



TPC Benchmark™ C Full Disclosure Report

**Unisys e-@ction ES5085R
Enterprise Server**

using

**Microsoft SQL Server 2000 Version 8,
Enterprise Edition**

on

Microsoft Windows 2000 Datacenter Server

**Second Edition
August 18th 2000**

Unisys Part Number 4500 5139-100

Second Edition – August 2000

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Overview

This report documents the methodology and results of the TPC Benchmark C (TPC-C) conducted on the Unisys Corporation e-@ction ES5085R Enterprise Server. The operating system on the server was Microsoft Windows 2000 Datacenter Server. The DBMS used was Microsoft SQL Server 2000 Version 8, Enterprise Edition. The operating system on the clients was Microsoft Windows 2000 Server. The clients ran Microsoft's Internet Information Server 5.0 and COM+.

TPC Benchmark Metrics

The standard TPC Benchmark C metrics, tpnC (transactions per minute), price per tpnC (five year capital cost per measured tpnC), and the availability date are reported as required by the benchmark specification.

Executive Summary

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

Auditor

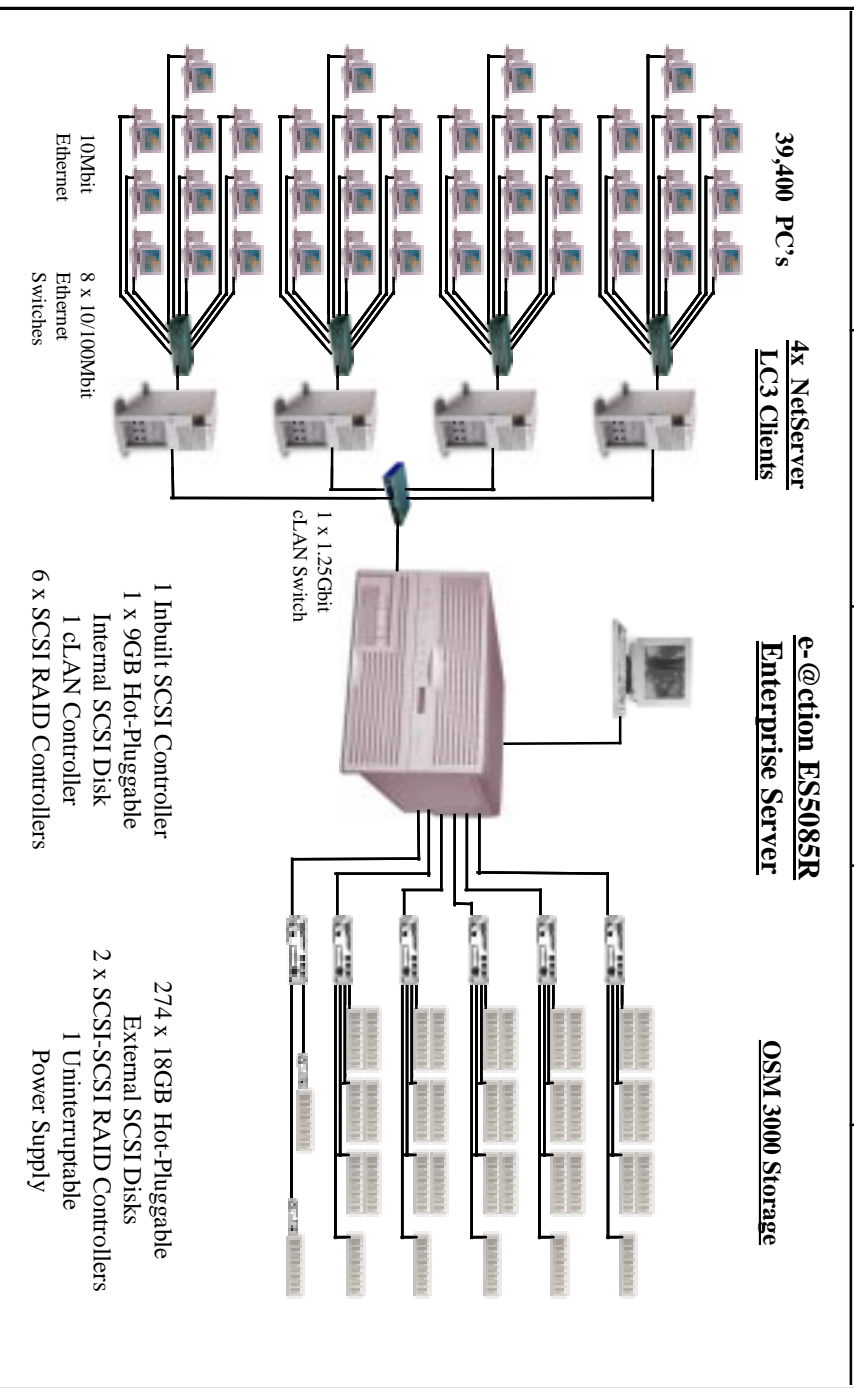
The benchmark configuration, environment, and methodology used to produce and validate the test results, along with the pricing model used to calculate the cost per tpnC, were audited by Tom Sawyer of Performance Metrics, Inc. to verify compliance with the relevant TPC specification.



e-@ction ES5085R Enterprise Server
(8P 550MHz/2MB)

TPC-C Rev. 3.5
Report Date: 15-Feb-2000
Updated: 18-Aug-2000

Total System Cost	TPC-C Throughput	Price/Performance	Availability Date	
\$981,337	48,767.76 tpmC	\$20.13 per tpmC	26-Sep-2000	
Processors	Database Manager	Operating System	Other Software	Number of Users
8 Pentium® III Xeon 550 MHz 2MB L2 cache	Microsoft SQL Server 2000 Version 8, Ent. Ed.	Microsoft Windows 2000 Datacenter Server	Windows 2000 Server, IIS 5.0 and COM+	39,400



System Components	Enterprise Server		Clients (each of 4)	
	Quantity	Type	Quantity	Type
Processors	8	550 MHz Pentium® III Xeon with 2MB Level 2 Cache	2	500 MHz Pentium® III with 512KB Level 2 Cache
Memory	1	32 GB	1	512 MB
Disk Controllers	6 + 2	SCSI RAID Inbuilt SCSI	1	Inbuilt SCSI
Disk Drives	1 274	8.19 GB (boot drive) 16.76 GB	1	8.54 GB
Total Storage		4601.53 GB		8.54 GB
CD-ROM / Tape	1	SCSI CD-ROM Drive	1	CD-ROM Drive



e-@ction ES5085R Enterprise Server
(8P 550MHz/2MB)

TPC-C Rev 3.5
18-Aug-2000

Description	Style	Third Party Brand	Pricing	Unit Price	Qty.	Extended Price	5 Years Maint.
Server Hardware							
SYS: ES5085R, 0CPU, 0MB, w/ MS Windows2000 Datacenter PROC: 550MHz Pentium III Xeon /2MB Cache & VRMs	ESR508151-DZN			\$51,700	1	\$51,700	\$55,136
BRD: Processor Mezzanine Board, 0 Proc.	XEO3550-2MB			\$5,157	8	\$41,256	\$13,248
MEM: 1GB Memory, SDRAM, Buf 6ns	ESR81-MEZ			\$1,179	1	\$1,179	\$312
BRD: Memory Carrier Board, 0 Mem.	DIM6168-1GB			\$6,630	32	\$212,160	\$31,488
MEM: Cache Coherency Filter, 4x SRAM	ESR81-MCB			\$737	1	\$737	\$192
CTRL: RAID, PCI, 4-Ch w/ 32MB Mem + 10% spares	ESR81-CC4			\$921	2	\$1,842	\$480
CTRL: cLAN, PCI Host Adapter & Cable	EXtreme 2000	Mylex		\$1,872	8	\$14,976	
DISK: 9GB, 10K SCSI LVD, SCA	PCI10001-CXG			\$675	1	\$675	\$144
SYS MGT: ES5080 Value Add Software	HDL91102-CXI			\$516	1	\$516	\$240
MONITOR: 15-inch Color	ESS508011-N			\$368	1	\$368	\$168
	EVG2100-P			\$221	1	\$221	
	Subtotal					\$325,630	\$101,408
Storage Hardware							
DISK: 18GB Drive, 10K SCSI LVD, SCA	OSD18209-W45			\$940	274	\$257,560	Spared
DISK: 18GB Drive, 10K SCSI LVD, SCA 10% spares	OSD18209-W45			\$940	28		\$26,320
CAB: Disk, 8 SCA w/ I/F cards, 0 Disks, 3U	OSM310300-105			\$2,118	35	\$74,130	\$33,600
CAB: Disk, 8 SCA w/ RAID Ctrl'r, 0MB, 0 Disks, 3U	OSM311000-LR			\$4,191	2	\$8,382	\$4,248
MEM: 32MB OSM cache	OSM1032-MEM			\$187	2	\$374	\$216
PWR: 2nd Power Supply Upgrade, OSM	OSM3000-BPF			\$392	2	\$784	\$264
PWR:3000 VA UPS, 3U	UPD30001-SXR			\$1,897	1	\$1,897	\$936
PWR: Distribution Kit, 220V	SFR220-PWR			\$42	12	\$504	
CBL: SCSI 68-pin VHD Conn's, 5 meter	CBL134-5			\$142	22	\$3,124	
CBL: SCSI 68-pin VHD Conn's, 0.5 meter	CBL134-CAT			\$69	15	\$1,035	
CAB: Rackmount Kit for Disk Cages	OSM3000-RMK			\$97	37	\$3,589	
CAB: 36U x 19" x 34" Cabinet, Open	RM361934-OFT			\$884	4	\$3,536	
DOOR: 36U x 19" Rear	RM3619-RDR			\$277	4	\$1,108	
PNL: 36U x 34" Side Skins, L&R	RM3634-SDS			\$221	4	\$884	
	Subtotal					\$356,907	\$65,584
Server Software							
Microsoft SQL Server 2000 Version 8, Ent. Ed., unlimited CALs		Microsoft		\$28,999	1	\$28,999	\$10,475
Microsoft Windows 2000, Resource Kit		Microsoft		\$240	1	\$240	Inc. above
	Subtotal					\$29,239	\$10,475
Client Hardware							
SYS: NetServer LC3, w/1 500MHz Proc., 0MB Mem	D7127-AV			\$1,399	4	\$5,596	\$6,444
PROC:1x500MHz Pentium III/512KB Cache UPG	D7130-AV			\$827	4	\$3,308	\$1,728
MEM: 128 MB SDRAM Memory Upgrade	D6098-AV			\$199	16	\$3,184	
DISK: 9GB SCSI 3.5 Internal	D4911-AV			\$317	4	\$1,268	\$1,632
ETHERNET: 10/100TX Mbit/sec, PCI 32-bit	D5013-AV			\$74	8	\$592	
CTRL: cLAN, PCI Host Adapter & Cable	PCI10001-CXG			\$675	4	\$2,700	\$576
MONITOR:15-inch Color	EVG2100-P			\$221	4	\$884	
	Subtotal					\$17,532	\$10,380
Client Software							
O/S: Microsoft Windows 2000 Server, incl 25 CALs		Microsoft		\$809	4	\$3,236	Inc. above
ACC: Microsoft Visual C++ Professional 6.0		Microsoft		\$549	1	\$549	Inc. above
	Subtotal					\$3,785	\$0
User Connectivity							
SWTCH: cLAN, 8-port, 1.25Gbit	SWT50081-CXG			\$5,313	1	\$5,313	\$1,704
SWTCH: Ethernet, 8-Port 100TX TrueFast + 10% spares	NX-SW8	Netlux		\$179	10	\$1,790	spared
HUB: Ethernet, 8-Port 10Base-T (8+1 ports) + 10% spares	HB-1009DX/P	NetCruiser		\$24	5434	\$130,416	spared
	Subtotal					\$137,519	\$1,704
	Total					\$870,612	\$189,551 (\$12,323)
Unisys Service Pre-Pay Discount							
Western Micro discount							
1							
Notes:							
1. HW Maintenance - Unisys 36 month warranty is upgraded to service level: Standard Performance-Gold. Last 24 months are also at service level: Standard Performance-Gold.							
2. All Microsoft maintenance is covered by the maintenance cost of Microsoft SQL Server.							
3. 10% or minimum 2 spares are added in place of onsite service (products have a five year return-to-vendor warranty)							
4. Pricing: 1 = Western Micro, 2 = Mylex, 3 = Microsoft, 4 = Netlux, 5 = NetCruiser							
The benchmark results and test methodology were audited by Tom Sawyer of Performance Metrics, Inc.							
Prices used in TPC benchmarks reflect the actual prices a customer would pay for a one-time purchase of the stated components. Individually negotiated discounts are not permitted. Special prices based on assumption about past or future purchases are not permitted. All discounts reflect standard pricing policies for the listed components. For complete details, see the pricing sections of the TPC benchmarks specifications. If you find that the stated prices are not available according to these terms, please inform the TPC at pricing@tpc.org. Thank You.							
				Five Year Cost of Ownership			
				TPC-C Throughput			
				\$/tpmc			
				\$981,337			
				48,767/76			
				\$20.13			

NUMERICAL QUANTITIES SUMMARY
for
Unisys e-@ction ES5085R Enterprise Server

MQTh, Computed Maximum Qualified Throughput: **48,767.76**
% throughput difference, reported & reproducibility runs: **0.21%**

Transaction Mix		
New Order	44.81%	
Payment	43.06%	
Delivery	4.02%	
Stock-Level	4.05%	
Order-Status	4.03%	

Response Times			
Transaction	Average	Maximum	90th %ile
New-Order	0.53	4.99	0.89
Payment	0.48	4.67	0.84
Delivery	0.22	1.52	0.45
Stock-Level	0.75	3.40	1.15
Order Status	0.49	5.11	0.85
Menu	0.23	4.43	0.45
Delivery (Deferred)	0.38	2.45	0.61

Response time delay added for emulated components (seconds)		
RT Response time		0.1
Menu Response time		0.1

Keying/Think Time Times (seconds)			
Transaction	Minimum	Average	Maximum
New-Order	18.00/0	18/12.04	19.07/120.49
Payment	3.00/0	3/12.02	4.16/120.3
Delivery	2.00/0	2/5.06	2.88/50.6
Stock-Level	2.00/0	2/5.05	2.88/50.6
Order-Status	2.00/0	2/10.07	3/100.71

Test Duration		
Ramp up time		57 minutes
Measurement interval (M)		30 minutes
Transactions (all types) completed during measurement interval		3,264,375
Ramp-down time		125 minutes

Checkpointing:		
Number of checkpoints		1
Checkpoint interval		30 minutes

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Document Structure

The TPC Benchmark C Standard Specification requires test sponsors to publish, submit to the TPC, and make available to the public, a full disclosure report for any result to be considered compliant with the specification. The required contents of the full disclosure report are specified in Clause 8.

This report is submitted to satisfy the specification's requirement for full disclosure. It documents the compliance of the benchmark implementation and execution reported for the Unisys e-@ction ES5085R Enterprise Server using Microsoft SQL Server 2000 Version 8, Enterprise Edition on Microsoft Windows 2000 Datacenter Server.

TPC Benchmark C Overview

The TPC Benchmark™ C Standard Specification Revision 3.5 was developed by the Transaction Processing Performance Council (TPC). It is the intent of the TPC to develop a suite of benchmarks to measure the performance of computer systems executing a wide range of applications. Unisys and Microsoft Corporations are active participants in the TPC to define and develop such a suite of benchmarks.

TPC Benchmark™ C (TPC-C) is an OLTP workload. It is a mixture of read-only and update intensive transactions that simulate the activities found in complex OLTP application environments. It does so by exercising a breadth of system components associated with such environments, which are characterized by:

- The simultaneous execution of multiple transaction types that span a breadth of complexity.
- On-line and deferred transaction execution modes.
- Multiple on-line terminal sessions.
- Moderate system and application execution time.
- Significant disk input/output.
- Transaction integrity (ACID properties).
- Non-uniform distribution of data access through primary and secondary keys.
- Databases consisting of many tables with a wide variety of sizes, attributes, and relationships.
- Contention on data access and update.

The performance metric reported by TPC-C is a "business throughput" measuring the number of orders processed per minute. Multiple transactions are used to simulate the business activity of processing an order, and each transaction is subject to a response time constraint. The performance metric for this benchmark is expressed in transactions-per-minute-C (tpmC). To be compliant with the TPC-C standard, all references to tpmC results must include the tpmC rate, the associated price-per-tpmC, and the availability date of the priced configuration.

Despite the fact that this benchmark offers a rich environment that emulates many OLTP environments, this benchmark does not reflect the entire range of OLTP requirements. In addition, the extent to which a customer can achieve the results reported by a vendor is highly dependent on how closely TPC-C approximates the customer application. The relative performance of systems derived from this benchmark does not necessarily hold for other workloads or environments. Extrapolations to any other environment are not recommended.

0.1. Order and Titles

The order and titles of sections in the Test Sponsor's Full Disclosure report must correspond with the order and titles of sections from the TPC-C standard specification (i.e., this document). The intent is to make it as easy as possible for readers to compare and contrast material in different Full Disclosure reports.

The order and titles of the sections in this report correspond with those from the TPC-C standard specification.

0.2. Executive Summary Statement

The TPC Executive Summary Statement must be included near the beginning of the Full Disclosure report.

The TPC Executive Summary Statement is included near the beginning of this report.

0.3. Numerical Quantities Summary

The numerical quantities listed below must be summarized near the beginning of the Full Disclosure Report :

- *measurement interval in minutes,*
- *number of checkpoints in the measurement interval,*
- *checkpoint interval in minutes,*
- *number of transactions (all types) completed within the measurement interval,*
- *computed Maximum Qualified Throughput in tpmC,*
- *percentage difference between reported throughput and throughput obtained in reproducibility run,*
- *ninetieth percentile, average and maximum response times for the New-Order, Payment, Order-Status, Stock-Level, Delivery (deferred and interactive) and Menu transactions,*
- *time in seconds added to response time to compensate for delays associated with emulated components,*
- *percentage of transaction mix for each transaction type.*

These numerical quantities are summarized near the beginning of this report.

0.4. Application Code Disclosure

The applicable program (as defined in Clause 2.1.7) must be disclosed. This includes, but is not limited to, the code implementing the five transactions and the terminal input and output functions.

Appendix A contains the client application code used in this TPC-C benchmark. Appendix B contains the SQL stored procedures which implement the TPC-C transactions.

0.5. Benchmark Sponsor

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

This TPC benchmark C was sponsored by Unisys Corporation. The benchmark test was developed by Microsoft and Unisys. The benchmark was conducted at Unisys, Mission Viejo, California.

0.6. Parameter Settings

Settings must be provided for all customer-tunable parameters and options which have been changed from the defaults found in actual products, including but not limited to:

- *Data Base tuning options*
- *Recovery/commit options*
- *Consistency/locking options*
- *Operating system and application configuration parameters*

Appendix C contains the configuration and system parameters used in running these TPC-C tests. It also contains all the client and server OS and SQL Server tunable parameters.

0.7. Configuration Diagrams

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

- *Number and type of processors.*
- *Size of allocated memory, and any specific mapping/partitioning of memory unique to the test.*
- *Number and type of disk units (and controllers, if applicable).*
- *Number of channels or bus connections to disk units, including their protocol type.*
- *Number of LAN (e.g., Ethernet) connections, including routers, workstations, terminals, etc., that were physically used in the test or are incorporated into the pricing structure (see Clause 8.1.8).*
- *Type and the run-time execution location of software components (e.g., DBMS, client processes, transaction monitors, software drivers, etc.).*

The Remote Terminal Emulator (RTE) software used for these TPC-C tests is proprietary to Unisys. The benchmarked configuration of the RTE and Unisys e-@ction ES5085R Enterprise Server is illustrated in Figure 0.1. Tables 4.3, 4.4 and 4.5 contain a detailed explanation of the disk configuration.

The priced configuration for the Unisys e-@ction ES5085R Enterprise Server is shown in Figure 0.2.

Figure 0.1: Benchmarked Configuration

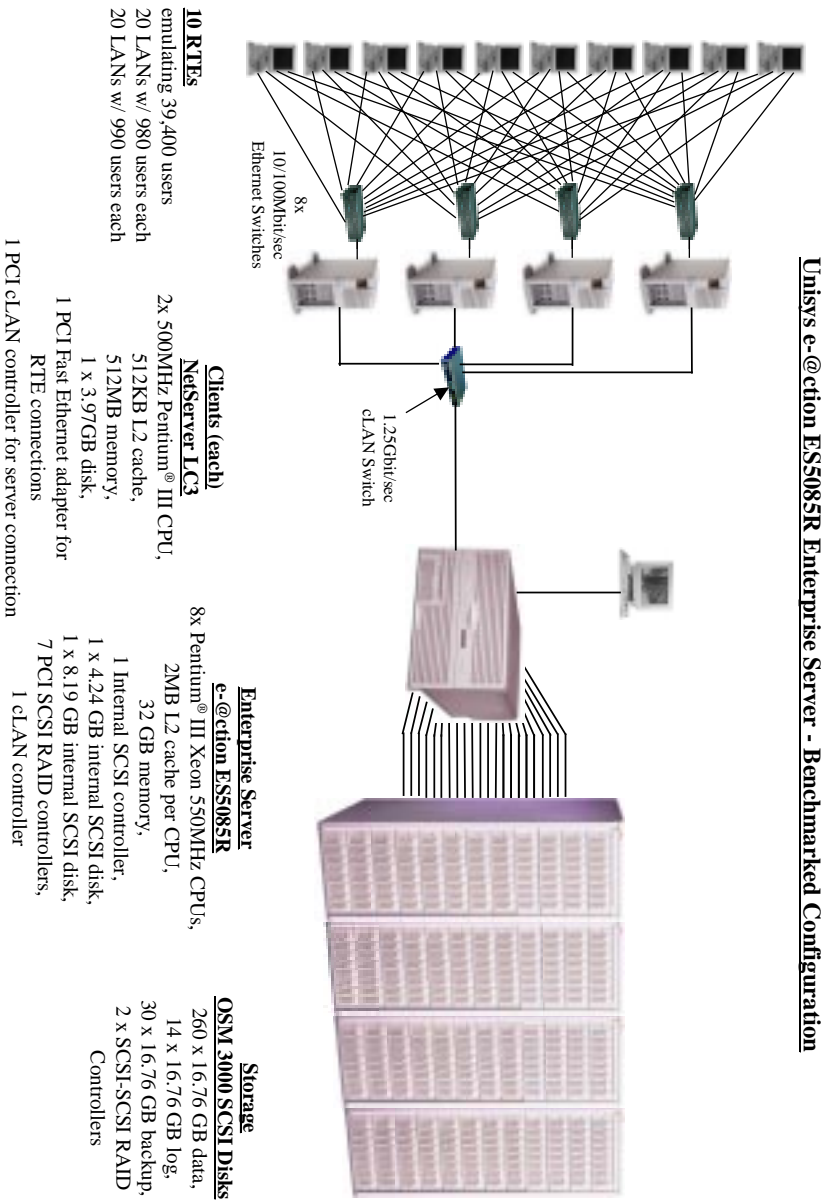
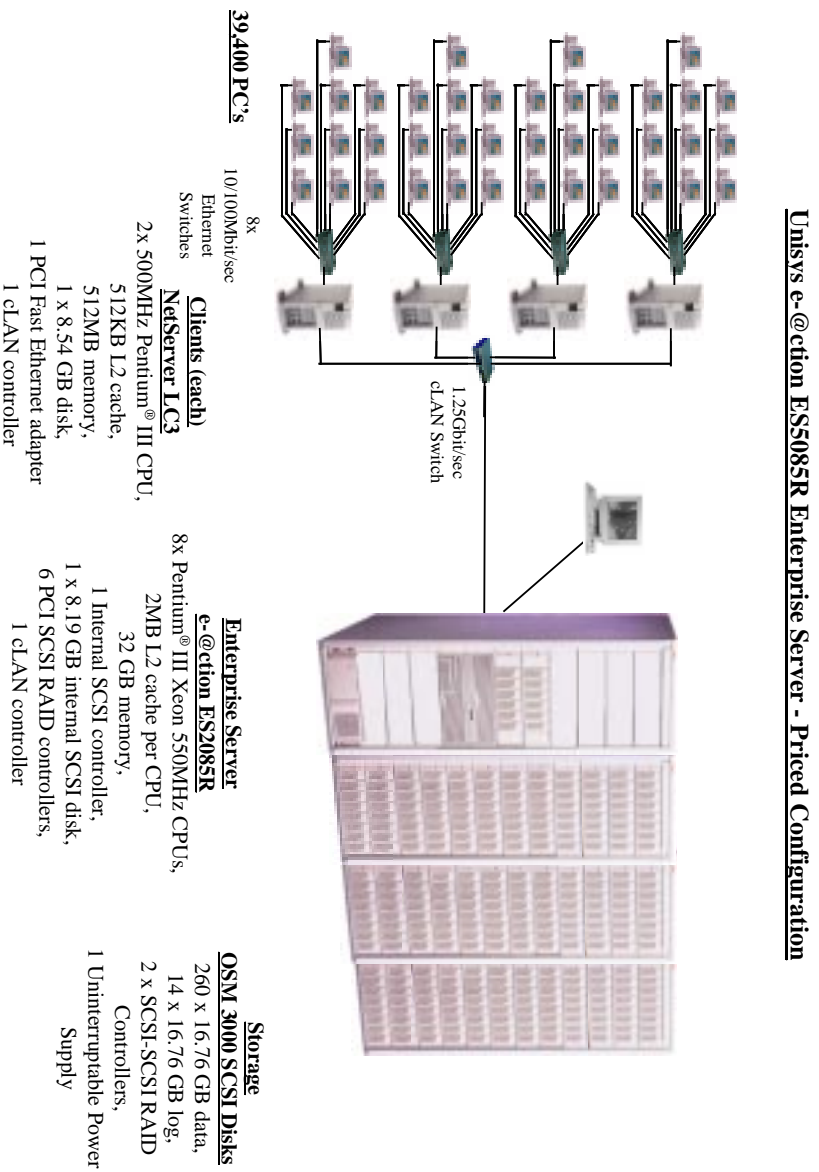


Figure 0.2: Priced Configuration



1.1. Table Definitions

Listings must be provided for all table definition statements and all other statements used to setup the data base.

Appendix B contains the SQL definitions of all the required database files, filegroups, tables, indexes and stored procedures, plus a listing of the program used to load the database and establish the required initial populations of each table.

1.2. Physical Organization of the Database

The physical organization of tables and indices, within the data base, must be disclosed.

The disk space was allocated to SQL Server according to the data in Tables 4.3, 4.4 and 4.5. The SQL definitions are contained in Appendix B.

1.3. Insert and/or Delete Operations

It must be ascertained that insert and/or delete operations to any of the tables can occur concurrently with the TPC-C transaction mix. Furthermore, any restriction in the SUT data base implementation that precludes inserts beyond the limits defined in Clause 1.4.11 must be disclosed. This includes the maximum number of rows that can be inserted and the maximum key value for these new rows.

There were no restrictions on insert and/or delete operations to any of the tables.

1.4. Partitioning

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

Partitioning was not used for any table in this implementation.

1.5. Replication, Duplication or Additions

Replication of tables, if used, must be disclosed.

Additional and/or duplicate 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 implementation.

2.

Clause 2: Transaction & Terminal Profiles

2.1. Random Number Generation

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

The drivers used the Unisys RTE program, which was independently audited. The initial population of the database was performed by the loader program from V4.20 of the Microsoft TPC-C toolkit, which was also independently audited. Furthermore, the auditor sampled various initial and runtime distributions produced by this implementation to verify correctness.

2.2. Input/Output Screen Layout

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

The screen layouts are based on those in Clauses 2.4.3, 2.5.3, 2.6.3, 2.7.3, and 2.8.3 of the TPC Benchmark C Standard Specification. There are some minor differences in appearance due to the use of a web client implementation.

2.3. Priced Terminal Feature Verification

The method used to verify that the emulated terminals provide all the features described in Clause 2.2.2.4 must be explained. Although not specifically priced, the type and model of the terminals used for the demonstration in 8.1.3.3 must be disclosed and commercially available (including supporting software and maintenance).

This was verified by the auditor.

2.4. Presentation Managers or Intelligent Terminal

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

Application code running on the client implemented the TPC-C user interface. A listing of this code is included in Appendix A. No presentation manager was used on the client, as screen manipulation and data input/output was handled for each user by the Microsoft Internet Explorer web browser running on each user PC.

2.5. Transaction Statistics

The percentage of New-Order transactions that were rolled back as a result of an unused item number must be disclosed.

The number of items per order entered by New-Order transactions must be disclosed.

The percentage of home and remote Payment transactions must be disclosed.

The percentage of Payment and Order-Status transactions that used non-primary key (C_LAST) access to the database must be disclosed.

The percentage of Delivery transactions that were skipped as a result of an insufficient number of rows in the NEW-ORDER table must be disclosed.

The mix (i.e., percentages) of transaction types seen by the SUT must be disclosed.

Table 5.4 in Section 5 contains all these statistics.

2.6. Queuing Mechanism of Delivery

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

Deferred deliveries are queued by making an entry in an array within the application process (tpcc.dll) running on the client systems. Background threads within the application process asynchronously process the queued delivery transactions and log the results to a file upon completion.

3.

Clause 3: Transaction & System Properties

3.1. Transaction System Properties (ACID)

The results of the ACID tests must be disclosed along with a description of how the ACID requirements were met. This includes disclosing which case was followed for the execution of Isolation Test 7.

The TPC Benchmark C Standard Specification defines a set of transaction processing system properties that a system under test (SUT) must support during the execution of the benchmark. Those properties are Atomicity, Consistency, Isolation, and Durability (ACID).

This section defines each of these properties, describes the steps taken to ensure that they were present during the test and describes a series of tests done to demonstrate compliance with the specification. All ACID property tests were executed successfully.

3.2. Atomicity

The system under test must guarantee that data base transactions are atomic; the system will either perform all individual operations on the data, or will assure that no partially-completed operations leave any effects on the data.

3.2.1. Completed Transaction

Perform the Payment transaction for a randomly selected warehouse, district, and customer (by customer number) and verify that the records in the CUSTOMER, DISTRICT, and WAREHOUSE tables have been changed appropriately.

The balances from a randomly selected warehouse, district, and customer row were retrieved by customer number from a script. A Payment transaction was submitted with the same warehouse, district and customer identifiers for a known amount. After completion of the Payment transaction, the balances of the selected warehouse, district, and customer were again retrieved to verify that the changes had been made correctly.

3.2.2. Aborted Transactions

Perform the Payment transaction for a randomly selected warehouse, district, and customer (by customer number) and substitute a ROLLBACK of the transaction for the COMMIT of the transaction. Verify that the records in the CUSTOMER, DISTRICT, and WAREHOUSE tables have NOT been changed.

The balances from a randomly selected warehouse, district, and customer row were retrieved by customer number from a script. A Payment transaction was submitted with the same warehouse, district and customer identifiers that issued a ROLLBACK command rather than a COMMIT. After the transaction completed, the balances of the selected warehouse, district, and customer were again retrieved to verify that no changes had been made to the database.

3.3. Consistency

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

The benchmark specification requires explicit demonstration of the following four consistency conditions:

1. The sum of the district balances in a warehouse is equal to the warehouse balance;
2. For each district, the next order id minus one is equal to maximum order id in the ORDER table and equal to the maximum new order id in the NEW ORDER table;
3. For each district, the maximum order id minus minimum order id in the ORDER table plus one equals the number of rows in the NEW-ORDER table for that district;
4. For each district, the sum of the order line counts in the ORDER table equals the number of rows in the ORDER-LINE table for that district;

In order to demonstrate this consistency, the following steps were taken:

1. Prior to the start of a benchmark run, the consistency of the database was verified by testing successfully conditions 1-4 described above with a script.
2. A run under full user load was executed for over 10 minutes with a checkpoint during the run.
3. After completion of that test, the consistency of the database was again verified by successfully testing using the same consistency script as in step 1.

3.4. Isolation

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

The benchmark specification defines seven required tests to be performed to demonstrate that required levels of transaction isolation are met. These tests, described in Clauses 3.4.2.1 - 3.4.2.7, were all performed from a script and verified by the auditor. In Isolation Test 7, Case A was observed. In addition, the phantom tests and stock level tests were executed and verified to be successful.

3.5. Durability

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

Three durability tests were executed to satisfy the requirements of the specification. The tests for loss of memory and instantaneous interruption were combined and performed with a fully scaled database with all emulated users. The loss of log and loss of data tests were performed on the same system, using a ten warehouse database with 100 emulated users. To the best of our knowledge, these tests prove that the fully scaled configuration used for the throughput test would also meet all durability tests.

3.5.1. Loss of Log Disk and Loss of Data Disk

The following steps were taken (using a ten warehouse database on the same system) to demonstrate durability in the case of loss of a log disk and loss of a data disk. The same log disks and controllers were used for the log as for the fully scaled database. Two extra 18GB drives on each of two data controllers of the fully scaled database were used as the data area for the 10 warehouse database.

1. The database was backed up to extra disks on a backup device.
2. The D_NEXT_O_ID fields for all rows in the district table were summed up to determine the initial count of orders present in the database.
3. The RTE was started with 100 users. On the driver systems, committed and rolled back New-Order transactions were recorded in a “success” file.
4. After five minutes of running at steady state, a hot-pluggable log disk was removed from the disk cabinet, with no effect on NT or SQL server.
5. After 5 additional minutes of operation, a hot-pluggable data disk was removed from the disk cabinet.
6. Windows 2000 and SQL Server encountered IO errors due to the missing disk and recorded these errors in the system event log and SQL Server error log, respectively. The RTEs also recorded errors.
7. First, the RTEs and clients were stopped, then SQL Server was used to take a dump of the transaction log to the dump device.
8. Next, scripts were executed to drop the database and all its devices. Then, SQL Server was shutdown and the SUT shutdown.
9. A data disk was inserted in the disk cabinet to replace the one removed. The RAID controller was used to recreate the stripe set containing the new data disk. (The missing log drive was not replaced.)
10. The SUT was restarted, and Disk Manager was used to assign the proper drive letter to the new volume. SQL Server was then restarted and a new (empty) database created as part of the restore database process. That process loaded the initial database into the new database, but did not perform any recovery. Next the transaction log was restored, followed by transaction recovery. The latter step restored all committed transactions to the database.
11. Consistency condition 3 of Clause 3.3.2.3 was executed to verify database consistency.
12. Step 2 was repeated to determine the total number of orders. This number was subtracted from the count obtained previously in Step 2 to determine the number of additional orders added to the database.
13. The contents of the “success” files on the drivers were sampled to verify that the records in the “success” file for committed New-Order transactions had corresponding records in the ORDER table. Moreover, the counts were matched with those obtained in step 12.

3.5.2. Instantaneous Interruption and Loss of Memory

Instantaneous interruption and loss of memory tests were combined because the loss of power erased the contents of memory. This failure was induced by removing the primary power to the System Under Test while the benchmark was executing.

1. The D_NEXT_O_ID fields for all rows in the district table were summed up to determine the initial count of orders present in the database (count1).
2. On the driver systems, committed and rolled back New-Order transaction were recorded in a “success” file.
3. The benchmark was executed at full load with all emulated users for a minimum of 10 minutes.
4. The system’s primary power was then turned off.
5. After transaction failures were noted by the RTEs, the RTEs and clients were shutdown.
6. Power was restored to the SUT, the system rebooted, SQL Server was restarted, and automatic database recovery was performed. The database recovery used the transaction log to reapply all committed transactions and rollback any (in progress) uncommitted transactions, so that the database disks were correct.
7. After recovery finished, Consistency Condition 3 of Clause 3.3.2.3 (no gaps in NO_O_ID) was executed to verify that the database was consistent..

8. Next, samples of the contents of the “success” file from the drivers were compared against corresponding rows of the ORDER table to verify that records in the “success” file for committed New-Order transactions had corresponding records in the ORDER table.
9. Finally, step 1 was repeated to determine the total number of orders (count2). Count2 minus count1 was not less than the number of committed New-Order records in the “success” file.

4.

Clause 4: Scaling & Database Population

4.1. Initial Cardinality of Tables

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

The TPC-C database for this test was configured with 4000 warehouses. The cardinality of each table in the database is listed in Table 4.1

Table 4.1: Initial Cardinality of Database Table

Table	Occurrences
Warehouse	4,000
District	40,000
Customer	120,000,000
History	120,000,000
Order	120,000,000
New-Order	36,000,000
Order Line	1,200,000,541
Stock	400,000,000
Item	100,000

60 upper warehouses were inactive and not used while executing the measurement runs.

4.2. Constant Values

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

Table 4.2: Constant C for NURand

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

4.3. Database Layout

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

Tables 4.3, 4.4 and 4.5 list the distribution of the database over 260 18GB disks and the transaction log over 7 mirrored pairs of 18GB disks for the benchmark configuration. In addition, there was one 9GB disk containing Windows 2000 Datacenter Server and SQL Server 2000 Version 8 code and the Master database plus the paging file. A second 4GB internal disk was present but not used during the measurements and thus not priced. Similarly, 30 18GB disks were present solely for database backup, along with an extra SCSI RAID controller; those components also were not used during the measurements and thus were not priced. Otherwise, the tested and priced disk configurations were identical.

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

A statement must be provided that describes:

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

Microsoft SQL Server 2000, Version 8 is a relational DBMS.

The client software interfaced to SQL Server through Stored Procedures invoked through ODBC calls embedded in the C application code.

4.5. DBMS Partitions/Replications

The mapping of database partitions/replications must be explicitly described.

No table partitioning or replication was done.

4.6. DBMS Space Requirements

Details of the 180 day space computation along with proof that the database is configured to sustain 8 hours of growth for dynamic tables (Order, Order-line, and History) must be disclosed (see Clause 4.2.3).

Appendix E lists the space requirements for the 180-day space as well as the logical log space for eight hours.

Table 4.3: Disk Cage Configuration

Disk Cage Configuration												
Adapter	Channel	Id	Id	Id	Id	Id	Id	Id	Id	Id	Id	Rack #
1	0	8	9	10	11	12	13	14	15			
		18GB	18GB	18GB	18GB	18GB	18GB	18GB	empty			1
		8	9	10	11	12	13	14	15			
	1	8	9	10	11	12	13	14	15			
		18GB	18GB	18GB	18GB	18GB	18GB	18GB	empty			2
		8	9	10	11	12	13	14	15			
	2	0	1	2	3	4	5	6	7			
		18GB	18GB	18GB	18GB	18GB	18GB	18GB	empty			*
		8	9	10	11	12	13	14	15			
		18GB	18GB	18GB	18GB	18GB	18GB	18GB	empty			*
		8	9	10	11	12	13	14	15			
		18GB	18GB	18GB	18GB	18GB	18GB	18GB	empty			
2	0	0	1	2	3	4	5	6	7			
		18GB	18GB	18GB	18GB	18GB	18GB	18GB	empty			*
		8	9	10	11	12	13	14	15			
		18GB	18GB	18GB	18GB	18GB	18GB	18GB	empty			*
		8	9	10	11	12	13	14	15			
		18GB	18GB	18GB	18GB	18GB	18GB	18GB	empty			
3	0	0	1	2	3	4	5	6	7			
		18GB	18GB	18GB	18GB	18GB	18GB	18GB	empty			3
		8	9	10	11	12	13	14	15			
		18GB	18GB	18GB	18GB	18GB	18GB	18GB	empty			4
		0	1	2	3	4	5	6	7			
		18GB	18GB	18GB	18GB	18GB	18GB	18GB	empty			5
	1	8	9	10	11	12	13	14	15			
		18GB	18GB	18GB	18GB	18GB	18GB	18GB	empty			6
		0	1	2	3	4	5	6	7			
		18GB	18GB	18GB	18GB	18GB	18GB	18GB	empty			7
		8	9	10	11	12	13	14	15			
		18GB	18GB	18GB	18GB	18GB	18GB	18GB	empty			8
	2	0	1	2	3	4	5	6	7			
		18GB	18GB	18GB	18GB	18GB	18GB	18GB	empty			9
		8	9	10	11	12	13	14	15			
		18GB	18GB	18GB	18GB	18GB	18GB	18GB	empty			10
		0	1	2	3	4	5	6	7			
		18GB	18GB	18GB	18GB	18GB	18GB	18GB	empty			11
	3	8	9	10	11	12	13	14	15			
		18GB	18GB	18GB	18GB	18GB	18GB	18GB	empty			12
		0	1	2	3	4	5	6	7			
		18GB	18GB	18GB	18GB	18GB	18GB	18GB	empty			13
		8	9	10	11	12	13	14	15			
		18GB	18GB	18GB	18GB	18GB	18GB	18GB	empty			14
4	0	0	1	2	3	4	5	6	7			
		18GB	18GB	18GB	18GB	18GB	18GB	18GB	empty			10
		8	9	10	11	12	13	14	15			
	1	8	9	10	11	12	13	14	15			
		18GB	18GB	18GB	18GB	18GB	18GB	18GB	empty			11
		0	1	2	3	4	5	6	7			
	2	8	9	10	11	12	13	14	15			
		18GB	18GB	18GB	18GB	18GB	18GB	18GB	empty			12
		0	1	2	3	4	5	6	7			
		18GB	18GB	18GB	18GB	18GB	18GB	18GB	empty			13
	3	8	9	10	11	12	13	14	15			
		18GB	18GB	18GB	18GB	18GB	18GB	18GB	empty			14
		0	1	2	3	4	5	6	7			
		18GB	18GB	18GB	18GB	18GB	18GB	18GB	empty			15
		empty	empty	empty	empty	empty	empty	empty	empty			
		8	9	10	11	12	13	14	15			
		18GB	18GB	18GB	18GB	18GB	18GB	18GB	empty			16

Table 4.3: Disk Cage Configuration (Continued)

Disk Cage Configuration													
Adapter	Channel	Id	Id	Id	Id	Id	Id	Id	Id	Id	Id	Id	Rack #
5	0	0	1	2	3	4	5	6	7				
		18GB	18GB	18GB	18GB	18GB	18GB	18GB	empty				17
		8	9	10	11	12	13	14	15				
		18GB	18GB	18GB	18GB	18GB	18GB	18GB	18GB				18
		0	1	2	3	4	5	6	7				
		18GB	18GB	18GB	18GB	18GB	18GB	18GB	empty				19
		8	9	10	11	12	13	14	15				
		18GB	18GB	18GB	18GB	18GB	18GB	18GB	18GB				20
		0	1	2	3	4	5	6	7				
		18GB	18GB	18GB	18GB	18GB	18GB	18GB	empty				21
		8	9	10	11	12	13	14	15				
		18GB	18GB	18GB	18GB	18GB	18GB	18GB	empty				22
		0	1	2	3	4	5	6	7				
		empty	empty	empty	empty	empty	empty	empty	empty				
		8	9	10	11	12	13	14	15				23
		18GB	18GB	18GB	18GB	18GB	18GB	18GB	18GB				
6	0	0	1	2	3	4	5	6	7				
		18GB	18GB	18GB	18GB	18GB	18GB	18GB	empty				24
		8	9	10	11	12	13	14	15				
		18GB	18GB	18GB	18GB	18GB	18GB	18GB	18GB				25
		0	1	2	3	4	5	6	7				
		18GB	18GB	18GB	18GB	18GB	18GB	18GB	empty				26
		8	9	10	11	12	13	14	15				
		18GB	18GB	18GB	18GB	18GB	18GB	18GB	18GB				27
		0	1	2	3	4	5	6	7				
		18GB	18GB	18GB	18GB	18GB	18GB	18GB	empty				28
		8	9	10	11	12	13	14	15				
		18GB	18GB	18GB	18GB	18GB	18GB	18GB	empty				29
		0	1	2	3	4	5	6	7				
		empty	empty	empty	empty	empty	empty	empty	empty				
		8	9	10	11	12	13	14	15				30
		18GB	18GB	18GB	18GB	18GB	18GB	18GB	18GB				
7	0	0	1	2	3	4	5	6	7				
		18GB	18GB	18GB	18GB	18GB	18GB	18GB	empty				31
		8	9	10	11	12	13	14	15				
		18GB	18GB	18GB	18GB	18GB	18GB	18GB	18GB				32
		0	1	2	3	4	5	6	7				
		18GB	18GB	18GB	18GB	18GB	18GB	18GB	empty				33
		8	9	10	11	12	13	14	15				
		18GB	18GB	18GB	18GB	18GB	18GB	18GB	empty				34
		0	1	2	3	4	5	6	7				
		18GB	18GB	18GB	18GB	18GB	18GB	18GB	empty				35
		8	9	10	11	12	13	14	15				
		18GB	18GB	18GB	18GB	18GB	18GB	18GB	empty				36
		0	1	2	3	4	5	6	7				
		empty	empty	empty	empty	empty	empty	empty	empty				
		8	9	10	11	12	13	14	15				37
		18GB	18GB	18GB	18GB	18GB	18GB	18GB	18GB				

Table 4.4: RAID Adapter Disk Configuration

RAID Adapter Disk Configuration					
Adapter	ID	Channel 0	Channel 1	Channel 2	Channel 3 RAID Configuration Drive Letters
1	0		A2-1	Configure Array 2 as RAID 5 (backup)	M:
	1		A2-2		
	2		A2-3		
	3		A2-4		
	4		A2-5		
	5		A2-6		
	6		A2-7		
	8		A2-8		
	9		A2-9		
	10		A2-10		
	11		A2-11		
	12		A2-12		
	13		A2-13		
	14		A2-14		
	15	A1-1	A1-2	A2-15	
2	Configure Array 1 as RAID 1 (log)				L:
	0	A1-1			
	1	A1-2			
	2	A1-3			
	3	A1-4			
	4	A1-5			
	5	A1-6			
	6	A1-7			
	8	A1-8			
	9	A1-9			
	10	A1-10			
	11	A1-11			
	12	A1-12			
	13	A1-13			
	14	A1-14			
	15	A1-15			
3	Configure Array 2 as RAID 5 (backup)				N:
	0	A1-1	A2-3	A3-5	
	1	A1-2	A2-4	A3-6	
	2	A1-3	A2-5	A3-7	
	3	A1-4	A2-6	A3-8	
	4	A1-5	A2-7	A3-9	
	5	A1-6	A2-8	A3-10	
	6	A1-7	A2-9	A3-11	
	8	A1-8	A2-10	A3-12	A4-6
	9	A1-9	A2-11	A3-13	A4-7
	10	A1-10	A2-12	A4-1	A4-8
	11	A1-11	A2-13	A4-2	A4-9
	12	A1-12	A3-1	A4-3	A4-10
	13	A1-13	A3-2	A4-4	A4-11
	14	A2-1	A3-3	A4-5	A4-12
	15	A2-2	A3-4	A4-13	
Configure Arrays 1-4 as RAID 0 (data)					D: and E:

Table 4.4: RAID Adapter Disk Configuration (Continued)

RAID Adapter Disk Configuration						
Adapter	ID	Channel 0	Channel 1	Channel 2	Channel 3	RAID Configuration Drive Letters
4	0	A1-1	A2-3	A3-5	Configure Arrays 1-4 as RAID 0 (data)	F: and G:
	1	A1-2	A2-4	A3-6		
	2	A1-3	A2-5	A3-7		
	3	A1-4	A2-6	A3-8		
	4	A1-5	A2-7	A3-9		
	5	A1-6	A2-8	A3-10		
	6	A1-7	A2-9	A3-11		
	8	A1-8	A2-10	A3-12		
	9	A1-9	A2-11	A3-13		
	10	A1-10	A2-12	A4-1		
	11	A1-11	A2-13	A4-2		
	12	A1-12	A3-1	A4-3		
	13	A1-13	A3-2	A4-4		
	14	A2-1	A3-3	A4-5		
	15	A2-2	A3-4	A4-13		
5	0	A1-1	A2-3	A3-5	Configure Arrays 1-4 as RAID 0 (data)	H: and I:
	1	A1-2	A2-4	A3-6		
	2	A1-3	A2-5	A3-7		
	3	A1-4	A2-6	A3-8		
	4	A1-5	A2-7	A3-9		
	5	A1-6	A2-8	A3-10		
	6	A1-7	A2-9	A3-11		
	8	A1-8	A2-10	A3-12		
	9	A1-9	A2-11	A3-13		
	10	A1-10	A2-12	A4-1		
	11	A1-11	A2-13	A4-2		
	12	A1-12	A3-1	A4-3		
	13	A1-13	A3-2	A4-4		
	14	A2-1	A3-3	A4-5		
	15	A2-2	A3-4	A4-13		
6	0	A1-1	A2-3	A3-5	Configure Arrays 1-4 as RAID 0 (data)	J: and K:
	1	A1-2	A2-4	A3-6		
	2	A1-3	A2-5	A3-7		
	3	A1-4	A2-6	A3-8		
	4	A1-5	A2-7	A3-9		
	5	A1-6	A2-8	A3-10		
	6	A1-7	A2-9	A3-11		
	8	A1-8	A2-10	A3-12		
	9	A1-9	A2-11	A3-13		
	10	A1-10	A2-12	A4-1		
	11	A1-11	A2-13	A4-2		
	12	A1-12	A3-1	A4-3		
	13	A1-13	A3-2	A4-4		
	14	A2-1	A3-3	A4-5		
	15	A2-2	A3-4	A4-13		

Table 4.4: RAID Adapter Disk Configuration (Continued)

RAID Adapter Disk Configuration					
Adapter	ID	Channel 0	Channel 1	Channel 2	Channel 3 RAID Configuration Drive Letters
7	0	A1-1	A2-3	A3-5	Configure Arrays 1-4 as RAID 0 (data) O: and P:
	1	A1-2	A2-4	A3-6	
	2	A1-3	A2-5	A3-7	
	3	A1-4	A2-6	A3-8	
	4	A1-5	A2-7	A3-9	
	5	A1-6	A2-8	A3-10	
	6	A1-7	A2-9	A3-11	
	8	A1-8	A2-10	A3-12	
	9	A1-9	A2-11	A3-13	
	10	A1-10	A2-12	A4-1	
	11	A1-11	A2-13	A4-2	
	12	A1-12	A3-1	A4-3	
	13	A1-13	A3-2	A4-4	
	14	A2-1	A3-3	A4-5	
	15	A2-2	A3-4	A4-13	

Table 4.5: Disk Administrator Configuration

Disk Administrator Configuration				
Disk 0 4.24 GB	C: SYSTEM FAT 2.00 GB	Z: testfiles NTFS 2.24 GB	free space none	
Disk 1 8.49 GB	U: W2K_Test NTFS 2.24 GB	V: Win2K NTFS 6.24 GB	free space none	
Disk 2 118.83 GB	L: unknown 117.68GB		free space 1.15 GB	
Disk 3 234.68 GB	M: Backup1 NTFS 234.68 GB		free space none	
Disk 4 234.68 GB	N: Backup2 NTFS 234.68 GB		free space none	
Disk 5 871.71 GB	D: unknown 44.44 GB	E: unknown 21.98 GB	free space 805.29 GB	
Disk 6 871.71 GB	F: unknown 44.44 GB	G: unknown 21.98 GB	free space 805.29 GB	
Disk 7 871.71 GB	H: unknown 44.44 GB	I: unknown 21.98 GB	free space 805.29 GB	
Disk 8 871.71 GB	J: unknown 44.44 GB	K: unknown 21.98 GB	free space 805.29 GB	
Disk 9 871.71 GB	O: unknown 44.44 GB	P: unknown 21.98 GB	free space 805.29 GB	
CD-ROM 0	W: unknown 44.44 GB			

5. Clause 5: Performance Metrics & Response Time

5.1. Measured Throughput (tpmC)

Measured tpmC must be reported.

The measured tpmC was 48,767.76.

5.2. Response Times

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

Table 5.1: Response Time Data

Transaction	Average	Maximum	90th %ile
New-Order	0.53	4.99	0.89
Payment	0.48	4.67	0.84
Delivery	0.22	1.52	0.45
Stock-Level	0.75	3.40	1.15
Order Status	0.49	5.11	0.85
Menu	0.23	4.43	0.45
Delivery (Deferred)	0.38	2.45	0.61

5.3. 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

Transaction	Minimum	Average	Maximum
New-Order	18.00	18.00	19.07
Payment	3.00	3.00	4.16
Delivery	2.00	2.00	2.88
Stock-Level	2.00	2.00	2.88
Order Status	2.00	2.00	3.00

Table 5.3: Think Times

Transaction	Minimum	Average	Maximum
New-Order	0.00	12.04	120.49
Payment	0.00	12.02	120.30
Delivery	0.00	5.06	50.60
Stock-Level	0.00	5.05	50.60
Order Status	0.00	10.07	100.71

5.4. Response Time Frequency Distribution Curves

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

Figure 5.1: New Order Response Time Distribution

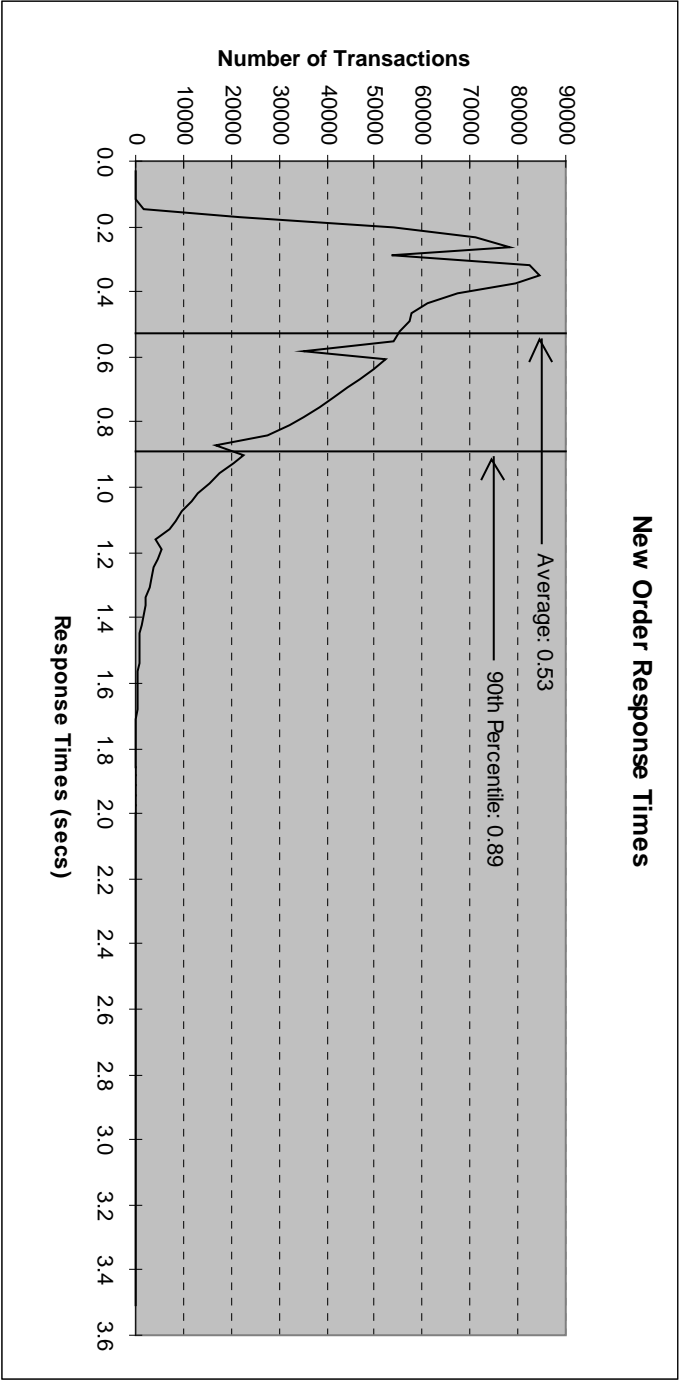


Figure 5.2: Payment Response Time Distribution

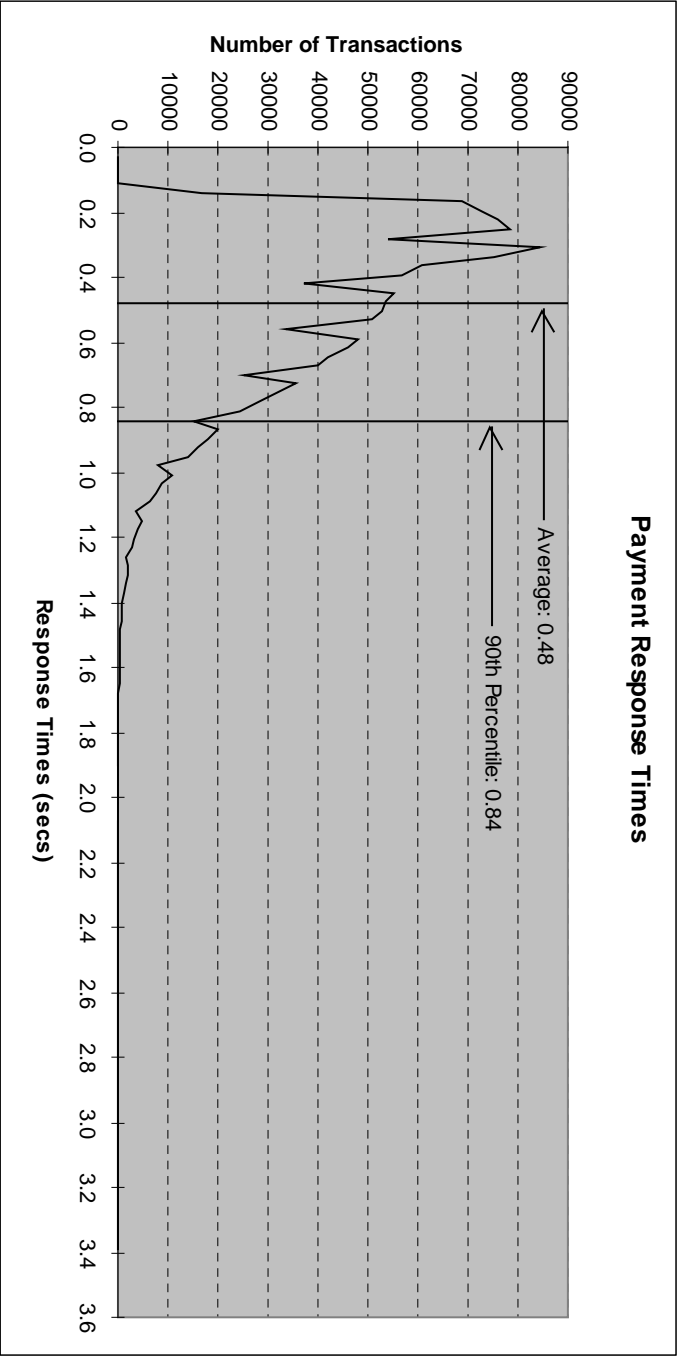


Figure 5.3: Order Status Response Time Distribution

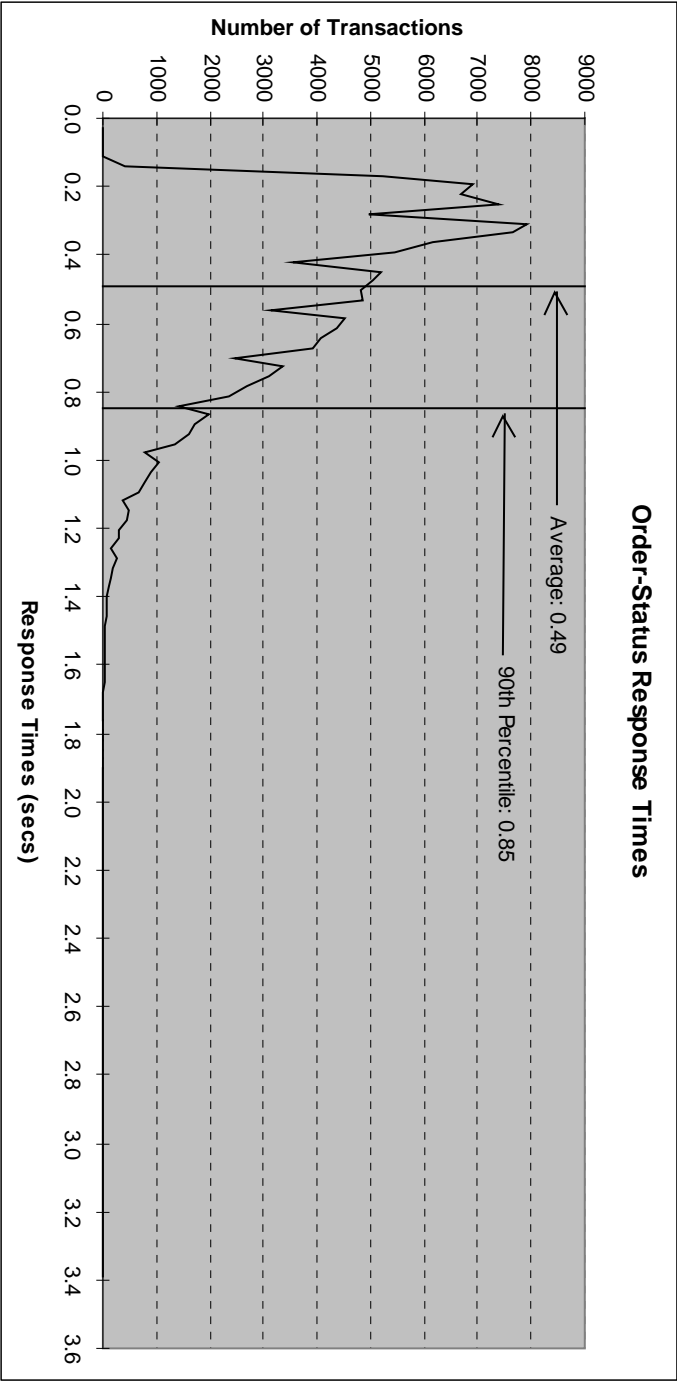


Figure 5.4: Delivery Response Time Distribution

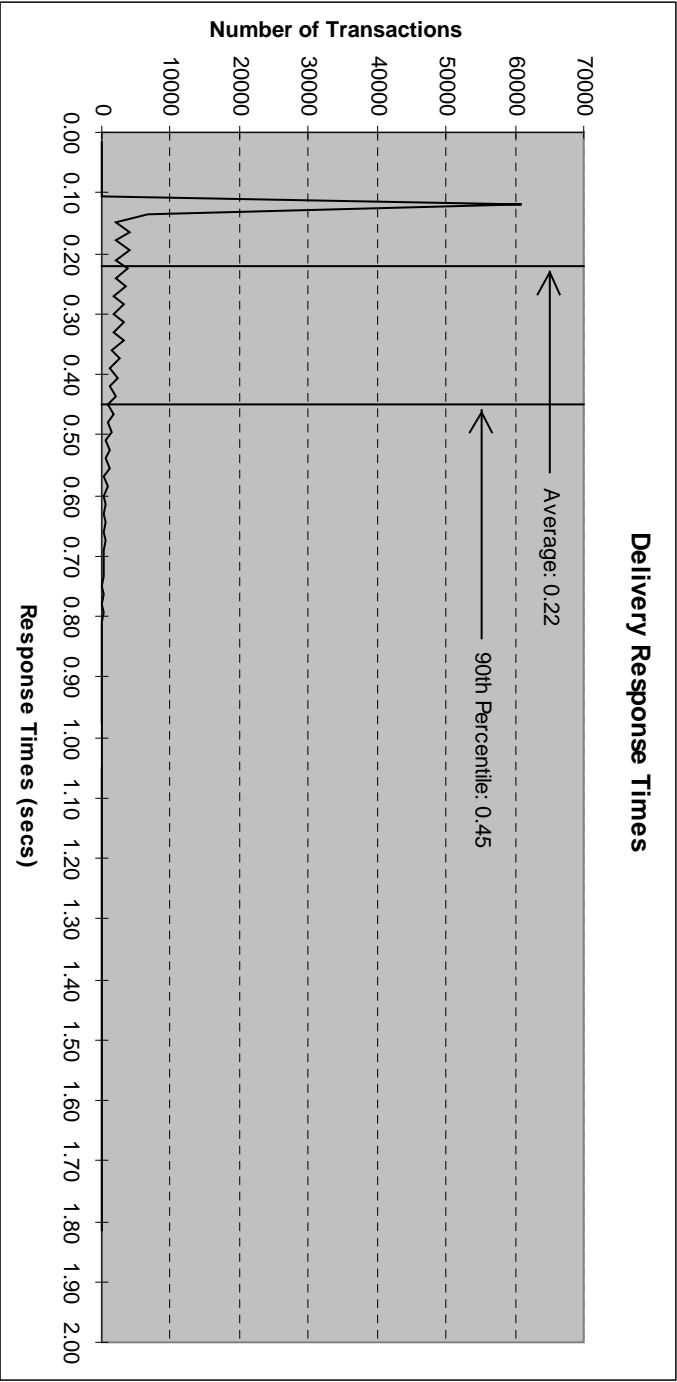
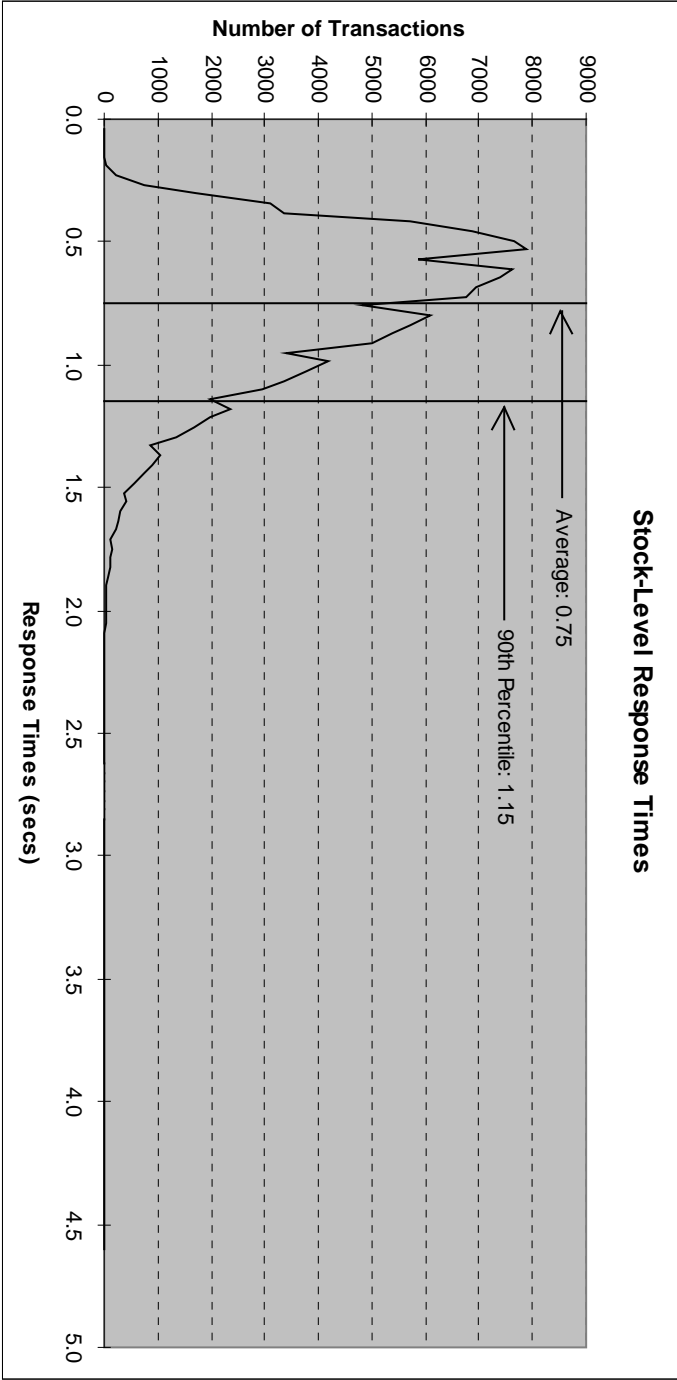


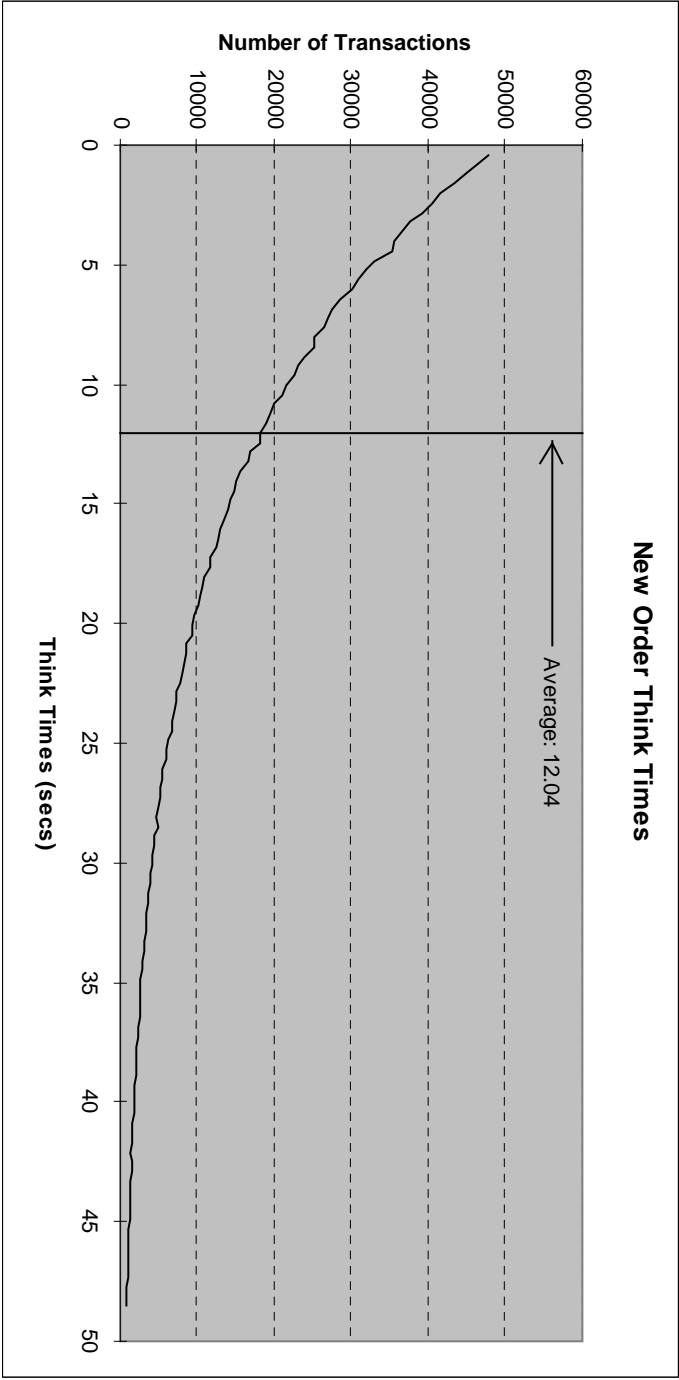
Figure 5.5: Stock Level Response Time Distribution



5.5. New Order Think Time Frequency Distribution Curve

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

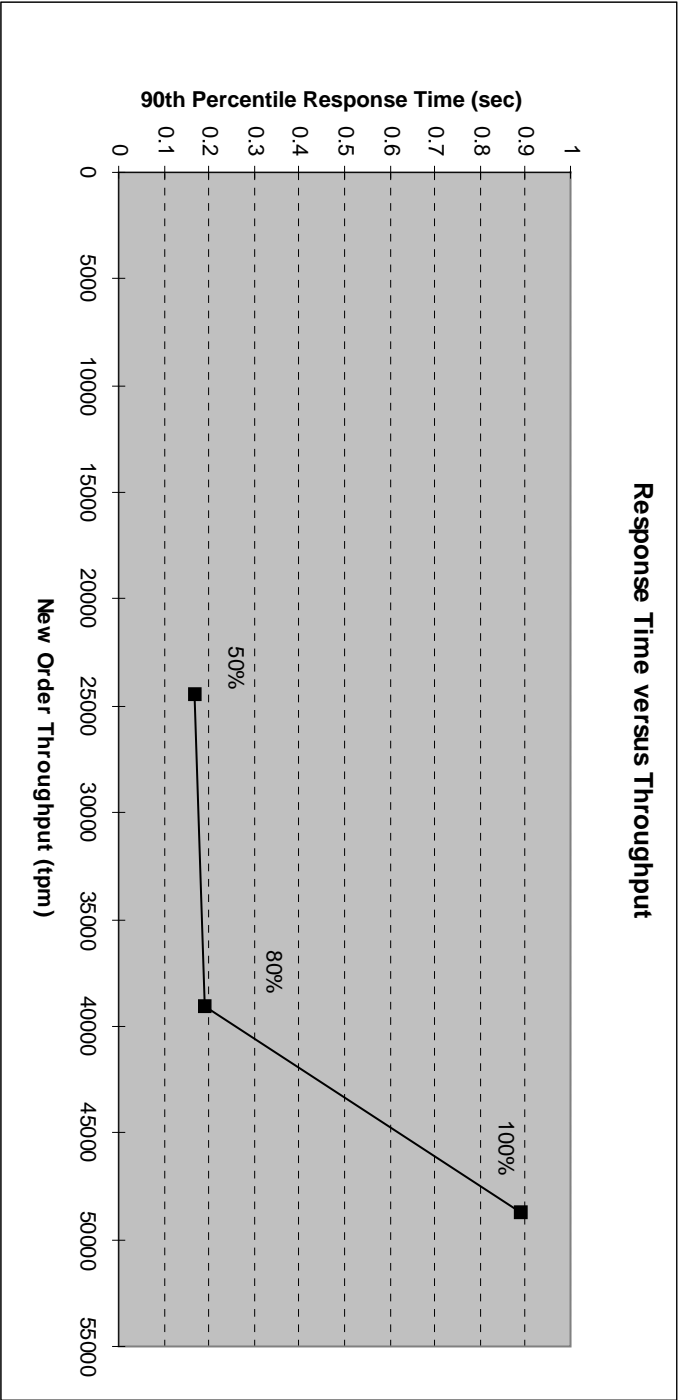
Figure 5.6: New Order Think Time Distribution



5.6. Response Time versus Throughput Performance Curve

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

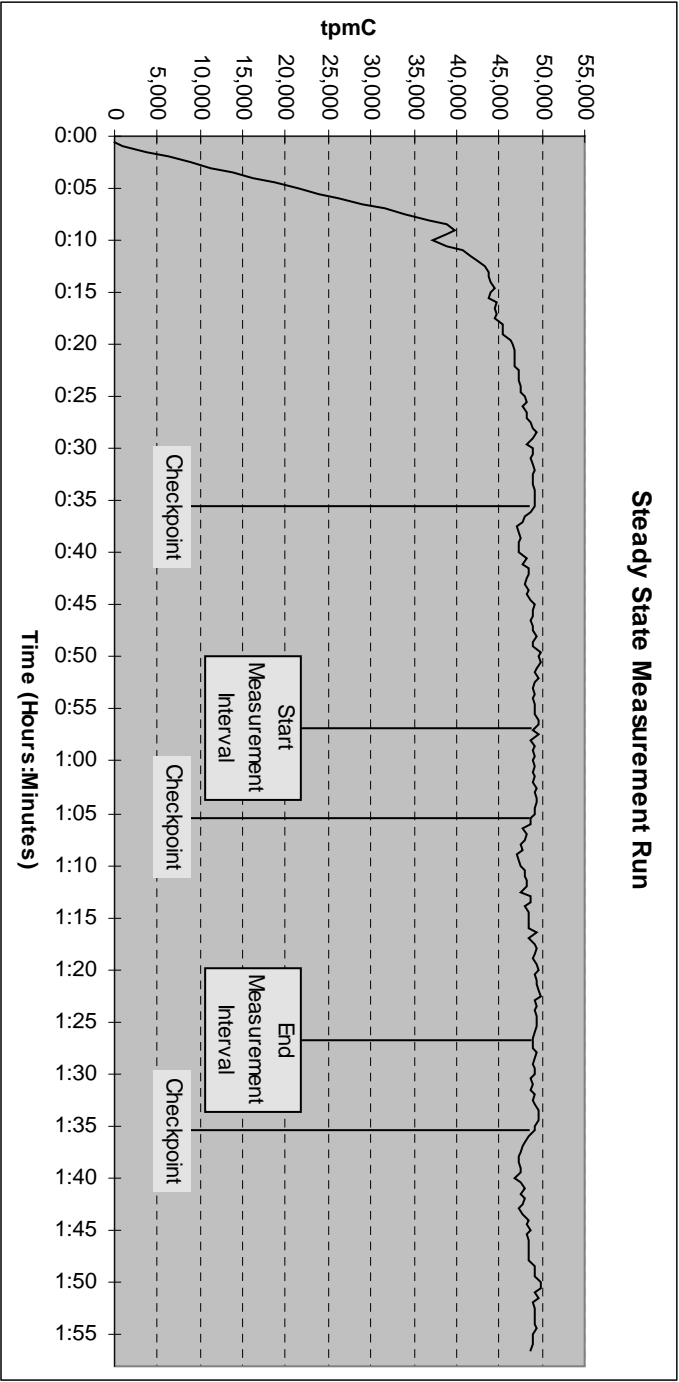
Figure 5.7: Response Time versus Throughput



5.7. New-Order Throughput vs. Time

A graph of throughput versus elapsed time (Clause 5.6.5) must be reported for the New-Order transaction.

Figure 5.8: Throughput (tpmC) versus Time



5.8. Determination of “Steady State”

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

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

5.9. Work Performed During Steady State

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

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

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

To perform checkpoints at specific intervals, SQL Server’s checkpoint interval was set to the maximum allowable value and a utility was written to schedule checkpoints at parameter-specified intervals and record the start and end time of each checkpoint. The checkpoint script was started manually on one of the client machines after the RTE had all users logged in and sending transactions and a steady state had been achieved. Using this information, the positioning of the checkpoint within the measurement interval was verified to be clear of the guard zones.

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

5.10. Reproducibility

A description of the method used to determine the reproducibility of the measurement results must be reported.

In a repeat test, carried out in the same manner as the primary test, a throughput of 48,667.33 tpnC was achieved on the same database during a 30-minute, steady state run. All required transaction statistics were met. See the Auditor's attestation letter for details.

5.11. Measurement Interval Duration

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

The measurement interval was 30 minutes.

5.12. 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 weighed random distribution which could not be adjusted during the run.

5.13. 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 entered 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 5.4 shows this information.

Table 5.4: Transaction Statistics

Transaction Type	Statistics	Value
New Order	Rollback transactions	0.99%
	Home warehouse	99.00%
	Remote warehouse	1.00%
	Average Items per Order	10.00
Payment	Home warehouse	85.02%
	Remote warehouse	14.98%
	Non-primary key access	59.99%
Order Status	Non-primary key access	59.93%
Delivery	Skipped transactions (Interactive)	0
	Skipped transaction counts (Deferred)	0
	Skipped District counts (Deferred)	0
Transaction Mix	New Order	44.81%
	Payment	43.06%
	Delivery	4.02%
	Stock-Level	4.05%
	Order-Status	4.03%

5.14. Checkpoint Statistics

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

There is one checkpoint in the measurement interval. The checkpoint starts 527 seconds into the measurement interval. The checkpoint interval is 30 minutes (from the start of one to the start of the next) and a checkpoint lasts approximately 13.7 minutes. In conformance with Clause 5.5.2.2., the checkpoint occurs outside the guard zones.

6. Clause 6: SUT, Driver & Communications Definition

6.1. Remote Terminal Emulator (RTE) Description

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

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

6.2. Emulated Components

It must be demonstrated that the functionality and performance of the components being emulated in the Driver System are equivalent to that of the priced system.

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

6.3. Functional Diagrams

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

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

6.4. Network Configuration

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

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

6.5. Network Bandwidth

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

Local area networks (LAN) are used in the priced and tested configurations. The database server (SUT) contains a single cLAN 1.25 gigabit per second LAN adapter. This LAN segment runs at 1.25 gigabit per second in both the priced and tested configurations. The clients contain one 10/100 megabit per second LAN adapter and one cLAN 1.25 gigabit per second adapter. The 10/100 LAN connection runs at 100 megabits per second in the priced and tested configurations. The cLAN connection runs at 1.25 gigabit per second in the priced and tested configurations. 40 (10 per client) user LAN segments run at 10 megabits per second in both the priced and tested configurations. Two concatenated eight-port 10/100 megabit per second switches per client were used to connect the clients to the users. An additional 1.25 gigabit per second cLAN switch was used to connect the clients to the database server. In the

priced configuration, the clients are connected to workstations (PCs running web browsers). In the tested configuration, the clients are connected to RTE driver systems emulating web browsers.

6.6. Operator Intervention

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

No operator intervention was required to sustain eight hours of operation at the reported throughput.

7.1. Pricing

A detailed list of hardware and software used in the priced system must be reported. Each separately orderable item must have vendor part number, description, and release/revision level, and either general availability status or committed delivery date. If package-pricing is used, vendor part number of the package and a description uniquely identifying each of the components of the package must be disclosed. Pricing source(s) and effective date(s) must also be reported.

The total 5-year price of the entire configuration must be reported, including: hardware, software, and maintenance charges. Separate component pricing is recommended. The basis of all discounts used must be disclosed.

System pricing should include subtotals for the following components: Server Hardware, Server Software, Client Hardware, Client Software, and Network Components used for terminal connection (see Clause 7.2.2.3). Clause 6.1 describes the Server and Client components.

System pricing must include line item indication where non-sponsoring companies' brands are used. System pricing must also include line item indication of third party pricing.

A detailed list of hardware and software components along with their part numbers and prices are given in the Executive Summary near the beginning of this document.

7.1.1. System Pricing

Each priced configuration consists of an integrated system package, additional options, and components. Prices for all products are US list prices. A three year warranty is standard with this class of Unisys server products.

7.1.2. Maintenance Pricing

The five year support pricing for Unisys Corporation Business Server products is based on a 36-month warranty on hardware, upgraded to service level Performance-Gold, plus an additional 24 months of support at service level Performance-Gold. Microsoft support pricing is based on 5 years of annual support costs.

Unisys Corporation Standard Performance-Gold Support: four hour maximum response, onsite support for hardware provides service from 8:00 A.M. to 5:00 P.M., Monday through Friday. Service requests made as late as 5:00 P.M. will receive a response the same day.

Server disks are covered by Western Micro's 5 year, seven day return-to-factory warranty, and appropriate spares are included in the priced configuration. MyIlex, Netlux and NetCruiser also provide 5 year, seven day return-to-factory warranties for their respective components, and appropriate spares are included in the priced configuration.

7.1.3. Discounts

Unisys provides a standard pre-pay discount for maintenance service of the client, server and storage components of the priced configuration.

Western Micro provides a standard dollar-volume discount to the client, server and storage components of the priced configuration.

7.2. Availability

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

The hardware, software and support/maintenance products priced in this benchmark are detailed on page vi.

All components will be available by September 26, 2000.

7.3. Measured tpmC, Pricing, Price/Performance, and Availability Date

A statement of the measured tpmC as well as the respective calculations for the 5-year pricing, price/performance (price/tpmC), and the availability date must be included.

The measured tpmC, plus pricing calculations, price/performance, and availability are shown on pages v and vi.

7.4. Country-Specific Pricing

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

None.

7.5. Usage Pricing

For any usage pricing, the sponsor must disclose:

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

The component pricing based on usage is shown below:

- One (1) Microsoft Windows 2000 Datacenter Server
- One (1) Microsoft SQL Server 2000 Version 8, Enterprise Edition license
- Four (4) Microsoft Windows 2000 Server License
- One (1) Microsoft Windows 2000 Resource Kit
- One (1) Microsoft Visual C++ Professional 6.0

Microsoft SQL Server & Internet Information Server were priced for an unlimited number of users.

8.1. Availability

The Full Disclosure Report must be readily available to the public at a reasonable charge, similar to charges for similar documents by that test sponsor.

Copies of this Full Disclosure Report may be downloaded from the Transaction Processing Performance Council web site at www.tpc.org or obtained by contacting:

TPC Benchmark Administrator
Systems Analysis, Modeling & Measurement Group
Unisys Corporation, M/S 262
25725 Jeronimo Road
Mission Viejo, CA 92691
USA

9.1. Auditor's Report

The auditor's name, address, phone number and a copy of the auditor's attestation letter indicating compliance must be included in the Full Disclosure Report.

This implementation of the TPC Benchmark C on the Unisys Unisys e-@ction ES5085R Enterprise Server was audited by Tom Sawyer, a TPC certified auditor of:

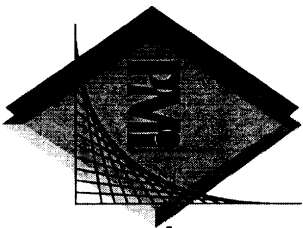
Performance Metrics, Inc.
137 Yankton St. Suite 101
Folsom, CA 95630

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

The attestation letter is shown on the next 2 pages.

PERFORMANCE METRICS INC.

TPC Certified Auditors



February 14, 2000

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

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

Platform:	Unisys e-@ction ES5085R Enterprise Server
Database Manager:	Microsoft SQL Server 2000 Version 8, Enterprise Edition
Operating System:	Microsoft Windows 2000 Datacenter Server
Transaction Manager:	Microsoft COM+ (included in Windows 2000 Server)

Server: e-@ction ES5085R Enterprise Server				
CPU's	Memory	Disks	90% Response	tpmC
8 Pentium III Xeon @ 550 MHz	Main: 32 GB Cache: 2MB each	1 @ 4.24 GB 1 @ 8.19 GB 308 @ 18GB	0.89 sec	48,767.76
4 Clients: NetServer LC3				
2 Pentium III @ 500 MHz	Main: 512 MB Cache: 512K	1 @ 8.54 GB	na	na

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

- The transactions were correctly implemented.
- The database was properly sized and populated.

PERFORMANCE METRICS INC.

TPC Certified Auditors

- The database was properly scaled with 4,000 warehouses. There were 3,940 warehouses used in the measurement. I verified that d_next_o_id and w_yrd did not change for the unused warehouses.
- The ACID properties were met.
- The durability data loss and log loss tests were performed on a 10-warehouse database.
- Input data was generated according to the specified percentages.
- Eight hours of mirrored log space was configured on the measured system.
- Eight hours of dynamic table growth space was configured on the measured system.
- The 180-day space calculation was verified. The measured configuration has sufficient storage to satisfy this requirement.
- I verified that of the 310 disks on the configured system, 274 18GB disks were used for data and log and 1 8.19GB was used for system-software in the measurement.
- Measurement cycle times included a 0.1-second menu and a 0.1 second response time delay for an emulated Web browser.
- There were 39,400 user contexts present on the system.
- Each emulated user started with a different random number seed.
- The NURand constants used for database load and at run time were 123 and 208.
- The steady state portion of the test was 30 minutes.
- One checkpoint was taken before the measured interval.
- One checkpoint was taken during the measured interval.
- The checkpoints were verified to be clear of the guard zone.
- The system pricing was checked for major components and maintenance.

Auditor Notes:

None.

Sincerely,



Tom Sawyer
Auditor

Appendix A - Client Source

tpcc.def

```
EXPORTS
    GetExtensionVersion
    HttpExtensionProc
```

tpcc.h

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

#include <time.h>

#define VERSIONINFO "--- 1.2a ---"

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

// TPCC Service return codes
#define SVC_BADITEMID 1
#define SVC_NOERROR 0
#define SVCERR_DEADLOCK -1
#define SVCERR_NOCUSTOMER -2
#define SVCERR_NOORDERS -3
#define SVCERR_DBLIB -4
#define SVCERR_EXCEPTION -5
#define SVCERR_DQFULL -6
#define SVCERR_DQSTART -7
#define SVCERR_ODBC -8

// Min/Max transaction data definitions
#define MIN_DID 1
#define MAX_DID 10
#define MIN_OL 5
#define MAX_OL 15
#define MIN_QUANTITY 1
#define MAX_QUANTITY 10
#define MIN_ITEM_ID 1
#define MAX_ITEM_ID 100000
#define MIN_CUST_ID 1
#define MAX_CUST_ID 3000
#define MIN_CARRIER 1
#define MAX_CARRIER 10
#define MIN_THRESHOLD 10
#define MAX_THRESHOLD 20

// pTPCC->iStatusId codes
#define INVALID_IID 1
#define STATUS_OK 0
```

```
#define ERR_CMD_UNKNOWN -10
#define ERRTXT_CMD_UNKNOWN "Unrecognized Command"
#define ERR_ALREADY_LOGGEDIN -11
#define ERRTXT_ALREADY_LOGGEDIN "Already Logged In"
#define ERR_TERMID -12
#define ERRTXT_TERMID "TermId or SyncId in Error"
#define ERR_FORM_UNKNOWN -13
#define ERRTXT_FORM_UNKNOWN "Unrecognized FormId"
#define ERR_WID_INVALID -14
#define ERR_DID_INVALID -15
#define ERR_MISSING_KEY -16
#define ERR_NOT_NUMERIC -17
#define ERR_THRESHOLD_RANGE -18
#define ERR_EMBEDDED_EMPTY_OL -19
#define ERR_QUANTITY_INVALID -20
#define ERR_OL_INVALID -21
#define ERR_OL_COUNT -22
#define ERR_TM_INTERFACE -23
#define ERR_SERVICE_RSLT -24
#define ERR_INPUT_TOOLONG -25
#define ERR_IDANDNAME_EMPTY -26
#define ERR_IDANDNAME_ENTERED -27
#define ERR_AMOUNT_BADFORM -28
#define ERR_AMOUNT_INVALID -29
#define ERR_CARRIER_INVALID -30
#define ERR_TERM_ALLOC -31

#define STATUS_LEN 30
#define NAME_LEN 16
#define ADDR_LEN 20
#define STATE_LEN 2
#define ZIP_LEN 9

#define MAX_MSG_SZ 5000
#define CTEXT "Content-length: "
#define HTTPHdr "Content-type: text/html\r\nContent-length: \r\n\r\n"

typedef struct
{
    unsigned short year;
    unsigned short month;
    unsigned short day;
    unsigned short hour;
    unsigned short minute;
    unsigned short second;
} DATEDETAILS;

typedef struct
{
    short ol_supply_w_id;
    long ol_i_id;
    char ol_i_name[25];
    short ol_quantity;
    char ol_brand_generic[2];
    double ol_i_price;
    double ol_amount;
```

```

    short ol_stock;
} OL_NEW_ORDER_DATA;

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

typedef struct
{
    bool bTPRslt;
    short iTPRslt;
    short w_id;
    short d_id;
    long c_id;
    short c_d_id;
    short c_w_id;
    double h_amount;
    DATEDETAILS h_date;
    char w_street_1[ADDR_LEN + 1];
    char w_street_2[ADDR_LEN + 1];
    char w_city[ADDR_LEN + 1];
    char w_state[STATE_LEN + 1];
    char w_zip[ZIP_LEN + 1];
    char d_street_1[ADDR_LEN + 1];
    char d_street_2[ADDR_LEN + 1];
    char d_city[ADDR_LEN + 1];
    char d_state[STATE_LEN + 1];
    char d_zip[ZIP_LEN + 1];
    char c_first[NAME_LEN + 1];
    char c_middle[3];
    char c_last[NAME_LEN + 1];
    char c_street_1[ADDR_LEN + 1];
    char c_street_2[ADDR_LEN + 1];
    char c_city[ADDR_LEN + 1];
    char c_state[STATE_LEN + 1];
    char c_zip[ZIP_LEN + 1];
    char c_phone[17];
    DATEDETAILS c_since;
    char c_credit[3];
    double c_credit_lim;
    double c_discount;
    double c_balance;
    char c_data[200+1];

```

```

    char execution_status[STATUS_LEN];
} PAYMENT_DATA;

typedef struct
{
    long ol_i_id;
    short ol_supply_w_id;
    short ol_quantity;
    double ol_amount;
    DATEDETAILS ol_delivery_d;
} OL_ORDER_STATUS_DATA;

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

typedef struct
{
    bool bTPRslt;
    short iTPRslt;
    short w_id;
    short o_carrier_id;
    long o_id[10];
    SYSTEMTIME QTime;           // time delivery was queued
    SYSTEMTIME EndTime;         // time delivery completed
} DELIVERY_DATA;

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

// tpcc.cpp
//
// Copyright Unisys, 1999
//

```

tpcc.cpp

```

#include <windows.h>
#include <stdio.h>
#include <malloc.h>
#include <stdlib.h>
#include <string.h>
#include <winreg.h>
#include <httpext.h>

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

#define EXTN_VERSION MAKELONG(HSE_VERSION_MINOR,HSE_VERSION_MAJOR)
#define TLS_NULL 0xFFFFFFFF
DWORD dwTlsInx;
CHAR * pTitle = "IIS TPCC COM DLL";
CRITICAL_SECTION csDllMain;

// Diagnostic logging settings
BOOL bSetEventLog = TRUE;
BOOL bSetConsole = FALSE;
UINT uSetDiagLevel = DIAG_INFO;

// TMon Interface Settings
INT iTMMaxMsg = 0;

// Term Interface Settings
INT iMaxTerms = 3000;

// Delivery Settings
long lSetDThreads = 8;
long lSetDQSize = DEFAULTDQSIZE;
char szSetPath[200] = "\\inetpub\\wwwroot\\";

static CHAR * szTPCCError =
    HTTPHdr "<HTML>"
    "<HEAD><TITLE>Welcome To TPC-C</TITLE></HEAD><BODY>"
    "<B>TPCC Extension Error (TPCC Array Not Allocated)</B><BR>"
    "</BODY></HTML>";

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

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

//=====
//
// Function name: DllMain

```

```

//
//=====
BOOL APIENTRY DllMain(HANDLE hInst, ULONG ul_reason_for_call,
LPVOID lpReserved)
{
    TPCC_STATE * pTPCC = NULL;
    CHAR szDiag[MAX_DIAG_SZ];
    UINT iTMMaxSz = 0;
    switch(ul_reason_for_call)
    {
        case DLL_PROCESS_ATTACH:
            // Process initialization

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

```

```

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

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

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

```

```

        pTPCC = NULL;
        TlsSetValue(dwTlsInx, pTPCC);
    };
}
finally
{
    LeaveCriticalSection(&csDllMain);
}; // ThreadDetach

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

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

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

```

```

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

HttpHit:

        return(dwRslt);

}; // HttpExtensionProc

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

//=====
//
// Function name: ReadRegistry
//
// Sets global operational parameters from registry if they exist.
// Otherwise, compiled in defaults apply.
//
// Result:
// FALSE Registry entry found
// TRUE Registry entry does not exist
//
//=====
BOOL ReadRegistry(VOID)
{
    HKEY hkTPCC;
    DWORD dwMax;

```

```

    DWORD dwRT;
    INT i;
    CHAR szValue[100];
    if (RegOpenKeyEx(HKEY_LOCAL_MACHINE,"SOFTWARE\\Unisys\\TPCC",0,
        KEY_READ, &hkTPCC) != ERROR_SUCCESS )
        return(TRUE);
    dwMax = sizeof(szValue);
    if (RegQueryValueEx(hkTPCC,"EVENTLOG",0,&dwRT,(BYTE *) &szValue,&dwMax)
        == ERROR_SUCCESS)
    {
        if (abs(atoi(szValue) == 0))
            bSetEventLog = FALSE;
        else
            bSetEventLog = TRUE;
    };
    dwMax = sizeof(szValue);
    if (RegQueryValueEx(hkTPCC,"CONSOLE",0,&dwRT,(BYTE *) &szValue,&dwMax)
        == ERROR_SUCCESS )
    {
        if (abs(atoi(szValue) == 0))
            bSetConsole = FALSE;
        else
            bSetConsole = TRUE;
    };
    dwMax = sizeof(szValue);
    if (RegQueryValueEx(hkTPCC,"DIAGLEVEL",0,&dwRT,(BYTE *)
&szValue,&dwMax)
        == ERROR_SUCCESS )
    {
        i = atoi(szValue);
        if (i < DIAG_FORCE)
            i = DIAG_FORCE;
        else
            if (i > DIAG_INFO)
                i = DIAG_INFO;
        uSetDiagLevel = i;
    };
    dwMax = sizeof(szValue);
    if (RegQueryValueEx(hkTPCC,"MAXTERMS",0,&dwRT,(BYTE *) &szValue,&dwMax)
        == ERROR_SUCCESS )
    {
        iMaxTerms = abs(atoi(szValue));
    };
    dwMax = sizeof(szValue);
    if (RegQueryValueEx(hkTPCC,"DELIVERYTHREADS",0,&dwRT,(BYTE *)
&szValue,&dwMax)
        == ERROR_SUCCESS )
    {
        lSetDThreads = abs(atoi(szValue));
    };
    dwMax = sizeof(szValue);
    if (RegQueryValueEx(hkTPCC,"DQSIZE",0,&dwRT,(BYTE *) &szValue,&dwMax)
        == ERROR_SUCCESS )
    {
        lSetDQSize = abs(atoi(szValue));
    };
    dwMax = sizeof(szValue);
    if (RegQueryValueEx(hkTPCC,"DQPATH",0,&dwRT,(BYTE *) &szValue,&dwMax)
        == ERROR_SUCCESS )
    {
        strcpy(szSetPath,szValue);
    };

```

```
};
RegCloseKey(hkTPCC);
return(FALSE);
}; // ReadRegistry
```

tpcchandler.h

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

typedef struct
{
    LPVOID ConnID;           // Active Connection Id
    SHORT sWid;              // TPCC WareHouse Id
    SHORT sDId;              // TPCC District Id
    INT iSyncId;             // TPCC Sync Id
    INT iTermId;             // TPCC Term Id
    UINT uFormId;            // TPCC Form Id
    INT iStatusId;           // TPCC Status Id
    CHAR ErrTxt[500];        // Error text
    CHAR szWork[200];        // Thread work area
    CHAR szHeader[100];      // HTTP work area
    CHAR * RecvMsg;          // HTML message from ECB
    CHAR SendMsg[MAX_MSG_SZ]; // HTML work area
    TMON_STATE tstMon;       // TMon Interface
} TPCC_STATE;

BOOL TPCCclear(TPCC_STATE * pTPCC);
UINT TPCCHandler(TPCC_STATE * pTPCC);
```

tpcchandler.cpp

```
// tpcchandler.cpp
//
// Copyright Unisys, 1999
//
#include <windows.h>
#include <stdio.h>
#include <stdlib.h>
#include <string.h>

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

// pTPCC->iFormId - TPCC forms enumeration.
#define FORM_NULL 0
#define FORM_LOGON 1
#define FORM_MENU 2
#define FORM_NEWORDER 3
#define FORM_PAYMENT 4
#define FORM_DELIVERY 5
#define FORM_ORDERSTATUS 6
```

```
#define FORM_STOCKLEVEL 7
#define FORM_EXIT 8
#define FORM_MAX 9

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

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

static CHAR * szFormLogin =
    HTTPHdr "<HTML>"
    "<HEAD><TITLE>Welcome To TPC-C</TITLE></HEAD><BODY>"
    "Please Identify your Warehouse and District for this session.<BR>"
    "<FORM ACTION=\"tpcc.dll\" METHOD=\"GET\">"
    "<INPUT TYPE=\"hidden\" NAME=\"STATUSID\" VALUE=\"0\">"
    "<INPUT TYPE=\"hidden\" NAME=\"FORMID\" VALUE=\"1\">"
    "<INPUT TYPE=\"hidden\" NAME=\"TERMINID\" VALUE=\"-2\">"
    "<INPUT TYPE=\"hidden\" NAME=\"SYNCID\" VALUE=\"0\">"
    "Warehouse ID <INPUT NAME=\"w_id\" SIZE=4><BR>"
    "District ID <INPUT NAME=\"d_id\" SIZE=2><BR>"
    "<HR>"
    "<INPUT TYPE=\"submit\" NAME=\"CMD\" VALUE=\"Submit\">"
    "</FORM>";

static CHAR * szMenuList =
    "<INPUT TYPE=\"submit\" NAME=\"CMD\" VALUE=\"..NewOrder..\">"
    "<INPUT TYPE=\"submit\" NAME=\"CMD\" VALUE=\"..Payment..\">"
    "<INPUT TYPE=\"submit\" NAME=\"CMD\" VALUE=\"..Delivery..\">"
    "<INPUT TYPE=\"submit\" NAME=\"CMD\" VALUE=\"..Order-Status..\">"
    "<INPUT TYPE=\"submit\" NAME=\"CMD\" VALUE=\"..Stock-Level..\">"
    "<INPUT TYPE=\"submit\" NAME=\"CMD\" VALUE=\"..Exit..\">";

static CHAR * HTMLTrailer =
    "</BODY></HTML>";

static CHAR * TERMINIDTOKEN = "TERMINID=";
static CHAR * SYNCIDTOKEN = "SYNCID=";
static CHAR * FORMIDTOKEN = "FORMID=";
static CHAR * STATUSIDTOKEN = "STATUSID=";
```



```

static CHAR * CMDTOKEN = "CMD=";
static CHAR * NEWORDER_SERVICE = "NEWORDER";
static CHAR * PAYMENT_SERVICE = "PAYMENT";
static CHAR * ORDERSTATUS_SERVICE = "ORDERSTS";
static CHAR * DELIVERY_SERVICE = "DELIVERY";
static CHAR * STOCKLEVEL_SERVICE = "STOCKLVL";
static CHAR * ZIPPIC = "XXXXX-XXXX";

BOOL ProcessLogin(CHAR * pIn,CHAR * pOut,TPCC_STATE * pTPCC);
BOOL ProcessForm(CHAR * pIn,CHAR * pOut,TPCC_STATE * pTPCC);
BOOL ProcessNewOrder(CHAR * pIn,CHAR * pOut,TPCC_STATE * pTPCC);
BOOL ProcessPayment(CHAR * pIn,CHAR * pOut,TPCC_STATE * pTPCC);
BOOL ProcessDelivery(CHAR * pIn,CHAR * pOut,TPCC_STATE * pTPCC);
BOOL ProcessOrderStatus(CHAR * pIn,CHAR * pOut,TPCC_STATE * pTPCC);
BOOL ProcessStockLevel(CHAR * pIn,CHAR * pOut,TPCC_STATE * pTPCC);
VOID FormatLogin(CHAR * pMsg,CHAR * pAddText);
BOOL GetHidden(CHAR * pMsg,UINT * uFormId,INT * iSyncId,INT * iTermId);
BOOL GetCmd(CHAR * pMsg,CHAR * pWork,UINT uLen);
BOOL GetLongKey(LONG * lRslt,CHAR * pHTML,CHAR * pKey,TPCC_STATE * pTPCC);
BOOL GetIntKey(INT * iRslt,CHAR * pHTML,CHAR * pKey,TPCC_STATE * pTPCC);
BOOL GetShortKey(SHORT * sRslt,CHAR * pHTML,CHAR * pKey,TPCC_STATE * pTPCC);
BOOL GetStringKey(CHAR * szRslt,CHAR * pHTML,CHAR * pKey,TPCC_STATE * pTPCC,UINT uMax);
BOOL GetAmountKey(DOUBLE * dRslt,CHAR * pHTML,CHAR * pKey,TPCC_STATE * pTPCC);
BOOL GetKeyValue(CHAR * pHTML,CHAR * pKey,CHAR * pValue,UINT uMax);
VOID FormatLogin(CHAR * pOut,CHAR * pAddText);
VOID FormatMenu(CHAR * pOut,TPCC_STATE * pTPCC);
VOID FormatNewOrder(CHAR * pOut,TPCC_STATE * pTPCC);
VOID FormatPayment(CHAR * pOut,TPCC_STATE * pTPCC);
VOID FormatDelivery(CHAR * pOut,TPCC_STATE * pTPCC);
VOID FormatOrderStatus(CHAR * pOut,TPCC_STATE * pTPCC);
VOID FormatStockLevel(CHAR * pOut,TPCC_STATE * pTPCC);
INT FormatFormHdr(CHAR * pOut,CHAR * pTitle,TPCC_STATE * pTPCC);
INT FormatRespHdr(CHAR * pOut,CHAR * pTitle,TPCC_STATE * pTPCC);
VOID FormatString(CHAR * pOut,CHAR * pPic,CHAR * pIn);
VOID UtilStrCpy(CHAR * pDest,CHAR * pSrc,INT n);
BOOL CheckNumeric(CHAR * pNum);

//=====
//
// Function name: TPCCclear
//
//=====
BOOL TPCCclear(TPCC_STATE * pTPCC)
{
    pTPCC->ConnID = 0;
    pTPCC->SWID = 0;
    pTPCC->SDID = 0;
    pTPCC->iSyncId = 0;
    pTPCC->iTermId = -2;
    pTPCC->uFormId = FORM_NULL;
    pTPCC->iStatusId = 0;
    strcpy(pTPCC->ErrMsg,"");
    return (FALSE);
}; // TPCCclear

//=====
//
// Function name: TPCCHandler

```

```

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

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

```

```

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

uRslt = TPCCSEND;

HdlrXit:

    return(uRslt);
}; // TPCCHandler

//=====
//
// Function name: ProcessLogin
//
// ProcessLogin extracts WId and DId from the incoming form. Assumes
// log in has not previously completed (sWid == 0 already verified).
//
// Result:
// FALSE - log in successful, sWid and sDId set in pTPCC,
// pOut contains menu.

```

```

// TRUE - log in failed, pOut contains log in form with
// error message.
//
//=====
BOOL ProcessLogin(CHAR * pIn, CHAR * pOut, TPCC_STATE * pTPCC)
{
    SHORT sWid;
    SHORT sDId;
    TERM_STATE * pTerm;

    if (GetShortKey(&sWid, pIn, "w_id", pTPCC))
    {
        FormatLogin(pOut, pTPCC->ErrTxt);
        return(TRUE);
    };
    if (sWid < 1)
    {
        sprintf(pTPCC->ErrTxt, "Warehouse Id (%d) Invalid", sWid);
        pTPCC->iStatusId = ERR_WID_INVALID;
        FormatLogin(pOut, pTPCC->ErrTxt);
        return(TRUE);
    };
    if (GetShortKey(&sDId, pIn, "d_id", pTPCC))
    {
        FormatLogin(pOut, pTPCC->ErrTxt);
        return(TRUE);
    };
    if (sDId < MIN_DId || sDId > MAX_DId)
    {
        sprintf(pTPCC->ErrTxt, "DId Out of Range(%ld,%ld) - %ld",
            MIN_DId, MAX_DId, sDId);
        pTPCC->iStatusId = ERR_DID_INVALID;
        FormatLogin(pOut, pTPCC->ErrTxt);
        return(TRUE);
    };
    pTerm = TermAlloc();
    if (pTerm == NULL)
    {
        sprintf(pTPCC->ErrTxt, "Unable to Allocate Terminal Entry");
        pTPCC->iStatusId = ERR_TERM_ALLOC;
        FormatLogin(pOut, pTPCC->ErrTxt);
        return(TRUE);
    };
    pTerm->ConnID = pTPCC->ConnID;
    pTerm->iSyncId = pTerm->iTermId;
    pTerm->sWid = abs(sWid);
    pTerm->sDId = abs(sDId);
    pTPCC->iTermId = pTerm->iTermId;
    pTPCC->iSyncId = pTerm->iSyncId;
    pTPCC->sWid = pTerm->sWid;
    pTPCC->sDId = pTerm->sDId;
    FormatMenu(pOut, pTPCC);
    return(FALSE);
}; // ProcessLogin

//=====
//
// Function name: ProcessForm
//
// ProcessForm uses pTPCC->uFormId to determine which form input is
// present and ready for processing. Actual processing is done by

```

```

// the form specific routine.
//
// Result:
// FALSE - form processed, pOut contains response.
// TRUE - error processing form input, pOut contains reason.
//
//=====
BOOL ProcessForm(CHAR * pIn, CHAR * pOut, TPCC_STATE * pTPCC)
{
    switch (pTPCC->uFormId)
    {
        case FORM_NEWORDER:
            return(ProcessNewOrder(pIn, pOut, pTPCC));
        case FORM_PAYMENT:
            return(ProcessPayment(pIn, pOut, pTPCC));
        case FORM_DELIVERY:
            return(ProcessDelivery(pIn, pOut, pTPCC));
        case FORM_ORDERSTATUS:
            return(ProcessOrderStatus(pIn, pOut, pTPCC));
        case FORM_STOCKLEVEL:
            return(ProcessStockLevel(pIn, pOut, pTPCC));
        default:
            wsprintf(pTPCC->ErrTxt, "%s (%ld)",
                ERRTXT_FORM_UNKNOWN, pTPCC->uFormId);
            pTPCC->iStatusId = ERR_FORM_UNKNOWN;
            FormatMenu(pOut, pTPCC);
            break;
    }
    return(TRUE);
}; // ProcessForm

//=====
// Function name: ProcessNewOrder
//
// ProcessNewOrder extracts the input data fields from pIn, processes
// the data, and returns a response in pOut.
//
// Result:
// FALSE - NewOrder processed successfully.
// TRUE - NewOrder processing failed.
//
//=====
BOOL ProcessNewOrder(CHAR * pIn, CHAR * pOut, TPCC_STATE * pTPCC)
{
    NEW_ORDER_DATA * pnod;
    TMON_STATE * pTMon;
    CHAR szKey[20];
    CHAR * ptr;
    INT iInx;
    UINT u;
    UINT uLine;
    HRESULT hr;
    int iSize;

    pTMon = &pTPCC->tsTMon;
    pnod = (NEW_ORDER_DATA *) pTMon->pTxnData;
    ZeroMemory(pnod, sizeof(NEW_ORDER_DATA));
    pnod->w_id = pTPCC->sWid;
    if (GetShortKey(&pnod->d_id, pIn, "DID*", pTPCC))
    {

```

```

        FormatMenu(pOut, pTPCC);
        return(TRUE);
    };
    if (pnod->d_id < MIN_Did || pnod->d_id > MAX_Did)
    {
        wsprintf(pTPCC->ErrTxt, "DId Out of Range(%ld,%ld) - %ld",
            MIN_Did, MAX_Did, pnod->d_id);
        pTPCC->iStatusId = ERR_DID_INVALID;
        FormatMenu(pOut, pTPCC);
        return(TRUE);
    };
    if (GetLongKey(&pnod->c_id, pIn, "CID*", pTPCC))
    {
        FormatMenu(pOut, pTPCC);
        return(TRUE);
    };
    pnod->o_ol_cnt = 0;
    ptr = pIn;
    for(u=0, uLine=0; u < MAX_OL; u++)
    {
        wsprintf(szKey, "SP%2.2d*", u);
        ptr = strstr(ptr, szKey);
        if (GetShortKey(&pnod->Ol[uLine].ol_supply_w_id, ptr, szKey, pTPCC))
        {
            FormatMenu(pOut, pTPCC);
            return(TRUE);
        };
        wsprintf(szKey, "IID%2.2d*", u);
        if (GetLongKey(&pnod->Ol[uLine].ol_i_id, ptr, szKey, pTPCC))
        {
            FormatMenu(pOut, pTPCC);
            return(TRUE);
        };
        wsprintf(szKey, "Qty%2.2d*", u);
        if (GetShortKey(&pnod->Ol[uLine].ol_quantity, ptr, szKey, pTPCC))
        {
            FormatMenu(pOut, pTPCC);
            return(TRUE);
        };
        if (pnod->Ol[uLine].ol_i_id != 0)
        {
            if (pnod->Ol[uLine].ol_supply_w_id < 1)
            {
                wsprintf(pTPCC->ErrTxt,
                    "Order Line %ld Contains Invalid WId %d",
                    u + 1, pnod->Ol[uLine].ol_supply_w_id);
                pTPCC->iStatusId = ERR_WID_INVALID;
                FormatMenu(pOut, pTPCC);
                return(TRUE);
            };
            if (pnod->Ol[uLine].ol_quantity < MIN_QUANTITY ||
                pnod->Ol[uLine].ol_quantity > MAX_QUANTITY)
            {
                wsprintf(pTPCC->ErrTxt,
                    "Order Line %ld Contains Invalid Qty %d",
                    u + 1, pnod->Ol[uLine].ol_quantity);
                pTPCC->iStatusId = ERR_QUANTITY_INVALID;
                FormatMenu(pOut, pTPCC);
                return(TRUE);
            };
            uLine++;

```

```

} // if (ol_i_id !=0)
else
{
    if (pnod->Ol[uLine].ol_supply_w_id != 0)
    {
        wsprintf(pTPCC->ErrTxt,
            "Order Line %ld WId Supplied with No Item",u + 1);
        pTPCC->iStatusId = ERR_OL_INVALID;
        FormatMenu(pOut,pTPCC);
        return(TRUE);
    };
    if (pnod->Ol[uLine].ol_quantity != 0)
    {
        wsprintf(pTPCC->ErrTxt,
            "Order Line %ld Qty Supplied with No Item",u + 1);
        pTPCC->iStatusId = ERR_OL_INVALID;
        FormatMenu(pOut,pTPCC);
        return(TRUE);
    };
}; // empty order line
}; // for (u < MAX_OL)
pnod->o_ol_cnt = uLine;
if (pnod->o_ol_cnt < MIN_OL)
{
    wsprintf(pTPCC->ErrTxt,"Too Few Order Lines %d",pnod->o_ol_cnt);
    pTPCC->iStatusId = ERR_OL_COUNT;
    FormatMenu(pOut,pTPCC);
    return(TRUE);
};
iSize = pTMon->iSize;
hr = pTMon->pIAllTxn->NewOrder(&iSize,(unsigned char**) &pTMon-
>pTxnData);
if (FAILED(hr))
{
    pTPCC->iStatusId = ERR_TM_INTERFACE;
    wsprintf(pTPCC->ErrTxt,
        "COM Interface to NewOrder Call Failed, HRESULT %x",
        hr);
    FormatMenu(pOut,pTPCC);
    return(TRUE);
};
pnod = (NEW_ORDER_DATA *) pTMon->pTxnData;
// Exclude invalid item id case
if (pnod->bTPRslt && pnod->iTPRslt < SVC_NOERROR)
{
    wsprintf(pTPCC->ErrTxt,
        "New Order Service Returned Error(%ld): %s",
        pnod->iTPRslt,pnod->execution_status);
    pTPCC->iStatusId = ERR_SERVICE_RSLT;
    FormatMenu(pOut,pTPCC);
    return(TRUE);
};
if (pnod->iTPRslt == SVC_BADITEMID)
    pTPCC->iStatusId = INVALID_IID;

iInx = FormatRespHdr(pOut,"TPC-C New Order",pTPCC);
if (!pnod->bTPRslt)
{
    iInx += wsprintf(pOut + iInx,
        "<PRE>                               New Order<BR>"
        "Warehouse: %4.4d   District: %2.2d   "

```

```

        "Date: %2.2d-%2.2d-%4.4d %2.2d:%2.2d:%2.2d <BR>"
        "Customer:  %4.4d   Name: %-16s   Credit: %-2s   ",
        pnod->w_id,pnod->d_id,
        pnod->o_entry_d.day,pnod->o_entry_d.month,
        pnod->o_entry_d.year,pnod->o_entry_d.hour,
        pnod->o_entry_d.minute,pnod->o_entry_d.second,
        pnod->c_id,pnod->c_last,pnod->c_credit);
    iInx += sprintf(pOut + iInx,
        "%Disc: %5.2f                               <BR>"
        "Order Number: %8.8d   Number of Lines: %2.2d           W_tax: %5.2f
D_tax: %5.2f <BR><BR>"
        "  Supp_W   Item_Id   Item Name                               Qty Stock B/G
Price   Amount<BR>",
        pnod->c_discount * 100,pnod->o_id,pnod->o_ol_cnt,pnod->w_tax *
100,pnod->d_tax * 100);
    for (u = 0; u < (UINT) pnod->o_ol_cnt; u++)
    {
        iInx += sprintf(pOut + iInx,
            "      %4.4d   %6.6d   %-24s   %2.2d   %3.3d   %1.1s   %6.2f
$%7.2f <BR>",
            pnod->Ol[u].ol_supply_w_id,pnod->Ol[u].ol_i_id,
            pnod->Ol[u].ol_i_name,pnod->Ol[u].ol_quantity,pnod-
>Ol[u].ol_stock,
            pnod->Ol[u].ol_brand_generic,pnod->Ol[u].ol_i_price,
            pnod->Ol[u].ol_amount);
    };
    for(; u < MAX_OL; u++)
    {
        strcat(pOut + iInx," <BR>");
        iInx += 5;
    };
    sprintf(pOut + iInx,
        "Execution Status: %24.24s                               Total:  $%8.2f  "
        "</PRE><HR><BR>%s</FORM>%s",
        pnod->execution_status,pnod->total_amount,
        szMenuList,HTMLTrailer);
} // !bTPRslt
else
{
    iInx += wsprintf(pOut + iInx,
        "<PRE>                               New Order<BR>"
        "Warehouse: %4.4d   District: %2.2d
Date:<BR>"
        "Customer:  %4.4d   Name: %-16s   Credit: %-2s   "
        "%Disc:<BR>"
        "Order Number: %8.8d   Number of Lines:           W_tax:
D_tax:<BR><BR>"
        "  Supp_W   Item_Id   Item Name                               Qty Stock B/G
Price   Amount<BR>",
        pnod->w_id,pnod->d_id,
        pnod->c_id,pnod->c_last,pnod->c_credit,
        pnod->o_id);
    for(u = 0; u < MAX_OL; u++)
    {
        strcat(pOut + iInx," <BR>");
        iInx += 5;
    };
    iInx += wsprintf(pOut + iInx,
        "Execution Status: %24.24s                               Total:"
        "</PRE><HR><BR>%s</FORM>%s",
        pnod->execution_status,szMenuList,HTMLTrailer);
}

```

```

};    // bTPRslt

return(FALSE);

};    // ProcessNewOrder

//=====
//
// Function name: ProcessPayment
//
// ProcessPayment extracts the input data fields from pIn, processes
// the data, and returns a response in pOut.
//
// Result:
// FALSE - Payment processed successfully.
// TRUE - Payment processing failed.
//=====
BOOL ProcessPayment (CHAR * pIn, CHAR * pOut, TPCC_STATE * pTPCC)
{
    PAYMENT_DATA * ppd;
    TMON_STATE * pTMon;
    CHAR szWork1[60];
    CHAR szZip1[20];
    CHAR szZip2[20];
    CHAR szZip3[20];
    INT iInx;
    HRESULT hr;
    int iSize;

    pTMon = &pTPCC->tsTMon;
    ppd = (PAYMENT_DATA *) pTMon->pTxnData;
    ZeroMemory(ppd, sizeof(PAYMENT_DATA));
    ppd->w_id = pTPCC->sWid;
    // Get and validate DID
    if (GetShortKey(&ppd->d_id, pIn, "DID*", pTPCC))
    {
        FormatMenu(pOut, pTPCC);
        return(TRUE);
    };
    if (ppd->d_id < MIN_DID || ppd->d_id > MAX_DID)
    {
        wsprintf(pTPCC->ErrTxt, "DID Out of Range(%ld,%ld) - %ld",
            MIN_DID, MAX_DID, ppd->d_id);
        pTPCC->iStatusId = ERR_DID_INVALID;
        FormatMenu(pOut, pTPCC);
        return(TRUE);
    };
    // Get and validate customer Id and name
    if (GetLongKey(&ppd->c_id, pIn, "CID*", pTPCC))
    {
        FormatMenu(pOut, pTPCC);
        return(TRUE);
    };
    if (GetStringKey(ppd->c_last, pIn, "CLT*", pTPCC, NAME_LEN))
    {
        FormatMenu(pOut, pTPCC);
        return(TRUE);
    };
    if (ppd->c_id == 0 && ppd->c_last[0] == 0)
    {

```

```

        strcpy(pTPCC->ErrTxt, "Error - Customer Id and Name Empty");
        pTPCC->iStatusId = ERR_IDANDNAME_EMPTY;
        FormatMenu(pOut, pTPCC);
        return(TRUE);
    };
    if (ppd->c_id != 0 && ppd->c_last[0] != 0)
    {
        strcpy(pTPCC->ErrTxt,
            "Error - Specify Customer Id or Name, not Both");
        pTPCC->iStatusId = ERR_IDANDNAME_ENTERED;
        FormatMenu(pOut, pTPCC);
        return(TRUE);
    };
    // Get and validate customer DID
    if (GetShortKey(&ppd->c_d_id, pIn, "CDI*", pTPCC))
    {
        FormatMenu(pOut, pTPCC);
        return(TRUE);
    };
    if (ppd->c_d_id < MIN_DID || ppd->c_d_id > MAX_DID)
    {
        wsprintf(pTPCC->ErrTxt, "Cust DID Out of Range(%ld,%ld) - %ld",
            MIN_DID, MAX_DID, ppd->c_d_id);
        pTPCC->iStatusId = ERR_DID_INVALID;
        FormatMenu(pOut, pTPCC);
        return(TRUE);
    };
    // Get and validate customer WID
    if (GetShortKey(&ppd->c_w_id, pIn, "CWI*", pTPCC))
    {
        FormatMenu(pOut, pTPCC);
        return(TRUE);
    };
    if (ppd->c_w_id < 1)
    {
        wsprintf(pTPCC->ErrTxt,
            "Payment Contains Invalid Customer WId %d",
            ppd->c_w_id);
        pTPCC->iStatusId = ERR_WID_INVALID;
        FormatMenu(pOut, pTPCC);
        return(TRUE);
    };
    // Get and validate amount
    if (GetAmountKey(&ppd->h_amount, pIn, "HAM*", pTPCC))
    {
        FormatMenu(pOut, pTPCC);
        return(TRUE);
    };
    if (ppd->h_amount <= 0)
    {
        wsprintf(pTPCC->ErrTxt,
            "Payment Amount Negative or Missing");
        pTPCC->iStatusId = ERR_AMOUNT_INVALID;
        FormatMenu(pOut, pTPCC);
        return(TRUE);
    };
    iSize = pTMon->iSize;
    hr = pTMon->pIA1Txn->Payment(&iSize, (unsigned char**) &pTMon-
    >pTxnData);
    if (FAILED(hr))
    {

```

```

pTPCC->iStatusId = ERR_TM_INTERFACE;
wsprintf(pTPCC->ErrTxt,
    "COM Interface to Payment Call Failed, HRESULT %x",
    hr);
FormatMenu(pOut,pTPCC);
return(TRUE);
};
ppd = (PAYMENT_DATA *) pTMon->pTxnData;
if (ppd->bTPRsIt)
{
    wsprintf(pTPCC->ErrTxt,
        "Payment Service Returned Error(%ld): %s",
        ppd->iTPRsIt,ppd->execution_status);
    pTPCC->iStatusId = ERR_SERVICE_RSLT;
    FormatMenu(pOut,pTPCC);
    return(TRUE);
};
iInx = FormatRespHdr(pOut,"TPC-C Payment",pTPCC);
FormatString(szZip1,ZIPPIC,ppd->w_zip);
FormatString(szZip2,ZIPPIC,ppd->d_zip);
FormatString(szZip3,ZIPPIC,ppd->c_zip);
FormatString(szWork1,"XXXXXX-XXX-XXX-XXXX",ppd->c_phone);
iInx += wsprintf(pOut + iInx,
    "<PRE>
    "Date: %2.2d-%2.2d-%4.4d %2.2d:%2.2d:%2.2d <BR><BR>"
    "Warehouse: %4.4d"
    "
    District: %2.2d<BR>"
    "%-20s
    %-20s<BR>"
    "%-20s
    %-20s<BR>"
    "%-20s %-2s %10.10s
    %-20s %-2s %10.10s<BR><BR>"
    "Customer: %4.4d Cust-Warehouse: %4.4d Cust-District: %2.2d<BR>"
    "Name: %-16s %-2s %-16s Since: %2.2d-%2.2d-%4.4d<BR>"
    "
    %-20s
    Credit: %-2s<BR>"
    "
    %-20s
    ",
    ppd->h_date.day,ppd->h_date.month,
    ppd->h_date.year,ppd->h_date.hour,
    ppd->h_date.minute,ppd->h_date.second,
    ppd->w_id,ppd->d_id,
    ppd->w_street_1,ppd->d_street_1,
    ppd->w_street_2,ppd->d_street_2,
    ppd->w_city,ppd->w_state,szZip1,ppd->d_city,ppd->d_state,szZip2,
    ppd->c_id,ppd->c_w_id,ppd->c_d_id,
    ppd->c_first,ppd->c_middle,ppd->c_last,
    ppd->c_since.day,ppd->c_since.month,ppd->c_since.year,
    ppd->c_street_1,ppd->c_credit,ppd->c_street_2);
iInx += sprintf(pOut + iInx,"%%Disc: %5.2f<BR>",ppd->c_discount *
100);
iInx += wsprintf(pOut + iInx,
    "
    %-20s %-2s %10.10s Phone: %-19.19s<BR><BR>",
    ppd->c_city,ppd->c_state,szZip3,szWork1);
iInx += sprintf(pOut + iInx,
    "Amount Paid: $%7.2f New Cust Balance: $%14.2f<BR>"
    "Credit Limit: $%13.2f<BR><BR>",
    ppd->h_amount,ppd->c_balance,ppd->c_credit_lim);
if (ppd->c_credit[0] == 'B' && ppd->c_credit[1] == 'C')
{
    wsprintf(pOut + iInx,
        "Cust-Data: %-50.50s<BR>
        %-50.50s<BR>
        %-50.50s<BR>
        %s</FORM>%s",

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```

        ppd->c_data,(ppd->c_data + 50),(ppd->c_data + 100),(ppd->c_data +
150),
        szMenuList,HTMLTrailer);
    }
    else
    {
        wsprintf(pOut + iInx,
            "Cust-Data: <BR><BR><BR><BR>"
            "</PRE><HR><BR>%s</FORM>%s",
            szMenuList,HTMLTrailer);
    };
    return(FALSE);
}; // ProcessPayment

//=====
//
// Function name: ProcessDelivery
//
// ProcessDelivery extracts the input data fields from pIn, processes
// the data, and returns a response in pOut.
//
// Result:
// FALSE - Delivery processed successfully.
// TRUE - Delivery processing failed.
//=====
BOOL ProcessDelivery(CHAR * pIn,CHAR * pOut,TPCC_STATE * pTPCC)
{
    DELIVERY_DATA * pdd;
    TMON_STATE * pTMon;
    INT iInx;

    pTMon = &pTPCC->tsTMon;
    pdd = (DELIVERY_DATA *) pTMon->pTxnData;
    ZeroMemory(pdd,sizeof(DELIVERY_DATA));
    pdd->w_id = pTPCC->sWId;
    // Get and validate carrier id
    if (GetShortKey(&pdd->o_carrier_id,pIn,"OCD*",pTPCC))
    {
        FormatMenu(pOut,pTPCC);
        return(TRUE);
    };
    if (pdd->o_carrier_id < MIN_CARRIER ||
        pdd->o_carrier_id > MAX_CARRIER)
    {
        wsprintf(pTPCC->ErrTxt,"Carrier Id Out of Range(%ld,%ld) - %ld",
            MIN_CARRIER,MAX_CARRIER,pdd->o_carrier_id);
        pTPCC->iStatusId = ERR_CARRIER_INVALID;
        FormatMenu(pOut,pTPCC);
        return(TRUE);
    };
    GetLocalTime(&pdd->QTime);
    DeliveryPost(pdd);
    if (pdd->bTPRsIt)
    {
        wsprintf(pTPCC->ErrTxt,
            "Delivery Post Returned Error(%ld): Queue Request Failed",
            pdd->iTPRsIt);
        pTPCC->iStatusId = ERR_SERVICE_RSLT;

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```

        FormatMenu(pOut, pTPCC);
        return(TRUE);
    };
    iInx = FormatRespHdr(pOut, "TPC-C Delivery", pTPCC);
    iInx += sprintf(pOut + iInx,
        "<PRE>
        Warehouse: %4.4d<BR><BR>"
        "Carrier Number: %2.2d<BR><BR>"
        "Execution Status: %25.25s<BR>"
        "</PRE><HR><BR>%s</FORM>%s",
        pdd->w_id, pdd->o_carrier_id, "Delivery has been queued.",
        szMenuList, HTMLTrailer);

    return(FALSE);
}; // ProcessDelivery

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

    pTMon = &pTPCC->tsTMon;
    posd = (ORDER_STATUS_DATA *) pTMon->pTxnData;
    ZeroMemory(posd, sizeof(ORDER_STATUS_DATA));
    posd->w_id = pTPCC->sWid;
    if (GetShortKey(&posd->d_id, pIn, "DID*", pTPCC))
    {
        FormatMenu(pOut, pTPCC);
        return(TRUE);
    };
    if (posd->d_id < MIN_DID || posd->d_id > MAX_DID)
    {
        sprintf(pTPCC->ErrTxt, "DID Out of Range(%ld,%ld) - %ld",
            MIN_DID, MAX_DID, posd->d_id);
        pTPCC->iStatusId = ERR_DID_INVALID;
        FormatMenu(pOut, pTPCC);
        return(TRUE);
    };
    if (GetLongKey(&posd->c_id, pIn, "CID*", pTPCC))
    {
        FormatMenu(pOut, pTPCC);
        return(TRUE);
    };
    if (GetStringKey(posd->c_last, pIn, "CLT*", pTPCC, NAME_LEN))

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```

    {
        FormatMenu(pOut, pTPCC);
        return(TRUE);
    };
    if (posd->c_id == 0 && posd->c_last[0] == 0)
    {
        strcpy(pTPCC->ErrTxt, "Error - Customer Id and Name Empty");
        pTPCC->iStatusId = ERR_IDANDNAME_EMPTY;
        FormatMenu(pOut, pTPCC);
        return(TRUE);
    };
    if (posd->c_id != 0 && posd->c_last[0] != 0)
    {
        strcpy(pTPCC->ErrTxt,
            "Error - Specify Customer Id or Name, not Both");
        pTPCC->iStatusId = ERR_IDANDNAME_ENTERED;
        FormatMenu(pOut, pTPCC);
        return(TRUE);
    };
    iSize = pTMon->iSize;
    hr = pTMon->pAllTxn->OrderStatus(&iSize, (unsigned char**) &pTMon-
    >pTxnData);
    if (FAILED(hr))
    {
        pTPCC->iStatusId = ERR_TM_INTERFACE;
        sprintf(pTPCC->ErrTxt,
            "COM Interface to OrderStatus Call Failed, HRESULT %x",
            hr);
        FormatMenu(pOut, pTPCC);
        return(TRUE);
    };
    posd = (ORDER_STATUS_DATA *) pTMon->pTxnData;
    if (posd->bTPRslt)
    {
        sprintf(pTPCC->ErrTxt,
            "Order Status Service Returned Error(%ld): %s",
            posd->iTPRslt, posd->execution_status);
        pTPCC->iStatusId = ERR_SERVICE_RSLT;
        FormatMenu(pOut, pTPCC);
        return(TRUE);
    };
    iInx = FormatRespHdr(pOut, "TPC-C Order-Status", pTPCC);
    iInx += sprintf(pOut + iInx,
        "<PRE>
        Order-Status<BR>"
        "Warehouse: %4.4d District: %2.2d<BR>"
        "Customer: %4.4d Name: %-16s %-2s %-16s<BR>",
        posd->w_id, posd->d_id,
        posd->c_id, posd->c_first, posd->c_middle, posd->c_last);
    iInx += sprintf(pOut + iInx, "Cust-Balance: $%9.2f<BR><BR>", posd-
    >c_balance);
    iInx += sprintf(pOut + iInx,
        "Order-Number: %8.8d Entry-Date: %2.2d-%2.2d-%4.4d
    %2.2d:%2.2d:%2.2d Carrier-Number: %2.2d<BR>"
        "Supply-W Item-Id Qty Amount Delivery-Date<BR>",
        posd->o_id, posd->o_entry_d.day, posd->o_entry_d.month,
        posd->o_entry_d.year, posd->o_entry_d.hour,
        posd->o_entry_d.minute, posd->o_entry_d.second,
        posd->o_carrier_id);
    for(i = 0; i < posd->o_ol_cnt; i++)
    {
        iInx += sprintf(pOut + iInx,

```

```

        " %4.4d      %6.6d      %2.2d      $%8.2f      %2.2d-%2.2d-
%4.4d<BR>",
        posd->OlOrderStatusData[i].ol_supply_w_id,
        posd->OlOrderStatusData[i].ol_i_id,
        posd->OlOrderStatusData[i].ol_quantity,
        posd->OlOrderStatusData[i].ol_amount,
        posd->OlOrderStatusData[i].ol_delivery_d.day,
        posd->OlOrderStatusData[i].ol_delivery_d.month,
        posd->OlOrderStatusData[i].ol_delivery_d.year);
};
wsprintf(pOut + iInx,
        "<BR></PRE><HR><BR>%s</FORM>%s", szMenuList, HTMLTrailer);

return(FALSE);
}; // ProcessOrderStatus

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

    pTMon = &pTPCC->tsTMon;
    psld = (STOCK_LEVEL_DATA *) pTMon->pTxnData;
    ZeroMemory(psld, sizeof(STOCK_LEVEL_DATA));
    psld->w_id = pTPCC->sWId;
    psld->d_id = pTPCC->sDId;
    psld->low_stock = 0;
    psld->execution_status[0] = 0;
    if (GetShortKey(&psld->thresh_hold, pIn, "TT*", pTPCC))
    {
        FormatMenu(pOut, pTPCC);
        return(TRUE);
    };
    if (psld->thresh_hold < MIN_THRESHOLD ||
        psld->thresh_hold > MAX_THRESHOLD)
    {
        wsprintf(pTPCC->ErrTxt, "Threshold Out of Range(%ld,%ld) - %ld",
            MIN_THRESHOLD, MAX_THRESHOLD, psld->thresh_hold);
        pTPCC->iStatusId = ERR_THRESHOLD_RANGE;
        FormatMenu(pOut, pTPCC);
        return(TRUE);
    };
    iSize = pTMon->iSize;
    hr = pTMon->pIAllTxn->StockLevel(&iSize, (unsigned char**) &pTMon-
    >pTxnData);

```

```

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

    return(FALSE);
}; // ProcessStockLevel

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

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

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

    // Extract FORMID
    pPtr = strstr(pMsg, FORMIDTOKEN);
    if (pPtr == NULL)
        goto xit;

```



```

    pPtr += strlen(FORMIDTOKEN);
    *uFormId = abs(atoi(pPtr));

    bRslt = FALSE;

xit:

    return(bRslt);

}; // GetHidden

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

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

    // Convert command name into command index
    for(u=0; u < CMD_MAX; u++)
    {
        if (!strcmp(szCmds[u], pWork))
            return(u);
    };

    // Command string not found
    return(CMD_NULL);

}; // GetCmd

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

```

```

    pTPCC->iStatusId = ERR_NOT_NUMERIC;
    return(TRUE);
};

};
*lRslt = atol(pTPCC->szWork);
return(FALSE);
}; // GetLongKey

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

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

```

```

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

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

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

```

```

                break;
            if (*ptr < '0' || *ptr > '9')
            {
                bInvalid = TRUE;
                break;
            };
            ptr++;
            if (*ptr)
            {
                bInvalid = TRUE;
                break;
            };
            break;
        }
        else
        if (*ptr < '0' || *ptr > '9')
        {
            bInvalid = TRUE;
            break;
        };
        ptr++;
    }; // while(!*ptr)

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

    return(bInvalid);
}; // GetAmountKey

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

```

```

    };
    *pValue = 0;
    return (FALSE);
}; // GetKeyValue

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

//=====
//
// Function name: FormatMenu
//
//=====
VOID FormatMenu (CHAR * pOut, TPCC_STATE * pTPCC)
{
    wsprintf (pOut,
        "%s<HTML><HEAD><TITLE>TPC-C MainMenu</TITLE></HEAD><BODY>"
        "Select Desired Transaction.<BR><HR>"
        "<FORM ACTION=\"tpcc.dll\" METHOD=\"GET\">"
        "<INPUT TYPE=\"hidden\" NAME=\"STATUSID\" VALUE=\"%d\">"
        "<INPUT TYPE=\"hidden\" NAME=\"TERMINID\" VALUE=\"%d\">"
        "<INPUT TYPE=\"hidden\" NAME=\"SYNCID\" VALUE=\"%d\">"
        "<INPUT TYPE=\"hidden\" NAME=\"FORMID\" VALUE=\"%d\">"
        "%s</FORM><BR>%s<BR>%s",
        HTTPHdr, pTPCC->iStatusId, pTPCC->iTermId, pTPCC->iSyncId, FORM_MENU,
        szMenuList, pTPCC->ErrTxt, HTMLTrailer);
}; // FormatMenu

//=====
//
// Function name: FormatNewOrder
//
//=====
VOID FormatNewOrder (CHAR * pOut, TPCC_STATE * pTPCC)
{
    INT iInx;
    pTPCC->uFormId = FORM_NEWORDER;
    iInx = FormatFormHdr (pOut, "TPC-C New Order", pTPCC);
    iInx += wsprintf (pOut + iInx,
        "<PRE>
        Warehouse: %4.4d District: <INPUT NAME=\"DID*\" SIZE=1>
Date:<BR>",
        pTPCC->sWId);
    strcpy (pOut + iInx,
        "Customer: <INPUT NAME=\"CID*\" SIZE=4> Name:
Credit: %Disc:<BR>"
        "Order Number: Number of Lines: W_tax:
D_tax:<BR><BR>"
        " Supp_W Item_Id Item Name Qty Stock B/G Price
Amount<BR>"
        " <INPUT NAME=\"SP00*\" SIZE=4> <INPUT NAME=\"IID00*\" SIZE=6>
<INPUT NAME=\"Qty00*\" SIZE=1><BR>"
        " <INPUT NAME=\"SP01*\" SIZE=4> <INPUT NAME=\"IID01*\" SIZE=6>
<INPUT NAME=\"Qty01*\" SIZE=1><BR>"
    );
}

```

```

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

//=====
//
// Function name: FormatPayment
//
//=====
VOID FormatPayment (CHAR * pOut, TPCC_STATE * pTPCC)
{
    INT iInx;
    pTPCC->uFormId = FORM_PAYMENT;
    iInx = FormatFormHdr (pOut, "TPC-C Payment", pTPCC);
    iInx += wsprintf (pOut + iInx,
        "<PRE>
        Date:<BR><BR>"
        "Warehouse: %4.4d",
        pTPCC->sWId);
    strcpy (pOut + iInx,
        "District: <INPUT NAME=\"DID*\"
SIZE=1><BR><BR><BR><BR><BR>"
        "Customer: <INPUT NAME=\"CID*\" SIZE=4>"
        "Cust-Warehouse: <INPUT NAME=\"CWI*\" SIZE=4> "
        "Cust-District: <INPUT NAME=\"CDI*\" SIZE=1><BR>"
        "Name: <INPUT NAME=\"CLT*\" SIZE=16>
Since:<BR>"
        "Credit:<BR>"
        "Disc:<BR>"
        "Phone:<BR><BR>"
        "Amount Paid: $<INPUT NAME=\"HAM*\" SIZE=7> New Cust
Balance:<BR>"
    );
}

```

```

        "Credit Limit:<BR><BR>Cust-Data: <BR><BR><BR><BR></PRE><HR>"
        "<INPUT TYPE=\"submit\" NAME=\"CMD\" VALUE=\"Process\">"
        "<INPUT TYPE=\"submit\" NAME=\"CMD\" VALUE=\"Menu\">"
        "</FORM></BODY></HTML>";
}; // FormatPayment

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

//=====
//
// Function name: FormatOrderStatus
//
//=====
VOID FormatOrderStatus (CHAR * pOut, TPCC_STATE * pTPCC)
{
    INT iInx;
    pTPCC->uFormId = FORM_ORDERSTATUS;
    iInx = FormatFormHdr (pOut, "TPC-C Order-Status", pTPCC);
    wsprintf (pOut + iInx,
        "<PRE>
        Warehouse: %4.4d "
        "District: <INPUT NAME=\"DID*\" SIZE=1><BR>"
        "Customer: <INPUT NAME=\"CID*\" SIZE=4> Name:
<INPUT NAME=\"CLT*\" SIZE=23><BR>"
        "Cust-Balance:<BR><BR>"
        "Order-Number: Entry-Date: Carrier-
Number:<BR>"
        "Supply-W Item-Id Qty Amount Delivery-
Date<BR></PRE><HR>"
        "<INPUT TYPE=\"submit\" NAME=\"CMD\" VALUE=\"Process\">"
        "<INPUT TYPE=\"submit\" NAME=\"CMD\" VALUE=\"Menu\">"
        "</FORM></BODY></HTML>",
        pTPCC->sWId);
}; // FormatOrderStatus

//=====
//
// Function name: FormatStockLevel
//
//=====
VOID FormatStockLevel (CHAR * pOut, TPCC_STATE * pTPCC)
{

```

```

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

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

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

//=====
//
// Function name: FormatString
//
// Encodes formatted string for HTML transmission.
//
//=====
VOID FormatString (CHAR * pOut, CHAR * pPic, CHAR * pIn)
{

```

```

while(*pPic)
{
    if (*pPic == 'X' )
    {
        if (*pIn)
            *pOut++ = *pIn++;
        else
            *pOut++ = ' ';
    }
    else
        *pOut++ = *pPic;
    pPic++;
};
*pOut = 0;
}; // FormatString

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

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

```

delivery.h

```

// delivery.h
//
// Copyright Unisys, 1999

#define DEFAULTDQSIZE 2000

```

```

bool DeliveryInit(long lSetThreads,long lSetQSize,char * pszPath);
void DeliveryTerm(void);
bool DeliveryPost(DELIVERY_DATA * pdd);

```

delivery.cpp

```

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

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

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

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

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

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

    lDeliveryThreads = lSetThreads;
    lDQSize = lSetQSize;
    if (lDQSize <= 0)
        lDQSize = DEFAULTDQSIZE;
    strcpy(szPath,pszPath);

```

```

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

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

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

        if (hThread == 0)
        {
            wsprintf(szDiag,
                "DoDQStart: Begin Delivery Thread(%d) Failed(%ld)\n",
                i + 1, errno);

```

```

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

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

//=====
//
// Function name: DeliveryPost
//
//=====
bool DeliveryPost(DELIVERY_DATA * pPost)
{

```

```

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

//=====
//
// Function name: DoDelivery
//
//=====
UINT WINAPI DoDelivery(void * Unused)
{
    FILE *fpLog;
    char szLogTitle[300];
    bool bFlush = FALSE;
    DELIVERY_QUEUE * pDQSlot;
    DELIVERY_DATA * pddEntry;
    DELIVERY_DATA * pdd;
    TMON_STATE tsState;
    TMON_STATE * pTMon;
    HRESULT hr;
    int iSize;

```

```

long lMyId;
char szTMErrTxt[500];
char szDiag[MAX_DIAG_SZ];
int iElapsed;
int iInx;
long lDQReport = 0;

lMyId = InterlockedIncrement(&lDeliveryActive);
pTMon = &tsState;
pTMon->pIAllTxn = NULL;
pTMon->pTxnData = NULL;
pTMon->pszErrTxt = szTMErrTxt;
if (TMInit(pTMon))
{
    wsprintf(szDiag,"DoDelivery(%ld): TMInit %s\n",lMyId,szTMErrTxt);
    DiagIoWrite(szDiag,DIAG_ERROR);
    InterlockedDecrement(&lDeliveryActive);
    SetEvent(hDQStart);
    return(1);
};
wsprintf(szLogTitle,"%sdelilog%ld",szPath,lMyId);
fpLog = fopen(szLogTitle,"ab");
if (!fpLog)
{
    wsprintf(szDiag,
        "DoDelivery(%ld): LogFile %s Open Failed (%ld)\n",
        lMyId,szLogTitle,GetLastError());
    DiagIoWrite(szDiag,DIAG_ERROR);
    InterlockedDecrement(&lDeliveryActive);
    SetEvent(hDQStart);
    return(1);
};
wsprintf(szDiag,"DoDelivery(%ld): Initialized\n",lMyId);
DiagIoWrite(szDiag,DIAG_FORCE);
SetEvent(hDQStart);

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

```

```

    LDQNextRead++;
    if (LDQNextRead == LDQSize)
    {
        LDQNextRead = 0;
        LDQReport = LDQNextWrite;
    };
    if (LDQNextRead == LDQNextWrite)
        ResetEvent(hDQRead);
    LeaveCriticalSection(&csDQWrite);
    LeaveCriticalSection(&csDQRead);
    // Process delivery transaction
    iSize = pTMon->iSize;
    hr = pTMon->pIAIAllTxn->Delivery(&iSize, (unsigned char**) &pTMon-
>pTxnData);
    if (FAILED(hr))
    {
        wsprintf(szDiag,
            "DoDelivery(%ld): COM Interface Call Failed HRESULT %x\n",
            lMyId, hr);
        DiagIoWrite(szDiag, DIAG_ERROR);
        break;
    };
    pdd = (DELIVERY_DATA *) pTMon->pTxnData;
    GetLocalTime(&pdd->EndTime);
    iElapsed = 9999999;
    if (!pdd->bTPRsslt)
        CalculateElapsed(&iElapsed, &pdd->QTime, &pdd->EndTime);
    iInx = wsprintf(szDiag,
"%4.4d/%2.2d/%2.2d,%2.2d:%2.2d:%2.2d:%3.3d,%2.2d:%2.2d:%2.2d:%3.3d,"
"%d,%d,%d,%d,%d,%d,%d,%d,%d,%d,%d,%d\r\n",
pdd->EndTime.wYear,pdd->EndTime.wMonth,pdd->EndTime.wDay,
pdd->QTime.wHour,pdd->QTime.wMinute,
pdd->QTime.wSecond,pdd->QTime.wMilliseconds,
pdd->EndTime.wHour,pdd->EndTime.wMinute,
pdd->EndTime.wSecond,pdd->EndTime.wMilliseconds,
iElapsed,pdd->w_id,pdd->o_carrier_id,
pdd->o_id[0],pdd->o_id[1],pdd->o_id[2],pdd->o_id[3],pdd->o_id[4],
pdd->o_id[5],pdd->o_id[6],pdd->o_id[7],pdd->o_id[8],pdd->o_id[9]
);
    fwrite(szDiag,iInx,1,fpLog);
    if (LDQReport)
    {
        wsprintf(szDiag,"DoDelivery(%ld): DQDepth
%ld\n",lMyId,LDQReport);
        DiagIoWrite(szDiag,DIAG_ERROR);
        LDQReport = 0;
    };
}; // while !bDQQuit

if (fpLog)
    fclose(fpLog);
TMDone(pTMon);
InterlockedDecrement(&lDeliveryActive);
wsprintf(szDiag,"DoDelivery(%ld): Shutdown\n",lMyId);
DiagIoWrite(szDiag,DIAG_FORCE);
return(0);
}; // DoDelivery

//=====
//

```

```

// Function name: CalculateElapsed (milliseconds)
//
//=====
void CalculateElapsed(int * pElapsed,LPSYSTEMTIME lpBegin,
                    LPSYSTEMTIME lpEnd)
{
    int tmBegin;
    int tmEnd;
    tmBegin = (lpBegin->wHour * 3600000) + (lpBegin->wMinute * 60000) +
        (lpBegin->wSecond * 1000) + lpBegin->wMilliseconds;
    tmEnd = (lpEnd->wHour * 3600000) + (lpEnd->wMinute * 60000) +
        (lpEnd->wSecond * 1000) + lpEnd->wMilliseconds;
    *pElapsed = tmEnd - tmBegin;
    // Check for day boundry, this will function for 24 hour period but
    // will fail over a 48 hours period.
    if (*pElapsed < 0)
        *pElapsed = *pElapsed + (24 * 60 * 60 * 1000);
    return;
}; // CalculateElapsed

```

term.h

```

// term.h
//
// Copyright Unisys, 1999

#include <sys\timeb.h>

#define TMILLI_TIMEOUT 3600000 // One hour

typedef struct
{
    BOOL bInUse; // In use flag
    INT iTermId; // TermId
    LPVOID ConnID; // Connection Id
    INT iSyncId; // Sync Id
    SHORT sWId; // TPCC Warehouse Id
    SHORT sDId; // TPCC District Id
    struct _timeb tbLastAccess; // Last activity timestamp
} TERM_STATE;

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

```

term.cpp

```

// term.cpp
//
// Copyright Unisys, 1999
//
#include <windows.h>
#include <stdio.h>
#include "diagio.h"
#include "timesupp.h"

```



```

#include "term.h"

TERM_STATE * pTArray;
INT iNextTerm = 0;
INT iMaxTerm = 0;
CRITICAL_SECTION csTerm;

VOID TermMaint (VOID);

//=====
//
// Function name: TermInit
//   Creates and initializes the first TERMINITIAL Tarray entries.
//   Initializes critical section to control access to TArray. Assumes
//   access to function is single threaded, no other threads will start
//   until this function completes and that function is called once
//   (DLL_PROCESS_ATTACH) .
//
// Returns:
//   FALSE Tarray allocated and initialized
//   TRUE  Tarray allocation failure
//
//=====
BOOL TermInit (INT iSetMaxTerm)
{
    INT iTermId;
    CHAR szDiag[MAX_DIAG_SZ];
    if (pTArray != NULL)
    {
        sprintf(szDiag, "TermInit(%ld): TArray Already Initialized\n",
            GetCurrentThreadId());
        DiagIoWrite(szDiag, DIAG_ERROR);
        return(TRUE);
    };
    InitializeCriticalSection(&csTerm);
    iMaxTerm = iSetMaxTerm;
    pTArray = (TERM_STATE *) malloc(sizeof(TERM_STATE) * (iMaxTerm + 1));
    if (pTArray == NULL)
    {
        sprintf(szDiag, "TermInit(%ld): malloc failed (%ld)\n",
            GetCurrentThreadId(), GetLastError());
        DiagIoWrite(szDiag, DIAG_ERROR);
        return(TRUE);
    }
    for (iTermId = 1; iTermId <= iMaxTerm; iTermId++)
        TermFree(iTermId);
    iNextTerm = 1;
    return(FALSE);
}; // TermInit

//=====
//
// Function name: TermTerm
//   Frees TArray and deletes csTerm critical section. Assumes access
//   to function is single threaded and no other threads are actively
//   accessing TArray entries (DLL_PROCESS_DETACH) .
//
//
//=====
VOID TermTerm(VOID)
{
    DeleteCriticalSection(&csTerm);

```

```

    if (pTArray != NULL)
        free(pTArray);
    iNextTerm = 0;
    iMaxTerm = 0;
}; // TermTerm

//=====
//
// Function name: TermAlloc
//   Allocates empty TArray. Uses iNextTerm to start search.
//
// Returns:
//   > 0   Tarray entry index (iTermId)
//   < 0   Empty Tarray entry not available
//
//=====
TERM_STATE * TermAlloc (VOID)
{
    INT iTermId = -1;
    if (pTArray == NULL)
    {
        CHAR szDiag[MAX_DIAG_SZ];
        sprintf(szDiag, "TermAlloc(%ld): Term Array Not Allocated\n",
            GetCurrentThreadId());
        DiagIoWrite(szDiag, DIAG_ERROR);
        return(NULL);
    };
    EnterCriticalSection(&csTerm);
    _try
    {
        while(iNextTerm <= iMaxTerm)
        {
            if (!pTArray[iNextTerm].bInUse)
            {
                pTArray[iNextTerm].bInUse = TRUE;
                _ftime(&pTArray[iNextTerm].tbLastAccess);
                iTermId = iNextTerm;
                iNextTerm++;
                break;
            };
            iNextTerm++;
        }; // while(iNextTerm <= iMaxTerm) (1st Try)
        if (iTermId <= 0)
        {
            // No entry found. Perform maint and try again
            TermMaint();
            iNextTerm = 1;
            while(iNextTerm <= iMaxTerm)
            {
                if (!pTArray[iNextTerm].bInUse)
                {
                    pTArray[iNextTerm].bInUse = TRUE;
                    _ftime(&pTArray[iNextTerm].tbLastAccess);
                    iTermId = iNextTerm;
                    iNextTerm++;
                    break;
                };
                iNextTerm++;
            }; // while(iNextTerm <= iMaxTerm) (2nd Try)
        }; // if (iTermId <= 0)
        if (iTermId <= 0)

```

```

        iNextTerm = 1;
    }
    finally
    {
        LeaveCriticalSection(&csTerm);
    };

    if (iTermId > 0)
        return(&pTArray[iTermId]);
    else
        return(NULL);

}; // TermAlloc

//=====
//
// Function name: TermMaint
// Clears entries whose last access time exceeds TMILLI_TIMEOUT.
// Assumes caller has entered csTerm.
//
//=====
VOID TermMaint (VOID)
{
    INT iTermId;
    TMILLI tmElapsed;
    // Free entries that have timed out
    for (iTermId = 1; iTermId <= iMaxTerm; iTermId++)
    {
        if (pTArray[iTermId].bInUse)
        {
            tmElapsed = TimebElapsed(&pTArray[iTermId].tbLastAccess);
            if (tmElapsed > TMILLI_TIMEOUT)
                TermFree(iTermId);
        }
    };
}; // TermMaint

//=====
//
// Function name: TermGet
// Returns pointer to TArray slot at iTermId.
//
// Returns:
// FALSE TArray entry made available
// TRUE iTermId invalid.
//
//=====
TERM_STATE * TermGet (INT iTermId)
{
    TERM_STATE * pTerm;
    TMILLI tmElapsed;
    if (iTermId <= 0 || iTermId > iMaxTerm)
    {
        CHAR szDiag[MAX_DIAG_SZ];
        wsprintf(szDiag, "TermGet(%ld): Invalid TermId (%ld)\n",
            GetCurrentThreadId(), iTermId);
        DiagIoWrite(szDiag, DIAG_ERROR);
        return(NULL);
    };
    pTerm = &pTArray[iTermId];

```

```

    if (!pTerm->bInUse)
        return(NULL);
    tmElapsed = TimebElapsed(&pTerm->tbLastAccess);
    if (tmElapsed > TMILLI_TIMEOUT)
        return(NULL); // Entry destined to be freed by maint
    _ftime(&pTArray[iTermId].tbLastAccess);
    return(&pTArray[iTermId]);
}; // TermGet

//=====
//
// Function name: TermFree
// Initializes contents of TArray slot at iTermId.
//
// Returns:
// FALSE TArray entry made available
// TRUE iTermId invalid.
//
//=====
BOOL TermFree (INT iTermId)
{
    TERM_STATE * pTerm;
    if (iTermId <= 0 || iTermId > iMaxTerm)
    {
        CHAR szDiag[MAX_DIAG_SZ];
        wsprintf(szDiag, "TermFree(%ld): Invalid TermId (%ld)\n",
            GetCurrentThreadId(), iTermId);
        DiagIoWrite(szDiag, DIAG_ERROR);
        return(TRUE);
    };
    pTerm = &pTArray[iTermId];
    pTerm->ConnID = 0;
    pTerm->SWId = 0;
    pTerm->SDId = 0;
    pTerm->iSyncId = 0;
    pTerm->iTermId = iTermId;
    TimebClear(&pTerm->tbLastAccess);
    pTerm->bInUse = FALSE;
    return(FALSE);
}; // TermFree

tmon.h

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

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

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

VOID TMonInit (INT iSetMaxMsg);
VOID TMonTerm (VOID);

```

```

BOOL TMonInit(TMON_STATE * pTMon);
VOID TMDone(TMON_STATE * pTMon);

```

tmon.cpp

```

// tmon.cpp
//
// Copyright Unisys, 1999
//

// needed for CoInitializeEx
#define _WIN32_WINNT 0x0400

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

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

#include "tmon.h"

INT iTMaxSz;

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

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

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

    pTMon->pIAllTxn = NULL;
    pTMon->pTxnData = NULL;

```

```

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

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

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

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

```

timesupp.h

```

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

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

```

```

#define TIMEBSEED_MOD 10000
#define TIMEBSEED_SHIFT 1000
#define TIMEB_STRING_SZ 23
#define TIMEB_STRING_DATESZ 10
#define TIMEB_STRING_TIMEOFFSET 11
#define TIMEB_STRING_TIMESZ 12

typedef ULONG TMILLI;

TMILLI TimebDiff(struct _timeb * p_tb1, struct _timeb * p_tb2);
VOID TimebCopy(struct _timeb * p_tbDest, struct _timeb * p_tbSource);
TMILLI TimebElapsed(struct _timeb * p_tb1);
VOID TimebClear(struct _timeb * p_tb1);
CHAR * TimebToString(struct _timeb * p_tb1, CHAR * psz, BOOL bMillis);
BOOL TimebFromString(struct _timeb * p_tb1, CHAR * psz);
VOID TimebAddSecs(struct _timeb * p_tb1, INT iSeconds);
ULONG TimebSeed(VOID);

```

timesupp.cpp

```

// timesupp.cpp
//
// Copyright Unisys, 1999
//

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

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

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

```

```

}; // TimebDiff

//=====
//
// Function name: TimebElapsed
//
//=====
TMILLI TimebElapsed(struct _timeb * p_tb1)
{
    struct _timeb _tb2;
    _ftime(&_tb2);
    return (TimebDiff(p_tb1, &_tb2));
}; // TimebElapsed

//=====
//
// Function name: TimebClear
//
//=====
VOID TimebClear(struct _timeb * p_tb1)
{
    p_tb1->time = 0;
    p_tb1->millitm = 0;
}; // TimebClear

//=====
//
// Function name: TimebToString
// Converts timeb to yyyy:mm:dd,hh:mm:ss.sss format
//
//=====
CHAR * TimebToString(struct _timeb * p_tb1, CHAR * psz, BOOL bMillis)
{
    struct tm * ptm;
    int iInx;
    ptm = localtime(&p_tb1->time);
    iInx = wsprintf(psz, "%4.4d/%2.2d/%2.2d,%2.2d:%2.2d:%2.2d",
        ptm->tm_year + 1900, ptm->tm_mon + 1, ptm->tm_mday,
        ptm->tm_hour, ptm->tm_min, ptm->tm_sec);
    if (bMillis)
        wsprintf(psz + iInx, ".%3.3d", p_tb1->millitm);
    return(psz);
}; // TimebToString

//=====
//
// Function name: TimebFromString
// Converts yyyy:mm:dd,hh:mm:ss.sss (TimebToString) format to timeb
//
//=====
BOOL TimebFromString(struct _timeb * p_tb1, CHAR * psz)
{
    struct tm tmTime;
    struct tm * ptm;
    UINT uLen;

    ptm = &tmTime;
    uLen = strlen(psz);
};

```

```

if (uLen < (TIMEB_STRING_SZ - 4))    // millis are optional
{
    p_tbl->time = 0;
    p_tbl->millitm = 0;
    return (TRUE);
};
// Clear fields that won't be set
ptm->tm_wday = 0;
ptm->tm_yday = 0;
ptm->tm_isdst = -1;
// Set tm struct fields from string
ptm->tm_year = (atoi(psz)) - 1900;
psz += 5;
ptm->tm_mon = (atoi(psz)) - 1;
psz += 3;
ptm->tm_mday = atoi(psz);
psz += 3;
ptm->tm_hour = atoi(psz);
psz += 3;
ptm->tm_min = atoi(psz);
psz += 3;
ptm->tm_sec = atoi(psz);
if (uLen >= TIMEB_STRING_SZ)    // Millis present
{
    psz += 3;
    p_tbl->millitm = atoi(psz);
};
};    // TimebFromString

//=====
//
// Function name: TimebAddSecs
//
//=====
VOID TimebAddSecs(struct _timeb * p_tbl,INT iSeconds)
{
    p_tbl->time += iSeconds;
};    // TimebAddSecs

//=====
//
// Function name: TimebSeed
//
//=====
ULONG TimebSeed(VOID)
{
    ULONG ulSeed;
    struct _timeb tb_1;
    _ftime(&tb_1);
    ulSeed = ((tb_1.time % TIMEBSEED_MOD) * TIMEBSEED_SHIFT) +
tb_1.millitm;
    return(ulSeed);
};    // TimebSeed

```

diagio.h

// diagio.h

```

//
// Copyright Unisys, 1999

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

#define DIAGNOSTICS TRUE
#define MAX_DIAG_SZ 2000

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

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

```

diagio.cpp

```

// diagio.cpp
//
// Copyright Unisys, 1999
//
#include <windows.h>
#include <stdio.h>
#include "diagio.h"

CRITICAL_SECTION csDiagIo;
HANDLE hEventLog = NULL;
UINT uDiagLevel;
BOOL bEventLog;
BOOL bConsoleLog;
CHAR * pDiagHdr;
CHAR * pEventHost;
CHAR * pErrHdr =
    {"*** ERROR *** ERROR *** ERROR *** ERROR *** ERROR ***"};

INT WriteEventLog(CHAR * pDMsgs[],UINT uMsgCnt,UINT uSeverity);

//=====
//
// Function name: DiagIoInit
//
//=====
VOID DiagIoInit(CHAR * pDiagId,BOOL bConsole,BOOL bEvent,UINT uLevel)
{
    if (DIAGNOSTICS)
    {
        InitializeCriticalSection(&csDiagIo);

        uDiagLevel = uLevel;
        bEventLog = bEvent;
        bConsoleLog = bConsole;
        pEventHost = (CHAR *) malloc(10);
        strcpy(pEventHost,"");    // local host
        pDiagHdr = (CHAR *) malloc(strlen(pDiagId) + 1);
    }
}

```

```

strcpy(pDiagHdr,pDiagId);
if (bEventLog)
{
    hEventLog = RegisterEventSource(pEventHost,pDiagId);
    if (hEventLog == NULL)
    {
        bEventLog = FALSE;
        if (bConsoleLog)
            fprintf(stdout,
                "%s: Event Log Register Failed (%ld)\n"
                "Event Log Will NOT be Used\n",
                pDiagHdr,GetLastError());
    }
    else
    {
        if (bConsoleLog)
            fprintf(stdout,"%s: Event Logging to LocalHost as %s\n",
                pDiagHdr,pDiagHdr);
    }
}; // if bEventLog
}; // if Diagnostics
}; // DiagIoInit

//=====
//
// Function name: DiagIoTerm
//
//=====
VOID DiagIoTerm(VOID)
{
    if (DIAGNOSTICS)
    {
        DeleteCriticalSection(&csDiagIo);
        if (hEventLog != NULL)
            DeregisterEventSource(hEventLog);
        free(pDiagHdr);
        free(pEventHost);
    }
}; // DiagIoTerm

//=====
//
// Function name: DiagIoWrite
//
//=====
VOID DiagIoWrite(CHAR * pDiagBuffer, UINT uSeverity)
{
    CHAR * pDMsgs[3];
    UINT uMsgCnt = 0;
    INT iERslt = 0;
    if (DIAGNOSTICS)
    {
        if (uDiagLevel >= uSeverity)
        {
            EnterCriticalSection(&csDiagIo);
            try
            {
                if (uSeverity == DIAG_ERROR)
                {
                    pDMsgs[0] = pDiagHdr;

```

```

                    pDMsgs[1] = pErrHdr;
                    pDMsgs[2] = pDiagBuffer;
                    uMsgCnt = 3;
                }
            }
            else
            {
                pDMsgs[0] = pDiagHdr;
                pDMsgs[1] = pDiagBuffer;
                uMsgCnt = 2;
            }
        };
        if (bEventLog)
            iERslt = WriteEventLog(pDMsgs,uMsgCnt,uSeverity);
        if (bConsoleLog)
        {
            if (uMsgCnt == 3)
                fprintf(stdout,"\n%s:
%s\n%s",pDMsgs[0],pDMsgs[1],pDMsgs[2]);
            else
                fprintf(stdout,"\n%s: %s",pDMsgs[0],pDMsgs[1]);
            if (iERslt != 0)
                fprintf(stdout,
                    "EventLog Write Failed (%ld), No Longer in Use\n",
                    iERslt);
        }
    };
}
finally
{
    LeaveCriticalSection(&csDiagIo);
};
}; // if uDiagLevel >= uSeverity
}; // if Diagnostics
}; // DiagIoWrite

INT WriteEventLog(CHAR * pDMsgs[],UINT uMsgCnt,UINT uSeverity)
{
    WORD wType;
    WORD wCount;
    wCount = uMsgCnt;
    switch (uSeverity)
    {
        case DIAG_ERROR:
            wType = EVENTLOG_ERROR_TYPE;
            break;
        default:
            wType = EVENTLOG_INFORMATION_TYPE;
            break;
    };
    if (wType != 0)
    {
        if (!ReportEvent(hEventLog,
            wType,
            0,
            uSeverity,
            NULL,
            wCount,
            0,
            (LPCTSTR *) pDMsgs,
            NULL))
        {
            DeregisterEventSource(hEventLog);
            hEventLog = NULL;

```

```

        bEventLog = FALSE;
        return(GetLastError());
    }; // ReportEvent failed
}; // if wType != 0
return(0);
}; // WriteEventLog

```

tpccproxy.def

```

LIBRARY      "tpcc_com_ps"

DESCRIPTION  'Proxy/Stub DLL'

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

```

tpccproxy.idl

```

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

// Forward declare all types defined
//interface ITPCC;
import "oaidl.idl";
import "ocidl.idl";

[
    object,
    uuid(FEEE6AA2-84B1-11d2-BA47-00C04FBFE08B),
    helpstring("ITPCC Interface"),
    pointer_default(unique)
]
interface ITPCC : IUnknown
{

    HRESULT _stdcall NewOrder
    (
        [in, out] int * iSize,
        [in, out, size_is(*iSize)] char ** pTData
    );

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

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

```

```

    );

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

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

    HRESULT _stdcall CallSetComplete
    (
    );

}; // interface ITPCC

```

tpccsvr.def

; tpccsvr.def : Declares the module parameters.

```

LIBRARY      "tpcc_com_all.dll"

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

```

tpccsvr.idl

```

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

interface TPCC;

import "oaidl.idl";
import "ocidl.idl";
import "..\tpccproxy\tpccproxy.idl";

[
    uuid(122A3117-2520-11D3-BA71-00C04FBFE08B),
    version(1.0),
    helpstring("TPC-C 1.0 Type Library")
]
library TPCCLib
{
    importlib("stdole32.tlb");
    importlib("stdole2.tlb");

    [
        uuid(122A3128-2520-11D3-BA71-00C04FBFE08B),

```

```

        helpstring("All Txns Class")
    }
coclass TPCC
{
    [default] interface ITPCC;
};
};

```

tpccsvr.h

```

// tpccsvr.h
//
// Copyright Unisys, 1999

class CTPCC_Common :
public ITPCC,
public IObjectControl,
public IObjectConstruct,
public CComObjectRootEx<CComSingleThreadModel>
{
public:
    BEGIN_COM_MAP(CTPCC_Common)
        COM_INTERFACE_ENTRY(ITPCC)
        COM_INTERFACE_ENTRY(IObjectControl)
        COM_INTERFACE_ENTRY(IObjectConstruct)
    END_COM_MAP()

    CTPCC_Common();
    ~CTPCC_Common();

    // ITPCC
public:
    HRESULT __stdcall NewOrder(int * iSize, UCHAR ** pTData);
    HRESULT __stdcall Payment(int * iSize, UCHAR ** pTData);
    HRESULT __stdcall Delivery(int * iSize, UCHAR ** pTData);
    HRESULT __stdcall StockLevel(int * iSize, UCHAR ** pTData);
    HRESULT __stdcall OrderStatus(int * iSize, UCHAR ** pTData);
    HRESULT __stdcall CallSetComplete();

    // IObjectControl
    STDMETHODCALLTYPE CanBePooled() {return m_bCanBePooled;}
    STDMETHODCALLTYPE Activate() {return S_OK;} // no transactions enlistment
    STDMETHODCALLTYPE Deactivate() {}

    // IObjectConstruct
    STDMETHODCALLTYPE Construct(IDispatch * pUnk);

    // state
private:
    bool m_bCanBePooled;
    long m_lRefId;
    int m_iMaxRetry;
    int m_iTryCount;
    bool m_bTPRslt;
    int m_iTPRslt;
    union
    {
        NEW_ORDER_DATA NOData;
    }
};

```

```

    PAYMENT_DATA PYData;
    DELIVERY_DATA DLData;
    ORDER_STATUS_DATA OSData;
    STOCK_LEVEL_DATA SLData;
} m_TData;
SQLHDBC m_hdbc;
SQLHSTMT m_hstmt;
SQLHSTMT m_hstmtNewOrder;
SQLHSTMT m_hstmtPayment;
SQLHSTMT m_hstmtDelivery;
SQLHSTMT m_hstmtOrderStatus;
SQLHSTMT m_hstmtStockLevel;
SQLHDESC m_descNewOrderCols1;
SQLHDESC m_descNewOrderCols2;
SQLHDESC m_descOrderStatusCols1;
SQLHDESC m_descOrderStatusCols2;
SQLUIINTEGER m_BindOffset;
SQLUIINTEGER m_RowsFetched;
int m_no_commit_flag;

bool InitNOParams(void);
bool InitPYParams(void);
bool InitDLParams(void);
bool InitOSParams(void);
bool InitSLParams(void);
bool CheckDBError(char * pSource);

```

```

}; // Class CTPCC_Common

class CTPCC :
public CTPCC_Common,
public CComCoClass<CTPCC, &CLSID_TPCC>
{
public:
    DECLARE_REGISTRY_RESOURCEID(IDR_TPCC)

    BEGIN_COM_MAP(CTPCC)
        COM_INTERFACE_ENTRY2(IUnknown, CComObjectRootEx)
        COM_INTERFACE_ENTRY_CHAIN(CTPCC_Common)
    END_COM_MAP()
}; // Class CTPCC

```

tpccsvr.cpp

```

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

#define STRICT
#define _WIN32_WINNT 0x0400
#define _ATL_APARTMENT_THREADED

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

```



```

extern CComModule _Module;

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

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

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

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

CComModule _Module;

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

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

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

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

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

extern "C"
BOOL WINAPI DllMain(HINSTANCE hInst, ULONG ul_reason_for_call, LPVOID lpReserved)
{
    char szDiag[300];
    DWORD dwCNSize = MAX_COMPUTERNAME_LENGTH;
    try
    {
        switch(ul_reason_for_call)
        {
            case DLL_PROCESS_ATTACH:
                _Module.Init(ObjectMap, hInst);

```

```

                DisableThreadLibraryCalls(hInst);
                if (ReadRegistry())
                {
                    WriteEventLog("DllMain: Registry Key Not Present\n", TRUE);
                    return (FALSE);
                };
                GetComputerName(szMyHost, &dwCNSize);
                szMyHost[dwCNSize] = 0;
                if (SQLAllocHandleStd(SQL_HANDLE_ENV, SQL_NULL_HANDLE, &henv) !=
SQL_SUCCESS)
                {
                    wsprintf(szDiag, "DllMain(%s): Allocate Environment
Failed\n"
                        "ServerName=%s,DB=%s,User=%s,PW=%s,Retries=%d\n",
                            VERSIONINFO, szServer, szDatabase, szUser, szPassword, iDeadlockRetry);
                    WriteEventLog(szDiag, FALSE);
                    return FALSE;
                };
                wsprintf(szDiag, "DllMain(%s): Initialization Complete\n"
                    "ServerName=%s,DB=%s,User=%s,PW=%s,Retries=%d\n",
                        VERSIONINFO, szServer, szDatabase, szUser, szPassword, iDeadlockRetry);
                WriteEventLog(szDiag, FALSE);
                break;

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

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

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

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

```

```

};

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

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

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

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

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

```

```

ReleaseInterface(pObjectContext);
return hr;
};

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

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

    try
    {
        if (SQLAllocHandle(SQL_HANDLE_DBC, henv, &m_hdbc) != SQL_SUCCESS)
        {
            wsprintf(szDiag, "Construct(%ld): Allocate DBC Handle
failed\n", m_lRefId);
            CheckDBError(szDiag);
            return (E_FAIL);
        };
        if (SQLSetConnectOption(m_hdbc, SQL_PACKET_SIZE, 4096) != SQL_SUCCESS)
        {
            wsprintf(szDiag,
            "Construct(%ld): Set Connection Packet Size failed\n",
            m_lRefId);
        };
    }
    catch (...)
    {
        wsprintf(szDiag, "Construct(%ld): Exception occurred\n", m_lRefId);
        CheckDBError(szDiag);
        return (E_FAIL);
    }
};

```

```

        CheckDBError(szDiag);
        return(E_FAIL);
    };
    wsprintf(szConnectStr,
        "DRIVER=SQL Server;SERVER=%s;UID=%s;PWD=%s;DATABASE=%s;WSID=%s-
%ld",
        szServer, szUser, szPassword, szDatabase, szMyHost, m_lRefId);
    rc = SQLDriverConnect(m_hdbc, NULL, (SQLCHAR *) szConnectStr,
        sizeof(szConnectStr), (SQLCHAR *) szOutStr, sizeof(szOutStr),
        &iOutStrLen, SQL_DRIVER_NOPROMPT);
    if (rc != SQL_SUCCESS && rc != SQL_SUCCESS_WITH_INFO)
    {
        wsprintf(szDiag, "Construct(%ld): Connect failed\n", m_lRefId);
        CheckDBError(szDiag);
        return(E_FAIL);
    };
    if (SQLAllocHandle(SQL_HANDLE_STMT, m_hdbc, &m_hstmt) != SQL_SUCCESS)
    {
        wsprintf(szDiag, "Construct(%ld): Allocate STMT Handle
failed\n", m_lRefId);
        CheckDBError(szDiag);
        return(E_FAIL);
    };

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

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

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

//=====
// FUNCTION: UtilStrCpy

```

```

//
// Copies n characters from string pSrc to pDst and places a null
// null character at the end of the destination string. Unlike
// strncpy this function ensures that the result string is always
// null terminated.
//
//=====
inline static void UtilStrCpy(char * pDest, const unsigned char * pSrc,
int n)
{
    strncpy(pDest, (char *)pSrc, n);
    pDest[n] = '\0';
    return;
}; // UtilStrCpy

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

    m_hstmt = m_hstmtNewOrder;

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

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

```

```

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

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

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

    i = 0;
    if (SQLBindCol(m_hstmt, ++i, SQL_C_CHAR, &m_TData.NOData.Ol[0].ol_i_name,
        sizeof(m_TData.NOData.Ol[0].ol_i_name), NULL) != SQL_SUCCESS
        ||
        SQLBindCol(m_hstmt, ++i, SQL_C_SSHORT, &m_TData.NOData.Ol[0].ol_stock,
        0, NULL) != SQL_SUCCESS
        ||
        SQLBindCol(m_hstmt, ++i, SQL_C_CHAR, &m_TData.NOData.Ol[0].ol_brand_generic,
        sizeof(m_TData.NOData.Ol[0].ol_brand_generic), NULL) !=
        SQL_SUCCESS
        ||
        SQLBindCol(m_hstmt, ++i, SQL_C_DOUBLE, &m_TData.NOData.Ol[0].ol_i_price,
        0, NULL) != SQL_SUCCESS
        ||
        SQLBindCol(m_hstmt, ++i, SQL_C_DOUBLE, &m_TData.NOData.Ol[0].ol_amount,
        0, NULL) != SQL_SUCCESS
    )
    {
        wsprintf(szDiag, "InitNOParams(%ld): Bind Col Ol
        failed\n", m_lRefId);
        CheckDBError(szDiag);
        return(TRUE);
    };

```

```

    };

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

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

    return(FALSE);
}; // InitNOParams

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

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

    int i;

    pnod = (NEW_ORDER_DATA *) *pTData;
    try
    {
        m_hstmt = m_hstmtNewOrder;
        m_bTPRslt = TRUE;
        m_iTPRslt = SVCERR_DEADLOCK;
        // associate the parameter and column bindings for this transaction
        if (SQLSetStmtAttrW(m_hstmt, SQL_ATTR_APP_ROW_DESC,
            m_descNewOrderCols1, SQL_IS_POINTER) != SQL_SUCCESS)

```

```

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

```

```

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

```

```

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

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

}; // NewOrder

bool CTPCC_Common::InitPYParams(void)
{
    int i;
    char szDiag[300];
    if (SQLAllocHandle(SQL_HANDLE_STMT, m_hdbc, &m_hstmtPayment) !=
SQL_SUCCESS)
    {
        wsprintf(szDiag, "InitPYParams(%ld): Allocate Stmt Handle
failed\n", m_lRefId);
        CheckDBError(szDiag);
        return(TRUE);
    };
    m_hstmt = m_hstmtPayment;
    i = 0;
    if
(SQLBindParameter(m_hstmt, ++i, SQL_PARAM_INPUT, SQL_C_SSHORT, SQL_SMALLINT,
0, 0, &m_TData.PYData.w_id, 0, NULL) != SQL_SUCCESS
    ||
SQLBindParameter(m_hstmt, ++i, SQL_PARAM_INPUT, SQL_C_SSHORT, SQL_SMALLINT,
0, 0, &m_TData.PYData.c_w_id, 0, NULL) != SQL_SUCCESS
    ||
SQLBindParameter(m_hstmt, ++i, SQL_PARAM_INPUT, SQL_C_DOUBLE, SQL_NUMERIC,
6, 2, &m_TData.PYData.h_amount, 0, NULL) != SQL_SUCCESS
    ||
SQLBindParameter(m_hstmt, ++i, SQL_PARAM_INPUT, SQL_C_UTINYINT, SQL_TINYINT,
0, 0, &m_TData.PYData.d_id, 0, NULL) != SQL_SUCCESS
    ||
SQLBindParameter(m_hstmt, ++i, SQL_PARAM_INPUT, SQL_C_UTINYINT, SQL_TINYINT,
0, 0, &m_TData.PYData.c_d_id, 0, NULL) != SQL_SUCCESS
    ||
SQLBindParameter(m_hstmt, ++i, SQL_PARAM_INPUT, SQL_C_SLONG, SQL_INTEGER,
0, 0, &m_TData.PYData.c_id, 0, NULL) != SQL_SUCCESS
    || SQLBindParameter(m_hstmt, ++i, SQL_PARAM_INPUT, SQL_C_CHAR, SQL_CHAR,
sizeof(m_TData.PYData.c_last), 0, &m_TData.PYData.c_last,
sizeof(m_TData.PYData.c_last), NULL) != SQL_SUCCESS

```

```

)
{
    wsprintf(szDiag, "InitPYParams(%ld): Bind Param
failed\n", m_lRefId);
    CheckDBError(szDiag);
    return(TRUE);
};
i = 0;
if (SQLBindCol(m_hstmt, ++i, SQL_C_SLONG, &m_TData.PYData.
c_id, 0, NULL) != SQL_SUCCESS
    || SQLBindCol(m_hstmt, ++i, SQL_C_CHAR, &m_TData.PYData.c_last,
sizeof(m_TData.PYData.c_last), NULL) != SQL_SUCCESS
    ||
SQLBindCol(m_hstmt, ++i, SQL_C_TYPE_TIMESTAMP, &m_TData.PYData.h_date,
0, NULL) != SQL_SUCCESS
    || SQLBindCol(m_hstmt, ++i, SQL_C_CHAR, &m_TData.PYData.w_street_1,
sizeof(m_TData.PYData.w_street_1), NULL) != SQL_SUCCESS
    || SQLBindCol(m_hstmt, ++i, SQL_C_CHAR, &m_TData.PYData.w_street_2,
sizeof(m_TData.PYData.w_street_2), NULL) != SQL_SUCCESS
    || SQLBindCol(m_hstmt, ++i, SQL_C_CHAR, &m_TData.PYData.w_city,
sizeof(m_TData.PYData.w_city), NULL) != SQL_SUCCESS
    || SQLBindCol(m_hstmt, ++i, SQL_C_CHAR, &m_TData.PYData.w_state,
sizeof(m_TData.PYData.w_state), NULL) != SQL_SUCCESS
    || SQLBindCol(m_hstmt, ++i, SQL_C_CHAR, &m_TData.PYData.w_zip,
sizeof(m_TData.PYData.w_zip), NULL) != SQL_SUCCESS
    || SQLBindCol(m_hstmt, ++i, SQL_C_CHAR, &m_TData.PYData.d_street_1,
sizeof(m_TData.PYData.d_street_1), NULL) != SQL_SUCCESS
    || SQLBindCol(m_hstmt, ++i, SQL_C_CHAR, &m_TData.PYData.d_street_2,
sizeof(m_TData.PYData.d_street_2), NULL) != SQL_SUCCESS
    || SQLBindCol(m_hstmt, ++i, SQL_C_CHAR, &m_TData.PYData.d_city,
sizeof(m_TData.PYData.d_city), NULL) != SQL_SUCCESS
    || SQLBindCol(m_hstmt, ++i, SQL_C_CHAR, &m_TData.PYData.d_state,
sizeof(m_TData.PYData.d_state), NULL) != SQL_SUCCESS
    || SQLBindCol(m_hstmt, ++i, SQL_C_CHAR, &m_TData.PYData.d_zip,
sizeof(m_TData.PYData.d_zip), NULL) != SQL_SUCCESS
    || SQLBindCol(m_hstmt, ++i, SQL_C_CHAR, &m_TData.PYData.c_first,
sizeof(m_TData.PYData.c_first), NULL) != SQL_SUCCESS
    || SQLBindCol(m_hstmt, ++i, SQL_C_CHAR, &m_TData.PYData.c_middle,
sizeof(m_TData.PYData.c_middle), NULL) != SQL_SUCCESS
    || SQLBindCol(m_hstmt, ++i, SQL_C_CHAR, &m_TData.PYData.c_street_1,
sizeof(m_TData.PYData.c_street_1), NULL) != SQL_SUCCESS
    || SQLBindCol(m_hstmt, ++i, SQL_C_CHAR, &m_TData.PYData.c_street_2,
sizeof(m_TData.PYData.c_street_2), NULL) != SQL_SUCCESS
    || SQLBindCol(m_hstmt, ++i, SQL_C_CHAR, &m_TData.PYData.c_city,
sizeof(m_TData.PYData.c_city), NULL) != SQL_SUCCESS
    || SQLBindCol(m_hstmt, ++i, SQL_C_CHAR, &m_TData.PYData.c_state,
sizeof(m_TData.PYData.c_state), NULL) != SQL_SUCCESS
    || SQLBindCol(m_hstmt, ++i, SQL_C_CHAR, &m_TData.PYData.c_zip,
sizeof(m_TData.PYData.c_zip), NULL) != SQL_SUCCESS
    || SQLBindCol(m_hstmt, ++i, SQL_C_CHAR, &m_TData.PYData.c_phone,
sizeof(m_TData.PYData.c_phone), NULL) != SQL_SUCCESS
    ||
SQLBindCol(m_hstmt, ++i, SQL_C_TYPE_TIMESTAMP, &m_TData.PYData.c_since,
0, NULL) != SQL_SUCCESS
    || SQLBindCol(m_hstmt, ++i, SQL_C_CHAR, &m_TData.PYData.c_credit,
sizeof(m_TData.PYData.c_credit), NULL) != SQL_SUCCESS
    || SQLBindCol(m_hstmt, ++i, SQL_C_DOUBLE, &m_TData.PYData.c_credit_lim,
0, NULL) != SQL_SUCCESS
    || SQLBindCol(m_hstmt, ++i, SQL_C_DOUBLE, &m_TData.PYData.c_discount,
0, NULL) != SQL_SUCCESS
    || SQLBindCol(m_hstmt, ++i, SQL_C_DOUBLE, &m_TData.PYData.c_balance,

```

```

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

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

```

```

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

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

bool CTPCC_Common::InitDLParams(void)
{
    int i;
    char szDiag[300];
    if (SQLAllocHandle(SQL_HANDLE_STMT,m_hdbc,&m_hstmtDelivery) !=
SQL_SUCCESS)
    {
        wsprintf(szDiag,"InitDLParams(%ld): Allocate Stmt Handle
failed\n",m_lRefId);
        CheckDBError(szDiag);
        return(TRUE);
    };
    m_hstmt = m_hstmtDelivery;
    i = 0;
    if
(SQLBindParameter(m_hstmt,++i,SQL_PARAM_INPUT,SQL_C_SSHORT,SQL_SMALLINT,
        0,0,&m_TData.DLData.w_id, 0, NULL) != SQL_SUCCESS
    ||
SQLBindParameter(m_hstmt,++i,SQL_PARAM_INPUT,SQL_C_SSHORT,SQL_SMALLINT,
        0,0,&m_TData.DLData.o_carrier_id,0,NULL) != SQL_SUCCESS
    )
    {
        wsprintf(szDiag,"InitDLParams(%ld): Bind Param
failed\n",m_lRefId);
        CheckDBError(szDiag);
        return(TRUE);
    };
    for (i = 0; i < 10; i++)
    {

```

```

        if
(SQLBindCol(m_hstmt, (WORD) (i+1), SQL_C_SLONG, &m_TData.DLData.o_id[i],
0, NULL) != SQL_SUCCESS)
    {
        wsprintf(szDiag, "InitPYParams(%ld): Bind Col (%d)
failed\n", m_lRefId, (i+1));
        CheckDBError(szDiag);
        return(TRUE);
    }
};
return(FALSE);
}; // InitDLParams

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

```

```

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

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

    m_hstmt = m_hstmtOrderStatus;

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

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

    // configure block cursor

```



```

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

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

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

    i = 0;
    if (SQLBindCol(m_hstmt,++i,SQL_C_SLONG,&m_TData.OSData.c_id,
        0,NULL) != SQL_SUCCESS
    || SQLBindCol(m_hstmt,++i,SQL_C_CHAR,&m_TData.OSData.c_last,
        sizeof(m_TData.OSData.c_last),NULL) != SQL_SUCCESS
    || SQLBindCol(m_hstmt,++i,SQL_C_CHAR,&m_TData.OSData.c_first,
        sizeof(m_TData.OSData.c_first),NULL) != SQL_SUCCESS
    || SQLBindCol(m_hstmt,++i,SQL_C_CHAR,&m_TData.OSData.c_middle,
        sizeof(m_TData.OSData.c_middle), NULL) != SQL_SUCCESS
    ||
SQLBindCol(m_hstmt,++i,SQL_C_TYPE_TIMESTAMP,&m_TData.OSData.o_entry_d,
        0,NULL) != SQL_SUCCESS
    || SQLBindCol(m_hstmt,++i,SQL_C_SSHORT,&m_TData.OSData.o_carrier_id,
        0,NULL) != SQL_SUCCESS
    || SQLBindCol(m_hstmt,++i,SQL_C_DOUBLE,&m_TData.OSData.c_balance,

```

```

        0,NULL) != SQL_SUCCESS
    || SQLBindCol(m_hstmt,++i,SQL_C_SLONG,&m_TData.OSData.o_id,
        0,NULL) != SQL_SUCCESS
    )
    {
        wsprintf(szDiag,"InitOSParams(%ld): Bind Col failed\n",m_lRefId);
        CheckDBError(szDiag);
        return(TRUE);
    };
    return(FALSE);
}; // InitOSParams

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

    posd = (ORDER_STATUS_DATA *) *pTData;
    try
    {
        m_hstmt = m_hstmtOrderStatus;
        m_bTPRslt = TRUE;
        m_iTPRslt = SVCERR_DEADLOCK;
        if (SQLSetStmtAttrW(m_hstmt,SQL_ATTR_APP_ROW_DESC,
            m_descOrderStatusCols1,SQL_IS_POINTER) != SQL_SUCCESS)
        {
            char szDiag[100];
            wsprintf(szDiag,"OrderStatus(%ld): SetStmtAttr
OSCols1\n",m_lRefId);
            CheckDBError(szDiag);
            posd->bTPRslt = TRUE;
            posd->iTPRslt = SVCERR_ODBC;
            strcpy(posd->execution_status,"Error, SetStmt OSCols1");
            return(S_OK);
        };
        if (posd->c_id != 0)
            posd->c_last[0] = 0;
        memcpy(&m_TData.OSData,posd,sizeof(ORDER_STATUS_DATA));
        for (m_iTryCount = 1; m_iTryCount <= m_iMaxRetry; m_iTryCount++)
        {
            // configure block cursor
            if
(SQLSetStmtAttrW(m_hstmt,SQL_ATTR_ROW_ARRAY_SIZE,(SQLPOINTER)1,0) !=
SQL_SUCCESS)
            {
                char szDiag[100];
                wsprintf(szDiag,"OrderStatus(%ld): SetStmtAttr
RowArraySize\n",m_lRefId);
                if (CheckDBError(szDiag))
                {
                    m_iTPRslt = SVCERR_ODBC;
                    break;
                };
                continue;
            };
            rc = SQLExecDirectW(m_hstmt,(SQLWCHAR*)L"{call
tpcc_orderstatus(?,?,?,?)",SQL_NTS);
            if ( ((rc == SQL_SUCCESS_WITH_INFO) && (m_RowsFetched != 0)) ||
(rc == SQL_ERROR) )
            {
                char szDiag[100];

```

```

        wsprintf(szDiag,"OrderStatus(%ld): Execute
Direct\n",m_lRefId);
        if (CheckDBError(szDiag))
        {
            m_iTPRslt = SVCERR_ODBC;
            break;
        };
        continue;
    };
    // configure block cursor
    if (SQLSetStmtAttrW(m_hstmt,SQL_ATTR_ROW_ARRAY_SIZE,
        (SQLPOINTER)MAX_OL, 0) != SQL_SUCCESS)
    {
        char szDiag[100];
        wsprintf(szDiag,"OrderStatus(%ld): SetStmtAttr RowArraySize
MAX_OL\n",m_lRefId);
        if (CheckDBError(szDiag))
        {
            m_iTPRslt = SVCERR_ODBC;
            break;
        };
        continue;
    };
    rc = SQLFetchScroll(m_hstmt,SQL_FETCH_NEXT,0);
    if ( ((rc == SQL_SUCCESS_WITH_INFO) && (m_RowsFetched != 0)) ||
(rc == SQL_ERROR) )
    {
        char szDiag[100];
        wsprintf(szDiag,"OrderStatus(%ld): FetchScroll\n",m_lRefId);
        if (CheckDBError(szDiag))
        {
            m_iTPRslt = SVCERR_ODBC;
            break;
        };
        continue;
    };
    m_TData.OSData.o_ol_cnt = (short)m_RowsFetched;

    if (m_TData.OSData.o_ol_cnt != 0)
    {
        if
(SQLSetStmtAttrW(m_hstmt,SQL_ATTR_APP_ROW_DESC,m_descOrderStatusCols2,
        SQL_IS_POINTER) != SQL_SUCCESS)
        {
            char szDiag[100];
            wsprintf(szDiag,"OrderStatus(%ld): SetStmtAttr
OSCols2\n",m_lRefId);
            if (CheckDBError(szDiag))
            {
                m_iTPRslt = SVCERR_ODBC;
                break;
            };
            continue;
        };
        if (SQLMoreResults(m_hstmt) == SQL_ERROR)
        {
            char szDiag[100];
            wsprintf(szDiag,"OrderStatus(%ld):
MoreResults\n",m_lRefId);
            if (CheckDBError(szDiag))
            {

```

```

            m_iTPRslt = SVCERR_ODBC;
            break;
        };
        continue;
    };
    if (SQLFetch(m_hstmt) == SQL_ERROR)
    {
        char szDiag[100];
        wsprintf(szDiag,"OrderStatus(%ld): Fetch\n",m_lRefId);
        CheckDBError(szDiag);
        if (SQLSetStmtAttrW(m_hstmt,SQL_ATTR_APP_ROW_DESC,
            m_descOrderStatusCols1,SQL_IS_POINTER) != SQL_SUCCESS)
        {
            char szDiag[100];
            wsprintf(szDiag,"OrderStatus(%ld): SetStmtAttr (Fetch)
OSCols1\n",m_lRefId);
            CheckDBError(szDiag);
            posd->bTPRslt = TRUE;
            posd->iTPRslt = SVCERR_ODBC;
            strcpy(posd->execution_status,"Error, SetStmt Cols1
Fetch");
            return(S_OK);
        };
        memcpy(&m_TData.OSData,posd,sizeof(ORDER_STATUS_DATA));
        Sleep(20);
        continue;
    };
    }; // order lines exist
    SQLFreeStmt(m_hstmt,SQL_CLOSE);
    if (m_TData.OSData.o_ol_cnt == 0)
        m_iTPRslt = SVCERR_NOORDERS;
    else
    if (m_TData.OSData.c_id == 0 && m_TData.OSData.c_last[0] == 0)
        m_iTPRslt = SVCERR_NOCUSTOMER;
    else
    {
        m_bTPRslt = FALSE;
        m_iTPRslt = SVC_NOERROR;
    };
    break;
    }; // for m_iMaxRetry
    memcpy(posd,&m_TData.OSData,sizeof(ORDER_STATUS_DATA));
    posd->bTPRslt = m_bTPRslt;
    posd->iTPRslt = m_iTPRslt;
    if (!m_bTPRslt)
    {
        strcpy(posd->execution_status,"Transaction committed.");
        return(S_OK);
    };
    if (m_iTPRslt == SVCERR_NOCUSTOMER)
    {
        strcpy(posd->execution_status,"Invalid Customer id,name.");
        return(S_OK);
    };
    if (m_iTPRslt == SVCERR_NOORDERS)
    {
        strcpy(posd->execution_status,"Customer has no orders.");
        return(S_OK);
    };
    if (m_iTPRslt == SVCERR_DEADLOCK)

```

```

        wsprintf(posd->execution_status,"Hit retry
max(%d).",m_iMaxRetry);
    else
        strcpy(posd->execution_status,"DBTranAbort, Check Input Data");
        return(S_OK);
    }
    catch (...)
    {
        char szDiag[300];
        wsprintf(szDiag,"OrderStatus(%ld): Unhandled exception\n",m_lRefId);
        WriteEventLog(szDiag,TRUE);
        m_bCanBePooled = FALSE;
        posd->bTPRslt = TRUE;
        posd->iTPRslt = SVCERR_EXCEPTION;
        strcpy(posd->execution_status,"Error, Unhandled exception");
        return(S_OK);
    };
}; // Orderstatus

bool CTPCC_Common::InitSLParams(void)
{
    char szDiag[300];
    int i = 0;
    if (SQLAllocHandle(SQL_HANDLE_STMT,m_hdbc,&m_hstmtStockLevel) !=
SQL_SUCCESS )
    {
        wsprintf(szDiag,"InitSLParams(%ld): Allocate Stmt Handle
failed\n",m_lRefId);
        CheckDBError(szDiag);
        return(TRUE);
    };
    m_hstmt = m_hstmtStockLevel;
    if
(SQLBindParameter(m_hstmt,++i,SQL_PARAM_INPUT,SQL_C_SSHORT,SQL_SMALLINT,
0,0,&m_TData.SLData.w_id, 0, NULL) != SQL_SUCCESS
||
SQLBindParameter(m_hstmt,++i,SQL_PARAM_INPUT,SQL_C_UTINYINT,SQL_TINYINT,
0,0,&m_TData.SLData.d_id, 0, NULL) != SQL_SUCCESS
||
SQLBindParameter(m_hstmt,++i,SQL_PARAM_INPUT,SQL_C_SSHORT,SQL_SMALLINT,
0,0,&m_TData.SLData.thresh_hold, 0, NULL) != SQL_SUCCESS
)
    {
        wsprintf(szDiag,"InitSLParams(%ld): Bind Param failed\n",m_lRefId);
        CheckDBError(szDiag);
        return(TRUE);
    };
    if (SQLBindCol(m_hstmt,1,SQL_C_SLONG,
&m_TData.SLData.low_stock,0,NULL) != SQL_SUCCESS)
    {
        wsprintf(szDiag,"InitSLParams(%ld): Bind Column failed\n",m_lRefId);
        CheckDBError(szDiag);
        return(TRUE);
    };
    return(FALSE);
}; // InitSLParams

HRESULT CTPCC_Common::StockLevel(int * iSize,UCHAR ** pTData)
{
    STOCK_LEVEL_DATA * psld;
    RETCODE rc;

```

```

    psld = (STOCK_LEVEL_DATA *) *pTData;
    try
    {
        m_hstmt = m_hstmtStockLevel;
        m_bTPRslt = TRUE;
        m_iTPRslt = SVCERR_DEADLOCK;
        memcpy(&m_TData.SLData,psld,sizeof(STOCK_LEVEL_DATA));
        for (m_iTryCount = 1; m_iTryCount <= m_iMaxRetry; m_iTryCount++)
        {
            rc = SQLExecDirectW(m_hstmt,
(SQLWCHAR*)L"(call tpcc_stocklevel(?,?,?))",SQL_NTS);
            if (rc != SQL_SUCCESS && rc != SQL_SUCCESS_WITH_INFO)
            {
                char szDiag[100];
                wsprintf(szDiag,"StockLevel(%ld): Execute Direct\n",m_lRefId);
                if (CheckDBError(szDiag))
                {
                    m_iTPRslt = SVCERR_ODBC;
                    break;
                };
                continue;
            };
            if (SQLFetch(m_hstmt) == SQL_ERROR)
            {
                char szDiag[100];
                wsprintf(szDiag,"StockLevel(%ld): Fetch\n",m_lRefId);
                if (CheckDBError(szDiag))
                {
                    m_iTPRslt = SVCERR_ODBC;
                    break;
                };
                continue;
            };
            SQLFreeStmt(m_hstmt,SQL_CLOSE);
            m_bTPRslt = FALSE;
            m_iTPRslt = SVC_NOERROR;
            break;
        }; // for m_iMaxRetry
        memcpy(psld,&m_TData.SLData,sizeof(STOCK_LEVEL_DATA));
        psld->bTPRslt = m_bTPRslt;
        psld->iTPRslt = m_iTPRslt;
        if (!m_bTPRslt)
        {
            strcpy(psld->execution_status,"Transaction committed.");
            return(S_OK);
        };
        if (m_iTPRslt == SVCERR_DEADLOCK)
            wsprintf(psld->execution_status,"Hit retry
max(%d).",m_iMaxRetry);
        else
            strcpy(psld->execution_status,"DBTranAbort, Check Input Data");
        return(S_OK);
    }
    catch (...)
    {
        char szDiag[300];
        wsprintf(szDiag,"StockLevel(%ld): Unhandled exception\n",m_lRefId);
        WriteEventLog(szDiag,TRUE);
        m_bCanBePooled = FALSE;
        psld->bTPRslt = TRUE;
        psld->iTPRslt = SVCERR_EXCEPTION;

```

```

        strcpy(psld->execution_status,"Error, Unhandled exception");
        return(S_OK);
    };
}; // Stocklevel

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

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

```

```

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

```

Appendix B - Database Design

Build Scripts

BACKUP.SQL

```
-- File:      BACKUP.SQL
--           Microsoft TPC-C Benchmark Kit Ver. 4.20
--           Copyright Microsoft, 1999
-- Purpose:   Creates backup of tpcc database

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

dump database tpcc to tpccback1, tpccback2, tpccback3, tpccback4 with
init, stats = 1

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

go
```

BACKUPDEVB.SQL

```
-- File:      BACKUPDEVB.SQL
--           Microsoft TPC-C Benchmark Kit Ver. 4.20
--           Copyright Microsoft, 1999
-- Purpose:   Creates tpcc database Backup Devices

use master
go

-- create backup devices

exec sp_addumpdevice 'disk','tpccback1','M:\tpccback1.dmp'
exec sp_addumpdevice 'disk','tpccback2','N:\tpccback2.dmp'
exec sp_addumpdevice 'disk','tpccback3','M:\tpccback3.dmp'
exec sp_addumpdevice 'disk','tpccback4','N:\tpccback4.dmp'
go
```

CREATEDB.SQL

```
-- File:      CREATEDB.SQL
--           Microsoft TPC-C Benchmark Kit Ver. 4.20
--           Copyright Microsoft, 1999
-- Purpose:   Creates tpcc database and backup files
--           for 4000 warehouse database.

use master
```

```
go

-- Create temporary table for timing

if exists ( select name from sysobjects where name = 'tpcc_timer' )
drop table tpcc_timer
go

create table tpcc_timer
(
    start_date          char(30),
    end_date            char(30)
)

insert into tpcc_timer values (0,0)
go

-- Store starting time

update tpcc_timer
set start_date = (select convert(char(30), getdate(),9))
go

-- create main database files

CREATE DATABASE tpcc
ON PRIMARY
(
    NAME          = MSSQL70_tpcc_root,
    FILENAME      = "V:\MSSQL75\MSSQL\Data\tpcc_root.mdf",
    SIZE          = 10MB,
    FILEGROWTH    = 0),
FILEGROUP MSSQL70_misc_fg
(
    NAME          = MSSQL70_misc1,
    FILENAME      = "P:",
    SIZE          = 22500MB,
    FILEGROWTH    = 0),
(
    NAME          = MSSQL70_misc2,
    FILENAME      = "K:",
    SIZE          = 22500MB,
    FILEGROWTH    = 0),
(
    NAME          = MSSQL70_misc3,
    FILENAME      = "I:",
    SIZE          = 22500MB,
    FILEGROWTH    = 0),
(
    NAME          = MSSQL70_misc4,
    FILENAME      = "G:",
    SIZE          = 22500MB,
    FILEGROWTH    = 0),
(
    NAME          = MSSQL70_misc5,
    FILENAME      = "E:",
    SIZE          = 22500MB,
    FILEGROWTH    = 0),
FILEGROUP MSSQL70_cs_fg
(
    NAME          = MSSQL70_cs1,
    FILENAME      = "D:",
    SIZE          = 45500MB,
```

```

        FILEGROWTH      = 0),
(
    NAME                = MSSQL70_cs2,
    FILENAME             = "F:",
    SIZE                 = 45500MB,
    FILEGROWTH           = 0),
(
    NAME                = MSSQL70_cs3,
    FILENAME             = "H:",
    SIZE                 = 45500MB,
    FILEGROWTH           = 0),
(
    NAME                = MSSQL70_cs4,
    FILENAME             = "J:",
    SIZE                 = 45500MB,
    FILEGROWTH           = 0),
(
    NAME                = MSSQL70_cs5,
    FILENAME             = "O:",
    SIZE                 = 45500MB,
    FILEGROWTH           = 0)

LOG ON
(
    NAME                =MSSQL70_tpcc_log,
    FILENAME             ="L:",
    SIZE                 =100001MB,
    FILEGROWTH           =0)

go

-- Store ending time
update tpcc_timer
set     end_date        = (select convert(char(30), getdate(),9))
go

select 'Elapsed time (in seconds): ', datediff(second,(select start_date
from tpcc_timer),(select end_date from tpcc_timer))

--      remove temporary table

if exists ( select name from sysobjects where name = 'tpcc_timer' )
    drop table tpcc_timer
go

```

DBOPT1.SQL

```

-- File:      DBOPT1.SQL
--            Microsoft TPC-C Benchmark Kit Ver. 4.20
--            Copyright Microsoft, 1999
-- Purpose:   Sets database options for data load

use master
go

exec sp_dboption tpcc,'select into/bulkcopy',true
exec sp_dboption tpcc,'trunc. log on chkpt.',true
go

use tpcc
go

checkpoint
go

```

DBOPT2.SQL

```

-- File:      DBOPT2.SQL
--            Microsoft TPC-C Benchmark Kit Ver. 4.20
--            Copyright Microsoft, 1999
-- Purpose:   Resets database options after data load

use master
go

sp_dboption tpcc,'select ',false
go

sp_dboption tpcc,'trunc. ',false
go

use tpcc
go

checkpoint
go

sp_configure allow,1
go

reconfigure with override
go

/*
/* Set option values for user-defined indexes */
/*
sp_indexoption 'customer',      'AllowPageLocks',      FALSE
go
sp_indexoption 'district',      'AllowPageLocks',      FALSE
go
sp_indexoption 'warehouse',     'AllowPageLocks',      FALSE
go
sp_indexoption 'stock',         'AllowPageLocks',      FALSE
go
sp_indexoption 'order_line',    'AllowRowLocks',      FALSE
go
sp_indexoption 'orders',        'AllowRowLocks',      FALSE
go
sp_indexoption 'new_order',     'AllowRowLocks',      FALSE
go
sp_indexoption 'item',          'AllowRowLocks',      FALSE
go
sp_indexoption 'item',          'AllowPageLocks',      FALSE
go

Print ' '
Print '*****'
Print 'Pre-specified Locking Hierarchy:'
Print '  Lockflag = 0 ==> No pre-specified hierarchy'
Print '  Lockflag = 1 ==> Lock at Page-level then Table-level'
Print '  Lockflag = 2 ==> Lock at Row-level then Table-level'
Print '  Lockflag = 3 ==> Lock at Table-level'
Print ' '

```

```

select name,lockflags
from sysindexes
where object_id("warehouse") = id or
      object_id("district") = id or
      object_id("customer") = id or
      object_id("stock") = id or
      object_id("orders") = id or
      object_id("order_line") = id or
      object_id("history") = id or
      object_id("new_order") = id or
      object_id("item") = id
order by lockflags asc
go

sp_configure allow,0
go

reconfigure with override
go

exec sp_dboption tpcc, 'auto update statistics', FALSE
exec sp_dboption tpcc, 'auto create statistics', FALSE
go

exec sp_tableoption "district", "pintable",true
exec sp_tableoption "warehouse", "pintable",true
exec sp_tableoption "new_order", "pintable",true
exec sp_tableoption "item", "pintable",true
go

```

REMOVEDB.SQL

```

-- File:      REMOVEDB.SQL
--            Microsoft TPC-C Benchmark Kit Ver. 4.20
--            Copyright Microsoft, 1999
-- Purpose:    Removes tpcc database and backup files

use master
go

-- remove any existing database and backup files

exec sp_dbremove tpcc, dropdev
go

exec sp_dropdevice 'tpccback1'
exec sp_dropdevice 'tpccback2'
exec sp_dropdevice 'tpccback3'
exec sp_dropdevice 'tpccback4'
go

```

RESTORE.SQL

```

-- File:      RESTORE.SQL
--            Microsoft TPC-C Benchmark Kit Ver. 4.20
--            Copyright Microsoft, 1999
-- Purpose:    Loads database backup from backup files

```

```

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

load database tpcc from tpccback1, tpccback2, tpccback3, tpccback4 with
stats = 1

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

go

```

VERIFY_SORT.SQL

```

-- File:      VERIFY_SORT.SQL
--            Microsoft TPC-C Benchmark Kit Ver. 4.20
--            Copyright Microsoft, 1999
-- Purpose:    Verifies the Sort Order

if exists (select name from sysobjects where name = "ms_verify_sort" )
      drop procedure ms_verify_sort
go

create proc ms_verify_sort
as

declare @sort_order      int

-- get the sort order
select @sort_order      = (select value from sysconfigures where config =
'1123')

if (select @sort_order) <> 50
      RAISERROR (50003,11,1)
go

```

VERIFYTPCCLOAD

```

-- File:      VERIFYTPCCLOAD.SQL
--            Microsoft TPC-C Benchmark Kit Ver. 4.20
--            Copyright Microsoft, 1999
-- Purpose:    Performs series of TPCC database checks to verify
--            that database load completed correctly

print " "
select convert(char(30), getdate(),9)
print " "

use tpcc
go

```

```

--      *****
--      Check rows per table from SYSINDEXES
--      *****

print 'WAREHOUSE TABLE'

select rows
from sysindexes
where id = object_id("warehouse")
go

print 'DISTRICT TABLE = (10 * No of warehouses)'

select rows
from sysindexes
where id =object_id("district")
go

print 'ITEM TABLE = 100,000'

select rows
from sysindexes
where id =object_id("item")
go

print 'CUSTOMER TABLE = (30,000 * No of warehouses)'

select rows
from sysindexes
where id =object_id("customer")
go

print 'ORDERS TABLE = (30,000 * No of warehouses)'

select rows
from sysindexes
where id =object_id("orders")
go

print 'HISTORY TABLE = (30,000 * No of warehouses)'

select rows
from sysindexes
where id =object_id("history")
go

print 'STOCK TABLE = (100,000 * No of warehouses)'

select rows
from sysindexes
where id =object_id("stock")
go

print 'ORDER_LINE TABLE = (300,000 * No of warehouses + some change)'

select rows
from sysindexes
where id =object_id("order_line")
go

```

```

print 'NEW_ORDER TABLE = (9000 * No of warehouses)'

select rows
from sysindexes
where id =object_id("new_order")
go

--      *****
--      Check indices
--      *****

print '*****Index Check*****'

use tpcc
go

sp_helpindex customer
go

sp_helpindex stock
go

sp_helpindex district
go

sp_helpindex item
go

sp_helpindex new_order
go

sp_helpindex orders
go

sp_helpindex order_line
go

sp_helpindex warehouse
go

```

Tables

IDXCUSCL.SQL

```

-- File:      IDXCUSCL.SQL
--            Microsoft TPC-C Benchmark Kit Ver. 4.20
--            Copyright Microsoft, 1999
-- Purpose:   Creates clustered index on customer table

```

```

use tpcc
go

declare @startdate datetime
declare @enddate datetime

```



```

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

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

create unique clustered index customer_c1 on customer(c_w_id, c_d_id,
c_id)
    on MSSQL70_cs_fg

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

go

```

IDXCUSNC.SQL

```

-- File:      IDXCUSNC.SQL
--            Microsoft TPC-C Benchmark Kit Ver. 4.20
--            Copyright Microsoft, 1999
-- Purpose:    Creates non-clustered index on customer table

```

```

use tpcc
go

```

```

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

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

create unique nonclustered index customer_nc1 on customer(c_w_id, c_d_id,
c_last, c_first, c_id)
    on MSSQL70_cs_fg

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

go

```

IDXDISCL.SQL

```

-- File:      IDXDISCL.SQL
--            Microsoft TPC-C Benchmark Kit Ver. 4.20
--            Copyright Microsoft, 1999
-- Purpose:    Creates clustered index on district table

```

```

use tpcc
go

```

```

declare @startdate datetime

```

```

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

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

create unique clustered index district_c1 on district(d_w_id, d_id)
    with fillfactor=100 on MSSQL70_misc_fg

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

go

```

IDXITMCL.SQL

```

-- File:      IDXITMCL.SQL
--            Microsoft TPC-C Benchmark Kit Ver. 4.20
--            Copyright Microsoft, 1999
-- Purpose:    Creates clustered index on item table

```

```

use tpcc
go

```

```

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

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

create unique clustered index item_c1 on item(i_id)
    on MSSQL70_misc_fg

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

go

```

IDXNODCL.SQL

```

-- File:      IDXNODCL.SQL
--            Microsoft TPC-C Benchmark Kit Ver. 4.20
--            Copyright Microsoft, 1999
-- Purpose:    Creates clustered index on new_order table

```

```

use tpcc
go

```

```

declare @startdate datetime
declare @enddate datetime

```

```

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

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

create unique clustered index new_order_c1 on new_order(no_w_id, no_d_id,
no_o_id)
    on MSSQL70_misc_fg

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

go

```

IDXODLCL.SQL

```

-- File:      IDXODLCL.SQL
--           Microsoft TPC-C Benchmark Kit Ver. 4.20
--           Copyright Microsoft, 1999
-- Purpose:   Creates clustered index on order_line table

```

```

use tpcc
go

```

```

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

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

create unique clustered index order_line_c1 on order_line(ol_w_id,
ol_d_id, ol_o_id, ol_number)
    on MSSQL70_misc_fg

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

go

```

IDXORDCL.SQL

```

-- File:      IDXORDCL.SQL
--           Microsoft TPC-C Benchmark Kit Ver. 4.20
--           Copyright Microsoft, 1999
-- Purpose:   Creates clustered index on orders table

```

```

use tpcc
go

declare @startdate datetime

```

```

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

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

create unique clustered index orders_c1 on orders(o_w_id, o_d_id, o_id)
    on MSSQL70_misc_fg

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

go

```

IXORDNC.SQL

```

-- File:      IXORDNC.SQL
--           Microsoft TPC-C Benchmark Kit Ver. 4.20
--           Copyright Microsoft, 1999
-- Purpose:   Creates non-clustered index on orders table

```

```

use tpcc
go

```

```

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

if exists ( select name from sysindexes where name = 'orders_nc1' )
    drop index orders.orders_nc1

create unique nonclustered index orders_nc1 on orders(o_w_id, o_d_id,
o_c_id, o_id)
    with pad_index, fillfactor=90
    on MSSQL70_misc_fg

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

go

```

IXSTKCL.SQL

```

-- File:      IXSTKCL.SQL
--           Microsoft TPC-C Benchmark Kit Ver. 4.20
--           Copyright Microsoft, 1999
-- Purpose:   Creates clustered index on stock table

```

```

use tpcc
go

```

```

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

if exists ( select name from sysindexes where name = 'stock_c1' )
    drop index stock.stock_c1

create unique clustered index stock_c1 on stock(s_i_id, s_w_id)
    on MSSQL70_cs_fg

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

go

```

IDXWARCL.SQL

```

-- File:      IDXWARCL.SQL
--           Microsoft TPC-C Benchmark Kit Ver. 4.20
--           Copyright Microsoft, 1999
-- Purpose:   Creates clustered index on warehouse table

use tpcc
go

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

if exists ( select name from sysindexes where name = 'warehouse_c1' )
    drop index warehouse.warehouse_c1

create unique clustered index warehouse_c1 on warehouse(w_id)
    with fillfactor=100 on MSSQL70_misc_fg

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

go

```

TABLES.SQL

```

-- File:      TABLES.SQL
--           Microsoft TPC-C Benchmark Kit Ver. 4.20
--           Copyright Microsoft, 1999
-- Purpose:   Creates TPC-C tables

use tpcc
go
--

```

```

-- Remove all existing TPC-C tables
--
if exists ( select name from sysobjects where name = 'warehouse' )
    drop table warehouse
go
if exists ( select name from sysobjects where name = 'district' )
    drop table district
go
if exists ( select name from sysobjects where name = 'customer' )
    drop table customer
go
if exists ( select name from sysobjects where name = 'history' )
    drop table history
go
if exists ( select name from sysobjects where name = 'new_order' )
    drop table new_order
go
if exists ( select name from sysobjects where name = 'orders' )
    drop table orders
go
if exists ( select name from sysobjects where name = 'order_line' )
    drop table order_line
go
if exists ( select name from sysobjects where name = 'item' )
    drop table item
go
if exists ( select name from sysobjects where name = 'stock' )
    drop table stock
go

--
-- Create new tables
--

create table warehouse
(
    w_id                smallint,
    w_name              char(10),
    w_street_1          char(20),
    w_street_2          char(20),
    w_city              char(20),
    w_state             char(2),
    w_zip              char(9),
    w_tax              numeric(4,4),
    w_ytd              numeric(12,2)
) on MSSQL70_misc_fg
go

create table district
(
    d_id                tinyint,
    d_w_id             smallint,
    d_name              char(10),
    d_street_1          char(20),
    d_street_2          char(20),
    d_city              char(20),
    d_state             char(2),
    d_zip              char(9),
    d_tax              numeric(4,4),
    d_ytd              numeric(12,2),

```

```

        d_next_o_id
    ) on MSSQL70_misc_fg
go

```

```

create table customer
(
    c_id                int,
    c_d_id              tinyint,
    c_w_id              smallint,
    c_first             char(16),
    c_middle            char(2),
    c_last             char(16),
    c_street_1         char(20),
    c_street_2         char(20),
    c_city             char(20),
    c_state            char(2),
    c_zip              char(9),
    c_phone            char(16),
    c_since            datetime,
    c_credit          char(2),
    c_credit_lim       numeric(12,2),
    c_discount         numeric(4,4),
    c_balance          numeric(12,2),
    c_ytd_payment     numeric(12,2),
    c_payment_cnt     smallint,
    c_delivery_cnt    smallint,
    c_data            char(500)
) on MSSQL70_cs_fg
go

```

```

create table history
(
    h_c_id            int,
    h_c_d_id         tinyint,
    h_c_w_id         smallint,
    h_d_id          tinyint,
    h_w_id          smallint,
    h_date          datetime,
    h_amount        numeric(6,2),
    h_data          char(24)
) on MSSQL70_misc_fg
go

```

```

create table new_order
(
    no_o_id          int,
    no_d_id         tinyint,
    no_w_id         smallint
) on MSSQL70_misc_fg
go

```

```

create table orders
(
    o_id            int,
    o_d_id         tinyint,
    o_w_id         smallint,
    o_c_id         int,
    o_entry_d      datetime,
    o_carrier_id   tinyint,
    o_ol_cnt       tinyint,
    o_all_local    tinyint

```

```

    int,
    tinyint,
    smallint,
    char(16),
    char(2),
    char(16),
    char(20),
    char(20),
    char(20),
    char(2),
    char(9),
    char(16),
    datetime,
    char(2),
    numeric(12,2),
    numeric(4,4),
    numeric(12,2),
    numeric(12,2),
    smallint,
    smallint,
    char(500)

```

```

    int,
    tinyint,
    smallint,
    tinyint,
    smallint,
    datetime,
    numeric(6,2),
    char(24)

```

```

    int,
    tinyint,
    smallint

```

```

    int,
    tinyint,
    smallint,
    int,
    datetime,
    tinyint,
    tinyint,
    tinyint

```

```

) on MSSQL70_misc_fg
go

create table order_line
(
    ol_o_id          int,
    ol_d_id         tinyint,
    ol_w_id         smallint,
    ol_number        tinyint,
    ol_i_id         int,
    ol_supply_w_id   smallint,
    ol_delivery_d    datetime,
    ol_quantity      smallint,
    ol_amount        numeric(6,2),
    ol_dist_info     char(24)
) on MSSQL70_misc_fg
go

```

```

create table item
(
    i_id            int,
    i_im_id         int,
    i_name          char(24),
    i_price         numeric(5,2),
    i_data          char(50)
) on MSSQL70_misc_fg
go

```

```

create table stock
(
    s_i_id          int,
    s_w_id          smallint,
    s_quantity      smallint,
    s_dist_01       char(24),
    s_dist_02       char(24),
    s_dist_03       char(24),
    s_dist_04       char(24),
    s_dist_05       char(24),
    s_dist_06       char(24),
    s_dist_07       char(24),
    s_dist_08       char(24),
    s_dist_09       char(24),
    s_dist_10       char(24),
    s_ytd           int,
    s_order_cnt     smallint,
    s_remote_cnt    smallint,
    s_data          char(50)
) on MSSQL70_cs_fg
go

```

Stored Procedures

DELIVERY.SQL

```

-- File:      DELIVERY.SQL
--            Microsoft TPC-C Benchmark Kit Ver. 4.20.000
--            Copyright Microsoft, 1999

```

```

-- Purpose: Creates delivery transaction stored procedure
--
-- Interface Level: 4.10.000

use tpcc
go

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

create proc tpcc_delivery    @w_id          smallint,
                             @o_carrier_id  smallint
as

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

select @d_id = 0

begin tran d

    while (@d_id < 10)
    begin

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

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

        if (@@rowcount <> 0)
        begin

-- claim the order for this district

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

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

```

```

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

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

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

-- accumulate lineitem amounts for this order into customer

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

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

end

select @oid1 = case @d_id when 1 then @o_id else @oid1 end,
       @oid2 = case @d_id when 2 then @o_id else @oid2 end,
       @oid3 = case @d_id when 3 then @o_id else @oid3 end,
       @oid4 = case @d_id when 4 then @o_id else @oid4 end,
       @oid5 = case @d_id when 5 then @o_id else @oid5 end,
       @oid6 = case @d_id when 6 then @o_id else @oid6 end,
       @oid7 = case @d_id when 7 then @o_id else @oid7 end,
       @oid8 = case @d_id when 8 then @o_id else @oid8 end,
       @oid9 = case @d_id when 9 then @o_id else @oid9 end,
       @oid10 = case @d_id when 10 then @o_id else @oid10 end

end

commit tran d

-- return delivery data to client

select @oid1,
       @oid2,
       @oid3,
       @oid4,
       @oid5,
       @oid6,
       @oid7,
       @oid8,
       @oid9,
       @oid10

go

```

NEWORD.SQL

```
-- File:      NEWORD.SQL
--           Microsoft TPC-C Benchmark Kit Ver. 4.20.000
--           Copyright Microsoft, 1999
-- Purpose:    Creates new order transaction stored procedure
--
--           Interface Level: 4.10.000

use tpcc
go

if exists ( select name from sysobjects where name = "tpcc_neworder" )
    drop procedure tpcc_neworder
go

create proc tpcc_neworder

    @w_id      smallint,
    @d_id      tinyint,
    @c_id      int,
    @o_ol_cnt  tinyint,
    @o_all_local tinyint,
    @i_id1 int = 0, @s_w_id1 smallint

    @i_id2 int = 0, @s_w_id2 smallint
    @i_id3 int = 0, @s_w_id3 smallint
    @i_id4 int = 0, @s_w_id4 smallint
    @i_id5 int = 0, @s_w_id5 smallint
    @i_id6 int = 0, @s_w_id6 smallint
    @i_id7 int = 0, @s_w_id7 smallint
    @i_id8 int = 0, @s_w_id8 smallint
    @i_id9 int = 0, @s_w_id9 smallint
    @i_id10 int = 0, @s_w_id10 smallint
    @i_id11 int = 0, @s_w_id11 smallint
    @i_id12 int = 0, @s_w_id12 smallint
    @i_id13 int = 0, @s_w_id13 smallint
    @i_id14 int = 0, @s_w_id14 smallint
    @i_id15 int = 0, @s_w_id15 smallint

    = 0, @ol_qty1 smallint = 0,
    = 0, @ol_qty2 smallint = 0,
    = 0, @ol_qty3 smallint = 0,
    = 0, @ol_qty4 smallint = 0,
    = 0, @ol_qty5 smallint = 0,
    = 0, @ol_qty6 smallint = 0,
    = 0, @ol_qty7 smallint = 0,
    = 0, @ol_qty8 smallint = 0,
    = 0, @ol_qty9 smallint = 0,
    = 0, @ol_qty10 smallint = 0,
    = 0, @ol_qty11 smallint = 0,
    = 0, @ol_qty12 smallint = 0,
    = 0, @ol_qty13 smallint = 0,
    = 0, @ol_qty14 smallint = 0,
    = 0, @ol_qty15 smallint = 0

as
declare @w_tax      numeric(4,4),
        @d_tax      numeric(4,4),
        @c_last      char(16),
        @c_credit     char(2),
        @c_discount   numeric(4,4),
```

```
@i_price      numeric(5,2),
@i_name        char(24),
@i_data        char(50),
@o_entry_d     datetime,
@remote_flag   int,
@s_quantity    smallint,
@s_data        char(50),
@s_dist        char(24),
@li_no         int,
@o_id          int,
@commit_flag   tinyint,
@li_id         int,
@li_s_w_id     smallint,
@li_qty        smallint,
@ol_number     int,
@c_id_local    int
```

```
begin

begin transaction n

-- get district tax and next available order id and update
-- plus initialize local variables

    update district
    set      @d_tax      = d_tax,
            @o_id       = d_next_o_id,
            d_next_o_id = d_next_o_id + 1,
            @o_entry_d   = getdate(),
            @li_no       = 0,
            @commit_flag = 1
    where    d_w_id      = @w_id and
            d_id         = @d_id

-- process orderlines

    while (@li_no < @o_ol_cnt)
    begin

        select @li_no = @li_no + 1

-- set i_id, s_w_id, and qty for this lineitem

        select @li_id = case @li_no
                        when 1 then @i_id1
                        when 2 then @i_id2
                        when 3 then @i_id3
                        when 4 then @i_id4
                        when 5 then @i_id5
                        when 6 then @i_id6
                        when 7 then @i_id7
                        when 8 then @i_id8
                        when 9 then @i_id9
                        when 10 then @i_id10
                        when 11 then @i_id11
                        when 12 then @i_id12
                        when 13 then @i_id13
                        when 14 then @i_id14
                        when 15 then @i_id15
                        end,
```

```

@li_s_w_id = case @li_no
    when 1 then @s_w_id1
    when 2 then @s_w_id2
    when 3 then @s_w_id3
    when 4 then @s_w_id4
    when 5 then @s_w_id5
    when 6 then @s_w_id6
    when 7 then @s_w_id7
    when 8 then @s_w_id8
    when 9 then @s_w_id9
    when 10 then @s_w_id10
    when 11 then @s_w_id11
    when 12 then @s_w_id12
    when 13 then @s_w_id13
    when 14 then @s_w_id14
    when 15 then @s_w_id15
end,

@li_qty = case @li_no
    when 1 then @ol_qty1
    when 2 then @ol_qty2
    when 3 then @ol_qty3
    when 4 then @ol_qty4
    when 5 then @ol_qty5
    when 6 then @ol_qty6
    when 7 then @ol_qty7
    when 8 then @ol_qty8
    when 9 then @ol_qty9
    when 10 then @ol_qty10
    when 11 then @ol_qty11
    when 12 then @ol_qty12
    when 13 then @ol_qty13
    when 14 then @ol_qty14
    when 15 then @ol_qty15
end

-- get item data (no one updates item)

select @i_price = i_price,
       @i_name = i_name,
       @i_data = i_data
from item (tablock repeatableread)
where i_id = @li_id

-- update stock values

update stock
set s_ytd = s_ytd + @li_qty,
    @s_quantity = s_quantity - @li_qty +
    case when (s_quantity -
@li_qty < 10) then 91 else 0 end,
    s_order_cnt = s_order_cnt + 1,
    s_remote_cnt = s_remote_cnt + case when
(@li_s_w_id = @w_id) then 0 else 1 end,
    @s_data = s_data,
    @s_dist = case @d_id
        when 1 then s_dist_01
        when 2 then s_dist_02
        when 3 then s_dist_03
        when 4 then s_dist_04
        when 5 then s_dist_05
        when 6 then s_dist_06
        when 7 then s_dist_07
        when 8 then s_dist_08
        when 9 then s_dist_09
        when 10 then s_dist_10
    end

where s_i_id = @li_id and
      s_w_id = @li_s_w_id

-- if there actually is a stock (and item) with these ids, go to work

if (@@rowcount > 0)
begin
-- insert order_line data (using data from item and stock)

insert into order_line values(@o_id,
                              @d_id,
                              @w_id,
                              @li_no,
                              @li_id,
                              @li_s_w_id,
                              "dec 31, 1899",
                              @li_qty,
                              @i_price * @li_qty,
                              @s_dist)

-- send line-item data to client

select @i_name,
       @s_quantity,
       b_g = case when (
(patindex("%ORIGINAL%",@i_data) > 0) and
(patindex("%ORIGINAL%",@s_data) > 0) )
        then "B" else "G" end,
       @i_price,
       @i_price * @li_qty

end
else
begin

-- no item (or stock) found - triggers rollback condition

select "",0,"",0,0
select @commit_flag = 0

end

end

-- get customer last name, discount, and credit rating

select @c_last = c_last,
       @c_discount = c_discount,
       @c_credit = c_credit,
       @c_id_local = c_id
from customer (repeatableread)
where c_id = @c_id and

```

```

        c_w_id      = @w_id and
        c_d_id      = @d_id

-- insert fresh row into orders table

        insert into orders values (      @o_id,
                                         @d_id,
                                         @w_id,
                                         @c_id_local,
                                         @o_entry_d,
                                         0,
                                         @o_ol_cnt,
                                         @o_all_local)

-- insert corresponding row into new-order table

        insert into new_order values (      @o_id,
                                         @d_id,
                                         @w_id)

-- select warehouse tax

        select @w_tax = w_tax
        from   warehouse (repeatableread)
        where  w_id    = @w_id

        if (@commit_flag = 1)
            commit transaction n
        else

-- all that work for nuthin!!!

            rollback transaction n

-- return order data to client

        select @w_tax,
               @d_tax,
               @o_id,
               @c_last,
               @c_discount,
               @c_credit,
               @o_entry_d,
               @commit_flag

end

go

```

ORDSTAT.SQL

```

-- File:      ORDSTAT.SQL
--            Microsoft TPC-C Benchmark Kit Ver. 4.20.000
--            Copyright Microsoft, 1999
-- Purpose:   Creates order status transaction stored procedure
--
--            Interface Level: 4.10.000

use tpcc
go

```

```

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

create proc tpcc_orderstatus @w_id  smallint,
                             @d_id  tinyint,

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

as

declare @c_balance      numeric(12,2),
        @c_first        char(16),
        @c_middle        char(2),
        @o_id           int,
        @o_entry_d       datetime,
        @o_carrier_id    smallint,
        @cnt             smallint

begin tran o

if (@c_id = 0)
    begin

-- get customer id and info using last name

        select @cnt = (count(*)+1)/2
        from   customer (repeatableread)
        where  c_last = @c_last and
               c_w_id = @w_id and
               c_d_id = @d_id

        set      rowcount @cnt

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

        set      rowcount 0

    end

else

    begin

-- get customer info if by id

        select @c_balance = c_balance,
               @c_first   = c_first,
               @c_middle  = c_middle,
               @c_last    = c_last
        from   customer (repeatableread)

```



```

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

        select @cnt          = @@rowcount

    end

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

-- get order info

    select @o_id            = o_id,
           @o_entry_d        = o_entry_d,
           @o_carrier_id     = o_carrier_id
    from    orders (serializable)
    where   o_c_id           = @c_id and
           o_d_id           = @d_id and
           o_w_id           = @w_id
    order   by o_id asc

-- select order lines for the current order

    select ol_supply_w_id,
           ol_i_id,
           ol_quantity,
           ol_amount,
           ol_delivery_d
    from    order_line (repeatableread)
    where   ol_o_id = @o_id and
           ol_d_id = @d_id and
           ol_w_id = @w_id

custnotfound:

commit tran o

-- return data to client

select @c_id,
       @c_last,
       @c_first,
       @c_middle,
       @o_entry_d,
       @o_carrier_id,
       @c_balance,
       @o_id

go

```

PAYMENTS.SQL

```

-- File:      PAYMENT.SQL
--            Microsoft TPC-C Benchmark Kit Ver. 4.20.000

```

```

--            Copyright Microsoft, 1999
-- Purpose:   Creates payment transaction stored procedure
--
--            Interface Level: 4.10.000

use tpcc
go

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

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

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

select @screen_data = ""

```

```

begin tran p

-- get payment date

select @datetime = getdate()

if (@c_id = 0)
begin

-- get customer id and info using last name

select @cnt = count(*)
from customer (repeatableread)
where c_last = @c_last and
c_w_id = @c_w_id and
c_d_id = @c_d_id

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

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

set rowcount 0

end

-- get customer info and update balances

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

-- if customer has bad credit get some more info

if (@c_credit = "BC")
begin

```

```

-- compute new info

select @c_data = convert(char(5),@c_id) +
convert(char(4),@c_d_id) +
convert(char(5),@c_w_id) +
convert(char(4),@d_id) +
convert(char(5),@w_id) +
convert(char(19),@h_amount) +
substring(@data, 1, 458)

-- update customer info

update customer
set c_data = @c_data
where c_id = @c_id and
c_w_id = @c_w_id and
c_d_id = @c_d_id

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

end

-- get district data and update year-to-date

update district
set d_ytd = d_ytd + @h_amount,
@d_street_1 = d_street_1,
@d_street_2 = d_street_2,
@d_city = d_city,
@d_state = d_state,
@d_zip = d_zip,
@d_name = d_name,
@d_id_local = d_id
where d_w_id = @w_id and
d_id = @d_id

-- get warehouse data and update year-to-date

update warehouse
set w_ytd = w_ytd + @h_amount,
@w_street_1 = w_street_1,
@w_street_2 = w_street_2,
@w_city = w_city,
@w_state = w_state,
@w_zip = w_zip,
@w_name = w_name,
@w_id_local = w_id
where w_id = @w_id

-- create history record

insert into history values ( @c_id_local,
@c_d_id,
@c_w_id,
@d_id_local,
@w_id_local,
@datetime,
@h_amount,
@w_name + " " + @d_name)

commit tran p

-- return data to client

```

```

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

```

go

STOCKLEV.SQL

```

-- File:      STOCKLEV.SQL
--            Microsoft TPC-C Benchmark Kit Ver. 4.20.000
--            Copyright Microsoft, 1999
-- Purpose:   Creates stock level transaction stored procedure
--
--            Interface Level: 4.10.000

```

```

use tpcc
go

```

```

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

```

```

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

```

```

declare @o_id_low int,
        @o_id_high int

```

```

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

```

```

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

```

go

VERSION.SQL

```

-- File:      VERSION.SQL
--            Microsoft TPC-C Benchmark Kit Ver. 4.20.000
--            Copyright Microsoft, 1999
-- Purpose:   Returns version level of TPC-C stored procs
-- Note:      Always update the return value of this proc for
--            any interface changes or "must have" bug fixes.
--
-- The value returned by this SP defines the "interface level",
-- which must match between the stored procs and the client code.
-- The interface level may be down rev from the current kit. This
-- indicates that the interface hasn't changed since that version.

```

```

use tpcc
go

```

```

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

```

```

create proc tpcc_version
as
declare @version      char(8)

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

```

go

Loader Source

GETARGS.C

```

//      File:      GETARGS.C
//            Microsoft TPC-C Kit Ver. 4.20
//            Copyright Microsoft, 1996, 1997, 1998, 1999
//      Purpose:   Source file for command line processing
//
// Includes

```

```

#include "tpcc.h"

//=====
//
// Function name: GetArgsLoader
//
//=====

void GetArgsLoader(int argc, char **argv, TPCCLDR_ARGS *pargs)
{
    int        i;
    char        *ptr;

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

    /* init args struct with some useful values */
    pargs->server      = SERVER;
    pargs->user         = USER;
    pargs->password     = PASSWORD;
    pargs->database     = DATABASE;
    pargs->batch        = BATCH;
    pargs->num_warehouses = UNDEF;
    pargs->tables_all   = TRUE;
    pargs->table_item    = FALSE;
    pargs->table_warehouse = FALSE;
    pargs->table_customer = FALSE;
    pargs->table_orders  = FALSE;
    pargs->loader_res_file = LOADER_RES_FILE;
    pargs->pack_size     = DEFLDPACKSIZE;
    pargs->starting_warehouse = DEF_STARTING_WAREHOUSE;
    pargs->build_index   = BUILD_INDEX;
    pargs->index_order   = INDEX_ORDER;
    pargs->index_script_path = INDEX_SCRIPT_PATH;
    pargs->scale_down    = SCALE_DOWN;

    /* check for zero command line args */
    if ( argc == 1 )
        GetArgsLoaderUsage();

    for (i = 1; i < argc; ++i)
    {
        if (argv[i][0] != '-' && argv[i][0] != '/')
        {
            printf("\nUnrecognized command");
            GetArgsLoaderUsage();
            exit(1);
        }

        ptr = argv[i];

        switch (ptr[1])
        {
            case 'h':    /* Fall throught */
            case 'H':
                GetArgsLoaderUsage();
                break;

            case 'D':

```

```

                pargs->database = ptr+2;
                break;

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

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

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

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

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

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

            case 't':
                {
                    pargs->tables_all = FALSE;
                    if (strcmp(ptr+2,"item") == 0)
                        pargs->table_item = TRUE;
                    else if (strcmp(ptr+2,"warehouse")
== 0)
                        pargs->table_warehouse =
TRUE;
                    else if (strcmp(ptr+2,"customer") ==
0)
                        pargs->table_customer = TRUE;
                    else if (strcmp(ptr+2,"orders") ==
0)
                        pargs->table_orders = TRUE;
                    else
                    {
                        printf("\nUnrecognized command");
                        GetArgsLoaderUsage();
                        exit(1);
                    }

                    break;
                }

            case 'f':
                pargs->loader_res_file = ptr+2;
                break;

            case 'p':
                pargs->pack_size = atol(ptr+2);
                break;

            case 'i':

```

```

                pargs->build_index = atol(ptr+2);
                break;

        case 'o':
                pargs->index_order = atol(ptr+2);
                break;

        case 'c':
                pargs->scale_down = atol(ptr+2);
                break;

        case 'd':
                pargs->index_script_path = ptr+2;
                break;

        default:
                GetArgsLoaderUsage();
                exit(-1);
                break;
    }

    /* check for required args */
    if (pargs->num_warehouses == UNDEF )
    {
        printf("Number of Warehouses is required\n");
        exit(-2);
    }

    return;
}

//=====
//
// Function name: GetArgsLoaderUsage
//
//=====

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

    printf("TPCCLDR:\n\n");
    printf("Parameter
Default\n");
    printf("-----\n");
    printf("-W Number of Warehouses to Load                Required
\n");
    printf("-S Server                                %s\n",
SERVER);
    printf("-U Username                                %s\n",
USER);
    printf("-P Password                                %s\n",
PASSWORD);

```

```

        printf("-D Database                                %s\n",
DATABASE);
        printf("-b Batch Size
%ld\n", (long) BATCH);
        printf("-p TDS packet size
%ld\n", (long) DEFLDPAKSIZE);
        printf("-f Loader Results Output Filename
%s\n", LOADER_RES_FILE);
        printf("-s Starting Warehouse
%ld\n", (long) DEF_STARTING_WAREHOUSE);
        printf("-i Build Option (data = 0, data and index = 1)
%ld\n", (long) BUILD_INDEX);
        printf("-o Cluster Index Build Order (before = 1, after = 0)
%ld\n", (long) INDEX_ORDER);
        printf("-c Build Scaled Database (normal = 0, tiny = 1)
%ld\n", (long) SCALE_DOWN);
        printf("-d Index Script Path
%s\n", INDEX_SCRIPT_PATH);
        printf("-t Table to Load                                all
tables \n");
        printf("        [item|warehouse|customer|orders]\n");
        printf("Notes: \n");
        printf("    - the '-t' parameter may be included multiple times to
\n");
        printf("        specify multiple tables to be loaded \n");
        printf("    - 'item' loads ITEM table \n");
        printf("    - 'warehouse' loads WAREHOUSE, DISTRICT, and STOCK tables
\n");
        printf("    - 'customer' loads CUSTOMER and HISTORY tables \n");
        printf("    - 'orders' load NEW-ORDER, ORDERS, ORDER-LINE tables
\n");

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

        exit(0);
    }

```

RANDOM.C

```

//      File:                RANDOM.C
//                          Microsoft TPC-C Kit Ver. 4.20
//                          Copyright Microsoft, 1996, 1997, 1998, 1999
//      Purpose:            Random number generation routines for database
//      loader
//
// Includes
#include "tpcc.h"
#include "math.h"
//
// Defines
#define A                16807
#define M                2147483647
#define Q                127773        /* M div A */
#define R                2836         /* M mod A */
#define Thread            __declspec(thread)
//
// Globals
long    Thread Seed = 0;        /* thread local seed */

```

```

/*****
*
* random -
*
* Implements a GOOD pseudo random number generator. This generator
* will/should? run the complete period before repeating.
*
* Copied from:
*
* Random Numbers Generators: Good Ones Are Hard to Find.
*
* Communications of the ACM - October 1988 Volume 31 Number 10
*
* Machine Dependencies:
*
* long must be 2 ^ 31 - 1 or greater.
*
*****/

/*****
* seed - load the Seed value used in irand and drand. Should be used
before *
* first call to irand or drand.
*
*****/

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

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

    Seed = val;
}

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

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

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

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

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

    return( Seed );
}

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

double drand()
{

```

```

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

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

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

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

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

    upper++;

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

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

    return rand_num;
}

#if 0

//Original code pgd 08/13/96

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

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

    upper++;

```

```

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

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

    return rand_num;
}
#endif

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

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

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

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

    return rand_num;
}

```

STRINGS.C

```

//      File:          STRINGS.C
//                        Microsoft TPC-C Kit Ver. 4.20
//                        Copyright Microsoft, 1996, 1997, 1998, 1999
//      Purpose:       Source file for database loader string functions

// Includes
#include "tpcc.h"
#include <string.h>
#include <ctype.h>

```

```
//=====
//
// Function name: MakeAddress
//
//=====

void MakeAddress(char *street_1,
                char *street_2,
                char *city,
                char *state,
                char *zip)
{
#ifdef DEBUG
    printf("[%ld]DBG: Entering MakeAddress()\n", (int)
GetCurrentThreadId());
#endif

    MakeAlphaString (10, 20, ADDRESS_LEN, street_1);
    MakeAlphaString (10, 20, ADDRESS_LEN, street_2);
    MakeAlphaString (10, 20, ADDRESS_LEN, city);
    MakeAlphaString ( 2,  2, STATE_LEN, state);
    MakeZipNumberString( 9,  9, ZIP_LEN, zip);

#ifdef DEBUG
    printf("[%ld]DBG: MakeAddress: street_1: %s, street_2: %s, city: %s,
state: %s, zip: %s\n",
        (int) GetCurrentThreadId(), street_1, street_2,
city, state, zip);
#endif

    return;
}

//=====
//
// Function name: LastName
//
//=====

void LastName(int num,
             char *name)
{
    static char *n[] =
    {
        "BAR" , "OUGHT" , "ABLE" , "PRI" , "PRES",
        "ESE" , "ANTI" , "CALLY" , "ATION", "EING"
    };

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

    if ((num >= 0) && (num < 1000))
    {
        strcpy(name, n[(num/100)%10]);
        strcat(name, n[(num/10)%10]);
        strcat(name, n[(num/1)%10]);
    }
}
```

```
if (strlen(name) < LAST_NAME_LEN)
{
    PaddString(LAST_NAME_LEN, name);
}
else
{
    printf("\nError in LastName()... num <%ld> out of range
(0,999)\n", num);
    exit(-1);
}

#ifdef DEBUG
    printf("[%ld]DBG: LastName: num = [%d] ==> [%d][%d][%d]\n",
        (int) GetCurrentThreadId(), num, num/100,
(num/10)%10, num%10);
    printf("[%ld]DBG: LastName: String = %s\n", (int)
GetCurrentThreadId(), name);
#endif

    return;
}

//=====
//
// Function name: MakeAlphaString
//
//=====

//philipdu 08/13/96 Changed MakeAlphaString to use A-Z, a-z, and 0-9 in
//accordance with spec see below:
//The spec says:
//4.3.2.2 The notation random a-string [x .. y]
//(respectively, n-string [x .. y]) represents a string of random
alphanumeric
//(respectively, numeric) characters of a random length of minimum x,
maximum y,
//and mean (y+x)/2. Alphanumerics are A..Z, a..z, and 0..9. The only
other
//requirement is that the character set used "must be able to represent a
minimum
//of 128 different characters". We are using 8-bit chars, so this is a
non issue.
//It is completely unreasonable to stuff non-printing chars into the text
fields.
//CLevine 08/13/96

int MakeAlphaString( int x, int y, int z, char *str)
{
    int len;
    int i;
    char cc = 'a';
    static char chArray[] =
"0123456789ABCDEFGHIJKLMNOPQRSTUVWXYZabcdefghijklmnopqrstuvwxyz";
    static int chArrayMax = 61;

#ifdef DEBUG
```



```

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

    len= RandomNumber(x, y);

    for (i=0; i<len; i++)
    {
        cc = chArray[RandomNumber(0, chArrayMax)];
        str[i] = cc;
    }

    if ( len < z )
        memset(str+len, ' ', z - len);
    str[len] = 0;

    return len;
}

//=====
//
// Function name: MakeOriginalAlphaString
//
//=====
int MakeOriginalAlphaString(int x,
                           int y,
                           int z,
                           char *str,
                           int percent)
{
    int len;
    int val;
    int start;

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

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

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

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

    val = RandomNumber(1,100);
    if (val <= percent)

```

```

    {
        start = RandomNumber(0, len - 8);
        strncpy(str + start, "ORIGINAL", 8);
    }

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

    return strlen(str);
}

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

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

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

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

    str[16] = 0;

    return 16;
}

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

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

    strcpy(str, "000011111");

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

    return 9;
}

```

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

    memset(str, ' ', len);
    str[len] = 0;
}

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

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

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

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

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

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

    return;
}
```

TIME.C

```
// File: TIME.C
// Microsoft TPC-C Kit Ver. 4.20
// Copyright Microsoft, 1996, 1997, 1998, 1999
// Purpose: Source file for time functions

// Includes
#include "tpcc.h"

// Globals
static long start_sec;

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

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

    _ftime(&el_time);

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

    return time_now;
}
```

TPCC.H

```
// File: TPCC.H
// Microsoft TPC-C Kit Ver. 4.20
// Copyright Microsoft, 1996, 1997, 1998, 1999
// Purpose: Header file for TPC-C database loader

// Build number of TPC Benchmark Kit
#define TPCKIT_VER "4.20"

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

```

#include <sys\types.h>

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

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

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

// Default loader arguments
#define BATCH 10000
#define DEFLDPACKSIZE 32768
#define LOADER_RES_FILE "logs\\load.out"
#define LOADER_NURAND_C 123
#define DEF_STARTING_WAREHOUSE 1
#define BUILD_INDEX 1 // build both
data and indexes
#define INDEX_ORDER 1 // build
indexes before load
#define SCALE_DOWN 0 // build a normal
scale database
#define INDEX_SCRIPT_PATH "scripts"

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

```

```

    long scale_down;
    char *index_script_path;
} TPCCLDR_ARGS;

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

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

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

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

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

```

```
void InitAddress();
void PaddString();
```

TPCCLDR.C

```
// File: TPCCLDR.C
// Microsoft TPC-C Kit Ver. 4.21
// Copyright Microsoft, 1996, 1997, 1998, 1999,
2000
// Purpose: Source file for TPC-C database loader
```

```
// Includes
#include "tpcc.h"
#include "search.h"
```

```
// Defines
#define MAXITEMS 100000
#define MAXITEMS_SCALE_DOWN 100
#define CUSTOMERS_PER_DISTRICT 3000
#define CUSTOMERS_SCALE_DOWN 30
#define DISTRICT_PER_WAREHOUSE 10
#define ORDERS_PER_DISTRICT 3000
#define ORDERS_SCALE_DOWN 30
#define MAX_CUSTOMER_THREADS 2
#define MAX_ORDER_THREADS 3
#define MAX_MAIN_THREADS 4
```

```
// Functions declarations
```

```
void HandleErrorDBC (SQLHDBC hdbc1);
```

```
void CheckSQL();
void CheckDataBase();
```

```
long NURand();
void LoadItem();
void LoadWarehouse();
```

```
void Stock();
void District();
```

```
void LoadCustomer();
void CustomerBufInit();
void CustomerBufLoad();
void LoadCustomerTable();
void LoadHistoryTable();
```

```
void LoadOrders();
void OrdersBufInit();
void OrdersBufLoad();
void LoadOrdersTable();
void LoadNewOrderTable();
void LoadOrderLineTable();
void GetPermutation();
void CheckForCommit();
void OpenConnections();
void BuildIndex();
void FormatDate ();
```

```
// Shared memory structures
```

```
typedef struct
{
    long ol;
    long ol_i_id;
    short ol_supply_w_id;
    short ol_quantity;
    double ol_amount;
    char ol_dist_info[DIST_INFO_LEN+1];
    char ol_delivery_d[OL_DELIVERY_D_LEN+1];
} ORDER_LINE_STRUCT;
```

```
typedef struct
{
    long o_id;
    short o_d_id;
    short o_w_id;
    long o_c_id;
    short o_carrier_id;
    short o_ol_cnt;
    short o_all_local;
    ORDER_LINE_STRUCT o_ol[15];
} ORDERS_STRUCT;
```

```
typedef struct
{
    long c_id;
    short c_d_id;
    short c_w_id;
    char c_first[FIRST_NAME_LEN+1];
    char c_middle[MIDDLE_NAME_LEN+1];
    char c_last[LAST_NAME_LEN+1];
    char c_street_1[ADDRESS_LEN+1];
    char c_street_2[ADDRESS_LEN+1];
    char c_city[ADDRESS_LEN+1];
    char c_state[STATE_LEN+1];
    char c_zip[ZIP_LEN+1];
    char c_phone[PHONE_LEN+1];
    char c_credit[CREDIT_LEN+1];
    double c_credit_lim;
    double c_discount;
    // fix to avoid ODBC float to numeric conversion problem.
    // double c_balance;
    char c_balance[6];

    double c_ytd_payment;
    short c_payment_cnt;
    short c_delivery_cnt;
    char c_data[C_DATA_LEN+1];
    double h_amount;
    char h_data[H_DATA_LEN+1];
} CUSTOMER_STRUCT;
```

```
typedef struct
{
    char c_last[LAST_NAME_LEN+1];
    char c_first[FIRST_NAME_LEN+1];
    long c_id;
} CUSTOMER_SORT_STRUCT;
```

```

typedef struct
{
    long            time_start;
} LOADER_TIME_STRUCT;

// Global variables

char    szLastError[300];

HENV    henv;

HDBC    v_hdbc;                // for SQL Server
version verification
HDBC    i_hdbc1;               // for ITEM table
HDBC    w_hdbc1;               // for WAREHOUSE,
DISTRICT, STOCK
HDBC    c_hdbc1;               // for CUSTOMER
HDBC    c_hdbc2;               // for HISTORY
HDBC    o_hdbc1;               // for ORDERS
HDBC    o_hdbc2;               // for NEW-ORDER

HDBC    o_hdbc3;               // for ORDER-LINE

HSTMT    v_hstmt;              // for SQL Server
version verification
HSTMT    i_hstmt1;
HSTMT    w_hstmt1;
HSTMT    c_hstmt1, c_hstmt2;
HSTMT    o_hstmt1, o_hstmt2, o_hstmt3;

ORDERS_STRUCT    orders_buf[ORDERS_PER_DISTRICT];
CUSTOMER_STRUCT  customer_buf[CUSTOMERS_PER_DISTRICT];
long             orders_rows_loaded;
long             new_order_rows_loaded;
long             order_line_rows_loaded;
long             history_rows_loaded;
long             customer_rows_loaded;
long             stock_rows_loaded;
long             district_rows_loaded;
long             item_rows_loaded;
long             warehouse_rows_loaded;
long             main_time_start;
long             main_time_end;
long             max_items;
long             customers_per_district;
long             orders_per_district;
long             first_new_order;
long             last_new_order;

TPCCLDR_ARGS    *aptr, args;

//=====
//
// Function name: main
//
//=====

int main(int  argc, char **argv)

```

```

{
    DWORD            dwThreadId[MAX_MAIN_THREADS];
    HANDLE           hThread[MAX_MAIN_THREADS];
    FILE             *fLoader;
    char             buffer[255];
    int              i;

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

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

    TPCKIT_VER);
    printf("\n*");
    printf("\n*****\n\n");
};

// process command line arguments

aptr = &args;
GetArgsLoader(argc, argv, aptr);

// verify database and tables exist before attempting to load

CheckDataBase();

printf("Build interface is ODBC.\n");

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

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

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

```

```

        last_new_order  = 3000;
    }

    // open connections to SQL Server
    OpenConnections();

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

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

    // start loading data

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

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

    main_time_start = (TimeNow() / MILLI);

    // start parallel load threads

    if (aptr->tables_all || aptr->table_item)
    {
        fprintf(fLoader, "\nStarting loader threads for: item\n");

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

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

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

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

```

```

                                0,
                                &dwThreadID[1]);

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

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

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

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

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

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

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

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

```

```

        CloseHandle(hThread[i]);
        hThread[i] = NULL;
    }

    main_time_end = (TimeNow() / MILLI);

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

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

    fclose(fLoader);

    SQLFreeEnv(henv);

    exit(0);

    return 0;
}

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

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

    // Seed with unique number
    seed(1);

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

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

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

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

    rc = bcp_init(i_hdbc1, name, NULL, "logs\\item.err", DB_IN);
    if (rc != SUCCEED)
        HandleErrorDBC(i_hdbc1);

```

```

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

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

    rc = bcp_bind(i_hdbc1, (BYTE *) &i_im_id, 0, SQL_VARLEN_DATA,
NULL, 0, SQLINT4, 2);
    if (rc != SUCCEED)
        HandleErrorDBC(i_hdbc1);

    rc = bcp_bind(i_hdbc1, (BYTE *) i_name, 0, I_NAME_LEN, NULL, 0, 0,
3);
    if (rc != SUCCEED)
        HandleErrorDBC(i_hdbc1);

    rc = bcp_bind(i_hdbc1, (BYTE *) &i_price, 0, SQL_VARLEN_DATA,
NULL, 0, SQLFLT8, 4);
    if (rc != SUCCEED)
        HandleErrorDBC(i_hdbc1);

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

    time_start = (TimeNow() / MILLI);

    item_rows_loaded = 0;

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

        MakeAlphaString(14, 24, I_NAME_LEN, i_name);

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

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

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

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

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

```

```

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

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

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

//=====
//
// Function    : LoadWarehouse
//
// Loads WAREHOUSE table and loads Stock and District as Warehouses are
// created
//
//=====

void LoadWarehouse()
{
    short      w_id;
    char        w_name[W_NAME_LEN+1];
    char        w_street_1[ADDRESS_LEN+1];
    char        w_street_2[ADDRESS_LEN+1];
    char        w_city[ADDRESS_LEN+1];
    char        w_state[STATE_LEN+1];
    char        w_zip[ZIP_LEN+1];
    double      w_tax;
    double      w_ytd;
    char        name[20];
    long        time_start;
    RETCODE rc;
    DBINT       rcint;
    char        bcphint[128];

    // Seed with unique number
    seed(2);

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

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

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

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

    rc = bcp_init(w_hdbc1, name, NULL, "logs\\whouse.err", DB_IN);
    if (rc != SUCCEED)
        HandleErrorDBC(w_hdbc1);

    if ((aptr->build_index == 1) && (aptr->index_order == 1))

```

```

    {
        sprintf(bcphint, "tablock, order (w_id), ROWS_PER_BATCH =
%d", aptr->num_warehouses);
        rc = bcp_control(w_hdbc1, BCPHINTS, (void*) bcphint);
        if (rc != SUCCEED)
            HandleErrorDBC(w_hdbc1);
    }

    rc = bcp_bind(w_hdbc1, (BYTE *) &w_id, 0, SQL_VARLEN_DATA, NULL,
0, SQLINT2, 1);
    if (rc != SUCCEED)
        HandleErrorDBC(w_hdbc1);

    rc = bcp_bind(w_hdbc1, (BYTE *) w_name, 0, W_NAME_LEN, NULL, 0, 0,
2);
    if (rc != SUCCEED)
        HandleErrorDBC(w_hdbc1);

    rc = bcp_bind(w_hdbc1, (BYTE *) w_street_1, 0, ADDRESS_LEN, NULL,
0, 0, 3);
    if (rc != SUCCEED)
        HandleErrorDBC(w_hdbc1);

    rc = bcp_bind(w_hdbc1, (BYTE *) w_street_2, 0, ADDRESS_LEN, NULL,
0, 0, 4);
    if (rc != SUCCEED)
        HandleErrorDBC(w_hdbc1);

    rc = bcp_bind(w_hdbc1, (BYTE *) w_city, 0, ADDRESS_LEN, NULL, 0,
0, 5);
    if (rc != SUCCEED)
        HandleErrorDBC(w_hdbc1);

    rc = bcp_bind(w_hdbc1, (BYTE *) w_state, 0, STATE_LEN, NULL, 0, 0,
6);
    if (rc != SUCCEED)
        HandleErrorDBC(w_hdbc1);

    rc = bcp_bind(w_hdbc1, (BYTE *) w_zip, 0, ZIP_LEN, NULL, 0, 0, 7);
    if (rc != SUCCEED)
        HandleErrorDBC(w_hdbc1);

    rc = bcp_bind(w_hdbc1, (BYTE *) &w_tax, 0, SQL_VARLEN_DATA, NULL,
0, SQLFLT8, 8);
    if (rc != SUCCEED)
        HandleErrorDBC(w_hdbc1);

    rc = bcp_bind(w_hdbc1, (BYTE *) &w_ytd, 0, SQL_VARLEN_DATA, NULL,
0, SQLFLT8, 9);
    if (rc != SUCCEED)
        HandleErrorDBC(w_hdbc1);

    time_start = (TimeNow() / MILLI);

    warehouse_rows_loaded = 0;

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

```



```

w_zip);

    MakeAddress(w_street_1, w_street_2, w_city, w_state,

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

w_ytd = 300000.00;

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

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

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

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

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

stock_rows_loaded = 0;
district_rows_loaded = 0;

District();
Stock();
}

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

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

```

```

// Seed with unique number
seed(4);

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

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

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

rc = bcp_init(w_hdbc1, name, NULL, "logs\\district.err", DB_IN);
if (rc != SUCCEED)
    HandleErrorDBC(w_hdbc1);

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

rc = bcp_bind(w_hdbc1, (BYTE *) &d_id, 0, SQL_VARLEN_DATA, NULL,
0, SQLINT2, 1);
if (rc != SUCCEED)
    HandleErrorDBC(w_hdbc1);

rc = bcp_bind(w_hdbc1, (BYTE *) &d_w_id, 0, SQL_VARLEN_DATA, NULL,
0, SQLINT2, 2);
if (rc != SUCCEED)
    HandleErrorDBC(w_hdbc1);

rc = bcp_bind(w_hdbc1, (BYTE *) d_name, 0, D_NAME_LEN, NULL, 0, 0,
3);
if (rc != SUCCEED)
    HandleErrorDBC(w_hdbc1);

rc = bcp_bind(w_hdbc1, (BYTE *) d_street_1, 0, ADDRESS_LEN, NULL,
0, 0, 4);
if (rc != SUCCEED)
    HandleErrorDBC(w_hdbc1);

rc = bcp_bind(w_hdbc1, (BYTE *) d_street_2, 0, ADDRESS_LEN, NULL,
0, 0, 5);
if (rc != SUCCEED)
    HandleErrorDBC(w_hdbc1);

rc = bcp_bind(w_hdbc1, (BYTE *) d_city, 0, ADDRESS_LEN, NULL, 0,
0, 6);
if (rc != SUCCEED)
    HandleErrorDBC(w_hdbc1);

rc = bcp_bind(w_hdbc1, (BYTE *) d_state, 0, STATE_LEN, NULL, 0, 0,
7);
if (rc != SUCCEED)
    HandleErrorDBC(w_hdbc1);

```

```

    rc = bcp_bind(w_hdbc1, (BYTE *) d_zip, 0, ZIP_LEN, NULL, 0, 0, 8);
    if (rc != SUCCEED)
        HandleErrorDBC(w_hdbc1);

    rc = bcp_bind(w_hdbc1, (BYTE *) &d_tax, 0, SQL_VARLEN_DATA, NULL,
0, SQLFLT8, 9);
    if (rc != SUCCEED)
        HandleErrorDBC(w_hdbc1);

    rc = bcp_bind(w_hdbc1, (BYTE *) &d_ytd, 0, SQL_VARLEN_DATA, NULL,
0, SQLFLT8, 10);
    if (rc != SUCCEED)
        HandleErrorDBC(w_hdbc1);

    rc = bcp_bind(w_hdbc1, (BYTE *) &d_next_o_id, 0, SQL_VARLEN_DATA,
NULL, 0, SQLINT4, 11);
    if (rc != SUCCEED)
        HandleErrorDBC(w_hdbc1);

    d_ytd = 30000.0;

    d_next_o_id = orders_per_district+1;

    time_start = (TimeNow() / MILLI);

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

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

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

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

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

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

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

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

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

    }

    return;
}

```

```

//=====
//
// Function : Stock
//
//=====

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

    // Seed with unique number
    seed(3);

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

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

    rc = bcp_init(w_hdbc1, name, NULL, "logs\\stock.err", DB_IN);
    if (rc != SUCCEED)
        HandleErrorDBC(w_hdbc1);

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

    rc = bcp_bind(w_hdbc1, (BYTE *) &s_i_id, 0, SQL_VARLEN_DATA, NULL,
0, SQLINT4, 1);
    if (rc != SUCCEED)
        HandleErrorDBC(w_hdbc1);

```

```

        bcp_bind(w_hdbc1, (BYTE *) &s_w_id, 0, SQL_VARLEN_DATA, NULL, 0,
SQLINT2, 2);
        if (rc != SUCCEED)
            HandleErrorDBC(w_hdbc1);

        rc = bcp_bind(w_hdbc1, (BYTE *) &s_quantity, 0, SQL_VARLEN_DATA,
NULL, 0, SQLINT2, 3);
        if (rc != SUCCEED)
            HandleErrorDBC(w_hdbc1);

        rc = bcp_bind(w_hdbc1, (BYTE *) s_dist_01, 0, S_DIST_LEN, NULL, 0,
0, 4);
        if (rc != SUCCEED)
            HandleErrorDBC(w_hdbc1);

        rc = bcp_bind(w_hdbc1, (BYTE *) s_dist_02, 0, S_DIST_LEN, NULL, 0,
0, 5);
        if (rc != SUCCEED)
            HandleErrorDBC(w_hdbc1);

        rc = bcp_bind(w_hdbc1, (BYTE *) s_dist_03, 0, S_DIST_LEN, NULL, 0,
0, 6);
        if (rc != SUCCEED)
            HandleErrorDBC(w_hdbc1);

        rc = bcp_bind(w_hdbc1, (BYTE *) s_dist_04, 0, S_DIST_LEN, NULL, 0,
0, 7);
        if (rc != SUCCEED)
            HandleErrorDBC(w_hdbc1);

        rc = bcp_bind(w_hdbc1, (BYTE *) s_dist_05, 0, S_DIST_LEN, NULL, 0,
0, 8);
        if (rc != SUCCEED)
            HandleErrorDBC(w_hdbc1);

        rc = bcp_bind(w_hdbc1, (BYTE *) s_dist_06, 0, S_DIST_LEN, NULL, 0,
0, 9);
        if (rc != SUCCEED)
            HandleErrorDBC(w_hdbc1);

        rc = bcp_bind(w_hdbc1, (BYTE *) s_dist_07, 0, S_DIST_LEN, NULL, 0,
0, 10);
        if (rc != SUCCEED)
            HandleErrorDBC(w_hdbc1);

        rc = bcp_bind(w_hdbc1, (BYTE *) s_dist_08, 0, S_DIST_LEN, NULL, 0,
0, 11);
        if (rc != SUCCEED)
            HandleErrorDBC(w_hdbc1);

        rc = bcp_bind(w_hdbc1, (BYTE *) s_dist_09, 0, S_DIST_LEN, NULL, 0,
0, 12);
        if (rc != SUCCEED)
            HandleErrorDBC(w_hdbc1);

        rc = bcp_bind(w_hdbc1, (BYTE *) s_dist_10, 0, S_DIST_LEN, NULL, 0,
0, 13);
        if (rc != SUCCEED)
            HandleErrorDBC(w_hdbc1);

```

```

        rc = bcp_bind(w_hdbc1, (BYTE *) &s_ytd, 0, SQL_VARLEN_DATA, NULL,
0, SQLINT4, 14);
        if (rc != SUCCEED)
            HandleErrorDBC(w_hdbc1);

        rc = bcp_bind(w_hdbc1, (BYTE *) &s_order_cnt, 0, SQL_VARLEN_DATA,
NULL, 0, SQLINT2, 15);
        if (rc != SUCCEED)
            HandleErrorDBC(w_hdbc1);

        rc = bcp_bind(w_hdbc1, (BYTE *) &s_remote_cnt, 0, SQL_VARLEN_DATA,
NULL, 0, SQLINT2, 16);
        if (rc != SUCCEED)
            HandleErrorDBC(w_hdbc1);

        rc = bcp_bind(w_hdbc1, (BYTE *) s_data, 0, S_DATA_LEN, NULL, 0, 0,
17);
        if (rc != SUCCEED)
            HandleErrorDBC(w_hdbc1);

        s_ytd = s_order_cnt = s_remote_cnt = 0;

        time_start = (TimeNow() / MILLI);

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

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

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

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

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

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

```

```

        HandleErrorDBC(w_hdbc1);

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

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

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

return;
}

//=====
//
// Function : LoadCustomer
//
//=====

void LoadCustomer()
{
    LOADER_TIME_STRUCT    customer_time_start;
    LOADER_TIME_STRUCT    history_time_start;
    short                  w_id;
    short                  d_id;
    DWORD                  dwThreadID[MAX_CUSTOMER_THREADS];
    HANDLE                  hThread[MAX_CUSTOMER_THREADS];
    char                    name[20];
    RETCODE                 rc;
    DBINT                   rcint;
    char                    bcphint[128];
    char                    cmd[256];
    char                    rc_1;
    // SQLRETURN             rcnum, MsgLen;
    // SQLSMALLINT           SqlState[6],
    Msg[SQL_MAX_MESSAGE_LENGTH];
    // SQLINTEGER             NativeError;

    // Seed with unique number
    seed(5);

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

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

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

    rc = bcp_init(c_hdbc1, name, NULL, "logs\\customer.err", DB_IN);
    if (rc != SUCCEED)
        HandleErrorDBC(c_hdbc1);

    if ((aptr->build_index == 1) && (aptr->index_order == 1))
    {
        sprintf(bcphint, "tablock, order (c_w_id, c_d_id, c_id),
ROWS_PER_BATCH = %u", (aptr->num_warehouses * 30000));

```

```

        rc = bcp_control(c_hdbc1, BCPHINTS, (void*) bcphint);
        if (rc != SUCCEED)
            HandleErrorDBC(c_hdbc1);
    }

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

    rc = bcp_init(c_hdbc2, name, NULL, "logs\\history.err", DB_IN);
    if (rc != SUCCEED)
        HandleErrorDBC(c_hdbc2);

    sprintf(bcphint, "tablock");
    rc = bcp_control(c_hdbc2, BCPHINTS, (void*) bcphint);
    if (rc != SUCCEED)
        HandleErrorDBC(c_hdbc2);

    customer_rows_loaded    = 0;
    history_rows_loaded     = 0;

    CustomerBufInit();

    customer_time_start.time_start = (TimeNow() / MILLI);
    history_time_start.time_start = (TimeNow() / MILLI);

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

            // Start parallel loading threads here...

            // Start customer table thread

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

            hThread[0] = CreateThread(NULL,

0,

(LPTHREAD_START_ROUTINE) LoadCustomerTable,

&customer_time_start,

0,

&dwThreadID[0]);

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

                exit(-1);
            }

            // Start History table thread

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

```

```

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

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

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

        if (CloseHandle(hThread[0]) == FALSE)
        {
            printf("Error, failed in closing customer
thread handle with errno: %d\n", GetLastError());
        }

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

    }

}

// flush the bulk connection
rcint = bcp_done(c_hdbc1);
if (rcint < 0)
    HandleErrorDBC(c_hdbc1);

rcint = bcp_done(c_hdbc2);
if (rcint < 0)
    HandleErrorDBC(c_hdbc2);

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

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

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

// Output the NURAND used for the loader into C_FIRST for C_ID =
1,
// C_W_ID = 1, and C_D_ID = 1

```

```

        sprintf(cmd, "isql -S%s -U%s -P%s -d%s -e -Q\"update customer set
c_first = 'C_LOAD = %d' where c_id = 1 and c_w_id = 1 and c_d_id = 1\" >
logs\\nurand_load.log",
        aptr->server,
        aptr->user,
        aptr->password,
        aptr->database,
        LOADER_NURAND_C);

        system(cmd);

        SQLFreeStmt(c_hstmt1, SQL_DROP);
        SQLDisconnect(c_hdbc1);
        SQLFreeConnect(c_hdbc1);

        SQLFreeStmt(c_hstmt2, SQL_DROP);
        SQLDisconnect(c_hdbc2);
        SQLFreeConnect(c_hdbc2);

        return;
    }

//=====
//
// Function : CustomerBufInit
//
//=====

void CustomerBufInit()
{
    int i;

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

        strcpy(customer_buf[i].c_first,"");
        strcpy(customer_buf[i].c_middle,"");
        strcpy(customer_buf[i].c_last,"");
        strcpy(customer_buf[i].c_street_1,"");
        strcpy(customer_buf[i].c_street_2,"");
        strcpy(customer_buf[i].c_city,"");
        strcpy(customer_buf[i].c_state,"");
        strcpy(customer_buf[i].c_zip,"");
        strcpy(customer_buf[i].c_phone,"");
        strcpy(customer_buf[i].c_credit,"");

        customer_buf[i].c_credit_lim = 0;
        customer_buf[i].c_discount = (float) 0;

        // fix to avoid ODBC float to numeric conversion problem.
        // customer_buf[i].c_balance = 0;
        strcpy(customer_buf[i].c_balance,"");

        customer_buf[i].c_ytd_payment = 0;
        customer_buf[i].c_payment_cnt = 0;
    }
}

```

```

        customer_buf[i].c_delivery_cnt = 0;

        strcpy(customer_buf[i].c_data, "");

        customer_buf[i].h_amount = 0;

        strcpy(customer_buf[i].h_data, "");

    }

}

//=====
//
// Function   : CustomerBufLoad
//
// Fills shared buffer for HISTORY and CUSTOMER
//=====

void CustomerBufLoad(int d_id, int w_id)
{
    long                i;
    CUSTOMER_SORT_STRUCT c[CUSTOMERS_PER_DISTRICT];

    for (i=0; i<customers_per_district; i++)
    {
        if (i < 1000)
            LastName(i, c[i].c_last);
        else
            LastName(NURand(255, 0, 999, LOADER_NURAND_C),
c[i].c_last);

        MakeAlphaString(8, 16, FIRST_NAME_LEN, c[i].c_first);

        c[i].c_id = i+1;
    }

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

    for (i=0; i<customers_per_district; i++)
    {
        customer_buf[i].c_d_id = d_id;
        customer_buf[i].c_w_id = w_id;
        customer_buf[i].h_amount = 10.0;

        customer_buf[i].c_ytd_payment = 10.0;

        customer_buf[i].c_payment_cnt = 1;
        customer_buf[i].c_delivery_cnt = 0;

        // Generate CUSTOMER and HISTORY data

        customer_buf[i].c_id = c[i].c_id;

        strcpy(customer_buf[i].c_first, c[i].c_first);

```

```

        strcpy(customer_buf[i].c_last, c[i].c_last);

        customer_buf[i].c_middle[0] = 'O';
        customer_buf[i].c_middle[1] = 'E';

        MakeAddress(customer_buf[i].c_street_1,
            customer_buf[i].c_street_2,
            customer_buf[i].c_city,
            customer_buf[i].c_state,
            customer_buf[i].c_zip);

        MakeNumberString(16, 16, PHONE_LEN,
customer_buf[i].c_phone);

        if (RandomNumber(1L, 100L) > 10)
            customer_buf[i].c_credit[0] = 'G';
        else
            customer_buf[i].c_credit[0] = 'B';
        customer_buf[i].c_credit[1] = 'C';

        customer_buf[i].c_credit_lim = 50000.0;
        customer_buf[i].c_discount = ((float) RandomNumber(0L,
5000L)) / 10000.0;

        // fix to avoid ODBC float to numeric conversion problem.

        // customer_buf[i].c_balance = -10.0;
        strcpy(customer_buf[i].c_balance, "-10.0");

        MakeAlphaString(300, 500, C_DATA_LEN,
customer_buf[i].c_data);

        // Generate HISTORY data
        MakeAlphaString(12, 24, H_DATA_LEN,
customer_buf[i].h_data);
    }
}

//=====
//
// Function   : LoadCustomerTable
//
//=====

void LoadCustomerTable(LOADER_TIME_STRUCT *customer_time_start)
{
    int                i;
    long                c_id;
    short                c_d_id;
    short                c_w_id;
    char                c_first[FIRST_NAME_LEN+1];
    char                c_middle[MIDDLE_NAME_LEN+1];
    char                c_last[LAST_NAME_LEN+1];
    char                c_street_1[ADDRESS_LEN+1];
    char                c_street_2[ADDRESS_LEN+1];
    char                c_city[ADDRESS_LEN+1];
    char                c_state[STATE_LEN+1];
    char                c_zip[ZIP_LEN+1];
    char                c_phone[PHONE_LEN+1];
    char                c_credit[CREDIT_LEN+1];

```

```

double      c_credit_lim;
double      c_discount;

    // fix to avoid ODBC float to numeric conversion problem.

    // double      c_balance;
    char      c_balance[6];

double      c_ytd_payment;
short      c_payment_cnt;
short      c_delivery_cnt;
char      c_data[C_DATA_LEN+1];
char      c_since[C_SINCE_LEN+1];
RETCODE    rc;

    rc = bcp_bind(c_hdbc1, (BYTE *) &c_id, 0, SQL_VARLEN_DATA, NULL, 0,
SQLINT4, 1);
    if (rc != SUCCEED)
        HandleErrorDBC(c_hdbc1);

    rc = bcp_bind(c_hdbc1, (BYTE *) &c_d_id, 0, SQL_VARLEN_DATA, NULL, 0,
SQLINT2, 2);
    if (rc != SUCCEED)
        HandleErrorDBC(c_hdbc1);

    rc = bcp_bind(c_hdbc1, (BYTE *) &c_w_id, 0, SQL_VARLEN_DATA, NULL,
0, SQLINT2, 3);
    if (rc != SUCCEED)
        HandleErrorDBC(c_hdbc1);

    rc = bcp_bind(c_hdbc1, (BYTE *) c_first, 0, FIRST_NAME_LEN, NULL, 0,
0, 4);
    if (rc != SUCCEED)
        HandleErrorDBC(c_hdbc1);

    rc = bcp_bind(c_hdbc1, (BYTE *) c_middle, 0, MIDDLE_NAME_LEN, NULL, 0,
0, 5);
    if (rc != SUCCEED)
        HandleErrorDBC(c_hdbc1);

    rc = bcp_bind(c_hdbc1, (BYTE *) c_last, 0, LAST_NAME_LEN, NULL, 0, 0,
6);
    if (rc != SUCCEED)
        HandleErrorDBC(c_hdbc1);

    rc = bcp_bind(c_hdbc1, (BYTE *) c_street_1, 0, ADDRESS_LEN, NULL, 0,
0, 7);
    if (rc != SUCCEED)
        HandleErrorDBC(c_hdbc1);

    rc = bcp_bind(c_hdbc1, (BYTE *) c_street_2, 0, ADDRESS_LEN, NULL, 0, 0,
8);
    if (rc != SUCCEED)
        HandleErrorDBC(c_hdbc1);

    rc = bcp_bind(c_hdbc1, (BYTE *) c_city, 0, ADDRESS_LEN, NULL, 0, 0,
9);
    if (rc != SUCCEED)
        HandleErrorDBC(c_hdbc1);

```

```

    rc = bcp_bind(c_hdbc1, (BYTE *) c_state, 0, STATE_LEN, NULL, 0, 0,
10);
    if (rc != SUCCEED)
        HandleErrorDBC(c_hdbc1);

    rc = bcp_bind(c_hdbc1, (BYTE *) c_zip, 0, ZIP_LEN, NULL, 0, 0, 11);
    if (rc != SUCCEED)
        HandleErrorDBC(c_hdbc1);

    rc = bcp_bind(c_hdbc1, (BYTE *) c_phone, 0, PHONE_LEN, NULL, 0, 0,
12);
    if (rc != SUCCEED)
        HandleErrorDBC(c_hdbc1);

    rc = bcp_bind(c_hdbc1, (BYTE *) &c_since, 0, C_SINCE_LEN, NULL, 0,
SQLCHARACTER, 13);
    if (rc != SUCCEED)
        HandleErrorDBC(c_hdbc1);

    rc = bcp_bind(c_hdbc1, (BYTE *) c_credit, 0, CREDIT_LEN, NULL, 0, 0,
14);
    if (rc != SUCCEED)
        HandleErrorDBC(c_hdbc1);

    rc = bcp_bind(c_hdbc1, (BYTE *) &c_credit_lim, 0, SQL_VARLEN_DATA,
NULL, 0, SQLFLT8, 15);
    if (rc != SUCCEED)
        HandleErrorDBC(c_hdbc1);

    rc = bcp_bind(c_hdbc1, (BYTE *) &c_discount, 0, SQL_VARLEN_DATA, NULL,
0, SQLFLT8, 16);
    if (rc != SUCCEED)
        HandleErrorDBC(c_hdbc1);

    // fix to avoid ODBC float to numeric conversion problem.

    // rc = bcp_bind(c_hdbc1, (BYTE *) &c_balance, 0, SQL_VARLEN_DATA,
NULL, 0, SQLFLT8, 17);
    // if (rc != SUCCEED)
    //     HandleErrorDBC(c_hdbc1);
    rc = bcp_bind(c_hdbc1, (BYTE *) c_balance, 0, 5, NULL, 0,
SQLCHARACTER, 17);
    if (rc != SUCCEED)
        HandleErrorDBC(c_hdbc1);

    rc = bcp_bind(c_hdbc1, (BYTE *) &c_ytd_payment, 0, SQL_VARLEN_DATA,
NULL, 0, SQLFLT8, 18);
    if (rc != SUCCEED)
        HandleErrorDBC(c_hdbc1);

    rc = bcp_bind(c_hdbc1, (BYTE *) &c_payment_cnt, 0, SQL_VARLEN_DATA,
NULL, 0, SQLINT2, 19);
    if (rc != SUCCEED)
        HandleErrorDBC(c_hdbc1);

    rc = bcp_bind(c_hdbc1, (BYTE *) &c_delivery_cnt, 0, SQL_VARLEN_DATA,
NULL, 0, SQLINT2, 20);
    if (rc != SUCCEED)
        HandleErrorDBC(c_hdbc1);

```

```

rc = bcp_bind(c_hdbc1, (BYTE *) c_data, 0, 500, NULL, 0, 0, 21);
if (rc != SUCCEED)
    HandleErrorDBC(c_hdbc1);

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

    strcpy(c_first, customer_buf[i].c_first);
    strcpy(c_middle, customer_buf[i].c_middle);
    strcpy(c_last, customer_buf[i].c_last);
    strcpy(c_street_1, customer_buf[i].c_street_1);
    strcpy(c_street_2, customer_buf[i].c_street_2);
    strcpy(c_city, customer_buf[i].c_city);
    strcpy(c_state, customer_buf[i].c_state);
    strcpy(c_zip, customer_buf[i].c_zip);
    strcpy(c_phone, customer_buf[i].c_phone);
    strcpy(c_credit, customer_buf[i].c_credit);

    FormatDate(&c_since);

    c_credit_lim = customer_buf[i].c_credit_lim;
    c_discount = customer_buf[i].c_discount;

    // fix to avoid ODBC float to numeric conversion problem.
    // c_balance = customer_buf[i].c_balance;
    strcpy(c_balance, customer_buf[i].c_balance);

    c_ytd_payment = customer_buf[i].c_ytd_payment;
    c_payment_cnt = customer_buf[i].c_payment_cnt;
    c_delivery_cnt = customer_buf[i].c_delivery_cnt;

    strcpy(c_data, customer_buf[i].c_data);

    // Send data to server
    rc = bcp_sendrow(c_hdbc1);
    if (rc != SUCCEED)
        HandleErrorDBC(c_hdbc1);

    customer_rows_loaded++;
    CheckForCommit(c_hdbc1, c_hstmt1, customer_rows_loaded,
"customer", &customer_time_start->time_start);
}

}

//=====
//
// Function : LoadHistoryTable
//
//=====

void LoadHistoryTable(LOADER_TIME_STRUCT *history_time_start)
{
    int i;
    long c_id;

```

```

short c_d_id;
short c_w_id;
double h_amount;
char h_data[H_DATA_LEN+1];
char h_date[H_DATE_LEN+1];
RETCODE rc;

rc = bcp_bind(c_hdbc2, (BYTE *) &c_id, 0, SQL_VARLEN_DATA, NULL, 0,
SQLINT4, 1);
if (rc != SUCCEED)
    HandleErrorDBC(c_hdbc2);

rc = bcp_bind(c_hdbc2, (BYTE *) &c_d_id, 0, SQL_VARLEN_DATA, NULL, 0,
SQLINT2, 2);
if (rc != SUCCEED)
    HandleErrorDBC(c_hdbc2);

rc = bcp_bind(c_hdbc2, (BYTE *) &c_w_id, 0, SQL_VARLEN_DATA, NULL, 0,
SQLINT2, 3);
if (rc != SUCCEED)
    HandleErrorDBC(c_hdbc2);

rc = bcp_bind(c_hdbc2, (BYTE *) &c_d_id, 0, SQL_VARLEN_DATA, NULL, 0,
SQLINT2, 4);
if (rc != SUCCEED)
    HandleErrorDBC(c_hdbc2);

rc = bcp_bind(c_hdbc2, (BYTE *) &c_w_id, 0, SQL_VARLEN_DATA, NULL, 0,
SQLINT2, 5);
if (rc != SUCCEED)
    HandleErrorDBC(c_hdbc2);

rc = bcp_bind(c_hdbc2, (BYTE *) &h_date, 0, H_DATE_LEN, NULL, 0,
SQLCHARACTER, 6);
if (rc != SUCCEED)
    HandleErrorDBC(c_hdbc2);

rc = bcp_bind(c_hdbc2, (BYTE *) &h_amount, 0, SQL_VARLEN_DATA, NULL,
0, SQLFLT8, 7);
if (rc != SUCCEED)
    HandleErrorDBC(c_hdbc2);

rc = bcp_bind(c_hdbc2, (BYTE *) h_data, 0, H_DATA_LEN, NULL, 0, 0, 8);
if (rc != SUCCEED)
    HandleErrorDBC(c_hdbc2);

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

    FormatDate(&h_date);

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

```



```

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

//=====
//
// Function    : LoadOrders
//
//=====

void LoadOrders()
{
    LOADER_TIME_STRUCT    orders_time_start;
    LOADER_TIME_STRUCT    new_order_time_start;
    LOADER_TIME_STRUCT    order_line_time_start;
    short                 w_id;
    short                 d_id;
    DWORD                 dwThreadID[MAX_ORDER_THREADS];
    HANDLE                 hThread[MAX_ORDER_THREADS];
    char                   name[20];
    RETCODE                rc;
    char                   bcphint[128];

    // seed with unique number
    seed(6);

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

    // if build index before load...
    if ((aptr->build_index == 1) && (aptr->index_order == 1))
    {
        BuildIndex("idxordcl");
        BuildIndex("idxnodcl");
        BuildIndex("idxodlcl");
    }

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

    rc = bcp_init(o_hdbc1, name, NULL, "logs\\orders.err", DB_IN);
    if (rc != SUCCEED)
        HandleErrorDBC(o_hdbc1);

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

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

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

```

```

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

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

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

    rc = bcp_init(o_hdbc3, name, NULL, "logs\\ordline.err", DB_IN);
    if (rc != SUCCEED)
        HandleErrorDBC(o_hdbc3);

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

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

    OrdersBufInit();

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

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

            // start parallel loading threads here...

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

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

```

```

&dwThreadID[0]);

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

    // start NewOrder table thread

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

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

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

    // start Order-Line table thread

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

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

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

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

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

```

```

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

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

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

    }

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

    return;
}

//=====
//
// Function    : OrdersBufInit
//
// Clears shared buffer for ORDERS, NEWORDER, and ORDERLINE
//
//=====

void OrdersBufInit()
{
    int    i;
    int    j;

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

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

```

```

}

//=====
//
// Function   : OrdersBufLoad
//
// Fills shared buffer for ORDERS, NEWORDER, and ORDERLINE
//
//=====

void OrdersBufLoad(int d_id, int w_id)
{
    int      cust[ORDERS_PER_DISTRICT+1];
    long     o_id;
    short    ol;

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

    GetPermutation(cust, orders_per_district);

    for (o_id=0;o_id<orders_per_district;o_id++)
    {
        // Generate ORDER and NEW-ORDER data

        orders_buf[o_id].o_d_id = d_id;
        orders_buf[o_id].o_w_id = w_id;
        orders_buf[o_id].o_id = o_id+1;
        orders_buf[o_id].o_c_id = cust[o_id+1];
        orders_buf[o_id].o_ol_cnt = (short)RandomNumber(5L, 15L);

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

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

            // Generate ORDER-LINE data
            if (o_id < first_new_order)
            {
                orders_buf[o_id].o_ol[ol].ol_amount = 0;

```

```

// Added to insure ol_delivery_d set
properly during load

        FormatDate(&orders_buf[o_id].o_ol[ol].ol_delivery_d);
        }
        else
        {
            orders_buf[o_id].o_ol[ol].ol_amount =
RandomNumber(1,999999)/100.0;
            // Added to insure ol_delivery_d set
properly during load

            // odbc datetime format

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

//=====
//
// Function   : LoadOrdersTable
//
//=====

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

    // bind ORDER data
    rc = bcp_bind(o_hdbc1, (BYTE *) &o_id, 0, SQL_VARLEN_DATA, NULL, 0,
SQLINT4, 1);
    if (rc != SUCCEED)
        HandleErrorDBC(o_hdbc1);

    rc = bcp_bind(o_hdbc1, (BYTE *) &o_d_id, 0, SQL_VARLEN_DATA, NULL, 0,
SQLINT2, 2);
    if (rc != SUCCEED)
        HandleErrorDBC(o_hdbc1);

    rc = bcp_bind(o_hdbc1, (BYTE *) &o_w_id, 0, SQL_VARLEN_DATA, NULL, 0,
SQLINT2, 3);
    if (rc != SUCCEED)
        HandleErrorDBC(o_hdbc1);

```

```

    rc = bcp_bind(o_hdbc1, (BYTE *) &o_c_id, 0, SQL_VARLEN_DATA, NULL, 0,
SQLINT4, 4);
    if (rc != SUCCEED)
        HandleErrorDBC(o_hdbc1);

    rc = bcp_bind(o_hdbc1, (BYTE *) &o_entry_d, 0, O_ENTRY_D_LEN,
NULL, 0, SQLCHARACTER, 5);
    if (rc != SUCCEED)
        HandleErrorDBC(o_hdbc1);

    rc = bcp_bind(o_hdbc1, (BYTE *) &o_carrier_id, 0, SQL_VARLEN_DATA,
NULL, 0, SQLINT2, 6);
    if (rc != SUCCEED)
        HandleErrorDBC(o_hdbc1);

    rc = bcp_bind(o_hdbc1, (BYTE *) &o_ol_cnt, 0, SQL_VARLEN_DATA, NULL,
0, SQLINT2, 7);
    if (rc != SUCCEED)
        HandleErrorDBC(o_hdbc1);

    rc = bcp_bind(o_hdbc1, (BYTE *) &o_all_local, 0, SQL_VARLEN_DATA,
NULL, 0, SQLINT2, 8);
    if (rc != SUCCEED)
        HandleErrorDBC(o_hdbc1);

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

        FormatDate(&o_entry_d);

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

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

    // rcint = bcp_batch(o_hdbc1);
    // if (rcint < 0)
    //     HandleErrorDBC(o_hdbc1);

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

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

```

```

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

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

//=====
//
// Function : LoadNewOrderTable
//
//=====

void LoadNewOrderTable(LOADER_TIME_STRUCT *new_order_time_start)
{
    int      i;
    long     o_id;
    short    o_d_id;
    short    o_w_id;
    RETCODE  rc;
    DBINT    rcint;

    // Bind NEW-ORDER data

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

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

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

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

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

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

    // rcint = bcp_batch(o_hdbc2);
    // if (rcint < 0)

```

```

//      HandleErrorDBC(o_hdbc2);

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

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

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

}

//=====
//
// Function   : LoadOrderLineTable
//
//=====

void LoadOrderLineTable(LOADER_TIME_STRUCT *order_line_time_start)
{
    int      i,j;
    long     o_id;
    short    o_d_id;
    short    o_w_id;
    long     ol;
    long     ol_i_id;
    short    ol_supply_w_id;
    short    ol_quantity;
    double   ol_amount;
    char     ol_dist_info[DIST_INFO_LEN+1];
    char     ol_delivery_d[OL_DELIVERY_D_LEN+1];
    RETCODE  rc;
    DBINT    rcint;

    // bind ORDER-LINE data
    rc = bcp_bind(o_hdbc3, (BYTE *) &o_id, 0, SQL_VARLEN_DATA, NULL, 0,
SQLINT4, 1);
    if (rc != SUCCEED)
        HandleErrorDBC(o_hdbc3);

    rc = bcp_bind(o_hdbc3, (BYTE *) &o_d_id, 0, SQL_VARLEN_DATA, NULL, 0,
SQLINT2, 2);
    if (rc != SUCCEED)
        HandleErrorDBC(o_hdbc3);

    rc = bcp_bind(o_hdbc3, (BYTE *) &o_w_id, 0, SQL_VARLEN_DATA, NULL, 0,
SQLINT2, 3);
    if (rc != SUCCEED)
        HandleErrorDBC(o_hdbc3);

    rc = bcp_bind(o_hdbc3, (BYTE *) &ol, 0, SQL_VARLEN_DATA, NULL, 0,
SQLINT4, 4);

```

```

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

    rc = bcp_bind(o_hdbc3, (BYTE *) &ol_i_id, 0, SQL_VARLEN_DATA, NULL, 0,
SQLINT4, 5);
    if (rc != SUCCEED)
        HandleErrorDBC(o_hdbc3);

    rc = bcp_bind(o_hdbc3, (BYTE *) &ol_supply_w_id, 0, SQL_VARLEN_DATA,
NULL, 0, SQLINT2, 6);
    if (rc != SUCCEED)
        HandleErrorDBC(o_hdbc3);

    rc = bcp_bind(o_hdbc3, (BYTE *) &ol_delivery_d, 0,
OL_DELIVERY_D_LEN, NULL, 0, SQLCHARACTER, 7);
    if (rc != SUCCEED)
        HandleErrorDBC(o_hdbc3);

    rc = bcp_bind(o_hdbc3, (BYTE *) &ol_quantity, 0, SQL_VARLEN_DATA,
NULL, 0, SQLINT2, 8);
    if (rc != SUCCEED)
        HandleErrorDBC(o_hdbc3);

    rc = bcp_bind(o_hdbc3, (BYTE *) &ol_amount, 0, SQL_VARLEN_DATA, NULL,
0, SQLFLT8, 9);
    if (rc != SUCCEED)
        HandleErrorDBC(o_hdbc3);

    rc = bcp_bind(o_hdbc3, (BYTE *) ol_dist_info, 0, DIST_INFO_LEN, NULL,
0, 0, 10);
    if (rc != SUCCEED)
        HandleErrorDBC(o_hdbc3);

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

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

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

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

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

            order_line_rows_loaded++;
            CheckForCommit(o_hdbc3, o_hstmt3,
order_line_rows_loaded, "order_line", &order_line_time_start->time_start);

```

```

    }

}

// rcint = bcp_batch(o_hdbc3);
// if (rcint < 0)
//     HandleErrorDBC(o_hdbc3);

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

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

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

}

//=====
//
// Function   : GetPermutation
//
//=====

void GetPermutation(int perm[], int n)
{
    int i, r, t;

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

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

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

void CheckForCommit(HDBC hdbc,
                    HSTMT hstmt,
                    int rows_loaded,
                    char *table_name,

```

```

        long *time_start)
{
    long    time_end, time_diff;
    // DBINT    rcint;

    if ( !(rows_loaded % aptr->batch) )
    {
        // rcint = bcp_batch(hdbc);
        // if (rcint < 0)
        //     HandleErrorDBC(hdbc);

        time_end = (TimeNow() / MILLI);
        time_diff = time_end - *time_start;

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

        *time_start = time_end;
    }

    return;
}

//=====
//
// Function   : OpenConnections
//
//=====

void OpenConnections()
{
    RETCODE    rc;

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

    SQLAllocHandle(SQL_HANDLE_ENV, SQL_NULL_HANDLE, &henv );

    SQLSetEnvAttr(henv, SQL_ATTR_ODBC_VERSION, (void*)SQL_OV_ODBC3, 0
);

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

```

```

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

        // Open connections to SQL Server

        // Connection 1

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

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

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

        // Connection 2

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

        rc = SQLSetConnectOption (w_hdbc1, SQL_PACKET_SIZE, aptr-
>pack_size);
        if (rc != SUCCEED)
            HandleErrorDBC(w_hdbc1);

        rc = SQLDriverConnect ( w_hdbc1,
                                NULL,

```

```

                                (SQLCHAR*)&szDriverString[0] ,
                                SQL_NTS,
                                (SQLCHAR*)&szDriverStringOut[0] ,
                                sizeof(szDriverStringOut),
                                &cbDriverStringOut,
                                SQL_DRIVER_NOPROMPT
                                );
        if (rc != SUCCEED)
            HandleErrorDBC(w_hdbc1);

        // Connection 3

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

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

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

        // Connection 4

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

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

        rc = SQLDriverConnect ( c_hdbc2,
                                NULL,
                                (SQLCHAR*)&szDriverString[0] ,
                                SQL_NTS,

```

```

        (SQLCHAR*)&szDriverStringOut[0],
        sizeof(szDriverStringOut),
                                &cbDriverStringOut,
                                SQL_DRIVER_NOPROMPT
    );
    if (rc != SUCCEED)
        HandleErrorDBC(c_hdbc2);

    // Connection 5

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

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

    rc = SQLDriverConnect ( o_hdbc1,
                                NULL,

                                (SQLCHAR*)&szDriverString[0] ,
                                SQL_NTS,

                                (SQLCHAR*)&szDriverStringOut[0],
                                sizeof(szDriverStringOut),
                                &cbDriverStringOut,
                                SQL_DRIVER_NOPROMPT
    );

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

    // Connection 6

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

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

    rc = SQLDriverConnect ( o_hdbc2,
                                NULL,

                                (SQLCHAR*)&szDriverString[0] ,
                                SQL_NTS,

                                (SQLCHAR*)&szDriverStringOut[0],

```

```

        sizeof(szDriverStringOut),
                                &cbDriverStringOut,
                                SQL_DRIVER_NOPROMPT
    );
    if (rc != SUCCEED)
        HandleErrorDBC(o_hdbc2);

    // Connection 7

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

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

    rc = SQLDriverConnect ( o_hdbc3,
                                NULL,

                                (SQLCHAR*)&szDriverString[0] ,
                                SQL_NTS,

                                (SQLCHAR*)&szDriverStringOut[0],
                                sizeof(szDriverStringOut),
                                &cbDriverStringOut,
                                SQL_DRIVER_NOPROMPT
    );

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

//=====
//
// Function name: BuildIndex
//
//=====

void BuildIndex(char *index_script)
{
    char cmd[256];

    printf("Starting index creation: %s\n",index_script);

    sprintf(cmd, "isql -S%s -U%s -P%s -e -i%s\\%s.sql > logs\\%s.log",
                                aptr->server,
                                aptr->user,
                                aptr->password,
                                aptr->index_script_path,
                                index_script,
                                index_script);

    system(cmd);

```



```

        printf("Finished index creation:  %s\n",index_script);
    }

void HandleErrorDBC (SQLHDBC  hdbc1)
{
    SQLCHAR          SqlState[6], Msg[SQL_MAX_MESSAGE_LENGTH];
    SQLINTEGER  NativeError;
    SQLSMALLINT i, MsgLen;
    SQLRETURN  rc2;
    char        timebuf[128];
    char        datebuf[128];
    FILE        *fp1;

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

        _strtime(timebuf);
        _strdate(datebuf);

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

        fp1 = fopen("logs\\tpccldr.err","w");
        if (fp1 == NULL)
            printf("ERROR:  Unable to open errorlog file.\n");
        else
        {
            fprintf(fp1, "[%s : %s] %s\n" , datebuf, timebuf,
szLastError);
            fclose(fp1);
        }

        i++;
    }
}

void HandleErrorSTMT (HSTMT  hstmt1)
{
    SQLCHAR          SqlState[6], Msg[SQL_MAX_MESSAGE_LENGTH];
    SQLINTEGER  NativeError;
    SQLSMALLINT i, MsgLen;
    SQLRETURN  rc2;
    char        timebuf[128];
    char        datebuf[128];
    FILE        *fp1;

    i = 1;
    while (( rc2 = SQLGetDiagRec(SQL_HANDLE_STMT , hstmt1, i, SqlState
, &NativeError,
                                Msg, sizeof(Msg) , &MsgLen )) !=
SQL_NO_DATA )
    {

```

```

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

        _strtime(timebuf);
        _strdate(datebuf);

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

        fp1 = fopen("logs\\tpccldr.err","w");
        if (fp1 == NULL)
            printf("ERROR:  Unable to open errorlog file.\n");
        else
        {
            fprintf(fp1, "[%s : %s] %s\n" , datebuf, timebuf,
szLastError);
            fclose(fp1);
        }

        i++;
    }
}

void FormatDate ( char* szTimeCOutput )
{
    struct tm when;
    time_t now;

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

    mktime( &when );

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

    return;
}

//=====
//
// Function      : CheckDataBase
//
//=====

void CheckDataBase()
{
    RETCODE          rc;

    char              szDriverString[300];
    char              szDriverStringOut[1024];
    char              TablesBitMap[9] = {"0000000000"};
    int               i, ExitFlag;

    SQLSMALLINT       cbDriverStringOut;
    SQLCHAR            TabName[10];
    SQLINTEGER         TabNameInd, TabCount, TabCountInd;

```

```

ExitFlag = 0;

SQLAllocHandle(SQL_HANDLE_ENV, SQL_NULL_HANDLE, &henv );

SQLSetEnvAttr(henv, SQL_ATTR_ODBC_VERSION, (void*)SQL_OV_ODBC3, 0
);

SQLAllocHandle(SQL_HANDLE_DBC, henv , &v_hdbc);

SQLSetConnectAttr(v_hdbc, SQL_COPT_SS_BCP, (void *)SQL_BCP_ON,
SQL_IS_INTEGER );

// Open connection to SQL Server

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

rc = SQLSetConnectAttr( v_hdbc, SQL_ATTR_PACKET_SIZE,
(SQLPOINTER)aptr->pack_size, SQL_IS_UINTEGER );
if (rc != SQL_SUCCESS)
    HandleErrorDBC(v_hdbc);

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

// if the rc is SQL_ERROR, the the TPCC database probably does not
exist
if (rc == SQL_ERROR)
{
    printf("The database TPCC does not appear to exist!\n");
    printf("\nCheck LOGS\ directory for database creation
errors.\n");

    // cleanup database connections and handles
    SQLFreeHandle(SQL_HANDLE_STMT, v_hstmt);
    SQLDisconnect(v_hdbc);
    SQLFreeHandle(SQL_HANDLE_DBC, v_hdbc);

    // since there is not a database, exit back to SETUP.CMD
    exit(1);
}

if ( SQLAllocHandle(SQL_HANDLE_STMT, v_hdbc , &v_hstmt) !=
SQL_SUCCESS )
    HandleErrorDBC(v_hdbc);

```

```

if ( SQLBindCol(v_hstmt, 1, SQL_C_ULONG, &TabCount, 0,
&TabCountInd) != SQL_SUCCESS )
    HandleErrorSTMT(v_hstmt);

// count the number of user tables from sysobjects
rc = SQLExecDirect(v_hstmt, "select count(*) from sysobjects where
xtype = \'U\'", SQL_NTS);
if ((rc != SQL_SUCCESS) && (rc != SQL_SUCCESS_WITH_INFO))
    HandleErrorSTMT(v_hstmt);

if ( SQLFetch(v_hstmt) != SQL_SUCCESS )
    HandleErrorSTMT(v_hstmt);

// if the number of tables is less than 9, select all the user
tables in TPCC
if (TabCount != 9)
{
    SQLFreeHandle(SQL_HANDLE_STMT, v_hstmt);

    SQLAllocHandle(SQL_HANDLE_STMT, v_hdbc , &v_hstmt);

    if ( SQLBindCol(v_hstmt, 1, SQL_C_CHAR, &TabName,
sizeof(TabName), &TabNameInd) != SQL_SUCCESS )
        HandleErrorSTMT(v_hstmt);

    // select the list of user tables into a result set
    rc = SQLExecDirect(v_hstmt, "select * from sysobjects where
xtype = \'U\'", SQL_NTS);
    if ((rc != SQL_SUCCESS) && (rc != SQL_SUCCESS_WITH_INFO))
        HandleErrorSTMT(v_hstmt);

    // go through the result set and set the bitmap for each
found table
    // set the bitmap to '1' if the table name is found

    while ((rc = SQLFetch(v_hstmt)) != SQL_NO_DATA)
    {
        switch( TabName[0] )
        {
            case 'w':
                TablesBitMap[0] = '1';
                break;
            case 'd':
                TablesBitMap[1] = '1';
                break;
            case 'c':
                TablesBitMap[2] = '1';
                break;
            case 'h':
                TablesBitMap[3] = '1';
                break;
            case 'n':
                TablesBitMap[4] = '1';
                break;
            case 'o':
                if (TabName[5] = 's')
                    TablesBitMap[5] = '1';
                if (TabName[5] = '_')
                    TablesBitMap[6] = '1';
                break;
            case 'i':

```

```

        TablesBitMap[7] = '1';
        break;
    case 's':
        TablesBitMap[8] = '1';
        break;
    }
}

// a '0' ExitFlag means do NOT exit the loader early, a '1'
means exit the loader early
ExitFlag = 0;

// iterate through the bitmap to display which table(s) is
actually missing
for (i = 0; i <= 8; i++)
{
    switch(i)
    {
    case 0:
        if (TablesBitMap[i] == '0')
        {
            printf("The Warehouse table is
missing or damaged.\n");
            ExitFlag = 1;
        }
        break;
    case 1:
        if (TablesBitMap[i] == '0')
        {
            printf("The District table is
missing or damaged.\n");
            ExitFlag = 1;
        }
        break;
    case 2:
        if (TablesBitMap[i] == '0')
        {
            printf("The Customer table is
missing or damaged.\n");
            ExitFlag = 1;
        }
        break;
    case 3:
        if (TablesBitMap[i] == '0')
        {
            printf("The History table is missing
or damaged.\n");
            ExitFlag = 1;
        }
        break;
    case 4:
        if (TablesBitMap[i] == '0')
        {
            printf("The New_Order table is
missing or damaged.\n");
            ExitFlag = 1;
        }
        break;
    case 5:
        if (TablesBitMap[i] == '0')
        {

```

```

        printf("The Orders table is missing
or damaged.\n");
        ExitFlag = 1;
    }
    break;
case 6:
    if (TablesBitMap[i] == '0')
    {
        printf("The Order_Line table is
missing or damaged.\n");
        ExitFlag = 1;
    }
    break;
case 7:
    if (TablesBitMap[i] == '0')
    {
        printf("The Item table is missing or
damaged.\n");
        ExitFlag = 1;
    }
    break;
case 8:
    if (TablesBitMap[i] == '0')
    {
        printf("The Stock table is missing
or damaged.\n");
        ExitFlag = 1;
    }
    break;
    }
}

// if one or more tables are missing, display message and
exit the loader
if (ExitFlag = 1)
{
    printf("\nExiting TPC-C Loader!\n");
    printf("\nCheck LOGS\\ directory for database\n");
    printf("or table creation errors.\n");

    // cleanup database connections and handles
    SQLFreeHandle(SQL_HANDLE_STMT, v_hstmt);
    SQLDisconnect(v_hdbc);
    SQLFreeHandle(SQL_HANDLE_DBC, v_hdbc);

    exit(1);
}

// cleanup database connections and handles
SQLFreeHandle(SQL_HANDLE_STMT, v_hstmt);
SQLDisconnect(v_hdbc);
SQLFreeHandle(SQL_HANDLE_DBC, v_hdbc);

return;
}

```


Appendix C - Tunable Parameters

Microsoft SQL Server Startup Parameters

```
C:\MSSQL\BINN\SQLSERVER.EXE -c -x -T3502 -g50
```

Where:

- -c Start SQL Server independently of the Service Control Manager
- -x Disables the keeping of CPU time and cache hit ratio statistics
- -T3502 Writes a message to the SQL Server Errorlog showing the beginning and ending time of each checkpoint
- -g50 Specifies the amount of virtual address space, in MB, SQL Server will leave available for memory allocations, excluding the buffer pool and thread stacks, such as dynamically-loaded DLLs, extended procedure calls, etc. If this option is not specified, SQL Server will use a value that is suitable for a wide range of runtime environments. Use of this option may be appropriate in 2GB (3GB Enterprise Edition) configurations in which the memory usage requirements of SQL Server are atypical and the virtual address space of the SQL Server process is totally in use. Incorrect use of this option can lead to conditions under which SQL Server may not start or may encounter runtime errors.

SQL Server Stack Size

The default stack size for Microsoft SQL Server 2000, Version 8 was changed using the EDITBIN utility. The EDITBIN utility ships with Microsoft Visual C++ V6.0. The command used to change the stack size is:

```
editbin /S: 131072 sqlservr.exe
```

This command is fully documented as an article in the Microsoft Knowledge Base on the Microsoft Web Site at www.Microsoft.com/support.

BOOT.INI

The /pae switch was added to the boot.ini file to cause Windows 2000 to support more than 4GB of physical memory.

User Rights Assignment

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

Microsoft SQL Server Configuration Parameters

```
1> 2> 3> 4> 5> 6> 7> 8> 9> 10> 11>
-- File:      VERSION.SQL
--           Microsoft TPC-C Benchmark Kit Ver. 4.20
--           Copyright Microsoft, 1999
-- Purpose:   Returns SQL Server version string
```

```
print " "
select convert(char(30), getdate(),9)
print " "
```

```
-----
Feb 13 2000 11:30:34:090AM
```

(1 row affected)

```
1> 2> 3>
select @@version
```

```
-----
-----
-----
Microsoft SQL Server 2000 - 8.00.024 (Intel X86)
Feb 11 2000 00:57:15
Copy
right (c) 1988-1999 Microsoft Corporation
```

Enterprise Edition on Window
s NT 5.0 (Build 2195:)

(1 row affected)

```
1> 2>
1> 2> 3> 4> 5> 6> 7> 8> 9> 10>
-- File:      CONFIG.SQL
--           Microsoft TPC-C Benchmark Kit Ver. 4.20
--           Copyright Microsoft, 1999
-- Purpose:   Collects SQL Server configuration parameters
```

```
print " "
select convert(char(30), getdate(), 9)
print " "
```

Feb 13 2000 11:30:35:030AM

(1 row affected)

1> 2> 3> DBCC execution completed. If DBCC printed error messages, contact your system administrator.
Configuration option 'show advanced options' changed from 1 to 1. Run the RECONFIGURE statement to install.

```
sp_configure "show advanced", 1
1> 2> reconfigure with override
1> 2> sp_configure
```

name	minimum	maximum	config_value	run_value
------	---------	---------	--------------	-----------

name	minimum	maximum	config_value	run_value
affinity mask				
0 2147483647		255	255	
allow updates				
0 1	1	1	1	
c2 audit mode				
0 1	0	0	0	
cost threshold for parallelism				
0 32767	5	5	5	
cursor threshold				
-1 2147483647	-1	-1	-1	
default full-text language				
0 2147483647	1033	1033	1033	
default language				
0 9999	0	0	0	
fill factor (%)				
0 100	0	0	0	
index create memory (KB)				
704 1600000	0	0	0	
language in cache				
3 100	3	3	3	
lightweight pooling				
0 1	1	1	1	
locks				
5000 2147483647	0	0	0	

max degree of parallelism			
0 32	1	1	
max server memory (MB)			
4 2147483647	31000	31000	
max text repl size (B)			
0 2147483647	65536	65536	
max worker threads			
10 1024	144	144	
media retention			
0 365	0	0	
min memory per query (KB)			
512 2147483647	1024	1024	
min server memory (MB)			
0 2147483647	3000	3000	
nested triggers			
0 1	1	1	
network packet size (B)			
512 65535	4096	4096	
open objects			
0 2147483647	0	0	
priority boost			
0 1	1	1	
query governor cost limit			
0 2147483647	0	0	
query wait (s)			
-1 2147483647	-1	-1	
recovery interval (min)			
0 32767	32767	32767	
remote access			
0 1	1	1	
remote login timeout (s)			
0 2147483647	5	5	
remote proc trans			
0 1	0	0	
remote query timeout (s)			
0 2147483647	0	0	
scan for startup procs			
0 1	0	0	
set working set size			
0 1	0	0	
show advanced options			
0 1	1	1	
two digit year cutoff			
1753 9999	2049	2049	
user connections			
0 32767	0	0	
user options			
0 16383	0	0	

Interrupt Affinity Filter

Interrupt binding tool "IntFiltr" from the Windows 2000 Resource Kit was used to affinitize device interrupts to specific processors as specified in the parameters below.

cLAN Adapter affinitized to CPU 7
Mylex EXR2000P (log) affinitized to CPU 6

Mylex EXR2000P Command Batching

A Mylex utility was used to change the default value for command IO completion batching:

```
V:\>U:\Mylex\mdactest -y -i20 -nzerointr
Setting zero interrupt counter value to 20 ... Done
```

```
V:\>pause
Press any key to continue . . .
```

Internal RAID Configuration Parameters

```
*****
* MYLEX Disk Array Controller - Configuration Utility *
*****
```

CONFIGURATION INFORMATION OF :
=====

6 Channel - 128 Target eXtremeRAID 2000 #0 Firmware version 6.00

PHYSICAL PACK INFORMATION :
=====

```
Pack 0 : [ 0:15] [ 1:15]
Pack 1 : [ 2: 0] [ 2: 1] [ 2: 2] [ 2: 3] [ 2: 4] [ 2: 5] [ 2: 6] [
2: 8] [ 2: 9] [ 2:10] [ 2:11] [ 2:12] [ 2:13] [ 2:14] [ 2:15]
```

SYSTEM DRIVE INFORMATION :
=====

Number of System Drives = 2

Sys Drv#	Phy. Size(GB)	Raid Level	Eff. Size(GB)	Write Policy	State
0	118.836	1	118.836	Thru	Online
1	234.691	5	234.691	Thru	Online

PHYSICAL DEVICE INFORMATION
=====

Chan:Targ	Type	Vendor	Model	Version	Size(GB)	Status
0: 15	Disk	IFT	3101	0222	118.836	Online
1: 15	Disk	IFT	3101	0222	118.836	Online
2: 0	Disk	UNISYS	018200MAG3182LC	0608	16.764	Online
2: 1	Disk	UNISYS	018200MAG3182LC	0608	16.764	Online

2: 2	Disk	UNISYS	018200MAG3182LC	0608	16.764	Online
2: 3	Disk	UNISYS	018200MAG3182LC	0608	16.764	Online
2: 4	Disk	UNISYS	018200MAG3182LC	0608	16.764	Online
2: 5	Disk	UNISYS	018200MAG3182LC	0608	16.764	Online
2: 6	Disk	UNISYS	018200MAG3182LC	0608	16.764	Online
2: 8	Disk	UNISYS	018200MAG3182LC	0608	16.764	Online
2: 9	Disk	UNISYS	018200MAG3182LC	0608	16.764	Online
2: 10	Disk	UNISYS	018200MAG3182LC	0608	16.764	Online
2: 11	Disk	UNISYS	018200MAG3182LC	0608	16.764	Online
2: 12	Disk	UNISYS	018200MAG3182LC	0608	16.764	Online
2: 13	Disk	UNISYS	018200MAG3182LC	0608	16.764	Online
2: 14	Disk	UNISYS	018200MAG3182LC	0608	16.764	Online
2: 15	Disk	UNISYS	018200MAG3182LC	0608	16.764	Online

```
*****
* MYLEX Disk Array Controller - Configuration Utility *
*****
```

CONFIGURATION INFORMATION OF :
=====

6 Channel - 128 Target eXtremeRAID 2000 #1 Firmware version 6.00

PHYSICAL PACK INFORMATION :
=====

```
Pack 0 : [ 1: 0] [ 1: 1] [ 1: 2] [ 1: 3] [ 1: 4] [ 1: 5] [ 1: 6] [
1: 8] [ 1: 9] [ 1:10] [ 1:11] [ 1:12] [ 1:13] [ 1:14] [ 1:15]
```

SYSTEM DRIVE INFORMATION :
=====

Number of System Drives = 1

Sys Drv#	Phy. Size(GB)	Raid Level	Eff. Size(GB)	Write Policy	State
0	234.691	5	234.691	Thru	Online

PHYSICAL DEVICE INFORMATION
=====

Chan:Targ	Type	Vendor	Model	Version	Size(GB)	Status
1: 0	Disk	UNISYS	018200MAG3182LC	0608	16.764	Online
1: 1	Disk	UNISYS	018200MAG3182LC	0608	16.764	Online
1: 2	Disk	UNISYS	018200MAG3182LC	0608	16.764	Online
1: 3	Disk	UNISYS	018200MAG3182LC	0608	16.764	Online
1: 4	Disk	UNISYS	018200MAG3182LC	0608	16.764	Online
1: 5	Disk	UNISYS	018200MAG3182LC	0608	16.764	Online
1: 6	Disk	UNISYS	018200MAG3182LC	0608	16.764	Online
1: 8	Disk	UNISYS	018200MAG3182LC	0608	16.764	Online
1: 9	Disk	UNISYS	018200MAG3182LC	0608	16.764	Online
1: 10	Disk	UNISYS	018200MAG3182LC	0608	16.764	Online
1: 11	Disk	UNISYS	018200MAG3182LC	0608	16.764	Online
1: 12	Disk	UNISYS	018200MAG3182LC	0608	16.764	Online
1: 13	Disk	UNISYS	018200MAG3182LC	0608	16.764	Online
1: 14	Disk	UNISYS	018200MAG3182LC	0608	16.764	Online
1: 15	Disk	UNISYS	018200MAG3182LC	0608	16.764	Online

* MYLEX Disk Array Controller - Configuration Utility *

CONFIGURATION INFORMATION OF :
=====

6 Channel - 128 Target eXtremeRAID 2000 #0 Firmware version 6.00

PHYSICAL PACK INFORMATION :
=====

Pack 0 : [0: 8] [0: 9] [0:10] [0:11] [0:12] [0:13] [0:14] [0:15] [1: 0] [1: 1] [1: 2] [1: 3] [1: 4]
Pack 1 : [1: 5] [1: 6] [1: 8] [1: 9] [1:10] [1:11] [1:12] [1:13] [1:14] [1:15] [2: 0] [2: 1] [2: 2]
Pack 2 : [2: 3] [2: 4] [2: 5] [2: 8] [2: 9] [2:10] [2:11] [2:12] [2:13] [2:14] [2:15] [3: 0] [3: 1]
Pack 3 : [3: 2] [3: 3] [3: 4] [3: 5] [3: 6] [3: 8] [3: 9] [3:10] [3:11] [3:12] [3:13] [3:14] [3:15]

SYSTEM DRIVE INFORMATION :
=====

Number of System Drives = 1

Sys Drv#	Phy. Size(GB)	Raid Level	Eff. Size(GB)	Write Policy	State
0	871.711	0	871.711	Thru	Online

PHYSICAL DEVICE INFORMATION
=====

Chan:Targ	Type	Vendor	Model	Version	Size(GB)	Status
0: 8	Disk	UNISYS	018200MAG3182LC	0610	16.764	Online
0: 9	Disk	UNISYS	018200MAG3182LC	0610	16.764	Online
0: 10	Disk	UNISYS	018200MAG3182LC	0610	16.764	Online
0: 11	Disk	UNISYS	018200MAG3182LC	0610	16.764	Online
0: 12	Disk	UNISYS	018200MAG3182LC	0610	16.764	Online
0: 13	Disk	UNISYS	018200MAG3182LC	0608	16.764	Online
0: 14	Disk	UNISYS	018200MAG3182LC	0608	16.764	Online
0: 15	Disk	UNISYS	018200MAG3182LC	0608	16.764	Online
1: 0	Disk	UNISYS	018200MAG3182LC	0608	16.764	Online
1: 1	Disk	UNISYS	018200MAG3182LC	0608	16.764	Online
1: 2	Disk	UNISYS	018200MAG3182LC	0608	16.764	Online
1: 3	Disk	UNISYS	018200MAG3182LC	0608	16.764	Online
1: 4	Disk	UNISYS	018200MAG3182LC	0608	16.764	Online
1: 5	Disk	UNISYS	018200MAG3182LC	0608	16.764	Online
1: 6	Disk	UNISYS	018200MAG3182LC	0610	16.764	Online
1: 8	Disk	UNISYS	018200MAG3182LC	0608	16.764	Online
1: 9	Disk	UNISYS	018200MAG3182LC	0608	16.764	Online
1: 10	Disk	UNISYS	018200MAG3182LC	0608	16.764	Online
1: 11	Disk	UNISYS	018200MAG3182LC	0608	16.764	Online
1: 12	Disk	UNISYS	018200MAG3182LC	0608	16.764	Online
1: 13	Disk	UNISYS	018200MAG3182LC	0608	16.764	Online
1: 14	Disk	UNISYS	018200MAG3182LC	0608	16.764	Online

1: 15	Disk	UNISYS	018200MAG3182LC	0608	16.764	Online
2: 0	Disk	UNISYS	018200MAG3182LC	0608	16.764	Online
2: 1	Disk	UNISYS	018200MAG3182LC	0608	16.764	Online
2: 2	Disk	UNISYS	018200MAG3182LC	0608	16.764	Online
2: 3	Disk	UNISYS	018200MAG3182LC	0608	16.764	Online
2: 4	Disk	UNISYS	018200MAG3182LC	0608	16.764	Online
2: 5	Disk	UNISYS	018200MAG3182LC	0610	16.764	Online
2: 8	Disk	UNISYS	018200MAG3182LC	0608	16.764	Online
2: 9	Disk	UNISYS	018200MAG3182LC	0608	16.764	Online
2: 10	Disk	UNISYS	018200MAG3182LC	0608	16.764	Online
2: 11	Disk	UNISYS	018200MAG3182LC	0608	16.764	Online
2: 12	Disk	UNISYS	018200MAG3182LC	0610	16.764	Online
2: 13	Disk	UNISYS	018200MAG3182LC	0610	16.764	Online
2: 14	Disk	UNISYS	018200MAG3182LC	0608	16.764	Online
2: 15	Disk	UNISYS	018200MAG3182LC	0608	16.764	Online
3: 0	Disk	UNISYS	018200MAG3182LC	0610	16.764	Online
3: 1	Disk	UNISYS	018200MAG3182LC	0610	16.764	Online
3: 2	Disk	UNISYS	018200MAG3182LC	0610	16.764	Online
3: 3	Disk	UNISYS	018200MAG3182LC	0610	16.764	Online
3: 4	Disk	UNISYS	018200MAG3182LC	0610	16.764	Online
3: 5	Disk	UNISYS	018200MAG3182LC	0610	16.764	Online
3: 6	Disk	UNISYS	018200MAG3182LC	0608	16.764	Online
3: 8	Disk	UNISYS	018200MAG3182LC	0610	16.764	Online
3: 9	Disk	UNISYS	018200MAG3182LC	0610	16.764	Online
3: 10	Disk	UNISYS	018200MAG3182LC	0610	16.764	Online
3: 11	Disk	UNISYS	018200MAG3182LC	0610	16.764	Online
3: 12	Disk	UNISYS	018200MAG3182LC	0610	16.764	Online
3: 13	Disk	UNISYS	018200MAG3182LC	0608	16.764	Online
3: 14	Disk	UNISYS	018200MAG3182LC	0610	16.764	Online
3: 15	Disk	UNISYS	018200MAG3182LC	0610	16.764	Online

* MYLEX Disk Array Controller - Configuration Utility *

CONFIGURATION INFORMATION OF :
=====

6 Channel - 128 Target eXtremeRAID 2000 #1 Firmware version 6.00

PHYSICAL PACK INFORMATION :
=====

Pack 0 : [0: 0] [0: 1] [0: 2] [0: 3] [0: 4] [0: 5] [0: 6] [0: 8] [0: 9] [0:10] [0:11] [0:12] [0:13]
Pack 1 : [0:14] [0:15] [1: 0] [1: 1] [1: 2] [1: 3] [1: 4] [1: 5] [1: 6] [1: 8] [1: 9] [1:10] [1:11]
Pack 2 : [1:12] [1:13] [1:14] [1:15] [2: 0] [2: 1] [2: 2] [2: 3] [2: 4] [2: 5] [2: 8] [2: 9] [2:10]
Pack 3 : [2:11] [2:12] [2:13] [2:14] [2:15] [3: 8] [3: 9] [3:10] [3:11] [3:12] [3:13] [3:14] [3:15]

SYSTEM DRIVE INFORMATION :
=====

Number of System Drives = 1

Sys Drv#	Phy. Size(GB)	Raid Level	Eff. Size(GB)	Write Policy	State
----------	---------------	------------	---------------	--------------	-------

===== 0 871.711 0 871.711 Thru Online

PHYSICAL DEVICE INFORMATION

=====

Chan:Targ	Type	Vendor	Model	Version	Size(GB)	Status
0: 0	Disk	UNISYS	018200MAG3182LC	0608	16.764	Online
0: 1	Disk	UNISYS	018200MAG3182LC	0608	16.764	Online
0: 2	Disk	UNISYS	018200MAG3182LC	0608	16.764	Online
0: 3	Disk	UNISYS	018200MAG3182LC	0608	16.764	Online
0: 4	Disk	UNISYS	018200MAG3182LC	0608	16.764	Online
0: 5	Disk	UNISYS	018200MAG3182LC	0610	16.764	Online
0: 6	Disk	UNISYS	018200MAG3182LC	0610	16.764	Online
0: 8	Disk	UNISYS	018200MAG3182LC	0610	16.764	Online
0: 9	Disk	UNISYS	018200MAG3182LC	0610	16.764	Online
0: 10	Disk	UNISYS	018200MAG3182LC	0610	16.764	Online
0: 11	Disk	UNISYS	018200MAG3182LC	0610	16.764	Online
0: 12	Disk	UNISYS	018200MAG3182LC	0610	16.764	Online
0: 13	Disk	UNISYS	018200MAG3182LC	0610	16.764	Online
0: 14	Disk	UNISYS	018200MAG3182LC	0610	16.764	Online
0: 15	Disk	UNISYS	018200MAG3182LC	0610	16.764	Online
1: 0	Disk	UNISYS	018200MAG3182LC	0610	16.764	Online
1: 1	Disk	UNISYS	018200MAG3182LC	0610	16.764	Online
1: 2	Disk	UNISYS	018200MAG3182LC	0610	16.764	Online
1: 3	Disk	UNISYS	018200MAG3182LC	0610	16.764	Online
1: 4	Disk	UNISYS	018200MAG3182LC	0610	16.764	Online
1: 5	Disk	UNISYS	018200MAG3182LC	0610	16.764	Online
1: 6	Disk	UNISYS	018200MAG3182LC	0610	16.764	Online
1: 8	Disk	UNISYS	018200MAG3182LC	0610	16.764	Online
1: 9	Disk	UNISYS	018200MAG3182LC	0610	16.764	Online
1: 10	Disk	UNISYS	018200MAG3182LC	0610	16.764	Online
1: 11	Disk	UNISYS	018200MAG3182LC	0610	16.764	Online
1: 12	Disk	UNISYS	018200MAG3182LC	0610	16.764	Online
1: 13	Disk	UNISYS	018200MAG3182LC	0610	16.764	Online
1: 14	Disk	UNISYS	018200MAG3182LC	0610	16.764	Online
1: 15	Disk	UNISYS	018200MAG3182LC	0610	16.764	Online
2: 0	Disk	UNISYS	018200MAG3182LC	0610	16.764	Online
2: 1	Disk	UNISYS	018200MAG3182LC	0610	16.764	Online
2: 2	Disk	UNISYS	018200MAG3182LC	0610	16.764	Online
2: 3	Disk	UNISYS	018200MAG3182LC	0610	16.764	Online
2: 4	Disk	UNISYS	018200MAG3182LC	0610	16.764	Online
2: 5	Disk	UNISYS	018200MAG3182LC	0608	16.764	Online
2: 8	Disk	UNISYS	018200MAG3182LC	0610	16.764	Online
2: 9	Disk	UNISYS	018200MAG3182LC	0610	16.764	Online
2: 10	Disk	UNISYS	018200MAG3182LC	0610	16.764	Online
2: 11	Disk	UNISYS	018200MAG3182LC	0610	16.764	Online
2: 12	Disk	UNISYS	018200MAG3182LC	0610	16.764	Online
2: 13	Disk	UNISYS	018200MAG3182LC	0610	16.764	Online
2: 14	Disk	UNISYS	018200MAG3182LC	0610	16.764	Online
2: 15	Disk	UNISYS	018200MAG3182LC	0610	16.764	Online
3: 8	Disk	UNISYS	018200MAG3182LC	0610	16.764	Online
3: 9	Disk	UNISYS	018200MAG3182LC	0610	16.764	Online
3: 10	Disk	UNISYS	018200MAG3182LC	0610	16.764	Online
3: 11	Disk	UNISYS	018200MAG3182LC	0610	16.764	Online
3: 12	Disk	UNISYS	018200MAG3182LC	0610	16.764	Online
3: 13	Disk	UNISYS	018200MAG3182LC	0610	16.764	Online
3: 14	Disk	UNISYS	018200MAG3182LC	0610	16.764	Online

3: 15 Disk UNISYS 018200MAG3182LC 0608 16.764 Online

* MYLEX Disk Array Controller - Configuration Utility *

CONFIGURATION INFORMATION OF :

=====

6 Channel - 128 Target eXtremeRAID 2000 #0 Firmware version 6.00

PHYSICAL PACK INFORMATION :

=====

Pack 0 : [0: 8] [0: 9] [0:10] [0:11] [0:12] [0:13] [0:14] [0:15] [1: 0] [1: 1] [1: 2] [1: 3] [1: 4]
Pack 1 : [1: 5] [1: 6] [1: 8] [1: 9] [1:10] [1:11] [1:12] [1:13] [1:14] [1:15] [2: 0] [2: 1] [2: 2]
Pack 2 : [2: 3] [2: 4] [2: 5] [2: 6] [2: 8] [2: 9] [2:10] [2:11] [2:12] [2:13] [2:14] [2:15] [3: 0]
Pack 3 : [3: 1] [3: 2] [3: 3] [3: 4] [3: 5] [3: 8] [3: 9] [3:10] [3:11] [3:12] [3:13] [3:14] [3:15]

SYSTEM DRIVE INFORMATION :

=====

Number of System Drives = 1

Sys Drv#	Phy. Size(GB)	Raid Level	Eff. Size(GB)	Write Policy	State
0	871.711	0	871.711	Thru	Online

PHYSICAL DEVICE INFORMATION

=====

Chan:Targ	Type	Vendor	Model	Version	Size(GB)	Status
0: 8	Disk	UNISYS	018200MAG3182LC	0610	16.764	Online
0: 9	Disk	UNISYS	018200MAG3182LC	0610	16.764	Online
0: 10	Disk	UNISYS	018200MAG3182LC	0610	16.764	Online
0: 11	Disk	UNISYS	018200MAG3182LC	0610	16.764	Online
0: 12	Disk	UNISYS	018200MAG3182LC	0610	16.764	Online
0: 13	Disk	UNISYS	018200MAG3182LC	0610	16.764	Online
0: 14	Disk	UNISYS	018200MAG3182LC	0610	16.764	Online
0: 15	Disk	UNISYS	018200MAG3182LC	0610	16.764	Online
1: 0	Disk	UNISYS	018200MAG3182LC	0610	16.764	Online
1: 1	Disk	UNISYS	018200MAG3182LC	0610	16.764	Online
1: 2	Disk	UNISYS	018200MAG3182LC	0610	16.764	Online
1: 3	Disk	UNISYS	018200MAG3182LC	0610	16.764	Online
1: 4	Disk	UNISYS	018200MAG3182LC	0610	16.764	Online
1: 5	Disk	UNISYS	018200MAG3182LC	0610	16.764	Online
1: 6	Disk	UNISYS	018200MAG3182LC	0610	16.764	Online
1: 8	Disk	UNISYS	018200MAG3182LC	0610	16.764	Online
1: 9	Disk	UNISYS	018200MAG3182LC	0610	16.764	Online
1: 10	Disk	UNISYS	018200MAG3182LC	0610	16.764	Online
1: 11	Disk	UNISYS	018200MAG3182LC	0610	16.764	Online
1: 12	Disk	UNISYS	018200MAG3182LC	0610	16.764	Online
1: 13	Disk	UNISYS	018200MAG3182LC	0610	16.764	Online

```

1: 14 Disk UNISYS 018200MAG3182LC 0610 16.764 Online
1: 15 Disk UNISYS 018200MAG3182LC 0610 16.764 Online
2: 0 Disk UNISYS 018200MAG3182LC 0610 16.764 Online
2: 1 Disk UNISYS 018200MAG3182LC 0610 16.764 Online
2: 2 Disk UNISYS 018200MAG3182LC 0610 16.764 Online
2: 3 Disk UNISYS 018200MAG3182LC 0610 16.764 Online
2: 4 Disk UNISYS 018200MAG3182LC 0610 16.764 Online
2: 5 Disk UNISYS 018200MAG3182LC 0610 16.764 Online
2: 6 Disk UNISYS 018200MAG3182LC 0610 16.764 Online
2: 8 Disk UNISYS 018200MAG3182LC 0610 16.764 Online
2: 9 Disk UNISYS 018200MAG3182LC 0610 16.764 Online
2: 10 Disk UNISYS 018200MAG3182LC 0610 16.764 Online
2: 11 Disk UNISYS 018200MAG3182LC 0610 16.764 Online
2: 12 Disk UNISYS 018200MAG3182LC 0610 16.764 Online
2: 13 Disk UNISYS 018200MAG3182LC 0610 16.764 Online
2: 14 Disk UNISYS 018200MAG3182LC 0610 16.764 Online
2: 15 Disk UNISYS 018200MAG3182LC 0610 16.764 Online
3: 0 Disk UNISYS 018200MAG3182LC 0610 16.764 Online
3: 1 Disk UNISYS 018200MAG3182LC 0610 16.764 Online
3: 2 Disk UNISYS 018200MAG3182LC 0610 16.764 Online
3: 3 Disk UNISYS 018200MAG3182LC 0610 16.764 Online
3: 4 Disk UNISYS 018200MAG3182LC 0610 16.764 Online
3: 5 Disk UNISYS 018200MAG3182LC 0610 16.764 Online
3: 8 Disk UNISYS 018200MAG3182LC 0610 16.764 Online
3: 9 Disk UNISYS 018200MAG3182LC 0610 16.764 Online
3: 10 Disk UNISYS 018200MAG3182LC 0610 16.764 Online
3: 11 Disk UNISYS 018200MAG3182LC 0610 16.764 Online
3: 12 Disk UNISYS 018200MAG3182LC 0610 16.764 Online
3: 13 Disk UNISYS 018200MAG3182LC 0610 16.764 Online
3: 14 Disk UNISYS 018200MAG3182LC 0610 16.764 Online
3: 15 Disk UNISYS 018200MAG3182LC 0610 16.764 Online

```

```

*****
* MYLEX Disk Array Controller - Configuration Utility *
*****

```

CONFIGURATION INFORMATION OF :

```

=====
6 Channel - 128 Target eXtremeRAID 2000 #1 Firmware version 6.00

```

PHYSICAL PACK INFORMATION :

```

=====
Pack 0 : [ 0: 8] [ 0: 9] [ 0:10] [ 0:11] [ 0:12] [ 0:13] [ 0:14] [
0:15] [ 1: 0] [ 1: 1] [ 1: 2] [ 1: 3] [ 1: 4]
Pack 1 : [ 1: 5] [ 1: 6] [ 1: 8] [ 1: 9] [ 1:10] [ 1:11] [ 1:12] [
1:13] [ 1:14] [ 1:15] [ 2: 0] [ 2: 1] [ 2: 2]
Pack 2 : [ 2: 3] [ 2: 4] [ 2: 5] [ 2: 6] [ 2: 8] [ 2: 9] [ 2:10] [
2:11] [ 2:12] [ 2:13] [ 2:14] [ 2:15] [ 3: 0]
Pack 3 : [ 3: 1] [ 3: 2] [ 3: 3] [ 3: 4] [ 3: 5] [ 3: 8] [ 3: 9] [
3:10] [ 3:11] [ 3:12] [ 3:13] [ 3:14] [ 3:15]

```

SYSTEM DRIVE INFORMATION :

```

=====
Number of System Drives = 1

```

```

Sys Drv#  Phy. Size(GB)  Raid Level  Eff. Size(GB)  Write Policy  State
=====  =====
0          871.711          0          871.711          Thru      Online

```

PHYSICAL DEVICE INFORMATION

```

=====
Chan:Targ Type      Vendor      Model          Version  Size(GB)  Status
=====  =====  =====  =====  =====  =====  =====
0: 8 Disk UNISYS 018200MAG3182LC 0610 16.764 Online
0: 9 Disk UNISYS 018200MAG3182LC 0608 16.764 Online
0: 10 Disk UNISYS 018200MAG3182LC 0610 16.764 Online
0: 11 Disk UNISYS 018200MAG3182LC 0610 16.764 Online
0: 12 Disk UNISYS 018200MAG3182LC 0610 16.764 Online
0: 13 Disk UNISYS 018200MAG3182LC 0610 16.764 Online
0: 14 Disk UNISYS 018200MAG3182LC 0610 16.764 Online
0: 15 Disk UNISYS 018200MAG3182LC 0610 16.764 Online
1: 0 Disk UNISYS 018200MAG3182LC 0610 16.764 Online
1: 1 Disk UNISYS 018200MAG3182LC 0610 16.764 Online
1: 2 Disk UNISYS 018200MAG3182LC 0610 16.764 Online
1: 3 Disk UNISYS 018200MAG3182LC 0610 16.764 Online
1: 4 Disk UNISYS 018200MAG3182LC 0610 16.764 Online
1: 5 Disk UNISYS 018200MAG3182LC 0610 16.764 Online
1: 6 Disk UNISYS 018200MAG3182LC 0610 16.764 Online
1: 8 Disk UNISYS 018200MAG3182LC 0610 16.764 Online
1: 9 Disk UNISYS 018200MAG3182LC 0610 16.764 Online
1: 10 Disk UNISYS 018200MAG3182LC 0610 16.764 Online
1: 11 Disk UNISYS 018200MAG3182LC 0610 16.764 Online
1: 12 Disk UNISYS 018200MAG3182LC 0610 16.764 Online
1: 13 Disk UNISYS 018200MAG3182LC 0610 16.764 Online
1: 14 Disk UNISYS 018200MAG3182LC 0610 16.764 Online
1: 15 Disk UNISYS 018200MAG3182LC 0610 16.764 Online
2: 0 Disk UNISYS 018200MAG3182LC 0610 16.764 Online
2: 1 Disk UNISYS 018200MAG3182LC 0610 16.764 Online
2: 2 Disk UNISYS 018200MAG3182LC 0610 16.764 Online
2: 3 Disk UNISYS 018200MAG3182LC 0610 16.764 Online
2: 4 Disk UNISYS 018200MAG3182LC 0610 16.764 Online
2: 5 Disk UNISYS 018200MAG3182LC 0610 16.764 Online
2: 6 Disk UNISYS 018200MAG3182LC 0610 16.764 Online
2: 8 Disk UNISYS 018200MAG3182LC 0610 16.764 Online
2: 9 Disk UNISYS 018200MAG3182LC 0610 16.764 Online
2: 10 Disk UNISYS 018200MAG3182LC 0610 16.764 Online
2: 11 Disk UNISYS 018200MAG3182LC 0610 16.764 Online
2: 12 Disk UNISYS 018200MAG3182LC 0610 16.764 Online
2: 13 Disk UNISYS 018200MAG3182LC 0610 16.764 Online
2: 14 Disk UNISYS 018200MAG3182LC 0610 16.764 Online
2: 15 Disk UNISYS 018200MAG3182LC 0610 16.764 Online
3: 0 Disk UNISYS 018200MAG3182LC 0610 16.764 Online
3: 1 Disk UNISYS 018200MAG3182LC 0610 16.764 Online
3: 2 Disk UNISYS 018200MAG3182LC 0610 16.764 Online
3: 3 Disk UNISYS 018200MAG3182LC 0610 16.764 Online
3: 4 Disk UNISYS 018200MAG3182LC 0610 16.764 Online
3: 5 Disk UNISYS 018200MAG3182LC 0610 16.764 Online
3: 8 Disk UNISYS 018200MAG3182LC 0610 16.764 Online
3: 9 Disk UNISYS 018200MAG3182LC 0610 16.764 Online
3: 10 Disk UNISYS 018200MAG3182LC 0610 16.764 Online
3: 11 Disk UNISYS 018200MAG3182LC 0610 16.764 Online
3: 12 Disk UNISYS 018200MAG3182LC 0610 16.764 Online
3: 13 Disk UNISYS 018200MAG3182LC 0610 16.764 Online

```

```
3: 14 Disk      UNISYS  018200MAG3182LC 0610  16.764 Online
3: 15 Disk      UNISYS  018200MAG3182LC 0610  16.764 Online
```

```
*****
* MYLEX Disk Array Controller - Configuration Utility *
*****
```

CONFIGURATION INFORMATION OF :
=====

6 Channel - 128 Target eXtremeRAID 2000 #1 Firmware version 6.00

PHYSICAL PACK INFORMATION :
=====

```
Pack 0 : [ 0: 0] [ 0: 1] [ 0: 2] [ 0: 3] [ 0: 4] [ 0: 5] [ 0: 6] [
0: 8] [ 0: 9] [ 0:10] [ 0:11] [ 0:12] [ 0:13]
Pack 1 : [ 0:14] [ 0:15] [ 1: 0] [ 1: 1] [ 1: 2] [ 1: 3] [ 1: 4] [
1: 5] [ 1: 6] [ 1: 8] [ 1: 9] [ 1:10] [ 1:11]
Pack 2 : [ 1:12] [ 1:13] [ 1:14] [ 1:15] [ 2: 0] [ 2: 1] [ 2: 2] [
2: 3] [ 2: 4] [ 2: 5] [ 2: 8] [ 2: 9] [ 2:10]
Pack 3 : [ 2:11] [ 2:12] [ 2:13] [ 2:14] [ 2:15] [ 3: 8] [ 3: 9] [
3:10] [ 3:11] [ 3:12] [ 3:13] [ 3:14] [ 3:15]
```

SYSTEM DRIVE INFORMATION :
=====

Number of System Drives = 1

Sys Drv#	Phy. Size(GB)	Raid Level	Eff. Size(GB)	Write Policy	State
=====	=====	=====	=====	=====	=====
0	871.711	0	871.711	Thru	Online

PHYSICAL DEVICE INFORMATION
=====

Chan:Targ	Type	Vendor	Model	Version	Size(GB)	Status
=====	=====	=====	=====	=====	=====	=====
0: 0	Disk	UNISYS	018200MAG3182LC	0610	16.764	Online
0: 1	Disk	UNISYS	018200MAG3182LC	0610	16.764	Online
0: 2	Disk	UNISYS	018200MAG3182LC	0610	16.764	Online
0: 3	Disk	UNISYS	018200MAG3182LC	0610	16.764	Online
0: 4	Disk	UNISYS	018200MAG3182LC	0610	16.764	Online
0: 5	Disk	UNISYS	018200MAG3182LC	0610	16.764	Online
0: 6	Disk	UNISYS	018200MAG3182LC	0608	16.764	Online
0: 8	Disk	UNISYS	018200MAG3182LC	0610	16.764	Online
0: 9	Disk	UNISYS	018200MAG3182LC	0610	16.764	Online
0: 10	Disk	UNISYS	018200MAG3182LC	0610	16.764	Online
0: 11	Disk	UNISYS	018200MAG3182LC	0610	16.764	Online
0: 12	Disk	UNISYS	018200MAG3182LC	0610	16.764	Online
0: 13	Disk	UNISYS	018200MAG3182LC	0610	16.764	Online
0: 14	Disk	UNISYS	018200MAG3182LC	0610	16.764	Online
0: 15	Disk	UNISYS	018200MAG3182LC	0610	16.764	Online
1: 0	Disk	UNISYS	018200MAG3182LC	0608	16.764	Online
1: 1	Disk	UNISYS	018200MAG3182LC	0608	16.764	Online
1: 2	Disk	UNISYS	018200MAG3182LC	0608	16.764	Online
1: 3	Disk	UNISYS	018200MAG3182LC	0610	16.764	Online
1: 4	Disk	UNISYS	018200MAG3182LC	0610	16.764	Online

1: 5	Disk	UNISYS	018200MAG3182LC	0610	16.764	Online
1: 6	Disk	UNISYS	018200MAG3182LC	0610	16.764	Online
1: 8	Disk	UNISYS	018200MAG3182LC	0608	16.764	Online
1: 9	Disk	UNISYS	018200MAG3182LC	0608	16.764	Online
1: 10	Disk	UNISYS	018200MAG3182LC	0608	16.764	Online
1: 11	Disk	UNISYS	018200MAG3182LC	0608	16.764	Online
1: 12	Disk	UNISYS	018200MAG3182LC	0608	16.764	Online
1: 13	Disk	UNISYS	018200MAG3182LC	0608	16.764	Online
1: 14	Disk	UNISYS	018200MAG3182LC	0610	16.764	Online
1: 15	Disk	UNISYS	018200MAG3182LC	0610	16.764	Online
2: 0	Disk	UNISYS	018200MAG3182LC	0610	16.764	Online
2: 1	Disk	UNISYS	018200MAG3182LC	0610	16.764	Online
2: 2	Disk	UNISYS	018200MAG3182LC	0610	16.764	Online
2: 3	Disk	UNISYS	018200MAG3182LC	0610	16.764	Online
2: 4	Disk	UNISYS	018200MAG3182LC	0610	16.764	Online
2: 5	Disk	UNISYS	018200MAG3182LC	0610	16.764	Online
2: 8	Disk	UNISYS	018200MAG3182LC	0608	16.764	Online
2: 9	Disk	UNISYS	018200MAG3182LC	0608	16.764	Online
2: 10	Disk	UNISYS	018200MAG3182LC	0608	16.764	Online
2: 11	Disk	UNISYS	018200MAG3182LC	0608	16.764	Online
2: 12	Disk	UNISYS	018200MAG3182LC	0608	16.764	Online
2: 13	Disk	UNISYS	018200MAG3182LC	0608	16.764	Online
2: 14	Disk	UNISYS	018200MAG3182LC	0610	16.764	Online
2: 15	Disk	UNISYS	018200MAG3182LC	0610	16.764	Online
3: 8	Disk	UNISYS	018200MAG3182LC	0610	16.764	Online
3: 9	Disk	UNISYS	018200MAG3182LC	0610	16.764	Online
3: 10	Disk	UNISYS	018200MAG3182LC	0610	16.764	Online
3: 11	Disk	UNISYS	018200MAG3182LC	0610	16.764	Online
3: 12	Disk	UNISYS	018200MAG3182LC	0610	16.764	Online
3: 13	Disk	UNISYS	018200MAG3182LC	0610	16.764	Online
3: 14	Disk	UNISYS	018200MAG3182LC	0610	16.764	Online
3: 15	Disk	UNISYS	018200MAG3182LC	0610	16.764	Online

External RAID Configuration Parameters

```
*****
*      Unisys Ultra-Wide RAID Controller      OSM1200-RAD      *
*****
```

CPU type: 5X86-133 (WB)
Serial Number 3056383
IFT 3101
Firmware version 2.22V
Bootcode version 1.12G
Total cache: 32MB (EDO)

- Cache	Write Back:	enabled
	optimization:	sequential (128K stripe size)
- Raid	Rebuild Priority:	low
	Write Priority	on Initialization: disabled
		on Rebuild: disabled
		on Normal: disabled

- SCSI SCSI Motor Spin-Up Disable
 Power-Up SCSI Reset Enable
 SMART Disabled

Physical Drives

Slot	Chl	Id	Capacity	Status	XferRate	Vendor/Product	Id/Rev
1	8	17429 MB	online	83 MB	UNISYS	018200MAG3182LC	0610
1	9	17429 MB	online	83 MB	UNISYS	018200MAG3182LC	0610
1	10	17429 MB	online	83 MB	UNISYS	018200MAG3182LC	0610
1	11	17429 MB	online	83 MB	UNISYS	018200MAG3182LC	0610
1	12	17429 MB	online	83 MB	UNISYS	018200MAG3182LC	0610
1	13	17429 MB	online	83 MB	UNISYS	018200MAG3182LC	0610
1	14	17429 MB	online	83 MB	UNISYS	018200MAG3182LC	0610

Logical Drives

ID	RAIDLevel	Capacity	Status	# Drives	# On-line	# Spares	# Failed
D02756E	RAID 0	122003MB	Good	7	7	0	0

Volume

Logical Volume Partition table
ID D02756E Capacity 122003 MB

Idx	Base Offset	Part Size
0	0 MB	122003 MB

Host LUN Assignment

SCSI	Chl	LUN	LVIDx	PortIdx	Capacity
	2	0	0	0	122003 MB

* Unisys Ultra-Wide RAID Controller OSM1200-RAD *

CPU type: 5X86-133(WB)
Serial Number 3056390
IFT 3101
Firmware version 2.22V
Bootcode version 1.12G
Total cache: 32MB (EDO)

- Cache Write Back: enabled
 optimization: sequential (128K stripe size)

- Raid Rebuild Priority: low
 Write Priority on Initialization: disabled
 on Rebuild: disabled
 on Normal: disabled

- SCSI SCSI Motor Spin-Up Disable

Power-Up SCSI Reset Enable
SMART Disabled

Physical Drives

Slot	Chl	Id	Capacity	Status	XferRate	Vendor/Product	Id/Rev
1	8	17429 MB	online	83 MB	UNISYS	018200MAG3182LC	0610
1	9	17429 MB	online	83 MB	UNISYS	018200MAG3182LC	0610
1	10	17429 MB	online	83 MB	UNISYS	018200MAG3182LC	0610
1	11	17429 MB	online	83 MB	UNISYS	018200MAG3182LC	0610
1	12	17429 MB	online	83 MB	UNISYS	018200MAG3182LC	0610
1	13	17429 MB	online	83 MB	UNISYS	018200MAG3182LC	0610
1	14	17429 MB	online	83 MB	UNISYS	018200MAG3182LC	0610

Logical Drives

ID	RAIDLevel	Capacity	Status	# Drives	# On-line	# Spares	# Failed
46CE84DF	RAID 0	122003MB	Good	7	7	0	0

Volume

Logical Volume Partition table
ID 46CE84DF Capacity 122003 MB

Idx	Base Offset	Part Size
0	0 MB	122003 MB

Host LUN Assignment

SCSI	Chl	LUN	LVIDx	PortIdx	Capacity
	0	0	0	0	122003 MB

Configuration of Log Drives

A single Mylex ExtremeRAID 2000 controller was used in the SUT for the mirrored log drives. Half of the drives were in one disk cage connected to one channel of the controller and half were in a second disk cage connected to a second channel of the controller. The controller implemented the RAID 1 mirroring across the two channels. Write caching was disabled on both the controller and on all the physical drives themselves.

Two OSM311000-LR disk cages, which include one OSM1200-RAD SCSI-to-SCSI RAID controller each, were used for the log. Each of these controllers implemented RAID 0 striping on the seven 18GB drives that were in each disk cage, so that the ExtremeRAID 2000 controller in the SUT saw just two large disks'. Each of the OSM1200-RAD controllers had a 32MB cache. Configuration options were set for Write

Back caching and Optimized for Sequential IO. The OSM1200-RAD controllers used an algorithm that ensured that cached write data was held for no more than a fraction of a minute before being written to the physical drives.

For the priced configuration, each of the disk cages contained two redundant power supplies. Only one was required to be functional to keep the OSM1200-RAD controller and disk drives operational. A UPS was priced to provide power to one power supply in each disk cage. The second power supply in each disk cage was connected to normal wall power. Thus neither interruption of power nor failure of the UPS would affect the two log disk cages (or their controllers and disks). Since the two disk cages were completely independent of each other, this configuration ensured that there was no single point of failure in writing to the log.

Windows 2000 Datacenter Server Configuration Information

System Information report written at: 02/13/2000 11:45:08 AM

[System Information]

[Following are sub-categories of this main category]

[System Summary]

Item	Value
OS Name	Microsoft Windows 2000 Datacenter Server
Version	5.0.2195 Build 2195
OS Manufacturer	Microsoft Corporation
System Name	SHILOH8
System Manufacturer	INTEL
System Model	OCPRF100
System Type	X86-based PC
Processor	x86 Family 6 Model 7 Stepping 3 GenuineIntel ~550 Mhz
Processor	x86 Family 6 Model 7 Stepping 3 GenuineIntel ~550 Mhz
Processor	x86 Family 6 Model 7 Stepping 3 GenuineIntel ~550 Mhz
Processor	x86 Family 6 Model 7 Stepping 3 GenuineIntel ~550 Mhz
Processor	x86 Family 6 Model 7 Stepping 3 GenuineIntel ~550 Mhz
Processor	x86 Family 6 Model 7 Stepping 3 GenuineIntel ~550 Mhz
Processor	x86 Family 6 Model 7 Stepping 3 GenuineIntel ~550 Mhz
BIOS Version	OCPRF100- PhoenixBIOS 4.0 Release 6.0
Windows Directory	V:\WIN2K
System Directory	V:\WIN2K\System32
Boot Device	\Device\Harddisk0\Partition1
Locale	United States
User Name	SHILOH8\Administrator
Time Zone	Pacific Standard Time
Total Physical Memory	32,505,124 KB
Available Physical Memory	192,404 KB
Total Virtual Memory	66,735,512 KB
Available Virtual Memory	2,442,296 KB
Page File Space	34,230,388 KB

Page File V:\pagefile.sys

[Hardware Resources]

[Following are sub-categories of this main category]

[Conflicts/Sharing]

Resource	Device
IRQ 10	Compaq PCI Hotplug Controller
IRQ 10	Compaq PCI Hotplug Controller
IRQ 10	Compaq PCI Hotplug Controller
IRQ 10	Compaq PCI Hotplug Controller

[DMA]

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

[Forced Hardware]

Device PNP Device ID
No Forced Hardware

[I/O]

Address Range	Device	Status
0x0000-0x0CF7	PCI bus	OK
0x0000-0x0CF7	Direct memory access controller	OK
0x0000-0x0CF7	PCI bus	OK
0x0D00-0x2000	PCI bus	OK
0x9000-0xFFFF	PCI bus	OK
0x1000-0x10FF	Symbios Logic 896, 22910 PCI SCSI Adapter	OK
0x1400-0x14FF	Symbios Logic 896, 22910 PCI SCSI Adapter	OK
0x03B0-0x03BB	Cirrus Logic 5446 Compatible Graphics Adapter	OK
0x03C0-0x03DF	Cirrus Logic 5446 Compatible Graphics Adapter	OK
0x0A79-0x0A79	ISAPNP Read Data Port	OK
0x0279-0x0279	ISAPNP Read Data Port	OK
0x0274-0x0277	ISAPNP Read Data Port	OK
0x1820-0x182F	Intel(r) 82371AB/EB PCI Bus Master IDE Controller	OK
0x01F0-0x01F7	Primary IDE Channel	OK
0x03F6-0x03F6	Primary IDE Channel	OK
0x1800-0x181F	Intel 82371AB/EB PCI to USB Universal Host Controller	OK
0x00B3-0x00B3	Motherboard resources	OK
0x0C10-0x0C3F	Motherboard resources	OK
0x0CA8-0x0CAF	Motherboard resources	OK
0x0CC0-0x0CCF	Motherboard resources	OK
0x0010-0x001F	Direct memory access controller	OK
0x0080-0x009F	Direct memory access controller	OK
0x00C0-0x00DF	Direct memory access controller	OK
0x0070-0x0077	System CMOS/real time clock	OK
0x0020-0x0021	Programmable interrupt controller	OK
0x0024-0x0025	Programmable interrupt controller	OK
0x0028-0x0029	Programmable interrupt controller	OK
0x002C-0x002D	Programmable interrupt controller	OK
0x0030-0x0031	Programmable interrupt controller	OK
0x0034-0x0035	Programmable interrupt controller	OK

0x0038-0x0039	Programmable interrupt controller	OK
0x003C-0x003D	Programmable interrupt controller	OK
0x00A0-0x00A1	Programmable interrupt controller	OK
0x00A4-0x00A5	Programmable interrupt controller	OK
0x00A8-0x00A9	Programmable interrupt controller	OK
0x00AC-0x00AD	Programmable interrupt controller	OK
0x00B0-0x00B1	Programmable interrupt controller	OK
0x00B4-0x00B5	Programmable interrupt controller	OK
0x00B8-0x00B9	Programmable interrupt controller	OK
0x00BC-0x00BD	Programmable interrupt controller	OK
0x04D0-0x04D1	Programmable interrupt controller	OK
0x00F0-0x00FF	Numeric data processor	OK
0x0040-0x0043	System timer	OK
0x0050-0x0053	System timer	OK
0x0061-0x0061	System speaker	OK
0x0060-0x0060	Standard 101/102-Key or Microsoft Natural PS/2 Keyboard	OK
0x0064-0x0064	Standard 101/102-Key or Microsoft Natural PS/2 Keyboard	OK
0x03F2-0x03F5	Standard floppy disk controller	OK
0x03F7-0x03F7	Standard floppy disk controller	OK
0x03F8-0x03FF	Communications Port (COM1)	OK
0x0378-0x037B	Printer Port (LPT1)	OK
0x02F8-0x02FF	Communications Port (COM2)	OK
0x2000-0x4FFF	PCI bus	OK
0x2000-0x4FFF	DEC 21154 PCI to PCI bridge	OK
0x2000-0x4FFF	Mylex eXtremeRAID 2000 Disk Array Controller	OK
0x3000-0x3FFF	DEC 21154 PCI to PCI bridge	OK
0x3000-0x3FFF	Mylex eXtremeRAID 2000 Disk Array Controller	OK
0x4000-0x4FFF	DEC 21154 PCI to PCI bridge	OK
0x4000-0x4FFF	Mylex eXtremeRAID 2000 Disk Array Controller	OK
0x5000-0x6FFF	PCI bus	OK
0x5000-0x6FFF	DEC 21154 PCI to PCI bridge	OK
0x5000-0x6FFF	Mylex eXtremeRAID 2000 Disk Array Controller	OK
0x6000-0x6FFF	DEC 21154 PCI to PCI bridge	OK
0x6000-0x6FFF	Mylex eXtremeRAID 2000 Disk Array Controller	OK
0x7000-0x8FFF	PCI bus	OK
0x7000-0x8FFF	DEC 21154 PCI to PCI bridge	OK
0x7000-0x8FFF	Mylex eXtremeRAID 2000 Disk Array Controller	OK
0x8000-0x8FFF	DEC 21154 PCI to PCI bridge	OK
0x8000-0x8FFF	Mylex eXtremeRAID 2000 Disk Array Controller	OK

[IRQs]

IRQ Number	Device
9	Microsoft ACPI-Compliant System
10	Compaq PCI Hotplug Controller
10	Compaq PCI Hotplug Controller
10	Compaq PCI Hotplug Controller
10	Compaq PCI Hotplug Controller
54	cLAN Host Adapter
58	Symbios Logic 896, 22910 PCI SCSI Adapter
18	Symbios Logic 896, 22910 PCI SCSI Adapter
14	Primary IDE Channel
49	Intel 82371AB/EB PCI to USB Universal Host Controller
8	System CMOS/real time clock
13	Numeric data processor
1	Standard 101/102-Key or Microsoft Natural PS/2 Keyboard
12	Microsoft PS/2 Mouse

6	Standard floppy disk controller
4	Communications Port (COM1)
3	Communications Port (COM2)
50	Mylex eXtremeRAID 2000 Disk Array Controller
44	Mylex eXtremeRAID 2000 Disk Array Controller
36	Mylex eXtremeRAID 2000 Disk Array Controller
32	Mylex eXtremeRAID 2000 Disk Array Controller
28	Mylex eXtremeRAID 2000 Disk Array Controller
24	Mylex eXtremeRAID 2000 Disk Array Controller
20	Mylex eXtremeRAID 2000 Disk Array Controller

[Memory]

Range	Device	Status
0xA0000-0xBFFFF	PCI bus	OK
0xA0000-0xBFFFF	Cirrus Logic 5446 Compatible Graphics Adapter	OK
0xC8000-0xDFFFF	PCI bus	OK
0xE0000-0xFFFF	PCI bus	OK
0xC0000000-0xDBFFFFFFF	PCI bus	OK
0xFFFF00000-0xFFFFFFFF	PCI bus	OK
0xD8015000-0xD80150FF	Compaq PCI Hotplug Controller	OK
0xD8020000-0xD803FFFF	cLAN Host Adapter	OK
0xD8200000-0xD83FFFFF	cLAN Host Adapter	OK
0xD9000000-0xD9FFFFFFF	cLAN Host Adapter	OK
0xD8000000-0xD800FFFF	cLAN Host Adapter	OK
0xD8015400-0xD80157FF	Symbios Logic 896, 22910 PCI SCSI Adapter	OK
0xD8010000-0xD8011FFF	Symbios Logic 896, 22910 PCI SCSI Adapter	OK
0xD8015800-0xD8015BFF	Symbios Logic 896, 22910 PCI SCSI Adapter	OK
0xD8012000-0xD8013FFF	Symbios Logic 896, 22910 PCI SCSI Adapter	OK
0xDA000000-0xDBFFFFFFF	Cirrus Logic 5446 Compatible Graphics Adapter	OK
0xD8014000-0xD8014FFF	Cirrus Logic 5446 Compatible Graphics Adapter	OK
0xDC000000-0xE9FFFFFFF	PCI bus	OK
0xDC000000-0xE9FFFFFFF	Compaq PCI Hotplug Controller	OK
0xDE000000-0xDFFFFFFF	DEC 21154 PCI to PCI bridge	OK
0xDE000000-0xDFFFFFFF	Mylex eXtremeRAID 2000 Disk Array Controller	OK
0xE4000000-0xE5FFFFFFF	DEC 21154 PCI to PCI bridge	OK
0xE4000000-0xE5FFFFFFF	Mylex eXtremeRAID 2000 Disk Array Controller	OK
0xE0000000-0xE1FFFFFFF	DEC 21154 PCI to PCI bridge	OK
0xE0000000-0xE1FFFFFFF	Mylex eXtremeRAID 2000 Disk Array Controller	OK
0xE6000000-0xE7FFFFFFF	DEC 21154 PCI to PCI bridge	OK
0xE6000000-0xE7FFFFFFF	Mylex eXtremeRAID 2000 Disk Array Controller	OK
0xE2000000-0xE3FFFFFFF	DEC 21154 PCI to PCI bridge	OK
0xE2000000-0xE3FFFFFFF	Mylex eXtremeRAID 2000 Disk Array Controller	OK
0xE8000000-0xE9FFFFFFF	DEC 21154 PCI to PCI bridge	OK
0xE8000000-0xE9FFFFFFF	Mylex eXtremeRAID 2000 Disk Array Controller	OK
0xEA000000-0xF3FFFFFFF	PCI bus	OK
0xEA000000-0xF3FFFFFFF	Compaq PCI Hotplug Controller	OK
0xEC000000-0xEDFFFFFFF	DEC 21154 PCI to PCI bridge	OK
0xEC000000-0xEDFFFFFFF	Mylex eXtremeRAID 2000 Disk Array Controller	OK
0xF0000000-0xF1FFFFFFF	DEC 21154 PCI to PCI bridge	OK
0xF0000000-0xF1FFFFFFF	Mylex eXtremeRAID 2000 Disk Array Controller	OK
0xEE000000-0xEFFFFFFF	DEC 21154 PCI to PCI bridge	OK
0xEE000000-0xEFFFFFFF	Mylex eXtremeRAID 2000 Disk Array Controller	OK
0xF2000000-0xF3FFFFFFF	DEC 21154 PCI to PCI bridge	OK
0xF2000000-0xF3FFFFFFF	Mylex eXtremeRAID 2000 Disk Array Controller	OK
0xF4000000-0xFDFFFFFFF	PCI bus	OK

0xF4000000-0xFDFDFDFDF Compaq PCI Hotplug Controller OK
0xF6000000-0xF7FFFFFFF DEC 21154 PCI to PCI bridge OK
0xF6000000-0xF7FFFFFFF Mylex eXtremeRAID 2000 Disk Array Controller OK
0xFA000000-0xFBFFFFFFF DEC 21154 PCI to PCI bridge OK
0xFA000000-0xFBFFFFFFF Mylex eXtremeRAID 2000 Disk Array Controller OK
0xF8000000-0xF9FFFFFFF DEC 21154 PCI to PCI bridge OK
0xF8000000-0xF9FFFFFFF Mylex eXtremeRAID 2000 Disk Array Controller OK
0xFC000000-0xFDFDFDFDF DEC 21154 PCI to PCI bridge OK
0xFC000000-0xFDFDFDFDF Mylex eXtremeRAID 2000 Disk Array Controller OK

[Components]

[Following are sub-categories of this main category]

[Multimedia]

[Following are sub-categories of this main category]

[Audio Codecs]

Codec	Manufacturer	Description	Status	File	Version	Size
		Creation Date				
v:\win2k\system32\iac25_32.ax	Intel Corporation	Indeo® audio software	OK	V:\WIN2K\System32\IAC25_32.AX	2.05.53	195.00 KB (199,680 bytes)
		12/6/1999 4:00:00 PM				
v:\win2k\system32\msgsm32.acm	Microsoft Corporation		OK	V:\WIN2K\System32\MSGSM32.ACM	5.00.2134.1	22.27 KB (22,800 bytes)
		12/6/1999 4:00:00 PM				
v:\win2k\system32\msadp32.acm	Microsoft Corporation		OK	V:\WIN2K\System32\MSADP32.ACM	5.00.2134.1	14.77 KB (15,120 bytes)
		12/6/1999 4:00:00 PM				
v:\win2k\system32\lhacm.acm	Microsoft Corporation		OK	V:\WIN2K\System32\LHACM.ACM	4.4.3385	33.27 KB (34,064 bytes)
		1/19/2000 9:39:03 AM				
v:\win2k\system32\msg711.acm	Microsoft Corporation		OK	V:\WIN2K\System32\MSG711.ACM	5.00.2134.1	10.27 KB (10,512 bytes)
		12/6/1999 4:00:00 PM				
v:\win2k\system32\msg723.acm	Microsoft Corporation		OK	V:\WIN2K\System32\MSG723.ACM	4.4.3385	106.77 KB (109,328 bytes)
		1/19/2000 9:39:02 AM				
v:\win2k\system32\tsssoft32.acm	DSP GROUP, INC.		OK	V:\WIN2K\System32\TSSOFT32.ACM	1.01	9.27 KB (9,488 bytes)
		12/6/1999 4:00:00 PM				
v:\win2k\system32\imaadp32.acm	Microsoft Corporation		OK	V:\WIN2K\System32\IMAADP32.ACM	5.00.2134.1	16.27 KB (16,656 bytes)
		12/6/1999 4:00:00 PM				

[Video Codecs]

Codec	Manufacturer	Description	Status	File	Version	Size
		Creation Date				
v:\win2k\system32\ir50_32.dll	Intel Corporation	Indeo® video 5.10	OK	V:\WIN2K\System32\IR50_32.DLL	R.5.10.15.2.55	737.50 KB (755,200 bytes)
		12/6/1999 4:00:00 PM				
v:\win2k\system32\msh261.drv	Microsoft Corporation		OK	V:\WIN2K\System32\MSH261.DRV	4.4.3385	163.77 KB (167,696 bytes)
		1/19/2000 9:39:03 AM				

v:\win2k\system32\msh263.drv Microsoft Corporation OK
V:\WIN2K\System32\MSH263.DRV 4.4.3385 252.27 KB (258,320 bytes)
1/19/2000 9:38:30 AM
v:\win2k\system32\msvidc32.dll Microsoft Corporation OK
V:\WIN2K\System32\MSVIDC32.DLL 5.00.2134.1 27.27 KB (27,920 bytes)
12/6/1999 4:00:00 PM
v:\win2k\system32\msrle32.dll Microsoft Corporation OK
V:\WIN2K\System32\MSRLE32.DLL 5.00.2134.1 10.77 KB (11,024 bytes)
12/6/1999 4:00:00 PM
v:\win2k\system32\ir32_32.dll Intel(R) Corporation OK
V:\WIN2K\System32\IR32_32.DLL Not Available 194.50 KB (199,168 bytes)
12/6/1999 4:00:00 PM
v:\win2k\system32\iccvid.dll Radius Inc. OK
V:\WIN2K\System32\ICCVID.DLL 1.10.0.6 108.00 KB (110,592 bytes)
12/6/1999 4:00:00 PM

[CD-ROM]

Item	Value
Drive	W:
Description	CD-ROM Drive
Media Loaded	False
Media Type	CD-ROM
Name	TEAC CD-532E-B
Manufacturer	(Standard CD-ROM drives)
Status	OK
Transfer Rate	Not Available
SCSI Target ID	0
PNP Device ID	IDE\CDROMTEAC_CD-532E-B
	1.0A\5&201331&0&0.0.0

[Sound Device]

Item	Value
No sound devices	

[Display]

Item	Value
Name	Cirrus Logic 5446 Compatible Graphics Adapter
PNP Device ID	PCI\VEN_1013&DEV_00B8&SUBSYS_00B81013&REV_45\3&267A616A&0&60
Adapter Type	Cirrus Logic 5446BE, Cirrus Logic compatible
Adapter Description	Cirrus Logic 5446 Compatible Graphics Adapter
Adapter RAM	2.00 MB (2,097,152 bytes)
Installed Drivers	vga.sys,cirrus.sys,vga256.dll,vga64k.dll
Driver Version	5.00.2146.1
INF File	display.inf (cirrus section)
Color Planes	1
Color Table Entries	65536
Resolution	1024 x 768 x 75 hertz
Bits/Pixel	16

[Infrared]

Item	Value
No infrared devices	

[Input]

[Following are sub-categories of this main category]

[Keyboard]

Item	Value
Description	Standard 101/102-Key or Microsoft Natural PS/2 Keyboard
Name	Enhanced (101- or 102-key)
Layout	00000409
PNP Device ID	ACPI\PNP0303\4&2D147C4F&0
NumberOfFunctionKeys	12

[Pointing Device]

Item	Value
Hardware Type	Microsoft PS/2 Mouse
Number of Buttons	2
Status	OK
PNP Device ID	ACPI\PNP0F03\4&2D147C4F&0
Power Management Supported	False
Double Click Threshold	6
Handedness	Right Handed Operation

[Modem]

Item	Value
No modems	

[Network]

[Following are sub-categories of this main category]

[Adapter]

Item	Value
Name	[00000000] cLAN Host Adapter
Adapter Type	Ethernet 802.3
Product Name	cLAN Host Adapter
Installed	True
PNP Device ID	PCI\VEN_135B&DEV_0001&SUBSYS_00000000&REV_00\3&267A616A&0&28
Last Reset	2/12/2000 11:44:23 PM
Index	0
Service Name	GNINDIS
IP Address	192.167.91.218
IP Subnet	255.255.255.0
Default IP Gateway	Not Available
DHCP Enabled	False
DHCP Server	Not Available
DHCP Lease Expires	Not Available
DHCP Lease Obtained	Not Available
MAC Address	00:90:FA:00:08:3D
Service Name	GNINDIS
IRQ Number	54
Driver	v:\win2k\system32\drivers\gnindis.sys (22656, 3.85)

Name	[00000001] RAS Async Adapter
Adapter Type	Not Available
Product Name	RAS Async Adapter
Installed	True
PNP Device ID	Not Available
Last Reset	2/12/2000 11:44:23 PM
Index	1
Service Name	AsyncMac
IP Address	Not Available
IP Subnet	Not Available
Default IP Gateway	Not Available
DHCP Enabled	False
DHCP Server	Not Available
DHCP Lease Expires	Not Available
DHCP Lease Obtained	Not Available
MAC Address	Not Available
Service Name	Not Available

Name	[00000002] WAN Miniport (L2TP)
Adapter Type	Not Available
Product Name	WAN Miniport (L2TP)
Installed	True
PNP Device ID	ROOT\MS_L2TPMINIPORT\0000
Last Reset	2/12/2000 11:44:23 PM
Index	2
Service Name	Rasl2tp
IP Address	Not Available
IP Subnet	Not Available
Default IP Gateway	Not Available
DHCP Enabled	False
DHCP Server	Not Available
DHCP Lease Expires	Not Available
DHCP Lease Obtained	Not Available
MAC Address	Not Available
Service Name	Rasl2tp
Driver	v:\win2k\system32\drivers\rasl2tp.sys (50800, 5.00.2179.1)

Name	[00000003] WAN Miniport (PPTP)
Adapter Type	Wide Area Network (WAN)
Product Name	WAN Miniport (PPTP)
Installed	True
PNP Device ID	ROOT\MS_PPTPMINIPORT\0000
Last Reset	2/12/2000 11:44:23 PM
Index	3
Service Name	PptpMiniport
IP Address	Not Available
IP Subnet	Not Available
Default IP Gateway	Not Available
DHCP Enabled	False
DHCP Server	Not Available
DHCP Lease Expires	Not Available
DHCP Lease Obtained	Not Available
MAC Address	50:50:54:50:30:30
Service Name	PptpMiniport
Driver	v:\win2k\system32\drivers\raspptp.sys (47856, 5.00.2160.1)

Name	[00000004] Direct Parallel
Adapter Type	Not Available

Product Name Direct Parallel
 Installed True
 PNP Device ID ROOT\MS_PTMINIPORT\0000
 Last Reset 2/12/2000 11:44:23 PM
 Index 4
 Service Name Raspti
 IP Address Not Available
 IP Subnet Not Available
 Default IP Gateway Not Available
 DHCP Enabled False
 DHCP Server Not Available
 DHCP Lease Expires Not Available
 DHCP Lease Obtained Not Available
 MAC Address Not Available
 Service Name Raspti
 Driver v:\win2k\system32\drivers\raspti.sys (16880, 5.00.2146.1)

Name [00000005] WAN Miniport (IP)
 Adapter Type Not Available
 Product Name WAN Miniport (IP)
 Installed True
 PNP Device ID ROOT\MS_NDISWANIP\0000
 Last Reset 2/12/2000 11:44:23 PM
 Index 5
 Service Name NdisWan
 IP Address Not Available
 IP Subnet Not Available
 Default IP Gateway Not Available
 DHCP Enabled False
 DHCP Server Not Available
 DHCP Lease Expires Not Available
 DHCP Lease Obtained Not Available
 MAC Address Not Available
 Service Name NdisWan
 Driver v:\win2k\system32\drivers\ndiswan.sys (90768, 5.00.2184.1)

[Protocol]

Item Value
 Name MSAFD Tcpip [TCP/IP]
 ConnectionlessService False
 GuaranteesDelivery True
 GuaranteesSequencing True
 MaximumAddressSize 16 bytes
 MaximumMessageSize 0 bytes
 MessageOriented False
 MinimumAddressSize 16 bytes
 PseudoStreamOriented False
 SupportsBroadcasting False
 SupportsConnectData False
 SupportsDisconnectData False
 SupportsEncryption False
 SupportsExpeditedData True
 SupportsGracefulClosing True
 SupportsGuaranteedBandwidth False
 SupportsMulticasting False

Name MSAFD Tcpip [UDP/IP]

ConnectionlessService True
 GuaranteesDelivery False
 GuaranteesSequencing False
 MaximumAddressSize 16 bytes
 MaximumMessageSize 65467 bytes
 MessageOriented True
 MinimumAddressSize 16 bytes
 PseudoStreamOriented False
 SupportsBroadcasting True
 SupportsConnectData False
 SupportsDisconnectData False
 SupportsEncryption False
 SupportsExpeditedData False
 SupportsGracefulClosing False
 SupportsGuaranteedBandwidth False
 SupportsMulticasting True

Name RSVP UDP Service Provider
 ConnectionlessService True
 GuaranteesDelivery False
 GuaranteesSequencing False
 MaximumAddressSize 16 bytes
 MaximumMessageSize 65467 bytes
 MessageOriented True
 MinimumAddressSize 16 bytes
 PseudoStreamOriented False
 SupportsBroadcasting True
 SupportsConnectData False
 SupportsDisconnectData False
 SupportsEncryption True
 SupportsExpeditedData False
 SupportsGracefulClosing False
 SupportsGuaranteedBandwidth False
 SupportsMulticasting True

Name RSVP TCP Service Provider
 ConnectionlessService False
 GuaranteesDelivery True
 GuaranteesSequencing True
 MaximumAddressSize 16 bytes
 MaximumMessageSize 0 bytes
 MessageOriented False
 MinimumAddressSize 16 bytes
 PseudoStreamOriented False
 SupportsBroadcasting False
 SupportsConnectData False
 SupportsDisconnectData False
 SupportsEncryption True
 SupportsExpeditedData True
 SupportsGracefulClosing True
 SupportsGuaranteedBandwidth False
 SupportsMulticasting False

Name MSAFD NetBIOS [\Device\NetBT_Tcpip_{81DA4F1E-4986-453F-BCC4-3F7F0A045472}] SEQPACKE 3
 ConnectionlessService False
 GuaranteesDelivery True
 GuaranteesSequencing True
 MaximumAddressSize 20 bytes

MaximumMessageSize 64000 bytes
 MessageOriented True
 MinimumAddressSize 20 bytes
 PseudoStreamOriented False
 SupportsBroadcasting False
 SupportsConnectData False
 SupportsDisconnectData False
 SupportsEncryption False
 SupportsExpeditedData False
 SupportsGracefulClosing False
 SupportsGuaranteedBandwidth False
 SupportsMulticasting False

Name MSAFD NetBIOS [\Device\NetBT_Tcpip_{81DA4F1E-4986-453F-BCC4-3F7F0A045472}] DATAGRAM 3
 ConnectionlessService True
 GuaranteesDelivery False
 GuaranteesSequencing False
 MaximumAddressSize 20 bytes
 MaximumMessageSize 64000 bytes
 MessageOriented True
 MinimumAddressSize 20 bytes
 PseudoStreamOriented False
 SupportsBroadcasting True
 SupportsConnectData False
 SupportsDisconnectData False
 SupportsEncryption False
 SupportsExpeditedData False
 SupportsGracefulClosing False
 SupportsGuaranteedBandwidth False
 SupportsMulticasting False

Name MSAFD NetBIOS [\Device\NetBT_Tcpip_{BD4FD8F6-4FE2-45B9-B025-8CA8694939B9}] SEQUENCE 1
 ConnectionlessService False
 GuaranteesDelivery True
 GuaranteesSequencing True
 MaximumAddressSize 20 bytes
 MaximumMessageSize 64000 bytes
 MessageOriented True
 MinimumAddressSize 20 bytes
 PseudoStreamOriented False
 SupportsBroadcasting False
 SupportsConnectData False
 SupportsDisconnectData False
 SupportsEncryption False
 SupportsExpeditedData False
 SupportsGracefulClosing False
 SupportsGuaranteedBandwidth False
 SupportsMulticasting False

Name MSAFD NetBIOS [\Device\NetBT_Tcpip_{BD4FD8F6-4FE2-45B9-B025-8CA8694939B9}] DATAGRAM 1
 ConnectionlessService True
 GuaranteesDelivery False
 GuaranteesSequencing False
 MaximumAddressSize 20 bytes
 MaximumMessageSize 64000 bytes
 MessageOriented True

MinimumAddressSize 20 bytes
 PseudoStreamOriented False
 SupportsBroadcasting True
 SupportsConnectData False
 SupportsDisconnectData False
 SupportsEncryption False
 SupportsExpeditedData False
 SupportsGracefulClosing False
 SupportsGuaranteedBandwidth False
 SupportsMulticasting False

Name MSAFD NetBIOS [\Device\NetBT_Tcpip_{30D42AA3-6312-440E-9867-472318E0CF00}] SEQUENCE 2
 ConnectionlessService False
 GuaranteesDelivery True
 GuaranteesSequencing True
 MaximumAddressSize 20 bytes
 MaximumMessageSize 64000 bytes
 MessageOriented True
 MinimumAddressSize 20 bytes
 PseudoStreamOriented False
 SupportsBroadcasting False
 SupportsConnectData False
 SupportsDisconnectData False
 SupportsEncryption False
 SupportsExpeditedData False
 SupportsGracefulClosing False
 SupportsGuaranteedBandwidth False
 SupportsMulticasting False

Name MSAFD NetBIOS [\Device\NetBT_Tcpip_{30D42AA3-6312-440E-9867-472318E0CF00}] DATAGRAM 2
 ConnectionlessService True
 GuaranteesDelivery False
 GuaranteesSequencing False
 MaximumAddressSize 20 bytes
 MaximumMessageSize 64000 bytes
 MessageOriented True
 MinimumAddressSize 20 bytes
 PseudoStreamOriented False
 SupportsBroadcasting True
 SupportsConnectData False
 SupportsDisconnectData False
 SupportsEncryption False
 SupportsExpeditedData False
 SupportsGracefulClosing False
 SupportsGuaranteedBandwidth False
 SupportsMulticasting False

[WinSock]

Item Value
 File v:\win2k\system32\winsock.dll
 Version 3.10
 Size 2.80 KB (2,864 bytes)
 File v:\win2k\system32\wssock32.dll
 Version 5.00.2152.1

Size 21.27 KB (21,776 bytes)

[Ports]

[Following are sub-categories of this main category]

[Serial]

Item	Value
Name	COM1
Status	OK
PNP Device ID	ACPI\PNP0501\1
Maximum Input Buffer Size	0
Maximum Output Buffer Size	False
Settable Baud Rate	True
Settable Data Bits	True
Settable Flow Control	True
Settable Parity	True
Settable Parity Check	True
Settable Stop Bits	True
Settable RLSD	True
Supports RLSD	True
Supports 16 Bit Mode	False
Supports Special Characters	False
Baud Rate	9600
Bits/Byte	8
Stop Bits	1
Parity	None
Busy	0
Abort Read/Write on Error	0
Binary Mode Enabled	-1
Continue XMit on XOff	0
CTS Outflow Control	0
Discard NULL Bytes	0
DSR Outflow Control	0
DSR Sensitivity	0
DTR Flow Control Type	Enable
EOF Character	0
Error Replace Character	0
Error Replacement Enabled	0
Event Character	0
Parity Check Enabled	0
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
IRQ Number	4
I/O Port	0x03F8-0x03FF
Driver	v:\win2k\system32\drivers\serial.sys (62448, 5.00.2134.1)

Name	COM2
Status	OK
PNP Device ID	ACPI\PNP0501\2
Maximum Input Buffer Size	0
Maximum Output Buffer Size	False

Settable Baud Rate	True
Settable Data Bits	True
Settable Flow Control	True
Settable Parity	True
Settable Parity Check	True
Settable Stop Bits	True
Settable RLSD	True
Supports RLSD	True
Supports 16 Bit Mode	False
Supports Special Characters	False
Baud Rate	9600
Bits/Byte	8
Stop Bits	1
Parity	None
Busy	0
Abort Read/Write on Error	0
Binary Mode Enabled	-1
Continue XMit on XOff	0
CTS Outflow Control	0
Discard NULL Bytes	0
DSR Outflow Control	0
DSR Sensitivity	0
DTR Flow Control Type	Enable
EOF Character	0
Error Replace Character	0
Error Replacement Enabled	0
Event Character	0
Parity Check Enabled	0
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
IRQ Number	3
I/O Port	0x02F8-0x02FF
Driver	v:\win2k\system32\drivers\serial.sys (62448, 5.00.2134.1)

[Parallel]

Item	Value
Name	LPT1
PNP Device ID	ACPI\PNP0400\1

[Storage]

[Following are sub-categories of this main category]

[Drives]

Item	Value
Drive A:	
Description	3 1/2 Inch Floppy Drive
Drive C:	
Description	Local Fixed Disk

Compressed False
 File System FAT
 Size 2.00 GB (2,146,467,840 bytes)
 Free Space 1.31 GB (1,402,601,472 bytes)
 Volume Name SYSTEM
 Volume Serial Number F0358AA4
 Partition Disk #0, Partition #0
 Partition Size 2.00 GB (2,146,765,824 bytes)
 Starting Offset 32256 bytes
 Drive Description Disk drive
 Drive Manufacturer (Standard disk drives)
 Drive Model UNISYS 003665MAB3045SC SCSI Disk Device
 Drive BytesPerSector 512
 Drive MediaLoaded True
 Drive MediaType Fixed hard disk media
 Drive Partitions 2
 Drive SCSIbus 0
 Drive SCSILogicalUnit 0
 Drive SCSIPort 1
 Drive SCsITargetId 0
 Drive SectorsPerTrack 63
 Drive Size 4548579840 bytes
 Drive TotalCylinders 553
 Drive TotalSectors 8883945
 Drive TotalTracks 141015
 Drive TracksPerCylinder 255

Drive D:
 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 E:
 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 F:
 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 G:
 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 H:
 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 I:
 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 J:
 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 K:
 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 L:
 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 M:
 Description Local Fixed Disk
 Compressed False
 File System NTFS
 Size 234.68 GB (251,989,590,016 bytes)
 Free Space 85.20 GB (91,480,653,824 bytes)
 Volume Name Backup1
 Volume Serial Number C465C025
 Partition Disk #9, Partition #0
 Partition Size 234.68 GB (251,989,645,824 bytes)

Starting Offset 32256 bytes
 Drive Description \\.\PHYSICALDRIVE9
 Drive Manufacturer Not Available
 Drive Model Not Available
 Drive BytesPerSector 512
 Drive MediaLoaded True
 Drive MediaType Fixed hard disk media
 Drive Partitions 1
 Drive SCSIbus 4
 Drive SCSILogicalUnit 0
 Drive SCSIPort 9
 Drive SCSTargetId 1
 Drive SectorsPerTrack 63
 Drive Size 251997903360 bytes
 Drive TotalCylinders 30637
 Drive TotalSectors 492183405
 Drive TotalTracks 7812435
 Drive TracksPerCylinder 255

Drive N:
 Description Local Fixed Disk
 Compressed False
 File System NTFS
 Size 234.68 GB (251,989,590,016 bytes)
 Free Space 89.30 GB (95,883,689,984 bytes)
 Volume Name Backup2
 Volume Serial Number D4A1C928
 Partition Disk #2, Partition #0
 Partition Size 234.68 GB (251,989,645,824 bytes)
 Starting Offset 32256 bytes
 Drive Description \\.\PHYSICALDRIVE2
 Drive Manufacturer Not Available
 Drive Model Not Available
 Drive BytesPerSector 512
 Drive MediaLoaded True
 Drive MediaType Fixed hard disk media
 Drive Partitions 1
 Drive SCSIbus 4
 Drive SCSILogicalUnit 0
 Drive SCSIPort 3
 Drive SCSTargetId 0
 Drive SectorsPerTrack 63
 Drive Size 251997903360 bytes
 Drive TotalCylinders 30637
 Drive TotalSectors 492183405
 Drive TotalTracks 7812435
 Drive TracksPerCylinder 255

Drive O:
 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 P:
 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 False
 File System NTFS
 Size 2.24 GB (2,401,779,712 bytes)
 Free Space 23.28 MB (24,408,064 bytes)
 Volume Name W2K-Test
 Volume Serial Number B0C533C8
 Partition Disk #1, Partition #0
 Partition Size 2.24 GB (2,409,974,784 bytes)
 Starting Offset 32256 bytes
 Drive Description Disk drive
 Drive Manufacturer (Standard disk drives)
 Drive Model UNISYS 009100MAG3091LC SCSI Disk Device
 Drive BytesPerSector 512
 Drive MediaLoaded True
 Drive MediaType Fixed hard disk media
 Drive Partitions 2
 Drive SCSIbus 0
 Drive SCSILogicalUnit 0
 Drive SCSIPort 1
 Drive SCSTargetId 1
 Drive SectorsPerTrack 63
 Drive Size 9121835520 bytes
 Drive TotalCylinders 1109
 Drive TotalSectors 17816085
 Drive TotalTracks 282795
 Drive TracksPerCylinder 255

Drive V:
 Description Local Fixed Disk
 Compressed False
 File System NTFS
 Size 6.24 GB (6,703,599,616 bytes)
 Free Space 2.04 GB (2,185,424,896 bytes)
 Volume Name Win2K
 Volume Serial Number 2CB3AFCC
 Partition Disk #1, Partition #1
 Partition Size 6.24 GB (6,703,603,200 bytes)
 Starting Offset Not Available
 Drive Description Disk drive
 Drive Manufacturer (Standard disk drives)
 Drive Model UNISYS 009100MAG3091LC SCSI Disk Device
 Drive BytesPerSector 512
 Drive MediaLoaded True
 Drive MediaType Fixed hard disk media
 Drive Partitions 2
 Drive SCSIbus 0
 Drive SCSILogicalUnit 0
 Drive SCSIPort 1
 Drive SCSTargetId 1
 Drive SectorsPerTrack 63

Drive Size 9121835520 bytes
Drive TotalCylinders 1109
Drive TotalSectors 17816085
Drive TotalTracks 282795
Drive TracksPerCylinder 255

Drive Z:
Description Local Fixed Disk
Compressed False
File System NTFS
Size 2.24 GB (2,401,779,712 bytes)
Free Space 1.01 GB (1,088,794,624 bytes)
Volume Name testfiles
Volume Serial Number B0C533C8
Partition Disk #0, Partition #1
Partition Size 2.24 GB (2,401,781,760 bytes)
Starting Offset 2146798080 bytes
Drive Description Disk drive
Drive Manufacturer (Standard disk drives)
Drive Model UNISYS 003665MAB3045SC SCSI Disk Device
Drive BytesPerSector 512
Drive MediaLoaded True
Drive MediaType Fixed hard disk media
Drive Partitions 2
Drive SCSIbus 0
Drive SCSILogicalUnit 0
Drive SCSIPort 1
Drive SCSTargetId 0
Drive SectorsPerTrack 63
Drive Size 4548579840 bytes
Drive TotalCylinders 553
Drive TotalSectors 8883945
Drive TotalTracks 141015
Drive TracksPerCylinder 255

[SCSI]

Item Value
Name Symbios Logic 896, 22910 PCI SCSI Adapter
Caption Symbios Logic 896, 22910 PCI SCSI Adapter
Driver sym_hi
Status OK
PNP Device ID
PCI\VEN_1000&DEV_000B&SUBSYS_10001000&REV_05\3&267A616A&0&50
Device ID
PCI\VEN_1000&DEV_000B&SUBSYS_10001000&REV_05\3&267A616A&0&50
Device Map Not Available
Index Not Available
Max Number Controlled Not Available
IRQ Number 58
I/O Port 0x1000-0x10FF
Driver v:\win2k\system32\drivers\sym_hi.sys (21136, 5.00.2134.1)

Name Symbios Logic 896, 22910 PCI SCSI Adapter
Caption Symbios Logic 896, 22910 PCI SCSI Adapter
Driver sym_hi
Status OK

PNP Device ID
PCI\VEN_1000&DEV_000B&SUBSYS_10001000&REV_05\3&267A616A&0&51
Device ID
PCI\VEN_1000&DEV_000B&SUBSYS_10001000&REV_05\3&267A616A&0&51
Device Map Not Available
Index Not Available
Max Number Controlled Not Available
IRQ Number 18
I/O Port 0x1400-0x14FF
Driver v:\win2k\system32\drivers\sym_hi.sys (21136, 5.00.2134.1)

Name Mylex eXtremeRAID 2000 Disk Array Controller
Caption Mylex eXtremeRAID 2000 Disk Array Controller
Driver dac2w2k
Status OK
PNP Device ID
PCI\VEN_1069&DEV_BA56&SUBSYS_00401069&REV_00\4&20B2DAF0&0&4020
Device ID
PCI\VEN_1069&DEV_BA56&SUBSYS_00401069&REV_00\4&20B2DAF0&0&4020
Device Map Not Available
Index Not Available
Max Number Controlled Not Available
IRQ Number 50
I/O Port 0x2000-0x4FFF
Driver v:\win2k\system32\drivers\dac2w2k.sys (185568, 6.00-19)

Name Mylex eXtremeRAID 2000 Disk Array Controller
Caption Mylex eXtremeRAID 2000 Disk Array Controller
Driver dac2w2k
Status OK
PNP Device ID
PCI\VEN_1069&DEV_BA56&SUBSYS_00401069&REV_00\4&DE4D5E1&0&4028
Device ID
PCI\VEN_1069&DEV_BA56&SUBSYS_00401069&REV_00\4&DE4D5E1&0&4028
Device Map Not Available
Index Not Available
Max Number Controlled Not Available
IRQ Number 44
I/O Port 0x3000-0x3FFF
Driver v:\win2k\system32\drivers\dac2w2k.sys (185568, 6.00-19)

Name Mylex eXtremeRAID 2000 Disk Array Controller
Caption Mylex eXtremeRAID 2000 Disk Array Controller
Driver dac2w2k
Status OK
PNP Device ID
PCI\VEN_1069&DEV_BA56&SUBSYS_00401069&REV_00\4&2FBC1DEA&0&4038
Device ID
PCI\VEN_1069&DEV_BA56&SUBSYS_00401069&REV_00\4&2FBC1DEA&0&4038
Device Map Not Available
Index Not Available
Max Number Controlled Not Available
IRQ Number 36
I/O Port 0x4000-0x4FFF
Driver v:\win2k\system32\drivers\dac2w2k.sys (185568, 6.00-19)

Name Mylex eXtremeRAID 2000 Disk Array Controller
Caption Mylex eXtremeRAID 2000 Disk Array Controller
Driver dac2w2k

Status OK
 PNP Device ID
 PCI\VEN_1069&DEV_BA56&SUBSYS_00401069&REV_00\4&8C49857&0&4020
 Device ID
 PCI\VEN_1069&DEV_BA56&SUBSYS_00401069&REV_00\4&8C49857&0&4020
 Device Map Not Available
 Index Not Available
 Max Number Controlled Not Available
 IRQ Number 32
 I/O Port 0x5000-0x6FFF
 Driver v:\win2k\system32\drivers\dac2w2k.sys (185568, 6.00-19)

Name Mylex eXtremeRAID 2000 Disk Array Controller
 Caption Mylex eXtremeRAID 2000 Disk Array Controller
 Driver dac2w2k
 Status OK
 PNP Device ID
 PCI\VEN_1069&DEV_BA56&SUBSYS_00401069&REV_00\4&375C4928&0&4028
 Device ID
 PCI\VEN_1069&DEV_BA56&SUBSYS_00401069&REV_00\4&375C4928&0&4028
 Device Map Not Available
 Index Not Available
 Max Number Controlled Not Available
 IRQ Number 28
 I/O Port 0x6000-0x6FFF
 Driver v:\win2k\system32\drivers\dac2w2k.sys (185568, 6.00-19)

Name Mylex eXtremeRAID 2000 Disk Array Controller
 Caption Mylex eXtremeRAID 2000 Disk Array Controller
 Driver dac2w2k
 Status OK
 PNP Device ID
 PCI\VEN_1069&DEV_BA56&SUBSYS_00401069&REV_00\4&1B89A02&0&4020
 Device ID
 PCI\VEN_1069&DEV_BA56&SUBSYS_00401069&REV_00\4&1B89A02&0&4020
 Device Map Not Available
 Index Not Available
 Max Number Controlled Not Available
 IRQ Number 24
 I/O Port 0x7000-0x8FFF
 Driver v:\win2k\system32\drivers\dac2w2k.sys (185568, 6.00-19)

Name Mylex eXtremeRAID 2000 Disk Array Controller
 Caption Mylex eXtremeRAID 2000 Disk Array Controller
 Driver dac2w2k
 Status OK
 PNP Device ID
 PCI\VEN_1069&DEV_BA56&SUBSYS_00401069&REV_00\4&1CDF5718&0&4028
 Device ID
 PCI\VEN_1069&DEV_BA56&SUBSYS_00401069&REV_00\4&1CDF5718&0&4028
 Device Map Not Available
 Index Not Available
 Max Number Controlled Not Available
 IRQ Number 20
 I/O Port 0x8000-0x8FFF
 Driver v:\win2k\system32\drivers\dac2w2k.sys (185568, 6.00-19)

[Printing]

Name Port Name Server Name
 No printing information

[Problem Devices]

Device PNP Device ID Error Code
 Generic Packet Classifier ROOT\LEGACY_GPC\0000 22

[USB]

Device PNP Device ID
 Intel 82371AB/EB PCI to USB Universal Host Controller
 PCI\VEN_8086&DEV_7112&SUBSYS_00000000&REV_01\3&267A616A&0&7A
 USB Root Hub USB\ROOT_HUB\4&B5B4E1B&0

[Software Environment]

[Following are sub-categories of this main category]

[Drivers]

Name	Description	File	Type	Started	Start	Mode	State	Status
	Error Control	Accept	Pause	Accept	Stop			
abiosdsk	Abiosdsk		Not Available	Kernel	Driver	False		
	Disabled	Stopped	OK	Ignore	False	False		
abp480n5	abp480n5		Not Available	Kernel	Driver	False		
	Disabled	Stopped	OK	Normal	False	False		
acpi	Microsoft ACPI	Driver v:\win2k\system32\drivers\acpi.sys						Kernel
Driver	True	Boot	Running	OK	Normal	False	True	
acpiec	ACPIEC	v:\win2k\system32\drivers\acpiec.sys						Kernel Driver
	Disabled	Stopped	OK	Normal	False	False		False
adpu160m	adpu160m		Not Available	Kernel	Driver	False		
	Disabled	Stopped	OK	Normal	False	False		
afd	AFD Networking Support Environment							
	v:\win2k\system32\drivers\afd.sys							
	Running	OK	Normal	False	True			Auto
aha154x	Aha154x	Not Available	Kernel	Driver	False	Disabled		
	Stopped	OK	Normal	False	False			
aic116x	aic116x	Not Available	Kernel	Driver	False	Disabled		
	Stopped	OK	Normal	False	False			
aic78u2	aic78u2	Not Available	Kernel	Driver	False	Disabled		
	Stopped	OK	Normal	False	False			
aic78xx	aic78xx	Not Available	Kernel	Driver	False	Disabled		
	Stopped	OK	Normal	False	False			
ami0nt	ami0nt	Not Available	Kernel	Driver	False	Disabled		
	Stopped	OK	Normal	False	False			
amsint	amsint	Not Available	Kernel	Driver	False	Disabled		
	Stopped	OK	Normal	False	False			
asc	asc	Not Available	Kernel	Driver	False	Disabled		
	Stopped	OK	Normal	False	False			
asc3350p	asc3350p		Not Available	Kernel	Driver	False		
	Disabled	Stopped	OK	Normal	False	False		
asc3550	asc3550	Not Available	Kernel	Driver	False	Disabled		
	Stopped	OK	Normal	False	False			
asyncmac	RAS Asynchronous Media Driver							
	v:\win2k\system32\drivers\asyncmac.sys							Kernel Driver
	Manual	Stopped	OK	Normal	False	False		False

em	em	v:\win2k\system32\drivers\em.sys	Kernel Driver	True
System	Running OK	Normal False True		
fastfat	Fastfat v:\win2k\system32\drivers\fastfat.sys	File System Driver		
True	Disabled	Running OK	Normal False True	
fdl6_700	Fdl6_700	Not Available	Kernel Driver	False
	Disabled	Stopped OK	Normal False False	
fdc	Floppy Disk Controller Driver v:\win2k\system32\drivers\fdc.sys			
Kernel Driver	True	Manual Running OK	Normal False True	
fireport	fireport	Not Available	Kernel Driver	False
	Disabled	Stopped OK	Normal False False	
flashpnt	flashpnt	Not Available	Kernel Driver	False
	Disabled	Stopped OK	Normal False False	
flpydisk	Floppy Disk Driver			
	v:\win2k\system32\drivers\flpydisk.sys		Kernel Driver	True
Manual	Running OK	Normal False True		
ftdisk	Volume Manager Driver v:\win2k\system32\drivers\ftdisk.sys		Kernel	
Driver	True	Boot Running OK	Normal False True	
gamdrv	gamdrv v:\win2k\system32\drivers\gamdrv.sys		Kernel Driver	True
	Auto	Running OK	Normal False True	
gnindis	CLAN NDIS Driver v:\win2k\system32\drivers\gnindis.sys		Kernel	
Driver	True	Auto Running OK	Normal False True	
gninvipl	CLAN VIPL Service			
	v:\win2k\system32\drivers\gninvipl.sys		Kernel Driver	False
Manual	Stopped OK	Normal False False		
gnivia	CLAN VIA Driver v:\win2k\system32\drivers\gnivia.sys		Kernel	
Driver	True	Auto Running OK	Normal False True	
gpc	Generic Packet Classifier v:\win2k\system32\drivers\msgpc.sys			
	Kernel Driver	False Disabled	Stopped OK	Normal False False
i8042prt	i8042 Keyboard and PS/2 Mouse Port Driver			
	v:\win2k\system32\drivers\i8042prt.sys		Kernel Driver	True
System	Running OK	Normal False True		
ini910u	ini910u Not Available	Kernel Driver	False	Disabled
	Stopped OK	Normal False False		
intelide	IntelIde v:\win2k\system32\drivers\intelide.sys			
Kernel Driver	True	Boot Running OK	Normal False True	
interruptaffinityfilter	Interrupt Affinity Filter			
	v:\win2k\system32\drivers\intfilt.sys		Kernel Driver	True
Auto	Running OK	Normal False True		
ipfilterdriver	IP Traffic Filter Driver			
	v:\win2k\system32\drivers\ipfltdrv.sys		Kernel Driver	False
Manual	Stopped OK	Normal False False		
ipinip	IP in IP Tunnel Driver v:\win2k\system32\drivers\ipinip.sys		Kernel	
Driver	False	Manual Stopped OK	Normal False False	
ipnat	IP Network Address Translator v:\win2k\system32\drivers\ipnat.sys			
Kernel Driver	False	Manual Stopped OK	Normal False False	
ipsec	IPSEC driver v:\win2k\system32\drivers\ipsec.sys		Kernel Driver	
	False	Manual Stopped OK	Normal False False	
ipsraidn	ipsraidn	Not Available	Kernel Driver	False
	Disabled	Stopped OK	Normal False False	
isapnp	PnP ISA/EISA Bus Driver v:\win2k\system32\drivers\isapnp.sys			
Kernel Driver	True	Boot Running OK	Critical	False
True				
kbdclass	Keyboard Class Driver			
	v:\win2k\system32\drivers\kbdclass.sys		Kernel Driver	True
System	Running OK	Normal False True		
ksecdd	KSecDD v:\win2k\system32\drivers\ksecdd.sys		Kernel Driver	True
Boot	Running OK	Normal False True		

lbrtfdc	lbrtfdc	Not Available	Kernel Driver	False	System	Stopped	OK
	Ignore	False					
lp6nds35	lp6nds35	v:\win2k\system32\drivers\lp6nds35.sys					
	Kernel Driver	False	Disabled	Stopped	OK	Normal	False
	False						
macdisk	macdisk	v:\win2k\system32\drivers\macdwwk.sys	Kernel Driver	True			
	Boot	Running	OK	Normal	False	True	
mnmd	mnmd	v:\win2k\system32\drivers\mnmd.sys	Kernel Driver	True			
	System	Running	OK	Ignore	False	True	
modem	Modem	v:\win2k\system32\drivers\modem.sys	Kernel Driver	False			
	Manual	Stopped	OK	Ignore	False	False	
mouclass	Mouse Class Driver						
	v:\win2k\system32\drivers\mouclass.sys		Kernel Driver	True			
	System	Running	OK	Normal	False	True	
mountmgr	MountMgr	v:\win2k\system32\drivers\mountmgr.sys					
	Kernel Driver	True	Boot	Running	OK	Normal	False
mraid35x	mraid35x	Not Available	Kernel Driver	False			
	Disabled	Stopped	OK	Normal	False	False	
mrxsm	MRXSMB	v:\win2k\system32\drivers\mrxsm.sys	File System Driver				
	True	System	Running	OK	Normal	False	True
msfs	Msfs	v:\win2k\system32\drivers\msfs.sys	File System Driver				
	True	System	Running	OK	Normal	False	True
mskssrv	Microsoft Streaming Service Proxy						
	v:\win2k\system32\drivers\mskssrv.sys	Kernel Driver	False	Manual			
	Stopped	OK	Normal	False	False		
mspclock	Microsoft Streaming Clock Proxy						
	v:\win2k\system32\drivers\mspclock.sys	Kernel Driver	False				
	Manual	Stopped	OK	Normal	False	False	
mspqm	Microsoft Streaming Quality Manager Proxy						
	v:\win2k\system32\drivers\mspqm.sys	Kernel Driver	False	Manual			
	Stopped	OK	Normal	False	False		
mup	Mup	v:\win2k\system32\drivers\mup.sys	File System Driver				
	True	Boot	Running	OK	Normal	False	True
ncrc710	Not Available	Kernel Driver	False	Disabled			
	Stopped	OK	Normal	False	False		
ndis	NDIS System Driver	v:\win2k\system32\drivers\ndis.sys	Kernel				
Driver	True	Boot	Running	OK	Normal	False	True
ndistapi	Remote Access NDIS TAPI Driver						
	v:\win2k\system32\drivers\ndistapi.sys	Kernel Driver	True				
	Manual	Running	OK	Normal	False	True	
ndiswan	Remote Access NDIS WAN Driver						
	v:\win2k\system32\drivers\ndiswan.sys	Kernel Driver	True	Manual			
	Running	OK	Normal	False	True		
ndproxy	NDIS Proxy	v:\win2k\system32\drivers\ndproxy.sys	Kernel Driver				
	True	Manual	Running	OK	Normal	False	True
netbios	NetBIOS Interface	v:\win2k\system32\drivers\netbios.sys	File System Driver				
System	Driver	True	System	Running	OK	Normal	False
netbt	NetBios over Tcpip	v:\win2k\system32\drivers\netbt.sys	Kernel				
Driver	True	System	Running	OK	Normal	False	True
netdetect	NetDetect	v:\win2k\system32\drivers\netdetect.sys					
	Kernel Driver	False	Manual	Stopped	OK	Normal	False
npfs	Npfs	v:\win2k\system32\drivers\npfs.sys	File System Driver				
	True	System	Running	OK	Normal	False	True
ntfs	Ntfs	v:\win2k\system32\drivers\ntfs.sys	File System Driver				
	True	Disabled	Running	OK	Normal	False	True
null	Null	v:\win2k\system32\drivers\null.sys	Kernel Driver	True			
	System	Running	OK	Normal	False	True	

nwlkflt	IPX Traffic Filter Driver						
	v:\win2k\system32\drivers\nwlkflt.sys	Kernel Driver	False				
	Manual	Stopped	OK	Normal	False	False	
nwlkfwd	IPX Traffic Forwarder Driver						
	v:\win2k\system32\drivers\nwlkfwd.sys	Kernel Driver	False				
	Manual	Stopped	OK	Normal	False	False	
parallel	Parallel class driver						
	v:\win2k\system32\drivers\parallel.sys	Kernel Driver	True				
	Manual	Running	OK	Normal	False	True	
parport	Parallel port driver	v:\win2k\system32\drivers\parport.sys	Kernel				
Driver	True	System	Running	OK	Ignore	False	True
partmgr	PartMgr	v:\win2k\system32\drivers\partmgr.sys	Kernel Driver	True			
	Boot	Running	OK	Normal	False	True	
parvdm	ParVdm	v:\win2k\system32\drivers\parvdm.sys	Kernel Driver	True			
	Auto	Running	OK	Ignore	False	True	
pci	PCI Bus Driver	v:\win2k\system32\drivers\pci.sys	Kernel Driver				
	True	Boot	Running	OK	Critical	False	True
pcidump	PCIDump	Not Available	Kernel Driver	False	System	Stopped	OK
	Ignore	False	False				
pciide	PCIIde	Not Available	Kernel Driver	False	Disabled		
	Stopped	OK	Normal	False	False		
pcmcia	Pcmcia	v:\win2k\system32\drivers\pcmcia.sys	Kernel Driver	False			
	Disabled	Stopped	OK	Normal	False	False	
pdcomp	PDCOMP	Not Available	Kernel Driver	False	Manual	Stopped	OK
	Ignore	False	False				
pdframe	PDFRAME	Not Available	Kernel Driver	False	Manual	Stopped	OK
	Ignore	False	False				
pdreli	PDRELI	Not Available	Kernel Driver	False	Manual	Stopped	OK
	Ignore	False	False				
pdrframe	PDRFRAME	Not Available	Kernel Driver	False	Manual		
	Stopped	OK	Ignore	False	False		
pptpminiport	WAN Miniport (PPTP)						
	v:\win2k\system32\drivers\raspttp.sys	Kernel Driver	True	Manual			
	Running	OK	Normal	False	True		
ptilink	Direct Parallel Link Driver						
	v:\win2k\system32\drivers\ptilink.sys	Kernel Driver	True	Manual			
	Running	OK	Normal	False	True		
ql1080	ql1080	Not Available	Kernel Driver	False	Disabled		
	Stopped	OK	Normal	False	False		
ql10wnt	Ql10wnt	Not Available	Kernel Driver	False	Disabled		
	Stopped	OK	Normal	False	False		
ql1240	ql1240	Not Available	Kernel Driver	False	Disabled		
	Stopped	OK	Normal	False	False		
ql2100	ql2100	Not Available	Kernel Driver	False	Disabled		
	Stopped	OK	Normal	False	False		
ql2200	ql2200	v:\win2k\system32\drivers\ql2200.sys	Kernel Driver	False			
	Disabled	Stopped	OK	Normal	False	False	
qldirect	qldirect	v:\win2k\system32\drivers\qldirect.sys					
	Kernel Driver	False	Disabled	Stopped	OK	Normal	False
	False						
rasacd	Remote Access Auto Connection Driver						
	v:\win2k\system32\drivers\rasacd.sys	Kernel Driver	True	System			
	Running	OK	Normal	False	True		
rasl2tp	WAN Miniport (L2TP)	v:\win2k\system32\drivers\rasl2tp.sys	Kernel				
Driver	True	Manual	Running	OK	Normal	False	True
raspti	Direct Parallel	v:\win2k\system32\drivers\raspti.sys	Kernel				
Driver	True	Manual	Running	OK	Normal	False	True

```

rca      Microsoft Streaming Network Raw Channel Access
v:\win2k\system32\drivers\rca.sys Kernel Driver False Manual
Stopped OK Normal False False
rdbss    Rdbss v:\win2k\system32\drivers\rdbss.sys File System Driver
True System Running OK Normal False True
rdpwd    RDPWD v:\win2k\system32\drivers\rdpwd.sys Kernel Driver False
Manual Stopped OK Ignore False False
redbook  Digital CD Audio Playback Filter Driver
v:\win2k\system32\drivers\redbook.sys Kernel Driver False System
Stopped OK Normal False False
serenum  Serenum Filter Driver v:\win2k\system32\drivers\serenum.sys Kernel
Driver True Manual Running OK Normal False True
serial   Serial port driver v:\win2k\system32\drivers\serial.sys Kernel
Driver True System Running OK Ignore False True
sfloppy  Sfloppy v:\win2k\system32\drivers\sfloppy.sys Kernel Driver False
System Stopped OK Ignore False False
sglfb    sglfb v:\win2k\system32\drivers\sglfb.sys Kernel Driver False
System Stopped OK Normal False False
simbad   Simbad Not Available Kernel Driver False Disabled
Stopped OK Normal False False
sparrow  Sparrow Not Available Kernel Driver False Disabled
Stopped OK Normal False False
srv       Srv v:\win2k\system32\drivers\srv.sys File System Driver
True Manual Running OK Normal False True
swenum   Software Bus Driver v:\win2k\system32\drivers\swenum.sys Kernel
Driver True Manual Running OK Normal False True
symc810  symc810 Not Available Kernel Driver False Disabled
Stopped OK Normal False False
symc8xx  symc8xx Not Available Kernel Driver False Disabled
Stopped OK Normal False False
sym_hi   sym_hi v:\win2k\system32\drivers\sym_hi.sys Kernel Driver True
Boot Running OK Normal False True
sysdrv   Sysdrv v:\win2k\system32\drivers\sysdrv.sys Kernel Driver True
Auto Running OK Normal False True
tcpip    TCP/IP Protocol Driver v:\win2k\system32\drivers\tcpip.sys Kernel
Driver True System Running OK Normal False True
tdasync  TDASYNC v:\win2k\system32\drivers\tdasync.sys Kernel Driver False
Manual Stopped OK Ignore False False
tdipx    TDIPX v:\win2k\system32\drivers\tdipx.sys Kernel Driver False
Manual Stopped OK Ignore False False
tdnetb   TDNETB v:\win2k\system32\drivers\tdnetb.sys Kernel Driver False
Manual Stopped OK Ignore False False
tdpipe   TDPIPE v:\win2k\system32\drivers\tdpipe.sys Kernel Driver False
Manual Stopped OK Ignore False False
tdspx    TDSPX v:\win2k\system32\drivers\tdspx.sys Kernel Driver False
Manual Stopped OK Ignore False False
tdtcp    TDTCP v:\win2k\system32\drivers\tdtcp.sys Kernel Driver False
Manual Stopped OK Ignore False False
termdd   Terminal Device Driver v:\win2k\system32\drivers\termdd.sys Kernel
Driver False Disabled Stopped OK Normal False False
tga      Not Available Kernel Driver False System Stopped OK
Ignore False False
udfs     Udfs v:\win2k\system32\drivers\udfs.sys File System Driver
False Disabled Stopped OK Normal False False
uhcd     Microsoft USB Universal Host Controller Driver
v:\win2k\system32\drivers\uhcd.sys Kernel Driver True Manual
Running OK Normal False True
ultra66  ultra66 Not Available Kernel Driver False Disabled
Stopped OK Normal False False

```

```

update   Microcode Update Driver v:\win2k\system32\drivers\update.sys
Kernel Driver True Manual Running OK Normal False True
usbhub   Microsoft USB Standard Hub Driver
v:\win2k\system32\drivers\usbhub.sys Kernel Driver True Manual
Running OK Normal False True
vgasave  VgaSave v:\win2k\system32\drivers\vga.sys Kernel Driver False
System Stopped OK Ignore False False
wanarp   Remote Access IP ARP Driver v:\win2k\system32\drivers\wanarp.sys
Kernel Driver True Manual Running OK Normal False True
wdica    WDICA Not Available Kernel Driver False Manual Stopped OK
Ignore False False

```

[Environment Variables]

Variable	Value	User Name
ComSpec	%SystemRoot%\system32\cmd.exe	<SYSTEM>
HOME	V:/	<SYSTEM>
NUMBER_OF_PROCESSORS	8	<SYSTEM>
OS	Windows_NT	<SYSTEM>
Os2LibPath	%SystemRoot%\system32\os2\dll;	<SYSTEM>
Path	V:\WIN2K\system32;V:\WIN2K;V:\WIN2K\System32\Wbem;V:\mksnt;U:\INTE	
	L\EMON\bin;V:\Program Files\Microsoft SQL Server\80\Tools\BINN	
	<SYSTEM>	
PATHEXT	.COM;.EXE;.BAT;.CMD;.VBS;.VBE;.JS;.JSE;.WSF;.WSH	<SYSTEM>
PROCESSOR_ARCHITECTURE	x86	<SYSTEM>
PROCESSOR_IDENTIFIER	x86 Family 6 Model 7 Stepping 3, GenuineIntel	
	<SYSTEM>	
PROCESSOR_LEVEL	6	<SYSTEM>
PROCESSOR_REVISION	0703	<SYSTEM>
ROOTDIR	V:/	<SYSTEM>
SHELL	V:/mksnt/sh.exe	<SYSTEM>
TEMP	%SystemRoot%\TEMP	<SYSTEM>
TMP	%SystemRoot%\TEMP	<SYSTEM>
TMPDIR	V:/WIN2K/TEMP	<SYSTEM>
windir	%SystemRoot%	<SYSTEM>
TEMP	%USERPROFILE%\Local Settings\Temp	SHILOH8\Administrator
TMP	%USERPROFILE%\Local Settings\Temp	SHILOH8\Administrator

[Jobs]

[Following are sub-categories of this main category]

[Print]

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

[Network Connections]

Local Name	Remote Name	Type	Status	User Name
No network connections information				

[Running Tasks]

Name	Path	Process ID	Priority	Min Working Set	Max Working Set
Start Time	Version	Size	File Date		
system idle process	Not Available	0	0	Not Available	Not Available
Available	Not Available	Unknown	Unknown	Unknown	
system	Not Available	8	0	1413120	Not Available
	Unknown	Unknown	Unknown		
smss.exe	v:\win2k\system32\smss.exe	184	11	204800	
	1413120 2/13/2000 7:45:05 AM	5.00.2170.1	44.27 KB	(45,328 bytes)	12/6/1999 4:00:00 PM
csrss.exe	Not Available	212	13	Not Available	Not Available
	2/13/2000 7:45:12 AM	Unknown	Unknown	Unknown	
winlogon.exe	v:\win2k\system32\winlogon.exe	232	13	204800	
	1413120 2/13/2000 7:45:14 AM	5.00.2182.1	173.27 KB	(177,424 bytes)	12/6/1999 4:00:00 PM
services.exe	v:\win2k\system32\services.exe	260	9	204800	
	1413120 2/13/2000 7:45:15 AM	5.00.2134.1	86.77 KB	(88,848 bytes)	12/6/1999 4:00:00 PM
lsass.exe	v:\win2k\system32\lsass.exe	272	13	204800	
	1413120 2/13/2000 7:45:15 AM	5.00.2184.1	32.77 KB	(33,552 bytes)	12/6/1999 4:00:00 PM
gnconmgr.exe	v:\win2k\system32\gnconmgr.exe	400	8	204800	
	1413120 2/13/2000 7:45:37 AM	3.85 92.00 KB	(94,208 bytes)	2/3/2000 1:46:12 PM	
svchost.exe	v:\win2k\system32\svchost.exe	452	8	204800	
	1413120 2/13/2000 7:45:37 AM	5.00.2134.1	7.77 KB	(7,952 bytes)	12/6/1999 4:00:00 PM
snmp.exe	v:\win2k\system32\snmp.exe	468	8	204800	
	1413120 2/13/2000 7:45:37 AM	5.00.2173.1	29.77 KB	(30,480 bytes)	1/19/2000 9:36:57 AM
svchost.exe	v:\win2k\system32\svchost.exe	592	8	204800	
	1413120 2/13/2000 7:45:41 AM	5.00.2134.1	7.77 KB	(7,952 bytes)	12/6/1999 4:00:00 PM
winmgmt.exe	v:\win2k\system32\wbem\winmgmt.exe	604	8	204800	
	1413120 2/13/2000 7:45:41 AM	1.50.1085.0001	188.05 KB	(192,567 bytes)	12/6/1999 4:00:00 PM
svchost.exe	v:\win2k\system32\svchost.exe	724	8	204800	
	1413120 2/13/2000 7:45:53 AM	5.00.2134.1	7.77 KB	(7,952 bytes)	12/6/1999 4:00:00 PM
explorer.exe	v:\win2k\explorer.exe	740	8	204800	1413120
	2/13/2000 7:45:53 AM	5.00.2920.0000	232.77 KB	(238,352 bytes)	12/6/1999 4:00:00 PM
cmd.exe	v:\win2k\system32\cmd.exe	704	8	204800	1413120
	2/13/2000 7:47:42 AM	5.00.2144.1	230.77 KB	(236,304 bytes)	12/6/1999 4:00:00 PM
sqlservr.exe	v:\mssql75\mssql\binn\sqlservr.exe	808	13	204800	
	1413120 2/13/2000 7:47:42 AM	2000.01.20	6.59 MB	(6,909,992 bytes)	1/21/2000 5:46:11 PM
isqlw.exe	v:\program files\Microsoft sql server\80\tools\binn\isqlw.exe	796	8	204800	1413120
	2/13/2000 7:48:48 AM	2000.01.07	264.00 KB	(270,336 bytes)	12/13/1999 2:23:52 PM
mmc.exe	v:\win2k\system32\mmc.exe	728	8	204800	1413120
	2/13/2000 11:42:55 AM	5.00.2153.1	589.27 KB	(603,408 bytes)	12/6/1999 4:00:00 PM
cmd.exe	v:\win2k\system32\cmd.exe	668	8	204800	1413120
	2/13/2000 11:43:57 AM	5.00.2144.1	230.77 KB	(236,304 bytes)	12/6/1999 4:00:00 PM

Name	Version	Size	File Date	Manufacturer	Path
isql.exe	v:\program files\Microsoft sql server\80\tools\binn\isql.exe	1056	8	204800	1413120 2/13/2000 11:44:09 AM
	2000.01.07	96.00 KB	(98,304 bytes)		12/13/1999 2:23:59 PM
notepad.exe	v:\win2k\system32\notepad.exe	1168	8	204800	
	1413120 2/13/2000 11:44:39 AM	5.00.2140.1	49.77 KB	(50,960 bytes)	12/6/1999 4:00:00 PM
[Loaded Modules]					
notepad.exe	5.00.2140.1	49.77 KB	(50,960 bytes)		12/6/1999 4:00:00 PM
Microsoft Corporation	v:\win2k\system32\notepad.exe				
ntwdblib.dll	2000.01.07	268.06 KB	(274,489 bytes)		1/10/2000 4:40:57 PM
Microsoft Corporation	v:\win2k\system32\ntwdblib.dll				
isql.exe	2000.01.07	96.00 KB	(98,304 bytes)		12/13/1999 2:23:59 PM
Microsoft Corporation	v:\program files\Microsoft sql server\80\tools\binn\isql.exe				
wbemprox.dll	1.50.1085.0001	40.05 KB	(41,016 bytes)		12/6/1999 4:00:00 PM
Microsoft Corporation	v:\win2k\system32\wbem\wbemprox.dll				
mlang.dll	5.00.2920.0000	510.77 KB	(523,024 bytes)		12/6/1999 4:00:00 PM
Microsoft Corporation	v:\win2k\system32\mlang.dll				
rassapi.dll	5.00.2188.1	14.27 KB	(14,608 bytes)		12/6/1999 4:00:00 PM
Microsoft Corporation	v:\win2k\system32\rassapi.dll				
adsnt.dll	5.00.2191.1	194.27 KB	(198,928 bytes)		12/6/1999 4:00:00 PM
Microsoft Corporation	v:\win2k\system32\adsnt.dll				
dbghelp.dll	5.00.2195.1	159.27 KB	(163,088 bytes)		12/6/1999 4:00:00 PM
Microsoft Corporation	v:\win2k\system32\dbghelp.dll				
localsec.dll	5.00.2134.1	227.27 KB	(232,720 bytes)		12/6/1999 4:00:00 PM
Microsoft Corporation	v:\win2k\system32\localsec.dll				
devmgr.dll	5.00.2166.1	215.77 KB	(220,944 bytes)		12/6/1999 4:00:00 PM
Microsoft Corporation	v:\win2k\system32\devmgr.dll				
filemgmt.dll	5.00.2134.1	287.27 KB	(294,160 bytes)		12/6/1999 4:00:00 PM
Microsoft Corporation	v:\win2k\system32\filemgmt.dll				
pdh.dll	5.00.2174.1	143.27 KB	(146,704 bytes)		12/6/1999 4:00:00 PM
Microsoft Corporation	v:\win2k\system32\pdh.dll				
smlogcfg.dll	5.00.2163.1	273.27 KB	(279,824 bytes)		12/6/1999 4:00:00 PM
Microsoft Corporation	v:\win2k\system32\smlogcfg.dll				
cabinet.dll	5.00.2147.1	54.77 KB	(56,080 bytes)		12/6/1999 4:00:00 PM
Microsoft Corporation	v:\win2k\system32\cabinet.dll				
msinfo32.dll	5.00.2177.1	312.27 KB	(319,760 bytes)		1/19/2000 9:38:58 AM
Microsoft Corporation	v:\program files\common files\Microsoft shared\msinfo\msinfo32.dll				
riched20.dll	5.30.23.1200	421.27 KB	(431,376 bytes)		12/6/1999 4:00:00 PM
Microsoft Corporation	v:\win2k\system32\riched20.dll				
riched32.dll	5.00.2134.1	3.77 KB	(3,856 bytes)		12/6/1999 4:00:00 PM
Microsoft Corporation	v:\win2k\system32\riched32.dll				
els.dll	5.00.2175.1	151.27 KB	(154,896 bytes)		12/6/1999 4:00:00 PM
Microsoft Corporation	v:\win2k\system32\els.dll				
ntmsmgr.dll	1,0,0,1 427.77 KB	(438,032 bytes)			12/6/1999 4:00:00 PM
Microsoft Corporation and HighGround Systems, Inc.	v:\win2k\system32\ntmsmgr.dll				
mmfutil.dll	1.50.1085.0000	32.06 KB	(32,829 bytes)		12/6/1999 4:00:00 PM
Microsoft Corporation	v:\win2k\system32\mmfutil.dll				
logdrive.dll	1.50.1085.0000	200.06 KB	(204,863 bytes)		12/6/1999 4:00:00 PM
Microsoft Corporation	v:\win2k\system32\logdrive.dll				
dfrgres.dll	5.00.2150.1	27.50 KB	(28,160 bytes)		12/6/1999 4:00:00 PM
Executive Software International, Inc.	v:\win2k\system32\dfrgres.dll				

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dfrgsnap.dll 5.00.2150.1 41.77 KB (42,768 bytes) 12/6/1999
4:00:00 PM Executive Software International, Inc.
v:\win2k\system32\dfrgsnap.dll
dmdskres.dll 2191.1.296.2 119.00 KB (121,856 bytes) 12/6/1999
4:00:00 PM Microsoft Corp., VERITAS Software
v:\win2k\system32\dmdskres.dll
dmutil.dll 2191.1.296.2 41.77 KB (42,768 bytes) 12/6/1999
4:00:00 PM VERITAS Software Corp. v:\win2k\system32\dmutil.dll
ntmsapi.dll 5.00.1948.1 50.27 KB (51,472 bytes) 12/6/1999
4:00:00 PM Microsoft Corporation v:\win2k\system32\ntmsapi.dll
dmdskmgr.dll 2191.1.296.2 158.77 KB (162,576 bytes) 12/6/1999
4:00:00 PM Microsoft Corp., VERITAS Software
v:\win2k\system32\dmdskmgr.dll
mycomput.dll 5.00.2134.1 107.77 KB (110,352 bytes) 12/6/1999
4:00:00 PM Microsoft Corporation v:\win2k\system32\mycomput.dll
mmcndmgr.dll 5.00.2178.1 815.27 KB (834,832 bytes) 12/6/1999
4:00:00 PM Microsoft Corporation v:\win2k\system32\mmcndmgr.dll
mmc.exe 5.00.2153.1 589.27 KB (603,408 bytes) 12/6/1999 4:00:00 PM
Microsoft Corporation v:\win2k\system32\mmc.exe
dbnmpntw.dll 2000.01.07 32.27 KB (33,040 bytes) 12/6/1999
4:00:00 PM Microsoft Corporation v:\win2k\system32\dbnmpntw.dll
dbmslpcn.dll 2000.01.07 24.00 KB (24,576 bytes) 1/21/2000
5:46:15 PM Microsoft Corporation v:\win2k\system32\dbmslpcn.dll
dbnetlib.dll 2000.01.07 76.27 KB (78,096 bytes) 2/9/2000
11:38:56 AM Microsoft Corporation v:\win2k\system32\dbnetlib.dll
sqlsrv32.rll 3.80.0024.01 96.00 KB (98,304 bytes) 1/10/2000
4:38:38 PM Microsoft Corporation v:\win2k\system32\sqlsrv32.rll
sqllex.dll 2000.01.07 124.00 KB (126,976 bytes) 12/13/1999
2:23:59 PM Microsoft Corporation v:\program files\Microsoft sql
server\80\tools\bin\sqllex.dll
odbccp32.dll 3.520.4403.2 100.27 KB (102,672 bytes) 12/6/1999
4:00:00 PM Microsoft Corporation v:\win2k\system32\odbccp32.dll
sqlwoa.dll 2000.01.07 48.27 KB (49,424 bytes) 12/6/1999
4:00:00 PM Microsoft Corporation v:\win2k\system32\sqlwoa.dll
sqlsrv32.dll 3.80.0024.01 577.64 KB (591,503 bytes) 12/6/1999
4:00:00 PM Microsoft Corporation v:\win2k\system32\sqlsrv32.dll
objmgr.rll Not Available 44.00 KB (45,056 bytes) 12/13/1999
2:23:52 PM Not Available v:\program files\Microsoft sql
server\80\tools\bin\resources\1033\objmgr.rll
objmgr.dll Not Available 228.00 KB (233,472 bytes) 12/13/1999
2:23:52 PM Not Available v:\program files\Microsoft sql
server\80\tools\bin\objmgr.dll
isqlw.rll 2000.01.07 196.00 KB (200,704 bytes) 12/13/1999
2:23:52 PM Microsoft Corporation v:\program files\Microsoft sql
server\80\tools\bin\resources\1033\isqlw.rll
sqlqry.rll 2000.01.07 180.00 KB (184,320 bytes) 12/13/1999
2:23:52 PM Microsoft Corporation v:\program files\Microsoft sql
server\80\tools\bin\resources\1033\sqlqry.rll
autowiz.rll 2000.01.07 244.00 KB (249,856 bytes) 12/13/1999
2:24:00 PM Microsoft Corporation v:\program files\Microsoft sql
server\80\tools\bin\resources\1033\autowiz.rll
autoplt.rll 2000.01.07 24.00 KB (24,576 bytes) 12/13/1999
2:24:00 PM Microsoft Corporation v:\program files\Microsoft sql
server\80\tools\bin\resources\1033\autoplt.rll
ce_clnt.rll 2000.01.07 140.00 KB (143,360 bytes) 12/13/1999
2:24:00 PM Microsoft Corporation v:\program files\Microsoft sql
server\80\tools\bin\resources\1033\ce_clnt.rll

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comnevnt.rll 2000.01.07 32.00 KB (32,768 bytes) 12/13/1999
2:23:52 PM Microsoft Corporation v:\program files\Microsoft sql
server\80\tools\bin\resources\1033\comnevnt.rll
semsfc.rll 2000.01.07 24.00 KB (24,576 bytes) 12/13/1999
2:24:00 PM Microsoft Corporation v:\program files\Microsoft sql
server\80\tools\bin\resources\1033\semsfc.rll
sqlgui.rll 2000.01.07 56.00 KB (57,344 bytes) 12/13/1999
2:24:00 PM Microsoft Corporation v:\program files\Microsoft sql
server\80\tools\bin\resources\1033\sqlgui.rll
sqlsvc.rll 2000.01.07 24.00 KB (24,576 bytes) 12/13/1999
2:23:59 PM Microsoft Corporation v:\program files\Microsoft sql
server\80\tools\bin\resources\1033\sqlsvc.rll
autoplt.dll 2000.01.07 488.00 KB (499,712 bytes) 12/13/1999
2:24:00 PM Microsoft Corporation v:\program files\Microsoft sql
server\80\tools\bin\autoplt.dll
ce_clnt.dll 2000.01.07 760.00 KB (778,240 bytes) 12/13/1999
2:24:00 PM Microsoft Corporation v:\program files\Microsoft sql
server\80\tools\bin\ce_clnt.dll
ce_sprxy.dll 2000.01.07 252.00 KB (258,048 bytes) 12/13/1999
2:23:59 PM Microsoft Corporation v:\program files\Microsoft sql
server\80\tools\bin\ce_sprxy.dll
comnevnt.dll 2000.01.07 444.00 KB (454,656 bytes) 12/13/1999
2:23:59 PM Microsoft Corporation v:\program files\Microsoft sql
server\80\tools\bin\comnevnt.dll
semsfc.dll 2000.01.07 192.00 KB (196,608 bytes) 12/13/1999
2:23:59 PM Microsoft Corporation v:\program files\Microsoft sql
server\80\tools\bin\semsfc.dll
autowiz.dll 2000.01.07 136.00 KB (139,264 bytes) 12/13/1999
2:24:00 PM Microsoft Corporation v:\program files\Microsoft sql
server\80\tools\bin\autowiz.dll
sqlqry.dll 2000.01.07 428.00 KB (438,272 bytes) 12/13/1999
2:23:52 PM Microsoft Corporation v:\program files\Microsoft sql
server\80\tools\bin\sqlqry.dll
odbcbcp.dll 3.80.0024.01 28.27 KB (28,944 bytes) 12/6/1999
4:00:00 PM Microsoft Corporation v:\win2k\system32\odbcbcp.dll
sqlsvc.dll 2000.01.07 92.00 KB (94,208 bytes) 12/13/1999
2:23:59 PM Microsoft Corporation v:\program files\Microsoft sql
server\80\tools\bin\sqlsvc.dll
w95scm.dll 2000.01.07 40.00 KB (40,960 bytes) 12/13/1999
2:23:59 PM Microsoft Corporation v:\program files\Microsoft sql
server\80\tools\bin\w95scm.dll
sqlgui.dll 2000.01.07 420.00 KB (430,080 bytes) 12/13/1999
2:23:59 PM Microsoft Corporation v:\program files\Microsoft sql
server\80\tools\bin\sqlgui.dll
sqlresld.dll 2000.01.07 24.00 KB (24,576 bytes) 12/13/1999
2:23:59 PM Microsoft Corporation v:\program files\Microsoft sql
server\80\tools\bin\sqlresld.dll
sqlunirl.dll 2000.01.07 172.00 KB (176,128 bytes) 1/10/2000
4:38:38 PM Microsoft Corporation v:\win2k\system32\sqlunirl.dll
isqlw.exe 2000.01.07 264.00 KB (270,336 bytes) 12/13/1999
2:23:52 PM Microsoft Corporation v:\program files\Microsoft sql
server\80\tools\bin\isqlw.exe
sqlrgstr.dll Not Available 20.00 KB (20,480 bytes) 1/21/2000
5:46:13 PM Not Available v:\mssql75\mssql\bin\sqlrgstr.dll
ssmslpcn.dll 2000.01.07 36.00 KB (36,864 bytes) 1/21/2000
5:46:13 PM Microsoft Corporation v:\mssql75\mssql\bin\ssmslpcn.dll
security.dll 5.00.2154.1 5.77 KB (5,904 bytes) 12/6/1999 4:00:00 PM
Microsoft Corporation v:\win2k\system32\security.dll

```

ssnmpn70.dll 2000.01.07 24.27 KB (24,848 bytes) 1/21/2000
5:46:13 PM Microsoft Corporation v:\mssql75\mssql\bin\ssnmpn70.dll
ssmsgnet.dll 2000.02.07 36.06 KB (36,930 bytes) 2/3/2000
2:44:53 PM Microsoft Corporation v:\mssql75\mssql\bin\ssmsgnet.dll
ssnetlib.dll 2000.01.20 92.06 KB (94,270 bytes) 1/21/2000
5:46:13 PM Microsoft Corporation v:\mssql75\mssql\bin\ssnetlib.dll
resutils.dll 5.00.2191.1 39.77 KB (40,720 bytes) 12/6/1999
4:00:00 PM Microsoft Corporation v:\win2k\system32\resutils.dll
clusapi.dll 5.00.2179.1 50.27 KB (51,472 bytes) 12/6/1999
4:00:00 PM Microsoft Corporation v:\win2k\system32\clusapi.dll
mtxclu.dll 1999.9.3421.3 50.27 KB (51,472 bytes) 12/6/1999
4:00:00 PM Microsoft Corporation v:\win2k\system32\mtxclu.dll
msdtcprx.dll 1999.9.3422.10 619.27 KB (634,128 bytes) 1/19/2000
9:37:02 AM Microsoft Corporation v:\win2k\system32\msdtcprx.dll
xolehlp.dll 1999.9.3421.3 17.27 KB (17,680 bytes) 1/19/2000
9:37:01 AM Microsoft Corporation v:\win2k\system32\xolehlp.dll
sqlevn70.rll 2000.01.07 28.00 KB (28,672 bytes) 1/21/2000
5:46:15 PM Microsoft Corporation
v:\mssql75\mssql\bin\resources\1033\sqlevn70.rll
msvcirt.dll 6.10.8637.0 76.05 KB (77,878 bytes) 12/6/1999
4:00:00 PM Microsoft Corporation v:\win2k\system32\msvcirt.dll
sqlsort.dll 4.10.3703.0 608.06 KB (622,653 bytes) 1/21/2000
5:20:21 PM Microsoft Corporation v:\mssql75\mssql\bin\sqlsort.dll
ums.dll 2000.01.10 48.06 KB (49,210 bytes) 1/21/2000 5:46:13 PM
Microsoft Corporation v:\mssql75\mssql\bin\ums.dll
opends60.dll 2000.01.07 24.06 KB (24,639 bytes) 1/21/2000
5:46:13 PM Microsoft Corporation v:\mssql75\mssql\bin\opends60.dll
sqlservr.exe 2000.01.20 6.59 MB (6,909,992 bytes) 1/21/2000
5:46:11 PM Microsoft Corporation v:\mssql75\mssql\bin\sqlservr.exe
cmd.exe 5.00.2144.1 230.77 KB (236,304 bytes) 12/6/1999 4:00:00 PM
Microsoft Corporation v:\win2k\system32\cmd.exe
shdoclc.dll 5.00.2920.0000 324.50 KB (332,288 bytes) 12/6/1999
4:00:00 PM Microsoft Corporation v:\win2k\system32\shdoclc.dll
wininet.dll 5.00.2920.0000 456.77 KB (467,728 bytes) 12/6/1999
4:00:00 PM Microsoft Corporation v:\win2k\system32\wininet.dll
wzcab2.dll 2, 0, 0, 0 20.50 KB (20,992 bytes) 9/22/1998
8:00:00 AM Nico Mak Computing, Inc. v:\progra-1\winzip\wzcab2.dll
crt.dll 4.00 145.77 KB (149,264 bytes) 12/6/1999 4:00:00 PM
Microsoft Corporation v:\win2k\system32\crt.dll
wzshlex.dll Not Available 33.00 KB (33,792 bytes) 9/22/1998
8:00:00 AM Not Available v:\progra-1\winzip\wzshlex.dll
urlmon.dll 5.00.2920.0000 426.77 KB (437,008 bytes) 12/6/1999
4:00:00 PM Microsoft Corporation v:\win2k\system32\urlmon.dll
ntshrui.dll 5.00.2134.1 46.77 KB (47,888 bytes) 12/6/1999
4:00:00 PM Microsoft Corporation v:\win2k\system32\ntshrui.dll
linkinfo.dll 5.00.2134.1 15.77 KB (16,144 bytes) 12/6/1999
4:00:00 PM Microsoft Corporation v:\win2k\system32\linkinfo.dll
browserc.dll 5.00.2920.0000 34.50 KB (35,328 bytes) 12/6/1999
4:00:00 PM Microsoft Corporation v:\win2k\system32\browserc.dll
mydocs.dll 5.00.2920.0000 55.77 KB (57,104 bytes) 12/6/1999
4:00:00 PM Microsoft Corporation v:\win2k\system32\mydocs.dll
faxshell.dll 5.00.2134.1 8.27 KB (8,464 bytes) 12/6/1999 4:00:00 PM
Microsoft Corporation v:\win2k\system32\faxshell.dll
msacm32.dll 5.00.2134.1 65.27 KB (66,832 bytes) 12/6/1999
4:00:00 PM Microsoft Corporation v:\win2k\system32\msacm32.dll
avifil32.dll 5.00.2134.1 76.27 KB (78,096 bytes) 12/6/1999
4:00:00 PM Microsoft Corporation v:\win2k\system32\avifil32.dll
msvfw32.dll 5.00.2134.1 113.77 KB (116,496 bytes) 12/6/1999
4:00:00 PM Microsoft Corporation v:\win2k\system32\msvfw32.dll

docprop2.dll 5.00.2178.1 297.77 KB (304,912 bytes) 12/6/1999
4:00:00 PM Microsoft Corporation v:\win2k\system32\docprop2.dll
hhsetup.dll 4.74.8702 66.27 KB (67,856 bytes) 12/6/1999
4:00:00 PM Microsoft Corporation v:\win2k\system32\hhsetup.dll
mfc42u.dll 6.00.8665.0 972.05 KB (995,384 bytes) 12/6/1999
4:00:00 PM Microsoft Corporation v:\win2k\system32\mfc42u.dll
mmcshext.dll 5.00.2153.1 24.27 KB (24,848 bytes) 12/6/1999
4:00:00 PM Microsoft Corporation v:\win2k\system32\mmcshext.dll
msi.dll 1.10.1029.0 1.71 MB (1,794,320 bytes) 12/6/1999 4:00:00 PM
Microsoft Corporation v:\win2k\system32\msi.dll
powrprof.dll 5.00.2920.0000 13.27 KB (13,584 bytes) 12/6/1999
4:00:00 PM Microsoft Corporation v:\win2k\system32\powrprof.dll
batmeter.dll 5.00.2920.0000 20.27 KB (20,752 bytes) 12/6/1999
4:00:00 PM Microsoft Corporation v:\win2k\system32\batmeter.dll
stobject.dll 5.00.2144.1 81.77 KB (83,728 bytes) 12/6/1999
4:00:00 PM Microsoft Corporation v:\win2k\system32\stobject.dll
webcheck.dll 5.00.2920.0000 251.77 KB (257,808 bytes) 12/6/1999
4:00:00 PM Microsoft Corporation v:\win2k\system32\webcheck.dll
browseui.dll 5.00.2920.0000 793.27 KB (812,304 bytes) 12/6/1999
4:00:00 PM Microsoft Corporation v:\win2k\system32\browseui.dll
shdocvw.dll 5.00.2920.0000 1.05 MB (1,104,144 bytes) 12/6/1999
4:00:00 PM Microsoft Corporation v:\win2k\system32\shdocvw.dll
explorer.exe 5.00.2920.0000 232.77 KB (238,352 bytes) 12/6/1999
4:00:00 PM Microsoft Corporation v:\win2k\explorer.exe
rasdlg.dll 5.00.2194.1 514.27 KB (526,608 bytes) 12/6/1999
4:00:00 PM Microsoft Corporation v:\win2k\system32\rasdlg.dll
netcfgx.dll 5.00.2175.1 533.77 KB (546,576 bytes) 12/6/1999
4:00:00 PM Microsoft Corporation v:\win2k\system32\netcfgx.dll
sens.dll 5.00.2163.1 36.77 KB (37,648 bytes) 12/6/1999
4:00:00 PM Microsoft Corporation v:\win2k\system32\sens.dll
rasmans.dll 5.00.2188.1 146.77 KB (150,288 bytes) 12/6/1999
4:00:00 PM Microsoft Corporation v:\win2k\system32\rasmans.dll
netshell.dll 5.00.2176.1 456.77 KB (467,728 bytes) 12/6/1999
4:00:00 PM Microsoft Corporation v:\win2k\system32\netshell.dll
netman.dll 5.00.2175.1 88.77 KB (90,896 bytes) 12/6/1999
4:00:00 PM Microsoft Corporation v:\win2k\system32\netman.dll
txfaux.dll 1999.9.3422.24 341.27 KB (349,456 bytes) 1/19/2000
9:37:01 AM Microsoft Corporation v:\win2k\system32\txfaux.dll
es.dll 1999.9.3422.21 231.77 KB (237,328 bytes) 12/6/1999 4:00:00 PM
Microsoft Corporation v:\win2k\system32\es.dll
netui1.dll 5.00.2134.1 210.27 KB (215,312 bytes) 12/6/1999
4:00:00 PM Microsoft Corporation v:\win2k\system32\netui1.dll
netui0.dll 5.00.2134.1 70.27 KB (71,952 bytes) 12/6/1999
4:00:00 PM Microsoft Corporation v:\win2k\system32\netui0.dll
ntlanman.dll 5.00.2157.1 35.27 KB (36,112 bytes) 12/6/1999
4:00:00 PM Microsoft Corporation v:\win2k\system32\ntlanman.dll
wshnetbs.dll 5.00.2134.1 7.77 KB (7,952 bytes) 12/6/1999 4:00:00 PM
Microsoft Corporation v:\win2k\system32\wshnetbs.dll
provthrd.dll 1.50.1085.0000 68.07 KB (69,708 bytes) 1/19/2000
9:38:48 AM Microsoft Corporation v:\win2k\system32\wbem\provthrd.dll
ntevt.dll 1.50.1085.0000 192.06 KB (196,669 bytes) 12/6/1999
4:00:00 PM Microsoft Corporation v:\win2k\system32\wbem\ntevt.dll
wmi.dll 5.00.2191.1 6.27 KB (6,416 bytes) 12/6/1999 4:00:00 PM
Microsoft Corporation v:\win2k\system32\wmi.dll
psapi.dll 5.00.2134.1 28.27 KB (28,944 bytes) 12/6/1999
4:00:00 PM Microsoft Corporation v:\win2k\system32\psapi.dll
framedyn.dll 1.50.1085.0000 164.05 KB (167,992 bytes) 12/6/1999
4:00:00 PM Microsoft Corporation v:\win2k\system32\wbem\framedyn.dll

cimwin32.dll	1.50.1085.0000	1.03 MB (1,077,306 bytes)	12/6/1999
4:00:00 PM	Microsoft Corporation	v:\win2k\system32\wbem\cimwin32.dll	
wbemsvc.dll	1.50.1085.0000	140.07 KB (143,430 bytes)	12/6/1999
4:00:00 PM	Microsoft Corporation	v:\win2k\system32\wbem\wbemsvc.dll	
wbemess.dll	1.50.1085.0001	352.05 KB (360,503 bytes)	12/6/1999
4:00:00 PM	Microsoft Corporation	v:\win2k\system32\wbem\wbemess.dll	
fastprox.dll	1.50.1085.0001	144.08 KB (147,534 bytes)	12/6/1999
4:00:00 PM	Microsoft Corporation	v:\win2k\system32\wbem\fastprox.dll	
wbemcore.dll	1.50.1085.0001	632.05 KB (647,224 bytes)	12/6/1999
4:00:00 PM	Microsoft Corporation	v:\win2k\system32\wbem\wbemcore.dll	
wbemcomm.dll	1.50.1085.0001	684.05 KB (700,472 bytes)	12/6/1999
4:00:00 PM	Microsoft Corporation	v:\win2k\system32\wbem\wbemcomm.dll	
winmgmt.exe	1.50.1085.0001	188.05 KB (192,567 bytes)	12/6/1999
4:00:00 PM	Microsoft Corporation	v:\win2k\system32\wbem\winmgmt.exe	
ntmarta.dll	5.00.2158.1	98.77 KB (101,136 bytes)	12/6/1999
4:00:00 PM	Microsoft Corporation	v:\win2k\system32\ntmarta.dll	
tapisrv.dll	5.00.2186.1	168.77 KB (172,816 bytes)	12/6/1999
4:00:00 PM	Microsoft Corporation	v:\win2k\system32\tapisrv.dll	
gnisnmp.dll	Not Available	48.00 KB (49,152 bytes)	2/3/2000
4:01:34 PM	Not Available	v:\win2k\system32\gnisnmp.dll	
gamagent.dll	2.52-16	213.56 KB (218,688 bytes)	1/24/2000 11:22:24 AM
	Mylex Corporation	v:\win2k\system32\gamserv\gamagent.dll	
odbcbint.dll	3.520.4403.2	88.00 KB (90,112 bytes)	12/6/1999
4:00:00 PM	Microsoft Corporation	v:\win2k\system32\odbcbint.dll	
comdlg32.dll	5.00.2920.0000	236.77 KB (242,448 bytes)	12/6/1999
4:00:00 PM	Microsoft Corporation	v:\win2k\system32\comdlg32.dll	
odbc32.dll	3.520.4403.2	212.27 KB (217,360 bytes)	12/6/1999
4:00:00 PM	Microsoft Corporation	v:\win2k\system32\odbc32.dll	
sqlsnmp.dll	2000.01.07	60.00 KB (61,440 bytes)	1/21/2000
5:46:13 PM	Microsoft Corporation	v:\mssql75\mssql\bin\sqlsnmp.dll	
loadperf.dll	5.00.2195.1	60.77 KB (62,224 bytes)	12/6/1999
4:00:00 PM	Microsoft Corporation	v:\win2k\system32\loadperf.dll	
msvcp50.dll	5.00.7051	552.50 KB (565,760 bytes)	12/6/1999
4:00:00 PM	Microsoft Corporation	v:\win2k\system32\msvcp50.dll	
iasperf.dll	5.00.2160.1	20.27 KB (20,752 bytes)	12/6/1999
4:00:00 PM	Microsoft Corporation	v:\win2k\system32\iasperf.dll	
rtipxmib.dll	5.00.2168.1	29.77 KB (30,480 bytes)	12/6/1999
4:00:00 PM	Microsoft Corporation	v:\win2k\system32\rtipxmib.dll	
perfos.dll	5.00.2155.1	21.27 KB (21,776 bytes)	12/6/1999
4:00:00 PM	Microsoft Corporation	v:\win2k\system32\perfos.dll	
btapgnt.dll	5.00.2168.1	13.27 KB (13,584 bytes)	12/6/1999
4:00:00 PM	Microsoft Corporation	v:\win2k\system32\btapgnt.dll	
ospfagnt.dll	5.00.2168.1	6.77 KB (6,928 bytes)	12/6/1999 4:00:00 PM
	Microsoft Corporation	v:\win2k\system32\ospfagnt.dll	
ripagnt.dll	5.00.2168.1	24.27 KB (24,848 bytes)	12/6/1999
4:00:00 PM	Microsoft Corporation	v:\win2k\system32\ripagnt.dll	
mcastmib.dll	5.00.2168.1	13.27 KB (13,584 bytes)	12/6/1999
4:00:00 PM	Microsoft Corporation	v:\win2k\system32\mcastmib.dll	
igmpagnt.dll	5.00.2168.1	8.77 KB (8,976 bytes)	12/6/1999 4:00:00 PM
	Microsoft Corporation	v:\win2k\system32\igmpagnt.dll	
acsmib.dll	5.00.2167.1	11.27 KB (11,536 bytes)	12/6/1999
4:00:00 PM	Microsoft Corporation	v:\win2k\system32\acsmib.dll	
evntagnt.dll	5.00.2167.1	94.77 KB (97,040 bytes)	1/19/2000
9:36:57 AM	Microsoft Corporation	v:\win2k\system32\evntagnt.dll	
snmpmib.dll	5.00.2134.1	5.77 KB (5,904 bytes)	1/19/2000 9:36:57 AM
	Microsoft Corporation	v:\win2k\system32\snmpmib.dll	
inetmib1.dll	5.00.2168.1	28.77 KB (29,456 bytes)	12/6/1999
4:00:00 PM	Microsoft Corporation	v:\win2k\system32\inetmib1.dll	

lmmib2.dll	5.00.2134.1	29.27 KB (29,968 bytes)	1/19/2000
9:36:56 AM	Microsoft Corporation	v:\win2k\system32\lmmib2.dll	
snmpapi.dll	5.00.2134.1	17.27 KB (17,680 bytes)	12/6/1999
4:00:00 PM	Microsoft Corporation	v:\win2k\system32\snmpapi.dll	
snmp.exe	5.00.2173.1	29.77 KB (30,480 bytes)	1/19/2000
9:36:57 AM	Microsoft Corporation	v:\win2k\system32\snmp.exe	
rasadhlp.dll	5.00.2168.1	7.27 KB (7,440 bytes)	12/6/1999 4:00:00 PM
	Microsoft Corporation	v:\win2k\system32\rasadhlp.dll	
winrnr.dll	5.00.2160.1	18.77 KB (19,216 bytes)	12/6/1999
4:00:00 PM	Microsoft Corporation	v:\win2k\system32\winrnr.dll	
dhcpcsvc.dll	5.00.2153.1	88.77 KB (90,896 bytes)	12/6/1999
4:00:00 PM	Microsoft Corporation	v:\win2k\system32\dhcpcsvc.dll	
tapi32.dll	5.00.2182.1	123.27 KB (126,224 bytes)	12/6/1999
4:00:00 PM	Microsoft Corporation	v:\win2k\system32\tapi32.dll	
rasman.dll	5.00.2188.1	54.77 KB (56,080 bytes)	12/6/1999
4:00:00 PM	Microsoft Corporation	v:\win2k\system32\rasman.dll	
rasapi32.dll	5.00.2188.1	189.77 KB (194,320 bytes)	12/6/1999
4:00:00 PM	Microsoft Corporation	v:\win2k\system32\rasapi32.dll	
icmp.dll	5.00.2134.1	7.27 KB (7,440 bytes)	12/6/1999 4:00:00 PM
	Microsoft Corporation	v:\win2k\system32\icmp.dll	
iphlpapi.dll	5.00.2173.2	67.77 KB (69,392 bytes)	12/6/1999
4:00:00 PM	Microsoft Corporation	v:\win2k\system32\iphlpapi.dll	
rnr20.dll	5.00.2152.1	35.77 KB (36,624 bytes)	12/6/1999
4:00:00 PM	Microsoft Corporation	v:\win2k\system32\rnr20.dll	
wshtcpip.dll	5.00.2134.1	17.27 KB (17,680 bytes)	12/6/1999
4:00:00 PM	Microsoft Corporation	v:\win2k\system32\wshtcpip.dll	
msafd.dll	5.00.2153.1	54.27 KB (55,568 bytes)	12/6/1999
4:00:00 PM	Microsoft Corporation	v:\win2k\system32\msafd.dll	
rpcss.dll	5.00.2181.1	229.27 KB (234,768 bytes)	12/6/1999
4:00:00 PM	Microsoft Corporation	v:\win2k\system32\rpcss.dll	
svchost.exe	5.00.2134.1	7.77 KB (7,952 bytes)	12/6/1999 4:00:00 PM
	Microsoft Corporation	v:\win2k\system32\svchost.exe	
vipl.dll	3.85	80.00 KB (81,920 bytes)	2/3/2000 1:46:13 PM
	Giganet Incorporated	v:\win2k\system32\vipl.dll	
gnconmgr.exe	3.85	92.00 KB (94,208 bytes)	2/3/2000 1:46:12 PM
	Giganet Incorporated	v:\win2k\system32\gnconmgr.exe	
scecli.dll	5.00.2191.1	105.27 KB (107,792 bytes)	12/6/1999
4:00:00 PM	Microsoft Corporation	v:\win2k\system32\scecli.dll	
atl.dll	3.00.8449	57.56 KB (58,938 bytes)	12/6/1999 4:00:00 PM
	Microsoft Corporation	v:\win2k\system32\atl.dll	
certcli.dll	5.00.2175.1	132.27 KB (135,440 bytes)	12/6/1999
4:00:00 PM	Microsoft Corporation	v:\win2k\system32\certcli.dll	
esent.dll	6.0.3939.6	1.07 MB (1,120,016 bytes)	12/6/1999
4:00:00 PM	Microsoft Corporation	v:\win2k\system32\esent.dll	
mswsock.dll	5.00.2152.1	62.27 KB (63,760 bytes)	12/6/1999
4:00:00 PM	Microsoft Corporation	v:\win2k\system32\mswsock.dll	
ntdsatq.dll	5.00.2181.1	31.27 KB (32,016 bytes)	12/6/1999
4:00:00 PM	Microsoft Corporation	v:\win2k\system32\ntdsatq.dll	
ntdsa.dll	5.00.2195.1	993.27 KB (1,017,104 bytes)	12/6/1999
4:00:00 PM	Microsoft Corporation	v:\win2k\system32\ntdsa.dll	
kdcsvc.dll	5.00.2181.1	133.77 KB (136,976 bytes)	12/6/1999
4:00:00 PM	Microsoft Corporation	v:\win2k\system32\kdcsvc.dll	
sfmapi.dll	5.00.2134.1	38.77 KB (39,696 bytes)	12/6/1999
4:00:00 PM	Microsoft Corporation	v:\win2k\system32\sfmapi.dll	
rtutils.dll	5.00.2168.1	43.77 KB (44,816 bytes)	12/6/1999
4:00:00 PM	Microsoft Corporation	v:\win2k\system32\rtutils.dll	
adslrpc.dll	5.00.2172.1	127.77 KB (130,832 bytes)	12/6/1999
4:00:00 PM	Microsoft Corporation	v:\win2k\system32\adslrpc.dll	

activeds.dll	5.00.2172.1	172.77 KB (176,912 bytes)	12/6/1999
4:00:00 PM	Microsoft Corporation v:\win2k\system32\activeds.dll		
mprapi.dll	5.00.2181.1	79.27 KB (81,168 bytes)	12/6/1999
4:00:00 PM	Microsoft Corporation v:\win2k\system32\mprapi.dll		
rassfm.dll	5.00.2168.1	21.27 KB (21,776 bytes)	12/6/1999
4:00:00 PM	Microsoft Corporation v:\win2k\system32\rassfm.dll		
mpr.dll	5.00.2146.1	53.27 KB (54,544 bytes)	12/6/1999 4:00:00 PM
	Microsoft Corporation v:\win2k\system32\mpr.dll		
schannel.dll	5.00.2170.1	139.77 KB (143,120 bytes)	12/6/1999
4:00:00 PM	Microsoft Corporation v:\win2k\system32\schannel.dll		
netlogon.dll	5.00.2182.1	347.77 KB (356,112 bytes)	12/6/1999
4:00:00 PM	Microsoft Corporation v:\win2k\system32\netlogon.dll		
msv1_0.dll	5.00.2164.1	94.77 KB (97,040 bytes)	12/6/1999
4:00:00 PM	Microsoft Corporation v:\win2k\system32\msv1_0.dll		
kerberos.dll	5.00.2181.1	196.77 KB (201,488 bytes)	12/6/1999
4:00:00 PM	Microsoft Corporation v:\win2k\system32\kerberos.dll		
msprivs.dll	5.00.2154.1	41.50 KB (42,496 bytes)	12/6/1999
4:00:00 PM	Microsoft Corporation v:\win2k\system32\msprivs.dll		
samsrv.dll	5.00.2192.1	357.77 KB (366,352 bytes)	12/6/1999
4:00:00 PM	Microsoft Corporation v:\win2k\system32\samsrv.dll		
lsasrv.dll	5.00.2184.1	487.77 KB (499,472 bytes)	12/6/1999
4:00:00 PM	Microsoft Corporation v:\win2k\system32\lsasrv.dll		
lsass.exe	5.00.2184.1	32.77 KB (33,552 bytes)	12/6/1999
4:00:00 PM	Microsoft Corporation v:\win2k\system32\lsass.exe		
wmicore.dll	5.00.2178.1	70.77 KB (72,464 bytes)	12/6/1999
4:00:00 PM	Microsoft Corporation v:\win2k\system32\wmicore.dll		
psbase.dll	5.00.2146.1	111.77 KB (114,448 bytes)	12/6/1999
4:00:00 PM	Microsoft Corporation v:\win2k\system32\psbase.dll		
cryptsvc.dll	5.00.2181.1	61.77 KB (63,248 bytes)	12/6/1999
4:00:00 PM	Microsoft Corporation v:\win2k\system32\cryptsvc.dll		
cryptdll.dll	5.00.2135.1	41.27 KB (42,256 bytes)	12/6/1999
4:00:00 PM	Microsoft Corporation v:\win2k\system32\cryptdll.dll		
wkssvc.dll	5.00.2181.1	95.27 KB (97,552 bytes)	12/6/1999
4:00:00 PM	Microsoft Corporation v:\win2k\system32\wkssvc.dll		
srsvsvc.dll	5.00.2178.1	79.27 KB (81,168 bytes)	12/6/1999
4:00:00 PM	Microsoft Corporation v:\win2k\system32\srsvsvc.dll		
cfgmgr32.dll	5.00.2134.1	16.77 KB (17,168 bytes)	12/6/1999
4:00:00 PM	Microsoft Corporation v:\win2k\system32\cfgmgr32.dll		
dmserver.dll	2191.1.296.2	11.77 KB (12,048 bytes)	12/6/1999
4:00:00 PM	VERITAS Software Corp. v:\win2k\system32\dmserver.dll		
winsta.dll	5.00.2134.1	36.27 KB (37,136 bytes)	12/6/1999
4:00:00 PM	Microsoft Corporation v:\win2k\system32\winsta.dll		
eventlog.dll	5.00.2178.1	43.77 KB (44,816 bytes)	12/6/1999
4:00:00 PM	Microsoft Corporation v:\win2k\system32\eventlog.dll		
ntdsapi.dll	5.00.2160.1	56.27 KB (57,616 bytes)	12/6/1999
4:00:00 PM	Microsoft Corporation v:\win2k\system32\ntdsapi.dll		
scsersv.dll	5.00.2188.1	225.77 KB (231,184 bytes)	12/6/1999
4:00:00 PM	Microsoft Corporation v:\win2k\system32\scsersv.dll		
umpnpgmr.dll	5.00.2182.1	86.27 KB (88,336 bytes)	12/6/1999
4:00:00 PM	Microsoft Corporation v:\win2k\system32\umpnpgmr.dll		
services.exe	5.00.2134.1	86.77 KB (88,848 bytes)	12/6/1999
4:00:00 PM	Microsoft Corporation v:\win2k\system32\services.exe		
clbcatq.dll	1999.9.3422.14	479.27 KB (490,768 bytes)	1/19/2000
9:36:57 AM	Microsoft Corporation v:\win2k\system32\clbcatq.dll		
oleaut32.dll	2.40.4512	600.27 KB (614,672 bytes)	12/6/1999
4:00:00 PM	Microsoft Corporation v:\win2k\system32\oleaut32.dll		
cscui.dll	5.00.2172.1	227.27 KB (232,720 bytes)	12/6/1999
4:00:00 PM	Microsoft Corporation v:\win2k\system32\cscui.dll		

lz32.dll	5.00.2134.1	9.77 KB (10,000 bytes)	12/6/1999 4:00:00 PM
	Microsoft Corporation v:\win2k\system32\lz32.dll		
version.dll	5.00.2134.1	15.77 KB (16,144 bytes)	12/6/1999
4:00:00 PM	Microsoft Corporation v:\win2k\system32\version.dll		
rsabase.dll	5.00.2150.1	128.77 KB (131,856 bytes)	12/6/1999
4:00:00 PM	Microsoft Corporation v:\win2k\system32\rsabase.dll		
winspool.drv	5.00.2167.1	109.77 KB (112,400 bytes)	12/6/1999
4:00:00 PM	Microsoft Corporation v:\win2k\system32\winspool.drv		
winscard.dll	5.00.2134.1	77.27 KB (79,120 bytes)	12/6/1999
4:00:00 PM	Microsoft Corporation v:\win2k\system32\winscard.dll		
wlnotify.dll	5.00.2164.1	53.27 KB (54,544 bytes)	12/6/1999
4:00:00 PM	Microsoft Corporation v:\win2k\system32\wlnotify.dll		
cscdll.dll	5.00.2189.1	98.27 KB (100,624 bytes)	12/6/1999
4:00:00 PM	Microsoft Corporation v:\win2k\system32\cscdll.dll		
mecat32.dll	5.131.2134.1	7.77 KB (7,952 bytes)	12/6/1999 4:00:00 PM
	Microsoft Corporation v:\win2k\system32\mecat32.dll		
ole32.dll	5.00.2181.1	966.27 KB (989,456 bytes)	12/6/1999
4:00:00 PM	Microsoft Corporation v:\win2k\system32\ole32.dll		
imagehlp.dll	5.00.2195.1	125.27 KB (128,272 bytes)	12/6/1999
4:00:00 PM	Microsoft Corporation v:\win2k\system32\imagehlp.dll		
msasn1.dll	5.00.2134.1	51.27 KB (52,496 bytes)	12/6/1999
4:00:00 PM	Microsoft Corporation v:\win2k\system32\msasn1.dll		
crypt32.dll	5.131.2173.1	465.77 KB (476,944 bytes)	12/6/1999
4:00:00 PM	Microsoft Corporation v:\win2k\system32\crypt32.dll		
wintrust.dll	5.131.2143.1	162.27 KB (166,160 bytes)	12/6/1999
4:00:00 PM	Microsoft Corporation v:\win2k\system32\wintrust.dll		
setupapi.dll	5.00.2183.1	554.27 KB (567,568 bytes)	12/6/1999
4:00:00 PM	Microsoft Corporation v:\win2k\system32\setupapi.dll		
winmm.dll	5.00.2161.1	184.77 KB (189,200 bytes)	12/6/1999
4:00:00 PM	Microsoft Corporation v:\win2k\system32\winmm.dll		
comctl32.dll	5.81	540.27 KB (553,232 bytes)	12/6/1999 4:00:00 PM
	Microsoft Corporation v:\win2k\system32\comctl32.dll		
shlwapi.dll	5.00.2920.0000	282.77 KB (289,552 bytes)	12/6/1999
4:00:00 PM	Microsoft Corporation v:\win2k\system32\shlwapi.dll		
shell32.dll	5.00.2920.0000	2.24 MB (2,352,400 bytes)	12/6/1999
4:00:00 PM	Microsoft Corporation v:\win2k\system32\shell32.dll		
msgina.dll	5.00.2191.1	309.77 KB (317,200 bytes)	12/6/1999
4:00:00 PM	Microsoft Corporation v:\win2k\system32\msgina.dll		
wsock32.dll	5.00.2152.1	21.27 KB (21,776 bytes)	12/6/1999
4:00:00 PM	Microsoft Corporation v:\win2k\system32\wsock32.dll		
dnsapi.dll	5.00.2181.1	129.77 KB (132,880 bytes)	12/6/1999
4:00:00 PM	Microsoft Corporation v:\win2k\system32\dnsapi.dll		
wldap32.dll	5.00.2168.1	155.77 KB (159,504 bytes)	12/6/1999
4:00:00 PM	Microsoft Corporation v:\win2k\system32\wldap32.dll		
ws2help.dll	5.00.2134.1	17.77 KB (18,192 bytes)	12/6/1999
4:00:00 PM	Microsoft Corporation v:\win2k\system32\ws2help.dll		
ws2_32.dll	5.00.2134.1	69.77 KB (71,440 bytes)	12/6/1999
4:00:00 PM	Microsoft Corporation v:\win2k\system32\ws2_32.dll		
samlib.dll	5.00.2160.1	46.27 KB (47,376 bytes)	12/6/1999
4:00:00 PM	Microsoft Corporation v:\win2k\system32\samlib.dll		
netrap.dll	5.00.2134.1	11.27 KB (11,536 bytes)	12/6/1999
4:00:00 PM	Microsoft Corporation v:\win2k\system32\netrap.dll		
netapi32.dll	5.00.2194.1	302.77 KB (310,032 bytes)	12/6/1999
4:00:00 PM	Microsoft Corporation v:\win2k\system32\netapi32.dll		
profmap.dll	5.00.2181.1	29.27 KB (29,968 bytes)	12/6/1999
4:00:00 PM	Microsoft Corporation v:\win2k\system32\profmap.dll		
secur32.dll	5.00.2154.1	46.77 KB (47,888 bytes)	12/6/1999
4:00:00 PM	Microsoft Corporation v:\win2k\system32\secur32.dll		

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sfc.dll 5.00.2164.1 84.27 KB (86,288 bytes) 12/6/1999 4:00:00 PM
Microsoft Corporation v:\win2k\system32\sfc.dll
nddeapi.dll 5.00.2137.1 15.27 KB (15,632 bytes) 12/6/1999
4:00:00 PM Microsoft Corporation v:\win2k\system32\nddeapi.dll
userenv.dll 5.00.2185.1 361.27 KB (369,936 bytes) 12/6/1999
4:00:00 PM Microsoft Corporation v:\win2k\system32\userenv.dll
user32.dll 5.00.2180.1 393.27 KB (402,704 bytes) 12/6/1999
4:00:00 PM Microsoft Corporation v:\win2k\system32\user32.dll
gdi32.dll 5.00.2180.1 228.77 KB (234,256 bytes) 12/6/1999
4:00:00 PM Microsoft Corporation v:\win2k\system32\gdi32.dll
rpcrt4.dll 5.00.2193.1 434.27 KB (444,688 bytes) 12/6/1999
4:00:00 PM Microsoft Corporation v:\win2k\system32\rpcrt4.dll
advapi32.dll 5.00.2191.1 349.27 KB (357,648 bytes) 12/6/1999
4:00:00 PM Microsoft Corporation v:\win2k\system32\advapi32.dll
kernel32.dll 5.00.2191.1 715.27 KB (732,432 bytes) 12/6/1999
4:00:00 PM Microsoft Corporation v:\win2k\system32\kernel32.dll
msvcrt.dll 6.10.8637.0 288.09 KB (295,000 bytes) 12/6/1999
4:00:00 PM Microsoft Corporation v:\win2k\system32\msvcrt.dll
winlogon.exe 5.00.2182.1 173.27 KB (177,424 bytes) 12/6/1999
4:00:00 PM Microsoft Corporation v:\win2k\system32\winlogon.exe
sfcfiles.dll 5.00.2195.1 973.27 KB (996,624 bytes) 12/6/1999
4:00:00 PM Microsoft Corporation v:\win2k\system32\sfcfiles.dll
ntdll.dll 5.00.2163.1 469.77 KB (481,040 bytes) 12/6/1999
4:00:00 PM Microsoft Corporation v:\win2k\system32\ntdll.dll
smss.exe 5.00.2170.1 44.27 KB (45,328 bytes) 12/6/1999
4:00:00 PM Microsoft Corporation v:\win2k\system32\smss.exe

```

[Services]

Display Name	Name	State	Start Mode	Service Type	Path	Error
Control	Start	Name	Tag	ID		
Alert	Alert	Stopped	Disabled	Share Process		
	v:\win2k\system32\services.exe			Normal	LocalSystem	0
Application Management	AppMgmt	Stopped	Manual	Share Process		
	v:\win2k\system32\services.exe			Normal	LocalSystem	0
Computer Browser	Browser	Stopped	Disabled	Share Process		
	v:\win2k\system32\services.exe			Normal	LocalSystem	0
Indexing Service	cisvc	Stopped	Manual	Share Process		
	v:\win2k\system32\cisvc.exe			Normal	LocalSystem	0
ClipBook	ClipSrv	Stopped	Manual	Own Process		
	v:\win2k\system32\clipsrv.exe			Normal	LocalSystem	0
Distributed File System	Dfs	Stopped	Manual	Own Process		
	v:\win2k\system32\dfssvc.exe			Normal	LocalSystem	0
DHCP Client	Dhcp	Stopped	Disabled	Share Process		
	v:\win2k\system32\services.exe			Normal	LocalSystem	0
Logical Disk Manager	Administrative Service					
Process	v:\win2k\system32\dmadmin.exe		/com	Normal	LocalSystem	0
Logical Disk Manager	dmserver	Running	Auto	Share Process		
	v:\win2k\system32\services.exe			Normal	LocalSystem	0
DNS Client	Dnscache	Stopped	Disabled	Share Process		
	v:\win2k\system32\services.exe			Normal	LocalSystem	0
Event Log	Eventlog	Running	Auto	Share Process		
	v:\win2k\system32\services.exe			Normal	LocalSystem	0
COM+ Event System	EventSystem	Running	Manual	Share Process		
	v:\win2k\system32\svchost.exe		-k netsvcs	Normal	LocalSystem	0
Fax Service	Fax	Stopped	Manual	Own Process		
	v:\win2k\system32\faxsvc.exe			Normal	LocalSystem	0

Mylex Global Array Manager Server	gamscm	Stopped	Manual	Own Process		
	v:\win2k\system32\gamserv\gamscm.exe			Normal	LocalSystem	0
cLAN Connection Manager	GniConMgr	Running	Auto	Own Process		
	v:\win2k\system32\gnconmgr.exe			Normal	LocalSystem	0
Intersite Messaging	IsmServ	Stopped	Disabled	Own Process		
	v:\win2k\system32\ismserv.exe			Normal	LocalSystem	0
Kerberos Key Distribution Center	kdc	Stopped	Disabled	Share		
Process	v:\win2k\system32\lsass.exe			Normal	LocalSystem	0
Server lanmanserver	Running	Auto	Share Process			
	v:\win2k\system32\services.exe			Normal	LocalSystem	0
Workstation	lanmanworkstation	Running	Auto	Share Process		
	v:\win2k\system32\services.exe			Normal	LocalSystem	0
License Logging Service	LicenseService	Stopped	Manual	Own Process		
	v:\win2k\system32\llssrv.exe			Normal	LocalSystem	0
TCP/IP NetBIOS Helper Service	LmHosts	Stopped	Manual	Share Process		
	v:\win2k\system32\services.exe			Normal	LocalSystem	0
Messenger	Messenger	Stopped	Disabled	Share Process		
	v:\win2k\system32\services.exe			Normal	LocalSystem	0
NetMeeting Remote Desktop Sharing	mnmsrvc	Stopped	Manual	Own Process		
	v:\win2k\system32\mnmsrvc.exe			Normal	LocalSystem	0
Windows Installer	MSIServer	Stopped	Manual	Share Process		
	v:\win2k\system32\msiexec.exe		/v	Normal	LocalSystem	0
Microsoft Search	MSSEARCH	Stopped	Disabled	Share Process		
	"v:\program files\common files\system\mssearch\bin\mssearch.exe"			Normal	LocalSystem	0
MSSQLSERVER	MSSQLSERVER	Stopped	Manual	Own Process		
	v:\mssql175\mssql\bin\sqlservr.exe			Normal	LocalSystem	0
Navisphere Agent	Navisphere Agent	Stopped	Manual	Own Process		
	v:\program files\unisys\navisphere agent\naviagent.exe			Normal	LocalSystem	0
Network DDE	NetDDE	Stopped	Manual	Share Process		
	v:\win2k\system32\netdde.exe			Normal	LocalSystem	0
Network DDE DSDM	NetDDEdsdm	Stopped	Manual	Share Process		
	v:\win2k\system32\netdde.exe			Normal	LocalSystem	0
Net Logon	Netlogon	Stopped	Manual	Share Process		
	v:\win2k\system32\lsass.exe			Normal	LocalSystem	0
Network Connections	Netman	Running	Manual	Share Process		
	v:\win2k\system32\svchost.exe		-k netsvcs	Normal	LocalSystem	0
File Replication	NtFrs	Stopped	Manual	Own Process		
	v:\win2k\system32\ntfrs.exe			Ignore	LocalSystem	0
NT LM Security Support Provider	NtLmSsp	Stopped	Manual	Share Process		
	v:\win2k\system32\lsass.exe			Normal	LocalSystem	0
Removable Storage	NtmsSvc	Stopped	Manual	Share Process		
	v:\win2k\system32\svchost.exe		-k netsvcs	Normal	LocalSystem	0
Plug and Play	PlugPlay	Running	Auto	Share Process		
	v:\win2k\system32\services.exe			Normal	LocalSystem	0
IPSEC Policy Agent	PolicyAgent	Stopped	Manual	Share Process		
	v:\win2k\system32\lsass.exe			Normal	LocalSystem	0
Process Control Service	ProcCon	Stopped	Manual	Own Process		
	v:\win2k\system32\proconsv.exe			Normal	LocalSystem	0
Protected Storage	ProtectedStorage	Running	Auto	Share Process		
	v:\win2k\system32\services.exe			Normal	LocalSystem	0
Remote Access Auto Connection Manager	RasAuto	Stopped	Manual	Share Process		
	v:\win2k\system32\svchost.exe		-k netsvcs	Normal	LocalSystem	0

Remote Access Connection Manager	RasMan	Stopped	Manual	Share Process
v:\win2k\system32\svchost.exe -k netsvcs	Normal	LocalSystem	0	
Routing and Remote Access	RemoteAccess	Stopped	Disabled	Share Process
v:\win2k\system32\svchost.exe -k netsvcs	Normal	LocalSystem	0	
Remote Registry Service	RemoteRegistry	Stopped	Manual	Own Process
v:\win2k\system32\regsvc.exe	Normal	LocalSystem	0	
Remote Procedure Call (RPC) Locator	RpcLocator	Stopped	Manual	Own Process
v:\win2k\system32\locator.exe	Normal	LocalSystem	0	
Remote Procedure Call (RPC)	RpcSs	Running	Auto	Share Process
v:\win2k\system32\svchost -k rpcss	Normal	LocalSystem	0	
QoS RSVP	RSVP	Stopped	Disabled	Own Process
v:\win2k\system32\rsvp.exe -s	Normal	LocalSystem	0	
Security Accounts Manager	SamSs	Running	Auto	Share Process
v:\win2k\system32\lsass.exe	Normal	LocalSystem	0	
Smart Card Helper	SCardDrv	Stopped	Manual	Share Process
v:\win2k\system32\scardsvr.exe	Ignore	LocalSystem	0	
Smart Card	SCardSvr	Stopped	Manual	Share Process
v:\win2k\system32\scardsvr.exe	Ignore	LocalSystem	0	
Task Scheduler Schedule		Stopped	Manual	Share Process
v:\win2k\system32\mstask.exe	Normal	LocalSystem	0	
RunAs Service	seclogon	Stopped	Manual	Share Process
v:\win2k\system32\services.exe	Ignore	LocalSystem	0	
System Event Notification	SENS	Stopped	Manual	Share Process
v:\win2k\system32\svchost.exe -k netsvcs	Normal	LocalSystem	0	
Internet Connection Sharing	SharedAccess	Stopped	Manual	Share Process
v:\win2k\system32\svchost.exe -k netsvcs	Normal	LocalSystem	0	
SNMP Service	SNMP	Running	Auto	Own Process
v:\win2k\system32\snmp.exe	Normal	LocalSystem	0	
SNMP Trap Service	SNMPTRAP	Stopped	Manual	Own Process
v:\win2k\system32\snmptrap.exe	Normal	LocalSystem	0	
Print Spooler	Spooler	Stopped	Manual	Own Process
v:\win2k\system32\spoolsv.exe	Normal	LocalSystem	0	
SQLSERVERAGENT	SQLSERVERAGENT	Stopped	Manual	Own Process
v:\mssql75\mssql\bin\sqlagent.exe	Normal	LocalSystem	0	
Performance Logs and Alerts	SysmonLog	Stopped	Auto	Own Process
v:\win2k\system32\smlogsvc.exe	Normal	LocalSystem	0	
Telephony	TapiSrv	Running	Auto	Share Process
v:\win2k\system32\svchost.exe -k tapisrv	Normal	LocalSystem	0	
Terminal Services	TermService	Stopped	Disabled	Own Process
v:\win2k\system32\termsrv.exe	Normal	LocalSystem	0	
Telnet	TlntSvr	Stopped	Manual	Own Process
v:\win2k\system32\tlntsvr.exe	Normal	LocalSystem	0	
Distributed Link Tracking Server	TrkSvr	Stopped	Manual	Share Process
v:\win2k\system32\services.exe	Normal	LocalSystem	0	
Distributed Link Tracking Client	TrkWks	Stopped	Disabled	Share Process
v:\win2k\system32\services.exe	Normal	LocalSystem	0	
Uninterruptible Power Supply	UPS	Stopped	Manual	Own Process
v:\win2k\system32\ups.exe	Normal	LocalSystem	0	
Utility Manager	UtilMan	Stopped	Manual	Own Process
v:\win2k\system32\utilman.exe	Normal	LocalSystem	0	
Windows Time	W32Time	Stopped	Manual	Share Process
v:\win2k\system32\services.exe	Normal	LocalSystem	0	
Windows Management Instrumentation	WinMgmt	Running	Auto	Own Process
v:\win2k\system32\wbem\winmgmt.exe	Ignore	LocalSystem	0	

Windows Management Instrumentation Driver Extensions Wmi	Running
Share Process v:\win2k\system32\services.exe	Manual
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	
Accessories\System Tools	Default User:Accessories\System Tools	Default User	
Administrative Tools	Default User:Administrative Tools	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\Games	All Users:Accessories\Games	All Users	
Accessories\Microsoft Script Debugger	All Users:Accessories\Microsoft Script Debugger	All Users	
Accessories\System Tools	All Users:Accessories\System Tools	All Users	
Administrative Tools	All Users:Administrative Tools	All Users	
GigaNet	All Users:GigaNet	All Users	
Microsoft SQL Server 8.0	All Users:Microsoft SQL Server 8.0	All Users	
MKS Toolkit	All Users:MKS Toolkit	All Users	
Navisphere	All Users:Navisphere	All Users	
Startup	All Users:Startup	All Users	
WinZip	All Users:WinZip	All Users	
Accessories	SHILOH8\Administrator:Accessories	SHILOH8\Administrator	
Accessories\Accessibility	SHILOH8\Administrator:Accessories\Accessibility	SHILOH8\Administrator	
Accessories\Entertainment	SHILOH8\Administrator:Accessories\Entertainment	SHILOH8\Administrator	
Accessories\System Tools	SHILOH8\Administrator:Accessories\System Tools	SHILOH8\Administrator	
Administrative Tools	SHILOH8\Administrator:Administrative Tools	SHILOH8\Administrator	
Startup	SHILOH8\Administrator:Startup	SHILOH8\Administrator	

[Startup Programs]

Program Command	User Name	Location
Mylex 4-cmd Batching	v:\cmd4.bat	SHILOH8\Administrator
		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
Image Document "V:\Program Files\Windows NT\Accessories\ImageVue\KodakImg.exe"
WordPad Document "%ProgramFiles%\Windows NT\Accessories\WORDPAD.EXE"
Windows Media Services DRM Storage object Not Available
Bitmap Image V:\WIN2K\System32\mspaint.exe

[Internet Explorer 5]

[Following are sub-categories of this main category]

[Summary]

Item Value
Version 5.00.2920.0000
Build 52920
Product ID 51891-005-0249992-05809
Application Path V:\Program Files\Internet Explorer
Language English (United States)
Active Printer Not Available

Cipher Strength 56-bit
Content Advisor Disabled
IEAK Install No

[File Versions]

File	Version	Size	Date	Path	Company
advapi32.dll	5.0.2191.1	349 KB	12/6/1999 4:00:00 PM	V:\WIN2K\system32	Microsoft Corporation
advpack.dll	5.0.2920.0	87 KB	12/6/1999 4:00:00 PM	V:\WIN2K\system32	Microsoft Corporation
browsecl.dll	5.0.2920.0	35 KB	12/6/1999 4:00:00 PM	V:\WIN2K\system32	Microsoft Corporation
browseui.dll	5.0.2920.0	793 KB	12/6/1999 4:00:00 PM	V:\WIN2K\system32	Microsoft Corporation
ckcnv.exe	5.0.2189.1	9 KB	12/6/1999 4:00:00 PM	V:\WIN2K\system32	Microsoft Corporation
comctl32.dll	5.81.2920.0	540 KB	12/6/1999 4:00:00 PM	V:\WIN2K\system32	Microsoft Corporation
crypt32.dll	5.131.2173.1	466 KB	12/6/1999 4:00:00 PM	V:\WIN2K\system32	Microsoft Corporation
enhshg.dll	<File Missing>	Not Available	Not Available	Not Available	Not Available
iemigrat.dll	<File Missing>	Not Available	Not Available	Not Available	Not Available
iesetup.dll	5.0.2920.0	57 KB	12/6/1999 4:00:00 PM	V:\WIN2K\system32	Microsoft Corporation
iexplore.exe	5.0.2920.0	59 KB	12/6/1999 4:00:00 PM	V:\Program Files\Internet Explorer	Microsoft Corporation
imagehlp.dll	5.0.2195.1	125 KB	12/6/1999 4:00:00 PM	V:\WIN2K\system32	Microsoft Corporation
imgghelp.dll	<File Missing>	Not Available	Not Available	Not Available	Not Available
inseng.dll	5.0.2920.0	72 KB	12/6/1999 4:00:00 PM	V:\WIN2K\system32	Microsoft Corporation

jobexec.dll	5.0.0.147 KB	12/6/1999 4:00:00 PM	V:\WIN2K\system32	Microsoft Corporation
jscrip.dll	5.1.0.4615	476 KB	12/6/1999 4:00:00 PM	V:\WIN2K\system32
jsproxy.dll	5.0.2920.0	13 KB	12/6/1999 4:00:00 PM	V:\WIN2K\system32
msahtml.dll	<File Missing>	Not Available	Not Available	Not Available
mshtml.dll	5.0.2920.0	2302 KB	12/6/1999 4:00:00 PM	V:\WIN2K\system32
msjava.dll	5.0.3234.0	918 KB	12/6/1999 4:00:00 PM	V:\WIN2K\system32
msoss.dll	<File Missing>	Not Available	Not Available	Not Available
msxml.dll	5.0.2920.0	521 KB	12/6/1999 4:00:00 PM	V:\WIN2K\system32
occache.dll	5.0.2920.0	86 KB	12/6/1999 4:00:00 PM	V:\WIN2K\system32
ole32.dll	5.0.2181.1	966 KB	12/6/1999 4:00:00 PM	V:\WIN2K\system32
oleaut32.dll	2.40.4512.1	600 KB	12/6/1999 4:00:00 PM	V:\WIN2K\system32
olepro32.dll	5.0.4512.1	160 KB	12/6/1999 4:00:00 PM	V:\WIN2K\system32
rsabase.dll	5.0.2150.1	129 KB	12/6/1999 4:00:00 PM	V:\WIN2K\system32
rsaenh.dll	<File Missing>	Not Available	Not Available	Not Available
rsapi32.dll	<File Missing>	Not Available	Not Available	Not Available
rsasig.dll	<File Missing>	Not Available	Not Available	Not Available
schannel.dll	5.0.2170.0	140 KB	12/6/1999 4:00:00 PM	V:\WIN2K\system32
shdoc401.dll	<File Missing>	Not Available	Not Available	Not Available
shdocvw.dll	5.0.2920.0	1078 KB	12/6/1999 4:00:00 PM	V:\WIN2K\system32
shell32.dll	5.0.2920.0	2297 KB	12/6/1999 4:00:00 PM	V:\WIN2K\system32
shlwapi.dll	5.0.2920.0	283 KB	12/6/1999 4:00:00 PM	V:\WIN2K\system32
url.dll	5.0.2920.0	82 KB	12/6/1999 4:00:00 PM	V:\WIN2K\system32
urlmon.dll	5.0.2920.0	427 KB	12/6/1999 4:00:00 PM	V:\WIN2K\system32
vbscript.dll	5.1.0.4615	428 KB	12/6/1999 4:00:00 PM	V:\WIN2K\system32
webcheck.dll	5.0.2920.0	252 KB	12/6/1999 4:00:00 PM	V:\WIN2K\system32
win.com	5.0.2134.1	24 KB	12/6/1999 4:00:00 PM	V:\WIN2K\system32
wininet.dll	5.0.2920.0	457 KB	12/6/1999 4:00:00 PM	V:\WIN2K\system32
winsock.dll	3.10.0.103	3 KB	12/6/1999 4:00:00 PM	V:\WIN2K\system32
wintrust.dll	5.131.2143.1	162 KB	12/6/1999 4:00:00 PM	V:\WIN2K\system32

wsock.vxd <File Missing> Not Available Not Available Not Available
Not Available
wsock32.dll 5.0.2152.1 21 KB 12/6/1999 4:00:00 PM
V:\WIN2K\system32 Microsoft Corporation
wsock32n.dll <File Missing> Not Available Not Available Not Available
Not Available

[Connectivity]

Item Value
Connection Preference Never dial
EnableHttp1.1 1
ProxyHttp1.1 0

LAN Settings

AutoConfigProxy Not Available
AutoProxyDetectMode Disabled
AutoConfigURL
Proxy Disabled
ProxyServer
ProxyOverride

[Cache]

[Following are sub-categories of this main category]

[Summary]

Item Value
Page Refresh Type Automatic
Temporary Internet Files Folder V:\Documents and
Settings\Administrator.SHILOH8.002\Local Settings\Temporary Internet Files
Total Disk Space 6393 MB
Available Disk Space 2084 MB
Maximum Cache Size 199 MB
Available Cache Size 200 MB

[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
Administrator Administrator 1/7/2000 to 12/13/2099 sha1RSA

[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
Local intranet Medium-low
Trusted sites Low
Internet Medium
Restricted sites High

Windows 2000 Datacenter Server Registry Information

Software\GigaNet

Key Name: SOFTWARE\GigaNet
Class Name: <NO CLASS>
Last Write Time: 2/3/2000 - 2:11 PM

Key Name: SOFTWARE\GigaNet\cLAN Management Console
Class Name: <NO CLASS>
Last Write Time: 2/3/2000 - 4:01 PM

Key Name: SOFTWARE\GigaNet\cLAN Management Console\1.00.000
Class Name: <NO CLASS>
Last Write Time: 2/3/2000 - 4:01 PM

Key Name: SOFTWARE\GigaNet\GniConMgrMgmt2
Class Name: <NO CLASS>
Last Write Time: 2/3/2000 - 2:11 PM

Key Name: SOFTWARE\GigaNet\GniConMgrMgmt2\0
Class Name: <NO CLASS>
Last Write Time: 2/13/2000 - 7:45 AM

Key Name: SOFTWARE\GigaNet\GniConMgrMgmt2\0\BeginModify
Class Name: <NO CLASS>
Last Write Time: 2/13/2000 - 12:13 PM
Value 0
Name: <NO NAME>
Type: REG_SZ
Data: 12:13:21

Key Name: SOFTWARE\GigaNet\GniConMgrMgmt2\0\Fabric
Class Name: <NO CLASS>
Last Write Time: 2/13/2000 - 7:45 AM

Key Name: SOFTWARE\GigaNet\GniConMgrMgmt2\0\Fabric\Switch1

Class Name: <NO CLASS>
Last Write Time: 2/13/2000 - 7:45 AM
Value 0
Name: Ports
Type: REG_SZ
Data: n1 n2 n3 n4 n5 x x x

Value 1
Name: SwitchModel
Type: REG_DWORD
Data: 0x1388

Value 2
Name: SwitchRev
Type: REG_DWORD
Data: 0x2103

Key Name: SOFTWARE\GigaNet\GniConMgrMgmt2\0\LastModified
Class Name: <NO CLASS>
Last Write Time: 2/13/2000 - 12:13 PM
Value 0
Name: <NO NAME>
Type: REG_SZ
Data: 12:13:21

Key Name: SOFTWARE\GigaNet\GniConMgrMgmt2\0\NodeList
Class Name: <NO CLASS>
Last Write Time: 2/13/2000 - 7:45 AM

Key Name: SOFTWARE\GigaNet\GniConMgrMgmt2\0\NodeList\Node0
Class Name: <NO CLASS>
Last Write Time: 2/13/2000 - 7:45 AM
Value 0
Name: Address
Type: REG_SZ
Data: 0090FA00083D

Value 1
Name: MediaType
Type: REG_SZ
Data:

Value 2
Name: Name
Type: REG_SZ
Data: SHILOH8

Value 3
Name: NICName
Type: REG_SZ
Data: gnivia0

Value 4
Name: NodeNumber
Type: REG_DWORD
Data: 0x1

Value 5
Name: State
Type: REG_DWORD
Data: 0x1

Value 6
Name: SwitchPort
Type: REG_SZ
Data: s1.1

Key Name: SOFTWARE\GigaNet\GniConMgrMgmt2\0\NodeList\Node2
Class Name: <NO CLASS>
Last Write Time: 2/13/2000 - 12:13 PM
Value 0
Name: Address
Type: REG_SZ
Data: 0090FA0008C7

Value 1
Name: MediaType
Type: REG_SZ
Data:

Value 2
Name: Name
Type: REG_SZ
Data: CLIENT1

Value 3
Name: NICName
Type: REG_SZ
Data: nic0

Value 4
Name: NodeNumber
Type: REG_DWORD
Data: 0x2

Value 5
Name: State
Type: REG_DWORD
Data: 0x1

Value 6
Name: SwitchPort
Type: REG_SZ
Data: s1.2

Key Name: SOFTWARE\GigaNet\GniConMgrMgmt2\0\NodeList\Node3
Class Name: <NO CLASS>
Last Write Time: 2/13/2000 - 7:45 AM
Value 0
Name: Address
Type: REG_SZ
Data: 0090FA000886

Value 1

Name: MediaType
 Type: REG_SZ
 Data:

Value 2
 Name: Name
 Type: REG_SZ
 Data: CLIENT2

Value 3
 Name: NICName
 Type: REG_SZ
 Data: nic0

Value 4
 Name: NodeNumber
 Type: REG_DWORD
 Data: 0x3

Value 5
 Name: State
 Type: REG_DWORD
 Data: 0x1

Value 6
 Name: SwitchPort
 Type: REG_SZ
 Data: s1.3

Key Name: SOFTWARE\GigaNet\GniConMgrMgmt2\0\NodeList\Node4
 Class Name: <NO CLASS>
 Last Write Time: 2/13/2000 - 7:45 AM

Value 0
 Name: Address
 Type: REG_SZ
 Data: 0090FA000843

Value 1
 Name: MediaType
 Type: REG_SZ
 Data:

Value 2
 Name: Name
 Type: REG_SZ
 Data: CLIENT3

Value 3
 Name: NICName
 Type: REG_SZ
 Data: nic0

Value 4
 Name: NodeNumber
 Type: REG_DWORD
 Data: 0x4

Value 5

Name: State
 Type: REG_DWORD
 Data: 0x1

Value 6
 Name: SwitchPort
 Type: REG_SZ
 Data: s1.4

Key Name: SOFTWARE\GigaNet\GniConMgrMgmt2\0\NodeList\Node5
 Class Name: <NO CLASS>
 Last Write Time: 2/13/2000 - 7:45 AM

Value 0
 Name: Address
 Type: REG_SZ
 Data: 0090FA000932

Value 1
 Name: MediaType
 Type: REG_SZ
 Data:

Value 2
 Name: Name
 Type: REG_SZ
 Data: CLIENT4

Value 3
 Name: NICName
 Type: REG_SZ
 Data: nic0

Value 4
 Name: NodeNumber
 Type: REG_DWORD
 Data: 0x5

Value 5
 Name: State
 Type: REG_DWORD
 Data: 0x1

Value 6
 Name: SwitchPort
 Type: REG_SZ
 Data: s1.5

Key Name: SOFTWARE\GigaNet\GniConMgrMgmt2\LastModified
 Class Name: <NO CLASS>
 Last Write Time: 2/13/2000 - 7:45 AM

Value 0
 Name: <NO NAME>
 Type: REG_SZ
 Data: 07:45:37

Key Name: SOFTWARE\GigaNet\RFC1156Agent

Class Name: <NO CLASS>
 Last Write Time: 2/3/2000 - 4:01 PM

Key Name: SOFTWARE\GigaNet\RFC1156Agent\CurrentVersion
 Class Name: <NO CLASS>
 Last Write Time: 2/3/2000 - 4:01 PM

Value 0
 Name: Pathname
 Type: REG_EXPAND_SZ
 Data: %SystemRoot%\System32\gnisnmp.dll

Software\Microsoft\MSSQLServer

Key Name: SOFTWARE\Microsoft\MSSQLServer
 Class Name: <NO CLASS>
 Last Write Time: 1/21/2000 - 5:46 PM

Key Name: SOFTWARE\Microsoft\MSSQLServer\Client
 Class Name: <NO CLASS>
 Last Write Time: 1/21/2000 - 5:46 PM

Key Name: SOFTWARE\Microsoft\MSSQLServer\Client\ConnectTo
 Class Name: <NO CLASS>
 Last Write Time: 1/21/2000 - 5:46 PM

Value 0
 Name: DSQUERY
 Type: REG_SZ
 Data: DBNETLIB

Key Name: SOFTWARE\Microsoft\MSSQLServer\Client\DB-Lib
 Class Name: <NO CLASS>
 Last Write Time: 1/21/2000 - 5:48 PM

Value 0
 Name: AutoAnsiToOem
 Type: REG_SZ
 Data: ON

Value 1
 Name: UseIntlSettings
 Type: REG_SZ
 Data: ON

Key Name: SOFTWARE\Microsoft\MSSQLServer\Client\SuperSocketNetLib
 Class Name: <NO CLASS>
 Last Write Time: 1/21/2000 - 5:48 PM

Value 0
 Name: ProtocolOrder
 Type: REG_MULTI_SZ
 Data: tcp
 np

Key Name: SOFTWARE\Microsoft\MSSQLServer\Client\SuperSocketNetLib\LastConnect
 Class Name: <NO CLASS>
 Last Write Time: 2/9/2000 - 11:40 AM

Value 0
 Name: <NO NAME>
 Type: REG_SZ
 Data: np:\\.\pipe\sql\query

Value 1
 Name: .
 Type: REG_SZ
 Data: tcp:SHILOH8,1433

Value 2
 Name: SHILOH8
 Type: REG_SZ
 Data: np:\\.\pipe\sql\query

Key Name: SOFTWARE\Microsoft\MSSQLServer\Client\SuperSocketNetLib\Np
 Class Name: <NO CLASS>
 Last Write Time: 1/21/2000 - 5:48 PM

Value 0
 Name: DefaultPipe
 Type: REG_SZ
 Data: sql\query

Key Name: SOFTWARE\Microsoft\MSSQLServer\Client\SuperSocketNetLib\Tcp
 Class Name: <NO CLASS>
 Last Write Time: 1/21/2000 - 5:48 PM

Value 0
 Name: DefaultPort
 Type: REG_DWORD
 Data: 0x599

Key Name: SOFTWARE\Microsoft\MSSQLServer\Client\TDS
 Class Name: <NO CLASS>
 Last Write Time: 1/21/2000 - 8:02 PM

Value 0
 Name: <NO NAME>
 Type: REG_SZ
 Data: 7.0

Value 1
 Name: (local)
 Type: REG_SZ
 Data: 7.0

Value 2
 Name: .
 Type: REG_SZ
 Data: 7.0

Key Name: SOFTWARE\Microsoft\MSSQLServer\MSSQLServer
 Class Name: <NO CLASS>
 Last Write Time: 2/3/2000 - 2:46 PM
 Value 0
 Name: AuditLevel
 Type: REG_DWORD
 Data: 0
 Value 1
 Name: BackupDirectory
 Type: REG_SZ
 Data: v:\mssql75\MSSQL\BACKUP
 Value 2
 Name: DefaultCollationName
 Type: REG_SZ
 Data: Latin1_General_BIN
 Value 3
 Name: DefaultDomain
 Type: REG_SZ
 Data: SHILOH8
 Value 4
 Name: DefaultLogin
 Type: REG_SZ
 Data: guest
 Value 5
 Name: ListenOn
 Type: REG_MULTI_SZ
 Data: SSMSSH70
 SSNETLIB
 SSMSGNET
 Value 6
 Name: LoginMode
 Type: REG_DWORD
 Data: 0
 Value 7
 Name: Map#
 Type: REG_SZ
 Data: -
 Value 8
 Name: Map\$
 Type: REG_SZ
 Data:
 Value 9
 Name: Map_
 Type: REG_SZ
 Data: \
 Value 10
 Name: ResourceMgrID
 Type: REG_SZ

Data: {EB0E23E9-1D9C-4503-BFBC-2CEE7FB9063}

Value 11
 Name: SetHostName
 Type: REG_DWORD
 Data: 0
 Value 12
 Name: Tapeloadwaittime
 Type: REG_DWORD
 Data: 0xffffffff

Key Name: SOFTWARE\Microsoft\MSSQLServer\MSSQLServer\CurrentVersion
 Class Name: <NO CLASS>
 Last Write Time: 1/21/2000 - 5:46 PM

Value 0
 Name: checksum
 Type: REG_BINARY
 Data:
 00000000 37 36 32 32 63 31 35 38 - 61 65 37 64 34 63 64 37
 7622c158ae7d4cd7
 00000010 35 30 64 61 30 33 34 62 - 36 30 31 36 63 34 66 34
 50da034b6016c4f4
 00000020 66 31 35 62 30 36 31 34 - 39 65 66 35 33 36 63 34
 f15b06149ef536c4
 00000030 37 31 37 37 34 63 64 39 - 62 66 39 30 66 66 66 65
 71774cd9bf90fffe
 00000040 30 35 33 64 31 31 61 64 - 36 35 62 65 30 62 33 62
 053d11ad65be0b3b
 00000050 34 30 64 62 63 33 37 34 - 33 34 36 37 64 66 64 35
 40dbc3743467dfd5
 00000060 34 62 31 39 64 33 38 62 - 66 33 36 31 61 30 35 39
 4b19d38bf361a059
 00000070 38 31 36 30 34 32 61 30 - 35 63 37 36 30 32 30 64
 816042a05c76020d
 00000080 30 32 63 66 61 62 64 65 - 35 61 39 62 65 30 34 39
 02cfabde5a9be049
 00000090 61 66 64 39 38 64 35 63 - 32 62 00 afd98d5c2b.

Value 1
 Name: CurrentVersion
 Type: REG_SZ
 Data: 8.00.024

Value 2
 Name: RegisteredOwner
 Type: REG_SZ
 Data: SAMM

Value 3
 Name: SerialNumber
 Type: REG_DWORD
 Data: 0x812d0040

Key Name: SOFTWARE\Microsoft\MSSQLServer\MSSQLServer\Parameters
 Class Name: <NO CLASS>

Last Write Time: 1/21/2000 - 5:46 PM
Value 0
Name: SQLArg0
Type: REG_SZ
Data: -dv:\mssql75\MSSQL\data\master.mdf

Value 1
Name: SQLArg1
Type: REG_SZ
Data: -ev:\mssql75\MSSQL\log\ERRORLOG

Value 2
Name: SQLArg2
Type: REG_SZ
Data: -lv:\mssql75\MSSQL\data\mastlog.ldf

Key Name: SOFTWARE\Microsoft\MSSQLServer\MSSQLServer\RPCNetLib
Class Name: <NO CLASS>
Last Write Time: 1/21/2000 - 5:46 PM
Value 0
Name: Security
Type: REG_SZ
Data:

Key Name: SOFTWARE\Microsoft\MSSQLServer\MSSQLServer\SuperSocketNetLib
Class Name: <NO CLASS>
Last Write Time: 1/21/2000 - 5:46 PM
Value 0
Name: ProtocolList
Type: REG_MULTI_SZ
Data: tcp
np

Key Name: SOFTWARE\Microsoft\MSSQLServer\MSSQLServer\SuperSocketNetLib\Np
Class Name: <NO CLASS>
Last Write Time: 1/21/2000 - 5:46 PM
Value 0
Name: PipeName
Type: REG_SZ
Data: \\.\pipe\sql\query

Key Name: SOFTWARE\Microsoft\MSSQLServer\MSSQLServer\SuperSocketNetLib\Tcp
Class Name: <NO CLASS>
Last Write Time: 1/21/2000 - 5:46 PM
Value 0
Name: TcpHideFlag
Type: REG_DWORD
Data: 0

Value 1
Name: TcpPort

Type: REG_SZ
Data: 1433

Key Name: SOFTWARE\Microsoft\MSSQLServer\Providers
Class Name: <NO CLASS>
Last Write Time: 1/21/2000 - 5:48 PM
Value 0
Name: AllowInProcess
Type: REG_DWORD
Data: 0x1

Key Name: SOFTWARE\Microsoft\MSSQLServer\Providers\ADSDSOObject
Class Name: <NO CLASS>
Last Write Time: 1/21/2000 - 5:48 PM
Value 0
Name: AllowInProcess
Type: REG_DWORD
Data: 0x1

Key Name: SOFTWARE\Microsoft\MSSQLServer\Providers\Microsoft.Jet.OLEDB.4.0
Class Name: <NO CLASS>
Last Write Time: 1/21/2000 - 5:48 PM
Value 0
Name: AllowInProcess
Type: REG_DWORD
Data: 0x1

Key Name: SOFTWARE\Microsoft\MSSQLServer\Providers\MSDAORA
Class Name: <NO CLASS>
Last Write Time: 1/21/2000 - 5:48 PM
Value 0
Name: AllowInProcess
Type: REG_DWORD
Data: 0x1

Key Name: SOFTWARE\Microsoft\MSSQLServer\Providers\MSDASQL
Class Name: <NO CLASS>
Last Write Time: 1/21/2000 - 5:48 PM
Value 0
Name: AllowInProcess
Type: REG_DWORD
Data: 0x1

Key Name: SOFTWARE\Microsoft\MSSQLServer\Providers\MSIDXSS
Class Name: <NO CLASS>
Last Write Time: 1/21/2000 - 5:48 PM
Value 0
Name: AllowInProcess
Type: REG_DWORD
Data: 0x1

Key Name: SOFTWARE\Microsoft\MSSQLServer\Providers\MSQLImpProv
 Class Name: <NO CLASS>
 Last Write Time: 1/21/2000 - 5:48 PM
 Value 0
 Name: AllowInProcess
 Type: REG_DWORD
 Data: 0x1

Key Name: SOFTWARE\Microsoft\MSSQLServer\Providers\MSSEARCHSQL
 Class Name: <NO CLASS>
 Last Write Time: 1/21/2000 - 5:48 PM
 Value 0
 Name: AllowInProcess
 Type: REG_DWORD
 Data: 0x1

Key Name: SOFTWARE\Microsoft\MSSQLServer\Providers\SQLOLEDB
 Class Name: <NO CLASS>
 Last Write Time: 1/21/2000 - 5:48 PM
 Value 0
 Name: AllowInProcess
 Type: REG_DWORD
 Data: 0x1

Key Name: SOFTWARE\Microsoft\MSSQLServer\Setup
 Class Name: <NO CLASS>
 Last Write Time: 1/21/2000 - 5:46 PM
 Value 0
 Name: InstalledServer
 Type: REG_SZ
 Data: SHILOH8

Value 1
 Name: SourcePath
 Type: REG_SZ
 Data: U:\Shiloh_024.04

Value 2
 Name: SQLDataRoot
 Type: REG_SZ
 Data: v:\mssql75\MSSQL

Value 3
 Name: SQLPath
 Type: REG_SZ
 Data: v:\mssql75\MSSQL

Key Name: SOFTWARE\Microsoft\MSSQLServer\SNMP
 Class Name: <NO CLASS>
 Last Write Time: 1/21/2000 - 5:48 PM

Key Name: SOFTWARE\Microsoft\MSSQLServer\SNMP\CurrentVersion
 Class Name: <NO CLASS>
 Last Write Time: 1/21/2000 - 5:48 PM
 Value 0

Name: Pathname
 Type: REG_EXPAND_SZ
 Data: v:\mssql75\MSSQL\BINN\sqlsnmp.dll

Key Name: SOFTWARE\Microsoft\MSSQLServer\SQLServerAgent
 Class Name: <NO CLASS>
 Last Write Time: 1/21/2000 - 5:48 PM
 Value 0
 Name: DownloadedMaxRows
 Type: REG_DWORD
 Data: 0x64

Value 1
 Name: ErrorLogFile
 Type: REG_SZ
 Data: v:\mssql75\MSSQL\LOG\SQLAGENT.OUT

Value 2
 Name: ErrorLoggingLevel
 Type: REG_DWORD
 Data: 0x3

Value 3
 Name: JobHistoryMaxRows
 Type: REG_DWORD
 Data: 0x3e8

Value 4
 Name: JobHistoryMaxRowsPerJob
 Type: REG_DWORD
 Data: 0x64

Value 5
 Name: MSXServerName
 Type: REG_SZ

Value 6
 Name: NonAlertableErrors
 Type: REG_SZ
 Data: 1204,4002

Value 7
 Name: RestartServer
 Type: REG_DWORD
 Data: 0x1

Value 8
 Name: ServerHost
 Type: REG_SZ

Value 9
 Name: WorkingDirectory
 Type: REG_SZ
 Data: v:\mssql75\MSSQL\JOBS

Key Name: SOFTWARE\Microsoft\MSSQLServer\SQLServerAgent\Subsystems
 Class Name: <NO CLASS>
 Last Write Time: 1/21/2000 - 5:48 PM
 Value 0
 Name: ActiveScripting
 Type: REG_SZ
 Data: v:\mssql75\MSSQL\BINN\SQLATXSS.DLL,NULL,ActiveScriptStart,ActiveScriptEven
 t,ActiveScriptStop,10
 Value 1
 Name: CmdExec
 Type: REG_SZ
 Data: v:\mssql75\MSSQL\BINN\SQLCMDSS.DLL,NULL,CmdExecStart,CmdEvent,CmdExecStop,
 10
 Value 2
 Name: Distribution
 Type: REG_SZ
 Data: v:\mssql75\MSSQL\BINN\SQLREPSS.DLL,V:\Program
 Files\Microsoft SQL
 Server\80\COM\DISTRIB.EXE,ReplStart,ReplEvent,ReplStop,100
 Value 3
 Name: LogReader
 Type: REG_SZ
 Data: v:\mssql75\MSSQL\BINN\SQLREPSS.DLL,V:\Program
 Files\Microsoft SQL
 Server\80\COM\LOGREAD.EXE,ReplStart,ReplEvent,ReplStop,25
 Value 4
 Name: Merge
 Type: REG_SZ
 Data: v:\mssql75\MSSQL\BINN\SQLREPSS.DLL,V:\Program
 Files\Microsoft SQL
 Server\80\COM\REPLMERG.EXE,ReplStart,ReplEvent,ReplStop,100
 Value 5
 Name: QueueReader
 Type: REG_SZ
 Data: v:\mssql75\MSSQL\BINN\SQLREPSS.DLL,V:\Program
 Files\Microsoft SQL
 Server\80\COM\QRDRSVC.EXE,ReplStart,ReplEvent,ReplStop,100
 Value 6
 Name: Snapshot
 Type: REG_SZ
 Data: v:\mssql75\MSSQL\BINN\SQLREPSS.DLL,V:\Program
 Files\Microsoft SQL
 Server\80\COM\SNAPSHOT.EXE,ReplStart,ReplEvent,ReplStop,100
 Key Name: SOFTWARE\Microsoft\MSSQLServer\Tracking
 Class Name: <NO CLASS>
 Last Write Time: 1/21/2000 - 5:48 PM
 Value 0
 Name: {6DC86044-0C71-11d3-9E18-00C04F79D434}

Type: REG_SZ
 Data:
 Value 1
 Name: {E07FDDA4-5A21-11d2-9DAD-00C04F79D434}
 Type: REG_SZ
 Data:
 Value 2
 Name: {E07FDDA8-5A21-11d2-9DAD-00C04F79D434}
 Type: REG_SZ
 Data:
 Value 3
 Name: {E07FDDA9-5A21-11d2-9DAD-00C04F79D434}
 Type: REG_SZ
 Data:
 Value 4
 Name: {E07FDDAA-5A21-11d2-9DAD-00C04F79D434}
 Type: REG_SZ
 Data:
 Value 5
 Name: {E07FDDAC-5A21-11d2-9DAD-00C04F79D434}
 Type: REG_SZ
 Data:
 Value 6
 Name: {E07FDDAD-5A21-11d2-9DAD-00C04F79D434}
 Type: REG_SZ
 Data:
 Value 7
 Name: {E07FDDAF-5A21-11d2-9DAD-00C04F79D434}
 Type: REG_SZ
 Data:
 Value 8
 Name: {E07FDDBE-5A21-11d2-9DAD-00C04F79D434}
 Type: REG_SZ
 Data:
 Value 9
 Name: {E07FDDBF-5A21-11d2-9DAD-00C04F79D434}
 Type: REG_SZ
 Data:
 Value 10
 Name: {E07FDDC0-5A21-11d2-9DAD-00C04F79D434}
 Type: REG_SZ
 Data:
 Key Name: SOFTWARE\Microsoft\MSSQLServer\Tracking\Shortcuts
 Class Name: <NO CLASS>
 Last Write Time: 1/21/2000 - 5:48 PM
 Value 0
 Name: Books Online

Type: REG_SZ
Data:

Value 1
Name: Client Network Utility
Type: REG_SZ
Data:

Value 2
Name: Configure SQL XML Support in IIS
Type: REG_SZ
Data:

Value 3
Name: Enterprise Manager
Type: REG_SZ
Data:

Value 4
Name: Import and Export Data
Type: REG_SZ
Data:

Value 5
Name: Profiler
Type: REG_SZ
Data:

Value 6
Name: Query Analyzer
Type: REG_SZ
Data:

Value 7
Name: Server Network Utility
Type: REG_SZ
Data:

Value 8
Name: Service Manager
Type: REG_SZ
Data:

Software\Microsoft\Microsoft SQL Server

Key Name: SOFTWARE\Microsoft\Microsoft SQL Server
Class Name: <NO CLASS>
Last Write Time: 2/13/2000 - 7:48 AM

Value 0
Name: InstalledInstances
Type: REG_MULTI_SZ
Data: MSSQLSERVER

Value 1
Name: SsrpActiveServer

Type: REG_SZ
Data: MSSQLServer

Key Name: SOFTWARE\Microsoft\Microsoft SQL Server\8.00.000
Class Name: <NO CLASS>
Last Write Time: 1/21/2000 - 5:44 PM

Key Name: SOFTWARE\Microsoft\Microsoft SQL Server\80
Class Name: <NO CLASS>
Last Write Time: 1/21/2000 - 5:44 PM

Value 0
Name: Product ID
Type: REG_SZ
Data: 47343-111-1111111-12301

Key Name: SOFTWARE\Microsoft\Microsoft SQL Server\80\DTS
Class Name: <NO CLASS>
Last Write Time: 1/21/2000 - 5:48 PM

Key Name: SOFTWARE\Microsoft\Microsoft SQL Server\80\DTS\ActiveXWindowPosition
Class Name: <NO CLASS>
Last Write Time: 1/21/2000 - 5:48 PM

Value 0
Name: bottom
Type: REG_DWORD
Data: 0

Value 1
Name: language
Type: REG_SZ
Data:

Value 2
Name: left
Type: REG_DWORD
Data: 0

Value 3
Name: right
Type: REG_DWORD
Data: 0

Value 4
Name: showstyle
Type: REG_DWORD
Data: 0x1

Value 5
Name: splitterpos
Type: REG_DWORD
Data: 0

Value 6
Name: taborder
Type: REG_DWORD
Data: 0

Value 7
Name: top
Type: REG_DWORD
Data: 0

Key Name: SOFTWARE\Microsoft\Microsoft SQL Server\80\Replication
Class Name: <NO CLASS>
Last Write Time: 1/21/2000 - 5:48 PM

Key Name: SOFTWARE\Microsoft\Microsoft SQL Server\80\Replication\MergeReplicationProvider
Class Name: <NO CLASS>
Last Write Time: 1/21/2000 - 5:48 PM

Key Name: SOFTWARE\Microsoft\Microsoft SQL Server\80\Replication\MergeReplicationProvider\MsJet
Class Name: <NO CLASS>
Last Write Time: 1/21/2000 - 5:48 PM

Value 0
Name: <NO NAME>
Type: REG_SZ
Data: {f159cf30-0db4-11d1-b272-00aa00b8de95}

Key Name: SOFTWARE\Microsoft\Microsoft SQL Server\80\Tools
Class Name: <NO CLASS>
Last Write Time: 1/21/2000 - 5:46 PM

Key Name: SOFTWARE\Microsoft\Microsoft SQL Server\80\Tools\ClientSetup
Class Name: <NO CLASS>
Last Write Time: 1/21/2000 - 5:46 PM

Value 0
Name: SQLPath
Type: REG_SZ
Data: V:\Program Files\Microsoft SQL Server\80\Tools

Key Name: SOFTWARE\Microsoft\Microsoft SQL Server\80\Tools\Help
Class Name: <NO CLASS>
Last Write Time: 1/21/2000 - 5:48 PM

Value 0
Name: HelpFile
Type: REG_SZ
Data: V:\Program Files\Microsoft SQL Server\80\Tools\Books\SQL80.col

Value 1
Name: HelpLCID
Type: REG_SZ
Data: 1033

Key Name: SOFTWARE\Microsoft\Microsoft SQL Server\80\Tools\SQLLEW
Class Name: <NO CLASS>
Last Write Time: 1/21/2000 - 5:48 PM
Value 0

Name: CustomizableAlertBaseURL
Type: REG_SZ
Data: file:///V:\Program Files\Microsoft SQL Server\80\Tools\html\alrtfdbk.htm

Value 1
Name: CustomizableAlertDefaultBtnShortText
Type: REG_SZ
Data: Feedback&k

Value 2
Name: CustomizableAlertDefaultButtonText
Type: REG_SZ
Data: &Send Feedback

Key Name: SOFTWARE\Microsoft\Microsoft SQL Server\80\Tools\SQLLEW\Replication
Class Name: <NO CLASS>
Last Write Time: 1/21/2000 - 5:48 PM

Value 0
Name: PerfmonFile
Type: REG_SZ
Data: V:\Program Files\Microsoft SQL Server\80\Tools\BINN\REPLMON.PMC

Key Name: SOFTWARE\Microsoft\Microsoft SQL Server\80\Tools\SQLLEW\Wizards
Class Name: <NO CLASS>
Last Write Time: 1/21/2000 - 5:48 PM

Value 0
Name: Web Assistant
Type: REG_SZ
Data: V:\Program Files\Microsoft SQL Server\80\Tools\BINN\semwebwz.DLL^WebWizardEntry

Key Name: SOFTWARE\Microsoft\Microsoft SQL Server\80\Tools\Tracking
Class Name: <NO CLASS>
Last Write Time: 1/21/2000 - 5:48 PM

Value 0
Name: {E07FDDA8-5A21-11d2-9DAD-00C04F79D434}
Type: REG_DWORD
Data: 0x1

Value 1
Name: {E07FDDA9-5A21-11d2-9DAD-00C04F79D434}
Type: REG_DWORD
Data: 0x1

Value 2
Name: {E07FDDAA-5A21-11d2-9DAD-00C04F79D434}
Type: REG_DWORD
Data: 0x1

Value 3
Name: {E07FDDAC-5A21-11d2-9DAD-00C04F79D434}

Type: REG_DWORD
Data: 0x1

Value 4
Name: {E07FDDAD-5A21-11d2-9DAD-00C04F79D434}
Type: REG_DWORD
Data: 0x1

Value 5
Name: {E07FDDAF-5A21-11d2-9DAD-00C04F79D434}
Type: REG_DWORD
Data: 0x1

Value 6
Name: {E07FDDBE-5A21-11d2-9DAD-00C04F79D434}
Type: REG_DWORD
Data: 0x1

Value 7
Name: {E07FDDBF-5A21-11d2-9DAD-00C04F79D434}
Type: REG_DWORD
Data: 0x1

Key Name: SOFTWARE\Microsoft\Microsoft SQL
Server\80\Tools\Tracking\Shortcuts
Class Name: <NO CLASS>
Last Write Time: 1/21/2000 - 5:48 PM
Value 0
Name: Books Online
Type: REG_DWORD
Data: 0x1

Value 1
Name: Client Network Utility
Type: REG_DWORD
Data: 0x1

Value 2
Name: Configure SQL XML Support in IIS
Type: REG_DWORD
Data: 0x1

Value 3
Name: Enterprise Manager
Type: REG_DWORD
Data: 0x1

Value 4
Name: Import and Export Data
Type: REG_DWORD
Data: 0x1

Value 5
Name: Profiler
Type: REG_DWORD
Data: 0x1

Value 6

Name: Query Analyzer
Type: REG_DWORD
Data: 0x1

Value 7
Name: Server Network Utility
Type: REG_DWORD
Data: 0x1

Value 8
Name: Service Manager
Type: REG_DWORD
Data: 0x1

Software/Mylex

Key Name: SOFTWARE\Mylex
Class Name: <NO CLASS>
Last Write Time: 1/24/2000 - 11:22 AM

Key Name: SOFTWARE\Mylex\Global Array Manager Client
Class Name: <NO CLASS>
Last Write Time: 1/24/2000 - 11:22 AM

Key Name: SOFTWARE\Mylex\Global Array Manager Client\2.50-35
Class Name: <NO CLASS>
Last Write Time: 1/24/2000 - 11:22 AM
Value 0
Name: Company Name
Type: REG_SZ
Data: Unisys Corporation

Value 1
Name: User Name
Type: REG_SZ
Data: SAMM

Key Name: SOFTWARE\Mylex\Global Array Manager Server
Class Name: <NO CLASS>
Last Write Time: 1/24/2000 - 11:22 AM

Key Name: SOFTWARE\Mylex\Global Array Manager Server\2.52-16
Class Name: <NO CLASS>
Last Write Time: 1/24/2000 - 11:22 AM
Value 0
Name: Pathname
Type: REG_EXPAND_SZ
Data: V:\WIN2K\System32\GAMSERV\gamagent.dll

Software\ODBC

Key Name: SOFTWARE\ODBC
Class Name: <NO CLASS>
Last Write Time: 1/19/2000 - 9:28 AM

Key Name: SOFTWARE\ODBC\ODBC.INI
Class Name: <NO CLASS>
Last Write Time: 1/19/2000 - 9:28 AM

Key Name: SOFTWARE\ODBC\ODBC.INI\LocalServer
Class Name: <NO CLASS>
Last Write Time: 1/21/2000 - 5:48 PM
Value 0
Name: Description
Type: REG_SZ
Data:

Value 1
Name: Server
Type: REG_SZ
Data: (local)

Value 2
Name: Trusted_Connection
Type: REG_SZ
Data:

Value 3
Name: UseProcForPrepare
Type: REG_SZ
Data: Yes

Key Name: SOFTWARE\ODBC\ODBC.INI\ODBC Data Sources
Class Name: <NO CLASS>
Last Write Time: 1/21/2000 - 5:48 PM
Value 0
Name: LocalServer
Type: REG_SZ
Data: SQL Server

Key Name: SOFTWARE\ODBC\ODBC.INI\ODBC File DSN
Class Name: <NO CLASS>
Last Write Time: 1/19/2000 - 9:28 AM
Value 0
Name: DefaultDSNDir
Type: REG_SZ
Data: V:\Program Files\Common Files\ODBC\Data Sources

Key Name: SOFTWARE\ODBC\ODBCINST.INI
Class Name: <NO CLASS>
Last Write Time: 1/19/2000 - 9:28 AM

Key Name: SOFTWARE\ODBC\ODBCINST.INI\Conversor de página de código MS

Class Name: <NO CLASS>
Last Write Time: 1/19/2000 - 9:40 AM
Value 0
Name: Setup
Type: REG_SZ
Data: V:\WIN2K\System32\MSCPXL32.dll

Value 1
Name: Translator
Type: REG_SZ
Data: V:\WIN2K\System32\MSCPXL32.dll

Value 2
Name: UsageCount
Type: REG_DWORD
Data: 0x4

Key Name: SOFTWARE\ODBC\ODBCINST.INI\Driver da Microsoft para arquivos texto (*.txt; *.csv)
Class Name: <NO CLASS>
Last Write Time: 1/19/2000 - 9:40 AM
Value 0
Name: APILevel
Type: REG_SZ
Data: 1

Value 1
Name: ConnectFunctions
Type: REG_SZ
Data: YYN

Value 2
Name: Driver
Type: REG_SZ
Data: V:\WIN2K\System32\odbcjt32.dll

Value 3
Name: DriverODBCVer
Type: REG_SZ
Data: 02.50

Value 4
Name: FileExtns
Type: REG_SZ
Data: *.*,.asc,*.csv,*.tab,*.txt,*.csv

Value 5
Name: FileUsage
Type: REG_SZ
Data: 1

Value 6
Name: Setup
Type: REG_SZ
Data: V:\WIN2K\System32\odtext32.dll

Value 7
Name: SQLLevel

Type:	REG_SZ	Key Name:	SOFTWARE\ODBC\ODBCINST.INI\Driver do Microsoft dBase (*.dbf)
Data:	0	Class Name:	<NO CLASS>
Value 8		Last Write Time:	1/19/2000 - 9:40 AM
Name:	UsageCount	Value 0	
Type:	REG_DWORD	Name:	APILevel
Data:	0x4	Type:	REG_SZ
		Data:	1
Key Name:	SOFTWARE\ODBC\ODBCINST.INI\Driver do Microsoft Access (*.mdb)	Value 1	
Class Name:	<NO CLASS>	Name:	ConnectFunctions
Last Write Time:	1/19/2000 - 9:40 AM	Type:	REG_SZ
Value 0		Data:	YYN
Name:	APILevel	Value 2	
Type:	REG_SZ	Name:	Driver
Data:	1	Type:	REG_SZ
Value 1		Data:	V:\WIN2K\System32\odbcjt32.dll
Name:	ConnectFunctions	Value 3	
Type:	REG_SZ	Name:	DriverODBCVer
Data:	YYN	Type:	REG_SZ
Value 2		Data:	02.50
Name:	Driver	Value 4	
Type:	REG_SZ	Name:	FileExtns
Data:	V:\WIN2K\System32\odbcjt32.dll	Type:	REG_SZ
Value 3		Data:	*.dbf,*.ndx,*.mdx
Name:	DriverODBCVer	Value 5	
Type:	REG_SZ	Name:	FileUsage
Data:	02.50	Type:	REG_SZ
Value 4		Data:	1
Name:	FileExtns	Value 6	
Type:	REG_SZ	Name:	Setup
Data:	*.mdb	Type:	REG_SZ
Value 5		Data:	V:\WIN2K\System32\oddbse32.dll
Name:	FileUsage	Value 7	
Type:	REG_SZ	Name:	SQLLevel
Data:	2	Type:	REG_SZ
Value 6		Data:	0
Name:	Setup	Value 8	
Type:	REG_SZ	Name:	UsageCount
Data:	V:\WIN2K\System32\odbcjt32.dll	Type:	REG_DWORD
Value 7		Data:	0x4
Name:	SQLLevel	Key Name:	SOFTWARE\ODBC\ODBCINST.INI\Driver do Microsoft Excel (*.xls)
Type:	REG_SZ	Class Name:	<NO CLASS>
Data:	0	Last Write Time:	1/19/2000 - 9:40 AM
Value 8		Value 0	
Name:	UsageCount	Name:	APILevel
Type:	REG_DWORD	Type:	REG_SZ
Data:	0x4	Data:	1

Value 1
 Name: ConnectFunctions
 Type: REG_SZ
 Data: YYN

Value 2
 Name: Driver
 Type: REG_SZ
 Data: V:\WIN2K\System32\odbcjt32.dll

Value 3
 Name: DriverODBCVer
 Type: REG_SZ
 Data: 02.50

Value 4
 Name: FileExtns
 Type: REG_SZ
 Data: *.xls

Value 5
 Name: FileUsage
 Type: REG_SZ
 Data: 1

Value 6
 Name: Setup
 Type: REG_SZ
 Data: V:\WIN2K\System32\odexl32.dll

Value 7
 Name: SQLLevel
 Type: REG_SZ
 Data: 0

Value 8
 Name: UsageCount
 Type: REG_DWORD
 Data: 0x4

Key Name: SOFTWARE\ODBC\ODBCINST.INI\Driver do Microsoft Paradox (*.db)
 Class Name: <NO CLASS>
 Last Write Time: 1/19/2000 - 9:40 AM

Value 0
 Name: APILevel
 Type: REG_SZ
 Data: 1

Value 1
 Name: ConnectFunctions
 Type: REG_SZ
 Data: YYN

Value 2
 Name: Driver
 Type: REG_SZ
 Data: V:\WIN2K\System32\odbcjt32.dll

Value 3
 Name: DriverODBCVer
 Type: REG_SZ
 Data: 02.50

Value 4
 Name: FileExtns
 Type: REG_SZ
 Data: *.db

Value 5
 Name: FileUsage
 Type: REG_SZ
 Data: 1

Value 6
 Name: Setup
 Type: REG_SZ
 Data: V:\WIN2K\System32\odpdx32.dll

Value 7
 Name: SQLLevel
 Type: REG_SZ
 Data: 0

Value 8
 Name: UsageCount
 Type: REG_DWORD
 Data: 0x4

Key Name: SOFTWARE\ODBC\ODBCINST.INI\Driver para o Microsoft Visual FoxPro
 Class Name: <NO CLASS>
 Last Write Time: 1/19/2000 - 9:40 AM

Value 0
 Name: APILevel
 Type: REG_SZ
 Data: 0

Value 1
 Name: ConnectFunctions
 Type: REG_SZ
 Data: YYN

Value 2
 Name: Driver
 Type: REG_SZ
 Data: V:\WIN2K\System32\vfpodbc.dll

Value 3
 Name: DriverODBCVer
 Type: REG_SZ
 Data: 02.50

Value 4
 Name: FileExtns
 Type: REG_SZ

Data: *.dbf,*.cdx,*.idx,*.fpt

Value 5
 Name: FileUsage
 Type: REG_SZ
 Data: 1

Value 6
 Name: Setup
 Type: REG_SZ
 Data: V:\WIN2K\System32\vfpoDBC.dll

Value 7
 Name: SQLLevel
 Type: REG_SZ
 Data: 0

Value 8
 Name: UsageCount
 Type: REG_DWORD
 Data: 0x4

Key Name: SOFTWARE\ODBC\ODBCINST.INI\Microsoft Access Driver
 (*.mdb)
 Class Name: <NO CLASS>
 Last Write Time: 1/19/2000 - 9:40 AM

Value 0
 Name: APILevel
 Type: REG_SZ
 Data: 1

Value 1
 Name: ConnectFunctions
 Type: REG_SZ
 Data: YYN

Value 2
 Name: Driver
 Type: REG_SZ
 Data: V:\WIN2K\System32\odbcjt32.dll

Value 3
 Name: DriverODBCVer
 Type: REG_SZ
 Data: 02.50

Value 4
 Name: FileExtns
 Type: REG_SZ
 Data: *.mdb

Value 5
 Name: FileUsage
 Type: REG_SZ
 Data: 2

Value 6
 Name: Setup

Type: REG_SZ
 Data: V:\WIN2K\System32\odbcjt32.dll

Value 7
 Name: SQLLevel
 Type: REG_SZ
 Data: 0

Value 8
 Name: UsageCount
 Type: REG_DWORD
 Data: 0x4

Key Name: SOFTWARE\ODBC\ODBCINST.INI\Microsoft Access-Treiber
 (*.mdb)
 Class Name: <NO CLASS>
 Last Write Time: 1/19/2000 - 9:40 AM

Value 0
 Name: APILevel
 Type: REG_SZ
 Data: 1

Value 1
 Name: ConnectFunctions
 Type: REG_SZ
 Data: YYN

Value 2
 Name: Driver
 Type: REG_SZ
 Data: V:\WIN2K\System32\odbcjt32.dll

Value 3
 Name: DriverODBCVer
 Type: REG_SZ
 Data: 02.50

Value 4
 Name: FileExtns
 Type: REG_SZ
 Data: *.mdb

Value 5
 Name: FileUsage
 Type: REG_SZ
 Data: 2

Value 6
 Name: Setup
 Type: REG_SZ
 Data: V:\WIN2K\System32\odbcjt32.dll

Value 7
 Name: SQLLevel
 Type: REG_SZ
 Data: 0

Value 8

Name: UsageCount
 Type: REG_DWORD
 Data: 0x4

Key Name: SOFTWARE\ODBC\ODBCINST.INI\Microsoft dBase Driver
 (*.dbf)
 Class Name: <NO CLASS>
 Last Write Time: 1/19/2000 - 9:40 AM
 Value 0
 Name: APILevel
 Type: REG_SZ
 Data: 1

Value 1
 Name: ConnectFunctions
 Type: REG_SZ
 Data: YYN

Value 2
 Name: Driver
 Type: REG_SZ
 Data: V:\WIN2K\System32\odbcjt32.dll

Value 3
 Name: DriverODBCVer
 Type: REG_SZ
 Data: 02.50

Value 4
 Name: FileExtns
 Type: REG_SZ
 Data: *.dbf,*.ndx,*.mdx

Value 5
 Name: FileUsage
 Type: REG_SZ
 Data: 1

Value 6
 Name: Setup
 Type: REG_SZ
 Data: V:\WIN2K\System32\oddbse32.dll

Value 7
 Name: SQLLevel
 Type: REG_SZ
 Data: 0

Value 8
 Name: UsageCount
 Type: REG_DWORD
 Data: 0x4

Key Name: SOFTWARE\ODBC\ODBCINST.INI\Microsoft dBase VFP Driver
 (*.dbf)
 Class Name: <NO CLASS>
 Last Write Time: 1/19/2000 - 9:40 AM

Value 0
 Name: APILevel
 Type: REG_SZ
 Data: 0

Value 1
 Name: ConnectFunctions
 Type: REG_SZ
 Data: YYN

Value 2
 Name: Driver
 Type: REG_SZ
 Data: V:\WIN2K\System32\vfpodbc.dll

Value 3
 Name: DriverODBCVer
 Type: REG_SZ
 Data: 02.50

Value 4
 Name: FileExtns
 Type: REG_SZ
 Data: *.dbf,*.cdx,*.idx,*.fpt

Value 5
 Name: FileUsage
 Type: REG_SZ
 Data: 1

Value 6
 Name: Setup
 Type: REG_SZ
 Data: V:\WIN2K\System32\vfpodbc.dll

Value 7
 Name: SQLLevel
 Type: REG_SZ
 Data: 0

Value 8
 Name: UsageCount
 Type: REG_DWORD
 Data: 0x4

Key Name: SOFTWARE\ODBC\ODBCINST.INI\Microsoft dBase-Treiber
 (*.dbf)
 Class Name: <NO CLASS>
 Last Write Time: 1/19/2000 - 9:40 AM
 Value 0
 Name: APILevel
 Type: REG_SZ
 Data: 1

Value 1
 Name: ConnectFunctions
 Type: REG_SZ
 Data: YYN

Value 2	Name: Driver	Data: 02.50	Value 4	Name: FileExtns	
	Type: REG_SZ			Type: REG_SZ	
	Data: V:\WIN2K\System32\odbcjt32.dll			Data: *.xls	
Value 3	Name: DriverODBCVer		Value 5	Name: FileUsage	
	Type: REG_SZ			Type: REG_SZ	
	Data: 02.50			Data: 1	
Value 4	Name: FileExtns		Value 6	Name: Setup	
	Type: REG_SZ			Type: REG_SZ	
	Data: *.dbf,*.ndx,*.mdx			Data: V:\WIN2K\System32\odex132.dll	
Value 5	Name: FileUsage		Value 7	Name: SQLLevel	
	Type: REG_SZ			Type: REG_SZ	
	Data: 1			Data: 0	
Value 6	Name: Setup		Value 8	Name: UsageCount	
	Type: REG_SZ			Type: REG_DWORD	
	Data: V:\WIN2K\System32\oddbse32.dll			Data: 0x4	
Value 7	Name: SQLLevel		Key Name:	SOFTWARE\ODBC\ODBCINST.INI\Microsoft Excel-Treiber	
	Type: REG_SZ		(*.xls)		
	Data: 0		Class Name:	<NO CLASS>	
Value 8	Name: UsageCount		Last Write Time:	1/19/2000 - 9:40 AM	
	Type: REG_DWORD		Value 0	Name: APILevel	
	Data: 0x4			Type: REG_SZ	
Key Name:	SOFTWARE\ODBC\ODBCINST.INI\Microsoft Excel Driver			Data: 1	
(*.xls)			Value 1	Name: ConnectFunctions	
Class Name:	<NO CLASS>			Type: REG_SZ	
Last Write Time:	1/19/2000 - 9:40 AM			Data: YYN	
Value 0	Name: APILevel		Value 2	Name: Driver	
	Type: REG_SZ			Type: REG_SZ	
	Data: 1			Data: V:\WIN2K\System32\odbcjt32.dll	
Value 1	Name: ConnectFunctions		Value 3	Name: DriverODBCVer	
	Type: REG_SZ			Type: REG_SZ	
	Data: YYN			Data: 02.50	
Value 2	Name: Driver		Value 4	Name: FileExtns	
	Type: REG_SZ			Type: REG_SZ	
	Data: V:\WIN2K\System32\odbcjt32.dll			Data: *.xls	
Value 3	Name: DriverODBCVer		Value 5	Name: FileUsage	
	Type: REG_SZ				

Type: REG_SZ
Data: 1

Value 6
Name: Setup
Type: REG_SZ
Data: V:\WIN2K\System32\odexl32.dll

Value 7
Name: SQLLevel
Type: REG_SZ
Data: 0

Value 8
Name: UsageCount
Type: REG_DWORD
Data: 0x4

Key Name: SOFTWARE\ODBC\ODBCINST.INI\Microsoft FoxPro VFP Driver
(* .dbf)
Class Name: <NO CLASS>
Last Write Time: 1/19/2000 - 9:40 AM

Value 0
Name: APILevel
Type: REG_SZ
Data: 0

Value 1
Name: ConnectFunctions
Type: REG_SZ
Data: YYN

Value 2
Name: Driver
Type: REG_SZ
Data: V:\WIN2K\System32\vfpodbc.dll

Value 3
Name: DriverODBCVer
Type: REG_SZ
Data: 02.50

Value 4
Name: FileExtns
Type: REG_SZ
Data: *.dbf,*.cdx,*.idx,*.fpt

Value 5
Name: FileUsage
Type: REG_SZ
Data: 1

Value 6
Name: Setup
Type: REG_SZ
Data: V:\WIN2K\System32\vfpodbc.dll

Value 7

Name: SQLLevel
Type: REG_SZ
Data: 0

Value 8
Name: UsageCount
Type: REG_DWORD
Data: 0x4

Key Name: SOFTWARE\ODBC\ODBCINST.INI\Microsoft ODBC for Oracle
Class Name: <NO CLASS>
Last Write Time: 1/19/2000 - 9:39 AM

Value 0
Name: APILevel
Type: REG_SZ
Data: 1

Value 1
Name: ConnectFunctions
Type: REG_SZ
Data: YYY

Value 2
Name: CpTimeout
Type: REG_SZ
Data: 120

Value 3
Name: Driver
Type: REG_SZ
Data: V:\WIN2K\System32\msorc132.dll

Value 4
Name: DriverODBCVer
Type: REG_SZ
Data: 02.50

Value 5
Name: FileUsage
Type: REG_SZ
Data: 0

Value 6
Name: Setup
Type: REG_SZ
Data: V:\WIN2K\System32\msorc132.dll

Value 7
Name: SQLLevel
Type: REG_SZ
Data: 1

Value 8
Name: UsageCount
Type: REG_DWORD
Data: 0x2

Key Name: SOFTWARE\ODBC\ODBCINST.INI\Microsoft Paradox Driver
(* .db)
Class Name: <NO CLASS>
Last Write Time: 1/19/2000 - 9:40 AM

Value 0
Name: APILevel
Type: REG_SZ
Data: 1

Value 1
Name: ConnectFunctions
Type: REG_SZ
Data: YYN

Value 2
Name: Driver
Type: REG_SZ
Data: V:\WIN2K\System32\odbcjt32.dll

Value 3
Name: DriverODBCVer
Type: REG_SZ
Data: 02.50

Value 4
Name: FileExtns
Type: REG_SZ
Data: *.db

Value 5
Name: FileUsage
Type: REG_SZ
Data: 1

Value 6
Name: Setup
Type: REG_SZ
Data: V:\WIN2K\System32\odpdx32.dll

Value 7
Name: SQLLevel
Type: REG_SZ
Data: 0

Value 8
Name: UsageCount
Type: REG_DWORD
Data: 0x4

Key Name: SOFTWARE\ODBC\ODBCINST.INI\Microsoft Paradox-Treiber
(* .db)
Class Name: <NO CLASS>
Last Write Time: 1/19/2000 - 9:40 AM

Value 0
Name: APILevel
Type: REG_SZ
Data: 1

Value 1
Name: ConnectFunctions
Type: REG_SZ
Data: YYN

Value 2
Name: Driver
Type: REG_SZ
Data: V:\WIN2K\System32\odbcjt32.dll

Value 3
Name: DriverODBCVer
Type: REG_SZ
Data: 02.50

Value 4
Name: FileExtns
Type: REG_SZ
Data: *.db

Value 5
Name: FileUsage
Type: REG_SZ
Data: 1

Value 6
Name: Setup
Type: REG_SZ
Data: V:\WIN2K\System32\odpdx32.dll

Value 7
Name: SQLLevel
Type: REG_SZ
Data: 0

Value 8
Name: UsageCount
Type: REG_DWORD
Data: 0x4

Key Name: SOFTWARE\ODBC\ODBCINST.INI\Microsoft Text Driver
(* .txt; *.csv)
Class Name: <NO CLASS>
Last Write Time: 1/19/2000 - 9:40 AM

Value 0
Name: APILevel
Type: REG_SZ
Data: 1

Value 1
Name: ConnectFunctions
Type: REG_SZ
Data: YYN

Value 2
Name: Driver
Type: REG_SZ
Data: V:\WIN2K\System32\odbcjt32.dll

Value 3
 Name: DriverODBCVer
 Type: REG_SZ
 Data: 02.50

Value 4
 Name: FileExtns
 Type: REG_SZ
 Data: *.*.asc,*.csv,*.tab,*.txt,*.csv

Value 5
 Name: FileUsage
 Type: REG_SZ
 Data: 1

Value 6
 Name: Setup
 Type: REG_SZ
 Data: V:\WIN2K\System32\odtext32.dll

Value 7
 Name: SQLLevel
 Type: REG_SZ
 Data: 0

Value 8
 Name: UsageCount
 Type: REG_DWORD
 Data: 0x4

Key Name: SOFTWARE\ODBC\ODBCINST.INI\Microsoft Text-Treiber
 (*.txt; *.csv)
 Class Name: <NO CLASS>
 Last Write Time: 1/19/2000 - 9:40 AM

Value 0
 Name: APILevel
 Type: REG_SZ
 Data: 1

Value 1
 Name: ConnectFunctions
 Type: REG_SZ
 Data: YYN

Value 2
 Name: Driver
 Type: REG_SZ
 Data: V:\WIN2K\System32\odbcjt32.dll

Value 3
 Name: DriverODBCVer
 Type: REG_SZ
 Data: 02.50

Value 4
 Name: FileExtns
 Type: REG_SZ

Data: *.*.asc,*.csv,*.tab,*.txt,*.csv

Value 5
 Name: FileUsage
 Type: REG_SZ
 Data: 1

Value 6
 Name: Setup
 Type: REG_SZ
 Data: V:\WIN2K\System32\odtext32.dll

Value 7
 Name: SQLLevel
 Type: REG_SZ
 Data: 0

Value 8
 Name: UsageCount
 Type: REG_DWORD
 Data: 0x4

Key Name: SOFTWARE\ODBC\ODBCINST.INI\Microsoft Visual FoxPro
 Driver
 Class Name: <NO CLASS>
 Last Write Time: 1/19/2000 - 9:40 AM

Value 0
 Name: APILevel
 Type: REG_SZ
 Data: 0

Value 1
 Name: ConnectFunctions
 Type: REG_SZ
 Data: YYN

Value 2
 Name: Driver
 Type: REG_SZ
 Data: V:\WIN2K\System32\vfpodbc.dll

Value 3
 Name: DriverODBCVer
 Type: REG_SZ
 Data: 02.50

Value 4
 Name: FileExtns
 Type: REG_SZ
 Data: *.dbf,*.cdx,*.idx,*.fpt

Value 5
 Name: FileUsage
 Type: REG_SZ
 Data: 1

Value 6
 Name: Setup

Type: REG_SZ
Data: V:\WIN2K\System32\vfpodbc.dll

Value 7
Name: SQLLevel
Type: REG_SZ
Data: 0

Value 8
Name: UsageCount
Type: REG_DWORD
Data: 0x4

Key Name: SOFTWARE\ODBC\ODBCINST.INI\Microsoft Visual FoxPro-
Treiber
Class Name: <NO CLASS>
Last Write Time: 1/19/2000 - 9:40 AM
Value 0
Name: APILevel
Type: REG_SZ
Data: 0

Value 1
Name: ConnectFunctions
Type: REG_SZ
Data: YYN

Value 2
Name: Driver
Type: REG_SZ
Data: V:\WIN2K\System32\vfpodbc.dll

Value 3
Name: DriverODBCVer
Type: REG_SZ
Data: 02.50

Value 4
Name: FileExtns
Type: REG_SZ
Data: *.dbf,*.cdx,*.idx,*.fpt

Value 5
Name: FileUsage
Type: REG_SZ
Data: 1

Value 6
Name: Setup
Type: REG_SZ
Data: V:\WIN2K\System32\vfpodbc.dll

Value 7
Name: SQLLevel
Type: REG_SZ
Data: 0

Value 8

Name: UsageCount
Type: REG_DWORD
Data: 0x4

Key Name: SOFTWARE\ODBC\ODBCINST.INI\MS Code Page Translator
Class Name: <NO CLASS>
Last Write Time: 1/19/2000 - 9:40 AM
Value 0

Name: Setup
Type: REG_SZ
Data: V:\WIN2K\System32\MSCPXL32.dll

Value 1
Name: Translator
Type: REG_SZ
Data: V:\WIN2K\System32\MSCPXL32.dll

Value 2
Name: UsageCount
Type: REG_DWORD
Data: 0x4

Key Name: SOFTWARE\ODBC\ODBCINST.INI\MS Code Page-Übersetzer
Class Name: <NO CLASS>
Last Write Time: 1/19/2000 - 9:40 AM
Value 0

Name: Setup
Type: REG_SZ
Data: V:\WIN2K\System32\MSCPXL32.dll

Value 1
Name: Translator
Type: REG_SZ
Data: V:\WIN2K\System32\MSCPXL32.dll

Value 2
Name: UsageCount
Type: REG_DWORD
Data: 0x4

Key Name: SOFTWARE\ODBC\ODBCINST.INI\ODBC Drivers
Class Name: <NO CLASS>
Last Write Time: 1/19/2000 - 9:28 AM
Value 0

Name: Driver da Microsoft para arquivos texto (*.txt; *.csv)
Type: REG_SZ
Data: Installed

Value 1
Name: Driver do Microsoft Access (*.mdb)
Type: REG_SZ
Data: Installed

Value 2
Name: Driver do Microsoft dBase (*.dbf)
Type: REG_SZ

Data: Installed

Value 3
Name: Driver do Microsoft Excel (*.xls)
Type: REG_SZ
Data: Installed

Value 4
Name: Driver do Microsoft Paradox (*.db)
Type: REG_SZ
Data: Installed

Value 5
Name: Driver para o Microsoft Visual FoxPro
Type: REG_SZ
Data: Installed

Value 6
Name: Microsoft Access Driver (*.mdb)
Type: REG_SZ
Data: Installed

Value 7
Name: Microsoft Access-Treiber (*.mdb)
Type: REG_SZ
Data: Installed

Value 8
Name: Microsoft dBase Driver (*.dbf)
Type: REG_SZ
Data: Installed

Value 9
Name: Microsoft dBase VFP Driver (*.dbf)
Type: REG_SZ
Data: Installed

Value 10
Name: Microsoft dBase-Treiber (*.dbf)
Type: REG_SZ
Data: Installed

Value 11
Name: Microsoft Excel Driver (*.xls)
Type: REG_SZ
Data: Installed

Value 12
Name: Microsoft Excel-Treiber (*.xls)
Type: REG_SZ
Data: Installed

Value 13
Name: Microsoft FoxPro VFP Driver (*.dbf)
Type: REG_SZ
Data: Installed

Value 14
Name: Microsoft ODBC for Oracle

Type: REG_SZ
Data: Installed

Value 15
Name: Microsoft Paradox Driver (*.db)
Type: REG_SZ
Data: Installed

Value 16
Name: Microsoft Paradox-Treiber (*.db)
Type: REG_SZ
Data: Installed

Value 17
Name: Microsoft Text Driver (*.txt; *.csv)
Type: REG_SZ
Data: Installed

Value 18
Name: Microsoft Text-Treiber (*.txt; *.csv)
Type: REG_SZ
Data: Installed

Value 19
Name: Microsoft Visual FoxPro Driver
Type: REG_SZ
Data: Installed

Value 20
Name: Microsoft Visual FoxPro-Treiber
Type: REG_SZ
Data: Installed

Value 21
Name: SQL Server
Type: REG_SZ
Data: Installed

Key Name: SOFTWARE\ODBC\ODBCINST.INI\ODBC Translators
Class Name: <NO CLASS>
Last Write Time: 1/19/2000 - 9:28 AM

Value 0
Name: Conversor de página de código MS
Type: REG_SZ
Data: Installed

Value 1
Name: MS Code Page Translator
Type: REG_SZ
Data: Installed

Value 2
Name: MS Code Page-Übersetzer
Type: REG_SZ
Data: Installed

Key Name: SOFTWARE\ODBC\ODBCINST.INI\SQL Server

Class Name: <NO CLASS>
 Last Write Time: 1/19/2000 - 9:40 AM
 Value 0
 Name: APILevel
 Type: REG_SZ
 Data: 2
 Value 1
 Name: ConnectFunctions
 Type: REG_SZ
 Data: YYY
 Value 2
 Name: CPTimeout
 Type: REG_SZ
 Data: 60
 Value 3
 Name: Driver
 Type: REG_SZ
 Data: V:\WIN2K\System32\SQLSRV32.dll
 Value 4
 Name: DriverODBCVer
 Type: REG_SZ
 Data: 03.50
 Value 5
 Name: FileUsage
 Type: REG_SZ
 Data: 0
 Value 6
 Name: Setup
 Type: REG_SZ
 Data: V:\WIN2K\System32\sqlsrv32.dll
 Value 7
 Name: SQLLevel
 Type: REG_SZ
 Data: 1
 Value 8
 Name: UsageCount
 Type: REG_DWORD
 Data: 0x4

System\CurrentControlSet\Control\Session Manager

Key Name: SYSTEM\CurrentControlSet\Control\Session Manager
 Class Name: <NO CLASS>
 Last Write Time: 2/3/2000 - 8:16 AM
 Value 0
 Name: BootExecute
 Type: REG_MULTI_SZ
 Data: autocheck autochk *

DfsInit

Value 1
 Name: CriticalSectionTimeout
 Type: REG_DWORD
 Data: 0x278d00
 Value 2
 Name: EnableMCA
 Type: REG_DWORD
 Data: 0x1
 Value 3
 Name: EnableMCE
 Type: REG_DWORD
 Data: 0
 Value 4
 Name: ExcludeFromKnownDlls
 Type: REG_MULTI_SZ
 Data:
 Value 5
 Name: GlobalFlag
 Type: REG_DWORD
 Data: 0
 Value 6
 Name: HeapDeCommitFreeBlockThreshold
 Type: REG_DWORD
 Data: 0
 Value 7
 Name: HeapDeCommitTotalFreeThreshold
 Type: REG_DWORD
 Data: 0
 Value 8
 Name: HeapSegmentCommit
 Type: REG_DWORD
 Data: 0
 Value 9
 Name: HeapSegmentReserve
 Type: REG_DWORD
 Data: 0
 Value 10
 Name: LicensedProcessors
 Type: REG_DWORD
 Data: 0x20
 Value 11
 Name: ObjectDirectories
 Type: REG_MULTI_SZ
 Data: \Windows
 \RPC Control

```

Value 12
  Name:      ProcessorControl
  Type:      REG_DWORD
  Data:      0x2

Value 13
  Name:      ProtectionMode
  Type:      REG_DWORD
  Data:      0x1

Value 14
  Name:      RegisteredProcessors
  Type:      REG_DWORD
  Data:      0x20

Value 15
  Name:      ResourceTimeoutCount
  Type:      REG_DWORD
  Data:      0x9e340

Key Name:      SYSTEM\CurrentControlSet\Control\Session
Manager\AppCompatibility
Class Name:    <NO CLASS>
Last Write Time: 1/19/2000 - 9:39 AM

Key Name:      SYSTEM\CurrentControlSet\Control\Session
Manager\AppCompatibility\301bjdlx.exe
Class Name:    <NO CLASS>
Last Write Time: 1/19/2000 - 9:39 AM

Value 0
  Name:      192
  Type:      REG_BINARY
  Data:
00000000  0c 00 00 00 5b 4e 00 00 - 01 00 00 00 02 00 00 00
....[N.....
00000010  04 00 00 00 cc 6b 79 00 - 0a 00 00 00 04 00 00 00
....İky.....
00000020  22 f4 ec db 00 00 00 00 -
                                "ðiÛ....

Key Name:      SYSTEM\CurrentControlSet\Control\Session
Manager\AppCompatibility\_INS0432._MP
Class Name:    <NO CLASS>
Last Write Time: 1/19/2000 - 9:39 AM

Value 0
  Name:      283
  Type:      REG_BINARY
  Data:
00000000  0c 00 00 00 00 00 00 00 - 01 00 00 00 04 00 00 00
.....
00000010  10 00 00 00 00 00 6a 00 - 00 00 03 00 ff ff ff ff
.....j....ÿÿÿÿ
00000020  ff ff ff ff 0f 00 00 00 - 32 00 00 00 49 00 6e 00
ÿÿÿÿ....2...I.n.
00000030  73 00 74 00 61 00 6c 00 - 6c 00 53 00 68 00 69 00
s.t.a.l.l.S.h.i.

```

```

00000040  65 00 6c 00 64 00 20 00 - 45 00 6e 00 67 00 69 00 e.l.d.
.E.n.g.i.
00000050  6e 00 65 00 20 00 45 00 - 58 00 45 00 00 00 00 00 n.e.
.E.X.E....
00000060  00 00
                                ..

Value 1
  Name:      DllPatch-283
  Type:      REG_SZ
  Data:      shcmm.dll 9

Key Name:      SYSTEM\CurrentControlSet\Control\Session
Manager\AppCompatibility\_INS5176._MP
Class Name:    <NO CLASS>
Last Write Time: 1/19/2000 - 9:39 AM

Value 0
  Name:      495
  Type:      REG_BINARY
  Data:
00000000  0c 00 00 00 00 00 00 00 - 06 00 00 00 04 00 00 00
.....
00000010  10 00 00 00 00 00 9c 00 - 0a 00 05 00 ff ff ff ff
.....ÿÿÿÿ
00000020  ff ff ff ff 0f 00 00 00 - 2a 00 00 00 49 00 6e 00
ÿÿÿÿ....*...I.n.
00000030  73 00 74 00 61 00 6c 00 - 6c 00 53 00 68 00 69 00
s.t.a.l.l.S.h.i.
00000040  65 00 6c 00 64 00 20 00 - 45 00 6e 00 67 00 69 00 e.l.d.
.E.n.g.i.
00000050  6e 00 65 00 00 00 00 00 - 00 00
                                n.e.....

Value 1
  Name:      DllPatch-495
  Type:      REG_SZ
  Data:      shcmm.dll 22

Key Name:      SYSTEM\CurrentControlSet\Control\Session Manager\DOS
Devices
Class Name:    <NO CLASS>
Last Write Time: 1/19/2000 - 9:28 AM

Value 0
  Name:      AUX
  Type:      REG_SZ
  Data:      \DosDevices\COM1

Value 1
  Name:      MAILSLLOT
  Type:      REG_SZ
  Data:      \Device\MailSlot

Value 2
  Name:      NUL
  Type:      REG_SZ
  Data:      \Device\Null

Value 3
  Name:      PIPE

```

Type:	REG_SZ		
Data:	\Device\NamedPipe		
Value 4		Value 8	
Name:	PRN	Name:	PROCESSOR_IDENTIFIER
Type:	REG_SZ	Type:	REG_SZ
Data:	\DosDevices\LPT1	Data:	x86 Family 6 Model 7 Stepping 3, GenuineIntel
Value 5		Value 9	
Name:	UNC	Name:	PROCESSOR_LEVEL
Type:	REG_SZ	Type:	REG_SZ
Data:	\Device\Mup	Data:	6
Key Name:	SYSTEM\CurrentControlSet\Control\Session	Value 10	
Manager\Environment		Name:	PROCESSOR_REVISION
Class Name:	<NO CLASS>	Type:	REG_SZ
Last Write Time:	2/10/2000 - 11:54 AM	Data:	0703
Value 0		Value 11	
Name:	ComSpec	Name:	ROOTDIR
Type:	REG_EXPAND_SZ	Type:	REG_SZ
Data:	%SystemRoot%\system32\cmd.exe	Data:	V:/
Value 1		Value 12	
Name:	HOME	Name:	SHELL
Type:	REG_SZ	Type:	REG_SZ
Data:	V:/	Data:	V:/mksnt/sh.exe
Value 2		Value 13	
Name:	NUMBER_OF_PROCESSORS	Name:	TEMP
Type:	REG_SZ	Type:	REG_EXPAND_SZ
Data:	8	Data:	%SystemRoot%\TEMP
Value 3		Value 14	
Name:	OS	Name:	TMP
Type:	REG_SZ	Type:	REG_EXPAND_SZ
Data:	Windows_NT	Data:	%SystemRoot%\TEMP
Value 4		Value 15	
Name:	Os2LibPath	Name:	TMPDIR
Type:	REG_EXPAND_SZ	Type:	REG_SZ
Data:	%SystemRoot%\system32\os2\dll;	Data:	V:/WIN2K/TEMP
Value 5		Value 16	
Name:	Path	Name:	windir
Type:	REG_EXPAND_SZ	Type:	REG_EXPAND_SZ
Data:		Data:	%SystemRoot%
V:\WIN2K\system32;V:\WIN2K;V:\WIN2K\System32\Wbem;V:\mksnt;U:\INTEL\EMON\b		Key Name:	SYSTEM\CurrentControlSet\Control\Session
in;V:\Program Files\Microsoft SQL Server\80\Tools\BINN		Manager\Executive	
Value 6		Class Name:	<NO CLASS>
Name:	PATHEXT	Last Write Time:	1/19/2000 - 9:46 AM
Type:	REG_SZ	Value 0	
Data:	.COM;.EXE;.BAT;.CMD;.VBS;.VBE;.JS;.JSE;.WSF;.WSH	Name:	AdditionalCriticalWorkerThreads
Value 7		Type:	REG_DWORD
Name:	PROCESSOR_ARCHITECTURE	Data:	0
Type:	REG_SZ	Value 1	
Data:	x86	Name:	AdditionalDelayedWorkerThreads
		Type:	REG_DWORD

Data: 0

Value 2
 Name: PriorityQuantumMatrix
 Type: REG_BINARY
 Data: 00000000 fe f0 06 2d 80 c1 09 00 - a5 62 bf 01 bð.-.Á
 .¥bç.

Key Name: SYSTEM\CurrentControlSet\Control\Session
 Manager\FileRenameOperations
 Class Name: <NO CLASS>
 Last Write Time: 1/19/2000 - 9:28 AM

Key Name: SYSTEM\CurrentControlSet\Control\Session Manager\I/O
 System
 Class Name: <NO CLASS>
 Last Write Time: 2/13/2000 - 7:29 AM

Value 0
 Name: CountOperations
 Type: REG_DWORD
 Data: 0

Value 1
 Name: IrpStackLocations
 Type: REG_DWORD
 Data: 0x9

Value 2
 Name: LargeIrpStackLocations
 Type: REG_DWORD
 Data: 0x7

Key Name: SYSTEM\CurrentControlSet\Control\Session
 Manager\KnownDLLs
 Class Name: <NO CLASS>
 Last Write Time: 1/19/2000 - 9:28 AM

Value 0
 Name: advapi32
 Type: REG_SZ
 Data: advapi32.dll

Value 1
 Name: comdlg32
 Type: REG_SZ
 Data: comdlg32.dll

Value 2
 Name: DllDirectory
 Type: REG_EXPAND_SZ
 Data: %SystemRoot%\system32

Value 3
 Name: gdi32
 Type: REG_SZ
 Data: gdi32.dll

Value 4
 Name: imagehlp
 Type: REG_SZ
 Data: imagehlp.dll

Value 5
 Name: kernel32
 Type: REG_SZ
 Data: kernel32.dll

Value 6
 Name: lz32
 Type: REG_SZ
 Data: lz32.dll

Value 7
 Name: ole32
 Type: REG_SZ
 Data: ole32.dll

Value 8
 Name: oleaut32
 Type: REG_SZ
 Data: oleaut32.dll

Value 9
 Name: olecli32
 Type: REG_SZ
 Data: olecli32.dll

Value 10
 Name: olecnv32
 Type: REG_SZ
 Data: olecnv32.dll

Value 11
 Name: olesvr32
 Type: REG_SZ
 Data: olesvr32.dll

Value 12
 Name: olethk32
 Type: REG_SZ
 Data: olethk32.dll

Value 13
 Name: rpcrt4
 Type: REG_SZ
 Data: rpcrt4.dll

Value 14
 Name: shell32
 Type: REG_SZ
 Data: shell32.dll

Value 15
 Name: url
 Type: REG_SZ
 Data: url.dll

Value 16	Name: urlmon Type: REG_SZ Data: urlmon.dll	Data: 0
Value 17	Name: user32 Type: REG_SZ Data: user32.dll	Value 6 Name: NonPagedPoolSize Type: REG_DWORD Data: 0
Value 18	Name: version Type: REG_SZ Data: version.dll	Value 7 Name: PagedPoolQuota Type: REG_DWORD Data: 0
Value 19	Name: wininet Type: REG_SZ Data: wininet.dll	Value 8 Name: PagedPoolSize Type: REG_DWORD Data: 0
Value 20	Name: wldap32 Type: REG_SZ Data: wldap32.dll	Value 9 Name: PagingFiles Type: REG_MULTI_SZ Data: V:\pagefile.sys 2046 4092
Key Name: SYSTEM\CurrentControlSet\Control\Session Manager\Memory Management Class Name: <NO CLASS> Last Write Time: 1/23/2000 - 11:55 AM		Value 10 Name: PhysicalAddressExtension Type: REG_DWORD Data: 0x1
Value 0 Name: ClearPageFileAtShutdown Type: REG_DWORD Data: 0		Value 11 Name: SecondLevelDataCache Type: REG_DWORD Data: 0
Value 1 Name: DisablePagingExecutive Type: REG_DWORD Data: 0		Value 12 Name: SystemPages Type: REG_DWORD Data: 0
Value 2 Name: DontVerifyRandomDrivers Type: REG_DWORD Data: 0x1		Key Name: SYSTEM\CurrentControlSet\Control\Session Manager\Power Class Name: <NO CLASS> Last Write Time: 1/21/2000 - 5:00 PM
Value 3 Name: IoPageLockLimit Type: REG_DWORD Data: 0		Value 0 Name: AcPolicy Type: REG_BINARY Data: 00000000 01 00 00 00 06 00 00 00 - 03 00 00 00 00 00 00 00 00000010 02 00 00 00 03 00 00 00 - 00 00 00 00 00 00 00 00 00000020 01 00 00 00 00 00 00 00 - 01 00 00 00 18 44 f9 77Dùw 00000030 00 00 00 00 01 00 00 00 - 00 00 00 00 00 00 00 00 00000040 32 77 07 00 02 00 00 00 - 02 00 00 00 02 00 00 00 2w..... 00000050 01 00 00 00 00 00 00 00 - 00 00 00 00 03 00 00 00
Value 4 Name: LargeSystemCache Type: REG_DWORD Data: 0		
Value 5 Name: NonPagedPoolQuota Type: REG_DWORD		

```

00000060 01 00 00 00 03 00 00 00 - 02 00 00 00 04 00 00 c0
.....Ä
00000070 01 00 00 00 02 00 00 00 - 01 00 00 00 0a 00 00 00
.....
00000080 00 00 00 00 03 00 00 00 - 01 00 01 00 01 00 00 00
.....
00000090 00 00 00 00 00 00 00 00 - 00 00 00 00 00 00 00 00
.....
000000a0 00 00 02 00 00 00 00 00 - 00 00 00 00 00 00 00 00
.....
000000b0 00 00 00 00 00 00 00 00 - 00 00 03 00 00 00 00 00
.....
000000c0 00 00 00 00 6e b5 f8 77 - 00 00 00 00 20 fb 06 00 ....nþøw....
ü..
000000d0 07 7f db 77 00 00 00 00 - 00 64 64 14 02 00 00 00
..Üw.....dd.....
000000e0 04 00 00 c0 00 00 00 00 - ...Ä....

```

```

Value 1
  Name:      DcPolicy
  Type:      REG_BINARY
  Data:
00000000 01 00 00 00 06 00 00 00 - 03 00 00 00 00 00 00 00
.....
00000010 02 00 00 00 03 00 00 00 - 00 00 00 00 00 00 00 00
.....
00000020 01 00 00 00 00 00 00 00 - 01 00 00 00 2d 00 31 00
.....-1.
00000030 00 00 00 00 00 00 00 00 - 00 00 00 00 00 00 00 00
.....
00000040 32 00 2d 00 02 00 00 00 - 02 00 00 00 02 00 00 00 2.-
.....
00000050 01 00 00 00 33 00 31 00 - 00 00 00 00 03 00 00 00
.....3.1.....
00000060 01 00 00 00 03 00 00 00 - 02 00 00 00 04 00 00 c0
.....Ä
00000070 01 00 00 00 02 00 00 00 - 01 00 00 00 0a 00 00 00
.....
00000080 00 00 00 00 03 00 00 00 - 01 00 01 00 01 00 00 00
.....
00000090 00 00 00 00 00 00 00 00 - 00 00 00 00 00 00 00 00
.....
000000a0 00 00 02 00 00 00 00 00 - 00 00 00 00 00 00 00 00
.....
000000b0 00 00 00 00 00 00 00 00 - 00 00 03 00 00 00 00 00
.....
000000c0 84 03 00 00 01 00 00 00 - 18 fc 06 00 2c b3 f8 77
.....ü...³øw
000000d0 70 d1 fc 77 08 07 00 00 - 00 64 64 14 02 00 00 00
pNüw.....dd.....
000000e0 04 00 00 c0 00 00 00 00 - ...Ä....

```

```

Key Name:      SYSTEM\CurrentControlSet\Control\Session Manager\SFC
Class Name:    <NO CLASS>
Last Write Time: 1/19/2000 - 9:28 AM
Value 0
  Name:      CommonFilesDir
  Type:      REG_SZ

```

```

Data:          V:\Program Files\Common Files

Value 1
  Name:      ProgramFilesDir
  Type:      REG_SZ
  Data:      V:\Program Files

Key Name:      SYSTEM\CurrentControlSet\Control\Session
Manager\SubSystems
Class Name:    <NO CLASS>
Last Write Time: 1/19/2000 - 9:37 AM
Value 0
  Name:      Debug
  Type:      REG_EXPAND_SZ
  Data:

Value 1
  Name:      Kmode
  Type:      REG_EXPAND_SZ
  Data:      %SystemRoot%\system32\win32k.sys

Value 2
  Name:      Optional
  Type:      REG_MULTI_SZ
  Data:      Os2
              Posix

Value 3
  Name:      Os2
  Type:      REG_EXPAND_SZ
  Data:      %SystemRoot%\system32\os2ss.exe

Value 4
  Name:      Posix
  Type:      REG_EXPAND_SZ
  Data:      %SystemRoot%\system32\psxss.exe

Value 5
  Name:      Required
  Type:      REG_MULTI_SZ
  Data:      Debug
              Windows

Value 6
  Name:      Windows
  Type:      REG_EXPAND_SZ
  Data:      %SystemRoot%\system32\csrss.exe
ObjectDirectory=\Windows SharedSection=1024,3072,512,512 Windows=On
SubSystemType=Windows ServerDll=basesrv,1
ServerDll=winsrv:UserServerDllInitialization,3
ServerDll=winsrv:ConServerDllInitialization,2 ProfileControl=Off
MaxRequestThreads=16

```

CurrentControlSet\Services\dac2w2k

Key Name: SYSTEM\CurrentControlSet\Services\dac2w2k
Class Name: <NO CLASS>
Last Write Time: 2/2/2000 - 9:22 AM

Value 0
Name: ErrorControl
Type: REG_DWORD
Data: 0x1

Value 1
Name: Group
Type: REG_SZ
Data: SCSI Miniport

Value 2
Name: ImagePath
Type: REG_EXPAND_SZ
Data: System32\DRIVERS\dac2w2k.sys

Value 3
Name: Start
Type: REG_DWORD
Data: 0

Value 4
Name: Tag
Type: REG_DWORD
Data: 0x40

Value 5
Name: Type
Type: REG_DWORD
Data: 0x1

Key Name: SYSTEM\CurrentControlSet\Services\dac2w2k\Enum
Class Name: <NO CLASS>
Last Write Time: 2/13/2000 - 7:44 AM

Value 0
Name: 0
Type: REG_SZ
Data: PCI\VEN_1069&DEV_BA56&SUBSYS_00401069&REV_00\4&20b2daf0&0&4020

Value 1
Name: 1
Type: REG_SZ
Data: PCI\VEN_1069&DEV_BA56&SUBSYS_00401069&REV_00\4&de4d5e1&0&4028

Value 2
Name: 2
Type: REG_SZ
Data: PCI\VEN_1069&DEV_BA56&SUBSYS_00401069&REV_00\4&2fbc1dea&0&4038

Value 3

Name: 3
Type: REG_SZ
Data: PCI\VEN_1069&DEV_BA56&SUBSYS_00401069&REV_00\4&8c49857&0&4020

Value 4
Name: 4
Type: REG_SZ
Data: PCI\VEN_1069&DEV_BA56&SUBSYS_00401069&REV_00\4&375c4928&0&4028

Value 5
Name: 5
Type: REG_SZ
Data: PCI\VEN_1069&DEV_BA56&SUBSYS_00401069&REV_00\4&1b89a02&0&4020

Value 6
Name: 6
Type: REG_SZ
Data: PCI\VEN_1069&DEV_BA56&SUBSYS_00401069&REV_00\4&1cdf5718&0&4028

Value 7
Name: Count
Type: REG_DWORD
Data: 0x7

Value 8
Name: NextInstance
Type: REG_DWORD
Data: 0x7

Key Name: SYSTEM\CurrentControlSet\Services\dac2w2k\Parameters
Class Name: <NO CLASS>
Last Write Time: 1/24/2000 - 10:46 AM

Key Name: SYSTEM\CurrentControlSet\Services\dac2w2k\Parameters\Device0
Class Name: <NO CLASS>
Last Write Time: 1/27/2000 - 2:17 PM

Value 0
Name: DriverParameter
Type: REG_SZ
Data: EnableSIR

Key Name: SYSTEM\CurrentControlSet\Services\dac2w2k\Parameters\PnpInterface
Class Name: <NO CLASS>
Last Write Time: 1/24/2000 - 10:46 AM

Value 0
Name: 5
Type: REG_DWORD
Data: 0x1

Key Name: SYSTEM\CurrentControlSet\Services\dac2w2k\Security

```

Class Name:      <NO CLASS>
Last Write Time: 1/24/2000 - 10:46 AM
Value 0
  Name:          Security
  Type:          REG_BINARY
  Data:
00000000  01 00 14 80 a0 00 00 00 - ac 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 70 00 04 00 00 00 - 00 00 18 00 fd 01 02 00
..P.....ÿ...
00000040  01 01 00 00 00 00 00 05 - 12 00 00 00 00 00 00 00
.....
00000050  00 00 1c 00 ff 01 0f 00 - 01 02 00 00 00 00 00 05
....ÿ.....
00000060  20 00 00 00 20 02 00 00 - 98 3a 00 00 00 00 18 00  ...
.....
00000070  8d 01 02 00 01 01 00 00 - 00 00 00 05 0b 00 00 00
.....
00000080  20 02 00 00 00 00 1c 00 - fd 01 02 00 01 02 00 00
.....ÿ.....
00000090  00 00 00 05 20 00 00 00 - 23 02 00 00 98 3a 00 00  ....
...#.....
000000a0  01 01 00 00 00 00 00 05 - 12 00 00 00 01 01 00 00
.....
000000b0  00 00 00 05 12 00 00 00 - .....

```

CurrentControlSet\Services\ Diskperf

```

Key Name:      SYSTEM\CurrentControlSet\Services\Diskperf
Class Name:    <NO CLASS>
Last Write Time: 2/13/2000 - 7:29 AM
Value 0
  Name:          ErrorControl
  Type:          REG_DWORD
  Data:          0x1

Value 1
  Name:          Group
  Type:          REG_SZ
  Data:          System Bus Extender

Value 2
  Name:          Start
  Type:          REG_DWORD
  Data:          0x4

Value 3
  Name:          Tag
  Type:          REG_DWORD
  Data:          0xa

Value 4

```

```

Name:          Type
Type:          REG_DWORD
Data:          0x1

Key Name:      SYSTEM\CurrentControlSet\Services\Diskperf\Enum
Class Name:    <NO CLASS>
Last Write Time: 2/13/2000 - 7:44 AM
Value 0
  Name:          0
  Type:          REG_SZ
  Data:          Root\LEGACY_DISKPERF\0000

Value 1
  Name:          Count
  Type:          REG_DWORD
  Data:          0x1

Value 2
  Name:          NextInstance
  Type:          REG_DWORD
  Data:          0x1

```

CurrentControlSet\Services\gamdrv

```

Key Name:      SYSTEM\CurrentControlSet\Services\gamdrv
Class Name:    <NO CLASS>
Last Write Time: 2/7/2000 - 5:48 PM
Value 0
  Name:          ErrorControl
  Type:          REG_DWORD
  Data:          0x1

Value 1
  Name:          Group
  Type:          REG_SZ
  Data:          SCSI Class

Value 2
  Name:          ImagePath
  Type:          REG_EXPAND_SZ
  Data:          system32\Drivers\Gamdrv.sys

Value 3
  Name:          Start
  Type:          REG_DWORD
  Data:          0x2

Value 4
  Name:          Type
  Type:          REG_DWORD
  Data:          0x1

Key Name:      SYSTEM\CurrentControlSet\Services\gamdrv\Enum
Class Name:    <NO CLASS>
Last Write Time: 2/13/2000 - 7:44 AM

```


Value 0
Name: 0
Type: REG_SZ
Data: Root\LEGACY_GAMDRV\0000

Value 1
Name: Count
Type: REG_DWORD
Data: 0x1

Value 2
Name: NextInstance
Type: REG_DWORD
Data: 0x1

Key Name: SYSTEM\CurrentControlSet\Services\gamdrv\Security
Class Name: <NO CLASS>
Last Write Time: 1/24/2000 - 11:22 AM

Value 0
Name: Security
Type: REG_BINARY
Data:
00000000 01 00 14 80 a0 00 00 00 - ac 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 70 00 04 00 00 00 - 00 00 18 00 fd 01 02 00
..P.....ÿ...
00000040 01 01 00 00 00 00 00 05 - 12 00 00 00 20 02 00 00
...
00000050 00 00 1c 00 ff 01 0f 00 - 01 02 00 00 00 00 00 05
...ÿ.....
00000060 20 00 00 00 20 02 00 00 - 41 00 00 00 00 00 18 00 ...
...A.....
00000070 8d 01 02 00 01 01 00 00 - 00 00 00 05 0b 00 00 00
.....
00000080 20 02 00 00 00 00 1c 00 - fd 01 02 00 01 02 00 00
.....ÿ.....
00000090 00 00 00 05 20 00 00 00 - 23 02 00 00 41 00 00 00
...#...A...
000000a0 01 01 00 00 00 00 00 05 - 12 00 00 00 01 01 00 00
.....
000000b0 00 00 00 05 12 00 00 00 -

CurrentControlSet\Services\GniConMgr

Key Name: SYSTEM\CurrentControlSet\Services\GniConMgr
Class Name: <NO CLASS>
Last Write Time: 2/3/2000 - 2:08 PM

Value 0
Name: DependOnGroup
Type: REG_MULTI_SZ
Data:

Value 1
Name: DependOnService
Type: REG_MULTI_SZ
Data: GniVIA

Value 2
Name: DisplayName
Type: REG_SZ
Data: cLAN Connection Manager

Value 3
Name: ErrorControl
Type: REG_DWORD
Data: 0x1

Value 4
Name: Group
Type: REG_SZ
Data: TDI

Value 5
Name: ImagePath
Type: REG_EXPAND_SZ
Data: %SystemRoot%\System32\GnConMgr.exe

Value 6
Name: ObjectName
Type: REG_SZ
Data: LocalSystem

Value 7
Name: Start
Type: REG_DWORD
Data: 0x2

Value 8
Name: Type
Type: REG_DWORD
Data: 0x10

Key Name: SYSTEM\CurrentControlSet\Services\GniConMgr\Enum
Class Name: <NO CLASS>
Last Write Time: 2/13/2000 - 7:44 AM

Value 0
Name: 0
Type: REG_SZ
Data: Root\LEGACY_GNICONMGR\0000

Value 1
Name: Count
Type: REG_DWORD
Data: 0x1

Value 2
Name: NextInstance
Type: REG_DWORD
Data: 0x1

Key Name: SYSTEM\CurrentControlSet\Services\GniConMgr\Parameters
Class Name: <NO CLASS>
Last Write Time: 2/3/2000 - 2:08 PM
Value 0
Name: NicName
Type: REG_SZ
Data: GniVIA

Key Name: SYSTEM\CurrentControlSet\Services\GniConMgr\Security
Class Name: <NO CLASS>
Last Write Time: 2/3/2000 - 2:08 PM
Value 0
Name: Security
Type: REG_BINARY
Data:

00000000 01 00 14 80 a0 00 00 00 - ac 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 70 00 04 00 00 00 - 00 00 18 00 fd 01 02 00
..P.....ÿ...
00000040 01 01 00 00 00 00 00 05 - 12 00 00 00 61 67 65 72
.....ager
00000050 00 00 1c 00 ff 01 0f 00 - 01 02 00 00 00 00 00 05
....ÿ.....
00000060 20 00 00 00 20 02 00 00 - 00 00 00 00 00 00 18 00 ...
.....
00000070 8d 01 02 00 01 01 00 00 - 00 00 00 05 0b 00 00 00
.....
00000080 20 02 00 00 00 00 1c 00 - fd 01 02 00 01 02 00 00
.....ÿ.....
00000090 00 00 00 05 20 00 00 00 - 23 02 00 00 00 00 00 00
...#.....
000000a0 01 01 00 00 00 00 00 05 - 12 00 00 00 01 01 00 00
.....
000000b0 00 00 00 05 12 00 00 00 -

CurrentControlSet\Services\GNINDIS

Key Name: SYSTEM\CurrentControlSet\Services\GNINDIS
Class Name: <NO CLASS>
Last Write Time: 2/3/2000 - 2:08 PM
Value 0
Name: DisplayName
Type: REG_SZ
Data: cLAN NDIS Driver

Value 1
Name: ErrorControl
Type: REG_DWORD
Data: 0x1

Value 2

Name: Group
Type: REG_SZ
Data: NDIS

Value 3

Name: ImagePath
Type: REG_EXPAND_SZ
Data: System32\DRIVERS\gnindis.sys

Value 4

Name: Start
Type: REG_DWORD
Data: 0x2

Value 5

Name: Tag
Type: REG_DWORD
Data: 0xc

Value 6

Name: Type
Type: REG_DWORD
Data: 0x1

Key Name: SYSTEM\CurrentControlSet\Services\GNINDIS\Enum
Class Name: <NO CLASS>
Last Write Time: 2/13/2000 - 7:44 AM

Value 0

Name: 0
Type: REG_SZ
Data:

PCI\VEN_135B&DEV_0001&SUBSYS_00000000&REV_00\3&267a616a&0&28

Value 1

Name: Count
Type: REG_DWORD
Data: 0x1

Value 2

Name: NextInstance
Type: REG_DWORD
Data: 0x1

Key Name: SYSTEM\CurrentControlSet\Services\GNINDIS\Security
Class Name: <NO CLASS>
Last Write Time: 2/3/2000 - 2:08 PM

Value 0

Name: Security
Type: REG_BINARY
Data:

00000000 01 00 14 80 a0 00 00 00 - ac 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 70 00 04 00 00 00 - 00 00 18 00 fd 01 02 00
..P.....Ÿ...
00000040  01 01 00 00 00 00 00 05 - 12 00 00 00 00 00 00 00
.....
00000050  00 00 1c 00 ff 01 0f 00 - 01 02 00 00 00 00 00 05
....Ÿ.....
00000060  20 00 00 00 20 02 00 00 - 24 02 00 00 00 00 18 00  ...
...$.
00000070  8d 01 02 00 01 01 00 00 - 00 00 00 05 0b 00 00 00
.....
00000080  20 02 00 00 00 00 1c 00 - fd 01 02 00 01 02 00 00
.....Ÿ.....
00000090  00 00 00 05 20 00 00 00 - 23 02 00 00 24 02 00 00  ....
...#...$.
000000a0  01 01 00 00 00 00 00 05 - 12 00 00 00 01 01 00 00
.....
000000b0  00 00 00 05 12 00 00 00 -
.....

```

CurrentControlSet\Services\GNINVIPL

```

Key Name:      SYSTEM\CurrentControlSet\Services\GNINVIPL
Class Name:    <NO CLASS>
Last Write Time: 2/3/2000 - 2:08 PM
Value 0
  Name:        DisplayName
  Type:        REG_SZ
  Data:        cLAN VIPL Service

```

```

Value 1
  Name:        ErrorControl
  Type:        REG_DWORD
  Data:        0x1

```

```

Value 2
  Name:        ImagePath
  Type:        REG_EXPAND_SZ
  Data:        System32\DRIVERS\gninvipl.sys

```

```

Value 3
  Name:        Start
  Type:        REG_DWORD
  Data:        0x3

```

```

Value 4
  Name:        Type
  Type:        REG_DWORD
  Data:        0x1

```

```

Key Name:      SYSTEM\CurrentControlSet\Services\GNINVIPL\Security
Class Name:    <NO CLASS>
Last Write Time: 2/3/2000 - 2:08 PM

```

```

Value 0
  Name:        Security
  Type:        REG_BINARY
  Data:
00000000  01 00 14 80 a0 00 00 00 - ac 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 70 00 04 00 00 00 - 00 00 18 00 fd 01 02 00
..P.....Ÿ...
00000040  01 01 00 00 00 00 00 05 - 12 00 00 00 6e 00 61 00
.....n.a.
00000050  00 00 1c 00 ff 01 0f 00 - 01 02 00 00 00 00 00 05
....Ÿ.....
00000060  20 00 00 00 20 02 00 00 - 67 00 65 00 00 00 18 00  ...
...g.e.....
00000070  8d 01 02 00 01 01 00 00 - 00 00 00 05 0b 00 00 00
.....
00000080  20 02 00 00 00 00 1c 00 - fd 01 02 00 01 02 00 00
.....Ÿ.....
00000090  00 00 00 05 20 00 00 00 - 23 02 00 00 67 00 65 00  ....
...#...g.e.
000000a0  01 01 00 00 00 00 00 05 - 12 00 00 00 01 01 00 00
.....
000000b0  00 00 00 05 12 00 00 00 -
.....

```

CurrentControlSet\Services\GniVIA

```

Key Name:      SYSTEM\CurrentControlSet\Services\GniVIA
Class Name:    <NO CLASS>
Last Write Time: 2/3/2000 - 2:08 PM
Value 0
  Name:        DisplayName
  Type:        REG_SZ
  Data:        cLAN VIA Driver

```

```

Value 1
  Name:        ErrorControl
  Type:        REG_DWORD
  Data:        0x1

```

```

Value 2
  Name:        Group
  Type:        REG_SZ
  Data:        PNP_TDI

```

```

Value 3
  Name:        ImagePath
  Type:        REG_EXPAND_SZ
  Data:        System32\DRIVERS\GniVIA.sys

```

```

Value 4
  Name:        Start
  Type:        REG_DWORD
  Data:        0x2

```

```

Value 5
  Name:        Tag
  Type:        REG_DWORD
  Data:        0x7

```

```

Value 6

```

```

Name:      Type
Type:      REG_DWORD
Data:      0x1

Key Name:   SYSTEM\CurrentControlSet\Services\GniVIA\Enum
Class Name: <NO CLASS>
Last Write Time: 2/13/2000 - 7:44 AM
Value 0
  Name:     0
  Type:     REG_SZ
  Data:     Root\LEGACY_GNIVIA\0000

Value 1
  Name:     Count
  Type:     REG_DWORD
  Data:     0x1

Value 2
  Name:     NextInstance
  Type:     REG_DWORD
  Data:     0x1

Key Name:   SYSTEM\CurrentControlSet\Services\GniVIA\Linkage
Class Name: <NO CLASS>
Last Write Time: 2/3/2000 - 2:08 PM
Value 0
  Name:     Bind
  Type:     REG_MULTI_SZ
  Data:     \Device\{81DA4F1E-4986-453F-BCC4-3F7F0A045472}

Value 1
  Name:     Export
  Type:     REG_MULTI_SZ
  Data:     \Device\GniVIA_{81DA4F1E-4986-453F-BCC4-3F7F0A045472}

Value 2
  Name:     Route
  Type:     REG_MULTI_SZ
  Data:     "{81DA4F1E-4986-453F-BCC4-3F7F0A045472}"

Key Name:   SYSTEM\CurrentControlSet\Services\GniVIA\Parameters
Class Name: <NO CLASS>
Last Write Time: 2/3/2000 - 2:08 PM
Value 0
  Name:     <NO NAME>
  Type:     REG_SZ
  Data:

Value 1
  Name:     MaxNumberNics
  Type:     REG_DWORD
  Data:     0x2

```

```

Key Name:   SYSTEM\CurrentControlSet\Services\GniVIA\Performance
Class Name: <NO CLASS>
Last Write Time: 2/13/2000 - 7:45 AM
Value 0
  Name:     Close
  Type:     REG_SZ
  Data:     CloseNicPerformanceData

Value 1
  Name:     Collect
  Type:     REG_SZ
  Data:     CollectNicPerformanceData

Value 2
  Name:     First Counter
  Type:     REG_DWORD
  Data:     0xc76

Value 3
  Name:     First Help
  Type:     REG_DWORD
  Data:     0xc77

Value 4
  Name:     Last Counter
  Type:     REG_DWORD
  Data:     0xcb4

Value 5
  Name:     Last Help
  Type:     REG_DWORD
  Data:     0xcb5

Value 6
  Name:     Library
  Type:     REG_SZ
  Data:     gni_perf.dll

Value 7
  Name:     Open
  Type:     REG_SZ
  Data:     OpenNicPerformanceData

Value 8
  Name:     WbemAdapFileSize
  Type:     REG_DWORD
  Data:     0xc000

Value 9
  Name:     WbemAdapFileTime
  Type:     REG_BINARY
  Data:     00000000 b0 85 32 74 19 41 bf 01 - °.2t.A¿.

Value 10
  Name:     WbemAdapStatus
  Type:     REG_DWORD
  Data:     0

```

Key Name: SYSTEM\CurrentControlSet\Services\GniVIA\Security
Class Name: <NO CLASS>
Last Write Time: 2/3/2000 - 2:08 PM
Value 0
Name: Security
Type: REG_BINARY
Data:
00000000 01 00 14 80 a0 00 00 00 - ac 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 70 00 04 00 00 00 - 00 00 18 00 fd 01 02 00
..P.....ÿ...
00000040 01 01 00 00 00 00 00 05 - 12 00 00 00 00 00 00 00
.....
00000050 00 00 1c 00 ff 01 0f 00 - 01 02 00 00 00 00 00 05
....ÿ.....
00000060 20 00 00 00 20 02 00 00 - 02 00 00 00 00 00 18 00 ...
.....
00000070 8d 01 02 00 01 01 00 00 - 00 00 00 05 0b 00 00 00
.....
00000080 20 02 00 00 00 00 1c 00 - fd 01 02 00 01 02 00 00
.....ÿ.....
00000090 00 00 00 05 20 00 00 00 - 23 02 00 00 02 00 00 00
...#.....
000000a0 01 01 00 00 00 00 00 05 - 12 00 00 00 01 01 00 00
.....
000000b0 00 00 00 05 12 00 00 00 -

CurrentControlSet\Services\InterruptAffinityFilter

Key Name: SYSTEM\CurrentControlSet\Services\InterruptAffinityFilter
Class Name: <NO CLASS>
Last Write Time: 2/13/2000 - 7:37 AM
Value 0
Name: DisplayName
Type: REG_SZ
Data: Interrupt Affinity Filter
Value 1
Name: ErrorControl
Type: REG_DWORD
Data: 0x1
Value 2
Name: ImagePath
Type: REG_EXPAND_SZ
Data: System32\DRIVERS\intfiltr.sys
Value 3
Name: Start
Type: REG_DWORD

Data: 0x2
Value 4
Name: Type
Type: REG_DWORD
Data: 0x1

Key Name: SYSTEM\CurrentControlSet\Services\InterruptAffinityFilter\Enum
Class Name: <NO CLASS>
Last Write Time: 2/13/2000 - 7:44 AM
Value 0
Name: 0
Type: REG_SZ
Data: PCI\VEN_135B&DEV_0001&SUBSYS_00000000&REV_00\3&267a616a&0&28

Value 1
Name: 1
Type: REG_SZ
Data: PCI\VEN_1069&DEV_BA56&SUBSYS_00401069&REV_00\4&20b2daf0&0&4020

Value 2
Name: Count
Type: REG_DWORD
Data: 0x2

Value 3
Name: NextInstance
Type: REG_DWORD
Data: 0x2

CurrentControlSet\Services\macdisk

Key Name: SYSTEM\CurrentControlSet\Services\macdisk
Class Name: <NO CLASS>
Last Write Time: 2/2/2000 - 9:40 AM
Value 0
Name: ErrorControl
Type: REG_DWORD
Data: 0x1
Value 1
Name: Group
Type: REG_SZ
Data: System Bus Extender
Value 2
Name: ImagePath
Type: REG_EXPAND_SZ
Data: System32\DRIVERS\macdw2k.sys
Value 3
Name: Start

```

Type:          REG_DWORD
Data:          0

Value 4
Name:          Tag
Type:          REG_DWORD
Data:          0x6

Value 5
Name:          Type
Type:          REG_DWORD
Data:          0x1

Key Name:      SYSTEM\CurrentControlSet\Services\macdisk\Enum
Class Name:    <NO CLASS>
Last Write Time: 2/13/2000 - 7:45 AM
Value 0
Name:          0
Type:          REG_SZ
Data:          Root\LEGACY_MACDISK\0000

Value 1
Name:          1
Type:          REG_SZ
Data:          SCSI\Disk&Ven_MYLEX&Prod_eXtremeRAID_2000&Rev_0600\5&5933527&0&400

Value 2
Name:          2
Type:          REG_SZ
Data:          SCSI\Disk&Ven_MYLEX&Prod_eXtremeRAID_2000&Rev_0600\5&2e1f7b3c&1&400

Value 3
Name:          3
Type:          REG_SZ
Data:          SCSI\Disk&Ven_MYLEX&Prod_eXtremeRAID_2000&Rev_0600\5&2dd424b2&0&400

Value 4
Name:          4
Type:          REG_SZ
Data:          SCSI\Disk&Ven_MYLEX&Prod_eXtremeRAID_2000&Rev_0600\5&32a6693b&1&400

Value 5
Name:          5
Type:          REG_SZ
Data:          SCSI\Disk&Ven_MYLEX&Prod_eXtremeRAID_2000&Rev_0600\5&aa6c454&2&400

Value 6
Name:          6
Type:          REG_SZ
Data:          SCSI\Disk&Ven_MYLEX&Prod_eXtremeRAID_2000&Rev_0600\5&27c8c521&0&400

Value 7

```

```

Name:          7
Type:          REG_SZ
Data:          SCSI\Disk&Ven_MYLEX&Prod_eXtremeRAID_2000&Rev_0600\5&1ded6135&1&400

Value 8
Name:          8
Type:          REG_SZ
Data:          SCSI\Disk&Ven_MYLEX&Prod_eXtremeRAID_2000&Rev_0600\5&1ded6135&1&410

Value 9
Name:          Count
Type:          REG_DWORD
Data:          0x9

Value 10
Name:          NextInstance
Type:          REG_DWORD
Data:          0x9

Key Name:      SYSTEM\CurrentControlSet\Services\macdisk\Parameters
Class Name:    <NO CLASS>
Last Write Time: 1/24/2000 - 12:04 PM

Key Name:      SYSTEM\CurrentControlSet\Services\macdisk\Parameters\PnpInterface
Class Name:    <NO CLASS>
Last Write Time: 1/24/2000 - 12:04 PM
Value 0
Name:          5
Type:          REG_DWORD
Data:          0x1

Key Name:      SYSTEM\CurrentControlSet\Services\macdisk\Security
Class Name:    <NO CLASS>
Last Write Time: 1/24/2000 - 12:03 PM
Value 0
Name:          Security
Type:          REG_BINARY
Data:          00000000 01 00 14 80 a0 00 00 00 - ac 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 70 00 04 00 00 00 - 00 00 18 00 fd 01 02 00
..p.....ÿ...
00000040 01 01 00 00 00 00 00 05 - 12 00 00 00 6f 00 72 00
.....o.r.
00000050 00 00 1c 00 ff 01 0f 00 - 01 02 00 00 00 00 00 05
...ÿ.....
00000060 20 00 00 00 20 02 00 00 - 74 00 00 00 00 00 18 00 ...
...t.....
00000070 8d 01 02 00 01 01 00 00 - 00 00 00 05 0b 00 00 00
.....

```

```

00000080  20 02 00 00 00 00 1c 00 - fd 01 02 00 01 02 00 00
.....Ÿ.....
00000090  00 00 00 05 20 00 00 00 - 23 02 00 00 74 00 00 00 ....
...#...t...
000000a0  01 01 00 00 00 00 00 05 - 12 00 00 00 01 01 00 00
.....
000000b0  00 00 00 05 12 00 00 00 - .....

```

CurrentControlSet\Services\MSSQLSERVER

```

Key Name:      SYSTEM\CurrentControlSet\Services\MSSQLSERVER
Class Name:    <NO CLASS>
Last Write Time: 1/21/2000 - 5:46 PM
Value 0
  Name:      DisplayName
  Type:      REG_SZ
  Data:      MSSQLSERVER

Value 1
  Name:      ErrorControl
  Type:      REG_DWORD
  Data:      0x1

Value 2
  Name:      ImagePath
  Type:      REG_EXPAND_SZ
  Data:      v:\mssql75\MSSQL\bin\sqlservr.exe

Value 3
  Name:      ObjectName
  Type:      REG_SZ
  Data:      LocalSystem

Value 4
  Name:      Start
  Type:      REG_DWORD
  Data:      0x3

Value 5
  Name:      Type
  Type:      REG_DWORD
  Data:      0x10

Key Name:      SYSTEM\CurrentControlSet\Services\MSSQLSERVER\Enum
Class Name:    <NO CLASS>
Last Write Time: 2/13/2000 - 7:44 AM
Value 0
  Name:      0
  Type:      REG_SZ
  Data:      Root\LEGACY_MSSQLSERVER\0000

Value 1
  Name:      Count
  Type:      REG_DWORD
  Data:      0x1

```

```

Value 2
  Name:      NextInstance
  Type:      REG_DWORD
  Data:      0x1

Key Name:      SYSTEM\CurrentControlSet\Services\MSSQLSERVER\Linkage
Class Name:    <NO CLASS>
Last Write Time: 1/21/2000 - 5:48 PM
Value 0
  Name:      Export
  Type:      REG_MULTI_SZ
  Data:      MSSQLSERVER

Key Name:      SYSTEM\CurrentControlSet\Services\MSSQLSERVER\Performance
Class Name:    <NO CLASS>
Last Write Time: 2/13/2000 - 7:45 AM
Value 0
  Name:      Close
  Type:      REG_SZ
  Data:      CloseSQLPerformanceData

Value 1
  Name:      Collect
  Type:      REG_SZ
  Data:      CollectSQLPerformanceData

Value 2
  Name:      First Counter
  Type:      REG_DWORD
  Data:      0xb60

Value 3
  Name:      First Help
  Type:      REG_DWORD
  Data:      0xb61

Value 4
  Name:      Last Counter
  Type:      REG_DWORD
  Data:      0xc74

Value 5
  Name:      Last Help
  Type:      REG_DWORD
  Data:      0xc75

Value 6
  Name:      Library
  Type:      REG_SZ
  Data:      v:\mssql75\MSSQL\BINN\SQLCTR80.DLL

Value 7
  Name:      Object List
  Type:      REG_SZ

```

Data: 2912 2958 2966 2974 2990 3038 3048 3090 3106 3118 3148
3152 3156 3164 3172 3180 3186

Value 8
Name: Open
Type: REG_SZ
Data: OpenSQLPerformanceData

Value 9
Name: WbemAdapFileSize
Type: REG_DWORD
Data: 0x803b

Value 10
Name: WbemAdapFileTime
Type: REG_BINARY
Data: 00000000 00 7e b4 a3 b9 59 bf 01 -

Value 11
Name: WbemAdapStatus
Type: REG_DWORD
Data: 0

Key Name: SYSTEM\CurrentControlSet\Services\MSSQLSERVER\Security
Class Name: <NO CLASS>
Last Write Time: 1/21/2000 - 5:46 PM

Value 0
Name: Security
Type: REG_BINARY
Data: 00000000 01 00 14 80 a0 00 00 00 - ac 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 70 00 04 00 00 00 - 00 00 18 00 fd 01 02 00
..P.....ÿ...
00000040 01 01 00 00 00 00 00 05 - 12 00 00 00 c0 9a 08 00
.....Ä...
00000050 00 00 1c 00 ff 01 0f 00 - 01 02 00 00 00 00 00 05
.....ÿ.....
00000060 20 00 00 00 20 02 00 00 - 00 00 00 00 00 00 18 00 ...
.....
00000070 8d 01 02 00 01 01 00 00 - 00 00 00 05 0b 00 00 00
.....
00000080 20 02 00 00 00 00 1c 00 - fd 01 02 00 01 02 00 00
.....ÿ.....
00000090 00 00 00 05 20 00 00 00 - 23 02 00 00 00 00 00 00
...#.....
000000a0 01 01 00 00 00 00 00 05 - 12 00 00 00 01 01 00 00
.....
000000b0 00 00 00 05 12 00 00 00 -

CurrentControlSet\Services\NDIS

Key Name: SYSTEM\CurrentControlSet\Services\NDIS
Class Name: <NO CLASS>
Last Write Time: 1/19/2000 - 9:28 AM

Value 0
Name: DisplayName
Type: REG_SZ
Data: NDIS System Driver

Value 1
Name: ErrorControl
Type: REG_DWORD
Data: 0x1

Value 2
Name: Group
Type: REG_SZ
Data: NDIS Wrapper

Value 3
Name: Start
Type: REG_DWORD
Data: 0

Value 4
Name: Type
Type: REG_DWORD
Data: 0x1

Key Name: SYSTEM\CurrentControlSet\Services\NDIS\Enum
Class Name: <NO CLASS>
Last Write Time: 2/13/2000 - 7:44 AM

Value 0
Name: 0
Type: REG_SZ
Data: Root\LEGACY_NDIS\0000

Value 1
Name: Count
Type: REG_DWORD
Data: 0x1

Value 2
Name: NextInstance
Type: REG_DWORD
Data: 0x1

Key Name: SYSTEM\CurrentControlSet\Services\NDIS\MediaTypes
Class Name: <NO CLASS>
Last Write Time: 1/19/2000 - 9:28 AM

Key Name: SYSTEM\CurrentControlSet\Services\NDIS\NetDetect
Class Name: <NO CLASS>
Last Write Time: 1/19/2000 - 9:32 AM

Key Name: SYSTEM\CurrentControlSet\Services\NDIS\NetDetect\EISA
Class Name: <NO CLASS>
Last Write Time: 1/19/2000 - 9:32 AM
Value 0
Name: BusType
Type: REG_DWORD
Data: 0x2

Key Name:
SYSTEM\CurrentControlSet\Services\NDIS\NetDetect\EISA\3C592
Class Name: <NO CLASS>
Last Write Time: 1/19/2000 - 9:32 AM
Value 0
Name: Id
Type: REG_DWORD
Data: 0x20596d50

Value 1
Name: Mask
Type: REG_DWORD
Data: 0xf0ffffff

Value 2
Name: Token
Type: REG_SZ
Data: EISA*TCM5920

Key Name:
SYSTEM\CurrentControlSet\Services\NDIS\NetDetect\EISA\3C597
Class Name: <NO CLASS>
Last Write Time: 1/19/2000 - 9:32 AM
Value 0
Name: Id
Type: REG_DWORD
Data: 0x70596d50

Value 1
Name: Mask
Type: REG_DWORD
Data: 0xf0ffffff

Value 2
Name: Token
Type: REG_SZ
Data: EISA*TCM5970

Key Name:
SYSTEM\CurrentControlSet\Services\NDIS\NetDetect\EISA\579TP
Class Name: <NO CLASS>
Last Write Time: 1/19/2000 - 9:32 AM
Value 0
Name: Id
Type: REG_DWORD
Data: 0x93506d50

Value 1

Name: Mask
Type: REG_DWORD
Data: 0xffffffff

Value 2
Name: Token
Type: REG_SZ
Data: *TCM5093

Key Name:
SYSTEM\CurrentControlSet\Services\NDIS\NetDetect\EISA\BONSAI
Class Name: <NO CLASS>
Last Write Time: 1/19/2000 - 9:32 AM
Value 0
Name: Id
Type: REG_DWORD
Data: 0x62110e

Value 1
Name: Mask
Type: REG_DWORD
Data: 0xffffffff

Value 2
Name: Token
Type: REG_SZ
Data: EISA_CPQ6200_TOPNET

Key Name:
SYSTEM\CurrentControlSet\Services\NDIS\NetDetect\EISA\BONSAIPORT2
Class Name: <NO CLASS>
Last Write Time: 1/19/2000 - 9:32 AM
Value 0
Name: Id
Type: REG_DWORD
Data: 0x62110e

Value 1
Name: Mask
Type: REG_DWORD
Data: 0xffffffff

Value 2
Name: Token
Type: REG_SZ
Data: EISA_CPQ6200_BOTTOMNET

Key Name:
SYSTEM\CurrentControlSet\Services\NDIS\NetDetect\EISA\DEC300
Class Name: <NO CLASS>
Last Write Time: 1/19/2000 - 9:32 AM
Value 0
Name: Id
Type: REG_DWORD
Data: 0x230a310

Value 1
Name: Mask
Type: REG_DWORD
Data: 0xffffffff

Value 2
Name: Token
Type: REG_SZ
Data: EISA&DEFEA

Key Name:
SYSTEM\CurrentControlSet\Services\NDIS\NetDetect\EISA\DEC422
Class Name: <NO CLASS>
Last Write Time: 1/19/2000 - 9:32 AM

Value 0
Name: Id
Type: REG_DWORD
Data: 0x2042a310

Value 1
Name: Mask
Type: REG_DWORD
Data: 0xf0ffffff

Value 2
Name: Token
Type: REG_SZ
Data: EISA&DEC422

Key Name:
SYSTEM\CurrentControlSet\Services\NDIS\NetDetect\EISA\DURANGO
Class Name: <NO CLASS>
Last Write Time: 1/19/2000 - 9:32 AM

Value 0
Name: Id
Type: REG_DWORD
Data: 0x260110e

Value 1
Name: Mask
Type: REG_DWORD
Data: 0xffffffff

Value 2
Name: Token
Type: REG_SZ
Data: *CPQ6002

Key Name:
SYSTEM\CurrentControlSet\Services\NDIS\NetDetect\EISA\EE100E
Class Name: <NO CLASS>
Last Write Time: 1/19/2000 - 9:32 AM

Value 0
Name: Id
Type: REG_DWORD
Data: 0x6010d425

Value 1
Name: Mask
Type: REG_DWORD
Data: 0xf0ffffff

Value 2
Name: Token
Type: REG_SZ
Data: EISA&INT1060

Key Name:
SYSTEM\CurrentControlSet\Services\NDIS\NetDetect\EISA\HP2577A
Class Name: <NO CLASS>
Last Write Time: 1/19/2000 - 9:32 AM

Value 0
Name: Id
Type: REG_DWORD
Data: 0x4019f022

Value 1
Name: Mask
Type: REG_DWORD
Data: 0xf0ffffff

Value 2
Name: Token
Type: REG_SZ
Data: *HWP1940

Key Name:
SYSTEM\CurrentControlSet\Services\NDIS\NetDetect\EISA\INTEL32E
Class Name: <NO CLASS>
Last Write Time: 1/19/2000 - 9:32 AM

Value 0
Name: Id
Type: REG_DWORD
Data: 0x112d425

Value 1
Name: Mask
Type: REG_DWORD
Data: 0xffffffff

Value 2
Name: Token
Type: REG_SZ
Data: *INT1201

Key Name:
SYSTEM\CurrentControlSet\Services\NDIS\NetDetect\EISA\MAPLE
Class Name: <NO CLASS>
Last Write Time: 1/19/2000 - 9:32 AM

Value 0
Name: Id
Type: REG_DWORD

Data: 0x160110e

Value 1

Name: Mask
Type: REG_DWORD
Data: 0xffffffff

Value 2

Name: Token
Type: REG_SZ
Data: *CPQ6001

Key Name:

SYSTEM\CurrentControlSet\Services\NDIS\NetDetect\EISA\MDGEB

Class Name: <NO CLASS>

Last Write Time: 1/19/2000 - 9:32 AM

Value 0

Name: Id
Type: REG_DWORD
Data: 0x3008734

Value 1

Name: Mask
Type: REG_DWORD
Data: 0xffffffff

Value 2

Name: Token
Type: REG_SZ
Data: *MDG0003

Key Name:

SYSTEM\CurrentControlSet\Services\NDIS\NetDetect\EISA\MDGER1

Class Name: <NO CLASS>

Last Write Time: 1/19/2000 - 9:32 AM

Value 0

Name: Id
Type: REG_DWORD
Data: 0x1008734

Value 1

Name: Mask
Type: REG_DWORD
Data: 0xffffffff

Value 2

Name: Token
Type: REG_SZ
Data: *MDG0001

Key Name:

SYSTEM\CurrentControlSet\Services\NDIS\NetDetect\EISA\MDGER2

Class Name: <NO CLASS>

Last Write Time: 1/19/2000 - 9:32 AM

Value 0

Name: Id

Type: REG_DWORD

Data: 0x2008734

Value 1

Name: Mask
Type: REG_DWORD
Data: 0xffffffff

Value 2

Name: Token
Type: REG_SZ
Data: *MDG0002

Key Name:

SYSTEM\CurrentControlSet\Services\NDIS\NetDetect\EISA\MDGER3

Class Name: <NO CLASS>

Last Write Time: 1/19/2000 - 9:32 AM

Value 0

Name: Id
Type: REG_DWORD
Data: 0x4008734

Value 1

Name: Mask
Type: REG_DWORD
Data: 0xffffffff

Value 2

Name: Token
Type: REG_SZ
Data: *MDG0004

Key Name:

SYSTEM\CurrentControlSet\Services\NDIS\NetDetect\EISA\NE3200

Class Name: <NO CLASS>

Last Write Time: 1/19/2000 - 9:32 AM

Value 0

Name: Id
Type: REG_DWORD
Data: 0x7cc3a

Value 1

Name: Mask
Type: REG_DWORD
Data: 0xfffff

Value 2

Name: Token
Type: REG_SZ
Data: *NVL0701

Key Name:

SYSTEM\CurrentControlSet\Services\NDIS\NetDetect\EISA\NETFLEX3

Class Name: <NO CLASS>

Last Write Time: 1/19/2000 - 9:32 AM

Value 0

Name: Id
Type: REG_DWORD
Data: 0x20f1110e

Value 1
Name: Mask
Type: REG_DWORD
Data: 0xf0ffffff

Value 2
Name: Token
Type: REG_SZ
Data: *CPQF120

Key Name:
SYSTEM\CurrentControlSet\Services\NDIS\NetDetect\EISA\NETFLEX3.1
Class Name: <NO CLASS>
Last Write Time: 1/19/2000 - 9:32 AM

Value 0
Name: Id
Type: REG_DWORD
Data: 0x40f1110e

Value 1
Name: Mask
Type: REG_DWORD
Data: 0xf0ffffff

Value 2
Name: Token
Type: REG_SZ
Data: *CPQF140

Key Name:
SYSTEM\CurrentControlSet\Services\NDIS\NetDetect\EISA\NETFLX
Class Name: <NO CLASS>
Last Write Time: 1/19/2000 - 9:32 AM

Value 0
Name: Id
Type: REG_DWORD
Data: 0x61110e

Value 1
Name: Mask
Type: REG_DWORD
Data: 0xffffffff

Value 2
Name: Token
Type: REG_SZ
Data: *CPQ6100

Key Name:
SYSTEM\CurrentControlSet\Services\NDIS\NetDetect\EISA\NPEISA
Class Name: <NO CLASS>
Last Write Time: 1/19/2000 - 9:32 AM

Value 0
Name: Id
Type: REG_DWORD
Data: 0x93a

Value 1
Name: Mask
Type: REG_DWORD
Data: 0xffff

Value 2
Name: Token
Type: REG_SZ
Data: *NP1EISA

Key Name:
SYSTEM\CurrentControlSet\Services\NDIS\NetDetect\EISA\OC3133
Class Name: <NO CLASS>
Last Write Time: 1/19/2000 - 9:32 AM

Value 0
Name: Id
Type: REG_DWORD
Data: 0x209833d

Value 1
Name: Mask
Type: REG_DWORD
Data: 0xffffffff

Value 2
Name: Token
Type: REG_SZ
Data: EISA&*OLC0902

Key Name:
SYSTEM\CurrentControlSet\Services\NDIS\NetDetect\EISA\OCTK32
Class Name: <NO CLASS>
Last Write Time: 1/19/2000 - 9:32 AM

Value 0
Name: Id
Type: REG_DWORD
Data: 0x112833d

Value 1
Name: Mask
Type: REG_DWORD
Data: 0xffffffff

Value 2
Name: Token
Type: REG_SZ
Data: *OLC1201

Key Name:
SYSTEM\CurrentControlSet\Services\NDIS\NetDetect\EISA\P1990
Class Name: <NO CLASS>

Last Write Time: 1/19/2000 - 9:32 AM
Value 0
Name: Id
Type: REG_DWORD
Data: 0x604f42

Value 1
Name: Mask
Type: REG_DWORD
Data: 0xffffffff

Value 2
Name: Token
Type: REG_SZ
Data: EISA&*PRO6000

Key Name:
SYSTEM\CurrentControlSet\Services\NDIS\NetDetect\EISA\RODAN
Class Name: <NO CLASS>
Last Write Time: 1/19/2000 - 9:32 AM
Value 0
Name: Id
Type: REG_DWORD
Data: 0x63110e

Value 1
Name: Mask
Type: REG_DWORD
Data: 0xffffffff

Value 2
Name: Token
Type: REG_SZ
Data: EISA_CPQ6300_TOPNET

Key Name:
SYSTEM\CurrentControlSet\Services\NDIS\NetDetect\EISA\RODANPORT2
Class Name: <NO CLASS>
Last Write Time: 1/19/2000 - 9:32 AM
Value 0
Name: Id
Type: REG_DWORD
Data: 0x63110e

Value 1
Name: Mask
Type: REG_DWORD
Data: 0xffffffff

Value 2
Name: Token
Type: REG_SZ
Data: EISA_CPQ6300_BOTTOMNET

Key Name: SYSTEM\CurrentControlSet\Services\NDIS\NetDetect\ISA
Class Name: <NO CLASS>

Last Write Time: 1/19/2000 - 9:32 AM
Value 0
Name: BusType
Type: REG_DWORD
Data: 0x1

Key Name: SYSTEM\CurrentControlSet\Services\NDIS\Parameters
Class Name: <NO CLASS>
Last Write Time: 1/19/2000 - 9:28 AM
Value 0
Name: ProcessorAffinityMask
Type: REG_DWORD
Data: 0

CurrentControlSet\Services\NetBIOS

Key Name: SYSTEM\CurrentControlSet\Services\NetBIOS
Class Name: <NO CLASS>
Last Write Time: 1/19/2000 - 9:28 AM
Value 0
Name: Description
Type: REG_SZ
Data: NetBIOS Interface

Value 1
Name: DisplayName
Type: REG_SZ
Data: NetBIOS Interface

Value 2
Name: ErrorControl
Type: REG_DWORD
Data: 0x1

Value 3
Name: Group
Type: REG_SZ
Data: NetBIOSGroup

Value 4
Name: ImagePath
Type: REG_EXPAND_SZ
Data: System32\DRIVERS\netbios.sys

Value 5
Name: Start
Type: REG_DWORD
Data: 0x1

Value 6
Name: Tag
Type: REG_DWORD
Data: 0x1

Value 7
Name: Type

```

Type: REG_DWORD
Data: 0x2

Key Name: SYSTEM\CurrentControlSet\Services\NetBIOS\Enum
Class Name: <NO CLASS>
Last Write Time: 2/13/2000 - 7:44 AM
Value 0
  Name: 0
  Type: REG_SZ
  Data: Root\LEGACY_NETBIOS\0000

Value 1
  Name: Count
  Type: REG_DWORD
  Data: 0x1

Value 2
  Name: NextInstance
  Type: REG_DWORD
  Data: 0x1

Key Name: SYSTEM\CurrentControlSet\Services\NetBIOS\Linkage
Class Name: <NO CLASS>
Last Write Time: 2/13/2000 - 7:27 AM
Value 0
  Name: Bind
  Type: REG_MULTI_SZ
  Data: \Device\NetBT_Tcpip_{81DA4F1E-4986-453F-BCC4-3F7F0A045472}
      \Device\NetBT_Tcpip_{BD4FD8F6-4FE2-45B9-B025-8CA8694939B9}
      \Device\NetBT_Tcpip_{30D42AA3-6312-440E-9867-472318E0CF00}

Value 1
  Name: Export
  Type: REG_MULTI_SZ
  Data: \Device\NetBIOS_NetBT_Tcpip_{81DA4F1E-4986-453F-BCC4-3F7F0A045472}
      \Device\NetBIOS_NetBT_Tcpip_{BD4FD8F6-4FE2-45B9-B025-8CA8694939B9}
      \Device\NetBIOS_NetBT_Tcpip_{30D42AA3-6312-440E-9867-472318E0CF00}

Value 2
  Name: LanaMap
  Type: REG_BINARY
  Data: 00000000 01 03 00 01 00 02 .....

Value 3
  Name: Route
  Type: REG_MULTI_SZ
  Data: "NetBT" "Tcpip" "{81DA4F1E-4986-453F-BCC4-3F7F0A045472}"

```

```

"NetBT" "Tcpip" "NdisWanIp"

Key Name: SYSTEM\CurrentControlSet\Services\NetBIOS\Parameters
Class Name: <NO CLASS>
Last Write Time: 2/13/2000 - 7:27 AM
Value 0
  Name: MaxLana
  Type: REG_DWORD
  Data: 0x3

Key Name: SYSTEM\CurrentControlSet\Services\NetBIOS\Parameters\Winsock
Class Name: <NO CLASS>
Last Write Time: 1/19/2000 - 9:28 AM
Value 0
  Name: HelperDllName
  Type: REG_EXPAND_SZ
  Data: %SystemRoot%\System32\wshnetbs.dll

Value 1
  Name: Mapping
  Type: REG_BINARY
  Data: 00000000 02 00 00 00 03 00 00 00 - 11 00 00 00 05 00 00 00
      .....
      00000010 00 00 00 00 11 00 00 00 - 02 00 00 00 00 00 00 00
      .....

Value 2
  Name: MaxSockAddrLength
  Type: REG_DWORD
  Data: 0x14

Value 3
  Name: MinSockAddrLength
  Type: REG_DWORD
  Data: 0x14

Key Name: SYSTEM\CurrentControlSet\Services\NetBIOS\Security
Class Name: <NO CLASS>
Last Write Time: 1/19/2000 - 9:28 AM
Value 0
  Name: Security
  Type: REG_BINARY
  Data: 00000000 01 00 14 80 a0 00 00 00 - ac 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 70 00 04 00 00 00 - 00 00 18 00 fd 01 02 00
      ..p.....Ÿ...
      00000040 01 01 00 00 00 00 05 - 12 00 00 00 20 02 00 00 .....
      ...

```

```

00000050  00 00 1c 00 ff 01 0f 00 - 01 02 00 00 00 00 00 05
.....ÿ.....
00000060  20 00 00 00 20 02 00 00 - 03 00 00 00 00 00 18 00  ...
.....
00000070  8d 01 02 00 01 01 00 00 - 00 00 00 05 0b 00 00 00
.....
00000080  20 02 00 00 00 00 1c 00 - fd 01 02 00 01 02 00 00
.....ÿ.....
00000090  00 00 00 05 20 00 00 00 - 23 02 00 00 03 00 00 00  ....
...#.....
000000a0  01 01 00 00 00 00 00 05 - 12 00 00 00 01 01 00 00
.....
000000b0  00 00 00 05 12 00 00 00 - .....

```

CurrentControlSet\Services\SNMP

```

Key Name:      SYSTEM\CurrentControlSet\Services\SNMP
Class Name:    <NO CLASS>
Last Write Time: 1/19/2000 - 9:28 AM
Value 0
  Name:        DependOnGroup
  Type:        REG_MULTI_SZ
  Data:

Value 1
  Name:        DependOnService
  Type:        REG_MULTI_SZ
  Data:        EventLog

Value 2
  Name:        Description
  Type:        REG_SZ
  Data:        Includes agents that monitor the activity in network
devices and report to the network console workstation.

Value 3
  Name:        DisplayName
  Type:        REG_SZ
  Data:        SNMP Service

Value 4
  Name:        ErrorControl
  Type:        REG_DWORD
  Data:        0x1

Value 5
  Name:        ImagePath
  Type:        REG_EXPAND_SZ
  Data:        %SystemRoot%\System32\snmp.exe

Value 6
  Name:        ObjectName
  Type:        REG_SZ
  Data:        LocalSystem

Value 7

```

```

Name:          Start
Type:          REG_DWORD
Data:          0x2

Value 8
  Name:         Type
  Type:         REG_DWORD
  Data:         0x10

Key Name:      SYSTEM\CurrentControlSet\Services\SNMP\Enum
Class Name:    <NO CLASS>
Last Write Time: 2/13/2000 - 7:44 AM
Value 0
  Name:        0
  Type:        REG_SZ
  Data:        Root\LEGACY_SNMP\0000

Value 1
  Name:        Count
  Type:        REG_DWORD
  Data:        0x1

Value 2
  Name:        NextInstance
  Type:        REG_DWORD
  Data:        0x1

Key Name:      SYSTEM\CurrentControlSet\Services\SNMP\Parameters
Class Name:    <NO CLASS>
Last Write Time: 1/19/2000 - 9:28 AM
Value 0
  Name:        EnableAuthenticationTraps
  Type:        REG_DWORD
  Data:        0x1

Value 1
  Name:        NameResolutionRetries
  Type:        REG_DWORD
  Data:        0x10

Key Name:      SYSTEM\CurrentControlSet\Services\SNMP\Parameters\ExtensionAgents
Class Name:    <NO CLASS>
Last Write Time: 2/3/2000 - 4:01 PM
Value 0
  Name:        1
  Type:        REG_SZ
  Data:        SOFTWARE\Microsoft\LANManagerMIB2Agent\CurrentVersion

Value 1
  Name:        10
  Type:        REG_SZ
  Data:        SOFTWARE\Microsoft\OSPFMibAgent\CurrentVersion

Value 2
  Name:        11

```

Type: REG_SZ
Data: SOFTWARE\Microsoft\BOOTPMibAgent\CurrentVersion

Value 3
Name: 12
Type: REG_SZ
Data: SOFTWARE\Microsoft\IPXMibAgent\CurrentVersion

Value 4
Name: 14
Type: REG_SZ
Data: SOFTWARE\Microsoft\IASAgent\CurrentVersion

Value 5
Name: 15
Type: REG_SZ
Data: SOFTWARE\Microsoft\MSSQLServer\SNMP\CurrentVersion

Value 6
Name: 2
Type: REG_SZ
Data: SOFTWARE\Microsoft\RFC1156Agent\CurrentVersion

Value 7
Name: 3
Type: REG_SZ
Data: SOFTWARE\Microsoft\HostMIB\CurrentVersion

Value 8
Name: 4
Type: REG_SZ
Data: SOFTWARE\Microsoft\SNMPMIB\CurrentVersion

Value 9
Name: 5
Type: REG_SZ
Data: SOFTWARE\Microsoft\SNMP_EVENTS\CurrentVersion

Value 10
Name: 6
Type: REG_SZ
Data: SOFTWARE\Microsoft\ACS\CurrentVersion

Value 11
Name: 7
Type: REG_SZ
Data: SOFTWARE\Microsoft\IGMPMibAgent\CurrentVersion

Value 12
Name: 8
Type: REG_SZ
Data: SOFTWARE\Microsoft\IPMulticastMibAgent\CurrentVersion

Value 13
Name: 9
Type: REG_SZ
Data: SOFTWARE\Microsoft\RIPMibAgent\CurrentVersion

Value 14

Name: GigaNet
Type: REG_EXPAND_SZ
Data: SOFTWARE\GigaNet\RFC1156Agent\CurrentVersion

Value 15
Name: MLX_GAM
Type: REG_SZ
Data: SOFTWARE\Mylex\Global Array Manager Server\2.52-16

Key Name: SYSTEM\CurrentControlSet\Services\SNMP\Parameters\PermittedManagers
Class Name: <NO CLASS>
Last Write Time: 1/19/2000 - 9:28 AM

Key Name: SYSTEM\CurrentControlSet\Services\SNMP\Parameters\RFC1156Agent
Class Name: <NO CLASS>
Last Write Time: 1/19/2000 - 9:28 AM

Value 0
Name: sysContact
Type: REG_SZ
Data:

Value 1
Name: sysLocation
Type: REG_SZ
Data:

Value 2
Name: sysServices
Type: REG_DWORD
Data: 0x4c

Key Name: SYSTEM\CurrentControlSet\Services\SNMP\Parameters\TrapConfiguration
Class Name: <NO CLASS>
Last Write Time: 1/19/2000 - 9:28 AM

Key Name: SYSTEM\CurrentControlSet\Services\SNMP\Parameters\ValidCommunities
Class Name: <NO CLASS>
Last Write Time: 1/19/2000 - 9:28 AM

Value 0
Name: public
Type: REG_DWORD
Data: 0x4

Key Name: SYSTEM\CurrentControlSet\Services\SNMP\Security
Class Name: <NO CLASS>
Last Write Time: 1/19/2000 - 9:28 AM

Value 0
Name: Security
Type: REG_BINARY
Data: 00000000 01 00 14 80 a0 00 00 00 - ac 00 00 00 14 00 00 00
.... ..7.....


```

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 70 00 04 00 00 00 - 00 00 18 00 fd 01 02 00
..p.....ÿ...
00000040  01 01 00 00 00 00 00 05 - 12 00 00 00 76 00 63 00
.....v.c.
00000050  00 00 1c 00 ff 01 0f 00 - 01 02 00 00 00 00 00 05
.....ÿ.....
00000060  20 00 00 00 20 02 00 00 - 00 00 00 00 00 00 18 00  ...
.....
00000070  8d 01 02 00 01 01 00 00 - 00 00 00 05 0b 00 00 00
.....
00000080  20 02 00 00 00 00 1c 00 - fd 01 02 00 01 02 00 00
.....ÿ.....
00000090  00 00 00 05 20 00 00 00 - 23 02 00 00 00 00 00 00  ....
...#.....
000000a0  01 01 00 00 00 00 00 05 - 12 00 00 00 01 01 00 00
.....
000000b0  00 00 00 05 12 00 00 00 - .....

```

CurrentControlSet\Services\SQLSERVERAGENT

Key Name: SYSTEM\CurrentControlSet\Services\SQLSERVERAGENT
Class Name: <NO CLASS>
Last Write Time: 1/21/2000 - 5:48 PM
Value 0
Name: DependOnGroup
Type: REG_MULTI_SZ
Data:

Value 1
Name: DependOnService
Type: REG_MULTI_SZ
Data: MSSQLSERVER

Value 2
Name: DisplayName
Type: REG_SZ
Data: SQLSERVERAGENT

Value 3
Name: ErrorControl
Type: REG_DWORD
Data: 0x1

Value 4
Name: ImagePath
Type: REG_EXPAND_SZ
Data: v:\mssql75\MSSQL\bin\sqlagent.exe

Value 5
Name: ObjectName
Type: REG_SZ
Data: LocalSystem

Value 6
Name: Start
Type: REG_DWORD
Data: 0x3

Value 7
Name: Type
Type: REG_DWORD
Data: 0x10

Key Name:
SYSTEM\CurrentControlSet\Services\SQLSERVERAGENT\Security
Class Name: <NO CLASS>
Last Write Time: 1/21/2000 - 5:48 PM

Value 0
Name: Security
Type: REG_BINARY
Data:

```

00000000  01 00 14 80 a0 00 00 00 - ac 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 70 00 04 00 00 00 - 00 00 18 00 fd 01 02 00
..p.....ÿ...
00000040  01 01 00 00 00 00 00 05 - 12 00 00 00 00 00 00 00
.....
00000050  00 00 1c 00 ff 01 0f 00 - 01 02 00 00 00 00 00 05
.....ÿ.....
00000060  20 00 00 00 20 02 00 00 - 00 00 00 00 00 00 18 00  ...
.....
00000070  8d 01 02 00 01 01 00 00 - 00 00 00 05 0b 00 00 00
.....
00000080  20 02 00 00 00 00 1c 00 - fd 01 02 00 01 02 00 00
.....ÿ.....
00000090  00 00 00 05 20 00 00 00 - 23 02 00 00 00 00 00 00  ....
...#.....
000000a0  01 01 00 00 00 00 00 05 - 12 00 00 00 01 01 00 00
.....
000000b0  00 00 00 05 12 00 00 00 - .....

```

CurrentControlSet\Services\Tcpip

Key Name: SYSTEM\CurrentControlSet\Services\Tcpip
Class Name: Class
Last Write Time: 1/19/2000 - 9:28 AM

Value 0
Name: Description
Type: REG_SZ
Data: TCP/IP Protocol Driver

Value 1
Name: DisplayName
Type: REG_SZ

Data: TCP/IP Protocol Driver

Value 2
 Name: ErrorControl
 Type: REG_DWORD
 Data: 0x1

Value 3
 Name: Group
 Type: REG_SZ
 Data: PNP_TDI

Value 4
 Name: ImagePath
 Type: REG_EXPAND_SZ
 Data: System32\DRIVERS\tcpip.sys

Value 5
 Name: Start
 Type: REG_DWORD
 Data: 0x1

Value 6
 Name: Tag
 Type: REG_DWORD
 Data: 0x4

Value 7
 Name: Type
 Type: REG_DWORD
 Data: 0x1

Key Name: SYSTEM\CurrentControlSet\Services\Tcpip\Enum
 Class Name: <NO CLASS>
 Last Write Time: 2/13/2000 - 7:44 AM

Value 0
 Name: 0
 Type: REG_SZ
 Data: Root\LEGACY_TCPIP\0000

Value 1
 Name: Count
 Type: REG_DWORD
 Data: 0x1

Value 2
 Name: NextInstance
 Type: REG_DWORD
 Data: 0x1

Key Name: SYSTEM\CurrentControlSet\Services\Tcpip\Linkage
 Class Name: <NO CLASS>
 Last Write Time: 2/10/2000 - 11:52 AM

Value 0
 Name: Bind
 Type: REG_MULTI_SZ
 Data: \Device\{81DA4F1E-4986-453F-BCC4-3F7F0A045472}

\Device\NdisWanIp

Value 1
 Name: Export
 Type: REG_MULTI_SZ
 Data: \Device\Tcpip_{81DA4F1E-4986-453F-BCC4-3F7F0A045472}
 \Device\Tcpip_{BD4FD8F6-4FE2-45B9-B025-8CA8694939B9}
 \Device\Tcpip_{30D42AA3-6312-440E-9867-472318E0CF00}

Value 2
 Name: Route
 Type: REG_MULTI_SZ
 Data: "{81DA4F1E-4986-453F-BCC4-3F7F0A045472}"
 "NdisWanIp"

Key Name: SYSTEM\CurrentControlSet\Services\Tcpip\Parameters
 Class Name: Class
 Last Write Time: 1/19/2000 - 9:28 AM

Value 0
 Name: AllowUnqualifiedQuery
 Type: REG_DWORD
 Data: 0

Value 1
 Name: DataBasePath
 Type: REG_EXPAND_SZ
 Data: %SystemRoot%\System32\drivers\etc

Value 2
 Name: DeadGWDetectDefault
 Type: REG_DWORD
 Data: 0x1

Value 3
 Name: Domain
 Type: REG_SZ
 Data:

Value 4
 Name: DontAddDefaultGatewayDefault
 Type: REG_DWORD
 Data: 0

Value 5
 Name: EnableICMPRedirect
 Type: REG_DWORD
 Data: 0x1

Value 6
 Name: EnableSecurityFilters
 Type: REG_DWORD
 Data: 0

Value 7
 Name: ForwardBroadcasts

```

Type:      REG_DWORD
Data:      0

Value 8
Name:      Hostname
Type:      REG_SZ
Data:      SHILOH8

Value 9
Name:      IPEnableRouter
Type:      REG_DWORD
Data:      0

Value 10
Name:      KeepAliveInterval
Type:      REG_DWORD
Data:      0x2710

Value 11
Name:      MaxUserPort
Type:      REG_DWORD
Data:      0x4e20

Value 12
Name:      NameServer
Type:      REG_SZ
Data:

Value 13
Name:      NV Hostname
Type:      REG_SZ
Data:      SHILOH8

Value 14
Name:      PrioritizeRecordData
Type:      REG_DWORD
Data:      0x1

Value 15
Name:      SearchList
Type:      REG_SZ
Data:

Value 16
Name:      TcpAverageRTT
Type:      REG_DWORD
Data:      0x258

Value 17
Name:      UseDomainNameDevolution
Type:      REG_DWORD
Data:      0

Key Name:
SYSTEM\CurrentControlSet\Services\Tcpip\Parameters\Adapters
Class Name:      <NO CLASS>
Last Write Time: 1/19/2000 - 9:28 AM

```

```

Key Name:
SYSTEM\CurrentControlSet\Services\Tcpip\Parameters\Adapters\NdisWanIp
Class Name:      <NO CLASS>
Last Write Time: 1/19/2000 - 9:28 AM
Value 0
Name:      IpConfig
Type:      REG_MULTI_SZ
Data:      Tcpip\Parameters\Interfaces\{BD4FD8F6-4FE2-45B9-B025-
8CA8694939B9}
Tcpip\Parameters\Interfaces\{30D42AA3-6312-440E-9867-
472318E0CF00}

Value 1
Name:      IpInterfaces
Type:      REG_BINARY
Data:      00000000 f6 d8 4f bd e2 4f b9 45 - b0 25 8c a8 69 49 39 b9
00000010 a3 2a d4 30 12 63 0e 44 - 98 67 47 23 18 e0 cf 00
f*00.c.D.gG#.aI.

Value 2
Name:      LLInterface
Type:      REG_SZ
Data:      WANARP

Value 3
Name:      NumInterfaces
Type:      REG_DWORD
Data:      0x2

Key Name:
SYSTEM\CurrentControlSet\Services\Tcpip\Parameters\Adapters\{81DA4F1E-
4986-453F-BCC4-3F7F0A045472}
Class Name:      <NO CLASS>
Last Write Time: 2/3/2000 - 2:08 PM
Value 0
Name:      IpConfig
Type:      REG_MULTI_SZ
Data:      Tcpip\Parameters\Interfaces\{81DA4F1E-4986-453F-BCC4-
3F7F0A045472}

Value 1
Name:      LLInterface
Type:      REG_SZ
Data:

Key Name:
SYSTEM\CurrentControlSet\Services\Tcpip\Parameters\DNSRegisteredAdapters
Class Name:      DynDnsRootClass
Last Write Time: 1/19/2000 - 9:28 AM

Key Name:
SYSTEM\CurrentControlSet\Services\Tcpip\Parameters\Interfaces
Class Name:      <NO CLASS>

```

Last Write Time: 1/19/2000 - 9:28 AM

Key Name:
SYSTEM\CurrentControlSet\Services\Tcpip\Parameters\Interfaces\{30D42AA3-6312-440E-9867-472318E0CF00}

Class Name: <NO CLASS>

Last Write Time: 1/19/2000 - 9:28 AM

Value 0
Name: DefaultGateway
Type: REG_MULTI_SZ
Data:

Value 1
Name: DontAddDefaultGateway
Type: REG_DWORD
Data: 0

Value 2
Name: EnableDeadGWDetect
Type: REG_DWORD
Data: 0x1

Value 3
Name: EnableDHCP
Type: REG_DWORD
Data: 0

Value 4
Name: IPAddress
Type: REG_MULTI_SZ
Data: 0.0.0.0

Value 5
Name: SubnetMask
Type: REG_MULTI_SZ
Data: 0.0.0.0

Value 6
Name: UseZeroBroadcast
Type: REG_DWORD
Data: 0

Key Name:
SYSTEM\CurrentControlSet\Services\Tcpip\Parameters\Interfaces\{81DA4F1E-4986-453F-BCC4-3F7F0A045472}

Class Name: <NO CLASS>

Last Write Time: 2/13/2000 - 7:45 AM

Value 0
Name: DefaultGateway
Type: REG_MULTI_SZ
Data:

Value 1
Name: DefaultGatewayMetric
Type: REG_MULTI_SZ
Data:

Value 2
Name: DisableDynamicUpdate
Type: REG_DWORD
Data: 0x1

Value 3
Name: Domain
Type: REG_SZ
Data: mv.unisys.com

Value 4
Name: EnableAdapterDomainNameRegistration
Type: REG_DWORD
Data: 0

Value 5
Name: EnableDeadGWDetect
Type: REG_DWORD
Data: 0x1

Value 6
Name: EnableDHCP
Type: REG_DWORD
Data: 0

Value 7
Name: InterfaceMetric
Type: REG_DWORD
Data: 0x1

Value 8
Name: IPAddress
Type: REG_MULTI_SZ
Data: 192.167.91.218

Value 9
Name: NameServer
Type: REG_SZ
Data:

Value 10
Name: NTEContextList
Type: REG_MULTI_SZ
Data: 0x00000002

Value 11
Name: RawIPAllowedProtocols
Type: REG_MULTI_SZ
Data: 0

Value 12
Name: SubnetMask
Type: REG_MULTI_SZ
Data: 255.255.255.0

Value 13
Name: TCPAllowedPorts
Type: REG_MULTI_SZ
Data: 0

Value 14
Name: UDPAllowedPorts
Type: REG_MULTI_SZ
Data: 0

Value 15
Name: UseZeroBroadcast
Type: REG_DWORD
Data: 0

Key Name:
SYSTEM\CurrentControlSet\Services\Tcpip\Parameters\Interfaces\{BD4FD8F6-4FE2-45B9-B025-8CA8694939B9}
Class Name: <NO CLASS>
Last Write Time: 1/19/2000 - 9:28 AM

Value 0
Name: DefaultGateway
Type: REG_MULTI_SZ
Data:

Value 1
Name: DontAddDefaultGateway
Type: REG_DWORD
Data: 0

Value 2
Name: EnableDeadGWDetect
Type: REG_DWORD
Data: 0x1

Value 3
Name: EnabledDHCP
Type: REG_DWORD
Data: 0

Value 4
Name: IPAddress
Type: REG_MULTI_SZ
Data: 0.0.0.0

Value 5
Name: SubnetMask
Type: REG_MULTI_SZ
Data: 0.0.0.0

Value 6
Name: UseZeroBroadcast
Type: REG_DWORD

Data: 0

Key Name:
SYSTEM\CurrentControlSet\Services\Tcpip\Parameters\PersistentRoutes
Class Name: <NO CLASS>
Last Write Time: 1/19/2000 - 9:28 AM

Key Name:
SYSTEM\CurrentControlSet\Services\Tcpip\Parameters\Winsock
Class Name: <NO CLASS>
Last Write Time: 1/19/2000 - 9:28 AM

Value 0
Name: HelperDllName
Type: REG_EXPAND_SZ
Data: %SystemRoot%\System32\wshtcpip.dll

Value 1
Name: Mapping
Type: REG_BINARY
Data:
00000000 0b 00 00 00 03 00 00 00 - 02 00 00 00 01 00 00 00
.....
00000010 06 00 00 00 02 00 00 00 - 01 00 00 00 00 00 00 00
.....
00000020 02 00 00 00 00 00 00 00 - 06 00 00 00 00 00 00 00
.....
00000030 00 00 00 00 06 00 00 00 - 00 00 00 00 01 00 00 00
.....
00000040 06 00 00 00 02 00 00 00 - 02 00 00 00 11 00 00 00
.....
00000050 02 00 00 00 02 00 00 00 - 00 00 00 00 02 00 00 00
.....
00000060 00 00 00 00 11 00 00 00 - 00 00 00 00 00 00 00 00
.....
00000070 11 00 00 00 00 00 00 00 - 02 00 00 00 11 00 00 00
.....
00000080 02 00 00 00 03 00 00 00 - 00 00 00 00

Value 2
Name: MaxSockAddrLength
Type: REG_DWORD
Data: 0x10

Value 3
Name: MinSockAddrLength
Type: REG_DWORD
Data: 0x10

Value 4
Name: UseDelayedAcceptance
Type: REG_DWORD
Data: 0

Key Name:
SYSTEM\CurrentControlSet\Services\Tcpip\Performance
Class Name: <NO CLASS>
Last Write Time: 2/13/2000 - 7:46 AM
Value 0

```

Name:      Close
Type:      REG_SZ
Data:      CloseTcpIpPerformanceData

Value 1
Name:      Collect
Type:      REG_SZ
Data:      CollectTcpIpPerformanceData

Value 2
Name:      Library
Type:      REG_SZ
Data:      Perfctr.dll

Value 3
Name:      Open
Type:      REG_SZ
Data:      OpenTcpIpPerformanceData

Value 4
Name:      WbemAdapFileSize
Type:      REG_DWORD
Data:      0xa310

Value 5
Name:      WbemAdapFileTime
Type:      REG_BINARY
Data:      00 00 00 00 00 80 19 01 46 40 bf 01 - ....F@¿.

Value 6
Name:      WbemAdapStatus
Type:      REG_DWORD
Data:      0

Key Name:   SYSTEM\CurrentControlSet\Services\Tcpip\Security
Class Name: <NO CLASS>
Last Write Time: 1/19/2000 - 9:28 AM
Value 0
Name:      Security
Type:      REG_BINARY
Data:      00000000 01 00 14 80 a0 00 00 00 - ac 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 70 00 04 00 00 00 - 00 00 18 00 fd 01 02 00
..p.....ÿ...
00000040 01 01 00 00 00 00 00 05 - 12 00 00 00 02 00 00 00
.....
00000050 00 00 1c 00 ff 01 0f 00 - 01 02 00 00 00 00 00 05
.....ÿ.....
00000060 20 00 00 00 20 02 00 00 - 03 00 00 00 00 00 18 00 ...
.....
00000070 8d 01 02 00 01 01 00 00 - 00 00 00 05 0b 00 00 00
.....

```

```

00000080 20 02 00 00 00 00 1c 00 - fd 01 02 00 01 02 00 00
.....ÿ.....
00000090 00 00 00 00 05 20 00 00 00 - 23 02 00 00 03 00 00 00 ....
...#.....
000000a0 01 01 00 00 00 00 00 05 - 12 00 00 00 01 01 00 00
.....
000000b0 00 00 00 05 12 00 00 00 - .....

Key Name:   SYSTEM\CurrentControlSet\Services\Tcpip\ServiceProvider
Class Name:  <NO CLASS>
Last Write Time: 1/19/2000 - 9:28 AM
Value 0
Name:      Class
Type:      REG_DWORD
Data:      0x8

Value 1
Name:      DnsPriority
Type:      REG_DWORD
Data:      0x7d0

Value 2
Name:      HostsPriority
Type:      REG_DWORD
Data:      0x1f4

Value 3
Name:      LocalPriority
Type:      REG_DWORD
Data:      0x1f3

Value 4
Name:      Name
Type:      REG_SZ
Data:      TCP/IP

Value 5
Name:      NetbtPriority
Type:      REG_DWORD
Data:      0x7d1

Value 6
Name:      ProviderPath
Type:      REG_EXPAND_SZ
Data:      %SystemRoot%\System32\wssock32.dll

CurrentControlSet\Services\Winsock

Key Name:   SYSTEM\CurrentControlSet\Services\Winsock
Class Name:  <NO CLASS>
Last Write Time: 1/19/2000 - 9:28 AM
Value 0
Name:      ErrorControl
Type:      REG_DWORD
Data:      0x1

```

Value 1
 Name: Start
 Type: REG_DWORD
 Data: 0x3

Value 2
 Name: Type
 Type: REG_DWORD
 Data: 0x4

Key Name: SYSTEM\CurrentControlSet\Services\Winsock\Parameters
 Class Name: <NO CLASS>
 Last Write Time: 1/19/2000 - 9:36 AM

Value 0
 Name: Transports
 Type: REG_MULTI_SZ
 Data: Tcpip
 NetBIOS

Key Name: SYSTEM\CurrentControlSet\Services\Winsock\Setup
 Migration
 Class Name: <NO CLASS>
 Last Write Time: 1/22/2000 - 4:58 PM

Value 0
 Name: Known Static Providers
 Type: REG_MULTI_SZ
 Data: Tcpip
 NwlnkIpx
 NwlnkSpx
 AppleTalk
 IsoTp

Value 1
 Name: Provider List
 Type: REG_MULTI_SZ
 Data: Tcpip
 NetBIOS

Value 2
 Name: Setup Version
 Type: REG_DWORD
 Data: 0x1009

Key Name: SYSTEM\CurrentControlSet\Services\Winsock\Setup
 Migration\Providers
 Class Name: <NO CLASS>
 Last Write Time: 1/19/2000 - 9:28 AM

Key Name: SYSTEM\CurrentControlSet\Services\Winsock\Setup
 Migration\Providers\NetBIOS
 Class Name: <NO CLASS>
 Last Write Time: 2/13/2000 - 7:27 AM

Value 0

Name: WinSock 1.1 Provider Data
 Type: REG_BINARY
 Data:

00000000 0e 10 00 00 11 00 00 00 - 14 00 00 00 14 00 00 00

 00000010 05 00 00 00 fd ff ff ff - 00 fa 00 00 0e 03 00 00
ýýýý.ú.....
 00000020 09 12 00 00 11 00 00 00 - 14 00 00 00 14 00 00 00

 00000030 02 00 00 00 fd ff ff ff - 00 fa 00 00 98 02 00 00
ýýýý.ú.....
 00000040 0e 10 00 00 11 00 00 00 - 14 00 00 00 14 00 00 00

 00000050 05 00 00 00 ff ff ff ff - 00 fa 00 00 22 02 00 00
ýýýý.ú..".
 00000060 09 12 00 00 11 00 00 00 - 14 00 00 00 14 00 00 00

 00000070 02 00 00 00 ff ff ff ff - 00 fa 00 00 ac 01 00 00
ýýýý.ú..~..
 00000080 0e 10 00 00 11 00 00 00 - 14 00 00 00 14 00 00 00

 00000090 05 00 00 00 fe ff ff ff - 00 fa 00 00 36 01 00 00
þýýý.ú..6..
 000000a0 09 12 00 00 11 00 00 00 - 14 00 00 00 14 00 00 00

 000000b0 02 00 00 00 fe ff ff ff - 00 fa 00 00 c0 00 00 00
þýýý.ú..Å..
 000000c0 5c 00 44 00 65 00 76 00 - 69 00 63 00 65 00 5c 00
 \.D.e.v.i.c.e.\.
 000000d0 4e 00 65 00 74 00 42 00 - 54 00 5f 00 54 00 63 00
 N.e.t.B.T._.T.c..
 000000e0 70 00 69 00 70 00 5f 00 - 7b 00 33 00 30 00 44 00
 p.i.p._.{.3.0.D..
 000000f0 34 00 32 00 41 00 41 00 - 33 00 2d 00 36 00 33 00 4.2.A.A.3.-
 .6.3.
 00000100 31 00 32 00 2d 00 34 00 - 34 00 30 00 45 00 2d 00 1.2.-
 .4.4.0.E.-..
 00000110 39 00 38 00 36 00 37 00 - 2d 00 34 00 37 00 32 00 9.8.6.7.-
 .4.7.2.
 00000120 33 00 31 00 38 00 45 00 - 30 00 43 00 46 00 30 00
 3.1.8.E.0.C.F.0..
 00000130 30 00 7d 00 00 00 5c 00 - 44 00 65 00 76 00 69 00
 0.}...\.D.e.v.i..
 00000140 63 00 65 00 5c 00 4e 00 - 65 00 74 00 42 00 54 00
 c.e.\.N.e.t.B.T..
 00000150 5f 00 54 00 63 00 70 00 - 69 00 70 00 5f 00 7b 00
 T.c.p.i.p.{..
 00000160 33 00 30 00 44 00 34 00 - 32 00 41 00 41 00 33 00
 3.0.D.4.2.A.A.3..
 00000170 2d 00 36 00 33 00 31 00 - 32 00 2d 00 34 00 34 00 -.6.3.1.2.-
 .4.4.
 00000180 30 00 45 00 2d 00 39 00 - 38 00 36 00 37 00 2d 00 0.E.-
 .9.8.6.7.-..
 00000190 34 00 37 00 32 00 33 00 - 31 00 38 00 45 00 30 00
 4.7.2.3.1.8.E.0..
 000001a0 43 00 46 00 30 00 30 00 - 7d 00 00 00 5c 00 44 00
 C.F.0.0.}...\.D..
 000001b0 65 00 76 00 69 00 63 00 - 65 00 5c 00 4e 00 65 00
 e.v.i.c.e.\.N.e..

000001c0 74 00 42 00 54 00 5f 00 - 54 00 63 00 70 00 69 00
t.B.T._.T.c.p.i.
000001d0 70 00 5f 00 7b 00 42 00 - 44 00 34 00 46 00 44 00
p._.{.B.D.4.F.D.
000001e0 38 00 46 00 36 00 2d 00 - 34 00 46 00 45 00 32 00 8.F.6.-
.4.F.E.2.
000001f0 2d 00 34 00 35 00 42 00 - 39 00 2d 00 42 00 30 00 -.4.5.B.9.-
.B.0.
00000200 32 00 35 00 2d 00 38 00 - 43 00 41 00 38 00 36 00 2.5.-
.8.C.A.8.6.
00000210 39 00 34 00 39 00 33 00 - 39 00 42 00 39 00 7d 00
9.4.9.3.9.B.9.}.
00000220 00 00 5c 00 44 00 65 00 - 76 00 69 00 63 00 65 00
..\.D.e.v.i.c.e.
00000230 5c 00 4e 00 65 00 74 00 - 42 00 54 00 5f 00 54 00
\.N.e.t.B.T._.T.
00000240 63 00 70 00 69 00 70 00 - 5f 00 7b 00 42 00 44 00
c.p.i.p._.{.B.D.
00000250 34 00 46 00 44 00 38 00 - 46 00 36 00 2d 00 34 00
4.F.D.8.F.6.-.4.
00000260 46 00 45 00 32 00 2d 00 - 34 00 35 00 42 00 39 00 F.E.2.-
.4.5.B.9.
00000270 2d 00 42 00 30 00 32 00 - 35 00 2d 00 38 00 43 00 -.B.0.2.5.-
.8.C.
00000280 41 00 38 00 36 00 39 00 - 34 00 39 00 33 00 39 00
A.8.6.9.4.9.3.9.
00000290 42 00 39 00 7d 00 00 00 - 5c 00 44 00 65 00 76 00
B.9.}...\.D.e.v.
000002a0 69 00 63 00 65 00 5c 00 - 4e 00 65 00 74 00 42 00
i.c.e.\.N.e.t.B.
000002b0 54 00 5f 00 54 00 63 00 - 70 00 69 00 70 00 5f 00
T._.T.c.p.i.p._.
000002c0 7b 00 38 00 31 00 44 00 - 41 00 34 00 46 00 31 00
{.8.1.D.A.4.F.1.
000002d0 45 00 2d 00 34 00 39 00 - 38 00 36 00 2d 00 34 00 E.-
.4.9.8.6.-.4.
000002e0 35 00 33 00 46 00 2d 00 - 42 00 43 00 43 00 34 00 5.3.F.-
.B.C.C.4.
000002f0 2d 00 33 00 46 00 37 00 - 46 00 30 00 41 00 30 00 -
.3.F.7.F.0.A.0.
00000300 34 00 35 00 34 00 37 00 - 32 00 7d 00 00 00 5c 00
4.5.4.7.2.}...\
00000310 44 00 65 00 76 00 69 00 - 63 00 65 00 5c 00 4e 00
D.e.v.i.c.e.\.N.
00000320 65 00 74 00 42 00 54 00 - 5f 00 54 00 63 00 70 00
e.t.B.T._.T.c.p.
00000330 69 00 70 00 5f 00 7b 00 - 38 00 31 00 44 00 41 00
i.p._.{.8.1.D.A.
00000340 34 00 46 00 31 00 45 00 - 2d 00 34 00 39 00 38 00 4.F.1.E.-
.4.9.8.
00000350 36 00 2d 00 34 00 35 00 - 33 00 46 00 2d 00 42 00 6.-
.4.5.3.F.-.B.
00000360 43 00 43 00 34 00 2d 00 - 33 00 46 00 37 00 46 00 C.C.4.-
.3.F.7.F.
00000370 30 00 41 00 30 00 34 00 - 35 00 34 00 37 00 32 00
0.A.0.4.5.4.7.2.
00000380 7d 00 00 00 }...

Value 1

Name: WinSock 2.0 Provider ID
Type: REG_BINARY
Data:
00000000 30 18 5f 8d 73 c2 cf 11 - 95 c8 00 80 5f 48 a1 92
0._.sÄĬ..È.._Hj.

Key Name: SYSTEM\CurrentControlSet\Services\Winsock\Setup
Migration\Providers\Tcpip
Class Name: <NO CLASS>
Last Write Time: 1/19/2000 - 9:28 AM
Value 0
Name: WinSock 2.0 Provider ID
Type: REG_BINARY
Data:
00000000 a0 1a 0f e7 8b ab cf 11 - 8c a3 00 80 5f 48 a1 92
..ç.«Ĭ..f.._Hj.

Key Name: SYSTEM\CurrentControlSet\Services\Winsock\Setup
Migration\Well Known Guides
Class Name: <NO CLASS>
Last Write Time: 1/19/2000 - 9:28 AM
Value 0
Name: AppleTalk
Type: REG_BINARY
Data:
00000000 a0 17 3b 2c df c6 cf 11 - 95 c8 00 80 5f 48 a1 92
.;,ŒĬ..È.._Hj.

Value 1
Name: IsoTp
Type: REG_BINARY
Data:
00000000 b0 cb e4 89 c1 b9 cf 11 - 95 c8 00 80 5f 48 a1 92
°ĒÄ.ĀĬ..È.._Hj.

Value 2
Name: McsXns
Type: REG_BINARY
Data:
00000000 b1 cb e4 89 c1 b9 cf 11 - 95 c8 00 80 5f 48 a1 92
±ĒÄ.ĀĬ..È.._Hj.

Windows 2000 Server Client Configuration Information

System Information report written at: 02/13/2000 12:18:25 PM
client1[System Information]

[Following are sub-categories of this main category]

[System Summary]

Item Value
OS Name Microsoft Windows 2000 Server


```

Version 5.0.2195 Build 2195
OS Manufacturer      Microsoft Corporation
System Name           CLIENT1
System Manufacturer   HP
System Model          NetServer LC 3
System Type           X86-based PC
Processor             x86 Family 6 Model 7 Stepping 2 GenuineIntel ~500 Mhz
Processor             x86 Family 6 Model 7 Stepping 2 GenuineIntel ~500 Mhz
BIOS Version          05/05/99
Windows Directory     C:\WINNT
System Directory       C:\WINNT\System32
Boot Device           \Device\Harddisk0\Partition1
Locale United States
User Name             CLIENT1\Administrator
Time Zone             Pacific Standard Time
Total Physical Memory 523,824 KB
Available Physical Memory 451,752 KB
Total Virtual Memory 2,589,248 KB
Available Virtual Memory 2,468,860 KB
Page File Space       2,065,424 KB
Page File             C:\pagefile.sys

```

[Hardware Resources]

[Following are sub-categories of this main category]

[Conflicts/Sharing]

Resource	Device
IRQ 8	cLAN Host Adapter
IRQ 8	System CMOS/real time clock

[DMA]

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

[Forced Hardware]

Device	PNP Device ID
No Forced Hardware	

[I/O]

Address Range	Device	Status
0x0010-0x001F	PCI bus	OK
0x0022-0x003F	PCI bus	OK
0x0044-0x0047	PCI bus	OK
0x004C-0x006F	PCI bus	OK
0x0072-0x007F	PCI bus	OK
0x0090-0x0091	PCI bus	OK
0x0093-0x009F	PCI bus	OK
0x00A2-0x00BF	PCI bus	OK
0x00D0-0x00EF	PCI bus	OK
0x0100-0x0CF7	PCI bus	OK
0x0D00-0xFFFF	PCI bus	OK
0x0A79-0x0A79	ISAPNP Read Data Port	OK
0x0279-0x0279	ISAPNP Read Data Port	OK

0x0274-0x0277	ISAPNP Read Data Port	OK
0xFC90-0xFC9F	Intel(r) 82371AB/EB PCI Bus Master IDE Controller	OK
0x01F0-0x01F7	Primary IDE Channel	OK
0x03F6-0x03F6	Primary IDE Channel	OK
0xFCE0-0xFCFF	Intel 82371AB/EB PCI to USB Universal Host Controller	OK
0xFCC0-0xFCDF	HP NetServer 10/100TX PCI LAN Adapter	OK
0xFCA0-0xFCBF	HP NetServer 10/100TX PCI LAN Adapter #2	OK
0xF800-0xF8FF	Adaptec AIC-7880 PCI SCSI Controller	OK
0x03B0-0x03BB	Cirrus Logic 5446 Compatible Graphics Adapter	OK
0x03C0-0x03DF	Cirrus Logic 5446 Compatible Graphics Adapter	OK
0x0020-0x0021	Programmable interrupt controller	OK
0x00A0-0x00A1	Programmable interrupt controller	OK
0x0040-0x0043	System timer	OK
0x0000-0x000F	Direct memory access controller	OK
0x0081-0x008F	Direct memory access controller	OK
0x00C0-0x00DF	Direct memory access controller	OK
0x0060-0x0060	PC/AT Enhanced PS/2 Keyboard (101/102-Key)	OK
0x0064-0x0064	PC/AT Enhanced PS/2 Keyboard (101/102-Key)	OK
0x0378-0x037F	Printer Port (LPT1)	OK
0x02F8-0x02FF	Communications Port (COM2)	OK
0x03F8-0x03FF	Communications Port (COM1)	OK
0x03F0-0x03F5	Standard floppy disk controller	OK
0x03F7-0x03F7	Standard floppy disk controller	OK
0x0061-0x0061	System speaker	OK
0x0070-0x0071	System CMOS/real time clock	OK
0x0096-0x0097	Motherboard resources	OK
0x002E-0x002F	Motherboard resources	OK
0x00E0-0x00E0	Motherboard resources	OK
0x00E4-0x00E4	Motherboard resources	OK
0x00E8-0x00E9	Motherboard resources	OK
0x0C00-0x0C08	Motherboard resources	OK
0x00B2-0x00B3	Motherboard resources	OK
0x0CA8-0x0CAB	Motherboard resources	OK
0x04D0-0x04D1	Motherboard resources	OK
0x8000-0x803F	Motherboard resources	OK
0x2180-0x218F	Motherboard resources	OK
0x00F0-0x00FF	Numeric data processor	OK

[IRQs]

IRQ Number	Device
14	Primary IDE Channel
19	Intel 82371AB/EB PCI to USB Universal Host Controller
8	cLAN Host Adapter
8	System CMOS/real time clock
32	HP NetServer 10/100TX PCI LAN Adapter
36	HP NetServer 10/100TX PCI LAN Adapter #2
40	Adaptec AIC-7880 PCI SCSI Controller
1	PC/AT Enhanced PS/2 Keyboard (101/102-Key)
3	Communications Port (COM2)
4	Communications Port (COM1)
6	Standard floppy disk controller
13	Numeric data processor
12	Logitech PS/2 Port Mouse

[Memory]

Range	Device	Status
-------	--------	--------

```

0xA0000-0xBFFFF PCI bus OK
0xA0000-0xBFFFF Cirrus Logic 5446 Compatible Graphics Adapter
OK
0xCD000-0xDFFFF PCI bus OK
0x20000000-0xF9FFFFFF PCI bus OK
0xFECE000-0xFEDFFFFFF PCI bus OK
0xFECE000-0xFEDFFFFFF Cirrus Logic 5446 Compatible Graphics Adapter
OK
0xFEE01000-0xFFFFFFF PCI bus OK
0xFA000000-0xFEBFFFFFF PCI bus OK
0xFA000000-0xFEBFFFFFF Cirrus Logic 5446 Compatible Graphics Adapter
OK
0xFEC10000-0xFECDFFFF PCI bus OK
0xF8000000-0xF9AFFFFF DEC 21152 PCI to PCI bridge OK
0xF8000000-0xF9AFFFFF cLAN Host Adapter OK
0xF9AE0000-0xF9AFFFFF cLAN Host Adapter OK
0xF9800000-0xF99FFFFF cLAN Host Adapter OK
0xF9AD0000-0xF9ADFFFF cLAN Host Adapter OK
0xFECD000-0xFECDFFF HP NetServer 10/100TX PCI LAN Adapter OK
0xFED00000-0xFEDFFFFFF HP NetServer 10/100TX PCI LAN Adapter OK
0xFECFC000-0xFECFCFFF HP NetServer 10/100TX PCI LAN Adapter #2 OK
0xFFE00000-0xFFEFFFFF HP NetServer 10/100TX PCI LAN Adapter #2 OK
0xFECFF000-0xFECFFFFF Adaptec AIC-7880 PCI SCSI Controller OK
0x0000-0x9FFFF System board OK
0xE0000-0xFFFFF System board OK
0x100000-0x1FFFFFFF System board OK
0xFF80000-0xFFFFFFFF System board OK
0xFEC00000-0xFEC0FFFF Motherboard resources OK
0xFEE00000-0xFEE00FFF Motherboard resources OK

[Components]

[ Following are sub-categories of this main category ]

[Multimedia]

[ Following are sub-categories of this main category ]

[Audio Codecs]

Codec Manufacturer Description Status File Version Size
Creation Date
c:\winnt\system32\iac25_32.ax Intel Corporation Indeo® audio software
OK C:\WINNT\System32\IAC25_32.AX 2.05.53 195.00 KB (199,680
bytes) 1/27/2000 2:19:39 PM
c:\winnt\system32\msg723.acm Microsoft Corporation OK
C:\WINNT\System32\MSG723.ACM 4.4.3385 106.77 KB (109,328
bytes) 1/27/2000 2:40:48 PM
c:\winnt\system32\lhacm.acm Microsoft Corporation Lernout And Hauspie
Codecs OK C:\WINNT\System32\LHACM.ACM 4.4.3385 33.27 KB
(34,064 bytes) 1/27/2000 2:40:48 PM
c:\winnt\system32\tsssoft32.acm DSP GROUP, INC. OK
C:\WINNT\System32\TSSOFT32.ACM 1.01 9.27 KB (9,488 bytes)
1/27/2000 2:19:18 PM
c:\winnt\system32\msgsm32.acm Microsoft Corporation OK
C:\WINNT\System32\MSGSM32.ACM 5.00.2134.1 22.27 KB (22,800
bytes) 1/27/2000 2:18:35 PM

```

```

c:\winnt\system32\msg711.acm Microsoft Corporation OK
C:\WINNT\System32\MSG711.ACM 5.00.2134.1 10.27 KB (10,512
bytes) 1/27/2000 2:18:35 PM
c:\winnt\system32\imaadp32.acm Microsoft Corporation OK
C:\WINNT\System32\IMAADP32.ACM 5.00.2134.1 16.27 KB
(16,656 bytes) 1/27/2000 2:18:13 PM
c:\winnt\system32\msadp32.acm Microsoft Corporation OK
C:\WINNT\System32\MSADP32.ACM 5.00.2134.1 14.77 KB (15,120
bytes) 1/27/2000 2:18:34 PM

[Video Codecs]

Codec Manufacturer Description Status File Version Size
Creation Date
c:\winnt\system32\ir50_32.dll Intel Corporation Indeo® video 5.10
OK C:\WINNT\System32\IR50_32.DLL R.5.10.15.2.55 737.50 KB
(755,200 bytes) 1/27/2000 2:19:39 PM
c:\winnt\system32\msh261.drv Microsoft Corporation OK
C:\WINNT\System32\MSH261.DRV 4.4.3385 163.77 KB (167,696
bytes) 1/27/2000 2:40:48 PM
c:\winnt\system32\msvidc32.dll Microsoft Corporation OK
C:\WINNT\System32\MSVIDC32.DLL 5.00.2134.1 27.27 KB
(27,920 bytes) 1/27/2000 2:18:40 PM
c:\winnt\system32\msh263.drv Microsoft Corporation OK
C:\WINNT\System32\MSH263.DRV 4.4.3385 252.27 KB (258,320
bytes) 1/27/2000 2:40:23 PM
c:\winnt\system32\ir32_32.dll Intel(R) Corporation OK
C:\WINNT\System32\IR32_32.DLL Not Available 194.50 KB (199,168
bytes) 1/27/2000 2:18:18 PM
c:\winnt\system32\msrle32.dll Microsoft Corporation OK
C:\WINNT\System32\MSRLE32.DLL 5.00.2134.1 10.77 KB (11,024
bytes) 1/27/2000 2:18:38 PM
c:\winnt\system32\iccvid.dll Radius Inc. OK
C:\WINNT\System32\ICCVID.DLL 1.10.0.6 108.00 KB (110,592
bytes) 1/27/2000 2:18:11 PM

[CD-ROM]

Item Value
Drive D:
Description CD-ROM Drive
Media Loaded False
Media Type CD-ROM
Name TEAC CD-532E-B
Manufacturer (Standard CD-ROM drives)
Status OK
Transfer Rate Not Available
SCSI Target ID 0
PNP Device ID IDE\CDROMTEAC_CD-532E-
B_____2.1A____\4&1C9CBC13&0&0.0.0

[Sound Device]

Item Value
No sound devices

[Display]

```

```

Item      Value
Name      Cirrus Logic 5446 Compatible Graphics Adapter
PNP Device ID  PCI\VEN_1013&DEV_00B8&SUBSYS_0001103C&REV_45\2&EBB567F&0&68
Adapter Type  Cirrus Logic 5446BE, Cirrus Logic compatible
Adapter Description  Cirrus Logic 5446 Compatible Graphics Adapter
Adapter RAM    1024.00 KB (1,048,576 bytes)
Installed Drivers  vga.sys,cirrus.sys,vga256.dll,vga64k.dll
Driver Version  5.00.2146.1
INF File       display.inf (cirrus section)
Color Planes   1
Color Table Entries  256
Resolution     800 x 600 x 60 hertz
Bits/Pixel     8

```

[Infrared]

```

Item      Value
No infrared devices

```

[Input]

[Following are sub-categories of this main category]

[Keyboard]

```

Item      Value
Description  PC/AT Enhanced PS/2 Keyboard (101/102-Key)
Name        Enhanced (101- or 102-key)
Layout      00000409
PNP Device ID  ROOT\*PNP030B\1_0_22_0_32_0
NumberOfFunctionKeys  12

```

[Pointing Device]

```

Item      Value
Hardware Type  Logitech PS/2 Port Mouse
Number of Buttons  3
Status OK
PNP Device ID  ROOT\*PNP0F12\1_0_21_0_31_0
Power Management Supported  False
Double Click Threshold 6
Handedness    Right Handed Operation

```

[Modem]

```

Item      Value
No modems

```

[Network]

[Following are sub-categories of this main category]

[Adapter]

```

Item      Value
Name      [00000000] HP NetServer 10/100TX PCI LAN Adapter

```

```

Adapter Type  Ethernet 802.3
Product Name  HP NetServer 10/100TX PCI LAN Adapter
Installed     True
PNP Device ID  PCI\VEN_8086&DEV_1229&SUBSYS_10C3103C&REV_05\2&EBB567F&0&40
Last Reset    2/13/2000 4:12:41 AM
Index         0
Service Name   HPTX
IP Address     192.168.91.1
IP Subnet      255.255.255.0
Default IP Gateway  Not Available
DHCP Enabled   False
DHCP Server    Not Available
DHCP Lease Expires  Not Available
DHCP Lease Obtained  Not Available
MAC Address    00:90:27:8A:EA:88
Service Name   HPTX
IRQ Number     32
I/O Port       0xFCC0-0xFCDF
Driver c:\winnt\system32\drivers\hptxnt5.sys (80144, 4.01.67.0000)

```

```

Name [00000001] HP NetServer 10/100TX PCI LAN Adapter
Adapter Type  Ethernet 802.3
Product Name  HP NetServer 10/100TX PCI LAN Adapter
Installed     True
PNP Device ID  PCI\VEN_8086&DEV_1229&SUBSYS_10C3103C&REV_05\2&EBB567F&0&48
Last Reset    2/13/2000 4:12:41 AM
Index         1
Service Name   HPTX
IP Address     Not Available
IP Subnet      Not Available
Default IP Gateway  Not Available
DHCP Enabled   False
DHCP Server    Not Available
DHCP Lease Expires  Not Available
DHCP Lease Obtained  Not Available
MAC Address    00:90:27:8A:EB:D5
Service Name   HPTX
IRQ Number     36
I/O Port       0xFCA0-0xFCBF
Driver c:\winnt\system32\drivers\hptxnt5.sys (80144, 4.01.67.0000)

```

```

Name [00000002] RAS Async Adapter
Adapter Type  Not Available
Product Name  RAS Async Adapter
Installed     True
PNP Device ID  Not Available
Last Reset    2/13/2000 4:12:41 AM
Index         2
Service Name   AsyncMac
IP Address     Not Available
IP Subnet      Not Available
Default IP Gateway  Not Available
DHCP Enabled   False
DHCP Server    Not Available
DHCP Lease Expires  Not Available
DHCP Lease Obtained  Not Available
MAC Address    Not Available
Service Name   Not Available

```

Name [00000003] WAN Miniport (L2TP)
 Adapter Type Not Available
 Product Name WAN Miniport (L2TP)
 Installed True
 PNP Device ID ROOT\MS_L2TPMINIPORT\0000
 Last Reset 2/13/2000 4:12:41 AM
 Index 3
 Service Name Rasl2tp
 IP Address Not Available
 IP Subnet Not Available
 Default IP Gateway Not Available
 DHCP Enabled False
 DHCP Server Not Available
 DHCP Lease Expires Not Available
 DHCP Lease Obtained Not Available
 MAC Address Not Available
 Service Name Rasl2tp
 Driver c:\winnt\system32\drivers\rasl2tp.sys (50800, 5.00.2179.1)

Name [00000004] WAN Miniport (PPTP)
 Adapter Type Wide Area Network (WAN)
 Product Name WAN Miniport (PPTP)
 Installed True
 PNP Device ID ROOT\MS_PPTPMINIPORT\0000
 Last Reset 2/13/2000 4:12:41 AM
 Index 4
 Service Name PptpMiniport
 IP Address Not Available
 IP Subnet Not Available
 Default IP Gateway Not Available
 DHCP Enabled False
 DHCP Server Not Available
 DHCP Lease Expires Not Available
 DHCP Lease Obtained Not Available
 MAC Address 50:50:54:50:30:30
 Service Name PptpMiniport
 Driver c:\winnt\system32\drivers\raspptp.sys (47856, 5.00.2160.1)

Name [00000005] Direct Parallel
 Adapter Type Not Available
 Product Name Direct Parallel
 Installed True
 PNP Device ID ROOT\MS_PTMINIPORT\0000
 Last Reset 2/13/2000 4:12:41 AM
 Index 5
 Service Name Raspti
 IP Address Not Available
 IP Subnet Not Available
 Default IP Gateway Not Available
 DHCP Enabled False
 DHCP Server Not Available
 DHCP Lease Expires Not Available
 DHCP Lease Obtained Not Available
 MAC Address Not Available
 Service Name Raspti
 Driver c:\winnt\system32\drivers\raspti.sys (16880, 5.00.2146.1)

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

Product Name WAN Miniport (IP)
 Installed True
 PNP Device ID ROOT\MS_NDISWANIP\0000
 Last Reset 2/13/2000 4:12:41 AM
 Index 6
 Service Name NdisWan
 IP Address Not Available
 IP Subnet Not Available
 Default IP Gateway Not Available
 DHCP Enabled False
 DHCP Server Not Available
 DHCP Lease Expires Not Available
 DHCP Lease Obtained Not Available
 MAC Address Not Available
 Service Name NdisWan
 Driver c:\winnt\system32\drivers\ndiswan.sys (90768, 5.00.2184.1)

Name [00000007] WAN Miniport (NetBEUI, Dial In)
 Adapter Type Not Available
 Product Name WAN Miniport (NetBEUI, Dial In)
 Installed True
 PNP Device ID ROOT\MS_NDISWANNBFIN\0000
 Last Reset 2/13/2000 4:12:41 AM
 Index 7
 Service Name NdisWan
 IP Address Not Available
 IP Subnet Not Available
 Default IP Gateway Not Available
 DHCP Enabled False
 DHCP Server Not Available
 DHCP Lease Expires Not Available
 DHCP Lease Obtained Not Available
 MAC Address Not Available
 Service Name NdisWan
 Driver c:\winnt\system32\drivers\ndiswan.sys (90768, 5.00.2184.1)

Name [00000008] WAN Miniport (NetBEUI, Dial In)
 Adapter Type Not Available
 Product Name WAN Miniport (NetBEUI, Dial In)
 Installed True
 PNP Device ID ROOT\MS_NDISWANNBFIN\0001
 Last Reset 2/13/2000 4:12:41 AM
 Index 8
 Service Name NdisWan
 IP Address Not Available
 IP Subnet Not Available
 Default IP Gateway Not Available
 DHCP Enabled False
 DHCP Server Not Available
 DHCP Lease Expires Not Available
 DHCP Lease Obtained Not Available
 MAC Address Not Available
 Service Name NdisWan
 Driver c:\winnt\system32\drivers\ndiswan.sys (90768, 5.00.2184.1)

Name [00000009] WAN Miniport (NetBEUI, Dial Out)
 Adapter Type Not Available
 Product Name WAN Miniport (NetBEUI, Dial Out)
 Installed True

PNP Device ID ROOT\MS_NDISWANNBFOUT\0000
 Last Reset 2/13/2000 4:12:41 AM
 Index 9
 Service Name NdisWan
 IP Address Not Available
 IP Subnet Not Available
 Default IP Gateway Not Available
 DHCP Enabled False
 DHCP Server Not Available
 DHCP Lease Expires Not Available
 DHCP Lease Obtained Not Available
 MAC Address Not Available
 Service Name NdisWan
 Driver c:\winnt\system32\drivers\ndiswan.sys (90768, 5.00.2184.1)

Name [00000010] WAN Miniport (NetBEUI, Dial Out)
 Adapter Type Not Available
 Product Name WAN Miniport (NetBEUI, Dial Out)
 Installed True
 PNP Device ID ROOT\MS_NDISWANNBFOUT\0001
 Last Reset 2/13/2000 4:12:41 AM
 Index 10
 Service Name NdisWan
 IP Address Not Available
 IP Subnet Not Available
 Default IP Gateway Not Available
 DHCP Enabled False
 DHCP Server Not Available
 DHCP Lease Expires Not Available
 DHCP Lease Obtained Not Available
 MAC Address Not Available
 Service Name NdisWan
 Driver c:\winnt\system32\drivers\ndiswan.sys (90768, 5.00.2184.1)

Name [00000011] WAN Miniport (NetBEUI, Dial Out)
 Adapter Type Not Available
 Product Name WAN Miniport (NetBEUI, Dial Out)
 Installed True
 PNP Device ID ROOT\MS_NDISWANNBFOUT\0002
 Last Reset 2/13/2000 4:12:41 AM
 Index 11
 Service Name NdisWan
 IP Address Not Available
 IP Subnet Not Available
 Default IP Gateway Not Available
 DHCP Enabled False
 DHCP Server Not Available
 DHCP Lease Expires Not Available
 DHCP Lease Obtained Not Available
 MAC Address Not Available
 Service Name NdisWan
 Driver c:\winnt\system32\drivers\ndiswan.sys (90768, 5.00.2184.1)

Name [00000012] cLAN Host Adapter
 Adapter Type Ethernet 802.3
 Product Name cLAN Host Adapter
 Installed True
 PNP Device ID
 PCI\VEN_135B&DEV_0001&SUBSYS_00000000&REV_00\3&30BA3524&0&1038

Last Reset 2/13/2000 4:12:41 AM
 Index 12
 Service Name GNINDIS
 IP Address Not Available
 IP Subnet Not Available
 Default IP Gateway Not Available
 DHCP Enabled False
 DHCP Server Not Available
 DHCP Lease Expires Not Available
 DHCP Lease Obtained Not Available
 MAC Address 00:90:FA:00:08:C7
 Service Name GNINDIS
 IRQ Number 8
 Driver c:\winnt\system32\drivers\gnindis.sys (22656, 3.85)

[Protocol]

Item	Value
Name	MSAFD Tcpip [TCP/IP]
ConnectionlessService	False
GuaranteesDelivery	True
GuaranteesSequencing	True
MaximumAddressSize	16 bytes
MaximumMessageSize	0 bytes
MessageOriented	False
MinimumAddressSize	16 bytes
PseudoStreamOriented	False
SupportsBroadcasting	False
SupportsConnectData	False
SupportsDisconnectData	False
SupportsEncryption	False
SupportsExpeditedData	True
SupportsGracefulClosing	True
SupportsGuaranteedBandwidth	False
SupportsMulticasting	False

Name	MSAFD Tcpip [UDP/IP]
ConnectionlessService	True
GuaranteesDelivery	False
GuaranteesSequencing	False
MaximumAddressSize	16 bytes
MaximumMessageSize	65467 bytes
MessageOriented	True
MinimumAddressSize	16 bytes
PseudoStreamOriented	False
SupportsBroadcasting	True
SupportsConnectData	False
SupportsDisconnectData	False
SupportsEncryption	False
SupportsExpeditedData	False
SupportsGracefulClosing	False
SupportsGuaranteedBandwidth	False
SupportsMulticasting	True

Name	RSVP UDP Service Provider
ConnectionlessService	True
GuaranteesDelivery	False
GuaranteesSequencing	False

MaximumAddressSize 16 bytes
 MaximumMessageSize 65467 bytes
 MessageOriented True
 MinimumAddressSize 16 bytes
 PseudoStreamOriented False
 SupportsBroadcasting True
 SupportsConnectData False
 SupportsDisconnectData False
 SupportsEncryption True
 SupportsExpeditedData False
 SupportsGracefulClosing False
 SupportsGuaranteedBandwidth False
 SupportsMulticasting True

Name RSVP TCP Service Provider
 ConnectionlessService False
 GuaranteesDelivery True
 GuaranteesSequencing True
 MaximumAddressSize 16 bytes
 MaximumMessageSize 0 bytes
 MessageOriented False
 MinimumAddressSize 16 bytes
 PseudoStreamOriented False
 SupportsBroadcasting False
 SupportsConnectData False
 SupportsDisconnectData False
 SupportsEncryption True
 SupportsExpeditedData True
 SupportsGracefulClosing True
 SupportsGuaranteedBandwidth False
 SupportsMulticasting False

Name MSAFD NetBIOS [\Device\Nbf_{72CBAF01-CD27-4465-AF4F-D70603913B96}]
 SEQPACKET 11
 ConnectionlessService False
 GuaranteesDelivery True
 GuaranteesSequencing True
 MaximumAddressSize 20 bytes
 MaximumMessageSize 64000 bytes
 MessageOriented True
 MinimumAddressSize 20 bytes
 PseudoStreamOriented False
 SupportsBroadcasting False
 SupportsConnectData False
 SupportsDisconnectData False
 SupportsEncryption False
 SupportsExpeditedData False
 SupportsGracefulClosing False
 SupportsGuaranteedBandwidth False
 SupportsMulticasting False

Name MSAFD NetBIOS [\Device\Nbf_{72CBAF01-CD27-4465-AF4F-D70603913B96}]
 DATAGRAM 11
 ConnectionlessService True
 GuaranteesDelivery False
 GuaranteesSequencing False
 MaximumAddressSize 20 bytes
 MaximumMessageSize 64000 bytes
 MessageOriented True

MinimumAddressSize 20 bytes
 PseudoStreamOriented False
 SupportsBroadcasting True
 SupportsConnectData False
 SupportsDisconnectData False
 SupportsEncryption False
 SupportsExpeditedData False
 SupportsGracefulClosing False
 SupportsGuaranteedBandwidth False
 SupportsMulticasting False

Name MSAFD NetBIOS [\Device\Nbf_{866B1FFE-5C50-488C-9265-63F01B40EE90}]
 SEQPACKET 0
 ConnectionlessService False
 GuaranteesDelivery True
 GuaranteesSequencing True
 MaximumAddressSize 20 bytes
 MaximumMessageSize 64000 bytes
 MessageOriented True
 MinimumAddressSize 20 bytes
 PseudoStreamOriented False
 SupportsBroadcasting False
 SupportsConnectData False
 SupportsDisconnectData False
 SupportsEncryption False
 SupportsExpeditedData False
 SupportsGracefulClosing False
 SupportsGuaranteedBandwidth False
 SupportsMulticasting False

Name MSAFD NetBIOS [\Device\Nbf_{866B1FFE-5C50-488C-9265-63F01B40EE90}]
 DATAGRAM 0
 ConnectionlessService True
 GuaranteesDelivery False
 GuaranteesSequencing False
 MaximumAddressSize 20 bytes
 MaximumMessageSize 64000 bytes
 MessageOriented True
 MinimumAddressSize 20 bytes
 PseudoStreamOriented False
 SupportsBroadcasting True
 SupportsConnectData False
 SupportsDisconnectData False
 SupportsEncryption False
 SupportsExpeditedData False
 SupportsGracefulClosing False
 SupportsGuaranteedBandwidth False
 SupportsMulticasting False

Name MSAFD NetBIOS [\Device\Nbf_{ECC929FD-0C89-465C-AF2E-98C31F5F54F9}]
 SEQPACKET 1
 ConnectionlessService False
 GuaranteesDelivery True
 GuaranteesSequencing True
 MaximumAddressSize 20 bytes
 MaximumMessageSize 64000 bytes
 MessageOriented True
 MinimumAddressSize 20 bytes
 PseudoStreamOriented False

SupportsBroadcasting False
 SupportsConnectData False
 SupportsDisconnectData False
 SupportsEncryption False
 SupportsExpeditedData False
 SupportsGracefulClosing False
 SupportsGuaranteedBandwidth False
 SupportsMulticasting False

Name MSAFD NetBIOS [\Device\Nbf_{ECC929FD-0C89-465C-AF2E-98C31F5F54F9}]
 DATAGRAM 1
 ConnectionlessService True
 GuaranteesDelivery False
 GuaranteesSequencing False
 MaximumAddressSize 20 bytes
 MaximumMessageSize 64000 bytes
 MessageOriented True
 MinimumAddressSize 20 bytes
 PseudoStreamOriented False
 SupportsBroadcasting True
 SupportsConnectData False
 SupportsDisconnectData False
 SupportsEncryption False
 SupportsExpeditedData False
 SupportsGracefulClosing False
 SupportsGuaranteedBandwidth False
 SupportsMulticasting False

Name MSAFD NetBIOS [\Device\Nbf_NdisWanNbfOut{9A1C2258-4CA9-46A4-9550-69F23E8F3539}] SEQPACKET 4
 ConnectionlessService False
 GuaranteesDelivery True
 GuaranteesSequencing True
 MaximumAddressSize 20 bytes
 MaximumMessageSize 64000 bytes
 MessageOriented True
 MinimumAddressSize 20 bytes
 PseudoStreamOriented False
 SupportsBroadcasting False
 SupportsConnectData False
 SupportsDisconnectData False
 SupportsEncryption False
 SupportsExpeditedData False
 SupportsGracefulClosing False
 SupportsGuaranteedBandwidth False
 SupportsMulticasting False

Name MSAFD NetBIOS [\Device\Nbf_NdisWanNbfOut{9A1C2258-4CA9-46A4-9550-69F23E8F3539}] DATAGRAM 4
 ConnectionlessService True
 GuaranteesDelivery False
 GuaranteesSequencing False
 MaximumAddressSize 20 bytes
 MaximumMessageSize 64000 bytes
 MessageOriented True
 MinimumAddressSize 20 bytes
 PseudoStreamOriented False
 SupportsBroadcasting True
 SupportsConnectData False

SupportsDisconnectData False
 SupportsEncryption False
 SupportsExpeditedData False
 SupportsGracefulClosing False
 SupportsGuaranteedBandwidth False
 SupportsMulticasting False

Name MSAFD NetBIOS [\Device\Nbf_NdisWanNbfIn{735028B2-D6B4-4FA2-A138-432BC85E4FF0}] SEQPACKET 3
 ConnectionlessService False
 GuaranteesDelivery True
 GuaranteesSequencing True
 MaximumAddressSize 20 bytes
 MaximumMessageSize 64000 bytes
 MessageOriented True
 MinimumAddressSize 20 bytes
 PseudoStreamOriented False
 SupportsBroadcasting False
 SupportsConnectData False
 SupportsDisconnectData False
 SupportsEncryption False
 SupportsExpeditedData False
 SupportsGracefulClosing False
 SupportsGuaranteedBandwidth False
 SupportsMulticasting False

Name MSAFD NetBIOS [\Device\Nbf_NdisWanNbfIn{735028B2-D6B4-4FA2-A138-432BC85E4FF0}] DATAGRAM 3
 ConnectionlessService True
 GuaranteesDelivery False
 GuaranteesSequencing False
 MaximumAddressSize 20 bytes
 MaximumMessageSize 64000 bytes
 MessageOriented True
 MinimumAddressSize 20 bytes
 PseudoStreamOriented False
 SupportsBroadcasting True
 SupportsConnectData False
 SupportsDisconnectData False
 SupportsEncryption False
 SupportsExpeditedData False
 SupportsGracefulClosing False
 SupportsGuaranteedBandwidth False
 SupportsMulticasting False

Name MSAFD NetBIOS [\Device\Nbf_NdisWanNbfIn{04FDB3B5-F73C-47B3-BC97-364F543F7D5A}] SEQPACKET 2
 ConnectionlessService False
 GuaranteesDelivery True
 GuaranteesSequencing True
 MaximumAddressSize 20 bytes
 MaximumMessageSize 64000 bytes
 MessageOriented True
 MinimumAddressSize 20 bytes
 PseudoStreamOriented False
 SupportsBroadcasting False
 SupportsConnectData False
 SupportsDisconnectData False
 SupportsEncryption False

SupportsExpeditedData False
SupportsGracefulClosing False
SupportsGuaranteedBandwidth False
SupportsMulticasting False

Name MSAFD NetBIOS [\Device\Nbf_NdisWanNbfIn{04FDB3B5-F73C-47B3-BC97-364F543F7D5A}] DATAGRAM 2
ConnectionlessService True
GuaranteesDelivery False
GuaranteesSequencing False
MaximumAddressSize 20 bytes
MaximumMessageSize 64000 bytes
MessageOriented True
MinimumAddressSize 20 bytes
PseudoStreamOriented False
SupportsBroadcasting True
SupportsConnectData False
SupportsDisconnectData False
SupportsEncryption False
SupportsExpeditedData False
SupportsGracefulClosing False
SupportsGuaranteedBandwidth False
SupportsMulticasting False

Name MSAFD NetBIOS [\Device\Nbf_NdisWanNbfOut{774D16C8-9922-4534-89A2-2290727F3E9D}] SEQPACKET 9
ConnectionlessService False
GuaranteesDelivery True
GuaranteesSequencing True
MaximumAddressSize 20 bytes
MaximumMessageSize 64000 bytes
MessageOriented True
MinimumAddressSize 20 bytes
PseudoStreamOriented False
SupportsBroadcasting False
SupportsConnectData False
SupportsDisconnectData False
SupportsEncryption False
SupportsExpeditedData False
SupportsGracefulClosing False
SupportsGuaranteedBandwidth False
SupportsMulticasting False

Name MSAFD NetBIOS [\Device\Nbf_NdisWanNbfOut{774D16C8-9922-4534-89A2-2290727F3E9D}] DATAGRAM 9
ConnectionlessService True
GuaranteesDelivery False
GuaranteesSequencing False
MaximumAddressSize 20 bytes
MaximumMessageSize 64000 bytes
MessageOriented True
MinimumAddressSize 20 bytes
PseudoStreamOriented False
SupportsBroadcasting True
SupportsConnectData False
SupportsDisconnectData False
SupportsEncryption False
SupportsExpeditedData False
SupportsGracefulClosing False

SupportsGuaranteedBandwidth False
SupportsMulticasting False

Name MSAFD NetBIOS [\Device\Nbf_NdisWanNbfOut{4E2B07F5-D747-4D2E-A059-61E0C49B3B14}] SEQPACKET 10
ConnectionlessService False
GuaranteesDelivery True
GuaranteesSequencing True
MaximumAddressSize 20 bytes
MaximumMessageSize 64000 bytes
MessageOriented True
MinimumAddressSize 20 bytes
PseudoStreamOriented False
SupportsBroadcasting False
SupportsConnectData False
SupportsDisconnectData False
SupportsEncryption False
SupportsExpeditedData False
SupportsGracefulClosing False
SupportsGuaranteedBandwidth False
SupportsMulticasting False

Name MSAFD NetBIOS [\Device\Nbf_NdisWanNbfOut{4E2B07F5-D747-4D2E-A059-61E0C49B3B14}] DATAGRAM 10
ConnectionlessService True
GuaranteesDelivery False
GuaranteesSequencing False
MaximumAddressSize 20 bytes
MaximumMessageSize 64000 bytes
MessageOriented True
MinimumAddressSize 20 bytes
PseudoStreamOriented False
SupportsBroadcasting True
SupportsConnectData False
SupportsDisconnectData False
SupportsEncryption False
SupportsExpeditedData False
SupportsGracefulClosing False
SupportsGuaranteedBandwidth False
SupportsMulticasting False

Name MSAFD NetBIOS [\Device\NetBT_Tcpip_{72CBAF01-CD27-4465-AF4F-D70603913B96}] SEQPACKET 12
ConnectionlessService False
GuaranteesDelivery True
GuaranteesSequencing True
MaximumAddressSize 20 bytes
MaximumMessageSize 64000 bytes
MessageOriented True
MinimumAddressSize 20 bytes
PseudoStreamOriented False
SupportsBroadcasting False
SupportsConnectData False
SupportsDisconnectData False
SupportsEncryption False
SupportsExpeditedData False
SupportsGracefulClosing False
SupportsGuaranteedBandwidth False
SupportsMulticasting False

Name MSAFD NetBIOS [\Device\NetBT_Tcpip_{72CBAF01-CD27-4465-AF4F-D70603913B96}] DATAGRAM 12
 ConnectionlessService True
 GuaranteesDelivery False
 GuaranteesSequencing False
 MaximumAddressSize 20 bytes
 MaximumMessageSize 64000 bytes
 MessageOriented True
 MinimumAddressSize 20 bytes
 PseudoStreamOriented False
 SupportsBroadcasting True
 SupportsConnectData False
 SupportsDisconnectData False
 SupportsEncryption False
 SupportsExpeditedData False
 SupportsGracefulClosing False
 SupportsGuaranteedBandwidth False
 SupportsMulticasting False

Name MSAFD NetBIOS [\Device\NetBT_Tcpip_{866B1FFE-5C50-488C-9265-63F01B40EE90}] SEQUENCEPACKET 5
 ConnectionlessService False
 GuaranteesDelivery True
 GuaranteesSequencing True
 MaximumAddressSize 20 bytes
 MaximumMessageSize 64000 bytes
 MessageOriented True
 MinimumAddressSize 20 bytes
 PseudoStreamOriented False
 SupportsBroadcasting False
 SupportsConnectData False
 SupportsDisconnectData False
 SupportsEncryption False
 SupportsExpeditedData False
 SupportsGracefulClosing False
 SupportsGuaranteedBandwidth False
 SupportsMulticasting False

Name MSAFD NetBIOS [\Device\NetBT_Tcpip_{866B1FFE-5C50-488C-9265-63F01B40EE90}] DATAGRAM 5
 ConnectionlessService True
 GuaranteesDelivery False
 GuaranteesSequencing False
 MaximumAddressSize 20 bytes
 MaximumMessageSize 64000 bytes
 MessageOriented True
 MinimumAddressSize 20 bytes
 PseudoStreamOriented False
 SupportsBroadcasting True
 SupportsConnectData False
 SupportsDisconnectData False
 SupportsEncryption False
 SupportsExpeditedData False
 SupportsGracefulClosing False
 SupportsGuaranteedBandwidth False
 SupportsMulticasting False

Name MSAFD NetBIOS [\Device\NetBT_Tcpip_{ECC929FD-0C89-465C-AF2E-98C31F5F54F9}] SEQUENCEPACKET 6
 ConnectionlessService False
 GuaranteesDelivery True
 GuaranteesSequencing True
 MaximumAddressSize 20 bytes
 MaximumMessageSize 64000 bytes
 MessageOriented True
 MinimumAddressSize 20 bytes
 PseudoStreamOriented False
 SupportsBroadcasting False
 SupportsConnectData False
 SupportsDisconnectData False
 SupportsEncryption False
 SupportsExpeditedData False
 SupportsGracefulClosing False
 SupportsGuaranteedBandwidth False
 SupportsMulticasting False

Name MSAFD NetBIOS [\Device\NetBT_Tcpip_{ECC929FD-0C89-465C-AF2E-98C31F5F54F9}] DATAGRAM 6
 ConnectionlessService True
 GuaranteesDelivery False
 GuaranteesSequencing False
 MaximumAddressSize 20 bytes
 MaximumMessageSize 64000 bytes
 MessageOriented True
 MinimumAddressSize 20 bytes
 PseudoStreamOriented False
 SupportsBroadcasting True
 SupportsConnectData False
 SupportsDisconnectData False
 SupportsEncryption False
 SupportsExpeditedData False
 SupportsGracefulClosing False
 SupportsGuaranteedBandwidth False
 SupportsMulticasting False

Name MSAFD NetBIOS [\Device\NetBT_Tcpip_{EE8FF43E-80E6-41B0-9040-81062CA1A36E}] SEQUENCEPACKET 7
 ConnectionlessService False
 GuaranteesDelivery True
 GuaranteesSequencing True
 MaximumAddressSize 20 bytes
 MaximumMessageSize 64000 bytes
 MessageOriented True
 MinimumAddressSize 20 bytes
 PseudoStreamOriented False
 SupportsBroadcasting False
 SupportsConnectData False
 SupportsDisconnectData False
 SupportsEncryption False
 SupportsExpeditedData False
 SupportsGracefulClosing False
 SupportsGuaranteedBandwidth False
 SupportsMulticasting False

Name MSAFD NetBIOS [\Device\NetBT_Tcpip_{EE8FF43E-80E6-41B0-9040-81062CA1A36E}] DATAGRAM 7

ConnectionlessService True
 GuaranteesDelivery False
 GuaranteesSequencing False
 MaximumAddressSize 20 bytes
 MaximumMessageSize 64000 bytes
 MessageOriented True
 MinimumAddressSize 20 bytes
 PseudoStreamOriented False
 SupportsBroadcasting True
 SupportsConnectData False
 SupportsDisconnectData False
 SupportsEncryption False
 SupportsExpeditedData False
 SupportsGracefulClosing False
 SupportsGuaranteedBandwidth False
 SupportsMulticasting False

Name MSAFD NetBIOS [\Device\NetBT_Tcpip_{99867619-09B4-4E52-A092-F8E370FB9A6C}] SEQUENCEPACKET 8
 ConnectionlessService False
 GuaranteesDelivery True
 GuaranteesSequencing True
 MaximumAddressSize 20 bytes
 MaximumMessageSize 64000 bytes
 MessageOriented True
 MinimumAddressSize 20 bytes
 PseudoStreamOriented False
 SupportsBroadcasting False
 SupportsConnectData False
 SupportsDisconnectData False
 SupportsEncryption False
 SupportsExpeditedData False
 SupportsGracefulClosing False
 SupportsGuaranteedBandwidth False
 SupportsMulticasting False

Name MSAFD NetBIOS [\Device\NetBT_Tcpip_{99867619-09B4-4E52-A092-F8E370FB9A6C}] DATAGRAM 8
 ConnectionlessService True
 GuaranteesDelivery False
 GuaranteesSequencing False
 MaximumAddressSize 20 bytes
 MaximumMessageSize 64000 bytes
 MessageOriented True
 MinimumAddressSize 20 bytes
 PseudoStreamOriented False
 SupportsBroadcasting True
 SupportsConnectData False
 SupportsDisconnectData False
 SupportsEncryption False
 SupportsExpeditedData False
 SupportsGracefulClosing False
 SupportsGuaranteedBandwidth False
 SupportsMulticasting False

[WinSock]

Item Value

File c:\winnt\system32\winsock.dll
 Version 3.10
 Size 2.80 KB (2,864 bytes)
 File c:\winnt\system32\wssock32.dll
 Version 5.00.2152.1
 Size 21.27 KB (21,776 bytes)

[Ports]

[Following are sub-categories of this main category]

[Serial]

Item	Value
Name	COM2
Status	OK
PNP Device ID	ROOT*PNP0501\1_0_17_1_0_0
Maximum Input Buffer Size	0
Maximum Output Buffer Size	False
Settable Baud Rate	True
Settable Data Bits	True
Settable Flow Control	True
Settable Parity	True
Settable Parity Check	True
Settable Stop Bits	True
Settable RLSD	True
Supports RLSD	True
Supports 16 Bit Mode	False
Supports Special Characters	False
Baud Rate	9600
Bits/Byte	8
Stop Bits	1
Parity	None
Busy	0
Abort Read/Write on Error	0
Binary Mode Enabled	-1
Continue Xmit on XOff	0
CTS Outflow Control	0
Discard NULL Bytes	0
DSR Outflow Control	0
DSR Sensitivity	0
DTR Flow Control Type	Enable
EOF Character	0
Error Replace Character	0
Error Replacement Enabled	0
Event Character	0
Parity Check Enabled	0
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
IRQ Number	3
I/O Port	0x02F8-0x02FF
Driver	c:\winnt\system32\drivers\serial.sys (62448, 5.00.2134.1)

```

Name      COM1
Status    OK
PNP Device ID  ROOT\*PNP0501\PNPBIOS_14
Maximum Input Buffer Size      0
Maximum Output Buffer Size     False
Settable Baud Rate             True
Settable Data Bits             True
Settable Flow Control          True
Settable Parity                True
Settable Parity Check          True
Settable Stop Bits            True
Settable RLSD                 True
Supports RLSD                 True
Supports 16 Bit Mode          False
Supports Special Characters    False
Baud Rate                     9600
Bits/Byte                     8
Stop Bits                     1
Parity None
Busy 0
Abort Read/Write on Error      0
Binary Mode Enabled           -1
Continue XMit on XOff          0
CTS Outflow Control           0
Discard NULL Bytes            0
DSR Outflow Control           0
DSR Sensitivity                0
DTR Flow Control Type         Enable
EOF Character                  0
Error Replace Character         0
Error Replacement Enabled      0
Event Character                0
Parity Check Enabled           0
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
IRQ Number                    4
I/O Port                      0x03F8-0x03FF
Driver c:\winnt\system32\drivers\serial.sys (62448, 5.00.2134.1)

```

```

Name      COM3
Status    Error
PNP Device ID  ROOT\*PNP0501\PNPBIOS_22
Maximum Input Buffer Size      Not Available
Maximum Output Buffer Size     Not Available
Settable Baud Rate             Not Available
Settable Data Bits             Not Available
Settable Flow Control          Not Available
Settable Parity                Not Available
Settable Parity Check          Not Available
Settable Stop Bits            Not Available
Settable RLSD                 Not Available
Supports RLSD                 Not Available
Supports 16 Bit Mode          Not Available

```

```

Supports Special Characters    Not Available
I/O Port                      Unknown
Driver c:\winnt\system32\drivers\serial.sys (62448, 5.00.2134.1)

```

[Parallel]

```

Item      Value
Name      LPT1
PNP Device ID  ROOT\*PNP0400\PNPBIOS_13

```

[Storage]

[Following are sub-categories of this main category]

[Drives]

```

Item      Value
Drive A:
Description  3 1/2 Inch Floppy Drive

```

```

Drive C:
Description  Local Fixed Disk
Compressed   False
File System  NTFS
Size         3.96 GB (4,252,434,432 bytes)
Free Space   1.74 GB (1,870,086,144 bytes)
Volume Name
Volume Serial Number E4A951E7
Partition       Disk #0, Partition #0
Partition Size 3.96 GB (4,252,437,504 bytes)
Starting Offset 32256 bytes
Drive Description Disk drive
Drive Manufacturer (Standard disk drives)
Drive Model HP 4.26GB B 68-5541 SCSI Disk Device
Drive BytesPerSector 512
Drive MediaLoaded True
Drive MediaType Fixed hard disk media
Drive Partitions 1
Drive SCSIIBus 0
Drive SCSILogicalUnit 0
Drive SCSIPort 1
Drive SCSTargetId 0
Drive SectorsPerTrack 63
Drive Size 4260695040 bytes
Drive TotalCylinders 518
Drive TotalSectors 8321670
Drive TotalTracks 132090
Drive TracksPerCylinder 255

```

[SCSI]

```

Item      Value
Name      Adaptec AIC-7880 PCI SCSI Controller
Caption  Adaptec AIC-7880 PCI SCSI Controller
Driver  aic78xx
Status  OK

```

PNP Device ID PCI\VEN_9004&DEV_8078&SUBSYS_78809004&REV_01\2&EBB567F&0&50
Device ID PCI\VEN_9004&DEV_8078&SUBSYS_78809004&REV_01\2&EBB567F&0&50
Device Map Not Available
Index Not Available
Max Number Controlled Not Available
IRQ Number 40
I/O Port 0xF800-0xF8FF
Driver c:\winnt\system32\drivers\aic78xx.sys (56848, v2.20b)

[Printing]

Name Port Name Server Name
No printing information

[Problem Devices]

Device PNP Device ID Error Code
Communications Port (COM3) ROOT*PNP0501\PNPBIOS_22 29

[USB]

Device PNP Device ID
Intel 82371AB/EB PCI to USB Universal Host Controller
PCI\VEN_8086&DEV_7112&SUBSYS_00000000&REV_01\2&EBB567F&0&22
USB Root Hub USB\ROOT_HUB\3&29761208&0

[Software Environment]

[Following are sub-categories of this main category]

[Drivers]

Name	Description	File	Type	Started	Start	Mode	State	Status
	Error Control	Accept	Pause	Accept	Stop			
abiosdsk	Abiosdsk	Not Available	Kernel	Driver	False			
	Disabled	Stopped	OK	Ignore	False	False		
abp480n5	abp480n5	Not Available	Kernel	Driver	False			
	Disabled	Stopped	OK	Normal	False	False		
acpi	ACPI	Not Available	Kernel	Driver	False	Disabled		
	Stopped	OK	Normal	False	False			
acpiec	ACPIEC	Not Available	Kernel	Driver	False	Disabled		
	Stopped	OK	Normal	False	False			
adpu160m	adpu160m	Not Available	Kernel	Driver	False			
	Disabled	Stopped	OK	Normal	False	False		
afd	AFD Networking Support Environment	c:\winnt\system32\drivers\afd.sys	Kernel	Driver	True	Auto		
	Running	OK	Normal	False	True			
aha154x	Aha154x	Not Available	Kernel	Driver	False	Disabled		
	Stopped	OK	Normal	False	False			
aic116x	aic116x	Not Available	Kernel	Driver	False	Disabled		
	Stopped	OK	Normal	False	False			
aic78u2	aic78u2	Not Available	Kernel	Driver	False	Disabled		
	Stopped	OK	Normal	False	False			
aic78xx	aic78xx c:\winnt\system32\drivers\aic78xx.sys	Kernel	Driver	True				
	Boot	Running	OK	Normal	False	True		
ami0nt	ami0nt	Not Available	Kernel	Driver	False	Disabled		
	Stopped	OK	Normal	False	False			

amsint	amsint	Not Available	Kernel	Driver	False	Disabled		
	Stopped	OK	Normal	False	False			
asc	asc	Not Available	Kernel	Driver	False	Disabled		
	Stopped	OK	Normal	False	False			
asc3350p	asc3350p	Not Available	Kernel	Driver	False			
	Disabled	Stopped	OK	Normal	False	False		
asc3550	asc3550	Not Available	Kernel	Driver	False	Disabled		
	Stopped	OK	Normal	False	False			
asynccmac	RAS Asynchronous Media Driver	c:\winnt\system32\drivers\asynccmac.sys	Kernel	Driver	False			
	Manual	Stopped	OK	Normal	False	False		
atapi	Standard IDE/ESDI Hard Disk Controller	c:\winnt\system32\drivers\atapi.sys	Kernel	Driver	True	Boot		
	Running	OK	Normal	False	True			
atdisk	Atdisk	Not Available	Kernel	Driver	False	Disabled		
	Stopped	OK	Ignore	False	False			
atmarpc	ATM ARP Client Protocol	c:\winnt\system32\drivers\atmarpc.sys	Kernel	Driver	False	Manual		
	Stopped	OK	Normal	False	False			
audstub	Audio Stub Driver	c:\winnt\system32\drivers\audstub.sys	Kernel					
Driver	True	Manual	Running	OK	Normal	False	True	
beep	System speaker driver	c:\winnt\system32\drivers\beep.sys	Kernel					
Driver	True	System	Running	OK	Normal	False	True	
buslogic	BusLogic	Not Available	Kernel	Driver	False			
	Disabled	Stopped	OK	Normal	False	False		
cd20xrnt	cd20xrnt	Not Available	Kernel	Driver	False			
	Disabled	Stopped	OK	Normal	False	False		
cdaudio	Cdaudio	c:\winnt\system32\drivers\cdaudio.sys	Kernel	Driver	False			
	System	Stopped	OK	Ignore	False	False		
cdfs	Cdfs	c:\winnt\system32\drivers\cdfs.sys	File	System	Driver			
	True	Disabled	Running	OK	Normal	False	True	
cdrom	CD-ROM Driver	c:\winnt\system32\drivers\cdrom.sys	Kernel	Driver				
	True	System	Running	OK	Normal	False	True	
changer	Changer	Not Available	Kernel	Driver	False	System	Stopped	OK
	Ignore	False	False					
cirrus	cirrus	c:\winnt\system32\drivers\cirrus.sys	Kernel	Driver	True			
	Manual	Running	OK	Ignore	False	True		
cpqarray	Cpqarray	Not Available	Kernel	Driver	False			
	Disabled	Stopped	OK	Normal	False	False		
cpqarry2	cpqarry2	Not Available	Kernel	Driver	False			
	Disabled	Stopped	OK	Normal	False	False		
cpqgfcalm	cpqgfcalm	Not Available	Kernel	Driver	False			
	Disabled	Stopped	OK	Normal	False	False		
cpqfws2e	cpqfws2e	Not Available	Kernel	Driver	False			
	Disabled	Stopped	OK	Normal	False	False		
dac960nt	dac960nt	Not Available	Kernel	Driver	False			
	Disabled	Stopped	OK	Normal	False	False		
deckzpsx	deckzpsx	Not Available	Kernel	Driver	False			
	Disabled	Stopped	OK	Normal	False	False		
dfsdriver	DfsDriver	c:\winnt\system32\drivers\dfs.sys	File					
System	Driver	True	Boot	Running	OK	Normal	False	True
disk	Disk Driver	c:\winnt\system32\drivers\disk.sys	Kernel	Driver				
	True	Boot	Running	OK	Normal	False	True	
diskperf	Diskperf	c:\winnt\system32\drivers\diskperf.sys						
	Kernel	Driver	True	Boot	Running	OK	Normal	False
dmboot	dmboot	c:\winnt\system32\drivers\dmboot.sys	Kernel	Driver	False			
	Disabled	Stopped	OK	Normal	False	False		
dmio	Logical Disk Manager Driver	c:\winnt\system32\drivers\dmio.sys						
	Kernel	Driver	True	Boot	Running	OK	Normal	False

dmload	dmload	c:\winnt\system32\drivers\dmload.sys	Kernel Driver	True		
efs	Boot	Running OK	Normal	False	True	
	efs	c:\winnt\system32\drivers\efs.sys	File System Driver			
	True	Disabled	Running OK	Normal	False	True
fastfat	Fastfat	c:\winnt\system32\drivers\fastfat.sys	File System Driver			
	True	Disabled	Running OK	Normal	False	True
fdl6_700	Fdl6_700	Not Available	Kernel Driver	False		
	Disabled	Stopped OK	Normal	False	False	
fdc	Floppy Disk Controller Driver	c:\winnt\system32\drivers\fdc.sys				
	Kernel Driver	True	Manual	Running OK	Normal	False
fireport	fireport	Not Available	Kernel Driver	False		
	Disabled	Stopped OK	Normal	False	False	
flashpnt	flashpnt	Not Available	Kernel Driver	False		
	Disabled	Stopped OK	Normal	False	False	
flpydisk	Floppy Disk Driver					
	c:\winnt\system32\drivers\flpydisk.sys		Kernel Driver	True		
	Manual	Running OK	Normal	False	True	
ftdisk	Volume Manager Driver	c:\winnt\system32\drivers\ftdisk.sys	Kernel Driver			
	Driver	True	Boot	Running OK	Normal	False
gnindis	cLAN NDIS Driver	c:\winnt\system32\drivers\gnindis.sys	Kernel Driver			
	Driver	True	Auto	Running OK	Normal	False
gninvipl	cLAN VIPL Service					
	c:\winnt\system32\drivers\gninvipl.sys		Kernel Driver	False		
	Manual	Stopped OK	Normal	False	False	
gnivia	cLAN VIA Driver	c:\winnt\system32\drivers\gnivia.sys	Kernel Driver			
	Driver	True	Auto	Running OK	Normal	False
gpc	Generic Packet Classifier	c:\winnt\system32\drivers\msgpc.sys				
	Kernel Driver	True	Manual	Running OK	Normal	False
hptx	HP 10/100TX PCI LAN Adapter NT Driver					
	c:\winnt\system32\drivers\hptxnt5.sys		Kernel Driver	True	Manual	
	Running OK	Normal	False	True		
i8042prt	i8042 Keyboard and PS/2 Mouse Port Driver					
	c:\winnt\system32\drivers\i8042prt.sys		Kernel Driver	True		
	System	Running OK	Normal	False	True	
ini910u	ini910u	Not Available	Kernel Driver	False	Disabled	
	Stopped OK	Normal	False	False		
intelide	IntelIde	c:\winnt\system32\drivers\intelide.sys				
	Kernel Driver	True	Boot	Running OK	Normal	False
ipfilterdriver	IP Traffic Filter Driver					
	c:\winnt\system32\drivers\ipfltdrv.sys		Kernel Driver	False		
	Manual	Stopped OK	Normal	False	False	
ipinip	IP in IP Tunnel Driver	c:\winnt\system32\drivers\ipinip.sys	Kernel Driver			
	Driver	False	Manual	Stopped OK	Normal	False
ipnat	IP Network Address Translator	c:\winnt\system32\drivers\ipnat.sys				
	Kernel Driver	False	Manual	Stopped OK	Normal	False
ipsec	IPSEC driver	c:\winnt\system32\drivers\ipsec.sys	Kernel Driver			
	False	Manual	Stopped OK	Normal	False	False
ipsraidn	ipsraidn	Not Available	Kernel Driver	False		
	Disabled	Stopped OK	Normal	False	False	
isapnp	PnP ISA/EISA Bus Driver	c:\winnt\system32\drivers\isapnp.sys				
	Kernel Driver	True	Boot	Running OK	Critical	False
kbdclass	Keyboard Class Driver					
	c:\winnt\system32\drivers\kbdclass.sys		Kernel Driver	True		
	System	Running OK	Normal	False	True	
ksecdd	KSecDD	c:\winnt\system32\drivers\ksecdd.sys	Kernel Driver	True		
	Boot	Running OK	Normal	False	True	
lbrtfdc	lbrtfdc	Not Available	Kernel Driver	False	System	Stopped OK
	Ignore	False	False			

lp6nds35	lp6nds35	Not Available	Kernel Driver	False		
	Disabled	Stopped OK	Normal	False	False	
mnmd	mnmd	c:\winnt\system32\drivers\mnmd.sys	Kernel Driver	True		
	System	Running OK	Ignore	False	True	
modem	Modem	c:\winnt\system32\drivers\modem.sys	Kernel Driver	False		
	Manual	Stopped OK	Ignore	False	False	
mouclass	Mouse Class Driver					
	c:\winnt\system32\drivers\mouclass.sys		Kernel Driver	True		
	System	Running OK	Normal	False	True	
mountmgr	MountMgr	c:\winnt\system32\drivers\mountmgr.sys				
	Kernel Driver	True	Boot	Running OK	Normal	False
mrraid35x	mrraid35x	Not Available	Kernel Driver	False		
	Disabled	Stopped OK	Normal	False	False	
mrxsmb	MRXSMB	c:\winnt\system32\drivers\mrxsmb.sys	File System Driver			
	True	System	Running OK	Normal	False	True
msfs	Msfs	c:\winnt\system32\drivers\msfs.sys	File System Driver			
	True	System	Running OK	Normal	False	True
mskssrv	Microsoft Streaming Service Proxy					
	c:\winnt\system32\drivers\mskssrv.sys		Kernel Driver	False	Manual	
	Stopped OK	Normal	False			
mspclock	Microsoft Streaming Clock Proxy					
	c:\winnt\system32\drivers\mspclock.sys		Kernel Driver	False		
	Manual	Stopped OK	Normal	False	False	
mspgm	Microsoft Streaming Quality Manager Proxy					
	c:\winnt\system32\drivers\mspgm.sys		Kernel Driver	False	Manual	
	Stopped OK	Normal	False	False		
mup	Mup	c:\winnt\system32\drivers\mup.sys	File System Driver			
	True	Boot	Running OK	Normal	False	True
nbfd	NetBEUI Protocol	c:\winnt\system32\drivers\nbf.sys	Kernel Driver			
	Driver	True	Auto	Running OK	Normal	False
ncrc710	Ncrc710	Not Available	Kernel Driver	False	Disabled	
	Stopped OK	Normal	False	False		
ndis	NDIS System Driver	c:\winnt\system32\drivers\ndis.sys	Kernel Driver			
	Driver	True	Boot	Running OK	Normal	False
ndistapi	Remote Access NDIS TAPI Driver					
	c:\winnt\system32\drivers\ndistapi.sys		Kernel Driver	True		
	Manual	Running OK	Normal	False	True	
ndiswan	Remote Access NDIS WAN Driver					
	c:\winnt\system32\drivers\ndiswan.sys		Kernel Driver	True	Manual	
	Running OK	Normal	False	True		
ndproxy	NDIS Proxy	c:\winnt\system32\drivers\ndproxy.sys	Kernel Driver			
	True	Manual	Running OK	Normal	False	True
netbios	NetBIOS Interface	c:\winnt\system32\drivers\netbios.sys	File System Driver			
	System	Running OK	Normal	False	True	
netbt	NetBios over Tcpip	c:\winnt\system32\drivers\netbt.sys	Kernel Driver			
	Driver	True	System	Running OK	Normal	False
netdetect	NetDetect	c:\winnt\system32\drivers\netdetect.sys				
	Kernel Driver	False	Manual	Stopped OK	Normal	False
npfs	Npfs	c:\winnt\system32\drivers\npfs.sys	File System Driver			
	True	System	Running OK	Normal	False	True
ntfs	Ntfs	c:\winnt\system32\drivers\ntfs.sys	File System Driver			
	True	Disabled	Running OK	Normal	False	True
null	Null	c:\winnt\system32\drivers\null.sys	Kernel Driver	True		
	System	Running OK	Normal	False	True	
nwlkflt	IPX Traffic Filter Driver					
	c:\winnt\system32\drivers\nwlkflt.sys		Kernel Driver	False		
	Manual	Stopped OK	Normal	False	False	

nwlkfw	IPX Traffic Forwarder Driver								
	c:\winnt\system32\drivers\nwlkfw.sys	Kernel Driver	False						
parallel	Parallel class driver								
	c:\winnt\system32\drivers\parallel.sys	Kernel Driver	True						
parport	Parallel port driver	c:\winnt\system32\drivers\parport.sys	Kernel Driver	True					
partmgr	PartMgr	c:\winnt\system32\drivers\partmgr.sys	Kernel Driver	True					
parvdm	ParVdm	c:\winnt\system32\drivers\parvdm.sys	Kernel Driver	True					
pci	PCI Bus Driver	c:\winnt\system32\drivers\pci.sys	Kernel Driver	True					
pcidump	PCIDump	Not Available	Kernel Driver	False					
pciide	PCIIde	Not Available	Kernel Driver	False					
pcmcia	Pcmcia	c:\winnt\system32\drivers\pcmcia.sys	Kernel Driver	False					
pdcomp	PDCOMP	Not Available	Kernel Driver	False					
pdframe	PDFRAME	Not Available	Kernel Driver	False					
pdreli	PDRELI	Not Available	Kernel Driver	False					
pdrframe	PDRFRAME	Not Available	Kernel Driver	False					
pptpminiport	WAN Miniport (PPTP)	c:\winnt\system32\drivers\raspttp.sys	Kernel Driver	True					
ptilink	Direct Parallel Link Driver	c:\winnt\system32\drivers\ptilink.sys	Kernel Driver	True					
ql1080	ql1080	Not Available	Kernel Driver	False					
ql10wnt	Ql10wnt	Not Available	Kernel Driver	False					
ql1240	ql1240	Not Available	Kernel Driver	False					
ql2100	ql2100	Not Available	Kernel Driver	False					
rasacd	Remote Access Auto Connection Driver	c:\winnt\system32\drivers\rasacd.sys	Kernel Driver	True					
rasl2tp	WAN Miniport (L2TP)	c:\winnt\system32\drivers\rasl2tp.sys	Kernel Driver	True					
raspti	Direct Parallel	c:\winnt\system32\drivers\raspti.sys	Kernel Driver	True					
rca	Microsoft Streaming Network Raw Channel Access	c:\winnt\system32\drivers\rca.sys	Kernel Driver	False					
rdbss	Rdbss	c:\winnt\system32\drivers\rdbss.sys	File System Driver	True					
rdpwd	RDPWD	c:\winnt\system32\drivers\rdpwd.sys	Kernel Driver	False					
redbook	Digital CD Audio Playback Filter Driver	c:\winnt\system32\drivers\redbook.sys	Kernel Driver	False					

scsiscan	Scsiscan	Not Available	Kernel Driver	False					
serenum	Serenum Filter Driver	c:\winnt\system32\drivers\serenum.sys	Kernel Driver	True					
serial	Serial port driver	c:\winnt\system32\drivers\serial.sys	Kernel Driver	True					
sfloppy	Sfloppy	c:\winnt\system32\drivers\sfloppy.sys	Kernel Driver	False					
sglfb	sglfb	c:\winnt\system32\drivers\sglfb.sys	Kernel Driver	False					
simbad	Simbad	Not Available	Kernel Driver	False					
sparrow	Sparrow	Not Available	Kernel Driver	False					
spud	Special Purpose Utility Driver	c:\winnt\system32\drivers\spud.sys	Kernel Driver	False					
srv	Srv	c:\winnt\system32\drivers\srv.sys	File System Driver	True					
swenum	Software Bus Driver	c:\winnt\system32\drivers\swenum.sys	Kernel Driver	True					
symc810	symc810	Not Available	Kernel Driver	False					
symc8xx	symc8xx	Not Available	Kernel Driver	False					
sym_hi	sym_hi	Not Available	Kernel Driver	False					
tcpip	TCP/IP Protocol Driver	c:\winnt\system32\drivers\tcpip.sys	Kernel Driver	True					
tdasync	TDASync	c:\winnt\system32\drivers\tdasync.sys	Kernel Driver	False					
tdipx	TDIPX	c:\winnt\system32\drivers\tdipx.sys	Kernel Driver	False					
tdnetb	TDNETB	c:\winnt\system32\drivers\tdnetb.sys	Kernel Driver	False					
tdpipe	TDPIPE	c:\winnt\system32\drivers\tdpipe.sys	Kernel Driver	False					
tdspx	TDSPX	c:\winnt\system32\drivers\tdspx.sys	Kernel Driver	False					
tdtcp	TDTCP	c:\winnt\system32\drivers\tdtcp.sys	Kernel Driver	False					
termdd	Terminal Device Driver	c:\winnt\system32\drivers\termdd.sys	Kernel Driver	False					
tga	tga	Not Available	Kernel Driver	False					
udfs	Udfs	c:\winnt\system32\drivers\udfs.sys	File System Driver	False					
uhcd	Microsoft USB Universal Host Controller Driver	c:\winnt\system32\drivers\uhcd.sys	Kernel Driver	True					
ultra66	ultra66	Not Available	Kernel Driver	False					
update	Microcode Update Driver	c:\winnt\system32\drivers\update.sys	Kernel Driver	True					
usbhub	Microsoft USB Standard Hub Driver	c:\winnt\system32\drivers\usbhub.sys	Kernel Driver	True					
vgasave	VgaSave	c:\winnt\system32\drivers\vga.sys	Kernel Driver	False					

wanarp Remote Access IP ARP Driver c:\winnt\system32\drivers\wanarp.sys
Kernel Driver True Manual Running OK Normal False True
wdica WDICA Not Available Kernel Driver False Manual Stopped OK
Ignore False False

[Environment Variables]

Variable	Value	User Name
ComSpec	%SystemRoot%\system32\cmd.exe	<SYSTEM>
Os2LibPath	%SystemRoot%\system32\os2\dll; Path	<SYSTEM>
	%SystemRoot%\system32;%SystemRoot%;%SystemRoot%\system32\WBEM;C:\P rogram Files\Microsoft SQL Server\80\Tools\BINN	<SYSTEM>
windir	%SystemRoot%	<SYSTEM>
OS	Windows_NT	<SYSTEM>
PROCESSOR_ARCHITECTURE	x86	<SYSTEM>
PROCESSOR_LEVEL	6	<SYSTEM>
PROCESSOR_IDENTIFIER	x86 Family 6 Model 7 Stepping 2, GenuineIntel	<SYSTEM>
PROCESSOR_REVISION	0702	<SYSTEM>
NUMBER_OF_PROCESSORS	2	<SYSTEM>
PATHEXT	.COM;.EXE;.BAT;.CMD;.VBS;.VBE;.JS;.JSE;.WS;.WSH;.WSF	<SYSTEM>
TEMP	%SystemRoot%\TEMP	<SYSTEM>
TMP	%SystemRoot%\TEMP	<SYSTEM>
TEMP	%USERPROFILE%\Local Settings\Temp	CLIENT1\Administrator
TMP	%USERPROFILE%\Local Settings\Temp	CLIENT1\Administrator

[Jobs]

[Following are sub-categories of this main category]

[Print]

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

[Network Connections]

Local Name	Remote Name	Type	Status	User Name
No network connections information				

[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	Unknown	Unknown	Unknown	
system	Not Available	8	8	0	1413120 Not Available
	Unknown	Unknown	Unknown		
smss.exe	c:\winnt\system32\smss.exe	160	11	204800	
	1413120 2/13/2000 12:13:05 PM	5.00.2170.1	44.27 KB	(45,328	
bytes)	1/27/2000 2:19:06 PM				
csrss.exe	Not Available	188	13	Not Available	Not Available
	2/13/2000 12:13:12 PM	Unknown	Unknown	Unknown	

winlogon.exe	c:\winnt\system32\winlogon.exe	184	13	204800	
	1413120 2/13/2000 12:13:13 PM	5.00.2182.1	173.27 KB	(177,424	
bytes)	1/27/2000 2:19:30 PM				
services.exe	c:\winnt\system32\services.exe	236	9	204800	
	1413120 2/13/2000 12:13:16 PM	5.00.2134.1	86.77 KB	(88,848	
bytes)	1/27/2000 2:19:03 PM				
lsass.exe	c:\winnt\system32\lsass.exe	248	13	204800	
	1413120 2/13/2000 12:13:16 PM	5.00.2184.1	32.77 KB	(33,552	
bytes)	1/27/2000 2:18:24 PM				
gnconmgr.exe	c:\winnt\system32\gnconmgr.exe	364	8	204800	
	1413120 2/13/2000 12:13:20 PM	3.85 92.00 KB	(94,208 bytes)		
	2/3/2000 12:49:22 PM				
svchost.exe	c:\winnt\system32\svchost.exe	416	8	204800	
	1413120 2/13/2000 12:13:21 PM	5.00.2134.1	7.77 KB	(7,952 bytes)	
	1/27/2000 2:19:11 PM				
msdtc.exe	c:\winnt\system32\msdtc.exe	448	8	204800	
	1413120 2/13/2000 12:13:26 PM	1999.9.3421.3	6.77 KB	(6,928 bytes)	
	1/27/2000 2:37:56 PM				
svchost.exe	c:\winnt\system32\svchost.exe	580	8	204800	
	1413120 2/13/2000 12:13:33 PM	5.00.2134.1	7.77 KB	(7,952 bytes)	
	1/27/2000 2:19:11 PM				
regsvc.exe	c:\winnt\system32\regsvc.exe	604	8	204800	
	1413120 2/13/2000 12:13:33 PM	5.00.2155.1	65.27 KB	(66,832	
bytes)	1/27/2000 2:18:58 PM				
mstask.exe	c:\winnt\system32\mstask.exe	624	8	204800	
	1413120 2/13/2000 12:13:33 PM	4.71.2137.1	115.27 KB	(118,032	
bytes)	1/27/2000 2:40:39 PM				
winmgmt.exe	c:\winnt\system32\wbem\winmgmt.exe	704	8	204800	
	1413120 2/13/2000 12:13:35 PM	1.50.1085.0001	188.05 KB	(192,567	
bytes)	1/27/2000 2:19:30 PM				
inetinfo.exe	c:\winnt\system32\inetinfo.exe		700	8	
	204800 1413120 2/13/2000 12:13:39 PM	5.00.0984	14.27 KB		
(14,608 bytes)	8/22/1999 11:29:31 PM				
svchost.exe	c:\winnt\system32\svchost.exe	888	8	204800	
	1413120 2/13/2000 12:13:55 PM	5.00.2134.1	7.77 KB	(7,952 bytes)	
	1/27/2000 2:19:11 PM				
explorer.exe	c:\winnt\explorer.exe	804	8	204800	1413120
	2/13/2000 12:16:25 PM	5.00.2920.0000	232.77 KB	(238,352 bytes)	
	1/27/2000 2:18:03 PM				
rhostsrv.exe	c:\rhost\rhostsrv.exe	864	8	204800	1413120
	2/13/2000 12:16:28 PM	Not Available	109.00 KB	(111,616 bytes)	
	8/23/1999 7:35:41 AM				
msinfo32.exe	c:\program files\Microsoft				
shared\msinfo32.exe	436	8	204800	1413120 2/13/2000	
	12:17:23 PM	5.00.2134.1	15.77 KB	(16,144 bytes)	1/27/2000
	2:40:45 PM				
rsrvp.exe	c:\winnt\system32\rsrvp.exe	980	8	204800	
	1413120 2/13/2000 12:17:59 PM	5.00.2167.1	172.77 KB	(176,912	
bytes)	1/27/2000 2:19:00 PM				

[Loaded Modules]

Name	Version	Size	File Date	Manufacturer	Path
traffic.dll	5.00.2139.1	30.77 KB	(31,504 bytes)		1/27/2000
2:19:14 PM	Microsoft Corporation			c:\winnt\system32\traffic.dll	
rsrvp.exe	5.00.2167.1	172.77 KB	(176,912 bytes)		1/27/2000
2:19:00 PM	Microsoft Corporation			c:\winnt\system32\rsrvp.exe	
wbemprox.dll	1.50.1085.0001	40.05 KB	(41,016 bytes)		1/27/2000
2:19:25 PM	Microsoft Corporation			c:\winnt\system32\wbem\wbemprox.dll	

cabinet.dll	5.00.2147.1	54.77 KB (56,080 bytes)	1/27/2000
2:17:35 PM	Microsoft Corporation c:\winnt\system32\cabinet.dll		
msinfo32.dll	5.00.2177.1	312.27 KB (319,760 bytes)	1/27/2000
2:40:45 PM	Microsoft Corporation c:\program files\common files\Microsoft shared\msinfo\msinfo32.dll		
mfc42u.dll	6.00.8665.0	972.05 KB (995,384 bytes)	1/27/2000
2:18:28 PM	Microsoft Corporation c:\winnt\system32\mfc42u.dll		
msinfo32.exe	5.00.2134.1	15.77 KB (16,144 bytes)	1/27/2000
2:40:45 PM	Microsoft Corporation c:\program files\common files\Microsoft shared\msinfo\msinfo32.exe		
rhostsrv.exe	Not Available	109.00 KB (111,616 bytes)	8/23/1999
7:35:41 AM	Not Available c:\rhost\rhostsrv.exe		
powrprof.dll	5.00.2920.0000	13.27 KB (13,584 bytes)	1/27/2000
2:18:54 PM	Microsoft Corporation c:\winnt\system32\powrprof.dll		
batmeter.dll	5.00.2920.0000	20.27 KB (20,752 bytes)	1/27/2000
2:17:31 PM	Microsoft Corporation c:\winnt\system32\batmeter.dll		
stobject.dll	5.00.2144.1	81.77 KB (83,728 bytes)	1/27/2000
2:19:10 PM	Microsoft Corporation c:\winnt\system32\stobject.dll		
msi.dll	1.10.1029.0	1.71 MB (1,794,320 bytes)	1/27/2000 2:18:36 PM
Microsoft Corporation c:\winnt\system32\msi.dll			
webcheck.dll	5.00.2920.0000	251.77 KB (257,808 bytes)	1/27/2000
2:19:26 PM	Microsoft Corporation c:\winnt\system32\webcheck.dll		
browseui.dll	5.00.2920.0000	793.27 KB (812,304 bytes)	1/27/2000
2:17:32 PM	Microsoft Corporation c:\winnt\system32\browseui.dll		
shdocvw.dll	5.00.2920.0000	1.05 MB (1,104,144 bytes)	1/27/2000
2:19:04 PM	Microsoft Corporation c:\winnt\system32\shdocvw.dll		
explorer.exe	5.00.2920.0000	232.77 KB (238,352 bytes)	1/27/2000
2:18:03 PM	Microsoft Corporation c:\winnt\explorer.exe		
tapisrv.dll	5.00.2186.1	168.77 KB (172,816 bytes)	1/27/2000
2:19:12 PM	Microsoft Corporation c:\winnt\system32\tapisrv.dll		
security.dll	5.00.2154.1	5.77 KB (5,904 bytes)	1/27/2000 2:19:02 PM
Microsoft Corporation c:\winnt\system32\security.dll			
svcxext.dll	5.00.0984	39.77 KB (40,720 bytes)	1/27/2000
2:37:40 PM	Microsoft Corporation c:\winnt\system32\inetrv\svcxext.dll		
admexs.dll	5.00.0984	27.77 KB (28,432 bytes)	1/27/2000
2:37:39 PM	Microsoft Corporation c:\winnt\system32\inetrv\admexs.dll		
wamreg.dll	5.00.0984	46.27 KB (47,376 bytes)	1/27/2000
2:37:44 PM	Microsoft Corporation c:\winnt\system32\inetrv\wamreg.dll		
metadata.dll	5.00.0984	70.77 KB (72,464 bytes)	1/27/2000
2:37:40 PM	Microsoft Corporation c:\winnt\system32\inetrv\metadata.dll		
iismap.dll	5.00.0984	56.27 KB (57,616 bytes)	1/27/2000
2:37:40 PM	Microsoft Corporation c:\winnt\system32\iismap.dll		
nsepm.dll	5.00.0984	43.27 KB (44,304 bytes)	1/27/2000
2:37:40 PM	Microsoft Corporation c:\winnt\system32\inetrv\nsepm.dll		
admwprox.dll	5.00.0984	31.77 KB (32,528 bytes)	1/27/2000
2:37:40 PM	Microsoft Corporation c:\winnt\system32\admwprox.dll		
coadmin.dll	5.00.0984	39.77 KB (40,720 bytes)	1/27/2000
2:37:41 PM	Microsoft Corporation c:\winnt\system32\inetrv\coadmin.dll		
iisadmin.dll	5.00.0984	14.77 KB (15,120 bytes)	1/27/2000
2:37:39 PM	Microsoft Corporation c:\winnt\system32\inetrv\iisadmin.dll		
rpcref.dll	5.00.0984	4.27 KB (4,368 bytes)	1/27/2000 2:37:40 PM
Microsoft Corporation c:\winnt\system32\inetrv\rpcref.dll			
iisrtl.dll	5.00.0984	120.77 KB (123,664 bytes)	1/27/2000
2:37:40 PM	Microsoft Corporation c:\winnt\system32\iisrtl.dll		

inetinfo.exe	5.00.0984	14.27 KB (14,608 bytes)	8/22/1999
11:29:31 PM	Microsoft Corporation c:\winnt\system32\inetrv\inetinfo.exe		
netui1.dll	5.00.2134.1	210.27 KB (215,312 bytes)	1/27/2000
2:18:43 PM	Microsoft Corporation c:\winnt\system32\netui1.dll		
netui0.dll	5.00.2134.1	70.27 KB (71,952 bytes)	1/27/2000
2:18:43 PM	Microsoft Corporation c:\winnt\system32\netui0.dll		
ntlanman.dll	5.00.2157.1	35.27 KB (36,112 bytes)	1/27/2000
2:18:48 PM	Microsoft Corporation c:\winnt\system32\ntlanman.dll		
rapilib.dll	5.00.2167.1	25.27 KB (25,872 bytes)	1/27/2000
2:18:56 PM	Microsoft Corporation c:\winnt\system32\rapilib.dll		
rsvpsp.dll	5.00.2167.1	74.77 KB (76,560 bytes)	1/27/2000
2:19:00 PM	Microsoft Corporation c:\winnt\system32\rsvpsp.dll		
ntmarta.dll	5.00.2158.1	98.77 KB (101,136 bytes)	1/27/2000
2:18:48 PM	Microsoft Corporation c:\winnt\system32\ntmarta.dll		
provthrd.dll	1.50.1085.0000	68.07 KB (69,708 bytes)	1/27/2000
2:40:38 PM	Microsoft Corporation c:\winnt\system32\wbem\provthrd.dll		
ntevt.dll	1.50.1085.0000	192.06 KB (196,669 bytes)	1/27/2000
2:18:47 PM	Microsoft Corporation c:\winnt\system32\wbem\ntevt.dll		
perfos.dll	5.00.2155.1	21.27 KB (21,776 bytes)	1/27/2000
2:18:53 PM	Microsoft Corporation c:\winnt\system32\perfos.dll		
psapi.dll	5.00.2134.1	28.27 KB (28,944 bytes)	1/27/2000
2:18:54 PM	Microsoft Corporation c:\winnt\system32\psapi.dll		
framedyn.dll	1.50.1085.0000	164.05 KB (167,992 bytes)	1/27/2000
2:18:05 PM	Microsoft Corporation c:\winnt\system32\wbem\framedyn.dll		
cimwin32.dll	1.50.1085.0000	1.03 MB (1,077,306 bytes)	1/27/2000
2:17:38 PM	Microsoft Corporation c:\winnt\system32\wbem\cimwin32.dll		
wbemsvc.dll	1.50.1085.0000	140.07 KB (143,430 bytes)	1/27/2000
2:19:25 PM	Microsoft Corporation c:\winnt\system32\wbem\wbemsvc.dll		
wbemess.dll	1.50.1085.0001	352.05 KB (360,503 bytes)	1/27/2000
2:19:24 PM	Microsoft Corporation c:\winnt\system32\wbem\wbemess.dll		
fastprox.dll	1.50.1085.0001	144.08 KB (147,534 bytes)	1/27/2000
2:18:04 PM	Microsoft Corporation c:\winnt\system32\wbem\fastprox.dll		
wbemcore.dll	1.50.1085.0001	632.05 KB (647,224 bytes)	1/27/2000
2:19:24 PM	Microsoft Corporation c:\winnt\system32\wbem\wbemcore.dll		
wbemcomn.dll	1.50.1085.0001	684.05 KB (700,472 bytes)	1/27/2000
2:19:24 PM	Microsoft Corporation c:\winnt\system32\wbem\wbemcomn.dll		
winmgmt.exe	1.50.1085.0001	188.05 KB (192,567 bytes)	1/27/2000
2:19:30 PM	Microsoft Corporation c:\winnt\system32\wbem\winmgmt.exe		
msidle.dll	5.00.2920.0000	6.27 KB (6,416 bytes)	1/27/2000 2:18:36 PM
Microsoft Corporation c:\winnt\system32\msidle.dll			
mstask.exe	4.71.2137.1	115.27 KB (118,032 bytes)	1/27/2000
2:40:39 PM	Microsoft Corporation c:\winnt\system32\mstask.exe		
regsvc.exe	5.00.2155.1	65.27 KB (66,832 bytes)	1/27/2000
2:18:58 PM	Microsoft Corporation c:\winnt\system32\regsvc.exe		
wmi.dll	5.00.2191.1	6.27 KB (6,416 bytes)	1/27/2000 2:19:31 PM
Microsoft Corporation c:\winnt\system32\wmi.dll			
netshell.dll	5.00.2176.1	456.77 KB (467,728 bytes)	1/27/2000
2:18:43 PM	Microsoft Corporation c:\winnt\system32\netshell.dll		
netman.dll	5.00.2175.1	88.77 KB (90,896 bytes)	1/27/2000
2:18:42 PM	Microsoft Corporation c:\winnt\system32\netman.dll		
rasdlg.dll	5.00.2194.1	514.27 KB (526,608 bytes)	1/27/2000
2:18:56 PM	Microsoft Corporation c:\winnt\system32\rasdlg.dll		
netcfgx.dll	5.00.2175.1	533.77 KB (546,576 bytes)	1/27/2000
2:18:42 PM	Microsoft Corporation c:\winnt\system32\netcfgx.dll		
rasmans.dll	5.00.2188.1	146.77 KB (150,288 bytes)	1/27/2000
2:18:56 PM	Microsoft Corporation c:\winnt\system32\rasmans.dll		
sens.dll	5.00.2163.1	36.77 KB (37,648 bytes)	1/27/2000
2:19:02 PM	Microsoft Corporation c:\winnt\system32\sens.dll		


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es.dll 1999.9.3422.21 231.77 KB (237,328 bytes) 1/27/2000 2:18:03 PM
Microsoft Corporation c:\winnt\system32\es.dll
mtxoci.dll 1999.9.3421.3 109.27 KB (111,888 bytes) 1/27/2000
2:37:57 PM Microsoft Corporation c:\winnt\system32\mtxoci.dll
resutils.dll 5.00.2191.1 39.77 KB (40,720 bytes) 1/27/2000
2:18:58 PM Microsoft Corporation c:\winnt\system32\resutils.dll
clusapi.dll 5.00.2179.1 50.27 KB (51,472 bytes) 1/27/2000
2:17:39 PM Microsoft Corporation c:\winnt\system32\clusapi.dll
msvcvp50.dll 5.00.7051 552.50 KB (565,760 bytes) 1/27/2000
2:18:40 PM Microsoft Corporation c:\winnt\system32\msvcvp50.dll
xolehlp.dll 1999.9.3421.3 17.27 KB (17,680 bytes) 1/27/2000
2:37:57 PM Microsoft Corporation c:\winnt\system32\xolehlp.dll
msdtclog.dll 1999.9.3421.3 89.77 KB (91,920 bytes) 1/27/2000
2:37:56 PM Microsoft Corporation c:\winnt\system32\msdtclog.dll
mtxclu.dll 1999.9.3421.3 50.27 KB (51,472 bytes) 1/27/2000
2:18:41 PM Microsoft Corporation c:\winnt\system32\mtxclu.dll
msdtcprx.dll 1999.9.3422.10 619.27 KB (634,128 bytes) 1/27/2000
2:37:57 PM Microsoft Corporation c:\winnt\system32\msdtcprx.dll
txfaux.dll 1999.9.3422.24 341.27 KB (349,456 bytes) 1/27/2000
2:37:57 PM Microsoft Corporation c:\winnt\system32\txfaux.dll
msdtctm.dll 1999.9.3422.12 1.02 MB (1,070,864 bytes) 1/27/2000
2:37:57 PM Microsoft Corporation c:\winnt\system32\msdtctm.dll
msdtc.exe 1999.9.3421.3 6.77 KB (6,928 bytes) 1/27/2000 2:37:56 PM
Microsoft Corporation c:\winnt\system32\msdtc.exe
wshnetbs.dll 5.00.2134.1 7.77 KB (7,952 bytes) 1/27/2000 2:19:33 PM
Microsoft Corporation c:\winnt\system32\wshnetbs.dll
rasadhlp.dll 5.00.2168.1 7.27 KB (7,440 bytes) 1/27/2000 2:18:56 PM
Microsoft Corporation c:\winnt\system32\rasadhlp.dll
winrnr.dll 5.00.2160.1 18.77 KB (19,216 bytes) 1/27/2000
2:19:30 PM Microsoft Corporation c:\winnt\system32\winrnr.dll
dhcpcsvc.dll 5.00.2153.1 88.77 KB (90,896 bytes) 1/27/2000
2:17:47 PM Microsoft Corporation c:\winnt\system32\dhcpcsvc.dll
tapi32.dll 5.00.2182.1 123.27 KB (126,224 bytes) 1/27/2000
2:19:12 PM Microsoft Corporation c:\winnt\system32\tapi32.dll
rasman.dll 5.00.2188.1 54.77 KB (56,080 bytes) 1/27/2000
2:18:56 PM Microsoft Corporation c:\winnt\system32\rasman.dll
rasapi32.dll 5.00.2188.1 189.77 KB (194,320 bytes) 1/27/2000
2:18:56 PM Microsoft Corporation c:\winnt\system32\rasapi32.dll
iphlpapi.dll 5.00.2173.2 67.77 KB (69,392 bytes) 1/27/2000
2:18:17 PM Microsoft Corporation c:\winnt\system32\iphlpapi.dll
rnr20.dll 5.00.2152.1 35.77 KB (36,624 bytes) 1/27/2000
2:18:58 PM Microsoft Corporation c:\winnt\system32\rnr20.dll
wshtcpip.dll 5.00.2134.1 17.27 KB (17,680 bytes) 1/27/2000
2:19:33 PM Microsoft Corporation c:\winnt\system32\wshtcpip.dll
msafid.dll 5.00.2153.1 54.27 KB (55,568 bytes) 1/27/2000
2:18:34 PM Microsoft Corporation c:\winnt\system32\msafid.dll
rpcss.dll 5.00.2181.1 229.27 KB (234,768 bytes) 1/27/2000
2:18:59 PM Microsoft Corporation c:\winnt\system32\rpcss.dll
svchost.exe 5.00.2134.1 7.77 KB (7,952 bytes) 1/27/2000 2:19:11 PM
Microsoft Corporation c:\winnt\system32\svchost.exe
vipl.dll 3.85 80.00 KB (81,920 bytes) 2/3/2000 12:49:23 PM
Giganet Incorporated c:\winnt\system32\vipl.dll
gnconmgr.exe 3.85 92.00 KB (94,208 bytes) 2/3/2000 12:49:22 PM
Giganet Incorporated c:\winnt\system32\gnconmgr.exe
scecli.dll 5.00.2191.1 105.27 KB (107,792 bytes) 1/27/2000
2:19:01 PM Microsoft Corporation c:\winnt\system32\scecli.dll
atl.dll 3.00.8449 57.56 KB (58,938 bytes) 1/27/2000 2:17:30 PM
Microsoft Corporation c:\winnt\system32\atl.dll

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certcli.dll 5.00.2175.1 132.27 KB (135,440 bytes) 1/27/2000
2:17:36 PM Microsoft Corporation c:\winnt\system32\certcli.dll
esent.dll 6.0.3939.6 1.07 MB (1,120,016 bytes) 1/27/2000
2:18:03 PM Microsoft Corporation c:\winnt\system32\esent.dll
mswsock.dll 5.00.2152.1 62.27 KB (63,760 bytes) 1/27/2000
2:18:40 PM Microsoft Corporation c:\winnt\system32\mswsock.dll
ntdsatq.dll 5.00.2181.1 31.27 KB (32,016 bytes) 1/27/2000
2:18:46 PM Microsoft Corporation c:\winnt\system32\ntdsatq.dll
ntdsa.dll 5.00.2195.1 993.27 KB (1,017,104 bytes) 1/27/2000
2:18:46 PM Microsoft Corporation c:\winnt\system32\ntdsa.dll
kdcsvc.dll 5.00.2181.1 133.77 KB (136,976 bytes) 1/27/2000
2:18:21 PM Microsoft Corporation c:\winnt\system32\kdcsvc.dll
sfmapi.dll 5.00.2134.1 38.77 KB (39,696 bytes) 1/27/2000
2:19:03 PM Microsoft Corporation c:\winnt\system32\sfmapi.dll
rtutils.dll 5.00.2168.1 43.77 KB (44,816 bytes) 1/27/2000
2:19:00 PM Microsoft Corporation c:\winnt\system32\rtutils.dll
adslrpc.dll 5.00.2172.1 127.77 KB (130,832 bytes) 1/27/2000
2:17:27 PM Microsoft Corporation c:\winnt\system32\adslrpc.dll
activeds.dll 5.00.2172.1 172.77 KB (176,912 bytes) 1/27/2000
2:17:21 PM Microsoft Corporation c:\winnt\system32\activeds.dll
mprapi.dll 5.00.2181.1 79.27 KB (81,168 bytes) 1/27/2000
2:18:31 PM Microsoft Corporation c:\winnt\system32\mprapi.dll
rassfm.dll 5.00.2168.1 21.27 KB (21,776 bytes) 1/27/2000
2:18:56 PM Microsoft Corporation c:\winnt\system32\rassfm.dll
mpr.dll 5.00.2146.1 53.27 KB (54,544 bytes) 1/27/2000 2:18:31 PM
Microsoft Corporation c:\winnt\system32\mpr.dll
schannel.dll 5.00.2170.1 139.77 KB (143,120 bytes) 1/27/2000
2:19:01 PM Microsoft Corporation c:\winnt\system32\schannel.dll
netlogon.dll 5.00.2182.1 347.77 KB (356,112 bytes) 1/27/2000
2:18:42 PM Microsoft Corporation c:\winnt\system32\netlogon.dll
msv1_0.dll 5.00.2164.1 94.77 KB (97,040 bytes) 1/27/2000
2:18:39 PM Microsoft Corporation c:\winnt\system32\msv1_0.dll
kerberos.dll 5.00.2181.1 196.77 KB (201,488 bytes) 1/27/2000
2:18:21 PM Microsoft Corporation c:\winnt\system32\kerberos.dll
msprivs.dll 5.00.2154.1 41.50 KB (42,496 bytes) 1/27/2000
2:18:38 PM Microsoft Corporation c:\winnt\system32\msprivs.dll
samsrv.dll 5.00.2192.1 357.77 KB (366,352 bytes) 1/27/2000
2:19:01 PM Microsoft Corporation c:\winnt\system32\samsrv.dll
lsasrv.dll 5.00.2184.1 487.77 KB (499,472 bytes) 1/27/2000
2:18:24 PM Microsoft Corporation c:\winnt\system32\lsasrv.dll
lsass.exe 5.00.2184.1 32.77 KB (33,552 bytes) 1/27/2000
2:18:24 PM Microsoft Corporation c:\winnt\system32\lsass.exe
ntlsapi.dll 5.00.2134.1 6.77 KB (6,928 bytes) 1/27/2000 2:18:48 PM
Microsoft Corporation c:\winnt\system32\ntlsapi.dll
wmicore.dll 5.00.2178.1 70.77 KB (72,464 bytes) 1/27/2000
2:19:31 PM Microsoft Corporation c:\winnt\system32\wmicore.dll
browser.dll 5.00.2142.1 48.27 KB (49,424 bytes) 1/27/2000
2:17:32 PM Microsoft Corporation c:\winnt\system32\browser.dll
seclogon.dll 5.00.2135.1 15.77 KB (16,144 bytes) 1/27/2000
2:19:02 PM Microsoft Corporation c:\winnt\system32\seclogon.dll
psbase.dll 5.00.2146.1 111.77 KB (114,448 bytes) 1/27/2000
2:18:54 PM Microsoft Corporation c:\winnt\system32\psbase.dll
cryptsvc.dll 5.00.2181.1 61.77 KB (63,248 bytes) 1/27/2000
2:17:43 PM Microsoft Corporation c:\winnt\system32\cryptsvc.dll
cryptdll.dll 5.00.2135.1 41.27 KB (42,256 bytes) 1/27/2000
2:17:43 PM Microsoft Corporation c:\winnt\system32\cryptdll.dll
wkssvc.dll 5.00.2181.1 95.27 KB (97,552 bytes) 1/27/2000
2:19:31 PM Microsoft Corporation c:\winnt\system32\wkssvc.dll

```

```

srvsvc.dll 5.00.2178.1 79.27 KB (81,168 bytes) 1/27/2000
2:19:09 PM Microsoft Corporation c:\winnt\system32\srvsvc.dll
cfgmgr32.dll 5.00.2134.1 16.77 KB (17,168 bytes) 1/27/2000
2:17:37 PM Microsoft Corporation c:\winnt\system32\cfgmgr32.dll
dmserver.dll 2191.1.296.2 11.77 KB (12,048 bytes) 1/27/2000
2:17:48 PM VERITAS Software Corp. c:\winnt\system32\dmserver.dll
winsta.dll 5.00.2134.1 36.27 KB (37,136 bytes) 1/27/2000
2:19:31 PM Microsoft Corporation c:\winnt\system32\winsta.dll
icmp.dll 5.00.2134.1 7.27 KB (7,440 bytes) 1/27/2000 2:18:11 PM
Microsoft Corporation c:\winnt\system32\icmp.dll
lmhsvc.dll 5.00.2134.1 9.27 KB (9,488 bytes) 1/27/2000 2:18:23 PM
Microsoft Corporation c:\winnt\system32\lmhsvc.dll
eventlog.dll 5.00.2178.1 43.77 KB (44,816 bytes) 1/27/2000
2:18:03 PM Microsoft Corporation c:\winnt\system32\eventlog.dll
ntdsapi.dll 5.00.2160.1 56.27 KB (57,616 bytes) 1/27/2000
2:18:46 PM Microsoft Corporation c:\winnt\system32\ntdsapi.dll
scesrv.dll 5.00.2188.1 225.77 KB (231,184 bytes) 1/27/2000
2:19:01 PM Microsoft Corporation c:\winnt\system32\scesrv.dll
umpnpgmgr.dll 5.00.2182.1 86.27 KB (88,336 bytes) 1/27/2000
2:19:19 PM Microsoft Corporation c:\winnt\system32\umpnpgmgr.dll
services.exe 5.00.2134.1 86.77 KB (88,848 bytes) 1/27/2000
2:19:03 PM Microsoft Corporation c:\winnt\system32\services.exe
clbcatq.dll 1999.9.3422.14 479.27 KB (490,768 bytes) 1/27/2000
2:17:53 PM Microsoft Corporation c:\winnt\system32\clbcatq.dll
oleaut32.dll 2.40.4512 600.27 KB (614,672 bytes) 1/27/2000
2:18:51 PM Microsoft Corporation c:\winnt\system32\oleaut32.dll
cscui.dll 5.00.2172.1 227.27 KB (232,720 bytes) 1/27/2000
2:17:44 PM Microsoft Corporation c:\winnt\system32\cscui.dll
winspool.drv 5.00.2167.1 109.77 KB (112,400 bytes) 1/27/2000
2:19:30 PM Microsoft Corporation c:\winnt\system32\winspool.drv
winscard.dll 5.00.2134.1 77.27 KB (79,120 bytes) 1/27/2000
2:19:30 PM Microsoft Corporation c:\winnt\system32\winscard.dll
wlnotify.dll 5.00.2164.1 53.27 KB (54,544 bytes) 1/27/2000
2:19:31 PM Microsoft Corporation c:\winnt\system32\wlnotify.dll
cscdll.dll 5.00.2189.1 98.27 KB (100,624 bytes) 1/27/2000
2:17:44 PM Microsoft Corporation c:\winnt\system32\cscdll.dll
lz32.dll 5.00.2134.1 9.77 KB (10,000 bytes) 1/27/2000 2:18:24 PM
Microsoft Corporation c:\winnt\system32\lz32.dll
version.dll 5.00.2134.1 15.77 KB (16,144 bytes) 1/27/2000
2:19:22 PM Microsoft Corporation c:\winnt\system32\version.dll
rsabase.dll 5.00.2150.1 128.77 KB (131,856 bytes) 1/27/2000
2:18:59 PM Microsoft Corporation c:\winnt\system32\rsabase.dll
mscat32.dll 5.131.2134.1 7.77 KB (7,952 bytes) 1/27/2000 2:18:34 PM
Microsoft Corporation c:\winnt\system32\mscat32.dll
ole32.dll 5.00.2181.1 966.27 KB (989,456 bytes) 1/27/2000
2:18:51 PM Microsoft Corporation c:\winnt\system32\ole32.dll
imagehlp.dll 5.00.2195.1 125.27 KB (128,272 bytes) 1/27/2000
2:18:13 PM Microsoft Corporation c:\winnt\system32\imagehlp.dll
msasn1.dll 5.00.2134.1 51.27 KB (52,496 bytes) 1/27/2000
2:18:34 PM Microsoft Corporation c:\winnt\system32\msasn1.dll
crypt32.dll 5.131.2173.1 465.77 KB (476,944 bytes) 1/27/2000
2:17:43 PM Microsoft Corporation c:\winnt\system32\crypt32.dll
wintrust.dll 5.131.2143.1 162.27 KB (166,160 bytes) 1/27/2000
2:19:31 PM Microsoft Corporation c:\winnt\system32\wintrust.dll
setupapi.dll 5.00.2183.1 554.27 KB (567,568 bytes) 1/27/2000
2:19:03 PM Microsoft Corporation c:\winnt\system32\setupapi.dll
winmm.dll 5.00.2161.1 184.77 KB (189,200 bytes) 1/27/2000
2:19:30 PM Microsoft Corporation c:\winnt\system32\winmm.dll

```

```

comctl32.dll 5.81 540.27 KB (553,232 bytes) 1/27/2000 2:17:40 PM
Microsoft Corporation c:\winnt\system32\comctl32.dll
shlwapi.dll 5.00.2920.0000 282.77 KB (289,552 bytes) 1/27/2000
2:19:04 PM Microsoft Corporation c:\winnt\system32\shlwapi.dll
shell32.dll 5.00.2920.0000 2.24 MB (2,352,400 bytes) 1/27/2000
2:19:04 PM Microsoft Corporation c:\winnt\system32\shell32.dll
msgina.dll 5.00.2191.1 309.77 KB (317,200 bytes) 1/27/2000
2:18:35 PM Microsoft Corporation c:\winnt\system32\msgina.dll
wsock32.dll 5.00.2152.1 21.27 KB (21,776 bytes) 1/27/2000
2:19:33 PM Microsoft Corporation c:\winnt\system32\wsock32.dll
dnsapi.dll 5.00.2181.1 129.77 KB (132,880 bytes) 1/27/2000
2:17:49 PM Microsoft Corporation c:\winnt\system32\dnsapi.dll
ldap32.dll 5.00.2168.1 155.77 KB (159,504 bytes) 1/27/2000
2:19:31 PM Microsoft Corporation c:\winnt\system32\ldap32.dll
ws2help.dll 5.00.2134.1 17.77 KB (18,192 bytes) 1/27/2000
2:19:33 PM Microsoft Corporation c:\winnt\system32\ws2help.dll
ws2_32.dll 5.00.2134.1 69.77 KB (71,440 bytes) 1/27/2000
2:19:33 PM Microsoft Corporation c:\winnt\system32\ws2_32.dll
samlib.dll 5.00.2160.1 46.27 KB (47,376 bytes) 1/27/2000
2:19:01 PM Microsoft Corporation c:\winnt\system32\samlib.dll
netrap.dll 5.00.2134.1 11.27 KB (11,536 bytes) 1/27/2000
2:18:43 PM Microsoft Corporation c:\winnt\system32\netrap.dll
netapi32.dll 5.00.2194.1 302.77 KB (310,032 bytes) 1/27/2000
2:18:41 PM Microsoft Corporation c:\winnt\system32\netapi32.dll
profmap.dll 5.00.2181.1 29.27 KB (29,968 bytes) 1/27/2000
2:18:54 PM Microsoft Corporation c:\winnt\system32\profmap.dll
secur32.dll 5.00.2154.1 46.77 KB (47,888 bytes) 1/27/2000
2:19:02 PM Microsoft Corporation c:\winnt\system32\secur32.dll
sfc.dll 5.00.2164.1 84.27 KB (86,288 bytes) 1/27/2000 2:19:03 PM
Microsoft Corporation c:\winnt\system32\sfc.dll
nddeapi.dll 5.00.2137.1 15.27 KB (15,632 bytes) 1/27/2000
2:18:41 PM Microsoft Corporation c:\winnt\system32\nddeapi.dll
userenv.dll 5.00.2185.1 361.27 KB (369,936 bytes) 1/27/2000
2:19:20 PM Microsoft Corporation c:\winnt\system32\userenv.dll
user32.dll 5.00.2180.1 393.27 KB (402,704 bytes) 1/27/2000
2:19:20 PM Microsoft Corporation c:\winnt\system32\user32.dll
gdi32.dll 5.00.2180.1 228.77 KB (234,256 bytes) 1/27/2000
2:18:06 PM Microsoft Corporation c:\winnt\system32\gdi32.dll
rpcrt4.dll 5.00.2193.1 434.27 KB (444,688 bytes) 1/27/2000
2:18:59 PM Microsoft Corporation c:\winnt\system32\rpcrt4.dll
advapi32.dll 5.00.2191.1 349.27 KB (357,648 bytes) 1/27/2000
2:17:27 PM Microsoft Corporation c:\winnt\system32\advapi32.dll
kernel32.dll 5.00.2191.1 715.27 KB (732,432 bytes) 1/27/2000
2:18:21 PM Microsoft Corporation c:\winnt\system32\kernel32.dll
msvcrt.dll 6.10.8637.0 288.09 KB (295,000 bytes) 1/27/2000
2:18:40 PM Microsoft Corporation c:\winnt\system32\msvcrt.dll
winlogon.exe 5.00.2182.1 173.27 KB (177,424 bytes) 1/27/2000
2:19:30 PM Microsoft Corporation c:\winnt\system32\winlogon.exe
sfcfiles.dll 5.00.2195.1 973.27 KB (996,624 bytes) 1/27/2000
2:19:03 PM Microsoft Corporation c:\winnt\system32\sfcfiles.dll
ntdll.dll 5.00.2163.1 469.77 KB (481,040 bytes) 1/27/2000
2:18:45 PM Microsoft Corporation c:\winnt\system32\ntdll.dll
smss.exe 5.00.2170.1 44.27 KB (45,328 bytes) 1/27/2000
2:19:06 PM Microsoft Corporation c:\winnt\system32\smss.exe

```

[Services]

Display Name	Name	State	Start Mode	Service Type	Path	Error
Control Start	Name	Tag ID				

Alert	Alert	Stopped	Disabled	Share	Process	
c:\winnt\system32\services.exe		Normal	LocalSystem	0		
Application Management AppMgmt	Stopped	Manual	Share	Process		
c:\winnt\system32\services.exe		Normal	LocalSystem	0		
Computer Browser	Browser	Running	Auto	Share	Process	
c:\winnt\system32\services.exe		Normal	LocalSystem	0		
Indexing Service	cisvc	Stopped	Manual	Share	Process	
c:\winnt\system32\cisvc.exe		Normal	LocalSystem	0		
ClipBook	ClipSrv	Stopped	Manual	Own	Process	
c:\winnt\system32\clipsrv.exe		Normal	LocalSystem	0		
Distributed File System	Dfs	Stopped	Disabled	Own	Process	
c:\winnt\system32\dfssvc.exe		Normal	LocalSystem	0		
DHCP Client	Dhcp	Stopped	Disabled	Share	Process	
c:\winnt\system32\services.exe		Normal	LocalSystem	0		
Logical Disk Manager Administrative Service	dmadmin	Stopped	Manual	Share		
Process c:\winnt\system32\dmadmin.exe	/com	Normal	LocalSystem	0		
Logical Disk Manager dmsrv		Running	Auto	Share	Process	
c:\winnt\system32\services.exe		Normal	LocalSystem	0		
DNS Client	Dnscache	Stopped	Disabled	Share	Process	
c:\winnt\system32\services.exe		Normal	LocalSystem	0		
Event Log	Eventlog	Running	Auto	Share	Process	
c:\winnt\system32\services.exe		Normal	LocalSystem	0		
COM+ Event System	EventSystem	Running	Manual	Share	Process	
c:\winnt\system32\svchost.exe	-k netsvcs	Normal	LocalSystem	0		
Fax Service	Fax	Stopped	Manual	Own	Process	
c:\winnt\system32\faxsvc.exe		Normal	LocalSystem	0		
cLAN Connection Manager	GniConMgr	Running	Auto	Own	Process	
c:\winnt\system32\gnconmgr.exe		Normal	LocalSystem	0		
IIS Admin Service	IISADMIN	Running	Auto	Share	Process	
c:\winnt\system32\inetrv\inetinfo.exe		Normal	LocalSystem	0		
Intersite Messaging	IsmSrv	Stopped	Disabled	Own	Process	
c:\winnt\system32\ismssrv.exe		Normal	LocalSystem	0		
Kerberos Key Distribution Center	kdc	Stopped	Disabled	Share		
Process c:\winnt\system32\lsass.exe		Normal	LocalSystem	0		
Server lanmanserver		Running	Auto	Share	Process	
c:\winnt\system32\services.exe		Normal	LocalSystem	0		
Workstation lanmanworkstation		Running	Auto	Share	Process	
c:\winnt\system32\services.exe		Normal	LocalSystem	0		
License Logging Service	LicenseService	Stopped	Disabled	Own		
Process c:\winnt\system32\llssrv.exe		Normal	LocalSystem	0		
TCP/IP NetBIOS Helper Service	LmHosts	Running	Auto	Share	Process	
c:\winnt\system32\services.exe		Normal	LocalSystem	0		
Messenger	Messenger	Stopped	Disabled	Share	Process	
c:\winnt\system32\services.exe		Normal	LocalSystem	0		
NetMeeting Remote Desktop Sharing	mnmsrvc	Stopped	Manual	Own	Process	
c:\winnt\system32\mnmsrvc.exe		Normal	LocalSystem	0		
Distributed Transaction Coordinator	MSDTC	Running	Auto	Own	Process	
c:\winnt\system32\msdtc.exe		Normal	LocalSystem	1		
Windows Installer	MSIServer	Stopped	Manual	Share	Process	
c:\winnt\system32\msiexec.exe	/v	Normal	LocalSystem	0		
Network DDE	NetDDE	Stopped	Manual	Share	Process	
c:\winnt\system32\netdde.exe		Normal	LocalSystem	0		
Network DDE DSDM	NetDDEdsdm	Stopped	Manual	Share	Process	
c:\winnt\system32\netdde.exe		Normal	LocalSystem	0		
Net Logon	Netlogon	Stopped	Manual	Share	Process	
c:\winnt\system32\lsass.exe		Normal	LocalSystem	0		

Network Connections	Netman	Running	Manual	Share	Process	
c:\winnt\system32\svchost.exe	-k netsvcs	Normal	LocalSystem	0		
File Replication	NtFrs	Stopped	Manual	Own	Process	
c:\winnt\system32\ntfrs.exe		Ignore	LocalSystem	0		
NT LM Security Support Provider	NtLmSsp	Stopped	Manual	Share	Process	
c:\winnt\system32\lsass.exe		Normal	LocalSystem	0		
Removable Storage	NtmsSvc	Stopped	Disabled	Share	Process	
c:\winnt\system32\svchost.exe	-k netsvcs	Normal	LocalSystem	0		
Plug and Play	PlugPlay	Running	Auto	Share	Process	
c:\winnt\system32\services.exe		Normal	LocalSystem	0		
IPSEC Policy Agent	PolicyAgent	Stopped	Disabled	Share	Process	
c:\winnt\system32\lsass.exe		Normal	LocalSystem	0		
Protected Storage	ProtectedStorage	Running	Auto	Share	Process	
c:\winnt\system32\services.exe		Normal	LocalSystem	0		
Remote Access Auto Connection Manager	RasAuto	Stopped	Manual	Share	Process	
c:\winnt\system32\svchost.exe	-k netsvcs	Normal	LocalSystem	0		
Remote Access Connection Manager	RasMan	Stopped	Manual	Share	Process	
c:\winnt\system32\svchost.exe	-k netsvcs	Normal	LocalSystem	0		
Routing and Remote Access	RemoteAccess	Stopped	Disabled	Share	Process	
Process c:\winnt\system32\svchost.exe	-k netsvcs	Normal	LocalSystem	0		
Remote Registry Service	RemoteRegistry	Running	Auto	Own	Process	
c:\winnt\system32\regsvc.exe		Normal	LocalSystem	0		
Remote Procedure Call (RPC) Locator	RpcLocator	Stopped	Manual	Own	Process	
Process c:\winnt\system32\locator.exe		Normal	LocalSystem	0		
Remote Procedure Call (RPC)	RpcSs	Running	Auto	Share	Process	
c:\winnt\system32\svchost.exe	-k rpcss	Normal	LocalSystem	0		
QoS RSVP	RSVP	Running	Manual	Own	Process	
c:\winnt\system32\rsrv.exe	-s	Normal	LocalSystem	0		
Security Accounts Manager	SamSs	Running	Auto	Share	Process	
c:\winnt\system32\lsass.exe		Normal	LocalSystem	0		
Smart Card Helper	SCardDrv	Stopped	Manual	Share	Process	
c:\winnt\system32\scardsvr.exe		Ignore	LocalSystem	0		
Smart Card	SCardSvr	Stopped	Manual	Share	Process	
c:\winnt\system32\scardsvr.exe		Ignore	LocalSystem	0		
Task Scheduler	Schedule	Running	Auto	Share	Process	
c:\winnt\system32\mstask.exe		Normal	LocalSystem	0		
Secondary Logon Service	seclogon	Running	Auto	Share	Process	
c:\winnt\system32\services.exe		Ignore	LocalSystem	0		
System Event Notification	SENS	Running	Auto	Share	Process	
c:\winnt\system32\svchost.exe	-k netsvcs	Normal	LocalSystem	0		
Internet Connection Sharing	SharedAccess	Stopped	Manual	Share	Process	
c:\winnt\system32\svchost.exe	-k netsvcs	Normal	LocalSystem	0		
Print Spooler	Spooler	Stopped	Disabled	Own	Process	
c:\winnt\system32\spoolsv.exe		Normal	LocalSystem	0		
Performance Logs and Alerts	SysmonLog	Stopped	Auto	Own	Process	
c:\winnt\system32\smlogsvc.exe		Normal	LocalSystem	0		
Telephony	TapiSrv	Running	Manual	Share	Process	
c:\winnt\system32\svchost.exe	-k tapisrv	Normal	LocalSystem	0		
Terminal Services	TermService	Stopped	Disabled	Own	Process	
c:\winnt\system32\termsrv.exe		Normal	LocalSystem	0		

```

Telnet TlntSvr Stopped Manual Own Process c:\winnt\system32\tlntsvr.exe
Normal LocalSystem 0
Distributed Link Tracking Server TrkSvr Stopped Disabled Share
Process c:\winnt\system32\services.exe Normal LocalSystem 0
Distributed Link Tracking Client TrkWks Stopped Disabled Share
Process c:\winnt\system32\services.exe Normal LocalSystem 0
Uninterruptible Power Supply UPS Stopped Manual Own Process
c:\winnt\system32\ups.exe Normal LocalSystem 0
Utility Manager UtilMan Stopped Manual Own Process
c:\winnt\system32\utilman.exe Normal LocalSystem 0
Windows Time W32Time Stopped Manual Share Process
c:\winnt\system32\services.exe Normal LocalSystem 0
World Wide Web Publishing Service W3SVC Stopped Manual Share Process
c:\winnt\system32\inet_srv\inetinfo.exe Normal LocalSystem
0
Windows Management Instrumentation WinMgmt Running Auto Own Process
c:\winnt\system32\wbem\winmgmt.exe Ignore LocalSystem 0
Windows Management Instrumentation Driver Extensions Wmi Running Manual
Share Process c:\winnt\system32\services.exe 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
Accessories\System Tools Default User:Accessories\System Tools
Default User
Administrative Tools Default User:Administrative Tools Default User
Startup Default User:Startup Default User
Accessories All Users:Accessories All Users
Accessories\Communications All Users:Accessories\Communications All
Users
Accessories\Entertainment All Users:Accessories\Entertainment All
Users
Accessories\System Tools All Users:Accessories\System Tools All
Users
Administrative Tools All Users:Administrative Tools All Users
GigaNet All Users:GigaNet All Users
Microsoft SQL Server 8.0 All Users:Microsoft SQL Server 8.0 All
Users
Startup All Users:Startup All Users
Accessories CLIENT1\Administrator:Accessories CLIENT1\Administrator
Accessories\Accessibility CLIENT1\Administrator:Accessories\Accessibility
CLIENT1\Administrator
Accessories\Entertainment CLIENT1\Administrator:Accessories\Entertainment
CLIENT1\Administrator
Accessories\System Tools CLIENT1\Administrator:Accessories\System
Tools CLIENT1\Administrator
Administrative Tools CLIENT1\Administrator:Administrative Tools
CLIENT1\Administrator
Startup CLIENT1\Administrator:Startup CLIENT1\Administrator

```

[Startup Programs]

```

Program Command User Name Location
Start rhostsvr c:\rhost\rhostsvr.exe -d\rhost -crhosthdlr.exe
CLIENT1\Administrator Startup
mdac_runonce c:\winnt\system32\runonce.exe All Users
HKLM\SOFTWARE\Microsoft\Windows\CurrentVersion\Run

[OLE Registration]

Object Local Server
Sound (OLE2) sndrec32.exe
Media Clip mplay32.exe
Video Clip mplay32.exe /avi
MIDI Sequence mplay32.exe /mid
Sound Not Available
Media Clip Not Available
Image Document "C:\Program Files\Windows
NT\Accessories\ImageVue\KodakImg.exe"
WordPad Document "%ProgramFiles%\Windows NT\Accessories\WORDPAD.EXE"
Windows Media Services DRM Storage object Not Available
DDSContainerCtl Class Not Available
Bitmap Image mspaint.exe

```

[Internet Explorer 5]

[Following are sub-categories of this main category]

[Summary]

```

Item Value
Version 5.00.2920.0000
Build 52920
Product ID 51876-OEM-0000007-00000
Application Path C:\Program Files\Internet Explorer
Language English (United States)
Active Printer Not Available

Cipher Strength 56-bit
Content Advisor Disabled
IEAK Install No

```

[File Versions]

File	Version	Size	Date	Path	Company
advapi32.dll	5.0.2191.1	349 KB	12/7/1999 12:00:00 PM	C:\WINNT\system32	Microsoft Corporation
advpack.dll	5.0.2920.0	87 KB	12/7/1999 12:00:00 PM	C:\WINNT\system32	Microsoft Corporation
browseic.dll	5.0.2920.0	35 KB	12/7/1999 12:00:00 PM	C:\WINNT\system32	Microsoft Corporation
browseui.dll	5.0.2920.0	793 KB	12/7/1999 12:00:00 PM	C:\WINNT\system32	Microsoft Corporation
ckcnv.exe	5.0.2189.1	9 KB	12/7/1999 12:00:00 PM	C:\WINNT\system32	Microsoft Corporation
comctl32.dll	5.81.2920.0	540 KB	12/7/1999 12:00:00 PM	C:\WINNT\system32	Microsoft Corporation
crypt32.dll	5.131.2173.1	466 KB	12/7/1999 12:00:00 PM	C:\WINNT\system32	Microsoft Corporation

enhsig.dll	<File Missing>	Not Available	Not Available	Not Available
Not Available				
iemigrat.dll	<File Missing>	Not Available	Not Available	Not Available
Not Available				
iesetup.dll	5.0.2920.0	57 KB	12/7/1999 12:00:00 PM	
C:\WINNT\system32		Microsoft Corporation		
iexplore.exe	5.0.2920.0	59 KB	12/7/1999 12:00:00 PM	C:\Program
Files\Internet Explorer		Microsoft Corporation		
imagehlp.dll	5.0.2195.1	125 KB	12/7/1999 12:00:00 PM	
C:\WINNT\system32		Microsoft Corporation		
imghelp.dll	<File Missing>	Not Available	Not Available	Not Available
Not Available				
inseng.dll	5.0.2920.0	72 KB	12/7/1999 12:00:00 PM	
C:\WINNT\system32		Microsoft Corporation		
jobexec.dll	5.0.0.1 47 KB	12/7/1999 12:00:00 PM	C:\WINNT\system32	
Microsoft Corporation				
jscript.dll	5.1.0.4615	476 KB	12/7/1999 12:00:00 PM	
C:\WINNT\system32		Microsoft Corporation		
jsproxy.dll	5.0.2920.0	13 KB	12/7/1999 12:00:00 PM	
C:\WINNT\system32		Microsoft Corporation		
msaahtml.dll	<File Missing>	Not Available	Not Available	Not Available
Not Available				
mshtml.dll	5.0.2920.0	2302 KB	12/7/1999 12:00:00 PM	
C:\WINNT\system32		Microsoft Corporation		
msjava.dll	5.0.3234.0	918 KB	12/7/1999 12:00:00 PM	
C:\WINNT\system32		Microsoft Corporation		
msoss.dll	<File Missing>	Not Available	Not Available	Not Available
Not Available				
msxml.dll	5.0.2920.0	521 KB	12/7/1999 12:00:00 PM	
C:\WINNT\system32		Microsoft Corporation		
occache.dll	5.0.2920.0	86 KB	12/7/1999 12:00:00 PM	
C:\WINNT\system32		Microsoft Corporation		
ole32.dll	5.0.2181.1	966 KB	12/7/1999 12:00:00 PM	
C:\WINNT\system32		Microsoft Corporation		
oleaut32.dll	2.40.4512.1	600 KB	12/7/1999 12:00:00 PM	
C:\WINNT\system32		Microsoft Corporation		
olepro32.dll	5.0.4512.1	160 KB	12/7/1999 12:00:00 PM	
C:\WINNT\system32		Microsoft Corporation		
rsabase.dll	5.0.2150.1	129 KB	12/7/1999 12:00:00 PM	
C:\WINNT\system32		Microsoft Corporation		
rsaenh.dll	<File Missing>	Not Available	Not Available	Not Available
Not Available				
rsapi32.dll	<File Missing>	Not Available	Not Available	Not Available
Not Available				
rsasig.dll	<File Missing>	Not Available	Not Available	Not Available
Not Available				
schannel.dll	5.0.2170.0	140 KB	12/7/1999 12:00:00 PM	
C:\WINNT\system32		Microsoft Corporation		
shdoc401.dll	<File Missing>	Not Available	Not Available	Not Available
Not Available				
shdocvw.dll	5.0.2920.0	1078 KB	12/7/1999 12:00:00 PM	
C:\WINNT\system32		Microsoft Corporation		
shell32.dll	5.0.2920.0	2297 KB	12/7/1999 12:00:00 PM	
C:\WINNT\system32		Microsoft Corporation		
shlwapi.dll	5.0.2920.0	283 KB	12/7/1999 12:00:00 PM	
C:\WINNT\system32		Microsoft Corporation		
url.dll	5.0.2920.0	82 KB	12/7/1999 12:00:00 PM	C:\WINNT\system32
Microsoft Corporation				

urlmon.dll	5.0.2920.0	427 KB	12/7/1999 12:00:00 PM	
C:\WINNT\system32		Microsoft Corporation		
vbscript.dll	5.1.0.4615	428 KB	12/7/1999 12:00:00 PM	
C:\WINNT\system32		Microsoft Corporation		
webcheck.dll	5.0.2920.0	252 KB	12/7/1999 12:00:00 PM	
C:\WINNT\system32		Microsoft Corporation		
win.com	5.0.2134.1	24 KB	12/7/1999 12:00:00 PM	C:\WINNT\system32
Microsoft Corporation				
wininet.dll	5.0.2920.0	457 KB	12/7/1999 12:00:00 PM	
C:\WINNT\system32		Microsoft Corporation		
winsock.dll	3.10.0.103	3 KB	12/7/1999 12:00:00 PM	
C:\WINNT\system32		Microsoft Corporation		
wintrust.dll	5.131.2143.1	162 KB	12/7/1999 12:00:00 PM	
C:\WINNT\system32		Microsoft Corporation		
wsock.vxd	<File Missing>	Not Available	Not Available	Not Available
Not Available				
wsock32.dll	5.0.2152.1	21 KB	12/7/1999 12:00:00 PM	
C:\WINNT\system32		Microsoft Corporation		
wsock32n.dll	<File Missing>	Not Available	Not Available	Not Available
Not Available				

[Connectivity]

Item	Value
Connection Preference	Never dial
EnableHttp1.1	1
ProxyHttp1.1	0

LAN Settings

AutoConfigProxy	Not Available
AutoProxyDetectMode	Enabled
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	4055 MB
Available Disk Space	1783 MB
Maximum Cache Size	126 MB
Available Cache Size	127 MB

[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
Administrator	Administrator	8/23/1999 to 8/23/2000	sha1RSA	
Administrator	Administrator	1/27/2000 to 1/2/2100	sha1RSA	

[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
Local intranet	Medium-low
Trusted sites	Low
Internet	Medium
Restricted sites	High

Component Services Configuration

Component Services Configuration

COM+ Component TPCC.AllTxns Settings:

- Transactions not supported
- Enable object pooling
- Minimum pool size 34
- Maximum pool size 34
- Creation timeout 120,000
- Enable object construction
- Enable just in time activation
- Concurrency required

Internet Information Server Registry Parameters

```
\registry\machine\system\currentcontrolset\services\inetinfo
Parameters
ListenBackLog = REG_DWORD 0x00000019
DispatchEntries = REG_MULTI_SZ "LDAPSVC"
PoolThreadLimit = REG_DWORD 0x000000a0
ThreadTimeout = REG_DWORD 0x00015180
DisableMemoryCache = REG_DWORD 0x00000001
ObjectCacheTTL = REG_DWORD 0xffffffff
```

```
BandwidthLevel = REG_DWORD 0xffffffff
MemoryCacheSize = REG_DWORD 0x00000000
Performance
Library = infoctrs.dll
Open = OpenINFOPerformanceData
Close = CloseINFOPerformanceData
Collect = CollectINFOPerformanceData
Last Counter = REG_DWORD 0x00000a36
Last Help = REG_DWORD 0x00000a37
First Counter = REG_DWORD 0x000009f6
First Help = REG_DWORD 0x000009f7
Library Validation Code = REG_BINARY 0x00000010 0x1dc8dfb2
0x01bf6917 0x00002510 0x00000000
WbemAdapFileTime = REG_BINARY 0x00000008 0xa471a000 0x01bf40ed
WbemAdapFileSize = REG_DWORD 0x00002510
WbemAdapStatus = REG_DWORD 0x00000000
```

World Wide Web Server Registry Parameters

```
\registry\machine\system\currentcontrolset\services\w3svc
Type = REG_DWORD 0x00000020
Start = REG_DWORD 0x00000003
ErrorControl = REG_DWORD 0x00000001
ImagePath = REG_EXPAND_SZ C:\WINNT\System32\inetssrv\inetinfo.exe
DisplayName = World Wide Web Publishing Service
DependOnService = REG_MULTI_SZ "IISADMIN"
DependOnGroup = REG_MULTI_SZ
ObjectName = LocalSystem
Description = Provides Web connectivity and administration through the
Internet Information Services snap-in.
ASP
NOTE = This is for backward compatibility only.
Parameters
Parameters
MajorVersion = REG_DWORD 0x00000005
MinorVersion = REG_DWORD 0x00000000
InstallPath = C:\WINNT\System32\inetssrv
CertMapList = C:\WINNT\System32\inetssrv\iisrmap.dll
AccessDeniedMessage = Error: Access is Denied.
Filter DLLs =
AcceptExOutstanding = REG_DWORD 0x00000028
LogFileDirectory = C:\WINNT\System32\LogFiles
ADCLaunch
AdvancedDataFactory
RDSServer.DataFactory
Script Map
Virtual Roots
/ = c:\inetpub\wwwroot,,207
/IISAdmin = C:\WINNT\System32\inetssrv\iisadmin,,201
/IISSamples = c:\inetpub\iissamples,,201
/MSADC = c:\program files\common files\system\msadc,,205
/IISHelp = c:\winnt\help\iishelp,,201
/Scripts = c:\inetpub\scripts,,204
/Printers = C:\WINNT\web\printers,,201
Performance
Library = w3ctrs.dll
Open = OpenW3PerformanceData
```

```

    Close = CloseW3PerformanceData
    Collect = CollectW3PerformanceData
    Last Counter = REG_DWORD 0x00000ada
    Last Help = REG_DWORD 0x00000adb
    First Counter = REG_DWORD 0x00000a38
    First Help = REG_DWORD 0x00000a39
    Library Validation Code = REG_BINARY 0x00000010 0x1f7f9062
0x01bf6917 0x00003d10 0x00000000
    WbemAdapFileTime = REG_BINARY 0x00000008 0xa471a000 0x01bf40ed
    WbemAdapFileSize = REG_DWORD 0x00003d10
    WbemAdapStatus = REG_DWORD 0x00000000
    Security
        Security = REG_BINARY 0x000000b8 0x80140001 0x000000a0 0x000000ac
0x00000014 0x00000030 0x001c0002 0x00000001 0x00148002 0x000f01ff
0x00000101 0x01000000 0x00000000 0x00700002 0x00000004 0x00180000
0x000201fd 0x00000101 0x05000000 \
        0x00000012 0x006f0074 0x001c0000 0x000f01ff 0x00000201
0x05000000 0x00000020 0x00000220 0x00730072 0x00180000 0x0002018d
0x00000101 0x05000000 0x0000000b 0x00000220 0x001c0000 0x000201fd
0x00000201 0x05000000 0x00000020 \

```

```

        0x00000223 0x00730072 0x00000101 0x05000000 0x00000012
0x00000101 0x05000000 0x00000012
    Enum
        0 = Root\LEGACY_W3SVC\0000
        Count = REG_DWORD 0x00000001
        NextInstance = REG_DWORD 0x00000001

```

TPCC Application Settings

```

\registry\machine\software\unisys
    TPCC
        MAXTERMS = 20000
        SERVERNAME = SHILOH8
        DELIVERYTHREADS = 7
        DATABASE = tpcc

```


Appendix D - RTE Code

Admin Environment

```
if '%1'==' ' goto usage
if '%2'==' ' goto usage
if '%3'==' ' goto usage

:paramok

set WEBCHECKWIDS=1
set WEBDIAGLEVEL=4
set WEBEVENTLOG=0
set WEBEVENTHOST=
set WEBCHECKLEVEL=2

c:\webdriver\webadmin.exe -cweb%1.cfg -m%2 -d%3 -s160
if %ERRORLEVEL% NEQ 0 pause

goto end

:usage
@ECHO You must supply the following parameters:
@ECHO "webnnn.cmd <cfg file suffix> <min driver #> <max driver #>"
pause

:end
```

Profiles used for Performance Run

Web3940.cfg

```
//
// Common Driver Configuration
//
INITBASEPORT 4300
INITSYNCMAX 4
INITPAUSE 1
INITRSIZE 400
INITTSIZE 100
INITRWID 1, 3940
INITFIXEDWID 1
INITCCLAST 208
INITCCID 208
INITCITEMID 208
//
// Configuration Driver 1
//
1 INITIPADDR 192.168.90.31
1 INITIISADDR 192.168.10.1
```

```
1 INITIISPORT 80
1 INITBROWSERS 990
1 INITMYWID 1,99

//
// Configuration Driver 2
//
2 INITIPADDR 192.168.90.31
2 INITIISADDR 192.168.20.2
2 INITIISPORT 80
2 INITBROWSERS 990
2 INITMYWID 100,198

//
// Configuration Driver 3
//
3 INITIPADDR 192.168.90.31
3 INITIISADDR 192.168.30.3
3 INITIISPORT 80
3 INITBROWSERS 990
3 INITMYWID 199,297

//
// Configuration Driver 4
//
4 INITIPADDR 192.168.90.31
4 INITIISADDR 192.168.40.4
4 INITIISPORT 80
4 INITBROWSERS 990
4 INITMYWID 298,396

//
// Configuration Driver 5
//
5 INITIPADDR 192.168.90.32
5 INITIISADDR 192.168.11.1
5 INITIISPORT 80
5 INITBROWSERS 990
5 INITMYWID 397,495

//
// Configuration Driver 6
//
6 INITIPADDR 192.168.90.32
6 INITIISADDR 192.168.21.2
6 INITIISPORT 80
6 INITBROWSERS 990
6 INITMYWID 496,594

//
// Configuration Driver 7
//
7 INITIPADDR 192.168.90.32
7 INITIISADDR 192.168.31.3
```

```

7 INITIISPORT 80
7 INITBROWSERS 990
7 INITMYWID 595,693

//
// Configuration Driver 8
//
8 INITIPADDR 192.168.90.32
8 INITIISADDR 192.168.41.4
8 INITIISPORT 80
8 INITBROWSERS 990
8 INITMYWID 694,792

//
// Configuration Driver 9
//
9 INITIPADDR 192.168.90.33
9 INITIISADDR 192.168.12.1
9 INITIISPORT 80
9 INITBROWSERS 990
9 INITMYWID 793,891

//
// Configuration Driver 10
//
10 INITIPADDR 192.168.90.33
10 INITIISADDR 192.168.22.2
10 INITIISPORT 80
10 INITBROWSERS 990
10 INITMYWID 892,990

//
// Configuration Driver 11
//
11 INITIPADDR 192.168.90.33
11 INITIISADDR 192.168.32.3
11 INITIISPORT 80
11 INITBROWSERS 990
11 INITMYWID 991,1089

//
// Configuration Driver 12
//
12 INITIPADDR 192.168.90.33
12 INITIISADDR 192.168.42.4
12 INITIISPORT 80
12 INITBROWSERS 990
12 INITMYWID 1090,1188

//
// Configuration Driver 13
//
13 INITIPADDR 192.168.90.34
13 INITIISADDR 192.168.13.1
13 INITIISPORT 80
13 INITBROWSERS 990
13 INITMYWID 1189,1287

//

```

```

// Configuration Driver 14
//
14 INITIPADDR 192.168.90.34
14 INITIISADDR 192.168.23.2
14 INITIISPORT 80
14 INITBROWSERS 990
14 INITMYWID 1288,1386

//
// Configuration Driver 15
//
15 INITIPADDR 192.168.90.34
15 INITIISADDR 192.168.33.3
15 INITIISPORT 80
15 INITBROWSERS 990
15 INITMYWID 1387,1485

//
// Configuration Driver 16
//
16 INITIPADDR 192.168.90.34
16 INITIISADDR 192.168.43.4
16 INITIISPORT 80
16 INITBROWSERS 990
16 INITMYWID 1486,1584

//
// Configuration Driver 17
//
17 INITIPADDR 192.168.90.35
17 INITIISADDR 192.168.14.1
17 INITIISPORT 80
17 INITBROWSERS 990
17 INITMYWID 1585,1683

//
// Configuration Driver 18
//
18 INITIPADDR 192.168.90.35
18 INITIISADDR 192.168.24.2
18 INITIISPORT 80
18 INITBROWSERS 990
18 INITMYWID 1684,1782

//
// Configuration Driver 19
//
19 INITIPADDR 192.168.90.35
19 INITIISADDR 192.168.34.3
19 INITIISPORT 80
19 INITBROWSERS 990
19 INITMYWID 1783,1881

//
// Configuration Driver 20
//
20 INITIPADDR 192.168.90.35
20 INITIISADDR 192.168.44.4
20 INITIISPORT 80

```

```

20 INITBROWSERS 990
20 INITMYWID 1882,1980

//
// Configuration Driver 21
//
21 INITIPADDR 192.168.90.36
21 INITIISADDR 192.168.15.1
21 INITIISPORT 80
21 INITBROWSERS 980
21 INITMYWID 1981,2078

//
// Configuration Driver 22
//
22 INITIPADDR 192.168.90.36
22 INITIISADDR 192.168.25.2
22 INITIISPORT 80
22 INITBROWSERS 980
22 INITMYWID 2079,2176

//
// Configuration Driver 23
//
23 INITIPADDR 192.168.90.36
23 INITIISADDR 192.168.35.3
23 INITIISPORT 80
23 INITBROWSERS 980
23 INITMYWID 2177,2274

//
// Configuration Driver 24
//
24 INITIPADDR 192.168.90.36
24 INITIISADDR 192.168.45.4
24 INITIISPORT 80
24 INITBROWSERS 980
24 INITMYWID 2275,2372

//
// Configuration Driver 25
//
25 INITIPADDR 192.168.90.37
25 INITIISADDR 192.168.16.1
25 INITIISPORT 80
25 INITBROWSERS 980
25 INITMYWID 2373,2470

//
// Configuration Driver 26
//
26 INITIPADDR 192.168.90.37
26 INITIISADDR 192.168.26.2
26 INITIISPORT 80
26 INITBROWSERS 980
26 INITMYWID 2471,2568

//
// Configuration Driver 27

```

```

//
27 INITIPADDR 192.168.90.37
27 INITIISADDR 192.168.36.3
27 INITIISPORT 80
27 INITBROWSERS 980
27 INITMYWID 2569,2666

//
// Configuration Driver 28
//
28 INITIPADDR 192.168.90.37
28 INITIISADDR 192.168.46.4
28 INITIISPORT 80
28 INITBROWSERS 980
28 INITMYWID 2667,2764

//
// Configuration Driver 29
//
29 INITIPADDR 192.168.90.38
29 INITIISADDR 192.168.17.1
29 INITIISPORT 80
29 INITBROWSERS 980
29 INITMYWID 2765,2862

//
// Configuration Driver 30
//
30 INITIPADDR 192.168.90.38
30 INITIISADDR 192.168.27.2
30 INITIISPORT 80
30 INITBROWSERS 980
30 INITMYWID 2863,2960

//
// Configuration Driver 31
//
31 INITIPADDR 192.168.90.38
31 INITIISADDR 192.168.37.3
31 INITIISPORT 80
31 INITBROWSERS 980
31 INITMYWID 2961,3058

//
// Configuration Driver 32
//
32 INITIPADDR 192.168.90.38
32 INITIISADDR 192.168.47.4
32 INITIISPORT 80
32 INITBROWSERS 980
32 INITMYWID 3059,3156

//
// Configuration Driver 33
//
33 INITIPADDR 192.168.90.39
33 INITIISADDR 192.168.18.1
33 INITIISPORT 80
33 INITBROWSERS 980

```

```

33 INITMYWID 3157,3254

//
// Configuration Driver 34
//
34 INITIPADDR 192.168.90.39
34 INITIISADDR 192.168.28.2
34 INITIISPORT 80
34 INITBROWSERS 980
34 INITMYWID 3255,3352

//
// Configuration Driver 35
//
35 INITIPADDR 192.168.90.39
35 INITIISADDR 192.168.38.3
35 INITIISPORT 80
35 INITBROWSERS 980
35 INITMYWID 3353,3450

//
// Configuration Driver 36
//
36 INITIPADDR 192.168.90.39
36 INITIISADDR 192.168.48.4
36 INITIISPORT 80
36 INITBROWSERS 980
36 INITMYWID 3451,3548

//
// Configuration Driver 37
//
37 INITIPADDR 192.168.90.40
37 INITIISADDR 192.168.19.1
37 INITIISPORT 80
37 INITBROWSERS 980
37 INITMYWID 3549,3646

//
// Configuration Driver 38
//
38 INITIPADDR 192.168.90.40
38 INITIISADDR 192.168.29.2
38 INITIISPORT 80
38 INITBROWSERS 980
38 INITMYWID 3647,3744

//
// Configuration Driver 39
//
39 INITIPADDR 192.168.90.40
39 INITIISADDR 192.168.39.3
39 INITIISPORT 80
39 INITBROWSERS 980
39 INITMYWID 3745,3842

//
// Configuration Driver 40
//

```

```

40 INITIPADDR 192.168.90.40
40 INITIISADDR 192.168.49.4
40 INITIISPORT 80
40 INITBROWSERS 980
40 INITMYWID 3843,3940

//

```

Driver Environment

```

if '%1'==' ' goto usage

:paramok

set WEBDRIVERNO=%1
set WEBADMBASEPORT=4300
set WEBDIAGLEVEL=2
set WEBEVENTLOG=1
set WEBEVENTHOST=
set WEBLOGLEVEL=1
set WEBSINGLETRAN=0
set WEBTPCCAUDIT=0
set WEBRTFUDGETM=110
set WEBNEWORDERPROB=4484
set WEBPAYMENTPROB=4307
set WEBORDERSTATUSPROB=403
set WEBDELIVERYPROB=403
set WEBSTOCKLEVELPROB=403
set WEBTTNEWORDER=12030
set WEBTTPAYMENT=12030
set WEBTTDELIVERY=5060
set WEBTTORDERSTATUS=10070
set WEBTTSTOCKLEVEL=5060

webdriver.exe

goto end

:usage
@ECHO You must supply the following parameters:
@ECHO "webdriver.cmd <driver number>"
pause

:end
exit

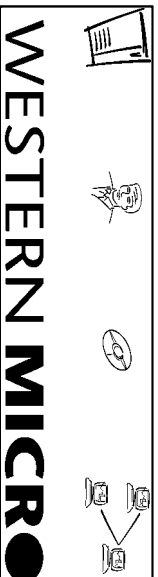
```

Appendix E - Disk Storage

TPC-C 180-Day Disk Space Requirements						
Warehouses		4000	tpmC	48,767.76	tpmC/W	12.19
Table	Initial Rows	Data KB	Index KB	Extra 5% KB	Total With 5% KB	
Warehouse	4,000	432	48	24	504	
District	40,000	4,448	48	225	4,721	
Customer	120,000,000	87,272,728	5,204,064	4,623,840	97,100,632	
History (D)	120,000,000	6,666,680	120		6,666,800	
Order (D)	120,000,000	3,678,168	1,855,272		5,533,440	
New-Order	36,000,000	569,176	1,344	28,526	599,046	
Order-Line (D)	1,200,000,541	75,000,040	158,776		75,158,816	
Item	100,000	9,528	64	480	10,072	
Stock	400,000,000	128,000,000	239,304	6,411,965	134,651,269	
Totals KB		301,201,200	7,459,040	11,065,059	319,725,299	
Db/Filegroup	Count	Size MB	MB Allocated	MB Loaded +5%	MB for 8 Hours	
master, model & msdb	22	22	22	22	22	
tempdb	10	10	10	10	10	
mssql70_lpcr_root	1	10	10	10	10	
mssql70_cs_fg	5	45,500	227,500	226,320	226,320	
mssql70_misc_fg	5	22,500	112,500	85,912	106,116	
Total Allocated MB			340,042	312,274	332,478	
MB						
Dynamic Space MB	83,345 Sum of data for orders, order_line & history					
Static Space	228,887 Sum of data+index+5% - Dynamic Space					
Free Space	27,810 Total allocated space - (Dynamic & Static Spaces)					
Daily Growth	16,258 (Dynamic Space / (W * 62.5)) * tpmC					
Daily Spread	3,423 Free space - 1.5 * Daily growth (zero if negative)					
	0 SQL Server can be configured to eliminate Daily Spread					
180 Day Space MB	3,155,349 Static Space + 180 * (Daily Growth + Daily Spread)					
180 Day Space GB	3,081.40					
8 hr log GB	114.67 (need double for mirroring)					
Disk Capacity MB	8392	8.195 GB		Capacity of 9GB disks		
	17166	16.764 GB		Capacity of 18GB disks		
Space Usage	GB Needed	Disks Priced	GB Priced			
180-day space DB	3081.40 GB	260	4358.64 GB	18GB drives		
		0	0.00 GB	9GB drives		
Total DB		260	4358.64 GB			
8-hr log+mirror OS, SQL Server	229.34 GB	14	234.70 GB	18GB drives		
	4.24 GB	1	8.20 GB	9GB drive		
Total space	3314.98 GB	275	4601.53 GB			

TPC-C 180-Day Dynamic Table Growth Rates for 8 Hours							48,767.76 tpmC
Tables	Initial (KB)	Final (KB)	Change(KB)	Unused (KB)	KB /New-Order	8-Hr MB	
History	6,666,800	7,220,720	553,920	938,240	0.0562	7,795.61	
Orders	5,533,440	6,826,928	1,293,488	8,768	0.1313	8,404.57	
Order_line	75,158,816	82,020,256	6,861,440	105,320	0.6963	89,315.44	
Dynamic	87,359,056	96,067,904	8,708,848	1,052,328	0.8838	105,515.62	
New_order	570,520	896,168	325,648	75,936	0.0330	1,312.63	
Static							
Log	1,426,089	51,440,159	50,014,070		5.0757	117,422.50	114,670
SUM(next_o_id)	120,040,000	129,893,638	9,853,638				

Appendix F - Third-Party Price Quotations



Western Micro Technology
(800)937-8446

2/15/00

Quoted to: Jerry Bugger/Unisys for TPC.org
Prepared by: Tony Jacobs

Qty.	Description	Style	Price	Extended Price
8	PROC: 650MHz Pentium III Xeon /2MB Cache & VRMs	XEO3550-2MB	\$5,157	\$41,256
1	BRD: Processor Mezzanine Board, 0 Proc.	ESR81-MEZ	\$1,179	\$1,179
32	MEM: 1GB Memory, SDRAM, Buf 6ns	DIM6168-1GB	\$6,630	\$212,160
1	BRD: Memory Carrier Board, 0 Mem.	ESR81-MCB	\$737	\$737
2	MEM: Cache Coherency Filter, 4x SDRAM	ESR81-CC4	\$921	\$1,842
1	CTRL: cLAN, PCI Host Adapter & Cable	PCI1001-CXG	\$675	\$675
1	DISK: 9GB, 10K SCSI LVD, SCA	HDL91102-CX1	\$516	\$516
1	SYS MGT: ESS5080 Value Add Software	ESS508011-N	\$368	\$368
1	MONITOR: 15-inch Color	EVG2100-P	\$221	\$221
Server Total				\$258,954
302	DISK: 18GB Drive, 10K SCSI LVD, SCA 10% spares	OSD18209-W45	\$940	\$283,880
35	CAB: Disk, 8 SCA w/ I/F cards, 0 Disks, 3U	OSM310300-L05	\$2,118	\$74,130
2	CAB: Disk, 8 SCA w/ RAID Cntl'r, 0MB, 0 Disks, 3U	OSM311000-LR	\$4,191	\$8,382
2	MEM: 32MB OSM cache	OSM1032-MEM	\$187	\$374
2	PWR: 2nd Power Supply Upgrade, OSM	OSM3000-BPF	\$392	\$784
1	PWR:3000 VA UPS, 3U	UPD30001-SXR	\$1,897	\$1,897
12	PWR: Distribution Kit, 220V	SFR220-PWR	\$42	\$504
22	CBL: SCSI 68-pin VHD Conn's, 5 meter	CBL134-5	\$142	\$3,124
15	CBL: SCSI 68-pin VHD Conn's, 0.5 meter	CBL134-CAT	\$69	\$1,035
37	CAB: Rackmount Kit for Disk Cages	OSM3000-RMK	\$97	\$3,589
4	CAB: 36U x 19" x 34" Cabinet, Open	RM361934-OFT	\$884	\$3,536
4	DOOR: 36U x 19", Rear	RM3619-RDR	\$277	\$1,108
4	PNL: 36U x 34" Side Skins, L&R	RM3634-SDS	\$221	\$884
Storage Total				\$383,227
4	SYS: NetServer LC3, w/1 500MHz Proc., 0MB Mem	D7127-AV	\$1,399	\$5,596
4	PROC:1x500MHz Pentium III/512KB Cache UPG	D7130-AV	\$827	\$3,308
16	MEM: 128 MB SDRAM Memory Upgrade	D6098-AV	\$199	\$3,184
4	DISK: 9GB SCSI 3.5 Internal	D4911-AV	\$317	\$1,268
8	ETHERNET: 10/100TX Mbit/sec, PCI 32-bit	D5013-AV	\$74	\$592
4	CTRL: cLAN, PCI Host Adapter & Cable	PCI1001-CXG	\$675	\$2,700
1	SWITCH: cLAN, 8-port, 1.25Gbit	SWT50081-CXG	\$5,313	\$5,313
4	MONITOR:15-inch Color	EVG2100-P	\$221	\$884
Client Total				\$22,845
Server, Storage and Client Total				\$665,026
Discount based on total dollar volume				(\$66,503)
Quote Total				\$598,523

Quote valid for 90 days.

Disks come with return to factory, 5 year warranty, 7 day replenishment

FEB 15 2000 14:31 FR MICROSOFT REC'D #1 425 936 7329 TO 919494652552 P.03/03
One Microsoft Way
Redmond, WA 98052-6399 Fax 425 936 7329
http://www.microsoft.com/

Microsoft

February 15, 2000

Mr. Jerrold Buggert
Director, Systems Analysis, Modeling, Measurement
Unisys Corporation
25725 Jeronimo Road
Mission Viejo, CA 92691
949-380-5106
Fax (949) 465-2552

Dear Mr. Buggert:

Here is the information you requested regarding U.S. pricing of several Microsoft products to be used in conjunction with TPC-C benchmark testing.

Microsoft SQL Server 2000 Version 8, Enterprise Edition (one server w/ unlimited CALs)	\$28,999
Windows 2000 Server (one server w/ 25 CALs, no discount for additional servers)	\$809
Visual C++ Professional 6.0 (single copy)	\$549
5-year maintenance for above software @ \$2095/yr	\$10,475

This quote is valid for the next 90 days. Some products may not be currently orderable but will be available through Microsoft's normal distribution by July 31, 2000.

If I can be of any further assistance, please contact me at 425-936-5301 or tomkr@microsoft.com.

Yours truly,



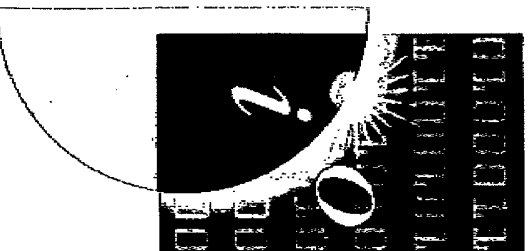
Thomas Kreyche
Product Manager
SQL Server Marketing

Microsoft Corporation is an equal opportunity employer.

** TOTAL PAGE.03 **

Quotation

mylex
MOVING DATA - SMARTER



To: Rick Freeman	From: Phil Drachman
Cc: Glenn Weeks	Phone: 949/753-2840
	Fax: 949/753-2899
	Email: pdrachman@mylex.com
Company: Unisys - Mission Viejo	Date: 2/09/00
RE: Mylex ExtremeRAID 2000	Total Pages: 1
Price quote	

Dear Mr. Freeman,

Mylex is pleased to submit the following quotation for ExtremeRAID 2000 controller:

<u>Mylex P/n/</u>	<u>Description</u>	<u>Reseller Suggested price</u>
<u>ExtremeRAID 2000, PCI RAID Ultra 160/mSCSI 4 Channel RAID controller:</u>		
<u>E2000-4-32NB</u>	[4 external +2 internal chnl, 32MB cache, no BBU]	\$1872

Notes: Above price is based on FOB, ex-factory, Fremont, California and firm for 90 days.

Lead time: 30 days ARO

Product is covered by a 5 year warranty.

Failed product will be repaired or replaced within 7 days.

Best regards,

Phil Drachman, Regional Sales Manager – Southwest OEM

Approved by : Bruce Foster, Director Sales – OEM West

Cc: Steve Page – Director PCI Marketing

34651 Ardenwood Blvd.
Fremont, CA 94555-3607
Tel: 510.706-6100
Sales Fax: 510.745-8018
www.mylex.com



NETLUX

1-800-739-1780

Phone#626-851-9737

Fax #626-851-9837

14180 Live Oak Ave., Unit E
Baldwin Park, Ca. 91760

February 10, 2000

Rick Freeman
Unisys Corporation
25725 Jeronimo Road
Mission Viejo, CA 92691
Fax: (949) 380-5539
cc: (949) 380-5344

Quotation

Quantity	Part No.	Description	Unit Price
1-50	NX-SW8	NETLUX 8-port 10/100Mbps FAST Ethernet Switch	\$179.00

Terms and Conditions:
FOB Origin
Quote Valid for 90 days
5 Year Warranty

Sincerely,
Martin Parry
NETLUX

Feb-11-00 10:21A NetCruiser Tech. Inc.

732 339 1686

P.02

Quoted To:

NetCruiser Technologies, Inc.
1347 Stelton Road
Piscataway, NJ 08854
United State

Quote Number:
020801

Quote Date:
Feb 8, 2000

Quoted to:

*Rick Freeman.
Unsys Corp.
25725 Jeronimo Rd.
Mission Viejo CA 92691.*

Customer ID

Good Thru

Payment Terms

Sales Rep

END99999

5/9/00

Prepaid

NCTT112

Quantity

Item

Description

Unit Price

Extension

10.00 HB-1009DX/P

8 PORT 10 Base-T Hub, 8
STP/UTP, 1 BNC Plastic
Price Good For 90 Days.
Price also valid for
quantity greater then 10
pieces. Price does not
include freight.

Lifetime Warranty

24.00

240.00

Subtotal	240.00
Sales Tax	
Freight	
Total	240.00