlog ("Error reading delivery response buffer:
%d\n",status);
    }
    if (!SetEvent(waitDelWork)) {
       userlog("Error on SetEvent(waitDelWork)\n");
       ret=sendform_deliveryoutput(status, queue_info->pdata,
CompletedDeliveries);
       ret=FALSE;
    }
    else ret=sendform_deliveryoutput(status, queue_info->pdata,
CompletedDeliveries);
    return ret;
}


int mod_payment_query(EXTENSION_CONTROL_BLOCK *pECB, int w_id, int
ld_id, char *ptr)
{
    T_payment_data *pdata;
    int index = w_id*10+ld_id, ret;
    int status = SUCCESS;

#ifdef NEW_ALLOCATE_FORM
```

```
    pdata = (T_payment_data *)allocate_form_new(&txn_data_pool,
index);
#else
    pdata = (T_payment_data *)allocate_form(&txn_data_pool, &index);
#endif

    pdata->w_id = w_id; pdata->ld_id = ld_id; pdata->context = (void
*)pECB;

    status = parse_payment_query(ptr, pdata);
    if (status != SUCCESS) {
        ret=send_error_message(pECB, 0, status, "", w_id, ld_id, 0);

#ifndef NEW_ALLOCATE_FORM
        free_form(&txn_data_pool, (char *) pdata, index);
#endif

        return ret;
    }

    status = mod_tpcc_payment(pdata);
    ret=sendform_paymentoutput(status, pdata);

#ifndef NEW_ALLOCATE_FORM
    free_form(&txn_data_pool, (char *) pdata, index);
#endif

    return ret;
}


int mod_orderstatus_query(EXTENSION_CONTROL_BLOCK *pECB, int w_id,
int ld_id, char *ptr)
{
    T_orderstatus_data *pdata;
    int index = w_id*10+ld_id, ret;
    int status = SUCCESS;

#ifdef NEW_ALLOCATE_FORM
    pdata = (T_orderstatus_data *)allocate_form_new(&txn_data_pool,
index);
#else
    pdata = (T_orderstatus_data *)allocate_form(&txn_data_pool,
&index);
#endif

    pdata->w_id = w_id; pdata->ld_id = ld_id; pdata->context = (void
*)pECB;

    status = parse_orderstatus_query(ptr, pdata);
    if (status != SUCCESS) {
        ret=send_error_message(pECB, 0, status, "", w_id, ld_id, 0);

#ifndef NEW_ALLOCATE_FORM
        free_form(&txn_data_pool, (char *) pdata, index);
#endif

        return ret;
    }

    status = mod_tpcc_orderstatus(pdata);
    ret=sendform_orderstatusoutput(status, pdata);

#ifndef NEW_ALLOCATE_FORM
    free_form(&txn_data_pool, (char *) pdata, index);
#endif

    return ret;
}


int mod_stocklevel_query(EXTENSION_CONTROL_BLOCK *pECB, int w_id,
int ld_id, char *ptr)
{
    T_stocklevel_data *pdata;
    int index = w_id*10+ld_id, ret;
    int status = SUCCESS;

#ifdef NEW_ALLOCATE_FORM
    pdata = (T_stocklevel_data *)allocate_form_new(&txn_data_pool,
index);
#else
    pdata = (T_stocklevel_data *)allocate_form(&txn_data_pool,
&index);
#endif

    pdata->w_id = w_id; pdata->ld_id = ld_id; pdata->context = (void
*)pECB;

    status =  parse_stocklevel_query(ptr, pdata);
    if (status != SUCCESS) {
        ret=send_error_message(pECB, 0, status, "", w_id, ld_id, 0);

#ifndef NEW_ALLOCATE_FORM
        free_form(&txn_data_pool, (char *) pdata, index);
#endif

        return ret;
    }

    status = mod_tpcc_stocklevel(pdata);
```

```
    ret=sendform_stockleveloutput(status, pdata);

#ifndef NEW_ALLOCATE_FORM
    free_form(&txn_data_pool, (char *) pdata, index);
#endif

    return ret;
}

/****************************************************************
**************************
* parse transaction query
*
****************************************************************
**************************/

int parse_neworder_query(char *iptr, T_neworder_data *pdata)
{
    int status, i, items;
    value_index_entry value_ptr[NO_INPUT_MAX];
    char *ptr;

    status = parse_query_string(iptr, NO_INPUT_MAX, neworder_chars,
value_ptr);

    if ((ptr = value_ptr[NO_INPUT_DID].value) == NULL) {
        return NEWORDER_MISSING_DID;
    }
    if ((status = get_number(ptr, &pdata->d_id)) == FALSE) {
        return NEWORDER_DISTRICT_INVALID;
    }
    if ((pdata->d_id > 10) || (pdata->d_id < 1)) {
        return NEWORDER_DISTRICT_RANGE;
    }

    if ((ptr = value_ptr[NO_INPUT_CID].value) == NULL) {
        return NEWORDER_CUSTOMER_KEY;
    }
    if ((status = get_number(ptr, &pdata->c_id)) == FALSE) {
        return NEWORDER_CUSTOMER_INVALID;
    }
    if ((pdata->c_id > 3000) || (pdata->c_id <= 0)) {
        return NEWORDER_CUSTOMER_RANGE;
    }

    pdata->o_all_local = 1;

    for (i = 0, items = 0; i < 15; i++) {
        if ((ptr = value_ptr[i*3 + NO_INPUT_IID00].value) == NULL) {
            return NEWORDER_MISSING_IID_KEY;
        }
        if (value_ptr[i*3 + NO_INPUT_IID00].length > 0) {
            if ((status = get_number(ptr, &pdata-
>o_orderline[items].ol_i_id)) == FALSE) {
                return NEWORDER_ITEMID_INVALID;
            }
            if ((ptr = value_ptr[i*3 + NO_INPUT_SPW00].value) ==
NULL) {
                return NEWORDER_MISSING_SUPPW_KEY;
            }
            if ((status = get_number(ptr, &pdata-
>o_orderline[items].ol_supply_w_id)) == FALSE) {
                return NEWORDER_SUPPW_INVALID;
            }
            if ((ptr = value_ptr[i*3 + NO_INPUT_QTY00].value) ==
NULL) {
                return NEWORDER_MISSING_QTY_KEY;
            }
            if ((status = get_number(ptr, &pdata-
>o_orderline[items].ol_quantity)) == FALSE) {
                return NEWORDER_QTY_INVALID;
            }
            /*
                We use item number 111111 as the bad one.
            */
            if ((pdata->o_orderline[items].ol_i_id > 999999) ||
                (pdata->o_orderline[items].ol_i_id < 1)) {
                return NEWORDER_ITEMID_RANGE;
            }
            if ((pdata->o_orderline[items].ol_quantity >= 100) ||
                (pdata->o_orderline[items].ol_quantity < 1)) {
                return NEWORDER_QTY_RANGE;
            }
            if (pdata->o_all_local && pdata-
>o_orderline[items].ol_supply_w_id != pdata->w_id) {
                pdata->o_all_local = 0;
            }
            items++;
        } else {
            if (value_ptr[i*3 + NO_INPUT_SPW00].value == NULL) {
                return NEWORDER_MISSING_SUPPW_KEY;
            }
            if (value_ptr[i*3 + NO_INPUT_SPW00].length > 0) {
                return NEWORDER_SUPPW_WITHOUT_ITEMID;
            }
            if (value_ptr[i*3 + NO_INPUT_QTY00].value == NULL) {
                return NEWORDER_MISSING_QTY_KEY;
            }
            if (value_ptr[i*3 + NO_INPUT_QTY00].length > 0) {
```

```c
                return NEWORDER_QTY_WITHOUT_ITEMID;
            }
        }
    }
    if (items ==  0) {
        return NEWORDER_NOITEMS_ENTERED;
    }
    pdata->o_ol_cnt = items;
    return SUCCESS;
}

int parse_payment_query(char *iptr, T_payment_data *pdata)
{
    int status, see_dot, i;
    value_index_entry value_ptr[PA_INPUT_MAX];
    char *ptr;

    status = parse_query_string(iptr, PA_INPUT_MAX, payment_chars,
value_ptr);

    if ((ptr = value_ptr[PA_INPUT_DID].value) == NULL) {
        return PAYMENT_MISSING_DID_KEY;
    }
    if ((status = get_number(ptr, &pdata->d_id)) == FALSE) {
        return PAYMENT_DISTRICT_INVALID;
    }
    if ((pdata->d_id > 10) || (pdata->d_id < 1)) {
        return PAYMENT_DISTRICT_RANGE;
    }

    if ((ptr = value_ptr[PA_INPUT_CID].value) == NULL) {
        return PAYMENT_MISSING_CID_KEY;
    }

    if (value_ptr[PA_INPUT_CID].length == 0) {          /* c_id ==
0 */
        pdata->c_id = 0;
        pdata->by_last_name = 1;
        if ((ptr = value_ptr[PA_INPUT_NAME].value) == NULL) {
            return PAYMENT_MISSING_CLASTNAME_KEY;
        }
        if (value_ptr[PA_INPUT_NAME].length == 0) {
            return PAYMENT_MISSING_CLASTNAME;
        }
        memcpy(pdata->c_last, ptr, value_ptr[PA_INPUT_NAME].length);
        pdata->c_last[value_ptr[PA_INPUT_NAME].length] = '\0';
        STRING_UPPERCASE(pdata->c_last);
        if (value_ptr[PA_INPUT_NAME].length > 16) {
            return PAYMENT_LAST_NAME_TO_LONG;
        }
    } else {                                        /* c_id !=
0 */
        pdata->by_last_name = 0;
        if ((status = get_number(ptr, &pdata->c_id)) == FALSE) {
            return PAYMENT_CUSTOMER_INVALID;
        }
        if ((pdata->c_id > 3000) || (pdata->c_id <= 0)) {
            return PAYMENT_CID_RANGE;
        }
        if ((ptr = value_ptr[PA_INPUT_NAME].value) == NULL) {
            return PAYMENT_MISSING_CLASTNAME_KEY;
        }
        if (value_ptr[PA_INPUT_NAME].length > 0) {
            return PAYMENT_CID_AND_CLASTNAME;
        }
    }

    if ((ptr = value_ptr[PA_INPUT_CDID].value) == NULL) {
        return PAYMENT_MISSING_CDI_KEY;
    }
    if ((status = get_number(ptr, &pdata->c_d_id)) == FALSE) {
        return PAYMENT_CDI_INVALID;
    }
    if ((pdata->c_d_id > 10) || (pdata->c_d_id < 1)) {
        return PAYMENT_CDI_RANGE;
    }
    if ((ptr = value_ptr[PA_INPUT_CWID].value) == NULL) {
        return PAYMENT_MISSING_CWI_KEY;
    }
    if ((status = get_number(ptr, &pdata->c_w_id)) == FALSE) {
        return PAYMENT_CWI_INVALID;
    }
    if ((ptr = value_ptr[PA_INPUT_AMT].value) == NULL) {
        return PAYMENT_MISSING_HAM_KEY;
    }

    see_dot = FALSE;

    for (i = 0; i < value_ptr[PA_INPUT_AMT].length; i++) {
        if (ptr[i] == '\0') {
            return PAYMENT_HAM_INVALID;
        }
        if (ptr[i] == '.') {
            if (see_dot) {
                return PAYMENT_HAM_INVALID;
            } else {
                see_dot = TRUE;
            }
        } else {
            if ((ptr[i] > '9') || (ptr[i] < '0')) {
                return PAYMENT_HAM_INVALID;
```

```c
            }
        }
    }
    pdata->h_amount = atof(ptr);

    if ((pdata->h_amount < 0) || (pdata->h_amount >= 10000.0)) {
        return PAYMENT_HAM_RANGE;
    }
    return SUCCESS;
}

int parse_delivery_query(char *iptr, T_delivery_data *pdata)
{
    int status = SUCCESS;
    value_index_entry value_ptr[DE_INPUT_MAX];
    int i, see_dot;
    char *ptr;

    status = parse_query_string(iptr, DE_INPUT_MAX, delivery_chars,
value_ptr);

    if ((ptr = value_ptr[DE_INPUT_DID].value) == NULL) {
        return DELIVERY_MISSING_OCD_KEY;
    }
    if ((status = get_number(ptr, &pdata->o_carrier_id)) == FALSE) {
        return DELIVERY_CARRIER_INVALID;
    }
    if ((pdata->o_carrier_id > 10) || (pdata->o_carrier_id < 1)) {
        return DELIVERY_CARRIER_ID_RANGE;
    }

    if ((ptr = value_ptr[DE_INPUT_QTIME].value) == NULL) {
        time (&pdata->enqueue_time);
        return SUCCESS;
    }

    if (value_ptr[DE_INPUT_QTIME].length == 0) {
        return DELIVERY_MISSING_QUEUETIME_KEY;
    }

    see_dot = FALSE;

    for (i = 0; i < value_ptr[DE_INPUT_QTIME].length; i++) {
        if (ptr[i] == '\0') {
            return DELIVERY_MISSING_QUEUETIME_KEY;
        }
        if (ptr[i] == '.') {
            if (see_dot) {
                return DELIVERY_MISSING_QUEUETIME_KEY;
            } else {
                see_dot = TRUE;
            }
        } else {
            if ((ptr[i] > '9') || (ptr[i] < '0')) {
                return DELIVERY_MISSING_QUEUETIME_KEY;
            }
        }
    }


    return SUCCESS;
}

int parse_orderstatus_query(char *iptr, T_orderstatus_data *pdata)
{
    int status = SUCCESS;
    value_index_entry value_ptr[OS_INPUT_MAX];
    char *ptr;

    status = parse_query_string(iptr, OS_INPUT_MAX,
orderstatus_chars, value_ptr);

    if ((ptr = value_ptr[OS_INPUT_DID].value) == NULL) {
        return ORDERSTATUS_MISSING_DID_KEY;
    }
    if ((status = get_number(ptr, &pdata->d_id)) == FALSE) {
        return ORDERSTATUS_DID_INVALID;
    }
    if ((pdata->d_id > 10) || (pdata->d_id < 1)) {
        return ORDERSTATUS_DID_RANGE;
    }

    if ((ptr = value_ptr[OS_INPUT_CID].value) == NULL) {
        return ORDERSTATUS_MISSING_CID_KEY;
    }

    if (value_ptr[OS_INPUT_CID].length == 0) {
        pdata->c_id = 0;
        pdata->by_last_name = 1;
        if ((ptr = value_ptr[OS_INPUT_NAME].value) == NULL) {
            return ORDERSTATUS_MISSING_CLASTNAME_KEY;
        }
        memcpy(pdata->c_last, ptr, value_ptr[OS_INPUT_NAME].length);
        pdata->c_last[value_ptr[OS_INPUT_NAME].length] = '\0';
        STRING_UPPERCASE(pdata->c_last);
        if (value_ptr[OS_INPUT_NAME].length > 16) {
            return ORDERSTATUS_CLASTNAME_RANGE;
        }
    } else {                                        /* c_id !=
0 */
        pdata->by_last_name = 0;
```

```
        if ((status = get_number(ptr, &pdata->c_id)) == FALSE) {            } else {
            return ORDERSTATUS_CID_INVALID;                                    memcpy(form+form_index[SUBI][NO_DATE].index, blank,
        }                                                                           form_index[SUBI][NO_DATE].length);
        if ((pdata->c_id > 3000) || (pdata->c_id <= 0)) {                    }
            return ORDERSTATUS_CID_RANGE;
        }                                                                    fill_number(form, pdata->c_id, form_index[SUBI][NO_CID].index,
        if ((ptr = value_ptr[OS_INPUT_NAME].value) == NULL) {                        form_index[SUBI][NO_CID].length);
            return ORDERSTATUS_MISSING_CLASTNAME_KEY;
        }                                                                    fill_string(form, pdata->c_last,
        if (value_ptr[OS_INPUT_NAME].length > 0) {                   form_index[SUBI][NO_NAME].index,
            return ORDERSTATUS_CID_AND_CLASTNAME;                                    form_index[SUBI][NO_NAME].length, &shift);
        }                                                                    indexes[strcount]=form_index[SUBI][NO_NAME].index;
    }                                                                        indLen[strcount++]=form_index[SUBI][NO_NAME].length;
    return SUCCESS;
}                                                                            fill_string(form, pdata->c_credit,
                                                                     form_index[SUBI][NO_CREDIT].index,
int parse_stocklevel_query(char *iptr, T_stocklevel_data *pdata)                     form_index[SUBI][NO_CREDIT].length, &shift);
{                                                                            indexes[strcount]=form_index[SUBI][NO_CREDIT].index;
                                                                             indLen[strcount++]=form_index[SUBI][NO_CREDIT].length;
    value_index_entry value_ptr[SL_INPUT_MAX];
    char *ptr;                                                               fill_float(form, pdata->c_discount,
    int status = SUCCESS;                                            form_index[SUBI][NO_DISC].index,
                                                                                     form_index[SUBI][NO_DISC].length);
    status = parse_query_string(iptr, SL_INPUT_MAX,
stocklevel_chars, value_ptr);                                                fill_number(form, pdata->o_id, form_index[SUBI][NO_OID].index,
                                                                                     form_index[SUBI][NO_OID].length);
    if ((ptr = value_ptr[SL_INPUT_THRESHOLD].value) == NULL) {
        return STOCKLEVEL_MISSING_THRESHOLD_KEY;                             fill_number(form, pdata->o_ol_cnt,
    }                                                                form_index[SUBI][NO_LINES].index,
    if ((status = get_number(ptr, &pdata->threshold)) == FALSE) {                    form_index[SUBI][NO_LINES].length);
        return STOCKLEVEL_THRESHOLD_INVALID;
    }                                                                        fill_float(form, pdata->w_tax, form_index[SUBI][NO_WTAX].index,
    if ((pdata->threshold >= 100) || (pdata->threshold < 0)) {                       form_index[SUBI][NO_WTAX].length);
        return STOCKLEVEL_THRESHOLD_RANGE;
    }                                                                        fill_float(form, pdata->d_tax, form_index[SUBI][NO_DTAX].index,
                                                                                     form_index[SUBI][NO_DTAX].length);
    return SUCCESS;
}                                                                            if (!pdata->status) {

                                                                                for (i=0; i<pdata->o_ol_cnt; i++) {
/*************************************************************************        fill_number(form, pdata->o_orderline[i].ol_supply_w_id,
****************************                                                              form_index[SUBI][NO_SUPPW+i*8].index,
* sendform output                                                                        form_index[SUBI][NO_SUPPW+i*8].length);
*
*************************************************************************        fill_number(form, pdata->o_orderline[i].ol_i_id,
****************************/                                                             form_index[SUBI][NO_ITEMID+i*8].index,
                                                                                         form_index[SUBI][NO_ITEMID+i*8].length);
int sendform_neworderoutput(int status, T_neworder_data *pdata)
{                                                                               fill_string(form, pdata->o_orderline[i].i_name,
    EXTENSION_CONTROL_BLOCK *pECB;                                                        form_index[SUBI][NO_INAME+i*8].index,
    int w_id, ld_id, ret;                                                                form_index[SUBI][NO_INAME+i*8].length, &shift);
    char *form, *form2;                                                          indexes[strcount]=form_index[SUBI][NO_INAME+i*8].index;
    char blank[] = "                                                            indLen[strcount++]=form_index[SUBI][NO_INAME+i*8].length;
";
    int index = -1, formlen, strcount=0, shift=0, i, j,                          fill_number(form, pdata->o_orderline[i].ol_quantity,
lineStart=15;                                                                             form_index[SUBI][NO_QTY+i*8].index,
    int indexes[NO_FORMINDEX_SIZE], indLen[NO_FORMINDEX_SIZE],                            form_index[SUBI][NO_QTY+i*8].length);
index2=-1;
    form_template_pool *pool;                                                    fill_number(form, pdata->o_orderline[i].s_quantity,
                                                                                         form_index[SUBI][NO_STOCK+i*8].index,
#define SUBI POOL_TYPE_TXN_OUTPUT][TXN_TYPE_NEWORDER                                       form_index[SUBI][NO_STOCK+i*8].length);

    w_id = pdata->w_id; ld_id = pdata->ld_id;                                    fill_string(form, pdata->o_orderline[i].b_g,
  pECB = (EXTENSION_CONTROL_BLOCK *) pdata->context;                                      form_index[SUBI][NO_BRAND+i*8].index,
                                                                                         form_index[SUBI][NO_BRAND+i*8].length, &shift);
    if (status != SUCCESS && status != DB_SUCCESS) {                             indexes[strcount]=form_index[SUBI][NO_BRAND+i*8].index;
      return send_error_message(pECB, 0, status, "", w_id, ld_id,               indLen[strcount++]=form_index[SUBI][NO_BRAND+i*8].length;
0);
    }                                                                            fill_float(form, pdata->o_orderline[i].i_price,
                                                                                         form_index[SUBI][NO_PRICE+i*8].index,
    if (pdata->txn_status != DB_RETURN_OCI_SUCCESS) {                                     form_index[SUBI][NO_PRICE+i*8].length);
      return send_error_message(pECB, 0, pdata->txn_status, "   ---
DATABASE ERROR ", w_id, ld_id, 0);                                               fill_float(form, pdata->o_orderline[i].ol_amount,
    }                                                                                    form_index[SUBI][NO_AMOUNT+i*8].index,
                                                                                         form_index[SUBI][NO_AMOUNT+i*8].length);
    pool = &txn_global_pool[SUBI];                                           }
    index=w_id*10+ld_id;
                                                                                for (j=NO_SUPPW+i*8; j<NO_SUPPW+15*8; j++)
#ifdef NEW_ALLOCATE_FORM
    form = allocate_form_new(pool, index);                            memcpy(form+form_index[SUBI][j].index,blank,form_index[SUBI][j].len
#else                                                                 gth);
    form = allocate_form(pool, &index);
#endif                                                                           for (lineStart=j=i; j<15; j++) {
                                                                                    form[form_index[SUBI][NO_PRICE+j*8].index-1]=' ';
    formlen=strlen(form);                                                        form[form_index[SUBI][NO_AMOUNT+j*8].index-1]=' ';
                                                                                }
    fill_number(form, WDID(w_id, ld_id),
form_index[SUBI][NO_TERMID].index,                                           } else {
                form_index[SUBI][NO_TERMID].length);                  /*
    fill_number(form, w_id, form_index[SUBI][NO_WID].index,                      for (j=NO_DISC; j<=NO_DTAX; j++)
                form_index[SUBI][NO_WID].length);
                                                                     memcpy(form+form_index[SUBI][j].index,blank,form_index[SUBI][j].len
    fill_number(form, pdata->d_id, form_index[SUBI][NO_DID].index,   gth);
                form_index[SUBI][NO_DID].length);                    */

    if (!pdata->status) {                                                       for (j=NO_SUPPW; j<NO_SUPPW+15*8; j++)
      fill_string(form, pdata->o_entry_d.DateString,
form_index[SUBI][NO_DATE].index,                                     memcpy(form+form_index[SUBI][j].index,blank,form_index[SUBI][j].len
                  form_index[SUBI][NO_DATE].length, &shift);          gth);
      indexes[strcount]=form_index[SUBI][NO_DATE].index;
      indLen[strcount++]=form_index[SUBI][NO_DATE].length;
```

```c
      for (lineStart=j=0; j<15; j++) {
        form[form_index[SUBI][NO_PRICE+j*8].index-1]=' ';
        form[form_index[SUBI][NO_AMOUNT+j*8].index-1]=' ';
      }
    }

    if (!pdata->status) {
      fill_string(form, "Transaction committed",
                  form_index[SUBI][NO_STATUS].index,
                  form_index[SUBI][NO_STATUS].length, &shift);
      indexes[strcount]=form_index[SUBI][NO_STATUS].index;
      indLen[strcount++]=form_index[SUBI][NO_STATUS].length;

      fill_float(form, pdata->total_amount,
form_index[SUBI][NO_TOTAL].index,
                  form_index[SUBI][NO_TOTAL].length);
    } else {
      fill_string(form, "Item number is not valid",
                  form_index[SUBI][NO_STATUS].index,
                  form_index[SUBI][NO_STATUS].length, &shift);
      indexes[strcount]=form_index[SUBI][NO_STATUS].index;
      indLen[strcount++]=form_index[SUBI][NO_STATUS].length;

      memcpy(form+form_index[SUBI][NO_TOTAL].index-1, blank,
             form_index[SUBI][NO_TOTAL].length+1);
    }

    if (shift)
      adjust_form(form, indexes, indLen, strcount, formlen, shift);

    ret=send_response(pECB, form, strlen(form));

    if (shift) {
      allocate_last_form(form2,pool);
      memcpy(form, form2, formlen+1);
    }
    for (j=lineStart; j<15; j++) {
      form[form_index[SUBI][NO_PRICE+j*8].index-1]='$';
      form[form_index[SUBI][NO_AMOUNT+j*8].index-1]='$';
    }
#ifndef NEW_ALLOCATE_FORM
    free_form(pool, form, index);
#endif

    return ret;
#undef SUBI
}

int sendform_paymentoutput(int status, T_payment_data *pdata)
{
  EXTENSION_CONTROL_BLOCK *pECB;
    int w_id, ld_id, ret;
    char *form, *form2;
    char blank[] = "
";
    int index = -1, formlen, strcount=0, shift=0, i=0, j,datalen;
    int indexes[PA_FORMINDEX_SIZE], indLen[PA_FORMINDEX_SIZE],
index2=-1;
    form_template_pool *pool;

    w_id = pdata->w_id; ld_id = pdata->ld_id;
  pECB = (EXTENSION_CONTROL_BLOCK *) pdata->context;

    if (status != SUCCESS && status != DB_SUCCESS) {
      return send_error_message(pECB, 0, status, "", w_id, ld_id,
0);
    }

    if (pdata->txn_status != DB_RETURN_OCI_SUCCESS) {
      return send_error_message(pECB, 0, pdata->txn_status, "   ---
DATABASE ERROR ", w_id, ld_id, 0);
    }

#define SUBI POOL_TYPE_TXN_OUTPUT][TXN_TYPE_PAYMENT

    pool = &txn_global_pool[SUBI];
  index=w_id*10+ld_id;

#ifdef NEW_ALLOCATE_FORM
    form  = allocate_form_new(pool, index);
#else
    form  = allocate_form(pool, &index);
#endif

    formlen=strlen(form);

    fill_number(form, WDID(w_id, ld_id),
form_index[SUBI][PA_TERMID].index,
                form_index[SUBI][PA_TERMID].length);

    fill_string(form, pdata->h_date.DateString,
form_index[SUBI][PA_DATE].index,
                form_index[SUBI][PA_DATE].length, &shift);
    indexes[strcount]=form_index[SUBI][PA_DATE].index;
    indLen[strcount++]=form_index[SUBI][PA_DATE].length;

    fill_number(form, w_id, form_index[SUBI][PA_WID].index,
                form_index[SUBI][PA_WID].length);

    fill_number(form, pdata->d_id, form_index[SUBI][PA_DID].index,
                form_index[SUBI][PA_DID].length);

    fill_string(form, pdata->w_street_1,
form_index[SUBI][PA_WST1].index,
                form_index[SUBI][PA_WST1].length, &shift);
    indexes[strcount]=form_index[SUBI][PA_WST1].index;
    indLen[strcount++]=form_index[SUBI][PA_WST1].length;

    fill_string(form, pdata->d_street_1,
form_index[SUBI][PA_DST1].index,
                form_index[SUBI][PA_DST1].length, &shift);
    indexes[strcount]=form_index[SUBI][PA_DST1].index;
    indLen[strcount++]=form_index[SUBI][PA_DST1].length;

    fill_string(form, pdata->w_street_2,
form_index[SUBI][PA_WST2].index,
                form_index[SUBI][PA_WST2].length, &shift);
    indexes[strcount]=form_index[SUBI][PA_WST2].index;
    indLen[strcount++]=form_index[SUBI][PA_WST2].length;

    fill_string(form, pdata->d_street_2,
form_index[SUBI][PA_DST2].index,
                form_index[SUBI][PA_DST2].length, &shift);
    indexes[strcount]=form_index[SUBI][PA_DST2].index;
    indLen[strcount++]=form_index[SUBI][PA_WST2].length;

    fill_string(form, pdata->w_city,
form_index[SUBI][PA_WCITY].index,
                form_index[SUBI][PA_WCITY].length, &shift);
    indexes[strcount]=form_index[SUBI][PA_WCITY].index;
    indLen[strcount++]=form_index[SUBI][PA_WCITY].length;

    fill_string(form, pdata->w_state,
form_index[SUBI][PA_WSTATE].index,
                form_index[SUBI][PA_WSTATE].length, &shift);
    indexes[strcount]=form_index[SUBI][PA_WSTATE].index;
    indLen[strcount++]=form_index[SUBI][PA_WSTATE].length;

    fill_string(form, pdata->w_zip,
form_index[SUBI][PA_WZIP].index,
                form_index[SUBI][PA_WZIP].length, &shift);
    indexes[strcount]=form_index[SUBI][PA_WZIP].index;
    indLen[strcount++]=form_index[SUBI][PA_WZIP].length;

    fill_string(form, pdata->d_city,
form_index[SUBI][PA_DCITY].index,
                form_index[SUBI][PA_DCITY].length, &shift);
    indexes[strcount]=form_index[SUBI][PA_DCITY].index;
    indLen[strcount++]=form_index[SUBI][PA_DCITY].length;

    fill_string(form, pdata->d_state,
form_index[SUBI][PA_DSTATE].index,
                form_index[SUBI][PA_DSTATE].length, &shift);
    indexes[strcount]=form_index[SUBI][PA_DSTATE].index;
    indLen[strcount++]=form_index[SUBI][PA_DSTATE].length;

    fill_string(form, pdata->d_zip,
form_index[SUBI][PA_DZIP].index,
                form_index[SUBI][PA_DZIP].length, &shift);
    indexes[strcount]=form_index[SUBI][PA_DZIP].index;
    indLen[strcount++]=form_index[SUBI][PA_DZIP].length;

    fill_number(form, pdata->c_id, form_index[SUBI][PA_CID].index,
                form_index[SUBI][PA_CID].length);

    fill_number(form, pdata->c_w_id,
form_index[SUBI][PA_CWARE].index,
                form_index[SUBI][PA_CWARE].length);

    fill_number(form, pdata->c_d_id,
form_index[SUBI][PA_CDIST].index,
                form_index[SUBI][PA_CDIST].length);

    fill_string(form, pdata->c_first,
form_index[SUBI][PA_CFIRST].index,
                form_index[SUBI][PA_CFIRST].length, &shift);
    indexes[strcount]=form_index[SUBI][PA_CFIRST].index;
    indLen[strcount++]=form_index[SUBI][PA_CFIRST].length;

    fill_string(form, pdata->c_middle,
form_index[SUBI][PA_CMIDDLE].index,
                form_index[SUBI][PA_CMIDDLE].length, &shift);
    indexes[strcount]=form_index[SUBI][PA_CMIDDLE].index;
    indLen[strcount++]=form_index[SUBI][PA_CMIDDLE].length;

    fill_string(form, pdata->c_last,
form_index[SUBI][PA_CLAST].index,
                form_index[SUBI][PA_CLAST].length, &shift);
    indexes[strcount]=form_index[SUBI][PA_CLAST].index;
    indLen[strcount++]=form_index[SUBI][PA_CLAST].length;

    fill_string(form, pdata->c_since.DateString,
form_index[SUBI][PA_SINCE].index,
                form_index[SUBI][PA_SINCE].length, &shift);
    indexes[strcount]=form_index[SUBI][PA_SINCE].index;
    indLen[strcount++]=form_index[SUBI][PA_SINCE].length;

    fill_string(form, pdata->c_street_1,
form_index[SUBI][PA_CST1].index,
                form_index[SUBI][PA_CST1].length, &shift);
    indexes[strcount]=form_index[SUBI][PA_CST1].index;
```

```
    indLen[strcount++]=form_index[SUBI][PA_CST1].length;

    fill_string(form, pdata->c_credit,
form_index[SUBI][PA_CREDIT].index,
                form_index[SUBI][PA_CREDIT].length, &shift);
    indexes[strcount]=form_index[SUBI][PA_CREDIT].index;
    indLen[strcount++]=form_index[SUBI][PA_CREDIT].length;

    fill_string(form, pdata->c_street_2,
form_index[SUBI][PA_CST2].index,
                form_index[SUBI][PA_CST2].length, &shift);
    indexes[strcount]=form_index[SUBI][PA_CST2].index;
    indLen[strcount++]=form_index[SUBI][PA_CST2].length;

    fill_float(form, pdata->c_discount,
form_index[SUBI][PA_DISC].index,
                form_index[SUBI][PA_DISC].length);

    fill_string(form, pdata->c_city,
form_index[SUBI][PA_CCITY].index,
                form_index[SUBI][PA_CCITY].length, &shift);
    indexes[strcount]=form_index[SUBI][PA_CCITY].index;
    indLen[strcount++]=form_index[SUBI][PA_CCITY].length;

    fill_string(form, pdata->c_state,
form_index[SUBI][PA_CSTATE].index,
                form_index[SUBI][PA_CSTATE].length, &shift);
    indexes[strcount]=form_index[SUBI][PA_CSTATE].index;
    indLen[strcount++]=form_index[SUBI][PA_CSTATE].length;

    fill_string(form, pdata->c_zip,
form_index[SUBI][PA_CZIP].index,
                form_index[SUBI][PA_CZIP].length, &shift);
    indexes[strcount]=form_index[SUBI][PA_CZIP].index;
    indLen[strcount++]=form_index[SUBI][PA_CZIP].length;

    fill_string(form, pdata->c_phone,
form_index[SUBI][PA_CPHONE].index,
                form_index[SUBI][PA_CPHONE].length, &shift);
    indexes[strcount]=form_index[SUBI][PA_CPHONE].index;
    indLen[strcount++]=form_index[SUBI][PA_CPHONE].length;

    fill_float(form, pdata->h_amount,
form_index[SUBI][PA_AMOUNT].index,
                form_index[SUBI][PA_AMOUNT].length);

    fill_float(form, pdata->c_balance,
form_index[SUBI][PA_CBAL].index,
                form_index[SUBI][PA_CBAL].length);

    fill_float(form, pdata->c_credit_lim,
form_index[SUBI][PA_LIMIT].index,
                form_index[SUBI][PA_LIMIT].length);

    if (pdata->c_credit[0]=='B' && pdata->c_credit[1]=='C') {
      datalen=strlen(pdata->c_data);
      for (i=0; i<4; i++) {
        if (i * form_index[SUBI][PA_CUSTDATA+i].length >= datalen)
break;
        fill_string(form, pdata-
>c_data+(i*form_index[SUBI][PA_CUSTDATA+i].length),
                    form_index[SUBI][PA_CUSTDATA+i].index,
                    form_index[SUBI][PA_CUSTDATA+i].length,
&shift);
        indexes[strcount]=form_index[SUBI][PA_CUSTDATA+i].index;
        indLen[strcount++]=form_index[SUBI][PA_CUSTDATA+i].length;
      }
    }

    for (j=i; j<4; j++)
      memcpy(form+form_index[SUBI][PA_CUSTDATA+j].index, blank,
             form_index[SUBI][PA_CUSTDATA+j].length);

    if (shift)
      adjust_form(form, indexes, indLen, strcount, formlen, shift);

    ret=send_response(pECB, form, strlen(form));

    if (shift) {
      allocate_last_form(form2, pool);
      memcpy(form, form2, formlen+1);
    }
#ifndef NEW_ALLOCATE_FORM
    free_form(pool, form, index);
#endif

    return ret;
#undef SUBI
}


int sendform_orderstatusoutput(int status, T_orderstatus_data
*pdata)
{
  EXTENSION_CONTROL_BLOCK *pECB;
    int w_id, ld_id, indexes[OS_FORMINDEX_SIZE],
indLen[OS_FORMINDEX_SIZE];
    char *form, *form2;
```

```
    int index = -1, strcount=0, formlen, shift=0, i, j, index2=-1,
lineStart=15, ret;
    form_template_pool *pool;
    char blank[] = "                       ";

    w_id = pdata->w_id; ld_id = pdata->ld_id;
  pECB = (EXTENSION_CONTROL_BLOCK *) pdata->context;

    if (status != SUCCESS && status != DB_SUCCESS) {
      return send_error_message(pECB, 0, status, "", w_id, ld_id,
0);
    }

    if (pdata->txn_status != DB_RETURN_OCI_SUCCESS) {
      return send_error_message(pECB, 0, pdata->txn_status, "   ---
DATABASE ERROR ", w_id, ld_id, 0);
    }

#define SUBI POOL_TYPE_TXN_OUTPUT][TXN_TYPE_ORDERSTATUS

    pool = &txn_global_pool[SUBI];
    index=w_id*10+ld_id;

#ifdef NEW_ALLOCATE_FORM
    form = allocate_form_new(pool, index);
#else
    form = allocate_form(pool, &index);
#endif

    formlen = strlen(form);

    fill_number(form, WDID(w_id, ld_id),
form_index[SUBI][OS_TERMID].index,
                form_index[SUBI][OS_TERMID].length);
    fill_number(form, w_id, form_index[SUBI][OS_WID].index,
                form_index[SUBI][OS_WID].length);
    fill_number(form, pdata->d_id, form_index[SUBI][OS_DID].index,
                form_index[SUBI][OS_DID].length);
    fill_number(form, pdata->c_id, form_index[SUBI][OS_CID].index,
                form_index[SUBI][OS_CID].length);
    fill_string(form, pdata->c_first,
form_index[SUBI][OS_FIRST].index,
                form_index[SUBI][OS_FIRST].length, &shift);
    indexes[strcount]=form_index[SUBI][OS_FIRST].index;
    indLen[strcount++]=form_index[SUBI][OS_FIRST].length;

    fill_string(form, pdata->c_middle,
form_index[SUBI][OS_MIDDLE].index,
                form_index[SUBI][OS_MIDDLE].length, &shift);
    indexes[strcount]=form_index[SUBI][OS_MIDDLE].index;
    indLen[strcount++]=form_index[SUBI][OS_MIDDLE].length;

    fill_string(form, pdata->c_last,
form_index[SUBI][OS_LAST].index,
                form_index[SUBI][OS_LAST].length, &shift);
    indexes[strcount]=form_index[SUBI][OS_LAST].index;
    indLen[strcount++]=form_index[SUBI][OS_LAST].length;

    fill_float(form, pdata->c_balance,
form_index[SUBI][OS_CBALANCE].index,
                form_index[SUBI][OS_CBALANCE].length);

    fill_number(form, pdata->o_id, form_index[SUBI][OS_OID].index,
                form_index[SUBI][OS_OID].length);

    fill_string(form, pdata->o_entry_d.DateString,
form_index[SUBI][OS_ENTRY_DATE].index,
                form_index[SUBI][OS_ENTRY_DATE].length, &shift);
    indexes[strcount]=form_index[SUBI][OS_ENTRY_DATE].index;
    indLen[strcount++]=form_index[SUBI][OS_ENTRY_DATE].length;

    fill_number(form, pdata->o_carrier_id,
form_index[SUBI][OS_CARID].index,
                form_index[SUBI][OS_CARID].length);

    for (i=0; i < pdata->o_ol_cnt; i++) {
      fill_number(form, pdata->o_orderline[i].ol_supply_w_id,
                  form_index[SUBI][OS_SUPW+i*5].index,
                  form_index[SUBI][OS_SUPW+i*5].length);

      fill_number(form, pdata->o_orderline[i].ol_i_id,
                  form_index[SUBI][OS_ITEMID+i*5].index,
                  form_index[SUBI][OS_ITEMID+i*5].length);

      fill_number(form, pdata->o_orderline[i].ol_quantity,
                  form_index[SUBI][OS_QTY+i*5].index,
                  form_index[SUBI][OS_QTY+i*5].length);

      fill_float(form, pdata->o_orderline[i].ol_amount,
                  form_index[SUBI][OS_AMOUNT+i*5].index,
                  form_index[SUBI][OS_AMOUNT+i*5].length);

      fill_string(form, pdata-
>o_orderline[i].ol_delivery_d.DateString,
                  form_index[SUBI][OS_DELDATE+i*5].index,
                  form_index[SUBI][OS_DELDATE+i*5].length, &shift);
      indexes[strcount]=form_index[SUBI][OS_DELDATE+i*5].index;
      indLen[strcount++]=form_index[SUBI][OS_DELDATE+i*5].length;
    }

    for (lineStart=j=i; j<15;j++) {
```

```c
        memcpy(form+form_index[SUBI][OS_SUPW+j*5].index, blank,
                form_index[SUBI][OS_SUPW+j*5].length);
        memcpy(form+form_index[SUBI][OS_ITEMID+j*5].index, blank,
                form_index[SUBI][OS_ITEMID+j*5].length);
        memcpy(form+form_index[SUBI][OS_QTY+j*5].index, blank,
                form_index[SUBI][OS_QTY+j*5].length);
        memcpy(form+form_index[SUBI][OS_AMOUNT+j*5].index-1, blank,
                form_index[SUBI][OS_AMOUNT+j*5].length+1);
        memcpy(form+form_index[SUBI][OS_DELDATE+j*5].index, blank,
                form_index[SUBI][OS_DELDATE+j*5].length);
    }

    if (shift)
        adjust_form(form, indexes, indLen, strcount, formlen, shift);

    ret=send_response(pECB, form, strlen(form));

    if (shift) {
        allocate_last_form(form2, pool);
        memcpy(form, form2, formlen+1);
    }

    for (j=lineStart; j<15; j++)
        form[form_index[SUBI][OS_AMOUNT+j*5].index-1]='$';

#ifndef NEW_ALLOCATE_FORM
    free_form(pool, form, index);
#endif

    return ret;
#undef SUBI
}


int sendform_deliveryoutput(int status, T_delivery_data *pdata,
pDelQueue_info CompletedDeliveries[DELIVERY_RESPONSE_COUNT])
{
  EXTENSION_CONTROL_BLOCK *pECB;
    int w_id, ld_id;
    char *form;
    int index = -1, ret;
    form_template_pool *pool;

  int ii, index2, jj;
  pT_delivery_data pCompletedDelivery;
  T_delivery_data blankDelivery = { 0 };

    w_id = pdata->w_id; ld_id = pdata->ld_id;
  pECB = (EXTENSION_CONTROL_BLOCK *) pdata->context;
    if (status != SUCCESS && status != DB_SUCCESS) {
        return send_error_message(pECB, 0, status, "", w_id, ld_id,
0);
    }

#define SUBI POOL_TYPE_TXN_OUTPUT][TXN_TYPE_DELIVERY

    pool = &txn_global_pool[SUBI];
  index=w_id*10+ld_id;

#ifdef NEW_ALLOCATE_FORM
    form  = allocate_form_new(pool, index);
#else
    form  = allocate_form(pool, &index);
#endif

    fill_number(form, WDID(w_id, ld_id),
form_index[SUBI][DE_TERMID].index,
            form_index[SUBI][DE_TERMID].length);
    fill_number(form, w_id, form_index[SUBI][DE_WID].index,
            form_index[SUBI][DE_WID].length);
    fill_number(form, pdata->o_carrier_id,
form_index[SUBI][DE_CARID].index,
            form_index[SUBI][DE_CARID].length);

  index2 = D_QUEUE1;
  for( jj = 0; jj < DELIVERY_RESPONSE_COUNT; jj++ ) {
    if( NULL == CompletedDeliveries[jj] )
      pCompletedDelivery = &blankDelivery;
    else
      pCompletedDelivery = CompletedDeliveries[jj]->pdata;
    fill_number(form, pCompletedDelivery->enqueue_time,
form_index[SUBI][index2].index,
            form_index[SUBI][index2].length);
    index2++;
    fill_number(form,pCompletedDelivery-
>delta_time,form_index[SUBI][index2].index,
        form_index[SUBI][index2].length);
    index2++;
    fill_number(form,pCompletedDelivery-
>w_id,form_index[SUBI][index2].index,
        form_index[SUBI][index2].length);
    index2++;
    fill_number(form,pCompletedDelivery-
>o_carrier_id,form_index[SUBI][index2].index,
        form_index[SUBI][index2].length);
    index2++;
    for( ii = 0; ii < 10; ii++ ) {
      fill_number(form,pCompletedDelivery-
>o_id[ii],form_index[SUBI][index2].index,
```

```c
            form_index[SUBI][index2].length);
      index2++;
    }
    if ( NULL != CompletedDeliveries[jj]){
//      free_form(&txn_data_pool,(char *)CompletedDeliveries[jj]-
>pdata,CompletedDeliveries->form_index);
        addFreeDelQueue(CompletedDeliveries[jj]);
    }
  }

    ret=send_response(pECB, form, strlen(form));

#ifndef NEW_ALLOCATE_FORM
    free_form(pool, form, index);
#endif

    return ret;
#undef SUBI
}


int sendform_stockleveloutput(int status, T_stocklevel_data *pdata)
{
  EXTENSION_CONTROL_BLOCK *pECB;
    int w_id, ld_id;
    char *form;
    int index = -1, ret;
    form_template_pool *pool;

    w_id = pdata->w_id; ld_id = pdata->ld_id;
  pECB = (EXTENSION_CONTROL_BLOCK *) pdata->context;

    if (status != SUCCESS && status != DB_SUCCESS) {
        return send_error_message(pECB, 0, status, "", w_id, ld_id,
0);
    }

    if (pdata->txn_status != DB_RETURN_OCI_SUCCESS) {
        return send_error_message(pECB, 0, pdata->txn_status, "   ---
DATABASE ERROR ", w_id, ld_id, 0);
    }

#define SUBI POOL_TYPE_TXN_OUTPUT][TXN_TYPE_STOCKLEVEL

    pool = &txn_global_pool[SUBI];
  index=w_id*10+ld_id;

#ifdef NEW_ALLOCATE_FORM
    form  = allocate_form_new(pool, index);
#else
    form  = allocate_form(pool, &index);
#endif

    fill_number(form, WDID(w_id, ld_id),
form_index[SUBI][SL_TERMID].index,
            form_index[SUBI][SL_TERMID].length);
    fill_number(form, w_id, form_index[SUBI][SL_WID].index,
            form_index[SUBI][SL_WID].length);
    fill_number(form, ld_id, form_index[SUBI][SL_DID].index,
            form_index[SUBI][SL_DID].length);
    fill_number(form, pdata->threshold,
form_index[SUBI][SL_THRESHOLD].index,
            form_index[SUBI][SL_THRESHOLD].length);
    fill_number(form, pdata->low_stock,
form_index[SUBI][SL_LOWSTOCK].index,
            form_index[SUBI][SL_LOWSTOCK].length);

    ret=send_response(pECB, form, strlen(form));

#ifndef NEW_ALLOCATE_FORM
    free_form(pool, form, index);
#endif

    return ret;
#undef SUBI
}


int (FAR * mod_tpcc_neworder)(T_neworder_data *);
int (FAR * mod_tpcc_payment)(T_payment_data *);
int (FAR * mod_tpcc_delivery)(T_delivery_data *, int);
int (FAR * mod_tpcc_orderstatus)(T_orderstatus_data *);
int (FAR * mod_tpcc_stocklevel)(T_stocklevel_data *);
void (FAR * userlog)(char * str, ...);
void (FAR * initDelLog)(int);
void (FAR * endDelLog)(int);modtpcc/modtpcc.h
#include "..\DBConnection\mod_tpcc.h"
#include "..\DBConnection\tpcc_struct.h"
#include "..\DBConnection\mod_tpcc_error.h"
#include <oratypes.h>
#include <oci.h>
#include <ocidfn.h>
#include "buf.c"
#include "StdAfx.h"

#define allocate_last_form(form, pool) \
(form)=(char *)((pool)->form_template_storage + \
 (Maxterms - 1) * (pool)->form_template_length)
```

```c
#define MAXLEN 100
#define Default_DBConnections "20"
#define Default_Maxterms "1"
#define Default_DeliveryQueues "500"
#define Default_DeliveryThreads "50"
#define Default_StartTerm "1"
#define LogName "log\\modtpcc.log"
#define InitName "DBInit.ini"
#define DllName "DBConnection.dll"
#define mod_name "/tpcc/modtpcc.dll"
#define DELIVERY_RESPONSE_COUNT 2


typedef struct _DelQueue_info {
  _DelQueue_info *Next;
  T_delivery_data *pdata;
  HANDLE queue_lock;
} DelQueue_info, *pDelQueue_info;


/**********************************************************************
****************************
* global functions
*
**********************************************************************
****************************/

//void userlog (char *, ...);
void readInit(char *, char *, char *);
void allocateMemoryPool();
int initDelQueue();
int deleteDelQueue();
void endDeliveryThread(int);
void initDeliveryThread(void *);
DelQueue_info *DequeueDel();
void EnqueueDel(DelQueue_info *);
void addFreeDelQueue(DelQueue_info *);
DelQueue_info *findFreeDelQueue();

int parse_neworder_query(char *ptr, T_neworder_data *pdata);
int parse_payment_query(char *ptr, T_payment_data *pdata);
int parse_delivery_query(char *ptr, T_delivery_data *pdata);
int parse_orderstatus_query(char *ptr, T_orderstatus_data *pdata);
int parse_stocklevel_query(char *ptr, T_stocklevel_data *pdata);

int sendform_neworderoutput(int status, T_neworder_data *pdata);
int sendform_paymentoutput(int status, T_payment_data *pdata);
int sendform_orderstatusoutput(int status, T_orderstatus_data
*pdata);
int sendform_deliveryoutput(int status, T_delivery_data *pdata,
pDelQueue_info CompletedDeliveries[DELIVERY_RESPONSE_COUNT]);
int sendform_stockleveloutput(int status, T_stocklevel_data
*pdata);

extern int (FAR * mod_tpcc_neworder)(T_neworder_data *);
extern int (FAR * mod_tpcc_payment)(T_payment_data *);
extern int (FAR * mod_tpcc_delivery)(T_delivery_data *, int);
extern int (FAR * mod_tpcc_orderstatus)(T_orderstatus_data *);
extern int (FAR * mod_tpcc_stocklevel)(T_stocklevel_data *);
extern void (FAR *userlog)(char * str, ...);
extern void (FAR *initDelLog)(int);
extern void (FAR *endDelLog)(int);


/**********************************************************************
****************************
* global variables
*
**********************************************************************
****************************/

DWORD TlsPointer;
char DllPath[MAXLEN];
char LogFile[MAXLEN];
char InitFile[MAXLEN];
char DllFile[MAXLEN];
char origin[MAXLEN];
CRITICAL_SECTION critical_initDelQueue;
CRITICAL_SECTION critical_memory;
CRITICAL_SECTION critical_DelQueue_free;
CRITICAL_SECTION critical_DelQueue_work;
HANDLE waitAvailableDelQueue;
HANDLE waitDelWork;
HANDLE DelThreadRunning;
HINSTANCE dllinstance;
int useddel=0;
int DBConnections;
int Maxterms;
int DeliveryQueues;
int DeliveryThreads;
int modtpcc_ready=0;
int memory_ready=0;
int queue_ready=0;
int DeliveryThreadstop=0;
int StartTerm=1;
DelQueue_info *DelQueue_begin = NULL;
DelQueue_info *DelQueue_end = NULL;
DelQueue_info *DelQueue_free = NULL;
BUFPTR deliveryoutput;
```

```c
static form_index_entry
form_index[POOL_TYPE_TXN_MAX][TXN_TYPE_MAX][MAX_FORM_INDEX];
static form_template_pool
txn_global_pool[POOL_TYPE_TXN_MAX][TXN_TYPE_MAX];
static form_template_pool txn_data_pool;
static form_template_pool resp_global_pool;


char delivery_chars [] = {'6', '7'};
char orderstatus_chars [] = {'8', '9', 'Y'};
char payment_chars [] = {'8', '9', 'Z', 'v', 'Y', 'w'};
char stocklevel_chars [] = {'x'};
char neworder_chars [] = {'8', '9',
'A', 'B', 'C', 'D', 'E', 'F', 'G', 'H', 'I',
'J', 'K', 'L', 'M', 'N', 'O', 'P', 'Q', 'R',
'S', 'T', 'U', 'V', 'W', 'X', 'a', 'b', 'c',
'd', 'e', 'f', 'g', 'h', 'i', 'j', 'k', 'l',
'm', 'n', 'o', 'p', 'q', 'r', 's', 't', 'u'};
-------------------------
modtpcc/StdAfx.cpp
-------------------------
// stdafx.cpp : source file that includes just the standard
includes
//  modtpcc.pch will be the pre-compiled header
//  stdafx.obj will contain the pre-compiled type information

#include "stdafx.h"

// TODO: reference any additional headers you need in STDAFX.H
// and not in this file
modtpcc/StdAfx.h
// stdafx.h : include file for standard system include files,
//  or project specific include files that are used frequently, but
//      are changed infrequently
//

#if
!defined(AFX_STDAFX_H__FBB80AB0_1068_4095_8E53_EEA38B5CF47B__INCLUD
ED_)
#define
AFX_STDAFX_H__FBB80AB0_1068_4095_8E53_EEA38B5CF47B__INCLUDED_

#if _MSC_VER > 1000
#pragma once
#endif // _MSC_VER > 1000


// Insert your headers here
#define WIN32_LEAN_AND_MEAN   // Exclude rarely-used stuff from
Windows headers

#include <windows.h>
#include <stdio.h>
#include <stdlib.h>
#include <atlbase.h>
#include <io.h>
#include <time.h>
#include <process.h>
#include <sys/stat.h>


// TODO: reference additional headers your program requires here

//{{AFX_INSERT_LOCATION}}
// Microsoft Visual C++ will insert additional declarations
immediately before the previous line.

#endif //
!defined(AFX_STDAFX_H__FBB80AB0_1068_4095_8E53_EEA38B5CF47B__INCLUD
ED_)
DBConnection/DBConnection.cpp
// DBConnection.cpp : Defines the entry point for the DLL
application.
//

#include "stdafx.h"
#include "DBConnection.h"

//#define OPS_LOGIN
//#define CONNECTION_MUTEX
//#define DEBUG
//#define DEBUG_DETAIL
//#define LOOPBACK

BOOL APIENTRY DllMain( HANDLE hModule,
                       DWORD  ul_reason_for_call,
                       LPVOID lpReserved
            )
{
  char string[MAXLEN];
  int i;

  if (ul_reason_for_call == DLL_PROCESS_ATTACH) {

  DisableThreadLibraryCalls((HMODULE)hModule);

  GetModuleFileName((HMODULE)hModule, DllPath, MAXLEN-1);
```

```
    if (DllPath[0]=='\\' && DllPath[1]=='\\' && DllPath[2]=='?' &&
DllPath[3]=='\\')
      strcpy(DllPath, DllPath+4);
    for (i=strlen(DllPath); DllPath[i]!='\\' && i; i--);
    DllPath[i]='\0';
    sprintf(LogFile, "%s\\%s", DllPath, LogName);
    sprintf(InitFile, "%s\\%s", DllPath, InitName);
      sprintf(DelLogFile, "%s\\%s", DllPath, DelLogName);

    if (!SetCurrentDirectory(DllPath)) {
      userlog("Cannot change current directory to %s, Error: %n",
DllPath, GetLastError());
      return FALSE;
    }

    if ((TlsPtr = TlsAlloc()) == 0xFFFFFFFF) {
      userlog("Error during TlsAlloc\n");
      return FALSE;
    }

    readInit(string, "DBConnections", Default_DBConnections);
    DBConnections = atoi(string);
    userlog("number of DBConnections is %d\n", DBConnections);

    TotalLoop=DBConnections*2;

    DBExecution_lock=(HANDLE*)malloc(sizeof(HANDLE)*DBConnections);
    for (i=0; i<DBConnections; i++)
      if ((DBExecution_lock[i]=CreateMutex(NULL, FALSE, NULL))==NULL)
    {
        userlog("Cannot create mutex : DBExecution_lock[%d]\n", i);
        return FALSE;
      }

    if (initializeDBExecutionPool() != TRUE) {
      userlog("initializeDBExecutionPool failed\n");
      return FALSE;
    }

    if ((waitIdle = CreateEvent(NULL, FALSE, FALSE, "Wait Idle
Event")) == NULL) {
      userlog("Cannot create event : waitIdle\n");
      return FALSE;
    }

    ready=1;

    }
    else if (ul_reason_for_call == DLL_PROCESS_DETACH) {

      if ((TlsFree(TlsPtr)) == NULL) {
        userlog("Error during TlsFree\n");
        return FALSE;
      }
    for (i=0; i<DBConnections; i++) {
      ((DBExecution *)(DBExecution_pool[i].pointer))->TPCexit();
      free(DBExecution_pool[i].pointer);
    }
    free (DBExecution_pool);
    CloseHandle(waitIdle);

    for (i=0; i<DBConnections; i++)
      CloseHandle(DBExecution_lock[i]);

    }

    return TRUE;
}

void initDelLog(int DelThreads)
{
  char filename[MAXLEN];

  DelFiles=(FILE **)malloc(sizeof(FILE *)*DelThreads);
  for (int i=0; i<DelThreads; i++) {
    sprintf(filename, "%s%d", DelLogFile, i);

    if ((DelFiles[i]=fopen(filename, "a"))==(FILE *) NULL) {
    userlog("Can't open file : %s\n", filename);
    exit(-1);
    }
    setvbuf(DelFiles[i], NULL, _IOFBF, 102400);
  }
}

void endDelLog(int DelThreads)
{
  for (int i=0; i<DelThreads; i++) {
    fclose(DelFiles[i]);
  }
  free(DelFiles);
}
/*********************************************************************
****************************
*  Execute transactions
*
*********************************************************************
***************************/

#ifndef LOOPBACK
```

```
int mod_tpcc_neworder(T_neworder_data *output)
{
#ifdef CONNECTION_MUTEX
  HANDLE *mutexptr=NULL;
#endif
    DBExecution_pool_info* ptr;

  DBExecution *dbexec;
  struct newstruct input;
    int i;

  input.newin.w_id = output->w_id;
  input.newin.d_id = output->d_id;
  input.newin.c_id = output->c_id;

  for (i=0; i<output->o_ol_cnt; i++) {
      input.newin.ol_i_id[i] = output->o_orderline[i].ol_i_id;
    input.newin.ol_supply_w_id[i] = output-
>o_orderline[i].ol_supply_w_id;
      input.newin.ol_quantity[i] = output-
>o_orderline[i].ol_quantity;
  }

  for (; i<15; i++) {
      input.newin.ol_i_id[i] = 0;
    input.newin.ol_supply_w_id[i] = 0;
      input.newin.ol_quantity[i] = 0;
  }

#ifdef CONNECTION_MUTEX
  ptr=findIdleDBExecution(mutexptr);
#else
  ptr=findIdleDBExecution();
#endif
  dbexec=(DBExecution *)(ptr->pointer);
//  ptr->neworder_count++;

  if (dbexec->TPCnew(&input) == -1) {
    convert_status(output->txn_status, dbexec->execstatus);
#ifdef CONNECTION_MUTEX
    freeDBExecution(ptr, mutexptr);
#else
    freeDBExecution(ptr);
#endif
    userlog("TPCnew returns -1\n");
    return SUCCESS;
  } else {
      output->txn_status = DB_RETURN_OCI_SUCCESS;
  }

  output->status = dbexec->status;

#ifdef CONNECTION_MUTEX
  freeDBExecution(ptr, mutexptr);
#else
  freeDBExecution(ptr);
#endif

  output->o_id = input.newout.o_id;
  output->o_ol_cnt = input.newout.o_ol_cnt;
  output->c_discount = input.newout.c_discount;
  output->w_tax = input.newout.w_tax;
  output->d_tax = input.newout.d_tax;
  output->total_amount = input.newout.total_amount;
  strncpy(output->o_entry_d.DateString, input.newout.o_entry_d,20);
  strncpy(output->c_last, input.newout.c_last,17);
  strncpy(output->c_credit, input.newout.c_credit,3);
  for (i=0; i<output->o_ol_cnt; i++) {
    output->o_orderline[i].ol_amount = input.newout.ol_amount[i];
    output->o_orderline[i].i_price = input.newout.i_price[i];
    output->o_orderline[i].s_quantity = input.newout.s_quantity[i];
    output->o_orderline[i].b_g[0] = input.newout.brand_generic[i];
    strncpy(output->o_orderline[i].i_name, input.newout.i_name[i],
25);
  }

  return SUCCESS;
}


int mod_tpcc_payment(T_payment_data *output)
{
#ifdef CONNECTION_MUTEX
  HANDLE *mutexptr=NULL;
#endif
    DBExecution_pool_info* ptr;
  DBExecution *dbexec;
  struct paystruct input;

  input.payin.w_id = output->w_id;
  input.payin.d_id = output->d_id;
  input.payin.c_w_id = output->c_w_id;
  input.payin.c_d_id = output->c_d_id;
  input.payin.bylastname = output->by_last_name;
  input.payin.h_amount = (int)(output->h_amount * 100);

  if (input.payin.bylastname) {
    input.payin.c_id = 0;
    strncpy(input.payin.c_last, output->c_last, 17);
```

```c
    input.payin.c_last[16]='\0';
  } else {
    input.payin.c_id = output->c_id;
    input.payin.c_last[0]='\0';
  }

#ifdef CONNECTION_MUTEX
  ptr=findIdleDBExecution(mutexptr);
#else
  ptr=findIdleDBExecution();
#endif
  dbexec=(DBExecution *)(ptr->pointer);
// ptr->payment_count++;

  if (dbexec->TPCpay(&input) == -1) {
    convert_status(output->txn_status, dbexec->execstatus);
#ifdef CONNECTION_MUTEX
  freeDBExecution(ptr, mutexptr);
#else
  freeDBExecution(ptr);
#endif
    userlog("TPCpay returns -1\n");
    return SUCCESS;
  } else {
    output->txn_status = DB_RETURN_OCI_SUCCESS;
  }

#ifdef CONNECTION_MUTEX
  freeDBExecution(ptr, mutexptr);
#else
  freeDBExecution(ptr);
#endif

  strncpy(output->w_street_1, input.payout.w_street_1, 21);
  strncpy(output->w_street_2, input.payout.w_street_2, 21);
  strncpy(output->w_city, input.payout.w_city, 21);
  strncpy(output->w_state, input.payout.w_state, 3);
  strncpy(output->w_zip, input.payout.w_zip, 10);
  strncpy(output->d_street_1, input.payout.d_street_1, 21);
  strncpy(output->d_street_2, input.payout.d_street_2, 21);
  strncpy(output->d_city, input.payout.d_city, 21);
  strncpy(output->d_state, input.payout.d_state, 3);
  strncpy(output->d_zip, input.payout.d_zip, 10);
  output->c_id = input.payout.c_id;
  strncpy(output->c_first, input.payout.c_first, 17);
  strncpy(output->c_middle, input.payout.c_middle, 3);
  strncpy(output->c_last, input.payout.c_last, 17);
  strncpy(output->c_street_1, input.payout.c_street_1, 21);
  strncpy(output->c_street_2, input.payout.c_street_2, 21);
  strncpy(output->c_city, input.payout.c_city, 21);
  strncpy(output->c_state, input.payout.c_state, 3);
  strncpy(output->c_zip, input.payout.c_zip, 10);
  strncpy(output->c_phone, input.payout.c_phone, 17);
  strncpy(output->c_credit, input.payout.c_credit, 3);
  strncpy(output->c_since.DateString, input.payout.c_since, 11);
  strncpy(output->h_date.DateString, input.payout.h_date, 20);
  strncpy(output->c_data, input.payout.c_data, 200);
  output->c_credit_lim = input.payout.c_credit_lim;
  output->c_discount = input.payout.c_discount;
  output->c_balance = input.payout.c_balance;

  return SUCCESS;
}


int mod_tpcc_delivery(T_delivery_data *output, int id)
{
#ifdef CONNECTION_MUTEX
  HANDLE *mutexptr=NULL;
#endif
    DBExecution_pool_info *ptr;
  DBExecution *dbexec;;
  struct delstruct input;

  input.delin.w_id = output->w_id;
  input.delin.plsqlflag = 1;
  input.delin.o_carrier_id = output->o_carrier_id;
  output->delta_time = GetTickCount();

#ifdef CONNECTION_MUTEX
  ptr=findIdleDBExecution(mutexptr);
#else
  ptr=findIdleDBExecution();
#endif
  dbexec=(DBExecution *)(ptr->pointer);
// ptr->delivery_count++;

  if (dbexec->TPCdel(&input) == -1) {
    convert_status(output->txn_status, dbexec->execstatus);
#ifdef CONNECTION_MUTEX
    freeDBExecution(ptr, mutexptr);
#else
    freeDBExecution(ptr);
#endif
    userlog("TPCdel returns -1\n");
    return SUCCESS;
  } else {
    output->txn_status = DB_RETURN_OCI_SUCCESS;
  }
```

```c
    output->delta_time = GetTickCount() - output->delta_time;
    for (int i=0; i<10; i++)
      output->o_id[i]=dbexec->del_o_id[i];

#ifdef CONNECTION_MUTEX
  freeDBExecution(ptr, mutexptr);
#else
  freeDBExecution(ptr);
#endif

#ifdef USE_DELIVERY_LOGS
  write_delivery_log(output, id);
#endif

  return SUCCESS;
}


int mod_tpcc_orderstatus(T_orderstatus_data *output)
{
#ifdef CONNECTION_MUTEX
  HANDLE *mutexptr=NULL;
#endif
    DBExecution_pool_info* ptr;
  DBExecution *dbexec;
  struct ordstruct input;

  input.ordin.w_id = output->w_id;
  input.ordin.d_id = output->d_id;
  input.ordin.bylastname = output->by_last_name;
  if (input.ordin.bylastname) {
    input.ordin.c_id = 0;
    strncpy(input.ordin.c_last, output->c_last, 17);
    input.ordin.c_last[16]='\0';
  }
  else {
    input.ordin.c_id = output->c_id;
    input.ordin.c_last[0]='\0';
  }

#ifdef CONNECTION_MUTEX
  ptr=findIdleDBExecution(mutexptr);
#else
  ptr=findIdleDBExecution();
#endif
  dbexec=(DBExecution *)(ptr->pointer);
// ptr->orderstatus_count++;

  if (dbexec->TPCord(&input) == -1) {
    convert_status(output->txn_status, dbexec->execstatus);
#ifdef CONNECTION_MUTEX
    freeDBExecution(ptr, mutexptr);
#else
    freeDBExecution(ptr);
#endif
    userlog("TPCord returns -1\n");
    return SUCCESS;
  } else {
    output->txn_status = DB_RETURN_OCI_SUCCESS;
  }

#ifdef CONNECTION_MUTEX
  freeDBExecution(ptr, mutexptr);
#else
  freeDBExecution(ptr);
#endif

  output->c_id = input.ordout.c_id;
  strncpy(output->c_last, input.ordout.c_last, 17);
  strncpy(output->c_first, input.ordout.c_first, 17);
  strncpy(output->c_middle, input.ordout.c_middle, 3);
  strncpy(output->o_entry_d.DateString, input.ordout.o_entry_d,
20);
  output->c_balance = input.ordout.c_balance;
  output->o_id = input.ordout.o_id;
  output->o_carrier_id = input.ordout.o_carrier_id;
  output->o_ol_cnt = input.ordout.o_ol_cnt;
  for (int i=0; i<output->o_ol_cnt; i++) {
    output->o_orderline[i].ol_supply_w_id =
input.ordout.ol_supply_w_id[i];
    output->o_orderline[i].ol_i_id = input.ordout.ol_i_id[i];
    output->o_orderline[i].ol_quantity =
input.ordout.ol_quantity[i];
    output->o_orderline[i].ol_amount = input.ordout.ol_amount[i];
    strncpy(output->o_orderline[i].ol_delivery_d.DateString,
input.ordout.ol_delivery_d[i], 11);
  }

  return SUCCESS;
}


int mod_tpcc_stocklevel(T_stocklevel_data *output)
{
#ifdef CONNECTION_MUTEX
  HANDLE *mutexptr=NULL;
#endif
    DBExecution_pool_info* ptr;
  DBExecution *dbexec;
  struct stostruct input;
```

```
  input.stoout.low_stock=-123;
  input.stoin.w_id = output->w_id;
  input.stoin.d_id = output->ld_id;
  input.stoin.threshold = output->threshold;

#ifdef CONNECTION_MUTEX
  ptr=findIdleDBExecution(mutexptr);
#else
  ptr=findIdleDBExecution();
#endif
  dbexec=(DBExecution *)(ptr->pointer);
//  ptr->stocklevel_count++;

  if (dbexec->TPCsto(&input) == -1) {
    convert_status(output->txn_status, dbexec->execstatus);
#ifdef CONNECTION_MUTEX
    freeDBExecution(ptr, mutexptr);
#else
    freeDBExecution(ptr);
#endif
    userlog("TPCsto returns -1\n");
    return SUCCESS;
    } else {
    output->txn_status = DB_RETURN_OCI_SUCCESS;
  }

#ifdef CONNECTION_MUTEX
  freeDBExecution(ptr, mutexptr);
#else
  freeDBExecution(ptr);
#endif

  output->low_stock = input.stoout.low_stock;

  return SUCCESS;
}

#endif


void write_delivery_log(T_delivery_data *pdata, int threadId)
{
  fprintf(DelFiles[threadId],
        "%ld %ld %ld %ld %ld %ld %ld %ld %ld %ld %ld %ld %ld %ld
%ld\n",
        pdata->w_id, pdata->ld_id, pdata->enqueue_time,
        pdata->delta_time, pdata->txn_status,
        pdata->o_id[0], pdata->o_id[1], pdata->o_id[2], pdata-
>o_id[3],
        pdata->o_id[4], pdata->o_id[5], pdata->o_id[6], pdata-
>o_id[7],
        pdata->o_id[8], pdata->o_id[9]);
}


#ifdef CONNECTION_MUTEX
int freeDBExecution(DBExecution_pool_info *ptr, HANDLE *mutexptr)
#else
int freeDBExecution(DBExecution_pool_info *ptr)
#endif
{
  ptr->current_status = IDLE;

#ifdef DEBUG_DETAIL
  userlog("Thread %d release connection\n", GetCurrentThreadId());
#endif


#ifdef CONNECTION_MUTEX
  if (mutexptr==NULL)
    userlog("Thread %d has mutexptr=NULL\n", GetCurrentThreadId());
  ReleaseMutex((*mutexptr));
#endif
  if (!SetEvent(waitIdle)) {
    userlog("Error on SetEvent, in function: free DBExection\n");
    return FALSE;
  }

  return TRUE;
}


#ifdef CONNECTION_MUTEX
DBExecution_pool_info* findIdleDBExecution(HANDLE *mutexptr)
#else
DBExecution_pool_info* findIdleDBExecution()
#endif
{
  int current=GetCurrentThreadId() % DBConnections;

#ifdef DEBUG
  findDBExecutionCall++;
#endif

  while (1) {

    for (int count=0; count<TotalLoop; count++) {

      if (DBExecution_pool[current].current_status == IDLE) {
```

```
        switch(WaitForSingleObject(DBExecution_lock[current], 0)) {

        case WAIT_ABANDONED:
#ifdef DEBUG
          userlog("connection mutex returns WAIT_ABANDONED\n");
#endif

        case WAIT_OBJECT_0:

#ifdef DEBUG_DETAIL
          userlog("Thread %d get connection: %d\n",
GetCurrentThreadId(), current);
#endif

          if (DBExecution_pool[current].current_status == IDLE) {
            DBExecution_pool[current].current_status = IN_USE;
#ifndef CONNECTION_MUTEX
            ReleaseMutex(DBExecution_lock[current]);
#else
            mutexptr=&(DBExecution_lock[current]);
#endif
            TlsSetValue(TlsPtr, (void *)
DBExecution_pool[current].pointer);
            return &(DBExecution_pool[current]);
          }
          else {
            ReleaseMutex(DBExecution_lock[current]);
#ifdef DEBUG
            userlog("get connection mutex, but current_status is
not IDLE\n");
#endif
          }
          break;

        case WAIT_TIMEOUT:
          break;

        default:
          userlog("Error on WaitForSingleObject, DBExecution\n");
          return NULL;
        }

      }

      current++;
      if (current==DBConnections) current=0;
    }
#ifdef DEBUG
    findDBExecutionWait++;
    if (findDBExecutionWait !=0 && findDBExecutionWait % 100000 ==
0)
      userlog("wait: %d,  total call: %d\n", findDBExecutionWait,
findDBExecutionCall);
#endif

    if ((WaitForSingleObject(waitIdle, INFINITE)) != WAIT_OBJECT_0)
{
      userlog("Error on WaitForSingleObject, in function
findIdleDBExecution\n");
      return NULL;
    }
  }

  return NULL;
}


void readInit(char *output, char *parameter, char *default_value)
{
  if (_access(InitFile, 0x00) != NULL) {
    userlog("Cannot access init file: %s\n", InitFile);
    strcpy(output, default_value);
  }
  else
    GetPrivateProfileString("TPCC", parameter, default_value,
output, MAXLEN, InitFile);
}


int initializeDBExecutionPool()
{
    DBExecution *ptr;

  userlog("execute initializeDBExecutionPool()\n");

    DBExecution_pool = (DBExecution_pool_info *) malloc
(sizeof(DBExecution_pool_info)*DBConnections);
  if (DBExecution_pool == 0) {
    userlog("malloc failed in initializeDBExecutionPool\n");
    return FALSE;
  }
  memset((void*)DBExecution_pool, 0,
sizeof(DBExecution_pool_info)*DBConnections);

  for (int i=0; i<DBConnections; i++) {
    if ((ptr=new DBExecution) == NULL) {
      userlog("Cannot create DBExecution object\n");
      return FALSE;
```

```
      }

      if ((TlsSetValue(TlsPtr, (void *) ptr)) == NULL) {
        userlog("TlsSetValue failed\n");
        return FALSE;
      }

      if (ptr->TPCinit(i, "tpcc", "tpcc")) {
        userlog("TPCinit failed\n");
        return FALSE;
      }

      DBExecution_pool[i].current_status = IDLE;
      DBExecution_pool[i].pointer = (void *) ptr;

      userlog ("DBExecution %d is initialized\n", i);
  }

  return TRUE;
}


void userlog (char * str, ...)
{
  HANDLE logMutex;
  FILE *file;
  time_t t;
  struct tm *currtime;
  va_list va;
  int threadId;

  logMutex = CreateMutex(NULL, FALSE, "TPCC_LOG");
  // Wait for initialization ended
  WaitForSingleObject(logMutex, INFINITE);

  threadId = GetCurrentThreadId();
    time (&t);
  currtime = localtime(&t);
  if ((file=fopen(LogFile, "a"))==(FILE *) NULL) {
    fprintf(stderr, "Can't open file : %s\n", LogFile);
    exit(-1);
  }
  va_start(va, str);
  fprintf(file, "[Time %d:%d:%d  Thread: %d]  ", currtime->tm_hour,
currtime->tm_min, currtime->tm_sec, threadId);
  vfprintf(file, str, va);
  fprintf(file, "\n");
  fflush(file);
  va_end(va);
  fclose(file);

  ReleaseMutex(logMutex);
  CloseHandle(logMutex);
}


sb4 no_data(dvoid *ctxp, OCIBind *bp, ub4 iter, ub4 index,
            dvoid **bufpp, ub4 *alenp, ub1 *piecep,
            dvoid **indpp)
{
  *bufpp = (dvoid*)0;
  *alenp =0;
  *indpp = (dvoid*)0;
  *piecep =OCI_ONE_PIECE;
  return (OCI_CONTINUE);
}


sb4 TPC_oid_data(dvoid *ctxp, OCIBind *bp, ub4 iter, ub4 index,
            dvoid **bufpp, ub4 **alenp, ub1 *piecep,
            dvoid **indpp, ub2 **rcodepp)
{

  DBExecution *dbc;

  dbc = (DBExecution*) TlsGetValue(TlsPtr);
  if (dbc == 0) {
  userlog("TlsGetValue failed in TPC_oid_data\n");
  exit(-1);
  }

  *bufpp = &dbc->dctx->del_o_id[iter];
  *indpp= &dbc->dctx->del_o_id_ind[iter];
  dbc->dctx->del_o_id_len[iter]=sizeof(dbc->dctx->del_o_id[0]);
  *alenp= &dbc->dctx->del_o_id_len[iter];
  *rcodepp = &dbc->dctx->del_o_id_rcode[iter];
  *piecep =OCI_ONE_PIECE;
  return (OCI_CONTINUE);
}


sb4 cid_data(dvoid *ctxp, OCIBind *bp, ub4 iter, ub4 index,
             dvoid **bufpp, ub4 **alenp, ub1 *piecep,
             dvoid **indpp, ub2 **rcodepp)
{

  DBExecution *dbc;

  dbc = (DBExecution*) TlsGetValue(TlsPtr);
  if (dbc == 0) {
```

```
      userlog("TlsGetValue failed in cid_data\n");
      exit(-1);
      }

  *bufpp = &dbc->dctx->c_id[iter];
  *indpp= &dbc->dctx->c_id_ind[iter];
  dbc->dctx->c_id_len[iter]=sizeof(dbc->dctx->c_id[0]);
  *alenp= &dbc->dctx->c_id_len[iter];
  *rcodepp = &dbc->dctx->c_id_rcode[iter];
  *piecep =OCI_ONE_PIECE;
  return (OCI_CONTINUE);
}


sb4 amt_data(dvoid *ctxp, OCIBind *bp, ub4 iter, ub4 index,
             dvoid **bufpp, ub4 **alenp, ub1 *piecep,
             dvoid **indpp, ub2 **rcodepp)
{
  amtctx *actx;
  actx =(amtctx*)ctxp;

  *bufpp = &actx->ol_amt[index];
  *indpp= &actx->ol_amt_ind[index];
  actx->ol_amt_len[index]=sizeof(actx->ol_amt[0]);
  *alenp= &actx->ol_amt_len[index];
  *rcodepp = &actx->ol_amt_rcode[index];
  *piecep =OCI_ONE_PIECE;
  return (OCI_CONTINUE);
}


/***************************************************************
****************************
 *  DBExecution member functions
 *
 ***************************************************************
**************************/

DBExecution::DBExecution()
{
  tracelevel = 0;
  logon = 0;
  new_init = 0;
  pay_init = 0;
  ord_init = 0;
  del_init_oci = 0;
  del_init_plsql = 0;
  sto_init = 0;
}

DBExecution::~DBExecution()
{

}


#define SQLTXTNEW2 "BEGIN inittpcc.init_no(:idx1arr); END;"
#define SQLTXTDEL "BEGIN inittpcc.init_del ; END;"
#define SQLTXTDEL1 "DELETE FROM nord WHERE no_d_id = :d_id \
                AND no_w_id = :w_id and rownum <= 1 \
                RETURNING no_o_id into :o_id "

#define SQLTXTDEL3 "UPDATE ordr SET o_carrier_id = :carrier_id \
                WHERE o_id = :o_id and o_d_id = :d_id and o_w_id =
:w_id \
                returning o_c_id into :o_c_id"

#define SQLTXTDEL4 "UPDATE ordl \
    SET ol_delivery_d = :cr_date \
    WHERE ol_w_id = :w_id AND ol_d_id = :d_id AND ol_o_id = :o_id \
    RETURNING sum(ol_amount) into :ol_amount "

#define SQLTXTDEL6 "UPDATE cust SET c_balance = c_balance + :amt, \
    c_delivery_cnt = c_delivery_cnt + 1 WHERE c_w_id = :w_id AND \
    c_d_id = :d_id AND c_id = :c_id"

#define SQLCUR0 "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 SQLCUR1 "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 \
                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 SQLCUR2 "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 \
                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 SQLCUR3 "SELECT  /*+ INDEX(ordl) */ \
                ol_i_id, ol_supply_w_id, ol_quantity, ol_amount,
ol_delivery_d \
                FROM ordl \
                WHERE ol_o_id = :o_id AND  ol_d_id = :d_id AND
ol_w_id = :w_id"

#define SQLCUR4 "SELECT count(c_last) FROM cust \
                WHERE c_d_id = :d_id AND c_w_id = :w_id AND c_last
= :c_last "

#ifdef PLSQLSTO
#define SQLTXTSTO "BEGIN stocklevel.getstocklevel (:w_id, :d_id,
:threshold, \
    :low_stock); END;"
#else
#define SQLTXTSTO "SELECT /*+ USE_NL(ordl) nocache (stok)
hash(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


#define SQLTXT_INIT "BEGIN inittpcc.init_pay; END;"


int DBExecution::sqlfile(char *fnam, text *linebuf)
{
  FILE *fd;
  int nulpt = 0;
  char realfile[512];

  sprintf(realfile,"%s",fnam);
  fd = fopen(realfile,"r");
  if (!fd){
      fprintf(stderr," fopen on %s failed %d\n",fnam,fd);
      exit(-1);
  }
  while (fgets((char *)linebuf+nulpt, SQL_BUF_SIZE,fd))
    nulpt = strlen((char *)linebuf);
  fclose(fd);

  return(nulpt);
}


int DBExecution::ocierror(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:
    userlog("ocierror: Module %s Line %d\n", fname, lineno);
    userlog("ocierror: Error - OCI_SUCCESS_WITH_INFO\n");
    lstat = OCIErrorGet (errhp, recno++, (text *) NULL, &errcode,
errbuf,
                        (ub4) sizeof(errbuf), OCI_HTYPE_ERROR);
    userlog("ocierror: Error - %s\n", errbuf);
    break;
  case OCI_NEED_DATA:
    userlog("ocierror: Module %s Line %d\n", fname, lineno);
    userlog("ocierror: Error - OCI_NEED_DATA\n");
    return (IRRECERR);
  case OCI_NO_DATA:
    userlog("ocierror: Module %s Line %d\n", fname, lineno);
    userlog("ocierror: 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)
    {
      userlog("ocierror: Module %s Line %d\n", fname, lineno);
      userlog("ocierror: Error - %s\n", errbuf);
      lstat = OCIErrorGet (errhp, recno++, (text *) NULL, &errcode,
errbuf,
                          (ub4) sizeof(errbuf), OCI_HTYPE_ERROR);
```

```
  }
    return (errcode);
/* vmm313    TPCexit(1); */
/* vmm313    exit(1); */
  case OCI_INVALID_HANDLE:
    userlog("ocierror: Module %s Line %d\n", fname, lineno);
    userlog("ocierror: Error - OCI_INVALID_HANDLE\n");
    TPCexit();
    exit(-1);
  case OCI_STILL_EXECUTING:
    userlog("ocierror: Module %s Line %d\n", fname, lineno);
    userlog("ocierror: Error - OCI_STILL_EXECUTE\n");
    return (IRRECERR);
  case OCI_CONTINUE:
    userlog("ocierror: Module %s Line %d\n", fname, lineno);
    userlog("ocierror: Error - OCI_CONTINUE\n");
    return (IRRECERR);
  default:
    userlog("ocierror: Module %s Line %d\n", fname, lineno);
    userlog("ocierror: Status - %s\n", status);
    return (IRRECERR);
  }
  return (RECOVERR);
}


/*****************************************************************
**************************
* TPCinit   TPCexit
*
*****************************************************************
**************************/


int DBExecution::TPCinit (int id, char *uid, char *pwd)
{
  int i;

#ifndef LOOPBACK

  text stmbuf[100];

#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 SQLTXTOPS "alter session set current_schema = tpcc"

  proc_no = id;
/*
  char *temp;

  if ((temp = getenv("LOCAL"))==NULL)
    _putenv( "LOCAL=tpcc" );

  OCIInitialize(OCI_DEFAULT|OCI_OBJECT,(dvoid *)0,0,0,0); */
// OCIERROR(errhp, OCIInitialize(OCI_THREADED|OCI_OBJECT,(dvoid
*)0,0,0,0));
  OCIERROR(errhp, OCIEnvInit(&tpcenv, OCI_DEFAULT, 0, (dvoid
**)0));
  OCIERROR(errhp, OCIHandleAlloc((dvoid *)tpcenv, (dvoid
**)&tpcsrv, OCI_HTYPE_SERVER, 0 , (dvoid **)0));
  OCIERROR(errhp, OCIHandleAlloc((dvoid *)tpcenv, (dvoid
**)&errhp, OCI_HTYPE_ERROR, 0 , (dvoid **)0));
  OCIERROR(errhp, OCIHandleAlloc((dvoid *)tpcenv, (dvoid
**)&tpcsvc, OCI_HTYPE_SVCCTX, 0 , (dvoid **)0));

  for (i=0; i<100; i++) {

    execstatus = OCIServerAttach(tpcsrv, errhp, (text
*)0,0,OCI_DEFAULT);
    if (execstatus == OCI_SUCCESS || execstatus ==
OCI_SUCCESS_WITH_INFO)
       break;
    OCIERROR(errhp, execstatus);
    Sleep(10);
  }

  if (i==100) {
    userlog("Can't attach to Server after 100 tries\n");
    return -1;
  }

  OCIERROR(errhp, OCIAttrSet((dvoid *)tpcsvc, OCI_HTYPE_SVCCTX,
(dvoid *)tpcsrv, (ub4)0,OCI_ATTR_SERVER, errhp));
  OCIERROR(errhp, OCIHandleAlloc((dvoid *)tpcenv, (dvoid
**)&tpcusr, OCI_HTYPE_SESSION, 0 , (dvoid **)0));
#ifdef OPS_LOGIN
  OCIERROR(errhp, OCISessionBegin(tpcsvc, errhp, tpcusr,
OCI_CRED_EXT, OCI_DEFAULT));
#else
  OCIERROR(errhp, OCIAttrSet((dvoid *)tpcusr, OCI_HTYPE_SESSION,
(dvoid *)uid, (ub4)strlen(uid),OCI_ATTR_USERNAME, errhp));
  OCIERROR(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));
#endif

  OCIERROR(errhp, OCIAttrSet(tpcsvc, OCI_HTYPE_SVCCTX, tpcusr, 0,
OCI_ATTR_SESSION, errhp));
```

```
    /* run all transaction in serializable mode */

    OCIHandleAlloc(tpcenv, (dvoid **)&curi, OCI_HTYPE_STMT, 0,
(dvoid**)0);
    sprintf ((char *) stmbuf, SQLTXT);
    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);

#ifdef OPS_LOGIN
    OCIHandleAlloc(tpcenv, (dvoid **)&curi, OCI_HTYPE_STMT, 0,
(dvoid**)0);
    memset(stmbuf,0,100);
    sprintf ((char *) stmbuf, SQLTXTOPS);
    OCIStmtPrepare(curi, errhp, stmbuf, strlen((char *)stmbuf),
     OCI_NTV_SYNTAX, OCI_DEFAULT);
    OCIERROR(errhp, OCIStmtExecute(tpcsvc, curi,
errhp,1,0,0,0,OCI_DEFAULT));
    OCIHandleFree((dvoid *)curi, OCI_HTYPE_STMT);
#endif

    if (tracelevel == 3) {
    OCIHandleAlloc(tpcenv, (dvoid **)&curi, OCI_HTYPE_STMT, 0,
(dvoid**)0);
    memset(stmbuf,0,100);
    sprintf ((char *) stmbuf, SQLTXTTIM);
    OCIStmtPrepare(curi, errhp, stmbuf, strlen((char *)stmbuf),
     OCI_NTV_SYNTAX, OCI_DEFAULT);
    OCIERROR(errhp, OCIStmtExecute(tpcsvc, curi,
errhp,1,0,0,0,OCI_DEFAULT));
    OCIHandleFree((dvoid *)curi, OCI_HTYPE_STMT);
    }

    logon = 1;

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

    if (tkvcninit ()) {  /* new order */
       TPCexit ();
       return (-1);
    }
    else
       new_init = 1;

    if (tkvcpinit ()) {   /* payment */
      TPCexit ();
       return (-1);
    }
    else
       pay_init = 1;

    if (tkvcoinit ()) {   /* order status */
      TPCexit ();
       return (-1);
    }
    else
       ord_init = 1;

    if (tkvcdinit (0)) {   /* delivery */
      TPCexit ();
       return (-1);
    }
    else
       del_init_oci = 1;

    if (tkvcdinit (1)) {   /* delivery */
      TPCexit ();
       return (-1);
    }
    else
       del_init_plsql = 1;

    if (tkvcsinit ()) {   /* stock level */
      TPCexit ();
       return (-1);
    }
    else
       sto_init = 1;

#endif

    return (0);
}


void DBExecution::TPCexit()
{

#ifndef LOOPBACK

    if (new_init) {
       tkvcndone();
       new_init = 0;
    }
```

```
    if (pay_init) {
       tkvcpdone();
       pay_init = 0;
    }
    if (ord_init) {
       tkvcodone();
       ord_init = 0;
    }
    if (del_init_oci) {
       tkvcddone(0);
       del_init_oci = 0;
    }
    if (del_init_plsql) {
       tkvcddone(1);
       del_init_plsql = 0;
    }
    if (sto_init) {
       tkvcsdone();
       sto_init = 0;
    }

    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);

#endif

}


/*******************************************************************
****************************
* tkvcninit  tkvcndone  tkvcpinit  tkvcpdone  tkvcdinit  tkvcddone
tkvcoinit  tkvcodone        *
* tkvcsinit  tkvcsdone
*
*******************************************************************
****************************/


int DBExecution::tkvcninit ()
{

  text stmbuf[32*1024];

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

  /* open first cursor */
  DISCARD OCIERROR(errhp,OCIHandleAlloc(tpcenv,(dvoid **)(&nctx-
>curn1),
        OCI_HTYPE_STMT, 0, (dvoid**)0));

#if defined(ISO)
  sqlfile(".\\blocks\\tkvcpnew_iso.sql",stmbuf);
#else
#if defined(ISO7)
  sqlfile(".\\blocks\\tkvcpnew_iso7.sql",stmbuf);
#else
  sqlfile(".\\blocks\\tkvcpnew.sql",stmbuf);
#endif
#endif
  DISCARD OCIERROR(errhp,OCIStmtPrepare(nctx->curn1, errhp, stmbuf,
        strlen((char *)stmbuf), OCI_NTV_SYNTAX, OCI_DEFAULT));

  /* bind variables */

  OCIBNDPL(nctx->curn1, nctx->w_id_bp, errhp,
":w_id",ADR(w_id),SIZ(w_id),
        SQLT_INT, &nctx->w_id_len);
  OCIBNDPL(nctx->curn1, nctx->d_id_bp, errhp,
":d_id",ADR(d_id),SIZ(d_id),
        SQLT_INT, &nctx->d_id_len);
  OCIBNDPL(nctx->curn1, nctx->c_id_bp, errhp,
":c_id",ADR(c_id),SIZ(c_id),
        SQLT_INT, &nctx->c_id_len);
  OCIBNDPL(nctx->curn1, nctx->o_all_local_bp, errhp,
":o_all_local",
        ADR(o_all_local), SIZ(o_all_local),SQLT_INT, &nctx-
>o_all_local_len);
  OCIBNDPL(nctx->curn1, nctx->o_all_cnt_bp, errhp,
":o_ol_cnt",ADR(o_ol_cnt),
        SIZ(o_ol_cnt),SQLT_INT, &nctx->o_ol_cnt_len);
  OCIBNDPL(nctx->curn1, nctx->w_tax_bp, errhp,
":w_tax",ADR(w_tax),SIZ(w_tax),
```

```
                SQLT_FLT, &nctx->w_tax_len);
  OCIBNDPL(nctx->curn1, nctx->d_tax_bp, errhp,
":d_tax",ADR(d_tax),SIZ(d_tax),
          SQLT_FLT, &nctx->d_tax_len);
  OCIBNDPL(nctx->curn1, nctx->o_id_bp, errhp,
":o_id",ADR(o_id),SIZ(o_id),
          SQLT_INT, &nctx->o_id_len);
  OCIBNDPL(nctx->curn1, nctx->c_discount_bp, errhp, ":c_discount",
          ADR(c_discount), SIZ(c_discount),SQLT_FLT, &nctx-
>c_discount_len);
  OCIBNDPL(nctx->curn1, nctx->c_credit_bp, errhp,
":c_credit",c_credit,
          SIZ(c_credit),SQLT_CHR, &nctx->c_credit_len);
  OCIBNDPL(nctx->curn1, nctx->c_last_bp, errhp,
":c_last",c_last,SIZ(c_last),
          SQLT_STR, &nctx->c_last_len);
  OCIBNDPL(nctx->curn1, nctx->retries_bp, errhp,
":retry",ADR(retries),
          SIZ(retries),SQLT_INT, &nctx->retries_len);
  OCIBNDPL(nctx->curn1, nctx->cr_date_bp, errhp,
":cr_date",&cr_date,
          SIZ(OCIDate), SQLT_ODT, &nctx->cr_date_len);

  OCIBNDPLA(nctx->curn1, nctx-
>ol_i_id_bp,errhp,":ol_i_id",nol_i_id,
          SIZ(int), SQLT_INT, nctx->nol_i_id_len,NITEMS,&nctx-
>nol_i_count);
  OCIBNDPLA(nctx->curn1, nctx->ol_supply_w_id_bp, errhp,
":ol_supply_w_id",
          nol_supply_w_id,SIZ(int),SQLT_INT, nctx-
>nol_supply_w_id_len,
          NITEMS, &nctx->nol_s_count);

#ifdef USE_IEEE_NUMBER
  OCIBNDPLA(nctx->curn1, nctx->ol_quantity_bp,errhp,":ol_quantity",
          nol_quantity, SIZ(float),SQLT_BFLOAT,nctx-
>nol_quantity_len,
          NITEMS,&nctx->nol_q_count);

  OCIBNDPLA(nctx->curn1, nctx-
>i_price_bp,errhp,":i_price",i_price,SIZ(float),
          SQLT_BFLOAT, nctx->i_price_len, NITEMS, &nctx-
>nol_item_count);
#else
  OCIBNDPLA(nctx->curn1, nctx->ol_quantity_bp,errhp,":ol_quantity",
          nol_quantity, SIZ(int),SQLT_INT,nctx->nol_quantity_len,
          NITEMS,&nctx->nol_q_count);

  OCIBNDPLA(nctx->curn1, nctx-
>i_price_bp,errhp,":i_price",i_price,SIZ(int),
          SQLT_INT, nctx->i_price_len, NITEMS, &nctx-
>nol_item_count);
#endif /* USE_IEEE_NUMBER */
  OCIBNDPLA(nctx->curn1, nctx->i_name_bp,errhp,":i_name",i_name,
          SIZ(i_name[0]),SQLT_STR, nctx->i_name_len,NITEMS,
          &nctx->nol_name_count);

#ifdef USE_IEEE_NUMBER
  OCIBNDPLA(nctx->curn1, nctx-
>s_quantity_bp,errhp,":s_quantity",s_quantity,
          SIZ(float), SQLT_BFLOAT,nctx->s_quant_len,NITEMS,&nctx-
>nol_qty_count);
#else
  OCIBNDPLA(nctx->curn1, nctx-
>s_quantity_bp,errhp,":s_quantity",s_quantity,
          SIZ(int), SQLT_INT,nctx->s_quant_len,NITEMS,&nctx-
>nol_qty_count);
#endif /* USE_IEEE_NUMBER */

  OCIBNDPLA(nctx->curn1, nctx-
>s_bg_bp,errhp,":brand_generic",brand_generic,
          SIZ(char), SQLT_CHR,nctx->s_bg_len,NITEMS,&nctx-
>nol_bg_count);
#ifdef USE_IEEE_NUMBER
  OCIBNDPLA(nctx->curn1, nctx-
>ol_amount_bp,errhp,":ol_amount",nol_amount,
          SIZ(float),SQLT_BFLOAT, nctx-
>nol_amount_len,NITEMS,&nctx->nol_am_count);

  OCIBNDPLA(nctx->curn1, nctx->s_remote_bp,errhp,":s_remote",nctx-
>s_remote,
          SIZ(float),SQLT_BFLOAT,nctx->s_remote_len,NITEMS,&nctx-
>s_remote_count);
#else
  OCIBNDPLA(nctx->curn1, nctx-
>ol_amount_bp,errhp,":ol_amount",nol_amount,
          SIZ(int),SQLT_INT, nctx->nol_amount_len,NITEMS,&nctx-
>nol_am_count);

  OCIBNDPLA(nctx->curn1, nctx->s_remote_bp,errhp,":s_remote",nctx-
>s_remote,
          SIZ(int),SQLT_INT, nctx->s_remote_len,NITEMS,&nctx-
>s_remote_count);
#endif /* USE_IEEE_NUMBER */

  /* open second cursor */
  DISCARD OCIERROR(errhp,OCIHandleAlloc(tpcenv, (dvoid **)(&nctx-
>curn2),
                  OCI_HTYPE_STMT, 0, (dvoid**)0));
  DISCARD sprintf ((char *) stmbuf, SQLTXTNEW2);
  DISCARD OCIERROR(errhp,OCIStmtPrepare(nctx->curn2, errhp, stmbuf,
```

```
                strlen((char *)stmbuf), OCI_NTV_SYNTAX,
OCI_DEFAULT));

  /* execute second cursor to init newinit package */
  {
    int idx1arr[NITEMS];
    OCIBind *idx1arr_bp;
    ub2 idx1arr_len[NITEMS];
    sb2 idx1arr_ind[NITEMS];
    ub4 idx1arr_count;
    ub2 idx;

    for (idx = 0; idx < NITEMS; idx++) {
      idx1arr[idx] = idx + 1;
      idx1arr_ind[idx] = TRUE;
      idx1arr_len[idx] = sizeof(int);
    }
    idx1arr_count = NITEMS;
    o_ol_cnt = NITEMS;

    /* Bind array */
    OCIBNDPLA(nctx->curn2, idx1arr_bp,errhp,":idx1arr",idx1arr,
          SIZ(int), SQLT_INT, idx1arr_len,
NITEMS,&idx1arr_count);

      execstatus = OCIStmtExecute(tpcsvc,nctx->curn2,errhp,1,0,
                NULLP(CONST
OCISnapshot),NULLP(OCISnapshot),OCI_DEFAULT);

    if(execstatus != OCI_SUCCESS) {
      OCITransRollback(tpcsvc,errhp,OCI_DEFAULT);
        errcode = OCIERROR(errhp,execstatus);
        return -1;
      }
    }

  return (0);
}


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


int DBExecution::tkvcdinit (int plsqlflag)

{

    text stmbuf[SQL_BUF_SIZE];

    if (plsqlflag)
    {
      pldctx = (pldelctx *) malloc (sizeof(pldelctx));
      DISCARD memset(pldctx,(char)0,(ub4)sizeof(pldelctx));
      /* Initialize */
      DISCARD OCIHandleAlloc(tpcenv, (dvoid**)&pldctx->curp1,
OCI_HTYPE_STMT, 0,
                        (dvoid**)0);
      DISCARD sprintf ((char *) stmbuf, SQLTXTDEL);
      DISCARD OCIStmtPrepare(pldctx->curp1, errhp, stmbuf,
                        (ub4) strlen((char *)stmbuf),
                  OCI_NTV_SYNTAX, OCI_DEFAULT);
      DISCARD OCIERROR(errhp,
        OCIStmtExecute(tpcsvc,pldctx-
>curp1,errhp,1,0,NULLP(OCISnapshot),
                  NULLP(OCISnapshot), OCI_DEFAULT));


      DISCARD OCIHandleAlloc(tpcenv,(dvoid**) &pldctx->curp2,
OCI_HTYPE_STMT,
                0, (dvoid**)0);
#if defined(ISO5) || defined(ISO6) || defined(ISO8)
  #if defined(ISO5)
      sqlfile(".\\blocks\\tkvcpdel_iso5.sql",stmbuf);
  #endif
  #if defined(ISO6)
      sqlfile(".\\blocks\\tkvcpdel_iso6.sql",stmbuf);
  #endif
  #if defined(ISO8)
      sqlfile(".\\blocks\\tkvcpdel_iso8.sql",stmbuf);
  #endif
#else
      sqlfile(".\\blocks\\tkvcpdel.sql",stmbuf);
#endif
      DISCARD OCIStmtPrepare(pldctx->curp2, errhp, stmbuf,
                  (ub4)strlen((char *)stmbuf), OCI_NTV_SYNTAX,
OCI_DEFAULT);
      OCIBNDPL(pldctx->curp2, pldctx->w_id_bp , errhp,":w_id",
                ADR(w_id), SIZ(int), SQLT_INT,&pldctx->w_id_len);
      OCIBNDPL(pldctx->curp2, pldctx->ordcnt_bp , errhp,":ordcnt",
                ADR(pldctx->ordcnt), SIZ(int), SQLT_INT,&pldctx-
>ordcnt_len);
```

```
    OCIBNDPL(pldctx->curp2, pldctx->del_date_bp,errhp,":now",
            ADR(pldctx->del_date), SIZ(OCIDate),
SQLT_ODT,&pldctx->del_date_len);
    OCIBNDPL(pldctx->curp2, pldctx->carrier_id_bp , errhp,
            ":carrier_id", ADR(o_carrier_id), SIZ(int),
            SQLT_INT, &pldctx->carrier_id_len);

    OCIBNDPLA(pldctx->curp2, pldctx->d_id_bp, errhp,":d_id",
            pldctx->del_d_id, SIZ(int),SQLT_INT, pldctx-
>del_d_id_len,
            NDISTS, &pldctx->del_d_id_rcnt);
    OCIBNDPLA(pldctx->curp2, pldctx->o_id_bp, errhp,":order_id",
            pldctx->del_o_id,SIZ(int),SQLT_INT, pldctx-
>del_o_id_len,NDISTS,
            &pldctx->del_o_id_rcnt);
#ifdef USE_IEEE_NUMBER
    OCIBNDPLA(pldctx->curp2, pldctx->sums_bp, errhp,":sums",
            pldctx->sums,SIZ(float),SQLT_BFLOAT, pldctx-
>sums_len,NDISTS,
            &pldctx->sums_rcnt);
#else
    OCIBNDPLA(pldctx->curp2, pldctx->sums_bp, errhp,":sums",
            pldctx->sums,SIZ(int),SQLT_INT, pldctx-
>sums_len,NDISTS,
            &pldctx->sums_rcnt);
#endif

    OCIBNDPLA(pldctx->curp2, pldctx->o_c_id_bp, errhp,":o_c_id",
            pldctx->o_c_id,SIZ(int),SQLT_INT, pldctx-
>o_c_id_len,NDISTS,
            &pldctx->o_c_id_rcnt);
    OCIBND(pldctx->curp2, pldctx->retry_bp , errhp,":retry",
            ADR(pldctx->retry), SIZ(int),SQLT_INT);

    }
    else
    {

    dctx = (delctx *) malloc (sizeof(delctx));
    memset(dctx,(char)0,sizeof(delctx));
    dctx->norow = 0;
    actx = (amtctx *) malloc (sizeof(amtctx));
    memset(actx,(char)0,sizeof(amtctx));

    OCIHandleAlloc(tpcenv, (dvoid **)(&dctx->curd1),
OCI_HTYPE_STMT, 0,
                    (dvoid**)0);
    DISCARD sprintf ((char *) stmbuf, "%s",    SQLTXTDEL1);
    DISCARD OCIStmtPrepare(dctx->curd1, errhp, stmbuf,
                    strlen((char *)stmbuf),OCI_NTV_SYNTAX,
OCI_DEFAULT);

    OCIBND(dctx->curd1, dctx->w_id_bp,errhp,":w_id",dctx-
>w_id,SIZ(int),
            SQLT_INT);
    OCIBNDRA(dctx->curd1, dctx->d_id_bp,errhp,":d_id",dctx-
>d_id,SIZ(int),
            SQLT_INT,NULL,NULL,NULL);

    OCIBNDRAD(dctx->curd1, dctx->del_o_id_bp, errhp, ":o_id",
            SIZ(int),SQLT_INT,NULL,
            &dctx->oid_ctx,no_data,TPC_oid_data);

    /* open third cursor */

    DISCARD OCIHandleAlloc(tpcenv, (dvoid **)(&dctx->curd3),
OCI_HTYPE_STMT,
                            0, (dvoid**)0);
    DISCARD sprintf ((char *) stmbuf, SQLTXTDEL3);
    DISCARD OCIStmtPrepare(dctx->curd3, errhp, stmbuf,
strlen((char *)stmbuf),
                    OCI_NTV_SYNTAX, OCI_DEFAULT);

    /* bind variables */

    OCIBNDRA(dctx->curd3, dctx->carrier_id_bp,errhp,":carrier_id",
            dctx->carrier_id, SIZ(dctx->carrier_id[0]),SQLT_INT,
            dctx->carrier_id_ind, dctx->carrier_id_len,dctx-
>carrier_id_rcode);

    OCIBNDRA(dctx->curd3, dctx->w_id_bp3, errhp, ":w_id", dctx-
>w_id,SIZ(int),
                SQLT_INT, NULL, NULL, NULL);
    OCIBNDRA(dctx->curd3, dctx->d_id_bp3, errhp, ":d_id", dctx-
>d_id,SIZ(int),
                SQLT_INT,NULL, NULL, NULL);
    OCIBNDRA(dctx->curd3, dctx->del_o_id_bp3, errhp, ":o_id",
dctx->del_o_id,
                SIZ(int), SQLT_INT,NULL,NULL,NULL);
    OCIBNDRAD(dctx->curd3, dctx->c_id_bp3, errhp, ":o_c_id",
SIZ(int),
                SQLT_INT,NULL,&dctx->cid_ctx,no_data, cid_data);

    /* open fourth cursor */

    DISCARD OCIHandleAlloc(tpcenv, (dvoid **)(&dctx->curd4),
OCI_HTYPE_STMT, 0,
                    (dvoid**)0);
    DISCARD sprintf ((char *) stmbuf, SQLTXTDEL4);
```

```
    DISCARD OCIStmtPrepare(dctx->curd4, errhp, stmbuf,
strlen((char *)stmbuf),
                    OCI_NTV_SYNTAX, OCI_DEFAULT);

    /* bind variables */

    OCIBND(dctx->curd4, dctx->w_id_bp4,errhp,":w_id",dctx->w_id,
            SIZ(int), SQLT_INT);
    OCIBND(dctx->curd4, dctx->d_id_bp4,errhp,":d_id",dctx->d_id,
            SIZ(int), SQLT_INT);
    OCIBND(dctx->curd4, dctx->o_id_bp,errhp,":o_id",dctx-
>del_o_id,
            SIZ(int),SQLT_INT);
    OCIBND(dctx->curd4, dctx->cr_date_bp,errhp,":cr_date", dctx-
>del_date,
            SIZ(OCIDate), SQLT_ODT);
    OCIBNDRAD(dctx->curd4, dctx->olamt_bp, errhp, ":ol_amount",
            SIZ(int), SQLT_INT,NULL, actx,no_data,amt_data);


    /* open sixth cursor */

    DISCARD OCIHandleAlloc(tpcenv, (dvoid **)(&dctx->curd6),
OCI_HTYPE_STMT,
                            0, (dvoid**)0);
    DISCARD sprintf ((char *) stmbuf, SQLTXTDEL6);
    DISCARD OCIStmtPrepare(dctx->curd6, errhp, stmbuf,
strlen((char *)stmbuf),
        OCI_NTV_SYNTAX, OCI_DEFAULT);

    /* bind variables */


    OCIBND(dctx->curd6,dctx->amt_bp,errhp,":amt",dctx-
>amt,SIZ(int),
            SQLT_INT);
    OCIBND(dctx->curd6,dctx->w_id_bp6,errhp,":w_id",dctx-
>w_id,SIZ(int),
            SQLT_INT);
    OCIBND(dctx->curd6,dctx->d_id_bp6,errhp,":d_id",dctx-
>d_id,SIZ(int),
            SQLT_INT);
    OCIBND(dctx->curd6,dctx->c_id_bp,errhp,":c_id",dctx-
>c_id,SIZ(int),
            SQLT_INT);
    }
    return (0);

}



void DBExecution::shiftdata(int from)
{
    int i;
    for (i=from;i<NDISTS-1; i++)
    {
        dctx->del_o_id_ind[i] = dctx->del_o_id_ind[i+1];
        dctx->del_o_id[i] = dctx->del_o_id[i+1];
        dctx->w_id[i] = dctx->w_id[i+1];
        dctx->d_id[i] = dctx->d_id[i+1];
        dctx->carrier_id[i] = dctx->carrier_id[i+1];
    }
}



void DBExecution::tkvcddone(int plsqlflag)
{
    if (plsqlflag)
    {
        if (pldctx)
        {
            DISCARD OCIHandleFree((dvoid *)dctx->curd0,OCI_HTYPE_STMT);
            DISCARD free(pldctx);
        }
    }
    else
    {
        if (dctx)
        {
            OCIHandleFree((dvoid *)dctx->curd1,OCI_HTYPE_STMT);
            OCIHandleFree((dvoid *)dctx->curd2,OCI_HTYPE_STMT);
            OCIHandleFree((dvoid *)dctx->curd3,OCI_HTYPE_STMT);
            OCIHandleFree((dvoid *)dctx->curd4,OCI_HTYPE_STMT);
            OCIHandleFree((dvoid *)dctx->curd5,OCI_HTYPE_STMT);
            OCIHandleFree((dvoid *)dctx->curd6,OCI_HTYPE_STMT);
            DISCARD free (dctx);
        }
    }
}


int DBExecution::tkvcoinit ()
{
    int i;
    text stmbuf[SQL_BUF_SIZE];

    octx = (ordctx *) malloc (sizeof(ordctx));
```

```
    DISCARD memset(octx,(char)0,sizeof(ordctx));
    octx->cs = 1;
    octx->norow = 0;
    octx->somerows = 10;
    for(i=0;i<100;i++) {
     DISCARD OCIERROR(errhp, OCIDescriptorAlloc(tpcenv,
                    (dvoid**)&octx->c_rowid_ptr[i],
OCI_DTYPE_ROWID,0,(dvoid**)0));
    }

    DISCARD OCIERROR(errhp,
      OCIHandleAlloc(tpcenv,(dvoid**)&octx-
>curo0,OCI_HTYPE_STMT,0,(dvoid**)0));
    DISCARD OCIERROR(errhp,
      OCIHandleAlloc(tpcenv,(dvoid**)&octx-
>curo0,OCI_HTYPE_STMT,0,(dvoid**)0));
    DISCARD OCIERROR(errhp,
      OCIHandleAlloc(tpcenv,(dvoid**)&octx-
>curo1,OCI_HTYPE_STMT,0,(dvoid**)0));
    DISCARD OCIERROR(errhp,
      OCIHandleAlloc(tpcenv,(dvoid**)&octx-
>curo2,OCI_HTYPE_STMT,0,(dvoid**)0));
    DISCARD OCIERROR(errhp,
      OCIHandleAlloc(tpcenv,(dvoid**)&octx-
>curo3,OCI_HTYPE_STMT,0,(dvoid**)0));
    DISCARD OCIERROR(errhp,
      OCIHandleAlloc(tpcenv,(dvoid**)&octx-
>curo4,OCI_HTYPE_STMT,0,(dvoid**)0));

/*  c_id = 0, use find customer by lastname. Get an array or
rowid's back*/
    DISCARD sprintf((char *) stmbuf, SQLCUR0);
    DISCARD OCIERROR(errhp,
      OCIStmtPrepare(octx->curo0,errhp,stmbuf,(ub4)strlen((char
*)stmbuf),
                    OCI_NTV_SYNTAX,OCI_DEFAULT));
    DISCARD OCIERROR(errhp,
      OCIAttrSet(octx->curo0,OCI_HTYPE_STMT,&octx->norow,0,
                    OCI_ATTR_PREFETCH_ROWS,errhp));
/* get order/customer info back based on rowid */
    DISCARD sprintf((char *) stmbuf, SQLCUR1);
    DISCARD OCIERROR(errhp,
      OCIStmtPrepare(octx->curo1,errhp,stmbuf,(ub4)strlen((char
*)stmbuf),
                    OCI_NTV_SYNTAX,OCI_DEFAULT));
    DISCARD OCIERROR(errhp,
      OCIAttrSet(octx->curo1,OCI_HTYPE_STMT,&octx->norow,0,
                    OCI_ATTR_PREFETCH_ROWS,errhp));

/*  c_id == 0, use lastname to find customer */
    DISCARD sprintf((char *) stmbuf, SQLCUR2);
    DISCARD OCIERROR(errhp,
      OCIStmtPrepare(octx->curo2,errhp,stmbuf,(ub4)strlen((char
*)stmbuf),
                    OCI_NTV_SYNTAX,OCI_DEFAULT));
    DISCARD OCIERROR(errhp,
      OCIAttrSet(octx->curo2,OCI_HTYPE_STMT,&octx->norow,0,
                    OCI_ATTR_PREFETCH_ROWS,errhp));

    DISCARD sprintf((char *) stmbuf, SQLCUR3);
    DISCARD OCIERROR(errhp,
      OCIStmtPrepare(octx->curo3,errhp,stmbuf,(ub4)strlen((char
*)stmbuf),
                    OCI_NTV_SYNTAX,OCI_DEFAULT));
    DISCARD OCIERROR(errhp,
      OCIAttrSet(octx->curo3,OCI_HTYPE_STMT,&octx->norow,0,
                    OCI_ATTR_PREFETCH_ROWS,errhp));

    DISCARD sprintf((char *) stmbuf, SQLCUR4);
    DISCARD OCIERROR(errhp,
      OCIStmtPrepare(octx->curo4,errhp,stmbuf,(ub4)strlen((char
*)stmbuf),
                    OCI_NTV_SYNTAX,OCI_DEFAULT));
    DISCARD OCIERROR(errhp,
      OCIAttrSet(octx->curo4,OCI_HTYPE_STMT,&octx->norow,0,
                    OCI_ATTR_PREFETCH_ROWS,errhp));

    for (i = 0; i < NITEMS; i++) {

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

    /* bind variables */

    /* c_id (customer id) is not known */
```

```
    OCIBND(octx->curo0,octx->w_id_bp[0],errhp,":w_id",ADR(w_id),
            SIZ(int),SQLT_INT);
    OCIBND(octx->curo0,octx->d_id_bp[0],errhp,":d_id",ADR(d_id),
            SIZ(int),SQLT_INT);
    OCIBND(octx->curo0,octx->c_last_bp[0],errhp,":c_last",c_last,
            SIZ(c_last), SQLT_STR);
    OCIDFNRA(octx->curo0,octx->c_rowid_dp,errhp,1,octx->c_rowid_ptr,
            SIZ(OCIRowid*), SQLT_RDD, NULL, octx->c_rowid_len,
NULL);

    OCIBND(octx->curo1,octx->c_rowid_bp,errhp,":cust_rowid", &octx-
>c_rowid_cust,
            sizeof( octx->c_rowid_ptr[0]),SQLT_RDD);
    OCIDEF(octx->curo1,octx-
>c_id_dp,errhp,1,ADR(c_id),SIZ(int),SQLT_INT);
#ifdef USE_IEEE_NUMBER
    OCIDEF(octx->curo1,octx->c_balance_dp[0],errhp,2,ADR(c_balance),
            SIZ(double),SQLT_BDOUBLE);
#else
    OCIDEF(octx->curo1,octx->c_balance_dp[0],errhp,2,ADR(c_balance),
            SIZ(double),SQLT_FLT);
#endif /* USE_IEEE_NUMBER */
    OCIDEF(octx->curo1,octx-
>c_first_dp[0],errhp,3,c_first,SIZ(c_first)-1,
            SQLT_CHR);
    OCIDEF(octx->curo1,octx->c_middle_dp[0],errhp,4,c_middle,
            SIZ(c_middle)-1,SQLT_AFC);
    OCIDEF(octx->curo1,octx-
>c_last_dp[0],errhp,5,c_last,SIZ(c_last)-1,
            SQLT_CHR);
    OCIDEF(octx->curo1,octx-
>o_id_dp[0],errhp,6,ADR(o_id),SIZ(int),SQLT_INT);
    OCIDEF(octx->curo1,octx->o_entry_d_dp[0],errhp,7,
            &o_entry_d_base,SIZ(OCIDate),SQLT_ODT);
    OCIDEF(octx->curo1,octx-
>o_cr_id_dp[0],errhp,8,ADR(o_carrier_id),
            SIZ(int),SQLT_INT);
    OCIDEF(octx->curo1,octx->o_ol_cnt_dp[0],errhp,9,ADR(o_ol_cnt),
            SIZ(int),SQLT_INT);

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

/* Bind for last cursor */

    OCIBND(octx->curo3,octx->w_id_bp[2],errhp,":w_id",ADR(w_id),
SIZ(int),SQLT_INT);
    OCIBND(octx->curo3,octx->d_id_bp[2],errhp,":d_id",ADR(d_id),
SIZ(int),SQLT_INT);
    OCIBND(octx->curo3,octx->o_id_bp,errhp,":o_id",ADR(o_id),
SIZ(int),SQLT_INT);
/*
    OCIBND(octx->curo3,octx->c_id_bp,errhp,":c_id",ADR(c_id),
SIZ(int),SQLT_INT);
 */

    OCIDFNRA(octx->curo3, octx->ol_i_id_dp, errhp, 1,
ol_i_id,SIZ(int),SQLT_INT,
        NULL,octx->ol_i_id_len, NULL);
    OCIDFNRA(octx->curo3,octx->ol_supply_w_id_dp,errhp,2,
ol_supply_w_id,
            SIZ(int),SQLT_INT, NULL,
            octx->ol_supply_w_id_len, NULL);
#ifdef USE_IEEE_NUMBER
    OCIDFNRA(octx->curo3, octx->ol_quantity_dp,errhp,3,
ol_quantity,SIZ(float),
            SQLT_BFLOAT, NULL,octx->ol_quantity_len, NULL);
    OCIDFNRA(octx->curo3,octx->ol_amount_dp,errhp,4,ol_amount,
SIZ(float),
            SQLT_BFLOAT,NULL, octx->ol_amount_len, NULL);
#else
```

```
    OCIDFNRA(octx->curo3, octx->ol_quantity_dp,errhp,3,
ol_quantity,SIZ(int),
            SQLT_INT, NULL,octx->ol_quantity_len, NULL);
    OCIDFNRA(octx->curo3,octx->ol_amount_dp,errhp,4,ol_amount,
SIZ(int),
            SQLT_INT,NULL, octx->ol_amount_len, NULL);
#endif /* USE_IEEE_NUMBER */
    OCIDFNRA(octx->curo3,octx-
>ol_d_base_dp,errhp,5,ol_d_base,SIZ(OCIDate),
            SQLT_ODT, NULL,octx->ol_delivery_d_len,NULL);

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

    return (0);
}


void DBExecution::tkvcodone ()
{

    if (octx)
        free (octx);

}


int DBExecution::tkvcpinit (void)
{
    text stmbuf[SQL_BUF_SIZE];
    pctx = (payctx *)malloc(sizeof(payctx));
    memset(pctx,(char)0,sizeof(payctx));

/* cursor for init */
    DISCARD OCIERROR(errhp,OCIHandleAlloc(tpcenv, (dvoid **)(&(pctx-
>curpi)),
            OCI_HTYPE_STMT,0,(dvoid**)0));

    DISCARD OCIERROR(errhp,OCIHandleAlloc(tpcenv, (dvoid **)(&(pctx-
>curp0)),
            OCI_HTYPE_STMT,0,(dvoid**)0));
    DISCARD OCIERROR(errhp,OCIHandleAlloc(tpcenv, (dvoid **)(&(pctx-
>curp1)),
            OCI_HTYPE_STMT,0,(dvoid**)0));

    /*  build the init statement  and execute it */

    sprintf ((char*)stmbuf, SQLTXT_INIT);
    DISCARD OCIERROR(errhp,OCIStmtPrepare(pctx->curpi, errhp,
stmbuf,
            strlen((char *)stmbuf), OCI_NTV_SYNTAX, OCI_DEFAULT));
    DISCARD OCIERROR(errhp, OCIStmtExecute(tpcsvc,pctx-
>curpi,errhp,1,0,
                       NULLP(CONST
OCISnapshot),NULLP(OCISnapshot),OCI_DEFAULT));

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

    sqlfile(".\\blocks\\paynz.sql",stmbuf);
    DISCARD OCIERROR(errhp,OCIStmtPrepare(pctx->curp0, errhp,
stmbuf,
            strlen((char *)stmbuf), OCI_NTV_SYNTAX, OCI_DEFAULT));

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

    sqlfile(".\\blocks\\payz.sql",stmbuf); /* sqlfile opens
$O/bench/.../blocks/... */
    DISCARD OCIERROR(errhp,OCIStmtPrepare(pctx->curp1, errhp,
stmbuf,
            strlen((char *)stmbuf), OCI_NTV_SYNTAX, OCI_DEFAULT));

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

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


    /* bind variables */


    OCIBNDPL(pctx->curp0, pctx->w_id_bp[0],
errhp,":w_id",ADR(w_id),SIZ(int),
            SQLT_INT, NULL);
    OCIBNDPL(pctx->curp0, pctx->d_id_bp[0],
errhp,":d_id",ADR(d_id),SIZ(int),
            SQLT_INT, NULL);
    OCIBND(pctx->curp0, pctx->c_w_id_bp[0],
errhp,":c_w_id",ADR(c_w_id),SIZ(int),
            SQLT_INT);
    OCIBND(pctx->curp0, pctx->c_d_id_bp[0],
errhp,":c_d_id",ADR(c_d_id),SIZ(int),
            SQLT_INT);
    OCIBND(pctx->curp0, pctx->c_id_bp[0],
errhp,":c_id",ADR(c_id),SIZ(int),
            SQLT_INT);
#ifdef USE_IEEE_NUMBER
    OCIBNDPL(pctx->curp0, pctx->h_amount_bp[0],
errhp,":h_amount",ADR(h_amount),
            SIZ(float),SQLT_BFLOAT,  &pctx->h_amount_len);
#else
    OCIBNDPL(pctx->curp0, pctx->h_amount_bp[0],
errhp,":h_amount",ADR(h_amount),
            SIZ(int),SQLT_INT,  &pctx->h_amount_len);
#endif /* USE_IEEE_NUMBER */
    OCIBNDPL(pctx->curp0, pctx->c_last_bp[0],
errhp,":c_last",c_last,SIZ(c_last),
            SQLT_STR, &pctx->c_last_len);
    OCIBNDPL(pctx->curp0, pctx->w_street_1_bp[0],
errhp,":w_street_1",w_street_1,
            SIZ(w_street_1),SQLT_STR, &pctx->w_street_1_len);
    OCIBNDPL(pctx->curp0, pctx->w_street_2_bp[0],
errhp,":w_street_2",w_street_2,
            SIZ(w_street_2),SQLT_STR, &pctx->w_street_2_len);
    OCIBNDPL(pctx->curp0, pctx->w_city_bp[0],
errhp,":w_city",w_city,SIZ(w_city),
            SQLT_STR, &pctx->w_city_len);
    OCIBNDPL(pctx->curp0, pctx->w_state_bp[0],
errhp,":w_state",w_state,
            SIZ(w_state), SQLT_STR, &pctx->w_state_len);
    OCIBNDPL(pctx->curp0, pctx->w_zip_bp[0],
errhp,":w_zip",w_zip,SIZ(w_zip),
            SQLT_STR, &pctx->w_zip_len);
    OCIBNDPL(pctx->curp0, pctx->d_street_1_bp[0],
errhp,":d_street_1",d_street_1,
            SIZ(d_street_1),SQLT_STR, &pctx->d_street_1_len);
    OCIBNDPL(pctx->curp0, pctx->d_street_2_bp[0],
errhp,":d_street_2",d_street_2,
            SIZ(d_street_2),SQLT_STR, &pctx->d_street_2_len);
    OCIBNDPL(pctx->curp0, pctx->d_city_bp[0],
errhp,":d_city",d_city,SIZ(d_city),
            SQLT_STR, &pctx->d_city_len);
    OCIBNDPL(pctx->curp0, pctx->d_state_bp[0],
errhp,":d_state",d_state,
            SIZ(d_state), SQLT_STR, &pctx->d_state_len);
    OCIBNDPL(pctx->curp0, pctx->d_zip_bp[0],
errhp,":d_zip",d_zip,SIZ(d_zip),
            SQLT_STR, &pctx->d_zip_len);
    OCIBNDPL(pctx->curp0, pctx->c_first_bp[0],
errhp,":c_first",c_first,
            SIZ(c_first), SQLT_STR, &pctx->c_first_len);
    OCIBNDPL(pctx->curp0, pctx->c_middle_bp[0],
errhp,":c_middle",c_middle,2,
            SQLT_AFC, &pctx->c_middle_len);
    OCIBNDPL(pctx->curp0, pctx->c_street_1_bp[0],
errhp,":c_street_1",c_street_1,
            SIZ(c_street_1),SQLT_STR, &pctx->c_street_1_len);
    OCIBNDPL(pctx->curp0, pctx->c_street_2_bp[0],
errhp,":c_street_2",c_street_2,
            SIZ(c_street_2),SQLT_STR, &pctx->c_street_2_len);
    OCIBNDPL(pctx->curp0, pctx->c_city_bp[0],
errhp,":c_city",c_city,SIZ(c_city),
            SQLT_STR, &pctx->c_city_len);
    OCIBNDPL(pctx->curp0, pctx->c_state_bp[0],
errhp,":c_state",c_state,
            SIZ(c_state), SQLT_STR, &pctx->c_state_len);
    OCIBNDPL(pctx->curp0, pctx->c_zip_bp[0],
errhp,":c_zip",c_zip,SIZ(c_zip),
            SQLT_STR, &pctx->c_zip_len);
    OCIBNDPL(pctx->curp0, pctx->c_phone_bp[0],
errhp,":c_phone",c_phone,
            SIZ(c_phone), SQLT_STR, &pctx->c_phone_len);
```

```
    OCIBNDPL(pctx->curp0, pctx->c_since_bp[0],
errhp,":c_since",&c_since,
        SIZ(OCIDate), SQLT_ODT, &pctx->c_since_len);
    OCIBNDPL(pctx->curp0, pctx->c_credit_bp[0],
errhp,":c_credit",c_credit,
        SIZ(c_credit),SQLT_CHR, &pctx->c_credit_len);
    OCIBNDPL(pctx->curp0, pctx->c_credit_lim_bp[0],
errhp,":c_credit_lim",
        ADR(c_credit_lim)SIZ(int), SQLT_INT, &pctx-
>c_credit_lim_len);
    OCIBNDPL(pctx->curp0, pctx->c_discount_bp[0],
errhp,":c_discount",
        ADR(c_discount),SIZ(c_discount), SQLT_FLT, &pctx-
>c_discount_len);
#ifdef USE_IEEE_NUMBER
    OCIBNDPL(pctx->curp0, pctx->c_balance_bp[0], errhp,":c_balance",
        ADR(c_balance), SIZ(double),SQLT_BDOUBLE, &pctx-
>c_balance_len);
#else
    OCIBNDPL(pctx->curp0, pctx->c_balance_bp[0], errhp,":c_balance",
        ADR(c_balance), SIZ(double),SQLT_FLT, &pctx-
>c_balance_len);
#endif /* USE_IEEE_NUMBER */
    OCIBNDPL(pctx->curp0, pctx->c_data_bp[0],
errhp,":c_data",c_data,SIZ(c_data),
        SQLT_STR, &pctx->c_data_len);
/*
    OCIBNDR(pctx->curp0, pctx->h_date_bp,
errhp,":h_date",h_date,SIZ(h_date),
        SQLT_STR, &pctx->h_date_ind, &pctx->h_date_len, &pctx-
>h_date_rc);
*/
    OCIBNDPL(pctx->curp0, pctx->retries_bp[0],
errhp,":retry",ADR(retries),
        SIZ(int), SQLT_INT, &pctx->retries_len);
    OCIBNDPL(pctx->curp0, pctx->cr_date_bp[0],
errhp,":cr_date",ADR(cr_date),
        SIZ(OCIDate),SQLT_ODT, &pctx->cr_date_len);

/* ---- Binds for  the second cursor   */

    OCIBNDPL(pctx->curp1, pctx->w_id_bp[1],
errhp,":w_id",ADR(w_id),SIZ(int),
        SQLT_INT, &pctx->w_id_len);
    OCIBNDPL(pctx->curp1, pctx->d_id_bp[1],
errhp,":d_id",ADR(d_id),SIZ(int),
        SQLT_INT, &pctx->d_id_len);
    OCIBND(pctx->curp1, pctx->c_w_id_bp[1],
errhp,":c_w_id",ADR(c_w_id),SIZ(int),
        SQLT_INT);
    OCIBND(pctx->curp1, pctx->c_d_id_bp[1],
errhp,":c_d_id",ADR(c_d_id),SIZ(int),
        SQLT_INT);
    OCIBNDPL(pctx->curp1, pctx->c_id_bp[1],
errhp,":c_id",ADR(c_id),SIZ(int),
        SQLT_INT, &pctx->c_id_len);
#ifdef USE_IEEE_NUMBER
    OCIBNDPL(pctx->curp1, pctx->h_amount_bp[1],
errhp,":h_amount",ADR(h_amount),
        SIZ(float),SQLT_BFLOAT, &pctx->h_amount_len);
#else
    OCIBNDPL(pctx->curp1, pctx->h_amount_bp[1],
errhp,":h_amount",ADR(h_amount),
        SIZ(int),SQLT_INT, &pctx->h_amount_len);
#endif /* USE_IEEE_NUMBER */
    OCIBND(pctx->curp1, pctx->c_last_bp[1],
errhp,":c_last",c_last,SIZ(c_last),
        SQLT_STR);
    OCIBNDPL(pctx->curp1, pctx->w_street_1_bp[1],
errhp,":w_street_1",w_street_1,
        SIZ(w_street_1),SQLT_STR, &pctx->w_street_1_len);
    OCIBNDPL(pctx->curp1, pctx->w_street_2_bp[1],
errhp,":w_street_2",w_street_2,
        SIZ(w_street_2),SQLT_STR, &pctx->w_street_2_len);
    OCIBNDPL(pctx->curp1, pctx->w_city_bp[1],
errhp,":w_city",w_city,SIZ(w_city),
        SQLT_STR, &pctx->w_city_len);
    OCIBNDPL(pctx->curp1, pctx->w_state_bp[1],
errhp,":w_state",w_state,
        SIZ(w_state), SQLT_STR, &pctx->w_state_len);
    OCIBNDPL(pctx->curp1, pctx->w_zip_bp[1],
errhp,":w_zip",w_zip,SIZ(w_zip),
        SQLT_STR, &pctx->w_zip_len);
    OCIBNDPL(pctx->curp1, pctx->d_street_1_bp[1],
errhp,":d_street_1",d_street_1,
        SIZ(d_street_1),SQLT_STR, &pctx->d_street_1_len);
    OCIBNDPL(pctx->curp1, pctx->d_street_2_bp[1],
errhp,":d_street_2",d_street_2,
        SIZ(d_street_2),SQLT_STR, &pctx->d_street_2_len);
    OCIBNDPL(pctx->curp1, pctx->d_city_bp[1],
errhp,":d_city",d_city,SIZ(d_city),
        SQLT_STR, &pctx->d_city_len);
    OCIBNDPL(pctx->curp1, pctx->d_state_bp[1],
errhp,":d_state",d_state,
        SIZ(d_state), SQLT_STR, &pctx->d_state_len);
    OCIBNDPL(pctx->curp1, pctx->d_zip_bp[1],
errhp,":d_zip",d_zip,SIZ(d_zip),
        SQLT_STR, &pctx->d_zip_len);
    OCIBNDPL(pctx->curp1, pctx->c_first_bp[1],
errhp,":c_first",c_first,
```
```
        SIZ(c_first), SQLT_STR, &pctx->c_first_len);
    OCIBNDPL(pctx->curp1, pctx->c_middle_bp[1],
errhp,":c_middle",c_middle,2,
        SQLT_AFC, &pctx->c_middle_len);

    OCIBNDPL(pctx->curp1, pctx->c_street_1_bp[1],
errhp,":c_street_1",c_street_1,
        SIZ(c_street_1),SQLT_STR, &pctx->c_street_1_len);
    OCIBNDPL(pctx->curp1, pctx->c_street_2_bp[1],
errhp,":c_street_2",c_street_2,
        SIZ(c_street_2),SQLT_STR, &pctx->c_street_2_len);
    OCIBNDPL(pctx->curp1, pctx->c_city_bp[1],
errhp,":c_city",c_city,
        SIZ(c_city),SQLT_STR, &pctx->c_city_len);
    OCIBNDPL(pctx->curp1, pctx->c_state_bp[1],
errhp,":c_state",c_state,
        SIZ(c_state), SQLT_STR, &pctx->c_state_len);
    OCIBNDPL(pctx->curp1, pctx->c_zip_bp[1],
errhp,":c_zip",c_zip,SIZ(c_zip),
        SQLT_STR, &pctx->c_zip_len);
    OCIBNDPL(pctx->curp1, pctx->c_phone_bp[1],
errhp,":c_phone",c_phone,
        SIZ(c_phone), SQLT_STR, &pctx->c_phone_len);
    OCIBNDPL(pctx->curp1, pctx->c_since_bp[1],
errhp,":c_since",&c_since,
        SIZ(OCIDate), SQLT_ODT, &pctx->c_since_len);
    OCIBNDPL(pctx->curp1, pctx->c_credit_bp[1],
errhp,":c_credit",c_credit,
        SIZ(c_credit),SQLT_CHR, &pctx->c_credit_len);
    OCIBNDPL(pctx->curp1, pctx->c_credit_lim_bp[1],
errhp,":c_credit_lim",
        ADR(c_credit_lim)SIZ(int), SQLT_INT, &pctx-
>c_credit_lim_len);
    OCIBNDPL(pctx->curp1, pctx->c_discount_bp[1],
errhp,":c_discount",
        ADR(c_discount),SIZ(c_discount), SQLT_FLT, &pctx-
>c_discount_len);
#ifdef USE_IEEE_NUMBER
    OCIBNDPL(pctx->curp1, pctx->c_balance_bp[1], errhp,":c_balance",
        ADR(c_balance), SIZ(double),SQLT_BDOUBLE, &pctx-
>c_balance_len);
#else
    OCIBNDPL(pctx->curp1, pctx->c_balance_bp[1], errhp,":c_balance",
        ADR(c_balance), SIZ(double),SQLT_FLT, &pctx-
>c_balance_len);
#endif /* USE_IEEE_NUMBER */
    OCIBNDPL(pctx->curp1, pctx->c_data_bp[1],
errhp,":c_data",c_data,SIZ(c_data),
        SQLT_STR, &pctx->c_data_len);
/*
    OCIBNDR(pctx->curp1, pctx->h_date_bp1,
errhp,":h_date",h_date,SIZ(h_date),
        SQLT_STR, &pctx->h_date_ind, &pctx->h_date_len, &pctx-
>h_date_rc);
*/
    OCIBNDPL(pctx->curp1, pctx->retries_bp[1],
errhp,":retry",ADR(retries),
        SIZ(int), SQLT_INT, &pctx->retries_len);
    OCIBNDPL(pctx->curp1, pctx->cr_date_bp[1],
errhp,":cr_date",ADR(cr_date),
        SIZ(OCIDate),SQLT_ODT, &pctx->cr_date_len);

    return (0);
}



void DBExecution::tkvcpdone ()

{
  if(pctx) {
    free(pctx);
  }
}



int DBExecution::tkvcsinit ()
{
    text stmbuf[SQL_BUF_SIZE];
    sctx = (stoctx *)malloc(sizeof(stoctx));
    memset(sctx,(char)0,sizeof(stoctx));

    sctx->norow=0;

    OCIERROR(errhp,
      OCIHandleAlloc(tpcenv,(dvoid**)&sctx-
>curs,OCI_HTYPE_STMT,0,(dvoid**)0));
    sprintf ((char *) stmbuf, SQLTXTSTO);
    OCIERROR(errhp,OCIStmtPrepare(sctx-
>curs,errhp,stmbuf,strlen((char *)stmbuf),
        OCI_NTV_SYNTAX,OCI_DEFAULT));
#ifndef PLSQLSTO
    OCIERROR(errhp,
      OCIAttrSet(sctx->curs,OCI_HTYPE_STMT,(dvoid*)&sctx->norow,0,
              OCI_ATTR_PREFETCH_ROWS,errhp));
#endif

    /* bind variables */
```

```
    OCIBND(sctx->curs,sctx->w_id_bp,errhp, ":w_id",
ADR(w_id),sizeof(int),
        SQLT_INT);
    OCIBND(sctx->curs,sctx->d_id_bp,errhp, ":d_id",
ADR(d_id),sizeof(int),
        SQLT_INT);
#ifdef USE_IEEE_NUMBER
    OCIBND(sctx->curs,sctx->threshold_bp,errhp, ":threshold",
ADR(threshold),
        sizeof(float),SQLT_BFLOAT);
#else
    OCIBND(sctx->curs,sctx->threshold_bp,errhp, ":threshold",
ADR(threshold),
        sizeof(int),SQLT_INT);
#endif /* USE_IEEE_NUMBER */
#ifdef PLSQLSTO
    OCIBND(sctx->curs,sctx->low_stock_bp,errhp,":low_stock" ,
ADR(low_stock),
        sizeof(int), SQLT_INT);
#else
    OCIDEFINE(sctx->curs,sctx->low_stock_bp,errhp, 1,
ADR(low_stock),
        sizeof(int), SQLT_INT);
#endif

    return (0);
}


void DBExecution::tkvcsdone ()
{
  if(sctx) free(sctx);
}


/**********************************************************************
****************************
*   tkvcn  tkvcd  tkvcp  tkvco  tkvcs
*
**********************************************************************
****************************/

int DBExecution::tkvcn ()
{

    int i;
    int rcount;

retry:

    status = 0;                            /* number of invalid items */

    /* get number of order lines, and check if all are local */

    o_ol_cnt = NITEMS;
    o_all_local = 1;
    for (i = 0; i < NITEMS; i++) {
        if (nol_i_id[i] == 0) {
            o_ol_cnt = i;
            break;
        }
        if (nol_supply_w_id[i] != w_id) {
#ifdef USE_IEEE_NUMBER
            nctx->s_remote[i] = 1.0;
#else
            nctx->s_remote[i] = 1;
#endif /* USE_IEEE_NUMBER */
            o_all_local = 0;
        }
        else
            nctx->s_remote[i] = 0;
    }
    nctx->w_id_len = sizeof(w_id);
    nctx->d_id_len = sizeof(d_id);
    nctx->c_id_len = sizeof(c_id);
    nctx->o_all_local_len = sizeof(o_all_local);
    nctx->o_ol_cnt_len = sizeof(o_ol_cnt);
    nctx->w_tax_len = 0;
    nctx->d_tax_len = 0;
    nctx->o_id_len = sizeof(o_id);
    nctx->c_discount_len = 0;
    nctx->c_credit_len = 0;
    nctx->c_last_len = 0;
    nctx->retries_len = sizeof(retries);
    nctx->cr_date_len = sizeof(cr_date);
    /* this is the row count */
    rcount = o_ol_cnt;
    nctx->nol_i_count = o_ol_cnt;
    nctx->nol_q_count = o_ol_cnt;
    nctx->nol_s_count = o_ol_cnt;
    nctx->s_remote_count = o_ol_cnt;

    nctx->nol_qty_count  = 0;
    nctx->nol_bg_count   = 0;
    nctx->nol_item_count = 0;
    nctx->nol_name_count = 0;
    nctx->nol_am_count   = 0;
```

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

        nctx->nol_i_id_len[i] = 0;
        nctx->nol_supply_w_id_len[i] = 0;
        nctx->nol_quantity_len[i] = 0;
        nctx->nol_amount_len[i] = 0;
        nctx->ol_o_id_len[i] = 0;
        nctx->ol_number_len[i] = 0;
        nctx->ol_dist_info_len[i] = 0;
        nctx->s_remote_len[i] = 0;
        nctx->s_quant_len[i] = 0;
        nctx->i_name_len[i]=0;
        nctx->s_bg_len[i] = 0;
    }

    execstatus = OCIStmtExecute(tpcsvc,nctx->curn1,errhp,1,0,0,0,
            OCI_DEFAULT | OCI_COMMIT_ON_SUCCESS);

    if(execstatus != OCI_SUCCESS) {
        OCITransRollback(tpcsvc,errhp,OCI_DEFAULT);
        errcode = OCIERROR(errhp,execstatus);
        if(errcode == NOT_SERIALIZABLE) {
            retries++;
            goto retry;
        } else if (errcode == RECOVERR) {
            retries++;
            goto retry;
        } else if (errcode == SNAPSHOT_TOO_OLD) {
            retries++;
            goto retry;
        } else {
            return -1;
        }
    }

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

    total_amount = 0;
    for (i = 0; i < o_ol_cnt; i++) total_amount += nol_amount[i];
    total_amount *= ((float)(1.0 - c_discount)) *
            (float)(1.0 + (float)(d_tax) + (float)(w_tax));
    total_amount = total_amount/100;

    return (0);
}


int DBExecution::tkvcd (int plsqlflag)
{

    int i;
    int rpc,rcount;
    int invalid;

    if (plsqlflag)
    {

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

        pldctx->retry=0;

        DISCARD OCIERROR(errhp,
            OCIStmtExecute(tpcsvc,pldctx->curp2,errhp,1,0,NULLP(CONST
OCISnapshot),
                    NULLP(OCISnapshot),OCI_DEFAULT));
        for (i = 0; i < NDISTS; i++)
        {
            del_o_id[i] = 0;
        }
        for (i = 0; i < (int)pldctx->del_o_id_rcnt; i++)
            del_o_id[pldctx->del_d_id[i] - 1] = pldctx->del_o_id[i];
```

```
            }                                                                   retries++;
         else                                                                   goto retry;
         {                                                                    }
                                                                           else
                                                                           {
retry:                                                                        return -1;
                                                                           }
     invalid = 0;                                                          }

    /* initialization for array operations */                           DISCARD OCIAttrGet(dctx-
                                                                   >curd3,OCI_HTYPE_STMT,&rcount,NULLP(ub4),
    for (i = 0; i < NDISTS; i++)                                             OCI_ATTR_ROW_COUNT,errhp);
    {
      dctx->del_o_id_ind[i] = TRUE;                                      if (rcount != rpc)
      dctx->d_id_ind[i] = TRUE;                                          {
      dctx->c_id_ind[i] = TRUE;                                            userlog ("Error in TPC-C server %d: %d rows selected, %d
      dctx->del_date_ind[i] = TRUE;                                  ords updated\n",
      dctx->carrier_id_ind[i] = TRUE;                                          proc_no, rpc, rcount);
      dctx->amt_ind[i] = TRUE;                                            DISCARD OCITransRollback(tpcsvc,errhp,OCI_DEFAULT);
                                                                           return (-1);
      dctx->del_o_id_len[i] = SIZ(dctx->del_o_id[0]);                    }
      dctx->w_id_len[i] = SIZ(dctx->w_id[0]);
      dctx->d_id_len[i] = SIZ(dctx->d_id[0]);                            /* array update of order_line table */
      dctx->c_id_len[i] = SIZ(dctx->c_id[0]);                           execstatus=OCIStmtExecute(tpcsvc,dctx->curd4,errhp,rpc,0,
      dctx->del_date_len[i] = DEL_DATE_LEN;                                        NULLP(CONST
      dctx->carrier_id_len[i] = SIZ(dctx->carrier_id[0]);          OCISnapshot),NULLP(CONST OCISnapshot),OCI_DEFAULT);
      dctx->amt_len[i] = SIZ(dctx->amt[0]);                             if(execstatus != OCI_SUCCESS)
                                                                        {
      dctx->w_id[i] = w_id;                                              DISCARD OCITransRollback(tpcsvc,errhp,OCI_DEFAULT);
      dctx->d_id[i] = i+1;                                               errcode = OCIERROR(errhp,execstatus);
      dctx->carrier_id[i] = o_carrier_id;                               if(errcode == NOT_SERIALIZABLE)
      memcpy(&dctx->del_date[i],&cr_date,sizeof(OCIDate));               {
    }                                                                      retries++;
                                                                           goto retry;
    memset(actx,(char)0,sizeof(amtctx));                                 }
                                                                         else if (errcode == RECOVERR)
   /* array select from new_order and orders tables */                   {
                                                                           retries++;
    execstatus=OCIStmtExecute(tpcsvc,dctx->curd1,errhp,NDISTS,0,           goto retry;
                NULLP(CONST                                              }
OCISnapshot),NULLP(OCISnapshot),OCI_DEFAULT);                           else if (errcode == SNAPSHOT_TOO_OLD)
    if((execstatus != OCI_SUCCESS) && (execstatus != OCI_NO_DATA))        {
    {                                                                      retries++;
      DISCARD OCITransRollback(tpcsvc,errhp,OCI_DEFAULT);                  goto retry;
      errcode = OCIERROR(errhp,execstatus);                              }
      if(errcode == NOT_SERIALIZABLE)                                   else
      {                                                                  {
        retries++;                                                         return -1;
        goto retry;                                                      }
      }                                                                }
      else if (errcode == RECOVERR)                                    DISCARD OCIAttrGet(dctx-
      {                                                          >curd4,OCI_HTYPE_STMT,&rcount,NULLP(ub4),
        retries++;                                                          OCI_ATTR_ROW_COUNT,errhp);
        goto retry;                                             /* transfer amounts   */
      }                                                              for (i=0;i<rpc;i++)
      else if (errcode == SNAPSHOT_TOO_OLD)                          {
      {                                                                dctx->amt[i]=0;
        retries++;                                                      if ( actx->ol_amt_rcode[i] == 0)
        goto retry;                                                     {
      }                                                                    dctx->amt[i] = actx->ol_amt[i];
      else                                                               }
      {                                                              }
        return -1;                                              #ifdef OLD
      }                                                             if (rcount > rpc) {
    }                                                                  userlog
    /* mark districts with no new order */                               ("Error in TPC-C server %d: %d ordnrs updated, %d ordl
    DISCARD OCIAttrGet(dctx-                                      updated\n",
>curd1,OCI_HTYPE_STMT,&rcount,NULLP(ub4),                                    proc_no, rpc, rcount);
            OCI_ATTR_ROW_COUNT,errhp);                              }
    rpc = rcount;                                                #endif
    if (rcount != NDISTS )
    {                                                                /* array update of customer table */
      int j = 0;                                                     execstatus=OCIStmtExecute(tpcsvc,dctx->curd6,errhp,rpc,0,
      for (i=0;i < NDISTS; i++)                                               NULLP(CONST OCISnapshot),NULLP(OCISnapshot),
      {                                                                       OCI_COMMIT_ON_SUCCESS | OCI_DEFAULT);
        if (dctx->del_o_id_ind[j] == 0) /* there is data here */
          j++;                                                       if(execstatus != OCI_SUCCESS)
        else                                                         {
          shiftdata(j);                                               OCITransRollback(tpcsvc,errhp,OCI_DEFAULT);
      }                                                                errcode = OCIERROR(errhp,execstatus);
    }                                                                  if(errcode == NOT_SERIALIZABLE)
                                                                       {
    execstatus=OCIStmtExecute(tpcsvc,dctx->curd3,errhp,rpc,0,           retries++;
                NULLP(CONST                                             goto retry;
OCISnapshot),NULLP(OCISnapshot),OCI_DEFAULT);                         }
    if(execstatus != OCI_SUCCESS)                                     else if (errcode == RECOVERR)
    {                                                                  {
      DISCARD OCITransRollback(tpcsvc,errhp,OCI_DEFAULT);               retries++;
      errcode = OCIERROR(errhp,execstatus);                             goto retry;
      if(errcode == NOT_SERIALIZABLE)                                  }
      {                                                                else if (errcode == SNAPSHOT_TOO_OLD)
        retries++;                                                     {
        goto retry;                                                      retries++;
      }                                                                  goto retry;
      else if (errcode == RECOVERR)                                    }
      {                                                                else
        retries++;                                                     {
        goto retry;                                                      return -1;
      }                                                                }
      else if (errcode == SNAPSHOT_TOO_OLD)                          }
      {
```

```
    DISCARD OCIAttrGet(dctx-
>curd6,OCI_HTYPE_STMT,&rcount,NULLP(ub4),
                        OCI_ATTR_ROW_COUNT,errhp);

    if (rcount != rpc) {
        userlog ("Error in TPC-C server %d: %d rows selected, %d
cust updated\n",
                 proc_no, rpc, rcount);
        DISCARD OCITransRollback(tpcsvc, errhp, OCI_DEFAULT);
        return (-1);
    }

    /* return o_id's in district id order */

    for (i = 0; i < NDISTS; i++)
        del_o_id[i] = 0;
    for (i = 0; i < rpc; i++)
        del_o_id[dctx->d_id[i] - 1] = dctx->del_o_id[i];
    }
    return (0);

}


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

#if defined(ISO9)
    int secondread = 0;
    char sdate[30];
    ub4  datelen;
    sysdate(sdate);
    printf("Order Status started at: %s\n", sdate);
#endif

    for (i = 0; i < NITEMS; i++) {
        octx->ol_supply_w_id_len[i] = sizeof(int);
        octx->ol_i_id_len[i] = sizeof(int);
        octx->ol_quantity_len[i] = sizeof(int);
        octx->ol_amount_len[i] = sizeof(int);
        octx->ol_delivery_d_len[i] = sizeof(OCIDate);
    }
    octx->ol_supply_w_id_csize = NITEMS;
    octx->ol_i_id_csize = NITEMS;
    octx->ol_quantity_csize = NITEMS;
    octx->ol_amount_csize = NITEMS;
    octx->ol_delivery_d_csize = NITEMS;
retry:
    if(bylastname)
    {
        cbctx.reexec = FALSE;
        execstatus=OCIStmtExecute(tpcsvc,octx->curo0,errhp,100,0,
                    NULLP(CONST
OCISnapshot),NULLP(OCISnapshot),OCI_DEFAULT);
        /* will get OCI_NO_DATA if <100 found */
        if ((execstatus != OCI_NO_DATA) && (execstatus !=
OCI_SUCCESS))
        {
            errcode=OCIERROR(errhp, execstatus);
            if((errcode == NOT_SERIALIZABLE) || (errcode == RECOVERR))
            {
                DISCARD OCITransCommit(tpcsvc,errhp,OCI_DEFAULT);
                retries++;
                goto retry;
            } else {
                return -1;
            }
        }
        if (execstatus == OCI_NO_DATA) /* there are no more rows */
        {
         /* get rowcount, find middle one */
            DISCARD OCIAttrGet(octx->curo0,OCI_HTYPE_STMT,&rcount,NULL,
                        OCI_ATTR_ROW_COUNT,errhp);
            if (rcount <1)
            {
/*
            userlog("ORDERSTATUS   rcount=%d\n",rcount);
*/
                return (-1);
            }
            octx->cust_idx=(rcount)/2 ;
        }
        else
        {
            /* count the number of rows */
            execstatus=OCIStmtExecute(tpcsvc,octx->curo4,errhp,1,0,
                        NULLP(CONST
OCISnapshot),NULLP(OCISnapshot),OCI_DEFAULT);
            if ((execstatus != OCI_NO_DATA) && (execstatus !=
OCI_SUCCESS))
            {
                errcode=OCIERROR(errhp, execstatus);
        if ((errcode == NOT_SERIALIZABLE) || (errcode == RECOVERR))
                {
                    DISCARD OCITransCommit(tpcsvc,errhp,OCI_DEFAULT);
                    retries++;
                    goto retry;
                } else {
```

```
            return -1;
            }
        }
        cbctx.reexec = TRUE;
        cbctx.count = (octx->rcount+1)/2 ;
        execstatus=OCIStmtExecute(tpcsvc,octx-
>curo0,errhp,cbctx.count,
                                0,NULLP(CONST OCISnapshot),
                                NULLP(OCISnapshot),OCI_DEFAULT);

        DISCARD OCIAttrGet(octx->curo0,OCI_HTYPE_STMT,&rcount,NULL,
                            OCI_ATTR_ROW_COUNT,errhp);

        /* will get OCI_NO_DATA if <100 found */
        if ((int)cbctx.count != rcount)
        {
/*
        userlog ("did not get all rows ");
*/
            return (-1);
        }

        if ((execstatus != OCI_NO_DATA) && (execstatus !=
OCI_SUCCESS))
        {
            errcode=OCIERROR(errhp, execstatus);
            if((errcode == NOT_SERIALIZABLE) || (errcode == RECOVERR))
            {
                DISCARD OCITransCommit(tpcsvc,errhp,OCI_DEFAULT);
                retries++;
                goto retry;
            } else {
                return -1;
            }
        }
        octx->cust_idx=cbctx.count - 1 ;
    }

    octx->c_rowid_cust = octx->c_rowid_ptr[octx->cust_idx];
    execstatus=OCIStmtExecute(tpcsvc,octx->curo1,errhp,1,0,
                NULLP(CONST
OCISnapshot),NULLP(OCISnapshot),OCI_DEFAULT);
    if (execstatus != OCI_SUCCESS)
    {
        errcode=OCIERROR(errhp,execstatus);
        DISCARD OCITransCommit(tpcsvc,errhp,OCI_DEFAULT);
        if((errcode == NOT_SERIALIZABLE) || (errcode == RECOVERR)
            || (errcode == SNAPSHOT_TOO_OLD))
        {
            retries++;
            goto retry;
        } else {
            return -1;
        }
    }
    }
    else
    {
        execstatus=OCIStmtExecute(tpcsvc,octx->curo2,errhp,1,0,
                    NULLP(CONST
OCISnapshot),NULLP(OCISnapshot),
                            OCI_DEFAULT);
        if (execstatus != OCI_SUCCESS)
        {
            errcode=OCIERROR(errhp,execstatus);
            DISCARD OCITransCommit(tpcsvc,errhp,OCI_DEFAULT);
            if((errcode == NOT_SERIALIZABLE) || (errcode == RECOVERR)
                || (errcode == SNAPSHOT_TOO_OLD))
            {
                retries++;
                goto retry;
            }
            else
            {
                return -1;
            }
        }
    }
#ifdef ISO9
    sysdate (sdate);
if (!secondread)
    printf ("---------- FIRST READ RESULT (out) %s ----------\n",
sdate);
else
    printf ("---------- SECOND READ RESULT (out) %s ----------
\n", sdate);

    printf ("c_id = %d\n", c_id);
    printf ("c_last = %s\n", c_last);
    printf ("c_first = %s\n", c_first);
    printf ("c_middle = %s\n", c_middle);
    printf ("c_balance = %7.2f\n", (float)c_balance/100);
    printf ("o_id = %d\n", o_id);
    datelen = sizeof(o_entry_d);

OCIERROR(errhp,OCIDateToText(errhp,&o_entry_d_base,(text*)FULLDATE,
SIZ(FULLDATE),(text*)0,0,&datelen,o_entry_d));
    printf ("o_entry_d = %s\n", o_entry_d);
    printf ("o_carrier_id = %d\n", o_carrier_id);
    printf ("o_ol_cnt = %d\n", o_ol_cnt);
    printf ("---------------------------------------------\n\n",
sdate);
```

```
        if (!secondread) {
            printf ("Sleep before re-read order at: %s\n", sdate);
            sleep (30);
            sysdate (sdate);
            printf ("Wake up and reread at: %s\n", sdate);
            secondread = 1;
            goto retry;
        }
#endif /* ISO9 */
    }
    octx->ol_w_id_len = sizeof(int);
    octx->ol_d_id_len = sizeof(int);
    octx->ol_o_id_len = sizeof(int);

    execstatus = OCIStmtExecute(tpcsvc,octx-
>curo3,errhp,o_ol_cnt,0,
                               NULLP(CONST
OCISnapshot),NULLP(OCISnapshot),
                               OCI_DEFAULT | OCI_COMMIT_ON_SUCCESS);
    if (execstatus != OCI_SUCCESS )
    {
        errcode=OCIERROR(errhp,execstatus);
        DISCARD OCITransCommit(tpcsvc,errhp,OCI_DEFAULT);
        if((errcode == NOT_SERIALIZABLE) || (errcode == RECOVERR)
            || (errcode == SNAPSHOT_TOO_OLD))
        {
            retries++;
            goto retry;
        }
        else
        {
            return -1;
        }
    }
    /* clean up and convert the delivery dates */
    for (i = 0; i < o_ol_cnt; i++)
    {
        ol_del_len[i]=sizeof(ol_delivery_d[i]);
        DISCARD OCIERROR(errhp,OCIDateToText(errhp,&ol_d_base[i],
            (const text*)SHORTDATE,(ub1)strlen(SHORTDATE),(text*)0,0,
            &ol_del_len[i], ol_delivery_d[i]));
/*
  cvtdmy(ol_d_base[i],ol_delivery_d[i]);
*/
    }

    return (0);

}



int DBExecution::tkvcp ()
{

retry:

  pctx->w_id_len = SIZ(w_id);
  pctx->d_id_len = SIZ(d_id);
  pctx->c_w_id_len = 0;
  pctx->c_d_id_len = 0;
  pctx->c_id_len = 0;
  pctx->h_amount_len = SIZ(h_amount);
  pctx->c_last_len = SIZ(c_last);
  pctx->w_street_1_len = 0;
  pctx->w_street_2_len = 0;
  pctx->w_city_len = 0;
  pctx->w_state_len = 0;
  pctx->w_zip_len = 0;
  pctx->d_street_1_len = 0;
  pctx->d_street_2_len = 0;
  pctx->d_city_len = 0;
  pctx->d_state_len = 0;
  pctx->d_zip_len = 0;
  pctx->c_first_len = 0;
  pctx->c_middle_len = 0;
  pctx->c_street_1_len = 0;
  pctx->c_street_2_len = 0;
  pctx->c_city_len = 0;
  pctx->c_state_len = 0;
  pctx->c_zip_len = 0;
  pctx->c_phone_len = 0;
  pctx->c_since_len = 0;
  pctx->c_credit_len = 0;
  pctx->c_credit_lim_len = 0;
  pctx->c_discount_len = 0;
  pctx->c_balance_len = sizeof(double);
  pctx->c_data_len = 0;
  pctx->h_date_len = 0;
  pctx->retries_len = SIZ(retries);
  pctx->cr_date_len = 7;
  if(bylastname) {
    execstatus=OCIStmtExecute(tpcsvc,pctx->curp1,errhp,1,0,
                NULLP(CONST OCISnapshot),NULLP(OCISnapshot),
                OCI_DEFAULT|OCI_COMMIT_ON_SUCCESS);
  } else {
    execstatus=OCIStmtExecute(tpcsvc,pctx->curp0,errhp,1,0,
                NULLP(CONST OCISnapshot),NULLP(OCISnapshot),
                OCI_DEFAULT|OCI_COMMIT_ON_SUCCESS);
```

```
    }

  if(execstatus != OCI_SUCCESS) {
    OCITransRollback(tpcsvc,errhp,OCI_DEFAULT);
    errcode = OCIERROR(errhp,execstatus);
    if(errcode == NOT_SERIALIZABLE) {
        retries++;
        goto retry;
    } else if (errcode == RECOVERR) {
        retries++;
        goto retry;
    } else if (errcode == SNAPSHOT_TOO_OLD) {
        retries++;
        goto retry;
    } else {
        return -1;
    }
  }
  return 0;
}



int DBExecution::tkvcs ()
{

retry:

    execstatus= OCIStmtExecute(tpcsvc,sctx->curs,errhp,1,0,0,0,
                               OCI_COMMIT_ON_SUCCESS |
OCI_DEFAULT);

  if (execstatus != OCI_SUCCESS)
    {

        errcode=OCIERROR(errhp,execstatus);
        OCITransCommit(tpcsvc,errhp,OCI_DEFAULT);
        if((errcode == NOT_SERIALIZABLE) || (errcode == RECOVERR)
            || (errcode == SNAPSHOT_TOO_OLD))
        {
            retries++;
            goto retry;
        } else {
            return -1;
        }
    }

  return (0);
}


/****************************************************************
**************************
*   TPCnew  TPCpay  TPCdel  TPCord  TPCsto
*
****************************************************************
**************************/


int DBExecution::TPCnew (struct newstruct *str)

{

    int i;

    w_id = str->newin.w_id;
    d_id = str->newin.d_id;
    c_id = str->newin.c_id;
    for (i = 0; i < 15; i++) {
        nol_i_id[i] = str->newin.ol_i_id[i];
        nol_supply_w_id[i] = str->newin.ol_supply_w_id[i];
        nol_quantity[i] = str->newin.ol_quantity[i];
    }
    retries = 0;

#ifndef AVOID_DEADLOCK

    for (i = NITEMS; i > 0; i--) {
        if (nol_i_id[i-1] > 0) {
            ordl_cnt = i;
            break;
        }
    }

    for (i = 0; i < NITEMS; i++) indx[i] = i;

    q_sort(nol_i_id, str, 0, ordl_cnt-1);

#endif

/*
  vgetdate(cr_date); */

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

    if (str->newout.terror = tkvcn ()) {
        if (str->newout.terror != RECOVERR)
            str->newout.terror = IRRECERR;
        return (-1);
    }
```

```
   /* fill in date for o_entry_d from time in beginning of txn*/
/*
   cvtdmyhms(cr_date,o_entry_d);
*/
    datelen = sizeof(o_entry_d);
    OCIERROR(errhp,

OCIDateToText(errhp,&cr_date,(text*)FULLDATE,SIZ(FULLDATE),(text*)0
,0,
                    &datelen,o_entry_d));

   str->newout.terror = NOERR;
   str->newout.o_id = o_id;
   str->newout.o_ol_cnt = o_ol_cnt;
   strncpy (str->newout.c_last, c_last, 17);
   strncpy (str->newout.c_credit, c_credit, 3);
   str->newout.c_discount = c_discount;
   str->newout.w_tax = (float)(w_tax);
   str->newout.d_tax = (float)(d_tax);
   strncpy (str->newout.o_entry_d, (char*)o_entry_d, 20);
   str->newout.total_amount = total_amount;
   for (i = 0; i < o_ol_cnt; i++) {
       strncpy (str->newout.i_name[i], i_name[i], 25);
       str->newout.brand_generic[i] = brand_generic[i][0];
#ifdef USE_IEEE_NUMBER
       str->newout.s_quantity[i] = (int) s_quantity[i];
       str->newout.i_price[i] = i_price[i]/100;
       str->newout.ol_amount[i] = nol_amount[i]/100;
#else
       str->newout.s_quantity[i] = s_quantity[i];
       str->newout.i_price[i] = (float)(i_price[i])/100;
       str->newout.ol_amount[i] = (float)(nol_amount[i])/100;
#endif /* USE_IEEE_NUMBER */
   }

#ifndef AVOID_DEADLOCK
    q_sort(indx, str, 0, ordl_cnt-1);
#endif

   if (status)
       strcpy (str->newout.status, "Item number is not valid");
   else
       str->newout.status[0] = '\0';
   str->newout.retry = retries;
   return(1);
}


int DBExecution::TPCpay (struct paystruct *str)
{

   w_id = str->payin.w_id;
   d_id = str->payin.d_id;
   c_w_id = str->payin.c_w_id;
   c_d_id = str->payin.c_d_id;
#ifdef USE_IEEE_NUMBER
   h_amount = (float) str->payin.h_amount;
#else
   h_amount = str->payin.h_amount;
#endif /* USE_IEEE_NUMBER */
   bylastname = str->payin.bylastname;

/*
   vgetdate(cr_date);  */
   OCIERROR(errhp,OCIDateSysDate(errhp,&cr_date));

   if (bylastname) {
       c_id = 0;
       strncpy (c_last, str->payin.c_last, 17);
   }
   else {
       c_id = str->payin.c_id;
       strcpy (c_last, " ");
   }
   retries = 0;

   if (str->payout.terror = tkvcp ()) {
       if (str->payout.terror != RECOVERR)
           str->payout.terror = IRRECERR;
       return (-1);
   }
/*
   cvtdmyhms(cr_date,h_date);
*/
       hlen=SIZ(h_date);
       OCIERROR(errhp,OCIDateToText(errhp,&cr_date,

(text*)FULLDATE,strlen(FULLDATE),(text*)0,0,&hlen,h_date));

/*
   cvtdmy(c_since,c_since_d);
*/
       sincelen=SIZ(c_since_d);
       OCIERROR(errhp,OCIDateToText(errhp,&c_since,

(text*)SHORTDATE,strlen(SHORTDATE),(text*)0,0,&sincelen,c_since_d))
;
```

```
       str->payout.terror = NOERR;
       strncpy (str->payout.w_street_1, w_street_1, 21);
       strncpy (str->payout.w_street_2, w_street_2, 21);
       strncpy (str->payout.w_city, w_city, 21);
       strncpy (str->payout.w_state, w_state, 3);
       strncpy (str->payout.w_zip, w_zip, 10);
       strncpy (str->payout.d_street_1, d_street_1, 21);
       strncpy (str->payout.d_street_2, d_street_2, 21);
       strncpy (str->payout.d_city, d_city, 21);
       strncpy (str->payout.d_state, d_state, 3);
       strncpy (str->payout.d_zip, d_zip, 10);
       str->payout.c_id = c_id;
       strncpy (str->payout.c_first, c_first, 17);
       strncpy (str->payout.c_middle, c_middle, 3);
       strncpy (str->payout.c_last, c_last, 17);
       strncpy (str->payout.c_street_1, c_street_1, 21);
       strncpy (str->payout.c_street_2, c_street_2, 21);
       strncpy (str->payout.c_city, c_city, 21);
       strncpy (str->payout.c_state, c_state, 3);
       strncpy (str->payout.c_zip, c_zip, 10);
       strncpy (str->payout.c_phone, c_phone, 17);
       strncpy (str->payout.c_since, (char*)c_since_d, 11);
       strncpy (str->payout.c_credit, c_credit, 3);
       str->payout.c_credit_lim = (double)(c_credit_lim)/100;
       str->payout.c_discount = c_discount;
       str->payout.c_balance = (double)(c_balance)/100;
       strncpy (str->payout.c_data, c_data, 201);
       strncpy (str->payout.h_date, (char*)h_date, 20);
       str->payout.retry = retries;
       return(1);
}



int DBExecution::TPCord (struct ordstruct *str)
{

   int i;
   w_id = str->ordin.w_id;
   d_id = str->ordin.d_id;
   bylastname = str->ordin.bylastname;
   if (bylastname) {
       c_id = 0;
       strncpy (c_last, str->ordin.c_last, 17);
   }
   else {
       c_id = str->ordin.c_id;
       strcpy (c_last, " ");
   }
   retries = 0;

   if (str->ordout.terror = tkvco ()) {
       if (str->ordout.terror != RECOVERR)
           str->ordout.terror = IRRECERR;
       return (-1);
   }

   datelen = sizeof(o_entry_d);
   OCIERROR(errhp,

OCIDateToText(errhp,&o_entry_d_base,(text*)FULLDATE,SIZ(FULLDATE),(
text*)0,0,
                    &datelen,o_entry_d));

   str->ordout.terror = NOERR;
   str->ordout.c_id = c_id;
   strncpy (str->ordout.c_last, c_last, 17);
   strncpy (str->ordout.c_first, c_first, 17);
   strncpy (str->ordout.c_middle, c_middle, 3);
   str->ordout.c_balance = c_balance/100;
   str->ordout.o_id = o_id;
   strncpy (str->ordout.o_entry_d, (char*)o_entry_d, 20);
   if ( o_carrier_id == 11 )
        str->ordout.o_carrier_id = 0;
   else
        str->ordout.o_carrier_id = o_carrier_id;
   str->ordout.o_ol_cnt = o_ol_cnt;
   for (i = 0; i < o_ol_cnt; i++) {
       ol_delivery_d[i][10] = '\0';
       if ( !strcmp((char*)ol_delivery_d[i],"15-09-1911") )
        strncpy((char*)ol_delivery_d[i],"NOT DELIVR",10);
       str->ordout.ol_supply_w_id[i] = ol_supply_w_id[i];
       str->ordout.ol_i_id[i] = ol_i_id[i];
#ifdef USE_IEEE_NUMBER
       str->ordout.ol_quantity[i] = (int) ol_quantity[i];
       str->ordout.ol_amount[i] = ol_amount[i]/100;
#else
       str->ordout.ol_quantity[i] = ol_quantity[i];
       str->ordout.ol_amount[i] = (float)(ol_amount[i])/100;
#endif /* USE_IEEE_NUMBER */
       strncpy (str->ordout.ol_delivery_d[i],
(char*)ol_delivery_d[i], 11);
   }
   str->ordout.retry = retries;
   return(1);
}
```

```
int DBExecution::TPCdel (struct delstruct *str)
{
    int i;

    w_id = str->delin.w_id;
    o_carrier_id = str->delin.o_carrier_id;
    retries = 0;
/*
    vgetdate(cr_date);   */
    OCIERROR(errhp,OCIDateSysDate(errhp,&cr_date));

    if (str->delout.terror = tkvcd (str->delin.plsqlflag)) {
        if(str->delout.terror == DEL_ERROR)
            return DEL_ERROR;
        if (str->delout.terror != RECOVERR)
            str->delout.terror = IRRECERR;
        return (-1);
    }

    for (i = 0; i < 10; i++) {
        if (del_o_id[i] <= 0) {
            userlog ("DELIVERY: no new order for w_id: %d, d_id %d\n",
                    w_id, i + 1);
        }
    }
    str->delout.terror = NOERR;
    str->delout.retry = retries;
    return(1);
}


int DBExecution::TPCsto (struct stostruct *str)
{
    w_id = str->stoin.w_id;
    d_id = str->stoin.d_id;
#ifdef USE_IEEE_NUMBER
    threshold = (float) str->stoin.threshold;
#else
    threshold = str->stoin.threshold;
#endif /* USE_IEEE_NUMBER */
    retries = 0;

    if (str->stoout.terror = tkvcs ()) {
        if (str->stoout.terror != RECOVERR)
            str->stoout.terror = IRRECERR;
        return (-1);
    }

    str->stoout.terror = NOERR;
    str->stoout.low_stock = low_stock;
    str->stoout.retry = retries;
    return(1);
}


#ifndef AVOID_DEADLOCK

void DBExecution::q_sort(int *arr,struct newstruct *str,int left,
int right)
{
    int i, last;

    if(left >= right)
        return;
    swap(str,left,(left+right)/2);
    last = left;
    for(i=left+1;i<=right;i++)
        if(arr[i] < arr[left])
            swap(str,last,i);
    swap(str,left,last);
    q_sort(arr,str,left,last-1);
    q_sort(arr,str,last+1,right);
}


void DBExecution::swap(struct newstruct *str, int i, int j)
{
    int temp;
    char tmpstr[25];
    char tmpch;
    float temp_float;

    temp = indx[i];
    indx[i] = indx[j];
    indx[j] = temp;

    temp = nol_i_id[i];
    nol_i_id[i] = nol_i_id[j];
    nol_i_id[j] = temp;

    temp = nol_supply_w_id[i];
    nol_supply_w_id[i] = nol_supply_w_id[j];
    nol_supply_w_id[j] = temp;

#ifdef USE_IEEE_NUMBER
    temp_float = nol_quantity[i];
```
```
    nol_quantity[i] = nol_quantity[j];
    nol_quantity[j] = temp_float;

    temp_float = str->newout.i_price[i];
    str->newout.i_price[i] = str->newout.i_price[j];
    str->newout.i_price[j] = temp_float;

    temp_float = str->newout.ol_amount[i];
    str->newout.ol_amount[i] = str->newout.ol_amount[j];
    str->newout.ol_amount[j] = temp_float;

    temp_float = (float)str->newout.s_quantity[i];
    str->newout.s_quantity[i] = str->newout.s_quantity[j];
    str->newout.s_quantity[j] = (int)temp_float;
#else
    temp = nol_quantity[i];
    nol_quantity[i] = nol_quantity[j];
    nol_quantity[j] = temp;

    temp_float = str->newout.i_price[i];
    str->newout.i_price[i] = str->newout.i_price[j];
    str->newout.i_price[j] = temp_float;

    temp_float = str->newout.ol_amount[i];
    str->newout.ol_amount[i] = str->newout.ol_amount[j];
    str->newout.ol_amount[j] = temp_float;

    temp = str->newout.s_quantity[i];
    str->newout.s_quantity[i] = str->newout.s_quantity[j];
    str->newout.s_quantity[j] = temp;
#endif /* USE_IEEE_NUMBER */

    strncpy(tmpstr,str->newout.i_name[i], 25);
    strncpy(str->newout.i_name[i],str->newout.i_name[j], 25);
    strncpy(str->newout.i_name[j],tmpstr, 25);

    tmpch = str->newout.brand_generic[i];
    str->newout.brand_generic[i] = str->newout.brand_generic[j];
    str->newout.brand_generic[j] = tmpch;
}

#endif



#ifdef LOOPBACK

int mod_tpcc_neworder(T_neworder_data *output)
{
    output->txn_status= DB_RETURN_OCI_SUCCESS;
    output->d_id=1;
    output->c_id=1;
    output->o_ol_cnt=7;
    output->o_all_local=0;
    strcpy(output->o_entry_d.DateString, "20-01-2004 11:59:10");
    strcpy(output->c_last, "TESTLASTNAME<>\"&");
    strcpy(output->c_credit, "GC");
    output->c_discount=.1791;
    output->w_tax=.093099996;
    output->d_tax=.159700006;
    output->o_id=2101;

    output->o_orderline[0].ol_i_id=98752;
    output->o_orderline[0].ol_supply_w_id=2;
    output->o_orderline[0].ol_quantity=5;
    output->o_orderline[0].ol_amount=2576.48;
    output->o_orderline[0].i_price=3.71;
    output->o_orderline[0].s_quantity=45;
    strcpy(output->o_orderline[0].i_name,  "item98752");
    output->o_orderline[0].b_g[0]='G';

    output->o_orderline[1].ol_i_id=80479;
    output->o_orderline[1].ol_supply_w_id=1;
    output->o_orderline[1].ol_quantity=6;
    output->o_orderline[1].ol_amount=3490.03;
    output->o_orderline[1].i_price=6.81;
    output->o_orderline[1].s_quantity=58;
    strcpy(output->o_orderline[1].i_name,  "item80479");
    output->o_orderline[1].b_g[0]='G';

    output->o_orderline[2].ol_i_id=58617;
    output->o_orderline[2].ol_supply_w_id=1;
    output->o_orderline[2].ol_quantity=6;
    output->o_orderline[2].ol_amount=1234.56;
    output->o_orderline[2].i_price=4.01;
    output->o_orderline[2].s_quantity=22;
    strcpy(output->o_orderline[2].i_name,  "item58617");
    output->o_orderline[2].b_g[0]='G';

    output->o_orderline[3].ol_i_id=3394;
    output->o_orderline[3].ol_supply_w_id=1;
    output->o_orderline[3].ol_quantity=5;
    output->o_orderline[3].ol_amount=2345.67;
    output->o_orderline[3].i_price=1.73;
    output->o_orderline[3].s_quantity=18;
    strcpy(output->o_orderline[3].i_name,  "item3394");
    output->o_orderline[3].b_g[0]='G';

    output->o_orderline[4].ol_i_id=2242;
```

```
  output->o_orderline[4].ol_supply_w_id=1;                          output->o_orderline[0].ol_i_id=98752;
  output->o_orderline[4].ol_quantity=4;                             output->o_orderline[0].ol_supply_w_id=2;
  output->o_orderline[4].ol_amount=3456.78;                         output->o_orderline[0].ol_quantity=5;
  output->o_orderline[4].i_price=4.48;                              output->o_orderline[0].ol_amount=2576.48;
  output->o_orderline[4].s_quantity=29;                             strcpy(output->o_orderline[0].ol_delivery_d.DateString, "20-01-
  strcpy(output->o_orderline[4].i_name,  "item2242");           2004 11:58:00");
  output->o_orderline[4].b_g[0]='G';
                                                                    output->o_orderline[1].ol_i_id=80479;
  output->o_orderline[6].ol_i_id=37310;                             output->o_orderline[1].ol_supply_w_id=1;
  output->o_orderline[6].ol_supply_w_id=1;                          output->o_orderline[1].ol_quantity=6;
  output->o_orderline[6].ol_quantity=5;                             output->o_orderline[1].ol_amount=3490.03;
  output->o_orderline[6].ol_amount=4567.89;                         strcpy(output->o_orderline[1].ol_delivery_d.DateString, "20-01-
  output->o_orderline[6].i_price=5.50;                           2004 11:58:01");
  output->o_orderline[6].s_quantity=21;
  strcpy(output->o_orderline[6].i_name,  "item37310");              output->o_orderline[2].ol_i_id=58617;
  output->o_orderline[6].b_g[0]='G';                                output->o_orderline[2].ol_supply_w_id=1;
                                                                    output->o_orderline[2].ol_quantity=6;
  output->o_orderline[5].ol_i_id=19395;                             output->o_orderline[2].ol_amount=1234.56;
  output->o_orderline[5].ol_supply_w_id=3;                          strcpy(output->o_orderline[2].ol_delivery_d.DateString, "20-01-
  output->o_orderline[5].ol_quantity=6;                          2004 11:58:02");
  output->o_orderline[5].ol_amount=5678.90;
  output->o_orderline[5].i_price=10.19;                             output->o_orderline[3].ol_i_id=3394;
  output->o_orderline[5].s_quantity=80;                             output->o_orderline[3].ol_supply_w_id=1;
  strcpy(output->o_orderline[5].i_name,  "item19395");              output->o_orderline[3].ol_quantity=5;
  output->o_orderline[5].b_g[0]='G';                                output->o_orderline[3].ol_amount=2345.67;
                                                                    strcpy(output->o_orderline[3].ol_delivery_d.DateString, "20-01-
  return SUCCESS;                                                2004 11:58:03");
}
                                                                    output->o_orderline[4].ol_i_id=2242;
                                                                    output->o_orderline[4].ol_supply_w_id=1;
                                                                    output->o_orderline[4].ol_quantity=4;
int mod_tpcc_payment(T_payment_data *output)                        output->o_orderline[4].ol_amount=3456.78;
{                                                                   strcpy(output->o_orderline[4].ol_delivery_d.DateString, "20-01-
  int i;                                                         2004 11:58:04");
  char c;
                                                                    return SUCCESS;
  output->txn_status= DB_RETURN_OCI_SUCCESS;                    }
  output->d_id=2;
  output->c_id=99;
  strcpy(output->c_last, "paymentCLast");
  output->c_w_id=2;                                              int mod_tpcc_stocklevel(T_stocklevel_data *output)
  output->c_d_id=5;                                              {
  output->h_amount=54321.09;                                       output->threshold=10;
  strcpy(output->h_date.DateString, "20-01-2004 11:59:10");        output->low_stock=1;
  strcpy(output->w_street_1, "WareStreet1");                       output->txn_status= DB_RETURN_OCI_SUCCESS;
  strcpy(output->w_street_2, "WareStreet2");                       return SUCCESS;
  strcpy(output->w_city, "WareCity");                           }
  strcpy(output->w_state, "WareState");
  strcpy(output->w_zip, "WareZip");
  strcpy(output->d_street_1, "DistStreet1");                    #endif
  strcpy(output->d_street_2, "DistStreet2");
  strcpy(output->d_city, "DistCity");                           ------------------------
  strcpy(output->d_state, "DistState");                         DBConnection/DBConnection.h
  strcpy(output->d_zip, "DistZip");                             ------------------------
  strcpy(output->c_first, "CFirst");                            #include "tpccpl.h"
  strcpy(output->c_middle, "PA");                               #include "tpccstruct.h"
  strcpy(output->c_street_1, "CustStreet1");                    #include "tpcc_struct.h"
  strcpy(output->c_street_2, "CustStreet2");                    #include "mod_tpcc_error.h"
  strcpy(output->c_city, "CustCity");                           #include "mod_tpcc.h"
  strcpy(output->c_state, "CustState");
  strcpy(output->c_zip, "CustZip");
  strcpy(output->c_phone, "9876543");                           #define MAXLEN 100
  strcpy(output->c_since.DateString, "20-01-2004 11:59:05");    #define LogName "log\\DBConnection.log"
  strcpy(output->c_credit, "BC");                               #define InitName "DBInit.ini"
  output->c_credit_lim=34567.89;
  output->c_discount=.234;                                      // Execution Pool Status
  output->c_balance=876543.21;                                  #define IDLE 1
                                                                #define IN_USE 2
  for (i=0, c='a'; i<143; i++, c++) {
    if (c=='z') c='a';                                          #define Default_DBConnections "20"
    output->c_data[i]=(char) c;                                 #define DelLogName "log\\DeliveryLog"
  }
  return SUCCESS;                                               #define convert_status(A,B) \
}                                                               {\
                                                                  switch (B) { \
                                                                    case OCI_SUCCESS: (A)=DB_RETURN_OCI_SUCCESS; break; \
                                                                    case OCI_SUCCESS_WITH_INFO:
int mod_tpcc_delivery(T_delivery_data *output, int id)          (A)=DB_RETURN_OCI_SUCCESS_WITH_INFO; break; \
{                                                                   case OCI_NEED_DATA: (A)=DB_RETURN_OCI_NEED_DATA; break; \
  output->txn_status= DB_RETURN_OCI_SUCCESS;                       case OCI_NO_DATA: (A)=DB_RETURN_OCI_NO_DATA; break; \
  output->o_carrier_id=4;                                          case OCI_ERROR: (A)=DB_RETURN_OCI_ERROR; break; \
  write_delivery_log(output, id);                                  case OCI_INVALID_HANDLE: (A)=DB_RETURN_OCI_INVALID_HANDLE;
  return SUCCESS;                                               break; \
}                                                                   case OCI_STILL_EXECUTING: (A)=DB_RETURN_OCI_STILL_EXECUTING;
                                                                break; \
                                                                    case OCI_CONTINUE: (A)=DB_RETURN_OCI_CONTINUE; break; \
                                                                  }; \
int mod_tpcc_orderstatus(T_orderstatus_data *output)            }
{
  output->txn_status= DB_RETURN_OCI_SUCCESS;                    /***************************************************************
  output->d_id=8;                                               ***************************
  output->c_id=4321;                                            * DBExecution_pool_info
  strcpy(output->c_last, "orderstatusCLast");                   *
  strcpy(output->c_first, "CFirst");                            ****************************************************************
  strcpy(output->c_middle, "OS");                               ***************************/
  output->c_balance=7543.21;
  output->o_id=9832;
  output->o_ol_cnt=5;                                           typedef struct _DBExecution_pool_info {
  output->o_carrier_id=2;
  strcpy(output->o_entry_d.DateString, "20-01-2004 11:59:08");    int current_status;
                                                                  int neworder_count;
```

```
    int payment_count;
    int orderstatus_count;
    int delivery_count;
    int stocklevel_count;
    void *pointer;

} DBExecution_pool_info;


/**********************************************************************
**************************
* global functions
*
**********************************************************************
**************************/

sb4 no_data(dvoid *,OCIBind *,ub4,ub4,dvoid **,ub4 *,ub1 *,dvoid
**);
sb4 TPC_oid_data(dvoid *,OCIBind *,ub4,ub4,dvoid **,ub4 **,ub1
*,dvoid **,ub2 **);
sb4 cid_data(dvoid *,OCIBind *,ub4,ub4,dvoid **,ub4 **,ub1 *,dvoid
**,ub2 **);
sb4 amt_data(dvoid *,OCIBind *,ub4,ub4,dvoid **,ub4 **,ub1 *,dvoid
**,ub2 **);
void userlog (char *, ...);
void readInit(char *, char *, char *);
int initializeDBExecutionPool();

DBExecution_pool_info* findIdleDBExecution();
int freeDBExecution(DBExecution_pool_info *);

//DBExecution_pool_info* findIdleDBExecution(HANDLE *);
//int freeDBExecution(DBExecution_pool_info *, HANDLE *);

void write_delivery_log(T_delivery_data *pdata, int id);
void initDelLog(int);
void endDelLog(int);

/**********************************************************************
**************************
* global variables
*
**********************************************************************
**************************/

HANDLE waitIdle;
HANDLE *DBExecution_lock;
DWORD TlsPtr;
DBExecution_pool_info *DBExecution_pool;
char DllPath[MAXLEN];
char LogFile[MAXLEN];
char InitFile[MAXLEN];
char DelLogFile[MAXLEN];
int TotalLoop=0;
int findDBExecutionCall=0;
int findDBExecutionWait=0;
int DBConnections;
int ready=0;
FILE **DelFiles;

/**********************************************************************
**************************
* DBExecution
*
**********************************************************************
**************************/

class DBExecution
{
  public:
     DBExecution();
     ~DBExecution();

     int TPCinit(int, char *, char *);
     int TPCnew(struct newstruct *);
     int TPCpay(struct paystruct *);
     int TPCdel(struct delstruct *);
     int TPCord(struct ordstruct *);
     int TPCsto(struct stostruct *);
     void TPCexit();

#ifndef AVOID_DEADLOCK
     void swap(struct newstruct *, int, int);
        void q_sort(int *, struct newstruct *, int, int);
#endif

     int ocierror(char *, int, OCIError *, sword);
     void shiftdata(int);
     int sqlfile(char *, text *);

     int tkvcninit();
     int tkvcn();
     void tkvcndone();

     int tkvcpinit();
     int tkvcp();
     void tkvcpdone();

     int tkvcoinit();
```

```
     int tkvco();
     void tkvcodone();

     int tkvcdinit(int);
     int tkvcd(int);
     void tkvcddone(int);

     int tkvcsinit();
     int tkvcs();
     void tkvcsdone();

     delctx *dctx;
     int execstatus;
     int status;
     int del_o_id[10];


  private:
     int proc_no;
     int logon;
     int new_init;
     int pay_init;
     int ord_init;
     int del_init_oci;
     int del_init_plsql;
     int sto_init;
     int errcode;
     int indx[NITEMS];
     int ordl_cnt;

         /* for stock-level transaction */

     int w_id;
       int d_id;
       int c_id;
#ifdef USE_IEEE_NUMBER
       float threshold;
#else
       int threshold;
#endif /* USE_IEEE_NUMBER */
     int low_stock;

/* for delivery transaction */

     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];
#ifdef USE_IEEE_NUMBER
     float ol_quantity[15];
     float ol_amount[15];
#else
     int ol_quantity[15];
     int ol_amount[15];
#endif /* USE_IEEE_NUMBER */
     ub4 ol_del_len[15];
     text ol_delivery_d[15][11];
     OCIRowid *o_rowid;

/* for payment transaction */

     int c_w_id;
     int c_d_id;
#ifdef USE_IEEE_NUMBER
     float h_amount;
#else
     int h_amount;
#endif /* USE_IEEE_NUMBER */
     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];
#ifdef USE_IEEE_NUMBER
    float nol_quantity[15];
    float nol_amount[15];
    float s_quantity[15];
    float i_price[15];
#else
    int nol_quantity[15];
    int nol_amount[15];
    int s_quantity[15];
    int i_price[15];
#endif /* USE_IEEE_NUMBER */
    int nol_quanti10[15];
    int nol_quanti91[15];
    int nol_ytdqty[15];
    int o_all_local;
    float w_tax;
    float d_tax;
    float total_amount;
    char i_name[15][25];
    char brand_gen[15];
    char brand_generic[15][1];
    int tracelevel;

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

    OCIEnv *tpcenv;
    OCIServer *tpcsrv;
    OCIError *errhp;
    OCISvcCtx *tpcsvc;
    OCISession *tpcusr;
    OCIStmt *curi;


    newctx *nctx;
    ordctx *octx;
    defctx cbctx;
    pldelctx *pldctx;
    amtctx *actx;
    payctx *pctx;
    stoctx *sctx;
};


-------------------------
DBConnection/loopback.cpp
-------------------------
#include "stdafx.h"
#include "DBConnection.h"


DBConnection/mod_tpcc_error.h
/* Copyright (c) 2004, Oracle Corporation.  All rights reserved.
*/

/*
   NAME
     mod_tpcc_error.h - <one-line expansion of the name>

   DESCRIPTION
     <short description of facility this file declares/defines>

   RELATED DOCUMENTS
     <note any documents related to this facility>

   EXPORT FUNCTION(S)
     <external functions declared for use outside package - one-
line descriptions>

   INTERNAL FUNCTION(S)
     <other external functions declared - one-line descriptions>

   EXAMPLES

   NOTES
     <other useful comments, qualifications, etc.>

   MODIFIED   (MM/DD/YY)
   xnie        02/09/04 - to make it work with tuxedo
   shuang      01/22/04 - shuang_rte
   shuang      01/21/04 - Creation

*/

#define DB_SUCCESS          0
#define DB_ERROR            1
#define TRANSPORT_ERROR     2
#define DB_INTERFACE        3
#define DB_DEADLOCK_LIMIT   4
```

```
#define DB_NOT_COMMITED        5
#define DB_DEAD                6
#define DB_PENDING             7
#define DB_NOT_LOGGED_IN       8
#define DB_LOGIN_FAILED        9
#define DB_USE_FAILED          10
#define DB_LOGOUT_FAILED       11
#define DB_TUXEDO_TPALLOC_ERROR      12
#define DB_TUXEDO_TPCALL_ERROR       13
#define DB_MAX_ERR             13
#define VALID_DB_ERR(err) (((err) >= DB_SUCCESS)&&((err) <=
DB_MAX_ERR))

#define SUCCESS                      1000
#define COMMAND_UNDEFINED            1001
#define NOT_IMPLEMENTED_YET          1002
#define CANNOT_INIT_TERMINAL         1003
#define OUT_OF_MEMORY                1004
#define NEW_ORDER_NOT_PROCESSED      1005
#define PAYMENT_NOT_PROCESSED        1006
#define NO_SERVER_SPECIFIED          1007
#define ORDER_STATUS_NOT_PROCESSED   1008
#define W_ID_INVALID                 1009
#define CAN_NOT_SET_MAX_CONNECTIONS  1010
#define UNKNOW_TRANSACTION_TYPE      1011
#define D_ID_INVALID                 1012
#define MAX_CONNECT_PARAM            1013
#define INVALID_SYNC_CONNECTION      1014
#define INVALID_TERMID               1015
#define PAYMENT_INVALID_CUSTOMER     1016
#define SQL_OPEN_CONNECTION          1017

#define STOCKLEVEL_MISSING_THRESHOLD_KEY 1018
#define STOCKLEVEL_THRESHOLD_INVALID 1019
#define STOCKLEVEL_THRESHOLD_RANGE 1020
#define STOCKLEVEL_NOT_PROCESSED 1021
#define NEWORDER_MISSING_DID 1022
#define NEWORDER_DISTRICT_INVALID 1023
#define NEWORDER_DISTRICT_RANGE 1024
#define NEWORDER_CUSTOMER_KEY 1025
#define NEWORDER_CUSTOMER_INVALID 1026
#define NEWORDER_CUSTOMER_RANGE 1027
#define NEWORDER_MISSING_IID_KEY 1028
#define NEWORDER_ITEM_BLANK_LINES 1029
#define NEWORDER_ITEMID_INVALID 1030
#define NEWORDER_MISSING_SUPPW_KEY 1031
#define NEWORDER_SUPPW_INVALID 1032
#define NEWORDER_MISSING_QTY_KEY 1033
#define NEWORDER_QTY_INVALID 1034
#define NEWORDER_SUPPW_RANGE 1035
#define NEWORDER_ITEMID_RANGE 1036
#define NEWORDER_QTY_RANGE 1037
#define NEWORDER_SUPPW_WITHOUT_ITEMID 1039
#define NEWORDER_QTY_WITHOUT_ITEMID 1040
#define NEWORDER_NOITEMS_ENTERED 1041
#define PAYMENT_MISSING_DID_KEY 1042
#define PAYMENT_DISTRICT_INVALID 1038
#define PAYMENT_DISTRICT_RANGE 1043
#define PAYMENT_MISSING_CID_KEY 1044
#define PAYMENT_CUSTOMER_INVALID 1045
#define PAYMENT_MISSING_CLASTNAME 1046
#define PAYMENT_LAST_NAME_TO_LONG 1047
#define PAYMENT_CID_RANGE  1048
#define PAYMENT_CID_AND_CLASTNAME 1049
#define PAYMENT_MISSING_CDI_KEY 1050
#define PAYMENT_CDI_INVALID 1051
#define PAYMENT_CDI_RANGE 1052
#define PAYMENT_MISSING_CWI_KEY 1053
#define PAYMENT_CWI_INVALID 1054
#define PAYMENT_CWI_RANGE 1055
#define PAYMENT_MISSING_HAM_KEY 1056
#define PAYMENT_HAM_INVALID 1057
#define PAYMENT_HAM_RANGE 1058
#define ORDERSTATUS_MISSING_DID_KEY 1059
#define ORDERSTATUS_DID_INVALID 1060
#define ORDERSTATUS_DID_RANGE 1061
#define ORDERSTATUS_MISSING_CID_KEY 1062
#define ORDERSTATUS_MISSING_CLASTNAME_KEY 1063
#define ORDERSTATUS_CLASTNAME_RANGE 1064
#define ORDERSTATUS_CID_INVALID 1065
#define ORDERSTATUS_CID_RANGE 1066
#define ORDERSTATUS_CID_AND_CLASTNAME 1067
#define DELIVERY_MISSING_OCD_KEY 1068
#define DELIVERY_CARRIER_INVALID 1069
#define DELIVERY_CARRIER_ID_RANGE 1070

#define PAYMENT_MISSING_CLASTNAME_KEY 1071
#define CANT_FIND_TPCC_KEY 1072
#define CANT_FIND_INETINFO_KEY 1073
#define CANT_FIND_POOLTHREADLIMIT 1074
#define DB_DELIVERY_NOT_QUEUED 1075
#define DELIVERY_NOT_PROCESSED 1076
#define TERM_ALLOCATE_FAILED 1077
#define PENDING 1078
#define CANT_START_FRCDINIT_THREAD 1079
#define CANT_START_DELIVERY_THREAD 1080
#define GOVERNOR_VALUE_NOT_FOUND 1081
#define SERVER_MISMATCH 1082
#define DATABASE_MISMATCH 1083
#define USER_MISMATCH 1084
#define PASSWORD_MISMATCH 1085
```

```c
#define CANT_CREATE_ALL_THREADS_EVENT 1086
#define CANT_CREATE_FORCE_THRED_STRT_EVENT 1087
#define CANT_ALLOCATE_THREAD_LOCAL_STORAGE 1088
#define CANT_SET_THREAD_LOCAL_STORAGE 1089
#define FORCE_CONNECT_THREAD_FAILED 1090
#define CANT_FIND_SERVER_VALUE 1091
#define NO_MESSAGE 1092
#define CANT_FIND_PATH_VALUE 1093
#define CANNOT_CREATE_RESULTS_FILE 1094
#define DELIVERY_PIPE_SECURITY 1095
#define DELIVERY_PIPE_CREATE 1096
#define DELIVERY_PIPE_OPEN 1097
#define DELIVERY_PIPE_READ 1098
#define DELIVERY_PIPE_DISCONNECT 1099
#define CANT_FIND_DATABASE_VALUE 1100
#define CANT_FIND_USER_VALUE 1101
#define CANT_FIND_PASSWORD_VALUE 1102
#define DELIVERY_OUTPUT_PIPE_WRITE 1103
#define DELIVERY_OUTPUT_PIPE_READ 1104
#define DELIVERY_MISSING_QUEUETIME_KEY 1105
#define DELIVERY_QUEUETIME_INVALID 1106
#define ALREADY_LOGGED_IN 1107
#define INVALID_FORM 1109
#define DELIVERY_MUST_CONNECTDB 1110
#define INVALID_FORM_AND_CMD_NOT_BEGIN 1111
#define MAX_CONNECTIONS_EXCEEDED 1112
#define CANNOT_FIND_CONNECTION 1113
#define CKPT_NOT_INITIALIZED 1114
#define PAYMENT_MISSING_CID_CLASTNAME 1115
#define CANT_FIND_MAXDBCONNECTIONS_VALUE 1116
#define PAYMENT_CUSTOMER_RANGE 1117

/* OCI return status */

#define DB_RETURN_OCI_SUCCESS 1118
#define DB_RETURN_OCI_SUCCESS_WITH_INFO 1119
#define DB_RETURN_OCI_NEED_DATA 1120
#define DB_RETURN_OCI_NO_DATA 1121
#define DB_RETURN_OCI_ERROR 1122
#define DB_RETURN_OCI_INVALID_HANDLE 1123
#define DB_RETURN_OCI_STILL_EXECUTING 1124
#define DB_RETURN_OCI_CONTINUE 1125

struct T_error_message
{
    int error_code;
    char error_mesg[80];
};
typedef struct T_error_message T_error_message;

T_error_message error_message [] =
{
    { SUCCESS, "Success, no error." },
    { NO_MESSAGE, "No message string available for the specified
error code." },
    { COMMAND_UNDEFINED, "Command undefined." },
    { NOT_IMPLEMENTED_YET, "Not Implemented Yet." },
    { CANNOT_INIT_TERMINAL, "Cannot initialize client connection." },
    { OUT_OF_MEMORY, "Insufficient memory." },
    { NEW_ORDER_NOT_PROCESSED, "Cannot process new Order form." },
    { PAYMENT_NOT_PROCESSED, "Cannot process payment form." },
    { NO_SERVER_SPECIFIED, "No Server name specified." },
    { ORDER_STATUS_NOT_PROCESSED, "Cannot process order status form."
},
    { W_ID_INVALID, "Invalid Warehouse ID." },
    { CAN_NOT_SET_MAX_CONNECTIONS, "Insufficient memory to allocate #
connections." },
    { D_ID_INVALID, "Invalid District ID Must be 1 to 10." },
    { MAX_CONNECT_PARAM, "Max client connections exceeded, run
install to increase." },
    { INVALID_SYNC_CONNECTION, "Invalid Terminal Sync ID." },
    { INVALID_TERMID, "Invalid Terminal ID." },
    { PAYMENT_INVALID_CUSTOMER, "Payment Form, No such Customer." },
    { SQL_OPEN_CONNECTION, "SQLOpenConnection API Failed." },
    { STOCKLEVEL_MISSING_THRESHOLD_KEY, "Stock Level missing
Threshold key \"TT*\"." },
    { STOCKLEVEL_THRESHOLD_INVALID, "Stock Level Threshold invalid
data type range = 1 - 99." },
    { STOCKLEVEL_THRESHOLD_RANGE, "Stock Level Threshold out of
range, range must be 1 - 99." },
    { STOCKLEVEL_NOT_PROCESSED, "Stock Level not processed." },
    { NEWORDER_MISSING_DID, "New Order missing District key
\"DID*\"." },
    { NEWORDER_DISTRICT_INVALID, "New Order District ID Invalid range
1 - 10." },
    { NEWORDER_DISTRICT_RANGE, "New Order District ID out of Range.
Range = 1 - 10." },
    { NEWORDER_CUSTOMER_KEY, "New Order missing Customer key
\"CID*\"." },
    { NEWORDER_CUSTOMER_INVALID, "New Order customer id invalid data
type, range = 1 to 3000." },
    { NEWORDER_CUSTOMER_RANGE, "New Order customer id out of range,
range = 1 to 3000." },
    { NEWORDER_MISSING_IID_KEY, "New Order missing Item Id key
\"IID*\"." },
    { NEWORDER_ITEM_BLANK_LINES, "New Order blank order lines all
orders must be continuous." },
    { NEWORDER_ITEMID_INVALID, "New Order Item Id is wrong data type,
must be numeric." },
    { NEWORDER_MISSING_SUPPW_KEY, "New Order missing Supp_W key
\"SP##*\"." },
    { NEWORDER_SUPPW_INVALID, "New Order Supp_W invalid data type
must be numeric." },
    { NEWORDER_MISSING_QTY_KEY, "New Order Missing Qty key
\"Qty##*\"." },
    { NEWORDER_QTY_INVALID, "New Order Qty invalid must be numeric
range 1 - 99." },
    { NEWORDER_SUPPW_RANGE, "New Order Supp_W value out of range
range = 1 - Max Warehouses." },
    { NEWORDER_ITEMID_RANGE, "New Order Item Id is out of range.
Range = 1 to 999999." },
    { NEWORDER_QTY_RANGE, "New Order Qty is out of range. Range = 1
to 99." },
    { PAYMENT_DISTRICT_INVALID, "Payment District ID is invalid must
be 1 - 10." },
    { NEWORDER_SUPPW_WITHOUT_ITEMID, "New Order Supp_W field entered
without a corresponding Item_Id." },
    { NEWORDER_QTY_WITHOUT_ITEMID, "New Order Qty entered without a
corrisponding Item_Id." },
    { NEWORDER_NOITEMS_ENTERED, "New Order Blank Items between items,
items must be continuous." },
    { PAYMENT_MISSING_DID_KEY, "Payment missing District Key
\"DID*\"." },
    { PAYMENT_DISTRICT_RANGE, "Payment District Out of range, range =
1 - 10." },
    { PAYMENT_MISSING_CID_KEY, "Payment missing Customer Key
\"CID*\"." },
    { PAYMENT_CUSTOMER_INVALID, "Payment Customer data type invalid,
must be numeric." },
    { PAYMENT_MISSING_CLASTNAME, "Payment missing Customer Last Name
Key \"CLASTNAME*\"." },
    { PAYMENT_MISSING_CID_CLASTNAME, "Payment entered without
Customer ID or last Name. " },
    { PAYMENT_LAST_NAME_TO_LONG, "Payment Customer last name longer
than 16 characters." },
    { PAYMENT_CUSTOMER_RANGE, "Payment Customer ID out of range, must
be 1 - 3000." },
    { PAYMENT_CID_AND_CLASTNAME, "Payment Customer ID and Last Name
entered must be one or other." },
    { PAYMENT_MISSING_CDI_KEY, "Payment missing Customer district key
\"CDI*\"." },
    { PAYMENT_CDI_INVALID, "Payment Customer district invalid must be
numeric." },
    { PAYMENT_CDI_RANGE, "Payment Customer district out of range must
be 1 - 10." },
    { PAYMENT_MISSING_CWI_KEY, "Payment missing Customer Warehouse
key \"CWI*\"." },
    { PAYMENT_CWI_INVALID, "Payment Customer Warehouse invalid must
be numeric." },
    { PAYMENT_CWI_RANGE, "Payment Customer Warehouse out of range, 1
to Max Warehouses." },
    { PAYMENT_MISSING_HAM_KEY, "Payment missing Amount key \"HAM*\"."
},
    { PAYMENT_HAM_INVALID, "Payment Amount invalid data type must be
numeric." },
    { PAYMENT_HAM_RANGE, "Payment Amount out of range, 0 - 9999.99."
},
    { ORDERSTATUS_MISSING_DID_KEY, "Order Status missing District key
\"DID*\"." },
    { ORDERSTATUS_DID_INVALID, "Order Status District invalid, value
must be numeric 1 - 10." },
    { ORDERSTATUS_DID_RANGE, "Order Status District out of range must
be 1 - 10." },
    { ORDERSTATUS_MISSING_CID_KEY, "Order Status missing Customer key
\"CID*\"." },
    { ORDERSTATUS_MISSING_CLASTNAME_KEY, "Order Status missing
Customer Last Name key \"CLASTNAME*\"." },
    { ORDERSTATUS_CLASTNAME_RANGE, "Order Status Customer last name
longer than 16 characters." },
    { ORDERSTATUS_CID_INVALID, "Order Status Customer ID invalid,
range must be numeric 1 - 3000." },
    { ORDERSTATUS_CID_RANGE, "Order Status Customer ID out of range
must be 1 - 3000." },
    { ORDERSTATUS_CID_AND_CLASTNAME, "Order Status Customer ID and
LastName entered must be only one. " },
    { DELIVERY_MISSING_OCD_KEY, "Delivery missing Carrier ID key
\"OCD*\"." },
    { DELIVERY_CARRIER_INVALID, "Delivery Carrier ID invalid must be
numeric 1 - 10." },
    { DELIVERY_CARRIER_ID_RANGE, "Delivery Carrier ID out of range
must be 1 - 10." },
    { PAYMENT_MISSING_CLASTNAME_KEY, "Payment missing Customer Last
Name key \"CLASTNAME*\"." },
    { DB_ERROR, "A Database error has occurred." },
    { DB_TUXEDO_TPALLOC_ERROR, "Tuxedo call tpalloc has failed." },
    { DB_TUXEDO_TPCALL_ERROR, "Tuxedo call tpcall has failed." },
    { DELIVERY_NOT_PROCESSED, "Delivery not processed." },
    { DB_DELIVERY_NOT_QUEUED, "Delivery not queued." },
    { CANT_FIND_TPCC_KEY, "TPCC key not found in registry." },
    { CANT_FIND_INETINFO_KEY, "inetinfo key not found in registry."
},
    { CANT_FIND_POOLTHREADLIMIT, "PoolThreadLimit value not set in
inetinfo\\Parameters key." },
    { TERM_ALLOCATE_FAILED, "Failed to allocate terminal data
structure." },
    { DELIVERY_PIPE_SECURITY, "Failed to initialize delivery pipe
security." },
    { DELIVERY_PIPE_CREATE, "Failed to create delivery pipe." },
    { DELIVERY_PIPE_OPEN, "Failed to open delivery pipe." },
    { DELIVERY_PIPE_READ, "Failed to read delivery pipe." },
    { DELIVERY_PIPE_DISCONNECT, "Failed to start delivery pipe
disconnect thread."},
```

```
    { PENDING, "Transaction pending."},
    { CANT_START_FRCDINIT_THREAD, "Can't start Forced Initialization
thread." },
    { CANT_START_DELIVERY_THREAD, "Can't start delivery thread." },
    { GOVERNOR_VALUE_NOT_FOUND, "Governor value not found in
Registry." },
    { SERVER_MISMATCH, "Server does not match registry value." },
    { DATABASE_MISMATCH, "Database name does not match registry
value." },
    { USER_MISMATCH, "User name does not match registry value." },
    { PASSWORD_MISMATCH, "Password does not match registry value." },
    { CANT_CREATE_ALL_THREADS_EVENT, "Can't create All Threads
Event." },
    { CANT_CREATE_FORCE_THRED_STRT_EVENT, "Can't create Force Thread
Start Event." },
    { CANT_ALLOCATE_THREAD_LOCAL_STORAGE, "Can't allocate thread
local storage" },
    { CANT_SET_THREAD_LOCAL_STORAGE, "Can't set thread local
storage." },
    { FORCE_CONNECT_THREAD_FAILED, "At least one database connect
call failed, check log files for specific error." },
    { CANT_FIND_SERVER_VALUE, "Server value not set in TPCC key." },
    { CANT_FIND_PATH_VALUE, "PATH value not set in TPCC key." },
    { CANNOT_CREATE_RESULTS_FILE, "Cannot create results file." },
    { CANT_FIND_DATABASE_VALUE, "Database value not set in TPCC key."
},
    { CANT_FIND_USER_VALUE, "User value not set in TPCC key." },
    { CANT_FIND_PASSWORD_VALUE, "Password value not set in TPCC key."
},
    { DELIVERY_OUTPUT_PIPE_WRITE, "Failed to write output delivery
pipe." },
    { DELIVERY_OUTPUT_PIPE_READ, "Failed to read output delivery
pipe." },
    { DELIVERY_MISSING_QUEUETIME_KEY, "Delivery queue time missing
from query." },
    { DELIVERY_QUEUETIME_INVALID, "Delivery queue time is invalid."
},
    { ALREADY_LOGGED_IN, "TPCCConnectDB has already been called." },
    { DB_NOT_LOGGED_IN, "TPCCConnectDB has not yet been called." },
    { INVALID_FORM, "The FORM field is missing or invalid." },
    { DELIVERY_MUST_CONNECTDB, "Synchronous transport requires
delivery server connect to database." },
    { INVALID_FORM_AND_CMD_NOT_BEGIN, "The FORM field is missing and
CMD is not Begin." },
    { MAX_CONNECTIONS_EXCEEDED, "The maximum number of connections
has been exceeded." },
    { CANT_FIND_MAXDBCONNECTIONS_VALUE, "MaxDBConnections value not
set in TPCC key." },
    { CANNOT_FIND_CONNECTION, "Transport layer unable to find a
DBContext coresponding to the CallersContext." },
    { CKPT_NOT_INITIALIZED, "The checkpoint subsystem has not been
started." },
    { DB_RETURN_OCI_SUCCESS, "OCI SUCCESS" },
    { DB_RETURN_OCI_SUCCESS_WITH_INFO, "OCI SUCCESS WITH INFO"},
    { DB_RETURN_OCI_NEED_DATA, "OCI NEED DATA"},
    { DB_RETURN_OCI_NO_DATA, "OCI NO DATA"},
    { DB_RETURN_OCI_ERROR, "OCI ERROR"},
    { DB_RETURN_OCI_INVALID_HANDLE, "OCI INVALID HANDLE"},
    { DB_RETURN_OCI_STILL_EXECUTING, "OCI STILL EXECUTING"},
    { DB_RETURN_OCI_CONTINUE, "OCI CONTINUE"},
    { 0, "" }
};
-------------------------
DBConnection/mod_tpcc.h
-------------------------
/* Copyright (c) 2004, Oracle Corporation.  All rights reserved.
*/

/*
   NAME
     mod_tpcc.h - <one-line expansion of the name>

   DESCRIPTION
     <short description of facility this file declares/defines>

   RELATED DOCUMENTS
     <note any documents related to this facility>

   EXPORT FUNCTION(S)
     <external functions declared for use outside package - one-
line descriptions>

   INTERNAL FUNCTION(S)
     <other external functions declared - one-line descriptions>

   EXAMPLES

   NOTES
     <other useful comments, qualifications, etc.>

   MODIFIED   (MM/DD/YY)
   xnie       01/30/04 - the real mod_tpcc.h
   shuang     01/22/04 - shuang_rte
   shuang     01/21/04 - Creation

*/

#include <httpext.h>

#define CMD_PROCESS(p)      (p[0] == 'P') && (p[1] == 'r')
#define CMD_NEWORDER(p)     (p[0] == 'N')
```

```
#define CMD_PAYMENT(p)      (p[0] == 'P') && (p[1] == 'a')
#define CMD_DELIVERY(p)     (p[0] == 'D')
#define CMD_ORDERSTATUS(p)  (p[0] == 'O')
#define CMD_STOCKLEVEL(p)   (p[0] == 'S')
#define CMD_EXIT(p)         (p[0] == 'E')
#define CMD_MENU(p)         (p[0] == 'M')
#define CMD_BEGIN(p)        (p[0] == 'B')

#define TXN_TYPE_DELIVERY     0
#define TXN_TYPE_STOCKLEVEL   1
#define TXN_TYPE_NEWORDER     2
#define TXN_TYPE_ORDERSTATUS  3
#define TXN_TYPE_PAYMENT      4
#define TXN_TYPE_MAX          5

#define POOL_TYPE_TXN_INPUT   0
#define POOL_TYPE_TXN_OUTPUT  1
#define POOL_TYPE_TXN_MAX     2

#define MAX_FORM_INDEX        164
//#define BUF_SIZE            4096
#define BUF_SIZE              512
#define FILENAMESIZE          128
#define MYLOGFILE             "/tmp/mod_tpcc.log"
#define WDID(w_id,d_id)       (10 * w_id + (d_id - 1))

#define MAX(a, b)            ((a > b) ? a : b)
#define MIN(a, b)            ((a > b) ? b : a)
#define STRING_UPPERCASE(x) \
        { \
            int str_pos; \
            int len = strlen(x); \
            for (str_pos=0; str_pos < len; str_pos++) \
                x[str_pos] = toupper(x[str_pos]); \
        }

struct value_index_entry
{
    char *value;
    int length;
};
typedef struct value_index_entry value_index_entry;

struct form_index_entry
{
    int index;
    int length;
};
typedef struct form_index_entry form_index_entry;

struct form_template_pool
{
    CRITICAL_SECTION form_template_spinlock;
                                                /* mutex for
serialization */
    int form_template_length;                   /* Length of
each form  */
    int form_template_size;                     /* Number of form
in the pool */
    char *form_template_storage;
                                        /* The space allocated for the
whole pool */
    int free_slot;
    int *free_list;
};
typedef struct form_template_pool form_template_pool;

//static int tpcc_handler(request_rec *r);
//static int tpcc_post_config(apr_pool_t *p, apr_pool_t *pl,
//                    apr_pool_t *pt, server_rec *s);
//static void tpcc_child_init(apr_pool_t *p, server_rec *s);
//static void tpcc_register_hooks(apr_pool_t *p);

void allocate_response_pool();
void allocate_transaction_pool();
void allocate_template_pool();

int sendform_mainmenu(EXTENSION_CONTROL_BLOCK *pECB, int w_id, int
ld_id);
int sendform_welcome(EXTENSION_CONTROL_BLOCK *, char *);
int sendform_neworderinput(EXTENSION_CONTROL_BLOCK *pECB, int w_id,
int ld_id);
int sendform_paymentinput(EXTENSION_CONTROL_BLOCK *pECB, int w_id,
int ld_id);
int sendform_orderstatusinput(EXTENSION_CONTROL_BLOCK *pECB, int
w_id, int ld_id);
int sendform_deliveryinput(EXTENSION_CONTROL_BLOCK *pECB, int w_id,
int ld_id);
int sendform_stocklevelinput(EXTENSION_CONTROL_BLOCK *pECB, int
w_id, int ld_id);

int mod_neworder_query(EXTENSION_CONTROL_BLOCK *pECB, int w_id, int
ld_id, char *ptr);
int mod_delivery_query(EXTENSION_CONTROL_BLOCK *pECB, int w_id, int
ld_id, char *ptr);
int mod_payment_query(EXTENSION_CONTROL_BLOCK *pECB, int w_id, int
ld_id, char *ptr);
int mod_orderstatus_query(EXTENSION_CONTROL_BLOCK *pECB, int w_id,
int ld_id, char *ptr);
int mod_stocklevel_query(EXTENSION_CONTROL_BLOCK *pECB, int w_id,
int ld_id, char *ptr);
```

```c
int process_query(EXTENSION_CONTROL_BLOCK *);
int mod_begin_cmd(EXTENSION_CONTROL_BLOCK *);
int mod_menu_cmd(EXTENSION_CONTROL_BLOCK *, int, int);
int mod_exit_cmd(EXTENSION_CONTROL_BLOCK *);
int send_error_message(EXTENSION_CONTROL_BLOCK *, int, int,char
*,int,int,void *);

int get_wid_did(char *iptr, int *wid, int *did, char **optr);
int getcharvalue(char *iptr, char key, char **optr);
char *allocate_form(form_template_pool *pool, int *index);
char *allocate_form_new(form_template_pool *pool, int index);
void free_form(form_template_pool *pool, char *form_template, int
index);
void make_txn_form_template(char *, char *, char *, char *, int);
int build_form_index(char *form, char *form_template,
form_index_entry *f_index, int length);
int send_response(EXTENSION_CONTROL_BLOCK *, char *, int);
void fill_number(char *form, int value, int index, int length);
void fill_float(char *form, double value, int index, int length);
void fill_string(char *form, char *string, int index, int length,
int *shift);
void adjust_form(char *form, int *indexes, int *length, int size,
int formlen, int totalshift);
int get_number(char *ptr, int *value);
int parse_query_string(char *iptr, int max_cnt, char *txn_chars,
value_index_entry *txn_vals);

#define mod_neworder_cmd(rec, w_id, ld_id)
sendform_neworderinput(rec, w_id, ld_id)
#define mod_delivery_cmd(rec, w_id, ld_id)
sendform_deliveryinput(rec, w_id, ld_id)
#define mod_payment_cmd(rec, w_id, ld_id)
sendform_paymentinput(rec, w_id, ld_id)
#define mod_orderstatus_cmd(rec, w_id, ld_id)
sendform_orderstatusinput(rec, w_id, ld_id)
#define mod_stocklevel_cmd(rec, w_id, ld_id)
sendform_stocklevelinput(rec, w_id, ld_id)

/* ----------------------------------------------------------------
----------------
    The following defines the form layout of the different screens
(forms).

    NAME=1 - Command.

     VALUE = NewOrder      - neworder bring out new order input
form
            Delivery      - delivery bring out delivery input form
            OrderStatus   - order status bring out order status
input form
            Payment       - payment bring out payment input form
            StockLevel    - stock level bring out stock level
input form
            Menu          - display main menu
            Process       - perform the specified transaction
after providing input
            Begin         - send wid and did

    NAME=2 - Form Type.

        VALUE = d,n,p,s,o [D,N,P,S,O] output/input. Plus terminal ID.
                = W logon
                = M main menu

    Delivery
        3 - district number.

    Order Status
        3 - district number.
        4 - customer id.
        5 - customer last name.

    Payment
        3 - district number.
        4 - customer id.
        5 - customer warehouse.
        6 - customer district.
        7 - name
        8 - amount paid

    Stock Level
        3 - stock level threshould

    New Order
        3 - district number.
        4 - customer number.
 ----------------------------------------------------------------
-------------------- */

#define TRANSACTION_MENU \
"<HR>"\
"<INPUT TYPE=submit NAME=0 VALUE=NewOrder>"\
"<INPUT TYPE=submit NAME=0 VALUE=Payment>"\
"<INPUT TYPE=submit NAME=0 VALUE=Delivery>"\
"<INPUT TYPE=submit NAME=0 VALUE=StockLevel>"\
"<INPUT TYPE=submit NAME=0 VALUE=OrderStatus>"\
"<INPUT TYPE=submit NAME=0 VALUE=Exit>"

/* static char WelcomeForm [] =
```

```c
"<BODY><FORM ACTION=%s METHOD=GET>"
"<INPUT TYPE=hidden NAME=2 VALUE=B000>"
"%s. Please provide your warehouse ID and district ID.<BR>"
"Warehouse ID <INPUT NAME=3 SIZE=7><BR>"
"District  ID <INPUT NAME=4 SIZE=2><BR>"
"<HR>"
"<INPUT TYPE=submit NAME=1 VALUE=Begin>"
"</FORM></BODY>"; */
static char WelcomeForm [] =
"<BODY><FORM ACTION=%s METHOD=GET>"
"<INPUT TYPE=hidden NAME=3 VALUE=W000>"
"%s. Please provide your warehouse ID and district ID.<BR>"
"Warehouse ID <INPUT NAME=4 SIZE=7><BR>"
"District  ID <INPUT NAME=5 SIZE=2><BR>"
"<HR>"
"<INPUT TYPE=submit NAME=0 VALUE=Begin>"
"</FORM></BODY>";


static char FormHeader [] =
"<BODY><FORM ACTION=%s METHOD=GET>";

#define FORM_BEGIN   "<BODY><FORM ACTION=%s METHOD=GET>"
#define FORM_END     "</FORM></BODY>"
#define FORM_SUBMIT  "<INPUT TYPE=submit NAME=0 VALUE=Process>"
#define FORM_MENU    "<INPUT TYPE=submit NAME=0 VALUE=Menu>"

static char MainForm [] =
FORM_BEGIN
"<INPUT TYPE=hidden NAME=3 VALUE=M%07d>"
"%60s<BR>"
"Please Select the Next Transaction.<BR>"
TRANSACTION_MENU
FORM_END;

static char ErrorForm [] =
FORM_BEGIN
"<INPUT TYPE=hidden NAME=3 VALUE=e%06d>"
"Error: %d %d %40s %s<BR>"
TRANSACTION_MENU
FORM_END;

/*
static char ErrorForm [] =
FORM_BEGIN
"<INPUT TYPE=hidden NAME=3 VALUE=e%06d>"
"Error: %d (%s): %s<BR>"
TRANSACTION_MENU
FORM_END;
*/
#define DE_EXTRA_ID      0
#define DE_INPUT_DID         DE_EXTRA_ID + 1
#define DE_INPUT_QTIME       DE_INPUT_DID + 1
#define DE_INPUT_MAX         DE_INPUT_QTIME + 1

#define OS_INPUT_DID     0
#define OS_INPUT_CID         OS_INPUT_DID + 1
#define OS_INPUT_NAME        OS_INPUT_CID + 1
#define OS_INPUT_MAX         OS_INPUT_NAME + 1

#define PA_INPUT_DID     0
#define PA_INPUT_CID         PA_INPUT_DID + 1
#define PA_INPUT_CWID        PA_INPUT_CID + 1
#define PA_INPUT_CDID        PA_INPUT_CWID + 1
#define PA_INPUT_NAME        PA_INPUT_CDID + 1
#define PA_INPUT_AMT         PA_INPUT_NAME + 1
#define PA_INPUT_MAX         PA_INPUT_AMT + 1

#define SL_INPUT_THRESHOLD   0
#define SL_INPUT_MAX         SL_INPUT_THRESHOLD + 1

#define NO_INPUT_DID     0
#define NO_INPUT_CID         NO_INPUT_DID + 1
#define NO_INPUT_SPW00       NO_INPUT_CID + 1
#define NO_INPUT_IID00       NO_INPUT_SPW00 + 1
#define NO_INPUT_QTY00       NO_INPUT_IID00 + 1
#define NO_INPUT_SPW01       NO_INPUT_QTY00 + 1
#define NO_INPUT_IID01       NO_INPUT_SPW01 + 1
#define NO_INPUT_QTY01       NO_INPUT_IID01 + 1
#define NO_INPUT_SPW02       NO_INPUT_QTY01 + 1
#define NO_INPUT_IID02       NO_INPUT_SPW02 + 1
#define NO_INPUT_QTY02       NO_INPUT_IID02 + 1
#define NO_INPUT_SPW03       NO_INPUT_QTY02 + 1
#define NO_INPUT_IID03       NO_INPUT_SPW03 + 1
#define NO_INPUT_QTY03       NO_INPUT_IID03 + 1
#define NO_INPUT_SPW04       NO_INPUT_QTY03 + 1
#define NO_INPUT_IID04       NO_INPUT_SPW04 + 1
#define NO_INPUT_QTY04       NO_INPUT_IID04 + 1
#define NO_INPUT_SPW05       NO_INPUT_QTY04 + 1
#define NO_INPUT_IID05       NO_INPUT_SPW05 + 1
#define NO_INPUT_QTY05       NO_INPUT_IID05 + 1
#define NO_INPUT_SPW06       NO_INPUT_QTY05 + 1
#define NO_INPUT_IID06       NO_INPUT_SPW06 + 1
#define NO_INPUT_QTY06       NO_INPUT_IID06 + 1
#define NO_INPUT_SPW07       NO_INPUT_QTY06 + 1
#define NO_INPUT_IID07       NO_INPUT_SPW07 + 1
#define NO_INPUT_QTY07       NO_INPUT_IID07 + 1
#define NO_INPUT_SPW08       NO_INPUT_QTY07 + 1
#define NO_INPUT_IID08       NO_INPUT_SPW08 + 1
#define NO_INPUT_QTY08       NO_INPUT_IID08 + 1
#define NO_INPUT_SPW09       NO_INPUT_QTY08 + 1
```

```
#define NO_INPUT_IID09          NO_INPUT_SPW09 + 1
#define NO_INPUT_QTY09          NO_INPUT_IID09 + 1
#define NO_INPUT_SPW10          NO_INPUT_QTY09 + 1
#define NO_INPUT_IID10          NO_INPUT_SPW10 + 1
#define NO_INPUT_QTY10          NO_INPUT_IID10 + 1
#define NO_INPUT_SPW11          NO_INPUT_QTY10 + 1
#define NO_INPUT_IID11          NO_INPUT_SPW11 + 1
#define NO_INPUT_QTY11          NO_INPUT_IID11 + 1
#define NO_INPUT_SPW12          NO_INPUT_QTY11 + 1
#define NO_INPUT_IID12          NO_INPUT_SPW12 + 1
#define NO_INPUT_QTY12          NO_INPUT_IID12 + 1
#define NO_INPUT_SPW13          NO_INPUT_QTY12 + 1
#define NO_INPUT_IID13          NO_INPUT_SPW13 + 1
#define NO_INPUT_QTY13          NO_INPUT_IID13 + 1
#define NO_INPUT_SPW14          NO_INPUT_QTY13 + 1
#define NO_INPUT_IID14          NO_INPUT_SPW14 + 1
#define NO_INPUT_QTY14          NO_INPUT_IID14 + 1
#define NO_INPUT_MAX            NO_INPUT_QTY14 + 1

#define DE_TERMID               0
#define DE_WID                  DE_TERMID+1
#define DE_CARID                DE_WID+1
#define D_QUEUE1 DE_CARID + 1
#define D_DELTA1 D_QUEUE1 + 1
#define D_WID1 D_DELTA1 + 1
#define D_CAR1 D_WID1 + 1
#define D_OID10 D_CAR1 + 1
#define D_OID11 D_OID10 + 1
#define D_OID12 D_OID11 + 1
#define D_OID13 D_OID12 + 1
#define D_OID14 D_OID13 + 1
#define D_OID15 D_OID14 + 1
#define D_OID16 D_OID15 + 1
#define D_OID17 D_OID16 + 1
#define D_OID18 D_OID17 + 1
#define D_OID19 D_OID18 + 1
#define D_QUEUE2 D_OID19 + 1
#define D_DELTA2 D_QUEUE2 + 1
#define D_WID2 D_DELTA2 + 1
#define D_CAR2 D_WID2 + 1
#define D_OID20 D_CAR2 + 1
#define D_OID21 D_OID20 + 1
#define D_OID22 D_OID21 + 1
#define D_OID23 D_OID22 + 1
#define D_OID24 D_OID23 + 1
#define D_OID25 D_OID24 + 1
#define D_OID26 D_OID25 + 1
#define D_OID27 D_OID26 + 1
#define D_OID28 D_OID27 + 1
#define D_OID29 D_OID28 + 1
#define DE_FORMINDEX_SIZE       D_OID29+1


static char DeliveryFormInput_Template [] =
"<INPUT TYPE=hidden NAME=3 VALUE=D#######>"
"<INPUT TYPE=hidden NAME=6 VALUE=0>"
"<PRE>                          Delivery <BR>"
"Warehouse: ####### <BR><BR>"
"Carrier Number: <INPUT NAME=7 SIZE=2><BR><BR>"
"Execution Status: <BR></PRE>"
FORM_MENU
FORM_SUBMIT
FORM_END;

static char DeliveryFormOutput_Template [] =
"<INPUT TYPE=hidden NAME=3 VALUE=d#######>"
"<PRE>                          Delivery <BR>"
"Warehouse: ####### <BR><BR>"
"Carrier Number: ##<BR><BR>"
"Execution Status: Delivery has been queued. <BR>"
"Previous Deliveries:<BR>"
"########## ######## ##### ## #### #### #### #### #### #### ####
#### #### ####"
"<BR>"
"########## ######## ##### ## #### #### #### #### #### #### ####
#### #### ####"
"<BR>"
"</PRE>"
TRANSACTION_MENU
FORM_END;

#define OS_TERMID               0
#define OS_WID                  OS_TERMID+1
#define OS_DID                  OS_WID+1
#define OS_CID                  OS_DID+1
#define OS_FIRST                OS_CID+1
#define OS_MIDDLE               OS_FIRST+1
#define OS_LAST                 OS_MIDDLE+1
#define OS_CBALANCE             OS_LAST+1
#define OS_OID                  OS_CBALANCE+1
#define OS_ENTRY_DATE           OS_OID+1
#define OS_CARID                OS_ENTRY_DATE+1
#define OS_SUPW                 OS_CARID+1
#define OS_ITEMID               OS_SUPW+1
#define OS_QTY                  OS_ITEMID+1
#define OS_AMOUNT               OS_QTY+1
#define OS_DELDATE              OS_AMOUNT+1
#define OS_FORMINDEX_SIZE       OS_DELDATE+(14*5)+1

static char OrderStatusInput_Template [] =
```

```
"<INPUT TYPE=hidden NAME=3 VALUE=O#######>"
"<PRE>                                   Order-Status <BR>"
"Warehouse: #######  District: <INPUT NAME=8 SIZE=2><BR>"
"Customer: <INPUT NAME=9 SIZE=4> Name: <INPUT NAME=Y SIZE=23> <BR>"
"Cust-Balance:<BR><BR>"
"Order-Number:           Entry-Data:
Carrier-Number:<BR>"
"Supply-W    Item-ID    QTY     Amount      Delivery-
Data<BR></PRE><HR>"
FORM_MENU
FORM_SUBMIT
FORM_END;

static char OrderStatusOutput_Template [] =
"<INPUT TYPE=hidden NAME=3 VALUE=o#######>"
"<PRE>                                   Order Status <BR>"
"Warehouse: #######  District: ##<BR>"
"Customer: ####    Name: ################ ## ################<BR>"
"Cust-Balance: $#########<BR><BR>"
"Order-Number: ########    Entry-Date: ##################
Carrier-Number: ##<BR>"
"Supply-W    Item-ID    QTY     Amount      Delivery-Data<BR>"
"  ######      ######     ##    $########     ##########<BR>"
"  ######      ######     ##    $########     ##########<BR>"
"  ######      ######     ##    $########     ##########<BR>"
"  ######      ######     ##    $########     ##########<BR>"
"  ######      ######     ##    $########     ##########<BR>"
"  ######      ######     ##    $########     ##########<BR>"
"  ######      ######     ##    $########     ##########<BR>"
"  ######      ######     ##    $########     ##########<BR>"
"  ######      ######     ##    $########     ##########<BR>"
"  ######      ######     ##    $########     ##########<BR>"
"  ######      ######     ##    $########     ##########<BR>"
"  ######      ######     ##    $########     ##########<BR>"
"  ######      ######     ##    $########     ##########<BR>"
"  ######      ######     ##    $########     ##########<BR>"
"  ######      ######     ##    $########     ##########<BR>"
"</PRE>"
TRANSACTION_MENU
FORM_END;

#define PA_INPUT_TERMID         0
#define PA_INPUT_WID            PA_TERMID+1
#define PA_INPUT_FORMINDEX_SIZE PA_INPUT_WID+1

#define PA_TERMID               0
#define PA_DATE                 PA_TERMID+1
#define PA_WID                  PA_DATE+1
#define PA_DID                  PA_WID+1
#define PA_WST1                 PA_DID+1
#define PA_DST1                 PA_WST1+1
#define PA_WST2                 PA_DST1+1
#define PA_DST2                 PA_WST2+1
#define PA_WCITY                PA_DST2+1
#define PA_WSTATE               PA_WCITY+1
#define PA_WZIP                 PA_WSTATE+1
#define PA_DCITY                PA_WZIP+1
#define PA_DSTATE               PA_DCITY+1
#define PA_DZIP                 PA_DSTATE+1
#define PA_CID                  PA_DZIP+1
#define PA_CWARE                PA_CID+1
#define PA_CDIST                PA_CWARE+1
#define PA_CFIRST               PA_CDIST+1
#define PA_CMIDDLE              PA_CFIRST+1
#define PA_CLAST                PA_CMIDDLE+1
#define PA_SINCE        PA_CLAST+1
#define PA_CST1                 PA_SINCE+1
#define PA_CREDIT               PA_CST1+1
#define PA_CST2                 PA_CREDIT+1
#define PA_DISC                 PA_CST2+1
#define PA_CCITY                PA_DISC+1
#define PA_CSTATE               PA_CCITY+1
#define PA_CZIP                 PA_CSTATE+1
#define PA_CPHONE               PA_CZIP+1
#define PA_AMOUNT               PA_CPHONE+1
#define PA_CBAL                 PA_AMOUNT+1
#define PA_LIMIT                PA_CBAL+1
#define PA_CUSTDATA             PA_LIMIT+1
#define PA_FORMINDEX_SIZE       PA_CUSTDATA+3+1

static char PaymentInput_Template [] =
"<INPUT TYPE=hidden NAME=3 VALUE=P#######>"
"<PRE>                                   Payment<BR>"
"Date: <BR><BR>"
"Warehouse: #######                      District: <INPUT
NAME=8 SIZE=2><BR>"
"<BR><BR><BR><BR>"
"Customer: <INPUT NAME=9 SIZE=4>"
"Cust-Warehouse: <INPUT NAME=Z SIZE=7>"
"Cust-District: <INPUT NAME=v SIZE=2><BR>"
"Name: <INPUT NAME=Y SIZE=16>                       Since:
<BR>"
"                                              Credit: <BR>"
"                                              Disc: <BR>"
"                                              Phone:
<BR><BR>"
"Amount Paid:           $<INPUT NAME=w SIZE=7>      New Cust
Balance: <BR>"
"Credit limit:<BR><BR>Cust-Data: <BR><BR><BR><BR></PRE><HR>"
FORM_MENU
FORM_SUBMIT
```

```
FORM_END;

static char PaymentOutput_Template [] =
"<INPUT TYPE=hidden NAME=3 VALUE=p#######>"
"<PRE>                                        Payment<BR>"
"Date: ###################<BR><BR>"
"Warehouse: #######                              District: ##<BR>"
"####################
####################<BR>"
"####################
####################<BR>"
"#################### ## #########        ####################
## #########<BR>"
"<BR><BR>"
"Customer: #### Cust-Warehouse: ####### Cust-District: ##<BR>"
"Name:  ############### ## ################       Since:
##########<BR>"
"       ###################                        Credit: ##<BR>"
"       ###################                        %Disc:  ####<BR>"
"       ################### ## #########          Phone:
###################<BR>"
"<BR><BR>"
"Amount Paid:      $######     New Cust Balance:
$###############<BR>"
"Credit Limit:   $###############<BR><BR>"
"Cust-Data: #####################################################<BR>"
"           #####################################################<BR>"
"           #####################################################<BR>"
"           #####################################################<BR>"
"</PRE>"
TRANSACTION_MENU
FORM_END;

#define SL_TERMID               0
#define SL_WID                  SL_TERMID+1
#define SL_DID                  SL_WID+1
#define SL_THRESHOLD            SL_DID+1
#define SL_LOWSTOCK             SL_THRESHOLD+1
#define SL_FORMINDXE_SIZE       SL_LOWSTOCK

static char StockLevelInput_Template [] =
"<INPUT TYPE=hidden NAME=3 VALUE=S#######>"
"<PRE>                                      Stock-Level<BR>"
"Warehouse: ######  District ##<BR><BR>"
"Stock Level Threshold: <INPUT NAME=x SIZE=2><BR><BR>"
"low stock:      <BR></PRE><HR>"
FORM_MENU
FORM_SUBMIT
FORM_END;

static char StockLevelOutput_Template [] =
"<INPUT TYPE=hidden NAME=3 VALUE=s#######>"
"<PRE>                                      Stock Level<BR>"
"Warehouse: ######  District ##<BR><BR>"
"Stock Level Threshold: ##<BR><BR>"
"low stock:  ### <BR></PRE><HR>"
TRANSACTION_MENU
FORM_END;

#define NO_TERMID               0
#define NO_WID                  NO_TERMID+1
#define NO_DID                  NO_WID+1
#define NO_DATE                 NO_DID+1
#define NO_CID                  NO_DATE+1
#define NO_NAME                 NO_CID+1
#define NO_CREDIT               NO_NAME+1
#define NO_DISC                 NO_CREDIT+1
#define NO_OID                  NO_DISC+1
#define NO_LINES                NO_OID+1
#define NO_WTAX                 NO_LINES+1
#define NO_DTAX                 NO_WTAX+1
#define NO_SUPPW                NO_DTAX+1
#define NO_ITEMID               NO_SUPPW+1
#define NO_INAME                NO_ITEMID+1
#define NO_QTY                  NO_INAME+1
#define NO_STOCK                NO_QTY+1
#define NO_BRAND                NO_STOCK+1
#define NO_PRICE                NO_BRAND+1
#define NO_AMOUNT               NO_PRICE+1
#define NO_STATUS               NO_AMOUNT + 14*8 + 1
#define NO_TOTAL                NO_STATUS+1
#define NO_FORMINDEX_SIZE       NO_TOTAL+1

static char NewOrderInput_Template [] =
"<INPUT TYPE=hidden NAME=3 VALUE=N#######>"
"<PRE>                                      New Order<BR>"
"Warehouse: ######   District: <INPUT NAME=8 SIZE=2>
Date:<BR>"
"Customer: <INPUT NAME=9 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>"
"<INPUT NAME=A SIZE=6> <INPUT NAME=B SIZE=7><INPUT NAME=C
SIZE=2><BR>"
"<INPUT NAME=D SIZE=6> <INPUT NAME=E SIZE=7><INPUT NAME=F
SIZE=2><BR>"
"<INPUT NAME=G SIZE=6> <INPUT NAME=H SIZE=7><INPUT NAME=I
SIZE=2><BR>"
```

```
"<INPUT NAME=J SIZE=6> <INPUT NAME=K SIZE=7><INPUT NAME=L
SIZE=2><BR>"
"<INPUT NAME=M SIZE=6> <INPUT NAME=N SIZE=7><INPUT NAME=O
SIZE=2><BR>"
"<INPUT NAME=P SIZE=6> <INPUT NAME=Q SIZE=7><INPUT NAME=R
SIZE=2><BR>"
"<INPUT NAME=S SIZE=6> <INPUT NAME=T SIZE=7><INPUT NAME=U
SIZE=2><BR>"
"<INPUT NAME=V SIZE=6> <INPUT NAME=W SIZE=7><INPUT NAME=X
SIZE=2><BR>"
"<INPUT NAME=a SIZE=6> <INPUT NAME=b SIZE=7><INPUT NAME=c
SIZE=2><BR>"
"<INPUT NAME=d SIZE=6> <INPUT NAME=e SIZE=7><INPUT NAME=f
SIZE=2><BR>"
"<INPUT NAME=g SIZE=6> <INPUT NAME=h SIZE=7><INPUT NAME=i
SIZE=2><BR>"
"<INPUT NAME=j SIZE=6> <INPUT NAME=k SIZE=7><INPUT NAME=l
SIZE=2><BR>"
"<INPUT NAME=m SIZE=6> <INPUT NAME=n SIZE=7><INPUT NAME=o
SIZE=2><BR>"
"<INPUT NAME=p SIZE=6> <INPUT NAME=q SIZE=7><INPUT NAME=r
SIZE=2><BR>"
"<INPUT NAME=s SIZE=6> <INPUT NAME=t SIZE=7><INPUT NAME=u
SIZE=2><BR>"
"Execution Status:
Total:<BR></PRE><HR>"
FORM_MENU
FORM_SUBMIT
FORM_END;

static char NewOrderOutput_Template [] =
"<INPUT TYPE=hidden NAME=3 VALUE=n#######>"
"<PRE>                                      New Order<BR>"
"Warehouse: #######   District: ##                     Date:
###################<BR>"
"Customer:     ####   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>"
" #######   ######  ######################   ##    ##    #
$######  $#######<BR>"
" #######   ######  ######################   ##    ##    #
$######  $#######<BR>"
" #######   ######  ######################   ##    ##    #
$######  $#######<BR>"
" #######   ######  ######################   ##    ##    #
$######  $#######<BR>"
" #######   ######  ######################   ##    ##    #
$######  $#######<BR>"
" #######   ######  ######################   ##    ##    #
$######  $#######<BR>"
" #######   ######  ######################   ##    ##    #
$######  $#######<BR>"
" #######   ######  ######################   ##    ##    #
$######  $#######<BR>"
" #######   ######  ######################   ##    ##    #
$######  $#######<BR>"
" #######   ######  ######################   ##    ##    #
$######  $#######<BR>"
" #######   ######  ######################   ##    ##    #
$######  $#######<BR>"
" #######   ######  ######################   ##    ##    #
$######  $#######<BR>"
" #######   ######  ######################   ##    ##    #
$######  $#######<BR>"
" #######   ######  ######################   ##    ##    #
$######  $#######<BR>"
"Execution Status:    #######################
Total: $#######<BR>"
"</PRE>"
TRANSACTION_MENU
FORM_END;

------------------------
DBConnection/StdAfx.cpp
------------------------
// stdafx.cpp : source file that includes just the standard
includes
// DBConnection.pch will be the pre-compiled header
// stdafx.obj will contain the pre-compiled type information

#include "stdafx.h"

// TODO: reference any additional headers you need in STDAFX.H
// and not in this file
DBConnection/StdAfx.h
// stdafx.h : include file for standard system include files,
// or project specific include files that are used frequently, but
//     are changed infrequently
//

#if
!defined(AFX_STDAFX_H__1D53560F_AAD5_4CEE_A8CC_651C9688A6DF__INCLUD
ED_)
#define
AFX_STDAFX_H__1D53560F_AAD5_4CEE_A8CC_651C9688A6DF__INCLUDED_
```

```c
#if _MSC_VER > 1000
#pragma once
#endif // _MSC_VER > 1000


// Insert your headers here
#define WIN32_LEAN_AND_MEAN    // Exclude rarely-used stuff from
Windows headers

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


// TODO: reference additional headers your program requires here

//{{AFX_INSERT_LOCATION}}
// Microsoft Visual C++ will insert additional declarations
immediately before the previous line.

#endif //
!defined(AFX_STDAFX_H__1D53560F_AAD5_4CEE_A8CC_651C9688A6DF__INCLUD
ED_)
-------------------------
DBConnection/tpccflags.h
-------------------------
//#define USE_IEEE_NUMBER


-------------------------
DBConnection/tpccpl.h
-------------------------
#ifndef TPCCPL_H
#define TPCCPL_H

//#include "tpcc.h"

#include <oratypes.h>
#include <oci.h>
#include <ocidfn.h>
#include <time.h>
#include <io.h>
#include "tpccflags.h"

#ifdef TUX
#define DELRT 5.0
#else
#define DELRT 80.0
#endif


#ifndef DISCARD
# define DISCARD (void)
#endif

#ifndef sword
# define sword int
#endif

#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 8192

#define FULLDATE "mm-dd-yyyy.hh24:mi:ss"
#define SHORTDATE "dd-mm-yyyy"


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

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

typedef char date[24+NLT];
typedef char varchar2;

#define OCIERROR(errp,function)\
  ocierror(__FILE__,__LINE__,(errp),(function));

#define OCIBND(stmp, bndp, errp, sqlvar, progv, progvl, ftype)\
```

```c
        ocierror(__FILE__,__LINE__,(errp), \

OCIHandleAlloc((stmp),(dvoid**)&(bndp),OCI_HTYPE_BIND,0,(dvoid**)0)
); \
        ocierror(__FILE__,__LINE__, (errp), \
        OCIBindByName((stmp), &(bndp), (errp), \
          (text *)(sqlvar), strlen((sqlvar)),\
          (progv), (progvl), (ftype),0,0,0,0,0,OCI_DEFAULT));

#define
OCIBNDRA(stmp,bndp,errp,sqlvar,progv,progvl,ftype,indp,alen,arcode)
\
        ocierror(__FILE__,__LINE__,(errp), \

OCIHandleAlloc((stmp),(dvoid**)&(bndp),OCI_HTYPE_BIND,0,(dvoid**)0)
); \
        ocierror(__FILE__,__LINE__,(errp), \
        OCIBindByName((stmp),&(bndp),(errp),(text
*)(sqlvar),strlen((sqlvar)),\

(progv),(progvl),(ftype),(indp),(alen),(arcode),0,0,OCI_DEFAULT));
#define
OCIBNDRAD(stmp,bndp,errp,sqlvar,progvl,ftype,indp,ctxp,cbf_nodata,c
bf_data) \
        ocierror(__FILE__,__LINE__,(errp), \

OCIHandleAlloc((stmp),(dvoid**)&(bndp),OCI_HTYPE_BIND,0,(dvoid**)0)
); \
        ocierror(__FILE__,__LINE__,(errp), \
        OCIBindByName((stmp),&(bndp),(errp),(text *)(sqlvar), \
          strlen((sqlvar)),0,(progvl),(ftype), \
          indp,0,0,0,0,OCI_DATA_AT_EXEC); \
        ocierror(__FILE__,__LINE__,(errp), \

OCIBindDynamic((bndp),(errp),(ctxp),(cbf_nodata),(ctxp),(cbf_data))
);


#define
OCIBNDR(stmp,bndp,errp,sqlvar,progv,progvl,ftype,indp,alen,arcode)
\
        ocierror(__FILE__,__LINE__,(errp), \

OCIHandleAlloc((stmp),(dvoid**)&(bndp),OCI_HTYPE_BIND,0,(dvoid**)0)
); \
        ocierror(__FILE__,__LINE__,(errp), \
     OCIBindByName((stmp),&(bndp),(errp),(text
*)(sqlvar),strlen((sqlvar)),\

(progv),(progvl),(ftype),(indp),(alen),(arcode),0,0,OCI_DEFAULT));

#define
OCIBNDRAA(stmp,bndp,errp,sqlvar,progv,progvl,ftype,indp,alen,arcode
,ms,cu) \
        ocierror(__FILE__,__LINE__, (errp), \
     OCIHandleAlloc((stmp),&(bndp),OCI_HTYPE_BIND,0,(dvoid**)0)); \
        ocierror(__FILE__,__LINE__,(errp),\
     OCIBindByName((stmp),&(bndp),(errp),(text
*)(sqlvar),strlen((sqlvar)),\

(progv),(progvl),(ftype),(indp),(alen),(arcode),(ms),(cu),OCI_DEFAU
LT));


#define OCIDEFINE(stmp,dfnp,errp,pos,progv,progvl,ftype)\

OCIDefineByPos((stmp),&(dfnp),(errp),(pos),(progv),(progvl),(ftype)
,\
          0,0,0,OCI_DEFAULT);


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

OCIDefineByPos((stmp),&(dfnp),(errp),(pos),(progv),(progvl),\
          (ftype),NULL,NULL,NULL,OCI_DEFAULT); \

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

#define OBNDRV(lda,cursor,sqlvar,progv,progvl,ftype)\
    if
(obndrv((cursor),(text*)(sqlvar),NA,(ub1*)(progv),(progvl),(ftype),
NA,\
        (sb2 *)0, (text *)0, NA, NA))\
        {errrpt(lda,cursor);return(-1);}\
    else\
        DISCARD 0

#define
OBNDRA(lda,cursor,sqlvar,progv,progvl,ftype,indp,alen,arcode)\
    if
(obndra((cursor),(text*)(sqlvar),NA,(ub1*)(progv),(progvl),(ftype),
NA,\
        (indp),(alen),(arcode),(ub4)0,(ub4*)0,(text*)0,NA,NA))\
```

```
          {errrpt(lda,cursor);return(-1);}\
       else\
          DISCARD 0

#define
OBNDRAA(lda,cursor,sqlvar,progv,progvl,ftype,indp,alen,arcode,ms,cs
)\
       if
(obndra((cursor),(text*)(sqlvar),NA,(ub1*)(progv),(progvl),(ftype),
NA,\

(indp),(alen),(arcode),(ub4)(ms),(ub4*)(cs),(text*)0,NA,NA))\
          {errrpt(lda,cursor);return(-1);}\
       else\
          DISCARD 0

#define
ODEFIN(lda,cursor,pos,buf,bufl,ftype,scale,indp,fmt,fmtl,fmtt,rlen,
rcode)\
       if
(odefin((cursor),(pos),(ub1*)(buf),(bufl),(ftype),(scale),(indp),\
       (text*)(fmt),(fmtl),(fmtt),(rlen),(rcode)))\
          {errrpt(lda,cursor);return(-1);}\
       else\
          DISCARD 0

#define OEXFET(lda,cursor,nrows,cancel,exact)\
       if (oexfet((cursor),(nrows),(cancel),(exact)))\
          {if ((cursor)->rc == 1403)\
        {i=errrpt(lda,cursor); orol(lda); return(-1);} \
     else if (errrpt(lda,cursor)==RECOVERR) \
         {orol(lda);return(RECOVERR);} \
     else{orol(lda);return(-1);}}\
       else\
          DISCARD 0

#define OOPEN(lda,cursor)\
       if (oopen((cursor),(lda),(text*)0,NA,NA,(text*)0,NA))\
          {errrpt(lda,cursor);return(-1);}\
       else\
          DISCARD 0

#define OPARSE(lda,cursor,sqlstm,sqll,defflg,lngflg)\
       if
(oparse((cursor),(sqlstm),(sb4)(sqll),(defflg),(ub4)(lngflg)))\
          {errrpt(lda,cursor);return(-1);}\
       else\
          DISCARD 0

#define OFEN(lda,cursor,nrows)\
       if (ofen((cursor),(nrows)))\
          {if (errrpt(lda,cursor)==RECOVERR) \
        {orol(lda);return(RECOVERR);} \
     else{orol(lda);return(-1);}}\
       else\
          DISCARD 0

#define OEXEC(lda,cursor)\
       if (oexec((cursor)))\
          {if (errrpt(lda,cursor)==RECOVERR) \
        {orol(lda);return(RECOVERR);} \
     else{orol(lda);return(-1);}}\
       else\
          DISCARD 0

#define OCOM(lda,cursor)\
       if (ocom((lda))) \
          {errrpt(lda,cursor);orol(lda);return(-1);}\
       else\
          DISCARD 0


#define OEXN(lda,cursor,iters,rowoff)\
       if (oexn((cursor),(iters),(rowoff))) \
          {if (errrpt(lda,cursor)==RECOVERR) \
        {orol(lda);return(RECOVERR);} \
     else{orol(lda);return(-1);}}\
       else\
          DISCARD 0

/* bind in/out for plsql without indicator and rcode */
#define OCIBNDPL(stmp,bndp,errp,sqlvar,progv,progvl,ftype,alen) \
       DISCARD ocierror(__FILE__,__LINE__,(errp), \

OCIHandleAlloc((stmp),(dvoid**)&(bndp),OCI_HTYPE_BIND,0,(dvoid**)0)
); \
       DISCARD ocierror(__FILE__,__LINE__,(errp), \
       OCIBindByName((stmp),&(bndp),(errp),(const text *)(sqlvar), \
       (sb4)strlen((const char *)(sqlvar)),
(dvoid*)(progv),(progvl),(ftype),\
              NULLP(dvoid),(alen), NULLP(ub2),
0,NULLP(ub4),OCI_DEFAULT));

/* bind in/out for plsql arrays witout indicator and rcode */
#define
OCIBNDPLA(stmp,bndp,errp,sqlvar,progv,progvl,ftype,alen,ms,cu) \
       DISCARD ocierror(__FILE__,__LINE__, (errp), \
```

```
OCIHandleAlloc((stmp),(dvoid**)&(bndp),OCI_HTYPE_BIND,0,(dvoid**)0)
);\
       DISCARD ocierror(__FILE__,__LINE__,(errp),\
       OCIBindByName((stmp),&(bndp),(errp),(CONST text
*)(sqlvar), \
              (sb4)strlen((CONST char *) (sqlvar)),(void
*)(progv), \

(progvl),(ftype),NULL,(alen),NULL,(ms),(cu),OCI_DEFAULT));

#define OCIDEFINE(stmp,dfnp,errp,pos,progv,progvl,ftype)\

OCIDefineByPos((stmp),&(dfnp),(errp),(pos),(progv),(progvl),(ftype)
,\
          0,0,0,OCI_DEFAULT);


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

OCIDefineByPos((stmp),&(dfnp),(errp),(pos),(progv),(progvl),\
                   (ftype),NULL,NULL,NULL,OCI_DEFAULT); \


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

#define
OCIDFNDYN(stmp,dfnp,errp,pos,progv,progvl,ftype,indp,ctxp,cbf_data)
\
       ocierror(__FILE__,__LINE__,(errp), \
       OCIHandleAlloc((stmp),(dvoid**)&(dfnp),OCI_HTYPE_DEFINE,0,\
          (dvoid**)0));\
       ocierror(__FILE__,__LINE__,(errp), \
       OCIDefineByPos((stmp),&(dfnp),(errp),(pos),(progv),
(progvl),(ftype),\
                                 (indp),NULL,NULL,
OCI_DYNAMIC_FETCH));\
       ocierror(__FILE__,__LINE__,(errp), \
       OCIDefineDynamic((dfnp),(errp),(ctxp),(cbf_data)));


#endif
-------------------------
DBConnection/tpcc_struct.h
-------------------------
/* Copyright (c) 2004, Oracle Corporation.  All rights reserved.
*/

/*
   NAME
     tpcc_struct.h - <one-line expansion of the name>

   DESCRIPTION
     <short description of facility this file declares/defines>

   RELATED DOCUMENTS
     <note any documents related to this facility>

   EXPORT FUNCTION(S)
     <external functions declared for use outside package - one-
line descriptions>

   INTERNAL FUNCTION(S)
     <other external functions declared - one-line descriptions>

   EXAMPLES

   NOTES
     <other useful comments, qualifications, etc.>

   MODIFIED   (MM/DD/YY)
   xnie       02/09/04 - add status field to carry error status
   shuang     01/22/04 - shuang_rte
   shuang     01/21/04 - Creation

*/

#define MAX_ORDERLINE  15
#define SMALL_BUF_SIZE 32

#define TXN_COMMON_DATA \
   int w_id; \
   int ld_id; \
   int txn_status; \
   int db_status; \
   void *context


struct T_connect_data
{
   TXN_COMMON_DATA;
};
typedef struct T_connect_data T_connect_data;
```

```
struct T_date
{
    char DateString[20];
};
typedef struct T_date T_date;

struct T_delivery_data
{
    TXN_COMMON_DATA;
    time_t        enqueue_time;
    int           delta_time;
    int           o_carrier_id;
    int           o_id[10];
};
typedef struct T_delivery_data T_delivery_data, *pT_delivery_data;

struct T_orderline
{
    int    ol_i_id;
    int    ol_supply_w_id;
    int    ol_quantity;
    char   i_name[25];
    int    s_quantity;
    char   b_g[2];
    double i_price;
    double ol_amount;
};
typedef struct T_orderline T_orderline;

struct T_neworder_data
{
    TXN_COMMON_DATA;
    int     d_id;
    int     c_id;
    int     o_ol_cnt;
    int     o_all_local;
    T_orderline o_orderline[MAX_ORDERLINE];
    T_date  o_entry_d;
    char    c_last[17];
    char    c_credit[3];
    double  c_discount;
    double  w_tax;
    double  d_tax;
    int     o_id;
    double  total_amount;
    int     status;
};
typedef struct T_neworder_data T_neworder_data;

struct T_stocklevel_data
{
    TXN_COMMON_DATA;
    int    threshold;
    int    low_stock;
};
typedef struct T_stocklevel_data T_stocklevel_data;

struct T_orderline_status
{
    int    ol_supply_w_id;
    int    ol_i_id;
    int    ol_quantity;
    double ol_amount;
    T_date ol_delivery_d;
};
typedef struct T_orderline_status T_orderline_status;

struct T_orderstatus_data
{
    TXN_COMMON_DATA;
    int    by_last_name;
    int    d_id;
    int    c_id;
    char   c_last[17];
    char   c_first[17];
    char   c_middle[3];
    double c_balance;
    int    o_id;
    T_date o_entry_d;
    int    o_carrier_id;
    int    o_ol_cnt;
    T_orderline_status  o_orderline[MAX_ORDERLINE];
};
typedef struct T_orderstatus_data T_orderstatus_data;

struct T_payment_data
{
    TXN_COMMON_DATA;
    int      by_last_name;
    int      d_id;
    int      c_id;
    char     c_last[17];
    int      c_w_id;
    int      c_d_id;
    double   h_amount;
    T_date   h_date;
    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_first[17];
    char    c_middle[3];
    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];
    T_date  c_since;
    char    c_credit[3];
    double  c_credit_lim;
    double  c_discount;
    double  c_balance;
    char    c_data[201];
};
typedef struct T_payment_data T_payment_data;


struct T_transaction_data
{
    int txn_type;
    union {
        T_delivery_data delivery_data;
        T_payment_data payment_data;
        T_neworder_data neworder_data;
        T_stocklevel_data stocklevel_data;
        T_orderstatus_data orderstatus_data;
    } txn_data;

};
typedef struct T_transaction_data T_transaction_data;


struct T_login_data
{
    TXN_COMMON_DATA;
    char    server[SMALL_BUF_SIZE];
    char    database[SMALL_BUF_SIZE];
    char    user[SMALL_BUF_SIZE];
    char    password[SMALL_BUF_SIZE];
    char    application[SMALL_BUF_SIZE];
};
typedef struct T_login_data T_login_data;


------------------------
DBConnection/tpccstruct.h
------------------------


#define NITEMS 15
#define ROWIDLEN 20
#define OCIROWLEN 20

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];

#ifdef USE_IEEE_NUMBER
    float s_remote[NITEMS];
#else
    int s_remote[NITEMS];
#endif
    char s_dist_info[NITEMS][25];
    OCIStmt *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;
```

```
    OCIStmt *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;



#define NDISTS 10
#define ROWIDLEN 20


struct delctx {
    sb2 del_o_id_ind[NDISTS];
    sb2 d_id_ind[NDISTS];
    sb2 c_id_ind[NDISTS];
    sb2 del_date_ind[NDISTS];
    sb2 carrier_id_ind[NDISTS];
    sb2 amt_ind[NDISTS];

    ub4 del_o_id_len[NDISTS];
    ub4 c_id_len[NDISTS];
    int oid_ctx;
    int cid_ctx;
    OCIBind *olamt_bp;

    ub2 w_id_len[NDISTS];
    ub2 d_id_len[NDISTS];
    ub2 del_date_len[NDISTS];
    ub2 carrier_id_len[NDISTS];
    ub2 amt_len[NDISTS];

    ub2 del_o_id_rcode[NDISTS];
    ub2 cons_rcode[NDISTS];
    ub2 w_id_rcode[NDISTS];
    ub2 d_id_rcode[NDISTS];
    ub2 c_id_rcode[NDISTS];
    ub2 del_date_rcode[NDISTS];
    ub2 carrier_id_rcode[NDISTS];
    ub2 amt_rcode[NDISTS];

    int del_o_id[NDISTS];
    int del_d_id[NDISTS];
    int cons[NDISTS];
    int w_id[NDISTS];
    int d_id[NDISTS];
    int c_id[NDISTS];
    int carrier_id[NDISTS];
    int amt[NDISTS];
    ub4 del_o_id_rcnt;
    int retry;
    OCIRowid *no_rowid_ptr[NDISTS];
    OCIRowid *o_rowid_ptr[NDISTS];
    OCIDate del_date[NDISTS];
    OCIStmt *curd0;
    OCIStmt *curd1;
    OCIStmt *curd2;
    OCIStmt *curd3;
    OCIStmt *curd4;
    OCIStmt *curd5;
    OCIStmt *curd6;
    OCIStmt *curdtest;

    OCIBind *w_id_bp;
    OCIBind *w_id_bp3;
    OCIBind *w_id_bp4;
    OCIBind *w_id_bp5;
    OCIBind *w_id_bp6;
    OCIBind *d_id_bp;
    OCIBind *d_id_bp3;
```

```
    OCIBind *d_id_bp4;
    OCIBind *d_id_bp6;
    OCIBind *o_id_bp;
    OCIBind *cr_date_bp;
    OCIBind *c_id_bp;
    OCIBind *c_id_bp3;
    OCIBind *no_rowid_bp;
    OCIBind *carrier_id_bp;
    OCIBind *o_rowid_bp;
    OCIBind *del_o_id_bp;
    OCIBind *del_o_id_bp3;
    OCIBind *amt_bp;
    OCIBind *bstr1_bp[10];
    OCIBind *bstr2_bp[10];
    OCIBind *retry_bp;
    OCIDefine *inum_dp;
    OCIDefine *d_id_dp;
    OCIDefine *del_o_id_dp;
    OCIDefine *no_rowid_dp;
    OCIDefine *c_id_dp;
    OCIDefine *o_rowid_dp;
    OCIDefine *cons_dp;
    OCIDefine *amt_dp;

    int norow;
};

typedef struct delctx delctx;
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];
#ifdef USE_IEEE_NUMBER
    float sums[NDISTS];
#else
    int sums[NDISTS];
#endif
    OCIDate del_date;
    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;
    OCIStmt *curp1;
    OCIStmt *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;

struct amtctx {
    int ol_amt[NITEMS];
    sb2 ol_amt_ind[NITEMS];
    ub4 ol_amt_len[NITEMS];
    ub2 ol_amt_rcode[NITEMS];
    int ol_cnt;
};
typedef struct amtctx amtctx;


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;                          OCIBind *d_city_bp[2];
    ub4 ol_quantity_csize;                      ub2 d_city_len;
    ub4 ol_amount_csize;
    ub4 ol_delivery_d_csize;                     OCIBind *d_state_bp[2];
    ub4 ol_w_id_csize;                          ub2 d_state_len;
    ub4 ol_d_id_csize;
    ub4 ol_o_id_csize;                           OCIBind *d_zip_bp[2];
                                                ub2 d_zip_len;
    OCIStmt *curo0;
    OCIStmt *curo1;                              OCIBind *c_first_bp[2];
    OCIStmt *curo2;                             ub2 c_first_len;
    OCIStmt *curo3;
    OCIStmt *curo4;                              OCIBind *c_middle_bp[2];
    OCIBind *c_id_bp;                           ub2 c_middle_len;
    OCIBind *w_id_bp[4];
    OCIBind *d_id_bp[4];                         OCIBind *c_street_1_bp[2];
    OCIBind *c_last_bp[2];                      ub2 c_street_1_len;
    OCIBind *o_id_bp;
    OCIBind *c_rowid_bp;                         OCIBind *c_street_2_bp[2];
    OCIDefine *c_rowid_dp;                      ub2 c_street_2_len;
    OCIDefine *c_last_dp[2];
    OCIDefine *c_id_dp;                          OCIBind *c_city_bp[2];
    OCIDefine *c_first_dp[2];                   ub2 c_city_len;
    OCIDefine *c_middle_dp[2];
    OCIDefine *c_balance_dp[2];                  OCIBind *c_state_bp[2];
    OCIDefine *o_id_dp[2];                      ub2 c_state_len;
    OCIDefine *o_entry_d_dp[2];
    OCIDefine *o_cr_id_dp[2];                    OCIBind *c_zip_bp[2];
    OCIDefine *o_ol_cnt_dp[2];                  ub2 c_zip_len;
    OCIDefine *ol_d_d_dp;
    OCIDefine *ol_i_id_dp;                       OCIBind *c_phone_bp[2];
    OCIDefine *ol_supply_w_id_dp;               ub2 c_phone_len;
    OCIDefine *ol_quantity_dp;
    OCIDefine *ol_amount_dp;                     OCIBind *c_since_bp[2];
    OCIDefine *ol_d_base_dp;                    ub2 c_since_len;
    OCIDefine *c_count_dp;
    OCIRowid *c_rowid_ptr[100];                  OCIBind *c_credit_bp[2];
    OCIRowid *c_rowid_cust;                     ub2 c_credit_len;
    int cs;
    int cust_idx;                                OCIBind *c_credit_lim_bp[2];
    int norow;                                  ub2 c_credit_lim_len;
    int rcount;
    int somerows;                                OCIBind *c_discount_bp[2];
};                                              ub2 c_discount_len;

typedef struct ordctx ordctx;                   OCIBind *c_balance_bp[2];
                                                ub2 c_balance_len;
struct defctx
{                                                OCIBind *c_data_bp[2];
 boolean reexec;                                ub2 c_data_len;
 ub4 count;
};                                               OCIBind *h_date_bp[2];
typedef struct defctx defctx;                   ub2 h_date_len;

                                                 OCIBind *retries_bp[2];
struct payctx {                                 ub2 retries_len;
  OCIStmt *curpi;
  OCIStmt *curp0;                                OCIBind *cr_date_bp[2];
  OCIStmt *curp1;                               ub2 cr_date_len;
  OCIBind *w_id_bp[2];
  ub2 w_id_len;                                  OCIBind *byln_bp[2];
                                                ub2 byln_len;
  OCIBind *d_id_bp[2];                         };
  ub2 d_id_len;
                                               typedef struct payctx payctx;
  OCIBind *c_w_id_bp[2];
  ub2 c_w_id_len;

  OCIBind *c_d_id_bp[2];                        struct stoctx {
  ub2 c_d_id_len;                                OCIStmt *curs;
                                                OCIBind *w_id_bp;
  OCIBind *c_id_bp[2];                           OCIBind *d_id_bp;
  ub2 c_id_len;                                  OCIBind *threshold_bp;
                                               #ifdef PLSQLSTO
  OCIBind *h_amount_bp[2];                       OCIBind *low_stock_bp;
  ub2 h_amount_len;                            #else
                                                OCIDefine *low_stock_bp;
  OCIBind *c_last_bp[2];                       #endif
  ub2 c_last_len;                                int norow;
                                               };
  OCIBind *w_street_1_bp[2];
  ub2 w_street_1_len;                          typedef struct stoctx stoctx;

  OCIBind *w_street_2_bp[2];
  ub2 w_street_2_len;                          /* New order */

  OCIBind *w_city_bp[2];                       struct newinstruct {
  ub2 w_city_len;                                int w_id;
                                                int d_id;
  OCIBind *w_state_bp[2];                        int c_id;
  ub2 w_state_len;                               int ol_i_id[15];
                                                int ol_supply_w_id[15];
  OCIBind *w_zip_bp[2];                          int ol_quantity[15];
  ub2 w_zip_len;                               };

  OCIBind *d_street_1_bp[2];                   struct newoutstruct {
  ub2 d_street_1_len;                            int terror;
                                                int o_id;
  OCIBind *d_street_2_bp[2];                     int o_ol_cnt;
  ub2 d_street_2_len;                            char c_last[17];
                                                char c_credit[3];
```

```c
    float c_discount;
    float w_tax;
    float d_tax;
    char o_entry_d[20];
    float total_amount;
    char i_name[15][25];
    int s_quantity[15];
    char brand_generic[15];
    float i_price[15];
    float ol_amount[15];
    char status[26];
    int retry;
};

struct newstruct {
    struct newinstruct newin;
    struct newoutstruct newout;
};


/* Payment */

struct payinstruct {
    int w_id;
    int d_id;
    int c_w_id;
    int c_d_id;
    int c_id;
    int bylastname;
    int h_amount;
    char c_last[17];
};

struct payoutstruct {
    int terror;
    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];
    int  c_id;
    char c_first[17];
    char c_middle[3];
    char c_last[17];
    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];
    char c_since[11];
    char c_credit[3];
    double c_credit_lim;
    float  c_discount;
    double c_balance;
    char c_data[201];
    char h_date[20];
    int retry;
};

struct paystruct {
    struct payinstruct payin;
    struct payoutstruct payout;
};


/* Order status */

struct ordinstruct {
    int w_id;
    int d_id;
    int c_id;
    int bylastname;
    char c_last[17];
};

struct ordoutstruct {
    int terror;
    int c_id;
    char c_last[17];
    char c_first[17];
    char c_middle[3];
    double c_balance;
    int o_id;
    char o_entry_d[20];
    int o_carrier_id;
    int o_ol_cnt;
    int ol_supply_w_id[15];
    int ol_i_id[15];
    int ol_quantity[15];
    float ol_amount[15];
    char ol_delivery_d[15][11];
    int retry;
};

struct ordstruct {
```

```c
    struct ordinstruct ordin;
    struct ordoutstruct ordout;
};


/* Delivery */

struct delinstruct {
    int w_id;
    int o_carrier_id;
    double qtime;
    int in_timing_int;
    int plsqlflag;
};

struct deloutstruct {
    int terror;
    int retry;
};

struct delstruct {
    struct delinstruct delin;
    struct deloutstruct delout;
};


/* Stock level */

struct stoinstruct {
    int w_id;
    int d_id;
    int threshold;
};

struct stooutstruct {
    int terror;
    int low_stock;
    int retry;
};

struct stostruct {
    struct stoinstruct stoin;
    struct stooutstruct stoout;
};
```

```
------------------------
blocks/load_ordordl.sql
------------------------
-- anonymous block for loading order/orderline

DECLARE
    order_idx       PLS_INTEGER;
    order_rows      PLS_INTEGER;
    ordl_rows       PLS_INTEGER;
    ordl_idx        PLS_INTEGER;
    ordl_idx_hi     PLS_INTEGER;
    local_idx       PLS_INTEGER;
BEGIN
    order_rows := :order_rows;
    ordl_rows  := :ordl_rows;
    order_idx  := 1;
    ordl_idx   := 1;

    WHILE (order_idx <= order_rows) LOOP

        INSERT INTO ordr (O_ID, O_D_ID, O_W_ID, O_C_ID, O_ENTRY_D,
                          O_CARRIER_ID, O_OL_CNT, O_ALL_LOCAL)
                VALUES (:o_id(order_idx), :o_d_id(order_idx),
:o_w_id(order_idx),
                        :o_c_id(order_idx), SYSDATE,
:o_carrier_id(order_idx),
                        :o_ol_cnt(order_idx), 1);

        ordl_idx_hi := ordl_idx + :o_ol_cnt(order_idx) - 1;

        IF ( :o_id(order_idx) < 2101 ) THEN
            FORALL local_idx IN ordl_idx .. ordl_idx_hi
                INSERT INTO ordl (OL_O_ID, OL_D_ID, OL_W_ID,
OL_NUMBER,
                                  OL_DELIVERY_D, OL_I_ID,
OL_SUPPLY_W_ID, OL_QUANTITY,
                                  OL_AMOUNT, OL_DIST_INFO)
                    VALUES (:ol_o_id(local_idx),
:ol_d_id(local_idx),
                            :ol_w_id(local_idx),
:ol_number(local_idx),
                            SYSDATE, :ol_i_id(local_idx),
                            :ol_supply_w_id(local_idx), 5, 0,
:ol_dist_info(local_idx));
        ELSE
            FORALL local_idx IN ordl_idx .. ordl_idx_hi
                INSERT INTO ordl (OL_O_ID, OL_D_ID, OL_W_ID,
OL_NUMBER,
                                  OL_DELIVERY_D, OL_I_ID,
OL_SUPPLY_W_ID, OL_QUANTITY,
                                  OL_AMOUNT, OL_DIST_INFO)
                    VALUES (:ol_o_id(local_idx),
:ol_d_id(local_idx),
                            :ol_w_id(local_idx),
:ol_number(local_idx),
                            to_date('01-Jan-1811'),
:ol_i_id(local_idx),
```

```
                               :ol_supply_w_id(local_idx), 5,
                               :ol_amount(local_idx),
:ol_dist_info(local_idx));
      END IF;
      ordl_idx := ordl_idx_hi + 1;
      order_idx := order_idx + 1;
   END LOOP;
END;

------------------------
blocks/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
        RETURNING substr(c_data,1, 200)
              INTO :c_data;

        END IF;

          UPDATE dist
             SET d_ytd = d_ytd + :h_amount
            WHERE d_id = :d_id
              AND d_w_id = :w_id
        RETURNING d_name, d_street_1, d_street_2, d_city,d_state,
d_zip
              INTO
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;
------------------------
blocks/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
            RETURNING substr(c_data,1, 200)
              INTO :c_data;

        END IF;

        UPDATE dist
           SET d_ytd = d_ytd+:h_amount
           WHERE d_id = :d_id
             AND d_w_id = :w_id
           RETURNING  d_name, d_street_1, d_street_2, d_city,
           d_state, d_zip
           INTO 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;
------------------------
blocks/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;
 idx1arr     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');
    idx1arr := 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
-------------------------
blocks/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;

  END LOOP; -- for retry
END;
-------------------------
blocks/tkvcpnew.sql
-------------------------

-- New Order Anonymous block

  DECLARE
       idx                    PLS_INTEGER;
       dummy_local            PLS_INTEGER;
       cache_ol_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);

    PROCEDURE u1 IS
    BEGIN
        FORALL idx IN 1 .. cache_ol_cnt
          UPDATE  stock_item
          SET s_order_cnt = s_order_cnt + 1,
          s_ytd = s_ytd + :ol_quantity(idx),
          s_remote_cnt = s_remote_cnt + :s_remote(idx),
          s_quantity = (CASE WHEN s_quantity < :ol_quantity (idx) +
10
                            THEN s_quantity +91
                            ELSE s_quantity
                        END) - :ol_quantity(idx)
          WHERE i_id = :ol_i_id(idx)
          AND s_w_id = :ol_supply_w_id(idx)
          RETURNING i_price, i_name, s_quantity, s_dist_01,
                    i_price*:ol_quantity(idx),
            CASE WHEN i_data NOT LIKE '%ORIGINAL%'
                  THEN 'G'
                  ELSE (CASE WHEN s_data NOT LIKE '%ORIGINAL%'
                         THEN 'G'
                         ELSE 'B'
                         END)
            END
        BULK COLLECT INTO :i_price, :i_name, :s_quantity,
inittpcc.s_dist,
                          :ol_amount,:brand_generic;
    END u1;

    PROCEDURE u2 IS
    BEGIN
        FORALL idx IN 1 .. cache_ol_cnt
          UPDATE  stock_item
          SET s_order_cnt = s_order_cnt + 1,
          s_ytd = s_ytd + :ol_quantity(idx),
          s_remote_cnt = s_remote_cnt + :s_remote(idx),
          s_quantity = (CASE WHEN s_quantity < :ol_quantity (idx) +
10
                            THEN s_quantity +91
                            ELSE s_quantity
                        END) - :ol_quantity(idx)
          WHERE i_id = :ol_i_id(idx)
          AND s_w_id = :ol_supply_w_id(idx)
          RETURNING i_price, i_name, s_quantity, s_dist_02,
                    i_price*:ol_quantity(idx),
            CASE WHEN i_data NOT LIKE '%ORIGINAL%'
                  THEN 'G'
                  ELSE (CASE WHEN s_data NOT LIKE '%ORIGINAL%'
                         THEN 'G'
                         ELSE 'B'
                         END)
            END
        BULK COLLECT INTO :i_price, :i_name, :s_quantity,
inittpcc.s_dist,
                          :ol_amount,:brand_generic;
    END u2;

    PROCEDURE u3 IS
    BEGIN
        FORALL idx IN 1 .. cache_ol_cnt
          UPDATE  stock_item
          SET s_order_cnt = s_order_cnt + 1,
          s_ytd = s_ytd + :ol_quantity(idx),
          s_remote_cnt = s_remote_cnt + :s_remote(idx),
          s_quantity = (CASE WHEN s_quantity < :ol_quantity (idx) +
10
                            THEN s_quantity +91
                            ELSE s_quantity
                        END) - :ol_quantity(idx)
```

```
                    WHERE i_id = :ol_i_id(idx)
                    AND s_w_id = :ol_supply_w_id(idx)
                    RETURNING i_price, i_name, s_quantity, s_dist_03,
                              i_price*:ol_quantity(idx),
                        CASE WHEN i_data NOT LIKE '%ORIGINAL%'
                            THEN 'G'
                             ELSE (CASE WHEN s_data NOT LIKE '%ORIGINAL%'
                                    THEN 'G'
                                    ELSE 'B'
                                    END)
                        END
             BULK COLLECT INTO :i_price, :i_name, :s_quantity,
inittpcc.s_dist,
                              :ol_amount,:brand_generic;
    END u3;

    PROCEDURE u4 IS
    BEGIN
        FORALL idx IN 1 .. cache_ol_cnt
          UPDATE  stock_item
          SET s_order_cnt = s_order_cnt + 1,
          s_ytd = s_ytd + :ol_quantity(idx),
          s_remote_cnt = s_remote_cnt + :s_remote(idx),
          s_quantity = (CASE WHEN s_quantity < :ol_quantity (idx) +
10
                                THEN s_quantity +91
                                ELSE s_quantity
                          END) - :ol_quantity(idx)
                    WHERE i_id = :ol_i_id(idx)
                    AND s_w_id = :ol_supply_w_id(idx)
                    RETURNING i_price, i_name, s_quantity, s_dist_04,
                              i_price*:ol_quantity(idx),
                        CASE WHEN i_data NOT LIKE '%ORIGINAL%'
                            THEN 'G'
                             ELSE (CASE WHEN s_data NOT LIKE '%ORIGINAL%'
                                    THEN 'G'
                                    ELSE 'B'
                                    END)
                        END
             BULK COLLECT INTO :i_price, :i_name, :s_quantity,
inittpcc.s_dist,
                              :ol_amount,:brand_generic;
    END u4;

    PROCEDURE u5 IS
    BEGIN
        FORALL idx IN 1 .. cache_ol_cnt
          UPDATE  stock_item
          SET s_order_cnt = s_order_cnt + 1,
          s_ytd = s_ytd + :ol_quantity(idx),
          s_remote_cnt = s_remote_cnt + :s_remote(idx),
          s_quantity = (CASE WHEN s_quantity < :ol_quantity (idx) +
10
                                THEN s_quantity +91
                                ELSE s_quantity
                          END) - :ol_quantity(idx)
                    WHERE i_id = :ol_i_id(idx)
                    AND s_w_id = :ol_supply_w_id(idx)
                    RETURNING i_price, i_name, s_quantity, s_dist_05,
                              i_price*:ol_quantity(idx),
                        CASE WHEN i_data NOT LIKE '%ORIGINAL%'
                            THEN 'G'
                             ELSE (CASE WHEN s_data NOT LIKE '%ORIGINAL%'
                                    THEN 'G'
                                    ELSE 'B'
                                    END)
                        END
             BULK COLLECT INTO :i_price, :i_name, :s_quantity,
inittpcc.s_dist,
                              :ol_amount,:brand_generic;
    END u5;

    PROCEDURE u6 IS
    BEGIN
        FORALL idx IN 1 .. cache_ol_cnt
          UPDATE  stock_item
          SET s_order_cnt = s_order_cnt + 1,
          s_ytd = s_ytd + :ol_quantity(idx),
          s_remote_cnt = s_remote_cnt + :s_remote(idx),
          s_quantity = (CASE WHEN s_quantity < :ol_quantity (idx) +
10
                                THEN s_quantity +91
                                ELSE s_quantity
                          END) - :ol_quantity(idx)
                    WHERE i_id = :ol_i_id(idx)
                    AND s_w_id = :ol_supply_w_id(idx)
                    RETURNING i_price, i_name, s_quantity, s_dist_06,
                              i_price*:ol_quantity(idx),
                        CASE WHEN i_data NOT LIKE '%ORIGINAL%'
                            THEN 'G'
                             ELSE (CASE WHEN s_data NOT LIKE '%ORIGINAL%'
                                    THEN 'G'
                                    ELSE 'B'
                                    END)
                        END
             BULK COLLECT INTO :i_price, :i_name, :s_quantity,
inittpcc.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
             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
             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
        BULK COLLECT INTO :i_price, :i_name, :s_quantity,
initttpcc.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);
          initttpcc.s_dist(temp_index + 1) :=
initttpcc.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;
          initttpcc.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
      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
          INTO :c_discount, :c_last, :c_credit
          FROM cust
          WHERE c_id = :c_id AND c_d_id = :d_id AND c_w_id = :w_id;

        SELECT w_tax
          INTO :w_tax
          FROM ware
          WHERE 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);

        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, initttpcc.idxlarr(idx),
initttpcc.nulldate,
                  :ol_i_id(idx), :ol_supply_w_id(idx),
                  :ol_quantity(idx), :ol_amount(idx),
initttpcc.s_dist(idx));

      IF (dummy_local != :o_ol_cnt) THEN
        :o_ol_cnt := dummy_local;
        ROLLBACK;
      END IF;

    EXIT;

    EXCEPTION
        WHEN not_serializable OR deadlock OR snapshot_too_old
THEN
            ROLLBACK;
            :retry := :retry + 1;
        END;
    END LOOP;
  END;
------------------------
blocks/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;
p8100.pr
echo
##################################################################
#############
#
#
#                      PRTE COMMAND FILE FOR v6-1-0
#
#
#
##################################################################
#############
noecho

disable initialized messages
```

```
disable stopped_messages


######################################################################
####
#
#
# PRTE internal variables.
#
#
#
#   set {var} {val}
#
#
#
######################################################################
####
#
# startup_interval must be set (before connects).  It controls the
rate at
#                 which prte user processes are forked off
initially.
#
# start_interval   controls the rate at which prte users are
started when the
#                 "start" command is issued at the console level.
#
# resume_interval  controls how fast resumes are done when the
"resume"
#                 command is issued at the console level.  (NOTE:
resumes
#                 done on the tester's behalf by the master user
are
#                 controlled by the network variable RESUME_DELAY
set below).
#
# stop_interval    controls how fast stops are done when the "stop"
#                 command is issued at the console level.  (NOTE:
stops done
#                 on the tester's behalf by the master user are
controlled by
#                 the network variable STOP_DELAY set below).
#
# type_rate        is the typing delay between each character???

# .0001 .0002 .001 .001 ko
set startup_interval  0.0001
set start_interval  0.0002
set resume_interval 0.0009
set stop_interval 0.00003
set type_rate    0.0



echo


######################################################################
#############
#
#
# Initializing connections.
#
#
#
######################################################################
#############


noecho

######################################################################
####
#
#
# Connect commands.
#
#
#
#   connect {exe} {prte to run on} {# users} {machine to connect
to}   #
#
#
######################################################################
####
#
# delay between the fork for each user process is startup_interval,
# defined above in the "PRTE internal variables" section.
#
# NOTE: The order of the connect statements is relevant since it
determines
#      the order in which prte user id's get assigned.  All
connect statements
#      for tpcc users (web_user, unix_user) should come first,
followed by
#      the connect statement for reduce, followed by the connect
#      statement for tpcc_master.
#
```

```
connect ~tpcc/bin/web_user  n47 1000  bd1
connect ~tpcc/bin/web_user  n47 1000  bd1
connect ~tpcc/bin/web_user  n47 1000  bd1
connect ~tpcc/bin/web_user  n47 1000  bd1
connect ~tpcc/bin/web_user  n47 1000  bd1
connect ~tpcc/bin/web_user  n47 1000  bd1
connect ~tpcc/bin/web_user  n47 1000  bd1
connect ~tpcc/bin/web_user  n47 1000  bd1
connect ~tpcc/bin/web_user  n47 1000  bd1
connect ~tpcc/bin/web_user  n47 1000  bd1

connect ~tpcc/bin/web_user  n47 1000  bd1
connect ~tpcc/bin/web_user  n47 1000  bd1
connect ~tpcc/bin/web_user  n47 1000  bd1
connect ~tpcc/bin/web_user  n47 1000  bd1
connect ~tpcc/bin/web_user  n47 1000  bd1
connect ~tpcc/bin/web_user  n47 1000  bd1
connect ~tpcc/bin/web_user  n47 1000  bd1
connect ~tpcc/bin/web_user  n47 1000  bd1
connect ~tpcc/bin/web_user  n47 1000  bd1
connect ~tpcc/bin/web_user  n47 1000  bd1

connect ~tpcc/bin/web_user  n48 1000  bd1
connect ~tpcc/bin/web_user  n48 1000  bd1
connect ~tpcc/bin/web_user  n48 1000  bd1
connect ~tpcc/bin/web_user  n48 1000  bd1
connect ~tpcc/bin/web_user  n48 1000  bd1
connect ~tpcc/bin/web_user  n48 1000  bd1
connect ~tpcc/bin/web_user  n48 1000  bd1
connect ~tpcc/bin/web_user  n48 1000  bd1
connect ~tpcc/bin/web_user  n48 1000  bd1
connect ~tpcc/bin/web_user  n48 1000  bd1

connect ~tpcc/bin/web_user  n48 1000  bd1
connect ~tpcc/bin/web_user  n48 1000  bd1
connect ~tpcc/bin/web_user  n48 1000  bd1
connect ~tpcc/bin/web_user  n48 1000  bd1
connect ~tpcc/bin/web_user  n48 1000  bd1
connect ~tpcc/bin/web_user  n48 1000  bd1
connect ~tpcc/bin/web_user  n48 1000  bd1
connect ~tpcc/bin/web_user  n48 1000  bd1
connect ~tpcc/bin/web_user  n48 1000  bd1
connect ~tpcc/bin/web_user  n48 500 bd1

#connect  ~tpcc/bin/web_user  n48 1000  bd1
#connect  ~tpcc/bin/web_user  n48 1000  bd1
#connect  ~tpcc/bin/web_user  n48 1000  bd1
#connect  ~tpcc/bin/web_user  n48 1000  bd1
#connect  ~tpcc/bin/web_user  n48 1000  bd1

connect ~tpcc/bin/web_user  n46 1000  bd2
connect ~tpcc/bin/web_user  n46 1000  bd2
connect ~tpcc/bin/web_user  n46 1000  bd2
connect ~tpcc/bin/web_user  n46 1000  bd2
connect ~tpcc/bin/web_user  n46 1000  bd2
connect ~tpcc/bin/web_user  n46 1000  bd2
connect ~tpcc/bin/web_user  n46 1000  bd2
connect ~tpcc/bin/web_user  n46 1000  bd2
connect ~tpcc/bin/web_user  n46 1000  bd2
connect ~tpcc/bin/web_user  n46 1000  bd2

connect ~tpcc/bin/web_user  n46 1000  bd2
connect ~tpcc/bin/web_user  n46 1000  bd2
connect ~tpcc/bin/web_user  n46 1000  bd2
connect ~tpcc/bin/web_user  n46 1000  bd2
connect ~tpcc/bin/web_user  n46 1000  bd2
connect ~tpcc/bin/web_user  n46 1000  bd2
connect ~tpcc/bin/web_user  n46 1000  bd2
connect ~tpcc/bin/web_user  n46 1000  bd2
connect ~tpcc/bin/web_user  n46 1000  bd2
connect ~tpcc/bin/web_user  n46 1000  bd2

#connect  ~tpcc/bin/web_user  n46 1000  bd1
#connect  ~tpcc/bin/web_user  n46 1000  bd1
#connect  ~tpcc/bin/web_user  n46 1000  bd1
#connect  ~tpcc/bin/web_user  n46 1000  bd1
#connect  ~tpcc/bin/web_user  n46 1000  bd1

connect ~tpcc/bin/web_user  n49 1000  bd2
connect ~tpcc/bin/web_user  n49 1000  bd2
connect ~tpcc/bin/web_user  n49 1000  bd2
connect ~tpcc/bin/web_user  n49 1000  bd2
connect ~tpcc/bin/web_user  n49 1000  bd2
connect ~tpcc/bin/web_user  n49 1000  bd2
connect ~tpcc/bin/web_user  n49 1000  bd2
connect ~tpcc/bin/web_user  n49 1000  bd2
connect ~tpcc/bin/web_user  n49 1000  bd2
connect ~tpcc/bin/web_user  n49 1000  bd2

connect ~tpcc/bin/web_user  n49 1000  bd2
connect ~tpcc/bin/web_user  n49 1000  bd2
connect ~tpcc/bin/web_user  n49 1000  bd2
connect ~tpcc/bin/web_user  n49 1000  bd2
connect ~tpcc/bin/web_user  n49 1000  bd2
connect ~tpcc/bin/web_user  n49 1000  bd2
connect ~tpcc/bin/web_user  n49 1000  bd2
connect ~tpcc/bin/web_user  n49 1000  bd2
connect ~tpcc/bin/web_user  n49 1000  bd2
connect ~tpcc/bin/web_user  n49 1000  bd2
```

```
connect ~tpcc/bin/web_user  n49 500 bd2

#connect  ~tpcc/bin/web_user  n49 1000  bd1
#connect  ~tpcc/bin/web_user  n49 1000  bd1
#connect  ~tpcc/bin/web_user  n49 1000  bd1
#connect  ~tpcc/bin/web_user  n49 1000  bd1


connect ~tpcc/bin/reduce   localhost 1 localhost
#connect ~tpcc/bin/aide    localhost 1 fe_21
connect ~tpcc/bin/tpcc_master localhost 1 localhost

# NOTE:   timeout MUST be set after the connect statements for it
to
#   take effect.
#
# timeout        is how long prte will wait for an outstanding
command to
#                   return its expected prompt before timing out.
#

set timeout 3600


echo

######################################################################
#############
#
#
# Setting PRTE network variables.
#
#
#
######################################################################
#############

noecho

######################################################################
####
#
#
# PRTE network variables.
#
#
#
#   set network_variable {name} {val}
#
#
#
######################################################################
####


##################################
#                                #
#  FRONT END NETWORK VARIABLES   #
#                                #
##################################
#
# FE_NAMES        A comma seperated list of the front end network
node names.
#
# FE_USER_COUNTS A comma seperated list of the users to run on each
front end.
#         NOTE: The order of counts in this list should
match the order
#         of names in FE_NAMES.
# ADMIN_USER_COUNT is the number of aides to run.
#
# ADMIN_FE_NAMES is a comma seperated list of FEs on which the
aides will
#    operated.

set network_variable FE_NAMES bd1,bd2

set network_variable FE_USER_COUNTS 40500,40500

set network_variable ADMIN_USER_COUNT 0
set network_variable ADMIN_FE_NAMES bd1-0


##############################
#                            #
#  REDUCER NETWORK VARIABLES #
#                            #
##############################
#
# REDUCER_UPDATE_INTERVAL      The interval, in seconds, between
updates
#                                displayed on the console.
#
# REDUCER_HEADER_INTERVAL      Every REDUCER_HEADER_INTERVAL
updates the
```

```
#                         column headers will be displayed on
the
#                         console.
#

set network_variable REDUCER_UPDATE_INTERVAL 30
set network_variable REDUCER_HEADER_INTERVAL 6


################################
#                              #
#   TPCC USER NETWORK VARIABLES  #
#                              #
################################
#
# TPCC_USER_LOG_TYPE controls what information the prte users log
to thier
#              respective files. This is a bit mask.
#
#              0 - no logging
#              1 - timer logging (required for asci data
reduction)
#              2 - sut data logging (required for durability)
#              4 - script logging (required by the tpcc user
script)
#              8 - user sut data logging (required by web
users for
#                 error checking)
#
#              In general, leave this at 12 for web clients
doing binary
#              data reduction, and 13 for web clients doing
asci data
#              reduction.
#
# TPCC_USER_FLUSH_LOG is whether or not to flush every write to the
log.
#
# DURABILITY_LOGGING is whether or not to parse new order response
pages for
#              durability data (to be sent to reducer). This
variable
#      is a boolean so legal values are 0,f,F and 1,t,T.
#
# C_LAST  is the constant value used for customer last names.
#   This value must be chosen with care.  It must be based on
#   the value you used when populating your database.

set network_variable TPCC_USER_LOG_TYPE   12
set network_variable TPCC_USER_FLUSH_LOG  0
#set network_variable TPCC_USER_LOG_TYPE  12
#set network_variable TPCC_USER_FLUSH_LOG 1
set network_variable DURABILITY_LOGGING   0
set network_variable C_LAST      87


####################################
#                                  #
#   CONFIGURATION NETWORK VARIABLES  #
#                                  #
####################################
#
# CGI_SCRIPT_NAME is the name of the application to run on the
front ends.
#
# LOAD_DLL_TIMEOUT is how long master should wait (in seconds) for
the dll
#     to initially load before timing out.
#

#set network_variable CGI_SCRIPT_NAME /webacmsxploop.dll
#set network_variable CGI_SCRIPT_NAME /webacmsxploop1500.dll
#set network_variable CGI_SCRIPT_NAME /webacmsxpora84.dll
#set network_variable CGI_SCRIPT_NAME /webacmsxpora8.dll
set network_variable CGI_SCRIPT_NAME  /tpcc/modtpcc.dll
set network_variable LOAD_DLL_TIMEOUT 600

####################################
#                                  #
#   TEST CONTROL NETWORK VARIABLES  #
#                                  #
####################################
#
# LOOPBACK_MODE
#   0 - Full end-to-end runs.
#   1 - Back end loopback runs (not implemented yet)
#   2 - Front end loopback runs
#   3 - RTE loopback runs

# RUN_NUMBER       is used to tag all output files with the run
number.
#
#              1 - the primary measurement run.
#              2 - the repeatability run.
#              5 - the 50% run.
#              8 - the 80% run.
#
#              If you are unsure which run this really will
end up being,
```

```
#                     just leave it at 1, and you can rename files
later if you
#                     need to.
#
# VERSION_NUMBER      is used to tag all output files with the
version number.
#                     This is used if you submit files to the
auditor, and then
#                     need to rerun the test, and resubmit files to
the auditor,
#                     for some reason.  For example, you submit a
repeatability
#                     run (RUN_NUMBER 2, VERSION_NUMBER 1) and the
auditor finds
#                     a problem and asks you to re-run the test
(RUN_NUMBER 1,
#                     VERSION_NUMBER 2).
#                     Under normal circumstances, this can just be
left at 1.
#
# TEST_RESULTS_DIR    is the full directory path where the test's
run directory
#                     will be created.  All files (data, log, etc)
will be
#                     put into the run directory.
#
# WARMUP_TIME         is the time in seconds to warm up.  This is
the period
#                     of time after all users have started doing
transactions
#                     and before the measurement interval begins.
#
# STEADY_STATE_TIME is the time for which the test is considered to
be
#     in a steady running state.  It is during this time
#     that all data for measurement intervals will be
#     collected.
#
# MEASUREMENT_INTERVAL  defines the length of a test period within
the
#     STEADY_STATE_TIME. The steady state time may have 1
#     or more measurement intervals. Each measurement
#     interval can be thought of as a seperate measurement
#     run.
#
# COOLDOWN_TIME       is the length of time the test will continue
to run
#                     after the measurement interval is over.  This
time can
#                     be used for doing various types of data
collection by
#                     hand if desired that might otherwise have a
negative
#                     impact on the measured test results. Even if
you are
#                     not collecting any extra data by hand, it is
recommended
#                     that you keep this value at something like
300 or 600
#                     to avoid "clipping" effects at the end of the
measurement
#                     interval.
#
# CHECKPOINT_INTERVAL is the total time between the start of each
#     checkpoint command.
#
# CKPT_PROXIMITY_ADDITIONAL_OFFSET  This value will be added to any
#     required proximity time to give the actual start
#     time of the first checkpoint in the measurement
#     interval.
#
# LOGIN_DELAY         is the delay between logins on a per front
end basis.
#                     NOTE: This is similar to the prte internal
variable
#                     resume_interval (tpcc users start, then
immediately
#                     pause, so the act of logging in is just a
resume) but
#                     not exactly the same.
#
# RESUME_DELAY        is the delay between resumes on a per front
end basis.
#                     NOTE: This is similar to the prte internal
variable
#                     resume_interval but not exactly the same.
#
# STOP_DELAY          is the delay between stops on a per front end
basis.
#                     NOTE: This is similar to the prte internal
variable
#                     stop_interval but not exactly the same.
#
# SYNC_OFFSET   how many users we'll allow to have outstanding
#     when doing crowd control.
#
# SYNC_UPDATE   how often user login/resume/stop progress is
printed
#     out to the console (heartbeat of user synchronization
#     effectively).
#
```

```
# MSG_TIMEOUT   how long we'll wait for status and sync messages.
#

set network_variable LOOPBACK_MODE   0

set network_variable RUN_NUMBER          1
set network_variable VERSION_NUMBER      1
set network_variable TEST_RESULTS_DIR    /results/
#set network_variable LOG_DIR    /home/tpcc/logs/
#set network_variable RUN_DIR    /home/tpcc/logs/

#set network_variable WARMUP_TIME    1800.0
#set network_variable STEADY_STATE_TIME   3600.0
#set network_variable MEASUREMENT_INTERVAL 3600.0
#set network_variable COOLDOWN_TIME    900.0

set network_variable WARMUP_TIME     4500.0
set network_variable STEADY_STATE_TIME    7200.0
set network_variable MEASUREMENT_INTERVAL 7200.0
set network_variable COOLDOWN_TIME     600.0

set network_variable CHECKPOINT_INTERVAL 0
set network_variable CKPT_PROXIMITY_ADDITIONAL_OFFSET 0
# .05 .08 .04 ko
set network_variable LOGIN_DELAY         0.002
#set network_variable RESUME_DELAY        0.08 #w2k lnx 10i
set network_variable RESUME_DELAY        0.04 #w2k lnx 10i
set network_variable STOP_DELAY          0.001
# 100 5000
set network_variable SYNC_OFFSET     256
set network_variable SYNC_UPDATE     2000

set network_variable MSG_TIMEOUT     1200.0

#set network_variable NO_THINK_TIME 14.90
#set network_variable NO_THINK_TIME 24.90 for measured run
set network_variable NO_THINK_TIME 12.009
#set network_variable NO_THINK_TIME 12.02
set network_variable NO_THINK_TIME_UPDATE_INTERVAL 15.0


# In general, the SEED network variable should not be set. A random
value
# based on process id and the current time will be used.  This
varaible is
# really only exposed in case you want to exactly reproduce a
previous run
# using that previous run's seed.

#set network_variable SEED    123127777

####################################################################
####
#
# AUDIT UTILITIES -- these are the replacement for the audit
# shell scripts -- they currently only work for Oracle on DUNIX.
# They do the following:
#     Collect logspace info
#     Write data to audit table for later use in runcheck
#     Collect checkpoint info
#     Run optional custom scripts on back-end before or after the
test
#     For Oracle, collect bstat/estat (optional)
#
####################################################################
####
#
# GET_ALL_AUDIT_FILES if True (or 1) will create the following:
#     Audit table for doing runcheck later
#     mllog.v1 -- a before & after snapshot of the logsize
#
# BE_NAMES          Comma-separated list of back-ends
#
# BE_USERNAME       Username to use when logging into back-ends
#                   NOTE: you must have .rhosts configured so no
password
#                   is needed.
#
# DATABASE_TYPE     Oracle, Sybase or MsSql
#
# DATABASE_USERNAME Username and password for database.
# DATABASE_PASSWORD Defaults are: tpcc/tpcc for Oracle and sa/<no-
passwd>
#                   for Sybase and MsSql
#
# Optional variables -- if you don't want them, comment them out or
set to ""
#
# ORACLE_STATS_SCRIPT_PATH
#                   Path to directory on back-end containing
Oracle's
#                   orst_<xxx>.sql files.
#                   For example: $ORACLE_HOME/bench/gen/sql
#
# CUSTOM_BEFORE_TEST_SCRIPT
# CUSTOM_AFTER_TEST_SCRIPT
#                   Path of executable file on back-end to be run
before/after
#                   the test.  For example, if you wanted to run
processor
```

```
#                     affinity and load some stored procedures
before a test,
#                     you could put the commands in a shell script
on the BE
#                     and call put the path to that shell script
into the
#                     CUSTOM_BEFORE_TEST_SCRIPT variable
#
####################################################################
####

set network_variable GET_ALL_AUDIT_FILES FALSE


set network_variable BE_NAMES          pencil
set network_variable BE_USERNAME   oracle

set network_variable DATABASE_TYPE   oracle
set network_variable DATABASE_USERNAME  tpcc
set network_variable DATABASE_PASSWORD  tpcc

set network_variable MAX_W_ID  8100
set network_variable BASE_W_ID  1

#set network_variable DATABASE_TYPE MsSql
#set network_variable DATABASE_USERNAME  tpcc
#set network_variable DATABASE_PASSWORD  tpcc

set network_variable ORACLE_STATS_SCRIPT_PATH    ""
set network_variable CUSTOM_BEFORE_TEST_SCRIPT   ""
set network_variable CUSTOM_AFTER_TEST_SCRIPT    ""



####################################################################
####


# now start all the users.  delay between each user being started
is controled
# by start_interval defined above in the "PRTE internal variables"
section.
#


echo

####################################################################
#############
#
#
# Starting all PRTE users (may take a while, depending on the
number of users) #
#
#
####################################################################
#############

noecho

#disable stop

#start
-------------------------
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

#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,3000000, :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)"
```

```c
#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 SQLTXTOL1 "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 SQLTXTOL2 "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;

OCIStmt *curw;
OCIStmt *curd;
OCIStmt *curc;
OCIStmt *curcs;
OCIStmt *curh;
OCIStmt *curs;
OCIStmt *curss;
OCIStmt *curi;
OCIStmt *curo1;
OCIStmt *curo2;
OCIStmt *curol1;
OCIStmt *curol2;
OCIStmt *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:\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");
```

```c
    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   $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];
```

```c
    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 eware=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);
        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 **)(&curo1),
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),SQL
T_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,
                        (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",
                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",
                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),SQL
T_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, 25,
SQLT_STR,
                (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, 25,
SQLT_STR,
                (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, 25,
SQLT_STR,
                (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, 25,
SQLT_STR,
                (dvoid *) 0, (ub2 *)0, (ub2 *)0,
                (ub4) 0, (ub4 *) 0, (ub4) OCI_DEFAULT));

        OCIERROR(errhp, OCIBindByName(curs, &s_dist_05_bp, errhp,
(text *)":s_dist_05",
                strlen(":s_dist_05"), (ub1 *)s_dist_05, 25,
SQLT_STR,
                (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, 25,
SQLT_STR,
                (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, 25,
SQLT_STR,
                (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, 25,
SQLT_STR,
                (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, 25,
SQLT_STR,
                (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, 25,
SQLT_STR,
                    (dvoid *) 0, (ub2 *)0, (ub2 *)0,
                    (ub4) 0, (ub4 *) 0, (ub4) OCI_DEFAULT));

        OCIERROR(errhp, OCIBindByName(curs, &s_data_bp, errhp,
(text *)":s_data",
                    strlen(":s_data"), (ub1 *)s_data, 51,
SQLT_STR,
                    (dvoid *) 0, (ub2 *)0, (ub2 *)0,
                    (ub4) 0, (ub4 *) 0, (ub4) OCI_DEFAULT));
    }

    /* history */

    if (do_A || do_h) {
        OCIERROR(errhp, OCIBindByName(curh, &h_c_id_bp, errhp,
(text *)":h_c_id",
                    strlen(":h_c_id"), (ub1 *)h_c_id,
sizeof(int), SQLT_INT,
                    (dvoid *) 0, (ub2 *)0, (ub2 *)0,
                    (ub4) 0, (ub4 *) 0, (ub4) OCI_DEFAULT));

        OCIERROR(errhp, OCIBindByName(curh, &h_c_d_id_bp, errhp,
(text *)":h_c_d_id",
                    strlen(":h_c_d_id"), (ub1 *)h_d_id,
sizeof(int), SQLT_INT,
                    (dvoid *) 0, (ub2 *)0, (ub2 *)0,
                    (ub4) 0, (ub4 *) 0, (ub4) OCI_DEFAULT));

        OCIERROR(errhp, OCIBindByName(curh, &h_c_w_id_bp, errhp,
(text *)":h_c_w_id",
                    strlen(":h_c_w_id"), (ub1 *)h_w_id,
sizeof(int), SQLT_INT,
                    (dvoid *) 0, (ub2 *)0, (ub2 *)0,
                    (ub4) 0, (ub4 *) 0, (ub4) OCI_DEFAULT));

        OCIERROR(errhp, OCIBindByName(curh, &h_d_id_bp, errhp,
(text *)":h_d_id",
                    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 < ORDARR; 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",
                    strlen(":ol_supply_w_id"), (ub1
*)ol_supply_w_id, sizeof(int), SQLT_INT,
                    (dvoid *) 0, (ub2 *)ol_supply_w_id_len, (ub2
*)0,
                    (ub4) 15*ORDEARR, (ub4 *)
&ol_supply_w_id_clen, (ub4) OCI_DEFAULT));

        OCIERROR(errhp, OCIBindByName(curo1, &ol_dist_info_bp,
errhp, (text *)":ol_dist_info",
                    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_ocnt_bp, errhp,
(text *)":order_rows",
                    strlen(":order_rows"), (ub1 *)&o_cnt,
sizeof(int), SQLT_INT,
                    (dvoid *) 0, (ub2 *)0, (ub2 *)0,
                    (ub4) 0, (ub4 *) 0, (ub4) OCI_DEFAULT));

        OCIERROR(errhp, OCIBindByName(curo1, &o_olcnt_bp, errhp,
(text *)":ordl_rows",
                    strlen(":ordl_rows"), (ub1 *)&ol_cnt,
sizeof(int), SQLT_INT,
                    (dvoid *) 0, (ub2 *)0, (ub2 *)0,
                    (ub4) 0, (ub4 *) 0, (ub4) OCI_DEFAULT));
    }
```

```c
        /* 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);
#ifndef ORA_NT
    srand48 (SEED);
#endif
    initperm ();


/*-------------------------------------------------------------+
 | Load the WAREHOUSE table.            |
 +-------------------------------------------------------------*/

    if (do_A || do_w) {
        nrows = eware - bware + 1;

        fprintf (stderr, "Loading/generating warehouse: w%d - w%d (%d
rows)\n",
                bware, eware, nrows);

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

        for (loop = bware; loop <= eware; 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 = OCIStmtExecute(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;
```

```c
        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
%s\n",
                        i + 1, dwid, d_tax[i], d_name[i],
d_street_1[i],
            d_street_2[i], d_city[i], str2, num9 );
                }
                else {
                    d_id[i] = i + 1;
                    d_w_id[i] = dwid;
                    strncpy (d_state[i], str2, 2);
                    strncpy (d_zip[i], num9, 9);
                }
            }

            if (gen) {
                fflush (stdout);
            }
            else {
                status = OCIStmtExecute(tpcsvc, curd, errhp, (ub4)
DISTARR, (ub4) 0,
                        (CONST OCISnapshot*) 0, (OCISnapshot*) 0,
                        (ub4) OCI_DEFAULT | OCI_COMMIT_ON_SUCCESS);
                if (status != OCI_SUCCESS) {
            fprintf (stderr, "Aborted at ware %d, dist 1\n", dwid);
                    OCIERROR(errhp, status);
                    quit ();
                    exit (1);
                }
            }
        }
        end_time = gettime ();
        end_cpu = getcpu ();
        fprintf (stderr, "Done.  %d rows loaded/generated in %10.2f
sec. (%10.2f cpu)\n\n",
                nrows, end_time - begin_time, end_cpu - begin_cpu);
    }
/*-------------------------------------------------------------+
 | Load the CUSTOMER table.            |
 +-------------------------------------------------------------*/

    if (do_A || do_c) {

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

        fprintf (stderr, "Loading/generating customer: w%d - w%d (%d
rows)\n   ",
                bware, eware, nrows);

        if (getenv("tpcc_hash_overflow")) {
            fprintf(stderr,"Hash overflow is enabled\n");
            OCIHandleAlloc(tpcenv, (dvoid **)&curi, OCI_HTYPE_STMT, 0,
(dvoid**)0);
            sprintf ((char *) stmbuf, SQLTXTENHA);
            OCIStmtPrepare(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 = 1;
        s_c_d_id = 1;
        s_c_w_id = bware;

        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) {
                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 = 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_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 = 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) 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 %s %cC
5000000 %6.4f -1000 1000 1 0 %s\n",
                        cid, cdid, cwid, c_first[i], c_last[i],
                        c_street_1[i], c_street_2[i], c_city[i],
str2, num9,
                        num16, sdate, c_credit[i][0], c_discount[i],
c_data[i]);
            }
            else {
                strncpy (c_state[i], str2, 2);
                strncpy (c_zip[i], num9, 9);
                strncpy (c_phone[i], num16, 16);
            }
        }

        if (gen) {
            fflush (stdout);
        }
        else {
            status = 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);
#ifndef 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 = 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) 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 %cC
5000000 %6.4f -1000 1000 1 0 %s\n",
                        cid, cdid, cwid, c_first[i], c_last[i],
                        c_street_1[i], c_street_2[i], c_city[i],
str2, num9,
                        num16, sdate, c_credit[i][0], c_discount[i],
c_data[i]);
            }
            else {
                strncpy (c_state[i], str2, 2);
                strncpy (c_zip[i], num9, 9);
                strncpy (c_phone[i], num16, 16);
            }
        }

        if (gen) {
            fflush (stdout);
        }
        else {
            status = 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 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 = OCIStmtExecute(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_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, eware, nrows);

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

       s_s_i_id = bitem;
       s_s_w_id = bware;

       while (s_s_i_id <= eitem) {
           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_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 = 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_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 %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 = OCIStmtExecute(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) {
                        cdid = 1;
                        cwid++;             /* shift warehouse cycle */
                    }
                }
                h_c_id[i] = cid;
                h_d_id[i] = cdid;
                h_w_id[i] = cwid;
                randstr (h_data[i], 12, 24);
                if (gen) {
                    printf ("%d %d %d %d %d %s 1000 %s\n", cid, cdid,
cwid, cdid,
                            cwid, sdate, h_data[i]);
                }
            }

            if (gen) {
                fflush (stdout);
            }
            else {
                status = OCIStmtExecute(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, eware, nrows, nrows * 10);

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

        cid = 0;
        cdid = 1;
        cwid = bware;
        loopcount = 0;
```

```
    for (row = 0; row < nrows; ) {

        batch_olcnt = 0;

        for (i = 0; i < ORDEARR; i++, row++) {
            cid++;
            if (cid > ORDEFAC) {          /* cycle cust id */
                cid = 1;                  /* cheap mod */
                cdid++;                   /* shift district cycle */
                if (cdid > DISTFAC) {
                    cdid = 1;
                    cwid++;               /* shift warehouse cycle */
                }
            }
            o_carrier_id[i] = lrand48 () % 10 + 1;
            o_ol_cnt[i] = olcnt = lrand48 () % 11 + 5;

            if (gen) {
                if (cid < 2101) {
                    printf ("%d %d %d %d %s %d %d 1\n", cid, cdid,
cwid,
                            randperm3000[cid - 1],
sdate,o_carrier_id[i],
                            o_ol_cnt[i]);
                }
                else {
                /* set carrierid to 11 instead of null */
                    printf ("%d %d %d %d %s 11 %d 1\n", cid, cdid,
cwid,
                            randperm3000[cid - 1], sdate,
o_ol_cnt[i]);
                }
            }
            else {
                o_id[i] = cid;
                o_d_id[i] = cdid;
                o_w_id[i] = cwid;
                o_c_id[i] = randperm3000[cid - 1];
                if (cid >= 2101 ) {
                    o_carrier_id[i] = 11;
                }
            }

            for (j = 0; j < o_ol_cnt[i]; j++, batch_olcnt++ ) {
                ol_i_id[batch_olcnt] = sid = lrand48 () % 100000 +
1;

                if (cid < 2101)
                    ol_amount[batch_olcnt] = 0;
                else
                    ol_amount[batch_olcnt] = (lrand48 () % 999999 +
1) ;

                randstr (str24[j], 24, 24);

                if (gen) {
                    if (cid < 2101) {
                        fprintf (olfp, "%d %d %d %d %s %d %d 5 %ld
%s\n", cid,
                                cdid, cwid, j + 1, sdate,
ol_i_id[batch_olcnt], cwid,
                                ol_amount[batch_olcnt], str24[j]);
                    }
                    else {
                        /* Insert a default date instead of null date
*/
                        fprintf (olfp, "%d %d %d %d 01-Jan-1811 %d %d
5 %ld %s\n", cid,
                                cdid, cwid, j + 1,
ol_i_id[batch_olcnt], cwid,
                                ol_amount[batch_olcnt], str24[j]);
                    }
                }
                else {
                    ol_o_id[batch_olcnt] = cid;
                    ol_d_id[batch_olcnt] = cdid;
                    ol_w_id[batch_olcnt] = cwid;
                    ol_number[batch_olcnt] = j + 1;
                    ol_supply_w_id[batch_olcnt] = cwid;
                    strncpy (ol_dist_info[batch_olcnt], str24[j],
24);
                }
            }
            if (gen) {
                fflush (olfp);
            }
        }

        o_cnt =  ORDEARR;
        ol_cnt =  batch_olcnt;

        for (j = 0; j < batch_olcnt; j++) {
            ol_o_id_len[j] = sizeof(int);
            ol_d_id_len[j] = sizeof(int);
            ol_w_id_len[j] = sizeof(int);
            ol_number_len[j] = sizeof(int);
            ol_i_id_len[j] = sizeof(int);
            ol_supply_w_id_len[j] = sizeof(int);
            ol_dist_info_len[j] = 24;
            ol_amount_len[j] = sizeof(int);
        }
        for (j = batch_olcnt; j < 15*ORDEARR; j++) {
            ol_o_id_len[j] = 0;
            ol_d_id_len[j] = 0;
            ol_w_id_len[j] = 0;
            ol_number_len[j] = 0;
            ol_i_id_len[j] = 0;
            ol_supply_w_id_len[j] = 0;
            ol_dist_info_len[j] = 0;
            ol_amount_len[j] = 0;
        }

        o_id_clen = ORDEARR;
        o_d_id_clen = ORDEARR;
        o_w_id_clen = ORDEARR;
        o_c_id_clen = ORDEARR;
        o_carrier_id_clen = ORDEARR;
        o_ol_cnt_clen = ORDEARR;

        ol_o_id_clen = batch_olcnt;
        ol_d_id_clen = batch_olcnt;
        ol_w_id_clen = batch_olcnt;
        ol_number_clen = batch_olcnt;
        ol_i_id_clen = batch_olcnt;
        ol_supply_w_id_clen = batch_olcnt;
        ol_dist_info_clen = batch_olcnt;
        ol_amount_clen = batch_olcnt;

        OCIERROR(errhp, OCIStmtExecute(tpcsvc, curo1, 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;
    cdid = 1;
    cwid = bware;
    loopcount = 0;

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

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

        if (gen) {
            fflush (stdout);
        }
        else {
            status = OCIStmtExecute(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 (RECOVERR);
}
```

Appendix B:
Database Design

```
------------------------
defaultopts.sh
------------------------

# configurable vars
tpcc_os=unix
tpcc_version=ttt
tpcc_ldrive=1
tpcc_scale=10
tpcc_np=1
tpcc_cpu=1
#megabytes
tpcc_memsize=512
#minutes
tpcc_runlen=24

tpcc_temp_imp=temp
tpcc_temp_size=10M
tpcc_temp_ext=calc
tpcc_temp_nf=calc
tpcc_temp_bs=2K

tpcc_ware_imp=iot
tpcc_ware_size=10M
tpcc_ware_ext=calc
tpcc_ware_nf=calc
tpcc_ware_bs=auto

tpcc_ware_used=-1
tpcc_ware_free=-1
tpcc_ware_trans=-1

tpcc_ware_indices=1-

tpcc_ware_autospace=t
tpcc_ware_flg=30
tpcc_ware_fl=22

tpcc_iware_imp=none
tpcc_iware_size=1M
tpcc_iware_ext=calc
tpcc_iware_nf=calc
tpcc_iware_bs=2K

tpcc_iware_used=-1
tpcc_iware_free=-1
tpcc_iware_trans=-1

tpcc_iware_autospace=t
tpcc_iware_flg=30
tpcc_iware_fl=22

tpcc_iware_indices=1-


tpcc_dist_imp=cluster
tpcc_dist_size=10M
tpcc_dist_ext=calc
tpcc_dist_nf=calc
tpcc_dist_bs=auto

tpcc_dist_used=-1
tpcc_dist_free=-1
tpcc_dist_trans=-1

tpcc_dist_indices=2-1-

tpcc_dist_autospace=t
tpcc_dist_flg=30
tpcc_dist_fl=22

tpcc_idist_imp=index
tpcc_idist_size=1M
tpcc_idist_ext=calc
tpcc_idist_nf=calc
tpcc_idist_bs=2K

tpcc_idist_used=-1
tpcc_idist_free=-1
tpcc_idist_trans=-1

tpcc_idist_autospace=t
tpcc_idist_flg=30
tpcc_idist_fl=22

tpcc_idist_indices=2-1-


tpcc_item_imp=cluster
```

```
tpcc_item_size=15M
tpcc_item_ext=calc
tpcc_item_nf=calc
tpcc_item_bs=auto

tpcc_item_used=-1
tpcc_item_free=-1
tpcc_item_trans=-1

tpcc_item_indices=1-

tpcc_item_autospace=t
tpcc_item_flg=30
tpcc_item_fl=22

tpcc_iitem_imp=index
tpcc_iitem_size=1M
tpcc_iitem_ext=calc
tpcc_iitem_nf=calc
tpcc_iitem_bs=2K

tpcc_iitem_used=-1
tpcc_iitem_free=-1
tpcc_iitem_trans=-1

tpcc_iitem_autospace=t
tpcc_iitem_flg=30
tpcc_iitem_fl=22

tpcc_iitem_indices=1-


tpcc_nord_imp=iot
tpcc_nord_size=10M
tpcc_nord_ext=calc
tpcc_nord_nf=calc
tpcc_nord_bs=auto

tpcc_nord_used=-1
tpcc_nord_free=-1
tpcc_nord_trans=-1

tpcc_nord_indices=1-2-3-

tpcc_nord_autospace=t
tpcc_nord_flg=30
tpcc_nord_fl=22

tpcc_inord_imp=none
tpcc_inord_size=1M
tpcc_inord_ext=calc
tpcc_inord_nf=calc
tpcc_inord_bs=2K

tpcc_inord_used=-1
tpcc_inord_free=-1
tpcc_inord_trans=-1

tpcc_inord_autospace=t
tpcc_inord_flg=30
tpcc_inord_fl=22

tpcc_inord_indices=1-2-3-


tpcc_ordl_imp=iot
tpcc_ordl_size=10M
tpcc_ordl_ext=calc
tpcc_ordl_nf=calc
tpcc_ordl_bs=auto

tpcc_ordl_used=-1
tpcc_ordl_free=-1
tpcc_ordl_trans=-1

tpcc_ordl_indices=1-2-3-4-

tpcc_ordl_autospace=t
tpcc_ordl_flg=30
tpcc_ordl_fl=22

tpcc_iordl_imp=none
tpcc_iordl_size=1M
tpcc_iordl_ext=calc
tpcc_iordl_nf=calc
tpcc_iordl_bs=2K

tpcc_iordl_used=-1
tpcc_iordl_free=-1
tpcc_iordl_trans=-1

tpcc_iordl_autospace=t
tpcc_iordl_flg=30
```

```
tpcc_iordl_fl=22

tpcc_iordl_indices=1-2-3-4-


tpcc_ordr_imp=table
tpcc_ordr_size=10M
tpcc_ordr_ext=calc
tpcc_ordr_nf=calc
tpcc_ordr_bs=auto

tpcc_ordr_used=-1
tpcc_ordr_free=-1
tpcc_ordr_trans=-1

tpcc_ordr_indices=2-3-1

tpcc_ordr_autospace=t
tpcc_ordr_flg=30
tpcc_ordr_fl=22

tpcc_iordr1_imp=index
tpcc_iordr1_size=1M
tpcc_iordr1_ext=calc
tpcc_iordr1_nf=calc
tpcc_iordr1_bs=2K

tpcc_iordr1_used=-1
tpcc_iordr1_free=-1
tpcc_iordr1_trans=-1

tpcc_iordr1_autospace=t
tpcc_iordr1_flg=30
tpcc_iordr1_fl=22

tpcc_iordr1_indices=2-3-1

tpcc_iordr2_imp=index
tpcc_iordr2_size=1M
tpcc_iordr2_ext=calc
tpcc_iordr2_nf=calc
tpcc_iordr2_bs=2K

tpcc_iordr2_used=-1
tpcc_iordr2_free=-1
tpcc_iordr2_trans=-1

tpcc_iordr2_autospace=t
tpcc_iordr2_flg=30
tpcc_iordr2_fl=22

tpcc_iordr2_indices=2-3-4-1


tpcc_stok_imp=cluster
tpcc_stok_size=35M
tpcc_stok_ext=calc
tpcc_stok_nf=calc
tpcc_stok_bs=auto

tpcc_stok_used=-1
tpcc_stok_free=-1
tpcc_stok_trans=-1

tpcc_stok_indices=1-2-

tpcc_stok_autospace=t
tpcc_stok_flg=30
tpcc_stok_fl=22

tpcc_istok_imp=index
tpcc_istok_size=1M
tpcc_istok_ext=calc
tpcc_istok_nf=calc
tpcc_istok_bs=2K

tpcc_istok_used=-1
tpcc_istok_free=-1
tpcc_istok_trans=-1

tpcc_istok_autospace=t
tpcc_istok_flg=30
tpcc_istok_fl=22

tpcc_istok_indices=1-2-


tpcc_cust_imp=cluster
tpcc_cust_size=25M
tpcc_cust_ext=calc
tpcc_cust_nf=calc
#bs
tpcc_cust_bs=2K

tpcc_cust_used=-1
tpcc_cust_free=-1
tpcc_cust_trans=-1

tpcc_cust_indices=1-2-3-
```

```
tpcc_cust_autospace=t
tpcc_cust_flg=30
tpcc_cust_fl=22

tpcc_icust1_imp=index
tpcc_icust1_size=1M
tpcc_icust1_ext=calc
tpcc_icust1_nf=calc
tpcc_icust1_bs=2K

tpcc_icust1_used=-1
tpcc_icust1_free=-1
tpcc_icust1_trans=-1

tpcc_icust1_autospace=t
tpcc_icust1_flg=30
tpcc_icust1_fl=22

tpcc_icust1_indices=1-2-3-

tpcc_icust2_imp=index
tpcc_icust2_size=1M
tpcc_icust2_ext=calc
tpcc_icust2_nf=calc
tpcc_icust2_bs=2K

tpcc_icust2_used=-1
tpcc_icust2_free=-1
tpcc_icust2_trans=-1

tpcc_icust2_autospace=t
tpcc_icust2_flg=30
tpcc_icust2_fl=22

tpcc_icust2_indices=6-7-1-2-3-

tpcc_hist_imp=table
tpcc_hist_size=10M
tpcc_hist_ext=calc
tpcc_hist_nf=calc
tpcc_hist_bs=auto

tpcc_hist_used=-1
tpcc_hist_free=-1
tpcc_hist_trans=-1

tpcc_hist_indices=no

tpcc_hist_autospace=t
tpcc_hist_flg=30
-----------------------
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: $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
      if test -n "`find $tpcc_bench/ -name '*.log'`"; then
        mv -f *.log $tpcc_bench/log/
      fi
    fi

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

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


------------------------
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=/home/oracle/tpcc_data/

#FOR NT
tpcc_disks_location=c:/tpcc_data/

#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='2'
tpcc_scale='8500'
tpcc_np='1'
tpcc_cpu='4'
tpcc_memsize='10240'
tpcc_runlen='20'
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_icust2_bs='auto'
tpcc_nord_free='5'                     tpcc_icust2_used='-1'
tpcc_nord_trans='4'                    tpcc_icust2_free='1'
tpcc_nord_autospace='t'                tpcc_icust2_trans='3'
tpcc_nord_flg='43'                     tpcc_icust2_autospace='t'
tpcc_nord_fl='22'                      tpcc_icust2_flg='43'
tpcc_nord_rsize='auto'                 tpcc_icust2_fl='22'
tpcc_nord_hkey='auto'                  tpcc_icust2_rsize='auto'
tpcc_nord_hash='auto'                  tpcc_icust2_hkey='auto'
tpcc_nord_bpool='default'              tpcc_icust2_hash='auto'
tpcc_nord_indices=1-2-3-               tpcc_icust2_bpool='default'
                                       tpcc_icust2_indices=6-3-2-7-1-
tpcc_ordl_imp='queue'
tpcc_ordl_size='21775'                 tpcc_idist_imp='index'
tpcc_ordl_ext='calc'                   tpcc_idist_size='4'
tpcc_ordl_nf='calc'                    tpcc_idist_ext='calc'
tpcc_ordl_bs='16K'                     tpcc_idist_nf='calc'
tpcc_ordl_used='-1'                    tpcc_idist_bs='auto'
tpcc_ordl_free='5'                     tpcc_idist_used='-1'
tpcc_ordl_trans='4'                    tpcc_idist_free='5'
tpcc_ordl_autospace='t'                tpcc_idist_trans='3'
tpcc_ordl_flg='43'                     tpcc_idist_autospace='t'
tpcc_ordl_fl='22'                      tpcc_idist_flg='43'
tpcc_ordl_rsize='auto'                 tpcc_idist_fl='22'
tpcc_ordl_hkey='auto'                  tpcc_idist_rsize='auto'
tpcc_ordl_hash='auto'                  tpcc_idist_hkey='auto'
tpcc_ordl_bpool='default'              tpcc_idist_hash='auto'
tpcc_ordl_indices=1-2-3-4-             tpcc_idist_bpool='default'
                                       tpcc_idist_indices=2-1-
tpcc_ordr_imp='queue'
tpcc_ordr_size='1206'                  tpcc_iitem_imp='index'
tpcc_ordr_ext='calc'                   tpcc_iitem_size='2048'
tpcc_ordr_nf='calc'                    tpcc_iitem_ext='calc'
tpcc_ordr_bs='16K'                     tpcc_iitem_nf='calc'
tpcc_ordr_used='-1'                    tpcc_iitem_bs='auto'
tpcc_ordr_free='5'                     tpcc_iitem_used='-1'
tpcc_ordr_trans='4'                    tpcc_iitem_free='5'
tpcc_ordr_autospace='t'                tpcc_iitem_trans='4'
tpcc_ordr_flg='43'                     tpcc_iitem_autospace='t'
tpcc_ordr_fl='22'                      tpcc_iitem_flg='43'
tpcc_ordr_rsize='auto'                 tpcc_iitem_fl='22'
tpcc_ordr_hkey='auto'                  tpcc_iitem_rsize='auto'
tpcc_ordr_hash='auto'                  tpcc_iitem_hkey='auto'
tpcc_ordr_bpool='default'              tpcc_iitem_hash='auto'
tpcc_ordr_indices=2-3-1-               tpcc_iitem_bpool='default'
                                       tpcc_iitem_indices=1-
tpcc_stok_imp='cluster'
tpcc_stok_size='calc'                  tpcc_inord_imp='none'
tpcc_stok_ext='calc'                   tpcc_inord_size='229'
tpcc_stok_nf='calc'                    tpcc_inord_ext='calc'
tpcc_stok_bs='auto'                    tpcc_inord_nf='calc'
tpcc_stok_used='-1'                    tpcc_inord_bs='auto'
tpcc_stok_free='0'                     tpcc_inord_used='-1'
tpcc_stok_trans='2'                    tpcc_inord_free='5'
tpcc_stok_autospace='t'                tpcc_inord_trans='4'
tpcc_stok_flg='43'                     tpcc_inord_autospace='t'
tpcc_stok_fl='22'                      tpcc_inord_flg='43'
tpcc_stok_rsize='auto'                 tpcc_inord_fl='22'
tpcc_stok_hkey='auto'                  tpcc_inord_rsize='auto'
tpcc_stok_hash='auto'                  tpcc_inord_hkey='auto'
tpcc_stok_bpool='keep'                 tpcc_inord_hash='auto'
tpcc_stok_indices=1-2-                 tpcc_inord_bpool='default'
                                       tpcc_inord_indices=1-2-3-
tpcc_ware_imp='cluster'
tpcc_ware_size='calc'                  tpcc_iordl_imp='none'
tpcc_ware_ext='calc'                   tpcc_iordl_size='8072'
tpcc_ware_nf='calc'                    tpcc_iordl_ext='calc'
tpcc_ware_bs='auto'                    tpcc_iordl_nf='calc'
tpcc_ware_used='-1'                    tpcc_iordl_bs='auto'
tpcc_ware_free='-1'                    tpcc_iordl_used='-1'
tpcc_ware_trans='2'                    tpcc_iordl_free='5'
tpcc_ware_autospace='t'                tpcc_iordl_trans='4'
tpcc_ware_flg='43'                     tpcc_iordl_autospace='t'
tpcc_ware_fl='22'                      tpcc_iordl_flg='43'
tpcc_ware_rsize='auto'                 tpcc_iordl_fl='22'
tpcc_ware_hkey='auto'                  tpcc_iordl_rsize='auto'
tpcc_ware_hash='auto'                  tpcc_iordl_hkey='auto'
tpcc_ware_bpool='default'              tpcc_iordl_hash='auto'
tpcc_ware_indices=1-                   tpcc_iordl_bpool='default'
                                       tpcc_iordl_indices=1-2-3-4-
tpcc_icust1_imp='index'
tpcc_icust1_size='736'                 tpcc_iordr1_imp='none'
tpcc_icust1_ext='calc'                 tpcc_iordr1_size='703'
tpcc_icust1_nf='calc'                  tpcc_iordr1_ext='calc'
tpcc_icust1_bs='16K'                   tpcc_iordr1_nf='calc'
tpcc_icust1_used='-1'                  tpcc_iordr1_bs='auto'
tpcc_icust1_free='1'                   tpcc_iordr1_used='-1'
tpcc_icust1_trans='3'                  tpcc_iordr1_free='1'
tpcc_icust1_autospace='t'              tpcc_iordr1_trans='3'
tpcc_icust1_flg='43'                   tpcc_iordr1_autospace='t'
tpcc_icust1_fl='22'                    tpcc_iordr1_flg='43'
tpcc_icust1_rsize='auto'               tpcc_iordr1_fl='22'
tpcc_icust1_hkey='auto'                tpcc_iordr1_rsize='auto'
tpcc_icust1_hash='auto'                tpcc_iordr1_hkey='auto'
tpcc_icust1_bpool='default'            tpcc_iordr1_hash='auto'
tpcc_icust1_indices=3-2-1-             tpcc_iordr1_bpool='default'
                                       tpcc_iordr1_indices=2-3-1-
tpcc_icust2_imp='index'
tpcc_icust2_size='4591'                tpcc_iordr2_imp='index'
tpcc_icust2_ext='calc'                 tpcc_iordr2_size='1135'
tpcc_icust2_nf='calc'                  tpcc_iordr2_ext='calc'
```

```
tpcc_iordr2_nf='calc'                      control_files = (c:\tpcc_data\control_001)
tpcc_iordr2_bs='auto'                      parallel_max_servers = 100
tpcc_iordr2_used='-1'                      recovery_parallelism = 40
tpcc_iordr2_free='25'                      db_files = 191
tpcc_iordr2_trans='4'                      db_cache_size    = 3413M
tpcc_iordr2_autospace='t'                  db_8k_cache_size  = 1280M
tpcc_iordr2_flg='43'                       db_16k_cache_size = 3413M
tpcc_iordr2_fl='22'                        dml_locks = 500
tpcc_iordr2_rsize='auto'                   statistics_level = basic
tpcc_iordr2_hkey='auto'                    log_buffer = 1048576
tpcc_iordr2_hash='auto'                    processes = 150
tpcc_iordr2_bpool='default'                sessions = 150
tpcc_iordr2_indices=2-3-4-1-               transactions = 150
                                           shared_pool_size = 640M
tpcc_istok_imp='index'                     cursor_space_for_time = TRUE
tpcc_istok_size='2090'                     db_block_size = 2048
tpcc_istok_ext='calc'                      undo_management = auto
tpcc_istok_nf='calc'                       undo_retention = 2
tpcc_istok_bs='16K'                        plsql_optimize_level=2
tpcc_istok_used='-1'
tpcc_istok_free='1'                        UNDO_TABLESPACE = undo_1
tpcc_istok_trans='3'                       db_4k_cache_size = 20M
tpcc_istok_autospace='t'                   ------------------------
tpcc_istok_flg='43'                        p_create.ora
tpcc_istok_fl='22'                         ------------------------
tpcc_istok_rsize='auto'
tpcc_istok_hkey='auto'                     compatible = 10.1.0.0.0
tpcc_istok_hash='auto'                     db_name = tpcc
tpcc_istok_bpool='default'                 control_files = (c:\tpcc_data\control_001)
tpcc_istok_indices=1-2-                    db_block_size = 2048
                                           db_cache_size = 3413M
tpcc_iware_imp='index'                     db_8k_cache_size = 1280M
tpcc_iware_size='1'                        log_buffer = 1048576
tpcc_iware_ext='calc'                      db_16k_cache_size = 3413M
tpcc_iware_nf='calc'                       undo_management = manual
tpcc_iware_bs='auto'                       statistics_level = basic
tpcc_iware_used='-1'                       shared_pool_size = 640M
tpcc_iware_free='1'                        plsql_optimize_level=2
tpcc_iware_trans='3'                       db_4k_cache_size = 20M
tpcc_iware_autospace='t'                   ------------------------
tpcc_iware_flg='43'                        p_run.ora
tpcc_iware_fl='22'                         ------------------------
tpcc_iware_rsize='auto'
tpcc_iware_hkey='auto'                     #########################
tpcc_iware_hash='auto'                     # General Database
tpcc_iware_bpool='default'                 #########################
tpcc_iware_indices=1-
                                           control_files               = C:/tpcc_data/control_001
tpcc_temp_imp='temp'                       processes       = 469
tpcc_temp_size='16145'                     sessions        = 880
tpcc_temp_ext='calc'                       transactions    = 600
tpcc_temp_nf='calc'                        db_name        = tpcc
tpcc_temp_bs='auto'                        db_files       = 200
tpcc_temp_used='-1'                        compatible     = 11.1.0.0.0
tpcc_temp_free='0'                         dml_locks      = 500
tpcc_temp_trans='3'                        db_block_size      = 2048
tpcc_temp_autospace='t'                    remote_login_passwordfile   = shared
tpcc_temp_flg='43'                         utl_file_dir       = *
tpcc_temp_fl='22'                          aq_tm_processes        = 0
tpcc_temp_rsize='auto'                     max_dump_file_size     = 1M
tpcc_temp_hkey='auto'                      resource_manager_plan    = ''
tpcc_temp_hash='auto'
tpcc_temp_bpool='default'                  #########################
tpcc_temp_indices=no                       # Buffer Cache / SGA
                                           #########################
------------------------
p_build2.ora
------------------------                   # 20 GB
                                           db_cache_size      = 2000M
                                           db_keep_cache_size     = 13800M
compatible = 10.1.0.0.0                    db_recycle_cache_size    = 256M
db_name = tpcc                             db_16k_cache_size    = 3000M
control_files = (c:\tpcc_data\control_001) db_8k_cache_size     = 64M
parallel_max_servers = 100                 shared_pool_size     = 1300M
recovery_parallelism = 40
db_files = 191                             java_pool_size       = 0
db_cache_size    = 3413M
db_8k_cache_size  = 1280M                  #########################
db_16k_cache_size = 3413M                  # I/O
dml_locks = 500                            #########################
statistics_level = basic
log_buffer = 1048576                       db_writer_processes     = 1
processes = 150                            disk_asynch_io      = true
sessions = 150                             db_block_checking     = false
transactions = 150                         db_block_checksum     = false
shared_pool_size = 640M
cursor_space_for_time = TRUE               #########################
db_block_size = 2048                       # Undo Management
undo_management = auto                     #########################
undo_retention = 2
plsql_optimize_level=2                     undo_management      = auto
                                           undo_retention       = 0
UNDO_TABLESPACE = undo_1                   undo_tablespace      = undo_1
db_4k_cache_size = 20M                     transactions_per_rollback_segment = 1
------------------------
p_build.ora                                #########################
------------------------                   # Optimizations
                                           #########################

compatible = 10.1.0.0.0                    cursor_space_for_time    = true
db_name = tpcc                             plsql_optimize_level     = 2
```

```
replication_dependency_tracking = false
db_file_multiblock_read_count = 32
fast_start_mttr_target   = 0
parallel_max_servers     = 0

##########################
# Recovery
##########################


##########################
# Log / Checkpointing
##########################

log_buffer       = 10485760
log_checkpoint_interval  = 0
log_checkpoint_timeout    =0
log_checkpoints_to_alert = true

##########################
# Statistics
##########################

timed_statistics    = false
statistics_level    = basic

query_rewrite_enabled = false

trace_enabled = false

------------------------
stepenv.sh
------------------------

# forces any env variables we set to be exported
set -a
tpcc_kit=t
tpcc_bench=c:/tpcc8500
tpcc_scripts=$tpcc_bench/scripts
tpcc_require=$tpcc_scripts/require_vars.sh
tpcc_lcm=$tpcc_scripts/lcm.sh
tpcc_tokilobytes=$tpcc_scripts/tokilobytes.sh
tpcc_fromkilobytes=$tpcc_scripts/fromkilobytes.sh
tpcc_estsize=$tpcc_scripts/estsize.sh
tpcc_notneg=$tpcc_scripts/notneg.sh
tpcc_isneg=$tpcc_scripts/isneg.sh


# need a better way to check for bc, may
# resort to checking each directory in path
# if this doesn't work
#11/7/02 - alex.ni this is causing too many problems
#because systems have bc in some odd place.  typically
#mangled cygwin installs w/ mksnt/cygwin mixes
#if test -x /usr/bin/bc -o -x /bin/bc; then
tpcc_bcexpr=$tpcc_scripts/bcexpr.sh
#else
#tpcc_bcexpr=expr
#fi


# the ksh version is a bit faster, so we want
# to use it if we have ksh.  Otherwise we have
# a compatible version.
#if test -x /bin/ksh; then
#tpcc_createts=$tpcc_scripts/createts.ksh
#else
tpcc_createts=$tpcc_scripts/createts.sh
#fi

tpcc_tabledata=$tpcc_scripts/tabledata.sh
tpcc_load=$tpcc_bench/benchrun/bin/tpccload.exe
tpcc_createtablespaces=$tpcc_scripts/createtablespaces.sh

##
tpcc_sqlplus=cat
tpcc_sqlplus_args='/nolog'
tpcc_internal_connect='connect / as sysdba'
tpcc_user_pass='tpcc/tpcc'
tpcc_dba_user_pass='system/manager'
oracle_dba=system
oracle_dba_password=manager
tpcc_sqlplus=sqlplus

# import options generated by gui
. ${tpcc_bench}/options.sh

#8gb oracle filesize limit (in k)
tpcc_fsize_limit_k=8243200
#2gb - 1k oracle extent limit (in k)
tpcc_extent_limit_k=2048000
#file number limit: 1024
tpcc_file_number_limit=1024

# Runlen calculations should be in hours, but
# this was the old calculation, which assumed
# minutes, and also 8 times:
# tpcc_runlen=`$tpcc_bcexpr 8 \* 60 \* $tpcc_runlen`
# we just want to keep the value as it is.

tpcc_system_size=400M
```

```
tpcc_kilo_bytes=1024
#tpcc_logfile_size=`$tpcc_bcexpr 20 + \( $tpcc_scale \)`

if test $tpcc_np -gt 1 ; then
   # 4.69k per commit * 2.1 commit per TPMC ~ 9.85K
   # 9.85k * 30 minutes * 12.5 TPMC per Warehouse = 3693
   tpcc_logfile_size=`$tpcc_bcexpr \( $tpcc_scale \* 3693 \) /
$tpcc_kilo_bytes`
else
   # 2.4k per commit * 2.1 commit per TPMC ~ 5k
   # 5k * 30 minutes * 12.5 TPMC per Warehouse = 1875
   tpcc_logfile_size=`$tpcc_bcexpr \( $tpcc_scale \* 1875 \) /
$tpcc_kilo_bytes`
fi

if test $tpcc_logfile_size -lt 1024; then
  tpcc_logfile_size=1024
fi
tpcc_logfile_size="${tpcc_logfile_size}M"

tpcc_undo_size=`$tpcc_bcexpr 2 \* $tpcc_scale`
if test $tpcc_undo_size -gt 8096; then
  tpcc_undo_size=8096
fi
if test $tpcc_undo_size -lt 512; then
  tpcc_undo_size=512
fi
tpcc_undo_size="${tpcc_undo_size}M"

tpcc_undo_bs=8K

tpcc_statspack_size=`$tpcc_bcexpr 1 \* $tpcc_scale`
if test $tpcc_statspack_size -gt 2048; then
  tpcc_statspack_size=2048
fi
if test $tpcc_statspack_size -lt 300; then
  tpcc_statspack_size=300
fi
tpcc_statspack_size="${tpcc_statspack_size}M"

tpcc_sysaux_size=120M

# fixed table params

#table list (note temp is always at the end since it may use
numbers from other tables, and it's not included in these lists)
tpcc_table_list='ware cust dist hist stok item ordr ordl nord'
tpcc_index_list='iware icust1 icust2 idist istok iitem iordr1
iordr2 iordl inord'
#for these I use average row length, calculated from multi-
blocksize stats.
#we figure out how many new rows we will gain in a run (in
createtablesspaces.sh)
#and add that much to the base tablespace size.
tpcc_hist_growth=51
tpcc_ordr_growth=35
tpcc_nord_growth=regular
#tpcc_ordl_growth=660
tpcc_ordl_growth=900

#i started indices at 1/10th... need an exact figure
tpcc_iordr1_growth=20
tpcc_iordr2_growth=20
tpcc_iordl_growth=66
tpcc_inord_growth=2

tpcc_item_growth=0
tpcc_iitem_growth=0
tpcc_temp_growth=0

tpcc_cust_growth=regular
tpcc_icust1_growth=regular
tpcc_icust2_growth=regular

tpcc_stok_growth=regular
tpcc_istok_growth=regular

tpcc_ware_growth=regular
tpcc_iware_growth=regular

tpcc_dist_growth=regular
tpcc_idist_growth=regular

# minimum size of temp tablespace
tpcc_tempts_min=10240

# for Linux, set appropriate tablespace heuristics
# to set high io tables to have 64 files, and minimize
# others.
if expr $tpcc_os = linux > /dev/null; then
#   for table in $tpcc_table_list $tpcc_index_list temp; do
#     eval "tpcc_${table}_tsfileinc=1"
#   done
  if test $tpcc_numfiles = 0 ; then
    tpcc_numfiles=256
  fi
  tpcc_os=unix

#  tpcc_stok_tsfileinc=64
#  tpcc_cust_tsfileinc=64
#  tpcc_iordl2_tsfileinc=16
```

```
#  tpcc_icust2_tsfileinc=16
#  tpcc_iordl_tsfileinc=16
else
#in case someone changes out of linux, and the shell is stuck
  for table in $tpcc_table_list $tpcc_index_list temp; do
    eval "tpcc_${table}_tsfileinc="
  done
fi
  tpcc_stok_tsfileinc=
  tpcc_cust_tsfileinc=
  tpcc_iordl2_tsfileinc=
  tpcc_icust2_tsfileinc=
  tpcc_iordl_tsfileinc=
#fi


# import local options
. ${tpcc_bench}/localoptions.sh

if expr `echo x$tpcc_no_options` = xt > /dev/null; then
  echo Please modify ${tpcc_bench}/localoptions.sh to configure the
generator.
  exit 1
fi

tpcc_fixordrdrdl=${tpcc_genscripts_dir}/loadfixordrdrdl.sh
tpcc_updateordrdrdl=${tpcc_scripts}/updateordrdrdl.sh

#tp- get table param.  (that is, $tpcc_tablename_tableparam)
tp(){
  eval echo \""\$tpcc_$1_$2"\"
}

# automatically generated variables
if expr `echo $tpcc_version | cut -b1` = t > /dev/null; then
  tpcc_auto_undo=t
else
  tpcc_auto_undo=f
fi
if expr `echo $tpcc_version | cut -b2` = t > /dev/null; then
  tpcc_autospace_avail=t
else
  tpcc_autospace_avail=f
fi
if expr `echo $tpcc_version | cut -b3` = t > /dev/null; then
  tpcc_queue_avail=t
  tpcc_use_sysaux=t
else
  tpcc_queue_avail=f
  tpcc_use_sysaux=f
fi

# for NT, ORACLE does not like $variables in sql scripts, so we
must
# hardcode these things for it.
if test x$tpcc_os = xnt; then
  tpcc_hardcode=t
else
  tpcc_hardcode=f
fi

# if this is unset we need to make sure it's something anyway
if test x$tpcc_defbs = x; then
  tpcc_defbs=2
fi

# used for loading program
if test x$tpcc_hash_overflow = xt; then
  tpcc_hash_overflow=t
else
  unset tpcc_hash_overflow
fi
if test x$tpcc_overflow = xt; then
  tpcc_hash_overflow=t
else
  unset tpcc_hash_overflow
fi

tpcc_create_steps="buildtpccflags buildcreatets buildcreatedb \
buildcreatetable-ware buildcreatetable-cust buildcreatetable-dist
buildcreatetable-hist buildcreatetable-stok buildcreatetable-item
buildcreatetable-ordr buildcreatetable-ordl buildcreatetable-nord \
buildloadware buildloaddist buildloaditem buildloadhist
buildloadnord buildloadordrdrdl buildloadcust buildloadstok \
buildcreateindex-iware buildcreateindex-icust1 buildcreateindex-
icust2 buildcreateindex-idist buildcreateindex-istok
buildcreateindex-iitem buildcreateindex-iordr1 buildcreateindex-
iordr2 buildcreateindex-iordl buildcreateindex-inord \
buildstoreprocsql buildspacestats listfiles
"

# remove runscript-loadfixordrdrdl - shuang, 030626

tpcc_steps="runsqllocal-createdb shutdowndb startupdb-p_build
createuser ddview runscript-createts assigntemp \
  runsql-createtable_ware runsql-createtable_cust runsql-
createtable_dist runsql-createtable_hist runsql-createtable_stok
runsql-createtable_item runsql-createtable_ordr runsql-
createtable_ordl runsql-createtable_nord \
```

```
runscript-loadware runscript-loaddist runscript-loaditem runscript-
loadhist runscript-loadnord runscript-loadordrdrdl runscript-
loadcust runscript-loadstok \
analyze runsql-createindex_iware runsql-createindex_icust1 runsql-
createindex_icust2 runsql-createindex_idist runsql-
createindex_istok runsql-createindex_iitem runsql-
createindex_iordr1 runsql-createindex_iordr2 runsql-
createindex_iordl runsql-createindex_inord \
createstats createstoredprocs createspacestats createmisc"


tpcc_total_files=524

# no longer automatically exports env variables
set +a

# check for problems with configuration
badconf=
for table in $tpcc_table_list; do
  if expr `tp $table imp` = queue > /dev/null; then
    if expr $tpcc_queue_avail = f > /dev/null; then
    echo Table $table may not be a queue, since queues are
    echo are unavailable in the selected Oracle version.
    badconf=t
    fi
  fi
  if expr $tpcc_autospace_avail = f \& `tp $table autospace` = t >
/dev/null; then
    echo Table $table may not use bitmapped space management
    echo since it is not available in the selected Oracle version.
    badconf=t
  fi
done

if test -n "$badconf"; then
  exit 1
fi

# make sure we have everything
if $tpcc_require ORACLE_SID \
  tpcc_tokilobytes tpcc_createts tpcc_lcm\
  tpcc_sqlplus tpcc_internal_connect\
  tpcc_np tpcc_cpu tpcc_os tpcc_runlen tpcc_ldrive tpcc_scale
tpcc_disks_location tpcc_auto_undo tpcc_tempts_min\
  tpcc_system_size tpcc_logfile_size\
  tpcc_undo_size tpcc_undo_bs\
  oracle_dba oracle_dba_password tpcc_dba_user_pass
then exit 1; fi

if test x$tpcc_hardcode != xt; then
  tpcc_disks_location=${tpcc_disks_location}/
#  tpcc_sql_dir='$tpcc_sql_dir'
#  tpcc_statspack_size='$tpcc_statspack_size'
#  tpcc_genscripts_dir='$tpcc_genscripts_dir'
fi

--------------------
createdb.sql
--------------------

/* created automatically by  /scratch/shuang/tpcc/price-
nt/tpcc8500/scripts/buildcreatedb.sh Tue Jun 19 10:34:04 PDT 2007
*/
spool createdb.log

set echo on

shutdown abort

startup pfile=p_create.ora nomount
create database tpcc
  controlfile reuse
  maxinstances 1
  datafile
    'c:/tpcc_data/system_1' size 400M reuse
  logfile 'c:/tpcc_data/log_1_1' size 14600M reuse,
          'c:/tpcc_data/log_1_2' size 14600M reuse
  sysaux datafile 'c:/tpcc_data/tpccaux' size 120M reuse ;




create undo tablespace undo_1 datafile
  'c:/tpcc_data/roll1' size 8096M reuse blocksize 8K;

set echo off
exit sql.sqlcode
--------------------
createindex_icust1.sql
--------------------

/* created automatically by /scratch/shuang/tpcc/price-
nt/tpcc8500/scripts/buildcreateindex.sh Tue Jun 19 10:34:35 PDT
2007 */
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 1
  compute statistics
  tablespace icust1_0 ;
    set echo off
    spool off
    exit sql.sqlcode;
--------------------
createindex_icust2.sql
--------------------

/* created automatically by /scratch/shuang/tpcc/price-
nt/tpcc8500/scripts/buildcreateindex.sh Tue Jun 19 10:34:36 PDT
2007 */
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 1
  compute statistics
  tablespace icust2_0 ;
    set echo off
    spool off
    exit sql.sqlcode;
--------------------
createindex_idist.sql
--------------------

/* created automatically by /scratch/shuang/tpcc/price-
nt/tpcc8500/scripts/buildcreateindex.sh Tue Jun 19 10:34:37 PDT
2007 */
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 /scratch/shuang/tpcc/price-
nt/tpcc8500/scripts/buildcreateindex.sh Tue Jun 19 10:34:40 PDT
2007 */
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_inord.sql
--------------------

/* created automatically by /scratch/shuang/tpcc/price-
nt/tpcc8500/scripts/buildcreateindex.sh Tue Jun 19 10:34:45 PDT
2007 */
set timing on
  exit 0;
--------------------
createindex_iordl.sql
--------------------

/* created automatically by /scratch/shuang/tpcc/price-
nt/tpcc8500/scripts/buildcreateindex.sh Tue Jun 19 10:34:43 PDT
2007 */
set timing on
  exit 0;
--------------------
createindex_iordr1.sql
--------------------
```

```
/* created automatically by /scratch/shuang/tpcc/price-
nt/tpcc8500/scripts/buildcreateindex.sh Tue Jun 19 10:34:41 PDT
2007 */
set timing on
  exit 0;
--------------------
createindex_iordr2.sql
--------------------

/* created automatically by /scratch/shuang/tpcc/price-
nt/tpcc8500/scripts/buildcreateindex.sh Tue Jun 19 10:34:42 PDT
2007 */
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 1
  compute statistics
  tablespace iordr2_0 ;
    set echo off
    spool off
    exit sql.sqlcode;
--------------------
createindex_istok.sql
--------------------

/* created automatically by /scratch/shuang/tpcc/price-
nt/tpcc8500/scripts/buildcreateindex.sh Tue Jun 19 10:34:38 PDT
2007 */
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 1
  compute statistics
  tablespace istok_0 ;
    set echo off
    spool off
    exit sql.sqlcode;
--------------------
createindex_iware.sql
--------------------

/* created automatically by /scratch/shuang/tpcc/price-
nt/tpcc8500/scripts/buildcreateindex.sh Tue Jun 19 10:34:34 PDT
2007 */
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;
--------------------
createspacestats.sql
--------------------

@space_init
@space_get 102455 8500
@space_rpt
spool off
exit sql.sqlcode;
--------------------
createstoredprocs.sql
--------------------

spool createstoreprocs.log
@tkvcinin.sql
spool off
exit sql.sqlcode;
--------------------
createtable_cust.sql
--------------------

/* created automatically by /scratch/shuang/tpcc/price-
nt/tpcc8500/scripts/buildcreatetable.sh Tue Jun 19 10:34:08 PDT
2007 */
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 255000000
  hash is ( ( c_id * ( 8500 * 10 ) + c_w_id * 10 + c_d_id) )
  size 180
  pctfree 0  initrans 3
  storage ( buffer_pool recycle ) parallel ( degree 4 )
  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 /scratch/shuang/tpcc/price-
nt/tpcc8500/scripts/buildcreatetable.sh Tue Jun 19 10:34:14 PDT
2007 */
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 85000
  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 /scratch/shuang/tpcc/price-
nt/tpcc8500/scripts/buildcreatetable.sh Tue Jun 19 10:34:17 PDT
2007 */
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 /scratch/shuang/tpcc/price-
nt/tpcc8500/scripts/buildcreatetable.sh Tue Jun 19 10:34:23 PDT
2007 */
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 /scratch/shuang/tpcc/price-
nt/tpcc8500/scripts/buildcreatetable.sh Tue Jun 19 10:34:30 PDT
2007 */
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 85000
    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 /scratch/shuang/tpcc/price-
nt/tpcc8500/scripts/buildcreatetable.sh Tue Jun 19 10:34:28 PDT
2007 */
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 ordrcluster_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 /scratch/shuang/tpcc/price-
nt/tpcc8500/scripts/buildcreatetable.sh Tue Jun 19 10:34:25 PDT
2007 */
set timing on
    set sqlblanklines on
    spool createtable_ordr.log
    set echo on
        drop cluster ordrcluster_queue including tables ;

  create cluster ordrcluster_queue (
    o_w_id number
, o_d_id number
, o_id number SORT
, o_number number SORT
    )

    hashkeys 85000
    hash is ( (o_w_id - 1) * 10 + o_d_id - 1 )
    size 1490
    tablespace ordr_0;

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

/* created automatically by /scratch/shuang/tpcc/price-
nt/tpcc8500/scripts/buildcreatetable.sh Tue Jun 19 10:34:19 PDT
2007 */
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 850000000
  hash is ( (s_i_id * 8500 + s_w_id) )
  size 256
  pctfree 0  initrans 2 maxtrans 2
  storage ( buffer_pool keep ) parallel ( degree 4 )
  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 /scratch/shuang/tpcc/price-
nt/tpcc8500/scripts/buildcreatetable.sh Tue Jun 19 10:34:05 PDT
2007 */
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 8500
  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;
--------------------
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_TS%' 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$.block_size, 0, 0, 0
      from
      (select f.tablespace_name , sum(blocks) sz_blocks,
t.block_size block_size
       from dba_data_files f, dba_tablespaces t
       where f.tablespace_name <> 'SYSTEM' and f.tablespace_name =
t.tablespace_name
       group by f.tablespace_name, t.block_size
       ) sp$,
      (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_TS' and f.tablespace_name =
t.tablespace_name
   group by f.tablespace_name, t.block_size;

   insert into tpcc_space
   select 'DB_STAT', sum(blocks), t.block_size, 0, 0, 0, 0
   from dba_data_files f, dba_tablespaces t
   where f.tablespace_name = 'SP_0' and f.tablespace_name =
t.tablespace_name
   group by f.tablespace_name, t.block_size;

   update tpcc_space
      set required =
      (
         select sum(total)
         from   tpcc_data
         where  tpcc_data.segment = tpcc_space.segment
      )
      where segment in
      (
         select segment from tpcc_data
      );
```

```
   update tpcc_space
      set static =
      (
         select sum(total)
         from   tpcc_data
         where  tpcc_data.segment = tpcc_space.segment
      )
      where segment in
      (
         select segment from tpcc_data
      );

   update tpcc_space
      set static = 0,
          dynamic =
      (
         select sum(blocks)
         from   tpcc_data
         where  tpcc_data.segment = tpcc_space.segment
      )
      where segment in ('HIST', 'ORDRCLUSTER_QUEUE', 'IORDL');

   update tpcc_space
      set oversize = blocks  - required;


   insert into tpcc_totspace
      select &&1, &&2, sum(static * block_size)/1024, sum(dynamic *
block_size)/1024, sum(oversize * block_size)/1024, 0, 0, 0
      from   tpcc_space;

   update tpcc_totspace
      set daily_grow =
      (
         select sum(daily_grow * block_size)/1024
         from   tpcc_data
      );
   update tpcc_totspace
      set space60 = static + 60 * daily_grow;
   set echo off;

---------------------
space_init.sql
---------------------

REM==============================================================
==+
REM FILENAME
REM       space_init.sql
REM DESCRIPTION
REM       Create tables for space calculations.
REM  Usage: sqlplus 'sys/change_on_install as sysdba'
@space_init.sql
REM==============================================================
==*/
   set echo on;
   drop table tpcc_data;
   drop table tpcc_space;
   drop table tpcc_totspace;
   create table tpcc_data (
      segment      varchar2(18),
      type         varchar2(15),
      blocks       number,
      block_size   number,
      five_pct     number,
      daily_grow   number,
      total        number
   );
   create table tpcc_space (
      segment       varchar2(18),
      blocks       number,
      block_size   number,
      required     number,
      static       number,
      dynamic      number,
      oversize     number
   );
   create table tpcc_totspace (
      tpm          number,
      nware        number,
      static       number,
      dynamic      number,
      oversize     number,
      daily_grow   number,
      daily_spre   number,
      space60      number
   );
   create unique index itpcc_data on tpcc_data (segment);
   create unique index itpcc_space on tpcc_space (segment);
   set echo off;

---------------------
space_rpt.sql
---------------------

REM==============================================================
==+
REM       Copyright (c) 1995  Oracle Corp, Redwood Shores, CA
|
```

```
REM                    OPEN SYSTEMS PERFORMANCE GROUP
|
REM                          All Rights Reserved
|
REM==============================================================
==+
REM FILENAME
REM        space_rpt.sql
REM DESCRIPTION
REM        Generate space report and save it in space.rpt
REM  Usage: sqlplus 'sys/change_on_install as sysdba'
@space_rpt.sql
REM==============================================================
==*/
    set space 2
    set pagesize 2000
    set echo off
    set termout off
    set verify off
    set feedback off
    set pagesize 60 linesize 120
    spool space.rpt
    select tpm, nware from tpcc_totspace;
    select * from tpcc_data order by segment;
    select * from tpcc_space order by segment;
    select static, dynamic, oversize, daily_grow, daily_spre,
space60
       from tpcc_totspace;
    spool off;
--------------------
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;
 idx1arr    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');
    idx1arr := 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
--------------------
createts.sh
--------------------

#created automatically by /scratch/shuang/tpcc/price-
nt/tpcc8500/scripts/buildcreatets.sh Tue Jun 19 10:33:44 PDT 2007

# Tablespace ware, ts size 30M (30720K)
# each file 30M (30720K)
# extents 19214K (19214K)
# 1 files

$tpcc_createts ware 1 1      30M 19214K unix 0        0 4 auto t
    if expr $? != 0 > /dev/null; then
      echo Creating tablespace for ware failed.  Exiting.
```

```
      exit 0
    fi

# Tablespace cust, ts size 228600M (234086400K)
# each file 7620M (7802880K)
# extents 103916K (103916K)
# 30 files

$tpcc_createts cust 30 1      7620M 103916K unix 0        1 4 auto
t
    if expr $? != 0 > /dev/null; then
      echo Creating tablespace for cust failed.  Exiting.
      exit 0
    fi

# Tablespace dist, ts size 190M (194560K)
# each file 190M (194560K)
# extents 182924K (182924K)
# 1 files

$tpcc_createts dist 1 1      190M 182924K unix 0       31 4 auto t
    if expr $? != 0 > /dev/null; then
      echo Creating tablespace for dist failed.  Exiting.
      exit 0
    fi

# Tablespace hist, ts size 25480M (26091520K)
# each file 6370M (6522880K)
# extents 103374K (103374K)
# 4 files

$tpcc_createts hist 4 1      6370M 103374K unix 0       32 4 auto
t
    if expr $? != 0 > /dev/null; then
      echo Creating tablespace for hist failed.  Exiting.
      exit 0
    fi

# Tablespace stok, ts size 256640M (262799360K)
# each file 8020M (8212480K)
# extents 103816K (103816K)
# 32 files

$tpcc_createts stok 32 1      8020M 103816K unix 0       36 4 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       68 4 auto t
    if expr $? != 0 > /dev/null; then
      echo Creating tablespace for item failed.  Exiting.
      exit 0
    fi

# Tablespace ordr, ts size 363180M (371896320K)
# each file 60530M (61982720K)
# extents 103296K (103296K)
# 6 files

$tpcc_createts ordr 6 1      60530M 103296K unix 0       69 4 16K
t
    if expr $? != 0 > /dev/null; then
      echo Creating tablespace for ordr failed.  Exiting.
      exit 0
    fi

# Tablespace nord, ts size 2980M (3051520K)
# each file 2980M (3051520K)
# extents 304190K (304190K)
# 1 files

$tpcc_createts nord 1 1      2980M 304190K unix 0       75 4 auto
t
    if expr $? != 0 > /dev/null; then
      echo Creating tablespace for nord failed.  Exiting.
      exit 0
    fi

# Tablespace iware, ts size 20M (20480K)
# each file 20M (20480K)
# extents 11650K (11650K)
# 1 files

$tpcc_createts iware 1 1      20M 11650K unix 0       76 4 auto t
    if expr $? != 0 > /dev/null; then
      echo Creating tablespace for iware failed.  Exiting.
      exit 0
    fi

# Tablespace icust1, ts size 6020M (6164480K)
# each file 6020M (6164480K)
# extents 192288K (192288K)
# 1 files
```

```
$tpcc_createts icust1 1 1       6020M 192288K unix 0       77 4 16K
t
    if expr $? != 0 > /dev/null; then
      echo Creating tablespace for icust1 failed.  Exiting.
      exit 0
    fi

# Tablespace icust2, ts size 15020M (15380480K)
# each file 7510M (7690240K)
# extents 240086K (240086K)
# 2 files

$tpcc_createts icust2 2 1       7510M 240086K unix 0       78 4
auto t
    if expr $? != 0 > /dev/null; then
      echo Creating tablespace for icust2 failed.  Exiting.
      exit 0
    fi

# Tablespace idist, ts size 50M (51200K)
# each file 50M (51200K)
# extents 43524K (43524K)
# 1 files

$tpcc_createts idist 1 1        50M 43524K unix 0       80 4 auto t
    if expr $? != 0 > /dev/null; then
      echo Creating tablespace for idist failed.  Exiting.
      exit 0
    fi

# Tablespace istok, ts size 17750M (18176000K)
# each file 17750M (18176000K)
# extents 567696K (567696K)
# 1 files

$tpcc_createts istok 1 1       17750M 567696K unix 0       81 4 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       82 4 auto t
    if expr $? != 0 > /dev/null; then
      echo Creating tablespace for iitem failed.  Exiting.
      exit 0
    fi

# Tablespace iordr2, ts size 14520M (14868480K)
# each file 7260M (7434240K)
# extents 103186K (103186K)
# 2 files

$tpcc_createts iordr2 2 1       7260M 103186K unix 0       83 4
auto t
    if expr $? != 0 > /dev/null; then
      echo Creating tablespace for iordr2 failed.  Exiting.
      exit 0
    fi

# Tablespace temp, ts size 44520M (45588480K)
# each file 7420M (7598080K)
# extents 205228K (205228K)
# 6 files

$tpcc_createts temp 6 1       7420M 205228K unix 1       85 4 auto
t
    if expr $? != 0 > /dev/null; then
      echo Creating tablespace for temp failed.  Exiting.
      exit 0
    fi
---------------------
loadcust.sh
---------------------

#created automatically by /scratch/shuang/tpcc/price-
nt/tpcc8500/scripts/evenload.sh Tue Jun 19 10:34:32 PDT 2007
rm -f loadcust*.log
cd $tpcc_bench
allprocs=
$tpcc_load -M 8500 -C  -l 1 -m 375 >> loadcust0.log 2>&1 &
allprocs="$allprocs ${!}"
$tpcc_load -M 8500 -C  -l 376 -m 750 >> loadcust1.log 2>&1 &
allprocs="$allprocs ${!}"
$tpcc_load -M 8500 -C  -l 751 -m 1125 >> loadcust2.log 2>&1 &
allprocs="$allprocs ${!}"
$tpcc_load -M 8500 -C  -l 1126 -m 1500 >> loadcust3.log 2>&1 &
allprocs="$allprocs ${!}"
$tpcc_load -M 8500 -C  -l 1501 -m 1875 >> loadcust4.log 2>&1 &
allprocs="$allprocs ${!}"
$tpcc_load -M 8500 -C  -l 1876 -m 2250 >> loadcust5.log 2>&1 &
allprocs="$allprocs ${!}"
$tpcc_load -M 8500 -C  -l 2251 -m 2625 >> loadcust6.log 2>&1 &
allprocs="$allprocs ${!}"
$tpcc_load -M 8500 -C  -l 2626 -m 3000 >> loadcust7.log 2>&1 &
allprocs="$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 /scratch/shuang/tpcc/price-
nt/tpcc8500/scripts/evenload.sh Tue Jun 19 10:34:31 PDT 2007
rm -f loadhist*.log
cd $tpcc_bench
allprocs=
$tpcc_load -M 8500 -h  -b 1 -e 1062 >> loadhist0.log 2>&1 &
allprocs="$allprocs ${!}"
$tpcc_load -M 8500 -h  -b 1063 -e 2124 >> loadhist1.log 2>&1 &
allprocs="$allprocs ${!}"
$tpcc_load -M 8500 -h  -b 2125 -e 3186 >> loadhist2.log 2>&1 &
allprocs="$allprocs ${!}"
$tpcc_load -M 8500 -h  -b 3187 -e 4248 >> loadhist3.log 2>&1 &
allprocs="$allprocs ${!}"
$tpcc_load -M 8500 -h  -b 4249 -e 5311 >> loadhist4.log 2>&1 &
allprocs="$allprocs ${!}"
$tpcc_load -M 8500 -h  -b 5312 -e 6374 >> loadhist5.log 2>&1 &
allprocs="$allprocs ${!}"
$tpcc_load -M 8500 -h  -b 6375 -e 7437 >> loadhist6.log 2>&1 &
allprocs="$allprocs ${!}"
$tpcc_load -M 8500 -h  -b 7438 -e 8500 >> loadhist7.log 2>&1 &
allprocs="$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 /scratch/shuang/tpcc/price-
nt/tpcc8500/scripts/evenload.sh Tue Jun 19 10:34:32 PDT 2007
rm -f loadnord*.log
cd $tpcc_bench
allprocs=
$tpcc_load -M 8500 -n  -b 1 -e 8500 >> loadnord0.log 2>&1 &
allprocs="$allprocs ${!}"
error=0
for curproc in $allprocs; do
  wait $curproc
  error=`expr $? + $error`
done
exit `expr $error != 0`
---------------------
loadordrordl.sh
---------------------

#created automatically by /scratch/shuang/tpcc/price-
nt/tpcc8500/scripts/evenload.sh Tue Jun 19 10:34:32 PDT 2007
rm -f loadordrordl*.log
cd $tpcc_bench
allprocs=
$tpcc_load -M 8500 -o ${tpcc_disks_location}dummy0.dat -b 1 -e 1062
>> loadordrordl0.log 2>&1 &
allprocs="$allprocs ${!}"
$tpcc_load -M 8500 -o ${tpcc_disks_location}dummy1.dat -b 1063 -e
2124 >> loadordrordl1.log 2>&1 &
allprocs="$allprocs ${!}"
$tpcc_load -M 8500 -o ${tpcc_disks_location}dummy2.dat -b 2125 -e
3186 >> loadordrordl2.log 2>&1 &
allprocs="$allprocs ${!}"
$tpcc_load -M 8500 -o ${tpcc_disks_location}dummy3.dat -b 3187 -e
4248 >> loadordrordl3.log 2>&1 &
allprocs="$allprocs ${!}"
$tpcc_load -M 8500 -o ${tpcc_disks_location}dummy4.dat -b 4249 -e
5311 >> loadordrordl4.log 2>&1 &
allprocs="$allprocs ${!}"
$tpcc_load -M 8500 -o ${tpcc_disks_location}dummy5.dat -b 5312 -e
6374 >> loadordrordl5.log 2>&1 &
allprocs="$allprocs ${!}"
$tpcc_load -M 8500 -o ${tpcc_disks_location}dummy6.dat -b 6375 -e
7437 >> loadordrordl6.log 2>&1 &
allprocs="$allprocs ${!}"
$tpcc_load -M 8500 -o ${tpcc_disks_location}dummy7.dat -b 7438 -e
8500 >> loadordrordl7.log 2>&1 &
allprocs="$allprocs ${!}"
error=0
for curproc in $allprocs; do
```

```
  wait $curproc
  error=`expr $? + $error`
done
exit `expr $error != 0`
---------------------
loadstok.sh
---------------------

#created automatically by /scratch/shuang/tpcc/price-
nt/tpcc8500/scripts/evenload.sh Tue Jun 19 10:34:33 PDT 2007
rm -f loadstok*.log
cd $tpcc_bench
allprocs=
$tpcc_load -M 8500 -S  -j 1 -k 12500 >> loadstok0.log 2>&1 &
allprocs="$allprocs ${!}"
$tpcc_load -M 8500 -S  -j 12501 -k 25000 >> loadstok1.log 2>&1 &
allprocs="$allprocs ${!}"
$tpcc_load -M 8500 -S  -j 25001 -k 37500 >> loadstok2.log 2>&1 &
allprocs="$allprocs ${!}"
$tpcc_load -M 8500 -S  -j 37501 -k 50000 >> loadstok3.log 2>&1 &
allprocs="$allprocs ${!}"
$tpcc_load -M 8500 -S  -j 50001 -k 62500 >> loadstok4.log 2>&1 &
allprocs="$allprocs ${!}"
$tpcc_load -M 8500 -S  -j 62501 -k 75000 >> loadstok5.log 2>&1 &
allprocs="$allprocs ${!}"
$tpcc_load -M 8500 -S  -j 75001 -k 87500 >> loadstok6.log 2>&1 &
allprocs="$allprocs ${!}"
$tpcc_load -M 8500 -S  -j 87501 -k 100000 >> loadstok7.log 2>&1 &
allprocs="$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

---------------------
analyze.sql
---------------------
spool analyze.log;
set echo on;

connect tpcc/tpcc;

ANALYZE TABLE stok ESTIMATE STATISTICS;
ANALYZE TABLE cust ESTIMATE STATISTICS;
ANALYZE TABLE ordr ESTIMATE STATISTICS;
ANALYZE TABLE ordl ESTIMATE STATISTICS;
```

```
ANALYZE TABLE hist ESTIMATE STATISTICS;
ANALYZE TABLE dist ESTIMATE STATISTICS;
ANALYZE TABLE item ESTIMATE STATISTICS;
ANALYZE TABLE ware ESTIMATE STATISTICS;
ANALYZE TABLE nord ESTIMATE STATISTICS;
ANALYZE index iware ESTIMATE STATISTICS;
ANALYZE index idist ESTIMATE STATISTICS;
ANALYZE index iitem ESTIMATE STATISTICS;
ANALYZE index icust1 ESTIMATE STATISTICS;
ANALYZE index icust2 ESTIMATE STATISTICS;
ANALYZE index istok ESTIMATE STATISTICS;
ANALYZE index iordr1 ESTIMATE STATISTICS;
ANALYZE index iordr2 ESTIMATE STATISTICS;

set echo off;
spool off;

exit sql.sqlcode;


---------------------
assigntemp.sql
---------------------
spool assigntemp.log;

set echo on;

alter user tpcc temporary tablespace temp_0;

set echo off;
spool off;

exit ;

---------------------
createuser.sql
---------------------
spool createusertpcc.log;

set echo on;

create user tpcc identified by tpcc;

grant dba to tpcc;

set echo off;
spool off;

exit ;
```

Appendix C:
Tunable Parameters

SEQUENCE OF EVENTS FOR PERFORMANCE RUN

1. Boot up systems clients, servers, & RTEs).
2. Startup the database on the server using p_run.ora.
3. Start the RTE.
4. Adjust RTE throttle.

```
--------------------------------------------------------
DBInit_bd1.ini
--------------------------------------------------------

[TPCC]
DBConnections=220
StartTerm=1
KMaxterms=406
DeliveryQueues=2000
DeliveryThreads=150


--------------------------------------------------------
DBInit_bd2.ini
--------------------------------------------------------

[TPCC]
DBConnections=220
StartTerm=40501
KMaxterms=406
DeliveryQueues=2000
DeliveryThreads=150


----------------------------------------
Db Server msinfo32 export
----------------------------------------
System Information report written at: 09/12/07 09:55:25
System Name: PENCIL
[System Summary]

Item  Value
OS Name Microsoft(R) Windows(R) Server 2003 Standard x64 Edition
Version 5.2.3790 Service Pack 1 Build 3790
Other OS Description  R2
OS Manufacturer Microsoft Corporation
System Name PENCIL
System Manufacturer HP
System Model  ProLiant ML350 G5
System Type x64-based PC
Processor EM64T Family 6 Model 15 Stepping 7 GenuineIntel ~2667 Mhz

Processor EM64T Family 6 Model 15 Stepping 7 GenuineIntel ~2667 Mhz

Processor EM64T Family 6 Model 15 Stepping 7 GenuineIntel ~2667 Mhz

Processor EM64T Family 6 Model 15 Stepping 7 GenuineIntel ~2667 Mhz

BIOS Version/Date HP D21, 9/27/2006
SMBIOS Version  2.3
Windows Directory C:\WINDOWS
System Directory  C:\WINDOWS\system32
Boot Device \Device\HarddiskVolume193
Locale  United States
Hardware Abstraction Layer  Version = "5.2.3790.1830
(srv03_sp1_rtm.050324-1447)"
User Name PENCIL\Administrator
Time Zone Central Daylight Time
Total Physical Memory 24,575.11 MB
Available Physical Memory 1.91 GB
Total Virtual Memory 25.48 GB
Available Virtual Memory  3.55 GB
Page File Space 2.23 GB
Page File C:\pagefile.sys

[Hardware Resources]


[Conflicts/Sharing]

Resource  Device
Memory Address 0xF0000000-0xFEBFFFFF  PCI bus
Memory Address 0xF0000000-0xFEBFFFFF  Standard VGA Graphics Adapter


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

```
Memory Address 0xFDA00000-0xFDBFFFFF  PCI standard PCI-to-PCI
bridge
Memory Address 0xFDA00000-0xFDBFFFFF  PCI standard PCI-to-PCI
bridge

IRQ 5 Base System Device
IRQ 5 PCI Device

I/O Port 0x000002F8-0x000002FF  Motherboard resources
I/O Port 0x000002F8-0x000002FF  Communications Port (COM2)

I/O Port 0x00006000-0x00006FFF  PCI standard PCI-to-PCI bridge
I/O Port 0x00006000-0x00006FFF  Smart Array P800 Controller (Non-
Miniport)

IRQ 16  PCI standard PCI-to-PCI bridge
IRQ 16  Smart Array P800 Controller (Non-Miniport)
IRQ 16  Smart Array P800 Controller (Non-Miniport)
IRQ 16  Smart Array E200i Controller
IRQ 16  PCI standard PCI-to-PCI bridge
IRQ 16  HP NC373i Virtual Bus Device
IRQ 16  Standard Universal PCI to USB Host Controller
IRQ 16  Standard Enhanced PCI to USB Host Controller

I/O Port 0x00005000-0x00005FFF  PCI standard PCI-to-PCI bridge
I/O Port 0x00005000-0x00005FFF  HP NC7170 Dual Gigabit Server
Adapter #2

IRQ 17  PCI standard PCI-to-PCI bridge
IRQ 17  Standard Universal PCI to USB Host Controller

Memory Address 0xA0000-0xBFFFF  PCI bus
Memory Address 0xA0000-0xBFFFF  Standard VGA Graphics Adapter

Memory Address 0xFA000000-0xFBFFFFFF  PCI standard PCI-to-PCI
bridge
Memory Address 0xFA000000-0xFBFFFFFF  PCI standard PCI-to-PCI
bridge
Memory Address 0xFA000000-0xFBFFFFFF  HP NC373i Virtual Bus Device


Memory Address 0xFDF00000-0xFDFFFFFF  PCI standard PCI-to-PCI
bridge
Memory Address 0xFDF00000-0xFDFFFFFF  PCI standard PCI-to-PCI
bridge

I/O Port 0x00007000-0x00007FFF  PCI standard PCI-to-PCI bridge
I/O Port 0x00007000-0x00007FFF  PCI standard PCI-to-PCI bridge
I/O Port 0x00007000-0x00007FFF  Smart Array E200i Controller

I/O Port 0x00004000-0x00005FFF  PCI standard PCI-to-PCI bridge
I/O Port 0x00004000-0x00005FFF  PCI standard PCI-to-PCI bridge
I/O Port 0x00004000-0x00005FFF  PCI standard PCI-to-PCI bridge
I/O Port 0x00004000-0x00005FFF  Smart Array P800 Controller (Non-
Miniport)


[DMA]

Resource  Device  Status
Channel 7 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
0x00004000-0x00005FFF PCI standard PCI-to-PCI bridge  OK
0x00004000-0x00005FFF PCI standard PCI-to-PCI bridge  OK
0x00004000-0x00005FFF PCI standard PCI-to-PCI bridge  OK
0x00004000-0x00005FFF Smart Array P800 Controller (Non-Miniport)
  OK
0x00005000-0x00005FFF PCI standard PCI-to-PCI bridge  OK
0x00005000-0x00005FFF HP NC7170 Dual Gigabit Server Adapter #2  OK

0x00005040-0x0000507F HP NC7170 Dual Gigabit Server Adapter OK
0x00006000-0x00006FFF PCI standard PCI-to-PCI bridge  OK
0x00006000-0x00006FFF Smart Array P800 Controller (Non-Miniport)
  OK
0x00007000-0x00007FFF PCI standard PCI-to-PCI bridge  OK
0x00007000-0x00007FFF PCI standard PCI-to-PCI bridge  OK
0x00007000-0x00007FFF Smart Array E200i Controller  OK
0x00001000-0x0000101F Standard Universal PCI to USB Host Controller
  OK
0x00001020-0x0000103F Standard Universal PCI to USB Host Controller
  OK
0x00001040-0x0000105F Standard Universal PCI to USB Host Controller
  OK
0x00001060-0x0000107F Standard Universal PCI to USB Host Controller
  OK
0x00003000-0x000030FF Standard VGA Graphics Adapter OK
0x000003B0-0x000003BB Standard VGA Graphics Adapter OK
0x000003C0-0x000003DF Standard VGA Graphics Adapter OK
0x00002800-0x000028FF Base System Device  OK
0x00003400-0x000034FF Base System Device  OK
```

```
0x00003800-0x0000381F Standard Universal PCI to USB Host Controller
  OK
0x00000070-0x00000077 Motherboard resources OK
0x00000408-0x0000040F Motherboard resources OK
0x000004D0-0x000004D1 Motherboard resources OK
0x00000020-0x0000003F Motherboard resources OK
0x000000A0-0x000000BF Motherboard resources OK
0x00000090-0x0000009F Motherboard resources OK
0x00000050-0x00000053 Motherboard resources OK
0x00000700-0x0000071F Motherboard resources OK
0x00000800-0x0000083F Motherboard resources OK
0x00000900-0x0000097F Motherboard resources OK
0x00000010-0x00000011 Motherboard resources OK
0x00000C80-0x00000C83 Motherboard resources OK
0x00000CD4-0x00000CD7 Motherboard resources OK
0x00000F50-0x00000F58 Motherboard resources OK
0x000000F0-0x000000F0 Motherboard resources OK
0x00000CA0-0x00000CA1 Motherboard resources OK
0x00000CA4-0x00000CA5 Motherboard resources OK
0x000002F8-0x000002FF Motherboard resources OK
0x000002F8-0x000002FF Communications Port (COM2)  OK
0x00000CA2-0x00000CA3   OK
0x00000040-0x00000043 System timer  OK
0x00000080-0x0000008F Direct memory access controller OK
0x000000C0-0x000000DF Direct memory access controller OK
0x00000061-0x00000061 System speaker  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
0x0000002E-0x0000002F Extended IO Bus OK
0x0000004E-0x0000004F Extended IO Bus OK
0x00000620-0x0000065F Extended IO Bus OK
0x00000680-0x0000069F Extended IO Bus OK
0x00000600-0x0000061F Extended IO Bus OK
0x00000660-0x0000067F Extended IO Bus OK
0x00000300-0x0000030F Extended IO Bus OK
0x000003F8-0x000003FF Communications Port (COM1)  OK
0x000003F0-0x000003F5 Standard floppy disk controller OK
0x000003F7-0x000003F7 Standard floppy disk controller OK
0x00000500-0x0000050F Standard Dual Channel PCI 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

[IRQs]

Resource  Device  Status
IRQ 9 Microsoft ACPI-Compliant System OK
IRQ 16  PCI standard PCI-to-PCI bridge  OK
IRQ 16  Smart Array P800 Controller (Non-Miniport)  OK
IRQ 16  Smart Array P800 Controller (Non-Miniport)  OK
IRQ 16  Smart Array E200i Controller  OK
IRQ 16  PCI standard PCI-to-PCI bridge  OK
IRQ 16  HP NC373i Virtual Bus Device  OK
IRQ 16  Standard Universal PCI to USB Host Controller OK
IRQ 16  Standard Enhanced PCI to USB Host Controller  OK
IRQ 17  PCI standard PCI-to-PCI bridge  OK
IRQ 17  Standard Universal PCI to USB Host Controller OK
IRQ 26  HP NC7170 Dual Gigabit Server Adapter #2  OK
IRQ 27  HP NC7170 Dual Gigabit Server Adapter OK
IRQ 18  Standard Universal PCI to USB Host Controller OK
IRQ 19  Standard Universal PCI to USB Host Controller OK
IRQ 5 Base System Device  OK
IRQ 5 PCI Device  OK
IRQ 10  Base System Device  OK
IRQ 22  Standard Universal PCI to USB Host Controller OK
IRQ 0 System timer  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 6 Standard floppy disk controller OK
IRQ 3 Communications Port (COM2)  OK

[Memory]

Resource  Device  Status
0xA0000-0xBFFFF PCI bus OK
0xA0000-0xBFFFF Standard VGA Graphics Adapter OK
0xF0000000-0xFEBFFFFF PCI bus OK
0xF0000000-0xFEBFFFFF Standard VGA Graphics Adapter OK
0xFD900000-0xFDCFFFFF PCI standard PCI-to-PCI bridge  OK
0xFDA00000-0xFDBFFFFF PCI standard PCI-to-PCI bridge  OK
0xFDA00000-0xFDBFFFFF PCI standard PCI-to-PCI bridge  OK
0xFDB00000-0xFDBFFFFF Smart Array P800 Controller (Non-Miniport)
  OK
0xFDAF0000-0xFDAF0FFF Smart Array P800 Controller (Non-Miniport)
  OK
0xFDC00000-0xFDCFFFFF PCI standard PCI-to-PCI bridge  OK
0xFDCE0000-0xFDCFFFFF HP NC7170 Dual Gigabit Server Adapter #2 OK

0xFDC80000-0xFDCBFFFF HP NC7170 Dual Gigabit Server Adapter #2  OK

0xFDC60000-0xFDC7FFFF HP NC7170 Dual Gigabit Server Adapter OK
0xFDD00000-0xFDEFFFFF PCI standard PCI-to-PCI bridge  OK
0xFDE00000-0xFDEFFFFF Smart Array P800 Controller (Non-Miniport)
  OK
0xFDDF0000-0xFDDF0FFF Smart Array P800 Controller (Non-Miniport)
  OK
```

```
0xFDF00000-0xFDFFFFFF PCI standard PCI-to-PCI bridge  OK
0xFDF00000-0xFDFFFFFF PCI standard PCI-to-PCI bridge  OK
0xFDF80000-0xFDFFFFFF Smart Array E200i Controller  OK
0xFDF70000-0xFDF77FFF Smart Array E200i Controller  OK
0xFA000000-0xFBFFFFFF PCI standard PCI-to-PCI bridge  OK
0xFA000000-0xFBFFFFFF PCI standard PCI-to-PCI bridge  OK
0xFA000000-0xFBFFFFFF HP NC373i Virtual Bus Device  OK
0xF9DF0000-0xF9DF03FF Standard Enhanced PCI to USB Host Controller
  OK
0xF9FF0000-0xF9FFFFFF Standard VGA Graphics Adapter OK
0xF9FE0000-0xF9FE01FF Base System Device  OK
0xF9FD0000-0xF9FD07FF Base System Device  OK
0xF9FC0000-0xF9FC1FFF Base System Device  OK
0xF9F00000-0xF9F7FFFF Base System Device  OK
0xF9EF0000-0xF9EF00FF PCI Device  OK
0xE0000000-0xEFFFFFFF Motherboard resources OK
0xFE000000-0xFEBFFFFF 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\msgsm32.acm Microsoft Corporation   OK
  C:\WINDOWS\system32\MSGSM32.ACM 5.2.3790.1830
(srv03_sp1_rtm.050324-1447) 34.50 KB (35,328 bytes) 11/30/2005 6:00
AM
c:\windows\system32\msg711.acm  Microsoft Corporation   OK
  C:\WINDOWS\system32\MSG711.ACM  5.2.3790.1830
(srv03_sp1_rtm.050324-1447) 13.50 KB (13,824 bytes) 11/30/2005 6:00
AM
c:\windows\system32\tssoft32.acm  DSP GROUP, INC.   OK
  C:\WINDOWS\system32\TSSOFT32.ACM  1.01  13.50 KB (13,824 bytes)
  11/30/2005 6:00 AM
c:\windows\system32\imaadp32.acm  Microsoft Corporation   OK
  C:\WINDOWS\system32\IMAADP32.ACM  5.2.3790.1830
(srv03_sp1_rtm.050324-1447) 24.00 KB (24,576 bytes) 11/30/2005 6:00
AM
c:\windows\system32\msadp32.acm Microsoft Corporation   OK
  C:\WINDOWS\system32\MSADP32.ACM 5.2.3790.1830
(srv03_sp1_rtm.050324-1447) 23.50 KB (24,064 bytes) 11/30/2005 6:00
AM

[Video Codecs]

CODEC Manufacturer  Description Status  File  Version Size
  Creation Date
c:\windows\system32\msrle32.dll Microsoft Corporation   OK
  C:\WINDOWS\system32\MSRLE32.DLL 5.2.3790.1830
(srv03_sp1_rtm.050324-1447) 15.50 KB (15,872 bytes) 11/30/2005 6:00
AM
c:\windows\system32\iyuv_32.dll Microsoft Corporation   OK
  C:\WINDOWS\system32\IYUV_32.DLL 5.2.3790.1830
(srv03_sp1_rtm.050324-1447) 52.50 KB (53,760 bytes) 3/24/2005 11:19
AM
c:\windows\system32\tsbyuv.dll  Microsoft Corporation   OK
  C:\WINDOWS\system32\TSBYUV.DLL  5.2.3790.1830
(srv03_sp1_rtm.050324-1447) 12.50 KB (12,800 bytes) 3/24/2005 11:34
AM
c:\windows\system32\msyuv.dll Microsoft Corporation   OK
  C:\WINDOWS\system32\MSYUV.DLL 5.2.3790.1830
(srv03_sp1_rtm.050324-1447) 21.00 KB (21,504 bytes) 3/24/2005 11:21
AM
c:\windows\system32\msvidc32.dll  Microsoft Corporation   OK
  C:\WINDOWS\system32\MSVIDC32.DLL  5.2.3790.1830
(srv03_sp1_rtm.050324-1447) 43.00 KB (44,032 bytes) 11/30/2005 6:00
AM

[CD-ROM]

Item  Value

[Sound Device]

Item  Value

[Display]

Item  Value
Name  Standard VGA Graphics Adapter
PNP Device ID
  PCI\VEN_1002&DEV_515E&SUBSYS_31FB103C&REV_02\4&2014205D&0&18F0
Adapter Type  ATI ES1000, (Standard display types) compatible
Adapter Description Standard VGA Graphics Adapter
Adapter RAM 32.00 MB (33,554,432 bytes)
Installed Drivers vga.dll,framebuf.dll,vga256,vga64k
Driver Version  5.2.3790.1830
INF File  display.inf (vga section)
Color Planes  1
Color Table Entries 4294967296
Resolution  1024 x 768 x 1 hertz
Bits/Pixel  32
Memory Address  0xF0000000-0xFEBFFFFF
```

```
I/O Port  0x00003000-0x000030FF
Memory Address  0xF9FF0000-0xF9FFFFFF
I/O Port  0x000003B0-0x000003BB
I/O Port  0x000003C0-0x000003DF
Memory Address  0xA0000-0xBFFFF
Driver  c:\windows\system32\drivers\vgapnp.sys (5.2.3790.1830
(srv03_sp1_rtm.050324-1447), 33.00 KB (33,792 bytes), 7/3/2007
12:24 PM)

[Infrared]

Item  Value

[Input]


[Keyboard]

Item  Value
Description USB Human Interface Device
Name  Enhanced (101- or 102-key)
Layout  00000409
PNP Device ID USB\VID_03F0&PID_1027&MI_00\7&2CD6FDA9&0&0000
Number of Function Keys 12
Driver  c:\windows\system32\drivers\hidusb.sys (5.2.3790.1830
(srv03_sp1_rtm.050324-1447), 18.50 KB (18,944 bytes), 11/30/2005
6:00 AM)

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&2AA4AD3D&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), 91.00 KB (93,184 bytes), 11/30/2005
6:00 AM)

[Pointing Device]

Item  Value
Hardware Type USB Human Interface Device
Number of Buttons 5
Status  OK
PNP Device ID USB\VID_03F0&PID_1027&MI_01\7&2CD6FDA9&0&0001
Power Management Supported  No
Double Click Threshold  6
Handedness  Right Handed Operation
Driver  c:\windows\system32\drivers\hidusb.sys (5.2.3790.1830
(srv03_sp1_rtm.050324-1447), 18.50 KB (18,944 bytes), 11/30/2005
6:00 AM)

Hardware Type PS/2 Compatible Mouse
Number of Buttons 5
Status  OK
PNP Device ID ACPI\PNP0F13\4&2AA4AD3D&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), 91.00 KB (93,184 bytes), 11/30/2005
6:00 AM)

[Modem]

Item  Value

[Network]


[Adapter]

Item  Value
Name  [00000001] HP NC7170 Dual Gigabit Server Adapter
Adapter Type  Ethernet 802.3
Product Type  HP NC7170 Dual Gigabit Server Adapter
Installed Yes
PNP Device ID
  PCI\VEN_8086&DEV_1010&SUBSYS_00DB0E11&REV_01\5&8D021B&0&110310
Last Reset  9/4/2007 11:39 AM
Index 1
Service Name  N1000
IP Address  130.172.204.165
IP Subnet 255.255.0.0
Default IP Gateway  Not Available
DHCP Enabled  No
DHCP Server Not Available
DHCP Lease Expires  Not Available
DHCP Lease Obtained Not Available
MAC Address 00:02:A5:4C:2F:EB
Memory Address  0xFDC60000-0xFDC7FFFF
I/O Port  0x00005040-0x0000507F
IRQ Channel IRQ 27
Driver  c:\windows\system32\drivers\n1g5132e.sys (8.8.1.0 built by:
WinDDK, 211.02 KB (216,088 bytes), 7/5/2007 10:19 AM)

Name  [00000002] HP NC7170 Dual Gigabit Server Adapter
Adapter Type  Ethernet 802.3
Product Type  HP NC7170 Dual Gigabit Server Adapter
Installed Yes
PNP Device ID
  PCI\VEN_8086&DEV_1010&SUBSYS_00DB0E11&REV_01\5&8D021B&0&100310
Last Reset  9/4/2007 11:39 AM
Index 2
Service Name  N1000
IP Address  130.168.204.165
IP Subnet 255.255.0.0
Default IP Gateway  Not Available
DHCP Enabled  No
DHCP Server Not Available
DHCP Lease Expires  Not Available
DHCP Lease Obtained Not Available
MAC Address 00:02:A5:4C:2F:EA
Memory Address  0xFDCE0000-0xFDCFFFFF
Memory Address  0xFDC80000-0xFDCBFFFF
I/O Port  0x00005000-0x00005FFF
IRQ Channel IRQ 26
Driver  c:\windows\system32\drivers\n1g5132e.sys (8.8.1.0 built by:
WinDDK, 211.02 KB (216,088 bytes), 7/5/2007 10:19 AM)

Name  [00000003] RAS Async Adapter
Adapter Type  Not Available
Product Type  RAS Async Adapter
Installed Yes
PNP Device ID Not Available
Last Reset  9/4/2007 11:39 AM
Index 3
Service Name  AsyncMac
IP Address  Not Available
IP Subnet Not Available
Default IP Gateway  Not Available
DHCP Enabled  No
DHCP Server Not Available
DHCP Lease Expires  Not Available
DHCP Lease Obtained Not Available
MAC Address Not Available

Name  [00000004] WAN Miniport (L2TP)
Adapter Type  Not Available
Product Type  WAN Miniport (L2TP)
Installed Yes
PNP Device ID ROOT\MS_L2TPMINIPORT\0000
Last Reset  9/4/2007 11:39 AM
Index 4
Service Name  Rasl2tp
IP Address  Not Available
IP Subnet Not Available
Default IP Gateway  Not Available
DHCP Enabled  No
DHCP Server Not Available
DHCP Lease Expires  Not Available
DHCP Lease Obtained Not Available
MAC Address Not Available
Driver  c:\windows\system32\drivers\rasl2tp.sys (5.2.3790.1830
(srv03_sp1_rtm.050324-1447), 132.00 KB (135,168 bytes), 11/30/2005
6:00 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  9/4/2007 11:39 AM
Index 5
Service Name  PptpMiniport
IP Address  Not Available
IP Subnet Not Available
Default IP Gateway  Not Available
DHCP Enabled  No
DHCP Server Not Available
DHCP Lease Expires  Not Available
DHCP Lease Obtained Not Available
MAC Address 50:50:54:50:30:30
Driver  c:\windows\system32\drivers\raspptp.sys (5.2.3790.1830
(srv03_sp1_rtm.050324-1447), 117.50 KB (120,320 bytes), 11/30/2005
6:00 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  9/4/2007 11:39 AM
Index 6
Service Name  RasPppoe
IP Address  Not Available
IP Subnet Not Available
Default IP Gateway  Not Available
DHCP Enabled  No
DHCP Server Not Available
DHCP Lease Expires  Not Available
DHCP Lease Obtained Not Available
MAC Address 33:50:6F:45:30:30
Driver  c:\windows\system32\drivers\raspppoe.sys (5.2.3790.1830
(srv03_sp1_rtm.050324-1447), 67.50 KB (69,120 bytes), 11/30/2005
6:00 AM)
```

```
Name  [00000007] Direct Parallel
Adapter Type  Not Available
Product Type  Direct Parallel
Installed Yes
PNP Device ID ROOT\MS_PTIMINIPORT\0000
Last Reset  9/4/2007 11:39 AM
Index 7
Service Name  Raspti
IP Address  Not Available
IP Subnet Not Available
Default IP Gateway  Not Available
DHCP Enabled  No
DHCP Server Not Available
DHCP Lease Expires  Not Available
DHCP Lease Obtained Not Available
MAC Address Not Available
Driver  c:\windows\system32\drivers\raspti.sys (5.2.3790.1830
(srv03_sp1_rtm.050324-1447), 30.50 KB (31,232 bytes), 11/30/2005
6:00 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  9/4/2007 11:39 AM
Index 8
Service Name  NdisWan
IP Address  Not Available
IP Subnet Not Available
Default IP Gateway  Not Available
DHCP Enabled  No
DHCP Server Not Available
DHCP Lease Expires  Not Available
DHCP Lease Obtained Not Available
MAC Address Not Available
Driver  c:\windows\system32\drivers\ndiswan.sys (5.2.3790.1830
(srv03_sp1_rtm.050324-1447), 157.50 KB (161,280 bytes), 11/30/2005
6:00 AM)

Name  [00000009] HP NC373i Multifunction Gigabit Server Adapter
Adapter Type  Ethernet 802.3
Product Type  HP NC373i Multifunction Gigabit Server Adapter
Installed Yes
PNP Device ID
  B06BDRV\L2ND&PCI_164C14E4&SUBSYS_7038103C&REV_12\6&183F41DD&0&200
50300
Last Reset  9/4/2007 11:39 AM
Index 9
Service Name  l2nd
IP Address  10.10.204.165
IP Subnet 255.0.0.0
Default IP Gateway  Not Available
DHCP Enabled  No
DHCP Server Not Available
DHCP Lease Expires  Not Available
DHCP Lease Obtained Not Available
MAC Address 00:19:BB:34:1A:A2
Driver  c:\windows\system32\drivers\bxnd52a.sys (3.0.5.0 built by:
WinDDK, 83.00 KB (84,992 bytes), 7/5/2007 10:45 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

[WinSock]

Item  Value
File  c:\windows\system32\wsock32.dll
Size  24.50 KB (25,088 bytes)
Version 5.2.3790.1830 (srv03_sp1_rtm.050324-1447)

[Ports]


[Serial]

Item  Value
Name  Communications Port (COM2)
Status  OK
PNP Device ID ROOT\*PNP0501\1_0_17_1_0_0
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 (5.2.3790.1830
(srv03_sp1_rtm.050324-1447), 118.50 KB (121,344 bytes), 11/30/2005
6:00 AM)

Name  Communications Port (COM1)
Status  OK
PNP Device ID ACPI\PNP0501\0
Maximum Input Buffer Size 0
Maximum Output Buffer Size  No
```

```
Settable Baud Rate  Yes                                    Size  Not Available
Settable Data Bits  Yes                                    Free Space  Not Available
Settable Flow Control Yes                                  Volume Name  Not Available
Settable Parity Yes                                        Volume Serial Number  Not Available
Settable Parity Check Yes
Settable Stop Bits  Yes                                    Drive I:
Settable RLSD Yes                                          Description Local Fixed Disk
Supports RLSD Yes                                          Compressed  Not Available
Supports 16 Bit Mode  No                                   File System Not Available
Supports Special Characters No                             Size  Not Available
Baud Rate 9600                                             Free Space  Not Available
Bits/Byte 8                                                Volume Name Not Available
Stop Bits 1                                                Volume Serial Number  Not Available
Parity  None
Busy  No                                                   Drive J:
Abort Read/Write on Error No                               Description Local Fixed Disk
Binary Mode Enabled Yes                                    Compressed  Not Available
Continue XMit on XOff No                                   File System Not Available
CTS Outflow Control No                                     Size  Not Available
Discard NULL Bytes  No                                     Free Space  Not Available
DSR Outflow Control 0                                      Volume Name Not Available
DSR Sensitivity 0                                          Volume Serial Number  Not Available
DTR Flow Control Type Enable
EOF Character 0                                            Drive K:
Error Replace Character 0                                  Description Local Fixed Disk
Error Replacement Enabled No                               Compressed  Not Available
Event Character 0                                          File System Not Available
Parity Check Enabled  No                                   Size  Not Available
RTS Flow Control Type Enable                               Free Space  Not Available
XOff Character  19                                         Volume Name Not Available
XOffXMit Threshold  512                                    Volume Serial Number  Not Available
XOn Character 17
XOnXMit Threshold 2048                                     Drive L:
XOnXOff InFlow Control  0                                  Description Local Fixed Disk
XOnXOff OutFlow Control 0                                  Compressed  Not Available
IRQ Channel IRQ 4                                          File System Not Available
I/O Port  0x000003F8-0x000003FF                            Size  Not Available
Driver  c:\windows\system32\drivers\serial.sys (5.2.3790.1830   Free Space  Not Available
(srv03_sp1_rtm.050324-1447), 118.50 KB (121,344 bytes), 11/30/2005   Volume Name Not Available
6:00 AM)                                                   Volume Serial Number  Not Available

[Parallel]                                                 Drive M:
                                                           Description Local Fixed Disk
Item  Value                                                Compressed  Not Available
                                                           File System Not Available
[Storage]                                                  Size  Not Available
                                                           Free Space  Not Available
                                                           Volume Name Not Available
                                                           Volume Serial Number  Not Available

[Drives]                                                   Drive N:
                                                           Description Local Fixed Disk
Item  Value                                                Compressed  Not Available
Drive C:                                                   File System Not Available
Description Local Fixed Disk                               Size  Not Available
Compressed  No                                             Free Space  Not Available
File System NTFS                                           Volume Name Not Available
Size  33.88 GB (36,381,306,880 bytes)                      Volume Serial Number  Not Available
Free Space  23.54 GB (25,273,253,888 bytes)
Volume Name                                                Drive O:
Volume Serial Number  A09C99C9                             Description Local Fixed Disk
                                                           Compressed  Not Available
Drive D:                                                   File System Not Available
Description Local Fixed Disk                               Size  Not Available
Compressed  Not Available                                  Free Space  Not Available
File System Not Available                                  Volume Name Not Available
Size  Not Available                                        Volume Serial Number  Not Available
Free Space  Not Available
Volume Name Not Available                                  Drive P:
Volume Serial Number  Not Available                        Description Local Fixed Disk
                                                           Compressed  Not Available
Drive E:                                                   File System Not Available
Description Local Fixed Disk                               Size  Not Available
Compressed  Not Available                                  Free Space  Not Available
File System Not Available                                  Volume Name Not Available
Size  Not Available                                        Volume Serial Number  Not Available
Free Space  Not Available
Volume Name Not Available                                  Drive Q:
Volume Serial Number  Not Available                        Description Local Fixed Disk
                                                           Compressed  Not Available
Drive F:                                                   File System Not Available
Description Local Fixed Disk                               Size  Not Available
Compressed  Not Available                                  Free Space  Not Available
File System Not Available                                  Volume Name Not Available
Size  Not Available                                        Volume Serial Number  Not Available
Free Space  Not Available
Volume Name Not Available                                  Drive R:
Volume Serial Number  Not Available                        Description Local Fixed Disk
                                                           Compressed  Not Available
Drive G:                                                   File System Not Available
Description Local Fixed Disk                               Size  Not Available
Compressed  Not Available                                  Free Space  Not Available
File System Not Available                                  Volume Name Not Available
Size  Not Available                                        Volume Serial Number  Not Available
Free Space  Not Available
Volume Name Not Available                                  Drive S:
Volume Serial Number  Not Available                        Description Local Fixed Disk
                                                           Compressed  Not Available
Drive H:                                                   File System Not Available
Description Local Fixed Disk                               Size  Not Available
Compressed  Not Available                                  Free Space  Not Available
File System Not Available
```

Volume Name Not Available
Volume Serial Number   Not Available

Drive T:
Description Local Fixed Disk
Compressed Not Available
File System Not Available
Size Not Available
Free Space Not Available
Volume Name Not Available
Volume Serial Number Not Available

Drive U:
Description Local Fixed Disk
Compressed Not Available
File System Not Available
Size Not Available
Free Space Not Available
Volume Name Not Available
Volume Serial Number Not Available

Drive V:
Description Local Fixed Disk
Compressed Not Available
File System Not Available
Size Not Available
Free Space Not Available
Volume Name Not Available
Volume Serial Number Not Available

Drive W:
Description Local Fixed Disk
Compressed Not Available
File System Not Available
Size Not Available
Free Space Not Available
Volume Name Not Available
Volume Serial Number Not Available

Drive X:
Description Local Fixed Disk
Compressed Not Available
File System Not Available
Size Not Available
Free Space Not Available
Volume Name Not Available
Volume Serial Number Not Available

Drive Y:
Description Local Fixed Disk
Compressed Not Available
File System Not Available
Size Not Available
Free Space Not Available
Volume Name Not Available
Volume Serial Number Not Available

Drive Z:
Description Local Fixed Disk
Compressed Not Available
File System Not Available
Size Not Available
Free Space Not Available
Volume Name Not Available
Volume Serial Number Not Available

[Disks]

Item Value
Description \\.\PHYSICALDRIVE8
Manufacturer Not Available
Model Not Available
Bytes/Sector 512
Media Loaded Yes
Media Type Fixed hard disk
Partitions 14
SCSI Bus Not Available
SCSI Logical Unit Not Available
SCSI Port Not Available
SCSI Target ID Not Available
Sectors/Track 63
Size 109.78 GB (117,876,487,680 bytes)
Total Cylinders 14,331
Total Sectors 230,227,515
Total Tracks 3,654,405
Tracks/Cylinder 255
Partition Disk #8, Partition #0
Partition Size 7.84 GB (8,414,429,184 bytes)
Partition Starting Offset 32,256 bytes
Partition Disk #8, Partition #1
Partition Size 7.84 GB (8,414,461,440 bytes)
Partition Starting Offset 8,414,461,440 bytes
Partition Disk #8, Partition #2
Partition Size 7.84 GB (8,414,461,440 bytes)
Partition Starting Offset 16,828,922,880 bytes
Partition Disk #8, Partition #3
Partition Size 86.27 GB (92,633,103,360 bytes)
Partition Starting Offset 25,243,384,320 bytes

Description \\.\PHYSICALDRIVE9
Manufacturer Not Available

Model Not Available
Bytes/Sector 512
Media Loaded Yes
Media Type Fixed hard disk
Partitions 14
SCSI Bus Not Available
SCSI Logical Unit Not Available
SCSI Port Not Available
SCSI Target ID Not Available
Sectors/Track 63
Size 260.10 GB (279,281,157,120 bytes)
Total Cylinders 33,954
Total Sectors 545,471,010
Total Tracks 8,658,270
Tracks/Cylinder 255
Partition Disk #9, Partition #0
Partition Size 7.84 GB (8,414,429,184 bytes)
Partition Starting Offset 32,256 bytes
Partition Disk #9, Partition #1
Partition Size 7.84 GB (8,414,461,440 bytes)
Partition Starting Offset 8,414,461,440 bytes
Partition Disk #9, Partition #2
Partition Size 59.12 GB (63,474,485,760 bytes)
Partition Starting Offset 16,828,922,880 bytes
Partition Disk #9, Partition #3
Partition Size 185.31 GB (198,977,748,480 bytes)
Partition Starting Offset 80,303,408,640 bytes

Description \\.\PHYSICALDRIVE10
Manufacturer Not Available
Model Not Available
Bytes/Sector 512
Media Loaded Yes
Media Type Fixed hard disk
Partitions 14
SCSI Bus Not Available
SCSI Logical Unit Not Available
SCSI Port Not Available
SCSI Target ID Not Available
Sectors/Track 63
Size 89.21 GB (95,791,610,880 bytes)
Total Cylinders 11,646
Total Sectors 187,092,990
Total Tracks 2,969,730
Tracks/Cylinder 255
Partition Disk #10, Partition #0
Partition Size 7.45 GB (7,994,939,904 bytes)
Partition Starting Offset 32,256 bytes
Partition Disk #10, Partition #1
Partition Size 7.45 GB (7,994,972,160 bytes)
Partition Starting Offset 7,994,972,160 bytes
Partition Disk #10, Partition #2
Partition Size 7.45 GB (7,994,972,160 bytes)
Partition Starting Offset 15,989,944,320 bytes
Partition Disk #10, Partition #3
Partition Size 66.88 GB (71,806,694,400 bytes)
Partition Starting Offset 23,984,916,480 bytes

Description \\.\PHYSICALDRIVE11
Manufacturer Not Available
Model Not Available
Bytes/Sector 512
Media Loaded Yes
Media Type Fixed hard disk
Partitions 6
SCSI Bus Not Available
SCSI Logical Unit Not Available
SCSI Port Not Available
SCSI Target ID Not Available
Sectors/Track 63
Size 40.23 GB (43,199,170,560 bytes)
Total Cylinders 5,252
Total Sectors 84,373,380
Total Tracks 1,339,260
Tracks/Cylinder 255
Partition Disk #11, Partition #0
Partition Size 6.84 GB (7,345,142,784 bytes)
Partition Starting Offset 32,256 bytes
Partition Disk #11, Partition #1
Partition Size 2.01 GB (2,155,023,360 bytes)
Partition Starting Offset 7,345,175,040 bytes
Partition Disk #11, Partition #2
Partition Size 7.91 GB (8,496,714,240 bytes)
Partition Starting Offset 9,500,198,400 bytes
Partition Disk #11, Partition #3
Partition Size 23.46 GB (25,194,032,640 bytes)
Partition Starting Offset 17,996,912,640 bytes

Description \\.\PHYSICALDRIVE12
Manufacturer Not Available
Model Not Available
Bytes/Sector 512
Media Loaded Yes
Media Type Fixed hard disk
Partitions 14
SCSI Bus Not Available
SCSI Logical Unit Not Available
SCSI Port Not Available
SCSI Target ID Not Available
Sectors/Track 63
Size 109.80 GB (117,901,163,520 bytes)

```
Total Cylinders 14,334                                    Partition Size  7.91 GB (8,496,714,240 bytes)
Total Sectors 230,275,710                                 Partition Starting Offset 9,500,198,400 bytes
Total Tracks  3,655,170                                    Partition Disk #15, Partition #3
Tracks/Cylinder 255                                        Partition Size  23.46 GB (25,194,032,640 bytes)
Partition Disk #12, Partition #0                           Partition Starting Offset 17,996,912,640 bytes
Partition Size  7.84 GB (8,414,429,184 bytes)
Partition Starting Offset 32,256 bytes                    Description \\.\PHYSICALDRIVE0
Partition Disk #12, Partition #1                           Manufacturer  Not Available
Partition Size  7.84 GB (8,414,461,440 bytes)             Model Not Available
Partition Starting Offset 8,414,461,440 bytes             Bytes/Sector  512
Partition Disk #12, Partition #2                           Media Loaded  Yes
Partition Size  7.84 GB (8,414,461,440 bytes)             Media Type  Fixed hard disk
Partition Starting Offset 16,828,922,880 bytes            Partitions  14
Partition Disk #12, Partition #3                           SCSI Bus  Not Available
Partition Size  86.27 GB (92,633,103,360 bytes)           SCSI Logical Unit Not Available
Partition Starting Offset 25,243,384,320 bytes            SCSI Port Not Available
                                                          SCSI Target ID  Not Available
Description \\.\PHYSICALDRIVE13                            Sectors/Track 63
Manufacturer  Not Available                               Size  109.78 GB (117,876,487,680 bytes)
Model Not Available                                       Total Cylinders 14,331
Bytes/Sector  512                                         Total Sectors 230,227,515
Media Loaded  Yes                                         Total Tracks  3,654,405
Media Type  Fixed hard disk                               Tracks/Cylinder 255
Partitions  14                                            Partition Disk #0, Partition #0
SCSI Bus  Not Available                                   Partition Size  7.84 GB (8,414,429,184 bytes)
SCSI Logical Unit Not Available                           Partition Starting Offset 32,256 bytes
SCSI Port Not Available                                   Partition Disk #0, Partition #1
SCSI Target ID  Not Available                             Partition Size  7.84 GB (8,414,461,440 bytes)
Sectors/Track 63                                          Partition Starting Offset 8,414,461,440 bytes
Size  260.10 GB (279,281,157,120 bytes)                   Partition Disk #0, Partition #2
Total Cylinders 33,954                                    Partition Size  7.84 GB (8,414,461,440 bytes)
Total Sectors 545,471,010                                 Partition Starting Offset 16,828,922,880 bytes
Total Tracks  8,658,270                                   Partition Disk #0, Partition #3
Tracks/Cylinder 255                                       Partition Size  86.27 GB (92,633,103,360 bytes)
Partition Disk #13, Partition #0                           Partition Starting Offset 25,243,384,320 bytes
Partition Size  7.84 GB (8,414,429,184 bytes)
Partition Starting Offset 32,256 bytes                    Description \\.\PHYSICALDRIVE1
Partition Disk #13, Partition #1                           Manufacturer  Not Available
Partition Size  7.84 GB (8,414,461,440 bytes)             Model Not Available
Partition Starting Offset 8,414,461,440 bytes             Bytes/Sector  512
Partition Disk #13, Partition #2                           Media Loaded  Yes
Partition Size  59.12 GB (63,474,485,760 bytes)           Media Type  Fixed hard disk
Partition Starting Offset 16,828,922,880 bytes            Partitions  14
Partition Disk #13, Partition #3                           SCSI Bus  Not Available
Partition Size  185.31 GB (198,977,748,480 bytes)         SCSI Logical Unit Not Available
Partition Starting Offset 80,303,408,640 bytes            SCSI Port Not Available
                                                          SCSI Target ID  Not Available
Description \\.\PHYSICALDRIVE14                            Sectors/Track 63
Manufacturer  Not Available                               Size  260.10 GB (279,281,157,120 bytes)
Model Not Available                                       Total Cylinders 33,954
Bytes/Sector  512                                         Total Sectors 545,471,010
Media Loaded  Yes                                         Total Tracks  8,658,270
Media Type  Fixed hard disk                               Tracks/Cylinder 255
Partitions  14                                            Partition Disk #1, Partition #0
SCSI Bus  Not Available                                   Partition Size  7.84 GB (8,414,429,184 bytes)
SCSI Logical Unit Not Available                           Partition Starting Offset 32,256 bytes
SCSI Port Not Available                                   Partition Disk #1, Partition #1
SCSI Target ID  Not Available                             Partition Size  7.84 GB (8,414,461,440 bytes)
Sectors/Track 63                                          Partition Starting Offset 8,414,461,440 bytes
Size  89.21 GB (95,791,610,880 bytes)                     Partition Disk #1, Partition #2
Total Cylinders 11,646                                    Partition Size  59.12 GB (63,474,485,760 bytes)
Total Sectors 187,092,990                                 Partition Starting Offset 16,828,922,880 bytes
Total Tracks  2,969,730                                   Partition Disk #1, Partition #3
Tracks/Cylinder 255                                       Partition Size  185.31 GB (198,977,748,480 bytes)
Partition Disk #14, Partition #0                           Partition Starting Offset 80,303,408,640 bytes
Partition Size  7.45 GB (7,994,939,904 bytes)
Partition Starting Offset 32,256 bytes                    Description \\.\PHYSICALDRIVE2
Partition Disk #14, Partition #1                           Manufacturer  Not Available
Partition Size  7.45 GB (7,994,972,160 bytes)             Model Not Available
Partition Starting Offset 7,994,972,160 bytes             Bytes/Sector  512
Partition Disk #14, Partition #2                           Media Loaded  Yes
Partition Size  7.45 GB (7,994,972,160 bytes)             Media Type  Fixed hard disk
Partition Starting Offset 15,989,944,320 bytes            Partitions  14
Partition Disk #14, Partition #3                           SCSI Bus  Not Available
Partition Size  66.88 GB (71,806,694,400 bytes)           SCSI Logical Unit Not Available
Partition Starting Offset 23,984,916,480 bytes            SCSI Port Not Available
                                                          SCSI Target ID  Not Available
Description \\.\PHYSICALDRIVE15                            Sectors/Track 63
Manufacturer  Not Available                               Size  89.21 GB (95,791,610,880 bytes)
Model Not Available                                       Total Cylinders 11,646
Bytes/Sector  512                                         Total Sectors 187,092,990
Media Loaded  Yes                                         Total Tracks  2,969,730
Media Type  Fixed hard disk                               Tracks/Cylinder 255
Partitions  6                                             Partition Disk #2, Partition #0
SCSI Bus  Not Available                                   Partition Size  7.45 GB (7,994,939,904 bytes)
SCSI Logical Unit Not Available                           Partition Starting Offset 32,256 bytes
SCSI Port Not Available                                   Partition Disk #2, Partition #1
SCSI Target ID  Not Available                             Partition Size  7.45 GB (7,994,972,160 bytes)
Sectors/Track 63                                          Partition Starting Offset 7,994,972,160 bytes
Size  40.23 GB (43,199,170,560 bytes)                     Partition Disk #2, Partition #2
Total Cylinders 5,252                                     Partition Size  7.45 GB (7,994,972,160 bytes)
Total Sectors 84,373,380                                  Partition Starting Offset 15,989,944,320 bytes
Total Tracks  1,339,260                                   Partition Disk #2, Partition #3
Tracks/Cylinder 255                                       Partition Size  66.88 GB (71,806,694,400 bytes)
Partition Disk #15, Partition #0                           Partition Starting Offset 23,984,916,480 bytes
Partition Size  6.84 GB (7,345,142,784 bytes)
Partition Starting Offset 32,256 bytes                    Description \\.\PHYSICALDRIVE3
Partition Disk #15, Partition #1                           Manufacturer  Not Available
Partition Size  2.01 GB (2,155,023,360 bytes)             Model Not Available
Partition Starting Offset 7,345,175,040 bytes             Bytes/Sector  512
Partition Disk #15, Partition #2                           Media Loaded  Yes
```

```
Media Type  Fixed hard disk                                      Tracks/Cylinder 255
Partitions  6                                                    Partition Disk #6, Partition #0
SCSI Bus  Not Available                                          Partition Size  7.45 GB (7,994,939,904 bytes)
SCSI Logical Unit Not Available                                  Partition Starting Offset 32,256 bytes
SCSI Port Not Available                                          Partition Disk #6, Partition #1
SCSI Target ID  Not Available                                    Partition Size  7.45 GB (7,994,972,160 bytes)
Sectors/Track 63                                                 Partition Starting Offset 7,994,972,160 bytes
Size  40.23 GB (43,199,170,560 bytes)                            Partition Disk #6, Partition #2
Total Cylinders 5,252                                            Partition Size  7.45 GB (7,994,972,160 bytes)
Total Sectors 84,373,380                                         Partition Starting Offset 15,989,944,320 bytes
Total Tracks  1,339,260                                          Partition Disk #6, Partition #3
Tracks/Cylinder 255                                              Partition Size  66.88 GB (71,806,694,400 bytes)
Partition Disk #3, Partition #0                                  Partition Starting Offset 23,984,916,480 bytes
Partition Size  6.84 GB (7,340,589,056 bytes)
Partition Starting Offset 16,384 bytes                           Description \\.\PHYSICALDRIVE7
Partition Disk #3, Partition #1                                  Manufacturer  Not Available
Partition Size  2.00 GB (2,151,628,800 bytes)                    Model Not Available
Partition Starting Offset 7,340,605,440 bytes                    Bytes/Sector  512
Partition Disk #3, Partition #2                                  Media Loaded  Yes
Partition Size  7.91 GB (8,493,711,360 bytes)                    Media Type  Fixed hard disk
Partition Starting Offset 9,492,234,240 bytes                    Partitions  6
Partition Disk #3, Partition #3                                  SCSI Bus  Not Available
Partition Size  23.48 GB (25,209,569,280 bytes)                  SCSI Logical Unit Not Available
Partition Starting Offset 17,985,945,600 bytes                   SCSI Port Not Available
                                                                 SCSI Target ID  Not Available
Description \\.\PHYSICALDRIVE4                                    Sectors/Track 63
Manufacturer  Not Available                                      Size  40.23 GB (43,199,170,560 bytes)
Model Not Available                                              Total Cylinders 5,252
Bytes/Sector  512                                                Total Sectors 84,373,380
Media Loaded  Yes                                                Total Tracks  1,339,260
Media Type  Fixed hard disk                                      Tracks/Cylinder 255
Partitions  14                                                   Partition Disk #7, Partition #0
SCSI Bus  Not Available                                          Partition Size  6.84 GB (7,340,589,056 bytes)
SCSI Logical Unit Not Available                                  Partition Starting Offset 16,384 bytes
SCSI Port Not Available                                          Partition Disk #7, Partition #1
SCSI Target ID  Not Available                                    Partition Size  2.00 GB (2,151,628,800 bytes)
Sectors/Track 63                                                 Partition Starting Offset 7,340,605,440 bytes
Size  109.80 GB (117,901,163,520 bytes)                          Partition Disk #7, Partition #2
Total Cylinders 14,334                                           Partition Size  7.91 GB (8,493,711,360 bytes)
Total Sectors 230,275,710                                        Partition Starting Offset 9,492,234,240 bytes
Total Tracks  3,655,170                                          Partition Disk #7, Partition #3
Tracks/Cylinder 255                                              Partition Size  23.48 GB (25,209,569,280 bytes)
Partition Disk #4, Partition #0                                  Partition Starting Offset 17,985,945,600 bytes
Partition Size  7.84 GB (8,414,429,184 bytes)
Partition Starting Offset 32,256 bytes                           Description Disk drive
Partition Disk #4, Partition #1                                  Manufacturer  (Standard disk drives)
Partition Size  7.84 GB (8,414,461,440 bytes)                    Model HP LOGICAL VOLUME SCSI Disk Device
Partition Starting Offset 8,414,461,440 bytes                    Bytes/Sector  512
Partition Disk #4, Partition #2                                  Media Loaded  Yes
Partition Size  7.84 GB (8,414,461,440 bytes)                    Media Type  Fixed hard disk
Partition Starting Offset 16,828,922,880 bytes                   Partitions  1
Partition Disk #4, Partition #3                                  SCSI Bus  0
Partition Size  86.27 GB (92,633,103,360 bytes)                  SCSI Logical Unit 0
Partition Starting Offset 25,243,384,320 bytes                   SCSI Port 2
                                                                 SCSI Target ID  4
Description \\.\PHYSICALDRIVE5                                    Sectors/Track 32
Manufacturer  Not Available                                      Size  33.89 GB (36,385,505,280 bytes)
Model Not Available                                              Total Cylinders 8,709
Bytes/Sector  512                                                Total Sectors 71,065,440
Media Loaded  Yes                                                Total Tracks  2,220,795
Media Type  Fixed hard disk                                      Tracks/Cylinder 255
Partitions  14                                                   Partition Disk #16, Partition #0
SCSI Bus  Not Available                                          Partition Size  33.88 GB (36,381,310,976 bytes)
SCSI Logical Unit Not Available                                  Partition Starting Offset 16,384 bytes
SCSI Port Not Available
SCSI Target ID  Not Available                                    Description Disk drive
Sectors/Track 63                                                 Manufacturer  (Standard disk drives)
Size  260.10 GB (279,281,157,120 bytes)                          Model HP LOGICAL VOLUME SCSI Disk Device
Total Cylinders 33,954                                           Bytes/Sector  512
Total Sectors 545,471,010                                        Media Loaded  Yes
Total Tracks  8,658,270                                          Media Type  Fixed hard disk
Tracks/Cylinder 255                                              Partitions  14
Partition Disk #5, Partition #0                                  SCSI Bus  0
Partition Size  7.84 GB (8,414,429,184 bytes)                    SCSI Logical Unit 0
Partition Starting Offset 32,256 bytes                           SCSI Port 2
Partition Disk #5, Partition #1                                  SCSI Target ID  5
Partition Size  7.84 GB (8,414,461,440 bytes)                    Sectors/Track 32
Partition Starting Offset 8,414,461,440 bytes                    Size  273.40 GB (293,561,548,800 bytes)
Partition Disk #5, Partition #2                                  Total Cylinders 70,265
Partition Size  59.12 GB (63,474,485,760 bytes)                  Total Sectors 573,362,400
Partition Starting Offset 16,828,922,880 bytes                   Total Tracks  17,917,575
Partition Disk #5, Partition #3                                  Tracks/Cylinder 255
Partition Size  185.31 GB (198,977,748,480 bytes)                Partition Disk #17, Partition #0
Partition Starting Offset 80,303,408,640 bytes                   Partition Size  15.24 GB (16,360,718,336 bytes)
                                                                 Partition Starting Offset 16,384 bytes
Description \\.\PHYSICALDRIVE6                                    Partition Disk #17, Partition #1
Manufacturer  Not Available                                      Partition Size  15.24 GB (16,360,734,720 bytes)
Model Not Available                                              Partition Starting Offset 16,360,734,720 bytes
Bytes/Sector  512                                                Partition Disk #17, Partition #2
Media Loaded  Yes                                                Partition Size  15.14 GB (16,256,286,720 bytes)
Media Type  Fixed hard disk                                      Partition Starting Offset 32,721,469,440 bytes
Partitions  14                                                   Partition Disk #17, Partition #3
SCSI Bus  Not Available                                          Partition Size  227.79 GB (244,583,792,640 bytes)
SCSI Logical Unit Not Available                                  Partition Starting Offset 48,977,756,160 bytes
SCSI Port Not Available
SCSI Target ID  Not Available                                    [SCSI]
Sectors/Track 63
Size  89.21 GB (95,791,610,880 bytes)                            Item  Value
Total Cylinders 11,646                                           Name  Smart Array P800 Controller (Non-Miniport)
Total Sectors 187,092,990                                        Manufacturer  Hewlett-Packard
Total Tracks  2,969,730                                          Status  OK
```

PNP Device ID
  PCI\VEN_103C&DEV_3230&SUBSYS_3223103C&REV_03\6&305972A8&0&0000001
0
Memory Address 0xFDB00000-0xFDBFFFFF
I/O Port 0x00004000-0x00005FFF
Memory Address 0xFDAF0000-0xFDAF0FFF
IRQ Channel IRQ 16
Driver c:\windows\system32\drivers\hpqcissb.sys (5.20.64.64 Build
1 (AMD64) built by: buildsrv, 56.50 KB (57,856 bytes), 10/27/2006
10:04 AM)

Name Smart Array P800 Controller (Non-Miniport)
Manufacturer Hewlett-Packard
Status OK
PNP Device ID
  PCI\VEN_103C&DEV_3230&SUBSYS_3223103C&REV_03\4&237315C2&0&0020
Memory Address 0xFDE00000-0xFDEFFFFF
I/O Port 0x00006000-0x00006FFF
Memory Address 0xFDDF0000-0xFDDF0FFF
IRQ Channel IRQ 16
Driver c:\windows\system32\drivers\hpqcissb.sys (5.20.64.64 Build
1 (AMD64) built by: buildsrv, 56.50 KB (57,856 bytes), 10/27/2006
10:04 AM)

Name Smart Array E200i Controller
Manufacturer Hewlett-Packard Company
Status OK
PNP Device ID
  PCI\VEN_103C&DEV_3238&SUBSYS_3211103C&REV_00\5&32CF3F35&0&400028

Memory Address 0xFDF80000-0xFDFFFFFF
I/O Port 0x00007000-0x00007FFF
Memory Address 0xFDF70000-0xFDF77FFF
IRQ Channel IRQ 16
Driver c:\windows\system32\drivers\hpcisss2.sys (5.8.0.64 Build 10
(x86-64) built by: WINBUILD1, 51.00 KB (52,224 bytes), 7/3/2007
12:14 PM)

[IDE]

Item Value
Name Standard Dual Channel PCI IDE Controller
Manufacturer (Standard IDE ATA/ATAPI controllers)
Status OK
PNP Device ID
  PCI\VEN_8086&DEV_269E&SUBSYS_31FE103C&REV_09\3&61AAA01&0&F9
I/O Port 0x00000500-0x0000050F
Driver c:\windows\system32\drivers\pciide.sys (5.2.3790.1830
(srv03_sp1_rtm.050324-1447), 6.00 KB (6,144 bytes), 11/30/2005 6:00
AM)

Name Primary IDE Channel
Manufacturer (Standard IDE ATA/ATAPI controllers)
Status OK
PNP Device ID PCIIDE\IDECHANNEL\4&56E2F28&0&0
I/O Port 0x000001F0-0x000001F7
I/O Port 0x000003F6-0x000003F6
Driver c:\windows\system32\drivers\atapi.sys (5.2.3790.1830
(srv03_sp1_rtm.050324-1447), 145.00 KB (148,480 bytes), 11/30/2005
6:00 AM)

Name Secondary IDE Channel
Manufacturer (Standard IDE ATA/ATAPI controllers)
Status OK
PNP Device ID PCIIDE\IDECHANNEL\4&56E2F28&0&1
I/O Port 0x00000170-0x00000177
I/O Port 0x00000376-0x00000376
Driver c:\windows\system32\drivers\atapi.sys (5.2.3790.1830
(srv03_sp1_rtm.050324-1447), 145.00 KB (148,480 bytes), 11/30/2005
6:00 AM)

[Printing]

Name Driver Port Name Server Name

[Problem Devices]

Device PNP Device ID Error Code
Base System Device
  PCI\VEN_0E11&DEV_B203&SUBSYS_3305103C&REV_03\4&2014205D&0&20F0
  The drivers for this device are not installed.
Base System Device
  PCI\VEN_0E11&DEV_B204&SUBSYS_3305103C&REV_03\4&2014205D&0&22F0
  The drivers for this device are not installed.
PCI Device
  PCI\VEN_103C&DEV_3302&SUBSYS_3305103C&REV_00\4&2014205D&0&26F0
  The drivers for this device are not installed.
Not Available ACPI\IPI0001\0 The drivers for this device are not
installed.

[USB]

Device PNP Device ID
Standard Universal PCI to USB Host Controller
  PCI\VEN_8086&DEV_2688&SUBSYS_31FE103C&REV_09\3&61AAA01&0&E8
Standard Universal PCI to USB Host Controller
  PCI\VEN_8086&DEV_2689&SUBSYS_31FE103C&REV_09\3&61AAA01&0&E9
Standard Universal PCI to USB Host Controller
  PCI\VEN_8086&DEV_268A&SUBSYS_31FE103C&REV_09\3&61AAA01&0&EA
Standard Universal PCI to USB Host Controller
  PCI\VEN_8086&DEV_268B&SUBSYS_31FE103C&REV_09\3&61AAA01&0&EB

Standard Enhanced PCI to USB Host Controller
  PCI\VEN_8086&DEV_268C&SUBSYS_31FE103C&REV_09\3&61AAA01&0&EF
Standard Universal PCI to USB Host Controller
  PCI\VEN_103C&DEV_3300&SUBSYS_3305103C&REV_00\4&2014205D&0&24F0

[Software Environment]

[System Drivers]

Name Description File Type Started Start Mode State Status
  Error Control Accept Pause Accept Stop
abiosdsk Abiosdsk Not Available Kernel Driver No Disabled
  Stopped OK Ignore No No
acpi Microsoft ACPI Driver c:\windows\system32\drivers\acpi.sys
  Kernel Driver Yes Boot Running OK Normal No Yes
acpiec ACPIEC c:\windows\system32\drivers\acpiec.sys Kernel
  Driver No Disabled Stopped OK Normal No No
adpu160m adpu160m Not Available Kernel Driver No Disabled
  Stopped OK Normal No No
adpu320 adpu320 Not Available Kernel Driver No Disabled Stopped
  OK Normal No No
afd AFD c:\windows\system32\drivers\afd.sys Kernel Driver Yes
  System Running OK Normal No Yes
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
amdide AmdIde Not Available Kernel Driver No Disabled Stopped
  OK Normal No No
arc arc Not Available Kernel Driver No Disabled Stopped OK
  Normal No No
asyncmac RAS Asynchronous Media Driver
  c:\windows\system32\drivers\asyncmac.sys Kernel Driver No
  Manual Stopped OK Normal No No
atapi Standard IDE/ESDI Hard Disk Controller
  c:\windows\system32\drivers\atapi.sys Kernel Driver Yes Boot
  Running OK Normal No Yes
atdisk Atdisk Not Available Kernel Driver No Disabled Stopped
  OK Ignore No No
atmarpc ATM ARP Client Protocol
  c:\windows\system32\drivers\atmarpc.sys Kernel Driver No Manual
  Stopped OK Normal No No
audstub Audio Stub Driver c:\windows\system32\drivers\audstub.sys
  Kernel Driver Yes Manual Running OK Normal No Yes
b06bdrv HP Virtual Bus Device
  c:\windows\system32\drivers\bxvbda.sys Kernel Driver Yes Boot
  Running OK Normal No Yes
beep Beep c:\windows\system32\drivers\beep.sys Kernel Driver Yes
  System Running OK Normal No Yes
cdac15ba CdaC15BA c:\windows\system32\drivers\cdac15ba.sys
  Kernel Driver Yes Auto Running OK Normal No Yes
cdad10ba CdaD10BA c:\windows\system32\drivers\cdad10ba.sys
  Kernel Driver Yes Auto Running OK Normal No Yes
cdfs Cdfs c:\windows\system32\drivers\cdfs.sys File System
  Driver No Disabled Stopped OK Normal No No
cdrom CD-ROM Driver c:\windows\system32\drivers\cdrom.sys Kernel
  Driver No System Stopped OK Normal No No
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
cpqcissm cpqcissm Not Available Kernel Driver No Disabled
  Stopped OK Normal No No
crcdisk CRC Disk Filter Driver
  c:\windows\system32\drivers\crcdisk.sys Kernel Driver Yes Boot
  Running OK Normal No Yes
dfsdriver DfsDriver c:\windows\system32\drivers\dfs.sys File System
  Driver Yes Boot Running OK Normal No Yes
disk Disk Driver c:\windows\system32\drivers\disk.sys Kernel
  Driver Yes Boot Running OK Normal No Yes
dmboot dmboot c:\windows\system32\drivers\dmboot.sys Kernel
  Driver No Disabled Stopped OK Normal No No
dmio Logical Disk Manager Driver
  c:\windows\system32\drivers\dmio.sys Kernel Driver Yes Boot
  Running OK Normal No Yes
dmload dmload c:\windows\system32\drivers\dmload.sys Kernel
  Driver Yes Boot Running OK Normal No Yes
dpti2o dpti2o Not Available Kernel Driver No Disabled Stopped
  OK Normal No No
e1000 Intel(R) PRO/1000 Device Driver
  c:\windows\system32\drivers\e1g5132e.sys Kernel Driver No
  Manual Stopped OK Normal No No
elxstor elxstor Not Available Kernel Driver No Disabled Stopped
  OK Normal No No
fastfat Fastfat c:\windows\system32\drivers\fastfat.sys File System
  Driver No Disabled Stopped OK Normal No No
fdc Floppy Disk Controller Driver
  c:\windows\system32\drivers\fdc.sys Kernel Driver Yes Manual
  Running OK Normal No No
fips Fips c:\windows\system32\drivers\fips.sys Kernel Driver Yes
  System Running OK Normal No Yes
flpydisk Flpydisk c:\windows\system32\drivers\flpydisk.sys
  Kernel Driver No System Stopped OK Ignore No No

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
hidusb Microsoft HID Class Driver c:\windows\system32\drivers\hidusb.sys Kernel Driver Yes Manual Running OK Ignore No Yes
hpcisss hpcisss c:\windows\system32\drivers\hpcisss.sys Kernel Driver Yes Boot Running OK Normal No Yes
hpcisss2 HpCISSs2 c:\windows\system32\drivers\hpcisss2.sys Kernel Driver Yes Boot Running OK Normal No Yes
hpqcissb Smart Array Controllers Non-Miniport Bus Driver c:\windows\system32\drivers\hpqcissb.sys Kernel Driver Yes Boot Running OK Normal No Yes
hpqcissd Smart Array Controllers Non-Miniport Disk Driver c:\windows\system32\drivers\hpqcissd.sys Kernel Driver Yes Boot Running OK Normal No Yes
http HTTP c:\windows\system32\drivers\http.sys Kernel Driver No Manual Stopped OK Normal No No
i2omgmt i2omgmt Not Available Kernel Driver No System Stopped OK Normal No No
i8042prt i8042 Keyboard and PS/2 Mouse Port Driver c:\windows\system32\drivers\i8042prt.sys Kernel Driver Yes System Running OK Normal No Yes
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
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
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
kbdhid Keyboard HID Driver c:\windows\system32\drivers\kbdhid.sys Kernel Driver Yes System Running OK Ignore No Yes
ksecdd KSecDD c:\windows\system32\drivers\ksecdd.sys Kernel Driver Yes Boot Running OK Normal No Yes
ksthunk Kernel Streaming WOW64 Thunk Service c:\windows\system32\drivers\ksthunk.sys Kernel Driver Yes Manual Running OK Normal No Yes
l2nd HP NC370 Multifunction Gigabit Server Adapter c:\windows\system32\drivers\bxnd52a.sys Kernel Driver Yes Manual Running OK Normal No Yes
lp6nds35 lp6nds35 Not Available Kernel Driver No Disabled Stopped OK Normal No No
mnmdd mnmdd c:\windows\system32\drivers\mnmdd.sys Kernel Driver Yes System Running OK Ignore No Yes
modem Modem c:\windows\system32\drivers\modem.sys Kernel Driver No Manual Stopped OK Ignore No No
mouclass Mouse Class Driver c:\windows\system32\drivers\mouclass.sys Kernel Driver Yes System Running OK Normal No Yes
mouhid Mouse HID Driver c:\windows\system32\drivers\mouhid.sys Kernel Driver Yes Manual Running OK Ignore No Yes
mountmgr Mount Point Manager c:\windows\system32\drivers\mountmgr.sys Kernel Driver Yes Boot Running OK Normal No Yes
mraid35x mraid35x Not Available Kernel Driver No Disabled Stopped OK Normal No No
mrxdav WebDav Client Redirector c:\windows\system32\drivers\mrxdav.sys File System Driver No Manual Stopped OK Normal No No
mrxsmb MRXSMB c:\windows\system32\drivers\mrxsmb.sys File System Driver Yes System Running OK Normal No Yes
msfs Msfs c:\windows\system32\drivers\msfs.sys File System Driver Yes System Running OK Normal No Yes
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
n1000 HP Gigabit NIC Driver c:\windows\system32\drivers\n1g5132e.sys Kernel Driver Yes Manual 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 Yes Manual Running OK Normal No Yes
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
pptpminiport WAN Miniport (PPTP) c:\windows\system32\drivers\rasppptp.sys Kernel Driver Yes Manual Running OK Normal No Yes
ptilink Direct Parallel Link Driver c:\windows\system32\drivers\ptilink.sys Kernel Driver Yes Manual Running OK Normal No Yes
ql2300 ql2300 Not Available Kernel Driver No Disabled Stopped OK Normal No No
rasacd Remote Access Auto Connection Driver c:\windows\system32\drivers\rasacd.sys Kernel Driver Yes System Running OK Normal No Yes
rasl2tp WAN Miniport (L2TP) c:\windows\system32\drivers\rasl2tp.sys Kernel Driver Yes Manual Running OK Normal No Yes
raspppoe Remote Access PPPOE Driver c:\windows\system32\drivers\raspppoe.sys Kernel Driver Yes Manual Running OK Normal No Yes
raspti Direct Parallel c:\windows\system32\drivers\raspti.sys Kernel Driver Yes Manual Running OK Normal No Yes
rdbss Rdbss c:\windows\system32\drivers\rdbss.sys File System Driver Yes System Running OK Normal No Yes
rdpcdd RDPCDD c:\windows\system32\drivers\rdpcdd.sys Kernel Driver Yes System Running OK Ignore No Yes
rdpdr Terminal Server Device Redirector Driver c:\windows\system32\drivers\rdpdr.sys Kernel Driver Yes Manual Running OK Normal No Yes
rdpwd RDPWD c:\windows\system32\drivers\rdpwd.sys Kernel Driver No Manual Stopped OK Ignore No No
redbook Digital CD Audio Playback Filter Driver c:\windows\system32\drivers\redbook.sys Kernel Driver No System Stopped OK Normal No No
secdrv Security Driver c:\windows\system32\drivers\secdrv.sys Kernel Driver Yes Auto Running OK Normal No Yes
serenum Serenum Filter Driver c:\windows\system32\drivers\serenum.sys Kernel Driver Yes Manual Running OK Normal No Yes
serial Serial port driver c:\windows\system32\drivers\serial.sys Kernel Driver Yes System Running OK Ignore No Yes
sfloppy Sfloppy c:\windows\system32\drivers\sfloppy.sys Kernel Driver No System Stopped OK Normal No No
simbad Simbad 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
startdss HP ProLiant Virtual Install Disk Support Driver c:\windows\system32\drivers\startdss.sys Kernel Driver No Disabled Stopped OK Normal No No
swenum Software Bus Driver c:\windows\system32\drivers\swenum.sys Kernel Driver Yes Manual Running OK Normal No Yes
symc8xx symc8xx Not Available Kernel Driver No Disabled Stopped OK Normal No No
symmpi symmpi Not Available Kernel Driver No Disabled Stopped OK Normal No No
sym_hi sym_hi Not Available Kernel Driver No Disabled Stopped OK Normal No No
sym_u3 sym_u3 Not Available Kernel Driver No Disabled Stopped OK Normal No No
tcpip TCP/IP Protocol Driver c:\windows\system32\drivers\tcpip.sys Kernel Driver Yes System Running OK Normal No Yes

tdpipe TDPIPE c:\windows\system32\drivers\tdpipe.sys Kernel
Driver No Manual Stopped OK Ignore No No
tdtcp TDTCP c:\windows\system32\drivers\tdtcp.sys Kernel Driver No
  Manual Stopped OK Ignore No No
termdd Terminal Device Driver
  c:\windows\system32\drivers\termdd.sys Kernel Driver Yes System
  Running OK Normal No Yes
toside TosIde Not Available Kernel Driver No Disabled Stopped
  OK Normal No No
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
usbccgp Microsoft USB Generic Parent Driver
  c:\windows\system32\drivers\usbccgp.sys Kernel Driver Yes Manual
  Running OK Normal No Yes
usbehci Microsoft USB 2.0 Enhanced Host Controller Miniport Driver
  c:\windows\system32\drivers\usbehci.sys Kernel Driver Yes Manual
  Running OK Normal No Yes
usbhub Microsoft USB Standard Hub Driver
  c:\windows\system32\drivers\usbhub.sys Kernel Driver Yes Manual
  Running OK Normal No Yes
usbstor USB Mass Storage Driver
  c:\windows\system32\drivers\usbstor.sys Kernel Driver No Manual
  Stopped OK Normal No No
usbuhci Microsoft USB Universal Host Controller Miniport Driver
  c:\windows\system32\drivers\usbuhci.sys Kernel Driver Yes Manual
  Running OK Normal No Yes
vga vga c:\windows\system32\drivers\vgapnp.sys Kernel Driver Yes
  Manual Running OK Ignore No Yes
vgasave VGA Display Controller. c:\windows\system32\drivers\vga.sys
  Kernel Driver No System Stopped OK Ignore No No
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
Communications Port Yes PORTS 5.2.3790.1830 10/1/2002 (Standard
port types) msports.inf Not Available ROOT*PNP0501\1_0_17_1_0_0
Microsoft System Management BIOS Driver Yes SYSTEM 5.2.3790.1830
  10/1/2002 (Standard system devices) machine.inf Not Available
  ROOT\SYSTEM\0002
Microcode Update Device Yes SYSTEM 5.2.3790.1830 10/1/2002
  (Standard system devices) machine.inf Not Available
  ROOT\SYSTEM\0001
Plug and Play Software Device Enumerator Yes SYSTEM 5.2.3790.1830
  10/1/2002 (Standard system devices) machine.inf Not Available
  ROOT\SYSTEM\0000
Terminal Server Mouse Driver Yes SYSTEM 5.2.3790.1830 10/1/2002
  (Standard system devices) machine.inf Not Available
  ROOT\RDP_MOU\0000
Terminal Server Keyboard Driver Yes SYSTEM 5.2.3790.1830 10/1/2002
  (Standard system devices) machine.inf Not Available
  ROOT\RDP_KBD\0000
Terminal Server Device Redirector Yes SYSTEM 5.2.3790.1830
  10/1/2002 (Standard system devices) machine.inf Not Available
  ROOT\RDPDR\0000
Direct Parallel Yes NET 5.2.3790.1830 10/1/2002 Microsoft
  netrasa.inf Not Available ROOT\MS_PTIMINIPORT\0000
WAN Miniport (PPTP) Yes NET 5.2.3790.1830 10/1/2002 Microsoft
  netrasa.inf Not Available ROOT\MS_PPTPMINIPORT\0000
WAN Miniport (PPPOE) Yes NET 5.2.3790.1830 10/1/2002 Microsoft
  netrasa.inf Not Available ROOT\MS_PPPOEMINIPORT\0000
WAN Miniport (IP) Yes NET 5.2.3790.1830 10/1/2002 Microsoft
  netrasa.inf Not Available ROOT\MS_NDISWANIP\0000
WAN Miniport (L2TP) Yes NET 5.2.3790.1830 10/1/2002 Microsoft
  netrasa.inf Not Available ROOT\MS_L2TPMINIPORT\0000
Video Codecs Yes MEDIA 5.2.3790.1830 10/1/2002 (Standard system
devices) wave.inf Not Available ROOT\MEDIA\MS_MMVID
Legacy Video Capture Devices Yes MEDIA 5.2.3790.1830 10/1/2002
  (Standard system devices) wave.inf Not Available
  ROOT\MEDIA\MS_MMVCD
Media Control Devices Yes MEDIA 5.2.3790.1830 10/1/2002 (Standard
system devices) wave.inf Not Available ROOT\MEDIA\MS_MMMCI
Legacy Audio Drivers Yes MEDIA 5.2.3790.1830 10/1/2002 (Standard
system devices) wave.inf Not Available ROOT\MEDIA\MS_MMDRV
Audio Codecs Yes MEDIA 5.2.3790.1830 10/1/2002 (Standard system
devices) 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
  ROOT\LEGACY_WANARP\0000
volsnap Not Available LEGACYDRIVER Not Available Not Available Not
Available Not Available Not Available ROOT\LEGACY_VOLSNAP\0000
TCP/IP Protocol Driver Not Available LEGACYDRIVER Not Available
  Not Available Not Available Not Available Not Available
  ROOT\LEGACY_TCPIP\0000

HP ProLiant Virtual Install Disk Support Driver Not Available
  LEGACYDRIVER Not Available Not Available Not Available Not
Available Not Available ROOT\LEGACY_STARTDSS\0000
Security Driver Not Available LEGACYDRIVER Not Available Not
Available Not Available Not Available Not Available
  ROOT\LEGACY_SECDRV\0000
RDPCDD Not Available LEGACYDRIVER Not Available Not Available Not
Available Not Available Not Available ROOT\LEGACY_RDPCDD\0000
Remote Access Auto Connection Driver Not Available LEGACYDRIVER
  Not Available Not Available Not Available Not Available Not
Available ROOT\LEGACY_RASACD\0000
Partition Manager Not Available LEGACYDRIVER 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 ROOT\LEGACY_NULL\0000
NetBios over Tcpip Not Available LEGACYDRIVER Not Available Not
Available Not Available Not Available Not Available
  ROOT\LEGACY_NETBT\0000
NDProxy Not Available LEGACYDRIVER Not 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
  ROOT\LEGACY_NDISUIO\0000
Remote Access NDIS TAPI Driver Not Available LEGACYDRIVER Not
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 Not Available Not Available
  ROOT\LEGACY_NDIS\0000
mountmgr Not Available LEGACYDRIVER Not Available Not Available
  Not Available Not Available Not Available
  ROOT\LEGACY_MOUNTMGR\0000
mnmdd Not Available LEGACYDRIVER Not Available Not Available Not
Available Not Available Not Available ROOT\LEGACY_MNMDD\0000
ksecdd Not Available LEGACYDRIVER Not 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
  ROOT\LEGACY_IPSEC\0000
IP Network Address Translator Not Available LEGACYDRIVER Not
Available Not Available Not Available Not Available Not Available
  ROOT\LEGACY_IPNAT\0000
hpcisss Not Available LEGACYDRIVER Not Available Not Available Not
Available Not Available Not Available ROOT\LEGACY_HPCISSS\0000
Generic Packet Classifier Not Available LEGACYDRIVER Not Available
  Not Available Not Available Not Available Not Available
  ROOT\LEGACY_GPC\0000
Fips Not Available LEGACYDRIVER Not Available Not Available Not
Available Not Available Not Available ROOT\LEGACY_FIPS\0000
dmload Not Available LEGACYDRIVER Not Available Not Available Not
Available Not Available Not Available ROOT\LEGACY_DMLOAD\0000
dmboot Not Available LEGACYDRIVER Not 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 Not Available Not Available
  ROOT\LEGACY_CRCDISK\0000
CdaD10BA Not Available LEGACYDRIVER Not Available Not Available
  Not Available Not Available Not Available
  ROOT\LEGACY_CDAD10BA\0000
CdaC15BA Not Available LEGACYDRIVER Not Available Not Available
  Not Available Not Available Not Available
  ROOT\LEGACY_CDAC15BA\0000
Beep Not Available LEGACYDRIVER Not Available Not Available Not
Available Not Available Not Available ROOT\LEGACY_BEEP\0000
AFD Not Available LEGACYDRIVER Not Available Not Available Not
Available Not Available Not Available ROOT\LEGACY_AFD\0000
Generic volume Yes VOLUME 5.2.3790.1830 10/1/2002 Microsoft
  volume.inf Not Available
  STORAGE\VOLUME\1&30A96598&0&SIGNATURE253CB9A1OFFSET316C624000LENG
TH3CF2CC000
Generic volume Yes VOLUME 5.2.3790.1830 10/1/2002 Microsoft
  volume.inf Not Available
  STORAGE\VOLUME\1&30A96598&0&SIGNATURE253CB9A1OFFSET2D9D354000LENG
TH3CF2CC000
Generic volume Yes VOLUME 5.2.3790.1830 10/1/2002 Microsoft
  volume.inf Not Available
  STORAGE\VOLUME\1&30A96598&0&SIGNATURE253CB9A1OFFSET29CE084000LENG
TH3CF2CC000
Generic volume Yes VOLUME 5.2.3790.1830 10/1/2002 Microsoft
  volume.inf Not Available
  STORAGE\VOLUME\1&30A96598&0&SIGNATURE253CB9A1OFFSET25FEDB4000LENG
TH3CF2CC000
Generic volume Yes VOLUME 5.2.3790.1830 10/1/2002 Microsoft
  volume.inf Not Available
  STORAGE\VOLUME\1&30A96598&0&SIGNATURE253CB9A1OFFSET222FAE4000LENG
TH3CF2CC000
Generic volume Yes VOLUME 5.2.3790.1830 10/1/2002 Microsoft
  volume.inf Not Available
  STORAGE\VOLUME\1&30A96598&0&SIGNATURE253CB9A1OFFSET1E60814000LENG
TH3CF2CC000
Generic volume Yes VOLUME 5.2.3790.1830 10/1/2002 Microsoft
  volume.inf Not Available
  STORAGE\VOLUME\1&30A96598&0&SIGNATURE253CB9A1OFFSET1A91544000LENG
TH3CF2CC000
Generic volume Yes VOLUME 5.2.3790.1830 10/1/2002 Microsoft
  volume.inf Not Available
  STORAGE\VOLUME\1&30A96598&0&SIGNATURE253CB9A1OFFSET16C2274000LENG
TH3CF2CC000
Generic volume Yes VOLUME 5.2.3790.1830 10/1/2002 Microsoft
  volume.inf Not Available

```
STORAGE\VOLUME\1&30A96598&0&SIGNATURE253CB9A1OFFSET12F9340000LENG
TH3C8F30000
Generic volume  Yes VOLUME  5.2.3790.1830 10/1/2002 Microsoft
  volume.inf  Not Available
  STORAGE\VOLUME\1&30A96598&0&SIGNATURE253CB9A1OFFSETF3040C000LENGT
H3C8F30000
Generic volume  Yes VOLUME  5.2.3790.1830 10/1/2002 Microsoft
  volume.inf  Not Available
  STORAGE\VOLUME\1&30A96598&0&SIGNATURE253CB9A1OFFSETB674D8000LENGT
H3C8F30000
Generic volume  Yes VOLUME  5.2.3790.1830 10/1/2002 Microsoft
  volume.inf  Not Available
  STORAGE\VOLUME\1&30A96598&0&SIGNATURE253CB9A1OFFSET79E5A0000LENGT
H3C8F34000
Generic volume  Yes VOLUME  5.2.3790.1830 10/1/2002 Microsoft
  volume.inf  Not Available
  STORAGE\VOLUME\1&30A96598&0&SIGNATURE253CB9A1OFFSET3CF2D0000LENGT
H3CF2D0000
Generic volume  Yes VOLUME  5.2.3790.1830 10/1/2002 Microsoft
  volume.inf  Not Available
  STORAGE\VOLUME\1&30A96598&0&SIGNATURE253CB9A1OFFSET4000LENGTH3CF2
CC000
Generic volume  Yes VOLUME  5.2.3790.1830 10/1/2002 Microsoft
  volume.inf  Not Available
  STORAGE\VOLUME\1&30A96598&0&SIGNATURE253CB9A3OFFSET4000LENGTH8787
EC000
Generic volume  Yes VOLUME  5.2.3790.1830 10/1/2002 Microsoft
  volume.inf  Not Available
  STORAGE\VOLUME\1&30A96598&0&SIGNATURE416F3F95OFFSET817DC8200LENGT
H1F393F800
Generic volume  Yes VOLUME  5.2.3790.1830 10/1/2002 Microsoft
  volume.inf  Not Available
  STORAGE\VOLUME\1&30A96598&0&SIGNATURE416F3F95OFFSET624480C00LENGT
H1F393F800
Generic volume  Yes VOLUME  5.2.3790.1830 10/1/2002 Microsoft
  volume.inf  Not Available
  STORAGE\VOLUME\1&30A96598&0&SIGNATURE416F3F95OFFSET430B39600LENGT
H1F393F800
Generic volume  Yes VOLUME  5.2.3790.1830 10/1/2002 Microsoft
  volume.inf  Not Available
  STORAGE\VOLUME\1&30A96598&0&SIGNATURE416F3F95OFFSET236418600LENGT
H1FA719200
Generic volume  Yes VOLUME  5.2.3790.1830 10/1/2002 Microsoft
  volume.inf  Not Available
  STORAGE\VOLUME\1&30A96598&0&SIGNATURE416F3F95OFFSET1B5CE7A00LENGT
H80730C00
Generic volume  Yes VOLUME  5.2.3790.1830 10/1/2002 Microsoft
  volume.inf  Not Available
  STORAGE\VOLUME\1&30A96598&0&SIGNATURE416F3F95OFFSET7E00LENGTH1B5C
DFC00
Generic volume  Yes VOLUME  5.2.3790.1830 10/1/2002 Microsoft
  volume.inf  Not Available
  STORAGE\VOLUME\1&30A96598&0&SIGNATURE416F3F99OFFSET11F3BEBA00LENG
TH45577B000
Generic volume  Yes VOLUME  5.2.3790.1830 10/1/2002 Microsoft
  volume.inf  Not Available
  STORAGE\VOLUME\1&30A96598&0&SIGNATURE416F3F99OFFSET11F2463400LENG
TH1780800
Generic volume  Yes VOLUME  5.2.3790.1830 10/1/2002 Microsoft
  volume.inf  Not Available
  STORAGE\VOLUME\1&30A96598&0&SIGNATURE416F3F99OFFSET11E6048200LENG
THC413400
Generic volume  Yes VOLUME  5.2.3790.1830 10/1/2002 Microsoft
  volume.inf  Not Available
  STORAGE\VOLUME\1&30A96598&0&SIGNATURE416F3F99OFFSET11E40E7A00LENG
TH1F58A00
Generic volume  Yes VOLUME  5.2.3790.1830 10/1/2002 Microsoft
  volume.inf  Not Available
  STORAGE\VOLUME\1&30A96598&0&SIGNATURE416F3F99OFFSET105578A000LENG
TH18E955C00
Generic volume  Yes VOLUME  5.2.3790.1830 10/1/2002 Microsoft
  volume.inf  Not Available
  STORAGE\VOLUME\1&30A96598&0&SIGNATURE416F3F99OFFSETEC6E2C600LENGT
H18E955C00
Generic volume  Yes VOLUME  5.2.3790.1830 10/1/2002 Microsoft
  volume.inf  Not Available
  STORAGE\VOLUME\1&30A96598&0&SIGNATURE416F3F99OFFSETCF1364A00LENGT
H1D5ABFE00
Generic volume  Yes VOLUME  5.2.3790.1830 10/1/2002 Microsoft
  volume.inf  Not Available
  STORAGE\VOLUME\1&30A96598&0&SIGNATURE416F3F99OFFSETB2B3A0E00LENGT
H1C5FBBE00
Generic volume  Yes VOLUME  5.2.3790.1830 10/1/2002 Microsoft
  volume.inf  Not Available
  STORAGE\VOLUME\1&30A96598&0&SIGNATURE416F3F99OFFSET94EB07600LENGT
H1DC891A00
Generic volume  Yes VOLUME  5.2.3790.1830 10/1/2002 Microsoft
  volume.inf  Not Available
  STORAGE\VOLUME\1&30A96598&0&SIGNATURE416F3F99OFFSET77226DE00LENGT
H1DC891A00
Generic volume  Yes VOLUME  5.2.3790.1830 10/1/2002 Microsoft
  volume.inf  Not Available
  STORAGE\VOLUME\1&30A96598&0&SIGNATURE416F3F99OFFSET5959D4600LENGT
H1DC891A00
Generic volume  Yes VOLUME  5.2.3790.1830 10/1/2002 Microsoft
  volume.inf  Not Available
  STORAGE\VOLUME\1&30A96598&0&SIGNATURE416F3F99OFFSET3B9133000LENGT
H1DC899800
Generic volume  Yes VOLUME  5.2.3790.1830 10/1/2002 Microsoft
  volume.inf  Not Available

STORAGE\VOLUME\1&30A96598&0&SIGNATURE416F3F99OFFSET1DC899800LENGT
H1DC899800
Generic volume  Yes VOLUME  5.2.3790.1830 10/1/2002 Microsoft
  volume.inf  Not Available
  STORAGE\VOLUME\1&30A96598&0&SIGNATURE416F3F99OFFSET7E00LENGTH1DC8
91A00
Generic volume  Yes VOLUME  5.2.3790.1830 10/1/2002 Microsoft
  volume.inf  Not Available
  STORAGE\VOLUME\1&30A96598&0&SIGNATURE416F3F9DOFFSET3F25819800LENG
TH1DC891A00
Generic volume  Yes VOLUME  5.2.3790.1830 10/1/2002 Microsoft
  volume.inf  Not Available
  STORAGE\VOLUME\1&30A96598&0&SIGNATURE416F3F9DOFFSET3D48F80000LENG
TH1DC891A00
Generic volume  Yes VOLUME  5.2.3790.1830 10/1/2002 Microsoft
  volume.inf  Not Available
  STORAGE\VOLUME\1&30A96598&0&SIGNATURE416F3F9DOFFSET3B6C6E6800LENG
TH1DC891A00
Generic volume  Yes VOLUME  5.2.3790.1830 10/1/2002 Microsoft
  volume.inf  Not Available
  STORAGE\VOLUME\1&30A96598&0&SIGNATURE416F3F9DOFFSET398FE4D000LENG
TH1DC891A00
Generic volume  Yes VOLUME  5.2.3790.1830 10/1/2002 Microsoft
  volume.inf  Not Available
  STORAGE\VOLUME\1&30A96598&0&SIGNATURE416F3F9DOFFSET37B35B3800LENG
TH1DC891A00
Generic volume  Yes VOLUME  5.2.3790.1830 10/1/2002 Microsoft
  volume.inf  Not Available
  STORAGE\VOLUME\1&30A96598&0&SIGNATURE416F3F9DOFFSET35D6D1A000LENG
TH1DC891A00
Generic volume  Yes VOLUME  5.2.3790.1830 10/1/2002 Microsoft
  volume.inf  Not Available
  STORAGE\VOLUME\1&30A96598&0&SIGNATURE416F3F9DOFFSET33FA480800LENG
TH1DC891A00
Generic volume  Yes VOLUME  5.2.3790.1830 10/1/2002 Microsoft
  volume.inf  Not Available
  STORAGE\VOLUME\1&30A96598&0&SIGNATURE416F3F9DOFFSET321DBE7000LENG
TH1DC891A00
Generic volume  Yes VOLUME  5.2.3790.1830 10/1/2002 Microsoft
  volume.inf  Not Available
  STORAGE\VOLUME\1&30A96598&0&SIGNATURE416F3F9DOFFSET304134D800LENG
TH1DC891A00
Generic volume  Yes VOLUME  5.2.3790.1830 10/1/2002 Microsoft
  volume.inf  Not Available
  STORAGE\VOLUME\1&30A96598&0&SIGNATURE416F3F9DOFFSET2179D50E00LENG
THEC75F4C00
Generic volume  Yes VOLUME  5.2.3790.1830 10/1/2002 Microsoft
  volume.inf  Not Available
  STORAGE\VOLUME\1&30A96598&0&SIGNATURE416F3F9DOFFSET12B2754400LENG
THEC75F4C00
Generic volume  Yes VOLUME  5.2.3790.1830 10/1/2002 Microsoft
  volume.inf  Not Available
  STORAGE\VOLUME\1&30A96598&0&SIGNATURE416F3F9DOFFSET3EB14FC00LENGT
HEC75FCA00
Generic volume  Yes VOLUME  5.2.3790.1830 10/1/2002 Microsoft
  volume.inf  Not Available
  STORAGE\VOLUME\1&30A96598&0&SIGNATURE416F3F9DOFFSET1F58A7E00LENGT
H1F58A7E00
Generic volume  Yes VOLUME  5.2.3790.1830 10/1/2002 Microsoft
  volume.inf  Not Available
  STORAGE\VOLUME\1&30A96598&0&SIGNATURE416F3F9DOFFSET7E00LENGTH1F58
A0000
Generic volume  Yes VOLUME  5.2.3790.1830 10/1/2002 Microsoft
  volume.inf  Not Available
  STORAGE\VOLUME\1&30A96598&0&SIGNATURE416F3F81OFFSET197808E400LENG
TH1F58A0000
Generic volume  Yes VOLUME  5.2.3790.1830 10/1/2002 Microsoft
  volume.inf  Not Available
  STORAGE\VOLUME\1&30A96598&0&SIGNATURE416F3F81OFFSET17827E6600LENG
TH1F58A0000
Generic volume  Yes VOLUME  5.2.3790.1830 10/1/2002 Microsoft
  volume.inf  Not Available
  STORAGE\VOLUME\1&30A96598&0&SIGNATURE416F3F81OFFSET158CF3E800LENG
TH1F58A0000
Generic volume  Yes VOLUME  5.2.3790.1830 10/1/2002 Microsoft
  volume.inf  Not Available
  STORAGE\VOLUME\1&30A96598&0&SIGNATURE416F3F81OFFSET1397696A00LENG
TH1F58A0000
Generic volume  Yes VOLUME  5.2.3790.1830 10/1/2002 Microsoft
  volume.inf  Not Available
  STORAGE\VOLUME\1&30A96598&0&SIGNATURE416F3F81OFFSET11A1DEEC00LENG
TH1F58A0000
Generic volume  Yes VOLUME  5.2.3790.1830 10/1/2002 Microsoft
  volume.inf  Not Available
  STORAGE\VOLUME\1&30A96598&0&SIGNATURE416F3F81OFFSETFAC546E00LENGT
H1F58A0000
Generic volume  Yes VOLUME  5.2.3790.1830 10/1/2002 Microsoft
  volume.inf  Not Available
  STORAGE\VOLUME\1&30A96598&0&SIGNATURE416F3F81OFFSETDB6C9F000LENGT
H1F58A0000
Generic volume  Yes VOLUME  5.2.3790.1830 10/1/2002 Microsoft
  volume.inf  Not Available
  STORAGE\VOLUME\1&30A96598&0&SIGNATURE416F3F81OFFSETBC13F7200LENGT
H1F58A0000
Generic volume  Yes VOLUME  5.2.3790.1830 10/1/2002 Microsoft
  volume.inf  Not Available
  STORAGE\VOLUME\1&30A96598&0&SIGNATURE416F3F81OFFSET9CBB4F400LENGT
H1F58A0000
Generic volume  Yes VOLUME  5.2.3790.1830 10/1/2002 Microsoft
  volume.inf  Not Available
```

```
STORAGE\VOLUME\1&30A96598&0&SIGNATURE416F3F81OFFSET7D62A7600LENGT
H1F58A0000
Generic volume  Yes VOLUME  5.2.3790.1830 10/1/2002 Microsoft
  volume.inf  Not Available
  STORAGE\VOLUME\1&30A96598&0&SIGNATURE416F3F81OFFSET5E09FF800LENGT
H1F58A0000
Generic volume  Yes VOLUME  5.2.3790.1830 10/1/2002 Microsoft
  volume.inf  Not Available
  STORAGE\VOLUME\1&30A96598&0&SIGNATURE416F3F81OFFSET3EB14FC00LENGT
H1F58A7E00
Generic volume  Yes VOLUME  5.2.3790.1830 10/1/2002 Microsoft
  volume.inf  Not Available
  STORAGE\VOLUME\1&30A96598&0&SIGNATURE416F3F81OFFSET1F58A7E00LENGT
H1F58A7E00
Generic volume  Yes VOLUME  5.2.3790.1830 10/1/2002 Microsoft
  volume.inf  Not Available
  STORAGE\VOLUME\1&30A96598&0&SIGNATURE416F3F81OFFSET7E00LENGTH1F58
A0000
Generic volume  Yes VOLUME  5.2.3790.1830 10/1/2002 Microsoft
  volume.inf  Not Available
  STORAGE\VOLUME\1&30A96598&0&SIGNATUREB2CE83C1OFFSET817DC8200LENGT
H1F393F800
Generic volume  Yes VOLUME  5.2.3790.1830 10/1/2002 Microsoft
  volume.inf  Not Available
  STORAGE\VOLUME\1&30A96598&0&SIGNATUREB2CE83C1OFFSET624480C00LENGT
H1F393F800
Generic volume  Yes VOLUME  5.2.3790.1830 10/1/2002 Microsoft
  volume.inf  Not Available
  STORAGE\VOLUME\1&30A96598&0&SIGNATUREB2CE83C1OFFSET430B39600LENGT
H1F393F800
Generic volume  Yes VOLUME  5.2.3790.1830 10/1/2002 Microsoft
  volume.inf  Not Available
  STORAGE\VOLUME\1&30A96598&0&SIGNATUREB2CE83C1OFFSET236418600LENGT
H1FA719200
Generic volume  Yes VOLUME  5.2.3790.1830 10/1/2002 Microsoft
  volume.inf  Not Available
  STORAGE\VOLUME\1&30A96598&0&SIGNATUREB2CE83C1OFFSET1B5CE7A00LENGT
H80730C00
Generic volume  Yes VOLUME  5.2.3790.1830 10/1/2002 Microsoft
  volume.inf  Not Available
  STORAGE\VOLUME\1&30A96598&0&SIGNATUREB2CE83C1OFFSET7E00LENGTH1B5C
DFC00
Generic volume  Yes VOLUME  5.2.3790.1830 10/1/2002 Microsoft
  volume.inf  Not Available
  STORAGE\VOLUME\1&30A96598&0&SIGNATUREB2CE83C5OFFSET11F3BEBA00LENG
TH45577B000
Generic volume  Yes VOLUME  5.2.3790.1830 10/1/2002 Microsoft
  volume.inf  Not Available
  STORAGE\VOLUME\1&30A96598&0&SIGNATUREB2CE83C5OFFSET11F2463400LENG
TH1780800
Generic volume  Yes VOLUME  5.2.3790.1830 10/1/2002 Microsoft
  volume.inf  Not Available
  STORAGE\VOLUME\1&30A96598&0&SIGNATUREB2CE83C5OFFSET11E6048200LENG
THC413400
Generic volume  Yes VOLUME  5.2.3790.1830 10/1/2002 Microsoft
  volume.inf  Not Available
  STORAGE\VOLUME\1&30A96598&0&SIGNATUREB2CE83C5OFFSET11E40E7A00LENG
TH1F58A00
Generic volume  Yes VOLUME  5.2.3790.1830 10/1/2002 Microsoft
  volume.inf  Not Available
  STORAGE\VOLUME\1&30A96598&0&SIGNATUREB2CE83C5OFFSET105578A000LENG
TH18E955C00
Generic volume  Yes VOLUME  5.2.3790.1830 10/1/2002 Microsoft
  volume.inf  Not Available
  STORAGE\VOLUME\1&30A96598&0&SIGNATUREB2CE83C5OFFSETEC6E2C600LENGT
H18E955C00
Generic volume  Yes VOLUME  5.2.3790.1830 10/1/2002 Microsoft
  volume.inf  Not Available
  STORAGE\VOLUME\1&30A96598&0&SIGNATUREB2CE83C5OFFSETCF1364A00LENGT
H1D5ABFE00
Generic volume  Yes VOLUME  5.2.3790.1830 10/1/2002 Microsoft
  volume.inf  Not Available
  STORAGE\VOLUME\1&30A96598&0&SIGNATUREB2CE83C5OFFSETB2B3A0E00LENGT
H1C5FBBE00
Generic volume  Yes VOLUME  5.2.3790.1830 10/1/2002 Microsoft
  volume.inf  Not Available
  STORAGE\VOLUME\1&30A96598&0&SIGNATUREB2CE83C5OFFSET94EB07600LENGT
H1DC891A00
Generic volume  Yes VOLUME  5.2.3790.1830 10/1/2002 Microsoft
  volume.inf  Not Available
  STORAGE\VOLUME\1&30A96598&0&SIGNATUREB2CE83C5OFFSET77226DE00LENGT
H1DC891A00
Generic volume  Yes VOLUME  5.2.3790.1830 10/1/2002 Microsoft
  volume.inf  Not Available
  STORAGE\VOLUME\1&30A96598&0&SIGNATUREB2CE83C5OFFSET5959D4600LENGT
H1DC891A00
Generic volume  Yes VOLUME  5.2.3790.1830 10/1/2002 Microsoft
  volume.inf  Not Available
  STORAGE\VOLUME\1&30A96598&0&SIGNATUREB2CE83C5OFFSET3B9133000LENGT
H1DC899800
Generic volume  Yes VOLUME  5.2.3790.1830 10/1/2002 Microsoft
  volume.inf  Not Available
  STORAGE\VOLUME\1&30A96598&0&SIGNATUREB2CE83C5OFFSET1DC899800LENGT
H1DC899800
Generic volume  Yes VOLUME  5.2.3790.1830 10/1/2002 Microsoft
  volume.inf  Not Available
  STORAGE\VOLUME\1&30A96598&0&SIGNATUREB2CE83C5OFFSET7E00LENGTH1DC8
91A00
Generic volume  Yes VOLUME  5.2.3790.1830 10/1/2002 Microsoft
  volume.inf  Not Available

STORAGE\VOLUME\1&30A96598&0&SIGNATUREB2CE83D9OFFSET3F25819800LENG
TH1DC891A00
Generic volume  Yes VOLUME  5.2.3790.1830 10/1/2002 Microsoft
  volume.inf  Not Available
  STORAGE\VOLUME\1&30A96598&0&SIGNATUREB2CE83D9OFFSET3D48F80000LENG
TH1DC891A00
Generic volume  Yes VOLUME  5.2.3790.1830 10/1/2002 Microsoft
  volume.inf  Not Available
  STORAGE\VOLUME\1&30A96598&0&SIGNATUREB2CE83D9OFFSET3B6C6E6800LENG
TH1DC891A00
Generic volume  Yes VOLUME  5.2.3790.1830 10/1/2002 Microsoft
  volume.inf  Not Available
  STORAGE\VOLUME\1&30A96598&0&SIGNATUREB2CE83D9OFFSET398FE4D000LENG
TH1DC891A00
Generic volume  Yes VOLUME  5.2.3790.1830 10/1/2002 Microsoft
  volume.inf  Not Available
  STORAGE\VOLUME\1&30A96598&0&SIGNATUREB2CE83D9OFFSET37B35B3800LENG
TH1DC891A00
Generic volume  Yes VOLUME  5.2.3790.1830 10/1/2002 Microsoft
  volume.inf  Not Available
  STORAGE\VOLUME\1&30A96598&0&SIGNATUREB2CE83D9OFFSET35D6D1A000LENG
TH1DC891A00
Generic volume  Yes VOLUME  5.2.3790.1830 10/1/2002 Microsoft
  volume.inf  Not Available
  STORAGE\VOLUME\1&30A96598&0&SIGNATUREB2CE83D9OFFSET33FA480800LENG
TH1DC891A00
Generic volume  Yes VOLUME  5.2.3790.1830 10/1/2002 Microsoft
  volume.inf  Not Available
  STORAGE\VOLUME\1&30A96598&0&SIGNATUREB2CE83D9OFFSET321DBE7000LENG
TH1DC891A00
Generic volume  Yes VOLUME  5.2.3790.1830 10/1/2002 Microsoft
  volume.inf  Not Available
  STORAGE\VOLUME\1&30A96598&0&SIGNATUREB2CE83D9OFFSET304134D800LENG
TH1DC891A00
Generic volume  Yes VOLUME  5.2.3790.1830 10/1/2002 Microsoft
  volume.inf  Not Available
  STORAGE\VOLUME\1&30A96598&0&SIGNATUREB2CE83D9OFFSET2179D50E00LENG
THEC75F4C00
Generic volume  Yes VOLUME  5.2.3790.1830 10/1/2002 Microsoft
  volume.inf  Not Available
  STORAGE\VOLUME\1&30A96598&0&SIGNATUREB2CE83D9OFFSET12B2754400LENG
THEC75F4C00
Generic volume  Yes VOLUME  5.2.3790.1830 10/1/2002 Microsoft
  volume.inf  Not Available
  STORAGE\VOLUME\1&30A96598&0&SIGNATUREB2CE83D9OFFSET3EB14FC00LENGT
HEC75FCA00
Generic volume  Yes VOLUME  5.2.3790.1830 10/1/2002 Microsoft
  volume.inf  Not Available
  STORAGE\VOLUME\1&30A96598&0&SIGNATUREB2CE83D9OFFSET1F58A7E00LENGT
H1F58A7E00
Generic volume  Yes VOLUME  5.2.3790.1830 10/1/2002 Microsoft
  volume.inf  Not Available
  STORAGE\VOLUME\1&30A96598&0&SIGNATUREB2CE83D9OFFSET7E00LENGTH1F58
A0000
Generic volume  Yes VOLUME  5.2.3790.1830 10/1/2002 Microsoft
  volume.inf  Not Available
  STORAGE\VOLUME\1&30A96598&0&SIGNATUREB2CE83DDOFFSET197808E400LENG
TH1F58A0000
Generic volume  Yes VOLUME  5.2.3790.1830 10/1/2002 Microsoft
  volume.inf  Not Available
  STORAGE\VOLUME\1&30A96598&0&SIGNATUREB2CE83DDOFFSET17827E6600LENG
TH1F58A0000
Generic volume  Yes VOLUME  5.2.3790.1830 10/1/2002 Microsoft
  volume.inf  Not Available
  STORAGE\VOLUME\1&30A96598&0&SIGNATUREB2CE83DDOFFSET158CF3E800LENG
TH1F58A0000
Generic volume  Yes VOLUME  5.2.3790.1830 10/1/2002 Microsoft
  volume.inf  Not Available
  STORAGE\VOLUME\1&30A96598&0&SIGNATUREB2CE83DDOFFSET1397696A00LENG
TH1F58A0000
Generic volume  Yes VOLUME  5.2.3790.1830 10/1/2002 Microsoft
  volume.inf  Not Available
  STORAGE\VOLUME\1&30A96598&0&SIGNATUREB2CE83DDOFFSET11A1DEEC00LENG
TH1F58A0000
Generic volume  Yes VOLUME  5.2.3790.1830 10/1/2002 Microsoft
  volume.inf  Not Available
  STORAGE\VOLUME\1&30A96598&0&SIGNATUREB2CE83DDOFFSETFAC546E00LENGT
H1F58A0000
Generic volume  Yes VOLUME  5.2.3790.1830 10/1/2002 Microsoft
  volume.inf  Not Available
  STORAGE\VOLUME\1&30A96598&0&SIGNATUREB2CE83DDOFFSETDB6C9F000LENGT
H1F58A0000
Generic volume  Yes VOLUME  5.2.3790.1830 10/1/2002 Microsoft
  volume.inf  Not Available
  STORAGE\VOLUME\1&30A96598&0&SIGNATUREB2CE83DDOFFSETBC13F7200LENGT
H1F58A0000
Generic volume  Yes VOLUME  5.2.3790.1830 10/1/2002 Microsoft
  volume.inf  Not Available
  STORAGE\VOLUME\1&30A96598&0&SIGNATUREB2CE83DDOFFSET9CBB4F400LENGT
H1F58A0000
Generic volume  Yes VOLUME  5.2.3790.1830 10/1/2002 Microsoft
  volume.inf  Not Available
  STORAGE\VOLUME\1&30A96598&0&SIGNATUREB2CE83DDOFFSET7D62A7600LENGT
H1F58A0000
Generic volume  Yes VOLUME  5.2.3790.1830 10/1/2002 Microsoft
  volume.inf  Not Available
  STORAGE\VOLUME\1&30A96598&0&SIGNATUREB2CE83DDOFFSET5E09FF800LENGT
H1F58A0000
Generic volume  Yes VOLUME  5.2.3790.1830 10/1/2002 Microsoft
  volume.inf  Not Available
```

STORAGE\VOLUME\1&30A96598&0&SIGNATUREB2CE83DDOFFSET3EB14FC00LENGT
H1F58A7E00
Generic volume Yes VOLUME 5.2.3790.1830 10/1/2002 Microsoft
 volume.inf Not Available
 STORAGE\VOLUME\1&30A96598&0&SIGNATUREB2CE83DDOFFSET1F58A7E00LENGT
H1F58A7E00
Generic volume Yes VOLUME 5.2.3790.1830 10/1/2002 Microsoft
 volume.inf Not Available
 STORAGE\VOLUME\1&30A96598&0&SIGNATUREB2CE83DDOFFSET7E00LENGTH1F58
A0000
Generic volume Yes VOLUME 5.2.3790.1830 10/1/2002 Microsoft
 volume.inf Not Available
 STORAGE\VOLUME\1&30A96598&0&SIGNATURE416F3F85OFFSET817210000LENGT
H1F38A4000
Generic volume Yes VOLUME 5.2.3790.1830 10/1/2002 Microsoft
 volume.inf Not Available
 STORAGE\VOLUME\1&30A96598&0&SIGNATURE416F3F85OFFSET623968000LENGT
H1F38A4000
Generic volume Yes VOLUME 5.2.3790.1830 10/1/2002 Microsoft
 volume.inf Not Available
 STORAGE\VOLUME\1&30A96598&0&SIGNATURE416F3F85OFFSET4300C0000LENGT
H1F38A4000
Generic volume Yes VOLUME 5.2.3790.1830 10/1/2002 Microsoft
 volume.inf Not Available
 STORAGE\VOLUME\1&30A96598&0&SIGNATURE416F3F85OFFSET235C80000LENGT
H1FA43C000
Generic volume Yes VOLUME 5.2.3790.1830 10/1/2002 Microsoft
 volume.inf Not Available
 STORAGE\VOLUME\1&30A96598&0&SIGNATURE416F3F85OFFSET1B588C000LENGT
H803F4000
Generic volume Yes VOLUME 5.2.3790.1830 10/1/2002 Microsoft
 volume.inf Not Available
 STORAGE\VOLUME\1&30A96598&0&SIGNATURE416F3F85OFFSET4000LENGTH1B58
88000
Generic volume Yes VOLUME 5.2.3790.1830 10/1/2002 Microsoft
 volume.inf Not Available
 STORAGE\VOLUME\1&30A96598&0&SIGNATURE416F3F89OFFSET11F3BEBA00LENG
TH45577B000
Generic volume Yes VOLUME 5.2.3790.1830 10/1/2002 Microsoft
 volume.inf Not Available
 STORAGE\VOLUME\1&30A96598&0&SIGNATURE416F3F89OFFSET11F2463400LENG
TH1780800
Generic volume Yes VOLUME 5.2.3790.1830 10/1/2002 Microsoft
 volume.inf Not Available
 STORAGE\VOLUME\1&30A96598&0&SIGNATURE416F3F89OFFSET11E6048200LENG
THC413400
Generic volume Yes VOLUME 5.2.3790.1830 10/1/2002 Microsoft
 volume.inf Not Available
 STORAGE\VOLUME\1&30A96598&0&SIGNATURE416F3F89OFFSET11E40E7A00LENG
TH1F58A00
Generic volume Yes VOLUME 5.2.3790.1830 10/1/2002 Microsoft
 volume.inf Not Available
 STORAGE\VOLUME\1&30A96598&0&SIGNATURE416F3F89OFFSET105578A000LENG
TH18E955C00
Generic volume Yes VOLUME 5.2.3790.1830 10/1/2002 Microsoft
 volume.inf Not Available
 STORAGE\VOLUME\1&30A96598&0&SIGNATURE416F3F89OFFSETEC6E2C600LENGT
H18E955C00
Generic volume Yes VOLUME 5.2.3790.1830 10/1/2002 Microsoft
 volume.inf Not Available
 STORAGE\VOLUME\1&30A96598&0&SIGNATURE416F3F89OFFSETCF1364A00LENGT
H1D5ABFE00
Generic volume Yes VOLUME 5.2.3790.1830 10/1/2002 Microsoft
 volume.inf Not Available
 STORAGE\VOLUME\1&30A96598&0&SIGNATURE416F3F89OFFSETB2B3A0E00LENGT
H1C5FBBE00
Generic volume Yes VOLUME 5.2.3790.1830 10/1/2002 Microsoft
 volume.inf Not Available
 STORAGE\VOLUME\1&30A96598&0&SIGNATURE416F3F89OFFSET94EB07600LENGT
H1DC891A00
Generic volume Yes VOLUME 5.2.3790.1830 10/1/2002 Microsoft
 volume.inf Not Available
 STORAGE\VOLUME\1&30A96598&0&SIGNATURE416F3F89OFFSET77226DE00LENGT
H1DC891A00
Generic volume Yes VOLUME 5.2.3790.1830 10/1/2002 Microsoft
 volume.inf Not Available
 STORAGE\VOLUME\1&30A96598&0&SIGNATURE416F3F89OFFSET5959D4600LENGT
H1DC891A00
Generic volume Yes VOLUME 5.2.3790.1830 10/1/2002 Microsoft
 volume.inf Not Available
 STORAGE\VOLUME\1&30A96598&0&SIGNATURE416F3F89OFFSET3B9133000LENGT
H1DC899800
Generic volume Yes VOLUME 5.2.3790.1830 10/1/2002 Microsoft
 volume.inf Not Available
 STORAGE\VOLUME\1&30A96598&0&SIGNATURE416F3F89OFFSET1DC899800LENGT
H1DC899800
Generic volume Yes VOLUME 5.2.3790.1830 10/1/2002 Microsoft
 volume.inf Not Available
 STORAGE\VOLUME\1&30A96598&0&SIGNATURE416F3F89OFFSET7E00LENGTH1DC8
91A00
Generic volume Yes VOLUME 5.2.3790.1830 10/1/2002 Microsoft
 volume.inf Not Available
 STORAGE\VOLUME\1&30A96598&0&SIGNATURE416F3F8DOFFSET3F25819800LENG
TH1DC891A00
Generic volume Yes VOLUME 5.2.3790.1830 10/1/2002 Microsoft
 volume.inf Not Available
 STORAGE\VOLUME\1&30A96598&0&SIGNATURE416F3F8DOFFSET3D48F80000LENG
TH1DC891A00
Generic volume Yes VOLUME 5.2.3790.1830 10/1/2002 Microsoft
 volume.inf Not Available

STORAGE\VOLUME\1&30A96598&0&SIGNATURE416F3F8DOFFSET3B6C6E6800LENG
TH1DC891A00
Generic volume Yes VOLUME 5.2.3790.1830 10/1/2002 Microsoft
 volume.inf Not Available
 STORAGE\VOLUME\1&30A96598&0&SIGNATURE416F3F8DOFFSET398FE4D000LENG
TH1DC891A00
Generic volume Yes VOLUME 5.2.3790.1830 10/1/2002 Microsoft
 volume.inf Not Available
 STORAGE\VOLUME\1&30A96598&0&SIGNATURE416F3F8DOFFSET37B35B3800LENG
TH1DC891A00
Generic volume Yes VOLUME 5.2.3790.1830 10/1/2002 Microsoft
 volume.inf Not Available
 STORAGE\VOLUME\1&30A96598&0&SIGNATURE416F3F8DOFFSET35D6D1A000LENG
TH1DC891A00
Generic volume Yes VOLUME 5.2.3790.1830 10/1/2002 Microsoft
 volume.inf Not Available
 STORAGE\VOLUME\1&30A96598&0&SIGNATURE416F3F8DOFFSET33FA480800LENG
TH1DC891A00
Generic volume Yes VOLUME 5.2.3790.1830 10/1/2002 Microsoft
 volume.inf Not Available
 STORAGE\VOLUME\1&30A96598&0&SIGNATURE416F3F8DOFFSET321DBE7000LENG
TH1DC891A00
Generic volume Yes VOLUME 5.2.3790.1830 10/1/2002 Microsoft
 volume.inf Not Available
 STORAGE\VOLUME\1&30A96598&0&SIGNATURE416F3F8DOFFSET304134D800LENG
TH1DC891A00
Generic volume Yes VOLUME 5.2.3790.1830 10/1/2002 Microsoft
 volume.inf Not Available
 STORAGE\VOLUME\1&30A96598&0&SIGNATURE416F3F8DOFFSET2179D50E00LENG
THEC75F4C00
Generic volume Yes VOLUME 5.2.3790.1830 10/1/2002 Microsoft
 volume.inf Not Available
 STORAGE\VOLUME\1&30A96598&0&SIGNATURE416F3F8DOFFSET12B2754400LENG
THEC75F4C00
Generic volume Yes VOLUME 5.2.3790.1830 10/1/2002 Microsoft
 volume.inf Not Available
 STORAGE\VOLUME\1&30A96598&0&SIGNATURE416F3F8DOFFSET3EB14FC00LENGT
HEC75FCA00
Generic volume Yes VOLUME 5.2.3790.1830 10/1/2002 Microsoft
 volume.inf Not Available
 STORAGE\VOLUME\1&30A96598&0&SIGNATURE416F3F8DOFFSET1F58A7E00LENGT
H1F58A7E00
Generic volume Yes VOLUME 5.2.3790.1830 10/1/2002 Microsoft
 volume.inf Not Available
 STORAGE\VOLUME\1&30A96598&0&SIGNATURE416F3F8DOFFSET7E00LENGTH1F58
A0000
Generic volume Yes VOLUME 5.2.3790.1830 10/1/2002 Microsoft
 volume.inf Not Available
 STORAGE\VOLUME\1&30A96598&0&SIGNATURE416F3FF1OFFSET197808E400LENG
TH1F58A0000
Generic volume Yes VOLUME 5.2.3790.1830 10/1/2002 Microsoft
 volume.inf Not Available
 STORAGE\VOLUME\1&30A96598&0&SIGNATURE416F3FF1OFFSET17827E6600LENG
TH1F58A0000
Generic volume Yes VOLUME 5.2.3790.1830 10/1/2002 Microsoft
 volume.inf Not Available
 STORAGE\VOLUME\1&30A96598&0&SIGNATURE416F3FF1OFFSET158CF3E800LENG
TH1F58A0000
Generic volume Yes VOLUME 5.2.3790.1830 10/1/2002 Microsoft
 volume.inf Not Available
 STORAGE\VOLUME\1&30A96598&0&SIGNATURE416F3FF1OFFSET1397696A00LENG
TH1F58A0000
Generic volume Yes VOLUME 5.2.3790.1830 10/1/2002 Microsoft
 volume.inf Not Available
 STORAGE\VOLUME\1&30A96598&0&SIGNATURE416F3FF1OFFSET11A1DEEC00LENG
TH1F58A0000
Generic volume Yes VOLUME 5.2.3790.1830 10/1/2002 Microsoft
 volume.inf Not Available
 STORAGE\VOLUME\1&30A96598&0&SIGNATURE416F3FF1OFFSETFAC546E00LENGT
H1F58A0000
Generic volume Yes VOLUME 5.2.3790.1830 10/1/2002 Microsoft
 volume.inf Not Available
 STORAGE\VOLUME\1&30A96598&0&SIGNATURE416F3FF1OFFSETDB6C9F000LENGT
H1F58A0000
Generic volume Yes VOLUME 5.2.3790.1830 10/1/2002 Microsoft
 volume.inf Not Available
 STORAGE\VOLUME\1&30A96598&0&SIGNATURE416F3FF1OFFSETBC13F7200LENGT
H1F58A0000
Generic volume Yes VOLUME 5.2.3790.1830 10/1/2002 Microsoft
 volume.inf Not Available
 STORAGE\VOLUME\1&30A96598&0&SIGNATURE416F3FF1OFFSET9CBB4F400LENGT
H1F58A0000
Generic volume Yes VOLUME 5.2.3790.1830 10/1/2002 Microsoft
 volume.inf Not Available
 STORAGE\VOLUME\1&30A96598&0&SIGNATURE416F3FF1OFFSET7D62A7600LENGT
H1F58A0000
Generic volume Yes VOLUME 5.2.3790.1830 10/1/2002 Microsoft
 volume.inf Not Available
 STORAGE\VOLUME\1&30A96598&0&SIGNATURE416F3FF1OFFSET5E09FF800LENGT
H1F58A0000
Generic volume Yes VOLUME 5.2.3790.1830 10/1/2002 Microsoft
 volume.inf Not Available
 STORAGE\VOLUME\1&30A96598&0&SIGNATURE416F3FF1OFFSET3EB14FC00LENGT
H1F58A7E00
Generic volume Yes VOLUME 5.2.3790.1830 10/1/2002 Microsoft
 volume.inf Not Available
 STORAGE\VOLUME\1&30A96598&0&SIGNATURE416F3FF1OFFSET1F58A7E00LENGT
H1F58A7E00
Generic volume Yes VOLUME 5.2.3790.1830 10/1/2002 Microsoft
 volume.inf Not Available

STORAGE\VOLUME\1&30A96598&0&SIGNATURE416F3FF1OFFSET7E00LENGTH1F58
A0000
Generic volume Yes VOLUME 5.2.3790.1830 10/1/2002 Microsoft
  volume.inf Not Available
  STORAGE\VOLUME\1&30A96598&0&SIGNATURE560C43EDOFFSET817210000LENGT
H1F38A4000
Generic volume Yes VOLUME 5.2.3790.1830 10/1/2002 Microsoft
  volume.inf Not Available
  STORAGE\VOLUME\1&30A96598&0&SIGNATURE560C43EDOFFSET623968000LENGT
H1F38A4000
Generic volume Yes VOLUME 5.2.3790.1830 10/1/2002 Microsoft
  volume.inf Not Available
  STORAGE\VOLUME\1&30A96598&0&SIGNATURE560C43EDOFFSET4300C0000LENGT
H1F38A4000
Generic volume Yes VOLUME 5.2.3790.1830 10/1/2002 Microsoft
  volume.inf Not Available
  STORAGE\VOLUME\1&30A96598&0&SIGNATURE560C43EDOFFSET235C80000LENGT
H1FA43C000
Generic volume Yes VOLUME 5.2.3790.1830 10/1/2002 Microsoft
  volume.inf Not Available
  STORAGE\VOLUME\1&30A96598&0&SIGNATURE560C43EDOFFSET1B588C000LENGT
H803F4000
Generic volume Yes VOLUME 5.2.3790.1830 10/1/2002 Microsoft
  volume.inf Not Available
  STORAGE\VOLUME\1&30A96598&0&SIGNATURE560C43EDOFFSET4000LENGTH1B58
88000
Generic volume Yes VOLUME 5.2.3790.1830 10/1/2002 Microsoft
  volume.inf Not Available
  STORAGE\VOLUME\1&30A96598&0&SIGNATURE560C43E9OFFSET11F3BEBA00LENG
TH45577B000
Generic volume Yes VOLUME 5.2.3790.1830 10/1/2002 Microsoft
  volume.inf Not Available
  STORAGE\VOLUME\1&30A96598&0&SIGNATURE560C43E9OFFSET11F2463400LENG
TH1780800
Generic volume Yes VOLUME 5.2.3790.1830 10/1/2002 Microsoft
  volume.inf Not Available
  STORAGE\VOLUME\1&30A96598&0&SIGNATURE560C43E9OFFSET11E6048200LENG
THC413400
Generic volume Yes VOLUME 5.2.3790.1830 10/1/2002 Microsoft
  volume.inf Not Available
  STORAGE\VOLUME\1&30A96598&0&SIGNATURE560C43E9OFFSET11E40E7A00LENG
TH1F58A00
Generic volume Yes VOLUME 5.2.3790.1830 10/1/2002 Microsoft
  volume.inf Not Available
  STORAGE\VOLUME\1&30A96598&0&SIGNATURE560C43E9OFFSET105578A000LENG
TH18E955C00
Generic volume Yes VOLUME 5.2.3790.1830 10/1/2002 Microsoft
  volume.inf Not Available
  STORAGE\VOLUME\1&30A96598&0&SIGNATURE560C43E9OFFSETC6E2C600LENGT
H18E955C00
Generic volume Yes VOLUME 5.2.3790.1830 10/1/2002 Microsoft
  volume.inf Not Available
  STORAGE\VOLUME\1&30A96598&0&SIGNATURE560C43E9OFFSETCF1364A00LENGT
H1D5ABFE00
Generic volume Yes VOLUME 5.2.3790.1830 10/1/2002 Microsoft
  volume.inf Not Available
  STORAGE\VOLUME\1&30A96598&0&SIGNATURE560C43E9OFFSETB2B3A0E00LENGT
H1C5FBBE00
Generic volume Yes VOLUME 5.2.3790.1830 10/1/2002 Microsoft
  volume.inf Not Available
  STORAGE\VOLUME\1&30A96598&0&SIGNATURE560C43E9OFFSET94EB07600LENGT
H1DC891A00
Generic volume Yes VOLUME 5.2.3790.1830 10/1/2002 Microsoft
  volume.inf Not Available
  STORAGE\VOLUME\1&30A96598&0&SIGNATURE560C43E9OFFSET77226DE00LENGT
H1DC891A00
Generic volume Yes VOLUME 5.2.3790.1830 10/1/2002 Microsoft
  volume.inf Not Available
  STORAGE\VOLUME\1&30A96598&0&SIGNATURE560C43E9OFFSET5959D4600LENGT
H1DC891A00
Generic volume Yes VOLUME 5.2.3790.1830 10/1/2002 Microsoft
  volume.inf Not Available
  STORAGE\VOLUME\1&30A96598&0&SIGNATURE560C43E9OFFSET3B9133000LENGT
H1DC899800
Generic volume Yes VOLUME 5.2.3790.1830 10/1/2002 Microsoft
  volume.inf Not Available
  STORAGE\VOLUME\1&30A96598&0&SIGNATURE560C43E9OFFSET1DC899800LENGT
H1DC899800
Generic volume Yes VOLUME 5.2.3790.1830 10/1/2002 Microsoft
  volume.inf Not Available
  STORAGE\VOLUME\1&30A96598&0&SIGNATURE560C43E9OFFSET7E00LENGTH1DC8
91A00
Generic volume Yes VOLUME 5.2.3790.1830 10/1/2002 Microsoft
  volume.inf Not Available
  STORAGE\VOLUME\1&30A96598&0&SIGNATURE560C43E5OFFSET3F25819800LENG
TH1DC891A00
Generic volume Yes VOLUME 5.2.3790.1830 10/1/2002 Microsoft
  volume.inf Not Available
  STORAGE\VOLUME\1&30A96598&0&SIGNATURE560C43E5OFFSET3D48F80000LENG
TH1DC891A00
Generic volume Yes VOLUME 5.2.3790.1830 10/1/2002 Microsoft
  volume.inf Not Available
  STORAGE\VOLUME\1&30A96598&0&SIGNATURE560C43E5OFFSET3B6C6E6800LENG
TH1DC891A00
Generic volume Yes VOLUME 5.2.3790.1830 10/1/2002 Microsoft
  volume.inf Not Available
  STORAGE\VOLUME\1&30A96598&0&SIGNATURE560C43E5OFFSET398FE4D000LENG
TH1DC891A00
Generic volume Yes VOLUME 5.2.3790.1830 10/1/2002 Microsoft
  volume.inf Not Available

STORAGE\VOLUME\1&30A96598&0&SIGNATURE560C43E5OFFSET37B35B3800LENG
TH1DC891A00
Generic volume Yes VOLUME 5.2.3790.1830 10/1/2002 Microsoft
  volume.inf Not Available
  STORAGE\VOLUME\1&30A96598&0&SIGNATURE560C43E5OFFSET35D6D1A000LENG
TH1DC891A00
Generic volume Yes VOLUME 5.2.3790.1830 10/1/2002 Microsoft
  volume.inf Not Available
  STORAGE\VOLUME\1&30A96598&0&SIGNATURE560C43E5OFFSET33FA480800LENG
TH1DC891A00
Generic volume Yes VOLUME 5.2.3790.1830 10/1/2002 Microsoft
  volume.inf Not Available
  STORAGE\VOLUME\1&30A96598&0&SIGNATURE560C43E5OFFSET321DBE7000LENG
TH1DC891A00
Generic volume Yes VOLUME 5.2.3790.1830 10/1/2002 Microsoft
  volume.inf Not Available
  STORAGE\VOLUME\1&30A96598&0&SIGNATURE560C43E5OFFSET304134D800LENG
TH1DC891A00
Generic volume Yes VOLUME 5.2.3790.1830 10/1/2002 Microsoft
  volume.inf Not Available
  STORAGE\VOLUME\1&30A96598&0&SIGNATURE560C43E5OFFSET2179D50E00LENG
THEC75F4C00
Generic volume Yes VOLUME 5.2.3790.1830 10/1/2002 Microsoft
  volume.inf Not Available
  STORAGE\VOLUME\1&30A96598&0&SIGNATURE560C43E5OFFSET12B2754400LENG
THEC75F4C00
Generic volume Yes VOLUME 5.2.3790.1830 10/1/2002 Microsoft
  volume.inf Not Available
  STORAGE\VOLUME\1&30A96598&0&SIGNATURE560C43E5OFFSET3EB14FC00LENGT
HEC75FCA00
Generic volume Yes VOLUME 5.2.3790.1830 10/1/2002 Microsoft
  volume.inf Not Available
  STORAGE\VOLUME\1&30A96598&0&SIGNATURE560C43E5OFFSET1F58A7E00LENGT
H1F58A7E00
Generic volume Yes VOLUME 5.2.3790.1830 10/1/2002 Microsoft
  volume.inf Not Available
  STORAGE\VOLUME\1&30A96598&0&SIGNATURE560C43E5OFFSET7E00LENGTH1F58
A0000
Generic volume Yes VOLUME 5.2.3790.1830 10/1/2002 Microsoft
  volume.inf Not Available
  STORAGE\VOLUME\1&30A96598&0&SIGNATURE560C43E1OFFSET197808E400LENG
TH1F58A0000
Generic volume Yes VOLUME 5.2.3790.1830 10/1/2002 Microsoft
  volume.inf Not Available
  STORAGE\VOLUME\1&30A96598&0&SIGNATURE560C43E1OFFSET17827E6600LENG
TH1F58A0000
Generic volume Yes VOLUME 5.2.3790.1830 10/1/2002 Microsoft
  volume.inf Not Available
  STORAGE\VOLUME\1&30A96598&0&SIGNATURE560C43E1OFFSET158CF3E800LENG
TH1F58A0000
Generic volume Yes VOLUME 5.2.3790.1830 10/1/2002 Microsoft
  volume.inf Not Available
  STORAGE\VOLUME\1&30A96598&0&SIGNATURE560C43E1OFFSET1397696A00LENG
TH1F58A0000
Generic volume Yes VOLUME 5.2.3790.1830 10/1/2002 Microsoft
  volume.inf Not Available
  STORAGE\VOLUME\1&30A96598&0&SIGNATURE560C43E1OFFSET11A1DEEC00LENG
TH1F58A0000
Generic volume Yes VOLUME 5.2.3790.1830 10/1/2002 Microsoft
  volume.inf Not Available
  STORAGE\VOLUME\1&30A96598&0&SIGNATURE560C43E1OFFSETFAC546E00LENGT
H1F58A0000
Generic volume Yes VOLUME 5.2.3790.1830 10/1/2002 Microsoft
  volume.inf Not Available
  STORAGE\VOLUME\1&30A96598&0&SIGNATURE560C43E1OFFSETDB6C9F000LENGT
H1F58A0000
Generic volume Yes VOLUME 5.2.3790.1830 10/1/2002 Microsoft
  volume.inf Not Available
  STORAGE\VOLUME\1&30A96598&0&SIGNATURE560C43E1OFFSETBC13F7200LENGT
H1F58A0000
Generic volume Yes VOLUME 5.2.3790.1830 10/1/2002 Microsoft
  volume.inf Not Available
  STORAGE\VOLUME\1&30A96598&0&SIGNATURE560C43E1OFFSET9CBB4F400LENGT
H1F58A0000
Generic volume Yes VOLUME 5.2.3790.1830 10/1/2002 Microsoft
  volume.inf Not Available
  STORAGE\VOLUME\1&30A96598&0&SIGNATURE560C43E1OFFSET7D62A7600LENGT
H1F58A0000
Generic volume Yes VOLUME 5.2.3790.1830 10/1/2002 Microsoft
  volume.inf Not Available
  STORAGE\VOLUME\1&30A96598&0&SIGNATURE560C43E1OFFSET5E09FF800LENGT
H1F58A0000
Generic volume Yes VOLUME 5.2.3790.1830 10/1/2002 Microsoft
  volume.inf Not Available
  STORAGE\VOLUME\1&30A96598&0&SIGNATURE560C43E1OFFSET3EB14FC00LENGT
H1F58A7E00
Generic volume Yes VOLUME 5.2.3790.1830 10/1/2002 Microsoft
  volume.inf Not Available
  STORAGE\VOLUME\1&30A96598&0&SIGNATURE560C43E1OFFSET1F58A7E00LENGT
H1F58A7E00
Generic volume Yes VOLUME 5.2.3790.1830 10/1/2002 Microsoft
  volume.inf Not Available
  STORAGE\VOLUME\1&30A96598&0&SIGNATURE560C43E1OFFSET7E00LENGTH1F58
A0000
Volume Manager Yes SYSTEM 5.2.3790.1830 10/1/2002 (Standard
system devices) machine.inf Not Available ROOT\FTDISK\0000
Logical Disk Manager Yes SYSTEM 5.2.3790.1830 10/1/2002 (Standard
system devices) machine.inf Not Available ROOT\DMIO\0000
ACPI Fixed Feature Button Yes SYSTEM 5.2.3790.1830 10/1/2002
  (Standard system devices) machine.inf Not Available
  ACPI\FIXEDBUTTON\2&DABA3FF&0

ACPI Thermal Zone Yes SYSTEM 5.2.3790.1830 10/1/2002 (Standard
system devices) machine.inf Not Available ACPI\THERMALZONE\THM0
Secondary IDE Channel Yes HDC 5.2.3790.1830 10/1/2002 (Standard IDE
ATA/ATAPI controllers) mshdc.inf Not Available
  PCIIDE\IDECHANNEL\4&56E2F28&0&1
Primary IDE Channel Yes HDC 5.2.3790.1830 10/1/2002 (Standard IDE
ATA/ATAPI controllers) mshdc.inf Not Available
  PCIIDE\IDECHANNEL\4&56E2F28&0&0
Standard Dual Channel PCI IDE Controller Yes HDC 5.2.3790.1830
  10/1/2002 (Standard IDE ATA/ATAPI controllers) mshdc.inf Not
Available
  PCI\VEN_8086&DEV_269E&SUBSYS_31FE103C&REV_09\3&61AAA01&0&F9
Standard floppy disk controller Yes FDC 5.2.3790.1830 10/1/2002
(Standard floppy disk controllers) fdc.inf Not Available
  ACPI\PNP0700\5&33D3B1FA&0
Communications Port Yes PORTS 5.2.3790.1830 10/1/2002 (Standard
port types) msports.inf Not Available ACPI\PNP0501\0
Extended IO Bus Yes SYSTEM 5.2.3790.1830 10/1/2002 (Standard
system devices) machine.inf Not Available ACPI\PNP0A06\4&2AA4AD3D&0

PS/2 Compatible Mouse Yes MOUSE 5.2.3790.1830 10/1/2002 Microsoft
  msmouse.inf Not Available ACPI\PNP0F13\4&2AA4AD3D&0
Standard 101/102-Key or Microsoft Natural PS/2 Keyboard Yes
  KEYBOARD 5.2.3790.1830 10/1/2002 (Standard keyboards)
  keyboard.inf Not Available ACPI\PNP0303\4&2AA4AD3D&0
System speaker Yes SYSTEM 5.2.3790.1830 10/1/2002 (Standard
system devices) machine.inf Not Available ACPI\PNP0800\4&2AA4AD3D&0

Direct memory access controller Yes SYSTEM 5.2.3790.1830 10/1/2002
  (Standard system devices) machine.inf Not Available
  ACPI\PNP0200\4&2AA4AD3D&0
High precision event timer Yes SYSTEM 5.2.3790.1830 10/1/2002
  (Standard system devices) machine.inf Not Available
  ACPI\PNP0103\0
System timer Yes SYSTEM 5.2.3790.1830 10/1/2002 (Standard system
devices) machine.inf Not Available ACPI\PNP0100\4&2AA4AD3D&0
Not Available Not Available Not Available Not Available Not
Available Not Available Not Available Not Available ACPI\IPI0001\0

Motherboard resources Yes SYSTEM 5.2.3790.1830 10/1/2002 (Standard
system devices) machine.inf Not Available ACPI\PNP0C02\0
PCI standard ISA bridge Yes SYSTEM 5.2.3790.1830 10/1/2002
  (Standard system devices) machine.inf Not Available
  PCI\VEN_8086&DEV_2670&SUBSYS_00000000&REV_09\3&61AAA01&0&F8
PCI Device Not Available UNKNOWN Not Available Not Available Not
Available Not Available Not Available
  PCI\VEN_103C&DEV_3302&SUBSYS_3305103C&REV_00\4&2014205D&0&26F0
Generic USB Hub Yes USB 5.2.3790.1830 10/1/2002 (Generic USB Hub)
  usb.inf Not Available USB\VID_03F0&PID_1327\6&18FFBC52&0&2
HID-compliant mouse Yes MOUSE 5.2.3790.1830 10/1/2002 Microsoft
  msmouse.inf Not Available
  HID\VID_03F0&PID_1027&MI_01\8&25B103E6&0&0000
USB Human Interface Device Yes HIDCLASS 5.2.3790.1830 10/1/2002
  (Standard system devices) input.inf Not Available
  USB\VID_03F0&PID_1027&MI_01\7&2CD6FDA9&0&0001
HID Keyboard Device Yes KEYBOARD 5.2.3790.1830 10/1/2002 (Standard
keyboards) keyboard.inf Not Available
  HID\VID_03F0&PID_1027&MI_00\8&DED77A1&0&0000
USB Human Interface Device Yes HIDCLASS 5.2.3790.1830 10/1/2002
  (Standard system devices) input.inf Not Available
  USB\VID_03F0&PID_1027&MI_00\7&2CD6FDA9&0&0000
USB Composite Device Yes USB 5.2.3790.1830 10/1/2002 (Standard USB
Host Controller) usb.inf Not Available
  USB\VID_03F0&PID_1027\6&18FFBC52&0&1
USB Root Hub Yes USB 5.2.3790.1830 10/1/2002 (Standard USB Host
Controller) usbport.inf Not Available USB\ROOT_HUB\5&26BC3420&0
Standard Universal PCI to USB Host Controller Yes USB 5.2.3790.1830
  10/1/2002 (Standard USB Host Controller) usbport.inf Not
Available
  PCI\VEN_103C&DEV_3300&SUBSYS_3305103C&REV_00\4&2014205D&0&24F0
Base System Device Not Available UNKNOWN Not Available Not
Available Not Available Not Available Not Available
  PCI\VEN_0E11&DEV_B204&SUBSYS_3305103C&REV_03\4&2014205D&0&22F0
Base System Device Not Available UNKNOWN Not Available Not
Available Not Available Not Available Not Available
  PCI\VEN_0E11&DEV_B203&SUBSYS_3305103C&REV_03\4&2014205D&0&20F0
Plug and Play Monitor Yes MONITOR 5.2.3790.1830 10/1/2002 (Standard
monitor types) monitor.inf Not Available
  DISPLAY\AVO0402\5&E64F3B&0&12345678&01&03
Standard VGA Graphics Adapter Yes DISPLAY 5.2.3790.1830 10/1/2002
  (Standard display types) display.inf Not Available
  PCI\VEN_1002&DEV_515E&SUBSYS_31FB103C&REV_02\4&2014205D&0&18F0
Intel(R) 82801 PCI Bridge - 244E Yes SYSTEM 5.2.3790.1830
  10/1/2002 Intel machine.inf Not Available
  PCI\VEN_8086&DEV_244E&SUBSYS_00000000&REV_D9\3&61AAA01&0&F0
USB Root Hub Yes USB 5.2.3790.1830 10/1/2002 (Standard USB Host
Controller) usbport.inf Not Available USB\ROOT_HUB20\4&392538C3&0
Standard Enhanced PCI to USB Host Controller Yes USB 5.2.3790.1830
  10/1/2002 (Standard USB Host Controller) usbport.inf Not
Available
  PCI\VEN_8086&DEV_268C&SUBSYS_31FE103C&REV_09\3&61AAA01&0&EF
USB Root Hub Yes USB 5.2.3790.1830 10/1/2002 (Standard USB Host
Controller) usbport.inf Not Available USB\ROOT_HUB\4&41C0314&0
Standard Universal PCI to USB Host Controller Yes USB 5.2.3790.1830
  10/1/2002 (Standard USB Host Controller) usbport.inf Not
Available
  PCI\VEN_8086&DEV_268B&SUBSYS_31FE103C&REV_09\3&61AAA01&0&EB
USB Root Hub Yes USB 5.2.3790.1830 10/1/2002 (Standard USB Host
Controller) usbport.inf Not Available USB\ROOT_HUB\4&A54F890&0
Standard Universal PCI to USB Host Controller Yes USB 5.2.3790.1830
  10/1/2002 (Standard USB Host Controller) usbport.inf Not

Available
  PCI\VEN_8086&DEV_268A&SUBSYS_31FE103C&REV_09\3&61AAA01&0&EA
USB Root Hub Yes USB 5.2.3790.1830 10/1/2002 (Standard USB Host
Controller) usbport.inf Not Available USB\ROOT_HUB\4&37897620&0
Standard Universal PCI to USB Host Controller Yes USB 5.2.3790.1830
  10/1/2002 (Standard USB Host Controller) usbport.inf Not
Available
  PCI\VEN_8086&DEV_2689&SUBSYS_31FE103C&REV_09\3&61AAA01&0&E9
USB Root Hub Yes USB 5.2.3790.1830 10/1/2002 (Standard USB Host
Controller) usbport.inf Not Available USB\ROOT_HUB\4&7353027&0
Standard Universal PCI to USB Host Controller Yes USB 5.2.3790.1830
  10/1/2002 (Standard USB Host Controller) usbport.inf Not
Available
  PCI\VEN_8086&DEV_2688&SUBSYS_31FE103C&REV_09\3&61AAA01&0&E8
HP NC373i Multifunction Gigabit Server Adapter Yes NET 3.0.5.0
  12/22/2006 Hewlett-Packard Company oem5.inf Not Available
  B06BDRV\L2ND\PCI_164C14E4&SUBSYS_7038103C&REV_12\6&183F41DD&0&200
50300
HP NC373i Virtual Bus Device Yes SYSTEM 3.0.7.0 1/2/2007
  Hewlett-Packard Company oem8.inf Not Available
  PCI\VEN_14E4&DEV_164C&SUBSYS_7038103C&REV_12\5&43097C6&0&0000E0
PCI standard PCI-to-PCI bridge Yes SYSTEM 5.2.3790.1830 10/1/2002
  (Standard system devices) machine.inf Not Available
  PCI\VEN_1166&DEV_0103&SUBSYS_00000000&REV_C3\4&187919FE&0&00E0
PCI standard PCI-to-PCI bridge Yes SYSTEM 5.2.3790.1830 10/1/2002
  (Standard system devices) machine.inf Not Available
  PCI\VEN_8086&DEV_2690&SUBSYS_00000000&REV_09\3&61AAA01&0&E0
PCI standard host CPU bridge Yes SYSTEM 5.2.3790.1830 10/1/2002
  (Standard system devices) machine.inf Not Available
  PCI\VEN_8086&DEV_25F6&SUBSYS_00000000&REV_B1\3&61AAA01&0&B0
PCI standard host CPU bridge Yes SYSTEM 5.2.3790.1830 10/1/2002
  (Standard system devices) machine.inf Not Available
  PCI\VEN_8086&DEV_25F5&SUBSYS_00000000&REV_B1\3&61AAA01&0&A8
PCI standard host CPU bridge Yes SYSTEM 5.2.3790.1830 10/1/2002
  (Standard system devices) machine.inf Not Available
  PCI\VEN_8086&DEV_25F3&SUBSYS_00000000&REV_B1\3&61AAA01&0&98
PCI standard host CPU bridge Yes SYSTEM 5.2.3790.1830 10/1/2002
  (Standard system devices) machine.inf Not Available
  PCI\VEN_8086&DEV_25F1&SUBSYS_00000000&REV_B1\3&61AAA01&0&88
PCI standard host CPU bridge Yes SYSTEM 5.2.3790.1830 10/1/2002
  (Standard system devices) machine.inf Not Available
  PCI\VEN_8086&DEV_25F0&SUBSYS_00000000&REV_B1\3&61AAA01&0&82
PCI standard host CPU bridge Yes SYSTEM 5.2.3790.1830 10/1/2002
  (Standard system devices) machine.inf Not Available
  PCI\VEN_8086&DEV_25F0&SUBSYS_00000000&REV_B1\3&61AAA01&0&81
PCI standard host CPU bridge Yes SYSTEM 5.2.3790.1830 10/1/2002
  (Standard system devices) machine.inf Not Available
  PCI\VEN_8086&DEV_25F0&SUBSYS_00000000&REV_B1\3&61AAA01&0&80
Disk drive Yes DISKDRIVE 5.2.3790.1830 10/1/2002 (Standard disk
drives) disk.inf Not Available
  SCSI\DISK&VEN_HP&PROD_LOGICAL_VOLUME&REV_1.20\6&6FC9EBA&0&050
Disk drive Yes DISKDRIVE 5.2.3790.1830 10/1/2002 (Standard disk
drives) disk.inf Not Available
  SCSI\DISK&VEN_HP&PROD_LOGICAL_VOLUME&REV_1.20\6&6FC9EBA&0&040
HP Virtual LUN Yes SYSTEM 5.2.3790.1830 10/1/2002 Compaq
  scsidev.inf Not Available
  SCSI\OTHER&VEN_COMPAQ&PROD_SCSI_COMMUNICATE&REV_CIS2\6&6FC9EBA&0&
000
Smart Array E200i Controller Yes SCSIADAPTER 5.8.0.64 2/13/2006
  Hewlett-Packard Company oem0.inf Not Available
  PCI\VEN_103C&DEV_3238&SUBSYS_3211103C&REV_00\5&32CF3F35&0&400028

PCI standard PCI-to-PCI bridge Yes SYSTEM 5.2.3790.1830 10/1/2002
  (Standard system devices) machine.inf Not Available
  PCI\VEN_1166&DEV_0104&SUBSYS_00000000&REV_B2\5&32CF3F35&0&200028

PCI standard PCI-to-PCI bridge Yes SYSTEM 5.2.3790.1830 10/1/2002
  (Standard system devices) machine.inf Not Available
  PCI\VEN_1166&DEV_0103&SUBSYS_00000000&REV_B4\4&1AB8B18D&0&0028
PCI standard PCI-to-PCI bridge Yes SYSTEM 5.2.3790.1830 10/1/2002
  (Standard system devices) machine.inf Not Available
  PCI\VEN_8086&DEV_25E5&SUBSYS_00000000&REV_B1\3&61AAA01&0&28
Smart Array Logical Volume No DISKDRIVE 5.12.2.64 10/27/2006
  Hewlett-Packard oem10.inf Not Available
  HPQCISS\DISK&VEN_HP&PROD_LOGICAL_VOLUME\5&28B0A89C&0&070000400000
0000
Smart Array Logical Volume No DISKDRIVE 5.12.2.64 10/27/2006
  Hewlett-Packard oem10.inf Not Available
  HPQCISS\DISK&VEN_HP&PROD_LOGICAL_VOLUME\5&28B0A89C&0&060000400000
0000
Smart Array Logical Volume No DISKDRIVE 5.12.2.64 10/27/2006
  Hewlett-Packard oem10.inf Not Available
  HPQCISS\DISK&VEN_HP&PROD_LOGICAL_VOLUME\5&28B0A89C&0&050000400000
0000
Smart Array Logical Volume No DISKDRIVE 5.12.2.64 10/27/2006
  Hewlett-Packard oem10.inf Not Available
  HPQCISS\DISK&VEN_HP&PROD_LOGICAL_VOLUME\5&28B0A89C&0&040000400000
0000
Smart Array Logical Volume No Not Available DISKDRIVE Not Available
  Not Available Hewlett-Packard Not Available Not Available
  HPQCISS\DISK&VEN_HP&PROD_LOGICAL_VOLUME\5&28B0A89C&0&030000400000
0000
Smart Array Logical Volume No DISKDRIVE 5.12.2.64 10/27/2006
  Hewlett-Packard oem10.inf Not Available
  HPQCISS\DISK&VEN_HP&PROD_LOGICAL_VOLUME\5&28B0A89C&0&020000400000
0000
Smart Array Logical Volume No DISKDRIVE 5.12.2.64 10/27/2006
  Hewlett-Packard oem10.inf Not Available
  HPQCISS\DISK&VEN_HP&PROD_LOGICAL_VOLUME\5&28B0A89C&0&010000400000
0000

```
Smart Array Logical Volume  No  DISKDRIVE 5.12.2.64 10/27/2006
  Hewlett-Packard oem10.inf Not Available
  HPQCISS\DISK\VEN_HP&PROD_LOGICAL_VOLUME\5&28B0A89C&0&000000400000
0000
Smart Array P800 Controller (Non-Miniport)  No  SCSIADAPTER
  5.20.64.64  10/27/2006  Hewlett-Packard oem9.inf  Not Available
  PCI\VEN_103C&DEV_3230&SUBSYS_3223103C&REV_03\4&237315C2&0&0020
PCI standard PCI-to-PCI bridge  Yes SYSTEM  5.2.3790.1830 10/1/2002
  (Standard system devices) machine.inf Not Available
  PCI\VEN_8086&DEV_25E4&SUBSYS_00000000&REV_B1\3&61AAA01&0&20
PCI standard PCI-to-PCI bridge  Yes SYSTEM  5.2.3790.1830 10/1/2002
  (Standard system devices) machine.inf Not Available
  PCI\VEN_8086&DEV_25E3&SUBSYS_00000000&REV_B1\3&61AAA01&0&18
HP NC7170 Dual Gigabit Server Adapter Yes NET 8.8.1.0 12/14/2006
  Hewlett-Packard Company oem4.inf  Not Available
  PCI\VEN_8086&DEV_1010&SUBSYS_00DB0E11&REV_01\5&8D021B&0&110310
HP NC7170 Dual Gigabit Server Adapter Yes NET 8.8.1.0 12/14/2006
  Hewlett-Packard Company oem4.inf  Not Available
  PCI\VEN_8086&DEV_1010&SUBSYS_00DB0E11&REV_01\5&8D021B&0&100310
PCI standard PCI-to-PCI bridge  Yes SYSTEM  5.2.3790.1830 10/1/2002
  (Standard system devices) machine.inf Not Available
  PCI\VEN_8086&DEV_350C&SUBSYS_00000000&REV_01\4&1EE18D9A&0&0310
PCI standard PCI-to-PCI bridge  Yes SYSTEM  5.2.3790.1830 10/1/2002
  (Standard system devices) machine.inf Not Available
  PCI\VEN_8086&DEV_3514&SUBSYS_00000000&REV_01\5&1AA5474&0&080010
Smart Array Logical Volume  No  DISKDRIVE 5.12.2.64 10/27/2006
  Hewlett-Packard oem10.inf Not Available
  HPQCISS\DISK\VEN_HP&PROD_LOGICAL_VOLUME\7&302311DB&0&070000400000
0000
Smart Array Logical Volume  No  DISKDRIVE 5.12.2.64 10/27/2006
  Hewlett-Packard oem10.inf Not Available
  HPQCISS\DISK\VEN_HP&PROD_LOGICAL_VOLUME\7&302311DB&0&060000400000
0000
Smart Array Logical Volume  No  DISKDRIVE 5.12.2.64 10/27/2006
  Hewlett-Packard oem10.inf Not Available
  HPQCISS\DISK\VEN_HP&PROD_LOGICAL_VOLUME\7&302311DB&0&050000400000
0000
Smart Array Logical Volume  No  DISKDRIVE 5.12.2.64 10/27/2006
  Hewlett-Packard oem10.inf Not Available
  HPQCISS\DISK\VEN_HP&PROD_LOGICAL_VOLUME\7&302311DB&0&040000400000
0000
Smart Array Logical Volume  No  DISKDRIVE 5.12.2.64 10/27/2006
  Hewlett-Packard oem10.inf Not Available
  HPQCISS\DISK\VEN_HP&PROD_LOGICAL_VOLUME\7&302311DB&0&030000400000
0000
Smart Array Logical Volume  No  DISKDRIVE 5.12.2.64 10/27/2006
  Hewlett-Packard oem10.inf Not Available
  HPQCISS\DISK\VEN_HP&PROD_LOGICAL_VOLUME\7&302311DB&0&020000400000
0000
Smart Array Logical Volume  No  DISKDRIVE 5.12.2.64 10/27/2006
  Hewlett-Packard oem10.inf Not Available
  HPQCISS\DISK\VEN_HP&PROD_LOGICAL_VOLUME\7&302311DB&0&010000400000
0000
Smart Array Logical Volume  No  DISKDRIVE 5.12.2.64 10/27/2006
  Hewlett-Packard oem10.inf Not Available
  HPQCISS\DISK\VEN_HP&PROD_LOGICAL_VOLUME\7&302311DB&0&000000400000
0000
Smart Array P800 Controller (Non-Miniport)  No  SCSIADAPTER
  5.20.64.64  10/27/2006  Hewlett-Packard oem9.inf  Not Available
  PCI\VEN_103C&DEV_3230&SUBSYS_3223103C&REV_03\6&305972A8&0&0000001
0
PCI standard PCI-to-PCI bridge  Yes SYSTEM  5.2.3790.1830 10/1/2002
  (Standard system devices) machine.inf Not Available
  PCI\VEN_8086&DEV_3510&SUBSYS_00000000&REV_01\5&1AA5474&0&000010
PCI standard PCI-to-PCI bridge  Yes SYSTEM  5.2.3790.1830 10/1/2002
  (Standard system devices) machine.inf Not Available
  PCI\VEN_8086&DEV_3500&SUBSYS_00000000&REV_01\4&1EE18D9A&0&0010
PCI standard PCI-to-PCI bridge  Yes SYSTEM  5.2.3790.1830 10/1/2002
  (Standard system devices) machine.inf Not Available
  PCI\VEN_8086&DEV_25F7&SUBSYS_00000000&REV_B1\3&61AAA01&0&10
PCI standard host CPU bridge  Yes SYSTEM  5.2.3790.1830 10/1/2002
  (Standard system devices) machine.inf Not Available
  PCI\VEN_8086&DEV_25D0&SUBSYS_00000000&REV_B1\3&61AAA01&0&00
PCI bus Yes SYSTEM  5.2.3790.1830 10/1/2002 (Standard system
devices)  machine.inf Not Available ACPI\PNP0A03\2&DABA3FF&0
Intel Processor Yes PROCESSOR 5.2.3790.1830 10/1/2002 Intel cpu.inf
  Not Available ACPI\GENUINEINTEL_-_EM64T_FAMILY_6_MODEL_15\_3
Intel Processor Yes PROCESSOR 5.2.3790.1830 10/1/2002 Intel cpu.inf
  Not Available ACPI\GENUINEINTEL_-_EM64T_FAMILY_6_MODEL_15\_2
Intel Processor Yes PROCESSOR 5.2.3790.1830 10/1/2002 Intel cpu.inf
  Not Available ACPI\GENUINEINTEL_-_EM64T_FAMILY_6_MODEL_15\_1
Intel Processor Yes PROCESSOR 5.2.3790.1830 10/1/2002 Intel cpu.inf
  Not Available ACPI\GENUINEINTEL_-_EM64T_FAMILY_6_MODEL_15\_0
Microsoft ACPI-Compliant System Yes SYSTEM  5.2.3790.1830 10/1/2002
  Microsoft acpi.inf  Not Available ACPI_HAL\PNP0C08\0
ACPI Multiprocessor x64-based PC  Yes COMPUTER  5.2.3790.1830
  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 HTREE\ROOT\0

[Environment Variables]

Variable  Value User Name
ClusterLog  C:\WINDOWS\Cluster\cluster.log  <SYSTEM>
ComSpec %SystemRoot%\system32\cmd.exe <SYSTEM>
FP_NO_HOST_CHECK  NO  <SYSTEM>
NUMBER_OF_PROCESSORS  4 <SYSTEM>
OS  Windows_NT  <SYSTEM>
```

```
Path
  %SystemRoot%\system32;%SystemRoot%;%SystemRoot%\System32\Wbem;c:\
oracle\bin  <SYSTEM>
PATHEXT .COM;.EXE;.BAT;.CMD;.VBS;.VBE;.JS;.JSE;.WSF;.WSH  <SYSTEM>

PROCESSOR_ARCHITECTURE  AMD64 <SYSTEM>
PROCESSOR_IDENTIFIER  EM64T Family 6 Model 15 Stepping 7,
GenuineIntel  <SYSTEM>
PROCESSOR_LEVEL 6 <SYSTEM>
PROCESSOR_REVISION  0f07  <SYSTEM>
TEMP  %SystemRoot%\TEMP <SYSTEM>
TMP %SystemRoot%\TEMP <SYSTEM>
windir  %SystemRoot%  <SYSTEM>
TEMP  %USERPROFILE%\Local Settings\Temp NT AUTHORITY\SYSTEM
TMP %USERPROFILE%\Local Settings\Temp NT AUTHORITY\SYSTEM
TEMP  %USERPROFILE%\Local Settings\Temp NT AUTHORITY\LOCAL SERVICE

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

ORACLE_HOME C:\Oracle PENCIL\Administrator
TEMP  %USERPROFILE%\Local Settings\Temp PENCIL\Administrator
TMP %USERPROFILE%\Local Settings\Temp PENCIL\Administrator

[Print Jobs]

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

[Network Connections]

Local Name  Remote Name Type  Status  User Name

[Running Tasks]

Name  Path  Process ID  Priority  Min Working Set Max Working Set
  Start Time  Version Size  File Date
system idle process Not Available 0 0 Not Available Not Available
  Not Available Not Available Not Available Not Available
system  Not Available 4 8 0 1413120 Not Available Not Available Not
Available Not Available
smss.exe  Not Available 684 11  204800  1413120 9/4/2007 11:39 AM
  Not Available Not Available Not Available
csrss.exe Not Available 636 13  Not Available Not Available
  9/4/2007 11:39 AM Not Available Not Available Not Available
winlogon.exe  c:\windows\system32\winlogon.exe  824 13  204800
  1413120 9/4/2007 11:39 AM 5.2.3790.1830 (srv03_sp1_rtm.050324-
1447) 901.00 KB (922,624 bytes) 11/30/2005 6:00 AM
services.exe  c:\windows\system32\services.exe  892 9 204800
  1413120 9/4/2007 11:39 AM 5.2.3790.1830 (srv03_sp1_rtm.050324-
1447) 216.50 KB (221,696 bytes) 11/30/2005 6:00 AM
lsass.exe c:\windows\system32\lsass.exe 904 9 204800  1413120
  9/4/2007 11:39 AM 5.2.3790.1830 (srv03_sp1_rtm.050324-1447) 14.00
KB (14,336 bytes) 11/30/2005 6:00 AM
svchost.exe c:\windows\system32\svchost.exe 236 8 204800  1413120
  9/4/2007 11:39 AM 5.2.3790.1830 (srv03_sp1_rtm.050324-1447) 24.50
KB (25,088 bytes) 11/30/2005 6:00 AM
svchost.exe Not Available 456 8 Not Available Not Available
  9/4/2007 11:39 AM Not Available Not Available Not Available
svchost.exe Not Available 564 8 Not Available Not Available
  9/4/2007 11:39 AM Not Available Not Available Not Available
svchost.exe Not Available 668 8 Not Available Not Available
  9/4/2007 11:39 AM Not Available Not Available Not Available
svchost.exe c:\windows\system32\svchost.exe 716 8 204800  1413120
  9/4/2007 11:39 AM 5.2.3790.1830 (srv03_sp1_rtm.050324-1447) 24.50
KB (25,088 bytes) 11/30/2005 6:00 AM
spoolsv.exe c:\windows\system32\spoolsv.exe 1720  8 204800  1413120
  9/4/2007 11:40 AM 5.2.3790.1830 (srv03_sp1_rtm.050324-1447)
  107.00 KB (109,568 bytes) 11/30/2005 6:00 AM
msdtc.exe Not Available 1756  8 Not Available Not Available
  9/4/2007 11:40 AM Not Available Not Available Not Available
svchost.exe c:\windows\system32\svchost.exe 1912  8 204800  1413120
  9/4/2007 11:40 AM 5.2.3790.1830 (srv03_sp1_rtm.050324-1447) 24.50
KB (25,088 bytes) 11/30/2005 6:00 AM
oracle.exe  c:\oracle\bin\oracle.exe  1944  8 204800  1413120
  9/4/2007 11:40 AM 10.2.0.1.0 Production 137.08 MB (143,739,904
bytes)  8/28/2006 10:26 AM
tnslsnr.exe c:\oracle\bin\tnslsnr.exe 2008  8 204800  1413120
  9/4/2007 11:40 AM Not Available 541.50 KB (554,496 bytes)
  7/16/2007 3:57 PM
svchost.exe Not Available 2044  8 Not Available Not Available
  9/4/2007 11:40 AM Not Available Not Available Not Available
svchost.exe c:\windows\system32\svchost.exe 1480  8 204800  1413120
  9/4/2007 11:40 AM 5.2.3790.1830 (srv03_sp1_rtm.050324-1447) 24.50
KB (25,088 bytes) 11/30/2005 6:00 AM
wmiprvse.exe  Not Available 556 8 Not Available Not Available
  9/4/2007 11:41 AM Not Available Not Available Not Available
explorer.exe  c:\windows\explorer.exe 896 8 204800  1413120
  9/4/2007 11:50 AM 6.00.3790.1830 (srv03_sp1_rtm.050324-1447)
  1.30 MB (1,364,480 bytes) 11/30/2005 6:00 AM
wzqkpick.exe  c:\program files (x86)\winzip\wzqkpick.exe  1652  8
  204800  1413120 9/4/2007 11:50 AM 1.0 (32-bit)  120.00 KB
(122,880 bytes) 7/5/2007 2:51 PM
wuauclt.exe c:\windows\system32\wuauclt.exe 1584  8 204800  1413120
  9/4/2007 11:51 AM 5.7.3790.1830 (srv03_sp1_rtm.050324-1447)
  156.00 KB (159,744 bytes) 7/3/2007 5:38 PM
```

cmd.exe c:\windows\system32\cmd.exe 552 8 204800 1413120 9/4/2007
2:22 PM 5.2.3790.1830 (srv03_sp1_rtm.050324-1447) 538.50 KB
(551,424 bytes) 11/30/2005 6:00 AM
bash.exe c:\cygwin\bin\bash.exe 1628 8 204800 1413120 9/4/2007
2:22 PM Not Available 459.50 KB (470,528 bytes) 7/5/2007 11:41 AM
bash.exe c:\cygwin\bin\bash.exe 1684 8 204800 1413120 9/4/2007
2:22 PM Not Available 459.50 KB (470,528 bytes) 7/5/2007 11:41 AM
winvnc4.exe c:\program files (x86)\realvnc\vnc4\winvnc4.exe 1648 8
 204800 1413120 9/5/2007 4:03 PM 4.1.2 428.95 KB (439,248 bytes)
 7/5/2007 11:20 AM
cmd.exe c:\windows\system32\cmd.exe 2964 8 204800 1413120
 9/12/2007 8:19 AM 5.2.3790.1830 (srv03_sp1_rtm.050324-1447)
538.50 KB (551,424 bytes) 11/30/2005 6:00 AM
bash.exe c:\cygwin\bin\bash.exe 1604 8 204800 1413120 9/12/2007
8:19 AM Not Available 459.50 KB (470,528 bytes) 7/5/2007 11:41 AM
bash.exe c:\cygwin\bin\bash.exe 908 8 204800 1413120 9/12/2007
8:19 AM Not Available 459.50 KB (470,528 bytes) 7/5/2007 11:41 AM
helpctr.exe c:\windows\pchealth\helpctr\binaries\helpctr.exe 1320
 8 204800 1413120 9/12/2007 9:51 AM 5.2.3790.1830
(srv03_sp1_rtm.050324-1447) 1.30 MB (1,363,456 bytes) 7/3/2007 5:38
PM
helpsvc.exe c:\windows\pchealth\helpctr\binaries\helpsvc.exe 1364
 8 204800 1413120 9/12/2007 9:51 AM 5.2.3790.1830
(srv03_sp1_rtm.050324-1447) 1.52 MB (1,591,296 bytes) 7/3/2007 5:38
PM
wmiprvse.exe Not Available 1016 8 Not Available Not Available
 9/12/2007 9:51 AM Not Available Not Available Not Available

[Loaded Modules]

Name Version Size File Date Manufacturer Path
winlogon 5.2.3790.1830 (srv03_sp1_rtm.050324-1447) 901.00 KB
(922,624 bytes) 11/30/2005 6:00 AM Microsoft Corporation
  c:\windows\system32\winlogon.exe
ntdll 5.2.3790.1830 (srv03_sp1_rtm.050324-1447) 1.20 MB (1,257,472
bytes) 11/30/2005 6:00 AM Microsoft Corporation
  c:\windows\system32\ntdll.dll
kernel32 5.2.3790.1830 (srv03_sp1_rtm.050324-1447) 1.43 MB
(1,500,160 bytes) 11/30/2005 6:00 AM Microsoft Corporation
  c:\windows\system32\kernel32.dll
advapi32 5.2.3790.1830 (srv03_sp1_rtm.050324-1447) 1.00 MB
(1,051,136 bytes) 11/30/2005 6:00 AM Microsoft Corporation
  c:\windows\system32\advapi32.dll
rpcrt4 5.2.3790.1830 (srv03_sp1_rtm.050324-1447) 1.63 MB
(1,714,176 bytes) 11/30/2005 6:00 AM Microsoft Corporation
  c:\windows\system32\rpcrt4.dll
crypt32 5.131.3790.1830 (srv03_sp1_rtm.050324-1447) 1.36 MB
(1,428,992 bytes) 11/30/2005 6:00 AM Microsoft Corporation
  c:\windows\system32\crypt32.dll
msasn1 5.2.3790.1830 (srv03_sp1_rtm.050324-1447) 152.50 KB
(156,160 bytes) 11/30/2005 6:00 AM Microsoft Corporation
  c:\windows\system32\msasn1.dll
msvcrt 7.0.3790.1830 (srv03_sp1_rtm.050324-1447) 508.00 KB
(520,192 bytes) 11/30/2005 6:00 AM Microsoft Corporation
  c:\windows\system32\msvcrt.dll
user32 5.2.3790.1830 (srv03_sp1_rtm.050324-1447) 1.04 MB
(1,085,952 bytes) 11/30/2005 6:00 AM Microsoft Corporation
  c:\windows\system32\user32.dll
gdi32 5.2.3790.1830 (srv03_sp1_rtm.050324-1447) 592.00 KB (606,208
bytes) 11/30/2005 6:00 AM Microsoft Corporation
  c:\windows\system32\gdi32.dll
nddeapi 5.2.3790.1830 (srv03_sp1_rtm.050324-1447) 25.00 KB (25,600
bytes) 11/30/2005 6:00 AM Microsoft Corporation
  c:\windows\system32\nddeapi.dll
profmap 5.2.3790.1830 (srv03_sp1_rtm.050324-1447) 36.00 KB (36,864
bytes) 11/30/2005 6:00 AM Microsoft Corporation
  c:\windows\system32\profmap.dll
netapi32 5.2.3790.1830 (srv03_sp1_rtm.050324-1447) 589.00 KB
(603,136 bytes) 11/30/2005 6:00 AM Microsoft Corporation
  c:\windows\system32\netapi32.dll
userenv 5.2.3790.1830 (srv03_sp1_rtm.050324-1447) 1.02 MB
(1,069,056 bytes) 11/30/2005 6:00 AM Microsoft Corporation
  c:\windows\system32\userenv.dll
psapi 5.2.3790.1830 (srv03_sp1_rtm.050324-1447) 29.00 KB (29,696
bytes) 11/30/2005 6:00 AM Microsoft Corporation
  c:\windows\system32\psapi.dll
regapi 5.2.3790.1830 (srv03_sp1_rtm.050324-1447) 108.50 KB
(111,104 bytes) 11/30/2005 6:00 AM Microsoft Corporation
  c:\windows\system32\regapi.dll
secur32 5.2.3790.1830 (srv03_sp1_rtm.050324-1447) 120.00 KB
(122,880 bytes) 11/30/2005 6:00 AM Microsoft Corporation
  c:\windows\system32\secur32.dll
setupapi 5.2.3790.1830 (srv03_sp1_rtm.050324-1447) 1.45 MB
(1,523,200 bytes) 11/30/2005 6:00 AM Microsoft Corporation
  c:\windows\system32\setupapi.dll
version 5.2.3790.1830 (srv03_sp1_rtm.050324-1447) 28.00 KB (28,672
bytes) 11/30/2005 6:00 AM Microsoft Corporation
  c:\windows\system32\version.dll
winsta 5.2.3790.1830 (srv03_sp1_rtm.050324-1447) 89.00 KB (91,136
bytes) 11/30/2005 6:00 AM Microsoft Corporation
  c:\windows\system32\winsta.dll
ws2_32 5.2.3790.1830 (srv03_sp1_rtm.050324-1447) 176.50 KB
(180,736 bytes) 11/30/2005 6:00 AM Microsoft Corporation
  c:\windows\system32\ws2_32.dll
ws2help 5.2.3790.1830 (srv03_sp1_rtm.050324-1447) 30.50 KB (31,232
bytes) 11/30/2005 6:00 AM Microsoft Corporation
  c:\windows\system32\ws2help.dll
msgina 5.2.3790.1830 (srv03_sp1_rtm.050324-1447) 1.14 MB
(1,193,472 bytes) 11/30/2005 6:00 AM Microsoft Corporation
  c:\windows\system32\msgina.dll

shsvcs 6.00.3790.1830 (srv03_sp1_rtm.050324-1447) 193.50 KB
(198,144 bytes) 11/30/2005 6:00 AM Microsoft Corporation
  c:\windows\system32\shsvcs.dll
shlwapi 6.00.3790.1830 (srv03_sp1_rtm.050324-1447) 606.50 KB
(621,056 bytes) 11/30/2005 6:00 AM Microsoft Corporation
  c:\windows\system32\shlwapi.dll
sfc 5.2.3790.1830 (srv03_sp1_rtm.050324-1447) 6.00 KB (6,144 bytes)
 11/30/2005 6:00 AM Microsoft Corporation
  c:\windows\system32\sfc.dll
sfc_os 5.2.3790.1830 (srv03_sp1_rtm.050324-1447) 183.50 KB
(187,904 bytes) 11/30/2005 6:00 AM Microsoft Corporation
  c:\windows\system32\sfc_os.dll
wintrust 5.131.3790.1830 (srv03_sp1_rtm.050324-1447) 297.50 KB
(304,640 bytes) 11/30/2005 6:00 AM Microsoft Corporation
  c:\windows\system32\wintrust.dll
imagehlp 5.2.3790.1830 (srv03_sp1_rtm.050324-1447) 57.50 KB
(58,880 bytes) 11/30/2005 6:00 AM Microsoft Corporation
  c:\windows\system32\imagehlp.dll
ole32 5.2.3790.1830 (srv03_sp1_rtm.050324-1447) 2.43 MB (2,543,616
bytes) 11/30/2005 6:00 AM Microsoft Corporation
  c:\windows\system32\ole32.dll
comctl32 6.0 (srv03_sp1_rtm.050324-1447) 1.51 MB (1,584,128 bytes)
 7/3/2007 12:20 PM Microsoft Corporation
  c:\windows\winsxs\amd64_microsoft.windows.common-
controls_6595b64144ccf1df_6.0.3790.1830_x-ww_aced72af\comctl32.dll

winscard 5.2.3790.1830 (srv03_sp1_rtm.050324-1447) 230.00 KB
(235,520 bytes) 11/30/2005 6:00 AM Microsoft Corporation
  c:\windows\system32\winscard.dll
wtsapi32 5.2.3790.1830 (srv03_sp1_rtm.050324-1447) 29.00 KB
(29,696 bytes) 11/30/2005 6:00 AM Microsoft Corporation
  c:\windows\system32\wtsapi32.dll
sxs 5.2.3790.1830 (srv03_sp1_rtm.050324-1447) 1.91 MB (2,003,968
bytes) 11/30/2005 6:00 AM Microsoft Corporation
  c:\windows\system32\sxs.dll
shell32 6.00.3790.1830 (srv03_sp1_rtm.050324-1447) 10.01 MB
(10,492,416 bytes) 11/30/2005 6:00 AM Microsoft Corporation
  c:\windows\system32\shell32.dll
wldap32 5.2.3790.1830 (srv03_sp1_rtm.050324-1447) 390.00 KB
(399,360 bytes) 11/30/2005 6:00 AM Microsoft Corporation
  c:\windows\system32\wldap32.dll
rsaenh 5.2.3790.1830 (srv03_sp1_rtm.050324-1447) 241.96 KB
(247,768 bytes) 11/30/2005 6:00 AM Microsoft Corporation
  c:\windows\system32\rsaenh.dll
cscdll 5.2.3790.1830 (srv03_sp1_rtm.050324-1447) 151.50 KB
(155,136 bytes) 11/30/2005 6:00 AM Microsoft Corporation
  c:\windows\system32\cscdll.dll
dimsntfy 5.2.3790.1830 (srv03_sp1_rtm.050324-1447) 28.00 KB
(28,672 bytes) 11/30/2005 6:00 AM Microsoft Corporation
  c:\windows\system32\dimsntfy.dll
wlnotify 5.2.3790.1830 (srv03_sp1_rtm.050324-1447) 148.00 KB
(151,552 bytes) 11/30/2005 6:00 AM Microsoft Corporation
  c:\windows\system32\wlnotify.dll
mpr 5.2.3790.1830 (srv03_sp1_rtm.050324-1447) 115.00 KB (117,760
bytes) 11/30/2005 6:00 AM Microsoft Corporation
  c:\windows\system32\mpr.dll
oleaut32 5.2.3790.1830 1.06 MB (1,116,160 bytes) 11/30/2005 6:00
AM Microsoft Corporation c:\windows\system32\oleaut32.dll
winmm 5.2.3790.1830 (srv03_sp1_rtm.050324-1447) 303.50 KB (310,784
bytes) 11/30/2005 6:00 AM Microsoft Corporation
  c:\windows\system32\winmm.dll
winspool 5.2.3790.1830 (srv03_sp1_rtm.050324-1447) 247.00 KB
(252,928 bytes) 11/30/2005 6:00 AM Microsoft Corporation
  c:\windows\system32\winspool.drv
comctl32 5.82 (srv03_sp1_rtm.050324-1447) 934.50 KB (956,928
bytes) 7/3/2007 12:20 PM Microsoft Corporation
  c:\windows\winsxs\amd64_microsoft.windows.common-
controls_6595b64144ccf1df_5.82.3790.1830_x-ww_4d792d2a\comctl32.dll

uxtheme 6.00.3790.1830 (srv03_sp1_rtm.050324-1447) 494.50 KB
(506,368 bytes) 11/30/2005 6:00 AM Microsoft Corporation
  c:\windows\system32\uxtheme.dll
samlib 5.2.3790.1830 (srv03_sp1_rtm.050324-1447) 69.00 KB (70,656
bytes) 11/30/2005 6:00 AM Microsoft Corporation
  c:\windows\system32\samlib.dll
cscui 5.2.3790.1830 (srv03_sp1_rtm.050324-1447) 441.00 KB (451,584
bytes) 11/30/2005 6:00 AM Microsoft Corporation
  c:\windows\system32\cscui.dll
clbcatq 2001.12.4720.1830 (srv03_sp1_rtm.050324-1447) 865.00 KB
(885,760 bytes) 7/3/2007 5:36 PM Microsoft Corporation
  c:\windows\system32\clbcatq.dll
comres 2001.12.4720.1830 (srv03_sp1_rtm.050324-1447) 779.50 KB
(798,208 bytes) 11/30/2005 6:00 AM Microsoft Corporation
  c:\windows\system32\comres.dll
xpsp2res 5.2.3790.1830 (srv03_sp1_rtm.050324-1447) 2.77 MB
(2,899,456 bytes) 11/30/2005 6:00 AM Microsoft Corporation
  c:\windows\system32\xpsp2res.dll
ntmarta 5.2.3790.1830 (srv03_sp1_rtm.050324-1447) 222.50 KB
(227,840 bytes) 11/30/2005 6:00 AM Microsoft Corporation
  c:\windows\system32\ntmarta.dll
wbemprox 5.2.3790.1830 (srv03_sp1_rtm.050324-1447) 38.00 KB
(38,912 bytes) 7/3/2007 5:36 PM Microsoft Corporation
  c:\windows\system32\wbem\wbemprox.dll
wbemcomn 5.2.3790.1830 (srv03_sp1_rtm.050324-1447) 524.00 KB
(536,576 bytes) 11/30/2005 6:00 AM Microsoft Corporation
  c:\windows\system32\wbem\wbemcomn.dll
wbemsvc 5.2.3790.1830 (srv03_sp1_rtm.050324-1447) 58.00 KB (59,392
bytes) 7/3/2007 5:36 PM Microsoft Corporation
  c:\windows\system32\wbem\wbemsvc.dll

fastprox 5.2.3790.1830 (srv03_sp1_rtm.050324-1447) 866.50 KB
(887,296 bytes) 7/3/2007 5:36 PM Microsoft Corporation
  c:\windows\system32\wbem\fastprox.dll
msvcp60 7.0.3790.1830 (srv03_sp1_rtm.050324-1447) 919.50 KB
(941,568 bytes) 11/30/2005 6:00 AM Microsoft Corporation
  c:\windows\system32\msvcp60.dll
ntdsapi 5.2.3790.1830 (srv03_sp1_rtm.050324-1447) 127.50 KB
(130,560 bytes) 11/30/2005 6:00 AM Microsoft Corporation
  c:\windows\system32\ntdsapi.dll
dnsapi 5.2.3790.1830 (srv03_sp1_rtm.050324-1447) 297.50 KB
(304,640 bytes) 11/30/2005 6:00 AM Microsoft Corporation
  c:\windows\system32\dnsapi.dll
services 5.2.3790.1830 (srv03_sp1_rtm.050324-1447) 216.50 KB
(221,696 bytes) 11/30/2005 6:00 AM Microsoft Corporation
  c:\windows\system32\services.exe
ncobjapi 5.2.3790.1830 (srv03_sp1_rtm.050324-1447) 80.00 KB
(81,920 bytes) 11/30/2005 6:00 AM Microsoft Corporation
  c:\windows\system32\ncobjapi.dll
scesrv 5.2.3790.1830 (srv03_sp1_rtm.050324-1447) 594.50 KB
(608,768 bytes) 11/30/2005 6:00 AM Microsoft Corporation
  c:\windows\system32\scesrv.dll
authz 5.2.3790.1830 (srv03_sp1_rtm.050324-1447) 167.00 KB (171,008
bytes) 11/30/2005 6:00 AM Microsoft Corporation
  c:\windows\system32\authz.dll
umpnpmgr 5.2.3790.1830 (srv03_sp1_rtm.050324-1447) 205.00 KB
(209,920 bytes) 11/30/2005 6:00 AM Microsoft Corporation
  c:\windows\system32\umpnpmgr.dll
eventlog 5.2.3790.1830 (srv03_sp1_rtm.050324-1447) 127.00 KB
(130,048 bytes) 11/30/2005 6:00 AM Microsoft Corporation
  c:\windows\system32\eventlog.dll
cryptnet 5.131.3790.1830 (srv03_sp1_rtm.050324-1447) 108.50 KB
(111,104 bytes) 11/30/2005 6:00 AM Microsoft Corporation
  c:\windows\system32\cryptnet.dll
sensapi 5.2.3790.1830 (srv03_sp1_rtm.050324-1447) 10.50 KB (10,752
bytes) 11/30/2005 6:00 AM Microsoft Corporation
  c:\windows\system32\sensapi.dll
cabinet 5.2.3790.1830 (srv03_sp1_rtm.050324-1447) 138.50 KB
(141,824 bytes) 11/30/2005 6:00 AM Microsoft Corporation
  c:\windows\system32\cabinet.dll
imm32 5.2.3790.1830 (srv03_sp1_rtm.050324-1447) 208.00 KB (212,992
bytes) 11/30/2005 6:00 AM Microsoft Corporation
  c:\windows\system32\imm32.dll
apphelp 5.2.3790.1830 (srv03_sp1_rtm.050324-1447) 241.00 KB
(246,784 bytes) 11/30/2005 6:00 AM Microsoft Corporation
  c:\windows\system32\apphelp.dll
lsass 5.2.3790.1830 (srv03_sp1_rtm.050324-1447) 14.00 KB (14,336
bytes) 11/30/2005 6:00 AM Microsoft Corporation
  c:\windows\system32\lsass.exe
lsasrv 5.2.3790.1830 (srv03_sp1_rtm.050324-1447) 1.50 MB
(1,568,256 bytes) 11/30/2005 6:00 AM Microsoft Corporation
  c:\windows\system32\lsasrv.dll
samsrv 5.2.3790.1830 (srv03_sp1_rtm.050324-1447) 1.01 MB
(1,059,328 bytes) 11/30/2005 6:00 AM Microsoft Corporation
  c:\windows\system32\samsrv.dll
cryptdll 5.2.3790.1830 (srv03_sp1_rtm.050324-1447) 47.00 KB
(48,128 bytes) 11/30/2005 6:00 AM Microsoft Corporation
  c:\windows\system32\cryptdll.dll
msprivs 5.2.3790.1830 (srv03_sp1_rtm.050324-1447) 47.50 KB (48,640
bytes) 11/30/2005 6:00 AM Microsoft Corporation
  c:\windows\system32\msprivs.dll
kerberos 5.2.3790.1830 (srv03_sp1_rtm.050324-1447) 698.00 KB
(714,752 bytes) 11/30/2005 6:00 AM Microsoft Corporation
  c:\windows\system32\kerberos.dll
msv1_0 5.2.3790.1830 (srv03_sp1_rtm.050324-1447) 253.00 KB
(259,072 bytes) 11/30/2005 6:00 AM Microsoft Corporation
  c:\windows\system32\msv1_0.dll
iphlpapi 5.2.3790.1830 (srv03_sp1_rtm.050324-1447) 177.00 KB
(181,248 bytes) 11/30/2005 6:00 AM Microsoft Corporation
  c:\windows\system32\iphlpapi.dll
netlogon 5.2.3790.1830 (srv03_sp1_rtm.050324-1447) 666.00 KB
(681,984 bytes) 11/30/2005 6:00 AM Microsoft Corporation
  c:\windows\system32\netlogon.dll
w32time 5.2.3790.1830 (srv03_sp1_rtm.050324-1447) 400.50 KB
(410,112 bytes) 11/30/2005 6:00 AM Microsoft Corporation
  c:\windows\system32\w32time.dll
schannel 5.2.3790.1830 (srv03_sp1_rtm.050324-1447) 248.00 KB
(253,952 bytes) 11/30/2005 6:00 AM Microsoft Corporation
  c:\windows\system32\schannel.dll
wdigest 5.2.3790.1830 (srv03_sp1_rtm.050324-1447) 130.50 KB
(133,632 bytes) 11/30/2005 6:00 AM Microsoft Corporation
  c:\windows\system32\wdigest.dll
rassfm 5.2.3790.1830 (srv03_sp1_rtm.050324-1447) 36.00 KB (36,864
bytes) 11/30/2005 6:00 AM Microsoft Corporation
  c:\windows\system32\rassfm.dll
kdcsvc 5.2.3790.1830 (srv03_sp1_rtm.050324-1447) 409.00 KB
(418,816 bytes) 11/30/2005 6:00 AM Microsoft Corporation
  c:\windows\system32\kdcsvc.dll
ntdsa 5.2.3790.1830 (srv03_sp1_rtm.050324-1447) 2.81 MB (2,948,096
bytes) 11/30/2005 6:00 AM Microsoft Corporation
  c:\windows\system32\ntdsa.dll
esent 5.2.3790.1830 (srv03_sp1_rtm.050324-1447) 2.26 MB (2,366,976
bytes) 11/30/2005 6:00 AM Microsoft Corporation
  c:\windows\system32\esent.dll
ntdsatq 5.2.3790.1830 (srv03_sp1_rtm.050324-1447) 51.00 KB (52,224
bytes) 11/30/2005 6:00 AM Microsoft Corporation
  c:\windows\system32\ntdsatq.dll
mswsock 5.2.3790.1830 (srv03_sp1_rtm.050324-1447) 478.00 KB
(489,472 bytes) 11/30/2005 6:00 AM Microsoft Corporation
  c:\windows\system32\mswsock.dll

scecli 5.2.3790.1830 (srv03_sp1_rtm.050324-1447) 308.00 KB
(315,392 bytes) 11/30/2005 6:00 AM Microsoft Corporation
  c:\windows\system32\scecli.dll
ws03res 5.2.3790.1830 (srv03_sp1_rtm.050324-1447) 794.00 KB
(813,056 bytes) 11/30/2005 6:00 AM Microsoft Corporation
  c:\windows\system32\ws03res.dll
hnetcfg 5.2.3790.1830 (srv03_sp1_rtm.050324-1447) 561.00 KB
(574,464 bytes) 11/30/2005 6:00 AM Microsoft Corporation
  c:\windows\system32\hnetcfg.dll
wshtcpip 5.2.3790.1830 (srv03_sp1_rtm.050324-1447) 29.00 KB
(29,696 bytes) 11/30/2005 6:00 AM Microsoft Corporation
  c:\windows\system32\wshtcpip.dll
ipsecsvc 5.2.3790.1830 (srv03_sp1_rtm.050324-1447) 358.50 KB
(367,104 bytes) 11/30/2005 6:00 AM Microsoft Corporation
  c:\windows\system32\ipsecsvc.dll
oakley 5.2.3790.1830 (srv03_sp1_rtm.050324-1447) 372.50 KB
(381,440 bytes) 11/30/2005 6:00 AM Microsoft Corporation
  c:\windows\system32\oakley.dll
winipsec 5.2.3790.1830 (srv03_sp1_rtm.050324-1447) 52.50 KB
(53,760 bytes) 11/30/2005 6:00 AM Microsoft Corporation
  c:\windows\system32\winipsec.dll
pstorsvc 5.2.3790.1830 (srv03_sp1_rtm.050324-1447) 36.00 KB
(36,864 bytes) 11/30/2005 6:00 AM Microsoft Corporation
  c:\windows\system32\pstorsvc.dll
psbase 5.2.3790.1830 (srv03_sp1_rtm.050324-1447) 124.00 KB
(126,976 bytes) 11/30/2005 6:00 AM Microsoft Corporation
  c:\windows\system32\psbase.dll
dssenh 5.2.3790.1830 (srv03_sp1_rtm.050324-1447) 226.96 KB
(232,408 bytes) 11/30/2005 6:00 AM Microsoft Corporation
  c:\windows\system32\dssenh.dll
wlbsctrl 5.2.3790.1830 (srv03_sp1_rtm.050324-1447) 137.50 KB
(140,800 bytes) 11/30/2005 6:00 AM Microsoft Corporation
  c:\windows\system32\wlbsctrl.dll
svchost 5.2.3790.1830 (srv03_sp1_rtm.050324-1447) 24.50 KB (25,088
bytes) 11/30/2005 6:00 AM Microsoft Corporation
  c:\windows\system32\svchost.exe
rpcss 5.2.3790.1830 (srv03_sp1_rtm.050324-1447) 672.00 KB (688,128
bytes) 11/30/2005 6:00 AM Microsoft Corporation
  c:\windows\system32\rpcss.dll
wzcsvc 5.2.3790.1830 (srv03_sp1_rtm.050324-1447) 492.00 KB
(503,808 bytes) 3/24/2005 11:35 AM Microsoft Corporation
  c:\windows\system32\wzcsvc.dll
rtutils 5.2.3790.1830 (srv03_sp1_rtm.050324-1447) 66.00 KB (67,584
bytes) 11/30/2005 6:00 AM Microsoft Corporation
  c:\windows\system32\rtutils.dll
wmi 5.4.3790.1830 (srv03_sp1_rtm.050324-1447) 5.50 KB (5,632 bytes)
  11/30/2005 6:00 AM Microsoft Corporation
  c:\windows\system32\wmi.dll
dhcpcsvc 5.2.3790.1830 (srv03_sp1_rtm.050324-1447) 219.00 KB
(224,256 bytes) 11/30/2005 6:00 AM Microsoft Corporation
  c:\windows\system32\dhcpcsvc.dll
atl 3.05.2284 96.50 KB (98,816 bytes) 11/30/2005 6:00 AM Microsoft
Corporation c:\windows\system32\atl.dll
rastls 5.2.3790.1830 (srv03_sp1_rtm.050324-1447) 236.50 KB
(242,176 bytes) 11/30/2005 6:00 AM Microsoft Corporation
  c:\windows\system32\rastls.dll
cryptui 5.131.3790.1830 (srv03_sp1_rtm.050324-1447) 705.50 KB
(722,432 bytes) 11/30/2005 6:00 AM Microsoft Corporation
  c:\windows\system32\cryptui.dll
mprapi 5.2.3790.1830 (srv03_sp1_rtm.050324-1447) 154.50 KB
(158,208 bytes) 11/30/2005 6:00 AM Microsoft Corporation
  c:\windows\system32\mprapi.dll
activeds 5.2.3790.1830 (srv03_sp1_rtm.050324-1447) 348.50 KB
(356,864 bytes) 11/30/2005 6:00 AM Microsoft Corporation
  c:\windows\system32\activeds.dll
adsldpc 5.2.3790.1830 (srv03_sp1_rtm.050324-1447) 240.50 KB
(246,272 bytes) 11/30/2005 6:00 AM Microsoft Corporation
  c:\windows\system32\adsldpc.dll
credui 5.2.3790.1830 (srv03_sp1_rtm.050324-1447) 202.00 KB
(206,848 bytes) 11/30/2005 6:00 AM Microsoft Corporation
  c:\windows\system32\credui.dll
rasapi32 5.2.3790.1830 (srv03_sp1_rtm.050324-1447) 410.00 KB
(419,840 bytes) 11/30/2005 6:00 AM Microsoft Corporation
  c:\windows\system32\rasapi32.dll
rasman 5.2.3790.1830 (srv03_sp1_rtm.050324-1447) 95.50 KB (97,792
bytes) 11/30/2005 6:00 AM Microsoft Corporation
  c:\windows\system32\rasman.dll
tapi32 5.2.3790.1830 (srv03_sp1_rtm.050324-1447) 332.50 KB
(340,480 bytes) 11/30/2005 6:00 AM Microsoft Corporation
  c:\windows\system32\tapi32.dll
raschap 5.2.3790.1830 (srv03_sp1_rtm.050324-1447) 141.00 KB
(144,384 bytes) 11/30/2005 6:00 AM Microsoft Corporation
  c:\windows\system32\raschap.dll
schedsvc 5.2.3790.1830 (srv03_sp1_rtm.050324-1447) 308.50 KB
(315,904 bytes) 7/3/2007 5:37 PM Microsoft Corporation
  c:\windows\system32\schedsvc.dll
msidle 6.00.3790.1830 (srv03_sp1_rtm.050324-1447) 9.00 KB (9,216
bytes) 11/30/2005 6:00 AM Microsoft Corporation
  c:\windows\system32\msidle.dll
audiosrv 5.2.3790.1830 (srv03_sp1_rtm.050324-1447) 77.00 KB
(78,848 bytes) 11/30/2005 6:00 AM Microsoft Corporation
  c:\windows\system32\audiosrv.dll
wkssvc 5.2.3790.1830 (srv03_sp1_rtm.050324-1447) 221.00 KB
(226,304 bytes) 11/30/2005 6:00 AM Microsoft Corporation
  c:\windows\system32\wkssvc.dll
wiarpc 5.2.3790.1830 (srv03_sp1_rtm.050324-1447) 57.00 KB (58,368
bytes) 11/30/2005 6:00 AM Microsoft Corporation
  c:\windows\system32\wiarpc.dll
aelupsvc 5.2.3790.1830 (srv03_sp1_rtm.050324-1447) 31.50 KB
(32,256 bytes) 11/30/2005 6:00 AM Microsoft Corporation
  c:\windows\system32\aelupsvc.dll

---

cryptsvc 5.2.3790.1830 (srv03_sp1_rtm.050324-1447) 114.00 KB
(116,736 bytes) 11/30/2005 6:00 AM Microsoft Corporation
  c:\windows\system32\cryptsvc.dll
certcli 5.2.3790.1830 (srv03_sp1_rtm.050324-1447) 372.00 KB
(380,928 bytes) 11/30/2005 6:00 AM Microsoft Corporation
  c:\windows\system32\certcli.dll
vssapi 5.2.3790.1830 (srv03_sp1_rtm.050324-1447) 1.26 MB
(1,320,960 bytes) 11/30/2005 6:00 AM Microsoft Corporation
  c:\windows\system32\vssapi.dll
dmserver 5.2.3790.1830 (srv03_sp1_rtm.050324-1447) 36.50 KB
(37,376 bytes) 11/30/2005 6:00 AM Microsoft Corporation
  c:\windows\system32\dmserver.dll
es 2001.12.4720.1830 (srv03_sp1_rtm.050324-1447) 357.00 KB
(365,568 bytes) 11/30/2005 6:00 AM Microsoft Corporation
  c:\windows\system32\es.dll
pchsvc 5.2.3790.1830 (srv03_sp1_rtm.050324-1447) 76.00 KB (77,824
bytes) 7/3/2007 5:38 PM Microsoft Corporation
  c:\windows\pchealth\helpctr\binaries\pchsvc.dll
srvsvc 5.2.3790.1830 (srv03_sp1_rtm.050324-1447) 156.50 KB
(160,256 bytes) 11/30/2005 6:00 AM Microsoft Corporation
  c:\windows\system32\srvsvc.dll
seclogon 5.2.3790.1830 (srv03_sp1_rtm.050324-1447) 27.50 KB
(28,160 bytes) 11/30/2005 6:00 AM Microsoft Corporation
  c:\windows\system32\seclogon.dll
sens 5.2.3790.1830 (srv03_sp1_rtm.050324-1447) 63.50 KB (65,024
bytes) 11/30/2005 6:00 AM Microsoft Corporation
  c:\windows\system32\sens.dll
trkwks 5.2.3790.1830 (srv03_sp1_rtm.050324-1447) 177.50 KB
(181,760 bytes) 11/30/2005 6:00 AM Microsoft Corporation
  c:\windows\system32\trkwks.dll
wmisvc 5.2.3790.1830 (srv03_sp1_rtm.050324-1447) 227.00 KB
(232,448 bytes) 7/3/2007 5:36 PM Microsoft Corporation
  c:\windows\system32\wbem\wmisvc.dll
comsvcs 2001.12.4720.1830 (srv03_sp1_rtm.050324-1447) 2.06 MB
(2,156,544 bytes) 7/3/2007 5:36 PM Microsoft Corporation
  c:\windows\system32\comsvcs.dll
wuauserv 5.7.3790.1830 (srv03_sp1_rtm.050324-1447) 12.00 KB
(12,288 bytes) 7/3/2007 5:38 PM Microsoft Corporation
  c:\windows\system32\wuauserv.dll
wuaueng 5.7.3790.1830 (srv03_sp1_rtm.050324-1447) 2.17 MB
(2,270,720 bytes) 7/3/2007 5:38 PM Microsoft Corporation
  c:\windows\system32\wuaueng.dll
advpack 6.00.3790.1830 (srv03_sp1_rtm.050324-1447) 146.00 KB
(149,504 bytes) 11/30/2005 6:00 AM Microsoft Corporation
  c:\windows\system32\advpack.dll
mspatcha 5.2.3790.1830 (srv03_sp1_rtm.050324-1447) 48.00 KB
(49,152 bytes) 11/30/2005 6:00 AM Microsoft Corporation
  c:\windows\system32\mspatcha.dll
shfolder 6.00.3790.1830 (srv03_sp1_rtm.050324-1447) 34.00 KB
(34,816 bytes) 11/30/2005 6:00 AM Microsoft Corporation
  c:\windows\system32\shfolder.dll
winhttp 5.2.3790.1830 (srv03_sp1_rtm.050324-1447) 508.50 KB
(520,704 bytes) 7/3/2007 12:20 PM Microsoft Corporation
  c:\windows\winsxs\amd64_microsoft.windows.winhttp_6595b64144ccf1d
f_5.1.3790.1830_x-ww_a61ef4db\winhttp.dll
browser 5.2.3790.1830 (srv03_sp1_rtm.050324-1447) 125.50 KB
(128,512 bytes) 11/30/2005 6:00 AM Microsoft Corporation
  c:\windows\system32\browser.dll
netrap 5.2.3790.1830 (srv03_sp1_rtm.050324-1447) 26.00 KB (26,624
bytes) 11/30/2005 6:00 AM Microsoft Corporation
  c:\windows\system32\netrap.dll
wbemcore 5.2.3790.1830 (srv03_sp1_rtm.050324-1447) 1.24 MB
(1,299,968 bytes) 7/3/2007 5:36 PM Microsoft Corporation
  c:\windows\system32\wbem\wbemcore.dll
esscli 5.2.3790.1830 (srv03_sp1_rtm.050324-1447) 626.50 KB
(641,536 bytes) 7/3/2007 5:36 PM Microsoft Corporation
  c:\windows\system32\wbem\esscli.dll
wmiutils 5.2.3790.1830 (srv03_sp1_rtm.050324-1447) 171.00 KB
(175,104 bytes) 7/3/2007 5:36 PM Microsoft Corporation
  c:\windows\system32\wbem\wmiutils.dll
repdrvfs 5.2.3790.1830 (srv03_sp1_rtm.050324-1447) 353.50 KB
(361,984 bytes) 7/3/2007 5:36 PM Microsoft Corporation
  c:\windows\system32\wbem\repdrvfs.dll
wmiprvsd 5.2.3790.1830 (srv03_sp1_rtm.050324-1447) 743.00 KB
(760,832 bytes) 7/3/2007 5:36 PM Microsoft Corporation
  c:\windows\system32\wbem\wmiprvsd.dll
wbemess 5.2.3790.1830 (srv03_sp1_rtm.050324-1447) 532.50 KB
(545,280 bytes) 7/3/2007 5:36 PM Microsoft Corporation
  c:\windows\system32\wbem\wbemess.dll
ncprov 5.2.3790.1830 (srv03_sp1_rtm.050324-1447) 73.00 KB (74,752
bytes) 7/3/2007 5:36 PM Microsoft Corporation
  c:\windows\system32\wbem\ncprov.dll
netman 5.2.3790.1830 (srv03_sp1_rtm.050324-1447) 457.00 KB
(467,968 bytes) 11/30/2005 6:00 AM Microsoft Corporation
  c:\windows\system32\netman.dll
netshell 5.2.3790.1830 (srv03_sp1_rtm.050324-1447) 2.32 MB
(2,437,120 bytes) 11/30/2005 6:00 AM Microsoft Corporation
  c:\windows\system32\netshell.dll
clusapi 5.2.3790.1830 (srv03_sp1_rtm.050324-1447) 127.00 KB
(130,048 bytes) 11/30/2005 6:00 AM Microsoft Corporation
  c:\windows\system32\clusapi.dll
wininet 6.00.3790.1830 (srv03_sp1_rtm.050324-1447) 1.13 MB
(1,186,304 bytes) 11/30/2005 6:00 AM Microsoft Corporation
  c:\windows\system32\wininet.dll
wzcsapi 5.2.3790.1830 (srv03_sp1_rtm.050324-1447) 49.00 KB (50,176
bytes) 3/24/2005 11:35 AM Microsoft Corporation
  c:\windows\system32\wzcsapi.dll
rasdlg 5.2.3790.1830 (srv03_sp1_rtm.050324-1447) 859.50 KB
(880,128 bytes) 11/30/2005 6:00 AM Microsoft Corporation
  c:\windows\system32\rasdlg.dll

rasadhlp 5.2.3790.1830 (srv03_sp1_rtm.050324-1447) 12.00 KB
(12,288 bytes) 11/30/2005 6:00 AM Microsoft Corporation
  c:\windows\system32\rasadhlp.dll
wups 5.7.3790.1830 (srv03_sp1_rtm.050324-1447) 37.50 KB (38,400
bytes) 7/3/2007 5:38 PM Microsoft Corporation
  c:\windows\system32\wups.dll
ntlsapi 5.2.3790.1830 (srv03_sp1_rtm.050324-1447) 11.00 KB (11,264
bytes) 11/30/2005 6:00 AM Microsoft Corporation
  c:\windows\system32\ntlsapi.dll
spoolsv 5.2.3790.1830 (srv03_sp1_rtm.050324-1447) 107.00 KB
(109,568 bytes) 11/30/2005 6:00 AM Microsoft Corporation
  c:\windows\system32\spoolsv.exe
spoolss 5.2.3790.1830 (srv03_sp1_rtm.050324-1447) 163.00 KB
(166,912 bytes) 11/30/2005 6:00 AM Microsoft Corporation
  c:\windows\system32\spoolss.dll
localspl 5.2.3790.1830 (srv03_sp1_rtm.050324-1447) 730.50 KB
(748,032 bytes) 11/30/2005 6:00 AM Microsoft Corporation
  c:\windows\system32\localspl.dll
cnbjmon 5.2.3790.1224 (dnsrv(skatari).040514-1058) 63.00 KB
(64,512 bytes) 3/24/2005 11:15 AM Microsoft Corporation
  c:\windows\system32\cnbjmon.dll
pjlmon 5.2.3790.1830 (srv03_sp1_rtm.050324-1447) 25.50 KB (26,112
bytes) 3/24/2005 11:22 AM Microsoft Corporation
  c:\windows\system32\pjlmon.dll
tcpmon 5.2.3790.1830 (srv03_sp1_rtm.050324-1447) 91.00 KB (93,184
bytes) 11/30/2005 6:00 AM Microsoft Corporation
  c:\windows\system32\tcpmon.dll
wsnmp32 5.2.3790.1830 (srv03_sp1_rtm.050324-1447) 67.50 KB (69,120
bytes) 11/30/2005 6:00 AM Microsoft Corporation
  c:\windows\system32\wsnmp32.dll
tcpmib 5.2.3790.1830 (srv03_sp1_rtm.050324-1447) 25.00 KB (25,600
bytes) 11/30/2005 6:00 AM Microsoft Corporation
  c:\windows\system32\tcpmib.dll
wsock32 5.2.3790.1830 (srv03_sp1_rtm.050324-1447) 24.50 KB (25,088
bytes) 11/30/2005 6:00 AM Microsoft Corporation
  c:\windows\system32\wsock32.dll
mgmtapi 5.2.3790.1830 (srv03_sp1_rtm.050324-1447) 22.50 KB (23,040
bytes) 11/30/2005 6:00 AM Microsoft Corporation
  c:\windows\system32\mgmtapi.dll
snmpapi 5.2.3790.1830 (srv03_sp1_rtm.050324-1447) 31.50 KB (32,256
bytes) 11/30/2005 6:00 AM Microsoft Corporation
  c:\windows\system32\snmpapi.dll
usbmon 5.2.3790.1830 (srv03_sp1_rtm.050324-1447) 28.50 KB (29,184
bytes) 11/30/2005 6:00 AM Microsoft Corporation
  c:\windows\system32\usbmon.dll
winrnr 5.2.3790.1830 (srv03_sp1_rtm.050324-1447) 30.00 KB (30,720
bytes) 11/30/2005 6:00 AM Microsoft Corporation
  c:\windows\system32\winrnr.dll
wshqos 5.2.3790.1830 (srv03_sp1_rtm.050324-1447) 33.50 KB (34,304
bytes) 11/30/2005 6:00 AM Microsoft Corporation
  c:\windows\system32\wshqos.dll
win32spl 5.2.3790.1830 (srv03_sp1_rtm.050324-1447) 167.00 KB
(171,008 bytes) 11/30/2005 6:00 AM Microsoft Corporation
  c:\windows\system32\win32spl.dll
inetpp 5.2.3790.1830 (srv03_sp1_rtm.050324-1447) 148.50 KB
(152,064 bytes) 11/30/2005 6:00 AM Microsoft Corporation
  c:\windows\system32\inetpp.dll
icmp 5.2.3790.1830 (srv03_sp1_rtm.050324-1447) 3.50 KB (3,584
bytes) 11/30/2005 6:00 AM Microsoft Corporation
  c:\windows\system32\icmp.dll
ersvc 5.2.3790.1830 (srv03_sp1_rtm.050324-1447) 31.00 KB (31,744
bytes) 11/30/2005 6:00 AM Microsoft Corporation
  c:\windows\system32\ersvc.dll
oracle 10.2.0.1.0 Production 137.08 MB (143,739,904 bytes)
  8/28/2006 10:26 AM Oracle Corporation c:\oracle\bin\oracle.exe

oraxml11 11.0.0.1.0 Production 2.79 MB (2,930,176 bytes) 9/6/2006
12:28 PM Oracle Corporation c:\oracle\bin\oraxml11.dll
oranls11 11.0.0.1.0 Production 990.50 KB (1,014,272 bytes)
  9/6/2006 12:28 PM Oracle Corporation c:\oracle\bin\oranls11.dll

oracore11 11.2.0.1.0 1.26 MB (1,321,984 bytes) 9/6/2006 12:28 PM
  Oracle Corporation c:\oracle\bin\oracore11.dll
orauts 10.1.0.2.0 144.50 KB (147,968 bytes) 8/9/2006 4:51 AM
  Oracle Corporation c:\oracle\bin\orauts.dll
oraunls11 11.0.0.1.0 Production 99.50 KB (101,888 bytes) 9/6/2006
12:28 PM Oracle Corporation c:\oracle\bin\oraunls11.dll
msvcirt 7.0.3790.1830 (srv03_sp1_rtm.050324-1447) 91.00 KB (93,184
bytes) 11/30/2005 6:00 AM Microsoft Corporation
  c:\windows\system32\msvcirt.dll
orageneric11 11.0.0.1.0 12.29 MB (12,889,088 bytes) 9/6/2006
12:28 PM Oracle Corporation c:\oracle\bin\orageneric11.dll
orasnls11 11.0.0.1.0 Production 200.00 KB (204,800 bytes) 9/6/2006
12:28 PM Oracle Corporation c:\oracle\bin\orasnls11.dll
oracommon11 11.0.0.1.0 1.82 MB (1,905,664 bytes) 9/6/2006 12:28 PM
  Oracle Corporation c:\oracle\bin\oracommon11.dll
oraclient11 11.0.0.1.0 Production 3.86 MB (4,045,312 bytes)
  9/6/2006 12:28 PM Oracle Corporation
  c:\oracle\bin\oraclient11.dll
oravsn11 11.0.0.1.0 7.00 KB (7,168 bytes) 9/6/2006 12:28 PM
  Oracle Corporation c:\oracle\bin\oravsn11.dll
oraldapclnt11 11.0.0.1.0 Production 1.83 MB (1,918,464 bytes)
  9/6/2006 12:28 PM Oracle Corporation
  c:\oracle\bin\oraldapclnt11.dll
orannzsbb11 11.0.0.1.0 Production 1.84 MB (1,928,704 bytes)
  9/6/2006 12:28 PM Oracle Corporation
  c:\oracle\bin\orannzsbb11.dll
orancrypt11 11.0.0.1.0 Production 119.00 KB (121,856 bytes)
  9/6/2006 12:28 PM Oracle Corporation
  c:\oracle\bin\orancrypt11.dll

oran11 11.0.0.1.0 Production 4.58 MB (4,804,608 bytes) 9/6/2006 12:28 PM Oracle Corporation c:\oracle\bin\oran11.dll
oranl11 11.0.0.1.0 Production 452.00 KB (462,848 bytes) 9/6/2006 12:28 PM Oracle Corporation c:\oracle\bin\oranl11.dll
orantcp11 11.0.0.1.0 Production 199.00 KB (203,776 bytes) 9/6/2006 12:28 PM Oracle Corporation c:\oracle\bin\orantcp11.dll
oranldap11 11.0.0.1.0 Production 312.00 KB (319,488 bytes) 9/6/2006 12:28 PM Oracle Corporation c:\oracle\bin\oranldap11.dll
oranro11 11.0.0.1.0 Production 340.50 KB (348,672 bytes) 9/6/2006 12:28 PM Oracle Corporation c:\oracle\bin\oranro11.dll
oranhost11 11.0.0.1.0 Production 26.00 KB (26,624 bytes) 9/6/2006 12:28 PM Oracle Corporation c:\oracle\bin\oranhost11.dll
orancds11 11.0.0.1.0 Production 5.00 KB (5,120 bytes) 9/6/2006 12:28 PM Oracle Corporation c:\oracle\bin\orancds11.dll
orantns11 11.0.0.1.0 Production 41.50 KB (42,496 bytes) 9/6/2006 12:28 PM Oracle Corporation c:\oracle\bin\orantns11.dll
oraztkg11 11.0.0.1.0 Production 686.50 KB (702,976 bytes) 5/22/2007 4:23 AM Oracle Corporation c:\oracle\bin\oraztkg11.dll
orapls11 11.0.0.1.0 4.87 MB (5,103,104 bytes) 9/6/2006 12:28 PM Oracle Corporation c:\oracle\bin\orapls11.dll
oraslax11 11.0.0.1.0 Production 25.50 KB (26,112 bytes) 9/6/2006 12:28 PM Oracle Corporation c:\oracle\bin\oraslax11.dll
oraplp11 11.0.0.1.0 4.16 MB (4,363,264 bytes) 9/6/2006 12:28 PM Oracle Corporation c:\oracle\bin\oraplp11.dll
orahasgen11 11.1.0.1.0 Production 504.50 KB (516,608 bytes) 9/6/2006 12:28 PM Oracle Corporation c:\oracle\bin\orahasgen11.dll
oraocr11 11.1.0.1.0 Production 544.00 KB (557,056 bytes) 9/6/2006 12:28 PM Oracle Corporation c:\oracle\bin\oraocr11.dll
oraocrb11 11.1.0.1.0 Production 418.50 KB (428,544 bytes) 9/6/2006 12:28 PM Oracle Corporation c:\oracle\bin\oraocrb11.dll
orazt11 11.0.0.1.0 Production 54.50 KB (55,808 bytes) 9/6/2006 12:28 PM Oracle Corporation c:\oracle\bin\orazt11.dll
libmmd 8.1.8.2 816.00 KB (835,584 bytes) 3/28/2007 1:46 AM Intel Corporation c:\oracle\bin\libmmd.dll
oransgr11 11.0.0.1.0 Production 158.50 KB (162,304 bytes) 9/6/2006 12:28 PM Oracle Corporation c:\oracle\bin\oransgr11.dll
oraclsra11 11.1.0.1.0 Production 44.00 KB (45,056 bytes) 9/6/2006 12:28 PM Oracle Corporation c:\oracle\bin\oraclsra11.dll
oradbcfg11 11.1.0.1.0 Production 108.50 KB (111,104 bytes) 9/6/2006 12:28 PM Oracle Corporation c:\oracle\bin\oradbcfg11.dll
orawwg 10.1.2.0.0 Production 170.50 KB (174,592 bytes) 7/27/2006 4:17 AM Oracle Corporation c:\oracle\bin\orawwg.dll
dbghelp 5.2.3790.1830 (srv03_sp1_rtm.050324-1447) 1.22 MB (1,274,368 bytes) 11/30/2005 6:00 AM Microsoft Corporation c:\windows\system32\dbghelp.dll
oraimr11 10, 1, 0, 2 117.50 KB (120,320 bytes) 9/6/2006 12:28 PM Oracle Corporation c:\oracle\bin\oraimr11.dll
oranbeq11 11.0.0.1.0 Production 102.50 KB (104,960 bytes) 9/6/2006 12:28 PM Oracle Corporation c:\oracle\bin\oranbeq11.dll
security 5.2.3790.1830 (srv03_sp1_rtm.050324-1447) 6.00 KB (6,144 bytes) 11/30/2005 6:00 AM Microsoft Corporation c:\windows\system32\security.dll
oraskgxpt11 11.0.0.1.0 833.00 KB (852,992 bytes) 7/16/2007 3:57 PM Oracle Corporation c:\oracle\bin\oraskgxpt11.dll
tnslsnr Not Available 541.50 KB (554,496 bytes) 7/16/2007 3:57 PM Not Available c:\oracle\bin\tnslsnr.exe
onsclient Not Available 58.50 KB (59,904 bytes) 7/16/2007 3:57 PM Not Available c:\oracle\bin\onsclient.dll
oranipc11 11.0.0.1.0 Production 89.00 KB (91,136 bytes) 7/16/2007 3:57 PM Oracle Corporation c:\oracle\bin\oranipc11.dll
oraocrut11l 11.1.0.1.0 Production 39.00 KB (39,936 bytes) 7/16/2007 3:57 PM Oracle Corporation c:\oracle\bin\oraocrut11l.dll
termsrv 5.2.3790.1830 (srv03_sp1_rtm.050324-1447) 354.50 KB (363,008 bytes) 7/3/2007 5:36 PM Microsoft Corporation c:\windows\system32\termsrv.dll
icaapi 5.2.3790.1830 (srv03_sp1_rtm.050324-1447) 27.50 KB (28,160 bytes) 7/3/2007 5:36 PM Microsoft Corporation c:\windows\system32\icaapi.dll
mstlsapi 5.2.3790.1830 (srv03_sp1_rtm.050324-1447) 187.00 KB (191,488 bytes) 11/30/2005 6:00 AM Microsoft Corporation c:\windows\system32\mstlsapi.dll
explorer 6.00.3790.1830 (srv03_sp1_rtm.050324-1447) 1.30 MB (1,364,480 bytes) 11/30/2005 6:00 AM Microsoft Corporation c:\windows\explorer.exe
browseui 6.00.3790.1830 (srv03_sp1_rtm.050324-1447) 1.53 MB (1,601,536 bytes) 11/30/2005 6:00 AM Microsoft Corporation c:\windows\system32\browseui.dll
shdocvw 6.00.3790.1830 (srv03_sp1_rtm.050324-1447) 2.30 MB (2,416,128 bytes) 11/30/2005 6:00 AM Microsoft Corporation c:\windows\system32\shdocvw.dll
themeui 6.00.3790.1830 (srv03_sp1_rtm.050324-1447) 530.50 KB (543,232 bytes) 11/30/2005 6:00 AM Microsoft Corporation c:\windows\system32\themeui.dll
msimg32 5.2.3790.1830 (srv03_sp1_rtm.050324-1447) 6.50 KB (6,656 bytes) 11/30/2005 6:00 AM Microsoft Corporation c:\windows\system32\msimg32.dll
linkinfo 5.2.3790.1830 (srv03_sp1_rtm.050324-1447) 30.00 KB (30,720 bytes) 11/30/2005 6:00 AM Microsoft Corporation c:\windows\system32\linkinfo.dll
ntshrui 6.00.3790.1830 (srv03_sp1_rtm.050324-1447) 184.00 KB (188,416 bytes) 11/30/2005 6:00 AM Microsoft Corporation c:\windows\system32\ntshrui.dll
urlmon 6.00.3790.1830 (srv03_sp1_rtm.050324-1447) 1.02 MB (1,074,176 bytes) 11/30/2005 6:00 AM Microsoft Corporation c:\windows\system32\urlmon.dll
webcheck 6.00.3790.1830 (srv03_sp1_rtm.050324-1447) 439.00 KB (449,536 bytes) 11/30/2005 6:00 AM Microsoft Corporation c:\windows\system32\webcheck.dll

stobject 5.2.3790.1830 (srv03_sp1_rtm.050324-1447) 142.50 KB (145,920 bytes) 11/30/2005 6:00 AM Microsoft Corporation c:\windows\system32\stobject.dll
batmeter 6.00.3790.1830 (srv03_sp1_rtm.050324-1447) 41.50 KB (42,496 bytes) 11/30/2005 6:00 AM Microsoft Corporation c:\windows\system32\batmeter.dll
powrprof 6.00.3790.1830 (srv03_sp1_rtm.050324-1447) 32.50 KB (33,280 bytes) 11/30/2005 6:00 AM Microsoft Corporation c:\windows\system32\powrprof.dll
drprov 5.2.3790.1830 (srv03_sp1_rtm.050324-1447) 24.00 KB (24,576 bytes) 11/30/2005 6:00 AM Microsoft Corporation c:\windows\system32\drprov.dll
ntlanman 5.2.3790.1830 (srv03_sp1_rtm.050324-1447) 71.50 KB (73,216 bytes) 11/30/2005 6:00 AM Microsoft Corporation c:\windows\system32\ntlanman.dll
netui0 5.2.3790.1830 (srv03_sp1_rtm.050324-1447) 130.00 KB (133,120 bytes) 11/30/2005 6:00 AM Microsoft Corporation c:\windows\system32\netui0.dll
netui1 5.2.3790.1830 (srv03_sp1_rtm.050324-1447) 338.50 KB (346,624 bytes) 11/30/2005 6:00 AM Microsoft Corporation c:\windows\system32\netui1.dll
davclnt 5.2.3790.1830 (srv03_sp1_rtm.050324-1447) 38.00 KB (38,912 bytes) 11/30/2005 6:00 AM Microsoft Corporation c:\windows\system32\davclnt.dll
shdoclc 6.00.3790.1830 (srv03_sp1_rtm.050324-1447) 589.50 KB (603,648 bytes) 11/30/2005 6:00 AM Microsoft Corporation c:\windows\system32\shdoclc.dll
browselc 6.00.3790.1830 (srv03_sp1_rtm.050324-1447) 63.00 KB (64,512 bytes) 11/30/2005 6:00 AM Microsoft Corporation c:\windows\system32\browselc.dll
mlang 6.00.3790.1830 (srv03_sp1_rtm.050324-1447) 686.00 KB (702,464 bytes) 11/30/2005 6:00 AM Microsoft Corporation c:\windows\system32\mlang.dll
mydocs 6.00.3790.1830 (srv03_sp1_rtm.050324-1447) 101.00 KB (103,424 bytes) 11/30/2005 6:00 AM Microsoft Corporation c:\windows\system32\mydocs.dll
jscript 5.6.0.8827 974.50 KB (997,888 bytes) 11/30/2005 6:00 AM Microsoft Corporation c:\windows\system32\jscript.dll
mstask 5.2.3790.1830 (srv03_sp1_rtm.050324-1447) 411.00 KB (420,864 bytes) 7/3/2007 5:37 PM Microsoft Corporation c:\windows\system32\mstask.dll
comdlg32 6.00.3790.1830 (srv03_sp1_rtm.050324-1447) 446.50 KB (457,216 bytes) 11/30/2005 6:00 AM Microsoft Corporation c:\windows\system32\comdlg32.dll
hhctrl 5.2.3790.1830 (srv03_sp1_rtm.050324-1447) 827.00 KB (846,848 bytes) 11/30/2005 6:00 AM Microsoft Corporation c:\windows\system32\hhctrl.ocx
itss 5.2.3790.1830 (srv03_sp1_rtm.050324-1447) 208.00 KB (212,992 bytes) 11/30/2005 6:00 AM Microsoft Corporation c:\windows\system32\itss.dll
wzqkpick 1.0 (32-bit) 120.00 KB (122,880 bytes) 7/5/2007 2:51 PM WinZip Computing LP c:\program files (x86)\winzip\wzqkpick.exe
wow64 5.2.3790.1830 (srv03_sp1_rtm.050324-1447) 245.00 KB (250,880 bytes) 11/30/2005 6:00 AM Microsoft Corporation c:\windows\system32\wow64.dll
wow64win 5.2.3790.1830 (srv03_sp1_rtm.050324-1447) 280.00 KB (286,720 bytes) 11/30/2005 6:00 AM Microsoft Corporation c:\windows\system32\wow64win.dll
wow64cpu 5.2.3790.1830 (srv03_sp1_rtm.050324-1447) 18.50 KB (18,944 bytes) 11/30/2005 6:00 AM Microsoft Corporation c:\windows\system32\wow64cpu.dll
wuauclt 5.7.3790.1830 (srv03_sp1_rtm.050324-1447) 156.00 KB (159,744 bytes) 7/3/2007 5:38 PM Microsoft Corporation c:\windows\system32\wuauclt.exe
wuaucpl 5.7.3790.1830 (srv03_sp1_rtm.050324-1447) 177.50 KB (181,760 bytes) 7/3/2007 5:38 PM Microsoft Corporation c:\windows\system32\wuaucpl.cpl
cmd 5.2.3790.1830 (srv03_sp1_rtm.050324-1447) 538.50 KB (551,424 bytes) 11/30/2005 6:00 AM Microsoft Corporation c:\windows\system32\cmd.exe
bash Not Available 459.50 KB (470,528 bytes) 7/5/2007 11:41 AM Not Available c:\cygwin\bin\bash.exe
winvnc4 4.1.2 428.95 KB (439,248 bytes) 7/5/2007 11:20 AM RealVNC Ltd. c:\program files (x86)\realvnc\vnc4\winvnc4.exe
helpctr 5.2.3790.1830 (srv03_sp1_rtm.050324-1447) 1.30 MB (1,363,456 bytes) 7/3/2007 5:38 PM Microsoft Corporation c:\windows\pchealth\helpctr\binaries\helpctr.exe
hcappres 5.2.3790.1830 (srv03_sp1_rtm.050324-1447) 7.50 KB (7,680 bytes) 7/3/2007 5:38 PM Microsoft Corporation c:\windows\pchealth\helpctr\binaries\hcappres.dll
msxml3 8.70.1104.0 2.04 MB (2,141,184 bytes) 11/30/2005 6:00 AM Microsoft Corporation c:\windows\system32\msxml3.dll
pchshell 5.2.3790.1830 (srv03_sp1_rtm.050324-1447) 155.00 KB (158,720 bytes) 7/3/2007 5:38 PM Microsoft Corporation c:\windows\pchealth\helpctr\binaries\pchshell.dll
mshtml 6.00.3790.1830 (srv03_sp1_rtm.050324-1447) 5.65 MB (5,928,448 bytes) 11/30/2005 6:00 AM Microsoft Corporation c:\windows\system32\mshtml.dll
msls31 3.10.349.0 357.00 KB (365,568 bytes) 11/30/2005 6:00 AM Microsoft Corporation c:\windows\system32\msls31.dll
msimtf 5.2.3790.1830 (srv03_sp1_rtm.050324-1447) 380.50 KB (389,632 bytes) 11/30/2005 6:00 AM Microsoft Corporation c:\windows\system32\msimtf.dll
msctf 5.2.3790.1830 (srv03_sp1_rtm.050324-1447) 617.50 KB (632,320 bytes) 11/30/2005 6:00 AM Microsoft Corporation c:\windows\system32\msctf.dll
mshtmled 6.00.3790.1830 (srv03_sp1_rtm.050324-1447) 905.50 KB (927,232 bytes) 11/30/2005 6:00 AM Microsoft Corporation c:\windows\system32\mshtmled.dll
vbscript 5.6.0.8827 646.50 KB (662,016 bytes) 11/30/2005 6:00 AM Microsoft Corporation c:\windows\system32\vbscript.dll

msinfo 5.2.3790.1830 (srv03_sp1_rtm.050324-1447) 636.00 KB
(651,264 bytes) 7/3/2007 5:38 PM Microsoft Corporation
  c:\windows\pchealth\helpctr\binaries\msinfo.dll
mfc42u 6.50.9146.0 1.39 MB (1,462,272 bytes) 11/30/2005 6:00 AM
  Microsoft Corporation c:\windows\system32\mfc42u.dll
riched32 5.2.3790.1830 (srv03_sp1_rtm.050324-1447) 7.00 KB (7,168
bytes) 11/30/2005 6:00 AM Microsoft Corporation
  c:\windows\system32\riched32.dll
riched20 5.31.23.1224 1.10 MB (1,157,120 bytes) 11/30/2005 6:00
AM Microsoft Corporation c:\windows\system32\riched20.dll
helpsvc 5.2.3790.1830 (srv03_sp1_rtm.050324-1447) 1.52 MB
(1,591,296 bytes) 7/3/2007 5:38 PM Microsoft Corporation
  c:\windows\pchealth\helpctr\binaries\helpsvc.exe

[Services]

Display Name Name State Start Mode Service Type Path Error
Control Start Name Tag ID
Application Experience Lookup Service AeLookupSvc Running Auto
  Share Process c:\windows\system32\svchost.exe -k netsvcs Normal
  LocalSystem 0
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 Running Auto Share Process
  c:\windows\system32\svchost.exe -k netsvcs Normal LocalSystem 0

Background Intelligent Transfer Service BITS Stopped Manual Share
Process c:\windows\system32\svchost.exe -k netsvcs Normal
  LocalSystem 0
Computer Browser Browser Running Auto Share Process
  c:\windows\system32\svchost.exe -k netsvcs Normal LocalSystem 0

Indexing Service CiSvc Stopped Disabled Share Process
  c:\windows\system32\cisvc.exe Normal LocalSystem 0
ClipBook ClipSrv Stopped Disabled Own Process
  c:\windows\system32\clipsrv.exe Normal LocalSystem 0
COM+ System Application COMSysApp Stopped Manual Own Process
  c:\windows\system32\dllhost.exe /processid:{02d4b3f1-fd88-11d1-
960d-00805fc97235} Normal LocalSystem 0
Cryptographic Services CryptSvc Running Auto Share Process
  c:\windows\system32\svchost.exe -k netsvcs Normal LocalSystem 0

DCOM Server Process Launcher DcomLaunch Running Auto Share
Process c:\windows\system32\svchost.exe -k dcomlaunch Normal
  LocalSystem 0
Distributed File System Dfs Stopped Manual Own Process
  c:\windows\system32\dfssvc.exe Normal LocalSystem 0
DHCP Client Dhcp Running Auto Share Process
  c:\windows\system32\svchost.exe -k networkservice Normal NT
AUTHORITY\NetworkService 0
Logical Disk Manager Administrative Service dmadmin Stopped Manual
  Share Process c:\windows\system32\dmadmin.exe /com Normal
  LocalSystem 0
Logical Disk Manager dmserver Running Auto Share Process
  c:\windows\system32\svchost.exe -k netsvcs Normal LocalSystem 0

DNS Client Dnscache Running Auto Share Process
  c:\windows\system32\svchost.exe -k networkservice Normal NT
AUTHORITY\NetworkService 0
Error Reporting Service ERSvc Running Auto Share Process
  c:\windows\system32\svchost.exe -k winerr Ignore LocalSystem 0
Event Log Eventlog Running Auto Share Process
  c:\windows\system32\services.exe Normal LocalSystem 0
COM+ Event System EventSystem Running Auto Share Process
  c:\windows\system32\svchost.exe -k netsvcs Normal LocalSystem 0

Help and Support helpsvc Running Auto Share Process
  c:\windows\system32\svchost.exe -k netsvcs Normal LocalSystem 0

Human Interface Device Access HidServ Stopped Disabled Share
Process c:\windows\system32\svchost.exe -k netsvcs Normal
  LocalSystem 0
HTTP SSL HTTPFilter Stopped Manual Share Process
  c:\windows\system32\lsass.exe Normal LocalSystem 0
IAS Jet Database Access IASJet Stopped Manual Share Process
  c:\windows\syswow64\svchost.exe -k iasjet Normal LocalSystem 0
IMAPI CD-Burning COM Service ImapiService Stopped Disabled Own
Process c:\windows\system32\imapi.exe Normal LocalSystem 0
Intersite Messaging IsmServ Stopped Disabled Own Process
  c:\windows\system32\ismserv.exe Normal LocalSystem 0
Kerberos Key Distribution Center kdc Stopped Disabled Share
Process c:\windows\system32\lsass.exe Normal LocalSystem 0
Server lanmanserver Running Auto Share Process
  c:\windows\system32\svchost.exe -k netsvcs Normal LocalSystem 0

Workstation lanmanworkstation Running Auto Share Process
  c:\windows\system32\svchost.exe -k netsvcs Normal LocalSystem 0

License Logging LicenseService Stopped Disabled Own Process
  c:\windows\system32\llssrv.exe Normal NT
AUTHORITY\NetworkService 0
TCP/IP NetBIOS Helper LmHosts Running Auto Share Process
  c:\windows\system32\svchost.exe -k localservice Normal NT
AUTHORITY\LocalService 0

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

NetMeeting Remote Desktop Sharing mnmsrvc Stopped Disabled Own
Process c:\windows\system32\mnmsrvc.exe Normal LocalSystem 0
Distributed Transaction Coordinator MSDTC Running Auto Own Process
  c:\windows\system32\msdtc.exe Normal NT AUTHORITY\NetworkService
  0
Windows Installer MSIServer Stopped Manual Share Process
  c:\windows\system32\msiexec.exe /v Normal LocalSystem 0
Network DDE NetDDE Stopped Disabled Share Process
  c:\windows\system32\netdde.exe Normal LocalSystem 0
Network DDE DSDM NetDDEdsdm Stopped Disabled Share Process
  c:\windows\system32\netdde.exe Normal LocalSystem 0
Net Logon Netlogon Stopped Manual Share Process
  c:\windows\system32\lsass.exe Normal LocalSystem 0
Network Connections Netman Running Manual Share Process
  c:\windows\system32\svchost.exe -k netsvcs Normal LocalSystem 0

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

File Replication NtFrs Stopped Manual Own Process
  c:\windows\system32\ntfrs.exe Ignore LocalSystem 0
NT LM Security Support Provider NtLmSsp Stopped Manual Share
Process c:\windows\system32\lsass.exe Normal LocalSystem 0
Removable Storage NtmsSvc Stopped Manual Share Process
  c:\windows\system32\svchost.exe -k netsvcs Normal LocalSystem 0

OracleJobSchedulertpcc OracleJobSchedulertpcc Stopped Disabled
  Own Process c:\oracle\bin\extjob.exe tpcc Normal LocalSystem 0
OracleServicetpcc OracleServicetpcc Running Auto Own Process
  c:\oracle\bin\oracle.exe tpcc Normal LocalSystem 0
OracleTNSListener OracleTNSListener Running Auto Own Process
  c:\oracle\bin\tnslsnr Normal LocalSystem 0
Plug and Play PlugPlay Running Auto Share Process
  c:\windows\system32\services.exe Normal LocalSystem 0
IPSEC Services PolicyAgent Running Auto Share Process
  c:\windows\system32\lsass.exe Normal LocalSystem 0
Protected Storage ProtectedStorage Running Auto Share Process
  c:\windows\system32\lsass.exe Normal LocalSystem 0
Remote Access Auto Connection Manager RasAuto Stopped Manual Share
Process c:\windows\system32\svchost.exe -k netsvcs Normal
  LocalSystem 0
Remote Access Connection Manager RasMan Stopped Manual Share
Process c:\windows\system32\svchost.exe -k netsvcs Normal
  LocalSystem 0
Remote Desktop Help Session Manager RDSessMgr Stopped Manual Own
Process c:\windows\system32\sessmgr.exe Normal LocalSystem 0
Routing and Remote Access RemoteAccess Stopped Disabled Share
Process c:\windows\system32\svchost.exe -k netsvcs Normal
  LocalSystem 0
Remote Registry RemoteRegistry Running Auto Share Process
  c:\windows\system32\svchost.exe -k regsvc Normal NT
AUTHORITY\LocalService 0
Remote Procedure Call (RPC) Locator RpcLocator Stopped Manual Own
Process c:\windows\system32\locator.exe Normal NT
AUTHORITY\NetworkService 0
Remote Procedure Call (RPC) RpcSs Running Auto Share Process
  c:\windows\system32\svchost.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 Running Auto 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 Running Auto 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 Auto Own Process
  c:\windows\system32\smlogsvc.exe Normal NT
Authority\NetworkService 0
Telephony TapiSrv Stopped Manual Share Process
  c:\windows\system32\svchost.exe -k tapisrv Normal LocalSystem 0

Terminal Services TermService 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 Running Auto 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
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 Running Auto Share Process
  c:\windows\system32\svchost.exe -k localservice Normal NT
AUTHORITY\LocalService 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
VNC Server Version 4 WinVNC4 Running Auto Own Process "c:\program
files (x86)\realvnc\vnc4\winvnc4.exe" -service Ignore LocalSystem
  0
Portable Media Serial Number Service WmdmPmSN Stopped Manual
  Share Process c:\windows\system32\svchost.exe -k netsvcs Normal
  LocalSystem 0
Windows Management Instrumentation Driver Extensions Wmi Stopped
  Manual Share Process c:\windows\system32\svchost.exe -k netsvcs
  Normal LocalSystem 0
WMI Performance Adapter WmiApSrv Stopped Manual Own Process
  c:\windows\system32\wbem\wmiapsrv.exe Normal LocalSystem 0
Automatic Updates wuauserv Running Auto Share Process
  c:\windows\system32\svchost.exe -k netsvcs Normal LocalSystem 0

Wireless Configuration WZCSVC Running Auto 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
Cygwin All Users:Cygwin All Users
HP System Tools All Users:HP System Tools All Users
HP System Tools\HP Array Configuration Utility All Users:HP System
Tools\HP Array Configuration Utility All Users
HP System Tools\HP Array Configuration Utility CLI All Users:HP
System Tools\HP Array Configuration Utility CLI All Users
HP System Tools\HP Array Diagnostic Utility All Users:HP System
Tools\HP Array Diagnostic Utility All Users
RealVNC All Users:RealVNC All Users
RealVNC\VNC Server 4 (Service-Mode) All Users:RealVNC\VNC Server 4
(Service-Mode) All Users
RealVNC\VNC Server 4 (User-Mode) All Users:RealVNC\VNC Server 4
(User-Mode) All Users
RealVNC\VNC Viewer 4 All Users:RealVNC\VNC Viewer 4 All Users
Startup All Users:Startup All Users
WinZip All Users:WinZip 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 PENCIL\Administrator:Accessories PENCIL\Administrator

Accessories\Accessibility
  PENCIL\Administrator:Accessories\Accessibility
  PENCIL\Administrator
Accessories\Entertainment
  PENCIL\Administrator:Accessories\Entertainment
  PENCIL\Administrator
Startup PENCIL\Administrator:Startup PENCIL\Administrator

[Startup Programs]

Program Command User Name Location
desktop desktop.ini NT AUTHORITY\SYSTEM Startup
desktop desktop.ini PENCIL\Administrator Startup
desktop desktop.ini .DEFAULT Startup
desktop desktop.ini All Users Common Startup
WinZip Quick Pick c:\progra~2\winzip\wzqkpick.exe 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"
Bitmap Image mspaint.exe

[Windows Error Reporting]

Time Type Details
7/19/2007 10:18 AM Application Hang Hanging application
IEXPLORE.EXE, version 6.0.3790.1830, hang module hungapp, version
0.0.0.0, hang address 0x00000000.

[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 221 KB 11/30/2005 7:00:00 AM
  C:\WINDOWS\system32 Microsoft Corporation
advpack.dll 6.0.3790.1830 146 KB 11/30/2005 7:00:00 AM
  C:\WINDOWS\system32 Microsoft Corporation
asctrls.ocx 6.0.3790.1830 147 KB 11/30/2005 7:00:00 AM
  C:\WINDOWS\system32 Microsoft Corporation
browselc.dll 6.0.3790.1830 63 KB 11/30/2005 7:00:00 AM
  C:\WINDOWS\system32 Microsoft Corporation
browseui.dll 6.0.3790.1830 1,564 KB 11/30/2005 7:00:00 AM
  C:\WINDOWS\system32 Microsoft Corporation
cdfview.dll 6.0.3790.1830 216 KB 11/30/2005 7:00:00 AM
  C:\WINDOWS\system32 Microsoft Corporation
comctl32.dll 5.82.3790.1830 935 KB 11/30/2005 7:00:00 AM
  C:\WINDOWS\system32 Microsoft Corporation
dxtrans.dll 6.3.3790.1830 320 KB 11/30/2005 7:00:00 AM
  C:\WINDOWS\system32 Microsoft Corporation
dxtmsft.dll 6.3.3790.1830 549 KB 11/30/2005 7:00:00 AM
  C:\WINDOWS\system32 Microsoft Corporation
iecont.dll <File Missing> Not Available Not Available Not
Available Not Available
iecontlc.dll <File Missing> Not Available Not Available Not
Available Not Available
iedkcs32.dll 16.0.3790.1830 417 KB 11/30/2005 7:00:00 AM
  C:\WINDOWS\system32 Microsoft Corporation
iepeers.dll 6.0.3790.1830 361 KB 11/30/2005 7:00:00 AM
  C:\WINDOWS\system32 Microsoft Corporation
iesetup.dll 6.0.3790.1830 71 KB 11/30/2005 7:00:00 AM
  C:\WINDOWS\system32 Microsoft Corporation
ieuinit.inf Not Available 24 KB 11/30/2005 7:00:00 AM
  C:\WINDOWS\system32 Not Available
iexplore.exe 6.0.3790.1830 94 KB 11/30/2005 7:00:00 AM C:\Program
Files\Internet Explorer Microsoft Corporation
imgutil.dll 6.0.3790.1830 61 KB 11/30/2005 7:00:00 AM
  C:\WINDOWS\system32 Microsoft Corporation
inetcpl.cpl 6.0.3790.1830 428 KB 11/30/2005 7:00:00 AM
  C:\WINDOWS\system32 Microsoft Corporation
inetcplc.dll 6.0.3790.1830 110 KB 11/30/2005 7:00:00 AM
  C:\WINDOWS\system32 Microsoft Corporation

inseng.dll 6.0.3790.1830 147 KB 11/30/2005 7:00:00 AM
  C:\WINDOWS\system32 Microsoft Corporation
mlang.dll 6.0.3790.1830 686 KB 11/30/2005 7:00:00 AM
  C:\WINDOWS\system32 Microsoft Corporation
msencode.dll <File Missing> Not Available Not Available Not
Available Not Available
mshta.exe 6.0.3790.1830 38 KB 11/30/2005 7:00:00 AM
  C:\WINDOWS\system32 Microsoft Corporation
mshtml.dll 6.0.3790.1830 5,790 KB 11/30/2005 7:00:00 AM
  C:\WINDOWS\system32 Microsoft Corporation
mshtml.tlb 6.0.3790.1830 1,320 KB 11/30/2005 7:00:00 AM
  C:\WINDOWS\system32 Microsoft Corporation
mshtmled.dll 6.0.3790.1830 906 KB 11/30/2005 7:00:00 AM
  C:\WINDOWS\system32 Microsoft Corporation
mshtmler.dll 6.0.3790.1830 56 KB 11/30/2005 7:00:00 AM
  C:\WINDOWS\system32 Microsoft Corporation
msident.dll 6.0.3790.1830 69 KB 11/30/2005 7:00:00 AM
  C:\WINDOWS\system32 Microsoft Corporation
msidntld.dll 6.0.3790.1830 16 KB 11/30/2005 7:00:00 AM
  C:\WINDOWS\system32 Microsoft Corporation
msieftp.dll 6.0.3790.1830 369 KB 11/30/2005 7:00:00 AM
  C:\WINDOWS\system32 Microsoft Corporation
msrating.dll 6.0.3790.1830 240 KB 11/30/2005 7:00:00 AM
  C:\WINDOWS\system32 Microsoft Corporation
mstime.dll 6.0.3790.1830 878 KB 11/30/2005 7:00:00 AM
  C:\WINDOWS\system32 Microsoft Corporation
occache.dll 6.0.3790.1830 126 KB 11/30/2005 7:00:00 AM
  C:\WINDOWS\system32 Microsoft Corporation
proctexe.ocx <File Missing> Not Available Not Available Not
Available Not Available
sendmail.dll 6.0.3790.1830 64 KB 11/30/2005 7:00:00 AM
  C:\WINDOWS\system32 Microsoft Corporation
shdoclc.dll 6.0.3790.1830 590 KB 11/30/2005 7:00:00 AM
  C:\WINDOWS\system32 Microsoft Corporation
shdocvw.dll 6.0.3790.1830 2,360 KB 11/30/2005 7:00:00 AM
  C:\WINDOWS\system32 Microsoft Corporation
shfolder.dll 6.0.3790.1830 34 KB 11/30/2005 7:00:00 AM
  C:\WINDOWS\system32 Microsoft Corporation
shlwapi.dll 6.0.3790.1830 607 KB 11/30/2005 7:00:00 AM
  C:\WINDOWS\system32 Microsoft Corporation
tdc.ocx 1.3.0.3130 91 KB 11/30/2005 7:00:00 AM C:\WINDOWS\system32
  Microsoft Corporation
url.dll 6.0.3790.1830 40 KB 11/30/2005 7:00:00 AM
  C:\WINDOWS\system32 Microsoft Corporation
urlmon.dll 6.0.3790.1830 1,049 KB 11/30/2005 7:00:00 AM
  C:\WINDOWS\system32 Microsoft Corporation
webcheck.dll 6.0.3790.1830 439 KB 11/30/2005 7:00:00 AM
  C:\WINDOWS\system32 Microsoft Corporation
wininet.dll 6.0.3790.1830 1,159 KB 11/30/2005 7:00:00 AM
  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 BD1 msinfo32 export

System Information report written at: 09/12/07 09:59:27
System Name: BD1
[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 BD1
System Manufacturer HP
System Model ProLiant ML110 G4
System Type X86-based PC
Processor x86 Family 15 Model 6 Stepping 5 GenuineIntel ~2793 Mhz
Processor x86 Family 15 Model 6 Stepping 5 GenuineIntel ~2793 Mhz
BIOS Version/Date HP O10, 3/5/2007
SMBIOS Version 2.4
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_sp1_rtm.050324-1447)"
User Name BD1\Administrator
Time Zone Central Daylight Time
Total Physical Memory 1,022.05 MB
Available Physical Memory 679.06 MB
Total Virtual Memory 2.91 GB
Available Virtual Memory 2.72 GB
Page File Space 2.00 GB
Page File C:\pagefile.sys

[Hardware Resources]

[Conflicts/Sharing]

Resource Device
I/O Port 0x00000000-0x00000BFF PCI bus
I/O Port 0x00000000-0x00000BFF Direct memory access controller

I/O Port 0x000003C0-0x000003DF PCI standard PCI-to-PCI bridge
I/O Port 0x000003C0-0x000003DF Standard VGA Graphics Adapter

Memory Address 0xEF900000-0xEF9FFFFF PCI standard PCI-to-PCI
bridge
Memory Address 0xEF900000-0xEF9FFFFF HP NC110T PCIe Gigabit Server
Adapter

IRQ 23 Standard Universal PCI to USB Host Controller
IRQ 23 Standard Enhanced PCI to USB Host Controller

Memory Address 0xEF000000-0xEF8FFFFF PCI standard PCI-to-PCI
bridge
Memory Address 0xEF000000-0xEF8FFFFF Standard VGA Graphics Adapter

IRQ 16 HP NC110T PCIe Gigabit Server Adapter
IRQ 16 PCI standard PCI-to-PCI bridge
IRQ 16 Standard Universal PCI to USB Host Controller

IRQ 17 PCI standard PCI-to-PCI bridge
IRQ 17 PCI standard PCI-to-PCI bridge
IRQ 17 HP NC320i PCIe Gigabit Server Adapter

IRQ 19 Standard Universal PCI to USB Host Controller
IRQ 19 Standard Dual Channel PCI IDE Controller

Memory Address 0xA0000-0xBFFFF PCI bus
Memory Address 0xA0000-0xBFFFF PCI standard PCI-to-PCI bridge
Memory Address 0xA0000-0xBFFFF Standard VGA Graphics Adapter

I/O Port 0x000003B0-0x000003BB PCI standard PCI-to-PCI bridge
I/O Port 0x000003B0-0x000003BB Standard VGA Graphics Adapter

I/O Port 0x00004000-0x00004FFF PCI standard PCI-to-PCI bridge
I/O Port 0x00004000-0x00004FFF HP NC110T PCIe Gigabit Server
Adapter

```
Memory Address 0xEFA00000-0xEFAFFFFF  PCI standard PCI-to-PCI
bridge
Memory Address 0xEFA00000-0xEFAFFFFF  HP NC320i PCIe Gigabit Server
Adapter

Memory Address 0xEE000000-0xEEFFFFFF  PCI standard PCI-to-PCI
bridge
Memory Address 0xEE000000-0xEEFFFFFF  Standard VGA Graphics Adapter


[DMA]

Resource  Device  Status
Channel 4 Direct memory access controller OK

[Forced Hardware]

Device  PNP Device ID

[I/O]

Resource  Device  Status
0x00000000-0x00000BFF PCI bus OK
0x00000000-0x00000BFF Direct memory access controller OK
0x00000D00-0x00000FDFF PCI bus OK
0x00004000-0x00004FFF PCI standard PCI-to-PCI bridge  OK
0x00004000-0x00004FFF HP NC110T PCIe Gigabit Server Adapter OK
0x000003B0-0x000003BB PCI standard PCI-to-PCI bridge  OK
0x000003B0-0x000003BB Standard VGA Graphics Adapter OK
0x000003C0-0x000003DF PCI standard PCI-to-PCI bridge  OK
0x000003C0-0x000003DF Standard VGA Graphics Adapter OK
0x00003000-0x0000301F Standard Universal PCI to USB Host Controller
  OK
0x00003020-0x0000303F Standard Universal PCI to USB Host Controller
  OK
0x00003040-0x0000305F Standard Universal PCI to USB Host Controller
  OK
0x00003060-0x0000307F Standard Universal PCI to USB Host Controller
  OK
0x00000A79-0x00000A79 ISAPNP Read Data Port OK
0x00000279-0x00000279 ISAPNP Read Data Port OK
0x00000274-0x00000277 ISAPNP Read Data Port OK
0x00000010-0x0000001F Motherboard resources OK
0x00000024-0x00000025 Motherboard resources OK
0x00000028-0x00000029 Motherboard resources OK
0x0000002C-0x0000002D Motherboard resources OK
0x00000030-0x00000031 Motherboard resources OK
0x00000034-0x00000035 Motherboard resources OK
0x00000038-0x00000039 Motherboard resources OK
0x0000003C-0x0000003D Motherboard resources OK
0x00000060-0x00000060 Motherboard resources OK
0x00000062-0x00000062 Motherboard resources OK
0x00000064-0x00000064 Motherboard resources OK
0x00000066-0x00000066 Motherboard resources OK
0x00000072-0x00000077 Motherboard resources OK
0x00000080-0x00000080 Motherboard resources OK
0x00000090-0x0000009F Motherboard resources OK
0x000000A4-0x000000A5 Motherboard resources OK
0x000000A8-0x000000A9 Motherboard resources OK
0x000000AC-0x000000AD Motherboard resources OK
0x000000B0-0x000000B5 Motherboard resources OK
0x000000B8-0x000000B9 Motherboard resources OK
0x000000BC-0x000000BD Motherboard resources OK
0x00000800-0x0000083F Motherboard resources OK
0x00001000-0x0000107F Motherboard resources OK
0x00001180-0x000011BF Motherboard resources OK
0x0000002E-0x0000002F Motherboard resources OK
0x000004D0-0x000004D1 Motherboard resources OK
0x00000600-0x0000063F Motherboard resources OK
0x0000FE00-0x0000FE00 Motherboard resources OK
0x00000081-0x0000008F Direct memory access controller OK
0x000000C0-0x000000DF Direct memory access controller OK
0x000000F0-0x000000FE Numeric data processor  OK
0x00000020-0x00000021 Programmable interrupt controller OK
0x000000A0-0x000000A1 Programmable interrupt controller OK
0x00000070-0x00000071 System CMOS/real time clock OK
0x00000061-0x00000061 System speaker  OK
0x00000040-0x00000043 System timer  OK
0x00000050-0x00000053 System timer  OK
0x000003F8-0x000003FF Communications Port (COM1)  OK
0x000002F8-0x000002FF Communications Port (COM2)  OK
0x00003080-0x0000308F Standard Dual Channel PCI 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
0x000030C8-0x000030CF Standard Dual Channel PCI IDE Controller  OK

0x000030BC-0x000030BF Standard Dual Channel PCI IDE Controller  OK

0x000030C0-0x000030C7 Standard Dual Channel PCI IDE Controller  OK

0x000030B8-0x000030BB Standard Dual Channel PCI IDE Controller  OK

0x00003090-0x0000309F Standard Dual Channel PCI IDE Controller  OK

0x00000CA2-0x00000CA3   OK

[IRQs]
```

```
Resource  Device  Status
IRQ 9 Microsoft ACPI-Compliant System OK
IRQ 17  PCI standard PCI-to-PCI bridge  OK
IRQ 17  PCI standard PCI-to-PCI bridge  OK
IRQ 17  HP NC320i PCIe Gigabit Server Adapter OK
IRQ 16  HP NC110T PCIe Gigabit Server Adapter OK
IRQ 16  PCI standard PCI-to-PCI bridge  OK
IRQ 16  Standard Universal PCI to USB Host Controller OK
IRQ 23  Standard Universal PCI to USB Host Controller OK
IRQ 23  Standard Enhanced PCI to USB Host Controller OK
IRQ 19  Standard Universal PCI to USB Host Controller OK
IRQ 19  Standard Dual Channel PCI IDE Controller  OK
IRQ 18  Standard Universal 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 4 Communications Port (COM1)  OK
IRQ 3 Communications Port (COM2)  OK
IRQ 14  Primary IDE Channel OK

[Memory]

Resource  Device  Status
0xA0000-0xBFFFF PCI bus OK
0xA0000-0xBFFFF PCI standard PCI-to-PCI bridge  OK
0xA0000-0xBFFFF Standard VGA Graphics Adapter OK
0xCC000-0xCFFFF PCI bus OK
0xD0000-0xD3FFF PCI bus OK
0xD4000-0xD7FFF PCI bus OK
0xD8000-0xDBFFF PCI bus OK
0x40000000-0xEFFFFFFF PCI bus OK
0xEF900000-0xEF9FFFFF PCI standard PCI-to-PCI bridge  OK
0xEF900000-0xEF9FFFFF HP NC110T PCIe Gigabit Server Adapter OK
0xEF920000-0xEF93FFFF HP NC110T PCIe Gigabit Server Adapter OK
0xEF000000-0xEF8FFFFF PCI standard PCI-to-PCI bridge  OK
0xEF000000-0xEF8FFFFF Standard VGA Graphics Adapter OK
0xEE000000-0xEEFFFFFF PCI standard PCI-to-PCI bridge  OK
0xEE000000-0xEEFFFFFF Standard VGA Graphics Adapter OK
0xEF800000-0xEF803FFF Standard VGA Graphics Adapter OK
0xEFA00000-0xEFAFFFFF PCI standard PCI-to-PCI bridge  OK
0xEFA00000-0xEFAFFFFF HP NC320i PCIe Gigabit Server Adapter OK
0xEFD00000-0xEFD003FF Standard Enhanced PCI to USB Host Controller
  OK
0xFED14000-0xFED17FFF Motherboard resources OK
0xFED13000-0xFED13FFF Motherboard resources OK
0xF0000000-0xF7FFFFFF Motherboard resources OK
0xFED20000-0xFED8FFFF Motherboard resources OK
0xFEF00000-0xFEFFFFFF Motherboard resources OK
0xFF800000-0xFFFFFFFF Intel(R) 82802 Firmware Hub Device  OK
0xEFD00400-0xEFD007FF Standard Dual Channel PCI IDE Controller  OK


[Components]



[Multimedia]



[Audio Codecs]

CODEC Manufacturer  Description Status  File  Version Size
  Creation Date
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 6:00 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 6:00 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 6:00 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 6:00 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 6:00 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 6:00 AM
c:\windows\system32\msg723.acm  Microsoft Corporation   OK
  C:\WINDOWS\system32\MSG723.ACM  5.2.3790.1830 120.00 KB (122,880
bytes) 5/1/2007 4:02 PM
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 6:00 AM
c:\windows\system32\msadp32.acm Microsoft Corporation   OK
  C:\WINDOWS\system32\MSADP32.ACM 5.2.3790.0 (srv03_rtm.030324-
2048) 14.50 KB (14,848 bytes) 3/25/2003 6:00 AM

[Video Codecs]

CODEC Manufacturer  Description Status  File  Version Size
  Creation Date
c:\windows\system32\msh261.drv  Microsoft Corporation   OK
  C:\WINDOWS\system32\MSH261.DRV  5.2.3790.1830 184.00 KB (188,416
bytes) 5/1/2007 4:02 PM
```

c:\windows\system32\msyuv.dll Microsoft Corporation   OK
   C:\WINDOWS\system32\MSYUV.DLL 5.2.3790.0 (srv03_rtm.030324-2048)
   16.50 KB (16,896 bytes) 3/24/2003 7:49 PM
c:\windows\system32\tsbyuv.dll Microsoft Corporation   OK
   C:\WINDOWS\system32\TSBYUV.DLL 5.2.3790.0 (srv03_rtm.030324-
2048) 8.00 KB (8,192 bytes) 3/24/2003 7:50 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 6:00 AM
c:\windows\system32\msh263.drv Microsoft Corporation   OK
   C:\WINDOWS\system32\MSH263.DRV 5.2.3790.1830 288.00 KB (294,912
bytes) 5/1/2007 4:02 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 6:00 AM
c:\windows\system32\iyuv_32.dll Microsoft Corporation   OK
   C:\WINDOWS\system32\IYUV_32.DLL 5.2.3790.1830
(srv03_sp1_rtm.050324-1447) 46.50 KB (47,616 bytes) 5/1/2007 4:02
PM

[CD-ROM]

Item Value
Drive D:
Description CD-ROM Drive
Media Loaded No
Media Type CD-ROM
Name TSSTcorp CD-ROM TS-H192C
Manufacturer (Standard CD-ROM drives)
Status OK
Transfer Rate Not Available
SCSI Target ID 0
PNP Device ID IDE\CDROMTSSTCORP_CD-ROM__TS-
H192C_____B504____\5&398DF2D0&0&0.0.0
Driver c:\windows\system32\drivers\cdrom.sys (5.2.3790.1830
(srv03_sp1_rtm.050324-1447), 51.00 KB (52,224 bytes), 3/25/2003
6:00 AM)

[Sound Device]

Item Value

[Display]

Item Value
Name Standard VGA Graphics Adapter
PNP Device ID
   PCI\VEN_102B&DEV_0522&SUBSYS_31FA103C&REV_02\4&2D8B019B&0&00E4
Adapter Type Matrox Graphics Inc., (Standard display types)
compatible
Adapter Description Standard VGA Graphics Adapter
Adapter RAM 1.63 MB (1,703,936 bytes)
Installed Drivers vga.dll,framebuf.dll,vga256.dll,vga64k.dll
Driver Version 5.2.3790.1830
INF File display.inf (vga section)
Color Planes 1
Color Table Entries 65536
Resolution 1024 x 768 x 1 hertz
Bits/Pixel 16
Memory Address 0xEE000000-0xEEFFFFFF
Memory Address 0xEF800000-0xEF803FFF
Memory Address 0xEF800000-0xEF8FFFFF
I/O Port 0x000003B0-0x000003BB
I/O Port 0x000003C0-0x000003DF
Memory Address 0xA0000-0xBFFFF
Driver c:\windows\system32\drivers\vgapnp.sys (5.2.3790.1830
(srv03_sp1_rtm.050324-1447), 23.50 KB (24,064 bytes), 5/1/2007 5:52
AM)

[Infrared]

Item Value

[Input]

[Keyboard]

Item Value
Description USB Human Interface Device
Name Enhanced (101- or 102-key)
Layout 00000409
PNP Device ID USB\VID_0000&PID_0000&MI_00\6&1B2FC350&0&0000
Number of Function Keys 12
Driver c:\windows\system32\drivers\hidusb.sys (5.2.3790.0
(srv03_rtm.030324-2048), 11.50 KB (11,776 bytes), 3/25/2003 6:00
AM)

[Pointing Device]

Item Value
Hardware Type USB Human Interface Device
Number of Buttons 8
Status OK
PNP Device ID USB\VID_0000&PID_0000&MI_01\6&1B2FC350&0&0001
Power Management Supported No
Double Click Threshold 6
Handedness Right Handed Operation

Driver c:\windows\system32\drivers\hidusb.sys (5.2.3790.0
(srv03_rtm.030324-2048), 11.50 KB (11,776 bytes), 3/25/2003 6:00
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 8/16/2007 7:57 AM
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 8/16/2007 7:57 AM
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
6:00 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 8/16/2007 7:57 AM
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\rasppp.sys (5.2.3790.1830
(srv03_sp1_rtm.050324-1447), 61.00 KB (62,464 bytes), 3/25/2003
6:00 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 8/16/2007 7:57 AM
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\rasppppoe.sys (5.2.3790.1830
(srv03_sp1_rtm.050324-1447), 40.00 KB (40,960 bytes), 3/25/2003
6:00 AM)

Name [00000005] Direct Parallel
Adapter Type Not Available
Product Type Direct Parallel
Installed Yes
PNP Device ID ROOT\MS_PTIMINIPORT\0000
Last Reset 8/16/2007 7:57 AM
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
6:00 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 8/16/2007 7:57 AM
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
6:00 AM)

Name [00000007] HP NC320i PCIe Gigabit Server Adapter
Adapter Type Ethernet 802.3
Product Type HP NC320i PCIe Gigabit Server Adapter
Installed Yes
PNP Device ID
  PCI\VEN_14E4&DEV_1659&SUBSYS_7032103C&REV_21\4&261E705A&0&00E5
Last Reset 8/16/2007 7:57 AM
Index 7
Service Name q57w2k
IP Address 130.168.209.98
IP Subnet 255.255.0.0
Default IP Gateway Not Available
DHCP Enabled No
DHCP Server Not Available
DHCP Lease Expires Not Available
DHCP Lease Obtained Not Available
MAC Address 00:1A:4B:AE:80:39
Memory Address 0xEFA00000-0xEFAFFFFF
IRQ Channel IRQ 17
Driver c:\windows\system32\drivers\q57xp32.sys (9.81.0.0 built by:
WinDDK, 154.50 KB (158,208 bytes), 5/1/2007 3:23 PM)

Name [00000008] HP NC110T PCIe Gigabit Server Adapter
Adapter Type Ethernet 802.3
Product Type HP NC110T PCIe Gigabit Server Adapter
Installed Yes
PNP Device ID
  PCI\VEN_8086&DEV_10B9&SUBSYS_704A103C&REV_06\4&6C79FC5&0&00E0
Last Reset 8/16/2007 7:57 AM
Index 8
Service Name N1e5132
IP Address 10.10.204.249, 11.11.204.249
IP Subnet 255.255.0.0, 255.255.0.0
Default IP Gateway Not Available
DHCP Enabled No
DHCP Server Not Available
DHCP Lease Expires Not Available
DHCP Lease Obtained Not Available
MAC Address 00:18:71:EA:16:6B
Memory Address 0xEF920000-0xEF93FFFF
Memory Address 0xEF900000-0xEF9FFFFF
I/O Port 0x00004000-0x00004FFF
IRQ Channel IRQ 16
Driver c:\windows\system32\drivers\n1e5132.sys (9.6.31.0 built by:
WinDDK, 225.40 KB (230,808 bytes), 5/1/2007 5:58 PM)

Name [00000009] HP NC110T PCIe Gigabit Server Adapter
Adapter Type Not Available
Product Type HP NC110T PCIe Gigabit Server Adapter
Installed Yes
PNP Device ID Not Available
Last Reset 8/16/2007 7:57 AM
Index 9
Service Name N1e5132
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

[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_{FAC74D76-F32C-4934-A64E-
A89B59AA22FC}] 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_{FAC74D76-F32C-4934-A64E-
A89B59AA22FC}] 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_{830EA663-C8B9-4640-AEA8-
FDF98C5B6129}] 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_{830EA663-C8B9-4640-AEA8-
FDF98C5B6129}] 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_{65AEDE46-4230-4F14-8819-
AB60CA352C9E}] 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_{65AEDE46-4230-4F14-8819-
AB60CA352C9E}] 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_{AA8B494D-24CC-4FD1-99E1-
FF8B06B164FC}] 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_{AA8B494D-24CC-4FD1-99E1-
FF8B06B164FC}] 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_{8175DA6E-2D90-4524-81BB-
533C52A189C1}] 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_{8175DA6E-2D90-4524-81BB-
533C52A189C1}] 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_sp1_rtm.050324-1447), 64.00 KB (65,536 bytes), 3/25/2003
6:00 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 (5.2.3790.1830
(srv03_sp1_rtm.050324-1447), 64.00 KB (65,536 bytes), 3/25/2003
6:00 AM)

[Parallel]

Item  Value

[Storage]


[Drives]

Item  Value
Drive C:
Description Local Fixed Disk
Compressed  No
File System NTFS
Size  149.04 GB (160,031,014,912 bytes)
Free Space  137.26 GB (147,379,855,360 bytes)
Volume Name
Volume Serial Number  8CE9AD1E

Drive D:
Description CD-ROM Disc

Drive Z:
Description Network Connection
Provider Name \\pencil\c$

[Disks]

Item  Value
Description Disk drive
Manufacturer  (Standard disk drives)
Model Maxtor 6L160M0
Bytes/Sector  512
Media Loaded  Yes
```

```
Media Type  Fixed hard disk
Partitions  1
SCSI Bus  0
SCSI Logical Unit 0
SCSI Port 1
SCSI Target ID  0
Sectors/Track 63
Size  149.05 GB (160,039,272,960 bytes)
Total Cylinders 19,457
Total Sectors 312,576,705
Total Tracks  4,961,535
Tracks/Cylinder 255
Partition Disk #0, Partition #0
Partition Size  149.04 GB (160,031,015,424 bytes)
Partition Starting Offset 32,256 bytes

[SCSI]

Item  Value

[IDE]

Item  Value
Name  Standard Dual Channel PCI IDE Controller
Manufacturer  (Standard IDE ATA/ATAPI controllers)
Status OK
PNP Device ID
  PCI\VEN_8086&DEV_27DF&SUBSYS_3206103C&REV_01\3&61AAA01&0&F9
I/O Port  0x00003080-0x0000308F
Driver  c:\windows\system32\drivers\pciide.sys (5.2.3790.0
(srv03_rtm.030324-2048), 5.50 KB (5,632 bytes), 3/25/2003 6:00 AM)


Name  Primary IDE Channel
Manufacturer  (Standard IDE ATA/ATAPI controllers)
Status OK
PNP Device ID PCIIDE\IDECHANNEL\4&78810&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
6:00 AM)

Name  Secondary IDE Channel
Manufacturer  (Standard IDE ATA/ATAPI controllers)
Status OK
PNP Device ID PCIIDE\IDECHANNEL\4&78810&0&1
I/O Port  0x00000170-0x00000177
I/O Port  0x00000376-0x00000376
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
6:00 AM)

Name  Standard Dual Channel PCI IDE Controller
Manufacturer  (Standard IDE ATA/ATAPI controllers)
Status OK
PNP Device ID
  PCI\VEN_8086&DEV_27C0&SUBSYS_3206103C&REV_01\3&61AAA01&0&FA
I/O Port  0x000030C8-0x000030CF
I/O Port  0x000030BC-0x000030BF
I/O Port  0x000030C0-0x000030C7
I/O Port  0x000030B8-0x000030BB
I/O Port  0x00003090-0x0000309F
Memory Address  0xEFD00400-0xEFD007FF
IRQ Channel IRQ 19
Driver  c:\windows\system32\drivers\pciide.sys (5.2.3790.0
(srv03_rtm.030324-2048), 5.50 KB (5,632 bytes), 3/25/2003 6:00 AM)


Name  Primary IDE Channel
Manufacturer  (Standard IDE ATA/ATAPI controllers)
Status OK
PNP Device ID PCIIDE\IDECHANNEL\4&193DA539&0&0
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
6:00 AM)

Name  Secondary IDE Channel
Manufacturer  (Standard IDE ATA/ATAPI controllers)
Status OK
PNP Device ID PCIIDE\IDECHANNEL\4&193DA539&0&1
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
6:00 AM)

[Printing]

Name  Driver  Port Name Server Name

[Problem Devices]

Device  PNP Device ID Error Code
Not Available ACPI\IPI0001\0  The drivers for this device are not
installed.

[USB]

Device  PNP Device ID
Standard Universal PCI to USB Host Controller
  PCI\VEN_8086&DEV_27C8&SUBSYS_3206103C&REV_01\3&61AAA01&0&E8
```

```
Standard Universal PCI to USB Host Controller
  PCI\VEN_8086&DEV_27C9&SUBSYS_3206103C&REV_01\3&61AAA01&0&E9
Standard Universal PCI to USB Host Controller
  PCI\VEN_8086&DEV_27CA&SUBSYS_3206103C&REV_01\3&61AAA01&0&EA
Standard Universal PCI to USB Host Controller
  PCI\VEN_8086&DEV_27CB&SUBSYS_3206103C&REV_01\3&61AAA01&0&EB
Standard Enhanced PCI to USB Host Controller
  PCI\VEN_8086&DEV_27CC&SUBSYS_3206103C&REV_01\3&61AAA01&0&EF


[Software Environment]



[System Drivers]

Name  Description File  Type  Started Start Mode  State Status
  Error Control Accept Pause  Accept Stop
abiosdsk  Abiosdsk  Not Available Kernel Driver No  Disabled
  Stopped OK  Ignore  No  No
acpi  Microsoft ACPI Driver c:\windows\system32\drivers\acpi.sys
  Kernel Driver Yes Boot  Running OK  Normal  No  Yes
acpiec  ACPIEC  c:\windows\system32\drivers\acpiec.sys  Kernel
Driver  No  Disabled  Stopped OK  Normal  No  No
adpu160m  adpu160m  Not Available Kernel Driver No  Disabled
  Stopped OK  Normal  No  No
adpu320 adpu320 Not Available Kernel Driver No  Disabled  Stopped
  OK  Normal  No  No
afcnt afcnt Not Available Kernel Driver No  Disabled  Stopped OK
  Normal  No  No
afd AFD Networking Support Environment
  c:\windows\system32\drivers\afd.sys Kernel Driver Yes System
  Running OK  Normal  No  Yes
aha154x Aha154x Not Available Kernel Driver No  Disabled  Stopped
  OK  Normal  No  No
aic78u2 aic78u2 Not Available Kernel Driver No  Disabled  Stopped
  OK  Normal  No  No
aic78xx aic78xx Not Available Kernel Driver No  Disabled  Stopped
  OK  Normal  No  No
aliide  AliIde  Not Available Kernel Driver No  Disabled  Stopped
  OK  Normal  No  No
asyncmac  RAS Asynchronous Media Driver
  c:\windows\system32\drivers\asyncmac.sys  Kernel Driver No
  Manual  Stopped OK  Normal  No  No
atapi Standard IDE/ESDI Hard Disk Controller
  c:\windows\system32\drivers\atapi.sys Kernel Driver Yes Boot
  Running OK  Normal  No  Yes
atdisk  Atdisk  Not Available Kernel Driver No  Disabled  Stopped
  OK  Ignore  No  No
atmarpc ATM ARP Client Protocol
  c:\windows\system32\drivers\atmarpc.sys Kernel Driver No  Manual
  Stopped OK  Normal  No  No
audstub Audio Stub Driver c:\windows\system32\drivers\audstub.sys
  Kernel Driver Yes Manual  Running OK  Normal  No  Yes
beep  Beep  c:\windows\system32\drivers\beep.sys  Kernel Driver Yes
  System  Running OK  Normal  No  Yes
cbidf2k cbidf2k c:\windows\system32\drivers\cbidf2k.sys Kernel
Driver  No  Disabled  Stopped OK  Normal  No  No
cd20xrnt  cd20xrnt  Not Available Kernel Driver No  Disabled
  Stopped OK  Normal  No  No
cdfs  Cdfs  c:\windows\system32\drivers\cdfs.sys  File System
Driver  Yes Disabled  Running OK  Normal  No  Yes
cdrom CD-ROM Driver c:\windows\system32\drivers\cdrom.sys Kernel
Driver  Yes System  Running OK  Normal  No  Yes
changer Changer Not Available Kernel Driver No  System  Stopped OK
  Ignore  No  No
clusdisk  Cluster Disk Driver
  c:\windows\system32\drivers\clusdisk.sys  Kernel Driver No
  Disabled  Stopped OK  Normal  No  No
cmdide  CmdIde  Not Available Kernel Driver No  Disabled  Stopped
  OK  Normal  No  No
cpqarray  Cpqarray  Not Available Kernel Driver No  Disabled
  Stopped OK  Normal  No  No
cpqarry2  cpqarry2  Not Available Kernel Driver No  Disabled
  Stopped OK  Normal  No  No
cpqcissm  cpqcissm  Not Available Kernel Driver No  Disabled
  Stopped OK  Normal  No  No
cpqfcalm  cpqfcalm  Not Available Kernel Driver No  Disabled
  Stopped OK  Normal  No  No
crcdisk CRC Disk Filter Driver
  c:\windows\system32\drivers\crcdisk.sys Kernel Driver Yes Boot
  Running OK  Normal  No  Yes
dac960nt  dac960nt  Not Available Kernel Driver No  Disabled
  Stopped OK  Normal  No  No
dellcerc  dellcerc  Not Available Kernel Driver No  Disabled
  Stopped OK  Normal  No  No
dfsdriver DfsDriver c:\windows\system32\drivers\dfs.sys File System
Driver  Yes Boot  Running OK  Normal  No  Yes
disk  Disk Driver c:\windows\system32\drivers\disk.sys  Kernel
Driver  Yes Boot  Running OK  Normal  No  Yes
dmboot  dmboot  c:\windows\system32\drivers\dmboot.sys  Kernel
Driver  No  Disabled  Stopped OK  Normal  No  No
dmio  Logical Disk Manager Driver
  c:\windows\system32\drivers\dmio.sys  Kernel Driver Yes Boot
  Running OK  Normal  No  Yes
dmload  dmload  c:\windows\system32\drivers\dmload.sys  Kernel
Driver  Yes Boot  Running OK  Normal  No  Yes
dpti2o  dpti2o  Not Available Kernel Driver No  Disabled  Stopped
  OK  Normal  No  No
fastfat Fastfat c:\windows\system32\drivers\fastfat.sys File System
Driver  Yes Disabled  Running OK  Normal  No  Yes
```

```
fdc Fdc c:\windows\system32\drivers\fdc.sys Kernel Driver No
  System  Stopped OK  Ignore  No  No
fips  Fips  c:\windows\system32\drivers\fips.sys  Kernel Driver Yes
  System  Running OK  Normal  No  Yes
flpydisk Flpydisk  c:\windows\system32\drivers\flpydisk.sys
  Kernel Driver No  System  Stopped OK  Normal  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
hidusb  Microsoft HID Class Driver
  c:\windows\system32\drivers\hidusb.sys  Kernel Driver Yes Manual
  Running OK  Ignore  No  Yes
hpn hpn Not Available Kernel Driver No  Disabled  Stopped OK
  Normal  No  No
hpt3xx hpt3xx Not Available Kernel Driver No  Disabled  Stopped
  OK  Normal  No  No
http HTTP c:\windows\system32\drivers\http.sys Kernel Driver 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
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
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
kbdhid  Keyboard HID Driver c:\windows\system32\drivers\kbdhid.sys
  Kernel Driver Yes System  Running OK  Ignore  No  Yes
ksecdd  KSecDD  c:\windows\system32\drivers\ksecdd.sys  Kernel
Driver  Yes Boot  Running OK  Normal  No  Yes
lp6nds35  lp6nds35  Not Available Kernel Driver No  Disabled
  Stopped OK  Normal  No  No
mnmdd mnmdd c:\windows\system32\drivers\mnmdd.sys Kernel Driver Yes
  System  Running OK  Ignore  No  Yes
modem Modem c:\windows\system32\drivers\modem.sys Kernel Driver No
  Manual  Stopped OK  Ignore  No  No
mouclass  Mouse Class Driver
  c:\windows\system32\drivers\mouclass.sys  Kernel Driver Yes
  System  Running OK  Normal  No  Yes
mouhid  Mouse HID Driver  c:\windows\system32\drivers\mouhid.sys
  Kernel Driver Yes Manual  Running OK  Ignore  No  Yes
mountmgr  Mount Point Manager
  c:\windows\system32\drivers\mountmgr.sys  Kernel Driver Yes Boot
  Running OK  Normal  No  Yes
mraid35x  mraid35x  Not Available Kernel Driver No  Disabled
  Stopped OK  Normal  No  No
mrxdav  WebDav Client Redirector
  c:\windows\system32\drivers\mrxdav.sys  File System Driver  No
  Manual  Stopped OK  Normal  No  No
mrxsmb  MRXSMB  c:\windows\system32\drivers\mrxsmb.sys  File System
Driver  Yes System  Running OK  Normal  No  Yes
msfs  Msfs  c:\windows\system32\drivers\msfs.sys  File System
Driver  Yes System  Running OK  Normal  No  Yes
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
nle5132 HP PCIe Gigabit NIC Driver
  c:\windows\system32\drivers\nle5132.sys Kernel Driver Yes Manual
  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 Yes Manual
  Running OK Normal No Yes
ndiswan Remote Access NDIS WAN Driver
  c:\windows\system32\drivers\ndiswan.sys Kernel Driver Yes Manual
  Running OK Normal No Yes
ndproxy NDIS Proxy c:\windows\system32\drivers\ndproxy.sys Kernel
Driver Yes Manual Running OK Normal No Yes
netbios NetBIOS Interface c:\windows\system32\drivers\netbios.sys
  File System Driver Yes System Running OK Normal No Yes
netbt NetBios over Tcpip c:\windows\system32\drivers\netbt.sys
  Kernel Driver Yes System Running OK Normal No Yes
nfrd960 nfrd960 Not Available Kernel Driver No Disabled Stopped
  OK Normal No No
npfs Npfs c:\windows\system32\drivers\npfs.sys File System
Driver Yes System Running OK Normal No Yes
ntfs Ntfs c:\windows\system32\drivers\ntfs.sys File System
Driver Yes Disabled Running OK Normal No Yes
null Null c:\windows\system32\drivers\null.sys Kernel Driver Yes
  System Running OK Normal No Yes
parport Parport c:\windows\system32\drivers\parport.sys Kernel
Driver No Manual Stopped OK Ignore No No
partmgr Partition Manager c:\windows\system32\drivers\partmgr.sys
  Kernel Driver Yes Boot Running OK Normal No Yes
pci PCI Bus Driver c:\windows\system32\drivers\pci.sys Kernel
Driver Yes Boot Running OK Critical No Yes
pciide PCIIde c:\windows\system32\drivers\pciide.sys Kernel
Driver Yes Boot Running OK Normal No Yes
pcmcia Pcmcia c:\windows\system32\drivers\pcmcia.sys Kernel
Driver No Disabled Stopped OK Normal No No
pdcomp PDCOMP Not Available Kernel Driver No Manual Stopped OK
  Ignore No No
pdframe PDFRAME Not Available Kernel Driver No Manual Stopped OK
  Ignore No No
pdreli PDRELI Not Available Kernel Driver No Manual Stopped OK
  Ignore No No
pdrframe PDRFRAME Not Available Kernel Driver No Manual Stopped
  OK Ignore No No
perc2 perc2 Not Available Kernel Driver No Disabled Stopped OK
  Normal No No
perc2hib perc2hib Not Available Kernel Driver No Disabled
  Stopped OK Normal No No
pptpminiport WAN Miniport (PPTP)
  c:\windows\system32\drivers\raspptp.sys Kernel Driver Yes Manual
  Running OK Normal No Yes
processor Processor Driver
  c:\windows\system32\drivers\processr.sys Kernel Driver 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
q57w2k HP NC320i PCIe Gigabit Server Adapter
  c:\windows\system32\drivers\q57xp32.sys Kernel Driver Yes Manual
  Running OK Normal No Yes
ql1080 ql1080 Not Available Kernel Driver No Disabled Stopped
  OK Normal No No
ql10wnt Ql10wnt Not Available Kernel Driver No Disabled Stopped
  OK Normal No No
ql12160 ql12160 Not Available Kernel Driver No Disabled Stopped
  OK Normal No No
ql1240 ql1240 Not Available Kernel Driver No Disabled Stopped
  OK Normal No No
ql1280 ql1280 Not Available Kernel Driver No Disabled Stopped
  OK Normal No No
ql2100 ql2100 Not Available Kernel Driver No Disabled Stopped
  OK Normal No No
ql2200 ql2200 Not Available Kernel Driver No Disabled Stopped
  OK Normal No No
ql2300 ql2300 Not Available Kernel Driver No Disabled Stopped
  OK Normal No No
rasacd Remote Access Auto Connection Driver
  c:\windows\system32\drivers\rasacd.sys Kernel Driver Yes System
  Running OK Normal No Yes
rasl2tp WAN Miniport (L2TP) c:\windows\system32\drivers\rasl2tp.sys
  Kernel Driver Yes Manual Running OK Normal No Yes
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 Normal 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 Manual Running OK Ignore No Yes
sfloppy Sfloppy c:\windows\system32\drivers\sfloppy.sys Kernel
Driver No System Stopped OK Normal No No

simbad Simbad Not Available Kernel Driver No Disabled Stopped
  OK Normal No No
sparrow Sparrow Not Available Kernel Driver No Disabled Stopped
  OK Normal No No
srv Srv c:\windows\system32\drivers\srv.sys File System Driver Yes
  Manual Running OK Normal No Yes
swenum Software Bus Driver c:\windows\system32\drivers\swenum.sys
  Kernel Driver Yes Manual Running OK Normal No Yes
symc810 symc810 Not Available Kernel Driver No Disabled Stopped
  OK Normal No No
symc8xx symc8xx Not Available Kernel Driver No Disabled Stopped
  OK Normal No No
symmpi symmpi Not Available Kernel Driver No Disabled Stopped
  OK Normal No No
sym_hi sym_hi Not Available Kernel Driver No Disabled Stopped
  OK Normal No No
sym_u3 sym_u3 Not Available Kernel Driver No Disabled Stopped
  OK Normal No No
tcpip TCP/IP Protocol Driver c:\windows\system32\drivers\tcpip.sys
  Kernel Driver Yes System Running OK Normal No Yes
tdpipe TDPIPE c:\windows\system32\drivers\tdpipe.sys Kernel
Driver No Manual Stopped OK Ignore No No
tdtcp TDTCP c:\windows\system32\drivers\tdtcp.sys Kernel Driver Yes
  Manual Running OK Normal 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
usbccgp Microsoft USB Generic Parent Driver
  c:\windows\system32\drivers\usbccgp.sys Kernel Driver Yes Manual
  Running OK Normal No Yes
usbehci Microsoft USB 2.0 Enhanced Host Controller Miniport Driver
  c:\windows\system32\drivers\usbehci.sys Kernel Driver Yes Manual
  Running OK Normal No Yes
usbhub Microsoft USB Standard Hub Driver
  c:\windows\system32\drivers\usbhub.sys Kernel Driver Yes Manual
  Running OK Normal No Yes
usbstor USB Mass Storage Driver
  c:\windows\system32\drivers\usbstor.sys Kernel Driver No Manual
  Stopped OK Normal No No
usbuhci Microsoft USB Universal Host Controller Miniport Driver
  c:\windows\system32\drivers\usbuhci.sys Kernel Driver Yes Manual
  Running OK Normal No Yes
vga vga c:\windows\system32\drivers\vgapnp.sys Kernel Driver Yes
  Manual Running OK Ignore No Yes
vgasave VGA Display Controller. c:\windows\system32\drivers\vga.sys
  Kernel Driver No System Stopped OK Ignore No No
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
vsperfdrv Performance Tools Driver \??\c:\program files\microsoft
visual studio 8\team tools\performance tools\vsperfdrv.sys Kernel
Driver No Manual Stopped OK Ignore No No
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 Yes SYSTEM 5.2.3790.1830
  10/1/2002 (Standard system devices) machine.inf Not Available
  ROOT\SYSTEM\0002
Microcode Update Device Yes SYSTEM 5.2.3790.0 10/1/2002 (Standard
system devices) machine.inf Not Available ROOT\SYSTEM\0001
Plug and Play Software Device Enumerator Yes SYSTEM 5.2.3790.0
  10/1/2002 (Standard system devices) machine.inf Not Available
  ROOT\SYSTEM\0000
Terminal Server Mouse Driver Yes SYSTEM 5.2.3790.0 10/1/2002
  (Standard system devices) machine.inf Not Available
  ROOT\RDP_MOU\0000
Terminal Server Keyboard Driver Yes SYSTEM 5.2.3790.0 10/1/2002
  (Standard system devices) machine.inf Not Available
  ROOT\RDP_KBD\0000
Terminal Server Device Redirector Yes SYSTEM 5.2.3790.0 10/1/2002
  (Standard system devices) machine.inf Not Available
  ROOT\RDPDR\0000
Direct Parallel Yes NET 5.2.3790.0 10/1/2002 Microsoft netrasa.inf
  Not Available ROOT\MS_PTIMINIPORT\0000
WAN Miniport (PPTP) Yes NET 5.2.3790.0 10/1/2002 Microsoft
  netrasa.inf Not Available ROOT\MS_PPTPMINIPORT\0000
WAN Miniport (PPPOE) Yes NET 5.2.3790.0 10/1/2002 Microsoft
  netrasa.inf Not Available ROOT\MS_PPPOEMINIPORT\0000
WAN Miniport (IP) Yes NET 5.2.3790.0 10/1/2002 Microsoft
  netrasa.inf Not Available ROOT\MS_NDISWANIP\0000
WAN Miniport (L2TP) Yes NET 5.2.3790.0 10/1/2002 Microsoft
  netrasa.inf Not Available ROOT\MS_L2TPMINIPORT\0000

Video Codecs Yes MEDIA 5.2.3790.0 10/1/2002 (Standard system devices) wave.inf Not Available ROOT\MEDIA\MS_MMVID
Legacy Video Capture Devices Yes MEDIA 5.2.3790.0 10/1/2002 (Standard system devices) wave.inf Not Available ROOT\MEDIA\MS_MMVCD
Media Control Devices Yes MEDIA 5.2.3790.0 10/1/2002 (Standard system devices) wave.inf Not Available ROOT\MEDIA\MS_MMMCI
Legacy Audio Drivers Yes MEDIA 5.2.3790.0 10/1/2002 (Standard system devices) wave.inf Not Available ROOT\MEDIA\MS_MMDRV
Audio Codecs Yes MEDIA 5.2.3790.0 10/1/2002 (Standard system devices) wave.inf Not Available ROOT\MEDIA\MS_MMACM
Remote Access IP ARP Driver Not Available LEGACYDRIVER 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 ROOT\LEGACY_VOLSNAP\0000
TDTCP Not Available LEGACYDRIVER 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 ROOT\LEGACY_TCPIP\0000
RDPWD Not Available LEGACYDRIVER Not Available Not Available Not Available Not Available Not Available ROOT\LEGACY_RDPWD\0000
RDPCDD Not Available LEGACYDRIVER Not Available Not Available Not Available Not Available Not Available ROOT\LEGACY_RDPCDD\0000
Remote Access Auto Connection Driver Not Available LEGACYDRIVER Not Available Not Available Not Available Not Available Not Available ROOT\LEGACY_RASACD\0000
Partition Manager Not Available LEGACYDRIVER 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 ROOT\LEGACY_NULL\0000
NetBios over Tcpip Not Available LEGACYDRIVER Not Available Not Available Not Available Not Available ROOT\LEGACY_NETBT\0000
NDProxy Not Available LEGACYDRIVER Not 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 ROOT\LEGACY_NDISUIO\0000
Remote Access NDIS TAPI Driver Not Available LEGACYDRIVER Not Available Not 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 Not Available Not Available ROOT\LEGACY_NDIS\0000
mountmgr Not Available LEGACYDRIVER Not Available Not Available Not Available Not Available Not Available ROOT\LEGACY_MOUNTMGR\0000
mnmdd Not Available LEGACYDRIVER Not Available Not Available Not Available Not Available Not Available ROOT\LEGACY_MNMDD\0000
ksecdd Not Available LEGACYDRIVER Not Available Not 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 ROOT\LEGACY_IPSEC\0000
HTTP Not Available LEGACYDRIVER Not Available Not 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 ROOT\LEGACY_GPC\0000
Fips Not Available LEGACYDRIVER Not Available Not Available Not Available Not Available Not Available Not Available ROOT\LEGACY_FIPS\0000
dmload Not Available LEGACYDRIVER Not Available Not Available Not Available Not Available Not Available Not Available ROOT\LEGACY_DMLOAD\0000
dmboot Not Available LEGACYDRIVER Not Available Not 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 Not Available Not Available ROOT\LEGACY_CRCDISK\0000
Beep Not Available LEGACYDRIVER Not 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 Not Available Not Available ROOT\LEGACY_AFD\0000
Generic volume Yes VOLUME 5.2.3790.0 10/1/2002 Microsoft volume.inf Not Available STORAGE\VOLUME\1&30A96598&0&SIGNATUREDE1D3OFFSET7E00LENGTH2542978200
Volume Manager Yes SYSTEM 5.2.3790.0 10/1/2002 (Standard system devices) machine.inf Not Available ROOT\FTDISK\0000
Logical Disk Manager Yes SYSTEM 5.2.3790.0 10/1/2002 (Standard system devices) machine.inf Not Available ROOT\DMIO\0000
ACPI Fixed Feature Button Yes SYSTEM 5.2.3790.0 10/1/2002 (Standard system devices) machine.inf Not Available ACPI\FIXEDBUTTON\2&DABA3FF&0
ACPI Power Button Yes SYSTEM 5.2.3790.0 10/1/2002 (Standard system devices) machine.inf Not Available ACPI\PNP0C0C\3&61AAA01&0

Not Available Not Available Not Available Not Available Not Available Not Available Not Available Not Available ACPI\IPI0001\0

Secondary IDE Channel Yes HDC 5.2.3790.0 10/1/2002 (Standard IDE ATA/ATAPI controllers) mshdc.inf Not Available PCIIDE\IDECHANNEL\4&193DA539&0&1
Disk drive Yes DISKDRIVE 5.2.3790.0 10/1/2002 (Standard disk drives) disk.inf Not Available IDE\DISKMAXTOR_6L160M0_____BACE1G10\334C42415A354731202020202020202020202020

Primary IDE Channel Yes HDC 5.2.3790.0 10/1/2002 (Standard IDE ATA/ATAPI controllers) mshdc.inf Not Available PCIIDE\IDECHANNEL\4&193DA539&0&0
Standard Dual Channel PCI IDE Controller Yes HDC 5.2.3790.0 10/1/2002 (Standard IDE ATA/ATAPI controllers) mshdc.inf Not Available PCI\VEN_8086&DEV_27C0&SUBSYS_3206103C&REV_01\3&61AAA01&0&FA
Secondary IDE Channel Yes HDC 5.2.3790.0 10/1/2002 (Standard IDE ATA/ATAPI controllers) mshdc.inf Not Available PCIIDE\IDECHANNEL\4&78810&0&1
CD-ROM Drive Yes CDROM 5.2.3790.0 10/1/2002 (Standard CD-ROM drives) cdrom.inf Not Available IDE\CDROMTSSTCORP_CD-ROM__TS-H192C_____B504_____\5&398DF2D0&0.0.0
Primary IDE Channel Yes HDC 5.2.3790.0 10/1/2002 (Standard IDE ATA/ATAPI controllers) mshdc.inf Not Available PCIIDE\IDECHANNEL\4&78810&0&0
Standard Dual Channel PCI IDE Controller Yes HDC 5.2.3790.0 10/1/2002 (Standard IDE ATA/ATAPI controllers) mshdc.inf Not Available PCI\VEN_8086&DEV_27DF&SUBSYS_3206103C&REV_01\3&61AAA01&0&F9
Communications Port Yes PORTS 5.2.3790.0 10/1/2002 (Standard port types) msports.inf Not Available ACPI\PNP0501\2
Communications Port Yes PORTS 5.2.3790.0 10/1/2002 (Standard port types) msports.inf Not Available ACPI\PNP0501\1
Generic Bus Yes SYSTEM 5.2.3790.0 10/1/2002 (Standard system devices) machine.inf Not Available ACPI\PNP0A05\4&2B9557D4&0
Intel(R) 82802 Firmware Hub Device Yes SYSTEM 5.2.3790.1830 10/1/2002 Intel machine.inf Not Available ACPI\INT0800\4&2B9557D4&0
System timer Yes SYSTEM 5.2.3790.0 10/1/2002 (Standard system devices) machine.inf Not Available ACPI\PNP0100\4&2B9557D4&0
System speaker Yes SYSTEM 5.2.3790.0 10/1/2002 (Standard system devices) machine.inf Not Available ACPI\PNP0800\4&2B9557D4&0
System CMOS/real time clock Yes SYSTEM 5.2.3790.0 10/1/2002 (Standard system devices) machine.inf Not Available ACPI\PNP0B00\4&2B9557D4&0
Programmable interrupt controller Yes SYSTEM 5.2.3790.0 10/1/2002 (Standard system devices) machine.inf Not Available ACPI\PNP0000\4&2B9557D4&0
Numeric data processor Yes SYSTEM 5.2.3790.0 10/1/2002 (Standard system devices) machine.inf Not Available ACPI\PNP0C04\4&2B9557D4&0

Direct memory access controller Yes SYSTEM 5.2.3790.0 10/1/2002 (Standard system devices) machine.inf Not Available ACPI\PNP0200\4&2B9557D4&0
Motherboard resources Yes SYSTEM 5.2.3790.0 10/1/2002 (Standard system devices) machine.inf Not Available ACPI\PNP0C02\1F
ISAPNP Read Data Port Yes SYSTEM 5.2.3790.0 10/1/2002 (Standard system devices) machine.inf Not Available ISAPNP\READDATAPORT\0
PCI standard ISA bridge Yes SYSTEM 5.2.3790.0 10/1/2002 (Standard system devices) machine.inf Not Available PCI\VEN_8086&DEV_27B8&SUBSYS_00000000&REV_01\3&61AAA01&0&F8
Intel(R) 82801 PCI Bridge - 244E Yes SYSTEM 5.2.3790.1830 10/1/2002 Intel machine.inf Not Available PCI\VEN_8086&DEV_244E&SUBSYS_00000000&REV_E1\3&61AAA01&0&F0
USB Root Hub Yes USB 5.2.3790.0 10/1/2002 (Standard USB Host Controller) usbhub.inf Not Available USB\ROOT_HUB20\4&393835B&0
Standard Enhanced PCI to USB Host Controller Yes USB 5.2.3790.0 10/1/2002 (Standard USB Host Controller) usbport.inf Not Available PCI\VEN_8086&DEV_27CC&SUBSYS_3206103C&REV_01\3&61AAA01&0&EF
HID-compliant mouse Yes MOUSE 5.2.3790.1830 10/1/2002 Microsoft msmouse.inf Not Available HID\VID_0000&PID_0000&MI_01\7&1A6BB360&0&0000
USB Human Interface Device Yes HIDCLASS 5.2.3790.0 10/1/2002 (Standard system devices) input.inf Not Available USB\VID_0000&PID_0000&MI_01\6&1B2FC350&0&0001
HID Keyboard Device Yes KEYBOARD 5.2.3790.0 10/1/2002 (Standard keyboards) keyboard.inf Not Available HID\VID_0000&PID_0000&MI_00\7&2A8271B&0&0000
USB Human Interface Device Yes HIDCLASS 5.2.3790.0 10/1/2002 (Standard system devices) input.inf Not Available USB\VID_0000&PID_0000&MI_00\6&1B2FC350&0&0000
USB Composite Device Yes USB 5.2.3790.1830 10/1/2002 (Standard USB Host Controller) usb.inf Not Available USB\VID_0000&PID_0000\600572C40604B4
USB Root Hub Yes USB 5.2.3790.0 10/1/2002 (Standard USB Host Controller) usbport.inf Not Available USB\ROOT_HUB\4&389CB90A&0
Standard Universal PCI to USB Host Controller Yes USB 5.2.3790.0 10/1/2002 (Standard USB Host Controller) usbport.inf Not Available PCI\VEN_8086&DEV_27CB&SUBSYS_3206103C&REV_01\3&61AAA01&0&EB
USB Root Hub Yes USB 5.2.3790.0 10/1/2002 (Standard USB Host Controller) usbport.inf Not Available USB\ROOT_HUB\4&621ED3D&0
Standard Universal PCI to USB Host Controller Yes USB 5.2.3790.0 10/1/2002 (Standard USB Host Controller) usbport.inf Not Available PCI\VEN_8086&DEV_27CA&SUBSYS_3206103C&REV_01\3&61AAA01&0&EA
USB Root Hub Yes USB 5.2.3790.0 10/1/2002 (Standard USB Host Controller) usbport.inf Not Available USB\ROOT_HUB\4&148839B4&0
Standard Universal PCI to USB Host Controller Yes USB 5.2.3790.0 10/1/2002 (Standard USB Host Controller) usbport.inf Not Available PCI\VEN_8086&DEV_27C9&SUBSYS_3206103C&REV_01\3&61AAA01&0&E9
USB Root Hub Yes USB 5.2.3790.0 10/1/2002 (Standard USB Host Controller) usbport.inf Not Available USB\ROOT_HUB\4&35838BF7&0
Standard Universal PCI to USB Host Controller Yes USB 5.2.3790.0 10/1/2002 (Standard USB Host Controller) usbport.inf Not Available PCI\VEN_8086&DEV_27C8&SUBSYS_3206103C&REV_01\3&61AAA01&0&E8

```
HP NC320i PCIe Gigabit Server Adapter Yes NET 9.81.0.0 8/28/2006
  Hewlett-Packard Company oem0.inf  Not Available
  PCI\VEN_14E4&DEV_1659&SUBSYS_7032103C&REV_21\4&261E705A&0&00E5
PCI standard PCI-to-PCI bridge Yes SYSTEM 5.2.3790.0 10/1/2002
  (Standard system devices) machine.inf Not Available
  PCI\VEN_8086&DEV_27E2&SUBSYS_00000000&REV_01\3&61AAA01&0&E5
Plug and Play Monitor Yes MONITOR 5.1.2001.0 6/6/2001 (Standard
  monitor types) monitor.inf Not Available
  DISPLAY\AVO0000\5&3006B4AB&0&12345678&03&00
Standard VGA Graphics Adapter Yes DISPLAY 5.2.3790.0 10/1/2002
  (Standard display types) display.inf Not Available
  PCI\VEN_102B&DEV_0522&SUBSYS_31FA103C&REV_02\4&2D8B019B&0&00E4
PCI standard PCI-to-PCI bridge Yes SYSTEM 5.2.3790.0 10/1/2002
  (Standard system devices) machine.inf Not Available
  PCI\VEN_8086&DEV_27E0&SUBSYS_00000000&REV_01\3&61AAA01&0&E4
HP NC110T PCIe Gigabit Server Adapter Yes NET 9.6.31.0 11/1/2006
  Hewlett-Packard Company oem1.inf  Not Available
  PCI\VEN_8086&DEV_10B9&SUBSYS_704A103C&REV_06\4&6C79FC5&0&00E0
PCI standard PCI-to-PCI bridge Yes SYSTEM 5.2.3790.0 10/1/2002
  (Standard system devices) machine.inf Not Available
  PCI\VEN_8086&DEV_27D0&SUBSYS_00000000&REV_01\3&61AAA01&0&E0
PCI standard host CPU bridge Yes SYSTEM 5.2.3790.0 10/1/2002
  (Standard system devices) machine.inf Not Available
  PCI\VEN_8086&DEV_2778&SUBSYS_00000000&REV_C0\3&61AAA01&0&00
PCI bus Yes SYSTEM 5.2.3790.0 10/1/2002 (Standard system devices)
  machine.inf Not Available ACPI\PNP0A03\2&DABA3FF&0
Intel Processor Yes PROCESSOR 5.2.3790.1830 10/1/2002 Intel cpu.inf
  Not Available ACPI\GENUINEINTEL_-_X86_FAMILY_15_MODEL_6\_1
Intel Processor Yes PROCESSOR 5.2.3790.1830 10/1/2002 Intel cpu.inf
  Not Available ACPI\GENUINEINTEL_-_X86_FAMILY_15_MODEL_6\_0
Microsoft ACPI-Compliant System Yes SYSTEM 5.2.3790.0 10/1/2002
  Microsoft acpi.inf  Not Available ACPI_HAL\PNP0C08\0
ACPI Multiprocessor PC  Yes 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 HTREE\ROOT\0

[Environment Variables]

Variable  Value User Name
ClusterLog  C:\WINDOWS\Cluster\cluster.log  <SYSTEM>
ComSpec %SystemRoot%\system32\cmd.exe <SYSTEM>
FP_NO_HOST_CHECK  NO  <SYSTEM>
NUMBER_OF_PROCESSORS  2 <SYSTEM>
OS  Windows_NT  <SYSTEM>
Path
  C:\oracle\product\10.2.0\client_1\bin;%SystemRoot%\system32;%Syst
  emRoot%;%SystemRoot%\System32\Wbem;c:\Program Files\Microsoft SQL
  Server\90\Tools\binn\ <SYSTEM>
PATHEXT .COM;.EXE;.BAT;.CMD;.VBS;.VBE;.JS;.JSE;.WSF;.WSH  <SYSTEM>

PROCESSOR_ARCHITECTURE  x86 <SYSTEM>
PROCESSOR_IDENTIFIER  x86 Family 15 Model 6 Stepping 5,
GenuineIntel  <SYSTEM>
PROCESSOR_LEVEL 15  <SYSTEM>
PROCESSOR_REVISION  0605  <SYSTEM>
TEMP %SystemRoot%\TEMP <SYSTEM>
TMP %SystemRoot%\TEMP <SYSTEM>
VS80COMNTOOLS C:\Program Files\Microsoft Visual Studio
8\Common7\Tools\  <SYSTEM>
windir  %SystemRoot%  <SYSTEM>
TEMP %USERPROFILE%\Local Settings\Temp NT AUTHORITY\SYSTEM
TMP %USERPROFILE%\Local Settings\Temp NT AUTHORITY\SYSTEM
TEMP  %USERPROFILE%\Local Settings\Temp NT AUTHORITY\LOCAL SERVICE

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

TEMP %USERPROFILE%\Local Settings\Temp BD1\Administrator
TMP %USERPROFILE%\Local Settings\Temp BD1\Administrator

[Print Jobs]

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

[Network Connections]

Local Name  Remote Name Type  Status  User Name
Z:  \\pencil\c$ Disk  Current Connection  BD1\Administrator

[Running Tasks]

Name  Path  Process ID  Priority  Min Working Set Max Working Set
  Start Time  Version Size  File Date
system idle process Not Available 0 0 Not Available Not Available
  Not Available Not Available Not Available Not Available
system  Not Available 4 8 0 1413120 Not Available Not Available Not
Available Not Available
smss.exe  Not Available 360 11  204800  1413120 8/16/2007 7:58 AM
  Not Available Not Available Not Available
csrss.exe Not Available 588 13  Not Available Not Available
  8/16/2007 7:58 AM Not Available Not Available Not Available
winlogon.exe  c:\windows\system32\winlogon.exe  724 13  204800
  1413120 8/16/2007 7:58 AM 5.2.3790.1830 (srv03_sp1_rtm.050324-
1447) 497.00 KB (508,928 bytes) 5/1/2007 4:02 PM

services.exe  c:\windows\system32\services.exe  768 9 204800
  1413120 8/16/2007 7:58 AM 5.2.3790.1830 (srv03_sp1_rtm.050324-
1447) 107.50 KB (110,080 bytes) 3/25/2003 6:00 AM
lsass.exe c:\windows\system32\lsass.exe 788 9 204800  1413120
  8/16/2007 7:58 AM 5.2.3790.0 (srv03_rtm.030324-2048) 13.00 KB
  (13,312 bytes)  3/25/2003 6:00 AM
svchost.exe c:\windows\system32\svchost.exe 996 8 204800  1413120
  8/16/2007 7:58 AM 5.2.3790.1830 (srv03_sp1_rtm.050324-1447) 14.00
KB (14,336 bytes) 5/1/2007 4:02 PM
svchost.exe Not Available 1088  8 Not Available Not Available
  8/16/2007 7:58 AM Not Available Not Available Not Available
svchost.exe Not Available 1188  8 Not Available Not Available
  8/16/2007 7:58 AM Not Available Not Available Not Available
svchost.exe Not Available 1264  8 Not Available Not Available
  8/16/2007 7:58 AM Not Available Not Available Not Available
svchost.exe c:\windows\system32\svchost.exe 1276  8 204800  1413120
  8/16/2007 7:58 AM 5.2.3790.1830 (srv03_sp1_rtm.050324-1447) 14.00
KB (14,336 bytes) 5/1/2007 4:02 PM
spoolsv.exe c:\windows\system32\spoolsv.exe 1784  8 204800  1413120
  8/16/2007 7:58 AM 5.2.3790.1830 (srv03_sp1_rtm.050324-1447) 57.00
KB (58,368 bytes) 5/1/2007 4:02 PM
msdtc.exe Not Available 1816  8 Not Available Not Available
  8/16/2007 7:58 AM Not Available Not Available Not Available
svchost.exe c:\windows\system32\svchost.exe 2028  8 204800  1413120
  8/16/2007 7:58 AM 5.2.3790.1830 (srv03_sp1_rtm.050324-1447) 14.00
KB (14,336 bytes) 5/1/2007 4:02 PM
sqlservr.exe  Not Available 240 8 Not Available Not Available
  8/16/2007 7:58 AM Not Available Not Available Not Available
svchost.exe Not Available 648 8 Not Available Not Available
  8/16/2007 7:58 AM Not Available Not Available Not Available
winvnc4.exe c:\program files\realvnc\vnc4\winvnc4.exe 960 8 204800
  1413120 8/16/2007 7:58 AM 4.1.2 428.95 KB (439,248 bytes)
  5/3/2007 2:01 PM
svchost.exe c:\windows\system32\svchost.exe 1660  8 204800  1413120
  8/16/2007 7:58 AM 5.2.3790.1830 (srv03_sp1_rtm.050324-1447) 14.00
KB (14,336 bytes) 5/1/2007 4:02 PM
wmiprvse.exe  Not Available 1896  8 Not Available Not Available
  8/16/2007 7:59 AM Not Available Not Available Not Available
explorer.exe  c:\windows\explorer.exe 3900  8 204800  1413120
  8/16/2007 9:28 AM 6.00.3790.1830 (srv03_sp1_rtm.050324-1447)
  1.00 MB (1,050,624 bytes) 5/1/2007 4:02 PM
svchost.exe c:\windows\system32\svchost.exe 612 8 204800  1413120
  8/16/2007 9:28 AM 5.2.3790.1830 (srv03_sp1_rtm.050324-1447) 14.00
KB (14,336 bytes) 5/1/2007 4:02 PM
inetinfo.exe  c:\windows\system32\inetsrv\inetinfo.exe  2752  8
  204800  1413120 8/22/2007 10:29 AM  6.0.3790.1830
(srv03_sp1_rtm.050324-1447) 14.00 KB (14,336 bytes) 5/1/2007 4:02
PM
svchost.exe c:\windows\system32\svchost.exe 380 8 204800  1413120
  8/22/2007 10:29 AM  5.2.3790.1830 (srv03_sp1_rtm.050324-1447)
  14.00 KB (14,336 bytes) 5/1/2007 4:02 PM
helpctr.exe c:\windows\pchealth\helpctr\binaries\helpctr.exe  1352
  8 204800  1413120 9/12/2007 9:57 AM 5.2.3790.1830
(srv03_sp1_rtm.050324-1447) 778.00 KB (796,672 bytes) 5/1/2007 4:02
PM
helpsvc.exe c:\windows\pchealth\helpctr\binaries\helpsvc.exe  3716
  8 204800  1413120 9/12/2007 9:57 AM 5.2.3790.1830
(srv03_sp1_rtm.050324-1447) 745.00 KB (762,880 bytes) 5/1/2007 4:02
PM
wmiprvse.exe  Not Available 536 8 Not Available Not Available
  9/12/2007 9:57 AM Not Available Not Available Not Available

[Loaded Modules]

Name  Version Size  File Date Manufacturer  Path
winlogon  5.2.3790.1830 (srv03_sp1_rtm.050324-1447) 497.00 KB
(508,928 bytes) 5/1/2007 4:02 PM  Microsoft Corporation
  c:\windows\system32\winlogon.exe
ntdll 5.2.3790.1830 (srv03_sp1_rtm.050324-1447) 748.50 KB (766,464
bytes)  3/25/2003 6:00 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) 5/1/2007 4:02 PM  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 6:00 AM Microsoft Corporation
  c:\windows\system32\advapi32.dll
rpcrt4  5.2.3790.1830 (srv03_sp1_rtm.050324-1447) 627.00 KB
(642,048 bytes) 5/1/2007 4:02 PM  Microsoft Corporation
  c:\windows\system32\rpcrt4.dll
crypt32 5.131.3790.1830 (srv03_sp1_rtm.050324-1447) 582.00 KB
(595,968 bytes) 5/1/2007 4:02 PM  Microsoft Corporation
  c:\windows\system32\crypt32.dll
msasn1  5.2.3790.1830 (srv03_sp1_rtm.050324-1447) 56.50 KB (57,856
bytes)  5/1/2007 4:02 PM  Microsoft Corporation
  c:\windows\system32\msasn1.dll
msvcrt  7.0.3790.1830 (srv03_sp1_rtm.050324-1447) 340.50 KB
(348,672 bytes) 5/1/2007 4:02 PM  Microsoft Corporation
  c:\windows\system32\msvcrt.dll
user32  5.2.3790.1830 (srv03_sp1_rtm.050324-1447) 574.50 KB
(588,288 bytes) 5/1/2007 4:02 PM  Microsoft Corporation
  c:\windows\system32\user32.dll
gdi32 5.2.3790.1830 (srv03_sp1_rtm.050324-1447) 273.00 KB (279,552
bytes)  5/1/2007 4:02 PM  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 6:00 AM Microsoft Corporation
  c:\windows\system32\nddeapi.dll
profmap 5.2.3790.1830 (srv03_sp1_rtm.050324-1447) 22.50 KB (23,040
bytes)  5/1/2007 4:02 PM  Microsoft Corporation
  c:\windows\system32\profmap.dll
```

netapi32 5.2.3790.1830 (srv03_sp1_rtm.050324-1447) 341.50 KB
(349,696 bytes) 5/1/2007 4:02 PM 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 6:00 AM Microsoft Corporation
   c:\windows\system32\userenv.dll
psapi 5.2.3790.1830 (srv03_sp1_rtm.050324-1447) 20.00 KB (20,480
bytes) 5/1/2007 4:02 PM Microsoft Corporation
   c:\windows\system32\psapi.dll
regapi 5.2.3790.1830 (srv03_sp1_rtm.050324-1447) 55.00 KB (56,320
bytes) 5/1/2007 4:02 PM Microsoft Corporation
   c:\windows\system32\regapi.dll
secur32 5.2.3790.1830 (srv03_sp1_rtm.050324-1447) 64.00 KB (65,536
bytes) 5/1/2007 4:02 PM 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 6:00 AM Microsoft Corporation
   c:\windows\system32\setupapi.dll
version 5.2.3790.1830 (srv03_sp1_rtm.050324-1447) 18.00 KB (18,432
bytes) 5/1/2007 4:02 PM Microsoft Corporation
   c:\windows\system32\version.dll
winsta 5.2.3790.1830 (srv03_sp1_rtm.050324-1447) 54.50 KB (55,808
bytes) 5/1/2007 4:02 PM Microsoft Corporation
   c:\windows\system32\winsta.dll
ws2_32 5.2.3790.1830 (srv03_sp1_rtm.050324-1447) 82.00 KB (83,968
bytes) 5/1/2007 4:02 PM Microsoft Corporation
   c:\windows\system32\ws2_32.dll
ws2help 5.2.3790.1830 (srv03_sp1_rtm.050324-1447) 19.50 KB (19,968
bytes) 5/1/2007 4:02 PM Microsoft Corporation
   c:\windows\system32\ws2help.dll
msgina 5.2.3790.1830 (srv03_sp1_rtm.050324-1447) 1.16 MB
(1,211,904 bytes) 5/1/2007 4:02 PM Microsoft Corporation
   c:\windows\system32\msgina.dll
shsvcs 6.00.3790.1830 (srv03_sp1_rtm.050324-1447) 131.50 KB
(134,656 bytes) 5/1/2007 4:02 PM Microsoft Corporation
   c:\windows\system32\shsvcs.dll
shlwapi 6.00.3790.1830 (srv03_sp1_rtm.050324-1447) 313.50 KB
(321,024 bytes) 5/1/2007 4:02 PM 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 6:00 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) 5/1/2007 4:02 PM Microsoft Corporation
   c:\windows\system32\sfc_os.dll
wintrust 5.131.3790.1830 (srv03_sp1_rtm.050324-1447) 162.00 KB
(165,888 bytes) 5/1/2007 4:02 PM 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 6:00 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) 5/1/2007 4:02 PM 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 10:41 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 6:00 AM Microsoft Corporation
   c:\windows\system32\winscard.dll
wtsapi32 5.2.3790.1830 (srv03_sp1_rtm.050324-1447) 19.00 KB
(19,456 bytes) 5/1/2007 4:02 PM Microsoft Corporation
   c:\windows\system32\wtsapi32.dll
sxs 5.2.3790.1830 (srv03_sp1_rtm.050324-1447) 743.50 KB (761,344
bytes) 5/1/2007 4:02 PM Microsoft Corporation
   c:\windows\system32\sxs.dll
winmm 5.2.3790.1830 (srv03_sp1_rtm.050324-1447) 172.50 KB (176,640
bytes) 5/1/2007 4:02 PM Microsoft Corporation
   c:\windows\system32\winmm.dll
shell32 6.00.3790.1830 (srv03_sp1_rtm.050324-1447) 7.99 MB
(8,379,392 bytes) 5/1/2007 4:02 PM Microsoft Corporation
   c:\windows\system32\shell32.dll
rsaenh 5.2.3790.1830 (srv03_sp1_rtm.050324-1447) 183.98 KB
(188,392 bytes) 5/1/2007 4:02 PM Microsoft Corporation
   c:\windows\system32\rsaenh.dll
wldap32 5.2.3790.1830 (srv03_sp1_rtm.050324-1447) 174.50 KB
(178,688 bytes) 5/1/2007 4:02 PM Microsoft Corporation
   c:\windows\system32\wldap32.dll
cscdll 5.2.3790.1830 (srv03_sp1_rtm.050324-1447) 100.00 KB
(102,400 bytes) 5/1/2007 4:02 PM Microsoft Corporation
   c:\windows\system32\cscdll.dll
dimsntfy 5.2.3790.1830 (srv03_sp1_rtm.050324-1447) 19.00 KB
(19,456 bytes) 5/1/2007 4:04 PM Microsoft Corporation
   c:\windows\system32\dimsntfy.dll
wlnotify 5.2.3790.1830 (srv03_sp1_rtm.050324-1447) 94.50 KB
(96,768 bytes) 5/1/2007 4:02 PM 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 6:00 AM Microsoft Corporation
   c:\windows\system32\mpr.dll
oleaut32 5.2.3790.1830 543.00 KB (556,032 bytes) 3/25/2003 6:00 AM
  Microsoft Corporation c:\windows\system32\oleaut32.dll
winspool 5.2.3790.1830 (srv03_sp1_rtm.050324-1447) 147.00 KB
(150,528 bytes) 3/25/2003 6:00 AM Microsoft Corporation
   c:\windows\system32\winspool.drv
comctl32 5.82 (srv03_sp1_rtm.050324-1447) 585.00 KB (599,040
bytes) 3/24/2005 10:41 PM Microsoft Corporation
   c:\windows\winsxs\x86_microsoft.windows.common-

controls_6595b64144ccf1df_5.82.3790.1830_x-ww_1b6f474a\comctl32.dll

uxtheme 6.00.3790.1830 (srv03_sp1_rtm.050324-1447) 202.00 KB
(206,848 bytes) 5/1/2007 4:02 PM 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 6:00 AM Microsoft Corporation
   c:\windows\system32\samlib.dll
cscui 5.2.3790.1830 (srv03_sp1_rtm.050324-1447) 319.50 KB (327,168
bytes) 5/1/2007 4:02 PM Microsoft Corporation
   c:\windows\system32\cscui.dll
clbcatq 2001.12.4720.1830 (srv03_sp1_rtm.050324-1447) 502.50 KB
(514,560 bytes) 5/1/2007 4:02 PM Microsoft Corporation
   c:\windows\system32\clbcatq.dll
comres 2001.12.4720.0 (srv03_rtm.030324-2048) 778.00 KB (796,672
bytes) 3/25/2003 6:00 AM Microsoft Corporation
   c:\windows\system32\comres.dll
ntmarta 5.2.3790.1830 (srv03_sp1_rtm.050324-1447) 120.50 KB
(123,392 bytes) 5/1/2007 4:02 PM Microsoft Corporation
   c:\windows\system32\ntmarta.dll
xpsp2res 5.2.3790.1830 (srv03_sp1_rtm.050324-1447) 2.76 MB
(2,897,920 bytes) 5/1/2007 4:04 PM Microsoft Corporation
   c:\windows\system32\xpsp2res.dll
wbemprox 5.2.3790.1830 (srv03_sp1_rtm.050324-1447) 20.50 KB
(20,992 bytes) 5/1/2007 4:02 PM Microsoft Corporation
   c:\windows\system32\wbem\wbemprox.dll
wbemcomn 5.2.3790.1830 (srv03_sp1_rtm.050324-1447) 221.00 KB
(226,304 bytes) 5/1/2007 4:02 PM Microsoft Corporation
   c:\windows\system32\wbem\wbemcomn.dll
wbemsvc 5.2.3790.0 (srv03_rtm.030324-2048) 42.50 KB (43,520 bytes)
5/1/2007 12:56 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) 5/1/2007 4:02 PM Microsoft Corporation
   c:\windows\system32\wbem\fastprox.dll
msvcp60 6.05.2144.0 388.00 KB (397,312 bytes) 3/25/2003 6:00 AM
  Microsoft Corporation c:\windows\system32\msvcp60.dll
ntdsapi 5.2.3790.1830 (srv03_sp1_rtm.050324-1447) 71.00 KB (72,704
bytes) 5/1/2007 4:02 PM Microsoft Corporation
   c:\windows\system32\ntdsapi.dll
dnsapi 5.2.3790.1830 (srv03_sp1_rtm.050324-1447) 153.50 KB
(157,184 bytes) 5/1/2007 4:02 PM Microsoft Corporation
   c:\windows\system32\dnsapi.dll
services 5.2.3790.1830 (srv03_sp1_rtm.050324-1447) 107.50 KB
(110,080 bytes) 3/25/2003 6:00 AM Microsoft Corporation
   c:\windows\system32\services.exe
ncobjapi 5.2.3790.1830 (srv03_sp1_rtm.050324-1447) 36.00 KB
(36,864 bytes) 5/1/2007 4:02 PM Microsoft Corporation
   c:\windows\system32\ncobjapi.dll
scesrv 5.2.3790.1830 (srv03_sp1_rtm.050324-1447) 327.00 KB
(334,848 bytes) 5/1/2007 4:02 PM Microsoft Corporation
   c:\windows\system32\scesrv.dll
authz 5.2.3790.1830 (srv03_sp1_rtm.050324-1447) 66.50 KB (68,096
bytes) 5/1/2007 4:02 PM Microsoft Corporation
   c:\windows\system32\authz.dll
umpnpmgr 5.2.3790.1830 (srv03_sp1_rtm.050324-1447) 126.50 KB
(129,536 bytes) 5/1/2007 4:02 PM Microsoft Corporation
   c:\windows\system32\umpnpmgr.dll
eventlog 5.2.3790.1830 (srv03_sp1_rtm.050324-1447) 67.50 KB
(69,120 bytes) 5/1/2007 4:02 PM Microsoft Corporation
   c:\windows\system32\eventlog.dll
cabinet 5.2.3790.1830 (srv03_sp1_rtm.050324-1447) 81.50 KB (83,456
bytes) 3/24/2005 9:35 PM Microsoft Corporation
   c:\windows\system32\cabinet.dll
cryptnet 5.131.3790.1830 (srv03_sp1_rtm.050324-1447) 61.00 KB
(62,464 bytes) 5/1/2007 4:02 PM 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 6:00 AM Microsoft Corporation
   c:\windows\system32\sensapi.dll
apphelp 5.2.3790.1830 (srv03_sp1_rtm.050324-1447) 146.50 KB
(150,016 bytes) 5/1/2007 4:02 PM Microsoft Corporation
   c:\windows\system32\apphelp.dll
imm32 5.2.3790.1830 (srv03_sp1_rtm.050324-1447) 108.00 KB (110,592
bytes) 5/1/2007 4:02 PM Microsoft Corporation
   c:\windows\system32\imm32.dll
lsass 5.2.3790.0 (srv03_rtm.030324-2048) 13.00 KB (13,312 bytes)
3/25/2003 6:00 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 6:00 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 6:00 AM Microsoft Corporation
   c:\windows\system32\samsrv.dll
cryptdll 5.2.3790.1830 (srv03_sp1_rtm.050324-1447) 32.00 KB
(32,768 bytes) 5/1/2007 4:02 PM 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 6:00 AM Microsoft Corporation
   c:\windows\system32\msprivs.dll
kerberos 5.2.3790.1830 (srv03_sp1_rtm.050324-1447) 340.50 KB
(348,672 bytes) 5/1/2007 4:02 PM Microsoft Corporation
   c:\windows\system32\kerberos.dll
msv1_0 5.2.3790.1830 (srv03_sp1_rtm.050324-1447) 141.00 KB
(144,384 bytes) 5/1/2007 4:02 PM Microsoft Corporation
   c:\windows\system32\msv1_0.dll
iphlpapi 5.2.3790.1830 (srv03_sp1_rtm.050324-1447) 92.50 KB
(94,720 bytes) 5/1/2007 4:02 PM Microsoft Corporation
   c:\windows\system32\iphlpapi.dll

```
netlogon  5.2.3790.1830 (srv03_sp1_rtm.050324-1447) 409.50 KB
(419,328 bytes) 5/1/2007 4:02 PM  Microsoft Corporation
   c:\windows\system32\netlogon.dll
w32time  5.2.3790.1830 (srv03_sp1_rtm.050324-1447) 222.00 KB
(227,328 bytes) 5/1/2007 4:02 PM  Microsoft Corporation
   c:\windows\system32\w32time.dll
schannel  5.2.3790.1830 (srv03_sp1_rtm.050324-1447) 141.00 KB
(144,384 bytes) 5/1/2007 4:02 PM  Microsoft Corporation
   c:\windows\system32\schannel.dll
wdigest  5.2.3790.1830 (srv03_sp1_rtm.050324-1447) 74.00 KB (75,776
bytes) 5/1/2007 4:02 PM  Microsoft Corporation
   c:\windows\system32\wdigest.dll
rassfm  5.2.3790.1830 (srv03_sp1_rtm.050324-1447) 23.00 KB (23,552
bytes) 5/1/2007 4:02 PM  Microsoft Corporation
   c:\windows\system32\rassfm.dll
kdcsvc  5.2.3790.1830 (srv03_sp1_rtm.050324-1447) 213.50 KB
(218,624 bytes) 5/1/2007 4:02 PM  Microsoft Corporation
   c:\windows\system32\kdcsvc.dll
ntdsa 5.2.3790.1830 (srv03_sp1_rtm.050324-1447) 1.45 MB (1,516,032
bytes) 5/1/2007 4:02 PM  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) 5/1/2007 4:02 PM  Microsoft Corporation
   c:\windows\system32\esent.dll
ntdsatq  5.2.3790.1830 (srv03_sp1_rtm.050324-1447) 29.50 KB (30,208
bytes) 5/1/2007 4:02 PM  Microsoft Corporation
   c:\windows\system32\ntdsatq.dll
mswsock  5.2.3790.1830 (srv03_sp1_rtm.050324-1447) 250.50 KB
(256,512 bytes) 5/1/2007 4:02 PM  Microsoft Corporation
   c:\windows\system32\mswsock.dll
scecli  5.2.3790.1830 (srv03_sp1_rtm.050324-1447) 186.50 KB
(190,976 bytes) 5/1/2007 4:02 PM  Microsoft Corporation
   c:\windows\system32\scecli.dll
ws03res  5.2.3790.1830 (srv03_sp1_rtm.050324-1447) 793.50 KB
(812,544 bytes) 5/1/2007 4:04 PM  Microsoft Corporation
   c:\windows\system32\ws03res.dll
hnetcfg  5.2.3790.1830 (srv03_sp1_rtm.050324-1447) 343.50 KB
(351,744 bytes) 5/1/2007 4:02 PM  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 6:00 AM Microsoft Corporation
   c:\windows\system32\wshtcpip.dll
pstorsvc  5.2.3790.0 (srv03_rtm.030324-2048)  24.00 KB (24,576
bytes)  3/25/2003 6:00 AM Microsoft Corporation
   c:\windows\system32\pstorsvc.dll
ipsecsvc  5.2.3790.1830 (srv03_sp1_rtm.050324-1447) 180.50 KB
(184,832 bytes) 5/1/2007 4:02 PM  Microsoft Corporation
   c:\windows\system32\ipsecsvc.dll
oakley  5.2.3790.1830 (srv03_sp1_rtm.050324-1447) 264.00 KB
(270,336 bytes) 5/1/2007 4:02 PM  Microsoft Corporation
   c:\windows\system32\oakley.dll
winipsec  5.2.3790.1830 (srv03_sp1_rtm.050324-1447) 35.50 KB
(36,352 bytes) 5/1/2007 4:02 PM  Microsoft Corporation
   c:\windows\system32\winipsec.dll
psbase  5.2.3790.1830 (srv03_sp1_rtm.050324-1447) 84.00 KB (86,016
bytes) 5/1/2007 4:02 PM  Microsoft Corporation
   c:\windows\system32\psbase.dll
dssenh  5.2.3790.1830 (srv03_sp1_rtm.050324-1447) 139.98 KB
(143,336 bytes) 5/1/2007 4:02 PM  Microsoft Corporation
   c:\windows\system32\dssenh.dll
wlbsctrl  5.2.3790.1830 (srv03_sp1_rtm.050324-1447) 82.00 KB
(83,968 bytes) 5/1/2007 4:02 PM  Microsoft Corporation
   c:\windows\system32\wlbsctrl.dll
w3ssl 6.0.3790.0 (srv03_rtm.030324-2048)  15.00 KB (15,360 bytes)
  3/25/2003 6:00 AM Microsoft Corporation
   c:\windows\system32\w3ssl.dll
svchost  5.2.3790.1830 (srv03_sp1_rtm.050324-1447) 14.00 KB (14,336
bytes) 5/1/2007 4:02 PM  Microsoft Corporation
   c:\windows\system32\svchost.exe
rpcss  5.2.3790.1830 (srv03_sp1_rtm.050324-1447) 406.00 KB (415,744
bytes) 5/1/2007 4:02 PM  Microsoft Corporation
   c:\windows\system32\rpcss.dll
wzcsvc  5.2.3790.1830 (srv03_sp1_rtm.050324-1447) 364.50 KB
(373,248 bytes) 5/1/2007 4:02 PM  Microsoft Corporation
   c:\windows\system32\wzcsvc.dll
rtutils  5.2.3790.1830 (srv03_sp1_rtm.050324-1447) 34.50 KB (35,328
bytes) 5/1/2007 4:02 PM  Microsoft Corporation
   c:\windows\system32\rtutils.dll
wmi 5.2.3790.0 (srv03_rtm.030324-2048)  6.50 KB (6,656 bytes)
  3/25/2003 6:00 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 6:00 AM Microsoft Corporation
   c:\windows\system32\dhcpcsvc.dll
atl 3.05.2283 83.00 KB (84,992 bytes) 3/25/2003 6:00 AM Microsoft
Corporation c:\windows\system32\atl.dll
rastls  5.2.3790.1830 (srv03_sp1_rtm.050324-1447) 180.00 KB
(184,320 bytes) 5/1/2007 4:02 PM  Microsoft Corporation
   c:\windows\system32\rastls.dll
cryptui 5.131.3790.1830 (srv03_sp1_rtm.050324-1447) 496.50 KB
(508,416 bytes) 5/1/2007 4:02 PM  Microsoft Corporation
   c:\windows\system32\cryptui.dll
mprapi  5.2.3790.1830 (srv03_sp1_rtm.050324-1447) 89.00 KB (91,136
bytes) 5/1/2007 4:02 PM  Microsoft Corporation
   c:\windows\system32\mprapi.dll
activeds  5.2.3790.1830 (srv03_sp1_rtm.050324-1447) 194.00 KB
(198,656 bytes) 5/1/2007 4:02 PM  Microsoft Corporation
   c:\windows\system32\activeds.dll
adsldpc 5.2.3790.1830 (srv03_sp1_rtm.050324-1447) 146.00 KB
(149,504 bytes) 5/1/2007 4:02 PM  Microsoft Corporation
   c:\windows\system32\adsldpc.dll
credui  5.2.3790.1830 (srv03_sp1_rtm.050324-1447) 162.00 KB
(165,888 bytes) 5/1/2007 4:02 PM  Microsoft Corporation
   c:\windows\system32\credui.dll
rasapi32  5.2.3790.1830 (srv03_sp1_rtm.050324-1447) 239.50 KB
(245,248 bytes) 3/25/2003 6:00 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 6:00 AM Microsoft Corporation
   c:\windows\system32\rasman.dll
tapi32  5.2.3790.1830 (srv03_sp1_rtm.050324-1447) 179.50 KB
(183,808 bytes) 5/1/2007 4:02 PM  Microsoft Corporation
   c:\windows\system32\tapi32.dll
raschap  5.2.3790.1830 (srv03_sp1_rtm.050324-1447) 119.50 KB
(122,368 bytes) 5/1/2007 4:02 PM  Microsoft Corporation
   c:\windows\system32\raschap.dll
schedsvc  5.2.3790.1830 (srv03_sp1_rtm.050324-1447) 197.50 KB
(202,240 bytes) 5/1/2007 4:02 PM  Microsoft Corporation
   c:\windows\system32\schedsvc.dll
msidle  6.00.3790.1830 (srv03_sp1_rtm.050324-1447)  6.50 KB (6,656
bytes) 5/1/2007 4:02 PM  Microsoft Corporation
   c:\windows\system32\msidle.dll
audiosrv  5.2.3790.1830 (srv03_sp1_rtm.050324-1447) 40.50 KB
(41,472 bytes) 5/1/2007 4:02 PM  Microsoft Corporation
   c:\windows\system32\audiosrv.dll
wkssvc  5.2.3790.1830 (srv03_sp1_rtm.050324-1447) 130.00 KB
(133,120 bytes) 3/25/2003 6:00 AM Microsoft Corporation
   c:\windows\system32\wkssvc.dll
wiarpc  5.2.3790.1830 (srv03_sp1_rtm.050324-1447) 32.50 KB (33,280
bytes) 5/1/2007 4:02 PM  Microsoft Corporation
   c:\windows\system32\wiarpc.dll
aelupsvc  5.2.3790.1830 (srv03_sp1_rtm.050324-1447) 26.00 KB
(26,624 bytes) 5/1/2007 4:04 PM  Microsoft Corporation
   c:\windows\system32\aelupsvc.dll
cryptsvc  5.2.3790.1830 (srv03_sp1_rtm.050324-1447) 55.50 KB
(56,832 bytes) 5/1/2007 4:02 PM  Microsoft Corporation
   c:\windows\system32\cryptsvc.dll
certcli  5.2.3790.1830 (srv03_sp1_rtm.050324-1447) 227.00 KB
(232,448 bytes) 5/1/2007 4:02 PM  Microsoft Corporation
   c:\windows\system32\certcli.dll
vssapi  5.2.3790.1830 (srv03_sp1_rtm.050324-1447) 548.00 KB
(561,152 bytes) 5/1/2007 4:02 PM  Microsoft Corporation
   c:\windows\system32\vssapi.dll
dmserver  5.2.3790.1830 (srv03_sp1_rtm.050324-1447) 25.50 KB
(26,112 bytes) 5/1/2007 4:02 PM  Microsoft Corporation
   c:\windows\system32\dmserver.dll
es  2001.12.4720.1830 (srv03_sp1_rtm.050324-1447) 233.00 KB
(238,592 bytes) 5/1/2007 4:02 PM  Microsoft Corporation
   c:\windows\system32\es.dll
pchsvc  5.2.3790.1830 (srv03_sp1_rtm.050324-1447) 39.00 KB (39,936
bytes)  5/1/2007 4:02 PM  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 6:00 AM Microsoft Corporation
   c:\windows\system32\srvsvc.dll
seclogon  5.2.3790.1830 (srv03_sp1_rtm.050324-1447) 18.50 KB
(18,944 bytes) 5/1/2007 4:02 PM  Microsoft Corporation
   c:\windows\system32\seclogon.dll
sens  5.2.3790.1830 (srv03_sp1_rtm.050324-1447) 36.50 KB (37,376
bytes) 5/1/2007 4:02 PM  Microsoft Corporation
   c:\windows\system32\sens.dll
trkwks  5.2.3790.0 (srv03_rtm.030324-2048)  85.00 KB (87,040 bytes)
  3/25/2003 6:00 AM Microsoft Corporation
   c:\windows\system32\trkwks.dll
comsvcs 2001.12.4720.1830 (srv03_sp1_rtm.050324-1447) 1.19 MB
(1,248,256 bytes) 5/1/2007 4:02 PM  Microsoft Corporation
   c:\windows\system32\comsvcs.dll
wmisvc  5.2.3790.1830 (srv03_sp1_rtm.050324-1447) 140.00 KB
(143,360 bytes) 5/1/2007 4:02 PM  Microsoft Corporation
   c:\windows\system32\wmisvc.dll
wuauserv  5.7.3790.1830 (srv03_sp1_rtm.050324-1447) 8.00 KB (8,192
bytes) 5/1/2007 4:04 PM  Microsoft Corporation
   c:\windows\system32\wuauserv.dll
wuaueng  5.7.3790.1830 (srv03_sp1_rtm.050324-1447) 1.18 MB
(1,232,896 bytes) 5/1/2007 4:04 PM  Microsoft Corporation
   c:\windows\system32\wuaueng.dll
advpack  6.00.3790.1830 (srv03_sp1_rtm.050324-1447)  98.00 KB
(100,352 bytes) 5/1/2007 4:02 PM  Microsoft Corporation
   c:\windows\system32\advpack.dll
mspatcha  5.2.3790.0 (srv03_rtm.030324-2048)  29.00 KB (29,696
bytes)  3/25/2003 6:00 AM Microsoft Corporation
   c:\windows\system32\mspatcha.dll
shfolder  6.00.3790.1830 (srv03_sp1_rtm.050324-1447)  24.50 KB
(25,088 bytes) 5/1/2007 4:02 PM  Microsoft Corporation
   c:\windows\system32\shfolder.dll
winhttp  5.2.3790.1830 (srv03_sp1_rtm.050324-1447) 353.00 KB
(361,472 bytes) 3/24/2005 10:41 PM  Microsoft Corporation
   c:\windows\winsxs\x86_microsoft.windows.winhttp_6595b64144ccf1df_
5.1.3790.1830_x-ww_74150efb\winhttp.dll
browser 5.2.3790.1830 (srv03_sp1_rtm.050324-1447) 76.50 KB (78,336
bytes)  5/1/2007 4:02 PM  Microsoft Corporation
   c:\windows\system32\browser.dll
netrap  5.2.3790.0 (srv03_rtm.030324-2048)  11.50 KB (11,776 bytes)
  3/25/2003 6:00 AM Microsoft Corporation
   c:\windows\system32\netrap.dll
wbemcore  5.2.3790.1830 (srv03_sp1_rtm.050324-1447) 497.50 KB
(509,440 bytes) 5/1/2007 4:02 PM  Microsoft Corporation
   c:\windows\system32\wbem\wbemcore.dll
esscli  5.2.3790.1830 (srv03_sp1_rtm.050324-1447) 250.00 KB
(256,000 bytes) 5/1/2007 4:02 PM  Microsoft Corporation
   c:\windows\system32\wbem\esscli.dll
```

wmiutils 5.2.3790.1830 (srv03_sp1_rtm.050324-1447) 93.50 KB (95,744 bytes) 5/1/2007 4:02 PM Microsoft Corporation
  c:\windows\system32\wbem\wmiutils.dll
repdrvfs 5.2.3790.1830 (srv03_sp1_rtm.050324-1447) 172.50 KB (176,640 bytes) 5/1/2007 4:02 PM Microsoft Corporation
  c:\windows\system32\wbem\repdrvfs.dll
wmiprvsd 5.2.3790.1830 (srv03_sp1_rtm.050324-1447) 404.00 KB (413,696 bytes) 5/1/2007 4:02 PM Microsoft Corporation
  c:\windows\system32\wbem\wmiprvsd.dll
wbemess 5.2.3790.1830 (srv03_sp1_rtm.050324-1447) 271.50 KB (278,016 bytes) 5/1/2007 4:02 PM Microsoft Corporation
  c:\windows\system32\wbem\wbemess.dll
ncprov 5.2.3790.1830 (srv03_sp1_rtm.050324-1447) 46.50 KB (47,616 bytes) 5/1/2007 4:02 PM Microsoft Corporation
  c:\windows\system32\wbem\ncprov.dll
xactsrv 5.2.3790.1830 (srv03_sp1_rtm.050324-1447) 90.00 KB (92,160 bytes) 5/1/2007 4:02 PM Microsoft Corporation
  c:\windows\system32\wbem\xactsrv.dll
winrnr 5.2.3790.1830 (srv03_sp1_rtm.050324-1447) 17.00 KB (17,408 bytes) 5/1/2007 4:02 PM Microsoft Corporation
  c:\windows\system32\winrnr.dll
rasadhlp 5.2.3790.1830 (srv03_sp1_rtm.050324-1447) 7.50 KB (7,680 bytes) 5/1/2007 4:02 PM Microsoft Corporation
  c:\windows\system32\rasadhlp.dll
ntlsapi 5.2.3790.0 (srv03_rtm.030324-2048) 8.00 KB (8,192 bytes) 3/25/2003 6:00 AM Microsoft Corporation
  c:\windows\system32\ntlsapi.dll
netman 5.2.3790.1830 (srv03_sp1_rtm.050324-1447) 258.50 KB (264,704 bytes) 5/1/2007 4:02 PM Microsoft Corporation
  c:\windows\system32\netman.dll
netshell 5.2.3790.1830 (srv03_sp1_rtm.050324-1447) 1.73 MB (1,812,992 bytes) 5/1/2007 4:02 PM Microsoft Corporation
  c:\windows\system32\netshell.dll
clusapi 5.2.3790.1830 (srv03_sp1_rtm.050324-1447) 60.00 KB (61,440 bytes) 5/1/2007 4:02 PM Microsoft Corporation
  c:\windows\system32\clusapi.dll
wininet 6.00.3790.1830 (srv03_sp1_rtm.050324-1447) 646.00 KB (661,504 bytes) 5/1/2007 4:02 PM Microsoft Corporation
  c:\windows\system32\wininet.dll
wzcsapi 5.2.3790.1830 (srv03_sp1_rtm.050324-1447) 41.00 KB (41,984 bytes) 5/1/2007 4:02 PM Microsoft Corporation
  c:\windows\system32\wzcsapi.dll
netcfgx 5.2.3790.1830 (srv03_sp1_rtm.050324-1447) 763.00 KB (781,312 bytes) 5/1/2007 4:02 PM Microsoft Corporation
  c:\windows\system32\netcfgx.dll
rasmans 5.2.3790.1830 (srv03_sp1_rtm.050324-1447) 176.00 KB (180,224 bytes) 5/1/2007 4:02 PM 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 6:00 AM Microsoft Corporation
  c:\windows\system32\rastapi.dll
rasppp 5.2.3790.1830 (srv03_sp1_rtm.050324-1447) 205.00 KB (209,920 bytes) 5/1/2007 4:02 PM Microsoft Corporation
  c:\windows\system32\rasppp.dll
ipbootp 5.2.3790.1830 (srv03_sp1_rtm.050324-1447) 36.00 KB (36,864 bytes) 5/1/2007 4:02 PM 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 6:00 AM Microsoft Corporation
  c:\windows\system32\rasdlg.dll
spoolsv 5.2.3790.1830 (srv03_sp1_rtm.050324-1447) 57.00 KB (58,368 bytes) 5/1/2007 4:02 PM Microsoft Corporation
  c:\windows\system32\spoolsv.exe
spoolss 5.2.3790.1830 (srv03_sp1_rtm.050324-1447) 85.00 KB (87,040 bytes) 5/1/2007 4:02 PM Microsoft Corporation
  c:\windows\system32\spoolss.dll
localspl 5.2.3790.1830 (srv03_sp1_rtm.050324-1447) 339.00 KB (347,136 bytes) 3/25/2003 6:00 AM Microsoft Corporation
  c:\windows\system32\localspl.dll
cnbjmon 5.2.3790.1224 (dnsrv(skatari).040514-1058) 46.50 KB (47,616 bytes) 5/1/2007 4:02 PM Microsoft Corporation
  c:\windows\system32\cnbjmon.dll
pjlmon 5.2.3790.1830 (srv03_sp1_rtm.050324-1447) 15.00 KB (15,360 bytes) 5/1/2007 4:02 PM Microsoft Corporation
  c:\windows\system32\pjlmon.dll
tcpmon 5.2.3790.1830 (srv03_sp1_rtm.050324-1447) 47.00 KB (48,128 bytes) 5/1/2007 4:02 PM Microsoft Corporation
  c:\windows\system32\tcpmon.dll
wsnmp32 5.2.3790.1830 (srv03_sp1_rtm.050324-1447) 43.00 KB (44,032 bytes) 5/1/2007 4:02 PM Microsoft Corporation
  c:\windows\system32\wsnmp32.dll
tcpmib 5.2.3790.1830 (srv03_sp1_rtm.050324-1447) 17.50 KB (17,920 bytes) 5/1/2007 4:02 PM Microsoft Corporation
  c:\windows\system32\tcpmib.dll
wsock32 5.2.3790.0 (srv03_rtm.030324-2048) 22.00 KB (22,528 bytes) 3/25/2003 6:00 AM Microsoft Corporation
  c:\windows\system32\wsock32.dll
mgmtapi 5.2.3790.1830 (srv03_sp1_rtm.050324-1447) 15.50 KB (15,872 bytes) 3/25/2003 6:00 AM Microsoft Corporation
  c:\windows\system32\mgmtapi.dll
snmpapi 5.2.3790.1830 (srv03_sp1_rtm.050324-1447) 19.50 KB (19,968 bytes) 5/1/2007 4:02 PM Microsoft Corporation
  c:\windows\system32\snmpapi.dll
usbmon 5.2.3790.1830 (srv03_sp1_rtm.050324-1447) 17.00 KB (17,408 bytes) 5/1/2007 4:02 PM Microsoft Corporation
  c:\windows\system32\usbmon.dll
wshqos 5.2.3790.1830 (srv03_sp1_rtm.050324-1447) 24.00 KB (24,576 bytes) 5/1/2007 4:02 PM Microsoft Corporation
  c:\windows\system32\wshqos.dll

win32spl 5.2.3790.1830 (srv03_sp1_rtm.050324-1447) 100.50 KB (102,912 bytes) 3/25/2003 6:00 AM Microsoft Corporation
  c:\windows\system32\win32spl.dll
inetpp 5.2.3790.1830 (srv03_sp1_rtm.050324-1447) 75.00 KB (76,800 bytes) 5/1/2007 4:02 PM Microsoft Corporation
  c:\windows\system32\inetpp.dll
icmp 5.2.3790.0 (srv03_rtm.030324-2048) 4.50 KB (4,608 bytes) 3/25/2003 6:00 AM Microsoft Corporation
  c:\windows\system32\icmp.dll
ersvc 5.2.3790.1830 (srv03_sp1_rtm.050324-1447) 24.00 KB (24,576 bytes) 5/1/2007 4:02 PM Microsoft Corporation
  c:\windows\system32\ersvc.dll
winvnc4 4.1.2 428.95 KB (439,248 bytes) 5/3/2007 2:01 PM RealVNC Ltd. c:\program files\realvnc\vnc4\winvnc4.exe
wm_hooks 4.1 42.47 KB (43,488 bytes) 5/3/2007 2:01 PM RealVNC Ltd. c:\program files\realvnc\vnc4\wm_hooks.dll
termsrv 5.2.3790.1830 (srv03_sp1_rtm.050324-1447) 239.00 KB (244,736 bytes) 5/1/2007 4:02 PM Microsoft Corporation
  c:\windows\system32\termsrv.dll
icaapi 5.2.3790.1830 (srv03_sp1_rtm.050324-1447) 12.50 KB (12,800 bytes) 5/1/2007 4:02 PM Microsoft Corporation
  c:\windows\system32\icaapi.dll
mstlsapi 5.2.3790.1830 (srv03_sp1_rtm.050324-1447) 116.00 KB (118,784 bytes) 5/1/2007 4:02 PM Microsoft Corporation
  c:\windows\system32\mstlsapi.dll
rdpwsx 5.2.3790.1830 (srv03_sp1_rtm.050324-1447) 101.63 KB (104,072 bytes) 5/1/2007 4:02 PM Microsoft Corporation
  c:\windows\system32\rdpwsx.dll
explorer 6.00.3790.1830 (srv03_sp1_rtm.050324-1447) 1.00 MB (1,050,624 bytes) 5/1/2007 4:02 PM Microsoft Corporation
  c:\windows\explorer.exe
browseui 6.00.3790.1830 (srv03_sp1_rtm.050324-1447) 1,009.00 KB (1,033,216 bytes) 5/1/2007 4:02 PM Microsoft Corporation
  c:\windows\system32\browseui.dll
shdocvw 6.00.3790.1830 (srv03_sp1_rtm.050324-1447) 1.43 MB (1,502,720 bytes) 5/1/2007 4:02 PM Microsoft Corporation
  c:\windows\system32\shdocvw.dll
themeui 6.00.3790.1830 (srv03_sp1_rtm.050324-1447) 377.50 KB (386,560 bytes) 5/1/2007 4:02 PM 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 6:00 AM Microsoft Corporation
  c:\windows\system32\msimg32.dll
linkinfo 5.2.3790.1830 (srv03_sp1_rtm.050324-1447) 19.00 KB (19,456 bytes) 5/1/2007 4:02 PM Microsoft Corporation
  c:\windows\system32\linkinfo.dll
ntshrui 6.00.3790.1830 (srv03_sp1_rtm.050324-1447) 140.00 KB (143,360 bytes) 5/1/2007 4:02 PM Microsoft Corporation
  c:\windows\system32\ntshrui.dll
webcheck 6.00.3790.1830 (srv03_sp1_rtm.050324-1447) 272.50 KB (279,040 bytes) 5/1/2007 4:02 PM Microsoft Corporation
  c:\windows\system32\webcheck.dll
stobject 5.2.3790.1830 (srv03_sp1_rtm.050324-1447) 120.50 KB (123,392 bytes) 5/1/2007 4:02 PM Microsoft Corporation
  c:\windows\system32\stobject.dll
batmeter 6.00.3790.1830 (srv03_sp1_rtm.050324-1447) 31.50 KB (32,256 bytes) 5/1/2007 4:02 PM Microsoft Corporation
  c:\windows\system32\batmeter.dll
powrprof 6.00.3790.1830 (srv03_sp1_rtm.050324-1447) 16.50 KB (16,896 bytes) 5/1/2007 4:02 PM Microsoft Corporation
  c:\windows\system32\powrprof.dll
urlmon 6.00.3790.1830 (srv03_sp1_rtm.050324-1447) 673.00 KB (689,152 bytes) 5/1/2007 4:02 PM Microsoft Corporation
  c:\windows\system32\urlmon.dll
shdoclc 6.00.3790.0 (srv03_rtm.030324-2048) 588.50 KB (602,624 bytes) 3/25/2003 6:00 AM Microsoft Corporation
  c:\windows\system32\shdoclc.dll
drprov 5.2.3790.1830 (srv03_sp1_rtm.050324-1447) 14.00 KB (14,336 bytes) 5/1/2007 4:02 PM Microsoft Corporation
  c:\windows\system32\drprov.dll
ntlanman 5.2.3790.1830 (srv03_sp1_rtm.050324-1447) 43.50 KB (44,544 bytes) 5/1/2007 4:02 PM 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 6:00 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 6:00 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 6:00 AM Microsoft Corporation
  c:\windows\system32\davclnt.dll
browselc 6.00.3790.0 (srv03_rtm.030324-2048) 62.00 KB (63,488 bytes) 3/25/2003 6:00 AM Microsoft Corporation
  c:\windows\system32\browselc.dll
mlang 6.00.3790.1830 (srv03_sp1_rtm.050324-1447) 577.50 KB (591,360 bytes) 5/1/2007 4:02 PM Microsoft Corporation
  c:\windows\system32\mlang.dll
jscript 5.6.0.8827 448.00 KB (458,752 bytes) 5/1/2007 4:02 PM Microsoft Corporation c:\windows\system32\jscript.dll
dfshim 2.0.50727.42 (RTM.050727-4200) 81.50 KB (83,456 bytes) 9/23/2005 9:28 AM Microsoft Corporation
  c:\windows\system32\dfshim.dll
mscoree 2.0.50727.42 (RTM.050727-4200) 264.50 KB (270,848 bytes) 9/23/2005 9:28 AM Microsoft Corporation
  c:\windows\system32\mscoree.dll
shfusion 2.0.50727.42 (RTM.050727-4200) 105.00 KB (107,520 bytes) 9/23/2005 9:28 AM Microsoft Corporation
  c:\windows\microsoft.net\framework\v2.0.50727\shfusion.dll
msvcr80 8.00.50727.42 612.00 KB (626,688 bytes) 9/23/2005 9:29 AM Microsoft Corporation

```
c:\windows\winsxs\x86_microsoft.vc80.crt_1fc8b3b9a1e18e3b_8.0.507
27.42_x-ww_0de06acd\msvcr80.dll
fusion 2.0.50727.42 (RTM.050727-4200) 9.00 KB (9,216 bytes)
 9/23/2005 9:28 AM Microsoft Corporation
 c:\windows\microsoft.net\framework\v2.0.50727\fusion.dll
culture 2.0.50727.42 (RTM.050727-4200) 17.50 KB (17,920 bytes)
 9/23/2005 9:28 AM Microsoft Corporation
 c:\windows\microsoft.net\framework\v2.0.50727\culture.dll
shfusres 2.0.50727.42 (RTM.050727-4200) 83.50 KB (85,504 bytes)
 9/23/2005 9:29 AM Microsoft Corporation
 c:\windows\microsoft.net\framework\v2.0.50727\shfusres.dll
mydocs 6.00.3790.1830 (srv03_sp1_rtm.050324-1447) 90.00 KB
(92,160 bytes) 5/1/2007 4:02 PM  Microsoft Corporation
 c:\windows\system32\mydocs.dll
wzcdlg 5.2.3790.1830 (srv03_sp1_rtm.050324-1447) 380.50 KB
(389,632 bytes) 5/1/2007 4:02 PM  Microsoft Corporation
 c:\windows\system32\wzcdlg.dll
mprui 5.2.3790.0 (srv03_rtm.030324-2048) 49.00 KB (50,176 bytes)
 3/25/2003 6:00 AM Microsoft Corporation
 c:\windows\system32\mprui.dll
netui2 5.2.3790.0 (srv03_rtm.030324-2048) 309.50 KB (316,928
bytes) 3/25/2003 6:00 AM Microsoft Corporation
 c:\windows\system32\netui2.dll
comdlg32 6.00.3790.1830 (srv03_sp1_rtm.050324-1447) 274.50 KB
(281,088 bytes) 3/25/2003 6:00 AM Microsoft Corporation
 c:\windows\system32\comdlg32.dll
netmsg 5.2.3790.0 (srv03_rtm.030324-2048) 178.00 KB (182,272
bytes) 3/25/2003 6:00 AM Microsoft Corporation
 c:\windows\system32\netmsg.dll
netplwiz 5.2.3790.1830 (srv03_sp1_rtm.050324-1447) 855.00 KB
(875,520 bytes) 5/1/2007 4:02 PM  Microsoft Corporation
 c:\windows\system32\netplwiz.dll
tapisrv 5.2.3790.1830 (srv03_sp1_rtm.050324-1447) 248.50 KB
(254,464 bytes) 5/1/2007 4:02 PM  Microsoft Corporation
 c:\windows\system32\tapisrv.dll
unimdm 5.2.3790.1830 (srv03_sp1_rtm.050324-1447) 203.00 KB
(207,872 bytes) 5/1/2007 4:02 PM  Microsoft Corporation
 c:\windows\system32\unimdm.tsp
uniplat 5.2.3790.1830 (srv03_sp1_rtm.050324-1447) 13.00 KB (13,312
bytes) 5/1/2007 4:02 PM  Microsoft Corporation
 c:\windows\system32\uniplat.dll
kmddsp 5.2.3790.1830 (srv03_sp1_rtm.050324-1447) 34.50 KB (35,328
bytes) 5/1/2007 4:02 PM  Microsoft Corporation
 c:\windows\system32\kmddsp.tsp
ndptsp 5.2.3790.1830 (srv03_sp1_rtm.050324-1447) 47.00 KB (48,128
bytes) 5/1/2007 4:02 PM  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 6:00 AM Microsoft Corporation
 c:\windows\system32\ipconf.tsp
h323 5.2.3790.1830 (srv03_sp1_rtm.050324-1447) 259.50 KB (265,728
bytes) 5/1/2007 4:02 PM  Microsoft Corporation
 c:\windows\system32\h323.tsp
hidphone 5.2.3790.1830 (srv03_sp1_rtm.050324-1447) 29.50 KB
(30,208 bytes) 5/1/2007 4:02 PM  Microsoft Corporation
 c:\windows\system32\hidphone.tsp
hid 5.2.3790.1830 (srv03_sp1_rtm.050324-1447) 18.50 KB (18,944
bytes) 5/1/2007 4:02 PM  Microsoft Corporation
 c:\windows\system32\hid.dll
inetinfo 6.0.3790.1830 (srv03_sp1_rtm.050324-1447) 14.00 KB
(14,336 bytes) 5/1/2007 4:02 PM  Microsoft Corporation
 c:\windows\system32\inetsrv\inetinfo.exe
iisutil 6.0.3790.1830 (srv03_sp1_rtm.050324-1447) 164.00 KB
(167,936 bytes) 5/1/2007 4:02 PM  Microsoft Corporation
 c:\windows\system32\inetsrv\iisutil.dll
rpcref 6.0.3790.1830 (srv03_sp1_rtm.050324-1447) 4.00 KB (4,096
bytes) 5/1/2007 4:02 PM  Microsoft Corporation
 c:\windows\system32\inetsrv\rpcref.dll
iisrtl 6.0.3790.1830 (srv03_sp1_rtm.050324-1447) 138.50 KB
(141,824 bytes) 5/1/2007 4:02 PM  Microsoft Corporation
 c:\windows\system32\iisrtl.dll
iisadmin 6.0.3790.1830 (srv03_sp1_rtm.050324-1447) 21.00 KB
(21,504 bytes) 5/1/2007 4:02 PM  Microsoft Corporation
 c:\windows\system32\inetsrv\iisadmin.dll
coadmin 6.0.3790.1830 (srv03_sp1_rtm.050324-1447) 62.50 KB (64,000
bytes) 5/1/2007 4:02 PM  Microsoft Corporation
 c:\windows\system32\inetsrv\coadmin.dll
admwprox 6.0.3790.1830 (srv03_sp1_rtm.050324-1447) 47.00 KB
(48,128 bytes) 5/1/2007 4:02 PM  Microsoft Corporation
 c:\windows\system32\admwprox.dll
iiscfg 6.0.3790.1830 (srv03_sp1_rtm.050324-1447) 1.08 MB
(1,133,056 bytes) 5/1/2007 4:02 PM  Microsoft Corporation
 c:\windows\system32\inetsrv\iiscfg.dll
metadata 6.0.3790.1830 (srv03_sp1_rtm.050324-1447) 229.00 KB
(234,496 bytes) 5/1/2007 4:02 PM  Microsoft Corporation
 c:\windows\system32\inetsrv\metadata.dll
msxml3 8.70.1104.0 1.06 MB (1,107,456 bytes) 5/1/2007 4:02 PM
 Microsoft Corporation c:\windows\system32\msxml3.dll
svcext 6.0.3790.1830 (srv03_sp1_rtm.050324-1447) 43.50 KB (44,544
bytes) 5/1/2007 4:02 PM  Microsoft Corporation
 c:\windows\system32\inetsrv\svcext.dll
security 5.2.3790.0 (srv03_rtm.030324-2048) 5.50 KB (5,632 bytes)
 3/25/2003 6:00 AM Microsoft Corporation
 c:\windows\system32\security.dll
iismap 6.0.3790.1830 (srv03_sp1_rtm.050324-1447) 58.50 KB (59,904
bytes) 5/1/2007 4:02 PM  Microsoft Corporation
 c:\windows\system32\iismap.dll
wamreg 6.0.3790.1830 (srv03_sp1_rtm.050324-1447) 54.50 KB (55,808
bytes) 5/1/2007 4:02 PM  Microsoft Corporation
 c:\windows\system32\inetsrv\wamreg.dll
```

```
strmfilt 6.0.3790.1830 (srv03_sp1_rtm.050324-1447) 84.00 KB
(86,016 bytes) 5/1/2007 4:02 PM  Microsoft Corporation
 c:\windows\system32\strmfilt.dll
httpapi 5.2.3790.1830 (srv03_sp1_rtm.050324-1447) 24.00 KB (24,576
bytes) 5/1/2007 4:02 PM  Microsoft Corporation
 c:\windows\system32\httpapi.dll
w3core 6.0.3790.1830 (srv03_sp1_rtm.050324-1447) 340.50 KB
(348,672 bytes) 5/1/2007 4:02 PM  Microsoft Corporation
 c:\windows\system32\inetsrv\w3core.dll
lonsint 6.0.3790.1830 (srv03_sp1_rtm.050324-1447) 13.00 KB (13,312
bytes) 5/1/2007 4:02 PM  Microsoft Corporation
 c:\windows\system32\inetsrv\lonsint.dll
w3cache 6.0.3790.1830 (srv03_sp1_rtm.050324-1447) 19.00 KB (19,456
bytes) 5/1/2007 4:02 PM  Microsoft Corporation
 c:\windows\system32\inetsrv\w3cache.dll
w3tp 6.0.3790.1830 (srv03_sp1_rtm.050324-1447) 13.00 KB (13,312
bytes) 5/1/2007 4:02 PM  Microsoft Corporation
 c:\windows\system32\inetsrv\w3tp.dll
w3comlog 6.0.3790.1830 (srv03_sp1_rtm.050324-1447) 10.50 KB
(10,752 bytes) 5/1/2007 4:02 PM  Microsoft Corporation
 c:\windows\system32\inetsrv\w3comlog.dll
w3dt 6.0.3790.1830 (srv03_sp1_rtm.050324-1447) 38.50 KB (39,424
bytes) 5/1/2007 4:02 PM  Microsoft Corporation
 c:\windows\system32\inetsrv\w3dt.dll
iisres 6.0.3790.1830 (srv03_sp1_rtm.050324-1447) 120.00 KB
(122,880 bytes) 5/1/2007 4:02 PM  Microsoft Corporation
 c:\windows\system32\inetsrv\iisres.dll
aspnet_filter 2.0.50727.42 (RTM.050727-4200) 10.50 KB (10,752
bytes) 9/23/2005 9:28 AM Microsoft Corporation
 c:\windows\microsoft.net\framework\v2.0.50727\aspnet_filter.dll
w3isapi 6.0.3790.1830 (srv03_sp1_rtm.050324-1447) 61.00 KB (62,464
bytes) 5/1/2007 4:02 PM  Microsoft Corporation
 c:\windows\system32\inetsrv\w3isapi.dll
comadmin 2001.12.4720.1830 (srv03_sp1_rtm.050324-1447) 192.50 KB
(197,120 bytes) 5/1/2007 4:02 PM  Microsoft Corporation
 c:\windows\system32\com\comadmin.dll
mfcsubs 2001.12.4720.0 (srv03_rtm.030324-2048) 21.50 KB (22,016
bytes) 3/25/2003 6:00 AM Microsoft Corporation
 c:\windows\system32\mfcsubs.dll
colbact 2001.12.4720.1830 (srv03_sp1_rtm.050324-1447) 59.50 KB
(60,928 bytes) 5/1/2007 4:02 PM  Microsoft Corporation
 c:\windows\system32\colbact.dll
gzip 6.0.3790.1830 (srv03_sp1_rtm.050324-1447) 25.00 KB (25,600
bytes) 5/1/2007 4:02 PM  Microsoft Corporation
 c:\windows\system32\inetsrv\gzip.dll
wamregps 6.0.3790.0 (srv03_rtm.030324-2048) 7.00 KB (7,168 bytes)
 5/1/2007 3:55 PM  Microsoft Corporation
 c:\windows\system32\wamregps.dll
iisw3adm 6.0.3790.1830 (srv03_sp1_rtm.050324-1447) 211.00 KB
(216,064 bytes) 5/1/2007 4:02 PM  Microsoft Corporation
 c:\windows\system32\inetsrv\iisw3adm.dll
helpctr 5.2.3790.1830 (srv03_sp1_rtm.050324-1447) 778.00 KB
(796,672 bytes) 5/1/2007 4:02 PM  Microsoft Corporation
 c:\windows\pchealth\helpctr\binaries\helpctr.exe
hcappres 5.2.3790.0 (srv03_rtm.030324-2048) 6.50 KB (6,656 bytes)
 5/1/2007 12:58 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) 5/1/2007 4:02 PM  Microsoft Corporation
 c:\windows\system32\itss.dll
pchshell 5.2.3790.1830 (srv03_sp1_rtm.050324-1447) 104.50 KB
(107,008 bytes) 5/1/2007 4:02 PM  Microsoft Corporation
 c:\windows\pchealth\helpctr\binaries\pchshell.dll
mshtml 6.00.3790.1830 (srv03_sp1_rtm.050324-1447) 2.96 MB
(3,108,864 bytes) 5/1/2007 4:02 PM  Microsoft Corporation
 c:\windows\system32\mshtml.dll
msls31 3.10.349.0 142.00 KB (145,408 bytes) 5/1/2007 4:02 PM
 Microsoft Corporation c:\windows\system32\msls31.dll
msimtf 5.2.3790.1830 (srv03_sp1_rtm.050324-1447) 156.00 KB
(159,744 bytes) 5/1/2007 4:02 PM  Microsoft Corporation
 c:\windows\system32\msimtf.dll
msctf 5.2.3790.1830 (srv03_sp1_rtm.050324-1447) 311.00 KB (318,464
bytes) 5/1/2007 4:02 PM  Microsoft Corporation
 c:\windows\system32\msctf.dll
mshtmled 6.00.3790.1830 (srv03_sp1_rtm.050324-1447) 454.50 KB
(465,408 bytes) 5/1/2007 4:02 PM  Microsoft Corporation
 c:\windows\system32\mshtmled.dll
vbscript 5.6.0.8827 392.00 KB (401,408 bytes) 5/1/2007 4:02 PM
 Microsoft Corporation c:\windows\system32\vbscript.dll
msinfo 5.2.3790.1830 (srv03_sp1_rtm.050324-1447) 376.00 KB
(385,024 bytes) 5/1/2007 4:02 PM  Microsoft Corporation
 c:\windows\pchealth\helpctr\binaries\msinfo.dll
mfc42u 6.06.8063.0 1.11 MB (1,163,776 bytes) 5/1/2007 4:02 PM
 Microsoft Corporation c:\windows\system32\mfc42u.dll
odbc32 3.526.1830.0 (srv03_sp1_rtm.050324-1447) 240.00 KB
(245,760 bytes) 5/1/2007 4:02 PM  Microsoft Corporation
 c:\windows\system32\odbc32.dll
odbcint 3.526.1830.0 (srv03_sp1_rtm.050324-1447) 92.00 KB (94,208
bytes) 5/1/2007 4:02 PM  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 6:00 AM Microsoft Corporation
 c:\windows\system32\riched32.dll
riched20 5.31.23.1224 439.00 KB (449,536 bytes) 5/1/2007 4:02 PM
 Microsoft Corporation c:\windows\system32\riched20.dll
helpsvc 5.2.3790.1830 (srv03_sp1_rtm.050324-1447) 745.00 KB
(762,880 bytes) 5/1/2007 4:02 PM  Microsoft Corporation
 c:\windows\pchealth\helpctr\binaries\helpsvc.exe

[Services]
```

Display Name Name State Start Mode Service Type Path Error
Control Start Name Tag ID
Application Experience Lookup Service AeLookupSvc Running Auto
  Share Process c:\windows\system32\svchost.exe -k netsvcs Normal
  LocalSystem 0
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

ASP.NET State Service aspnet_state Stopped Manual Own Process
  c:\windows\microsoft.net\framework\v2.0.50727\aspnet_state.exe
  Normal NT AUTHORITY\NetworkService 0
Windows Audio AudioSrv Running Auto Share Process
  c:\windows\system32\svchost.exe -k netsvcs Normal LocalSystem 0

Background Intelligent Transfer Service BITS Stopped Manual Share
Process c:\windows\system32\svchost.exe -k netsvcs Normal
  LocalSystem 0
Computer Browser Browser Running Auto Share Process
  c:\windows\system32\svchost.exe -k netsvcs Normal LocalSystem 0

Indexing Service CiSvc Stopped Disabled Share Process
  c:\windows\system32\cisvc.exe Normal LocalSystem 0
ClipBook ClipSrv Stopped Disabled Own Process
  c:\windows\system32\clipsrv.exe Normal LocalSystem 0
.NET Runtime Optimization Service v2.0.50727_X86
  clr_optimization_v2.0.50727_32 Stopped Manual Own Process
  c:\windows\microsoft.net\framework\v2.0.50727\mscorsvw.exe
  Ignore LocalSystem 0
COM+ System Application COMSysApp Stopped Manual Own Process
  c:\windows\system32\dllhost.exe /processid:{02d4b3f1-fd88-11d1-
  960d-00805fc79235} Normal LocalSystem 0
Cryptographic Services CryptSvc Running Auto Share Process
  c:\windows\system32\svchost.exe -k netsvcs Normal LocalSystem 0

DCOM Server Process Launcher DcomLaunch Running Auto Share
Process c:\windows\system32\svchost.exe -k dcomlaunch Normal
  LocalSystem 0
Distributed File System Dfs Stopped Manual Own Process
  c:\windows\system32\dfssvc.exe Normal LocalSystem 0
DHCP Client Dhcp Running Auto Share Process
  c:\windows\system32\svchost.exe -k networkservice Normal NT
AUTHORITY\NetworkService 0
Logical Disk Manager Administrative Service dmadmin Stopped Manual
  Share Process c:\windows\system32\dmadmin.exe /com Normal
  LocalSystem 0
Logical Disk Manager dmserver Running Auto Share Process
  c:\windows\system32\svchost.exe -k netsvcs Normal LocalSystem 0

DNS Client Dnscache Running Auto Share Process
  c:\windows\system32\svchost.exe -k networkservice Normal NT
AUTHORITY\NetworkService 0
Error Reporting Service ERSvc Running Auto Share Process
  c:\windows\system32\svchost.exe -k winerr Ignore LocalSystem 0
Event Log Eventlog Running Auto Share Process
  c:\windows\system32\services.exe Normal LocalSystem 0
COM+ Event System EventSystem Running Auto Share Process
  c:\windows\system32\svchost.exe -k netsvcs Normal LocalSystem 0

Help and Support helpsvc Running Auto 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 Running Manual Share Process
  c:\windows\system32\inetsrv\inetinfo.exe Normal LocalSystem 0
IIS Admin Service IISADMIN Running Auto Share Process
  c:\windows\system32\inetsrv\inetinfo.exe Normal LocalSystem 0
IMAPI CD-Burning COM Service ImapiService Stopped Disabled Own
Process c:\windows\system32\imapi.exe Normal LocalSystem 0
Intersite Messaging IsmServ Stopped Disabled Own Process
  c:\windows\system32\ismserv.exe Normal LocalSystem 0
Kerberos Key Distribution Center kdc Stopped Disabled Share
Process c:\windows\system32\lsass.exe Normal LocalSystem 0
Server lanmanserver Running Auto Share Process
  c:\windows\system32\svchost.exe -k netsvcs Normal LocalSystem 0

Workstation lanmanworkstation Running Auto Share Process
  c:\windows\system32\svchost.exe -k netsvcs Normal LocalSystem 0

License Logging LicenseService Stopped Disabled Own Process
  c:\windows\system32\llssrv.exe Normal NT
AUTHORITY\NetworkService 0
TCP/IP NetBIOS Helper LmHosts Running Auto Share Process
  c:\windows\system32\svchost.exe -k localservice Normal NT
AUTHORITY\LocalService 0
Messenger Messenger Stopped Disabled Share Process
  c:\windows\system32\svchost.exe -k netsvcs Normal LocalSystem 0

NetMeeting Remote Desktop Sharing mnmsrvc Stopped Disabled Own
Process c:\windows\system32\mnmsrvc.exe Normal LocalSystem 0
Distributed Transaction Coordinator MSDTC Running Auto Own Process
  c:\windows\system32\msdtc.exe Normal NT AUTHORITY\NetworkService
  0
Windows Installer MSIServer Stopped Manual Share Process
  c:\windows\system32\msiexec.exe /v Normal LocalSystem 0

SQL Server (SQLEXPRESS) MSSQL$SQLEXPRESS Running Auto Own Process
  "c:\program files\microsoft sql
server\mssql.1\mssql\binn\sqlservr.exe" -ssqlexpress Normal NT
AUTHORITY\NetworkService 0
SQL Server Active Directory Helper MSSQLServerADHelper Stopped
  Disabled Own Process "c:\program files\microsoft sql
server\90\shared\sqladhlp90.exe" Normal NT
AUTHORITY\NetworkService 0
Visual Studio 2005 Remote Debugger msvsmon80 Stopped Disabled Own
Process "c:\program files\microsoft visual studio
8\common7\ide\remote debugger\x86\msvsmon.exe" /service msvsmon80
  Ignore LocalSystem 0
Network DDE NetDDE Stopped Disabled Share Process
  c:\windows\system32\netdde.exe Normal LocalSystem 0
Network DDE DSDM NetDDEdsdm Stopped Disabled Share Process
  c:\windows\system32\netdde.exe Normal LocalSystem 0
Net Logon Netlogon Stopped Manual Share Process
  c:\windows\system32\lsass.exe Normal LocalSystem 0
Network Connections Netman Running Manual Share Process
  c:\windows\system32\svchost.exe -k netsvcs Normal LocalSystem 0

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

File Replication NtFrs Stopped Manual Own Process
  c:\windows\system32\ntfrs.exe Ignore LocalSystem 0
NT LM Security Support Provider NtLmSsp Stopped Manual Share
Process c:\windows\system32\lsass.exe Normal LocalSystem 0
Removable Storage NtmsSvc Stopped Manual Share Process
  c:\windows\system32\svchost.exe -k netsvcs Normal LocalSystem 0

OracleJobSchedulerMYDB OracleJobSchedulerMYDB Stopped Disabled
  Own Process c:\oracle\bin\extjob.exe mydb Normal LocalSystem 0
OracleServiceMYDB OracleServiceMYDB Stopped Manual Own Process
  c:\oracle\bin\oracle.exe mydb Normal LocalSystem 0
Plug and Play PlugPlay Running Auto Share Process
  c:\windows\system32\services.exe Normal LocalSystem 0
IPSEC Services PolicyAgent Running Auto 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 Running Auto 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 Running Auto Own Process
  c:\windows\system32\spoolsv.exe Normal LocalSystem 0
SQL Server Browser SQLBrowser Stopped Disabled Own Process
  "c:\program files\microsoft sql server\90\shared\sqlbrowser.exe"
  Normal NT AUTHORITY\NetworkService 0
SQL Server VSS Writer SQLWriter Stopped Manual Own Process
  "c:\program files\microsoft sql server\90\shared\sqlwriter.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 Running Auto 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 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 Running Auto Share Process
  c:\windows\system32\svchost.exe -k localservice Normal NT
AUTHORITY\LocalService 0
World Wide Web Publishing Service W3SVC Running Auto 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
VNC Server Version 4 WinVNC4 Running Auto Own Process "c:\program
files\realvnc\vnc4\winvnc4.exe" -service Ignore LocalSystem 0
Portable Media Serial Number Service WmdmPmSN Stopped Manual
  Share Process c:\windows\system32\svchost.exe -k netsvcs Normal
  LocalSystem 0
Windows Management Instrumentation Driver Extensions Wmi Stopped
  Manual Share Process c:\windows\system32\svchost.exe -k netsvcs
  Normal LocalSystem 0
WMI Performance Adapter WmiApSrv Stopped Manual Own Process
  c:\windows\system32\wbem\wmiapsrv.exe Normal LocalSystem 0
Automatic Updates wuauserv Running Auto Share Process
  c:\windows\system32\svchost.exe -k netsvcs Normal LocalSystem 0

Wireless Configuration WZCSVC Running Auto 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
Microsoft .NET Framework SDK v2.0 All Users:Microsoft .NET
Framework SDK v2.0 All Users
Microsoft .NET Framework SDK v2.0\Tools All Users:Microsoft .NET
Framework SDK v2.0\Tools All Users
Microsoft Developer Network All Users:Microsoft Developer Network
  All Users
Microsoft SQL Server 2005 All Users:Microsoft SQL Server 2005 All
Users
Microsoft SQL Server 2005\Configuration Tools All Users:Microsoft
SQL Server 2005\Configuration Tools All Users
Microsoft Visual Studio 2005 All Users:Microsoft Visual Studio
2005 All Users

Microsoft Visual Studio 2005\Visual Studio Remote Tools All
Users:Microsoft Visual Studio 2005\Visual Studio Remote Tools All
Users
Microsoft Visual Studio 2005\Visual Studio Tools All
Users:Microsoft Visual Studio 2005\Visual Studio Tools All Users
Oracle - OraClient10g_home1 All Users:Oracle - OraClient10g_home1
  All Users
Oracle - OraClient10g_home1\Application Development All
Users:Oracle - OraClient10g_home1\Application Development All Users

Oracle - OraClient10g_home1\Configuration and Migration Tools All
Users:Oracle - OraClient10g_home1\Configuration and Migration Tools
  All Users
Oracle - OraClient10g_home1\Integrated Management Tools All
Users:Oracle - OraClient10g_home1\Integrated Management Tools All
Users
Oracle - OraClient10g_home1\Oracle Installation Products All
Users:Oracle - OraClient10g_home1\Oracle Installation Products All
Users
RealVNC All Users:RealVNC All Users
RealVNC\VNC Server 4 (Service-Mode) All Users:RealVNC\VNC Server 4
(Service-Mode) All Users
RealVNC\VNC Server 4 (User-Mode) All Users:RealVNC\VNC Server 4
(User-Mode) All Users
RealVNC\VNC Viewer 4 All Users:RealVNC\VNC Viewer 4 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 BD1\Administrator:Accessories BD1\Administrator
Accessories\Accessibility
  BD1\Administrator:Accessories\Accessibility BD1\Administrator
Accessories\Entertainment
  BD1\Administrator:Accessories\Entertainment BD1\Administrator
Administrative Tools BD1\Administrator:Administrative Tools
  BD1\Administrator
Startup BD1\Administrator:Startup BD1\Administrator

[Startup Programs]

Program Command User Name Location
desktop desktop.ini NT AUTHORITY\SYSTEM Startup
desktop desktop.ini BD1\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
5/3/2007 1:04 PM Application Error Faulting application
inetinfo.exe, version 6.0.3790.1830, faulting module unknown,
version 0.0.0.0, fault address 0x00000000.

7/31/2007 8:29 AM Application Hang Hanging application
notepad.exe, version 5.2.3790.1830, hang module hungapp, version
0.0.0.0, hang address 0x00000000.

[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 7:55:26 PM
  C:\WINDOWS\system32 Microsoft Corporation
advpack.dll 6.0.3790.1830 98 KB 3/24/2005 7:55:28 PM
  C:\WINDOWS\system32 Microsoft Corporation

asctrls.ocx 6.0.3790.0 90 KB 3/25/2003 7:00:00 AM
  C:\WINDOWS\system32 Microsoft Corporation
browselc.dll 6.0.3790.0 62 KB 3/25/2003 7:00:00 AM
  C:\WINDOWS\system32 Microsoft Corporation
browseui.dll 6.0.3790.1830 1,009 KB 3/24/2005 7:56:10 PM
  C:\WINDOWS\system32 Microsoft Corporation
cdfview.dll 6.0.3790.1830 149 KB 3/24/2005 7:56:32 PM
  C:\WINDOWS\system32 Microsoft Corporation
comctl32.dll 5.82.3790.1830 585 KB 3/24/2005 7:57:56 PM
  C:\WINDOWS\system32 Microsoft Corporation
dxtrans.dll 6.3.3790.1830 205 KB 3/24/2005 8:00:58 PM
  C:\WINDOWS\system32 Microsoft Corporation
dxtmsft.dll 6.3.3790.1830 355 KB 3/24/2005 8:00:58 PM
  C:\WINDOWS\system32 Microsoft Corporation
iecont.dll <File Missing> Not Available Not Available Not
Available Not Available
iecontlc.dll <File Missing> Not Available Not Available Not
Available Not Available
iedkcs32.dll 16.0.3790.1830 324 KB 3/24/2005 8:04:58 PM
  C:\WINDOWS\system32 Microsoft Corporation
iepeers.dll 6.0.3790.1830 248 KB 3/24/2005 8:04:58 PM
  C:\WINDOWS\system32 Microsoft Corporation
iesetup.dll 6.0.3790.1830 61 KB 3/24/2005 8:04:58 PM
  C:\WINDOWS\system32 Microsoft Corporation
ieuinit.inf Not Available 24 KB 3/24/2005 8:04:58 PM
  C:\WINDOWS\system32 Not Available
iexplore.exe 6.0.3790.1830 92 KB 3/24/2005 8:04:58 PM C:\Program
Files\Internet Explorer Microsoft Corporation
imgutil.dll 6.0.3790.1830 38 KB 3/24/2005 8:05:04 PM
  C:\WINDOWS\system32 Microsoft Corporation
inetcpl.cpl 6.0.3790.1830 358 KB 3/24/2005 8:05:06 PM
  C:\WINDOWS\system32 Microsoft Corporation
inetcplc.dll 6.0.3790.0 109 KB 3/25/2003 7:00:00 AM
  C:\WINDOWS\system32 Microsoft Corporation
inseng.dll 6.0.3790.1830 94 KB 3/24/2005 8:05:06 PM
  C:\WINDOWS\system32 Microsoft Corporation
mlang.dll 6.0.3790.1830 578 KB 3/24/2005 8:07:20 PM
  C:\WINDOWS\system32 Microsoft Corporation
msencode.dll 2002.10.4.0 112 KB 3/25/2003 7:00:00 AM
  C:\WINDOWS\system32 □□□ə□w□□
mshta.exe 6.0.3790.1830 30 KB 3/24/2005 8:07:26 PM
  C:\WINDOWS\system32 Microsoft Corporation
mshtml.dll 6.0.3790.1830 3,036 KB 3/24/2005 8:07:26 PM
  C:\WINDOWS\system32 Microsoft Corporation
mshtml.tlb 6.0.3790.1830 1,320 KB 3/24/2005 8:07:26 PM
  C:\WINDOWS\system32 Microsoft Corporation
mshtmled.dll 6.0.3790.1830 455 KB 3/24/2005 8:07:26 PM
  C:\WINDOWS\system32 Microsoft Corporation
mshtmler.dll 6.0.3790.1830 56 KB 3/24/2005 8:07:26 PM
  C:\WINDOWS\system32 Microsoft Corporation
msident.dll 6.0.3790.1830 48 KB 3/24/2005 8:07:28 PM
  C:\WINDOWS\system32 Microsoft Corporation
msidntld.dll 6.0.3790.0 15 KB 3/25/2003 7:00:00 AM
  C:\WINDOWS\system32 Microsoft Corporation
msieftp.dll 6.0.3790.1830 244 KB 3/24/2005 8:07:28 PM
  C:\WINDOWS\system32 Microsoft Corporation
msrating.dll 6.0.3790.1830 144 KB 3/24/2005 8:07:36 PM
  C:\WINDOWS\system32 Microsoft Corporation
mstime.dll 6.0.3790.1830 523 KB 3/24/2005 8:07:38 PM
  C:\WINDOWS\system32 Microsoft Corporation
occache.dll 6.0.3790.1830 94 KB 3/24/2005 8:08:34 PM
  C:\WINDOWS\system32 Microsoft Corporation
proctexe.ocx 6.3.3790.1830 83 KB 3/24/2005 8:12:26 PM
  C:\WINDOWS\system32 Intel Corporation
sendmail.dll 6.0.3790.1830 56 KB 3/24/2005 8:13:36 PM
  C:\WINDOWS\system32 Microsoft Corporation
shdoclc.dll 6.0.3790.0 589 KB 3/25/2003 7:00:00 AM
  C:\WINDOWS\system32 Microsoft Corporation
shdocvw.dll 6.0.3790.1830 1,468 KB 3/24/2005 8:13:36 PM
  C:\WINDOWS\system32 Microsoft Corporation
shfolder.dll 6.0.3790.1830 25 KB 3/24/2005 8:13:36 PM
  C:\WINDOWS\system32 Microsoft Corporation
shlwapi.dll 6.0.3790.1830 314 KB 3/24/2005 8:13:40 PM
  C:\WINDOWS\system32 Microsoft Corporation
tdc.ocx 1.3.0.3130 58 KB 3/25/2003 7:00:00 AM C:\WINDOWS\system32
  Microsoft Corporation
url.dll 6.0.3790.1830 37 KB 3/24/2005 8:26:12 PM
  C:\WINDOWS\system32 Microsoft Corporation
urlmon.dll 6.0.3790.1830 673 KB 3/24/2005 8:26:12 PM
  C:\WINDOWS\system32 Microsoft Corporation
webcheck.dll 6.0.3790.1830 273 KB 3/24/2005 8:26:16 PM
  C:\WINDOWS\system32 Microsoft Corporation
wininet.dll 6.0.3790.1830 646 KB 3/24/2005 8:26:18 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 Never
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 BD2 msinfo32 export

System Information report written at: 09/12/07 10:04:23
System Name: BD2
[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 BD2
System Manufacturer HP
System Model ProLiant ML110 G4
System Type X86-based PC
Processor x86 Family 15 Model 6 Stepping 5 GenuineIntel ~2793 Mhz
Processor x86 Family 15 Model 6 Stepping 5 GenuineIntel ~2793 Mhz
BIOS Version/Date HP O10, 3/5/2007
SMBIOS Version 2.4
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_sp1_rtm.050324-1447)"
User Name BD2\Administrator
Time Zone Central Daylight Time
Total Physical Memory 1,022.05 MB
Available Physical Memory 689.23 MB
Total Virtual Memory 2.91 GB
Available Virtual Memory 2.73 GB
Page File Space 2.00 GB
Page File C:\pagefile.sys

[Hardware Resources]

[Conflicts/Sharing]

Resource Device
I/O Port 0x00000000-0x00000BFF PCI bus
I/O Port 0x00000000-0x00000BFF Direct memory access controller

I/O Port 0x000003C0-0x000003DF PCI standard PCI-to-PCI bridge
I/O Port 0x000003C0-0x000003DF Standard VGA Graphics Adapter

Memory Address 0xEF900000-0xEF9FFFFF PCI standard PCI-to-PCI
bridge

```
Memory Address 0xEF900000-0xEF9FFFFF  HP NC110T PCIe Gigabit Server
Adapter

IRQ 23  Standard Universal PCI to USB Host Controller
IRQ 23  Standard Enhanced PCI to USB Host Controller

Memory Address 0xEF000000-0xEF8FFFFF  PCI standard PCI-to-PCI
bridge
Memory Address 0xEF000000-0xEF8FFFFF  Standard VGA Graphics Adapter


IRQ 16  HP NC110T PCIe Gigabit Server Adapter
IRQ 16  PCI standard PCI-to-PCI bridge
IRQ 16  Standard Universal PCI to USB Host Controller

IRQ 17  PCI standard PCI-to-PCI bridge
IRQ 17  PCI standard PCI-to-PCI bridge
IRQ 17  HP NC320i PCIe Gigabit Server Adapter

IRQ 19  Standard Universal PCI to USB Host Controller
IRQ 19  Standard Dual Channel PCI IDE Controller

Memory Address 0xA0000-0xBFFFF  PCI bus
Memory Address 0xA0000-0xBFFFF  PCI standard PCI-to-PCI bridge
Memory Address 0xA0000-0xBFFFF  Standard VGA Graphics Adapter

I/O Port 0x000003B0-0x000003BB  PCI standard PCI-to-PCI bridge
I/O Port 0x000003B0-0x000003BB  Standard VGA Graphics Adapter

I/O Port 0x00004000-0x00004FFF  PCI standard PCI-to-PCI bridge
I/O Port 0x00004000-0x00004FFF  HP NC110T PCIe Gigabit Server
Adapter

Memory Address 0xEFA00000-0xEFAFFFFF  PCI standard PCI-to-PCI
bridge
Memory Address 0xEFA00000-0xEFAFFFFF  HP NC320i PCIe Gigabit Server
Adapter

Memory Address 0xEE000000-0xEEFFFFFF  PCI standard PCI-to-PCI
bridge
Memory Address 0xEE000000-0xEEFFFFFF  Standard VGA Graphics Adapter


[DMA]

Resource  Device  Status
Channel 4 Direct memory access controller OK

[Forced Hardware]

Device  PNP Device ID

[I/O]

Resource  Device  Status
0x00000000-0x00000BFF PCI bus OK
0x00000000-0x00000BFF Direct memory access controller OK
0x00000D00-0x0000FDFF PCI bus OK
0x00004000-0x00004FFF PCI standard PCI-to-PCI bridge  OK
0x00004000-0x00004FFF HP NC110T PCIe Gigabit Server Adapter OK
0x000003B0-0x000003BB PCI standard PCI-to-PCI bridge  OK
0x000003B0-0x000003BB Standard VGA Graphics Adapter OK
0x000003C0-0x000003DF PCI standard PCI-to-PCI bridge  OK
0x000003C0-0x000003DF Standard VGA Graphics Adapter OK
0x00003000-0x0000301F Standard Universal PCI to USB Host Controller
  OK
0x00003020-0x0000303F Standard Universal PCI to USB Host Controller
  OK
0x00003040-0x0000305F Standard Universal PCI to USB Host Controller
  OK
0x00003060-0x0000307F Standard Universal PCI to USB Host Controller
  OK
0x00000A79-0x00000A79 ISAPNP Read Data Port OK
0x00000279-0x00000279 ISAPNP Read Data Port OK
0x00000274-0x00000277 ISAPNP Read Data Port OK
0x00000010-0x0000001F Motherboard resources OK
0x00000024-0x00000025 Motherboard resources OK
0x00000028-0x00000029 Motherboard resources OK
0x0000002C-0x0000002D Motherboard resources OK
0x00000030-0x00000031 Motherboard resources OK
0x00000034-0x00000035 Motherboard resources OK
0x00000038-0x00000039 Motherboard resources OK
0x0000003C-0x0000003D Motherboard resources OK
0x00000060-0x00000060 Motherboard resources OK
0x00000062-0x00000062 Motherboard resources OK
0x00000064-0x00000064 Motherboard resources OK
0x00000066-0x00000066 Motherboard resources OK
0x00000072-0x00000077 Motherboard resources OK
0x00000080-0x00000080 Motherboard resources OK
0x00000090-0x0000009F Motherboard resources OK
0x000000A4-0x000000A5 Motherboard resources OK
0x000000A8-0x000000A9 Motherboard resources OK
0x000000AC-0x000000AD Motherboard resources OK
0x000000B0-0x000000B5 Motherboard resources OK
0x000000B8-0x000000B9 Motherboard resources OK
0x000000BC-0x000000BD Motherboard resources OK
0x00000800-0x0000083F Motherboard resources OK
0x00001000-0x0000107F Motherboard resources OK
0x00001180-0x000011BF Motherboard resources OK
0x0000002E-0x0000002F Motherboard resources OK
```

```
0x000004D0-0x000004D1 Motherboard resources OK
0x00000600-0x0000063F Motherboard resources OK
0x0000FE00-0x0000FE00 Motherboard resources OK
0x00000081-0x0000008F Direct memory access controller OK
0x000000C0-0x000000DF Direct memory access controller OK
0x000000F0-0x000000FE Numeric data processor  OK
0x00000020-0x00000021 Programmable interrupt controller OK
0x000000A0-0x000000A1 Programmable interrupt controller OK
0x00000070-0x00000071 System CMOS/real time clock OK
0x00000061-0x00000061 System speaker  OK
0x00000040-0x00000043 System timer  OK
0x00000050-0x00000053 System timer  OK
0x000003F8-0x000003FF Communications Port (COM1)  OK
0x000002F8-0x000002FF Communications Port (COM2)  OK
0x00003080-0x0000308F Standard Dual Channel PCI 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
0x000030C8-0x000030CF Standard Dual Channel PCI IDE Controller  OK

0x000030BC-0x000030BF Standard Dual Channel PCI IDE Controller  OK

0x000030C0-0x000030C7 Standard Dual Channel PCI IDE Controller  OK

0x000030B8-0x000030BB Standard Dual Channel PCI IDE Controller  OK

0x00003090-0x0000309F Standard Dual Channel PCI IDE Controller  OK

0x00000CA2-0x00000CA3   OK

[IRQs]

Resource  Device  Status
IRQ 9 Microsoft ACPI-Compliant System OK
IRQ 17  PCI standard PCI-to-PCI bridge  OK
IRQ 17  PCI standard PCI-to-PCI bridge  OK
IRQ 17  HP NC320i PCIe Gigabit Server Adapter OK
IRQ 16  HP NC110T PCIe Gigabit Server Adapter OK
IRQ 16  PCI standard PCI-to-PCI bridge  OK
IRQ 16  Standard Universal PCI to USB Host Controller OK
IRQ 23  Standard Universal PCI to USB Host Controller OK
IRQ 23  Standard Enhanced PCI to USB Host Controller OK
IRQ 19  Standard Universal PCI to USB Host Controller OK
IRQ 19  Standard Dual Channel PCI IDE Controller  OK
IRQ 18  Standard Universal 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 4 Communications Port (COM1)  OK
IRQ 3 Communications Port (COM2)  OK
IRQ 14  Primary IDE Channel OK

[Memory]

Resource  Device  Status
0xA0000-0xBFFFF PCI bus OK
0xA0000-0xBFFFF PCI standard PCI-to-PCI bridge  OK
0xA0000-0xBFFFF Standard VGA Graphics Adapter OK
0xCC000-0xCFFFF PCI bus OK
0xD0000-0xD3FFF PCI bus OK
0xD4000-0xD7FFF PCI bus OK
0xD8000-0xDBFFF PCI bus OK
0x40000000-0xEFFFFFFF PCI bus OK
0xEF900000-0xEF9FFFFF PCI standard PCI-to-PCI bridge  OK
0xEF900000-0xEF9FFFFF HP NC110T PCIe Gigabit Server Adapter OK
0xEF920000-0xEF93FFFF HP NC110T PCIe Gigabit Server Adapter OK
0xEF000000-0xEF8FFFFF PCI standard PCI-to-PCI bridge  OK
0xEF000000-0xEF8FFFFF Standard VGA Graphics Adapter OK
0xEE000000-0xEEFFFFFF PCI standard PCI-to-PCI bridge  OK
0xEE000000-0xEEFFFFFF Standard VGA Graphics Adapter OK
0xEF800000-0xEF803FFF Standard VGA Graphics Adapter OK
0xEFA00000-0xEFAFFFFF PCI standard PCI-to-PCI bridge  OK
0xEFA00000-0xEFAFFFFF HP NC320i PCIe Gigabit Server Adapter OK
0xEFD00000-0xEFD003FF Standard Enhanced PCI to USB Host Controller
  OK
0xFED14000-0xFED17FFF Motherboard resources OK
0xFED13000-0xFED13FFF Motherboard resources OK
0xF0000000-0xFFFFFFFF Motherboard resources OK
0xFED20000-0xFED8FFFF Motherboard resources OK
0xFEF00000-0xFEFFFFFF Motherboard resources OK
0xFF800000-0xFFFFFFFF Intel(R) 82802 Firmware Hub Device  OK
0xEFD00400-0xEFD007FF Standard Dual Channel PCI IDE Controller  OK


[Components]



[Multimedia]



[Audio Codecs]

CODEC Manufacturer  Description Status  File  Version Size
  Creation Date
c:\windows\system32\sl_anet.acm Sipro Lab Telecom Inc.  Sipro Lab
Telecom Audio Codec OK  C:\WINDOWS\system32\SL_ANET.ACM 3.02  84.00
KB (86,016 bytes) 3/25/2003 6:00 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 6:00 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 6:00 AM
c:\windows\system32\msg723.acm Microsoft Corporation   OK
  C:\WINDOWS\system32\MSG723.ACM 5.2.3790.1830 120.00 KB (122,880
bytes) 5/1/2007 4:02 PM
c:\windows\system32\msaud32.acm Microsoft Corporation Windows Media
Audio Codec OK C:\WINDOWS\system32\MSAUD32.ACM 8.00.00.4487
  288.00 KB (294,912 bytes) 3/25/2003 6:00 AM
c:\windows\system32\msadp32.acm Microsoft Corporation   OK
  C:\WINDOWS\system32\MSADP32.ACM 5.2.3790.0 (srv03_rtm.030324-
2048) 14.50 KB (14,848 bytes) 3/25/2003 6:00 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 6:00 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 6:00 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 6:00 AM

[Video Codecs]

CODEC Manufacturer Description Status File Version Size
  Creation Date
c:\windows\system32\tsbyuv.dll Microsoft Corporation   OK
  C:\WINDOWS\system32\TSBYUV.DLL 5.2.3790.0 (srv03_rtm.030324-
2048) 8.00 KB (8,192 bytes) 3/24/2003 7:50 PM
c:\windows\system32\iyuv_32.dll Microsoft Corporation   OK
  C:\WINDOWS\system32\IYUV_32.DLL 5.2.3790.1830
(srv03_sp1_rtm.050324-1447) 46.50 KB (47,616 bytes) 5/1/2007 4:02
PM
c:\windows\system32\msh261.drv Microsoft Corporation   OK
  C:\WINDOWS\system32\MSH261.DRV 5.2.3790.1830 184.00 KB (188,416
bytes) 5/1/2007 4:02 PM
c:\windows\system32\msyuv.dll Microsoft Corporation   OK
  C:\WINDOWS\system32\MSYUV.DLL 5.2.3790.0 (srv03_rtm.030324-2048)
  16.50 KB (16,896 bytes) 3/24/2003 7:49 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 6:00 AM
c:\windows\system32\msh263.drv Microsoft Corporation   OK
  C:\WINDOWS\system32\MSH263.DRV 5.2.3790.1830 288.00 KB (294,912
bytes) 5/1/2007 4:02 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 6:00 AM

[CD-ROM]

Item Value
Drive D:
Description CD-ROM Drive
Media Loaded No
Media Type CD-ROM
Name TSSTcorp CD-ROM TS-H192C
Manufacturer (Standard CD-ROM drives)
Status OK
Transfer Rate Not Available
SCSI Target ID 0
PNP Device ID IDE\CDROMTSSTCORP_CD-ROM__TS-
H192C_____B504____\5&398DF2D0&0&0.0.0
Driver c:\windows\system32\drivers\cdrom.sys (5.2.3790.1830
(srv03_sp1_rtm.050324-1447), 51.00 KB (52,224 bytes), 3/25/2003
6:00 AM)

[Sound Device]

Item Value

[Display]

Item Value
Name Standard VGA Graphics Adapter
PNP Device ID
  PCI\VEN_102B&DEV_0522&SUBSYS_31FA103C&REV_02\4&2D8B019B&0&00E4
Adapter Type Matrox Graphics Inc., (Standard display types)
compatible
Adapter Description Standard VGA Graphics Adapter
Adapter RAM 1.63 MB (1,703,936 bytes)
Installed Drivers vga.dll,framebuf.dll,vga256.dll,vga64k.dll
Driver Version 5.2.3790.1830
INF File display.inf (vga section)
Color Planes 1
Color Table Entries 65536
Resolution 1024 x 768 x 1 hertz
Bits/Pixel 16
Memory Address 0xEE000000-0xEEFFFFFF
Memory Address 0xEF800000-0xEF803FFF
Memory Address 0xEF000000-0xEF8FFFFF
I/O Port 0x000003B0-0x000003BB
I/O Port 0x000003C0-0x000003DF
Memory Address 0xA0000-0xBFFFF
Driver c:\windows\system32\drivers\vgapnp.sys (5.2.3790.1830
(srv03_sp1_rtm.050324-1447), 23.50 KB (24,064 bytes), 5/1/2007 5:52
AM)

[Infrared]

Item Value

[Input]

[Keyboard]

Item Value
Description USB Human Interface Device
Name Enhanced (101- or 102-key)
Layout 00000409
PNP Device ID USB\VID_0000&PID_0000&MI_00\6&879A40F&0&0000
Number of Function Keys 12
Driver c:\windows\system32\drivers\hidusb.sys (5.2.3790.0
(srv03_rtm.030324-2048), 11.50 KB (11,776 bytes), 3/25/2003 6:00
AM)

[Pointing Device]

Item Value
Hardware Type USB Human Interface Device
Number of Buttons 8
Status OK
PNP Device ID USB\VID_0000&PID_0000&MI_01\6&879A40F&0&0001
Power Management Supported No
Double Click Threshold 6
Handedness Right Handed Operation
Driver c:\windows\system32\drivers\hidusb.sys (5.2.3790.0
(srv03_rtm.030324-2048), 11.50 KB (11,776 bytes), 3/25/2003 6:00
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 8/15/2007 8:40 AM
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 8/15/2007 8:40 AM
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
6:00 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 8/15/2007 8:40 AM
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\raspptp.sys (5.2.3790.1830
(srv03_sp1_rtm.050324-1447), 61.00 KB (62,464 bytes), 3/25/2003
6:00 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  8/15/2007 8:40 AM
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
6:00 AM)

Name  [00000005] Direct Parallel
Adapter Type  Not Available
Product Type  Direct Parallel
Installed Yes
PNP Device ID ROOT\MS_PTIMINIPORT\0000
Last Reset  8/15/2007 8:40 AM
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
6:00 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  8/15/2007 8:40 AM
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
6:00 AM)

Name  [00000007] HP NC320i PCIe Gigabit Server Adapter
Adapter Type  Ethernet 802.3
Product Type  HP NC320i PCIe Gigabit Server Adapter
Installed Yes
PNP Device ID
  PCI\VEN_14E4&DEV_1659&SUBSYS_7032103C&REV_21\4&261E705A&0&00E5
Last Reset  8/15/2007 8:40 AM
Index 7
Service Name  q57w2k
IP Address  130.172.209.99
IP Subnet 255.255.0.0
Default IP Gateway  Not Available
DHCP Enabled  No
DHCP Server Not Available
DHCP Lease Expires  Not Available
DHCP Lease Obtained Not Available
MAC Address 00:1A:4B:AE:80:0D
Memory Address  0xEFA00000-0xEFAFFFFF
IRQ Channel IRQ 17
Driver  c:\windows\system32\drivers\q57xp32.sys (9.81.0.0 built by:
WinDDK, 154.50 KB (158,208 bytes), 5/1/2007 3:23 PM)

Name  [00000008] HP NC110T PCIe Gigabit Server Adapter
Adapter Type  Ethernet 802.3
Product Type  HP NC110T PCIe Gigabit Server Adapter
Installed Yes
PNP Device ID
  PCI\VEN_8086&DEV_10B9&SUBSYS_704A103C&REV_06\4&6C79FC5&0&00E0
Last Reset  8/15/2007 8:40 AM
Index 8
Service Name  N1e5132
IP Address  10.10.204.250, 11.11.204.250
IP Subnet 255.255.0.0, 255.255.0.0
Default IP Gateway  Not Available
DHCP Enabled  No
DHCP Server Not Available
DHCP Lease Expires  Not Available
```

```
DHCP Lease Obtained Not Available
MAC Address 00:18:71:EA:14:D4
Memory Address  0xEF920000-0xEF93FFFF
Memory Address  0xEF900000-0xEF9FFFFF
I/O Port  0x00004000-0x00004FFF
IRQ Channel IRQ 16
Driver  c:\windows\system32\drivers\n1e5132.sys (9.6.31.0 built by:
WinDDK, 225.40 KB (230,808 bytes), 5/1/2007 5:58 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_{830EA663-C8B9-4640-AEA8-
FDF98C5B6129}] 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_{830EA663-C8B9-4640-AEA8-
FDF98C5B6129}] 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_{65AEDE46-4230-4F14-8819-
AB60CA352C9E}] 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_{65AEDE46-4230-4F14-8819-
AB60CA352C9E}] 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_{AA8B494D-24CC-4FD1-99E1-
FF8B06B164FC}] 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_{AA8B494D-24CC-4FD1-99E1-
FF8B06B164FC}] 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_{8175DA6E-2D90-4524-81BB-
533C52A189C1}] 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_{8175DA6E-2D90-4524-81BB-
533C52A189C1}] 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_sp1_rtm.050324-1447), 64.00 KB (65,536 bytes), 3/25/2003
6:00 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 (5.2.3790.1830
(srv03_sp1_rtm.050324-1447), 64.00 KB (65,536 bytes), 3/25/2003
6:00 AM)

[Parallel]

Item  Value

[Storage]


[Drives]

Item  Value
Drive C:
Description Local Fixed Disk
Compressed  No
File System NTFS
Size  149.05 GB (160,039,239,680 bytes)
Free Space  137.28 GB (147,400,577,024 bytes)
Volume Name
Volume Serial Number  8CE9AD1E

Drive D:
Description CD-ROM Disc

[Disks]

Item  Value
Description Disk drive
Manufacturer  (Standard disk drives)
Model ST3160812AS
Bytes/Sector  512
Media Loaded  Yes
Media Type  Fixed hard disk
Partitions  1
SCSI Bus  0
SCSI Logical Unit 0
SCSI Port 1
SCSI Target ID  0
Sectors/Track 63
Size  149.05 GB (160,039,272,960 bytes)
Total Cylinders 19,457
Total Sectors 312,576,705
Total Tracks  4,961,535
Tracks/Cylinder 255
Partition Disk #0, Partition #0
Partition Size  149.05 GB (160,039,240,704 bytes)
Partition Starting Offset 32,256 bytes

[SCSI]

Item  Value

[IDE]

Item  Value
Name  Standard Dual Channel PCI IDE Controller
Manufacturer  (Standard IDE ATA/ATAPI controllers)
Status  OK
```

```
PNP Device ID
  PCI\VEN_8086&DEV_27DF&SUBSYS_3206103C&REV_01\3&61AAA01&0&F9
I/O Port  0x00003080-0x0000308F
Driver  c:\windows\system32\drivers\pciide.sys (5.2.3790.0
(srv03_rtm.030324-2048), 5.50 KB (5,632 bytes), 3/25/2003 6:00 AM)


Name  Primary IDE Channel
Manufacturer  (Standard IDE ATA/ATAPI controllers)
Status  OK
PNP Device ID PCIIDE\IDECHANNEL\4&78810&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
6:00 AM)

Name  Secondary IDE Channel
Manufacturer  (Standard IDE ATA/ATAPI controllers)
Status  OK
PNP Device ID PCIIDE\IDECHANNEL\4&78810&0&1
I/O Port  0x00000170-0x00000177
I/O Port  0x00000376-0x00000376
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
6:00 AM)

Name  Standard Dual Channel PCI IDE Controller
Manufacturer  (Standard IDE ATA/ATAPI controllers)
Status  OK
PNP Device ID
  PCI\VEN_8086&DEV_27C0&SUBSYS_3206103C&REV_01\3&61AAA01&0&FA
I/O Port  0x000030C8-0x000030CF
I/O Port  0x000030BC-0x000030BF
I/O Port  0x000030C0-0x000030C7
I/O Port  0x000030B8-0x000030BB
I/O Port  0x00003090-0x0000309F
Memory Address  0xEFD00400-0xEFD007FF
IRQ Channel IRQ 19
Driver  c:\windows\system32\drivers\pciide.sys (5.2.3790.0
(srv03_rtm.030324-2048), 5.50 KB (5,632 bytes), 3/25/2003 6:00 AM)


Name  Primary IDE Channel
Manufacturer  (Standard IDE ATA/ATAPI controllers)
Status  OK
PNP Device ID PCIIDE\IDECHANNEL\4&193DA539&0&0
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
6:00 AM)

Name  Secondary IDE Channel
Manufacturer  (Standard IDE ATA/ATAPI controllers)
Status  OK
PNP Device ID PCIIDE\IDECHANNEL\4&193DA539&0&1
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
6:00 AM)

[Printing]

Name  Driver  Port Name Server Name

[Problem Devices]

Device  PNP Device ID Error Code
Not Available ACPI\IPI0001\0  The drivers for this device are not
installed.

[USB]

Device  PNP Device ID
Standard Universal PCI to USB Host Controller
  PCI\VEN_8086&DEV_27C8&SUBSYS_3206103C&REV_01\3&61AAA01&0&E8
Standard Universal PCI to USB Host Controller
  PCI\VEN_8086&DEV_27C9&SUBSYS_3206103C&REV_01\3&61AAA01&0&E9
Standard Universal PCI to USB Host Controller
  PCI\VEN_8086&DEV_27CA&SUBSYS_3206103C&REV_01\3&61AAA01&0&EA
Standard Universal PCI to USB Host Controller
  PCI\VEN_8086&DEV_27CB&SUBSYS_3206103C&REV_01\3&61AAA01&0&EB
Standard Enhanced PCI to USB Host Controller
  PCI\VEN_8086&DEV_27CC&SUBSYS_3206103C&REV_01\3&61AAA01&0&EF

[Software Environment]


[System Drivers]

Name  Description File  Type  Started Start Mode  State Status
  Error Control Accept Pause  Accept Stop
abiosdsk  Abiosdsk  Not Available Kernel Driver No  Disabled
  Stopped OK  Ignore No  No
acpi  Microsoft ACPI Driver c:\windows\system32\drivers\acpi.sys
  Kernel Driver Yes Boot  Running OK  Normal  No  Yes
acpiec  ACPIEC  c:\windows\system32\drivers\acpiec.sys  Kernel
Driver  No  Disabled  Stopped OK  Normal  No  No
adpu160m  adpu160m  Not Available Kernel Driver No  Disabled
  Stopped OK  Normal  No  No
```

adpu320 adpu320 Not Available Kernel Driver No Disabled Stopped
  OK Normal No No
afcnt afcnt Not Available Kernel Driver No Disabled Stopped
  OK Normal No No
afd AFD Networking Support Environment
  c:\windows\system32\drivers\afd.sys Kernel Driver Yes System
  Running OK Normal No Yes
aha154x Aha154x Not Available Kernel Driver No Disabled Stopped
  OK Normal No No
aic78u2 aic78u2 Not Available Kernel Driver No Disabled Stopped
  OK Normal No No
aic78xx aic78xx Not Available Kernel Driver No Disabled Stopped
  OK Normal No No
aliide AliIde Not Available Kernel Driver No Disabled Stopped
  OK Normal No No
asyncmac RAS Asynchronous Media Driver
  c:\windows\system32\drivers\asyncmac.sys Kernel Driver No
  Manual Stopped OK Normal No No
atapi Standard IDE/ESDI Hard Disk Controller
  c:\windows\system32\drivers\atapi.sys Kernel Driver Yes Boot
  Running OK Normal No Yes
atdisk Atdisk Not Available Kernel Driver No Disabled Stopped
  OK Ignore No No
atmarpc ATM ARP Client Protocol
  c:\windows\system32\drivers\atmarpc.sys Kernel Driver No Manual
  Stopped OK Normal No No
audstub Audio Stub Driver c:\windows\system32\drivers\audstub.sys
  Kernel Driver Yes Manual Running OK Normal No Yes
beep Beep c:\windows\system32\drivers\beep.sys Kernel Driver Yes
  System Running OK Normal No Yes
cbidf2k c:\windows\system32\drivers\cbidf2k.sys Kernel
  Driver No Disabled Stopped OK Normal No No
cd20xrnt cd20xrnt Not Available Kernel Driver No Disabled
  Stopped OK Normal No No
cdfs Cdfs c:\windows\system32\drivers\cdfs.sys File System
  Driver Yes Disabled Running OK Normal No Yes
cdrom CD-ROM Driver c:\windows\system32\drivers\cdrom.sys Kernel
  Driver Yes System Running OK Normal No Yes
changer Changer Not Available Kernel Driver No System Stopped OK
  Ignore No No
clusdisk Cluster Disk Driver
  c:\windows\system32\drivers\clusdisk.sys Kernel Driver No
  Disabled Stopped OK Normal No No
cmdide CmdIde Not Available Kernel Driver No Disabled Stopped
  OK Normal No No
cpqarray Cpqarray Not Available Kernel Driver No Disabled
  Stopped OK Normal No No
cpqarry2 cpqarry2 Not Available Kernel Driver No Disabled
  Stopped OK Normal No No
cpqcissm cpqcissm Not Available Kernel Driver No Disabled
  Stopped OK Normal No No
cpqfcalm cpqfcalm Not Available Kernel Driver No Disabled
  Stopped OK Normal No No
crcdisk CRC Disk Filter Driver
  c:\windows\system32\drivers\crcdisk.sys Kernel Driver Yes Boot
  Running OK Normal No Yes
dac960nt dac960nt Not Available Kernel Driver No Disabled
  Stopped OK Normal No No
dellcerc dellcerc Not Available Kernel Driver No Disabled
  Stopped OK Normal No No
dfsdriver DfsDriver c:\windows\system32\drivers\dfs.sys File System
  Driver Yes Boot Running OK Normal No No
disk Disk Driver c:\windows\system32\drivers\disk.sys Kernel
  Driver Yes Boot Running OK Normal No Yes
dmboot dmboot c:\windows\system32\drivers\dmboot.sys Kernel
  Driver No Disabled Stopped OK Normal No No
dmio Logical Disk Manager Driver
  c:\windows\system32\drivers\dmio.sys Kernel Driver Yes Boot
  Running OK Normal No Yes
dmload dmload c:\windows\system32\drivers\dmload.sys Kernel
  Driver Yes Boot Running OK Normal No Yes
dpti2o dpti2o Not Available Kernel Driver No Disabled Stopped
  OK Normal No No
fastfat Fastfat c:\windows\system32\drivers\fastfat.sys File System
  Driver Yes Disabled Stopped OK Normal No No
fdc Fdc c:\windows\system32\drivers\fdc.sys Kernel Driver No
  System Stopped OK Ignore No No
fips Fips c:\windows\system32\drivers\fips.sys Kernel Driver Yes
  System Running OK Normal No Yes
flpydisk Flpydisk c:\windows\system32\drivers\flpydisk.sys
  Kernel Driver No System Stopped OK Ignore No No
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
hidusb Microsoft HID Class Driver
  c:\windows\system32\drivers\hidusb.sys Kernel Driver Yes Manual
  Running OK Ignore No Yes
hpn hpn Not Available Kernel Driver No Disabled Stopped OK
  Normal No No
hpt3xx hpt3xx Not Available Kernel Driver No Disabled Stopped
  OK Normal No No
http HTTP c:\windows\system32\drivers\http.sys Kernel Driver Yes
  Manual Running 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

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
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
kbdhid Keyboard HID Driver c:\windows\system32\drivers\kbdhid.sys
  Kernel Driver Yes System Running OK Ignore No Yes
ksecdd KSecDD c:\windows\system32\drivers\ksecdd.sys Kernel
  Driver Yes Boot Running OK Normal No Yes
lp6nds35 lp6nds35 Not Available Kernel Driver No Disabled
  Stopped OK Normal No No
mnmdd mnmdd c:\windows\system32\drivers\mnmdd.sys Kernel Driver Yes
  System Running OK Ignore No Yes
modem Modem c:\windows\system32\drivers\modem.sys Kernel Driver No
  Manual Stopped OK Ignore No No
mouclass Mouse Class Driver
  c:\windows\system32\drivers\mouclass.sys Kernel Driver Yes
  System Running OK Normal No Yes
mouhid Mouse HID Driver c:\windows\system32\drivers\mouhid.sys
  Kernel Driver Yes Manual Running OK Ignore No Yes
mountmgr Mount Point Manager
  c:\windows\system32\drivers\mountmgr.sys Kernel Driver Yes Boot
  Running OK Normal No Yes
mraid35x mraid35x Not Available Kernel Driver No Disabled
  Stopped OK Normal No No
mrxdav WebDav Client Redirector
  c:\windows\system32\drivers\mrxdav.sys File System Driver No
  Manual Stopped OK Normal No No
mrxsmb MRXSMB c:\windows\system32\drivers\mrxsmb.sys File System
  Driver Yes System Running OK Normal No Yes
msfs Msfs c:\windows\system32\drivers\msfs.sys File System
  Driver Yes System Running OK Normal No Yes
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
n1e5132 HP PCIe Gigabit NIC Driver
  c:\windows\system32\drivers\n1e5132.sys Kernel Driver Yes Manual
  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 Yes Manual
  Running OK Normal No Yes
ndiswan Remote Access NDIS WAN Driver
  c:\windows\system32\drivers\ndiswan.sys Kernel Driver Yes Manual
  Running OK Normal No Yes
ndproxy NDIS Proxy c:\windows\system32\drivers\ndproxy.sys Kernel
  Driver Yes Manual Running OK Normal No Yes
netbios NetBIOS Interface c:\windows\system32\drivers\netbios.sys
  File System Driver Yes System Running OK Normal No Yes
netbt NetBios over Tcpip c:\windows\system32\drivers\netbt.sys
  Kernel Driver Yes System Running OK Normal No Yes
nfrd960 nfrd960 Not Available Kernel Driver No Disabled Stopped
  OK Normal No No
npfs Npfs c:\windows\system32\drivers\npfs.sys File System
  Driver Yes System Running OK Normal No Yes
ntfs Ntfs c:\windows\system32\drivers\ntfs.sys File System
  Driver Yes Disabled Running OK Normal No Yes
null Null c:\windows\system32\drivers\null.sys Kernel Driver Yes
  System Running OK Normal No Yes
parport Parport c:\windows\system32\drivers\parport.sys Kernel
  Driver No Manual Stopped OK Ignore No No
partmgr Partition Manager c:\windows\system32\drivers\partmgr.sys
  Kernel Driver Yes Boot Running OK Normal No Yes
pci PCI Bus Driver c:\windows\system32\drivers\pci.sys Kernel
  Driver Yes Boot Running OK Critical No Yes

pciide PCIIde c:\windows\system32\drivers\pciide.sys Kernel
Driver Yes Boot Running OK Normal No Yes
pcmcia Pcmcia c:\windows\system32\drivers\pcmcia.sys Kernel
Driver No Disabled Stopped OK Normal No No
pdcomp PDCOMP Not Available Kernel Driver No Manual Stopped OK
Ignore No No
pdframe PDFRAME Not Available Kernel Driver No Manual Stopped OK
Ignore No No
pdreli PDRELI Not Available Kernel Driver No Manual Stopped OK
Ignore No No
pdrframe PDRFRAME Not Available Kernel Driver No Manual Stopped
OK Ignore No No
perc2 perc2 Not Available Kernel Driver No Disabled Stopped OK
Normal No No
perc2hib perc2hib Not Available Kernel Driver No Disabled
Stopped OK Normal No No
pptpminiport WAN Miniport (PPTP)
c:\windows\system32\drivers\raspptp.sys Kernel Driver Yes Manual
Running OK Normal No Yes
processor Processor Driver
c:\windows\system32\drivers\processr.sys Kernel Driver 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
q57w2k HP NC320i PCIe Gigabit Server Adapter
c:\windows\system32\drivers\q57xp32.sys Kernel Driver Yes Manual
Running OK Normal No Yes
ql1080 ql1080 Not Available Kernel Driver No Disabled Stopped
OK Normal No No
ql10wnt Ql10wnt Not Available Kernel Driver No Disabled Stopped
OK Normal No No
ql12160 ql12160 Not Available Kernel Driver No Disabled Stopped
OK Normal No No
ql1240 ql1240 Not Available Kernel Driver No Disabled Stopped
OK Normal No No
ql1280 ql1280 Not Available Kernel Driver No Disabled Stopped
OK Normal No No
ql2100 ql2100 Not Available Kernel Driver No Disabled Stopped
OK Normal No No
ql2200 ql2200 Not Available Kernel Driver No Disabled Stopped
OK Normal No No
ql2300 ql2300 Not Available Kernel Driver No Disabled Stopped
OK Normal No No
rasacd Remote Access Auto Connection Driver
c:\windows\system32\drivers\rasacd.sys Kernel Driver Yes System
Running OK Normal No Yes
rasl2tp WAN Miniport (L2TP) c:\windows\system32\drivers\rasl2tp.sys
Kernel Driver Yes Manual Running OK Normal No Yes
raspppoe Remote Access PPPOE Driver
c:\windows\system32\drivers\raspppoe.sys Kernel Driver Yes
Manual Running OK Normal No Yes
raspti Direct Parallel c:\windows\system32\drivers\raspti.sys
Kernel Driver Yes Manual Running OK Normal No Yes
rdbss Rdbss c:\windows\system32\drivers\rdbss.sys File System
Driver Yes System Running OK Normal No Yes
rdpcdd RDPCDD c:\windows\system32\drivers\rdpcdd.sys Kernel
Driver Yes System Running OK Ignore No Yes
rdpdr Terminal Server Device Redirector Driver
c:\windows\system32\drivers\rdpdr.sys Kernel Driver Yes Manual
Running OK Normal No Yes
rdpwd RDPWD c:\windows\system32\drivers\rdpwd.sys Kernel Driver Yes
Manual Running OK Ignore No Yes
redbook Digital CD Audio Playback Filter Driver
c:\windows\system32\drivers\redbook.sys Kernel Driver Yes System
Running OK Normal No Yes
secdrv Secdrv c:\windows\system32\drivers\secdrv.sys Kernel
Driver No Manual Stopped OK Normal No No
serenum Serenum Filter Driver
c:\windows\system32\drivers\serenum.sys Kernel Driver Yes Manual
Running OK Normal No Yes
serial Serial port driver c:\windows\system32\drivers\serial.sys
Kernel Driver Yes Manual Running OK Ignore No Yes
sfloppy Sfloppy c:\windows\system32\drivers\sfloppy.sys Kernel
Driver No System Stopped OK Ignore No No
simbad Simbad Not Available Kernel Driver No Disabled Stopped
OK Normal No No
sparrow Sparrow Not Available Kernel Driver No Disabled Stopped
OK Normal No No
srv Srv c:\windows\system32\drivers\srv.sys File System Driver Yes
Manual Running OK Normal No Yes
swenum Software Bus Driver c:\windows\system32\drivers\swenum.sys
Kernel Driver Yes Manual Running OK Normal No Yes
symc810 symc810 Not Available Kernel Driver No Disabled Stopped
OK Normal No No
symc8xx symc8xx Not Available Kernel Driver No Disabled Stopped
OK Normal No No
symmpi symmpi Not Available Kernel Driver No Disabled Stopped
OK Normal No No
sym_hi sym_hi Not Available Kernel Driver No Disabled Stopped
OK Normal No No
sym_u3 sym_u3 Not Available Kernel Driver No Disabled Stopped
OK Normal No No
tcpip TCP/IP Protocol Driver c:\windows\system32\drivers\tcpip.sys
Kernel Driver Yes System Running OK Normal No Yes
tdpipe TDPIPE c:\windows\system32\drivers\tdpipe.sys Kernel
Driver No Manual Stopped OK Ignore No No
tdtcp TDTCP c:\windows\system32\drivers\tdtcp.sys Kernel Driver Yes
Manual Running OK Ignore No Yes

termdd Terminal Device Driver
c:\windows\system32\drivers\termdd.sys Kernel Driver Yes System
Running OK Normal No Yes
toside TosIde Not Available Kernel Driver No Disabled Stopped
OK Normal No No
udfs Udfs c:\windows\system32\drivers\udfs.sys File System
Driver No Disabled Stopped OK Normal No No
ultra ultra Not Available Kernel Driver No Disabled Stopped OK
Normal No No
update Microcode Update Driver
c:\windows\system32\drivers\update.sys Kernel Driver Yes Manual
Running OK Normal No Yes
usbccgp Microsoft USB Generic Parent Driver
c:\windows\system32\drivers\usbccgp.sys Kernel Driver Yes Manual
Running OK Normal No Yes
usbehci Microsoft USB 2.0 Enhanced Host Controller Miniport Driver
c:\windows\system32\drivers\usbehci.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
usbstor USB Mass Storage Driver
c:\windows\system32\drivers\usbstor.sys Kernel Driver No Manual
Stopped OK Normal No No
usbuhci Microsoft USB Universal Host Controller Miniport Driver
c:\windows\system32\drivers\usbuhci.sys Kernel Driver Yes Manual
Running OK Normal No Yes
vga vga c:\windows\system32\drivers\vgapnp.sys Kernel Driver Yes
Manual Running OK Ignore No Yes
vgasave VGA Display Controller. c:\windows\system32\drivers\vga.sys
Kernel Driver No System Stopped OK Ignore No No
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
vsperfdrv Performance Tools Driver \??\c:\program files\microsoft
visual studio 8\team tools\performance tools\vsperfdrv.sys Kernel
Driver No Manual Stopped OK Ignore No No
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 Yes SYSTEM 5.2.3790.1830
10/1/2002 (Standard system devices) machine.inf Not Available
ROOT\SYSTEM\0002
Microcode Update Device Yes SYSTEM 5.2.3790.0 10/1/2002 (Standard
system devices) machine.inf Not Available ROOT\SYSTEM\0001
Plug and Play Software Device Enumerator Yes SYSTEM 5.2.3790.0
10/1/2002 (Standard system devices) machine.inf Not Available
ROOT\SYSTEM\0000
Terminal Server Mouse Driver Yes SYSTEM 5.2.3790.0 10/1/2002
(Standard system devices) machine.inf Not Available
ROOT\RDP_MOU\0000
Terminal Server Keyboard Driver Yes SYSTEM 5.2.3790.0 10/1/2002
(Standard system devices) machine.inf Not Available
ROOT\RDP_KBD\0000
Terminal Server Device Redirector Yes SYSTEM 5.2.3790.0 10/1/2002
(Standard system devices) machine.inf Not Available
ROOT\RDPDR\0000
Direct Parallel Yes NET 5.2.3790.0 10/1/2002 Microsoft netrasa.inf
Not Available ROOT\MS_PTIMINIPORT\0000
WAN Miniport (PPTP) Yes NET 5.2.3790.0 10/1/2002 Microsoft
netrasa.inf Not Available ROOT\MS_PPTPMINIPORT\0000
WAN Miniport (PPPOE) Yes NET 5.2.3790.0 10/1/2002 Microsoft
netrasa.inf Not Available ROOT\MS_PPPOEMINIPORT\0000
WAN Miniport (IP) Yes NET 5.2.3790.0 10/1/2002 Microsoft
netrasa.inf Not Available ROOT\MS_NDISWANIP\0000
WAN Miniport (L2TP) Yes NET 5.2.3790.0 10/1/2002 Microsoft
netrasa.inf Not Available ROOT\MS_L2TPMINIPORT\0000
Video Codecs Yes MEDIA 5.2.3790.0 10/1/2002 (Standard system
devices) wave.inf Not Available ROOT\MEDIA\MS_MMVID
Legacy Video Capture Devices Yes MEDIA 5.2.3790.0 10/1/2002
(Standard system devices) wave.inf Not Available
ROOT\MEDIA\MS_MMVCD
Media Control Devices Yes MEDIA 5.2.3790.0 10/1/2002 (Standard
system devices) wave.inf Not Available ROOT\MEDIA\MS_MMMCI
Legacy Audio Drivers Yes MEDIA 5.2.3790.0 10/1/2002 (Standard
system devices) wave.inf Not Available ROOT\MEDIA\MS_MMDRV
Audio Codecs Yes MEDIA 5.2.3790.0 10/1/2002 (Standard system
devices) wave.inf Not Available ROOT\MEDIA\MS_MMACM
Remote Access IP ARP Driver Not Available LEGACYDRIVER 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 ROOT\LEGACY_VOLSNAP\0000
TDTCP Not Available LEGACYDRIVER 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
ROOT\LEGACY_TCPIP\0000
RDPWD Not Available LEGACYDRIVER Not Available Not Available Not
Available Not Available Not Available ROOT\LEGACY_RDPWD\0000
RDPCDD Not Available LEGACYDRIVER Not Available Not Available Not
Available Not Available Not Available ROOT\LEGACY_RDPCDD\0000

Remote Access Auto Connection Driver Not Available LEGACYDRIVER
  Not Available Not Available Not Available Not Available Not
Available ROOT\LEGACY_RASACD\0000
Partition Manager Not Available LEGACYDRIVER 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 ROOT\LEGACY_NULL\0000
NetBios over Tcpip Not Available LEGACYDRIVER Not Available Not
Available Not Available Not Available Not Available
  ROOT\LEGACY_NETBT\0000
NDProxy Not Available LEGACYDRIVER Not 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
  ROOT\LEGACY_NDISUIO\0000
Remote Access NDIS TAPI Driver Not Available LEGACYDRIVER Not
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 Not Available Not Available
  ROOT\LEGACY_NDIS\0000
mountmgr Not Available LEGACYDRIVER Not Available Not Available
  Not Available Not Available Not Available
  ROOT\LEGACY_MOUNTMGR\0000
mnmdd Not Available LEGACYDRIVER Not Available Not Available Not
Available Not Available Not Available ROOT\LEGACY_MNMDD\0000
ksecdd Not Available LEGACYDRIVER Not 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
  ROOT\LEGACY_IPSEC\0000
HTTP Not Available LEGACYDRIVER Not 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
  ROOT\LEGACY_GPC\0000
Fips Not Available LEGACYDRIVER Not Available Not Available Not
Available Not Available Not Available ROOT\LEGACY_FIPS\0000
dmload Not Available LEGACYDRIVER Not Available Not Available Not
Available Not Available Not Available ROOT\LEGACY_DMLOAD\0000
dmboot Not Available LEGACYDRIVER Not 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 Not Available Not Available
  ROOT\LEGACY_CRCDISK\0000
Beep Not Available LEGACYDRIVER Not 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 Not Available Not Available
  ROOT\LEGACY_AFD\0000
Generic volume Yes VOLUME 5.2.3790.1830 10/1/2002 Microsoft
  volume.inf Not Available
  STORAGE\VOLUME\1&30A96598&0&SIGNATURE64576457OFFSET7E00LENGTH2543
150400
Volume Manager Yes SYSTEM 5.2.3790.0 10/1/2002 (Standard system
devices) machine.inf Not Available ROOT\FTDISK\0000
Logical Disk Manager Yes SYSTEM 5.2.3790.0 10/1/2002 (Standard
system devices) machine.inf Not Available ROOT\DMIO\0000
ACPI Fixed Feature Button Yes SYSTEM 5.2.3790.0 10/1/2002
  (Standard system devices) machine.inf Not Available
  ACPI\FIXEDBUTTON\2&DABA3FF&0
ACPI Power Button Yes SYSTEM 5.2.3790.0 10/1/2002 (Standard
system devices) machine.inf Not Available ACPI\PNP0C0C\3&61AAA01&0

Not Available Not Available Not Available Not Available Not
Available Not Available Not Available Not Available ACPI\IPI0001\0

Secondary IDE Channel Yes HDC 5.2.3790.0 10/1/2002 (Standard IDE
ATA/ATAPI controllers) mshdc.inf Not Available
  PCIIDE\IDECHANNEL\4&193DA539&0&1
Disk drive Yes DISKDRIVE 5.2.3790.0 10/1/2002 (Standard disk
drives) disk.inf Not Available
  IDE\DISKST3160812AS_____3.AJL_\5&1348C5
37&0&0.0.0
Primary IDE Channel Yes HDC 5.2.3790.0 10/1/2002 (Standard IDE
ATA/ATAPI controllers) mshdc.inf Not Available
  PCIIDE\IDECHANNEL\4&193DA539&0&0
Standard Dual Channel PCI IDE Controller Yes HDC 5.2.3790.0
  10/1/2002 (Standard IDE ATA/ATAPI controllers) mshdc.inf Not
Available
  PCI\VEN_8086&DEV_27C0&SUBSYS_3206103C&REV_01\3&61AAA01&0&FA
Secondary IDE Channel Yes HDC 5.2.3790.0 10/1/2002 (Standard IDE
ATA/ATAPI controllers) mshdc.inf Not Available
  PCIIDE\IDECHANNEL\4&78810&0&1
CD-ROM Drive Yes CDROM 5.2.3790.0 10/1/2002 (Standard CD-ROM
drives) cdrom.inf Not Available IDE\CDROMTSSTCORP_CD-ROM__TS-
H192C_____B504_____\5&398DF2D0&0&0.0.0
Primary IDE Channel Yes HDC 5.2.3790.0 10/1/2002 (Standard IDE
ATA/ATAPI controllers) mshdc.inf Not Available
  PCIIDE\IDECHANNEL\4&78810&0&0
Standard Dual Channel PCI IDE Controller Yes HDC 5.2.3790.0
  10/1/2002 (Standard IDE ATA/ATAPI controllers) mshdc.inf Not
Available
  PCI\VEN_8086&DEV_27DF&SUBSYS_3206103C&REV_01\3&61AAA01&0&F9
Communications Port Yes PORTS 5.2.3790.0 10/1/2002 (Standard port
types) msports.inf Not Available ACPI\PNP0501\2
Communications Port Yes PORTS 5.2.3790.0 10/1/2002 (Standard port
types) msports.inf Not Available ACPI\PNP0501\1
Generic Bus Yes SYSTEM 5.2.3790.0 10/1/2002 (Standard system
devices) machine.inf Not Available ACPI\PNP0A05\4&2B9557D4&0

Intel(R) 82802 Firmware Hub Device Yes SYSTEM 5.2.3790.1830
  10/1/2002 Intel machine.inf Not Available
  ACPI\INT0800\4&2B9557D4&0
System timer Yes SYSTEM 5.2.3790.0 10/1/2002 (Standard system
devices) machine.inf Not Available ACPI\PNP0100\4&2B9557D4&0
System speaker Yes SYSTEM 5.2.3790.0 10/1/2002 (Standard system
devices) machine.inf Not Available ACPI\PNP0800\4&2B9557D4&0
System CMOS/real time clock Yes SYSTEM 5.2.3790.0 10/1/2002
  (Standard system devices) machine.inf Not Available
  ACPI\PNP0B00\4&2B9557D4&0
Programmable interrupt controller Yes SYSTEM 5.2.3790.0 10/1/2002
  (Standard system devices) machine.inf Not Available
  ACPI\PNP0000\4&2B9557D4&0
Numeric data processor Yes SYSTEM 5.2.3790.0 10/1/2002 (Standard
system devices) machine.inf Not Available ACPI\PNP0C04\4&2B9557D4&0

Direct memory access controller Yes SYSTEM 5.2.3790.0 10/1/2002
  (Standard system devices) machine.inf Not Available
  ACPI\PNP0200\4&2B9557D4&0
Motherboard resources Yes SYSTEM 5.2.3790.0 10/1/2002 (Standard
system devices) machine.inf Not Available ACPI\PNP0C02\1F
ISAPNP Read Data Port Yes SYSTEM 5.2.3790.0 10/1/2002 (Standard
system devices) machine.inf Not Available ISAPNP\READDATAPORT\0
PCI standard ISA bridge Yes SYSTEM 5.2.3790.0 10/1/2002 (Standard
system devices) machine.inf Not Available
  PCI\VEN_8086&DEV_27B8&SUBSYS_00000000&REV_01\3&61AAA01&0&F8
Intel(R) 82801 PCI Bridge - 244E Yes SYSTEM 5.2.3790.1830
  10/1/2002 Intel machine.inf Not Available
  PCI\VEN_8086&DEV_244E&SUBSYS_00000000&REV_E1\3&61AAA01&0&F0
USB Root Hub Yes USB 5.2.3790.0 10/1/2002 (Standard USB Host
Controller) usbport.inf Not Available USB\ROOT_HUB20\4&393835B&0
Standard Enhanced PCI to USB Host Controller Yes USB 5.2.3790.0
  10/1/2002 (Standard USB Host Controller) usbport.inf Not
Available
  PCI\VEN_8086&DEV_27CC&SUBSYS_3206103C&REV_01\3&61AAA01&0&EF
HID-compliant mouse Yes MOUSE 5.2.3790.1830 10/1/2002 Microsoft
  msmouse.inf Not Available
  HID\VID_0000&PID_0000&MI_01\7&2B0CBCE&0&0000
USB Human Interface Device Yes HIDCLASS 5.2.3790.0 10/1/2002
  (Standard system devices) input.inf Not Available
  USB\VID_0000&PID_0000&MI_01\6&879A40F&0&0001
HID Keyboard Device Yes KEYBOARD 5.2.3790.0 10/1/2002 (Standard
keyboards) keyboard.inf Not Available
  HID\VID_0000&PID_0000&MI_00\7&15E0E80C&0&0000
USB Human Interface Device Yes HIDCLASS 5.2.3790.0 10/1/2002
  (Standard system devices) input.inf Not Available
  USB\VID_0000&PID_0000&MI_00\6&879A40F&0&0000
USB Composite Device Yes USB 5.2.3790.1830 10/1/2002 (Standard USB
Host Controller) usb.inf Not Available
  USB\VID_0000&PID_0000\601E63C40604B4
USB Root Hub Yes USB 5.2.3790.0 10/1/2002 (Standard USB Host
Controller) usbport.inf Not Available USB\ROOT_HUB\4&389CB90A&0
Standard Universal PCI to USB Host Controller Yes USB 5.2.3790.0
  10/1/2002 (Standard USB Host Controller) usbport.inf Not
Available
  PCI\VEN_8086&DEV_27CB&SUBSYS_3206103C&REV_01\3&61AAA01&0&EB
USB Root Hub Yes USB 5.2.3790.0 10/1/2002 (Standard USB Host
Controller) usbport.inf Not Available USB\ROOT_HUB\4&621ED3D&0
Standard Universal PCI to USB Host Controller Yes USB 5.2.3790.0
  10/1/2002 (Standard USB Host Controller) usbport.inf Not
Available
  PCI\VEN_8086&DEV_27CA&SUBSYS_3206103C&REV_01\3&61AAA01&0&EA
USB Root Hub Yes USB 5.2.3790.0 10/1/2002 (Standard USB Host
Controller) usbport.inf Not Available USB\ROOT_HUB\4&148839B4&0
Standard Universal PCI to USB Host Controller Yes USB 5.2.3790.0
  10/1/2002 (Standard USB Host Controller) usbport.inf Not
Available
  PCI\VEN_8086&DEV_27C9&SUBSYS_3206103C&REV_01\3&61AAA01&0&E9
USB Root Hub Yes USB 5.2.3790.0 10/1/2002 (Standard USB Host
Controller) usbport.inf Not Available USB\ROOT_HUB\4&35838BF7&0
Standard Universal PCI to USB Host Controller Yes USB 5.2.3790.0
  10/1/2002 (Standard USB Host Controller) usbport.inf Not
Available
  PCI\VEN_8086&DEV_27C8&SUBSYS_3206103C&REV_01\3&61AAA01&0&E8
HP NC320i PCIe Gigabit Server Adapter Yes NET 9.81.0.0 8/28/2006
  Hewlett-Packard Company oem0.inf Not Available
  PCI\VEN_14E4&DEV_1659&SUBSYS_7032103C&REV_21\4&261E705A&0&00E5
PCI standard PCI-to-PCI bridge Yes SYSTEM 5.2.3790.0 10/1/2002
  (Standard system devices) machine.inf Not Available
  PCI\VEN_8086&DEV_27E2&SUBSYS_00000000&REV_01\3&61AAA01&0&E5
Plug and Play Monitor Yes MONITOR 5.1.2001.0 6/6/2001 (Standard
monitor types) monitor.inf Not Available
  DISPLAY\AVO0402\5&3006B4AB&0&12345678&03&00
Standard VGA Graphics Adapter Yes DISPLAY 5.2.3790.0 10/1/2002
  (Standard display types) display.inf Not Available
  PCI\VEN_102B&DEV_0522&SUBSYS_31FA103C&REV_02\4&2D8B019B&0&00E4
PCI standard PCI-to-PCI bridge Yes SYSTEM 5.2.3790.0 10/1/2002
  (Standard system devices) machine.inf Not Available
  PCI\VEN_8086&DEV_27E0&SUBSYS_00000000&REV_01\3&61AAA01&0&E4
HP NC110T PCIe Gigabit Server Adapter Yes NET 9.6.31.0 11/1/2006
  Hewlett-Packard Company oem1.inf Not Available
  PCI\VEN_8086&DEV_10B9&SUBSYS_704A103C&REV_06\4&6C79FC5&0&00E0
PCI standard PCI-to-PCI bridge Yes SYSTEM 5.2.3790.0 10/1/2002
  (Standard system devices) machine.inf Not Available
  PCI\VEN_8086&DEV_27D0&SUBSYS_00000000&REV_01\3&61AAA01&0&E0
PCI standard host CPU bridge Yes SYSTEM 5.2.3790.0 10/1/2002
  (Standard system devices) machine.inf Not Available
  PCI\VEN_8086&DEV_2778&SUBSYS_00000000&REV_C0\3&61AAA01&0&00
PCI bus Yes SYSTEM 5.2.3790.0 10/1/2002 (Standard system devices)
  machine.inf Not Available ACPI\PNP0A03\2&DABA3FF&0

Intel Processor Yes PROCESSOR 5.2.3790.1830 10/1/2002 Intel cpu.inf
  Not Available ACPI\GENUINEINTEL_-_X86_FAMILY_15_MODEL_6_1
Intel Processor Yes PROCESSOR 5.2.3790.1830 10/1/2002 Intel cpu.inf
  Not Available ACPI\GENUINEINTEL_-_X86_FAMILY_15_MODEL_6_0
Microsoft ACPI-Compliant System Yes SYSTEM 5.2.3790.0 10/1/2002
  Microsoft acpi.inf Not Available ACPI_HAL\PNP0C08\0
ACPI Multiprocessor PC Yes 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 HTREE\ROOT\0

[Environment Variables]

Variable Value User Name
ComSpec %SystemRoot%\system32\cmd.exe <SYSTEM>
Path
  C:\oracle\product\10.2.0\client_1\bin;%SystemRoot%\system32;%Syst
emRoot%;%SystemRoot%\System32\Wbem;c:\Program Files\Microsoft SQL
Server\90\Tools\binn\ <SYSTEM>
windir %SystemRoot% <SYSTEM>
OS Windows_NT <SYSTEM>
PROCESSOR_ARCHITECTURE x86 <SYSTEM>
PROCESSOR_LEVEL 15 <SYSTEM>
PROCESSOR_IDENTIFIER x86 Family 15 Model 6 Stepping 5,
GenuineIntel <SYSTEM>
PROCESSOR_REVISION 0605 <SYSTEM>
NUMBER_OF_PROCESSORS 2 <SYSTEM>
ClusterLog C:\WINDOWS\Cluster\cluster.log <SYSTEM>
PATHEXT .COM;.EXE;.BAT;.CMD;.VBS;.VBE;.JS;.JSE;.WSF;.WSH <SYSTEM>

TEMP %SystemRoot%\TEMP <SYSTEM>
TMP %SystemRoot%\TEMP <SYSTEM>
FP_NO_HOST_CHECK NO <SYSTEM>
VS80COMNTOOLS C:\Program Files\Microsoft Visual Studio
8\Common7\Tools\ <SYSTEM>
TEMP %USERPROFILE%\Local Settings\Temp NT AUTHORITY\SYSTEM
TMP %USERPROFILE%\Local Settings\Temp NT AUTHORITY\SYSTEM
TEMP %USERPROFILE%\Local Settings\Temp NT AUTHORITY\LOCAL SERVICE

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

TEMP %USERPROFILE%\Local Settings\Temp BD2\Administrator
TMP %USERPROFILE%\Local Settings\Temp BD2\Administrator

[Print Jobs]

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

[Network Connections]

Local Name Remote Name Type Status User Name

[Running Tasks]

Name Path Process ID Priority Min Working Set Max Working Set
  Start Time Version Size File Date
system idle process Not Available 0 0 Not Available Not Available
  Not Available Not Available Not Available Not Available
system Not Available 4 8 0 1413120 Not Available Not Available Not
Available Not Available
smss.exe Not Available 360 11 204800 1413120 8/15/2007 8:40 AM
  Not Available Not Available Not Available
csrss.exe Not Available 572 13 204800 Not Available Not Available
  8/15/2007 8:40 AM Not Available Not Available Not Available
winlogon.exe c:\windows\system32\winlogon.exe 668 13 204800
  1413120 8/15/2007 8:40 AM 5.2.3790.1830 (srv03_sp1_rtm.050324-
1447) 497.00 KB (508,928 bytes) 5/1/2007 4:02 PM
services.exe c:\windows\system32\services.exe 720 9 204800
  1413120 8/15/2007 8:40 AM 5.2.3790.1830 (srv03_sp1_rtm.050324-
1447) 107.50 KB (110,080 bytes) 3/25/2003 6:00 AM
lsass.exe c:\windows\system32\lsass.exe 732 9 204800 1413120
  8/15/2007 8:40 AM 5.2.3790.0 (srv03_rtm.030324-2048) 13.00 KB
(13,312 bytes) 3/25/2003 6:00 AM
svchost.exe c:\windows\system32\svchost.exe 940 8 204800 1413120
  8/15/2007 8:40 AM 5.2.3790.1830 (srv03_sp1_rtm.050324-1447) 14.00
KB (14,336 bytes) 5/1/2007 4:02 PM
svchost.exe Not Available 1004 8 Not Available Not Available
  8/15/2007 8:40 AM Not Available Not Available Not Available
svchost.exe Not Available 1112 8 Not Available Not Available
  8/15/2007 8:40 AM Not Available Not Available Not Available
svchost.exe Not Available 1188 8 Not Available Not Available
  8/15/2007 8:40 AM Not Available Not Available Not Available
svchost.exe c:\windows\system32\svchost.exe 1200 8 204800 1413120
  8/15/2007 8:40 AM 5.2.3790.1830 (srv03_sp1_rtm.050324-1447) 14.00
KB (14,336 bytes) 5/1/2007 4:02 PM
spoolsv.exe c:\windows\system32\spoolsv.exe 1712 8 204800 1413120
  8/15/2007 8:40 AM 5.2.3790.1830 (srv03_sp1_rtm.050324-1447) 57.00
KB (58,368 bytes) 5/1/2007 4:02 PM
msdtc.exe Not Available 1744 8 Not Available Not Available
  8/15/2007 8:40 AM Not Available Not Available Not Available
svchost.exe c:\windows\system32\svchost.exe 1916 8 204800 1413120
  8/15/2007 8:40 AM 5.2.3790.1830 (srv03_sp1_rtm.050324-1447) 14.00
KB (14,336 bytes) 5/1/2007 4:02 PM
inetinfo.exe c:\windows\system32\inetsrv\inetinfo.exe 1992 8
  204800 1413120 8/15/2007 8:40 AM 6.0.3790.1830

(srv03_sp1_rtm.050324-1447) 14.00 KB (14,336 bytes) 5/1/2007 4:02
PM
sqlservr.exe Not Available 2016 8 Not Available Not Available
  8/15/2007 8:40 AM Not Available Not Available Not Available
svchost.exe Not Available 596 8 Not Available Not Available
  8/15/2007 8:41 AM Not Available Not Available Not Available
winvnc4.exe c:\program files\realvnc\vnc4\winvnc4.exe 860 8 204800
  1413120 8/15/2007 8:41 AM 4.1.2 428.95 KB (439,248 bytes)
  5/3/2007 2:01 PM
svchost.exe c:\windows\system32\svchost.exe 1260 8 204800 1413120
  8/15/2007 8:41 AM 5.2.3790.1830 (srv03_sp1_rtm.050324-1447) 14.00
KB (14,336 bytes) 5/1/2007 4:02 PM
svchost.exe c:\windows\system32\svchost.exe 1556 8 204800 1413120
  8/15/2007 8:41 AM 5.2.3790.1830 (srv03_sp1_rtm.050324-1447) 14.00
KB (14,336 bytes) 5/1/2007 4:02 PM
wmiprvse.exe Not Available 1832 8 Not Available Not Available
  8/15/2007 8:42 AM Not Available Not Available Not Available
explorer.exe c:\windows\explorer.exe 3716 8 204800 1413120
  8/22/2007 7:02 AM 6.00.3790.1830 (srv03_sp1_rtm.050324-1447)
  1.00 MB (1,050,624 bytes) 5/1/2007 4:02 PM
svchost.exe c:\windows\system32\svchost.exe 2836 8 204800 1413120
  8/22/2007 7:02 AM 5.2.3790.1830 (srv03_sp1_rtm.050324-1447) 14.00
KB (14,336 bytes) 5/1/2007 4:02 PM
helpctr.exe c:\windows\pchealth\helpctr\binaries\helpctr.exe 544 8
  204800 1413120 9/12/2007 10:02 AM 5.2.3790.1830
(srv03_sp1_rtm.050324-1447) 778.00 KB (796,672 bytes) 5/1/2007 4:02
PM
helpsvc.exe c:\windows\pchealth\helpctr\binaries\helpsvc.exe 3140
  8 204800 1413120 9/12/2007 10:02 AM 5.2.3790.1830
(srv03_sp1_rtm.050324-1447) 745.00 KB (762,880 bytes) 5/1/2007 4:02
PM
wmiprvse.exe Not Available 3424 8 Not Available Not Available
  9/12/2007 10:02 AM Not Available Not Available Not Available

[Loaded Modules]

Name Version Size File Date Manufacturer Path
winlogon 5.2.3790.1830 (srv03_sp1_rtm.050324-1447) 497.00 KB
(508,928 bytes) 5/1/2007 4:02 PM Microsoft Corporation
  c:\windows\system32\winlogon.exe
ntdll 5.2.3790.1830 (srv03_sp1_rtm.050324-1447) 748.50 KB (766,464
bytes) 3/25/2003 6:00 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) 5/1/2007 4:02 PM 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 6:00 AM Microsoft Corporation
  c:\windows\system32\advapi32.dll
rpcrt4 5.2.3790.1830 (srv03_sp1_rtm.050324-1447) 627.00 KB
(642,048 bytes) 5/1/2007 4:02 PM Microsoft Corporation
  c:\windows\system32\rpcrt4.dll
crypt32 5.131.3790.1830 (srv03_sp1_rtm.050324-1447) 582.00 KB
(595,968 bytes) 5/1/2007 4:02 PM Microsoft Corporation
  c:\windows\system32\crypt32.dll
msasn1 5.2.3790.1830 (srv03_sp1_rtm.050324-1447) 56.50 KB (57,856
bytes) 5/1/2007 4:02 PM Microsoft Corporation
  c:\windows\system32\msasn1.dll
msvcrt 7.0.3790.1830 (srv03_sp1_rtm.050324-1447) 340.50 KB
(348,672 bytes) 5/1/2007 4:02 PM Microsoft Corporation
  c:\windows\system32\msvcrt.dll
user32 5.2.3790.1830 (srv03_sp1_rtm.050324-1447) 574.50 KB
(588,288 bytes) 5/1/2007 4:02 PM Microsoft Corporation
  c:\windows\system32\user32.dll
gdi32 5.2.3790.1830 (srv03_sp1_rtm.050324-1447) 273.00 KB (279,552
bytes) 5/1/2007 4:02 PM 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 6:00 AM Microsoft Corporation
  c:\windows\system32\nddeapi.dll
profmap 5.2.3790.1830 (srv03_sp1_rtm.050324-1447) 22.50 KB (23,040
bytes) 5/1/2007 4:02 PM Microsoft Corporation
  c:\windows\system32\profmap.dll
netapi32 5.2.3790.1830 (srv03_sp1_rtm.050324-1447) 341.50 KB
(349,696 bytes) 5/1/2007 4:02 PM 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 6:00 AM Microsoft Corporation
  c:\windows\system32\userenv.dll
psapi 5.2.3790.1830 (srv03_sp1_rtm.050324-1447) 20.00 KB (20,480
bytes) 5/1/2007 4:02 PM Microsoft Corporation
  c:\windows\system32\psapi.dll
regapi 5.2.3790.1830 (srv03_sp1_rtm.050324-1447) 55.00 KB (56,320
bytes) 5/1/2007 4:02 PM Microsoft Corporation
  c:\windows\system32\regapi.dll
secur32 5.2.3790.1830 (srv03_sp1_rtm.050324-1447) 64.00 KB (65,536
bytes) 5/1/2007 4:02 PM 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 6:00 AM Microsoft Corporation
  c:\windows\system32\setupapi.dll
version 5.2.3790.1830 (srv03_sp1_rtm.050324-1447) 18.00 KB (18,432
bytes) 5/1/2007 4:02 PM Microsoft Corporation
  c:\windows\system32\version.dll
winsta 5.2.3790.1830 (srv03_sp1_rtm.050324-1447) 54.50 KB (55,808
bytes) 5/1/2007 4:02 PM Microsoft Corporation
  c:\windows\system32\winsta.dll
ws2_32 5.2.3790.1830 (srv03_sp1_rtm.050324-1447) 82.00 KB (83,968
bytes) 5/1/2007 4:02 PM Microsoft Corporation
  c:\windows\system32\ws2_32.dll

ws2help 5.2.3790.1830 (srv03_sp1_rtm.050324-1447) 19.50 KB (19,968 bytes) 5/1/2007 4:02 PM Microsoft Corporation
  c:\windows\system32\ws2help.dll
msgina 5.2.3790.1830 (srv03_sp1_rtm.050324-1447) 1.16 MB (1,211,904 bytes) 5/1/2007 4:02 PM Microsoft Corporation
  c:\windows\system32\msgina.dll
shsvcs 6.00.3790.1830 (srv03_sp1_rtm.050324-1447) 131.50 KB (134,656 bytes) 5/1/2007 4:02 PM Microsoft Corporation
  c:\windows\system32\shsvcs.dll
shlwapi 6.00.3790.1830 (srv03_sp1_rtm.050324-1447) 313.50 KB (321,024 bytes) 5/1/2007 4:02 PM 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 6:00 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) 5/1/2007 4:02 PM Microsoft Corporation
  c:\windows\system32\sfc_os.dll
wintrust 5.131.3790.1830 (srv03_sp1_rtm.050324-1447) 162.00 KB (165,888 bytes) 5/1/2007 4:02 PM 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 6:00 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) 5/1/2007 4:02 PM 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 10:41 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 6:00 AM Microsoft Corporation
  c:\windows\system32\winscard.dll
wtsapi32 5.2.3790.1830 (srv03_sp1_rtm.050324-1447) 19.00 KB (19,456 bytes) 5/1/2007 4:02 PM Microsoft Corporation
  c:\windows\system32\wtsapi32.dll
sxs 5.2.3790.1830 (srv03_sp1_rtm.050324-1447) 743.50 KB (761,344 bytes) 5/1/2007 4:02 PM Microsoft Corporation
  c:\windows\system32\sxs.dll
winmm 5.2.3790.1830 (srv03_sp1_rtm.050324-1447) 172.50 KB (176,640 bytes) 5/1/2007 4:02 PM Microsoft Corporation
  c:\windows\system32\winmm.dll
shell32 6.00.3790.1830 (srv03_sp1_rtm.050324-1447) 7.99 MB (8,379,392 bytes) 5/1/2007 4:02 PM Microsoft Corporation
  c:\windows\system32\shell32.dll
rsaenh 5.2.3790.1830 (srv03_sp1_rtm.050324-1447) 183.98 KB (188,392 bytes) 5/1/2007 4:02 PM Microsoft Corporation
  c:\windows\system32\rsaenh.dll
wldap32 5.2.3790.1830 (srv03_sp1_rtm.050324-1447) 174.50 KB (178,688 bytes) 5/1/2007 4:02 PM Microsoft Corporation
  c:\windows\system32\wldap32.dll
cscdll 5.2.3790.1830 (srv03_sp1_rtm.050324-1447) 100.00 KB (102,400 bytes) 5/1/2007 4:02 PM Microsoft Corporation
  c:\windows\system32\cscdll.dll
dimsntfy 5.2.3790.1830 (srv03_sp1_rtm.050324-1447) 19.00 KB (19,456 bytes) 5/1/2007 4:04 PM Microsoft Corporation
  c:\windows\system32\dimsntfy.dll
wlnotify 5.2.3790.1830 (srv03_sp1_rtm.050324-1447) 94.50 KB (96,768 bytes) 5/1/2007 4:02 PM 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 6:00 AM Microsoft Corporation
  c:\windows\system32\mpr.dll
oleaut32 5.2.3790.1830 543.00 KB (556,032 bytes) 3/25/2003 6:00 AM Microsoft Corporation c:\windows\system32\oleaut32.dll
winspool 5.2.3790.1830 (srv03_sp1_rtm.050324-1447) 147.00 KB (150,528 bytes) 3/25/2003 6:00 AM Microsoft Corporation
  c:\windows\system32\winspool.drv
comctl32 5.82 (srv03_sp1_rtm.050324-1447) 585.00 KB (599,040 bytes) 3/24/2005 10:41 PM Microsoft Corporation
  c:\windows\winsxs\x86_microsoft.windows.common-controls_6595b64144ccf1df_5.82.3790.1830_x-ww_1b6f474a\comctl32.dll

uxtheme 6.00.3790.1830 (srv03_sp1_rtm.050324-1447) 202.00 KB (206,848 bytes) 5/1/2007 4:02 PM Microsoft Corporation
  c:\windows\system32\uxtheme.dll
clbcatq 2001.12.4720.1830 (srv03_sp1_rtm.050324-1447) 502.50 KB (514,560 bytes) 5/1/2007 4:02 PM Microsoft Corporation
  c:\windows\system32\clbcatq.dll
comres 2001.12.4720.0 (srv03_rtm.030324-2048) 778.00 KB (796,672 bytes) 3/25/2003 6:00 AM Microsoft Corporation
  c:\windows\system32\comres.dll
wbemprox 5.2.3790.1830 (srv03_sp1_rtm.050324-1447) 20.50 KB (20,992 bytes) 5/1/2007 4:02 PM Microsoft Corporation
  c:\windows\system32\wbem\wbemprox.dll
wbemcomn 5.2.3790.1830 (srv03_sp1_rtm.050324-1447) 221.00 KB (226,304 bytes) 5/1/2007 4:02 PM Microsoft Corporation
  c:\windows\system32\wbem\wbemcomn.dll
xpsp2res 5.2.3790.1830 (srv03_sp1_rtm.050324-1447) 2.76 MB (2,897,920 bytes) 5/1/2007 4:04 PM Microsoft Corporation
  c:\windows\system32\xpsp2res.dll
wbemsvc 5.2.3790.0 (srv03_rtm.030324-2048) 42.50 KB (43,520 bytes) 5/1/2007 12:56 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) 5/1/2007 4:02 PM Microsoft Corporation
  c:\windows\system32\wbem\fastprox.dll
msvcp60 6.05.2144.0 388.00 KB (397,312 bytes) 3/25/2003 6:00 AM Microsoft Corporation c:\windows\system32\msvcp60.dll

ntdsapi 5.2.3790.1830 (srv03_sp1_rtm.050324-1447) 71.00 KB (72,704 bytes) 5/1/2007 4:02 PM Microsoft Corporation
  c:\windows\system32\ntdsapi.dll
dnsapi 5.2.3790.1830 (srv03_sp1_rtm.050324-1447) 153.50 KB (157,184 bytes) 5/1/2007 4:02 PM Microsoft Corporation
  c:\windows\system32\dnsapi.dll
samlib 5.2.3790.1830 (srv03_sp1_rtm.050324-1447) 46.50 KB (47,616 bytes) 3/25/2003 6:00 AM Microsoft Corporation
  c:\windows\system32\samlib.dll
cscui 5.2.3790.1830 (srv03_sp1_rtm.050324-1447) 319.50 KB (327,168 bytes) 5/1/2007 4:02 PM Microsoft Corporation
  c:\windows\system32\cscui.dll
es 2001.12.4720.1830 (srv03_sp1_rtm.050324-1447) 233.00 KB (238,592 bytes) 5/1/2007 4:02 PM Microsoft Corporation
  c:\windows\system32\es.dll
ntmarta 5.2.3790.1830 (srv03_sp1_rtm.050324-1447) 120.50 KB (123,392 bytes) 5/1/2007 4:02 PM Microsoft Corporation
  c:\windows\system32\ntmarta.dll
services 5.2.3790.1830 (srv03_sp1_rtm.050324-1447) 107.50 KB (110,080 bytes) 3/25/2003 6:00 AM Microsoft Corporation
  c:\windows\system32\services.exe
ncobjapi 5.2.3790.1830 (srv03_sp1_rtm.050324-1447) 36.00 KB (36,864 bytes) 5/1/2007 4:02 PM Microsoft Corporation
  c:\windows\system32\ncobjapi.dll
scesrv 5.2.3790.1830 (srv03_sp1_rtm.050324-1447) 327.00 KB (334,848 bytes) 5/1/2007 4:02 PM Microsoft Corporation
  c:\windows\system32\scesrv.dll
authz 5.2.3790.1830 (srv03_sp1_rtm.050324-1447) 66.50 KB (68,096 bytes) 5/1/2007 4:02 PM Microsoft Corporation
  c:\windows\system32\authz.dll
umpnpmgr 5.2.3790.1830 (srv03_sp1_rtm.050324-1447) 126.50 KB (129,536 bytes) 5/1/2007 4:02 PM Microsoft Corporation
  c:\windows\system32\umpnpmgr.dll
eventlog 5.2.3790.1830 (srv03_sp1_rtm.050324-1447) 67.50 KB (69,120 bytes) 5/1/2007 4:02 PM 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 6:00 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 6:00 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 6:00 AM Microsoft Corporation
  c:\windows\system32\samsrv.dll
cryptdll 5.2.3790.1830 (srv03_sp1_rtm.050324-1447) 32.00 KB (32,768 bytes) 5/1/2007 4:02 PM 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 6:00 AM Microsoft Corporation
  c:\windows\system32\msprivs.dll
kerberos 5.2.3790.1830 (srv03_sp1_rtm.050324-1447) 340.50 KB (348,672 bytes) 5/1/2007 4:02 PM Microsoft Corporation
  c:\windows\system32\kerberos.dll
msv1_0 5.2.3790.1830 (srv03_sp1_rtm.050324-1447) 141.00 KB (144,384 bytes) 5/1/2007 4:02 PM Microsoft Corporation
  c:\windows\system32\msv1_0.dll
iphlpapi 5.2.3790.1830 (srv03_sp1_rtm.050324-1447) 92.50 KB (94,720 bytes) 5/1/2007 4:02 PM Microsoft Corporation
  c:\windows\system32\iphlpapi.dll
netlogon 5.2.3790.1830 (srv03_sp1_rtm.050324-1447) 409.50 KB (419,328 bytes) 5/1/2007 4:02 PM Microsoft Corporation
  c:\windows\system32\netlogon.dll
w32time 5.2.3790.1830 (srv03_sp1_rtm.050324-1447) 222.00 KB (227,328 bytes) 5/1/2007 4:02 PM Microsoft Corporation
  c:\windows\system32\w32time.dll
schannel 5.2.3790.1830 (srv03_sp1_rtm.050324-1447) 141.00 KB (144,384 bytes) 5/1/2007 4:02 PM Microsoft Corporation
  c:\windows\system32\schannel.dll
wdigest 5.2.3790.1830 (srv03_sp1_rtm.050324-1447) 74.00 KB (75,776 bytes) 5/1/2007 4:02 PM Microsoft Corporation
  c:\windows\system32\wdigest.dll
rassfm 5.2.3790.1830 (srv03_sp1_rtm.050324-1447) 23.00 KB (23,552 bytes) 5/1/2007 4:02 PM Microsoft Corporation
  c:\windows\system32\rassfm.dll
kdcsvc 5.2.3790.1830 (srv03_sp1_rtm.050324-1447) 213.50 KB (218,624 bytes) 5/1/2007 4:02 PM Microsoft Corporation
  c:\windows\system32\kdcsvc.dll
ntdsa 5.2.3790.1830 (srv03_sp1_rtm.050324-1447) 1.45 MB (1,516,032 bytes) 5/1/2007 4:02 PM 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) 5/1/2007 4:02 PM Microsoft Corporation
  c:\windows\system32\esent.dll
ntdsatq 5.2.3790.1830 (srv03_sp1_rtm.050324-1447) 29.50 KB (30,208 bytes) 5/1/2007 4:02 PM Microsoft Corporation
  c:\windows\system32\ntdsatq.dll
mswsock 5.2.3790.1830 (srv03_sp1_rtm.050324-1447) 250.50 KB (256,512 bytes) 5/1/2007 4:02 PM Microsoft Corporation
  c:\windows\system32\mswsock.dll
scecli 5.2.3790.1830 (srv03_sp1_rtm.050324-1447) 186.50 KB (190,976 bytes) 5/1/2007 4:02 PM Microsoft Corporation
  c:\windows\system32\scecli.dll
ws03res 5.2.3790.1830 (srv03_sp1_rtm.050324-1447) 793.50 KB (812,544 bytes) 5/1/2007 4:02 PM Microsoft Corporation
  c:\windows\system32\ws03res.dll
hnetcfg 5.2.3790.1830 (srv03_sp1_rtm.050324-1447) 343.50 KB (351,744 bytes) 5/1/2007 4:02 PM 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 6:00 AM Microsoft Corporation
   c:\windows\system32\wshtcpip.dll
ipsecsvc  5.2.3790.1830 (srv03_sp1_rtm.050324-1447) 180.50 KB
(184,832 bytes) 5/1/2007 4:02 PM  Microsoft Corporation
   c:\windows\system32\ipsecsvc.dll
oakley  5.2.3790.1830 (srv03_sp1_rtm.050324-1447) 264.00 KB
(270,336 bytes) 5/1/2007 4:02 PM  Microsoft Corporation
   c:\windows\system32\oakley.dll
winipsec  5.2.3790.1830 (srv03_sp1_rtm.050324-1447) 35.50 KB
(36,352 bytes) 5/1/2007 4:02 PM  Microsoft Corporation
   c:\windows\system32\winipsec.dll
pstorsvc  5.2.3790.0 (srv03_rtm.030324-2048)  24.00 KB (24,576
bytes)  3/25/2003 6:00 AM Microsoft Corporation
   c:\windows\system32\pstorsvc.dll
psbase  5.2.3790.1830 (srv03_sp1_rtm.050324-1447) 84.00 KB (86,016
bytes) 5/1/2007 4:02 PM  Microsoft Corporation
   c:\windows\system32\psbase.dll
dssenh  5.2.3790.1830 (srv03_sp1_rtm.050324-1447) 139.98 KB
(143,336 bytes) 5/1/2007 4:02 PM  Microsoft Corporation
   c:\windows\system32\dssenh.dll
wlbsctrl  5.2.3790.1830 (srv03_sp1_rtm.050324-1447) 82.00 KB
(83,968 bytes) 5/1/2007 4:02 PM  Microsoft Corporation
   c:\windows\system32\wlbsctrl.dll
svchost  5.2.3790.1830 (srv03_sp1_rtm.050324-1447) 14.00 KB (14,336
bytes) 5/1/2007 4:02 PM  Microsoft Corporation
   c:\windows\system32\svchost.exe
rpcss 5.2.3790.1830 (srv03_sp1_rtm.050324-1447) 406.00 KB (415,744
bytes) 5/1/2007 4:02 PM  Microsoft Corporation
   c:\windows\system32\rpcss.dll
wzcsvc  5.2.3790.1830 (srv03_sp1_rtm.050324-1447) 364.50 KB
(373,248 bytes) 5/1/2007 4:02 PM  Microsoft Corporation
   c:\windows\system32\wzcsvc.dll
rtutils 5.2.3790.1830 (srv03_sp1_rtm.050324-1447) 34.50 KB (35,328
bytes) 5/1/2007 4:02 PM  Microsoft Corporation
   c:\windows\system32\rtutils.dll
wmi 5.2.3790.0 (srv03_rtm.030324-2048)  6.50 KB (6,656 bytes)
 3/25/2003 6:00 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 6:00 AM Microsoft Corporation
   c:\windows\system32\dhcpcsvc.dll
atl 3.05.2283 83.00 KB (84,992 bytes) 3/25/2003 6:00 AM Microsoft
Corporation c:\windows\system32\atl.dll
rastls  5.2.3790.1830 (srv03_sp1_rtm.050324-1447) 180.00 KB
(184,320 bytes) 5/1/2007 4:02 PM  Microsoft Corporation
   c:\windows\system32\rastls.dll
cryptui 5.131.3790.1830 (srv03_sp1_rtm.050324-1447) 496.50 KB
(508,416 bytes) 5/1/2007 4:02 PM  Microsoft Corporation
   c:\windows\system32\cryptui.dll
mprapi 5.2.3790.1830 (srv03_sp1_rtm.050324-1447) 89.00 KB (91,136
bytes)  5/1/2007 4:02 PM  Microsoft Corporation
   c:\windows\system32\mprapi.dll
activeds  5.2.3790.1830 (srv03_sp1_rtm.050324-1447) 194.00 KB
(198,656 bytes) 5/1/2007 4:02 PM  Microsoft Corporation
   c:\windows\system32\activeds.dll
adsldpc 5.2.3790.1830 (srv03_sp1_rtm.050324-1447) 146.00 KB
(149,504 bytes) 5/1/2007 4:02 PM  Microsoft Corporation
   c:\windows\system32\adsldpc.dll
credui  5.2.3790.1830 (srv03_sp1_rtm.050324-1447) 162.00 KB
(165,888 bytes) 5/1/2007 4:02 PM  Microsoft Corporation
   c:\windows\system32\credui.dll
rasapi32  5.2.3790.1830 (srv03_sp1_rtm.050324-1447) 239.50 KB
(245,248 bytes) 3/25/2003 6:00 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 6:00 AM Microsoft Corporation
   c:\windows\system32\rasman.dll
tapi32  5.2.3790.1830 (srv03_sp1_rtm.050324-1447) 179.50 KB
(183,808 bytes) 5/1/2007 4:02 PM  Microsoft Corporation
   c:\windows\system32\tapi32.dll
raschap 5.2.3790.1830 (srv03_sp1_rtm.050324-1447) 119.50 KB
(122,368 bytes) 5/1/2007 4:02 PM  Microsoft Corporation
   c:\windows\system32\raschap.dll
schedsvc  5.2.3790.1830 (srv03_sp1_rtm.050324-1447) 197.50 KB
(202,240 bytes) 5/1/2007 4:02 PM  Microsoft Corporation
   c:\windows\system32\schedsvc.dll
msidle  6.00.3790.1830 (srv03_sp1_rtm.050324-1447)  6.50 KB (6,656
bytes) 5/1/2007 4:02 PM  Microsoft Corporation
   c:\windows\system32\msidle.dll
audiosrv  5.2.3790.1830 (srv03_sp1_rtm.050324-1447) 40.50 KB
(41,472 bytes) 5/1/2007 4:02 PM  Microsoft Corporation
   c:\windows\system32\audiosrv.dll
wkssvc  5.2.3790.1830 (srv03_sp1_rtm.050324-1447) 130.00 KB
(133,120 bytes) 3/25/2003 6:00 AM Microsoft Corporation
   c:\windows\system32\wkssvc.dll
wiarpc  5.2.3790.1830 (srv03_sp1_rtm.050324-1447) 32.50 KB (33,280
bytes)  5/1/2007 4:02 PM  Microsoft Corporation
   c:\windows\system32\wiarpc.dll
aelupsvc  5.2.3790.1830 (srv03_sp1_rtm.050324-1447) 26.00 KB
(26,624 bytes) 5/1/2007 4:04 PM  Microsoft Corporation
   c:\windows\system32\aelupsvc.dll
apphelp 5.2.3790.1830 (srv03_sp1_rtm.050324-1447) 146.50 KB
(150,016 bytes) 5/1/2007 4:02 PM  Microsoft Corporation
   c:\windows\system32\apphelp.dll
cryptsvc  5.2.3790.1830 (srv03_sp1_rtm.050324-1447) 55.50 KB
(56,832 bytes) 5/1/2007 4:02 PM  Microsoft Corporation
   c:\windows\system32\cryptsvc.dll
certcli 5.2.3790.1830 (srv03_sp1_rtm.050324-1447) 227.00 KB
(232,448 bytes) 5/1/2007 4:02 PM  Microsoft Corporation
   c:\windows\system32\certcli.dll

vssapi  5.2.3790.1830 (srv03_sp1_rtm.050324-1447) 548.00 KB
(561,152 bytes) 5/1/2007 4:02 PM  Microsoft Corporation
   c:\windows\system32\vssapi.dll
dmserver  5.2.3790.1830 (srv03_sp1_rtm.050324-1447) 25.50 KB
(26,112 bytes)  5/1/2007 4:02 PM  Microsoft Corporation
   c:\windows\system32\dmserver.dll
pchsvc  5.2.3790.1830 (srv03_sp1_rtm.050324-1447) 39.00 KB (39,936
bytes) 5/1/2007 4:02 PM  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 6:00 AM Microsoft Corporation
   c:\windows\system32\srvsvc.dll
comsvcs  2001.12.4720.1830 (srv03_sp1_rtm.050324-1447) 1.19 MB
(1,248,256 bytes) 5/1/2007 4:02 PM  Microsoft Corporation
   c:\windows\system32\comsvcs.dll
seclogon  5.2.3790.1830 (srv03_sp1_rtm.050324-1447) 18.50 KB
(18,944 bytes)  5/1/2007 4:02 PM  Microsoft Corporation
   c:\windows\system32\seclogon.dll
sens  5.2.3790.1830 (srv03_sp1_rtm.050324-1447) 36.50 KB (37,376
bytes)  5/1/2007 4:02 PM  Microsoft Corporation
   c:\windows\system32\sens.dll
trkwks  5.2.3790.0 (srv03_rtm.030324-2048)  85.00 KB (87,040 bytes)
 3/25/2003 6:00 AM Microsoft Corporation
   c:\windows\system32\trkwks.dll
wmisvc  5.2.3790.1830 (srv03_sp1_rtm.050324-1447) 140.00 KB
(143,360 bytes) 5/1/2007 4:02 PM  Microsoft Corporation
   c:\windows\system32\wbem\wmisvc.dll
wuauserv  5.7.3790.1830 (srv03_sp1_rtm.050324-1447) 8.00 KB (8,192
bytes)  5/1/2007 4:04 PM  Microsoft Corporation
   c:\windows\system32\wuauserv.dll
wuaueng  5.7.3790.1830 (srv03_sp1_rtm.050324-1447) 1.18 MB
(1,232,896 bytes) 5/1/2007 4:04 PM  Microsoft Corporation
   c:\windows\system32\wuaueng.dll
advpack  6.00.3790.1830 (srv03_sp1_rtm.050324-1447)  98.00 KB
(100,352 bytes) 5/1/2007 4:02 PM  Microsoft Corporation
   c:\windows\system32\advpack.dll
cabinet  5.2.3790.1830 (srv03_sp1_rtm.050324-1447) 81.50 KB (83,456
bytes)  3/24/2005 9:35 PM Microsoft Corporation
   c:\windows\system32\cabinet.dll
mspatcha  5.2.3790.0 (srv03_rtm.030324-2048)  29.00 KB (29,696
bytes)  3/25/2003 6:00 AM Microsoft Corporation
   c:\windows\system32\mspatcha.dll
shfolder  6.00.3790.1830 (srv03_sp1_rtm.050324-1447)  24.50 KB
(25,088 bytes)  5/1/2007 4:02 PM  Microsoft Corporation
   c:\windows\system32\shfolder.dll
winhttp 5.2.3790.1830 (srv03_sp1_rtm.050324-1447) 353.00 KB
(361,472 bytes) 3/24/2005 10:41 PM Microsoft Corporation
   c:\windows\winsxs\x86_microsoft.windows.winhttp_6595b64144ccf1df_
   5.1.3790.1830_x-ww_74150efb\winhttp.dll
browser  5.2.3790.1830 (srv03_sp1_rtm.050324-1447) 76.50 KB (78,336
bytes)  5/1/2007 4:02 PM  Microsoft Corporation
   c:\windows\system32\browser.dll
wbemcore  5.2.3790.1830 (srv03_sp1_rtm.050324-1447) 497.50 KB
(509,440 bytes) 5/1/2007 4:02 PM  Microsoft Corporation
   c:\windows\system32\wbem\wbemcore.dll
esscli  5.2.3790.1830 (srv03_sp1_rtm.050324-1447) 250.00 KB
(256,000 bytes) 5/1/2007 4:02 PM  Microsoft Corporation
   c:\windows\system32\wbem\esscli.dll
wmiutils  5.2.3790.1830 (srv03_sp1_rtm.050324-1447) 93.50 KB
(95,744 bytes)  5/1/2007 4:02 PM  Microsoft Corporation
   c:\windows\system32\wbem\wmiutils.dll
repdrvfs  5.2.3790.1830 (srv03_sp1_rtm.050324-1447) 172.50 KB
(176,640 bytes) 5/1/2007 4:02 PM  Microsoft Corporation
   c:\windows\system32\wbem\repdrvfs.dll
wmiprvsd  5.2.3790.1830 (srv03_sp1_rtm.050324-1447) 404.00 KB
(413,696 bytes) 5/1/2007 4:02 PM  Microsoft Corporation
   c:\windows\system32\wbem\wmiprvsd.dll
wbemess 5.2.3790.1830 (srv03_sp1_rtm.050324-1447) 271.50 KB
(278,016 bytes) 5/1/2007 4:02 PM  Microsoft Corporation
   c:\windows\system32\wbem\wbemess.dll
netrap  5.2.3790.0 (srv03_rtm.030324-2048)  11.50 KB (11,776 bytes)
 3/25/2003 6:00 AM Microsoft Corporation
   c:\windows\system32\netrap.dll
ncprov  5.2.3790.1830 (srv03_sp1_rtm.050324-1447) 46.50 KB (47,616
bytes)  5/1/2007 4:02 PM  Microsoft Corporation
   c:\windows\system32\wbem\ncprov.dll
xactsrv  5.2.3790.1830 (srv03_sp1_rtm.050324-1447) 90.00 KB (92,160
bytes)  5/1/2007 4:02 PM  Microsoft Corporation
   c:\windows\system32\xactsrv.dll
winrnr  5.2.3790.1830 (srv03_sp1_rtm.050324-1447) 17.00 KB (17,408
bytes)  5/1/2007 4:02 PM  Microsoft Corporation
   c:\windows\system32\winrnr.dll
rasadhlp  5.2.3790.1830 (srv03_sp1_rtm.050324-1447) 7.50 KB (7,680
bytes)  5/1/2007 4:02 PM  Microsoft Corporation
   c:\windows\system32\rasadhlp.dll
netman  5.2.3790.1830 (srv03_sp1_rtm.050324-1447) 258.50 KB
(264,704 bytes) 5/1/2007 4:02 PM  Microsoft Corporation
   c:\windows\system32\netman.dll
netshell  5.2.3790.1830 (srv03_sp1_rtm.050324-1447) 1.73 MB
(1,812,992 bytes) 5/1/2007 4:02 PM  Microsoft Corporation
   c:\windows\system32\netshell.dll
clusapi  5.2.3790.1830 (srv03_sp1_rtm.050324-1447) 60.00 KB (61,440
bytes)  5/1/2007 4:02 PM  Microsoft Corporation
   c:\windows\system32\clusapi.dll
wininet  6.00.3790.1830 (srv03_sp1_rtm.050324-1447)  646.00 KB
(661,504 bytes) 5/1/2007 4:02 PM  Microsoft Corporation
   c:\windows\system32\wininet.dll
wzcsapi 5.2.3790.1830 (srv03_sp1_rtm.050324-1447) 41.00 KB (41,984
bytes)  5/1/2007 4:02 PM  Microsoft Corporation
   c:\windows\system32\wzcsapi.dll
```

netcfgx 5.2.3790.1830 (srv03_sp1_rtm.050324-1447) 763.00 KB
(781,312 bytes) 5/1/2007 4:02 PM Microsoft Corporation
  c:\windows\system32\netcfgx.dll
rasmans 5.2.3790.1830 (srv03_sp1_rtm.050324-1447) 176.00 KB
(180,224 bytes) 5/1/2007 4:02 PM 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 6:00 AM Microsoft Corporation
  c:\windows\system32\rastapi.dll
rasppp 5.2.3790.1830 (srv03_sp1_rtm.050324-1447) 205.00 KB
(209,920 bytes) 5/1/2007 4:02 PM 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 6:00 AM Microsoft Corporation
  c:\windows\system32\ntlsapi.dll
ipbootp 5.2.3790.1830 (srv03_sp1_rtm.050324-1447) 36.00 KB (36,864
bytes) 5/1/2007 4:02 PM 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 6:00 AM Microsoft Corporation
  c:\windows\system32\rasdlg.dll
wbemcons 5.2.3790.1830 (srv03_sp1_rtm.050324-1447) 45.50 KB
(46,592 bytes) 5/1/2007 4:02 PM Microsoft Corporation
  c:\windows\wbem\wbemcons.dll
spoolsv 5.2.3790.1830 (srv03_sp1_rtm.050324-1447) 57.00 KB (58,368
bytes) 5/1/2007 4:02 PM Microsoft Corporation
  c:\windows\system32\spoolsv.exe
spoolss 5.2.3790.1830 (srv03_sp1_rtm.050324-1447) 85.00 KB (87,040
bytes) 5/1/2007 4:02 PM Microsoft Corporation
  c:\windows\system32\spoolss.dll
localspl 5.2.3790.1830 (srv03_sp1_rtm.050324-1447) 339.00 KB
(347,136 bytes) 3/25/2003 6:00 AM Microsoft Corporation
  c:\windows\system32\localspl.dll
cnbjmon 5.2.3790.1224 (dnsrv(skatari).040514-1058) 46.50 KB
(47,616 bytes) 5/1/2007 4:02 PM Microsoft Corporation
  c:\windows\system32\cnbjmon.dll
pjlmon 5.2.3790.1830 (srv03_sp1_rtm.050324-1447) 15.00 KB (15,360
bytes) 5/1/2007 4:02 PM Microsoft Corporation
  c:\windows\system32\pjlmon.dll
tcpmon 5.2.3790.1830 (srv03_sp1_rtm.050324-1447) 47.00 KB (48,128
bytes) 5/1/2007 4:02 PM Microsoft Corporation
  c:\windows\system32\tcpmon.dll
wsnmp32 5.2.3790.1830 (srv03_sp1_rtm.050324-1447) 43.00 KB (44,032
bytes) 5/1/2007 4:02 PM Microsoft Corporation
  c:\windows\system32\wsnmp32.dll
tcpmib 5.2.3790.1830 (srv03_sp1_rtm.050324-1447) 17.50 KB (17,920
bytes) 5/1/2007 4:02 PM Microsoft Corporation
  c:\windows\system32\tcpmib.dll
wsock32 5.2.3790.0 (srv03_rtm.030324-2048) 22.00 KB (22,528 bytes)
  3/25/2003 6:00 AM Microsoft Corporation
  c:\windows\system32\wsock32.dll
mgmtapi 5.2.3790.1830 (srv03_sp1_rtm.050324-1447) 15.50 KB (15,872
bytes) 3/25/2003 6:00 AM Microsoft Corporation
  c:\windows\system32\mgmtapi.dll
snmpapi 5.2.3790.1830 (srv03_sp1_rtm.050324-1447) 19.50 KB (19,968
bytes) 5/1/2007 4:02 PM Microsoft Corporation
  c:\windows\system32\snmpapi.dll
usbmon 5.2.3790.1830 (srv03_sp1_rtm.050324-1447) 17.00 KB (17,408
bytes) 5/1/2007 4:02 PM Microsoft Corporation
  c:\windows\system32\usbmon.dll
wshqos 5.2.3790.1830 (srv03_sp1_rtm.050324-1447) 24.00 KB (24,576
bytes) 5/1/2007 4:02 PM Microsoft Corporation
  c:\windows\system32\wshqos.dll
win32spl 5.2.3790.1830 (srv03_sp1_rtm.050324-1447) 100.50 KB
(102,912 bytes) 3/25/2003 6:00 AM Microsoft Corporation
  c:\windows\system32\win32spl.dll
inetpp 5.2.3790.1830 (srv03_sp1_rtm.050324-1447) 75.00 KB (76,800
bytes) 5/1/2007 4:02 PM Microsoft Corporation
  c:\windows\system32\inetpp.dll
icmp 5.2.3790.0 (srv03_rtm.030324-2048) 4.50 KB (4,608 bytes)
  3/25/2003 6:00 AM Microsoft Corporation
  c:\windows\system32\icmp.dll
ersvc 5.2.3790.1830 (srv03_sp1_rtm.050324-1447) 24.00 KB (24,576
bytes) 5/1/2007 4:02 PM Microsoft Corporation
  c:\windows\system32\ersvc.dll
inetinfo 6.0.3790.1830 (srv03_sp1_rtm.050324-1447) 14.00 KB
(14,336 bytes) 5/1/2007 4:02 PM Microsoft Corporation
  c:\windows\system32\inetsrv\inetinfo.exe
iisutil 6.0.3790.1830 (srv03_sp1_rtm.050324-1447) 164.00 KB
(167,936 bytes) 5/1/2007 4:02 PM Microsoft Corporation
  c:\windows\system32\inetsrv\iisutil.dll
rpcref 6.0.3790.1830 (srv03_sp1_rtm.050324-1447) 4.00 KB (4,096
bytes) 5/1/2007 4:02 PM Microsoft Corporation
  c:\windows\system32\inetsrv\rpcref.dll
iisrtl 6.0.3790.1830 (srv03_sp1_rtm.050324-1447) 138.50 KB
(141,824 bytes) 5/1/2007 4:02 PM Microsoft Corporation
  c:\windows\system32\iisrtl.dll
iisadmin 6.0.3790.1830 (srv03_sp1_rtm.050324-1447) 21.00 KB
(21,504 bytes) 5/1/2007 4:02 PM Microsoft Corporation
  c:\windows\system32\inetsrv\iisadmin.dll
coadmin 6.0.3790.1830 (srv03_sp1_rtm.050324-1447) 62.50 KB (64,000
bytes) 5/1/2007 4:02 PM Microsoft Corporation
  c:\windows\system32\inetsrv\coadmin.dll
admwprox 6.0.3790.1830 (srv03_sp1_rtm.050324-1447) 47.00 KB
(48,128 bytes) 5/1/2007 4:02 PM Microsoft Corporation
  c:\windows\system32\admwprox.dll
iiscfg 6.0.3790.1830 (srv03_sp1_rtm.050324-1447) 1.08 MB
(1,133,056 bytes) 5/1/2007 4:02 PM Microsoft Corporation
  c:\windows\system32\inetsrv\iiscfg.dll

metadata 6.0.3790.1830 (srv03_sp1_rtm.050324-1447) 229.00 KB
(234,496 bytes) 5/1/2007 4:02 PM Microsoft Corporation
  c:\windows\system32\inetsrv\metadata.dll
msxml3 8.70.1104.0 1.06 MB (1,107,456 bytes) 5/1/2007 4:02 PM
  Microsoft Corporation c:\windows\system32\msxml3.dll
svcext 6.0.3790.1830 (srv03_sp1_rtm.050324-1447) 43.50 KB (44,544
bytes) 5/1/2007 4:02 PM Microsoft Corporation
  c:\windows\system32\inetsrv\svcext.dll
security 5.2.3790.0 (srv03_rtm.030324-2048) 5.50 KB (5,632 bytes)
  3/25/2003 6:00 AM Microsoft Corporation
  c:\windows\system32\security.dll
iismap 6.0.3790.1830 (srv03_sp1_rtm.050324-1447) 58.50 KB (59,904
bytes) 5/1/2007 4:02 PM Microsoft Corporation
  c:\windows\system32\iismap.dll
wamreg 6.0.3790.1830 (srv03_sp1_rtm.050324-1447) 54.50 KB (55,808
bytes) 5/1/2007 4:02 PM Microsoft Corporation
  c:\windows\system32\inetsrv\wamreg.dll
w3ssl 6.0.3790.0 (srv03_rtm.030324-2048) 15.00 KB (15,360 bytes)
  3/25/2003 6:00 AM Microsoft Corporation
  c:\windows\system32\w3ssl.dll
strmfilt 6.0.3790.1830 (srv03_sp1_rtm.050324-1447) 84.00 KB
(86,016 bytes) 5/1/2007 4:02 PM Microsoft Corporation
  c:\windows\system32\strmfilt.dll
httpapi 5.2.3790.1830 (srv03_sp1_rtm.050324-1447) 24.00 KB (24,576
bytes) 5/1/2007 4:02 PM Microsoft Corporation
  c:\windows\system32\httpapi.dll
w3core 6.0.3790.1830 (srv03_sp1_rtm.050324-1447) 340.50 KB
(348,672 bytes) 5/1/2007 4:02 PM Microsoft Corporation
  c:\windows\system32\inetsrv\w3core.dll
lonsint 6.0.3790.1830 (srv03_sp1_rtm.050324-1447) 13.00 KB (13,312
bytes) 5/1/2007 4:02 PM Microsoft Corporation
  c:\windows\system32\inetsrv\lonsint.dll
w3cache 6.0.3790.1830 (srv03_sp1_rtm.050324-1447) 19.00 KB (19,456
bytes) 5/1/2007 4:02 PM Microsoft Corporation
  c:\windows\system32\inetsrv\w3cache.dll
w3tp 6.0.3790.1830 (srv03_sp1_rtm.050324-1447) 13.00 KB (13,312
bytes) 5/1/2007 4:02 PM Microsoft Corporation
  c:\windows\system32\inetsrv\w3tp.dll
w3comlog 6.0.3790.1830 (srv03_sp1_rtm.050324-1447) 10.50 KB
(10,752 bytes) 5/1/2007 4:02 PM Microsoft Corporation
  c:\windows\system32\inetsrv\w3comlog.dll
w3dt 6.0.3790.1830 (srv03_sp1_rtm.050324-1447) 38.50 KB (39,424
bytes) 5/1/2007 4:02 PM Microsoft Corporation
  c:\windows\system32\inetsrv\w3dt.dll
iisres 6.0.3790.1830 (srv03_sp1_rtm.050324-1447) 120.00 KB
(122,880 bytes) 5/1/2007 4:02 PM Microsoft Corporation
  c:\windows\system32\inetsrv\iisres.dll
aspnet_filter 2.0.50727.42 (RTM.050727-4200) 10.50 KB (10,752
bytes) 9/23/2005 9:28 AM Microsoft Corporation
  c:\windows\microsoft.net\framework\v2.0.50727\aspnet_filter.dll
msvcr80 8.00.50727.42 612.00 KB (626,688 bytes) 9/23/2005 9:29 AM
  Microsoft Corporation
  c:\windows\winsxs\x86_microsoft.vc80.crt_1fc8b3b9a1e18e3b_8.0.507
27.42_x-ww_0de06acd\msvcr80.dll
w3isapi 6.0.3790.1830 (srv03_sp1_rtm.050324-1447) 61.00 KB (62,464
bytes) 5/1/2007 4:02 PM Microsoft Corporation
  c:\windows\system32\inetsrv\w3isapi.dll
comadmin 2001.12.4720.1830 (srv03_sp1_rtm.050324-1447) 192.50 KB
(197,120 bytes) 5/1/2007 4:02 PM Microsoft Corporation
  c:\windows\system32\com\comadmin.dll
mfcsubs 2001.12.4720.0 (srv03_rtm.030324-2048) 21.50 KB (22,016
bytes) 3/25/2003 6:00 AM Microsoft Corporation
  c:\windows\system32\mfcsubs.dll
colbact 2001.12.4720.1830 (srv03_sp1_rtm.050324-1447) 59.50 KB
(60,928 bytes) 5/1/2007 4:02 PM Microsoft Corporation
  c:\windows\system32\colbact.dll
gzip 6.0.3790.1830 (srv03_sp1_rtm.050324-1447) 25.00 KB (25,600
bytes) 5/1/2007 4:02 PM Microsoft Corporation
  c:\windows\system32\inetsrv\gzip.dll
winvnc4 4.1.2 428.95 KB (439,248 bytes) 5/3/2007 2:01 PM RealVNC
Ltd. c:\program files\realvnc\vnc4\winvnc4.exe
wm_hooks 4.1 42.47 KB (43,488 bytes) 5/3/2007 2:01 PM RealVNC
Ltd. c:\program files\realvnc\vnc4\wm_hooks.dll
iisw3adm 6.0.3790.1830 (srv03_sp1_rtm.050324-1447) 211.00 KB
(216,064 bytes) 5/1/2007 4:02 PM Microsoft Corporation
  c:\windows\system32\inetsrv\iisw3adm.dll
termsrv 5.2.3790.1830 (srv03_sp1_rtm.050324-1447) 239.00 KB
(244,736 bytes) 5/1/2007 4:02 PM Microsoft Corporation
  c:\windows\system32\termsrv.dll
icaapi 5.2.3790.1830 (srv03_sp1_rtm.050324-1447) 12.50 KB (12,800
bytes) 5/1/2007 4:02 PM Microsoft Corporation
  c:\windows\system32\icaapi.dll
mstlsapi 5.2.3790.1830 (srv03_sp1_rtm.050324-1447) 116.00 KB
(118,784 bytes) 5/1/2007 4:02 PM Microsoft Corporation
  c:\windows\system32\mstlsapi.dll
rdpwsx 5.2.3790.1830 (srv03_sp1_rtm.050324-1447) 101.63 KB
(104,072 bytes) 5/1/2007 4:02 PM Microsoft Corporation
  c:\windows\system32\rdpwsx.dll
explorer 6.00.3790.1830 (srv03_sp1_rtm.050324-1447) 1.00 MB
(1,050,624 bytes) 5/1/2007 4:02 PM Microsoft Corporation
  c:\windows\explorer.exe
browseui 6.00.3790.1830 (srv03_sp1_rtm.050324-1447) 1,009.00 KB
(1,033,216 bytes) 5/1/2007 4:02 PM Microsoft Corporation
  c:\windows\system32\browseui.dll
shdocvw 6.00.3790.1830 (srv03_sp1_rtm.050324-1447) 1.43 MB
(1,502,720 bytes) 5/1/2007 4:02 PM Microsoft Corporation
  c:\windows\system32\shdocvw.dll
themeui 6.00.3790.1830 (srv03_sp1_rtm.050324-1447) 377.50 KB
(386,560 bytes) 5/1/2007 4:02 PM 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 6:00 AM Microsoft Corporation
  c:\windows\system32\msimg32.dll
linkinfo 5.2.3790.1830 (srv03_sp1_rtm.050324-1447) 19.00 KB
(19,456 bytes) 5/1/2007 4:02 PM Microsoft Corporation
  c:\windows\system32\linkinfo.dll
ntshrui 6.00.3790.1830 (srv03_sp1_rtm.050324-1447) 140.00 KB
(143,360 bytes) 5/1/2007 4:02 PM Microsoft Corporation
  c:\windows\system32\ntshrui.dll
webcheck 6.00.3790.1830 (srv03_sp1_rtm.050324-1447) 272.50 KB
(279,040 bytes) 5/1/2007 4:02 PM Microsoft Corporation
  c:\windows\system32\webcheck.dll
stobject 5.2.3790.1830 (srv03_sp1_rtm.050324-1447) 120.50 KB
(123,392 bytes) 5/1/2007 4:02 PM Microsoft Corporation
  c:\windows\system32\stobject.dll
batmeter 6.00.3790.1830 (srv03_sp1_rtm.050324-1447) 31.50 KB
(32,256 bytes) 5/1/2007 4:02 PM Microsoft Corporation
  c:\windows\system32\batmeter.dll
powrprof 6.00.3790.1830 (srv03_sp1_rtm.050324-1447) 16.50 KB
(16,896 bytes) 5/1/2007 4:02 PM Microsoft Corporation
  c:\windows\system32\powrprof.dll
browselc 6.00.3790.0 (srv03_rtm.030324-2048) 62.00 KB (63,488
bytes) 3/25/2003 6:00 AM Microsoft Corporation
  c:\windows\system32\browselc.dll
jscript 5.6.0.8827 448.00 KB (458,752 bytes) 5/1/2007 4:02 PM
  Microsoft Corporation c:\windows\system32\jscript.dll
urlmon 6.00.3790.1830 (srv03_sp1_rtm.050324-1447) 673.00 KB
(689,152 bytes) 5/1/2007 4:02 PM Microsoft Corporation
  c:\windows\system32\urlmon.dll
sensapi 5.2.3790.0 (srv03_rtm.030324-2048) 6.00 KB (6,144 bytes)
  3/25/2003 6:00 AM Microsoft Corporation
  c:\windows\system32\sensapi.dll
mlang 6.00.3790.1830 (srv03_sp1_rtm.050324-1447) 577.50 KB
(591,360 bytes) 5/1/2007 4:02 PM Microsoft Corporation
  c:\windows\system32\mlang.dll
drprov 5.2.3790.1830 (srv03_sp1_rtm.050324-1447) 14.00 KB (14,336
bytes) 5/1/2007 4:02 PM Microsoft Corporation
  c:\windows\system32\drprov.dll
ntlanman 5.2.3790.1830 (srv03_sp1_rtm.050324-1447) 43.50 KB
(44,544 bytes) 5/1/2007 4:02 PM 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 6:00 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 6:00 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 6:00 AM Microsoft Corporation
  c:\windows\system32\davclnt.dll
dfshim 2.0.50727.42 (RTM.050727-4200) 81.50 KB (83,456 bytes)
  9/23/2005 9:28 AM Microsoft Corporation
  c:\windows\system32\dfshim.dll
mscoree 2.0.50727.42 (RTM.050727-4200) 264.50 KB (270,848 bytes)
  9/23/2005 9:28 AM Microsoft Corporation
  c:\windows\system32\mscoree.dll
shfusion 2.0.50727.42 (RTM.050727-4200) 105.00 KB (107,520 bytes)
  9/23/2005 9:28 AM Microsoft Corporation
  c:\windows\microsoft.net\framework\v2.0.50727\shfusion.dll
fusion 2.0.50727.42 (RTM.050727-4200) 9.00 KB (9,216 bytes)
  9/23/2005 9:28 AM Microsoft Corporation
  c:\windows\microsoft.net\framework\v2.0.50727\fusion.dll
culture 2.0.50727.42 (RTM.050727-4200) 17.50 KB (17,920 bytes)
  9/23/2005 9:28 AM Microsoft Corporation
  c:\windows\microsoft.net\framework\v2.0.50727\culture.dll
shfusres 2.0.50727.42 (RTM.050727-4200) 83.50 KB (85,504 bytes)
  9/23/2005 9:29 AM Microsoft Corporation
  c:\windows\microsoft.net\framework\v2.0.50727\shfusres.dll
wzcdlg 5.2.3790.1830 (srv03_sp1_rtm.050324-1447) 380.50 KB
(389,632 bytes) 5/1/2007 4:02 PM Microsoft Corporation
  c:\windows\system32\wzcdlg.dll
shdoclc 6.00.3790.0 (srv03_rtm.030324-2048) 588.50 KB (602,624
bytes) 3/25/2003 6:00 AM Microsoft Corporation
  c:\windows\system32\shdoclc.dll
tapisrv 5.2.3790.1830 (srv03_sp1_rtm.050324-1447) 248.50 KB
(254,464 bytes) 5/1/2007 4:02 PM Microsoft Corporation
  c:\windows\system32\tapisrv.dll
unimdm 5.2.3790.1830 (srv03_sp1_rtm.050324-1447) 203.00 KB
(207,872 bytes) 5/1/2007 4:02 PM Microsoft Corporation
  c:\windows\system32\unimdm.tsp
uniplat 5.2.3790.1830 (srv03_sp1_rtm.050324-1447) 13.00 KB (13,312
bytes) 5/1/2007 4:02 PM Microsoft Corporation
  c:\windows\system32\uniplat.dll
kmddsp 5.2.3790.1830 (srv03_sp1_rtm.050324-1447) 34.50 KB (35,328
bytes) 5/1/2007 4:02 PM Microsoft Corporation
  c:\windows\system32\kmddsp.tsp
ndptsp 5.2.3790.1830 (srv03_sp1_rtm.050324-1447) 47.00 KB (48,128
bytes) 5/1/2007 4:02 PM 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 6:00 AM Microsoft Corporation
  c:\windows\system32\ipconf.tsp
h323 5.2.3790.1830 (srv03_sp1_rtm.050324-1447) 259.50 KB (265,728
bytes) 5/1/2007 4:02 PM Microsoft Corporation
  c:\windows\system32\h323.tsp
hidphone 5.2.3790.1830 (srv03_sp1_rtm.050324-1447) 29.50 KB
(30,208 bytes) 5/1/2007 4:02 PM Microsoft Corporation
  c:\windows\system32\hidphone.tsp
hid 5.2.3790.1830 (srv03_sp1_rtm.050324-1447) 18.50 KB (18,944
bytes) 5/1/2007 4:02 PM Microsoft Corporation
  c:\windows\system32\hid.dll

helpctr 5.2.3790.1830 (srv03_sp1_rtm.050324-1447) 778.00 KB
(796,672 bytes) 5/1/2007 4:02 PM Microsoft Corporation
  c:\windows\pchealth\helpctr\binaries\helpctr.exe
hcappres 5.2.3790.0 (srv03_rtm.030324-2048) 6.50 KB (6,656 bytes)
  5/1/2007 12:58 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) 5/1/2007 4:02 PM Microsoft Corporation
  c:\windows\system32\itss.dll
pchshell 5.2.3790.1830 (srv03_sp1_rtm.050324-1447) 104.50 KB
(107,008 bytes) 5/1/2007 4:02 PM Microsoft Corporation
  c:\windows\pchealth\helpctr\binaries\pchshell.dll
mshtml 6.00.3790.1830 (srv03_sp1_rtm.050324-1447) 2.96 MB
(3,108,864 bytes) 5/1/2007 4:02 PM Microsoft Corporation
  c:\windows\system32\mshtml.dll
msls31 3.10.349.0 142.00 KB (145,408 bytes) 5/1/2007 4:02 PM
  Microsoft Corporation c:\windows\system32\msls31.dll
msimtf 5.2.3790.1830 (srv03_sp1_rtm.050324-1447) 156.00 KB
(159,744 bytes) 5/1/2007 4:02 PM Microsoft Corporation
  c:\windows\system32\msimtf.dll
msctf 5.2.3790.1830 (srv03_sp1_rtm.050324-1447) 311.00 KB (318,464
bytes) 5/1/2007 4:02 PM Microsoft Corporation
  c:\windows\system32\msctf.dll
imm32 5.2.3790.1830 (srv03_sp1_rtm.050324-1447) 108.00 KB (110,592
bytes) 5/1/2007 4:02 PM Microsoft Corporation
  c:\windows\system32\imm32.dll
mshtmled 6.00.3790.1830 (srv03_sp1_rtm.050324-1447) 454.50 KB
(465,408 bytes) 5/1/2007 4:02 PM Microsoft Corporation
  c:\windows\system32\mshtmled.dll
vbscript 5.6.0.8827 392.00 KB (401,408 bytes) 5/1/2007 4:02 PM
  Microsoft Corporation c:\windows\system32\vbscript.dll
msinfo 5.2.3790.1830 (srv03_sp1_rtm.050324-1447) 376.00 KB
(385,024 bytes) 5/1/2007 4:02 PM Microsoft Corporation
  c:\windows\pchealth\helpctr\binaries\msinfo.dll
mfc42u 6.06.8063.0 1.11 MB (1,163,776 bytes) 5/1/2007 4:02 PM
  Microsoft Corporation c:\windows\system32\mfc42u.dll
odbc32 3.526.1830.0 (srv03_sp1_rtm.050324-1447) 240.00 KB
(245,760 bytes) 5/1/2007 4:02 PM 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 6:00 AM Microsoft Corporation
  c:\windows\system32\comdlg32.dll
odbcint 3.526.1830.0 (srv03_sp1_rtm.050324-1447) 92.00 KB (94,208
bytes) 5/1/2007 4:02 PM 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 6:00 AM Microsoft Corporation
  c:\windows\system32\riched32.dll
riched20 5.31.23.1224 439.00 KB (449,536 bytes) 5/1/2007 4:02 PM
  Microsoft Corporation c:\windows\system32\riched20.dll
helpsvc 5.2.3790.1830 (srv03_sp1_rtm.050324-1447) 745.00 KB
(762,880 bytes) 5/1/2007 4:02 PM Microsoft Corporation
  c:\windows\pchealth\helpctr\binaries\helpsvc.exe

[Services]

Display Name Name State Start Mode Service Type Path Error
Control Start Name Tag ID
Application Experience Lookup Service AeLookupSvc Running Auto
  Share Process c:\windows\system32\svchost.exe -k netsvcs Normal
  LocalSystem 0
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

ASP.NET State Service aspnet_state Stopped Manual Own Process
  c:\windows\microsoft.net\framework\v2.0.50727\aspnet_state.exe
  Normal NT AUTHORITY\NetworkService 0
Windows Audio AudioSrv Running Auto Share Process
  c:\windows\system32\svchost.exe -k netsvcs Normal LocalSystem 0

Background Intelligent Transfer Service BITS Stopped Manual Share
Process c:\windows\system32\svchost.exe -k netsvcs Normal
  LocalSystem 0
Computer Browser Browser Running Auto Share Process
  c:\windows\system32\svchost.exe -k netsvcs Normal LocalSystem 0

Indexing Service CiSvc Stopped Disabled Share Process
  c:\windows\system32\cisvc.exe Normal LocalSystem 0
ClipBook ClipSrv Stopped Disabled Own Process
  c:\windows\system32\clipsrv.exe Normal LocalSystem 0
.NET Runtime Optimization Service v2.0.50727_X86
  clr_optimization_v2.0.50727_32 Stopped Manual Own Process
  c:\windows\microsoft.net\framework\v2.0.50727\mscorsvw.exe
  Ignore LocalSystem 0
COM+ System Application COMSysApp Stopped Manual Own Process
  c:\windows\system32\dllhost.exe /processid:{02d4b3f1-fd88-11d1-
  960d-00805fc79235} Normal LocalSystem 0
Cryptographic Services CryptSvc Running Auto Share Process
  c:\windows\system32\svchost.exe -k netsvcs Normal LocalSystem 0

DCOM Server Process Launcher DcomLaunch Running Auto Share
Process c:\windows\system32\svchost.exe -k dcomlaunch Normal
  LocalSystem 0
Distributed File System Dfs Stopped Manual Own Process
  c:\windows\system32\dfssvc.exe Normal LocalSystem 0

DHCP Client Dhcp Running Auto Share Process
  c:\windows\system32\svchost.exe -k networkservice Normal NT
AUTHORITY\NetworkService 0
Logical Disk Manager Administrative Service dmadmin Stopped Manual
  Share Process c:\windows\system32\dmadmin.exe /com Normal
  LocalSystem 0
Logical Disk Manager dmserver Running Auto Share Process
  c:\windows\system32\svchost.exe -k netsvcs Normal LocalSystem 0

DNS Client Dnscache Running Auto Share Process
  c:\windows\system32\svchost.exe -k networkservice Normal NT
AUTHORITY\NetworkService 0
Error Reporting Service ERSvc Running Auto Share Process
  c:\windows\system32\svchost.exe -k winerr Ignore LocalSystem 0
Event Log Eventlog Running Auto Share Process
  c:\windows\system32\services.exe Normal LocalSystem 0
COM+ Event System EventSystem Running Auto Share Process
  c:\windows\system32\svchost.exe -k netsvcs Normal LocalSystem 0

Help and Support helpsvc Running Auto 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 Running Manual Share Process
  c:\windows\system32\inetsrv\inetinfo.exe Normal LocalSystem 0
IIS Admin Service IISADMIN Running Auto Share Process
  c:\windows\system32\inetsrv\inetinfo.exe Normal LocalSystem 0
IMAPI CD-Burning COM Service ImapiService Stopped Disabled Own
Process c:\windows\system32\imapi.exe Normal LocalSystem 0
Intersite Messaging IsmServ Stopped Disabled Own Process
  c:\windows\system32\ismserv.exe Normal LocalSystem 0
Kerberos Key Distribution Center kdc Stopped Disabled Share
Process c:\windows\system32\lsass.exe Normal LocalSystem 0
Server lanmanserver Running Auto Share Process
  c:\windows\system32\svchost.exe -k netsvcs Normal LocalSystem 0

Workstation lanmanworkstation Running Auto Share Process
  c:\windows\system32\svchost.exe -k netsvcs Normal LocalSystem 0

License Logging LicenseService Stopped Disabled Own Process
  c:\windows\system32\llssrv.exe Normal NT
AUTHORITY\NetworkService 0
TCP/IP NetBIOS Helper LmHosts Running Auto Share Process
  c:\windows\system32\svchost.exe -k localservice Normal NT
AUTHORITY\LocalService 0
Messenger Messenger Stopped Disabled Share Process
  c:\windows\system32\svchost.exe -k netsvcs Normal LocalSystem 0

NetMeeting Remote Desktop Sharing mnmsrvc Stopped Disabled Own
Process c:\windows\system32\mnmsrvc.exe Normal LocalSystem 0
Distributed Transaction Coordinator MSDTC Running Auto Own Process
  c:\windows\system32\msdtc.exe Normal NT AUTHORITY\NetworkService
  0
Windows Installer MSIServer Stopped Manual Share Process
  c:\windows\system32\msiexec.exe /v Normal LocalSystem 0
SQL Server (SQLEXPRESS) MSSQL$SQLEXPRESS Running Auto Own Process
  "c:\program files\microsoft sql
server\mssql.1\mssql\binn\sqlservr.exe" -ssqlexpress Normal NT
AUTHORITY\NetworkService 0
SQL Server Active Directory Helper MSSQLServerADHelper Stopped
  Disabled Own Process "c:\program files\microsoft sql
server\90\shared\sqladhlp90.exe" Normal NT
AUTHORITY\NetworkService 0
Visual Studio 2005 Remote Debugger msvsmon80 Stopped Disabled Own
Process "c:\program files\microsoft visual studio
8\common7\ide\remote debugger\x86\msvsmon.exe" /service msvsmon80
  Ignore LocalSystem 0
Network DDE NetDDE Stopped Disabled Share Process
  c:\windows\system32\netdde.exe Normal LocalSystem 0
Network DDE DSDM NetDDEdsdm Stopped Disabled Share Process
  c:\windows\system32\netdde.exe Normal LocalSystem 0
Net Logon Netlogon Stopped Manual Share Process
  c:\windows\system32\lsass.exe Normal LocalSystem 0
Network Connections Netman Running Manual Share Process
  c:\windows\system32\svchost.exe -k netsvcs Normal LocalSystem 0

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

File Replication NtFrs Stopped Manual Own Process
  c:\windows\system32\ntfrs.exe Ignore LocalSystem 0
NT LM Security Support Provider NtLmSsp Stopped Manual Share
Process c:\windows\system32\lsass.exe Normal LocalSystem 0
Removable Storage NtmsSvc Stopped Manual Share Process
  c:\windows\system32\svchost.exe -k netsvcs Normal LocalSystem 0

OracleJobSchedulerMYDB OracleJobSchedulerMYDB Stopped Disabled
  Own Process c:\oracle\bin\extjob.exe mydb Normal LocalSystem 0
OracleServiceMYDB OracleServiceMYDB Stopped Manual Own Process
  c:\oracle\bin\oracle.exe mydb Normal LocalSystem 0
Plug and Play PlugPlay Running Auto Share Process
  c:\windows\system32\services.exe Normal LocalSystem 0
IPSEC Services PolicyAgent Running Auto 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 Running Auto 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 Running Auto Own Process
  c:\windows\system32\spoolsv.exe Normal LocalSystem 0
SQL Server Browser SQLBrowser Stopped Disabled Own Process
  "c:\program files\microsoft sql server\90\shared\sqlbrowser.exe"
  Normal NT AUTHORITY\NetworkService 0
SQL Server VSS Writer SQLWriter Stopped Manual Own Process
  "c:\program files\microsoft sql server\90\shared\sqlwriter.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 Running Auto 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 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 Running Auto Share Process
  c:\windows\system32\svchost.exe -k localservice Normal NT
AUTHORITY\LocalService 0
World Wide Web Publishing Service W3SVC Running Auto 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
VNC Server Version 4 WinVNC4 Running Auto Own Process "c:\program
files\realvnc\vnc4\winvnc4.exe" -service Ignore LocalSystem 0
Portable Media Serial Number Service WmdmPmSN Stopped Manual
  Share Process c:\windows\system32\svchost.exe -k netsvcs Normal
  LocalSystem 0
Windows Management Instrumentation Driver Extensions Wmi Stopped
  Manual Share Process c:\windows\system32\svchost.exe -k netsvcs
  Normal LocalSystem 0
WMI Performance Adapter WmiApSrv Stopped Manual Own Process
  c:\windows\system32\wbem\wmiapsrv.exe Normal LocalSystem 0
Automatic Updates wuauserv Running Auto Share Process
  c:\windows\system32\svchost.exe -k netsvcs Normal LocalSystem 0

Wireless Configuration WZCSVC Running Auto 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
Microsoft .NET Framework SDK v2.0 All Users:Microsoft .NET
Framework SDK v2.0 All Users
Microsoft .NET Framework SDK v2.0\Tools All Users:Microsoft .NET
Framework SDK v2.0\Tools All Users
Microsoft Developer Network All Users:Microsoft Developer Network
  All Users
Microsoft SQL Server 2005 All Users:Microsoft SQL Server 2005 All
Users
Microsoft SQL Server 2005\Configuration Tools All Users:Microsoft
SQL Server 2005\Configuration Tools All Users
Microsoft Visual Studio 2005 All Users:Microsoft Visual Studio
2005 All Users
Microsoft Visual Studio 2005\Visual Studio Remote Tools All
Users:Microsoft Visual Studio 2005\Visual Studio Remote Tools All
Users
Microsoft Visual Studio 2005\Visual Studio Tools All
Users:Microsoft Visual Studio 2005\Visual Studio Tools All Users
Oracle - OraClient10g_home1 All Users:Oracle - OraClient10g_home1
  All Users
Oracle - OraClient10g_home1\Application Development All
Users:Oracle - OraClient10g_home1\Application Development All Users

Oracle - OraClient10g_home1\Configuration and Migration Tools All
Users:Oracle - OraClient10g_home1\Configuration and Migration Tools
  All Users
Oracle - OraClient10g_home1\Integrated Management Tools All
Users:Oracle - OraClient10g_home1\Integrated Management Tools All
Users
Oracle - OraClient10g_home1\Oracle Installation Products All
Users:Oracle - OraClient10g_home1\Oracle Installation Products All
Users
RealVNC All Users:RealVNC All Users
RealVNC\VNC Server 4 (Service-Mode) All Users:RealVNC\VNC Server 4
(Service-Mode) All Users
RealVNC\VNC Server 4 (User-Mode) All Users:RealVNC\VNC Server 4
(User-Mode) All Users
RealVNC\VNC Viewer 4 All Users:RealVNC\VNC Viewer 4 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 BD2\Administrator:Accessories BD2\Administrator
Accessories\Accessibility
  BD2\Administrator:Accessories\Accessibility BD2\Administrator
Accessories\Entertainment
  BD2\Administrator:Accessories\Entertainment BD2\Administrator
Administrative Tools BD2\Administrator:Administrative Tools
  BD2\Administrator
Startup BD2\Administrator:Startup BD2\Administrator

[Startup Programs]

Program Command User Name Location

desktop desktop.ini NT AUTHORITY\SYSTEM Startup
desktop desktop.ini BD2\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
5/3/2007 1:04 PM Application Error Faulting application
inetinfo.exe, version 6.0.3790.1830, faulting module unknown,
version 0.0.0.0, fault address 0x00000000.

[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 7:55:26 PM
  C:\WINDOWS\system32 Microsoft Corporation
advpack.dll 6.0.3790.1830 98 KB 3/24/2005 7:55:28 PM
  C:\WINDOWS\system32 Microsoft Corporation
asctrls.ocx 6.0.3790.0 90 KB 3/25/2003 7:00:00 AM
  C:\WINDOWS\system32 Microsoft Corporation
browselc.dll 6.0.3790.0 62 KB 3/25/2003 7:00:00 AM
  C:\WINDOWS\system32 Microsoft Corporation
browseui.dll 6.0.3790.1830 1,009 KB 3/24/2005 7:56:10 PM
  C:\WINDOWS\system32 Microsoft Corporation
cdfview.dll 6.0.3790.1830 149 KB 3/24/2005 7:56:32 PM
  C:\WINDOWS\system32 Microsoft Corporation
comctl32.dll 5.82.3790.1830 585 KB 3/24/2005 7:57:56 PM
  C:\WINDOWS\system32 Microsoft Corporation
dxtrans.dll 6.3.3790.1830 205 KB 3/24/2005 8:00:58 PM
  C:\WINDOWS\system32 Microsoft Corporation
dxtmsft.dll 6.3.3790.1830 355 KB 3/24/2005 8:00:58 PM
  C:\WINDOWS\system32 Microsoft Corporation
iecont.dll <File Missing> Not Available Not Available Not
Available Not Available
iecontlc.dll <File Missing> Not Available Not Available Not
Available Not Available
iedkcs32.dll 16.0.3790.1830 324 KB 3/24/2005 8:04:58 PM
  C:\WINDOWS\system32 Microsoft Corporation
iepeers.dll 6.0.3790.1830 248 KB 3/24/2005 8:04:58 PM
  C:\WINDOWS\system32 Microsoft Corporation
iesetup.dll 6.0.3790.1830 61 KB 3/24/2005 8:04:58 PM
  C:\WINDOWS\system32 Microsoft Corporation
ieuinit.inf Not Available 24 KB 3/24/2005 8:04:58 PM
  C:\WINDOWS\system32 Not Available
iexplore.exe 6.0.3790.1830 92 KB 3/24/2005 8:04:58 PM C:\Program
Files\Internet Explorer Microsoft Corporation
imgutil.dll 6.0.3790.1830 38 KB 3/24/2005 8:05:04 PM
  C:\WINDOWS\system32 Microsoft Corporation
inetcpl.cpl 6.0.3790.1830 358 KB 3/24/2005 8:05:06 PM
  C:\WINDOWS\system32 Microsoft Corporation
inetcplc.dll 6.0.3790.0 109 KB 3/25/2003 7:00:00 AM
  C:\WINDOWS\system32 Microsoft Corporation
inseng.dll 6.0.3790.1830 94 KB 3/24/2005 8:05:06 PM
  C:\WINDOWS\system32 Microsoft Corporation
mlang.dll 6.0.3790.1830 578 KB 3/24/2005 8:07:20 PM
  C:\WINDOWS\system32 Microsoft Corporation
msencode.dll 2002.10.4.0 112 KB 3/25/2003 7:00:00 AM
  C:\WINDOWS\system32 □□□Ü□w□□
mshta.exe 6.0.3790.1830 30 KB 3/24/2005 8:07:26 PM
  C:\WINDOWS\system32 Microsoft Corporation
mshtml.dll 6.0.3790.1830 3,036 KB 3/24/2005 8:07:26 PM
  C:\WINDOWS\system32 Microsoft Corporation
mshtml.tlb 6.0.3790.1830 1,320 KB 3/24/2005 8:07:26 PM
  C:\WINDOWS\system32 Microsoft Corporation
mshtmled.dll 6.0.3790.1830 455 KB 3/24/2005 8:07:26 PM
  C:\WINDOWS\system32 Microsoft Corporation

```
mshtmler.dll  6.0.3790.1830 56 KB 3/24/2005 8:07:26 PM
  C:\WINDOWS\system32 Microsoft Corporation
msident.dll 6.0.3790.1830 48 KB 3/24/2005 8:07:28 PM
  C:\WINDOWS\system32 Microsoft Corporation
msidntld.dll  6.0.3790.0  15 KB 3/25/2003 7:00:00 AM
  C:\WINDOWS\system32 Microsoft Corporation
msieftp.dll 6.0.3790.1830 244 KB 3/24/2005 8:07:28 PM
  C:\WINDOWS\system32 Microsoft Corporation
msrating.dll  6.0.3790.1830 144 KB  3/24/2005 8:07:36 PM
  C:\WINDOWS\system32 Microsoft Corporation
mstime.dll  6.0.3790.1830 523 KB 3/24/2005 8:07:38 PM
  C:\WINDOWS\system32 Microsoft Corporation
occache.dll 6.0.3790.1830 94 KB 3/24/2005 8:08:34 PM
  C:\WINDOWS\system32 Microsoft Corporation
proctexe.ocx  6.3.3790.1830 83 KB 3/24/2005 8:12:26 PM
  C:\WINDOWS\system32 Intel Corporation
sendmail.dll  6.0.3790.1830 56 KB 3/24/2005 8:13:36 PM
  C:\WINDOWS\system32 Microsoft Corporation
shdoclc.dll  6.0.3790.0  589 KB  3/25/2003 7:00:00 AM
  C:\WINDOWS\system32 Microsoft Corporation
shdocvw.dll  6.0.3790.1830 1,468 KB 3/24/2005 8:13:36 PM
  C:\WINDOWS\system32 Microsoft Corporation
shfolder.dll  6.0.3790.1830 25 KB 3/24/2005 8:13:36 PM
  C:\WINDOWS\system32 Microsoft Corporation
shlwapi.dll 6.0.3790.1830 314 KB 3/24/2005 8:13:40 PM
  C:\WINDOWS\system32 Microsoft Corporation
tdc.ocx 1.3.0.3130  58 KB 3/25/2003 7:00:00 AM  C:\WINDOWS\system32
  Microsoft Corporation
url.dll 6.0.3790.1830 37 KB 3/24/2005 8:26:12 PM
  C:\WINDOWS\system32 Microsoft Corporation
urlmon.dll  6.0.3790.1830 673 KB 3/24/2005 8:26:12 PM
  C:\WINDOWS\system32 Microsoft Corporation
webcheck.dll  6.0.3790.1830 273 KB  3/24/2005 8:26:16 PM
  C:\WINDOWS\system32 Microsoft Corporation
wininet.dll 6.0.3790.1830 646 KB  3/24/2005 8:26:18 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 Never
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
```

```
-----------
HP Specific Drivers
-----------
The following Microsoft Windows 2003 Server device
drivers were replaced with HP-specific
device drivers:
The Microsoft HP Smart Array P800/512MB SAS
Controller
Controller default device driver
(hpcisss.SYS) was replaced with the
HP Smart Array P800/512MB SAS Controller
Non-miniport Performance Drivers for Microsoft
Windows 2003 Server (hpqcissb.sys and
hpqcissd.sys).

--------------
Server Disk Device Performance Driver Registry Parameters
--------------

Key Name:
HKEY_LOCAL_MACHINE\SYSTEM\CurrentControlSet\Services\hpqcissd
Class Name:       <NO CLASS>
Last Write Time:  9/4/2007 - 11:39 AM
Value 0
  Name:         Type
  Type:         REG_DWORD
  Data:         0x1

Value 1
  Name:         Start
  Type:         REG_DWORD
  Data:         0

Value 2
  Name:         ErrorControl
  Type:         REG_DWORD
  Data:         0x1

Value 3
  Name:         Tag
  Type:         REG_DWORD
  Data:         0x102

Value 4
  Name:         ImagePath
  Type:         REG_EXPAND_SZ
  Data:         system32\DRIVERS\hpqcissd.sys

Value 5
  Name:         DisplayName
  Type:         REG_SZ
  Data:         Smart Array Controllers Non-Miniport Disk Driver

Value 6
  Name:         Group
  Type:         REG_SZ
  Data:         Primary Disk


Key Name:
HKEY_LOCAL_MACHINE\SYSTEM\CurrentControlSet\Services\hpqcissd\Secur
ity
Class Name:       <NO CLASS>
Last Write Time:  7/19/2007 - 8:28 AM
Value 0
  Name:         Security
  Type:         REG_BINARY
  Data:
00000000   01 00 14 80 b8 00 00 00 - c4 00 00 00 14 00 00 00
.....,...Ä.......
00000010   30 00 00 00 02 00 1c 00 - 01 00 00 00 02 80 14 00
0...............
00000020   ff 01 0f 00 01 01 00 00 - 00 00 00 01 00 00 00 00
ÿ...............
00000030   02 00 88 00 06 00 00 00 - 00 00 14 00 fd 01 02 00
............ÿ...
00000040   01 01 00 00 00 00 00 05 - 12 00 00 00 00 00 18 00
................
00000050   ff 01 0f 00 01 02 00 00 - 00 00 00 05 20 00 00 00
ÿ........... ...
00000060   20 02 00 00 00 00 14 00 - 8d 01 02 00 01 01 00 00
 ...............
00000070   00 00 00 05 04 00 00 00 - 00 00 14 00 8d 01 02 00
................
00000080   01 01 00 00 00 00 00 05 - 06 00 00 00 00 00 14 00
................
00000090   00 01 00 00 01 01 00 00 - 00 00 00 05 0b 00 00 00
................
000000a0   00 00 18 00 fd 01 02 00 - 01 02 00 00 00 00 00 05
....ÿ...........
000000b0   20 00 00 00 23 02 00 00 - 01 01 00 00 00 00 00 05
...#...........
000000c0   12 00 00 00 01 01 00 00 - 00 00 00 05 12 00 00 00
................


Key Name:
HKEY_LOCAL_MACHINE\SYSTEM\CurrentControlSet\Services\hpqcissd\Enum
Class Name:       <NO CLASS>
```

```
Last Write Time:   9/4/2007 - 11:39 AM
Value 0
  Name:             0
  Type:             REG_SZ
  Data:
HPQCISS\Disk&VEN_HP&PROD_LOGICAL_VOLUME\7&302311db&0&000000040000000
00

Value 1
  Name:             Count
  Type:             REG_DWORD
  Data:             0x10

Value 2
  Name:             NextInstance
  Type:             REG_DWORD
  Data:             0x10

Value 3
  Name:             1
  Type:             REG_SZ
  Data:
HPQCISS\Disk&VEN_HP&PROD_LOGICAL_VOLUME\7&302311db&0&010000040000000
00

Value 4
  Name:             2
  Type:             REG_SZ
  Data:
HPQCISS\Disk&VEN_HP&PROD_LOGICAL_VOLUME\7&302311db&0&020000040000000
00

Value 5
  Name:             3
  Type:             REG_SZ
  Data:
HPQCISS\Disk&VEN_HP&PROD_LOGICAL_VOLUME\7&302311db&0&030000040000000
00

Value 6
  Name:             4
  Type:             REG_SZ
  Data:
HPQCISS\Disk&VEN_HP&PROD_LOGICAL_VOLUME\7&302311db&0&040000040000000
00

Value 7
  Name:             5
  Type:             REG_SZ
  Data:
HPQCISS\Disk&VEN_HP&PROD_LOGICAL_VOLUME\7&302311db&0&050000040000000
00

Value 8
  Name:             6
  Type:             REG_SZ
  Data:
HPQCISS\Disk&VEN_HP&PROD_LOGICAL_VOLUME\7&302311db&0&060000040000000
00

Value 9
  Name:             7
  Type:             REG_SZ
  Data:
HPQCISS\Disk&VEN_HP&PROD_LOGICAL_VOLUME\7&302311db&0&070000040000000
00

Value 10
  Name:             8
  Type:             REG_SZ
  Data:
HPQCISS\Disk&VEN_HP&PROD_LOGICAL_VOLUME\5&28b0a89c&0&000000040000000
00

Value 11
  Name:             9
  Type:             REG_SZ
  Data:
HPQCISS\Disk&VEN_HP&PROD_LOGICAL_VOLUME\5&28b0a89c&0&010000040000000
00

Value 12
  Name:             10
  Type:             REG_SZ
  Data:
HPQCISS\Disk&VEN_HP&PROD_LOGICAL_VOLUME\5&28b0a89c&0&020000040000000
00

Value 13
  Name:             11
  Type:             REG_SZ
  Data:
HPQCISS\Disk&VEN_HP&PROD_LOGICAL_VOLUME\5&28b0a89c&0&030000040000000
00

Value 14
  Name:             12
  Type:             REG_SZ
  Data:
HPQCISS\Disk&VEN_HP&PROD_LOGICAL_VOLUME\5&28b0a89c&0&040000040000000
00

Value 15
  Name:             13
  Type:             REG_SZ
  Data:
HPQCISS\Disk&VEN_HP&PROD_LOGICAL_VOLUME\5&28b0a89c&0&050000040000000
00

Value 16
  Name:             14
  Type:             REG_SZ
  Data:
HPQCISS\Disk&VEN_HP&PROD_LOGICAL_VOLUME\5&28b0a89c&0&060000040000000
00

Value 17
  Name:             15
  Type:             REG_SZ
  Data:
HPQCISS\Disk&VEN_HP&PROD_LOGICAL_VOLUME\5&28b0a89c&0&070000040000000
00


----------------
Server Bus Performance Driver Registry Parameters
----------------
Key Name:
HKEY_LOCAL_MACHINE\SYSTEM\CurrentControlSet\Services\hpqcissb
Class Name:         <NO CLASS>
Last Write Time:   9/4/2007 - 11:39 AM
Value 0
  Name:             Type
  Type:             REG_DWORD
  Data:             0x1

Value 1
  Name:             Start
  Type:             REG_DWORD
  Data:             0

Value 2
  Name:             ErrorControl
  Type:             REG_DWORD
  Data:             0x1

Value 3
  Name:             Tag
  Type:             REG_DWORD
  Data:             0x102

Value 4
  Name:             ImagePath
  Type:             REG_EXPAND_SZ
  Data:             system32\DRIVERS\hpqcissb.sys

Value 5
  Name:             DisplayName
  Type:             REG_SZ
  Data:             Smart Array Controllers Non-Miniport Bus Driver

Value 6
  Name:             Group
  Type:             REG_SZ
  Data:             port


Key Name:
HKEY_LOCAL_MACHINE\SYSTEM\CurrentControlSet\Services\hpqcissb\Param
eters
Class Name:         <NO CLASS>
Last Write Time:   7/19/2007 - 10:23 AM
Value 0
  Name:             CompletionMode
  Type:             REG_DWORD
  Data:             0x2

Value 1
  Name:             CosTimerRate
  Type:             REG_DWORD
  Data:             0x2


Key Name:
HKEY_LOCAL_MACHINE\SYSTEM\CurrentControlSet\Services\hpqcissb\Secur
ity
Class Name:         <NO CLASS>
Last Write Time:   7/19/2007 - 8:26 AM
Value 0
  Name:             Security
  Type:             REG_BINARY
  Data:
00000000   01 00 14 80 b8 00 00 00 - c4 00 00 00 14 00 00 00
.........Ä.......
00000010   30 00 00 00 02 00 1c 00 - 01 00 00 00 02 80 14 00
0...............
00000020   ff 01 0f 00 01 01 00 00 - 00 00 00 01 00 00 00 00
ÿ...............
00000030   02 00 88 00 06 00 00 00 - 00 00 14 00 fd 01 02 00
...........ý...
```

```
00000040   01 01 00 00 00 00 00 05 - 12 00 00 00 00 00 18 00
................
00000050   ff 01 0f 00 01 02 00 00 - 00 00 00 05 20 00 00 00
ÿ........... ...
00000060   20 02 00 00 00 00 14 00 - 8d 01 02 00 01 01 00 00
 ...............
00000070   00 00 00 05 04 00 00 00 - 00 00 14 00 8d 01 02 00
................
00000080   01 01 00 00 00 00 00 05 - 06 00 00 00 00 00 14 00
................
00000090   00 01 00 00 01 01 00 00 - 00 00 00 05 0b 00 00 00
................
000000a0   00 00 18 00 fd 01 02 00 - 01 02 00 00 00 00 00 05
....ÿ...........
000000b0   20 00 00 00 23 02 00 00 - 01 01 00 00 00 00 00 05
 ...#...........
000000c0   12 00 00 00 01 01 00 00 - 00 00 00 05 12 00 00 00
................


Key Name:
HKEY_LOCAL_MACHINE\SYSTEM\CurrentControlSet\Services\hpqcissb\Enum
Class Name:        <NO CLASS>
Last Write Time:   9/4/2007 - 11:39 AM
Value 0
  Name:            0
  Type:            REG_SZ
  Data:
PCI\VEN_103C&DEV_3230&SUBSYS_3223103C&REV_03\6&305972a8&0&00000010

Value 1
  Name:            Count
  Type:            REG_DWORD
  Data:            0x2

Value 2
  Name:            NextInstance
  Type:            REG_DWORD
  Data:            0x2

Value 3
  Name:            1
  Type:            REG_SZ
  Data:
PCI\VEN_103C&DEV_3230&SUBSYS_3223103C&REV_03\4&237315c2&0&0020

-------------------
client Inetinfo registry settings
-------------------
Key Name:
HKEY_LOCAL_MACHINE\SYSTEM\CurrentControlSet\Services\InetInfo
Class Name:        <NO CLASS>
Last Write Time:   5/1/2007 - 3:55 PM

Key Name:
HKEY_LOCAL_MACHINE\SYSTEM\CurrentControlSet\Services\InetInfo\Param
eters
Class Name:        <NO CLASS>
Last Write Time:   5/17/2007 - 8:57 AM
Value 0
  Name:            ListenBackLog
  Type:            REG_DWORD
  Data:            0xafc8

Value 1
  Name:            PoolThreadLimit
  Type:            REG_DWORD
  Data:            0xffc

Value 2
  Name:            MaxPoolThreads
  Type:            REG_DWORD
  Data:            0xffe

Value 3
  Name:            ThreadTimeout
  Type:            REG_DWORD
  Data:            0x15180

Key Name:
HKEY_LOCAL_MACHINE\SYSTEM\CurrentControlSet\Services\InetInfo\Perfo
rmance
Class Name:        <NO CLASS>
Last Write Time:   5/9/2007 - 7:25 PM
Value 0
  Name:            Library
  Type:            REG_SZ
  Data:            infoctrs.dll

Value 1
  Name:            Open
  Type:            REG_SZ
  Data:            OpenINFOPerformanceData

Value 2
  Name:            Close
  Type:            REG_SZ
  Data:            CloseINFOPerformanceData
```

```
Value 3
  Name:            Collect
  Type:            REG_SZ
  Data:            CollectINFOPerformanceData

Value 4
  Name:            PerfIniFile
  Type:            REG_SZ
  Data:            infoctrs.ini

Value 5
  Name:            Last Counter
  Type:            REG_DWORD
  Data:            0xa04

Value 6
  Name:            Last Help
  Type:            REG_DWORD
  Data:            0xa05

Value 7
  Name:            First Counter
  Type:            REG_DWORD
  Data:            0x9c4

Value 8
  Name:            First Help
  Type:            REG_DWORD
  Data:            0x9c5

Value 9
  Name:            Object List
  Type:            REG_SZ
  Data:            2500

Value 10
  Name:            Library Validation Code
  Type:            REG_BINARY
  Data:
00000000   00 81 34 12 33 8c c7 01 - 00 20 00 00 00 00 00 00
..4.3.ç.. ......

Value 11
  Name:            WbemAdapFileSignature
  Type:            REG_BINARY
  Data:
00000000   4c c3 d3 e7 44 ca 56 e0 - f3 e8 a0 14 52 26 fb 0f
LÃÓçDÊVà óè .R&û.

Value 12
  Name:            WbemAdapFileTime
  Type:            REG_BINARY
  Data:
0c 71 e3 11 33 8c c7 01 -                      .qã.3.ç.

Value 13
  Name:            WbemAdapFileSize
  Type:            REG_DWORD
  Data:            0x2000

Value 14
  Name:            WbemAdapStatus
  Type:            REG_DWORD
  Data:            0

Value 15
  Name:            2003
  Type:            REG_QWORD
  Data:
e8 c3 d4 ac 99 92 c7 01 -                      èÃÔ¬..ç.

-------------------
Client w3svc Registry Settings
-------------------
Key Name:
HKEY_LOCAL_MACHINE\SYSTEM\CurrentControlSet\Services\W3SVC
Class Name:        <NO CLASS>
Last Write Time:   8/16/2007 - 7:57 AM
Value 0
  Name:            Type
  Type:            REG_DWORD
  Data:            0x20

Value 1
  Name:            Start
  Type:            REG_DWORD
  Data:            0x2

Value 2
  Name:            ErrorControl
  Type:            REG_DWORD
  Data:            0x1

Value 3
  Name:            ImagePath
  Type:            REG_EXPAND_SZ
  Data:            %SystemRoot%\System32\svchost.exe -k iissvcs

Value 4
```

```
Name:           DisplayName
Type:           REG_SZ
Data:           World Wide Web Publishing Service

Value 5
  Name:         DependOnService
  Type:         REG_MULTI_SZ
  Data:         RPCSS
                HTTPFilter
                IISADMIN

Value 6
  Name:         DependOnGroup
  Type:         REG_MULTI_SZ
  Data:

Value 7
  Name:         ObjectName
  Type:         REG_SZ
  Data:         LocalSystem

Value 8
  Name:         Description
  Type:         REG_SZ
  Data:         Provides Web connectivity and administration
through the Internet Information Services Manager

Value 9
  Name:         FailureActions
  Type:         REG_BINARY
  Data:
00000000   80 51 01 00 01 00 00 00 - 00 00 00 00 03 00 00 00
.Q..............
00000010   53 00 65 00 01 00 00 00 - 01 00 00 00 01 00 00 00
S.e.............
01 00 00 00 01 00 00 00 - 01 00 00 00               ............


Key Name:
HKEY_LOCAL_MACHINE\SYSTEM\CurrentControlSet\Services\W3SVC\Paramete
rs
Class Name:      <NO CLASS>
Last Write Time: 8/22/2007 - 10:29 AM
Value 0
  Name:         MajorVersion
  Type:         REG_DWORD
  Data:         0x6

Value 1
  Name:         MinorVersion
  Type:         REG_DWORD
  Data:         0

Value 2
  Name:         InstallPath
  Type:         REG_SZ
  Data:         C:\WINDOWS\system32\inetsrv

Value 3
  Name:         AccessDeniedMessage
  Type:         REG_SZ
  Data:         Error: Access is Denied.

Value 4
  Name:         ServiceDll
  Type:         REG_EXPAND_SZ
  Data:         C:\WINDOWS\system32\inetsrv\iisw3adm.dll

Value 5
  Name:         IIS5IsolationModeIpmName
  Type:         REG_SZ
  Data:         \\.\pipe\iisipm1be5b4e4-a23e-4576-8f41-
7249f16724be

Value 6
  Name:         AcceptExOutstanding
  Type:         REG_DWORD
  Data:         0xafc8


Key Name:
HKEY_LOCAL_MACHINE\SYSTEM\CurrentControlSet\Services\W3SVC\Paramete
rs\ADCLaunch
Class Name:      <NO CLASS>
Last Write Time: 5/1/2007 - 3:55 PM

Key Name:
HKEY_LOCAL_MACHINE\SYSTEM\CurrentControlSet\Services\W3SVC\Paramete
rs\ADCLaunch\AdvancedDataFactory
Class Name:      <NO CLASS>
Last Write Time: 5/1/2007 - 3:55 PM

Key Name:
HKEY_LOCAL_MACHINE\SYSTEM\CurrentControlSet\Services\W3SVC\Paramete
rs\ADCLaunch\RDSServer.DataFactory
Class Name:      <NO CLASS>
Last Write Time: 5/1/2007 - 3:55 PM

Key Name:
HKEY_LOCAL_MACHINE\SYSTEM\CurrentControlSet\Services\W3SVC\Performa
nce
```

```
Class Name:      <NO CLASS>
Last Write Time: 5/3/2007 - 3:03 PM
Value 0
  Name:         Library
  Type:         REG_SZ
  Data:         C:\WINDOWS\system32\inetsrv\w3ctrs.dll

Value 1
  Name:         Open
  Type:         REG_SZ
  Data:         OpenW3PerformanceData

Value 2
  Name:         Close
  Type:         REG_SZ
  Data:         CloseW3PerformanceData

Value 3
  Name:         Collect
  Type:         REG_SZ
  Data:         CollectW3PerformanceData

Value 4
  Name:         PerfIniFile
  Type:         REG_SZ
  Data:         w3ctrs.ini

Value 5
  Name:         Last Counter
  Type:         REG_DWORD
  Data:         0xafc

Value 6
  Name:         Last Help
  Type:         REG_DWORD
  Data:         0xafd

Value 7
  Name:         First Counter
  Type:         REG_DWORD
  Data:         0xa06

Value 8
  Name:         First Help
  Type:         REG_DWORD
  Data:         0xa07

Value 9
  Name:         Object List
  Type:         REG_SZ
  Data:         2566 2740

Value 10
  Name:         Library Validation Code
  Type:         REG_BINARY
  Data:
00000000   00 08 c8 15 33 8c c7 01 - 00 5e 00 00 00 00 00 00
..È.3.Ç..^......


Value 11
  Name:         WbemAdapFileSignature
  Type:         REG_BINARY
  Data:
00000000   39 e3 6c 2c b4 be 59 f5 - 17 7c c4 d5 2f dc f7 1a
9ãl,´¾Yõ.|ÄÕ/Ü÷.


Value 12
  Name:         WbemAdapFileTime
  Type:         REG_BINARY
  Data:
1a 1f 7e 15 33 8c c7 01 -                       ..~.3.Ç.

Value 13
  Name:         WbemAdapFileSize
  Type:         REG_DWORD
  Data:         0x5e00

Value 14
  Name:         WbemAdapStatus
  Type:         REG_DWORD
  Data:         0


Key Name:
HKEY_LOCAL_MACHINE\SYSTEM\CurrentControlSet\Services\W3SVC\Security
Class Name:      <NO CLASS>
Last Write Time: 5/1/2007 - 3:55 PM
Value 0
  Name:         Security
  Type:         REG_BINARY
  Data:
00000000   01 00 14 80 90 00 00 00 - 9c 00 00 00 14 00 00 00
................
00000010   30 00 00 00 02 00 1c 00 - 01 00 00 00 02 80 14 00
0...............
00000020   ff 01 0f 00 01 01 00 00 - 00 00 00 01 00 00 00 00
ÿ...............
00000030   02 00 60 00 04 00 00 00 - 00 00 14 00 fd 01 02 00
..`.........ÿ...
```

```
00000040   01 01 00 00 00 00 00 05 - 12 00 00 00 00 00 18 00
................
00000050   ff 01 0f 00 01 02 00 00 - 00 00 00 05 20 00 00 00
ÿ........... ...
00000060   20 02 00 00 00 00 14 00 - 8d 01 02 00 01 01 00 00
 ...............
00000070   00 00 00 05 0b 00 00 00 - 00 00 18 00 fd 01 02 00
...........ÿ...
00000080   01 02 00 00 00 00 00 05 - 20 00 00 00 23 02 00 00
........ ...#...
00000090   01 01 00 00 00 00 00 05 - 12 00 00 00 01 01 00 00
................
00 00 00 05 12 00 00 00 -                        ........
```

Key Name:
HKEY_LOCAL_MACHINE\SYSTEM\CurrentControlSet\Services\W3SVC\Enum
Class Name: <NO CLASS>
Last Write Time: 8/16/2007 - 7:57 AM

Value 0
  Name: 0
  Type: REG_SZ
  Data: Root\LEGACY_W3SVC\0000

Value 1
  Name: Count
  Type: REG_DWORD
  Data: 0x1

Value 2
  Name: NextInstance
  Type: REG_DWORD
  Data: 0x1

Appendix D:
Third Party Letters

graycables

HOME | ABOUT US | PRIVACY POLICY | CONTACT US | SHOPPING CART

Home > Networking > Ethernet Patch Cables > CAT5E > 3' Green Cat 5e patch cable

3' Green Cat 5e patch cable

Item #	415-5003
Your Price:	$1.25

Add to Cart   Email to a Friend

Click For Larger Image   Cat 5e Molded Patch Cable.

Category 5 Enhanced high speed cabling is a pre-requisite for today's performance demanding Ethernet and gigabit networks. Graycables.com will keep you at the head of the pack with our high performance 350Mhz Cat5E patch cables. Our Cat5e 350Mhz patch cables easily handle bandwidth intensive applications and more. With the UL certified patch cables that meet all the TIA/EIA standards. Graycables' Enhanced Cat5 patch cables are well constructed using Enhanced Cat5e bulk cable, which consists of 4 unshielded twisted pairs, 24 AWG. stranded conductors, and a PVC jacket. We terminate the non-booted Enhanced Cat5e cables with RJ45 plugs, which are plated with 50 microns of gold plating per contact. We terminate the snagless molded booted Enhanced Cat5e cables with Cat5E certified RJ45 plugs, which are plated with 50 microns of gold plating per contact. Constructed with high-quality wire and a shortened body plug will keep Near-end Crosstalk (NEXT) levels to a minimum. Our molded, snagless boot prevents unwanted cable snags during installation/maintenance and provides extra strain-relief.

About Category 5e (CAT 5e), or Enhanced Category 5:

Ratified in 1999. It¿s an incremental improvement designed to enable cabling to support full-duplex Fast Ethernet operation and Gigabit Ethernet. This Cat5e Molded Patch cable will be used to connect all the hardware destinations in a local area network. The cable will ensure a clear transmission and snagless-type moldings to protect the connection.

The main differences between Category 5 and Category 5e can be found in the specifications. The performance requirements have been raised slightly in the new standard. CAT5e has stricter specifications for PS-ELFEXT (Power Sum Equal-Level Far-End Crosstalk), NEXT (Near-End Crosstalk), Attenuation, and Return Loss (RL) than those for Category 5. Like CAT 5, CAT5e is a 100-MHz standard, but it has the capacity to handle bandwidth superior to that of CAT5. With these improvements, you can expect problem-free, full-duplex, 4-pair Ethernet transmissions over your CAT5e UTP.

Cat 5E Specifications:
- Frequency100 MHz. Attenuation (Min. at 100 MHz) 22 dB.
- Characteristic Impedance100 ohms @ 15%.
- NEXT (Min. at 100 MHz) 35.3 dB.
- PS-NEXT (Min. at 100 MHz) 32.3 dB.
- ELFEXT (Min. at 100 MHz) 32.3 dB.
- PS-ELFEXT (Min. at 100 MHz) 20.8 dB.
- Return Loss (Min. at 100 MHz) 20.1 dB.
- Delay Skew (Max. per 100 m) 45 ns.

Graycables.com Requirements:
- Conductor: 4-pair 24 AWG Stranded Copper

Internet

ServersDirect - Product Detail   Page 1 of 3

☎ 1-800-576-7931

servers ▶ DIRECT
GO TO THE SOURCE

IDEAL LOW COST PLATFOR
More Info :

Home   About Us   My Account   Contact Us   Basket   Check Out

| Login | | Phone: 909-978-3200 | Customer Testimonials | RMA Returns Policy | Term and Condition

Items in the shopping cart: 0
Current total: $0.00

Search: Keywords   ▶ Go

Complete Intel® Server
Systems w/ Configurator
▶ 1U Pentium® D Servers
▶ 1U Core™2 Duo Servers
▶ 1U Dual-Core Xeon® Servers
▶ 2U Core 2™Duo Servers
▶ 2U Dual-Core Xeon® Servers
▶ 3U Dual-Core Xeon® Servers
▶ 4U Dual-Core Xeon® Servers
▶ 5U Dual-Core Xeon® Servers
▶ Intel® Tower/Pedestal
   Servers
▶ Intel® NAS Appliance
   System
Complete Intel® Server
Solutions w/ Configurator
▶ Intel® NAS Appliance
   System
▶ 1U Intel® Pentium® Servers
▶ 1U Intel® Dual-Core Xeon®
   Servers
▶ 2U Intel® Dual-Core Xeon®
   Servers
▶ Intel® Dual Core Xeon®
   Pedestal Servers
▶ 7U Intel® Blade Server
Complete AMD® Server
Systems w/Configurator
▶ 1U Opteron™ 200 Series
   Servers
▶ 2U Opteron™ 200 Series
   Servers
▶ 3U Opteron™ 200 Series
   Servers
▶ 4U Opteron™ 200 Series
   Servers
▶ 5U Opteron™ 200 Series
   Server
▶ AMD® Tower/Pedestal
   Server
▶ 1U Opteron™ 2000 Series
   Servers
▶ 2U Opteron™ 2000 Series
   Servers
▶ 1U Opteron™ 8000 Series
   Servers
Direct Attached Storage
w/ Configurator

03. 4 Port KVM Switch

Part number: NW0099
Mfg.Part No.: MG4

Our Price:
$65.99

BUY NOW

Description

MG4 v2.0 is an electronic Keyboard/Video/Mouse (KVM) switch that controls up to 4 PC's using a single keyl
save you money by eliminating redundant peripherals (e.g. keyboards, monitors, and mice) and provide a ce
small investment in MG4 v2.0, you can preserve precious office space, cut energy cost and redundant periph
v2.0 features intelligent mouse and keyboard emulation to ensure successful PC boot up and flawless operat
Lock status are recorded and restored while switching among PCs. Users can select desired PC by using Ho
the MG4 v2.0 do the automatic scan.

Specifications	
KVM Type	Keyboard / Video / Mouse - Switch
Port Selection Method	Hot Key • Button
Max Video Resolution	1600 x 1200 pixels
Additional Features	Scrolling Mouse Support • Mouse and Keyboard Emulation
No. of Computers Controlled	4
No. of Consoles	1
Video / Monitor Connector	HDB 15-pin
Mouse Connector	PS/2
Keyboard Connector	PS/2
Width	4.5 in.
Length	7.5 in.
Height	2 in.
Weight	5 lb.
Warranty	1 Year
MPN	MG4KVMSWITCHES
Product ID	25278573

215.9 x 279.4 mm

Navigation Panels ▼   1 of 3 ▶ ▶I 100%

Microsoft Corporation
One Microsoft Way
Redmond, WA   98052-6399

Tel 425 882 8080
Fax 425 936 7329
http://www.microsoft.com/

Microsoft

August 1, 2007

Hewlett-Packard Company
Paul Cao
20555 SH 249
MS 150402
Houston, TX 77040

Mr. Cao:

Here is the information you requested regarding pricing for several Microsoft products to be used in conjunction with your TPC-C benchmark testing.

All pricing shown is in US Dollars ($).

Part Number	Description	Unit Price	Quantity	Price
P73-02509	**Windows Server 2003 R2, Standard Edition** *Server License Only - No CALs* *No Discounts Applied*	$999	3	$2,997
127-00012	**Microsoft Visual Studio Standard 2005** *Full License* *No Discounts Applied*	$250	1	$250
N/A	**Microsoft Problem Resolution Services** *Professional Support* *(1 Incident)*	$245	1	$245

All products are currently orderable through Microsoft's normal distribution channels. A list of Microsoft's resellers can be found at http://www.microsoft.com/products/info/render.aspx?view=22&type=mnp&content=22/licensing>/b>

Defect support is included in the purchase price. Additional support is available from Microsoft PSS on an incident by incident basis at $245 per call.

This quote is valid for the next 90 days.

If we can be of any further assistance, please contact Jamie Reding at (425) 703-0510 or jamiere@microsoft.com.

Reference ID: PCPaCa07080106117.
Please include this Reference ID in any correspondence regarding this price quote.

Appendix E: Database Pricing

Product	Price	Quantity	Extended Price
Oracle Database 11g Standard Edition One, Per Processor, Unlimited Users, 3 years	1	$2498	$2498
Oracle Premium Support for 3 years	$1099	3	$3297
Oracle TOTAL			$5795

*When licensing Oracle programs with Standard Edition One or Standard Edition in the product name, a processors is counted equivalent to an occupied socket.

Oracle pricing contact: MaryBeth Pierantoni, mary.beth.pierantoni@oracle.com, 916- 3 15-5081