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**Itautec S.A.**

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TPC Benchmark™ C  
Full Disclosure Report  
for  
Servidor ZX400 4P  
using  
Microsoft SQL Server 2005  
Enterprise Edition  
and  
Microsoft Windows Server 2003 x64  
Enterprise Edition SP1

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Second Edition  
Submitted December 2005

## **First Edition – December 01, 2005**

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

All performance data contained in this report were obtained in a rigorously controlled environment. Results obtained in other operating environments may vary significantly. Itautec S.A. does not warrant or represent that a user can or will achieve similar performance expressed in transactions per minute (tpmC) or normalized price/performance (\$/tpmC). No warranty of system performance or price/performance is expressed or implied in this report.

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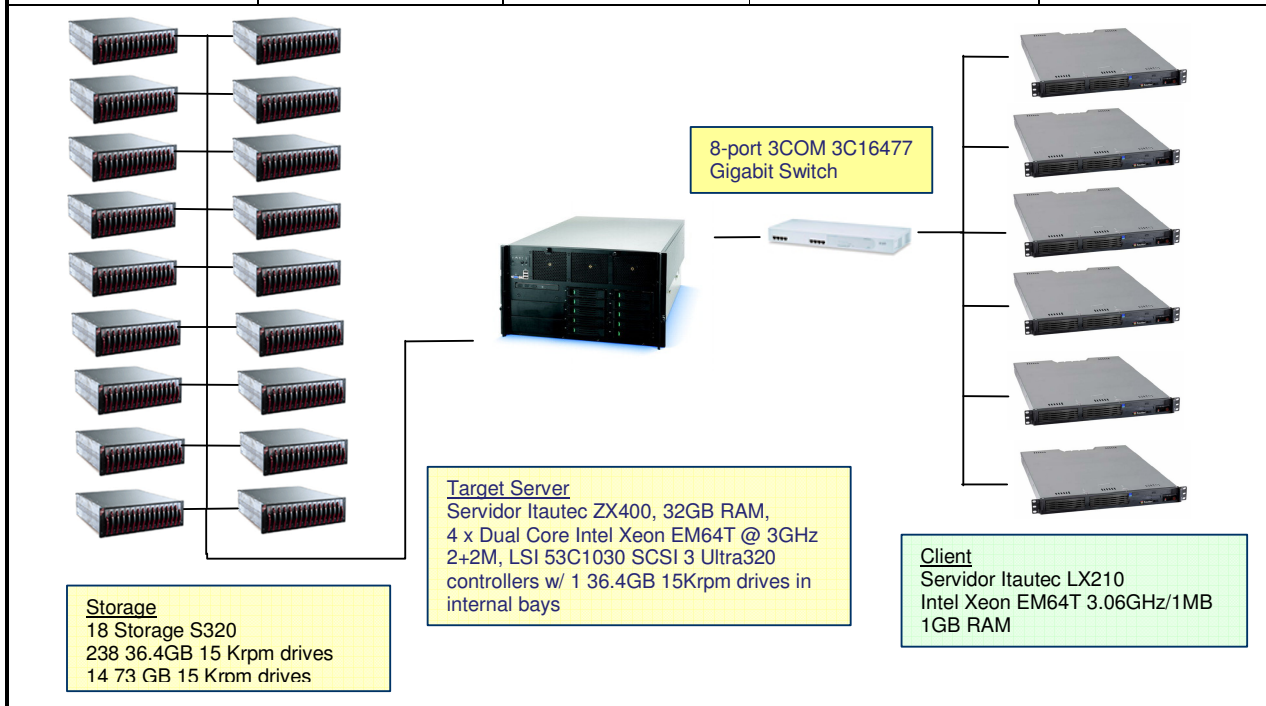


**Servidor Itautec ZX400 4P  
C/S with Servidor Itautec  
LX210 1P**

**TPC-C Rev. 5.5**

**Report Date:** 12/01/2005

<b>Total System Cost</b>	<b>TPC-C Throughput</b>	<b>Price/Performance</b>	<b>Availability Date</b>	
<b>R\$ 1,350,250.01 BRL</b>	<b>85,858</b>	<b>R\$ 15.34 BRL / tpmC:</b>	<b>11/30/2005</b>	
<b>Processors</b>	<b>Database Manager</b>	<b>Operating System</b>	<b>Other Software</b>	<b>Number of Users</b>
4 Intel Xeon EM64T @ 3GHz 2+2M - Server 1 Intel Xeon EM64T 3.06 GHz - Client	Microsoft SQL Server 2005 Enterprise Edition	Windows Server 2003 Enterprise Edition	Microsoft Visual C++ Microsoft COM+	<b>68,000</b>



System Components	Server		Each Client	
	Quantity	Description	Quantity	Description
<b>Processor</b>	4	3.0 GHz Intel Xeon EM64T 2+2M w/ 2 MB cache / 800 MHz FSB	1	3.06 GHz Intel Xeon EM64T w/1MB cache
<b>Memory</b>	16	2GB Register DDR2 @ 400MHz	2	512 MB Register ECC DDR DIMM @ 266 MHz
<b>Disk Controllers</b>	4 2 1	LSI Logic MegaRAID SCSI 320-2E LSI Logic MegaRAID SCSI 320-4X LSI Logic MegaRAID SCSI 320-2X	1	Intel® 82801EB I/O Controller Hub 5
<b>Disk Drives</b>	238 14	36.4 GB SCSI Drive 15 Krpm 73 GB SCSI Drive 15Krpm	1	80 GB 7200 SATA Drive
<b>Total Storage</b>		8845.2 GB		80 GB

# Numerical Quantities Summary

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MQTh, Computed Maximum Qualified Throughput

85,858 tpmC

## Response Times (in seconds)

	Average	90 th	Max
New Order	0.20	0.33	5.15
Payment	0.14	0.22	1.21
Order Status	0.18	0.29	4.40
Delivery (interactive)	0.10	0.11	0.82
Delivery (deferred)	0.16	0.33	4.30
Stock Level	0.23	0.41	2.09
Menu	0.10	0.11	1.09

## Response time delay added for emulated components

Menu 0.1  
Resp. 0.1

## Transaction Mix, in percent of total transactions


New Order	44.91%
Payment	43.04%
Order-Status	4.01%
Delivery	4.02%
Stock-Level	4.02%

## Keying/Think Times (in seconds)

	Min		Average		Max	
New Order	18.02	0.00	18.03	12.06	18.15	120.53
Payment	3.02	0.00	3.03	12.06	3.15	120.53
Delivery	2.02	0.00	2.03	5.08	2.15	50.52
Stock Level	2.02	0.00	2.03	5.07	2.15	50.53
Order Status	2.02	0.00	2.03	10.06	2.15	100.53

## Test Duration

Ramp-up time	34 minutes
Measurement interval	120 minutes
Number of checkpoints	4
Checkpoint interval	30 minutes
Number of transactions (all types) completed in measurement interval	23,862,034

	Itautec	Servidor Itautec ZX400 4P			TPC-C Rev. 5.5		
					Report Date: Dec 01, 2005		
Description	Part Number	Third Party		Unit Price R\$	Quantity	Extended Price	3 gr. Maint. Price
		Brand	Pricing				
<b>Server Hardware</b>							
Servidor Itautec ZX400 4P							
Base System with 4 x Xeon MP 3.0 GHz/2x2MB 667	I6950	Itautec	1	104.355	1	104.355	-
2 GB DDR2-400 SDRAM	I2393	Itautec	1	5.132	16	82.112	-
36 GB Ultra320 15Krpm HDD	Included	Itautec	1	-	2	-	-
On-Board LAN Broadcom NetXtreme 1000Gbps	Included	Itautec	1	-	2	-	-
CD-ROM, Internal SCSI Adapter	Included	Itautec	1	-	1	-	-
Upgrade to 3-year / 4-hour response / 7days - 24hrs	2106_05	Itautec	1	4.500	1	-	4.500
Monitor 15" Sync Master 591S	I1555	Itautec	1	390	1	390	-
UPS SMART APC 1	F2643	Itautec	1	1.800	1	1.800	-
					<b>Subtotal</b>	188.657	4.500
<b>Disk Subsystem</b>							
SCSI RAID Controller U320 2-channel PCI-E	I1710	Itautec	1	4.849	4	19.396	-
SCSI RAID Controller U320 2-channel PCI-X	G7622	Itautec	1	4.038	1	4.038	-
SCSI RAID Controller U320 4-channel PCI-X	G7624	Itautec	1	7.918	2	15.836	-
36 GB Ultra320 15K rpm	F6853	Itautec	1	2.728	238	649.264	-
73 GB Ultra320 15K rpm	F4641	Itautec	1	3.583	14	50.162	-
36 GB Ultra320 15K rpm (10% spare)	F6853	Itautec	1	2.728	24	-	65.472
73 GB Ultra320 15K rpm (10% spare)	F4641	Itautec	1	3.583	2	-	7.166
Storage Itautec S320	F1781	Itautec	1	20.321	18	365.783	-
Kit Rack for Storage	F1390	Itautec	1	345	18	6.210	-
Rack Itautec F2400	F2400	Itautec	1	5.281	3	15.843	-
					<b>Subtotal</b>	1.126.532	72.638
<b>Server Software</b>							
Microsoft Windows 2003 Server Enterprise Edition x64	P72-00981	Microsoft	1	10.434	1	10.434	-
SQL Server 2005 Standard Edition 32 bits	81852	Microsoft	1	16.460	1	16.460	-
					<b>Subtotal</b>	26.894	-
<b>Client Hardware</b>							
Servidor Itautec LX-210							
Base System with 1x Xeon EM64T 3.06GHz/HMB	C0V4F	Itautec	1	6.123	6	36.741	-
1x XEON EM64T 3.06GHz/HMB BTO Option	G9230	Itautec	1	1.123	6	6.741	-
2 x 512MB Memory	Included	Itautec	1	-	6	-	-
1x 80GB SATA 7200rpm	Included	Itautec	1	-	6	-	-
2 x Intel Pro/1000 Server Adapter	Included	Itautec	1	-	6	-	-
CD-ROM, On-Board LAN	Included	Itautec	1	-	6	-	-
Upgrade to 3-year / 4-hour response / 7days - 24hrs	001839	Itautec	1	357	6	-	2.142
Monitor 15" SYNC MASTER 551S	E9801	Itautec	1	410	6	2.460	-
					<b>Subtotal</b>	45.941	2.142
<b>Client Software</b>							
Microsoft Windows 2003 Server Standard Edition 32 bits	H0085	Microsoft	1	3.000	1	3.000	-
Visual C++ .NET Standard	254-00257	Microsoft	1	336	1	336	-
					<b>Subtotal</b>	3.336	-
<b>Network components</b>							
Switch 16P Baseline 10/100/1000	G9949	Itautec	1	2.100	2	4.200	-
Switch 16P Baseline 10/100/1000 (spares)	G9949	Itautec	1	2.100	2	4.200	-
					<b>Subtotal</b>	4.200	-
					<b>TOTAL</b>	1.395.561	79.280
Large volume purchase with cash in advance Discount on Itautec Hardware (11.58%)						158.105	
					<b>TOTAL</b>	1.237.455	79.280
Pricing: 1 - Itautec						3-Yr. Cost of Ownership: R\$ 1.316.735,23 BRL	
						tpmC Rating: 85858	
						<b>R\$ / tpmC:</b>	15,34
<b>Audited By Lorna Livingtree of Performance Metrics Inc.</b>							

Prices used in TPC benchmarks reflect the actual prices a customer would pay for a one-time purchase of the stated components. Individually negotiated discounts are not permitted. Special prices based on assumptions about past or future purchases are not permitted. All discounts reflect standard pricing policies for the listed components. For complete details, see the pricing sections of the TPC benchmark specifications. If you find that the stated prices are not available according to these items, please inform the TPC at [pricing@tpc.org](mailto:pricing@tpc.org).

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# Abstract

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## Overview

This report documents the methodology and results of the TPC Benchmark C test conducted on the Servidor Itautec ZX400 4P. The tests were conducted by Centro de Informática / UFPE in Brazil. The tests were run in a client/server configuration using five Servidor Itautec 1252 as clients. The operating system used for the benchmark was Microsoft Windows Server 2003 Enterprise Edition x64 SP1 for server and Microsoft Windows 2003 Server Standard Edition SP1 for clients. The database was Microsoft SQL Server 2005.

All tests were done in compliance with Revision 5.5 of the Transaction Processing Council's TPC Benchmark C Standard Specification. Two standard TPC Benchmark™ C metrics, transactions per minute (tpmC) and price per tpmC (R\$ BRL/tpmC) are reported and referred to in this document. The results from the tests are summarized below.

<b>Hardware</b>	<b>Software</b>	<b>Total System Cost</b>	<b>tpmC</b>	<b>R\$ BRL/tpmC</b>	<b>Total Solution Availability Date</b>
<b>Servidor Itautec ZX400 4P</b>	<b>Microsoft SQL Server 2005 Enterprise Edition</b> <b>Microsoft Windows Server 2003 Enterprise Edition x64 SP1</b>	<b>R\$ 1.316.735,23 BRL</b>	<b>85,858</b>	<b>R\$ 15.34 BRL</b>	<b>December 30, 2005</b>

## Auditor

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



# Preface

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The Transaction Processing Performance Council (TPC) developed The TPC Benchmark™ C. The TPC was founded to define transaction processing benchmarks and to disseminate objective, verifiable performance data to the industry. This full disclosure report is based on the TPC Benchmark C Standard Specification Version 5.1.

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

## Introduction

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.

Although these specifications express implementation in terms of a relational data model with conventional locking scheme, the database may be implemented using any commercially available database management system (DBMS), database server, file system, or other data repository that provides a functionally equivalent implementation. The terms "table", "row", and "column" are used in this document only as examples of logical data structures.

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

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

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

## General Items

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### Benchmark Sponsor

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

Itautec S.A. was the benchmark sponsor for this TPC Benchmark™ C. The benchmark was developed and engineered by Centro de Informática / UFPE in Brazil.

### Application Code and Definition Statements

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

Appendix A contains all source code implemented in this benchmark.

### 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:*

- *Database tuning options.*
- *Recovery/commit options.*
- *Consistency/locking options.*
- *Operating system and application configuration parameters.*

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

### Configuration Diagrams

*Diagrams of both measured and priced configurations must be provided, accompanied by a description of the differences.*

The following pages contain the diagrams for both the tested and priced configurations.

## Measured Configuration

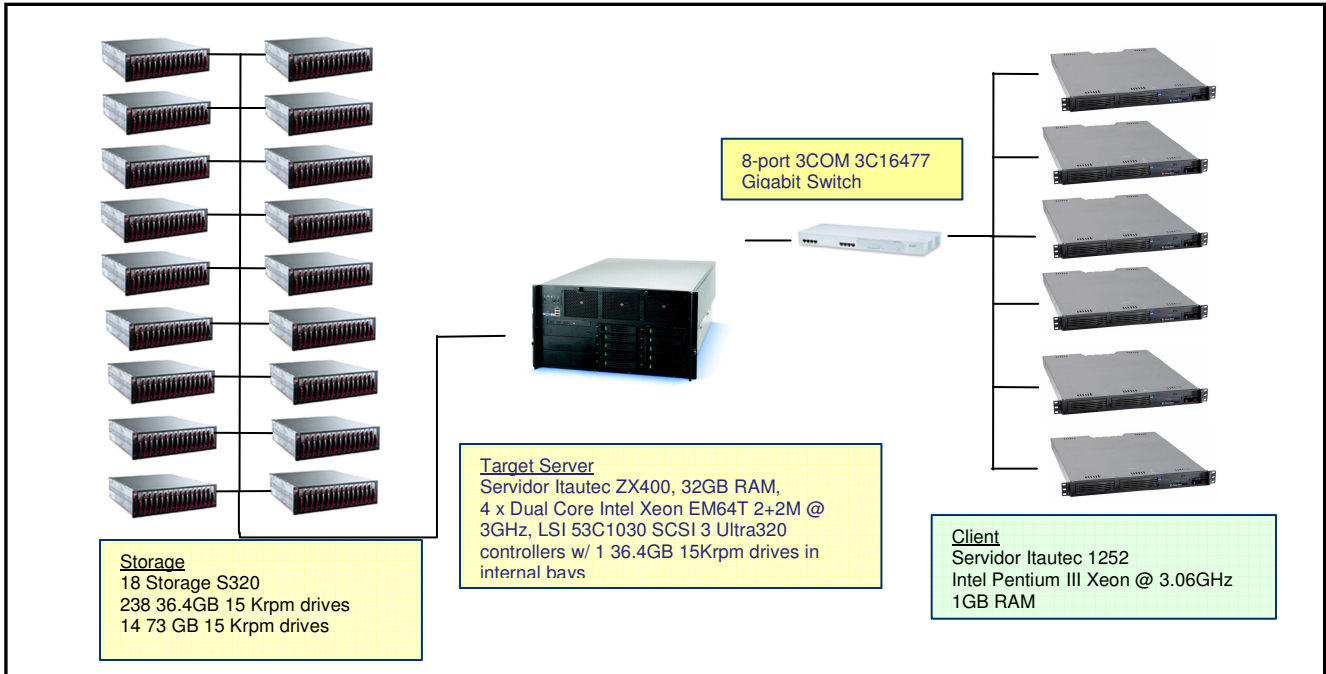


Figure 0.1 – Measured Configuration

## Priced Configuration

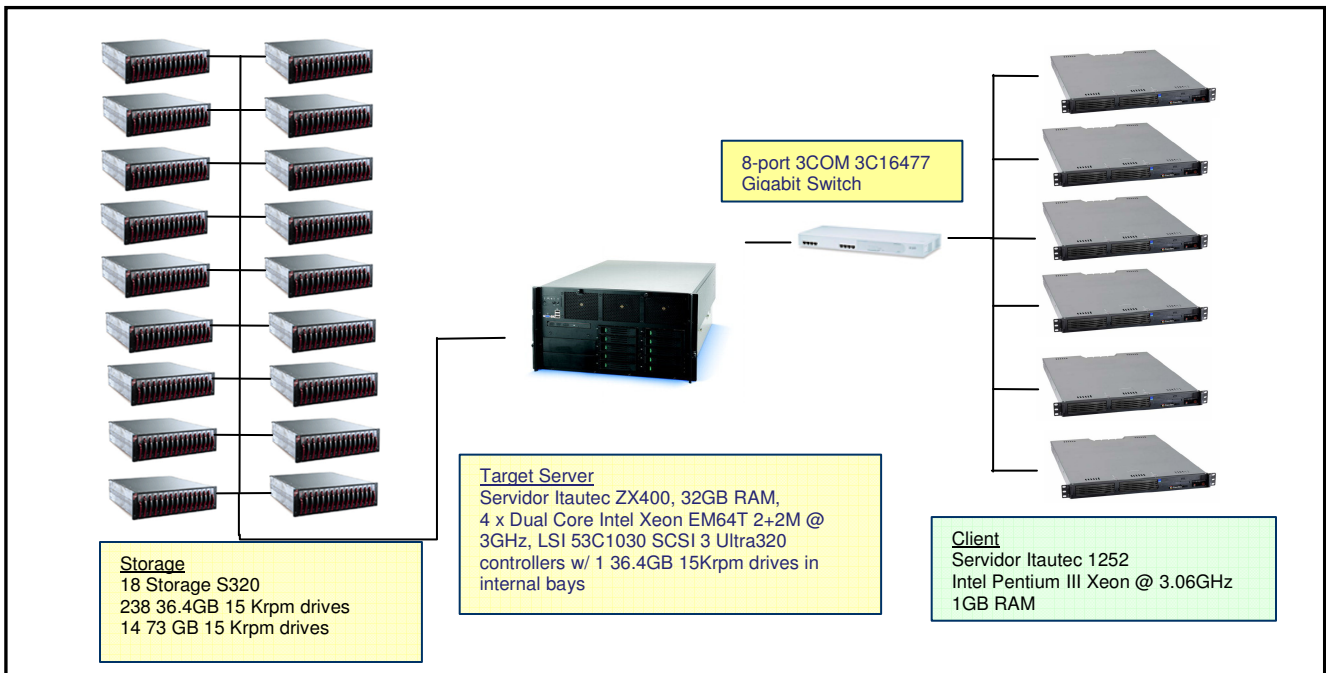


Figure 0.2 – Priced Configuration

## Clause 1 - Logical Database Design Related Items

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### Table Definitions

*Listings must be provided for all table definition statements and all other statements used to set up the database.*

Appendix B contains the code used to define and load the database tables.

### Physical Organization of the Database

*The physical organization of tables and indices, within the database, must be disclosed.*

The tested database configuration used 238 disk drives. The physical organization is documented in Table 4.2: Data Distribution.

### Insert and Delete Operations

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

Insert and delete functions were fully operational during the running of the benchmark.

### Horizontal or Vertical Partitioning

*While there are few restrictions placed upon horizontal or vertical partitioning of tables and rows in the TPC-C benchmark (see Clause 1.6), any such partitioning must be disclosed.*

Partitioning was not used in this benchmark.

### Replication

*Replication tables, if used, must be disclosed (see Clause 1.4.6).*

Replication was not used in this benchmark.

### Table Attributes

*Additional and/or duplicated attributes in any table must be disclosed, along with a statement on the impact on performance (see Clause 1.4.7).*

No additional attributes were used in this benchmark.

## Clause 2 - Transaction and Terminal Profiles Related Items

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### Random Number Generation

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

The random number generation was handled internally in the Microsoft BenchCraft RTE program. The independent auditing process verified this.

### Screen Layout

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

All screen layouts followed the Standard Specifications.

### Terminal Verification

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

The auditor with a thorough execution of the five transaction types, using Microsoft Internet Explorer, verified the terminal features.

### Intelligent Terminals

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

**Comment 1:** *The intent of this clause is to describe any special manipulations performed by a local terminal or workstation to off-load work from the SUT. This includes, but is not limited to: screen presentations; message bundling, and local storage of TPC-C rows.*

**Comment 2:** *This disclosure also requires that all data manipulation functions performed by the local terminal to provide navigational aids for transaction(s) must also be described. Within this disclosure, the purpose of such additional function(s) must be explained.*

The application code responsible for processing the data was executed on the clients. HTML Screen manipulation commands were downloaded to the web browser, which controlled the input and output graphics. This code is documented in Appendix A. IIS (Microsoft Internet Information Server) was involved in processing and presenting this data.

### Transaction Profiles

*The percentage of home and remote order-lines in the New-Order transactions must be disclosed.*

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

*The number of items per orders 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.*

**Table 2.1: Transaction Statistics**

<b>Transaction</b>	<b>Function</b>	<b>Value</b>
New Order	Home Warehouse Order Lines	99.00%
	Remote Warehouse Order Lines	1.00%
	Rolled Back Transactions	1.00%
	Average Lines Per Order	10.00
Payment	Home Warehouse Transactions	85.01%
	Remote Warehouse Transactions	14.99%
	Non-Primary Key Access	59.99%
Order Status	Non-Primary Key Access	60.09%
Delivery	Delivery Transactions Skipped	0

### Transaction Mix

*The mix (i.e., percentages) of transaction types seen by the SUT must be disclosed. (8.1.3.11)*

**Table 2.2: Transaction Mix**

<b>Transaction</b>	<b>Percentage</b>
New Order	44,91%
Payment	43,04%
Order Status	4,01%
Delivery	4,02%
Stock Level	4,02%

### Deferred Delivery Mechanism

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

Microsoft COM+ components installed on each Web Client create a pool of threads connected to the database, responsible for processing delivery transactions. When the application on the Web Client side receives a request for a delivery transaction, one of the threads is assigned for processing it while the control is immediately returned to the user (RTE). Upon completion, the thread writes an entry in the delivery log and returns to the thread pool.

The source code is listed in Appendix A.

## Clause 3 - Transaction and System Properties Related Items

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

All ACID tests were conducted successfully according to specification.

### Atomicity

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

### Completed Transaction

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

### Aborted Transaction

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

### Consistency

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

Consistency conditions one through four were tested using a script to issue queries to the database. The results of the queries verified that the database was consistent for all four tests. A run was executed under full load lasting over two hours and including several checkpoints. The script was re-executed and the result of the same queries verified that the database remained consistent after the run.

### Isolation

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

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

In addition, the phantom tests and the stock level tests were executed and verified.

For Isolation test seven, case A was followed.

### Durability

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

### Loss of Data / Loss of Log

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

- 1) A 6,800 warehouse database was generated.
- 2) The database was backed up using SQL scripts.
- 3) A sum of D\_NEXT\_O\_ID was recorded.
- 4) The RTEs were started with 10% of the benchmark users (68,000).
- 5) The system was run in steady state for 10 minutes.

- 6) One log disk was removed from the drive cabinet. No interruption occurred.
- 7) Keep running more 10 minutes.
- 8) One data disk was removed, causing an SQL Server error.
- 9) The RTE was stopped.
- 10) SQL Server was stopped and restarted.
- 11) The transaction log was dumped to disk.
- 12) SQL Server was stopped, the Windows was shutdown and the machine powered off.
- 13) The failed disk was replaced.
- 14) The machine was powered on.
- 15) SQL Server was started.
- 16) The database and the transaction log were restored from backup.
- 17) The sum of D\_NEXT\_O\_ID was taken.
- 18) This number was compared with the number of new orders reported by the RTE.
- 19) Consistency test #3 was executed and verified.

### Instantaneous Interruption and Loss of Memory

To validate system recovery an instantaneous interruption was caused by removing power to the Server, the following steps were executed:

- 1) A sum of D\_NEXT\_O\_ID was taken.
- 2) 68,000 users were started via the RTEs.
- 3) The system was run in steady state for 5 minutes.
- 4) The power supply cord was removed from the server, causing instantaneous interruption.
- 5) The RTE's were stopped.
- 6) Power was reconnected and the system was rebooted.
- 7) SQL Server was started and the recovery process completed successfully.
- 8) A new count of D\_NEXT\_O\_ID was taken.
- 9) This number was validated against the calculated number reported by the RTEs.



## Clause 4: Scaling and Database Population Related Items

---

### Cardinality of the Tables

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

The database was generated with 2784 warehouses, and the audited performance run used 2746 warehouses.

**Table 4.1: Table Cardinality**

Table	Initial Cardinality
Warehouse	6800
District	68000
Customer	240000000
New Order	72000000
Orders	240000000
History	240000000
Order Line	2400000000
Item	100000
Stock	800000000
Deleted Warehouses	100

### Distribution of Database Tables and Logs

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

The system was configured with 253 36.4GB 15Krpm SCSI disks. There were 238 disks connected to 7 controllers configured as RAID 0 and 14 disks connected to one controller and configured as RAID 0+1. The operating system was stored in one 36.4GB 15Krpm disk. The OS disk was connected to the server onboard controller in one internal bay as the log disks. Most logical data drives contained 3 partitions for miscellaneous, customer and stock, and backup data. Raw file systems were used except for the NTFS formatted backup and OS partitions. The configuration is further detailed below in Table 4.2.

### Database Model

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, DL/I, 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 Enterprise Edition is a relational DBMS.

The interface used was Microsoft SQL Server stored procedures accessed with Remote Procedure Calls embedded in C code using the Microsoft ODBC interface.

**Table 4.2: Data Distribution**

<b>Controller</b>	<b>DB Components</b>	<b>Partition</b>	<b>Size</b>	<b>Disks</b>
1	Miscellaneous Customer and Stock	I:\ J:\	50,000 MB 100,000 MB	28 – 36 GB 15K
2	Miscellaneous Customer and Stock	U:\ V:\ S:\ T:\	50,000 MB 100,000 MB 50,000 MB 100,000 MB	56 – 36 GB 15K
3	Miscellaneous Customer and Stock	E:\ F:\	50,000 MB 100,000 MB	28 – 36 GB 15K
4	Miscellaneous Customer and Stock	Q:\ R:\	50,000 MB 100,000 MB	28 – 36 GB 15K
5	Miscellaneous Customer and Stock Log	W:\ Z:\ L:\	25,000 MB 50,000 MB 240,000 MB	14 – 36 GB 15K 14 – 36 GB 15K
6	Miscellaneous Customer and Stock	O:\ P:\ M:\ N:\	50,000 MB 100,000 MB 50,000 MB 100,000 MB	56 – 36 GB 15K
7	Miscellaneous Customer and Stock	G:\ H:\	50,000 MB 100,000 MB	28 – 36 GB 15K

### Mapping Partitions/Replication

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

No partitioning or replication was used.

### 60-Day Space

*Details of the 60-day space computations along with proof that the database is configured to sustain 8 hours of growth for the dynamic tables (Order, Order-Line, and History) must be disclosed (see Clause 4.2.3).*

To calculate the space required to sustain the database log for 8 hours of growth at steady state, the following steps were followed:

1. The current log space was recorded by running *dbcc sqlperf(logspace)*
2. Transactions were run against the database with a full user load.
3. The final log space usage was recorded by running *dbcc sqlperf(logspace)*
4. The space used was calculated as the difference between the first and second queries.
5. The number of NEW-ORDERS was retrieved from the RTE report generated for the entire run.
6. The total space used was divided by the number of NEW-ORDERS producing a size per NEW-ORDER.
7. The NEW-ORDER size was multiplied by the measured tpmC rate and multiplied by 480 minutes.

The same methodology was used to compute growth requirements for dynamic tables Order, Order-Line and History.

The details of the 8-hour transaction log space and the 60-day space requirements are shown in Appendix D.

## Clause 5: Performance Metrics and Response Time Related Items

---

### Measured tpmC

*Measured tpmC must be reported.*

Measured tpmC: **85,858** tpmC

Price per tpmC: **R\$ 17.51 BRL** per tpmC

### Response Times

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

**Table 5.1: Response Times**

<b>Transaction</b>	<b>Average</b>	<b>90%</b>	<b>Maximum</b>
New order	0.20	0.33	5.15
Payment	0.14	0.22	1.21
Order Status	0.18	0.29	4.40
Delivery (interactive)	0.10	0.11	0.82
Delivery (deferred)	0.16	0.33	4.30
Stock Level	0.23	0.41	2.09
Menu	0.10	0.11	1.09

### 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**

<b>Transaction</b>	<b>Average</b>	<b>Minimum</b>	<b>Maximum</b>
New Order	18,03	18,02	18,15
Payment	3,03	3,02	3,15
Delivery	2,03	2,02	2,15
Stock Level	2,03	2,02	2,15
Order Status	2,03	2,02	2,15

**Table 5.3: Think Times**

<b>Transaction</b>	<b>Average</b>	<b>Minimum</b>	<b>Maximum</b>
New Order	12,06	0.00	120,53
Payment	12,06	0.00	120,53
Delivery	5,08	0.00	50,52
Stock Level	5,07	0.00	50,53
Order Status	10,06	0.00	100,53

## Response Time Distribution Curves

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

Figure 5.1 - New-Order Transaction Response Time Distribution

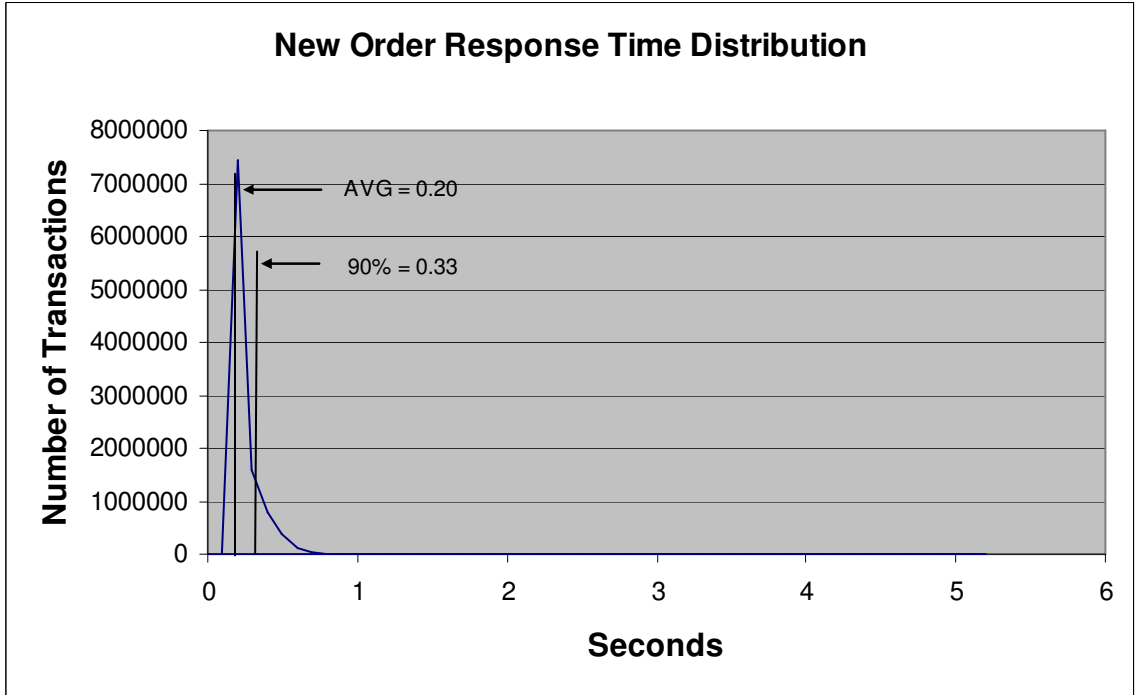


Figure 5.2 - Payment Transaction Response Time Distribution

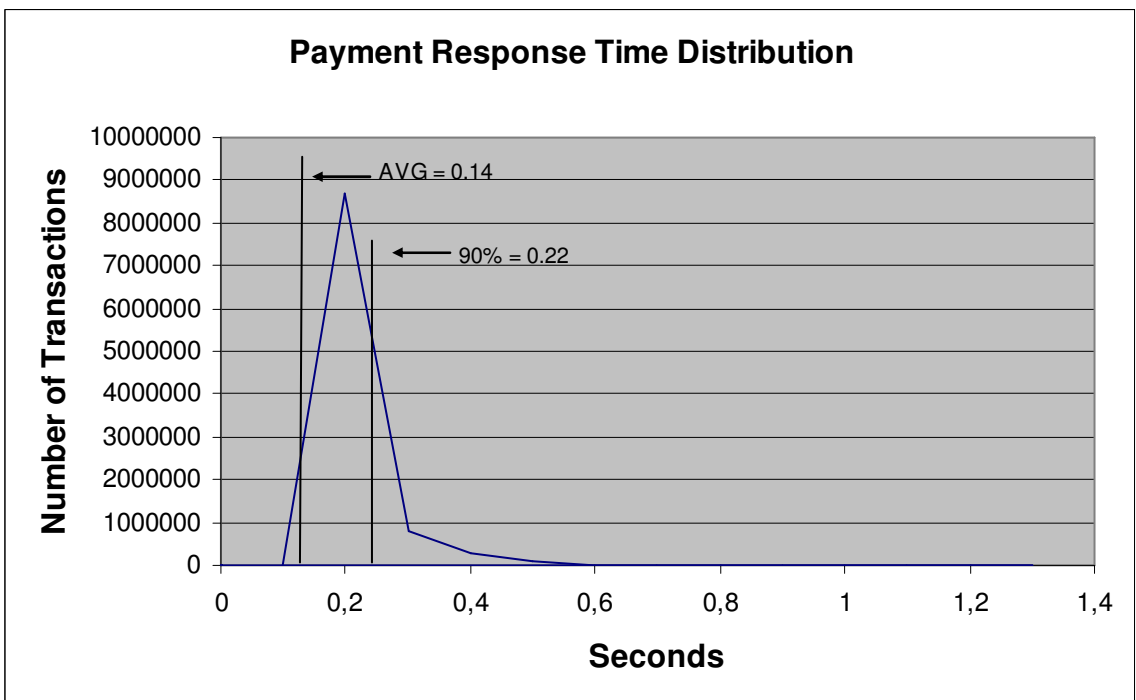


Figure 5.3 – Stock Level Transaction Response Time Distribution

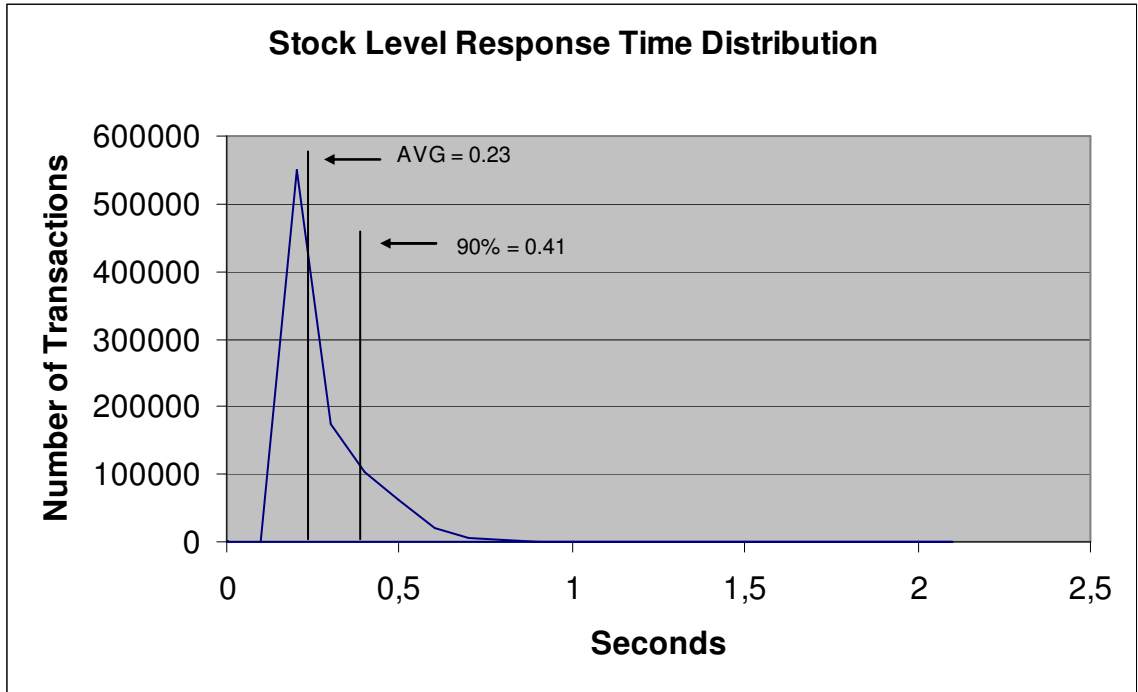


Figure 5.4 – Order Status Transaction Response Time Distribution

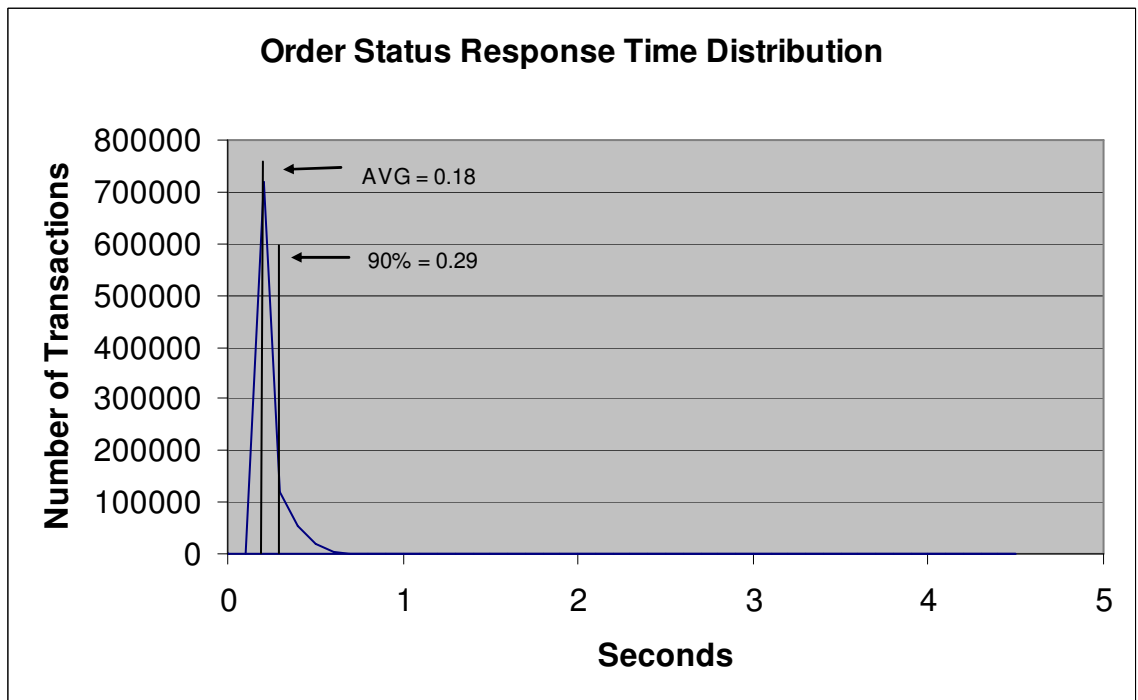
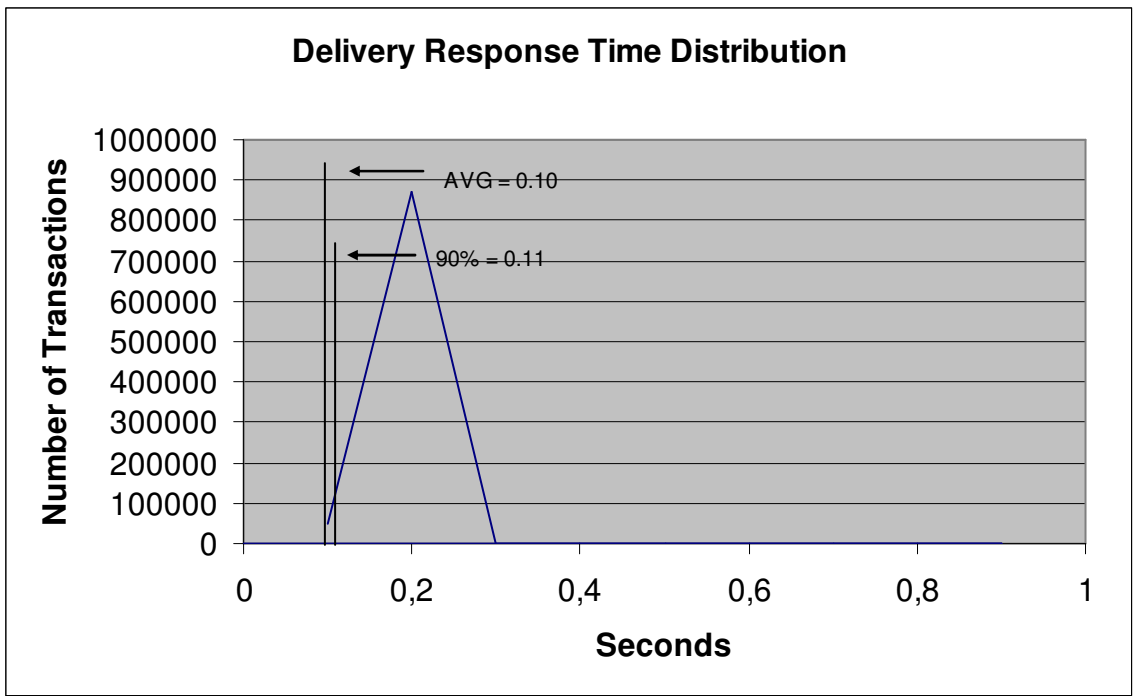


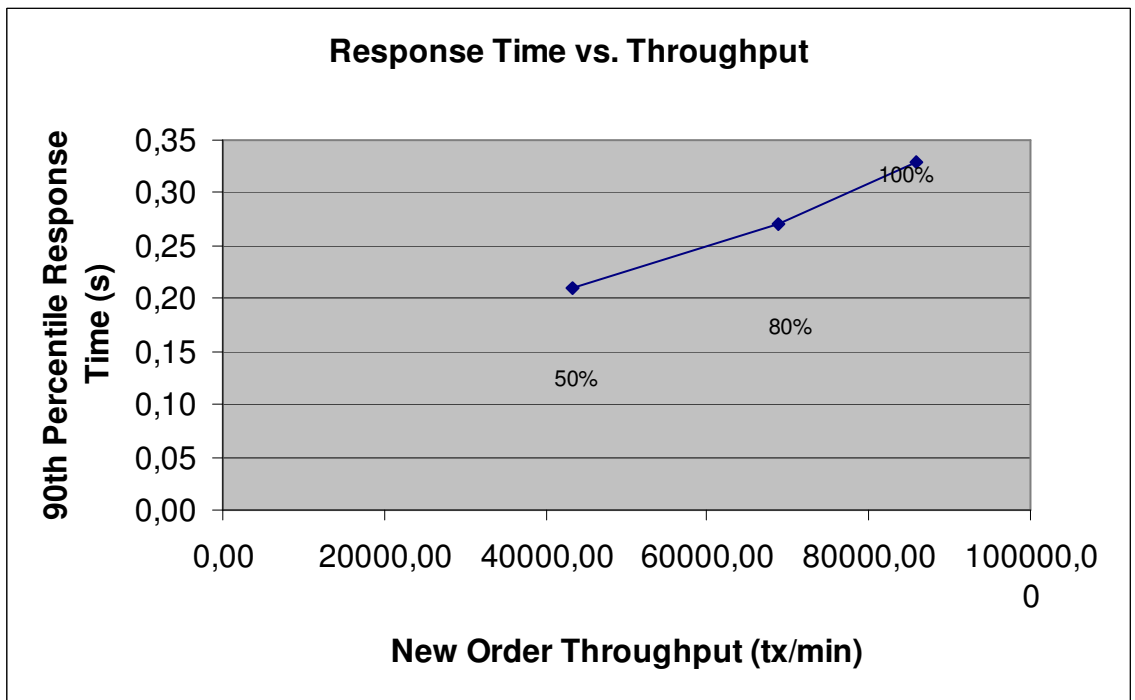
Figure 5.5 – Delivery Transaction Response Time Distribution



New Order Response Time vs. Throughput Performance

The performance curve for response time vs. throughput (see Clause 5.6.2) must be reported for the New-Order transaction.

Figure 5.6 – New Order Response Time vs. Throughput



## New Order Think Time Distribution

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

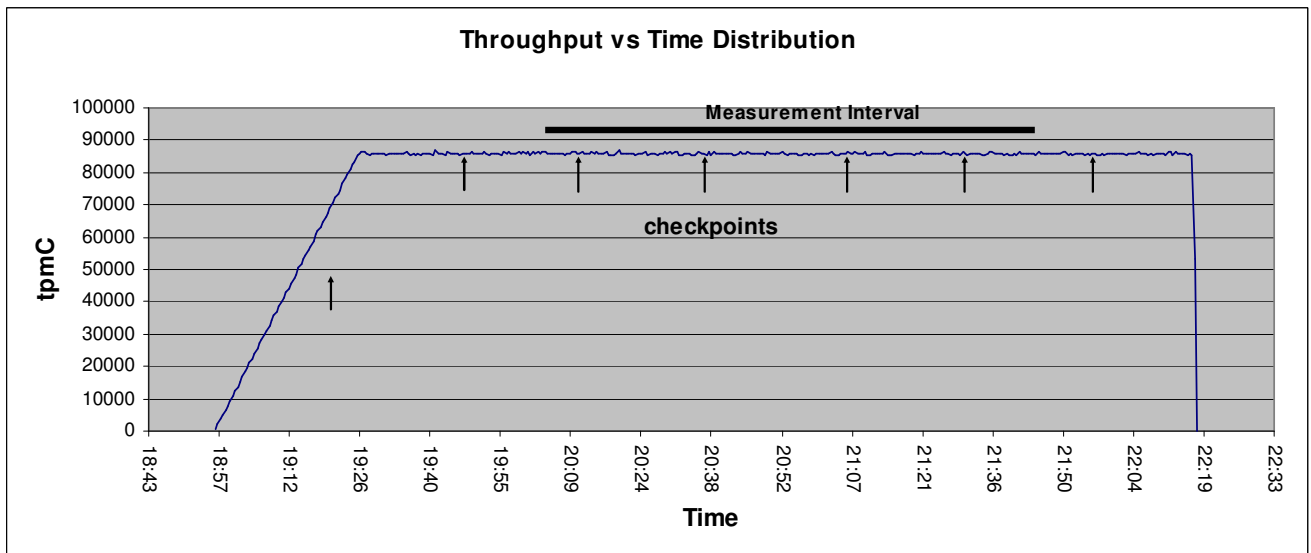
Figure 5.7 – New Order Think Time Distribution



## New Order Throughput vs. Elapsed Time

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

Figure 5.8 – Throughput vs. Time Distribution



## Steady State Methodology

*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.*

By using the monitoring tools on the RTE, a steady state was determined. Figure 5.8 further supports the level chosen by the utilities used.

## 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.*

A checkpoint in Microsoft SQL Server writes to disk all updated memory pages that have not been yet actually written to disk. SQL Server recovery interval parameter was set to 60 to perform checkpoint at specific intervals. A checkpoint script, which issues specified number of checkpoint at specified (30 minutes) intervals, was started after all users logged in and sending transactions.

## Measurement Period Duration and Checkpoint Duration

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

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

**Table 5.9: Checkpoints**

	Start	End	Duration (in seconds)
Measurement Interval	20:01:00	22:01:00	7200
1 <sup>st</sup> Checkpoint	20:06:30	20:32:03	1795
2 <sup>nd</sup> Checkpoint	20:36:25	21:01:21	1795
3 <sup>rd</sup> Checkpoint	21:06:20	21:30:57	1795
4 <sup>th</sup> Checkpoint	21:36:15	22:00:56	1795

## Regulation of Transaction Mix

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

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

## Transaction Statistics

*The percentage of the total mix for each transaction type must be disclosed.*

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

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

*The percentage of remote order lines per New-Order transaction must be disclosed.*

*The percentage of remote Payment transactions must be disclosed.*

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

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

The above statistics are disclosed in Table 2.1.

## Checkpoint Count and Location

*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 was one checkpoint before measurement and four checkpoints during measurement. The time of the first checkpoint during the measurement interval is 1795 seconds from the start of the measurement, and the checkpoint interval is 30 minutes.

## Clause 6: SUT, Driver, and Communication Definition Related Items

---

### RTE Parameters

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

**Comment:** *The intent is to demonstrate the RTE was configured to generate transaction input data as specified in Clause 2.*

The RTE input parameters are listed in Appendix C - Tunable Parameters.

### Lost Terminal Connections

*The number of terminal connections lost during the Measurement Interval must be disclosed.*

No terminal connections were lost.

### Emulated Components

*It must be demonstrated that the functionality and performance of the components being emulated in the Driver System are equivalent to that of the priced system. The results of the test described in Clause 6.6.3.4 must be disclosed. (8.1.7.2)*

No components were emulated.

### Benchmarked and Targeted System Configuration Diagrams

*A complete functional diagram of both the benchmark configuration and the configuration of the proposed (target) system must be disclosed. A detailed list of all software and hardware functionality being performed on the Driver System, and its interface to the SUT must be disclosed (see Clause 6.6.3.6). (8.1.7.3)*

The driver system performed transaction data generation and communication to the client through the standard Web browser (HTTP) protocol. It also captured and time stamped the SUT output data for post-processing of the reported metrics. No other functionality was included on the driver system.

Figures 0.1 and 0.2 of this report contain detailed diagrams of both the benchmark configuration and the priced configuration.

### Network Configuration

*The network configurations of both the tested services and the proposed (target) services which are being represented and a thorough explanation of exactly which parts of the proposed configuration are being replaced on the Driver System must be disclosed (see Clause 6.6.4). (8.1.7.4)*

The network configurations of the benchmarked and priced configurations were identical.

### Network Bandwidth

*The bandwidth of the network(s) used in the tested/priced configuration must be disclosed. (8.1.7.5)*

The bandwidth of the tested and priced networks were as follows:

- 1000 BaseT (1000 Mbit/sec) between the RTE and the clients
- 1000 BaseT (1000 Mbit/sec) between the Clients and Server.

### Operator Intervention

*If the configuration requires operator intervention (see Clause 6.6.6), the mechanism and the frequency of this intervention must be disclosed. (8.1.7.6)*

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

## Clause 7 - Pricing Related Items

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### Hardware and Software List

*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) of price(s) must also be reported. (8.1.8.1)*

*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. (8.1.8.2)*

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

### Availability Date

*The committed delivery date for general availability (availability date) of products used in the price calculations must be reported. When the priced system includes products with different availability dates, the reported availability date for the priced system must be the date at which all components are committed to be available. (8.1.8.3)*

Hardware Availability Date: 11/30/2005

Software Availability Date: 11/30/2005

### Measured TpmC

*A statement of the measured tpmC, as well as the respective calculations for 5-year pricing, price/performance (price/tpmC), and the availability date must be included. (8.1.8.4)*

Maximum Qualified Throughput: 85,858 tpmC

Price Performance Metric: R\$ 17.51 BRL

### 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. (8.1.8.5)*

This system is priced for Brazil.

### Usage Pricing

*For any usage pricing, the sponsor must disclose (8.1.8.6):*

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

**Comment:** *Usage pricing may include, but is not limited to, the operating system and database management software.*

The component pricing based on usage is shown below:

- 2 Microsoft Windows 2003 Standard Server Licenses
- 1 Microsoft Windows Server 2003 Enterprise x64 Edition License
- 1 Microsoft SQL Server 2005 Enterprise Edition Licenses (per processor)
- 1 Microsoft Visual C++ 32 bit Edition
- 3 Year Support for Hardware Components.

## System Pricing

*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. An example of the standard pricing sheet is shown in Appendix B. (8.1.8.7)*

*System pricing must include line item indication where non-sponsoring companies' brands are used. System pricing must also include line item indication of third party pricing. See example in Appendix B. (8.1.8.8)*

The details of the hardware and software are reported in the front of this report as part of the Executive Summary.

## Clause 9 - Audit Related Items

---

### Auditor

*The auditor's name, address, phone number, and a copy of the auditor's attestation letter indicating compliance must be included in the Full Disclosure Report. (8.1.9.1)*

*A review of the pricing model is required to ensure that all components required are priced (see Clause 9.2.8). The auditor is not required to review the final Full Disclosure Report or the final pricing prior to issuing the attestations letter. (8.1.9.2)*

This TPC-C benchmark has been audited by Lorna Livingtree of Performance Metrics.

### Availability of the Full Disclosure Report

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

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

Transaction Processing Performance Council  
c/o Administrator, TPC  
Presidio of San Francisco  
Bldg 572B Ruger St.  
San Francisco, CA 94129-0920  
Phone: (415) 561-6272, fax (415) 561-6120  
[www.tpc.org](http://www.tpc.org)

or:

Itautec S.A.  
Rua Santa Catarina, 1  
030860-025 – São Paulo – SP  
Phone: +55 (11) 6097-3000, fax +55 (11) 6097-4284

or:

Laboratório de Análise de Performance  
Centro de Informática / UFPE  
Rua Prof. Luis Freire, S/N – Cidade Universitária  
50740-540 – Recife – PE  
Phone: +55 (81) 3453-9213

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

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November 30, 2005

Mr. Fábio Ávila Rêgo Pessoa  
Itaotec Performance Lab  
Centro de Informática – UFPE  
Recife, Brazil

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

Platform: Servidor Itaotec ZX400  
Database Manager: Microsoft SQL Server 2005  
Operating System: Microsoft Windows 2003 Server, Enterprise Edition  
Transaction Monitor: Microsoft COM+

System Under Test:				
CPU's	Memory	Disks (total)	90% Response	TpmC
4 Intel Xeon @ 3 Ghz	Main: 32 GB	238 @ 36.4GB 14 @ 73 GB 1 @ 36 GB (OS)	0.33	85,858
6 Clients each with:				
1 Intel Xeon @ 3.06 Ghz	Main: 1 GB	1 @ 76 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 files were properly sized and populated.
- The database was properly scaled with 6800 warehouses, all of which were active during the measured interval.

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- The ACID properties were successfully demonstrated.
- Input data was generated according to the specified percentages.
- Eight hours of mirrored log space was present on the tested system.
- Eight hours of growth space for the dynamic tables was present on the tested system.
- The data for the 60 day space calculation was verified.
- The controller cache was disabled on the log disk controller.
- The steady state portion of the test was 120 minutes.
- At least one checkpoint was taken before the measured interval in steady state.
- Four complete checkpoints were taken during the measured interval.
- The system pricing was checked for major components and maintenance.

Auditor Notes:

The client machines used in the tested configuration are no longer orderable from the sponsor. The clients substituted in the priced configuration meet the substitution requirements.

Sincerely,



Lorna Livingtree  
Auditor

## Appendix A – Source Code

### isapi\_dll/src/tpcc.def

```
LIBRARY TPCC.DLL

EXPORTS

    GetExtensionVersion @1
    HttpExtensionProc @2
    TerminateExtension @3
```

### Isapi\_dll/src/tpcc.h

```
/* FILE: TPCC.H Microsoft TPC-C
 * Kit Ver. 4.20.000 Copyright
 * Microsoft, 1999 All Rights Reserved
 * Version
 * 4.10.000 audited by Richard Gimarc, Performance
 * Metrics, 3/17/99
 * PURPOSE: Header file for ISAPI TPCC.DLL,
 * defines structures and functions used in the isapi
 * tpcc.dll.
 */

//VERSION RESOURCE DEFINES
#define _APS_NEXT_RESOURCE_VALUE 101
#define _APS_NEXT_COMMAND_VALUE 40001
#define _APS_NEXT_CONTROL_VALUE 1000
#define _APS_NEXT_SYMED_VALUE 101

#define TP_MAX_RETRIES 50

//note that the welcome form must be processed first as
//terminal ids assigned here, once the
//terminal id is assigned then the forms can be
//processed in any order.
#define WELCOME_FORM 1
//beginning form no term id assigned, form id
#define MAIN_MENU_FORM 2
//term id assigned main menu form id
#define NEW_ORDER_FORM 3 //new
order form id
```

```
#define PAYMENT_FORM 4
//payment form id
#define DELIVERY_FORM 5
//delivery form id
#define ORDER_STATUS_FORM 6 //order status
id
#define STOCK_LEVEL_FORM 7 //stock level
form id

//This macro is used to prevent the compiler error
//unused formal parameter
#define UNUSEDPARAM(x) (x = x)

//This structure defines the data necessary to keep
//distinct for each terminal or client connection.
typedef struct _CLIENTDATA
{
    int iNextFree; //index of next
    free element or -1 if this entry in
    use.
    int w_id; //warehouse id
    assigned at welcome form
    int d_id; //district id
    assigned at welcome form
    int iSyncId; //synchronization id
    int iTickCount; //time of last
    access;
    CTPCC_BASE *pTxn;
} CLIENTDATA, *PCLIENTDATA;

//This structure is used to define the operational
//interface for terminal id support
typedef struct _TERM
{
    int iNumEntries;
    //total allocated terminal array entries
    int iFreeList;
    //next available terminal array
    element or -1 if none
    int iMasterSyncId;
    //synchronization id
    CLIENTDATA *pClientData; //pointer to
    allocated client data
} TERM;
typedef TERM *PTERM; //pointer to
terminal structure type

enum WEBERROR
{
```

```
NO_ERR,
ERR_COMMAND_UNDEFINED,
ERR_D_ID_INVALID,
ERR_DELIVERY_CARRIER_ID_RANGE,
ERR_DELIVERY_CARRIER_INVALID,
ERR_DELIVERY_MISSING_OCD_KEY,
ERR_DELIVERY_THREAD_FAILED,
ERR_GETPROCADDR_FAILED,
ERR_HTML_ILL_FORMED,
ERR_INVALID_SYNC_CONNECTION,
ERR_INVALID_TERMID,
ERR_LOADDLL_FAILED,
ERR_MAX_CONNECTIONS_EXCEEDED,
ERR_MEM_ALLOC_FAILED,
ERR_MISSING_REGISTRY_ENTRIES,
ERR_NEWORDER_CUSTOMER_INVALID,
ERR_NEWORDER_CUSTOMER_KEY,
ERR_NEWORDER_DISTRICT_INVALID,
ERR_NEWORDER_FORM_MISSING_DID,
ERR_NEWORDER_ITEMID_INVALID,
ERR_NEWORDER_ITEMID_RANGE,
ERR_NEWORDER_ITEMID_WITHOUT_SUPPW,
ERR_NEWORDER_MISSING_IID_KEY,
ERR_NEWORDER_MISSING_QTY_KEY,
ERR_NEWORDER_MISSING_SUPPW_KEY,
ERR_NEWORDER_NOITEMS_ENTERED,
ERR_NEWORDER_QTY_INVALID,
ERR_NEWORDER_QTY_RANGE,
ERR_NEWORDER_QTY_WITHOUT_SUPPW,
ERR_NEWORDER_SUPPW_INVALID,
ERR_NO_SERVER_SPECIFIED,
ERR_ORDERSTATUS_CID_AND_CLT,
ERR_ORDERSTATUS_CID_INVALID,
ERR_ORDERSTATUS_CLT_RANGE,
ERR_ORDERSTATUS_DID_INVALID,
ERR_ORDERSTATUS_MISSING_CID_CLT,
ERR_ORDERSTATUS_MISSING_CID_KEY,
ERR_ORDERSTATUS_MISSING_CLT_KEY,
ERR_ORDERSTATUS_MISSING_DID_KEY,
ERR_PAYMENT_CDI_INVALID,
ERR_PAYMENT_CID_AND_CLT,
ERR_PAYMENT_CUSTOMER_INVALID,
ERR_PAYMENT_CWI_INVALID,
ERR_PAYMENT_DISTRICT_INVALID,
ERR_PAYMENT_HAM_INVALID,
ERR_PAYMENT_HAM_RANGE,
ERR_PAYMENT_LAST_NAME_TO_LONG,
ERR_PAYMENT_MISSING_CDI_KEY,
ERR_PAYMENT_MISSING_CID_CLT,
ERR_PAYMENT_MISSING_CID_KEY,
ERR_PAYMENT_MISSING_CLT,
ERR_PAYMENT_MISSING_CLT_KEY,
ERR_PAYMENT_MISSING_CWI_KEY,
ERR_PAYMENT_MISSING_DID_KEY,
ERR_PAYMENT_MISSING_HAM_KEY,
ERR_STOCKLEVEL_MISSING_THRESHOLD_KEY,
ERR_STOCKLEVEL_THRESHOLD_INVALID,
ERR_STOCKLEVEL_THRESHOLD_RANGE,
ERR_VERSION_MISMATCH,
ERR_W_ID_INVALID
};

class CWEBCLNT_ERR : public CBaseErr
{
public:
    CWEBCLNT_ERR(WEBERROR Err)
    {
        m_Error = Err;
        m_szTextDetail = NULL;
        m_SystemErr = 0;
    }
};
```





```

        "\r\n"
        "\0"
END
#endif // APSTUDIO_INVOKED

////////////////////////////////////
//
// Dialog
//
IDD_DIALOG1 DIALOG DISCARDABLE 0, 0, 186, 95
STYLE DS_MODALFRAME | WS_POPUP | WS_CAPTION |
WS_SYSMENU
CAPTION "Dialog"
FONT 8, "MS Sans Serif"
BEGIN
    DEFPUSHBUTTON "OK",IDOK,129,7,50,14
    PUSHBUTTON "Cancel",IDCANCEL,129,24,50,14
END

////////////////////////////////////
//
// DESIGNINFO
//
#ifdef APSTUDIO_INVOKED
GUIDELINES DESIGNINFO DISCARDABLE
BEGIN
    IDD_DIALOG1, DIALOG
    BEGIN
        LEFTMARGIN, 7
        RIGHTMARGIN, 179
        TOPMARGIN, 7
        BOTTOMMARGIN, 88
    END
END
#endif // APSTUDIO_INVOKED

// English (U.S.) resources
////////////////////////////////////
//
//
// Generated from the TEXTINCLUDE 3 resource.
//
////////////////////////////////////
//
// not APSTUDIO_INVOKED
//

isapi_dll/src/tpcc.cpp

/* FILE: TPC.C Microsoft TPC-C
 * Kit Ver. 4.20.000

```

```

 * Copyright
 * Microsoft, 1999
 * All Rights Reserved
 *
 * Version
 * 4.10.000 audited by Richard Gimarc, Performance
 * Metrics, 3/17/99
 *
 * PURPOSE: Main module for TPCC.DLL which is
 * an ISAPI service dll.
 * Contact: Charles Levine
 * (clevine@microsoft.com)
 *
 * change history:
 * 4.20.000 - reworked error handling;
 * added options for COM and Encina txn monitors
 */
#include <windows.h>
#include <process.h>
#include <tchar.h>
#include <stdio.h>
#include <stdarg.h>
#include <malloc.h>
#include <stdlib.h>
#include <string.h>
#include <time.h>
#include <sys\timeb.h>
#include <io.h>
#include <assert.h>

#include <sqltypes.h>

#ifdef ICECAP
#include <icapexp.h>
#endif

#include "..\..\common\src\trans.h"
//tpckit transaction header contains
definitions of structures specific to

TPC-C
#include "..\..\common\src\error.h"
#include "..\..\common\src\txn_base.h"
#include "..\..\common\src\ReadRegistry.h"

#include "..\..\common\txnlog\include\rtetime.h"
#include "..\..\common\txnlog\include\spinlock.h"
#include "..\..\common\txnlog\include\txnlog.h"

// Database layer includes
#include "..\..\db_dblib_dll\src\tpcc_dblib.h"
// DBLIB implementation of TPC-C txns
#include "..\..\db_odbc_dll\src\tpcc_odbc.h"
// ODBC implementation of TPC-C txns

// Txn monitor layer includes
#include "..\..\tm_com_dll\src\tpcc_com.h"
// COM Services implementation on

TPC-C txns
#include "..\..\tm_tuxedo_dll\src\tpcc_tux.h"
// interface to tuxedo libraries
#include "..\..\tm_encina_dll\src\tpcc_enc.h"
// interface to encina libraries

#include "httpext.h"
//ISAPI DLL information header
#include "tpcc.h"
//this dlls specific structure, value e.t.
header.

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#define LEN_ERR_STRING 256

// defines for Make<Txn>Form calls to distinguish input
and output flavors
#define OUTPUT_FORM 0
#define INPUT_FORM 1

char
    szMyComputerName[MAX_COMPUTERNAME_LENGTH+1];

//Terminal client id structure
TERM Term = { 0, 0, 0, NULL };

// The WEBCLIENT_VERSION string specifies the version
level of this web client interface.
// The RTE must be synchronized with the interface
level on login, otherwise the login
// will fail. This is a sanity check to catch problems
resulting from mismatched versions
// of the RTE and web client.
#define WEBCLIENT_VERSION "420"

static CRITICAL_SECTION
    TermCriticalSection;

static HINSTANCE hLibInstanceTm = NULL;
static HINSTANCE hLibInstanceDb = NULL;

TYPE_CTPCC_DBLIB *pTPCC_DBLIB_new;
TYPE_CTPCC_ODBC *pCTPCC_ODBC_new;
TYPE_CTPCC_TUXEDO *pCTPCC_TUXEDO_new;
TYPE_CTPCC_ENCINA *pCTPCC_ENCINA_new;
TYPE_CTPCC_ENCINA *pCTPCC_ENCINA_post_init;
TYPE_CTPCC_COM *pCTPCC_COM_new;

// For deferred Delivery txns:

CTxnLog
    *txnDelilog = NULL;
//used to log delivery transaction

information
HANDLE
    hWorkerSemaphore = INVALID_HANDLE_VALUE;
HANDLE
    hDoneEvent =
INVALID_HANDLE_VALUE;
HANDLE
    *pDelihandles = NULL;

// configuration settings from registry
TPCCREGISTRYDATA Reg;

DWORD
    dwNumDeliveryThreads = 4;
CRITICAL_SECTION
    DelBuffCriticalSection;
//critical section for delivery
transactions cache
DELIVERY_TRANSACTION *pDelBuff
    = NULL;

DWORD
    dwDelBuffSize = 100;
// size of circular buffer for delivery txns

DWORD
    dwDelBuffFreeCount;
// number of buffers free

DWORD
    dwDelBuffBusyIndex = 0;
//
index position of entry waiting to be

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delivered
DWORD          dwDelBuffFreeIndex = 0;          //
index position of unused entry

// Critical section to synchronize connection open and
close.
//
CRITICAL_SECTION hConnectCriticalSection;

#include "..\..\common\src\ReadRegistry.cpp"

/* FUNCTION: DllMain
* PURPOSE:      This function is the entry point
for the DLL. This implementation is based on the
* fact that
DLL_PROCESS_ATTACH is only called from the inet service
once.
* ARGUMENTS:    HANDLE      hModule
                module handle
                ul_reason_for_call reason for call
                LPVOID      LPVOID
                lpReserved
reserved for future use
* RETURNS:      BOOL        FALSE
                errors occurred in
initialization
*
TRUE          DLL
successfully initialized
*/

BOOL WINAPI DllMain(HANDLE hModule, DWORD
ul_reason_for_call, LPVOID lpReserved)
{
    DWORD i;
    char szEvent[LEN_ERR_STRING] = "\0";
    char szLogFile[128];
    char szDllName[128];

// debugging...
// DebugBreak();

    try
    {
        switch( ul_reason_for_call )
        {
            case DLL_PROCESS_ATTACH:
                {
                    DWORD
                    dwSize = MAX_COMPUTERNAME_LENGTH+1;

                    GetComputerName(szMyComputerName, &dwSize);
                    szMyComputerName[dwSize] = 0; }

                    DisableThreadLibraryCalls((HMODULE)hModule);
                    InitializeCriticalSection(&TermCriticalSection);

                    if (
                    ReadTPCCRegistrySettings( &Reg ) )
                    throw
                    new CWEBCLNT_ERR( ERR_MISSING_REGISTRY_ENTRIES );

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                dwDelBuffSize =
                min( Reg.dwMaxPendingDeliveries, 10000 ); // min with
                10000 as a sanity
                constraint
                dwNumDeliveryThreads = min(
                Reg.dwNumberOfDeliveryThreads, 100 ); // min with 100
                as a
                sanity constraint
                TermInit();
                // load DLL for
                txn monitor
                == TUXEDO)
                {
                    if (Reg.eTxnMon
                    == TUXEDO)
                    {
                        strcpy( szDllName, Reg.szPath );
                        strcat( szDllName, "tpcc_tuxedo.dll");
                        hLibInstanceTm = LoadLibrary( szDllName );
                        if
                        (hLibInstanceTm == NULL)
                        throw new CWEBCLNT_ERR( ERR_LOADDLL_FAILED,
                        szDllName, GetLastError() );
                        //
                        get function pointer to wrapper for class constructor
                        pCTPCC_TUXEDO_new = (TYPE_CTPCC_TUXEDO*)
                        GetProcAddress(hLibInstanceTm, "
                        CTPCC_TUXEDO_new");
                        if
                        (pCTPCC_TUXEDO_new == NULL)
                        if
                        throw new CWEBCLNT_ERR(
                        ERR_GETPROCADDR_FAILED, szDllName, GetLastError() );
                        else if
                        (Reg.eTxnMon == ENCINA)
                        {
                            strcpy( szDllName, Reg.szPath );
                            strcat( szDllName, "tpcc_encina.dll");
                            hLibInstanceTm = LoadLibrary( szDllName );
                            if
                            (hLibInstanceTm == NULL)
                            throw new CWEBCLNT_ERR( ERR_LOADDLL_FAILED,
                            szDllName, GetLastError() );
                            //
                            get function pointer to wrapper for class constructor
                            pCTPCC_ENCINA_new = (TYPE_CTPCC_ENCINA*)
                            GetProcAddress(hLibInstanceTm, "
                            CTPCC_ENCINA_new");
                            pCTPCC_ENCINA_post_init =
                            (TYPE_CTPCC_ENCINA*) GetProcAddress(hLibInstanceTm, "
                            CTPCC_ENCINA_post_init");
                            if
                            (pCTPCC_ENCINA_new == NULL)

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                            throw new CWEBCLNT_ERR(
                            ERR_GETPROCADDR_FAILED, szDllName, GetLastError() );
                            else if
                            (Reg.eTxnMon == COM)
                            {
                                strcpy( szDllName, Reg.szPath );
                                strcat( szDllName, "tpcc_com.dll");
                                hLibInstanceTm = LoadLibrary( szDllName );
                                if
                                (hLibInstanceTm == NULL)
                                throw new CWEBCLNT_ERR( ERR_LOADDLL_FAILED,
                                szDllName, GetLastError() );
                                //
                                get function pointer to wrapper for class constructor
                                pCTPCC_COM_new = (TYPE_CTPCC_COM*)
                                GetProcAddress(hLibInstanceTm, "CTPCC_COM_new");
                                if
                                (pCTPCC_COM_new == NULL)
                                if
                                throw new CWEBCLNT_ERR(
                                ERR_GETPROCADDR_FAILED, szDllName, GetLastError() );
                                // load DLL for
                                database connection
                                if
                                ((Reg.eTxnMon == None) || (dwNumDeliveryThreads > 0))
                                {
                                    if
                                    (Reg.eDB_Protocol == DBLIB)
                                    {
                                        strcpy( szDllName, Reg.szPath );
                                        strcat( szDllName, "tpcc_dblib.dll");
                                        hLibInstanceDb = LoadLibrary( szDllName );
                                        if (hLibInstanceDb == NULL)
                                        throw new CWEBCLNT_ERR(
                                        ERR_LOADDLL_FAILED, szDllName, GetLastError()
                                        );
                                        // get function pointer to wrapper for class
                                        constructor
                                        pCTPCC_DBLIB_new = (TYPE_CTPCC_DBLIB*)
                                        GetProcAddress(hLibInstanceDb, "
                                        CTPCC_DBLIB_new");
                                        if (pCTPCC_DBLIB_new == NULL)
                                        throw new CWEBCLNT_ERR(
                                        ERR_GETPROCADDR_FAILED, szDllName,
                                        GetLastError() );
                                        }
                                        else
                                        if (Reg.eDB_Protocol == ODBC)
                                        {

```



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}

/* FUNCTION: GetExtensionVersion
* PURPOSE: This function is called by the inet
service when the DLL is first loaded.
* ARGUMENTS: HSE_VERSION_INFO *pver
passed in structure in which to place
expected version number.
* RETURNS: TRUE inet service
expected return value.
*/

BOOL WINAPI GetExtensionVersion(HSE_VERSION_INFO *pver)
{
    pver->dwExtensionVersion =
    MAKELONG(HSE_VERSION_MINOR, HSE_VERSION_MAJOR);
    lstrcpy(pver->lpszExtensionDesc, "TPC-C
Server.", HSE_MAX_EXT_DLL_NAME_LEN);

    // TODO: why do we need this here instead of
in the DLL attach?
    if (Reg.eTxnMon == ENCINA)
        pCTPCC_ENCINA_post_init();

    return TRUE;
}

/* FUNCTION: TerminateExtension
* PURPOSE: This function is called by the inet
service when the DLL is about to be unloaded.
* ARGUMENTS: Release all resources in
anticipation of being unloaded.
* RETURNS: TRUE inet service
expected return value.
*/

BOOL WINAPI TerminateExtension( DWORD dwFlags )
{
    if (pDelihandles)
    {
        SetEvent( hDoneEvent );
        for(DWORD i=0;
i<dwNumDeliveryThreads; i++)
        pDelihandles[i], INFINITE );
        waitforSingleObject(
        TermDeleteAll());
        return TRUE;
    }
}

/* FUNCTION: HttpExtensionProc
* PURPOSE: This function is the main entry
point for the TPCC DLL. The internet service
calls this function
passing in the http string.
* ARGUMENTS: EXTENSION_CONTROL_BLOCK *pECB
structure pointer to passed in internet
service information.
*/

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* RETURNS: DWORD
HSE_STATUS_SUCCESS
connection can be dropped if error
* HSE_STATUS_SUCCESS_AND_KEEP_CONN keep
connect valid comment sent
* COMMENTS: None
*/

DWORD WINAPI HttpExtensionProc(EXTENSION_CONTROL_BLOCK
*pECB)
{
    int iCmd, FormId,
    TermId, iSyncId;
    char szBuffer[4096];

    int lpbSize;
    static char szHeader[] = "200 Ok";
    DWORD dwSize = 6;
    // initial value is strlen(szHeader)
    char szHeader1[4096];

#ifdef ICECAP
    StartCAP();
#endif

    try
    {
        //process http query
        ProcessQueryString(pECB, &iCmd,
&FormId, &TermId, &iSyncId);

        if (TermId != 0)
        {
            if ( TermId < 0 || TermId
>= Term.iNumEntries ||
Term.pClientData[TermId].iNextFree != -1 )
            {
                // debugging...
                char
szTmp[128];
                wsprintf(
szTmp, "Invalid term ID; TermId = %d", TermId );
                WriteMessageToEventLog( szTmp );
                throw new
CWEBCLNT_ERR( ERR_INVALID_TERMID );
            }
            //must have a valid
syncid here since termid is valid
            if (iSyncId !=
Term.pClientData[TermId].iSyncId)
                throw new
CWEBCLNT_ERR( ERR_INVALID_SYNC_CONNECTION );

            //set use time
            Term.pClientData[TermId].iTickCount =
GetTickCount();
        }

        switch(iCmd)
        {
            case 0:
                WelcomeForm(pECB,
szBuffer);

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                break;
            case 1:
                switch( FormId )
                {
                    case
WELCOME_FORM:
                    case
MAIN_MENU_FORM:
                    break;
                    case
NEW_ORDER_FORM:
                        ProcessNewOrderForm(pECB, TermId, szBuffer);
                    break;
                    case
PAYMENT_FORM:
                        ProcessPaymentForm(pECB, TermId, szBuffer);
                    break;
                    case
DELIVERY_FORM:
                        ProcessDeliveryForm(pECB, TermId, szBuffer);
                    break;
                    case
ORDER_STATUS_FORM:
                        ProcessOrderStatusForm(pECB, TermId,
szBuffer);
                    break;
                    case
STOCK_LEVEL_FORM:
                        ProcessStockLevelForm(pECB, TermId,
szBuffer);
                    break;
                }
            case 2:
                // new-order selected
                from menu; display new-order input form
                MakeNewOrderForm(TermId,
NULL, INPUT_FORM, szBuffer);
                break;
            case 3:
                // payment selected from
                menu; display payment input form
                MakePaymentForm(TermId,
NULL, INPUT_FORM, szBuffer);
                break;
            case 4:
                // delivery selected from
                menu; display delivery input form
                MakeDeliveryForm(TermId,
NULL, INPUT_FORM, szBuffer);
                break;
            case 5:
                // order-status selected
                from menu; display order-status input form
                MakeOrderStatusForm(TermId, NULL, INPUT_FORM,
szBuffer);
                break;
            case 6:
                // stock-level selected
                from menu; display stock-level input form

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        MakeStockLevelForm(TermId, NULL, INPUT_FORM,
szBuffer);
        break;
    case 7:
        // ExitCmd
        TermDelete(TermId);
        WelcomeForm(pECB,
szBuffer);
        break;
    case 8:
        SubmitCmd(pECB,
szBuffer);
        break;
    case 9:
        // menu
        MakeMainMenuForm(TermId,
Term.pClientData[TermId].iSyncId, szBuffer);
        break;
    case 10:
        // CMD=Clear
        // resets all
        connections; should only be used when no other
        connections are active
        TermDeleteAll();
        TermInit();
        WelcomeForm(pECB,
szBuffer);
        break;
    case 11:
        // CMD=Stats
        StatsCmd(pECB, szBuffer);
        break;
    }
}
catch (CBaseErr *e)
{
    ErrorForm( pECB, e->ErrorType(), e-
>ErrorNum(), TermId, iSyncId, e->ErrorText(), szBuffer
);
    delete e;
}
catch (...)
{
    ErrorForm( pECB, ERR_TYPE_WEBDLL,
"Error: Unhandled exception in Web
Client.", szBuffer
);
}
}
#endif ICECAP
StopCAP();
#endif

    lpbSize = strlen(szBuffer);
    wsprintf(szHeader1,
"Content-Type:
\"Content-Length: %d\r\n\"
\"Connection: Keep-
Alive\r\n\r\n\", lpbSize);
    strcat( szHeader1, szBuffer );

    (*pECB->ServerSupportFunction)(pECB->ConnID,
HSE_REQ_SEND_RESPONSE_HEADER, szHeader, (LPDWORD)
&dwSize, (LPDWORD)
szHeader1);

    //finish up and keep connection
    pECB->dwHttpStatusCode = 200;

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    }
    return HSE_STATUS_SUCCESS_AND_KEEP_CONN;
}

void writeMessageToEventLog(LPTSTR lpszMsg)
{
    TCHAR    szMsg[256];
    HANDLE   hEventSource;
    LPTSTR   lpszStrings[2];

    // Use event logging to log the error.
    //
    hEventSource = RegisterEventSource(NULL,
TEXT("TPCC.DLL"));

    _stprintf(szMsg, TEXT("Error in TPCC.DLL: "));
    lpszStrings[0] = szMsg;
    lpszStrings[1] = lpszMsg;

    if (hEventSource != NULL)
    {
        ReportEvent(hEventSource, // handle of event
source
        EVENTLOG_ERROR_TYPE, // event type
        0, // event category
        0, // event ID
        NULL, // current user's SID
        2, // strings in
lpszStrings
        0, // no bytes of raw
data
        (LPTSTR *)lpszStrings, // array of
error strings
        NULL; // no raw data
        )
        (VOID) DeregisterEventSource(hEventSource);
    }
}

/* FUNCTION: DeliveryworkerThread
* PURPOSE: This function processes deferred
delivery txns. There are typically several
threads running this
routine. The number of threads is determined by an
entry
read from the registry.
The thread waits for work by waiting on semaphore.
When a delivery txn is
posted, the semaphore is released. After processing
the delivery txn,
information is logged to record the txn status and
execution
time.
*/

/*static*/ void DeliveryworkerThread(void *ptr)
{
    CTPCC_BASE *pTxn = NULL;

    DELIVERY_TRANSACTION
delivery;
pDELIVERY_DATA
pDeliveryData;
TXN_RECORD_TPCC_DELIV_DEF txnDelivRec;

    DWORD
index;
HANDLE
handles[2];

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        SYSTEMTIME trans_end;
        //delivery transaction finished
time
        SYSTEMTIME trans_start;
        //delivery transaction start time
        assert(txnDelivlog != NULL);
        try
        {
            if (Reg.edb_Protocol == ODBC)
            {
                if (Reg.dwConnectDelay >
0)
                {
                    // Synchronize
connect (for VIA)
                    //
                    EnterCriticalSection(&hConnectCriticalSection
);
                    Sleep(Reg.dwConnectDelay);
                }
                pTxn = pCTPCC_ODBC_new(
Reg.szDbServer, Reg.szDbuser, Reg.szDbPassword,
szMyComputerName, Reg.szDbName,
Reg.bCallNoDuplicatesNewOrder );
                if (Reg.dwConnectDelay >
0)
                {
                    // Synchronize
connect (for VIA)
                    //
                    LeaveCriticalSection(&hConnectCriticalSection
);
                }
            }
            else
            {
                if (Reg.edb_Protocol ==
DBLIB)
                {
                    pTxn =
pCTPCC_DBLIB_new( Reg.szDbServer, Reg.szDbUser,
Reg.szDbPassword, szMyComputerName,
Reg.szDbName );
                    pDeliveryData = pTxn-
>BuffAddr_delivery();
                }
                catch (CBaseErr *e)
                {
                    char szTmp[1024];
                    wsprintf( szTmp, "Error in Delivery
Txn thread. Could not connect to database. "
"%s",
Server=%s, User=%s, Password=%s, Database=%s",
e->ErrorText(),
Reg.szDbServer, Reg.szDbuser, Reg.szDbPassword,
Reg.szDbName );
                    writeMessageToEventLog( szTmp );
                    delete e;
                    goto ErrorExit;
                }
            }
        }
        catch (...)

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    {
        writeMessageToEventLog(TEXT("Unhandled
exception caught in DeliveryWorkerThread.));
        goto ErrorExit;
    }

    while (TRUE)
    {
        try
        {
            //while delivery thread
            //requested termination
            while (TRUE)
            {
                // need to wait
                // for multiple objects: program exit or worker semaphore;
                handles[0] =
                hDoneEvent;
                handles[1] =
                hWorkerSemaphore;
                index =
                WaitForMultipleObjects( 2, &handles[0], FALSE, INFINITE
                );
                if (index ==
                WAIT_OBJECT_0)
                    goto
                ErrorExit;

                ZeroMemory(&txnDeliRec, sizeof(txnDeliRec));

                txnDeliRec.TxnType =
                TXN_REC_TYPE_TPCC_DELIV_DEF;

                // make a local
                // copy of current entry from delivery buffer and
                // increment buffer index
                EnterCriticalSection(&DelBuffCriticalSection)
                ;
                *(&DelBuff+dwDelBuffBusyIndex);
                dwDelBuffFreeCount++;
                dwDelBuffBusyIndex++;
                if
                (dwDelBuffBusyIndex == dwDelBuffSize) // wrap-around
                if at end of buffer
                    dwDelBuffBusyIndex = 0;

                LeaveCriticalSection(&DelBuffCriticalSection)
                ;

                >w_id = delivery.w_id;
                >o_carrier_id = delivery.o_carrier_id;

                txnDeliRec.w_id
                = &DelBuff+dwDelBuffFreeIndex;
                txnDeliRec.o_carrier_id = &DelBuff+dwDelBuffFreeIndex;
                txnDeliRec.TxnStartT0 =
                Get64BitTime(&delivery.queue);
            }
        }
    }

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    &trans_start );
    >delivery();
    &trans_end );

    //log txn
    txnDeliRec.TxnStatus = ERR_SUCCESS;
    for (int i=0;
    i<10; i++)
        txnDeliRec.o_id[i] = &DelBuff+dwDelBuffFreeIndex;

    txnDeliRec.DeltaT4 =
    (int)(Get64BitTime(&trans_end) -
    txnDeliRec.TxnStartT0);
    txnDeliRec.DeltaTxnExec =
    (int)(Get64BitTime(&trans_end) -
    Get64BitTime(&trans_start));

    if (txnDeliRec
    != NULL)
        txnDeliRec->writeToLog(&txnDeliRec);
        catch (CBaseErr *e)
        {
            char szTmp[1024];
            wsprintf( szTmp, "%s
Error (code %d) in Delivery Txn thread. %s",
e-
>ErrorTypeStr(), e->ErrorNum(), e->ErrorText() );
            WriteMessageToEventLog(
            szTmp );

            // log the error txn
            txnDeliRec.TxnStatus = e-
            >ErrorType();
            if (txnDeliRec != NULL)
                txnDeliRec->
                writeToLog(&txnDeliRec);
            delete e;
        }
        catch (...)
        {
            // unhandled exception;
            shouldn't happen; not much we can do...
            writeMessageToEventLog(TEXT("Unhandled
exception caught in DeliveryWorkerThread.));
        }
    }

ErrorExit:
    if (Reg.dwConnectDelay > 0)
    {
        // Synchronize disconnect (for VIA)
        //
        EnterCriticalSection(&hConnectCriticalSection)
        ;

        Sleep(Reg.dwConnectDelay);
    }

    delete pTxn;

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    if (Reg.dwConnectDelay > 0)
    {
        // Synchronize disconnect (for VIA)
        //
        LeaveCriticalSection(&hConnectCriticalSection)
        ;
        _endthread();
    }

    /* FUNCTION: PostDeliveryInfo
    * PURPOSE: This function enters the delivery
    * txn into the deferred delivery buffer.
    * RETURNS: BOOL FALSE
    *           delivery information posted successfully
    *           TRUE error cannot post delivery info
    */
    BOOL PostDeliveryInfo(long w_id, short o_carrier_id)
    {
        BOOL bError;
        EnterCriticalSection(&DelBuffCriticalSection)
        ;
        if (dwDelBuffFreeCount > 0)
        {
            bError = FALSE;
            (&DelBuff+dwDelBuffFreeIndex)->w_id
            = w_id;
            (&DelBuff+dwDelBuffFreeIndex)-
            >o_carrier_id
            = o_carrier_id;
            GetLocalTime(&(&DelBuff+dwDelBuffFreeIndex)-
            >queue);

            dwDelBuffFreeCount--;
            dwDelBuffFreeIndex++;
            if (dwDelBuffFreeIndex ==
            dwDelBuffSize)
                // wrap-around if at end of buffer
            }
            else
                // No free buffers. Return an
                // error, which indicates that the delivery buffer is
                // full.
                // Most likely, the number of
                // delivery worker threads needs to be increased to keep
                // up
                // with the txn rate.
                bError = TRUE;
            LeaveCriticalSection(&DelBuffCriticalSection)
            ;

            if (!bError)
                // increment worker semaphore to
                // wake up a worker thread
                ReleaseSemaphore( hWorkerSemaphore,
                1, NULL );
            return bError;
        }

        /* FUNCTION: ProcessQueryString
        * PURPOSE: This function extracts the relevant
        * information out of the http command passed in from

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* the browser.
* COMMENTS: If this is the initial connection
* client is at welcome screen then there will not
be a terminal id or current form id. If this is the
case then the
* ptermid and pformid return values are undefined.
void ProcessQueryString(EXTENSION_CONTROL_BLOCK *pECB,
int *pCmd, int *pFormid, int *pTermid, int *pSyncid)
{
char *ptr = pECB->lpszQueryString;
char *szBuffer[25];
int i;
//allowable client command strings i.e.
static char *szCmds[] =
{
"process", ".NewOrder.", ".Order-Status.",
".Stock-Level.", ".Exit.", "submit", "Menu",
"Clear", "Stats", ""..Exit.", "submit", "Menu",
};
*PCmd = 0; // default is
*Screen = 0; // ptermid = 0;
// if no params (i.e., empty query string),
then return login screen
if (strlen(ptr) == 0)
return;
// parse FORMID, TERMID, and SYNCID
*pFormid = GetIntKeyValue(ptr, "FORMID",
NO_ERR, NO_ERR);
*pTermid = GetIntKeyValue(ptr, "TERMID",
NO_ERR, NO_ERR);
*pSyncid = GetIntKeyValue(ptr, "SYNCID",
NO_ERR, NO_ERR);
// parse CMD
GetIntValue(ptr, "CMD", szBuffer,
sizeof(szBuffer), ERR_COMMAND_UNDEFINED);
// see which command it matches
for(i=0; i++)
{
if (szCmds[i][0] == 0)
// no more; no match;
return error
ERR_COMMAND_UNDEFINED);
if ( strstr(szCmds[i], ptr) )
{
*pCmd = i+1;
break;
}
}
/* FUNCTION: void welcomeForm
*/
void welcomeForm(EXTENSION_CONTROL_BLOCK *pECB, char
*szBuffer)

```

```

{
char szTmp[1024];
//welcome to tpc-c html form buffer, this is
first form client sees.
strcpy(szBuffer, "<HTML><HEAD><TITLE>TPC-C
Web Client</TITLE></HEAD><BODY>"
"<B><BIG>Microsoft TPC-C Web Client (ver
4.20)</BIG></B> <BR> <BR>"
"<font face='Courier New'><PRE>"
"Compiled: " __DATE__ ", __TIME__ <BR>"
"Source: " __FILE__ (" __TIMESTAMP__ ") <BR>"
"</PRE></font>"
"<FORM ACTION='tpcc.dll' METHOD='GET'>"
"<INPUT TYPE='hidden' NAME='STATUSID'"
VALUE='0'>"
"<INPUT TYPE='hidden' NAME='ERROR'"
VALUE='0'>"
"<INPUT TYPE='hidden' NAME='FORMID'"
VALUE='1'>"
"<INPUT TYPE='hidden' NAME='TERMID'"
VALUE='0'>"
"<INPUT TYPE='hidden' NAME='SYNCID'"
VALUE='0'>"
"<INPUT TYPE='hidden' NAME='VERSION'"
VALUE=' " WEBCLIENT_VERSION " >"
);
printf( szTmp, "Configuration Settings:
<BR><font face='Courier New' color='blue'><PRE>"
"Txn
Monitor = <B>%s</B><BR>"
"Database protocol = <B>%s</B><BR>"
"Max
Connections = <B>%d</B><BR>"
"# of
Delivery Threads = <B>%d</B><BR>"
"Max
Pending deliveries = <B>%d</B><BR>"
,
szTxnMonNames[Reg.eTxnMon],
szDBNames[Reg.eDB_Protocol],
Reg.dwMaxConnections,
dwNumDeliveryThreads, dwBufSize);
strcpy( szBuffer, szTmp);
if (Reg.eTxnMon == COM)
{
printf( szTmp, "COM single
Pool = <B>%s</B><BR>", Reg.bCOM_SinglePool ?
"YES" : "No" );
strcpy( szBuffer, szTmp);
strcpy( szBuffer, "</PRE></font>");
}
if (Reg.eTxnMon == None)
// connection options may be
specified when not using a txn monitor

```

```

your database options for this connection:<BR>"
printf( szTmp, "Please enter
"<font face='Courier New'
color='blue'><PRE>"
"DB Server = <INPUT NAME='db_server'"
SIZE=20 VALUE='%s'><BR>"
"DB User ID = <INPUT NAME='db_user'"
SIZE=20 VALUE='%s'><BR>"
"DB Password = <INPUT NAME='db_passwd'"
SIZE=20 VALUE='%s'><BR>"
"DB Name = <INPUT NAME='db_name'"
SIZE=20 VALUE='%s'><BR>"
"</PRE></font>"
);
Reg.szDBServer, Reg.szDBUser, Reg.szDBPassword,
Reg.szDBName);
else
connection options are determined from registry; can't
// set per user. show options fyi
options which will be used by the transaction
monitor:<BR>"
printf( szTmp, "Database
"<font face='Courier New'
color='blue'><PRE>"
"DB Server = <B>%s</B><BR>"
"DB User ID = <B>%s</B><BR>"
"DB Password = <B>%s</B><BR>"
"DB Name = <B>%s</B><BR>"
"</PRE></font>"
);
Reg.szDBServer, Reg.szDBUser, Reg.szDBPassword,
Reg.szDBName);
strcpy( szBuffer, szTmp);
printf( szTmp, "Please enter your
Warehouse and District for this session:<BR>"
"<font face='Courier New'
color='blue'><PRE>"
strcpy( szBuffer, szTmp);
strcpy( szBuffer, "Warehouse ID = <INPUT
NAME='w_id' SIZE=6><BR>"
"District ID = <INPUT NAME='d_id'"
SIZE=2><BR>"
"</PRE></font><HR>"
" <INPUT TYPE='submit' NAME='CMD'"
VALUE='submit'>"
"</FORM></BODY></HTML>");
}
/* FUNCTION: SubmitCmd
* PURPOSE: This function allocated a new
terminal id in the term structure array.
*/

```



```

*/
void SubmitCmd(EXTENSION_CONTROL_BLOCK *pECB, char
*szBuffer)
{
    int          iNewTerm;
    char         *ptr = pECB->lpszQueryString;

    char         szVersion[32]   = { 0 };
    char         szServer[32]    = { 0 };
    char         szUser[32]      =
"sa";
    char         szPassword[32]  = { 0 };
    char         szDatabase[32]  = "tpcc";

    // validate version field; the version field
ensures that the RTE is synchronized with the web
client
    GetKeyValue(&ptr, "VERSION", szVersion,
sizeof(szVersion), ERR_VERSION_MISMATCH);
    if ( strcmp( szVersion, WEBCLIENT_VERSION ) )
        throw new CWEBCLNT_ERR(
ERR_VERSION_MISMATCH );

    if (Reg.eTxnMon == None)
    {
        // parse Server name
        GetKeyValue(&ptr, "db_server",
szServer, sizeof(szServer), ERR_NO_SERVER_SPECIFIED);
        // parse User name
        GetKeyValue(&ptr, "db_user",
szUser, sizeof(szUser), NO_ERR);
        // parse Password
        GetKeyValue(&ptr, "db_passwd",
szPassword, sizeof(szPassword), NO_ERR);
        // parse Database name
        GetKeyValue(&ptr, "db_name",
szDatabase, sizeof(szDatabase), NO_ERR);

        // parse warehouse ID
        int w_id = GetIntKeyValue(&ptr, "w_id",
ERR_HTML_ILL_FORMED, ERR_W_ID_INVALID);
        if ( w_id < 1 )
            throw new CWEBCLNT_ERR(
ERR_W_ID_INVALID );

        // parse district ID
        int d_id = GetIntKeyValue(&ptr, "d_id",
ERR_HTML_ILL_FORMED, ERR_D_ID_INVALID);
        if ( d_id < 1 || d_id > 10 )
            throw new CWEBCLNT_ERR(
ERR_D_ID_INVALID );

        iNewTerm = TermAdd();

        Term.pClientData[iNewTerm].w_id = w_id;
        Term.pClientData[iNewTerm].d_id = d_id;

        try
        {
            if (Reg.eTxnMon == TUXEDO)

                Term.pClientData[iNewTerm].pTxn =
pCTPCC_TUXEDO_new();
            else if (Reg.eTxnMon == ENCINA)

                Term.pClientData[iNewTerm].pTxn =
pCTPCC_ENCINA_new();
            else if (Reg.eTxnMon == COM)

```

```

                Term.pClientData[iNewTerm].pTxn =
pCTPCC_COM_new( Reg.bCOM_SinglePool );
            else if (Reg.eDB_Protocol == ODBC)

                Term.pClientData[iNewTerm].pTxn =
pCTPCC_ODBC_new( szServer, szUser, szPassword,
szMyComputerName,

szDatabase, Reg.szSPPrefix,

Reg.bCallNoDuplicatesNewOrder );
            else if (Reg.eDB_Protocol == DBLIB)

                Term.pClientData[iNewTerm].pTxn =
pCTPCC_DBLIB_new( szServer, szUser, szPassword,
szMyComputerName,
szDatabase );
        }
        catch (...)
        {
            TermDelete(iNewTerm);
            throw; // pass
        }
        exception upward
    }

    MakeMainMenuForm(iNewTerm,
Term.pClientData[iNewTerm].iSyncId, szBuffer);
}

/* FUNCTION: StatsCmd
* PURPOSE: This function returns to the
browser the total number of active terminal ids.
This routine is for
development/debugging purposes.
*/

void StatsCmd(EXTENSION_CONTROL_BLOCK *pECB, char
*szBuffer)
{
    int i;
    int iTotal;

    EnterCriticalSection(&TermCriticalSection);

    iTotal = 0;
    for(i=0; i<Term.iNumEntries; i++)
    {
        if (Term.pClientData[i].iNextFree
== -1)
            iTotal++;
    }

    LeaveCriticalSection(&TermCriticalSection);

    wsprintf( szBuffer,
" <HTML><HEAD><TITLE>TPC-C
Web Client Stats</TITLE></HEAD>"
" <BODY><B><BIG> Total
Active Connections: %d </BIG></B><BR></BODY></HTML>"

```

```

, iTotal );
}

char *CWEBCLNT_ERR::ErrorText()
{
    static SERRORMSG errorMsgs[] =
    {
        { ERR_COMMAND_UNDEFINED,
"Command undefined."

},
        { ERR_D_ID_INVALID,
"Invalid District ID Must be 1 to 10"
},
        { ERR_DELIVERY_CARRIER_ID_RANGE,
"Delivery Carrier ID out of range
must be 1 - 10."
},
        { ERR_DELIVERY_CARRIER_INVALID,
"Delivery Carrier ID invalid must be numeric
1 - 10."
},
        { ERR_DELIVERY_MISSING_OCD_KEY,
"Delivery missing Carrier ID key \"ocd*\"."
},
        { ERR_DELIVERY_THREAD_FAILED,
"Could not start delivery worker
thread."
},
        { ERR_GETPROCADDR_FAILED,
"Could not map proc in DLL. GetProcAddr
error. DLL="
},
        { ERR_HTML_ILL_FORMED,
"Required key field is missing from HTML
string."
},
        { ERR_INVALID_SYNC_CONNECTION,
"Invalid Terminal Sync ID."
},
        { ERR_INVALID_TERMINID,
"Invalid Terminal ID."
},
        { ERR_LOADDLL_FAILED,
"Load

```

```

of DLL failed. DLL="
    {
        ERR_MAX_CONNECTIONS_EXCEEDED,
        "No connections available. Max Connections
is
probably too low." },
    {
        ERR_MISSING_REGISTRY_ENTRIES,
        "Required registry entries are missing.
Rerun
INSTALL to correct." },
    {
        ERR_NEWORDER_CUSTOMER_INVALID,
        "New Order customer id invalid data
type, range = 1
to 3000." },
    {
        ERR_NEWORDER_CUSTOMER_KEY,
        "New Order missing Customer key
\"CID*\"."
    },
    {
        ERR_NEWORDER_DISTRICT_INVALID,
        "New Order District ID Invalid
range 1 - 10."
    },
    {
        ERR_NEWORDER_FORM_MISSING_DID,
        "New Order missing District key
\"DID*\"."
    },
    {
        ERR_NEWORDER_ITEMID_INVALID,
        "New Order Item Id is wrong data type, must
be
numeric."
    },
    {
        ERR_NEWORDER_ITEMID_RANGE,
        "New Order Item Id is out of range.
Range = 1
to 999999."
    },
    {
        ERR_NEWORDER_ITEMID_WITHOUT_SUPPW,
        "New Order Item_Id field entered without a
corresponding Supp_w."
    },
    {
        ERR_NEWORDER_MISSING_IID_KEY,
        "New Order missing Item Id key \"IID*\"."
    },
    {
        ERR_NEWORDER_MISSING_QTY_KEY,
        "New Order Missing Qty key \"Qty##*\"."
    },
    {
        ERR_NEWORDER_MISSING_SUPPW_KEY,

```

```

    "New Order missing Supp_w key
\"SP##*\"."
    },
    {
        ERR_NEWORDER_NOITEMS_ENTERED,
        "New Order No order lines entered."
    },
    {
        ERR_NEWORDER_QTY_INVALID,
        "New Order Qty
invalid must be numeric range
1 - 99."
    },
    {
        ERR_NEWORDER_QTY_RANGE,
        "New
Order Qty is out of range. Range = 1 to
99."
    },
    {
        ERR_NEWORDER_QTY_WITHOUT_SUPPW,
        "New Order Qty field entered
without a corresponding
Supp_w."
    },
    {
        ERR_NEWORDER_SUPPW_INVALID,
        "New Order Supp_w invalid data type
must be
numeric."
    },
    {
        ERR_NO_SERVER_SPECIFIED,
        "No Server name
specified."
    },
    {
        ERR_ORDERSTATUS_CID_AND_CLT,
        "Order Status Only Customer ID or Last Name
may be
entered, not both."
    },
    {
        ERR_ORDERSTATUS_CID_INVALID,
        "Order Status Customer ID invalid, range must
be
numeric 1 - 3000."
    },
    {
        ERR_ORDERSTATUS_CLT_RANGE,
        "Order Status Customer last name
longer than
16 characters."
    },
    {
        ERR_ORDERSTATUS_DID_INVALID,
        "Order Status District invalid, value must be
numeric
1 - 10."
    },
    {
        ERR_ORDERSTATUS_MISSING_CID_CLT,
        "Order Status Either Customer ID or Last Name
must be
entered."
    },
    {
        ERR_ORDERSTATUS_MISSING_CID_KEY,
        "Order Status missing Customer key \"CID*\"."
    },

```

```

    },
    {
        ERR_ORDERSTATUS_MISSING_CLT_KEY,
        "Order Status missing Customer Last Name key
\"CLT*\"
    },
    {
        ERR_ORDERSTATUS_MISSING_DID_KEY,
        "Order Status missing District key \"DID*\"."
    },
    {
        ERR_PAYMENT_CDI_INVALID,
        "Payment
Customer district invalid must be
numeric."
    },
    {
        ERR_PAYMENT_CID_AND_CLT,
        "Payment Only
Customer ID or Last Name may be
entered, not both."
    },
    {
        ERR_PAYMENT_CUSTOMER_INVALID,
        "Payment Customer data type invalid, must be
numeric
."
    },
    {
        ERR_PAYMENT_CWI_INVALID,
        "Payment
Customer Warehouse invalid, must be
numeric."
    },
    {
        ERR_PAYMENT_DISTRICT_INVALID,
        "Payment District ID is invalid, must be 1 -
10."
    },
    {
        ERR_PAYMENT_HAM_INVALID,
        "Payment Amount
invalid data type must be
numeric."
    },
    {
        ERR_PAYMENT_HAM_RANGE,
        "Payment Amount out of range, 0 - 9999.99."
    },
    {
        ERR_PAYMENT_LAST_NAME_TO_LONG,
        "Payment Customer last name longer
than 16
characters."
    },
    {
        ERR_PAYMENT_MISSING_CDI_KEY,
        "Payment missing Customer district key
\"CDI*\"."
    },
    {
        ERR_PAYMENT_MISSING_CID_CLT,
        "Payment Either Customer ID or Last Name must
be
entered."
    },

```

```

    {
        ERR_PAYMENT_MISSING_CID_KEY,
        "Payment missing Customer Key \"CID*\"."
    },
    {
        ERR_PAYMENT_MISSING_CLT_KEY,
        "Payment missing Customer Last Name key
        \"CLT*\"."
    },
    {
        ERR_PAYMENT_MISSING_CWI_KEY,
        "Payment missing Customer Warehouse key
        \"CWI*\"."
    },
    {
        ERR_PAYMENT_MISSING_DID_KEY,
        "Payment missing District Key \"DID*\"."
    },
    {
        ERR_PAYMENT_MISSING_HAM_KEY,
        "Payment missing Amount key \"HAM*\"."
    },
    {
        ERR_STOCKLEVEL_MISSING_THRESHOLD_KEY,
        "Stock Level; missing Threshold key \"TT*\"."
    },
    {
        ERR_STOCKLEVEL_THRESHOLD_INVALID,
        "Stock Level; Threshold value must be in the
        range =
        1 - 99."
    },
    {
        ERR_STOCKLEVEL_THRESHOLD_RANGE,
        "Stock Level Threshold out of
        range, range must be 1
        - 99."
    },
    {
        ERR_VERSION_MISMATCH,
        "Invalid version field. RTE and Web Client
        are probably out of sync."
    },
    {
        ERR_W_ID_INVALID,
        "Invalid warehouse ID."
    },
    {
        0,
        ""
    },
    }
};
char szTmp[256];
int i = 0;

```

```

while (TRUE)
{
    if (errorMsgs[i].szMsg[0] == 0)
    {
        strcpy( szTmp, "Unknown
        error number." );
        break;
    }
    if (m_Error == errorMsgs[i].iError)
    {
        strcpy( szTmp,
        errorMsgs[i].szMsg );
        break;
    }
    i++;
}

if (m_szTextDetail)
    strcat( szTmp, m_szTextDetail );
if (m_SystemErr)
    wsprintf( szTmp+strlen(szTmp), "
    Error=%d", m_SystemErr );

m_szErrorText = new char[strlen(szTmp)+1];
strcpy( m_szErrorText, szTmp );
return m_szErrorText;
}

/* FUNCTION: GetKeyValue
* PURPOSE: This function parses a http
formatted string for specific key values.
* ARGUMENTS: char http string from client
browser *pQueryString char key
value to look for *pkey char key
* character array into which to place key's
value *pvalue char key
* maximum length of key value array.
iMax int
* WEBERROR error
err WEBERROR error
value to throw
* RETURNS: nothing.
* ERROR: if (the pkey value is not found)
then if
* (err == 0) if
* return (empty string) else
* throw CWEBCLNT_ERR(err)
* COMMENTS: http keys are formatted either
KEY=value& or KEY=value\0. This DLL formats
TPC-C input
fields in such a manner that the keys can be extracted
in the above manner.
*/

```

```

void GetKeyValue(char **pQueryString, char *pkey, char
*pvalue, int iMax, WEBERROR err)
{
    char *ptr;
    if ( !(ptr=strstr(*pQueryString, pkey)) )
        goto ErrorExit;
    ptr += strlen(pkey);
    if ( *ptr != '=' )
        goto ErrorExit;
    ptr++;
    iMax--; // one position is for terminating
    null while( *ptr && *ptr != '&' && iMax)
    {
        *pvalue++ = *ptr++;
        iMax--;
    }
    *pvalue = 0; // terminating null
    *pQueryString = ptr;
    return;
ErrorExit:
    if (err != NO_ERR)
        throw new CWEBCLNT_ERR( err );
    *pvalue = 0; // return empty result string
}

/* FUNCTION: GetIntKeyValue
* PURPOSE: This function parses a http
formatted string for a specific key value.
* ARGUMENTS: char http string from client
browser *pQueryString char key
value to look for *pkey char key
* WEBERROR error value to throw if
key not found NoKeyErr error value to throw if
* WEBERROR error value to throw if
value not numeric NotIntErr error value to throw if
* RETURNS: integer
* ERROR: if (the pkey value is not found)
then if
* (NoKeyErr != NO_ERR) if
* throw CWEBCLNT_ERR(err) else
* return 0 else if (non-
numeric char found) then
* if
* (NotIntErr != NO_ERR) then
* throw CWEBCLNT_ERR(err) else
* return 0
* COMMENTS: http keys are formatted either
KEY=value& or KEY=value\0. This DLL formats

```

```

*
* fields in such a manner that the keys can be extracted
* in the above manner.
*/

int GetIntKeyValue(char **pQueryString, char *pKey,
WEBERROR NoKeyErr, WEBERROR NotIntErr)
{
    char *ptr0;
    char *ptr;

    if ( !(ptr=strstr(*pQueryString, pKey)) )
        goto ErrorNoKey;
    ptr += strlen(pKey);
    if ( *ptr != '=' )
        goto ErrorNoKey;
    ptr++;

    ptr0 = ptr; // remember
starting point
// scan string until a terminator (null or &
or a non-digit
while( *ptr && *ptr != '&' && isdigit(*ptr) )
    ptr++;

// make sure we stopped scanning for the
right reason
if ((ptr0 == ptr) || (*ptr && *ptr != '&'))
{
    if (NotIntErr != NO_ERR)
        throw new CWEBCLNT_ERR(
NoKeyErr );
    return 0;
}

*pQueryString = ptr;
return atoi(ptr0);

ErrorNoKey:
if (NoKeyErr != NO_ERR)
    throw new CWEBCLNT_ERR( NoKeyErr );
return 0;
}

/* FUNCTION: TermInit
*
* PURPOSE: This function initializes the
client terminal structure; it is called when the
TPCC.DLL is first loaded by the
inet service.
*/

void TermInit(void)
{
    EnterCriticalSection(&TermCriticalSection);

    Term.iMastersSyncId = 1;
    Term.iNumEntries = Reg.dwMaxConnections+1;

    Term.pClientData = NULL;
    Term.pClientData =
(PCLIENTDATA)malloc(Term.iNumEntries *
sizeof(CLIENTDATA));
    if (Term.pClientData == NULL)
    {
        LeaveCriticalSection(&TermCriticalSection);
        throw new CWEBCLNT_ERR(
ERR_MEM_ALLOC_FAILED );
    }
}

```

```

}

ZeroMemory( Term.pClientData,
Term.iNumEntries * sizeof(CLIENTDATA) );

Term.iFreeList =
Term.iNumEntries-1;
// build free list
// note: Term.pClientData[0].iNextFree gets
set to -1, which marks it as "in use".
// This is intentional, as the zero
entry is used as an anchor and never
terminal. // allocated as an actual
//
for(int i=0; i<Term.iNumEntries; i++)
    Term.pClientData[i].iNextFree = i-
1;

LeaveCriticalSection(&TermCriticalSection);

/* FUNCTION: TermDeleteAll
*
* PURPOSE: This function frees allocated
resources associated with the terminal structure.
*
* ARGUMENTS: none
*
* RETURNS: None
*
* COMMENTS: This function is called only when
the inet service unloads the TPCC.DLL
*/

void TermDeleteAll(void)
{
    EnterCriticalSection(&TermCriticalSection);
    for(int i=1; i<Term.iNumEntries; i++)
    {
        if (Term.pClientData[i].iNextFree
== -1)
            delete
Term.pClientData[i].pTxn;
    }

    Term.iFreeList = 0;
    Term.iNumEntries = 0;
    if (Term.pClientData)
        Free(Term.pClientData);
    Term.pClientData = NULL;

    LeaveCriticalSection(&TermCriticalSection);
}

/* FUNCTION: TermAdd
*
* PURPOSE: This function assigns a terminal id
which is used to identify a client browser.
*
* RETURNS: int
assigned terminal id
*/

int TermAdd(void)
{
    DWORD i;
    int iNewTerm, iTickCount;

    if (Term.iNumEntries == 0)

```

```

return -1;

EnterCriticalSection(&TermCriticalSection);
if (Term.iFreeList != 0)
{
    // position is available
    iNewTerm = Term.iFreeList;
    Term.iFreeList =
Term.pClientData[iNewTerm].iNextFree;

    Term.pClientData[iNewTerm].iNextFree = -1;
// indicates this position is in use
}
else
{
    // no open slots, so find the slot
that hasn't been used in the longest time and reuse it
    for(iNewTerm=1, i=1,
iTickCount=0x7FFFFFFF; i<Reg.dwMaxConnections; i++)
    {
        if (iTickCount >
Term.pClientData[i].iTickCount)
        {
            iTickCount =
Term.pClientData[i].iTickCount;
            iNewTerm = i;
        }
    }
    // if oldest term is less than one
minute old, it probably means that more connections
// are being attempted than were
specified as "Max Connections" at install. In this
case,
// do not bump existing connection;
instead, return error to requestor.
    if ((GetTickCount() - iTickCount) <
60000)
    {
        LeaveCriticalSection(&TermCriticalSection);
        throw new CWEBCLNT_ERR(
ERR_MAX_CONNECTIONS_EXCEEDED );
    }

    Term.pClientData[iNewTerm].iTickCount =
GetTickCount();
    Term.pClientData[iNewTerm].iSyncId =
Term.iMasterSyncId++;
    Term.pClientData[iNewTerm].pTxn = NULL;

    LeaveCriticalSection(&TermCriticalSection);
    return iNewTerm;
}

/* FUNCTION: TermDelete
*
* PURPOSE: This function makes a terminal
entry in the Term array available for reuse.
*
* ARGUMENTS: int
id
Terminal id of client exiting
*/

void TermDelete(int id)
{
    if ( id > 0 && id < Term.iNumEntries )
    {
        delete Term.pClientData[id].pTxn;
        // put onto free list

```

```

        EnterCriticalSection(&TermCriticalSection);
        Term.pClientData[id].iNextFree =
Term.iFreeList;
        Term.iFreeList = id;

        LeaveCriticalSection(&TermCriticalSection);
    }

/* FUNCTION: MakeErrorForm
*/
void ErrorForm(EXTENSION_CONTROL_BLOCK *pECB, int
iType, int iErrorNum, int iTermId, int iSyncId, char
*szErrorText, char *
szBuffer )
{
    sprintf(szBuffer,
        "HTML<>HEAD<TITLE>TPC-C
Error</TITLE></HEAD><BODY>"
        "<FORM ACTION=\"tpcc.d11\"
METHOD=\"GET\">"
        "<INPUT TYPE=\"hidden\"
NAME=\"STATUSID\" VALUE=\"%d\">"
        "<INPUT TYPE=\"hidden\"
NAME=\"ERROR\" VALUE=\"%d\">"
        "<INPUT TYPE=\"hidden\"
NAME=\"FORMID\" VALUE=\"%d\">"
        "<INPUT TYPE=\"hidden\"
NAME=\"TERMINID\" VALUE=\"%d\">"
        "<INPUT TYPE=\"hidden\"
NAME=\"SYNCID\" VALUE=\"%d\">"
        "<BOLD>An Error
Occurred</BOLD><BR><BR>"
        "%s"
        "<BR><BR><HR>"
        "<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..\">"
        "</FORM></BODY></HTML>"
        , iType, iErrorNum, MAIN_MENU_FORM,
iTermId, iSyncId, szErrorText );

/* FUNCTION: MakeMainMenuForm
*/
void MakeMainMenuForm(int iTermId, int iSyncId, char
*szForm)
{
    sprintf(szForm,
        "HTML<>HEAD<TITLE>TPC-C Main
Menu</TITLE></HEAD><BODY>"
        "Select Desired
Transaction.<BR><HR>"
        "<FORM ACTION=\"tpcc.d11\"
METHOD=\"GET\">"

```

```

        "<INPUT TYPE=\"hidden\"
NAME=\"STATUSID\" VALUE=\"0\">"
        "<INPUT TYPE=\"hidden\"
NAME=\"ERROR\" VALUE=\"0\">"
        "<INPUT TYPE=\"hidden\"
NAME=\"FORMID\" VALUE=\"%d\">"
        "<INPUT TYPE=\"hidden\"
NAME=\"TERMINID\" VALUE=\"%d\">"
        "<INPUT TYPE=\"hidden\"
NAME=\"SYNCID\" VALUE=\"%d\">"
        "<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..\">"
        "</FORM></BODY></HTML>"
        , MAIN_MENU_FORM, iTermId,
iSyncId);
}

/* FUNCTION: MakeStockLevelForm
* PURPOSE: This function constructs the Stock
Level HTML page.
* COMMENTS: The internal client buffer is
created when the terminal id is assigned and should not
be freed except
when the client terminal id is no longer needed.
*/
void MakeStockLevelForm(int iTermId, STOCK_LEVEL_DATA
*pStockLevelData, BOOL bInput, char *szForm)
{
    int c;

    c = sprintf(szForm,
        "HTML<>HEAD<TITLE>TPC-C Stock
Level</TITLE></HEAD><FORM ACTION=\"tpcc.d11\"
METHOD=\"GET\">"
        "<INPUT TYPE=\"hidden\"
NAME=\"STATUSID\" VALUE=\"0\">"
        "<INPUT TYPE=\"hidden\"
NAME=\"ERROR\" VALUE=\"0\">"
        "<INPUT TYPE=\"hidden\"
NAME=\"FORMID\" VALUE=\"%d\">"
        "<INPUT TYPE=\"hidden\"
NAME=\"TERMINID\" VALUE=\"%d\">"
        "<INPUT TYPE=\"hidden\"
NAME=\"SYNCID\" VALUE=\"%d\">"
        "<PRE><font face=\"Courier\">
Stock-Level<BR>"
        "warehouse: %6.6d District:
%2.2d<BR><BR>",
        STOCK_LEVEL_FORM, iTermId,
Term.pClientData[iTermId].iSyncId,
Term.pClientData[iTermId].w_id,
Term.pClientData[iTermId].d_id);

    if ( bInput )
    {
        strcpy(szForm+c,
            "Stock Level Threshold:
<INPUT NAME=\"TT*\" SIZE=2><BR><BR>"

```

```

        "low stock:
<BR><BR><BR><BR><BR><BR><BR>
<BR><BR><BR></PRE><HR>"
        "<INPUT TYPE=\"submit\"
NAME=\"CMD\" VALUE=\"Process\">"
        "<INPUT TYPE=\"submit\"
NAME=\"CMD\" VALUE=\"Menu\">"
        "</FORM></HTML> )";
    }
    else
    {
        sprintf(szForm+c,
            "Stock Level Threshold:
%2.2d<BR><BR>"
            "low stock: %3.3d</font>
<BR><BR><BR><BR><BR><BR><BR><BR>
<BR><BR><BR><BR></PRE><HR>"
            "<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..\">"
            "</FORM></HTML>"
            , pStockLevelData->threshold, pStockLevelData->low_stock);
    }

/* FUNCTION: MakeNewOrderForm
* COMMENTS: The internal client buffer is
created when the terminal id is assigned and should not
be freed except
when the client terminal id is no longer needed.
*/
void MakeNewOrderForm(int iTermId, NEW_ORDER_DATA
*pNewOrderData, BOOL bInput, char *szForm)
{
    int i, c;
    BOOL bValid;
    static char szBR[] = "<BR><BR><BR><BR>
<BR><BR><BR><BR><BR><BR><BR><BR><BR><BR><BR>";

    if (!bInput)
        assert( pNewOrderData->exec_status_code == eOK || pNewOrderData->exec_status_code == eInvalidItem );

    bValid = (bInput || (pNewOrderData->exec_status_code == eOK));

    c = sprintf(szForm,
        "HTML<>HEAD<TITLE>TPC-C New
Order</TITLE></HEAD><BODY>"
        "<FORM ACTION=\"tpcc.d11\"
METHOD=\"GET\">"
        "<INPUT TYPE=\"hidden\"
NAME=\"STATUSID\" VALUE=\"%d\">"
        "<INPUT TYPE=\"hidden\"
NAME=\"ERROR\" VALUE=\"0\">"

```

```

NAME="FORMID" VALUE="d"
NAME="TERMIN" VALUE="d"
NAME="SYCID" VALUE="d"
New Order<BR>
NEW_ORDER_FORM, iTermId,
Term.pClientData[iTermId].iSyncId);
    if ( bInput )
    {
        c += sprintf(szForm+c, "Warehouse:
%6.6d ", Term.pClientData[iTermId].w_id);
        strcpy( szForm+c,
                "District: <INPUT
                Date:<BR>
                Customer: <INPUT
                Name:
                %Disc:<BR>
                Order Number:
                W_tax:      D_tax:<BR>
                <BR>
                Name      Qty Stock  Supp_W Item_Id Item
                Amount<BR>
                <INPUT NAME=\"IID00*\" SIZE=6>
                <INPUT NAME=\"SP00*\"
                SIZE=4> <INPUT NAME=\"IID01*\" SIZE=6>
                <INPUT NAME=\"SP01*\"
                SIZE=4> <INPUT NAME=\"IID02*\" SIZE=6>
                <INPUT NAME=\"SP02*\"
                SIZE=4> <INPUT NAME=\"IID03*\" SIZE=6>
                <INPUT NAME=\"SP03*\"
                SIZE=4> <INPUT NAME=\"IID04*\" SIZE=6>
                <INPUT NAME=\"SP04*\"
                SIZE=4> <INPUT NAME=\"IID05*\" SIZE=6>
                <INPUT NAME=\"SP05*\"
                SIZE=4> <INPUT NAME=\"IID06*\" SIZE=6>
                <INPUT NAME=\"SP06*\"
                SIZE=4> <INPUT NAME=\"IID07*\" SIZE=6>
                <INPUT NAME=\"SP07*\"
                SIZE=4> <INPUT NAME=\"IID08*\" SIZE=6>
                <INPUT NAME=\"SP08*\"
                SIZE=4> <INPUT NAME=\"IID08*\" SIZE=6>

```

```

<INPUT
NAME="Qty08*" SIZE=1><BR>
SIZE=4> <INPUT NAME="IID09*" SIZE=6>
<INPUT
NAME="Qty09*" SIZE=1><BR>
SIZE=4> <INPUT NAME="IID10*" SIZE=6>
<INPUT
NAME="Qty10*" SIZE=1><BR>
SIZE=4> <INPUT NAME="IID11*" SIZE=6>
<INPUT
NAME="Qty11*" SIZE=1><BR>
SIZE=4> <INPUT NAME="IID12*" SIZE=6>
<INPUT
NAME="Qty12*" SIZE=1><BR>
SIZE=4> <INPUT NAME="IID13*" SIZE=6>
<INPUT
NAME="Qty13*" SIZE=1><BR>
SIZE=4> <INPUT NAME="IID14*" SIZE=6>
<INPUT
NAME="Qty14*" SIZE=1><BR>
Total:<BR>
NAME="CMD" VALUE="Process"
NAME="CMD" VALUE="Menu"
    }
    else
    {
        c += sprintf(szForm+c, "Warehouse:
%6.6d District: %2.2d Date: ",
                pNewOrderData->w_id,
                pNewOrderData->d_id);
        if ( bValid )
        {
            c += sprintf(szForm+c,
"%2.2d-%2.2d-%4.4d %2.2d:%2.2d:%2.2d",
                pNewOrderData-
>o_entry_d.day,
                pNewOrderData-
>o_entry_d.month,
                pNewOrderData-
>o_entry_d.year,
                pNewOrderData-
>o_entry_d.hour,
                pNewOrderData-
>o_entry_d.minute,
                pNewOrderData-
>o_entry_d.second);
        }
        c += sprintf(szForm+c,
"<BR>Customer: %4.4d Name: %-16s Credit: %-2s ",
                pNewOrderData->c_last, pNewOrderData->c_credit);

```

```

    if ( bValid )
    {
        c += sprintf(szForm+c,
                "%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>",
                100.0*pNewOrderData->c_discount,
                pNewOrderData-
>o_id,
                pNewOrderData-
>o_o1_cnt,
                100.0 *
                pNewOrderData->w_tax,
                100.0 *
                pNewOrderData->d_tax);
        for(i=0; i<pNewOrderData-
>o_o1_cnt; i++)
        {
            c +=
                sprintf(szForm+c, "%6.6d %6.6d %6.6d %2.2d
                %3.3d %1.1s %$6.2f %$7.2f
                <BR>",
                pNewOrderData->ol[i].ol_supply_w_id,
                pNewOrderData->ol[i].ol_i_id,
                pNewOrderData->ol[i].ol_i_name,
                pNewOrderData->ol[i].ol_quantity,
                pNewOrderData->ol[i].ol_stock,
                pNewOrderData->ol[i].ol_brand_generic,
                pNewOrderData->ol[i].ol_i_price,
                pNewOrderData->ol[i].ol_amount );
            else
            {
                c += sprintf(szForm+c,
                "%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>
                pNewOrderData->o_id);
                i = 0;
            }
            strncpy( szForm+c, szBR, (15-i)*5
        );
        c += (15-i)*5;
    }

```

```

        if ( bvalid )
            c += sprintf(szForm+c,
"Execution Status: Transaction committed.
Total:   $%8.2f
",
        pNewOrderData-
>total_amount);
        else
            c += sprintf(szForm+c,
"Execution Status: Item number is not valid.
Total:");
        strcpy(szForm+c,
            "<BR></font></PRE><HR>"
            "<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..\">"
            "</FORM></HTML>"
        );
    }
}

/* FUNCTION: MakePaymentForm
 * COMMENTS:   The internal client buffer is
 *             created when the terminal id is assigned and should not
 *             be freed except
 *             when the client terminal id is no longer needed.
 */

void MakePaymentForm(int iTermId, PAYMENT_DATA
*pPaymentData, BOOL bInput, char *szForm)
{
    int c;
    c = sprintf(szForm,
        "<HTML><HEAD><TITLE>TPC-C
Payment</TITLE></HEAD><BODY>"
        "<FORM ACTION=\"tpcc.d11\"
METHOD=\"GET\">"
        "<INPUT TYPE=\"hidden\"
NAME=\"STATUSID\" VALUE=\"0\">"
        "<INPUT TYPE=\"hidden\"
NAME=\"ERROR\" VALUE=\"0\">"
        "<INPUT TYPE=\"hidden\"
NAME=\"FORMID\" VALUE=\"%d\">"
        "<INPUT TYPE=\"hidden\"
NAME=\"TERMID\" VALUE=\"%d\">"
        "<INPUT TYPE=\"hidden\"
NAME=\"SYNCID\" VALUE=\"%d\">"
        "<PRE><font face=\"courier\">
Payment<BR>"
        "Date: "
        Term.pClientData[iTermId].iSyncId,
        PAYMENT_FORM, iTermId,
        Term.pClientData[iTermId].iSyncId);
    if ( !bInput )
        {
            c += sprintf(szForm+c, "%2.2d-
%2.2d-%4.4d %2.2d:%2.2d:%2.2d",
                pPaymentData->h_date.day,

```

```

                pPaymentData->
>h_date.month,
                pPaymentData->
>h_date.year,
                pPaymentData->
>h_date.hour,
                pPaymentData->
>h_date.minute,
                pPaymentData->
>h_date.second);
        }
        if ( bInput )
        {
            c += sprintf(szForm+c,
                "<BR><BR>warehouse:
%6.6d"
                "
                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></font></PRE><HR>"
                "<INPUT TYPE=\"submit\"
NAME=\"CMD\" VALUE=\"Process\"><INPUT TYPE=\"submit\"
NAME=\"CMD\" VALUE=\"
Menu\">"
                "</BODY></FORM></HTML>"
            );
            Term.pClientData[iTermId].w_id;
        }
        else
        {
            c += sprintf(szForm+c,
                "<BR><BR>warehouse:
%6.6d
                District: %2.2d<BR>"
                "%-20s
                "%-20s
                "%-20s
                "%-20s %2s %5.5s-%4.4s<BR> <BR>"
                "Customer: %4.4d Cust-
warehouse: %6.6d Cust-District: %2.2d<BR>"
                "Name: %16s %2s %16s
                "%-16s %2s %16s
                "
                "
                Since: %2.2d-%2.2d-%4.4d<BR>"
                "
                "%-20s
                "
                Credit: %2s<BR>"
            );
            Term.pClientData[iTermId].w_id, pPaymentData->d_id,
            pPaymentData->
>w_street_1, pPaymentData->d_street_1

```

```

                , pPaymentData->
>w_street_2, pPaymentData->d_street_2
                , pPaymentData->w_city,
                pPaymentData->w_state, pPaymentData->w_zip,
                pPaymentData->w_zip+5
                , pPaymentData->d_city,
                pPaymentData->d_state, pPaymentData->d_zip,
                pPaymentData->d_zip+5
                , pPaymentData->c_id,
                pPaymentData->c_d_id,
                pPaymentData->c_d_id,
                pPaymentData->c_first,
                pPaymentData->c_last,
                pPaymentData->c_first,
                pPaymentData->c_last
                , pPaymentData->
>c_since.day, pPaymentData->c_since.month,
                pPaymentData->c_since.year,
                pPaymentData->
>c_street_1, pPaymentData->c_credit
            );
            c += sprintf(szForm+c,
                "
                "%-20s
                "%Disc: %5.2f<BR>"
                "
                pPaymentData->c_street_2,
                100.0*pPaymentData->c_discount);
            c += sprintf(szForm+c,
                "
                "%-20s %2s
                "%5.5s-%4.4s Phone: %6.6s-%3.3s-%3.3s-%4.4s<BR>
                <BR>"
                "
                pPaymentData->c_state, pPaymentData->c_city,
                pPaymentData->c_zip,
                pPaymentData->c_zip+5,
                pPaymentData->c_phone,
                pPaymentData->c_phone+6, pPaymentData->c_phone+9,
                pPaymentData->c_phone+12 );
            c += sprintf(szForm+c,
                "Amount Paid:
                "%7.2f New Cust-Balance: $%14.2f<BR>
                "Credit Limit:
                "%13.2f<BR> <BR>"
                , pPaymentData->h_amount,
                pPaymentData->c_balance
                , pPaymentData->
                >c_credit_lim
            );
            if ( pPaymentData->c_credit[0] ==
                'B' && pPaymentData->c_credit[1] == 'C' )
                c += sprintf(szForm+c,
                    "Cust-Data: %50.50s<BR>
                    "%-50.50s<BR>
                    "%-
                    50.50s<BR>"
                    ,
                    pPaymentData->c_data, pPaymentData->
                    >c_data+50, pPaymentData->c_data+100,
                    pPaymentData->c_data+150 );
            else
                strcpy(szForm+c, "Cust-
                Data: <BR> <BR> <BR> <BR>");
            strcat(szForm,
                "
                "<INPUT TYPE=\"submit\" NAME=\"CMD\"
                VALUE=\"..NewOrder..\">"
                "
                "<INPUT TYPE=\"submit\" NAME=\"CMD\"
                VALUE=\"..Payment..\">"
            );

```







```

* form filling in the
required input variables. It then calls the
* SQLStockLevel
transaction, constructs the output form and writes it
* back to client browser.
*
* ARGUMENTS: EXTENSION_CONTROL_BLOCK *pECB
passed in structure pointer from inetsrv.
* int
*
* iTermId client browser terminal id
*/
void ProcessStockLevelForm(EXTENSION_CONTROL_BLOCK
*pECB, int iTermId, char *szBuffer)
{
    char *ptr = pECB-
>lpszQueryString;
    PSTOCK_LEVEL_DATA pStockLevel;
    pStockLevel = Term.pClientData[iTermId].pTxn-
>BuffAddr_StockLevel();
    ZeroMemory( pStockLevel,
sizeof(STOCK_LEVEL_DATA) );
    pStockLevel->w_id =
Term.pClientData[iTermId].w_id;
    pStockLevel->d_id =
Term.pClientData[iTermId].d_id;
    pStockLevel->threshold = GetIntKeyValue(&ptr,
"TT*", ERR_STOCKLEVEL_MISSING_THRESHOLD_KEY,
ERR_STOCKLEVEL_THRESHOLD_INVALID);
    if ( pStockLevel->threshold >= 100 ||
pStockLevel->threshold < 0 )
        throw new CWEBCLNT_ERR(
ERR_STOCKLEVEL_THRESHOLD_RANGE );
    Term.pClientData[iTermId].pTxn->StockLevel();
    pStockLevel = Term.pClientData[iTermId].pTxn-
>BuffAddr_StockLevel();
    MakeStockLevelForm(iTermId, pStockLevel,
OUTPUT_FORM, szBuffer);
}
/* FUNCTION: GetNewOrderData
*
* PURPOSE: This function extracts and
validates the new order form data from an http command
string.
*
* ARGUMENTS: LPSTR client browser
lpszQueryString
http command string
*
* pNewOrderData pointer to new
order data structure
*/
void GetNewOrderData(LPSTR lpszQueryString,
NEW_ORDER_DATA *pNewOrderData)
{
    char szTmp[26];
    int i;
    short items;
    int ol_i_id, ol_quantity;
    char *ptr = lpszQueryString;

```

```

    static char szSP[MAX_OL_NEW_ORDER_ITEMS][6] =
"SP03*", "SP04*", { "SP00*", "SP01*", "SP02*",
"SP08*", "SP09*", "SP05*", "SP06*", "SP07*",
"SP13*", "SP14*" };
    static char szIID[MAX_OL_NEW_ORDER_ITEMS][7]
=
"IID03*", "IID04*", { "IID00*", "IID01*", "IID02*",
"IID03*", "IID04*", "IID05*", "IID06*", "IID07*",
"IID08*", "IID09*", "IID05*", "IID06*", "IID07*",
"IID13*", "IID14*" };
    static char szQty[MAX_OL_NEW_ORDER_ITEMS][7]
=
"Qty03*", "Qty04*", { "Qty00*", "Qty01*", "Qty02*",
"Qty03*", "Qty04*", "Qty05*", "Qty06*", "Qty07*",
"Qty08*", "Qty09*", "Qty10*", "Qty11*", "Qty12*",
"Qty13*", "Qty14*" };
    pNewOrderData->d_id = GetIntKeyValue(&ptr,
"DID*", ERR_NEWORDER_FORM_MISSING_DID,
ERR_NEWORDER_DISTRICT_INVALID);
    pNewOrderData->c_id = GetIntKeyValue(&ptr,
"CID*", ERR_NEWORDER_CUSTOMER_KEY,
ERR_NEWORDER_CUSTOMER_INVALID);
    for(i=0, items=0; i<MAX_OL_NEW_ORDER_ITEMS;
i++)
    {
        GetKeyValue(&ptr, szSP[i], szTmp,
sizeof(szTmp), ERR_NEWORDER_MISSING_SUPPW_KEY);
        if ( szTmp[0] )
            if ( !IsNumeric(szTmp) )
                throw new
CWEBCLNT_ERR( ERR_NEWORDER_SUPPW_INVALID );
        pNewOrderData-
>OL[items].ol_supply_w_id = atoi(szTmp);
        ol_i_id = pNewOrderData-
>OL[items].ol_i_id =
        GetIntKeyValue(&ptr, szIID[i],
ERR_NEWORDER_MISSING_IID_KEY,
ERR_NEWORDER_ITEMID_INVALID);
        if ( ol_i_id > 999999 ||
ol_i_id < 1 )
            throw new
CWEBCLNT_ERR( ERR_NEWORDER_ITEMID_RANGE );
        ol_quantity =
pNewOrderData->OL[items].ol_quantity =
        GetIntKeyValue(&ptr, szQty[i],
ERR_NEWORDER_MISSING_QTY_KEY,
ERR_NEWORDER_QTY_INVALID);
        if ( ol_quantity > 99 ||
ol_quantity < 1 )
            throw new
CWEBCLNT_ERR( ERR_NEWORDER_QTY_RANGE );
        items++;
    }
    else
    {
        // nothing entered for
supply warehouse, so item id and qty must also be blank

```

```

        GetKeyValue(&ptr,
szIID[i], szTmp, sizeof(szTmp),
ERR_NEWORDER_MISSING_IID_KEY);
        if ( szTmp[0] )
            throw new
CWEBCLNT_ERR( ERR_NEWORDER_ITEMID_WITHOUT_SUPPW );
        GetKeyValue(&ptr,
szQty[i], szTmp, sizeof(szTmp),
ERR_NEWORDER_MISSING_QTY_KEY);
        if ( szTmp[0] )
            throw new
CWEBCLNT_ERR( ERR_NEWORDER_QTY_WITHOUT_SUPPW );
    }
    if ( items == 0 )
        throw new CWEBCLNT_ERR(
ERR_NEWORDER_NOITEMS_ENTERED );
    pNewOrderData->o_ol_cnt = items;
}
/* FUNCTION: GetPaymentData
*
* PURPOSE: This function extracts and
validates the payment form data from an http command
string.
*
* ARGUMENTS: LPSTR client browser
lpszQueryString
http command string
*
* pPaymentData pointer to
payment data structure
*/
void GetPaymentData(LPSTR lpszQueryString, PAYMENT_DATA
*pPaymentData)
{
    char szTmp[26];
    char *ptr = lpszQueryString;
    BOOL bCustIdBlank;
    int iLen;
    pPaymentData->d_id = GetIntKeyValue(&ptr,
"DID*", ERR_PAYMENT_MISSING_DID_KEY,
ERR_PAYMENT_DISTRICT_INVALID);
    GetKeyValue(&ptr, "CID*", szTmp,
sizeof(szTmp), ERR_PAYMENT_MISSING_CID_KEY);
    if ( szTmp[0] == 0 )
    {
        bCustIdBlank = TRUE;
        pPaymentData->c_id = 0;
    }
    else
    {
        // parse customer id and verify
that last name was NOT entered
        bCustIdBlank = FALSE;
        if ( !IsNumeric(szTmp) )
            throw new CWEBCLNT_ERR(
ERR_PAYMENT_CUSTOMER_INVALID );
        pPaymentData->c_id = atoi(szTmp);
    }
    pPaymentData->c_w_id = GetIntKeyValue(&ptr,
"CWI*", ERR_PAYMENT_MISSING_CWI_KEY,
ERR_PAYMENT_CWI_INVALID);
    pPaymentData->c_d_id = GetIntKeyValue(&ptr,
"CDI*", ERR_PAYMENT_MISSING_CDI_KEY,
ERR_PAYMENT_CDI_INVALID);

```

```

        if ( bCustIdBlank )
        {
            // customer id is blank, so last
            name must be entered
            GetKeyValue(&ptr, "CLT*", szTmp,
            sizeof(szTmp), ERR_PAYMENT_MISSING_CLT_KEY);
            if ( szTmp[0] == 0 )
                throw new CWEBCLNT_ERR(
ERR_PAYMENT_MISSING_CID_CLT );
        }

        _strupr( szTmp );
        if ( strlen(szTmp) > LAST_NAME_LEN
)
            throw new CWEBCLNT_ERR(
ERR_PAYMENT_LAST_NAME_TO_LONG );

        strcpy(pPaymentData->c_last,
szTmp);
        // pad with spaces so that the
        client layer doesn't have to do it
        // before passing parameters to
        stored procedure
        iLen = strlen(pPaymentData-
>c_last);
        memset(pPaymentData->c_last + iLen,
' ', LAST_NAME_LEN - iLen);
        pPaymentData->c_last[LAST_NAME_LEN]
= 0;
    }
    else
    {
        // parse customer id and verify
        that last name was NOT entered
        GetKeyValue(&ptr, "CLT*", szTmp,
        sizeof(szTmp), ERR_PAYMENT_MISSING_CLT_KEY);
        if ( szTmp[0] != 0 )
            throw new CWEBCLNT_ERR(
ERR_PAYMENT_CID_AND_CLT );
    }

    GetKeyValue(&ptr, "HAM*", szTmp,
    sizeof(szTmp), ERR_PAYMENT_MISSING_HAM_KEY);
    if (!IsDecimal(szTmp))
        throw new CWEBCLNT_ERR(
ERR_PAYMENT_HAM_INVALID );
    pPaymentData->h_amount = atof(szTmp);
    if ( pPaymentData->h_amount >= 10000.00 ||
pPaymentData->h_amount < 0 )
        throw new CWEBCLNT_ERR(
ERR_PAYMENT_HAM_RANGE );
}

/* FUNCTION: GetOrderStatusData
*
* PURPOSE: This function extracts and
validates the payment form data from an http command
string.
*/
void GetOrderStatusData(LPSTR lpszQueryString,
ORDER_STATUS_DATA *pOrderStatusData)
{
    char szTmp[26];
    char *ptr = lpszQueryString;
    int iLen;

    pOrderStatusData->d_id = GetIntKeyValue(&ptr,
"ID*", ERR_ORDERSTATUS_MISSING_ID_KEY,
ERR_ORDERSTATUS_ID_INVALID);

    GetKeyValue(&ptr, "CID*", szTmp,
    sizeof(szTmp), ERR_ORDERSTATUS_MISSING_CID_KEY);
    if ( szTmp[0] == 0 )

```

```

    {
        // customer id is blank, so last
        name must be entered
        pOrderStatusData->c_id = 0;
        GetKeyValue(&ptr, "CLT*", szTmp,
        sizeof(szTmp), ERR_ORDERSTATUS_MISSING_CLT_KEY);
        if ( szTmp[0] == 0 )
            throw new CWEBCLNT_ERR(
ERR_ORDERSTATUS_MISSING_CID_CLT );
    }

    _strupr( szTmp );
    if ( strlen(szTmp) > LAST_NAME_LEN
)
        throw new CWEBCLNT_ERR(
ERR_ORDERSTATUS_CLT_RANGE );

    strcpy(pOrderStatusData->c_last,
szTmp);
    // pad with spaces so that the
    client layer doesn't have to do it
    // before passing parameters to
    stored procedure
    iLen = strlen(pOrderStatusData-
>c_last);
    memset(pOrderStatusData->c_last +
iLen, ' ', LAST_NAME_LEN - iLen);
    pOrderStatusData-
>c_last[LAST_NAME_LEN] = 0;
}
else
{
    // parse customer id and verify
    that last name was NOT entered
    if ( !IsNumeric(szTmp) )
        throw new CWEBCLNT_ERR(
ERR_ORDERSTATUS_CID_INVALID );
    pOrderStatusData->c_id =
atoi(szTmp);
    GetKeyValue(&ptr, "CLT*", szTmp,
    sizeof(szTmp), ERR_ORDERSTATUS_MISSING_CLT_KEY);
    if ( szTmp[0] != 0 )
        throw new CWEBCLNT_ERR(
ERR_ORDERSTATUS_CID_AND_CLT );
}
}

/* FUNCTION: BOOL IsNumeric(char *ptr)
*
* PURPOSE: This function determines if a
string is numeric. It fails if any characters other
than numeric and null
terminator are present.
*
* ARGUMENTS: char *ptr
            pointer to string to check.
*
* RETURNS: BOOL FALSE if
string is not all numeric
*
            TRUE if string contains only numeric
characters i.e. '0' - '9'
*/
BOOL IsNumeric(char *ptr)
{
    if ( *ptr == 0 )
        return FALSE;

    while( *ptr && isdigit(*ptr) )
        ptr++;
    return ( !*ptr );
}

```

```

/* FUNCTION: BOOL IsDecimal(char *ptr)
*
* PURPOSE: This function determines if a
string is a non-negative decimal value.
*
* It fails if any characters other than a
series of numbers followed by
*
* a decimal point, another
series of numbers, and a null terminator are present.
*
* ARGUMENTS: char *ptr
            pointer to string to check.
*
* RETURNS: BOOL FALSE if
string is not a valid non-negative decimal value
*
            TRUE if string is OK
*/
BOOL IsDecimal(char *ptr)
{
    char *dotptr;
    BOOL bValid;

    if ( *ptr == 0 )
        return FALSE;

    // find decimal point
    dotptr = strchr( ptr, '.' );
    if (dotptr == NULL)
        // no decimal point, so just check
        for numeric
        return IsNumeric(ptr);
    *dotptr = 0; // temporarily replace decimal
    with a terminator

    if ( *ptr != 0 )
        bValid = IsNumeric(ptr);
    // string starts with decimal point
    else if (*(dotptr+1) == 0)
        return FALSE; // nothing but a
    decimal point is bad
    else
        bValid = TRUE;

    if (*(dotptr+1) != 0)
        // check text after decimal point
        bValid &= IsNumeric(dotptr+1);

    *dotptr = '.'; // replace decimal point
    return bValid;
}

```

## common/src/ReadRegistry.cpp

```

/* FILE: READREGISTRY.CPP
* Microsoft TPC-C
Kit Ver. 4.20.000
* Copyright
Microsoft, 1999
* All Rights Reserved
*
* not yet audited
*
* PURPOSE: Implementation for TPC-C Tuxedo
class.
* Contact: Charles Levine
(clevine@microsoft.com)

```

```

*
* Change history: 4.20.000 - first version
*/

/* FUNCTION: ReadTPCCRegistrySettings
* PURPOSE: This function reads the NT registry
for startup parameters. These parameters are
* under the TPCC key.
* RETURNS FALSE = no errors
TRUE = error reading
registry
*/
BOOL ReadTPCCRegistrySettings( TPCCREGISTRYDATA *pReg )
{
    HKEY hKey;
    DWORD size;
    DWORD type;
    DWORD dwTmp;
    char szTmp[256];

    if ( RegOpenKeyEx(HKEY_LOCAL_MACHINE,
"SOFTWARE\\Microsoft\\TPCC", 0, KEY_READ, &hKey) !=
ERROR_SUCCESS )
        return TRUE;

    // determine database protocol to use; may be
either ODBC or DBLIB
    pReg->eDB_Protocol = Unspecified;
    size = sizeof(szTmp);
    if ( RegQueryValueEx(hKey, "DB_Protocol", 0,
&type, (BYTE *)&szTmp, &size) == ERROR_SUCCESS )
    {
        if ( !strcmp(szTmp,
szDBNames[ODBC] ) )
            pReg->eDB_Protocol =
ODBC;
        else if ( !strcmp(szTmp,
szDBNames[DBLIB] ) )
            pReg->eDB_Protocol =
DBLIB;
    }

    pReg->eTxnMon = None;
    // determine txn monitor to use; may be
either TUXEDO, or blank
    size = sizeof(szTmp);
    if ( RegQueryValueEx(hKey, "TxnMonitor", 0,
&type, (BYTE *)&szTmp, &size) == ERROR_SUCCESS )
    {
        if ( !strcmp(szTmp,
szTxnMonNames[TUXEDO] ) )
            pReg->eTxnMon = TUXEDO;
        else if ( !strcmp(szTmp,
szTxnMonNames[ENCINA] ) )
            pReg->eTxnMon = ENCINA;
        else if ( !strcmp(szTmp,
szTxnMonNames[COM] ) )
            pReg->eTxnMon = COM;
    }

    pReg->bCOM_SinglePool = FALSE;
    size = sizeof(szTmp);
    if ( RegQueryValueEx(hKey, "COM_SinglePool",
0, &type, (BYTE *)&szTmp, &size) == ERROR_SUCCESS )
    {
        if ( !strcmp(szTmp, "YES") )
            pReg->bCOM_SinglePool =
TRUE;
    }
}

```

```

}

pReg->dwMaxConnections = 0;
size = sizeof(dwTmp);
if ( ( RegQueryValueEx(hKey,
"MaxConnections", 0, &type, (LPBYTE)&dwTmp, &size) ==
ERROR_SUCCESS )
    && (type == REG_DWORD) )
    pReg->dwMaxConnections = dwTmp;

pReg->dwMaxPendingDeliveries = 0;
size = sizeof(dwTmp);
if ( ( RegQueryValueEx(hKey,
"MaxPendingDeliveries", 0, &type, (LPBYTE)&dwTmp,
&size) == ERROR_SUCCESS )
    && (type == REG_DWORD) )
    pReg->dwMaxPendingDeliveries =
dwTmp;

pReg->dwNumberOfDeliveryThreads = 0;
size = sizeof(dwTmp);
if ( ( RegQueryValueEx(hKey,
"NumberOfDeliveryThreads", 0, &type, (LPBYTE)&dwTmp,
&size) == ERROR_SUCCESS )
    && (type == REG_DWORD) )
    pReg->dwNumberOfDeliveryThreads =
dwTmp;

size = sizeof( pReg->szPath );
if ( RegQueryValueEx(hKey, "Path", 0, &type,
(BYTE *)&pReg->szPath, &size) != ERROR_SUCCESS )
    pReg->szPath[0] = 0;

size = sizeof( pReg->szDbServer );
if ( RegQueryValueEx(hKey, "dbServer", 0,
&type, (BYTE *)&pReg->szDbServer, &size) !=
ERROR_SUCCESS )
    pReg->szDbServer[0] = 0;

size = sizeof( pReg->szDbName );
if ( RegQueryValueEx(hKey, "dbName", 0,
&type, (BYTE *)&pReg->szDbName, &size) != ERROR_SUCCESS
)
    pReg->szDbName[0] = 0;

size = sizeof( pReg->szDbUser );
if ( RegQueryValueEx(hKey, "dbUser", 0,
&type, (BYTE *)&pReg->szDbUser, &size) != ERROR_SUCCESS
)
    pReg->szDbUser[0] = 0;

size = sizeof( pReg->szDbPassword );
if ( RegQueryValueEx(hKey, "dbPassword", 0,
&type, (BYTE *)&pReg->szDbPassword, &size) !=
ERROR_SUCCESS )
    pReg->szDbPassword[0] = 0;

size = sizeof( pReg->szSPPrefix );
if ( RegQueryValueEx(hKey, "SPPrefix", 0,
&type, (BYTE *)&pReg->szSPPrefix, &size) !=
ERROR_SUCCESS )
    pReg->szSPPrefix[0] = L'\0';

pReg->dwConnectDelay = 0;
size = sizeof(dwTmp);
if ( ( RegQueryValueEx(hKey, "ConnectDelay",
0, &type, (LPBYTE)&dwTmp, &size) == ERROR_SUCCESS )
    && (type == REG_DWORD) )
    pReg->dwConnectDelay = dwTmp;

pReg->bCallNoDuplicatesNewOrder = FALSE;
size = sizeof(dwTmp);

```

```

if ( ( RegQueryValueEx(hKey,
"CallNoDuplicatesNewOrder", 0, &type, (LPBYTE)&dwTmp,
&size) == ERROR_SUCCESS )
    && (type == REG_DWORD) )
    pReg->bCallNoDuplicatesNewOrder =
dwTmp;

RegCloseKey(hKey);

return FALSE;
}

```

## common/src/ReadRegistry.h

```

/* FILE: ReadRegistry.h
Microsoft TPC-C
Kit Ver. 4.20.000
Copyright
Microsoft, 1999
All Rights Reserved
not audited
PURPOSE: Header for registry related code.
Change history: 4.20.000 - first version
*/

enum DBPROTOCOL { Unspecified, ODBC, DBLIB };
const char *szDBNames[] = { "Unspecified", "ODBC",
"DBLIB" };

enum TXNMON { None, TUXEDO, ENCINA, COM };
const char *szTxnMonNames[] = { "NONE", "TUXEDO",
"ENCINA", "COM" };

//This structure defines the data necessary to keep
distinct for each terminal or client connection.
typedef struct _TPCCREGISTRYDATA
{
    enum DBPROTOCOL eDB_Protocol;
    enum TXNMON eTxnMon;
    BOOL bCOM_SinglePool;
    DWORD dwMaxConnections;
    DWORD dwMaxPendingDeliveries;
    DWORD dwNumberOfDeliveryThreads;
    char szPath[128];
    char szDbServer[32];
    char szDbName[32];
    char szDbUser[32];
    char szDbPassword[32];
    wchar_t szSPPrefix[32]; //tpcc_odbc.dll
    stored procedures prefix
    DWORD dwConnectDelay; // delay in ms
    to use in pacing connection open and close
    BOOL bCallNoDuplicatesNewOrder; //
whether to check for non-duplicate item ids and call a
different New Order SP
} TPCCREGISTRYDATA;

BOOL ReadTPCCRegistrySettings( TPCCREGISTRYDATA *pReg
);

```

## common/src/error.h

```

/*      FILE:          ERROR.H      Microsoft TPC-C
Kit Ver. 4.20.000
*      Copyright
Microsoft, 1999
*      All Rights Reserved
*
*      Version
4.10.000 audited by Richard Gimarc, Performance
Metrics, 3/17/99
*
*      PURPOSE: Header file for error exception
classes.
*
*      Change history:
*      4.20.000 - updated rev number to
match kit
*      4.21.000 - fixed bug: ~CBaseErr
needed to be declared virtual
*/

#pragma once

#ifndef _INC_STRING
#include <string.h>
#endif

const int m_szMsg_size = 512;
const int m_szApp_size = 64;
const int m_szLoc_size = 64;

//error message structure used in ErrorText routines
typedef struct _SERRORMSG
{
    int          iError;
    char         szMsg[256];
} SERRORMSG;

//message to sent to browser

typedef enum _ErrorLevel
{
    ERR_FATAL_LEVEL          = 2,
    ERR_WARNING_LEVEL       = 3,
    ERR_INFORMATION_LEVEL
} ErrorLevel;

#define ERR_TYPE_LOGIC          -1
//logic error in program; internal

error
#define ERR_SUCCESS            0
//success (a non-error error)
#define ERR_BAD_ITEM_ID       1
//expected abort record in txnRecord
#define ERR_TYPE_DELIVERY_POST 2
//expected delivery post failed
#define ERR_TYPE_WEBDLL       3
//tpcc web generated error
#define ERR_TYPE_SQL          4
//sql server generated error

```

```

#define ERR_TYPE_DBLIB        5
//dblib generated error
#define ERR_TYPE_ODBC        6
//odbc generated error
#define ERR_TYPE_SOCKET      7
//error on communication socket

client rte only
#define ERR_TYPE_DEADLOCK    8
//dblib and odbc only deadlock

condition
#define ERR_TYPE_COM        9
//error from COM call
#define ERR_TYPE_TUXEDO     10
//tuxedo error
#define ERR_TYPE_OS        11
//operating system error
#define ERR_TYPE_MEMORY    12
//memory allocation error
#define ERR_TYPE_TPCC_ODBC 13
//error from tpcc odbc txn module
#define ERR_TYPE_TPCC_DBLIB 14
//error from tpcc dblib txn module
#define ERR_TYPE_DELISRV   15
//delivery server error
#define ERR_TYPE_TXNLOG    16
//txn log error
#define ERR_TYPE_BCCONN    17
//Benchcraft connection class
#define ERR_TYPE_TPCC_CONN 18
//Benchcraft connection class
#define ERR_TYPE_ENCINA     19
//Encina error
#define ERR_TYPE_COMPONENT  20
//error from COM component
#define ERR_TYPE_RTE        21
//Benchcraft rte
#define ERR_TYPE_AUTOMATION 22
//Benchcraft automation errors
#define ERR_TYPE_DRIVER     23
//Driver engine errors
#define ERR_TYPE_RTE_BASE   24
//Framework errors
#define ERR_BUF_OVERFLOW    25
//Buffer overflow during receive
#define ERR_TYPE_SOAP_HTTP  26
//HTTP/SOAP dll generated error

```

```

#define ERR_TYPE_OLEDB      27
//OLE-DB generated error
#define ERR_TYPE_TPCC_OLEDB 28
//error from tpcc ole-db txn module
// TPC-W error types
#define ERR_TYPE_TPCW_CONN 50
//Benchcraft connection class
#define ERR_TYPE_TPCW_HTML 51
//error from TpcWHtml dll
#define ERR_TYPE_TPCW_USER 52
//error from TPC-W user class
#define ERR_TYPE_TPCW_ENG_BASE 53
#define ERR_TYPE_TPCW_ENG_OS 54
#define ERR_TYPE_HTML_RESP 55
#define ERR_TYPE_TPCW_ODBC 56
#define ERR_TYPE_SCHANNEL 57
#define ERR_TYPE_THINK_LIST 58
//----- end TPC-W -----
#define ERR_TYPE_XML_PROFILE 59
// TPC-E error types
#define ERR_TYPE_TPCE_CONN 60
//TPC-E pipe connection errors
#define ERR_TYPE_TPCE_RTE 61
//TPC-E rte errors
#define ERR_TYPE_TPCE_ENG_BASE 62
//Tpce Driver engine errors
#define ERR_TYPE_TPCE_ENG_OS 63
//Tpce Driver
engine system errors
//define ERR_TYPE_TPCE_MEE_ENG_BASE 64
//Tpce MEE
Driver engine errors
//define ERR_TYPE_TPCE_MEE_ENG_OS 65
//Tpce MEE
Driver engine system errors
#define ERR_INS_MEMORY      "Insufficient Memory to continue."
#define ERR_UNKNOWN        "Unknown error."
#define ERR_MSG_BUF_SIZE    512
#define INV_ERROR_CODE     -1
#define ERR_INS_BUF_OVERFLOW "Insufficient Buffer
size to receive HTML pages."

class CBaseErr
{
public:
    enum Action
    {
        eNone = 0
    };
    CBaseErr(LPCTSTR szLoc = NULL)
    {

```

```

GetLastError(); //take the error code immediately
before it is reset by other
functions

    if (szLoc)
    {
        m_szLoc = new
char[strlen(szLoc)+1/*m_szLoc_size*/];
        strcpy(m_szLoc, szLoc);
    }
    else
        m_szLoc = NULL;

    m_szApp = new
char[m_szApp_size];
    GetModuleFileName(GetModuleHandle(NULL),
m_szApp, m_szApp_size);
}

CBaseErr(int idMsg, LPCTSTR szLoc = NULL)
{
    m_idMsg = idMsg;

    if (szLoc)
    {
        m_szLoc = new
char[strlen(szLoc)+1/*m_szLoc_size*/];
        strcpy(m_szLoc, szLoc);
    }
    else
        m_szLoc = NULL;

    m_szApp = new
char[m_szApp_size];
    GetModuleFileName(GetModuleHandle(NULL),
m_szApp, m_szApp_size);
}

virtual ~CBaseErr(void)
{
    if (m_szApp)
        delete [] m_szApp;
    if (m_szLoc)
        delete [] m_szLoc;
};

virtual void Draw(HWND hwnd, LPCTSTR szStr =
NULL)
{
    int j = 0;
    char szTmp[512];
    if (szStr)
        j += sprintf(szTmp,
"%s\n",szStr);
    if (ErrorNum() != INV_ERROR_CODE)
        j += sprintf(szTmp+j,
"Error = %d\n", ErrorNum());
    if (m_szLoc)
        j += sprintf(szTmp+j,
"Location = %s\n", GetLocation());
};

```

```

ErrorText();
j += sprintf(szTmp+j, "%s\n",
MessageBox(hwnd, szTmp, m_szApp,
MB_OK);
}

char *GetApp(void) { return m_szApp; }
char *GetLocation(void) { return m_szLoc; }
virtual int ErrorNum() { return m_idMsg; }

virtual int ErrorType() = 0; // a value
which distinguishes the kind of error that occurred
virtual char *ErrorTypeStr() = 0; // text
representation of the error type
virtual char *ErrorText() = 0; // a string
(i.e., human readable) representation of the error
virtual int ErrorAction() { return eNone; }
// the function call that caused the error

protected:
char *m_szApp;
char *m_szLoc; // code location where
the error occurred
int m_idMsg;
}; //short m_errType;

class CSocketErr : public CBaseErr
{
public:
    enum Action
    {
        eNone = 0,
        eSend,
        eSocket,
        eBind,
        eConnect,
        eListen,
        eHost,
        eRecv,
        eGetHostByName,
        eWSACreateEvent,
        eWSASend,
        eWSAGetOverlappedResult,
        eWSARecv,
        eWSAWaitForMultipleEvents,
        eWSAStartup,
        eWSAResetEvent,
        eWSAEnumNetworkEvents,
        eWSAEventSelect,
        eSelect,
        eAccept,
        eNonRetryable
    };

    CSocketErr(Action eAction, LPCTSTR szLocation
= NULL);

    ~CSocketErr()
    {
        if (m_szErrorText != NULL)
            delete [] m_szErrorText;
    };

    Action m_eAction;
    char *m_szErrorText;
};

```

```

int ErrorType() { return
ERR_TYPE_SOCKET};
char* ErrorTypeStr() { return "SOCKET"; }
char* ErrorText(void);
int ErrorAction() { return
(int)m_eAction; }
};

class CSystemErr : public CBaseErr
{
public:
    enum Action
    {
        eNone = 0,
        eTransactNamedPipe,
        eWaitNamedPipe,
        eSetNamedPipeHandleState,
        eCreateFile,
        eCreateProcess,
        eCallNamedPipe,
        eCreateEvent,
        eCreateThread,
        eVirtualAlloc,
        eReadFile = 10,
        eWriteFile,
        eMapViewOfFile,
        eCreateFileMapping,
        eInitializeSecurityDescriptor,
        eSetSecurityDescriptorDacl,
        eCreateNamedPipe,
        eConnectNamedPipe,
        eWaitForSingleObject,
        eRegOpenKeyEx,
        eRegQueryValueEx = 20,
        eBeginThread,
        eRegEnumValue,
        eRegSetValueEx,
        eRegCreateKeyEx,
        eWaitForMultipleObjects,
        eRegisterClassEx,
        eCreateWindow,
        eCreateSemaphore,
        eReleaseSemaphore,
        eFSeek,
        eFRead,
        eFWrite,
        eTmpFile,
        eSetFilePointer,
        eNew,
        eCloseHandle,
        eGetOverlappedResult
    };

    CSystemErr(Action
eAction, LPCTSTR szLocation);
    CSystemErr(int iError,
Action eAction, LPCTSTR szLocation);
    int ErrorType() { return
ERR_TYPE_OS};
    char* ErrorTypeStr() { return "SYSTEM"; }
    char* ErrorText(void);
    int ErrorAction() { return
(int)m_eAction; }
    void Draw(HWND hwnd, LPCTSTR szStr =
NULL);

    Action m_eAction;

private:
    char m_szMsg[ERR_MSG_BUF_SIZE];
};

```

```

class CMemoryErr : public CBaseErr
{
public:
    CMemoryErr();

    int             ErrorType() {return
ERR_TYPE_MEMORY;}
    char*          ErrorTypeStr() { return "OUT OF
MEMORY"; }
    char*          ErrorText() {return
ERR_INS_MEMORY;}
};

class CBufferOverflowErr : public CBaseErr
{
public:
    CBufferOverflowErr(int,LPTSTR);

    int             ErrorType() {return
ERR_BUF_OVERFLOW;}
    char*          ErrorTypeStr() { return "BUFFER
OVERFLOW"; }
    char*          ErrorText() {return
ERR_INS_BUF_OVERFLOW;}
};

// Exception type for XML profiles
class CXMLProfileErr : public CBaseErr
{
public:
    enum Action
    {
        LoadProfile = 1,
        LoadSchema,
        ValidateProfile,
        SaveProfile,
        LoadFromXML,
        SaveToXML,

        ApplyProcessingInstruction,
        ApplyAttribute,
        ApplyNode
    };

    CXMLProfileErr(Action eAction, int
eCode, LPCTSTR szLocation)
    {
        m_eAction = eAction;
        m_eCode = eCode;
        m_bOverload = true;
    };

    CXMLProfileErr(Action eAction, int
eCode, LPCTSTR szLocation, char * szMsg)
    {
        m_eAction = eAction;
        m_eCode = eCode;
        strcpy(m_szMsg, szMsg);
        m_bOverload = false;
    };

    virtual int
ErrorType() { return ERR_TYPE_XML_PROFILE;};
    virtual char *ErrorTypeStr()
{ return "XML PROFILE"; };
    virtual char *ErrorText();

    virtual int
ErrorCode() { return m_eCode; };
    int
ErrorAction() { return (int)m_eAction; }
};

```

```

//virtual void Draw(HWND hwnd,
LPCTSTR szStr = NULL)
//{
//    ::MessageBox(hwnd, szStr,
m_szLoc, MB_OK);
//};
private:
    char
m_szMsg[ERR_MSG_BUF_SIZE];
    LPCTSTR m_szLoc;
    int m_eCode;
    bool m_bOverload;
    Action m_eAction;
};

```

## common/src/trans.h

```

/* FILE: TRANS.H Microsoft TPC-C
Kit Ver. 4.42.000 Copyright
Microsoft, 2002 All Rights Reserved
Version
4.10.000 audited by Richard Gimarc, Performance
Metrics, 3/17/99
PURPOSE: Header file for TPC-C structure
templates.
Change history: 4.42.000 - changed w_id fields from
short to long to support >32K warehouses
4.20.000 - updated rev number to
match kit
*/
#pragma once

// 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 T_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 DATETIME_LEN 30
#define CREDIT_LEN 2
#define C_DATA_LEN 250
#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

// TIMESTAMP_STRUCT is provided by the ODBC header file
sqltypes.h, but is not available
// when compiling with dblib, so redefined here. Note:
we are using the symbol "SQLTYPES"
// (declared in sqltypes.h) as a way to determine if
TIMESTAMP_STRUCT has been declared.
#ifdef SQLTYPES
typedef struct
{
    /* SQLSMALLINT */ short
    SQLUSMALLINT */ unsigned short /*
    SQLUSMALLINT */ day; unsigned short /*
    SQLUSMALLINT */ hour; unsigned short /*
    SQLUSMALLINT */ minute; unsigned short /*
    SQLUSMALLINT */ second; unsigned long /*
    SQLINTEGER */ fraction;
} TIMESTAMP_STRUCT;
#endif

// possible values for exec_status_code after
transaction completes
enum EXEC_STATUS
{
    eOK, // 0
    "Transaction committed."
    eInvalidItem, // 1 "Item number is
not valid."
    eDeliveryFailed // 2 "Delivery Post
Failed."
};

// transaction structures
typedef struct
{
    // input params
    long
ol_supply_w_id;
    long
ol_i_id;
    short
ol_quantity;

    // output params
    char
ol_i_name[I_NAME_LEN+1];
    char
ol_brand_generic[BRAND_LEN+1];
    double
ol_i_price;
    double
ol_amount;
    short
ol_stock;
} OL_NEW_ORDER_DATA;

typedef struct
{
    // input params
    long w_id;
    short d_id;
    long c_id;
    short o_ol_cnt;
};

```

```

// output params
EXEC_STATUS
exec_status_code;
char
char
double
double
double
double
long
short
o_commit_flag;
TIMESTAMP_STRUCT
short
double
OL_NEW_ORDER_DATA
OL[MAX_OL_NEW_ORDER_ITEMS];
} NEW_ORDER_DATA, *PNEW_ORDER_DATA;

typedef struct
{
// input params
long
w_id;
short
d_id;
long
c_id;
short
c_d_id;
long
c_w_id;
double
h_amount;
char
c_last[LAST_NAME_LEN+1];

// output params
EXEC_STATUS
exec_status_code;
TIMESTAMP_STRUCT
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];
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];
char
c_first[FIRST_NAME_LEN+1];
char
c_middle[MIDDLE_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];
TIMESTAMP_STRUCT
char
c_credit[CREDIT_LEN+1];
double
c_credit_lim;
double
c_discount;
double
c_balance;
char
c_data[200+1];
} PAYMENT_DATA, *PPAYMENT_DATA;

typedef struct
{
long
ol_i_id;
long
short
ol_quantity;
double
ol_amount;
TIMESTAMP_STRUCT
} OL_ORDER_STATUS_DATA;

typedef struct
{
// input params
long
short
long
char
w_id;
d_id;
c_id;
c_last[LAST_NAME_LEN+1];

// output params
EXEC_STATUS
exec_status_code;
char
c_first[FIRST_NAME_LEN+1];
char
c_middle[MIDDLE_NAME_LEN+1];
double
long
TIMESTAMP_STRUCT
short
OL_ORDER_STATUS_DATA
short
} ORDER_STATUS_DATA, *PORDER_STATUS_DATA;

typedef struct
{
// input params
long
short
w_id;
o_carrier_id;

// output params
EXEC_STATUS
exec_status_code;
SYSTEMTIME
long
o_id[10]; // id's of delivered
orders for districts 1 to 10
} DELIVERY_DATA, *PDELIVERY_DATA;

//This structure is used for posting delivery
transactions and for writing them to the delivery
server.
typedef struct _DELIVERY_TRANSACTION
{

```

```

SYSTEMTIME
queue;
//time delivery transaction queued
long
//delivery warehouse
short
//carrier id
o_carrier_id;
} DELIVERY_TRANSACTION;

typedef struct
{
// input params
long
short
short
threshold;

// output params
EXEC_STATUS
exec_status_code;
long
low_stock;
} STOCK_LEVEL_DATA, *PSTOCK_LEVEL_DATA;

```

## common/src/txn\_base.h

```

/*
 * FILE: TXN_BASE.H
 * Microsoft TPC-C
 * Kit Ver. 4.20.000
 * Copyright
 * Microsoft, 1999
 * All Rights Reserved
 *
 * Version
 * 4.10.000 audited by Richard Gimarc, Performance
 * Metrics, 3/17/99
 *
 * PURPOSE: Header file for TPC-C txn class
 * implementation.
 *
 * Change history:
 * 4.20.000 - updated rev number to
 * match kit
 */

#pragma once

// need to declare functions for import, unless define
has already been created
// by the DLL's .cpp module for export.
#ifdef DllDecl
#define DllDecl __declspec( dllimport )
#endif

class DllDecl CTPCC_BASE
{
public:
CTPCC_BASE(void) {};
virtual ~CTPCC_BASE(void) {};

virtual PNEW_ORDER_DATA
BuffAddr_NewOrder() = 0;
virtual PPAYMENT_DATA
BuffAddr_Payment() = 0;
virtual PDELIVERY_DATA
BuffAddr_Delivery() = 0;
virtual PSTOCK_LEVEL_DATA
BuffAddr_StockLevel() = 0;

```



```

        virtual PORDER_STATUS_DATA
BuffAddr_OrderStatus() = 0;
        virtual void NewOrder
() = 0;
        virtual void Payment
() = 0;
        virtual void Delivery
() = 0;
        virtual void StockLevel
() = 0;
        virtual void OrderStatus
() =
0;
};

```

## db\_dblib\_dll/src/tpcc\_dblib.cpp

```

/*      FILE:          TPCC_DBLIB.CPP
 *      Microsoft TPC-C
Kit Ver. 4.42.000
 *      Copyright
Microsoft, 2002
 *      All Rights Reserved
 *
 *      Version
4.10.000 audited by Richard Gimarc, Performance
Metrics, 3/17/99
 *
 *      PURPOSE:  Implements dblib calls for TPC-C
txns.
 *      Contact:  Charles Levine
(clevine@microsoft.com)
 *
 *      Change history:
 *      4.42.000 - changed w_id fields from
short to long to support >32K warehouses
 *      4.20.000 - updated rev number to
match kit
 *      4.10.001 - not deleting error class
in catch handler on deadlock retry;
 *      not a
functional bug, but a memory leak
 *      - had to tweak
some declarations to compile with latest SDK; no
functional change
 */
#include <windows.h>
#include <stdio.h>
#include <assert.h>

#define DBNTWIN32
#include <sqlfront.h>
#include <sqldb.h>

#ifdef ICECAP
#include <icapexp.h>
#endif

// need to declare functions for export
#define dlldecl __declspec( dllexport )

#include "..\..\common\src\error.h"
#include "..\..\common\src\trans.h"
#include "..\..\common\src\txn_base.h"
#include "tpcc_dblib.h"

```

```

#define DEFCLPACKSIZE          4096

// version string; must match return value from
tpcc_version stored proc
const char sVersion[] = "4.20.000";

const          iMaxRetries = 10;
// how many retries on deadlock
static long    iConnectionCount = 0; // number of
current dblib connections

const int iErrOleDbProvider = 7312;
const char sErrTimeoutExpired[] = "Timeout expired";

BOOL WINAPIENTRY DllMain(HMODULE hModule, DWORD
ul_reason_for_call, LPVOID lpReserved)
{
    switch( ul_reason_for_call )
    {
        case DLL_PROCESS_ATTACH:
            DisableThreadLibraryCalls(hModule);
            dbinit(); //
        initialize dblib          break;

        case DLL_PROCESS_DETACH:
            dbexit(); //
        close all dblib structures/connections
            break;

        default:
            /* nothing */;
    }
    return TRUE;
}

int err_handler(DBPROCESS *dbproc, int severity, int
dberr, int oserr, LPCSTR dberrstr, LPCSTR oserrstr)
{
    CTPCC_DBLIB
    *pConn;
    assert(dbproc != NULL);
    pConn = (CTPCC_DBLIB*)dbgetuserdata(dbproc);

    if (pConn != NULL)
    {
        pConn->SetDblibError( severity,
        dberr, oserr, dberrstr, oserrstr );
    }
    return INT_CANCEL;
}

/* FUNCTION: int msg_handler(DBPROCESS *dbproc, DBINT
msgno, int msgstate, int severity, char *msgtext)
 *
 * PURPOSE:      This function handles DB-Library
SQL Server error messages
 *
 * ARGUMENTS:    DBPROCESS *dbproc
DBPROCESS id pointer          DBINT
 *
 *               msgno          message number
 *               msgstate       int
 *               msgstate       message state
 *               severity       int
 *               severity       message severity

```

```

 *               char
 *               *msgtext       printable
message description
 *
 * RETURNS:      int
 *               INT_CONTINUE   continue if
error is SLETIME else INT_CANCEL action
 *
 *               INT_CANCEL
 *               cancel operation
 *
 * COMMENTS:     This function also sets the dead
lock dbproc variable if necessary.
 *
 */
// typedef INT (SQLAPI *DBMSGHANDLE_PROC)(PDBPROCESS,
DBINT, INT, INT, LPCSTR, LPCSTR, LPCSTR, DBUSMALLINT);
int msg_handler(DBPROCESS *dbproc, DBINT msgno, int
msgstate, int severity,
 *
 *               LPCSTR srvname, LPCSTR procname, DBUSMALLINT line)
{
    CTPCC_DBLIB
    *pConn;
    assert(dbproc != NULL);
    pConn = (CTPCC_DBLIB*)dbgetuserdata(dbproc);

    if (pConn != NULL)
    {
        pConn->SetSqlError( msgno,
        msgstate, severity, msgtext );
    }
    return 0;
}

/* FUNCTION: void UtilStrCpy(char * pDest, char * pSrc,
int n)
 *
 * PURPOSE:      This function copies n characters
from string pSrc to pDst and places a
 *               null character at the end
of the destination string.
 *
 * ARGUMENTS:    char
 *               *pDest       destination string pointer
 *               char
 *               *pSrc        source string pointer
 *               int
 *               n            number of characters to copy
 *
 * RETURNS:      None
 *
 * COMMENTS:     Unlike strncpy this function
ensures that the result string is
 *               always null
terminated.
 *
 */
inline static void UtilStrCpy(char * pDest, const BYTE
* pSrc, int n)
{
    strncpy(pDest, (char *)pSrc, n);
    pDest[n] = '\0';

    return;
}

```

```

/* FUNCTION: CTPCC_DBLIB_ERR::ErrorText
*/
char* CTPCC_DBLIB_ERR::ErrorText(void)
{
    int i;

    static SERRORMSG errorMsgs[] =
    {
        { ERR_WRONG_SP_VERSION,
        "Wrong version of stored procs on database
server" },
        { ERR_INVALID_CUST,
        "Invalid Customer id,name." },

        { ERR_NO_SUCH_ORDER,
        "No orders found for customer." },
        { ERR_RETRIED_TRANS,
        "Retries before transaction succeeded." },
        { 0, "" }
    };

    static char szNotFound[] = "Unknown error
number.";

    for(i=0; errorMsgs[i].szMsg[0]; i++)
    {
        if ( m_errno == errorMsgs[i].iError )
            break;
    }
    if ( !errorMsgs[i].szMsg[0] )
        return szNotFound;
    else
        return errorMsgs[i].szMsg;

// wrapper routine for class constructor
_declspec(dllexport) CTPCC_DBLIB* CTPCC_DBLIB_new(
LPCSTR szServer, // name of SQL
server LPCSTR szUser, //
user name for login LPCSTR szPassword, // password for
login LPCSTR szHost, //
workstation name; shows up in sp_who; max 30 chars,
only first 10 kept by SQL
Server LPCSTR szDatabase ) // name of
database to use
{
    return new CTPCC_DBLIB( szServer, szUser,
szPassword, szHost, szDatabase );
}

CTPCC_DBLIB::CTPCC_DBLIB (
LPCSTR szServer, // name of SQL
server

```

```

LPCSTR szUser, //
user name for login LPCSTR szPassword, // password for
login LPCSTR szHost, //
workstation name; shows up in sp_who; max 30 chars,
only first 10 kept by SQL
Server LPCSTR szDatabase ) // name of
database to use
{
    LOGINREC *login;
    const BYTE *pData;

    // initialization
    m_dbproc = NULL;
    m_DbLibErr = (CDBLIBERR*)NULL;
    m_SqlErr = (CSQLERR*)NULL;

    m_MaxRetries = 10; // how many
retries on deadlock

// increase max number of connections if
getting close
if ( dbgetmaxprocs() < (iConnectionCount+5) )
{
    if (
dbsetmaxprocs(iConnectionCount+10) == FAIL )
        ThrowError(CDBLIBERR::edbSetMaxProcs);
}

// allocate a login structure
login = dblogin();
if (login == NULL)
    ThrowError(CDBLIBERR::eLogin);
InterlockedIncrement( &iConnectionCount );

// register error and message handler
functions if (dbprocerrhandle(login, err_handler) ==
NULL)
    ThrowError(CDBLIBERR::edbProcHandler);

NULL) if (dbprocsghandle(login, msg_handler) ==
NULL)
    ThrowError(CDBLIBERR::edbProcHandler);

DBSETLUSER(login, szUser);
DBSETPWD(login, szPassword);
DBSETHOST(login, szHost);
DBSETPACKET(login, (unsigned
short)DEFCLPACKSIZE);
DBSETLVERSION(login, DBVER60);
// use dblib ver 6.0 client behavior

// set time to wait for login
if (dbsetlogintime(60) == FAIL)
    ThrowError(CDBLIBERR::edbSet);

// set time to wait for statement execution
if (dbsettime(180) == FAIL)
    ThrowError(CDBLIBERR::edbSet);

m_dbproc = dbopen(login, szServer);

// deallocate login structure before checking
for success

```

```

dbfreelogin( login );

if (m_dbproc == NULL)
    ThrowError(CDBLIBERR::edbOpen);

// save address of class instance so that the
message and error handler
// can get to data.
dbsetuserdata(m_dbproc, (LPVOID)this);

// Use the the right database
if (dbuse(m_dbproc, szDatabase) == FAIL)
    ThrowError(CDBLIBERR::edbUse);

dbcmd(m_dbproc, "set nocount on ");
// do not return row counts
dbcmd(m_dbproc, "set XACT_ABORT ON");
// rollback transaction on abort

if (dbsqlexec(m_dbproc) == FAIL)
    ThrowError(CDBLIBERR::edbSqlExec);

DiscardNextResults(2);

// verify that version of stored procs on
server is correct
dbrpcinit(m_dbproc, "tpcc_version", 0);

if (dbrpcexec(m_dbproc) == FAIL)
    ThrowError(CDBLIBERR::edbRpcExec);

if (dbresults(m_dbproc) != SUCCEED)
    ThrowError(CDBLIBERR::edbResults);

if (dbnextrow(m_dbproc) != REG_ROW)
    ThrowError(CDBLIBERR::edbNextRow);

char szSrvVersion[16];
pData=dbdata(m_dbproc, 1);
if (pData)
    UtilStrCpy(szSrvVersion, pData,
dbdatlen(m_dbproc, 1));
else
    szSrvVersion[0]=0;
if (strcmp(szSrvVersion,sVersion))
    throw new CTPCC_DBLIB_ERR(
CTPCC_DBLIB_ERR::ERR_WRONG_SP_VERSION );

DiscardNextRows(0);
DiscardNextResults(0);
}

CTPCC_DBLIB::~CTPCC_DBLIB( void )
{
// close db connection and deallocate
resources
    dbclose(m_dbproc);
    InterlockedDecrement( &iConnectionCount );
    if (m_DbLibErr != NULL)
        delete m_DbLibErr;
    if (m_SqlErr != NULL)
        delete m_SqlErr;
}

void CTPCC_DBLIB::SetDbLibError(int severity, int
dberr, int oserr, LPCSTR dberrstr, LPCSTR oserrstr)
{
    delete m_DbLibErr;
    m_DbLibErr = new
CDBLIBERR(CDBLIBERR::eUnknown, severity, dberr, oserr);
}

```

```

        if (dberrstr != NULL)
        {
            m_DbLibErr->m_dberrstr = new char[
strlen(dberrstr)+1 ];
            strcpy( m_DbLibErr->m_dberrstr,
dberrstr );
        }

        if (oserrstr != NULL)
        {
            m_DbLibErr->m_oserrstr = new char[
strlen(oserrstr)+1 ];
            strcpy( m_DbLibErr->m_oserrstr,
oserrstr );
        }
    }

void CTPCC_DBLIB::SetSqlError( int /*DBINT*/ msgno, int
msgstate, int severity, LPCSTR msgtext )
{
    if (m_SqlErr == NULL)
        m_SqlErr = new CSQLERR();

    m_SqlErr->m_msgno = msgno;
    m_SqlErr->m_msgstate = msgstate;
    m_SqlErr->m_severity = severity;

    delete [] m_SqlErr->m_msgtext;
    if (msgtext != NULL)
    {
        m_SqlErr->m_msgtext = new char[
strlen(msgtext)+1 ];
        strcpy( m_SqlErr->m_msgtext,
msgtext );
    }
}

void CTPCC_DBLIB::ThrowError( CDBLIBERR::ACTION eAction
)
{
    // discard anything still in return buffer
    DiscardNextRows(-1);
    DiscardNextResults(-1);

    // check for SQL Server error first; if yes,
    throw it and ignore any DBLib error.
    if (m_SqlErr != NULL)
    {
        CSQLERR *pSqlErr;
        pSqlErr = m_SqlErr;
        m_SqlErr = NULL; // clear our
pointer to instance; catch handler will delete
        throw pSqlErr;
    }

    CDBLIBERR *pDbLibErr;
    if (m_DbLibErr == NULL)
        // this case isn't expected to
happen, since it means that an error was returned
        // but the error handlers were not
called.
        pDbLibErr = new CDBLIBERR(eAction);
    else
    {
        pDbLibErr = m_DbLibErr;
        pDbLibErr->m_eAction = eAction;
        m_DbLibErr = NULL; //
clear our pointer to instance; catch handler will
delete
    }
}

```

```

    }
    throw pDbLibErr;
}

// Read and discard rows until no more. Throw an
exception if number of rows read doesn't
// match number of rows expected. The row count will
be ignored if the expected count value
// passed in is negative. A typical use of this
routine is to verify that there are no more
// rows to be read.
void CTPCC_DBLIB::DiscardNextRows(int iExpectedCount)
{
    int         rc;         iRowsRead = 0;
    RETCODE     rc;
    while (TRUE)
    {
        rc = dbnextrow(m_dbproc);
        if (rc == NO_MORE_ROWS)
            break;
        if (rc == FAIL)
        {
            if (iExpectedCount >= 0)
                ThrowError(CDBLIBERR::edbNextRow);
            else
                break;
        }
        iRowsRead++;
    }

    if ((iExpectedCount >= 0) &&
(iExpectedCount != iRowsRead))
        ThrowError(CDBLIBERR::ewrongRowCount);
}

// Read and discard results until no more. Throw an
exception if number of result sets read doesn't
// match number expected. The result set count will be
ignored if the expected count value
// passed in is negative. A typical use of this
routine is to verify that there are no more
// result sets to be read.
void CTPCC_DBLIB::DiscardNextResults(int
iExpectedCount)
{
    int         rc;         iResultsRead = 0;
    RETCODE     rc;
    while (TRUE)
    {
        rc = dbresults(m_dbproc);
        if (rc == NO_MORE_RESULTS)
            break;
        if (rc == FAIL)
        {
            if (iExpectedCount >= 0)
                ThrowError(CDBLIBERR::edbResults);
            else
                break;
        }
        DiscardNextRows(-1);
        iResultsRead++;
    }

    if ((iExpectedCount >= 0) &&
(iExpectedCount != iResultsRead))

```

```

        ThrowError(CDBLIBERR::ewrongRowCount);
    }
}

void CTPCC_DBLIB::StockLevel()
{
    int         iTryCount = 0;
    const BYTE *pData;
    ResetError();
    while (TRUE)
    {
        try
        {
            dbrpcinit(m_dbproc,
"tpcc_stocklevel", 0);
            dbrpcparam(m_dbproc,
NULL, 0, SQLINT4, -1, -1, (BYTE *)
&m_txn.StockLevel.w_id); //
            dbrpcparam(m_dbproc,
@m_w_id int,
NULL, 0, SQLINT1, -1, -1, (BYTE *)
&m_txn.StockLevel.d_id); //
            dbrpcparam(m_dbproc,
NULL, 0, SQLINT2, -1, -1, (BYTE *)
&m_txn.StockLevel.threshold); //
            @threshold smallint
            if (dbrpcexec(m_dbproc)
== FAIL)
                ThrowError(CDBLIBERR::edbRpcExec);
            if (dbresults(m_dbproc)
!= SUCCEED)
                ThrowError(CDBLIBERR::edbResults);
            if (dbnextrow(m_dbproc)
!= REG_ROW)
                ThrowError(CDBLIBERR::edbNextRow);
            if
(pData=dbdata(m_dbproc, 1))
                m_txn.StockLevel.low_stock = *((long *)
pData);
            DiscardNextRows(0);
            DiscardNextResults(0);
            m_txn.StockLevel.exec_status_code = eOK;
            return;
        }
        catch (CSQLERR *e)
        {
            if ((e->m_msgno == 1205
||
(e->m_msgno ==
iErrOLEDbProvider &&
>m_msgtext, sErrTimeoutExpired) != NULL)) &&
(++iTryCount <=
iMaxRetries))

```



```

(LPCBYTE)pData, dbdatlen(m_dbproc,5), SQLFLT8, (BYTE *)
&m_txn.NewOrder.c_discount, 8);
if
(pData=dbdata(m_dbproc, 6))
    UtilStrCpy(m_txn.NewOrder.c_credit, pData,
dbdatlen(m_dbproc, 6));
if
(pData=dbdata(m_dbproc, 7))
    {
        datetime =
*((DBDATETIME *) pData);
        dbdatecrack(m_dbproc, &daterec, &datetime);
        m_txn.NewOrder.o_entry_d.year =
daterec.year;
        m_txn.NewOrder.o_entry_d.month =
daterec.month;
        m_txn.NewOrder.o_entry_d.day =
daterec.day;
        m_txn.NewOrder.o_entry_d.hour =
daterec.hour;
        m_txn.NewOrder.o_entry_d.minute =
daterec.minute;
        m_txn.NewOrder.o_entry_d.second =
daterec.second;
    }
if
(pData=dbdata(m_dbproc, 8))
    commit_flag =
(* (DBTINYINT *) pData);
    DiscardNextRows(0);
    DiscardNextResults(0);
    if (commit_flag == 1)
    {
        m_txn.NewOrder.total_amount *= ((1 +
m_txn.NewOrder.w_tax + m_txn.NewOrder.d_tax) * (1 -
m_txn.NewOrder.c_discount));
        m_txn.NewOrder.exec_status_code = eOK;
    }
    else
        m_txn.NewOrder.exec_status_code =
eInvalidItem;
    return;
}
catch (CSQLERR *e)
{
    if ((e->m_msgno == 1205
||
(e->m_msgno ==
iErrOleDbProvider &&
(e->m_msgtext, sErrTimeoutExpired) != NULL)) &&
(++iTryCount <=
iMaxRetries))
    {

```

```

// hit
deadlock; backoff for increasingly longer period
delete e;
Sleep(10 *
iTryCount);
    }
    else
        throw;
    }
} // while (TRUE)
//
// if (iTryCount)
//     throw new
CTPCC_DBLIB_ERR(CTPCC_DBLIB_ERR::ERR_RETRIED_TRANS,
iTryCount);
}

void CTPCC_DBLIB::Payment()
{
    DBDATETIME datetime;
    DBDATEREK daterec;
    int iTryCount = 0;
    const BYTE *pData;
    ResetError();
    while (TRUE)
    {
        try
        {
            dbrpcinit(m_dbproc,
"tpcc_payment", 0);
            dbrpcparam(m_dbproc,
NULL, 0, SQLINT4, -1, -1, (BYTE *)
&m_txn.Payment.w_id);
            dbrpcparam(m_dbproc,
NULL, 0, SQLINT4, -1, -1, (BYTE *)
&m_txn.Payment.c_w_id);
            dbrpcparam(m_dbproc,
NULL, 0, SQLFLT8, -1, -1, (BYTE *)
&m_txn.Payment.h_amount);
            dbrpcparam(m_dbproc,
NULL, 0, SQLINT1, -1, -1, (BYTE *)
&m_txn.Payment.d_id);
            dbrpcparam(m_dbproc,
NULL, 0, SQLINT1, -1, -1, (BYTE *)
&m_txn.Payment.c_d_id);
            dbrpcparam(m_dbproc,
NULL, 0, SQLINT4, -1, -1, (BYTE *)
&m_txn.Payment.c_id);
            // if customer id is
            // zero, then payment is by name
            if (m_txn.Payment.c_id ==
0)
                dbrpcparam(m_dbproc, NULL, 0, SQLCHAR, -1,
strlen(m_txn.Payment.c_last), (unsigned char *)
m_txn.Payment.c_last);
            if (dbrpcexec(m_dbproc)
== FAIL)
                ThrowError(CDBLIBERR::eDbrpcExec);

```

```

        if (dbresults(m_dbproc)
!= SUCCEED)
            ThrowError(CDBLIBERR::eDbResults);
        if (dbnextrow(m_dbproc)
!= REG_ROW)
            ThrowError(CDBLIBERR::eDbNextRow);
        if (dbnumcols(m_dbproc)
!= 27)
            ThrowError(CDBLIBERR::eWrongNumCols);
        if
(pData=dbdata(m_dbproc, 1))
            m_txn.Payment.c_id = *((DBINT *) pData);
        if
(pData=dbdata(m_dbproc, 2))
            UtilStrCpy(m_txn.Payment.c_last, pData,
dbdatlen(m_dbproc, 2));
        if
(pData=dbdata(m_dbproc, 3))
            {
                datetime =
*((DBDATETIME *) pData);
                dbdatecrack(m_dbproc, &daterec, &datetime);
                m_txn.Payment.h_date.year = daterec.year;
                m_txn.Payment.h_date.month = daterec.month;
                m_txn.Payment.h_date.day = daterec.day;
                m_txn.Payment.h_date.hour = daterec.hour;
                m_txn.Payment.h_date.minute = daterec.minute;
                m_txn.Payment.h_date.second = daterec.second;
            }
        if
(pData=dbdata(m_dbproc, 4))
            UtilStrCpy(m_txn.Payment.w_street_1, pData,
dbdatlen(m_dbproc, 4));
        if
(pData=dbdata(m_dbproc, 5))
            UtilStrCpy(m_txn.Payment.w_street_2, pData,
dbdatlen(m_dbproc, 5));
        if
(pData=dbdata(m_dbproc, 6))
            UtilStrCpy(m_txn.Payment.w_city, pData,
dbdatlen(m_dbproc, 6));
        if
(pData=dbdata(m_dbproc, 7))
            UtilStrCpy(m_txn.Payment.w_state, pData,
dbdatlen(m_dbproc, 7));
        if
(pData=dbdata(m_dbproc, 8))
            UtilStrCpy(m_txn.Payment.w_zip, pData,
dbdatlen(m_dbproc, 8));
        if
(pData=dbdata(m_dbproc, 9))

```

```

        UtilStrCpy(m_txn.Payment.d_street_1, pData,
dbdatlen(m_dbproc, 9));
        if
        (pData=dbdata(m_dbproc, 10))
        UtilStrCpy(m_txn.Payment.d_street_2, pData,
dbdatlen(m_dbproc, 10));
        if
        (pData=dbdata(m_dbproc, 11))
        UtilStrCpy(m_txn.Payment.d_city, pData,
dbdatlen(m_dbproc, 11));
        if
        (pData=dbdata(m_dbproc, 12))
        UtilStrCpy(m_txn.Payment.d_state, pData,
dbdatlen(m_dbproc, 12));
        if
        (pData=dbdata(m_dbproc, 13))
        UtilStrCpy(m_txn.Payment.d_zip, pData,
dbdatlen(m_dbproc, 13));
        if
        (pData=dbdata(m_dbproc, 14))
        UtilStrCpy(m_txn.Payment.c_first, pData,
dbdatlen(m_dbproc, 14));
        if
        (pData=dbdata(m_dbproc, 15))
        UtilStrCpy(m_txn.Payment.c_middle, pData,
dbdatlen(m_dbproc, 15));
        if
        (pData=dbdata(m_dbproc, 16))
        UtilStrCpy(m_txn.Payment.c_street_1, pData,
dbdatlen(m_dbproc, 16));
        if
        (pData=dbdata(m_dbproc, 17))
        UtilStrCpy(m_txn.Payment.c_street_2, pData,
dbdatlen(m_dbproc, 17));
        if
        (pData=dbdata(m_dbproc, 18))
        UtilStrCpy(m_txn.Payment.c_city, pData,
dbdatlen(m_dbproc, 18));
        if
        (pData=dbdata(m_dbproc, 19))
        UtilStrCpy(m_txn.Payment.c_state, pData,
dbdatlen(m_dbproc, 19));
        if
        (pData=dbdata(m_dbproc, 20))
        UtilStrCpy(m_txn.Payment.c_zip, pData,
dbdatlen(m_dbproc, 20));
        if
        (pData=dbdata(m_dbproc, 21))
        UtilStrCpy(m_txn.Payment.c_phone, pData,
dbdatlen(m_dbproc, 21));
        if
        (pData=dbdata(m_dbproc, 22))
        {
            datetime =
*((DBDATETIME *) pData);
            dbdatecrack(m_dbproc, &daterec, &datetime);
            m_txn.Payment.c_since.year = daterec.year;

```

```

        m_txn.Payment.c_since.month = daterec.month;
        m_txn.Payment.c_since.day = daterec.day;
        m_txn.Payment.c_since.hour = daterec.hour;
        m_txn.Payment.c_since.minute =
daterec.minute;
        m_txn.Payment.c_since.second =
daterec.second;
        }
        if(pData=dbdata(m_dbproc,
23))
        UtilStrCpy(m_txn.Payment.c_credit, pData,
dbdatlen(m_dbproc, 23));
        if(pData=dbdata(m_dbproc,
24))
        dbconvert(m_dbproc, SQLNUMERIC,
(LPCBYTE)pData, dbdatlen(m_dbproc,24), SQLFLT8, (BYTE
*)&m_txn.Payment.c_credit_lim, 8);
        if(pData=dbdata(m_dbproc,
25))
        dbconvert(m_dbproc, SQLNUMERIC,
(LPCBYTE)pData, dbdatlen(m_dbproc,25), SQLFLT8, (BYTE
*)&m_txn.Payment.c_discount, 8);
        if(pData=dbdata(m_dbproc,
26))
        dbconvert(m_dbproc, SQLNUMERIC,
(LPCBYTE)pData, dbdatlen(m_dbproc,26), SQLFLT8, (BYTE
*)&m_txn.Payment.c_balance, 8);
        if(pData=dbdata(m_dbproc,
27))
        UtilStrCpy(m_txn.Payment.c_data, pData,
dbdatlen(m_dbproc, 27));
        DiscardNextRows(0);
        DiscardNextResults(0);
        if (m_txn.Payment.c_id ==
0)
        throw new
CTPCC_DBLIB_ERR( CTPCC_DBLIB_ERR::ERR_INVALID_CUST );
        else
        m_txn.Payment.exec_status_code = eOK;
        return;
    }
    catch (CSQLERR *e)
    {
        if ((e->m_msgno == 1205
||
(e->m_msgno ==
iErrorDbProvider &&
strstr(e-
>m_msgtext, sErrTimeoutExpired) != NULL)) &&
(++iTryCount <=
iMaxRetries))

```

```

        {
            // hit
            delete e;
            Sleep(10 *
iTryCount);
        }
        else
            throw;
    }
    // while (TRUE)
}
// if (iTryCount)
// throw new
CTPCC_DBLIB_ERR(CTPCC_DBLIB_ERR::ERR_RETRIED_TRANS,
iTryCount);
}

void CTPCC_DBLIB::OrderStatus()
{
    int
    DBDATETIME datetime;
    DBDATETIME daterec;
    int
    RETCODE rc;
    const BYTE *pData;
    ResetError();
    while (TRUE)
    {
        try
        {
            dbrpcinit(m_dbproc,
"tpcc_orderstatus", 0);
            dbrpcparam(m_dbproc,
NULL, 0, SQLINT4, -1, -1, (BYTE *)
&m_txn.OrderStatus.w_id);
            dbrpcparam(m_dbproc,
NULL, 0, SQLINT1, -1, -1, (BYTE *)
&m_txn.OrderStatus.d_id);
            dbrpcparam(m_dbproc,
NULL, 0, SQLINT4, -1, -1, (BYTE *)
&m_txn.OrderStatus.c_id);
            // if customer id is
            // name
            if
            (m_txn.OrderStatus.c_id == 0)
            dbrpcparam(m_dbproc, NULL, 0, SQLCHAR, -1,
strlen(m_txn.OrderStatus.c_last), (unsigned char
*)m_txn.OrderStatus.c_last);
            if (dbrpcexec(m_dbproc)
== FAIL)
                ThrowError(CDBLIBERR::eDbRpcExec);
            // Get order lines
            if (dbresults(m_dbproc)
!= SUCCEED)
            {
                if ((m_DbLibErr
== NULL) && (m_SqlErr == NULL))

```



```

ResetError();
while (TRUE)
{
    try
    {
        dbrpcinit(m_dbproc,
"tpcc_delivery", 0);
        dbrpcparam(m_dbproc,
NULL, 0, SQLINT4, -1, -1, (BYTE *)
&m_txn.Delivery.w_id);
        dbrpcparam(m_dbproc,
NULL, 0, SQLINT1, -1, -1, (BYTE *)
&m_txn.Delivery.o_carrier_id);
        if (dbrpcexec(m_dbproc)
== FAIL)
            ThrowError(CDBLIBERR::eDbRpcExec);
        if (dbresults(m_dbproc)
!= SUCCEEDED)
            ThrowError(CDBLIBERR::eDbResults);
        if (dbnextrow(m_dbproc)
!= REG_ROW)
            ThrowError(CDBLIBERR::eDbNextRow);
        if (dbnumcols(m_dbproc)
!= 10)
            ThrowError(CDBLIBERR::ewrongNumCols);
        for (i=0; i<10; i++)
        {
            if (pdata =
dbdata(m_dbproc, i+1))
                m_txn.Delivery.o_id[i] = *((DBINT *)pdata);
            DiscardNextRows(0);
            DiscardNextResults(0);
            m_txn.Delivery.exec_status_code = eOK;
            return;
        }
        catch (CSQLERR *e)
        {
            if ((e->m_msgno == 1205
||
iErr0leDbProvider &&
(e->m_msgno ==
>m_msgtext, sErrTimeoutExpired) != NULL) &&
(++iTryCount <=
iMaxRetries))
            {
                // hit
                deadlock; backoff for increasingly longer period
                delete e;
                Sleep(10 *
iTryCount);
            }
            else
                throw;
        }
    }
} // while (TRUE)

```

```

//      if (iTryCount)
//          throw new
CTPCC_DBLIB_ERR(CTPCC_DBLIB_ERR::ERR_RETRIED_TRANS,
iTryCount);
}

void CTPCC_DBLIB::ResetError()
{
    if (m_DbLibErr != NULL)
    {
        delete m_DbLibErr;
        m_DbLibErr = (CDBLIBERR*)NULL;
    }
    if (m_SqlErr != NULL)
    {
        delete m_SqlErr;
        m_SqlErr = (CSQLERR*)NULL;
    }
    return;
}

```

## db\_dblib\_dll/src/tpcc\_dblib.h

```

/*      FILE:          TPCC_DBLIB.H
Kit Ver. 4.20.000      Microsoft TPC-C
Copyright
Microsoft, 1999      All Rights Reserved
*
*      Version
4.10.000 audited by Richard Gimarc, Performance
Metrics, 3/17/99
*
*      PURPOSE: Header file for TPC-C txn class
implementation.
*
*      Change history: 4.20.000 - updated rev number to
match kit
*/
#pragma once
#ifndef PDBPROCESS
#define DBPROCESS void // dbprocess structure type
typedef DBPROCESS * PDBPROCESS;
#endif

// need to declare functions for import, unless define
has already been created
// by the DLL's .cpp module for export.
#ifdef DllDecl
#define DllDecl __declspec( dllimport )
#endif

class CSQLERR : public CBaseErr
{
public:
    CSQLERR(void)
    {
        m_msgno = 0;
        m_msgstate = 0;
        m_severity = 0;
        m_msgtext = NULL;
    }
};

```

```

};
~CSQLERR()
{
    delete [] m_msgtext;
};
int m_msgno;
int m_msgstate;
int m_severity;
char *m_msgtext;
int ErrorType()
{return ERR_TYPE_SQL;};
char* ErrorTypeStr() { return
"SQL"; }
int ErrorNum()
{return m_msgno;};
char* ErrorText() {return
m_msgtext;};
};

class CDBLIBERR : public CBaseErr
{
public:
    enum ACTION
    {
        eNone,
        eUnknown,
        eLogin, // error from dblogin
        eDbOpen, // error from dbopen
        eDbUse, // error from dbuse
        eDbSqlExec, // error from dbsqlexec
        eDbSet, // error from dbset
        eDbSetMax, // error from one of the dbset*
        eDbNextRow, // error from dbnextrow
        eWrongRowCount, // error from dbnextrow
        eWrongNumCols, // more or less rows returned than expected
        eExpected, // more or less columns returned than
        eDbResults, // error from dbresults
        eDbRpcExec, // error from dbresults
        eDbSetMaxProcs, // error from dbsetmaxprocs
        eDbProcHandler, // error from dbsetmaxprocs
        eDbProcsgHandle, // error from either dbprocerrhandle or
        dbprocsghandle
    };
    CDBLIBERR(ACTION eAction, int
severity = 0, int dberror = 0, int oserr = 0)
    {
        m_eAction = eAction;
        m_severity = severity;
        m_dberror = dberror;
        m_oserr = oserr;
        m_dberrstr = NULL;
        m_oserrstr = NULL;
    };
};
~CDBLIBERR()

```



```

    {
        delete [] m_dberrstr;
        delete [] m_oserrstr;
    };
    ACTION m_eAction;
    int m_severity;
    int m_dberror;
    int m_oserr;
    char *m_dberrstr;
    char *m_oserrstr;

    int ErrorType()
    {return ERR_TYPE_DBLIB;};
    char* ErrorTypeStr() { return
    "DBLIB"; }
    int ErrorNum()
    {return m_dberror;};
    char* ErrorText() {return
    m_dberrstr;};
    int ErrorAction() {
    return (int)m_eAction; }
};

class CTPCC_DBLIB_ERR : public CBaseErr
{
public:
    enum CTPCC_DBLIB_ERRS
    {
        ERR_WRONG_SP_VERSION = 1,
server" // "wrong version of stored procs on database
        ERR_INVALID_CUST,
        // "Invalid Customer id,name."
        ERR_NO_SUCH_ORDER,
        // "No orders found for customer."
        ERR_RETRIED_TRANS,
        // "Retries before transaction
succeeded."
    };
    CTPCC_DBLIB_ERR( int iErr ) {
m_errno = iErr; m_iTryCount = 0; };
    CTPCC_DBLIB_ERR( int iErr, int
iTryCount ) { m_errno = iErr; m_iTryCount = iTryCount;
};

    int m_errno;
    int m_iTryCount;

    int ErrorType()
    {return ERR_TYPE_TPCC_DBLIB;};
    char* ErrorTypeStr() { return
    "TPCC DBLIB"; }
    int ErrorNum()
    {return m_errno;};
    char* ErrorText();
};

class DllDecl CTPCC_DBLIB : public CTPCC_BASE
{
private:
    // declare variables and private
functions here...
    PDBPROCESS m_dbproc;
    CDBLIBERR *m_DblibErr;
    // not allocated until needed (maybe never)

```

```

        CSQLErr *m_SqlErr;
        // not allocated until
needed (maybe never)
    int
    m_MaxRetries; // retry count
on deadlock

    void DiscardNextRows(int
iExpectedCount);
    void DiscardNextResults(int
iExpectedCount);
    void ThrowError( CDBLIBERR::ACTION
eAction );
    void ResetError();

    union
    {
        NewOrder;
        Payment;
        Delivery;
        StockLevel;
        OrderStatus;
    }
    m_txn;
public:
    CTPCC_DBLIB(LPCSTR szServer, LPCSTR
szUser, LPCSTR szPassword, LPCSTR szHost, LPCSTR
szDatabase );
    ~CTPCC_DBLIB(void);

    inline PNEW_ORDER_DATA
    BuffAddr_NewOrder() { return
    &m_txn.NewOrder; };
    inline PPAYMENT_DATA
    BuffAddr_Payment() { return
    &m_txn.Payment; };
    inline PDELIVERY_DATA
    BuffAddr_Delivery() { return
    &m_txn.Delivery; };
    inline PSTOCK_LEVEL_DATA
    BuffAddr_StockLevel() { return
    &m_txn.StockLevel; };
    inline PORDER_STATUS_DATA
    BuffAddr_OrderStatus() { return
    &m_txn.OrderStatus; };

    void NewOrder ();
    void Payment ();
    void Delivery ();
    void StockLevel ();
    void OrderStatus ();

    // these are public because they
must be called from
msg_hangler
    // outside of the class
    void SetDblibError(int severity,
int dberr, int oserr, LPCSTR dberrstr, LPCSTR
oserrstr);
    void SetSqlError( int msgno, int
msgstate, int severity, LPCSTR msgtext );
};

extern "C" DllDecl CTPCC_DBLIB* CTPCC_DBLIB_new

```

```

    ( LPCSTR szServer, LPCSTR szUser, LPCSTR
szPassword, LPCSTR szHost, LPCSTR szDatabase );
typedef CTPCC_DBLIB* (TYPE_TPCC_DBLIB)(LPCSTR, LPCSTR,
LPCSTR, LPCSTR, LPCSTR);

```

## tm\_com\_dll/src/tpcc\_com.h

```

/* FILE: TPCC_COM.H
 * Microsoft TPC-C
 * Kit Ver. 4.20.000
 * Copyright
 * Microsoft, 1999
 * All Rights Reserved
 * not yet audited
 * PURPOSE: Header file for TPC-C COM+ class
 * implementation.
 * Change history:
 * 4.20.000 - first version
 */

#pragma once

#include <stdio.h>
#include "..\..\tpcc_com_ps\src\tpcc_com_ps.h"

// need to declare functions for import, unless define
has already been created
// by the DLL's .cpp module for export.
#ifdef DllDecl
#define DllDecl __declspec( dllimport )
#endif

class CCOMERR : public CBaseErr
{
private:
    char m_szErrorText[64];
public:
    // use this interface for genuine
COM errors
    CCOMERR( HRESULT hr )
    {
        m_hr = hr;
        m_iErrorType = 0;
        m_iError = 0;
    }

    // use this interface to
impersonate a non-COM error type
    CCOMERR( int iErrorType, int iError
)
    {
        m_iErrorType =
        m_iError = iError;
        m_hr = S_OK;
    }

    int m_hr;
    int m_iErrorType;
    int m_iError;

```

```

// A COMERR class can impersonate
another class, which happens if the error
error, but was simply transmitted back via COM.
int ErrorType()
{
    if (m_iErrorType == 0)
        return
ERR_TYPE_COM;
    else
        return
m_iErrorType;
}
char *ErrorTypeStr() { return
"COM"; }
int ErrorNum()
{
    if (m_iErrorType == 0)
        return m_hr;
    // return COM error
    else
        return
m_iError; // return impersonated error
}
char *ErrorText()
{
    if (m_hr == S_OK)
        sprintf(
m_szErrorText, "Error: Class %d, error # %d",
m_iErrorType, m_iError );
    else
        sprintf(
m_szErrorText, "Error: COM HRESULT %x", m_hr );
    return m_szErrorText;
};
class DllDecl1 CTPCC_COM : public CTPCC_BASE
{
private:
    BOOL m_bSinglePool;
    // COM Interface pointers
    ITPCC*
m_pNewOrder;
    ITPCC*
m_pPayment;
    ITPCC*
m_pStockLevel;
    ITPCC*
m_porderStatus;
    struct COM_DATA
    {
        int ErrorType;
        int error;
        union
        {
            NEW_ORDER_DATA
NewOrder;
            PAYMENT_DATA
Payment;
            DELIVERY_DATA
Delivery;
            STOCK_LEVEL_DATA
StockLevel;
            ORDER_STATUS_DATA
OrderStatus;
        } u;
    };
};

```

```

} *m_pTxn;
public:
    VARIANT m_vTxn;
    CTPCC_COM(BOOL bSinglePool);
    ~CTPCC_COM(void);
    inline PNEW_ORDER_DATA
    BuffAddr_NewOrder() { return
&m_pTxn->u.NewOrder; };
    inline PPAYMENT_DATA
    BuffAddr_Payment() { return
&m_pTxn->u.Payment; };
    inline PDELIVERY_DATA
    BuffAddr_Delivery() { return
&m_pTxn->u.Delivery; };
    inline PSTOCK_LEVEL_DATA
    BuffAddr_StockLevel() { return
&m_pTxn->u.StockLevel; };
    inline PORDER_STATUS_DATA
    BuffAddr_OrderStatus() { return
&m_pTxn->u.OrderStatus; };
    void NewOrder() { };
    void Payment() { };
    void StockLevel() { };
    void OrderStatus() { };
    void Delivery() { };
throw new COMERR(E_NOTIMPL); } // not supported
};
inline void ReleaseInterface(IUnknown *pUnk)
{
    if (punk)
    {
        punk->Release();
        punk = NULL;
    }
}
// wrapper routine for class constructor
extern "C" __declspec(dllexport) CTPCC_COM*
CTPCC_COM_new(BOOL);
typedef CTPCC_COM* (TYPE_CTPCC_COM)(BOOL);

```

### tpcc\_com\_all/src/tpcc\_com\_all.def

```

; tpcc_com_all.def : Declares the module parameters.
LIBRARY "tpcc_com_all.dll"
EXPORTS
    DllCanUnloadNow @1 PRIVATE
    DllGetClassObject @2 PRIVATE
    DllRegisterServer @3 PRIVATE
    DllUnregisterServer @4 PRIVATE

```

### tpcc\_com\_all/src/tpcc\_com\_all.idl

```

/* FILE: TPCC.IDL Microsoft TPC-C
Kit Ver. 4.20.000
* Copyright
Microsoft, 1999 All Rights Reserved
*
* not yet audited
*
* PURPOSE: IDL source for TPCC.dll. This file
is processed by the MIDL tool to
* produce the
type library (TPCC.tlb) and marshalling code.
* Change history:
* 4.20.000 - first version
*/
interface TPCC;
interface NewOrder;
interface OrderStatus;
interface Payment;
interface StockLevel;
import "oidl.idl";
import "ocidl.idl";
import "..\tpcc_com_ps\src\tpcc_com_ps.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;
    };
    [
        uuid(975BAABF-84A7-11D2-BA47-
00C04FBFE08B),
        helpstring("NewOrder Class")
    ]
    coclass NewOrder
    {
        [default] interface ITPCC;
    };
    [
        uuid(266836AD-A50D-11D2-BA4E-
00C04FBFE08B),
        helpstring("OrderStatus Class")
    ]
    coclass OrderStatus
    {
        [default] interface ITPCC;
    };
};

```

```

[
    uuid(CD02F7EF-A4FA-11D2-BA4E-
00C04FBFE08B),
    helpstring("Payment Class")
]
coclass Payment
{
    [default] interface ITPCC;
};

[
    uuid(2668369E-A50D-11D2-BA4E-
00C04FBFE08B),
    helpstring("StockLevel Class")
]
coclass StockLevel
{
    [default] interface ITPCC;
};
};

```

## tpcc\_com\_all/src/tpcc\_com\_all.rc

```

//Microsoft Developer Studio generated resource script.
//
#include "resource.h"

#define APSTUDIO_READONLY_SYMBOLS
////////////////////////////////////
//
// Generated from the TEXTINCLUDE 2 resource.
//
#include "winres.h"
////////////////////////////////////
#undef APSTUDIO_READONLY_SYMBOLS
////////////////////////////////////
//
// English (U.S.) resources
//
#ifdef _WIN32
//
// If defined(AFX_RESOURCE_DLL) || defined(AFX_TARG_ENU)
//
#ifdef _WIN32
LANGUAGE LANG_ENGLISH, SUBLANG_ENGLISH_US
#pragma code_page(1252)
#endif // _WIN32

#ifdef APSTUDIO_INVOKED
////////////////////////////////////
//
// TEXTINCLUDE
//
1 TEXTINCLUDE DISCARDABLE
BEGIN
    "resource.h\0"
END

2 TEXTINCLUDE DISCARDABLE
BEGIN

```

```

#include "winres.h"
\0"
END

3 TEXTINCLUDE DISCARDABLE
BEGIN
    "1 TYPELIB "tpcc_com_all.tlb"\0"
\0"
END

#ifdef APSTUDIO_INVOKED

#ifdef _MAC
////////////////////////////////////
//
// Version
//

VS_VERSION_INFO VERSIONINFO
FILEVERSION 1,0,0,1
PRODUCTVERSION 1,0,0,1
FILEFLAGS 0x3fL
#ifdef _DEBUG
FILEFLAGS 0x1L
#else
FILEFLAGS 0x0L
#endif
FILES 0x4L
FILETYPE 0x2L
FILESUBTYPE 0x0L
BEGIN
    BLOCK "StringFileInfo"
    BEGIN
        BLOCK "040904B0"
        BEGIN
            VALUE "CompanyName", "\0"
            VALUE "FileDescription", "tpcc_com_all
Module\0"
            VALUE "FileVersion", "1, 0, 0, 1\0"
            VALUE "InternalName", "TPCCNEWORDER\0"
            VALUE "LegalCopyright", "Copyright 1997\0"
            VALUE "OriginalFilename",
"tpcc_com_all.DLL\0"
            VALUE "ProductName", "tpcc_com_all
Module\0"
            VALUE "ProductVersion", "1, 0, 0, 1\0"
            VALUE "OLESelfRegister", "\0"
        END
    END
    BLOCK "VarFileInfo"
    BEGIN
        VALUE "Translation", 0x409, 1200
    END
END

#ifdef ! _MAC

////////////////////////////////////
//
// REGISTRY
//

IDR_TPCC REGISTRY DISCARDABLE
"tpcc_com_all.rgs"
IDR_NEWORDER REGISTRY DISCARDABLE
"tpcc_com_no.rgs"
IDR_ORDERSTATUS REGISTRY DISCARDABLE
"tpcc_com_os.rgs"

```

```

IDR_PAYMENT REGISTRY DISCARDABLE
"tpcc_com_pay.rgs"
IDR_STOCKLEVEL REGISTRY DISCARDABLE
"tpcc_com_sl.rgs"

////////////////////////////////////
//
// String Table
//

STRINGTABLE DISCARDABLE
BEGIN
    IDS_PROJNAME "tpcc_com_all"
END

#ifdef English (U.S.) resources
////////////////////////////////////
//
// Generated from the TEXTINCLUDE 3 resource.
//
1 TYPELIB "tpcc_com_all.tlb"
////////////////////////////////////
//
// not APSTUDIO_INVOKED

```

## tpcc\_com\_all/src/tpcc\_com\_all.rgs

```

HKCR
{
    TPCC.AllTxns.1 = s 'All Txns Class'
    {
        CLSID = s '{122A3128-2520-11D3-
BA71-00C04FBFE08B}'
        TPCC.AllTxns = s 'TPCC Class'
        {
            CurVer = s 'TPCC.AllTxns.1'
            NoRemove CLSID
            {
                ForceRemove {122A3128-2520-11D3-
BA71-00C04FBFE08B} = s 'TPCC Class'
                {
                    ProgID = s
                    VersionIndependentProgID
= s 'TPCC.AllTxns'
                    InprocServer32 = s
                    {
                        va]
                    }
                }
            }
        }
    }
}

```

## tpcc\_com\_all/src/tpcc\_com\_all\_i.c

```
#pragma warning( disable: 4049 ) /* more than 64k
source lines */

/* this ALWAYS GENERATED file contains the IIDs and
CLSIDS */

/* link this file in with the server and any clients */

/* File created by MIDL compiler version 6.00.0347 */
/* at Fri Apr 15 14:48:53 2005 */
/*
Compiler settings for .\src\tpcc_com_all.idl:
  oicf, w1, zp8, env=win32 (32b run)
  protocol : dce , ms_ext, c_ext
  error checks: allocation ref bounds_check enum
  stub_data
  VC __declspec() decoration level:
  __declspec(uuid()), __declspec(selectany),
  __declspec(novtable)
  DECLSPEC_UUID(), MIDL_INTERFACE()
*/
//@@MIDL_FILE_HEADING( )

#if !defined(_M_IA64) && !defined(_M_AMD64)

#ifdef __cplusplus
extern "C"{
#endif

#include <rpc.h>
#include <rpcndr.h>

#ifdef _MIDL_USE_GUIDDEF_

#ifndef INITGUID
#define INITGUID
#include <guiddef.h>
#undef INITGUID
#else
#include <guiddef.h>
#endif
#endif

#define MIDL_DEFINE_GUID(type,name,l,w1,w2,b1,b2,b3,b4,b5,b6,b7,b8) \
DEFINE_GUID(name,l,w1,w2,b1,b2,b3,b4,b5,b6,b7,b8)

#else // !_MIDL_USE_GUIDDEF_

#ifdef __IID_DEFINED__
#define __IID_DEFINED__

typedef struct _IID
{
    unsigned long x;
    unsigned short s1;
    unsigned short s2;
    unsigned char c[8];
} IID;

#endif // __IID_DEFINED__

#ifndef CLSID_DEFINED
#define CLSID_DEFINED
typedef IID CLSID;
#endif

#endif

#endif
```

```
#endif // CLSID_DEFINED

#define MIDL_DEFINE_GUID(type,name,l,w1,w2,b1,b2,b3,b4,b5,b6,b7,b8) \
    const type name = \
    {l,w1,w2,{b1,b2,b3,b4,b5,b6,b7,b8}}

#ifdef !_MIDL_USE_GUIDDEF_

MIDL_DEFINE_GUID(IID,
LIBID_TPCCLib,0x122A3117,0x2520,0x11D3,0xBA,0x71,0x00,0xC0,0x4F,0xBF,0xE0,0x8B);

MIDL_DEFINE_GUID(CLSID,
CLSID_TPCC,0x122A3128,0x2520,0x11D3,0xBA,0x71,0x00,0xC0,0x4F,0xBF,0xE0,0x8B);

MIDL_DEFINE_GUID(CLSID,
CLSID_NewOrder,0x975BAABF,0x84A7,0x11D2,0xBA,0x47,0x00,0xC0,0x4F,0xBF,0xE0,0x8B);

MIDL_DEFINE_GUID(CLSID,
CLSID_OrderStatus,0x266836AD,0xA50D,0x11D2,0xBA,0x4E,0x00,0x00,0x4F,0xBF,0xE0,0x8B);

MIDL_DEFINE_GUID(CLSID,
CLSID_Payment,0xC0D2F7EF,0xA4FA,0x11D2,0xBA,0x4E,0x00,0xC0,0x4F,0xBF,0xE0,0x8B);

MIDL_DEFINE_GUID(CLSID,
CLSID_StockLevel,0x2668369E,0xA50D,0x11D2,0xBA,0x4E,0x00,0xC0,0x4F,0xBF,0xE0,0x8B);

#undef MIDL_DEFINE_GUID

#ifdef __cplusplus
}
#endif

#endif /* !defined(_M_IA64) && !defined(_M_AMD64) */

#pragma warning( disable: 4049 ) /* more than 64k
source lines */

/* this ALWAYS GENERATED file contains the IIDs and
CLSIDS */

/* link this file in with the server and any clients */

/* File created by MIDL compiler version 6.00.0347 */
/* at Fri Apr 15 14:48:53 2005 */
/*
Compiler settings for .\src\tpcc_com_all.idl:
  oicf, w1, zp8, env=win64 (32b run,appending)
  protocol : dce , ms_ext, c_ext, robust
  error checks: allocation ref bounds_check enum
  stub_data
  VC __declspec() decoration level:
  __declspec(uuid()), __declspec(selectany),
  __declspec(novtable)
  DECLSPEC_UUID(), MIDL_INTERFACE()
*/
```

```
//@@MIDL_FILE_HEADING( )

#if defined(_M_IA64) || defined(_M_AMD64)

#ifdef __cplusplus
extern "C"{
#endif

#include <rpc.h>
#include <rpcndr.h>

#ifdef _MIDL_USE_GUIDDEF_

#ifndef INITGUID
#define INITGUID
#include <guiddef.h>
#undef INITGUID
#else
#include <guiddef.h>
#endif
#endif

#define MIDL_DEFINE_GUID(type,name,l,w1,w2,b1,b2,b3,b4,b5,b6,b7,b8) \
DEFINE_GUID(name,l,w1,w2,b1,b2,b3,b4,b5,b6,b7,b8)

#else // !_MIDL_USE_GUIDDEF_

#ifdef __IID_DEFINED__
#define __IID_DEFINED__

typedef struct _IID
{
    unsigned long x;
    unsigned short s1;
    unsigned short s2;
    unsigned char c[8];
} IID;

#endif // __IID_DEFINED__

#ifndef CLSID_DEFINED
#define CLSID_DEFINED
typedef IID CLSID;
#endif

#endif

#define MIDL_DEFINE_GUID(type,name,l,w1,w2,b1,b2,b3,b4,b5,b6,b7,b8) \
    const type name = \
    {l,w1,w2,{b1,b2,b3,b4,b5,b6,b7,b8}}

#ifdef !_MIDL_USE_GUIDDEF_

MIDL_DEFINE_GUID(IID,
LIBID_TPCCLib,0x122A3117,0x2520,0x11D3,0xBA,0x71,0x00,0xC0,0x4F,0xBF,0xE0,0x8B);

MIDL_DEFINE_GUID(CLSID,
CLSID_TPCC,0x122A3128,0x2520,0x11D3,0xBA,0x71,0x00,0xC0,0x4F,0xBF,0xE0,0x8B);

MIDL_DEFINE_GUID(CLSID,
CLSID_NewOrder,0x975BAABF,0x84A7,0x11D2,0xBA,0x47,0x00,0xC0,0x4F,0xBF,0xE0,0x8B);

MIDL_DEFINE_GUID(CLSID,
CLSID_OrderStatus,0x266836AD,0xA50D,0x11D2,0xBA,0x4E,0x00,0x00,0x4F,0xBF,0xE0,0x8B);

MIDL_DEFINE_GUID(CLSID,
CLSID_Payment,0xC0D2F7EF,0xA4FA,0x11D2,0xBA,0x4E,0x00,0xC0,0x4F,0xBF,0xE0,0x8B);

MIDL_DEFINE_GUID(CLSID,
CLSID_StockLevel,0x2668369E,0xA50D,0x11D2,0xBA,0x4E,0x00,0xC0,0x4F,0xBF,0xE0,0x8B);

#endif
```

```
MIDL_DEFINE_GUID(CLSID,
  CLSID_OrderStatus, 0x266836AD, 0xA50D, 0x11D2, 0xBA, 0x4E, 0x00, 0x00, 0xC0, 0x4F, 0xBF, 0xE0, 0x8B);
```

```
MIDL_DEFINE_GUID(CLSID,
  CLSID_Payment, 0xCD02F7EF, 0xA4FA, 0x11D2, 0xBA, 0x4E, 0x00, 0x00, 0xC0, 0x4F, 0xBF, 0xE0, 0x8B);
```

```
MIDL_DEFINE_GUID(CLSID,
  CLSID_StockLevel, 0x2668369E, 0xA50D, 0x11D2, 0xBA, 0x4E, 0x00, 0x00, 0xC0, 0x4F, 0xBF, 0xE0, 0x8B);
```

```
#undef MIDL_DEFINE_GUID
```

```
#ifdef __cplusplus
}
#endif
```

```
#endif /* defined(_M_IA64) || defined(_M_AMD64) */
```

## tpcc\_com\_all/src/tpcc\_com\_no.rgs

```
HKCR
{
    TPCC.NewOrder.1 = s 'NewOrder Class'
    {
        CLSID = s '{975BAABF-84A7-11D2-
BA47-00C04FBFE08B}'
    }
    TPCC.NewOrder = s 'NewOrder Class'
    {
        CurVer = s 'TPCC.NewOrder.1'
    }
    NoRemove CLSID
    {
        ForceRemove {975BAABF-84A7-11D2-
BA47-00C04FBFE08B} = s 'NewOrder Class'
    }
    ProgID = s
    'TPCC.NewOrder.1'
    VersionIndependentProgID
    = s 'TPCC.NewOrder'
    InprocServer32 = s
    '%MODULE%'
    {
        val
    }
    ThreadingModel = s 'Both'
}
}
```

## tpcc\_com\_all/src/tpcc\_com\_os.rgs

```
HKCR
{
    TPCC.OrderStatus.1 = s 'OrderStatus Class'
    {
```

```
        CLSID = s '{266836AD-A50D-11D2-
BA4E-00C04FBFE08B}'
    }
    TPCC.OrderStatus = s 'OrderStatus Class'
    {
        CurVer = s 'TPCC.OrderStatus.1'
    }
    NoRemove CLSID
    {
        ForceRemove {266836AD-A50D-11D2-
BA4E-00C04FBFE08B} = s 'OrderStatus Class'
    }
    ProgID = s
    'TPCC.OrderStatus.1'
    VersionIndependentProgID
    = s 'TPCC.OrderStatus'
    InprocServer32 = s
    '%MODULE%'
    {
        val
    }
    ThreadingModel = s 'Both'
}
}
```

## tpcc\_com\_all/src/tpcc\_com\_pay.rgs

```
HKCR
{
    TPCC.Payment.1 = s 'Payment Class'
    {
        CLSID = s '{CD02F7EF-A4FA-11D2-
BA4E-00C04FBFE08B}'
    }
    TPCC.Payment = s 'Payment Class'
    {
        CurVer = s 'TPCC.Payment.1'
    }
    NoRemove CLSID
    {
        ForceRemove {CD02F7EF-A4FA-11D2-
BA4E-00C04FBFE08B} = s 'Payment Class'
    }
    ProgID = s
    'TPCC.Payment.1'
    VersionIndependentProgID
    = s 'TPCC.Payment'
    InprocServer32 = s
    '%MODULE%'
    {
        val
    }
    ThreadingModel = s 'Both'
}
}
```

## tpcc\_com\_all/src/tpcc\_com\_ps.h

```
#pragma warning( disable: 4049 ) /* more than 64k
source lines */
```

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

```
/* File created by MIDL compiler version 6.00.0347 */
/* at Fri Apr 15 14:48:43 2005
```

```
*/
/* Compiler settings for .\src\tpcc_com.ps.idl:
Oicf, w1, Zp8, env=win32 (32b run)
protocol : dce ; ms_ext, c_ext
error checks: allocation ref bounds_check enum
stub_data
vc __declspec( decoration level:
__declspec(uuid()), __declspec(selectany),
__declspec(novtable)
DECLSPEC_UUID(), MIDL_INTERFACE()
*/
//@@MIDL_FILE_HEADING( )
```

```
/* verify that the <rpcndr.h> version is high enough to
compile this file*/
#ifdef _REQUIRED_RPCNDR_H_VERSION__
#define _REQUIRED_RPCNDR_H_VERSION__ 440
#endif
```

```
#include "rpc.h"
#include "rpcndr.h"
```

```
#ifndef _RPCNDR_H_VERSION__
#error this stub requires an updated version of
<rpcndr.h>
#endif // _RPCNDR_H_VERSION__
```

```
#ifndef COM_NO_WINDOWS_H
#include "windows.h"
#include "ole2.h"
#endif /*COM_NO_WINDOWS_H*/
```

```
#ifndef _tpcc_com_ps_h__
#define _tpcc_com_ps_h__
```

```
#if defined(_MSC_VER) && (_MSC_VER >= 1020)
#pragma once
#endif
```

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

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

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

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

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

```
/* interface __MIDL_itf_tpcc_com_ps_0000 */
/* [local] */
```

```

extern RPC_IF_HANDLE
__MIDL_itf_tpcCom_ps_0000_v0_0_c_ifspec;
extern RPC_IF_HANDLE
__MIDL_itf_tpcCom_ps_0000_v0_0_s_ifspec;

#ifdef __ITPCC_INTERFACE_DEFINED__
#define __ITPCC_INTERFACE_DEFINED__

/* interface ITPCC */
/* [unique][helpstring][uuid][oleautomation][object] */

EXTERN_C const IID IID_ITPCC;

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

    MIDL_INTERFACE("FEEE6AA2-84B1-11d2-BA47-00C04FBFE08B")
    ITPCC : public IUnknown
    {
    public:
        virtual HRESULT STDMETHODCALLTYPE NewOrder(
            /* [in] */ VARIANT txn_in,
            /* [out] */ VARIANT *txn_out) = 0;

        virtual HRESULT STDMETHODCALLTYPE Payment(
            /* [in] */ VARIANT txn_in,
            /* [out] */ VARIANT *txn_out) = 0;

        virtual HRESULT STDMETHODCALLTYPE Delivery(
            /* [in] */ VARIANT txn_in,
            /* [out] */ VARIANT *txn_out) = 0;

        virtual HRESULT STDMETHODCALLTYPE StockLevel(
            /* [in] */ VARIANT txn_in,
            /* [out] */ VARIANT *txn_out) = 0;

        virtual HRESULT STDMETHODCALLTYPE OrderStatus(
            /* [in] */ VARIANT txn_in,
            /* [out] */ VARIANT *txn_out) = 0;

        virtual HRESULT STDMETHODCALLTYPE CallSetComplete(
            void) = 0;
    };

#else /* c style interface */
    typedef struct ITPCCVtbl
    {
        BEGIN_INTERFACE

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

        ULONG ( STDMETHODCALLTYPE AddRef )(
            ITPCC * This);

        ULONG ( STDMETHODCALLTYPE Release )(
            ITPCC * This);

        HRESULT ( STDMETHODCALLTYPE NewOrder )(
            ITPCC * This,
            /* [in] */ VARIANT txn_in,
            /* [out] */ VARIANT *txn_out);

        HRESULT ( STDMETHODCALLTYPE Payment )(
            ITPCC * This,
            /* [in] */ VARIANT txn_in,
            /* [out] */ VARIANT *txn_out);

        HRESULT ( STDMETHODCALLTYPE Delivery )(
            ITPCC * This,
            /* [in] */ VARIANT txn_in,
            /* [out] */ VARIANT *txn_out);

        HRESULT ( STDMETHODCALLTYPE StockLevel )(
            ITPCC * This,
            /* [in] */ VARIANT txn_in,
            /* [out] */ VARIANT *txn_out);

        HRESULT ( STDMETHODCALLTYPE OrderStatus )(
            ITPCC * This,
            /* [in] */ VARIANT txn_in,
            /* [out] */ VARIANT *txn_out);

        HRESULT ( STDMETHODCALLTYPE CallSetComplete )(
            ITPCC * This);

        END_INTERFACE
    } ITPCCVtbl;

    interface ITPCC
    {
        CONST_VTBL struct ITPCCVtbl *lpVtbl;
    };

#endif /* COBJMACROS */

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

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

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

#define ITPCC_NewOrder(This,txn_in,txn_out) \
    (This)->lpVtbl->NewOrder(This,txn_in,txn_out)

#define ITPCC_Payment(This,txn_in,txn_out) \
    (This)->lpVtbl->Payment(This,txn_in,txn_out)

#define ITPCC_Delivery(This,txn_in,txn_out) \
    (This)->lpVtbl->Delivery(This,txn_in,txn_out)

#define ITPCC_StockLevel(This,txn_in,txn_out) \
    (This)->lpVtbl->StockLevel(This,txn_in,txn_out)

#define ITPCC_OrderStatus(This,txn_in,txn_out) \
    (This)->lpVtbl->OrderStatus(This,txn_in,txn_out)

#define ITPCC_CallSetComplete(This) \
    (This)->lpVtbl->CallSetComplete(This)

#endif /* COBJMACROS */

#endif /* c style interface */

HRESULT STDMETHODCALLTYPE ITPCC_NewOrder_Proxy(
    ITPCC * This,
    /* [in] */ VARIANT txn_in,
    /* [out] */ VARIANT *txn_out);

HRESULT STDMETHODCALLTYPE ITPCC_StockLevel_Proxy(
    ITPCC * This,
    /* [in] */ VARIANT txn_in,
    /* [out] */ VARIANT *txn_out);

HRESULT STDMETHODCALLTYPE ITPCC_OrderStatus_Proxy(
    ITPCC * This,
    /* [in] */ VARIANT txn_in,
    /* [out] */ VARIANT *txn_out);

void STDMETHODCALLTYPE ITPCC_OrderStatus_Stub(
    IRpcStubBuffer *This,
    IRpcChannelBuffer *_pRpcChannelBuffer,
    PRPC_MESSAGE _pRpcMessage,
    DWORD *_pdwStubPhase);

HRESULT STDMETHODCALLTYPE ITPCC_CallSetComplete_Proxy(
    ITPCC * This);

void STDMETHODCALLTYPE ITPCC_CallSetComplete_Stub(
    IRpcStubBuffer *This,
    IRpcChannelBuffer *_pRpcChannelBuffer,
    PRPC_MESSAGE _pRpcMessage,
    DWORD *_pdwStubPhase);

```

```

HRESULT ( STDMETHODCALLTYPE Delivery )(
    ITPCC * This,
    /* [in] */ VARIANT txn_in,
    /* [out] */ VARIANT *txn_out);

HRESULT ( STDMETHODCALLTYPE StockLevel )(
    ITPCC * This,
    /* [in] */ VARIANT txn_in,
    /* [out] */ VARIANT *txn_out);

HRESULT ( STDMETHODCALLTYPE OrderStatus )(
    ITPCC * This,
    /* [in] */ VARIANT txn_in,
    /* [out] */ VARIANT *txn_out);

HRESULT ( STDMETHODCALLTYPE CallSetComplete )(
    ITPCC * This);

END_INTERFACE
} ITPCCVtbl;

interface ITPCC
{
    CONST_VTBL struct ITPCCVtbl *lpVtbl;
};

#ifdef COBJMACROS

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

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

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

#define ITPCC_NewOrder(This,txn_in,txn_out) \
    (This)->lpVtbl->NewOrder(This,txn_in,txn_out)

#define ITPCC_Payment(This,txn_in,txn_out) \
    (This)->lpVtbl->Payment(This,txn_in,txn_out)

#define ITPCC_Delivery(This,txn_in,txn_out) \
    (This)->lpVtbl->Delivery(This,txn_in,txn_out)

#define ITPCC_StockLevel(This,txn_in,txn_out) \
    (This)->lpVtbl->StockLevel(This,txn_in,txn_out)

#define ITPCC_OrderStatus(This,txn_in,txn_out) \
    (This)->lpVtbl->OrderStatus(This,txn_in,txn_out)

#define ITPCC_CallSetComplete(This) \
    (This)->lpVtbl->CallSetComplete(This)

#endif /* COBJMACROS */

#endif /* c style interface */

HRESULT STDMETHODCALLTYPE ITPCC_NewOrder_Proxy(
    ITPCC * This,
    /* [in] */ VARIANT txn_in,
    /* [out] */ VARIANT *txn_out);

```

```

void STDMETHODCALLTYPE ITPCC_NewOrder_Stub(
    IRpcStubBuffer *This,
    IRpcChannelBuffer *_pRpcChannelBuffer,
    PRPC_MESSAGE _pRpcMessage,
    DWORD *_pdwStubPhase);

HRESULT STDMETHODCALLTYPE ITPCC_Payment_Proxy(
    ITPCC * This,
    /* [in] */ VARIANT txn_in,
    /* [out] */ VARIANT *txn_out);

void STDMETHODCALLTYPE ITPCC_Payment_Stub(
    IRpcStubBuffer *This,
    IRpcChannelBuffer *_pRpcChannelBuffer,
    PRPC_MESSAGE _pRpcMessage,
    DWORD *_pdwStubPhase);

HRESULT STDMETHODCALLTYPE ITPCC_Delivery_Proxy(
    ITPCC * This,
    /* [in] */ VARIANT txn_in,
    /* [out] */ VARIANT *txn_out);

void STDMETHODCALLTYPE ITPCC_Delivery_Stub(
    IRpcStubBuffer *This,
    IRpcChannelBuffer *_pRpcChannelBuffer,
    PRPC_MESSAGE _pRpcMessage,
    DWORD *_pdwStubPhase);

HRESULT STDMETHODCALLTYPE ITPCC_StockLevel_Proxy(
    ITPCC * This,
    /* [in] */ VARIANT txn_in,
    /* [out] */ VARIANT *txn_out);

void STDMETHODCALLTYPE ITPCC_StockLevel_Stub(
    IRpcStubBuffer *This,
    IRpcChannelBuffer *_pRpcChannelBuffer,
    PRPC_MESSAGE _pRpcMessage,
    DWORD *_pdwStubPhase);

HRESULT STDMETHODCALLTYPE ITPCC_OrderStatus_Proxy(
    ITPCC * This,
    /* [in] */ VARIANT txn_in,
    /* [out] */ VARIANT *txn_out);

void STDMETHODCALLTYPE ITPCC_OrderStatus_Stub(
    IRpcStubBuffer *This,
    IRpcChannelBuffer *_pRpcChannelBuffer,
    PRPC_MESSAGE _pRpcMessage,
    DWORD *_pdwStubPhase);

HRESULT STDMETHODCALLTYPE ITPCC_CallSetComplete_Proxy(
    ITPCC * This);

void STDMETHODCALLTYPE ITPCC_CallSetComplete_Stub(
    IRpcStubBuffer *This,
    IRpcChannelBuffer *_pRpcChannelBuffer,
    PRPC_MESSAGE _pRpcMessage,
    DWORD *_pdwStubPhase);

```

```

#endif /* __ITPCC_INTERFACE_DEFINED__ */

/* Additional Prototypes for ALL interfaces */
unsigned long __RPC_USER VARIANT_UserSize(
unsigned long *, unsigned long *, VARIANT *
);
unsigned char * __RPC_USER VARIANT_UserMarshal(
unsigned long *, unsigned char *, VARIANT * );
unsigned char * __RPC_USER
VARIANT_UserUnmarshal(unsigned long *, unsigned char *,
VARIANT * );
void __RPC_USER VARIANT_UserFree(
unsigned long *, VARIANT * );

/* end of Additional Prototypes */

#ifdef __cplusplus
}
#endif
#endif

```

## tpcc\_com\_all/src/tpcc\_com\_sl.rgs

```

HKCR
{
    TPCC.StockLevel.1 = s 'StockLevel Class'
    {
        CLSID = s '{2668369E-A50D-11D2-
BA4E-00C04FBFE08B}'
    }
    TPCC.StockLevel = s 'StockLevel Class'
    {
        CurVer = s 'TPCC.StockLevel.1'
    }
    NoRemove CLSID
    {
        ForceRemove {2668369E-A50D-11D2-
BA4E-00C04FBFE08B} = s 'StockLevel Class'
    }
    ProgID = s
    'TPCC.StockLevel.1'
    VersionIndependentProgID
    = s 'TPCC.StockLevel'
    InprocServer32 = s
    '%MODULE%'
    {
        val
    }
    ThreadingModel = s 'Both'
}
}
}

```

## tpcc\_com\_ps/src/dlldata.c

```

/*****
***
DllData file -- generated by MIDL compiler

DO NOT ALTER THIS FILE

This file is regenerated by MIDL on every IDL file
compile.

To completely reconstruct this file, delete it and
rerun MIDL
on all the IDL files in this DLL, specifying this
file for the
/dlldata command line option
*****/

#include <rpcproxy.h>

#ifdef __cplusplus
extern "C" {
#endif

EXTERN_PROXY_FILE( tpcc_com_ps )

PROXYFILE_LIST_START
/* Start of list */
REFERENCE_PROXY_FILE( tpcc_com_ps ),
/* End of list */
PROXYFILE_LIST_END

DLLDATA_ROUTINES( aProxyFileList, GET_DLL_CLSID )

#ifdef __cplusplus
} /*extern "C" */
#endif

/* end of generated dlldata file */

```

## common/txnlog/include/rtetime.h

```

/* FILE: rtetime.h : header file
* Copyright 1997 Microsoft Corp., All rights reserved.
*
* Source code licensed to Tandem Computers for
Internal
* use only. Redistribution of source or object files
or
* any derivative works is prohibited. By agreement,
this
* notice may not be removed.
*
* Authors: Charles Levine, Philip Durr
* Microsoft Corp.
*/

//FILE: RTETIME.H

#define MAX_JULIAN_TIME
0x7FFFFFFFFFFFFFFF
#define JULIAN_TIME __int64
#define TC_TIME DWORD

```

```

extern "C"
{
    BOOL InitJulianTime(LPSYSTEMTIME
lpInitTime);
    JULIAN_TIME GetJulianTime(void);
    DWORD MyTickCount(void);
    void Time(int iYear, int iMonth, int iDay, int iHour, int
iMinute, int iSecond);
    JULIAN_TIME Get64BitTime(LPSYSTEMTIME
lpInitTime);
    int JulianDay( int yr, int
mm, int dd );
    void JulianToTime(JULIAN_TIME julianTS,
int* yr, int* mm, int* dd, int* hh, int* mi, int* ss );
    void JulianToCalendar( int day, int* yr,
int* mm, int* dd );
}

```

## common/txnlog/include/spinlock.h

```

/* FILE: SPINLOCK.H
*
* Copyright 1997 Microsoft Corp., All rights reserved.
*
* Source code licensed to Tandem Computers for
Internal
* use only. Redistribution of source or object files
or
* any derivative works is prohibited. By agreement,
this
* notice may not be removed.
*
* Authors: Mike Parkes, Charles Levine, Philip Durr
* Microsoft Corp.
*/

#ifdef _INC_Spinlock

const LONG LockClosed = 1;
const LONG LockOpen = 0;

/*****
*****
* Spinlock and Semaphore locking.
*
* This class provides a very conservative
locking scheme.
* The assumption behind the code is that
locks will be held for a very short time. When a lock
is taken a memory
* location is exchanged. All other
threads that want this
* lock wait by spinning and sometimes
sleeping on a semaphore
* until it becomes free again. The only
other choice is not
* to wait at all and move on to do
something else. This
* module should normally be used in
conjunction with cache
* aligned memory in minimize cache line
misses.
*
*/

```

```

*****
*****/
class Spinlock
{
    // Private data.
    HANDLE
Semaphore;
    volatile LONG
m_Spinlock;
    volatile LONG
waiting;

#ifdef _DEBUG
// Counters for debugging
builds.
    volatile LONG
TotalLocks;
    volatile LONG
TotalSleeps;
    volatile LONG
TotalSpins;
    volatile LONG
TotalWaits;
#endif
public:
    // Public functions.
    Spinlock( void );
    inline BOOL ClaimLock(
    BOOL Wait = TRUE );
    inline void ReleaseLock(
    void );
    ~Spinlock( void );
    // Disabled operations.
    Spinlock( const Spinlock
    & Copy );
    void operator=( const
    Spinlock & Copy );

private:
    // Private functions.
    inline BOOL
ClaimSpinlock( volatile LONG *sl );
    void WaitForLock( void );
    void WakeAllSleepers(
    void );
};

/*****
*****
*
* A guaranteed atomic exchange.
*
* An attempt is made to claim the
Spinlock. This action is
* guaranteed to be atomic.
*
*****
*****/

inline BOOL Spinlock::ClaimSpinlock( volatile
LONG *Spinlock )
{
#ifdef _DEBUG
InterlockedIncrement(
(LPLONG) & TotalLocks );
#endif

```

```

return ( (*Spinlock) == LockOpen)
&& (InterlockedExchange( (LPLONG)Spinlock, LockClosed)
== LockOpen) );
}

/*****
*****
*
* Claim the spinlock.
*
* Claim the lock if available else wait or
exit.
*
*****
*****/

inline BOOL Spinlock::ClaimLock( BOOL Wait )
{
    if ( ! ClaimSpinlock( (volatile
LONG*) & m_Spinlock ) )
    {
        if ( wait )
            WaitForLock();
        return Wait;
    }
    return TRUE;
}

/*****
*****
*
* Release the Spinlock.
*
* Release the lock and if needed wakeup
any sleepers.
*
*****
*****
*/

inline void Spinlock::ReleaseLock( void )
{
    m_Spinlock = LockOpen;
    if ( waiting > 0 )
        WakeAllSleepers();
}

#define _INC_Spinlock

#endif

```



## Appendix B: Database Design

### Build Scripts

#### setup.cmd

```
-----  
:-----  
:---- FILE:      SETUP.CMD  
:----          Microsoft TPC-C Kit Ver. 4.63  
:----          Copyright Microsoft, 2001, 2002,  
2005  
:----          All Rights Reserved  
:----  
:---- PURPOSE:   Calls RunSQLCfg.sql to configure SQL  
Server  
:----  
:---- ARGUMENTS: /? displays help for SETUP  
:----  
:-----  
@cscript SetupScripts\setup.vbs //H:CScript //I %1 %2  
%3 %4 %5 %6 %7
```

#### createdb.sql

```
-----  
---  
--- File:   CREATEDB.SQL  
---  
---       Microsoft TPC-C Benchmark Kit Ver. 4.63  
---  
---       Copyright Microsoft, 2005  
---  
-----
```

```
SET ANSI_NULL_DFLT_OFF ON  
GO
```

```
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))  
GO  
INSERT INTO tpcc_timer VALUES(0,0)  
GO  
-----  
-- Store starting time  
-----  
UPDATE tpcc_timer  
SET start_date = (SELECT CONVERT(CHAR(30),  
GETDATE(), 21))  
GO  
-----  
-- create main database files  
-----  
CREATE DATABASE tpcc  
ON PRIMARY  
    ( NAME = MSSQL_tpcc_root,  
      FILENAME = 'C:\MSSQL_tpcc_root.mdf',  
      SIZE = 8MB,  
      FILEGROWTH = 0),  
FILEGROUP MSSQL_misc_fg  
    ( NAME = MSSQL_misc1,  
      FILENAME = 'E:',  
      SIZE = 40000MB,  
      FILEGROWTH = 0),  
    ( NAME = MSSQL_misc2,  
      FILENAME = 'G:',  
      SIZE = 40000MB,  
      FILEGROWTH = 0),  
    ( NAME = MSSQL_misc3,  
      FILENAME = 'I:',  
      SIZE = 40000MB,  
      FILEGROWTH = 0),  
    ( NAME = MSSQL_misc4,  
      FILENAME = 'M:',  
      SIZE = 40000MB,  
      FILEGROWTH = 0),  
    ( NAME = MSSQL_misc5,  
      FILENAME = 'O:',  
      SIZE = 40000MB,  
      FILEGROWTH = 0),  
    ( NAME = MSSQL_misc6,  
      FILENAME = 'Q:',  
      SIZE = 40000MB,  
      FILEGROWTH = 0),  
    ( NAME = MSSQL_misc7,  
      FILENAME = 'S:',  
      SIZE = 40000MB,  
      FILEGROWTH = 0),  
    ( NAME = MSSQL_misc8,  
      FILENAME = 'U:',  
      SIZE = 40000MB,  
      FILEGROWTH = 0),  
    ( NAME = MSSQL_misc9,  
      FILENAME = 'W:',  
      SIZE = 20000MB,  
      FILEGROWTH = 0),  
FILEGROUP MSSQL_cs_fg  
    ( NAME = MSSQL_cs1,  
      FILENAME = 'F:',  
      SIZE = 80000MB,  
      FILEGROWTH = 0),  
    ( NAME = MSSQL_cs2,  
      FILENAME = 'H:',  
      SIZE = 80000MB,
```

```
      FILEGROWTH = 0),  
      NAME = MSSQL_cs3,  
      SIZE = 80000MB,  
      FILEGROWTH = 0),  
    ( NAME = MSSQL_cs4,  
      FILENAME = 'N:',  
      SIZE = 80000MB,  
      FILEGROWTH = 0),  
    ( NAME = MSSQL_cs5,  
      FILENAME = 'P:',  
      SIZE = 80000MB,  
      FILEGROWTH = 0),  
    ( NAME = MSSQL_cs6,  
      FILENAME = 'R:',  
      SIZE = 80000MB,  
      FILEGROWTH = 0),  
    ( NAME = MSSQL_cs7,  
      FILENAME = 'T:',  
      SIZE = 80000MB,  
      FILEGROWTH = 0),  
    ( NAME = MSSQL_cs8,  
      FILENAME = 'V:',  
      SIZE = 80000MB,  
      FILEGROWTH = 0),  
    ( NAME = MSSQL_cs9,  
      FILENAME = 'Z:',  
      SIZE = 40000MB,  
      FILEGROWTH = 0)  
LOG ON  
    ( NAME = MSSQL_tpcc_log,  
      FILENAME = 'L:',  
      SIZE = 35000MB,  
      FILEGROWTH = 0)  
COLLATE Latin1_General_BIN  
GO
```

```
-----  
-- Store ending time  
-----  
UPDATE tpcc_timer  
SET end_date = (SELECT CONVERT(CHAR(30),  
GETDATE(), 21))  
GO  
SELECT DATEDIFF(second,(SELECT start_date FROM  
tpcc_timer),(SELECT end_date FROM tpcc_timer))  
GO
```

```
-----  
-- remove temporary table  
-----  
IF EXISTS ( SELECT name FROM sysobjects WHERE name =  
'tpcc_timer' )  
DROP TABLE tpcc_timer  
GO
```

#### tables.sql

```
-----  
---  
--- File:   TABLES.SQL  
---
```

```

--      Microsoft TPC-C Benchmark Kit Ver. 4.63
--
--      Copyright Microsoft, 2005
--
--      Creates TPC-C tables
-----
SET ANSI_NULL_DFLT_OFF ON
GO
USE tpcc
GO
-----
-- Remove all existing TPC-C tables
-----
if exists ( select name from sysobjects where name =
'warehouse' )
drop table warehouse
go
if exists ( select name from sysobjects where name =
'district' )
drop table district
go
if exists ( select name from sysobjects where name =
'customer' )
drop table customer
go
if exists ( select name from sysobjects where name =
'history' )
drop table history
go
if exists ( select name from sysobjects where name =
'new_order' )
drop table new_order
go
if exists ( select name from sysobjects where name =
'orders' )
drop table orders
go
if exists ( select name from sysobjects where name =
'order_line' )
drop table order_line
go
if exists ( select name from sysobjects where name =
'item' )
drop table item
go
if exists ( select name from sysobjects where name =
'stock' )
drop table stock
go
-----
-- Create new tables
-----
create table warehouse
(
    w_id          int,
    w_ytd         money,
    w_tax         smallmoney,
    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)
) on MSSQL_misc_fg

```

```

go
create table district
(
    d_id          tinyint,
    d_w_id        int,
    d_ytd         money,
    d_next_o_id  int,
    d_tax         smallmoney,
    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)
) on MSSQL_misc_fg
go
create table customer
(
    c_id          int,
    c_d_id        tinyint,
    c_w_id        int,
    c_discount    smallmoney,
    c_credit_lim  money,
    c_last        char(16),
    c_first       char(16),
    c_credit      char(2),
    c_balance     money,
    c_ytd_payment smallint,
    c_payment_cnt smallint,
    c_delivery_cnt smallint,
    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_middle      char(2),
    c_data        char(500)
) on MSSQL_cs_fg
go
-- Use the following table option if using c_data
varchar(max)
-- sp_tableoption 'customer','large value types out of
row','1'
-- go
create table history
(
    h_c_id        int,
    h_c_d_id      tinyint,
    h_c_w_id      int,
    h_d_id        tinyint,
    h_w_id        int,
    h_date        datetime,
    h_amount      smallmoney,
    h_data        char(24)
) on MSSQL_misc_fg
go
create table new_order
(
    no_o_id       int,
    no_d_id       tinyint,
    no_w_id       int
) on MSSQL_misc_fg
go

```

```

create table orders
(
    o_id          int,
    o_d_id        tinyint,
    o_w_id        int,
    o_c_id        int,
    o_carrier_id  tinyint,
    o_ol_cnt      tinyint,
    o_all_local   tinyint,
    o_entry_d     datetime
) on MSSQL_misc_fg
go
create table order_line
(
    ol_o_id       int,
    ol_d_id       tinyint,
    ol_w_id       int,
    ol_number     tinyint,
    ol_i_id       int,
    ol_delivery_d datetime,
    ol_amount     smallmoney,
    ol_supply_w_id int,
    ol_quantity   smallint,
    ol_dist_info  char(24)
) on MSSQL_misc_fg
go
create table item
(
    i_id          int,
    i_name        char(24),
    i_price       smallmoney,
    i_data        char(50),
    i_im_id       int
) on MSSQL_misc_fg
go
create table stock
(
    s_i_id        int,
    s_w_id        int,
    s_quantity    smallint,
    s_ytd         int,
    s_order_cnt  smallint,
    s_remote_cnt int,
    s_data        char(50),
    s_dist_01    char(24),
    s_dist_02    char(24),
    s_dist_03    char(24),
    s_dist_04    char(24),
    s_dist_05    char(24),
    s_dist_06    char(24),
    s_dist_07    char(24),
    s_dist_08    char(24),
    s_dist_09    char(24),
    s_dist_10    char(24)
) on MSSQL_cs_fg
go

```

## idxcuscl.sql

```

-----
--
--

```

```

-- File:  IDXCUSCL.SQL
--
--      Microsoft TPC-C Benchmark Kit Ver. 4.63
--
--      Copyright Microsoft, 2005
--
--      Creates clustered index on customer table
-----
USE tpcc
GO

DECLARE @startdate  DATETIME,
        @enddate    DATETIME

SELECT @startdate = GETDATE()
SELECT 'Start date:',
       CONVERT(VARCHAR(30),@startdate,21)

IF EXISTS ( SELECT name FROM sysindexes WHERE name =
            'customer_c1' )
    DROP INDEX customer.customer_c1

CREATE UNIQUE CLUSTERED INDEX customer_c1 ON
customer(c_w_id, c_d_id, c_id)
ON MSSQL_cs_fg

SELECT @enddate = GETDATE()
SELECT 'End date:',
       CONVERT(VARCHAR(30),@enddate,21)
SELECT 'Elapsed time (in seconds):',
       DATEDIFF(second, @startdate, @enddate)
GO

```

## idxcusnc.sql

```

-----
--
-- File:  IDXCUSNC.SQL
--
--      Microsoft TPC-C Benchmark Kit Ver. 4.63
--
--      Copyright Microsoft, 2005
--
--      Creates non-clustered index on customer
table
-----
USE tpcc
GO

DECLARE @startdate  DATETIME,
        @enddate    DATETIME

SELECT @startdate = GETDATE()
SELECT 'Start date:',
       CONVERT(VARCHAR(30),@startdate,21)

```

```

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 MSSQL_cs_fg

SELECT @enddate = GETDATE()
SELECT 'End date:',
       CONVERT(VARCHAR(30),@enddate,21)
SELECT 'Elapsed time (in seconds):',
       DATEDIFF(second, @startdate, @enddate)
GO

```

## idxdiscl.sql

```

-----
--
-- File:  IDXDISCL.SQL
--
--      Microsoft TPC-C Benchmark Kit Ver. 4.63
--
--      Copyright Microsoft, 2005
--
--      Creates clustered index on district table
-----
USE tpcc
GO

DECLARE @startdate  DATETIME,
        @enddate    DATETIME

SELECT @startdate = GETDATE()
SELECT 'Start date:',
       CONVERT(VARCHAR(30),@startdate,21)

IF EXISTS ( SELECT name FROM sysindexes WHERE name =
            'district_c1' )
    DROP INDEX district.district_c1

CREATE UNIQUE CLUSTERED INDEX district_c1 ON
district(d_w_id, d_id)
WITH FILLFACTOR=100 ON MSSQL_misc_fg

SELECT @enddate = GETDATE()
SELECT 'End date:',
       CONVERT(VARCHAR(30),@enddate,21)
SELECT 'Elapsed time (in seconds):',
       DATEDIFF(second, @startdate, @enddate)
GO

```

## idxitmcl.sql

```

-----

```

```

--
-- File:  IDXITMCL.SQL
--
--      Microsoft TPC-C Benchmark Kit Ver. 4.63
--
--      Copyright Microsoft, 2005
--
--      Creates clustered index on item table
-----
USE tpcc
GO

DECLARE @startdate  DATETIME,
        @enddate    DATETIME

SELECT @startdate = GETDATE()
SELECT 'Start date:',
       CONVERT(VARCHAR(30),@startdate,21)

IF EXISTS ( SELECT name FROM sysindexes WHERE name =
            'item_c1' )
    DROP INDEX item.item_c1

CREATE UNIQUE CLUSTERED INDEX item_c1 ON item(i_id)
ON MSSQL_misc_fg

SELECT @enddate = GETDATE()
SELECT 'End date:',
       CONVERT(VARCHAR(30),@enddate,21)
SELECT 'Elapsed time (in seconds):',
       DATEDIFF(second, @startdate, @enddate)
GO

```

## idxnodcl.sql

```

-----
--
-- File:  IDXNODCL.SQL
--
--      Microsoft TPC-C Benchmark Kit Ver. 4.63
--
--      Copyright Microsoft, 2005
--
--      Creates clustered index on new-order table
-----
USE tpcc
GO

DECLARE @startdate  DATETIME,
        @enddate    DATETIME

SELECT @startdate = GETDATE()

```

```

SELECT 'Start date:',
      CONVERT(VARCHAR(30),@startdate,21)

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 MSSQL_misc_fg

SELECT @enddate = GETDATE()
SELECT 'End date:',
      CONVERT(VARCHAR(30),@enddate,21)
SELECT 'Elapsed time (in seconds): ',
      DATEDIFF(second, @startdate, @enddate)
GO

```

## idxodlcl.sql

```

-----
--
-- File:   IDXODLCL.SQL
--
-- Microsoft TPC-C Benchmark Kit Ver. 4.63
--
-- Copyright Microsoft, 2005
--
--
-- Creates clustered index on order-line table
--
-----
USE tpcc
GO

DECLARE @startdate DATETIME,
        @enddate   DATETIME

SELECT @startdate = GETDATE()
SELECT 'Start date:',
      CONVERT(VARCHAR(30),@startdate,21)

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(o1_w_id, o1_d_id, o1_o_id, o1_number)
      ON MSSQL_misc_fg

SELECT @enddate = GETDATE()
SELECT 'End date:',
      CONVERT(VARCHAR(30),@enddate,21)
SELECT 'Elapsed time (in seconds): ',
      DATEDIFF(second, @startdate, @enddate)
GO

```

## idxordcl.sql

```

-----
--
-- File:   IDXORDCL.SQL
--
-- Microsoft TPC-C Benchmark Kit Ver. 4.63
--
-- Copyright Microsoft, 2005
--
--
-- Creates clustered index on orders table
--
-----
USE tpcc
GO

DECLARE @startdate DATETIME,
        @enddate   DATETIME

SELECT @startdate = GETDATE()
SELECT 'Start date:',
      CONVERT(VARCHAR(30),@startdate,21)

IF EXISTS ( SELECT name FROM sysindexes WHERE name =
'orders_c1' )
      DROP INDEX orders.orders_c1

CREATE UNIQUE CLUSTERED INDEX orders_c1 ON
orders(o_w_id, o_d_id, o_id)
      ON MSSQL_misc_fg

SELECT @enddate = GETDATE()
SELECT 'End date:',
      CONVERT(VARCHAR(30),@enddate,21)
SELECT 'Elapsed time (in seconds): ',
      DATEDIFF(second, @startdate, @enddate)
GO

```

## idxstkcl.sql

```

-----
--
-- File:   IDXSTKCL.SQL
--
-- Microsoft TPC-C Benchmark Kit Ver. 4.63
--
-- Copyright Microsoft, 2005
--
--
-- Creates clustered index on stock table
--
-----

```

```

--
--
-----
USE tpcc
GO

DECLARE @startdate DATETIME,
        @enddate   DATETIME

SELECT @startdate = GETDATE()
SELECT 'Start date:',
      CONVERT(VARCHAR(30),@startdate,21)

IF EXISTS ( SELECT name FROM sysindexes WHERE name =
'stock_c1' )
      DROP INDEX stock.stock_c1

CREATE UNIQUE CLUSTERED INDEX stock_c1 ON stock(s_i_id,
s_w_id)
      ON MSSQL_cs_fg

SELECT @enddate = GETDATE()
SELECT 'End date:',
      CONVERT(VARCHAR(30),@enddate,21)
SELECT 'Elapsed time (in seconds): ',
      DATEDIFF(second, @startdate, @enddate)
GO

```

## idxwarcl.sql

```

-----
--
-- File:   IDXWARCL.SQL
--
-- Microsoft TPC-C Benchmark Kit Ver. 4.63
--
-- Copyright Microsoft, 2005
--
--
-- Creates clustered index on warehouse table
--
-----
USE tpcc
GO

DECLARE @startdate DATETIME,
        @enddate   DATETIME

SELECT @startdate = GETDATE()
SELECT 'Start date:',
      CONVERT(VARCHAR(30),@startdate,21)

IF EXISTS ( SELECT name FROM sysindexes WHERE name =
'warehouse_c1' )
      DROP INDEX warehouse.warehouse_c1

CREATE UNIQUE CLUSTERED INDEX warehouse_c1 ON
warehouse(w_id)
      WITH FILLFACTOR=100 ON MSSQL_misc_fg

```

```

SELECT @enddate = GETDATE()
SELECT 'End date:',
      CONVERT(VARCHAR(30),@enddate,21)
SELECT 'Elapsed time (in seconds): ',
      DATEDIFF(second, @startdate, @enddate)
GO

```

## idxordnc.sql

```

-----
--
-- File:   IDXORDNC.SQL
--
--         Microsoft TPC-C Benchmark Kit Ver. 4.63
--
--         Copyright Microsoft, 2005
--
--
--         Creates non-clustered index on orders table
--
-----
USE tpcc
GO

DECLARE @startdate DATETIME,
        @enddate   DATETIME

SELECT @startdate = GETDATE()
SELECT 'Start date:',
      CONVERT(VARCHAR(30),@startdate,21)

IF EXISTS ( SELECT name FROM sysindexes WHERE name =
            'orders_nc1' )
    DROP INDEX orders.orders_nc1

CREATE INDEX orders_nc1 ON orders(o_w_id, o_d_id,
o_c_id, o_id)
    ON MSSQL_misc_fg

SELECT @enddate = GETDATE()
SELECT 'End date:',
      CONVERT(VARCHAR(30),@enddate,21)
SELECT 'Elapsed time (in seconds): ',
      DATEDIFF(second, @startdate, @enddate)
GO

```

## dbopt1.sql

```

-----
--
-- File:   DBOPT1.SQL
--
--         Microsoft TPC-C Benchmark Kit Ver. 4.63
--
--         Copyright Microsoft, 2005
--

```

```

--
--
--         Sets database options for load
--
-----
USE master
GO

ALTER DATABASE tpcc SET RECOVERY BULK_LOGGED
GO

EXEC sp_dboption tpcc,'trunc. log on chkpt.',TRUE
GO

ALTER DATABASE tpcc SET TORN_PAGE_DETECTION OFF
GO

ALTER DATABASE tpcc SET PAGE_VERIFY NONE
GO

USE tpcc
GO

CHECKPOINT
GO

```

## dbopt2.sql

```

-----
--
-- File:   DBOPT2.SQL
--
--         Microsoft TPC-C Benchmark Kit Ver. 4.63
--
--         Copyright Microsoft, 2005
--
--
--         sets database options after load
--
-----
ALTER DATABASE tpcc SET RECOVERY FULL
GO

USE tpcc
GO

CHECKPOINT
GO

sp_configure 'allow updates',1
GO

RECONFIGURE WITH OVERRIDE
GO

DECLARE @msg          varchar(50)

```

```

--         OPTIONS FOR SQL SERVER 2000
-- Set option values for user-defined indexes --
-----
SET @msg = ' '
PRINT @msg
SET @msg = 'Setting SQL server indexoptions'
PRINT @msg
SET @msg = ' '
PRINT @msg

EXEC sp_indexoption 'customer',
'DisallowPageLocks', TRUE
EXEC sp_indexoption 'district',
'DisallowPageLocks', TRUE
EXEC sp_indexoption 'warehouse',
'DisallowPageLocks', TRUE
EXEC sp_indexoption 'stock',
'DisallowPageLocks', TRUE
EXEC sp_indexoption 'order_line',
'DisallowPageLocks', TRUE
EXEC sp_indexoption 'order_line', 'DisallowRowLocks',
TRUE
EXEC sp_indexoption 'orders',
'DisallowRowLocks',
TRUE
EXEC sp_indexoption 'new_order',
'DisallowRowLocks',
TRUE
EXEC sp_indexoption 'item',
'DisallowRowLocks',
TRUE
EXEC sp_indexoption 'item',
'DisallowPageLocks', 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 updates',0
GO

RECONFIGURE WITH OVERRIDE
GO

EXEC sp_dboption tpcc,
FALSE
'auto update statistics',
EXEC sp_dboption tpcc,
FALSE
'auto create statistics',
GO

DECLARE @db_id int,
@tbl_id int

```

```

SET @db_id = DB_ID('tpcc')
SET @tbl_id = OBJECT_ID('tpcc..warehouse')
DBCC PINTABLE (@db_id, @tbl_id)

SET @tbl_id = OBJECT_ID('tpcc..district')
DBCC PINTABLE (@db_id, @tbl_id)

SET @tbl_id = OBJECT_ID('tpcc..new_order')
DBCC PINTABLE (@db_id, @tbl_id)

SET @tbl_id = OBJECT_ID('tpcc..item')
DBCC PINTABLE (@db_id, @tbl_id)
GO

```

## backup.sql

```

-----
--
-- File: BACKUP.SQL
--
-- Microsoft TPC-C Benchmark Kit Ver. 4.63
--
-- Copyright Microsoft, 2005
--
-----

DECLARE @startdate DATETIME,
        @enddate DATETIME

SELECT @startdate = GETDATE()
SELECT 'Start date:',
       CONVERT(VARCHAR(30),@startdate, 21)

DUMP DATABASE tpcc TO tpccback1, tpccback2 WITH init,
stats = 1

SELECT @enddate = GETDATE()
SELECT 'End date:',
       CONVERT(VARCHAR(30),@enddate, 21)
SELECT 'Elapsed time (in seconds):',
       DATEDIFF(second, @startdate,
@enddate)
GO

```

## restore.sql

```

-----
--
-- File: RESTORE.SQL
--
-- Microsoft TPC-C Benchmark Kit Ver. 4.63
--
-- Copyright Microsoft, 2005
--

```

```

--
--
-----
DECLARE @startdate DATETIME,
        @enddate DATETIME

SELECT @startdate = GETDATE()
SELECT 'Start date:',
       CONVERT(VARCHAR(30),@startdate, 21)

LOAD DATABASE tpcc FROM tpccback1, tpccback2,
tpccback3, tpccback4 WITH stats = 1

SELECT @enddate = GETDATE()
SELECT 'End date:',
       CONVERT(VARCHAR(30),@enddate, 21)
SELECT 'Elapsed time (in seconds):',
       DATEDIFF(second, @startdate, @enddate)
GO

```

## Stored Procedures

### neworder.sql

```

-----
--
-- File: NEWORDER.SQL
--
-- Microsoft TPC-C Benchmark Kit Ver. 4.63
--
-- Copyright Microsoft, 2005
--
-- Creates neworder stored procedure
--
-- Interface Level: 4.20.000
--
-----

SET QUOTED_IDENTIFIER OFF
GO

SET ANSI_NULLS ON
GO

USE tpcc
GO

IF EXISTS ( SELECT name FROM sysobjects WHERE name =
'tpcc_neworder' )
DROP PROCEDURE tpcc_neworder
GO

CREATE PROCEDURE tpcc_neworder

```

```

        @w_id int,
        @d_id tinyint,
        @c_id int,
        @o_ol_cnt tinyint,
        @o_all_local tinyint,
        @i_id1 int = 0, @s_w_id1 int
= 0, @ol_qty1 smallint = 0,
        @i_id2 int = 0, @s_w_id2 int
= 0, @ol_qty2 smallint = 0,
        @i_id3 int = 0, @s_w_id3 int
= 0, @ol_qty3 smallint = 0,
        @i_id4 int = 0, @s_w_id4 int
= 0, @ol_qty4 smallint = 0,
        @i_id5 int = 0, @s_w_id5 int
= 0, @ol_qty5 smallint = 0,
        @i_id6 int = 0, @s_w_id6 int
= 0, @ol_qty6 smallint = 0,
        @i_id7 int = 0, @s_w_id7 int
= 0, @ol_qty7 smallint = 0,
        @i_id8 int = 0, @s_w_id8 int
= 0, @ol_qty8 smallint = 0,
        @i_id9 int = 0, @s_w_id9 int
= 0, @ol_qty9 smallint = 0,
        @i_id10 int = 0, @s_w_id10 int
= 0, @ol_qty10 smallint = 0,
        @i_id11 int = 0, @s_w_id11 int
= 0, @ol_qty11 smallint = 0,
        @i_id12 int = 0, @s_w_id12 int
= 0, @ol_qty12 smallint = 0,
        @i_id13 int = 0, @s_w_id13 int
= 0, @ol_qty13 smallint = 0,
        @i_id14 int = 0, @s_w_id14 int
= 0, @ol_qty14 smallint = 0,
        @i_id15 int = 0, @s_w_id15 int
= 0, @ol_qty15 smallint = 0

```

```

AS
DECLARE @w_tax smallmoney,
        @d_tax smallmoney,
        @c_last char(16),
        @c_credit char(2),
        @c_discount smallmoney,
        @i_price smallmoney,
        @i_name char(24),
        @i_data char(50),
        @o_entry_d datetime,
        @remote_flag int,
        @s_quantity smallint,
        @s_data char(50),
        @s_dist char(24),
        @li_no int,
        @o_id int,
        @commit_flag tinyint,
        @li_id int,
        @li_s_w_id int,
        @li_qty smallint,
        @ol_number int,
        @c_id_local int

```

```

BEGIN

BEGIN TRANSACTION n

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

```

```

UPDATE district
SET   @d_tax      = d_tax,
      @o_id       = d_next_o_id,
      d_next_o_id = d_next_o_id + 1,
      @o_entry_d  = GETDATE(),
      @li_no      = 0,
      @commit_flag = 1
WHERE d_w_id AND
      d_id       = @d_id

-----
-- process orderlines
-----
WHILE (@li_no < @o_o1_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 @o1_qty1
    WHEN 2 THEN @o1_qty2
    WHEN 3 THEN @o1_qty3
    WHEN 4 THEN @o1_qty4
    WHEN 5 THEN @o1_qty5
    WHEN 6 THEN @o1_qty6
    WHEN 7 THEN @o1_qty7
    WHEN 8 THEN @o1_qty8
    WHEN 9 THEN @o1_qty9
    WHEN 10 THEN @o1_qty10
    WHEN 11 THEN @o1_qty11
    WHEN 12 THEN @o1_qty12
    WHEN 13 THEN @o1_qty13
    WHEN 14 THEN @o1_qty14
    WHEN 15 THEN @o1_qty15
  END,

```

```

-----
-- update stock values
-----
UPDATE stock
SET   s_ytd      = s_ytd + @li_qty,
      @s_quantity = s_quantity -
s_quantity - @li_qty +
CASE WHEN
(s_quantity - @li_qty < 10) THEN 91 ELSE 0 END,
s_order_cnt = s_order_cnt + 1,
s_remote_cnt = s_remote_cnt +
CASE WHEN
(@li_s_w_id = @w_id) THEN 0 ELSE 1 END,
@s_data      = s_data,
@s_dist      = CASE @d_id
  WHEN 1 THEN
s_dist_01
  WHEN 2 THEN
s_dist_02
  WHEN 3 THEN
s_dist_03
  WHEN 4 THEN
s_dist_04
  WHEN 5 THEN
s_dist_05
  WHEN 6 THEN
s_dist_06
  WHEN 7 THEN
s_dist_07
  WHEN 8 THEN
s_dist_08
  WHEN 9 THEN
s_dist_09
  WHEN 10 THEN
s_dist_10
END
WHERE s_i_id = @li_id AND
      s_w_id = @li_s_w_id

-----
-- if there actually is a stock (and item) with these
ids, go to work
-----
IF (@@rowcount > 0)
BEGIN
  -- insert order_line data (using data from item and
stock)
  -----
  INSERT INTO order_line VALUES( @o_id,
    @d_id,
    @w_id,
    @li_no,
    @li_id,
    'dec 31,
1899',

```

```

    @li_qty,
    @li_s_w_id,
    @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

-----
-- get customer last name, discount, and credit rating
-----
  SELECT @c_last = c_last,
         @c_discount = c_discount,
         @c_credit = c_credit,
         @c_id_local = c_id
  FROM customer WITH (repeatableread)
  WHERE c_id = @c_id AND
        c_w_id = @w_id AND
        c_d_id = @d_id

-----
-- insert fresh row into orders table
-----
  INSERT INTO orders VALUES ( @o_id,
    @d_id,
    @w_id,
    @c_id_local,
    0,
    @o_o1_cnt,
    @o_all_local,
    @o_entry_d)

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

-----
-- select warehouse tax
-----
  SELECT @w_tax = w_tax
  FROM warehouse WITH (repeatableread)
  WHERE w_id = @w_id

```

```

IF (@commit_flag = 1)
    COMMIT TRANSACTION n
ELSE
    -----
    -- all that work for nuthin!!!
    -----
    ROLLBACK TRANSACTION n
    -----
    -- return order data to client
    -----
    SELECT @w_tax,
           @d_tax,
           @o_id,
           @c_last,
           @c_discount,
           @c_credit,
           @o_entry_d,
           @commit_flag
END
GO

SET QUOTED_IDENTIFIER OFF
GO

SET ANSI_NULLS ON
GO

```

## payment.sql

```

-----
--
-- File:      PAYMENT.SQL
--
-- Microsoft TPC-C Benchmark Kit Ver. 4.63
--
-- Copyright Microsoft, 2005
--
--
-- Creates payment stored procedure
--
--
-- Interface Level:      4.20.000
--
-----
SET QUOTED_IDENTIFIER OFF
GO

SET ANSI_NULLS ON
GO

USE tpcc
GO

IF EXISTS ( SELECT name FROM sysobjects WHERE name =
            'tpcc_payment' )
    DROP PROCEDURE tpcc_payment

```

```

GO

CREATE PROCEDURE tpcc_payment
    @w_id          int,
    @c_w_id       int,
    @h_amount     smallmoney,
    @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 money,
        @c_balance  money,
        @c_discount smallmoney,
        @c_data     char(42),
        @datetime   datetime,
        @w_ytd     money,
        @d_ytd     money,
        @cnt       smallint,
        @val       smallint,
        @screen_data char(200),
        @d_id_local tinyint,
        @w_id_local int,
        @c_id_local int

SELECT @screen_data = ""

BEGIN TRANSACTION p
-- get payment date
SELECT @datetime = GETDATE()

IF (@c_id = 0)
BEGIN
-- get customer id and info using last name
SELECT @cnt = COUNT(*)
FROM customer WITH (repeatableread)
WHERE c_last = @c_last AND
      c_w_id = @c_w_id AND
      c_d_id = @c_d_id

SELECT @val = (@cnt + 1) / 2

SET rowcount @val

SELECT @c_id = c_id
FROM customer WITH (repeatableread)

```

```

WHERE c_last = @c_last AND
      c_w_id = @c_w_id AND
      c_d_id = @c_d_id

ORDER BY c_last, c_first

SET rowcount 0

END

-- get customer info and update balances

UPDATE customer
SET @c_balance = c_balance = c_balance -
    @h_amount,
    c_payment_cnt = c_payment_cnt + 1,
    c_ytd_payment = c_ytd_payment +
    @h_amount,
    @c_first = c_first,
    @c_middle = c_middle,
    @c_last = c_last,
    @c_street_1 = c_street_1,
    @c_street_2 = c_street_2,
    @c_city = c_city,
    @c_state = c_state,
    @c_zip = c_zip,
    @c_phone = c_phone,
    @c_credit = c_credit,
    @c_credit_lim = c_credit_lim,
    @c_discount = c_discount,
    @c_since = c_since,
    @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)

-- update customer info
UPDATE customer
SET c_data = @c_data +
    substring(c_data, 1, 458),
    @screen_data = @c_data +
    substring(c_data, 1, 158)
WHERE c_id = @c_id AND
      c_w_id = @c_w_id AND
      c_d_id = @c_d_id

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 TRANSACTION p

-- return data to client
SELECT  @c_id,
        @c_last,
        @datetime,
        @w_street_1,
        @w_street_2,
        @w_city,
        @w_state,
        @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

SET QUOTED_IDENTIFIER OFF
GO

SET ANSI_NULLS ON
GO

```

## ordstat.sql

```

-----
--
-- File:  ORDSTAT.SQL
--

```

```

-- Microsoft TPC-C Benchmark Kit Ver. 4.63
-- Copyright Microsoft, 2005

-- Creates order status stored procedure
--
-- Interface Level: 4.20.000
-----
SET QUOTED_IDENTIFIER OFF
GO

SET ANSI_NULLS ON
GO

USE tpcc
GO

IF EXISTS ( SELECT name FROM sysobjects WHERE name =
'tpcc_orderstatus' )
DROP PROCEDURE tpcc_orderstatus
GO

CREATE PROCEDURE tpcc_orderstatus
    @w_id int,
    @d_id tinyint,

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

AS
DECLARE @c_balance money,
        @c_first char(16),
        @c_middle char(2),
        @o_id int,
        @o_entry_d datetime,
        @o_carrier_id smallint,
        @cnt smallint

BEGIN TRANSACTION o
IF (@c_id = 0)
BEGIN
-- get customer id and info using last name
-----
SELECT @cnt = (count(*)+1)/2
FROM customer WITH (repeatableread)
WHERE c_last = @c_last AND
c_w_id = @w_id AND
c_d_id = @d_id

SET rowcount @cnt

SELECT @c_id = c_id,
       @c_balance = c_balance,
       @c_first = c_first,
       @c_last = c_last,
       @c_middle = c_middle
FROM customer WITH (repeatableread)
WHERE c_last = @c_last AND
c_w_id = @w_id AND
c_d_id = @d_id
ORDER BY c_w_id, c_d_id, c_last, c_first

```

```

SET rowcount 0
END
ELSE
BEGIN
-----
-- get customer info if by id
-----
SELECT @c_balance = c_balance,
       @c_first = c_first,
       @c_middle = c_middle,
       @c_last = c_last
FROM customer WITH (repeatableread)
WHERE c_id = @c_id AND
c_d_id = @d_id AND
c_w_id = @w_id

SELECT @cnt = @@rowcount
END

-----
-- if no such customer
-----
IF (@cnt = 0)
BEGIN
RAISERROR('Customer not found',18,1)
GOTO custnotfound
END

-----
-- get order info
-----
SELECT @o_id = o_id,
       @o_entry_d = o_entry_d,
       @o_carrier_id = o_carrier_id
FROM orders WITH (serializable)
WHERE o_c_id = @c_id AND
o_d_id = @d_id AND
o_w_id = @w_id
ORDER BY o_id 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 WITH (repeatableread)
WHERE ol_o_id = @o_id AND
ol_d_id = @d_id AND
ol_w_id = @w_id

custnotfound:

COMMIT TRANSACTION 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

```

## delivery.sql

```
-----
--
-- File: DELIVERY.SQL
-- Microsoft TPC-C Benchmark Kit Ver. 4.63
-- Copyright Microsoft, 2005
--
-- Creates delivery stored procedure
--
-- Interface Level: 4.20.000
--
-----
SET QUOTED_IDENTIFIER OFF
GO
SET ANSI_NULLS ON
GO
USE tpcc
GO
IF EXISTS ( SELECT name FROM sysobjects WHERE name =
'tpcc_delivery' )
DROP PROCEDURE tpcc_delivery
GO
CREATE PROC tpcc_delivery
    @w_id int,
    @o_carrier_id smallint
AS
DECLARE @o_id int,
        @o_id2 int,
        @o_id3 int,
        @total money,
        @o_id1 int,
        @o_id2 int,
        @o_id3 int,
        @o_id4 int,
        @o_id5 int,
        @o_id6 int,
        @o_id7 int,
        @o_id8 int,
        @o_id9 int,
        @o_id10 int
SELECT @o_id = 0
BEGIN TRANSACTION d
WHILE (@d_id < 10)
BEGIN
    SELECT @o_id = @d_id + 1,
           @total = 0,
           @o_id1 = 0,
           @o_id2 = 0,
           @o_id3 = 0,
           @o_id4 = 0,
           @o_id5 = 0,
           @o_id6 = 0,
           @o_id7 = 0,
           @o_id8 = 0,
           @o_id9 = 0,
           @o_id10 = 0
    SELECT TOP 1

```

```

    FROM sysobjects WHERE name = 'tpcc_delivery'
    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,
            o_c_id = @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_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 +
            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 @o_id1 = CASE @d_id WHEN 1 THEN @o_id
                       END,
               @o_id2 = CASE @d_id WHEN 2 THEN @o_id
                       END,
               @o_id3 = CASE @d_id WHEN 3 THEN @o_id
                       END,
               @o_id4 = CASE @d_id WHEN 4 THEN @o_id
                       END,
               @o_id5 = CASE @d_id WHEN 5 THEN @o_id
                       END,
               @o_id6 = CASE @d_id WHEN 6 THEN @o_id
                       END,
               @o_id7 = CASE @d_id WHEN 7 THEN @o_id
                       END,
               @o_id8 = CASE @d_id WHEN 8 THEN @o_id
                       END,
               @o_id9 = CASE @d_id WHEN 9 THEN @o_id
                       END,
               @o_id10 = CASE @d_id WHEN 10 THEN @o_id
                       END
        COMMIT TRANSACTION d
        -- return delivery data to client
        SELECT @o_id1,

```

```

        @o_id2,
        @o_id3,
        @o_id4,
        @o_id5,
        @o_id6,
        @o_id7,
        @o_id8,
        @o_id9,
        @o_id10
GO
SET QUOTED_IDENTIFIER OFF
GO
SET ANSI_NULLS ON
GO
```

## stocklev.sql

```
-----
--
-- File: STOCKLEV.SQL
-- Microsoft TPC-C Benchmark Kit Ver. 4.63
-- Copyright Microsoft, 2005
--
-- Creates stock level stored procedure
--
-- Interface Level: 4.20.000
--
-----
SET QUOTED_IDENTIFIER OFF
GO
SET ANSI_NULLS ON
GO
USE tpcc
GO
IF EXISTS ( SELECT name FROM sysobjects WHERE name =
'tpcc_stocklev' )
DROP PROCEDURE tpcc_stocklev
GO
CREATE PROCEDURE tpcc_stocklev
    @w_id int,
    @d_id tinyint,
    @threshold smallint
AS
DECLARE @o_id_low int,
        @o_id_high int
SELECT @o_id_low = (d_next_o_id - 20),
       @o_id_high = (d_next_o_id - 1)
FROM district
```

```

WHERE d_w_id = @w_id AND
      d_id = @d_id

SELECT COUNT(DISTINCT(s_i_id))
FROM stock,
      order_line
WHERE ol_w_id = @w_id AND
      ol_d_id = @d_id and
      ol_o_id BETWEEN @o_id_low AND
                    @o_id_high AND
      s_w_id = ol_w_id AND
      s_i_id = ol_i_id AND
      s_quantity < @threshold
OPTION(OORDER GROUP)
GO

SET QUOTED_IDENTIFIER OFF
GO

SET ANSI_NULLS ON
GO

```

## Loader Source Code

### tpcc.h

```

// File: TPCC.H Microsoft TPC-C
// Kit Ver. 4.51 Copyright
// Microsoft, 1996, 1997, 1998, 1999, 2000, 2001, 2002,
// 2003, 2005 Purpose: Header file for TPC-C database
// loader

// Build number of TPC Benchmark Kit
#define TPCKIT_VER "4.51"

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

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

// General constants
#define MILLI 1000
#define FALSE 0
#define TRUE 1

```

```

#define UNDEF -1
#define MINPRINTASCII 32
#define MAXPRINTASCII 126

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

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

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

```

```

long case_sensitivity;
long starting_warehouse;
long build_index;
long index_order;
long scale_down;
char *index_script_path;
} TPCCDR_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 MakeAlphaStringPadded();
int MakeOriginalAlphaString();

```

```

int    MakeNumberString();
int    MakeZipNumberString();
void   InitString();
void   InitAddress();
void   PaddString();

```

## tpccldr.c

```

=====
// File:          TPCCCLR.C      Microsoft TPC-C
// Kit Ver. 4.51
// Copyright
// Microsoft, 1996, 1997, 1998, 1999, 2000, 2001, 2002, 2003
// Purpose: Source file for TPC-C database
// loader
=====
// Includes
#include "tpcc.h"
#include "search.h"

// Defines
#define MAXITEMS          100000
#define MAXITEMS_SCALE_DOWN 100
#define CUSTOMERS_PER_DISTRICT 3000
#define CUSTOMERS_SCALE_DOWN 30
#define DISTRICT_PER_WAREHOUSE 10
#define ORDERS_PER_DISTRICT 3000
#define ORDERS_SCALE_DOWN 30
#define MAX_CUSTOMER_THREADS 2
#define MAX_ORDER_THREADS 3
#define MAX_MAIN_THREADS 4
#define MAX_SQL_ERRORS 10

// Functions declarations
void HandleErrorDBC (SQLHDBC hdbc1);
long NURand();
void LoadItem();
void LoadWarehouse();
void Stock();
void District();
void LoadCustomer();
void CustomerBufInit();
void CustomerBufLoad();
void CustomerBufTable();
void LoadCustomerTable();
void LoadHistoryTable();
void LoadOrders();
void OrdersBufInit();
void OrdersBufLoad();
void LoadOrdersTable();
void LoadNewOrderTable();
void LoadOrderLineTable();
void GetPermutation();
void CheckForCommit();
void CheckForCommit_Big();
void OpenConnections();
void BuildIndex();
void FormatDate ();

// Shared memory structures
typedef struct
{

```

```

long    double    o1_i_id;          ol;
long    long      o1_supply_w_id;
short   short     o1_quantity;
double  double    o1_amount;
char    char      o1_dist_info[DIST_INFO_LEN+1];
char    char      o1_delivery_d[OL_DELIVERY_D_LEN+1];
} ORDER_LINE_STRUCT;

typedef struct
{
    long    long      o_id;
    short   short     o_d_id;
    long    long      o_w_id;
    long    long      o_c_id;
    short   short     o_carrier_id;
    short   short     o_ol_cnt;
    short   short     o_all_local;
    ORDER_LINE_STRUCT o_ol[15];
} ORDERS_STRUCT;

typedef struct
{
    long    long      c_id;
    short   short     c_d_id;
    long    long      c_w_id;
    char    char      c_first[FIRST_NAME_LEN+1];
    char    char      c_middle[MIDDLE_NAME_LEN+1];
    char    char      c_last[LAST_NAME_LEN+1];
    char    char      c_street_1[ADDRESS_LEN+1];
    char    char      c_street_2[ADDRESS_LEN+1];
    char    char      c_city[ADDRESS_LEN+1];
    char    char      c_state[STATE_LEN+1];
    char    char      c_zip[ZIP_LEN+1];
    char    char      c_phone[PHONE_LEN+1];
    char    char      c_credit[CREDIT_LEN+1];
    double  double    c_credit_lim;
    double  double    c_discount;
    char    char      c_balance[6];
    double  double    c_ytd_payment;
    short   short     c_payment_cnt;
    short   short     c_delivery_cnt;
    char    char      c_data[C_DATA_LEN+1];
    double  double    h_amount;
    char    char      h_data[H_DATA_LEN+1];
} CUSTOMER_STRUCT;

typedef struct
{

```

```

char    char      c_last[LAST_NAME_LEN+1];
char    char      c_first[FIRST_NAME_LEN+1];
long    long      c_id;
} CUSTOMER_SORT_STRUCT;

typedef struct
{
    long    long      time_start;
} LOADER_TIME_STRUCT;

// Global variables
char    char      szLastError[300];

HENV    henv;
HDBC    v_hdbc; // for SQL Server version
verification
HDBC    i_hdbc1; // for ITEM table
HDBC    w_hdbc1; // for WAREHOUSE, DISTRICT, STOCK
HDBC    c_hdbc1; // for CUSTOMER
HDBC    c_hdbc2; // for HISTORY
HDBC    o_hdbc1; // for ORDERS
HDBC    o_hdbc2; // for NEW-ORDER
HDBC    o_hdbc3; // for ORDER-LINE

HSTMT   v_hstmt; // for SQL Server version verification
HSTMT   i_hstmt1;
HSTMT   w_hstmt1;
HSTMT   c_hstmt1, c_hstmt2;
HSTMT   o_hstmt1, o_hstmt2, o_hstmt3;

int      total_db_errors;

ORDERS_STRUCT orders_buf[ORDERS_PER_DISTRICT];
CUSTOMER_STRUCT customer_buf[CUSTOMERS_PER_DISTRICT];

long    long      orders_rows_loaded;
double  double    new_order_rows_loaded;
double  double    order_line_rows_loaded;
long    long      history_rows_loaded;
long    long      customer_rows_loaded;
double  double    stock_rows_loaded;
long    long      district_rows_loaded;
long    long      item_rows_loaded;
long    long      warehouse_rows_loaded;
long    long      main_time_start;
long    long      main_time_end;
long    long      max_items;
long    long      customers_per_district;
long    long      orders_per_district;
long    long      first_new_order;
long    long      last_new_order;

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

    // process command line arguments
    apr = &args;
    GetArgsLoader(argc, argv, apr);

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

    if (aptr->index_order == 0)
        printf("Clustered indexes will be");
    else
        printf("Clustered indexes will be");

    // set database scale values
    if (aptr->scale_down == 1)
    {
        printf("*** Scaled Down Database");
        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);
    if (aptr->num_warehouses)
    {
        if (aptr->scale_down == 1)
            sprintf(buffer, "SCALED DOWN");
        DATABASE.\n");
        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,
NULL,
0,
&dwThreadID[0]);

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

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

                hThread[1] = CreateThread(NULL,
0,

```

```

(LPTHREAD_START_ROUTINE) Loadwarehouse,
NULL,
0,
&dwThreadID[1]);

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

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

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

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

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

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

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

        // wait for threads to finish..
        for (i=0; i<MAX_MAIN_THREADS; i++)

```

```

    {
        if (hThread[i] != NULL)
        {
            WaitForSingleObject(
hThread[i], INFINITE );
            CloseHandle(hThread[i]);
            hThread[i] = NULL;
        }
    }

    main_time_end = (TimeNow() / MILLI);
    sprintf(buffer, "\nTPC-C load completed successfully
in %ld minutes.\n",
    (main_time_end -
main_time_start)/60);
    printf("%s",buffer);
    fprintf(fLoader, "%s", buffer);
    fclose(fLoader);
    SQLFreeEnv(henv);

    exit(0);

    return 0;
}

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

    // Seed with unique number
    seed(11);

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

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

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

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

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

```

```

    if (rc != SUCCEEDED)
        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 != SUCCEEDED)
            HandleErrorDBC(i_hdbc1);
    }

    i = 0;
    rc = bcp_bind(i_hdbc1, (BYTE *) &i_id, 0,
SQL_VARLEN_DATA, NULL, 0, SQLINT4, ++i);
    if (rc != SUCCEEDED)
        HandleErrorDBC(i_hdbc1);
    rc = bcp_bind(i_hdbc1, (BYTE *) i_name, 0,
I_NAME_LEN, NULL, 0, 0, ++i);
    if (rc != SUCCEEDED)
        HandleErrorDBC(i_hdbc1);
    rc = bcp_bind(i_hdbc1, (BYTE *) &i_price, 0,
SQL_VARLEN_DATA, NULL, 0, SQLFLT8, ++i);
    if (rc != SUCCEEDED)
        HandleErrorDBC(i_hdbc1);
    rc = bcp_bind(i_hdbc1, (BYTE *) i_data, 0,
SQL_VARLEN_DATA, NULL, 1, 0, ++i);
    if (rc != SUCCEEDED)
        HandleErrorDBC(i_hdbc1);
    rc = bcp_bind(i_hdbc1, (BYTE *) &i_im_id, 0,
SQL_VARLEN_DATA, NULL, 0, SQLINT4, ++i);
    if (rc != SUCCEEDED)
        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);
        MakeAlphaStringPadded(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 != SUCCEEDED)
            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("idxitmc1");
}

//=====
// Function : LoadWarehouse
// Loads WAREHOUSE table and loads Stock and District
as warehouses are created
//=====
void LoadWarehouse()
{
    int i;
    long w_id;
    char w_name[W_NAME_LEN+1];
    char w_street_1[ADDRESS_LEN+1];
    char w_street_2[ADDRESS_LEN+1];
    char w_city[ADDRESS_LEN+1];
    char w_state[STATE_LEN+1];
    char w_zip[ZIP_LEN+1];
    double w_tax;
    double w_ytd;
    char name[20];
    long time_start;
    RETCODE rc;
    DBINT rcint;
    char bcphint[128];
    char err_log_path[256];

    // Seed with unique number
    seed(2);

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

    // if build index before load...
    if ((aptr->build_index == 1) && (aptr-
>index_order == 1))
        BuildIndex("idxwarc1");

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

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

    strcpy(err_log_path, aptr->log_path);
    strcat(err_log_path, "whouse.err");
    rc = bcp_init(w_hdbc1, name, NULL,
err_log_path, DB_IN);

    if (rc != SUCCEEDED)
        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 != SUCCEEDED)

```

```

        HandleErrorDBC(w_hdbc1);
    }
    i = 0;
    rc = bcp_bind(w_hdbc1, (BYTE *) &w_id, 0,
SQL_VARLEN_DATA, NULL, 0, SQLINT4, ++i);
    if (rc != SUCCEEDED)
        HandleErrorDBC(w_hdbc1);
    rc = bcp_bind(w_hdbc1, (BYTE *) &w_ytd, 0,
SQL_VARLEN_DATA, NULL, 0, SQLFLT8, ++i);
    if (rc != SUCCEEDED)
        HandleErrorDBC(w_hdbc1);
    rc = bcp_bind(w_hdbc1, (BYTE *) &w_tax, 0,
SQL_VARLEN_DATA, NULL, 0, SQLFLT8, ++i);
    if (rc != SUCCEEDED)
        HandleErrorDBC(w_hdbc1);
    rc = bcp_bind(w_hdbc1, (BYTE *) w_name, 0,
W_NAME_LEN, NULL, 0, 0, ++i);
    if (rc != SUCCEEDED)
        HandleErrorDBC(w_hdbc1);
    rc = bcp_bind(w_hdbc1, (BYTE *) w_street_1,
0, ADDRESS_LEN, NULL, 0, 0, ++i);
    if (rc != SUCCEEDED)
        HandleErrorDBC(w_hdbc1);
    rc = bcp_bind(w_hdbc1, (BYTE *) w_street_2,
0, ADDRESS_LEN, NULL, 0, 0, ++i);
    if (rc != SUCCEEDED)
        HandleErrorDBC(w_hdbc1);
    rc = bcp_bind(w_hdbc1, (BYTE *) w_city, 0,
ADDRESS_LEN, NULL, 0, 0, ++i);
    if (rc != SUCCEEDED)
        HandleErrorDBC(w_hdbc1);
    rc = bcp_bind(w_hdbc1, (BYTE *) w_state, 0,
STATE_LEN, NULL, 0, 0, ++i);
    if (rc != SUCCEEDED)
        HandleErrorDBC(w_hdbc1);
    rc = bcp_bind(w_hdbc1, (BYTE *) w_zip, 0,
ZIP_LEN, NULL, 0, 0, ++i);
    if (rc != SUCCEEDED)
        HandleErrorDBC(w_hdbc1);

    time_start = (TimeNow() / MILLI);
    warehouse_rows_loaded = 0;

    for (w_id = (long)aptr->starting_warehouse;
w_id <= aptr->num_warehouses; w_id++)
    {
        MakeAlphaStringPadded(6,10,
W_NAME_LEN, w_name);
        MakeAddress(w_street_1, w_street_2,
w_city, w_state, w_zip);

        w_tax = ((float)
RandomNumber(0L,2000L))/10000.00;
        w_ytd = 300000.00;
        rc = bcp_sendrow(w_hdbc1);
        if (rc != SUCCEEDED)
            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("idxwarc1");

    stock_rows_loaded = 0;
    district_rows_loaded = 0;

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

    // Seed with unique number
    seed(4);

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

    // build index before load
    if ((aptr->build_index == 1) && (aptr-
>index_order == 1))
        BuildIndex("idxdisc1");

    InitString(d_name, D_NAME_LEN+1);
    InitAddress(d_street_1, d_street_2, d_city,
d_state, d_zip);
    sprintf(name, "%.5s", aptr->database,
"district");

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

    i = 0;
    rc = bcp_bind(w_hdbc1, (BYTE *) &d_id, 0,
SQL_VARLEN_DATA, NULL, 0, SQLINT2, ++i);
    if (rc != SUCCEEDED)
        HandleErrorDBC(w_hdbc1);
    rc = bcp_bind(w_hdbc1, (BYTE *) &d_w_id, 0,
SQL_VARLEN_DATA, NULL, 0, SQLINT4, ++i);
    if (rc != SUCCEEDED)
        HandleErrorDBC(w_hdbc1);
    rc = bcp_bind(w_hdbc1, (BYTE *) &d_ytd, 0,
SQL_VARLEN_DATA, NULL, 0, SQLFLT8, ++i);
    if (rc != SUCCEEDED)
        HandleErrorDBC(w_hdbc1);
    rc = bcp_bind(w_hdbc1, (BYTE *) &d_next_o_id,
0, SQL_VARLEN_DATA, NULL, 0, SQLINT4, ++i);
    if (rc != SUCCEEDED)
        HandleErrorDBC(w_hdbc1);
    rc = bcp_bind(w_hdbc1, (BYTE *) &d_tax, 0,
SQL_VARLEN_DATA, NULL, 0, SQLFLT8, ++i);
    if (rc != SUCCEEDED)
        HandleErrorDBC(w_hdbc1);
    rc = bcp_bind(w_hdbc1, (BYTE *) &d_name, 0,
D_NAME_LEN, NULL, 0, 0, ++i);
    if (rc != SUCCEEDED)
        HandleErrorDBC(w_hdbc1);
    rc = bcp_bind(w_hdbc1, (BYTE *) d_street_1,
0, ADDRESS_LEN, NULL, 0, 0, ++i);
    if (rc != SUCCEEDED)
        HandleErrorDBC(w_hdbc1);
    rc = bcp_bind(w_hdbc1, (BYTE *) d_street_2,
0, ADDRESS_LEN, NULL, 0, 0, ++i);
    if (rc != SUCCEEDED)
        HandleErrorDBC(w_hdbc1);
    rc = bcp_bind(w_hdbc1, (BYTE *) d_city, 0,
ADDRESS_LEN, NULL, 0, 0, ++i);
    if (rc != SUCCEEDED)
        HandleErrorDBC(w_hdbc1);
    rc = bcp_bind(w_hdbc1, (BYTE *) d_state, 0,
STATE_LEN, NULL, 0, 0, ++i);
    if (rc != SUCCEEDED)
        HandleErrorDBC(w_hdbc1);
    rc = bcp_bind(w_hdbc1, (BYTE *) d_zip, 0,
ZIP_LEN, NULL, 0, 0, ++i);
    if (rc != SUCCEEDED)
        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++)
        {
            MakeAlphaStringPadded(6,10,D_NAME_LEN,
d_name);

```

```

        MakeAddress(d_street1,
d_street2, d_city, d_state, d_zip);
        d_tax = ((float)
RandomNumber(0L,2000L))/10000.00;
        rc =
bcp_sendrow(w_hdbc1);
        if (rc != SUCCEEDED)
            HandleErrorDBC(w_hdbc1);
        district_rows_loaded++;
        CheckForCommit(w_hdbc1,
&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("idxdisc1");
}
return;
}
//=====
//
// Function : Stock
//
//=====
void Stock()
{
    int i;
    long s_i_id;
    long s_w_id;
    short s_quantity;
    char s_dist_01[S_DIST_LEN+1];
    char s_dist_02[S_DIST_LEN+1];
    char s_dist_03[S_DIST_LEN+1];
    char s_dist_04[S_DIST_LEN+1];
    char s_dist_05[S_DIST_LEN+1];
    char s_dist_06[S_DIST_LEN+1];
    char s_dist_07[S_DIST_LEN+1];
    char s_dist_08[S_DIST_LEN+1];
    char s_dist_09[S_DIST_LEN+1];
    char s_dist_10[S_DIST_LEN+1];
    long s_ytd;
    short s_order_cnt;
    short s_remote_cnt;
    char s_data[S_DATA_LEN+1];
    len;
    char name[20];
    long time_start;
    RETCODE rc;
    DBINT rcint;
    char bcphint[128];
    char err_log_path[256];

    // Seed with unique number
    seed(3);

```

```

        // if build index before load...
        if ((aptr->build_index == 1) && (aptr-
>index_order == 1))
            BuildIndex("idxstck1");
        "stock");
        sprintf(name, "%s.%s", aptr->database,
        strcpy(err_log_path, aptr->log_path);
        strcat(err_log_path, "stock.err");
        rc = bcp_init(w_hdbc1, name, NULL,
err_log_path, DB_IN);
        if (rc != SUCCEEDED)
            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 != SUCCEEDED)
                HandleErrorDBC(w_hdbc1);
        }
        i = 0;
        rc = bcp_bind(w_hdbc1, (BYTE *) &s_i_id, 0,
SQL_VARLEN_DATA, NULL, 0, SQLINT4, ++i);
        if (rc != SUCCEEDED)
            HandleErrorDBC(w_hdbc1);
        rc = bcp_bind(w_hdbc1, (BYTE *) &s_w_id, 0,
SQL_VARLEN_DATA, NULL, 0, SQLINT4, ++i);
        if (rc != SUCCEEDED)
            HandleErrorDBC(w_hdbc1);
        rc = bcp_bind(w_hdbc1, (BYTE *) &s_quantity,
0, SQL_VARLEN_DATA, NULL, 0, SQLINT2, ++i);
        if (rc != SUCCEEDED)
            HandleErrorDBC(w_hdbc1);
        rc = bcp_bind(w_hdbc1, (BYTE *) &s_ytd, 0,
SQL_VARLEN_DATA, NULL, 0, SQLINT4, ++i);
        if (rc != SUCCEEDED)
            HandleErrorDBC(w_hdbc1);
        rc = bcp_bind(w_hdbc1, (BYTE *) &s_order_cnt,
0, SQL_VARLEN_DATA, NULL, 0, SQLINT2, ++i);
        if (rc != SUCCEEDED)
            HandleErrorDBC(w_hdbc1);
        rc = bcp_bind(w_hdbc1, (BYTE *) &s_data, 0,
SQL_VARLEN_DATA, "", 1, 0, ++i);
        if (rc != SUCCEEDED)
            HandleErrorDBC(w_hdbc1);
        rc = bcp_bind(w_hdbc1, (BYTE *) s_dist_01, 0,
S_DIST_LEN, NULL, 0, 0, ++i);
        if (rc != SUCCEEDED)
            HandleErrorDBC(w_hdbc1);
        rc = bcp_bind(w_hdbc1, (BYTE *) s_dist_02, 0,
S_DIST_LEN, NULL, 0, 0, ++i);
        if (rc != SUCCEEDED)
            HandleErrorDBC(w_hdbc1);
        rc = bcp_bind(w_hdbc1, (BYTE *) s_dist_03, 0,
S_DIST_LEN, NULL, 0, 0, ++i);
        if (rc != SUCCEEDED)
            HandleErrorDBC(w_hdbc1);
        rc = bcp_bind(w_hdbc1, (BYTE *) s_dist_04, 0,
S_DIST_LEN, NULL, 0, 0, ++i);

```

```

        if (rc != SUCCEEDED)
            HandleErrorDBC(w_hdbc1);
        rc = bcp_bind(w_hdbc1, (BYTE *) s_dist_05, 0,
S_DIST_LEN, NULL, 0, 0, ++i);
        if (rc != SUCCEEDED)
            HandleErrorDBC(w_hdbc1);
        rc = bcp_bind(w_hdbc1, (BYTE *) s_dist_06, 0,
S_DIST_LEN, NULL, 0, 0, ++i);
        if (rc != SUCCEEDED)
            HandleErrorDBC(w_hdbc1);
        rc = bcp_bind(w_hdbc1, (BYTE *) s_dist_07, 0,
S_DIST_LEN, NULL, 0, 0, ++i);
        if (rc != SUCCEEDED)
            HandleErrorDBC(w_hdbc1);
        rc = bcp_bind(w_hdbc1, (BYTE *) s_dist_08, 0,
S_DIST_LEN, NULL, 0, 0, ++i);
        if (rc != SUCCEEDED)
            HandleErrorDBC(w_hdbc1);
        rc = bcp_bind(w_hdbc1, (BYTE *) s_dist_09, 0,
S_DIST_LEN, NULL, 0, 0, ++i);
        if (rc != SUCCEEDED)
            HandleErrorDBC(w_hdbc1);
        rc = bcp_bind(w_hdbc1, (BYTE *) s_dist_10, 0,
S_DIST_LEN, NULL, 0, 0, ++i);
        if (rc != SUCCEEDED)
            HandleErrorDBC(w_hdbc1);

        s_ytd = s_order_cnt = s_remote_cnt = 0;
        time_start = (TimeNow() / MILLI);
        printf("...Loading stock table\n");
        for (s_i_id=1; s_i_id <= max_items; s_i_id++)
        {
            for (s_w_id = (long)aptr-
>starting_warehouse; s_w_id <= aptr->num_warehouses;
s_w_id++)
            {
                s_quantity =
(short)RandomNumber(10L,100L);
                len =
                MakeAlphaString(24,24,S_DIST_LEN, s_dist_01);
                len =
                MakeAlphaString(24,24,S_DIST_LEN, s_dist_02);
                len =
                MakeAlphaString(24,24,S_DIST_LEN, s_dist_03);
                len =
                MakeAlphaString(24,24,S_DIST_LEN, s_dist_04);
                len =
                MakeAlphaString(24,24,S_DIST_LEN, s_dist_05);
                len =
                MakeAlphaString(24,24,S_DIST_LEN, s_dist_06);
                len =
                MakeAlphaString(24,24,S_DIST_LEN, s_dist_07);
                len =
                MakeAlphaString(24,24,S_DIST_LEN, s_dist_08);
                len =
                MakeAlphaString(24,24,S_DIST_LEN, s_dist_09);
                len =
                MakeAlphaString(24,24,S_DIST_LEN, s_dist_10);
                len =
                MakeOriginalAlphaString(26,50, S_DATA_LEN, s_data,10);
                rc =
                bcp_sendrow(w_hdbc1);
                if (rc != SUCCEEDED)
                    HandleErrorDBC(w_hdbc1);

```



```

        stock_rows_loaded++;
    CheckForCommit_Big(w_hdbc1, w_hstmt1,
stock_rows_loaded, "stock", &time_start);
    }
    rcint = bcp_done(w_hdbc1);
    if (rcint < 0)
        HandleErrorDBC(w_hdbc1);

    printf("Finished loading stock table.\n");
    SQLFreeStmt(w_hstmt1, SQL_DROP);
    SQLDisconnect(w_hdbc1);
    SQLFreeConnect(w_hdbc1);

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

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

    // Seed with unique number
    seed(5);

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

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

```

```

        // check the number of processors
        on this system // if 8 or more processors, then
        build index on History. // if less than 8 processors, do
        not build the index
        num_procs = atoi(getenv(
"NUMBER_OF_PROCESSORS" ));
        if ( num_procs >= 8 )
            BuildIndex("idxhisc1");
    }
    // Initialize bulk copy
    sprintf(name, "%.5s", aptr->database,
"customer");
    strcpy(err_log_path_cust, aptr->log_path);
    strcat(err_log_path_cust, "customer.err");
    rc = bcp_init(c_hdbc1, name, NULL,
err_log_path_cust, DB_IN);
    if (rc != SUCCEEDED)
        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 != SUCCEEDED)
            HandleErrorDBC(c_hdbc1);
    }

    sprintf(name, "%.5s", aptr->database,
"history");
    rc = bcp_init(c_hdbc2, name, NULL,
"logs\\history.err", DB_IN);
    strcpy(err_log_path_hist, aptr->log_path);
    strcat(err_log_path_hist, "history.err");
    rc = bcp_init(c_hdbc2, name, NULL,
err_log_path_hist, DB_IN);
    if (rc != SUCCEEDED)
        HandleErrorDBC(c_hdbc2);

    sprintf(bcphint, "tablock");
    rc = bcp_control(c_hdbc2, BCPHINTS, (void*)
bcphint);
    if (rc != SUCCEEDED)
        HandleErrorDBC(c_hdbc2);

    customer_rows_loaded = 0;
    history_rows_loaded = 0;

    CustomerBufInit();
    customer_time_start.time_start = (TimeNow() /
MILLI);
    history_time_start.time_start = (TimeNow() /
MILLI);

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

```

```

        // Start parallel loading
        threads here... // Start customer table
        thread // Start customer table
        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 // Start History table
        history table for: d_id = %d, w_id = %d\n", d_id,
w_id);
        hThread[1] =
        CreateThread(NULL,
0,
(LPTHREAD_START_ROUTINE) LoadHistoryTable,
&history_time_start,
0,
&dwThreadId[1]);
        if (hThread[1] == NULL)
        {
            printf("Error,
failed in creating creating thread = 1.\n");
            exit(-1);
        }
        WaitForSingleObject(
hThread[0], INFINITE );
        WaitForSingleObject(
hThread[1], INFINITE );
        if
(CloseHandle(hThread[0]) == FALSE)
        {
            printf("Error,
failed in closing customer thread handle with errno:
%d\n", GetLastError());

```

```

    }
    if
(CloseHandle(hThread[1]) == FALSE)
    {
        printf("Error,
failed in closing history thread handle with errno:
%d\n", GetLastError());
    }
}
// Flush the bulk connection
rcint = bcp_done(c_hdbc1);
if (rcint < 0)
    HandleErrorDBC(c_hdbc1);

rcint = bcp_done(c_hdbc2);
if (rcint < 0)
    HandleErrorDBC(c_hdbc2);

printf("Finished loading customer table.\n");
// if build index after load...
if ((aptr->build_index == 1) && (aptr-
>index_order == 0))
{
    BuildIndex("idxcuscl");
    // check the number of processors
on this system // if 8 or more processors, then
build index on history. // if less than 8 processors, do
not build the index
    num_procs = atoi(getenv(
"NUMBER_OF_PROCESSORS" ));
    if (num_procs >= 8)
        BuildIndex("idxhisc1");
}
// build non-clustered index
if (aptr->build_index == 1)
    BuildIndex("idxcusnc");

// Output the NURAND used for the loader into
C_FIRST for C_ID = 1,
// C_W_ID = 1, and C_D_ID = 1
sprintf(cmd, "osql -S%s -U%s -P%s -d%s -e -
Q\\update customer set c_first = 'C_LOAD = %d' where
c_id = 1 and c_w_id = 1 and c_d_id = 1\\ " >
%snurand_load.log",
aptr->server,
aptr->user,
aptr->password,
aptr->database,

    LOADER_NURAND_C,
aptr-
>log_path);

system(cmd);

SQLFreeStmt(c_hstmt1, SQL_DROP);
SQLDisconnect(c_hdbc1);
SQLFreeConnect(c_hdbc1);

SQLFreeStmt(c_hstmt2, SQL_DROP);
SQLDisconnect(c_hdbc2);
SQLFreeConnect(c_hdbc2);

```

```

    return;
}
//=====
// Function : CustomerBufInit
//=====
void CustomerBufInit()
{
    long i;
    for (i=0;i<customers_per_district;i++)
    {
        customer_buf[i].c_id = 0;
        customer_buf[i].c_d_id = 0;
        customer_buf[i].c_w_id = 0;

        strcpy(customer_buf[i].c_first,"");

        strcpy(customer_buf[i].c_middle,"");
        strcpy(customer_buf[i].c_last,"");

        strcpy(customer_buf[i].c_street_1,"");
        strcpy(customer_buf[i].c_street_2,"");
        strcpy(customer_buf[i].c_city,"");
        strcpy(customer_buf[i].c_state,"");
        strcpy(customer_buf[i].c_zip,"");
        strcpy(customer_buf[i].c_phone,"");

        strcpy(customer_buf[i].c_credit,"");

        customer_buf[i].c_credit_lim = 0;
        customer_buf[i].c_discount =
(float) 0;

        strcpy(customer_buf[i].c_balance,"");

        customer_buf[i].c_ytd_payment = 0;
        customer_buf[i].c_payment_cnt = 0;
        customer_buf[i].c_delivery_cnt = 0;

        strcpy(customer_buf[i].c_data,"");

        customer_buf[i].h_amount = 0;

        strcpy(customer_buf[i].h_data,"");
    }
}
//=====
// Function : CustomerBufLoad
// Fills shared buffer for HISTORY and CUSTOMER
//=====
void CustomerBufLoad(int d_id, long w_id)
{
    long i;
    CUSTOMER_SORT_STRUCT c[CUSTOMERS_PER_DISTRICT];

    for (i=0;i<customers_per_district;i++)
    {
        if (i < 1000)
            LastName(i, c[i].c_last);

```

```

        else
            LastName(NURand(255,0,999,LOADER_NURAND_C),
c[i].c_last);

        MakeAlphaStringPadded(8,16,FIRST_NAME_LEN,
c[i].c_first);

        c[i].c_id = i+1;

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

        for (i=0;i<customers_per_district;i++)
        {
            customer_buf[i].c_d_id = d_id;
            customer_buf[i].c_w_id = w_id;
            customer_buf[i].h_amount = 10.0;
            customer_buf[i].c_ytd_payment =
10.0;

            customer_buf[i].c_payment_cnt = 1;
            customer_buf[i].c_delivery_cnt = 0;
            customer_buf[i].c_id = c[i].c_id;
            strcpy(customer_buf[i].c_first,
c[i].c_first);
            strcpy(customer_buf[i].c_last,
c[i].c_last);

            customer_buf[i].c_middle[0] = 'O';
            customer_buf[i].c_middle[1] = 'E';

            MakeAddress(customer_buf[i].c_street_1,
customer_buf[i].c_street_2,
customer_buf[i].c_city,
customer_buf[i].c_state,
customer_buf[i].c_zip);
            MakeNumberString(16, 16, PHONE_LEN,
customer_buf[i].c_phone);

            if (RandomNumber(1L, 100L) > 10)
                customer_buf[i].c_credit[0] = 'G';
            else
                customer_buf[i].c_credit[0] = 'B';
            customer_buf[i].c_credit[1] = 'C';
            customer_buf[i].c_credit_lim =
50000.0;
            customer_buf[i].c_discount =
((float) RandomNumber(0L, 5000L)) / 10000.0;

            strcpy(customer_buf[i].c_balance,"-
10.0");
            MakeAlphaStringPadded(300, 500,
C_DATA_LEN, customer_buf[i].c_data);

            // Generate HISTORY data
            MakeAlphaStringPadded(12, 24,
H_DATA_LEN, customer_buf[i].h_data);
        }
    }
}
//=====
// Function : LoadCustomerTable

```

```

//
//=====
void LoadCustomerTable(LOADER_TIME_STRUCT
*customer_time_start)
{
    long          i;
    long          c_id;
    short         c_d_id;
    long          c_w_id;
    char          c_first[FIRST_NAME_LEN+1];
    char          c_middle[MIDDLE_NAME_LEN+1];
    char          c_last[LAST_NAME_LEN+1];
    char          c_street_1[ADDRESS_LEN+1];
    char          c_street_2[ADDRESS_LEN+1];
    char          c_city[ADDRESS_LEN+1];
    char          c_state[STATE_LEN+1];
    char          c_zip[ZIP_LEN+1];
    char          c_phone[PHONE_LEN+1];
    char          c_credit[ CREDIT_LEN+1];
    double        c_credit_lim;
    double        c_discount;
    char          c_balance[6];
    double        c_ytd_payment;
    short         c_payment_cnt;
    short         c_delivery_cnt;
    char          c_data[C_DATA_LEN+1];
    char          c_since[C_SINCE_LEN+1];

    RETCODE      rc;

    i = 0;
    rc = bcp_bind(c_hdbc1, (BYTE *) &c_id, 0,
SQL_VARLEN_DATA, NULL, 0, SQLINT4, ++i);
    if (rc != SUCCEEDED)
        HandleErrorDBC(c_hdbc1);
    rc = bcp_bind(c_hdbc1, (BYTE *) &c_d_id, 0,
SQL_VARLEN_DATA, NULL, 0, SQLINT2, ++i);
    if (rc != SUCCEEDED)
        HandleErrorDBC(c_hdbc1);
    rc = bcp_bind(c_hdbc1, (BYTE *) &c_w_id, 0,
SQL_VARLEN_DATA, NULL, 0, SQLINT4, ++i);
    if (rc != SUCCEEDED)
        HandleErrorDBC(c_hdbc1);
    rc = bcp_bind(c_hdbc1, (BYTE *) &c_discount, 0,
SQL_VARLEN_DATA, NULL, 0, SQLFLT8, ++i);
    if (rc != SUCCEEDED)
        HandleErrorDBC(c_hdbc1);
    rc = bcp_bind(c_hdbc1, (BYTE *) &c_credit_lim, 0,
SQL_VARLEN_DATA, NULL, 0, SQLFLT8, ++i);
    if (rc != SUCCEEDED)
        HandleErrorDBC(c_hdbc1);
    rc = bcp_bind(c_hdbc1, (BYTE *) c_last, 0,
LAST_NAME_LEN, NULL, 0, 0, ++i);
    if (rc != SUCCEEDED)
        HandleErrorDBC(c_hdbc1);
    rc = bcp_bind(c_hdbc1, (BYTE *) c_first, 0,
FIRST_NAME_LEN, NULL, 0, 0, ++i);
    if (rc != SUCCEEDED)
        HandleErrorDBC(c_hdbc1);
    rc = bcp_bind(c_hdbc1, (BYTE *) c_credit, 0,
CREDIT_LEN, NULL, 0, 0, ++i);
    if (rc != SUCCEEDED)
        HandleErrorDBC(c_hdbc1);
    rc = bcp_bind(c_hdbc1, (BYTE *) c_balance, 0, 5,
NULL, 0, SQLCHARACTER, ++i);
    if (rc != SUCCEEDED)
        HandleErrorDBC(c_hdbc1);
    rc = bcp_bind(c_hdbc1, (BYTE *) &c_ytd_payment, 0,
SQL_VARLEN_DATA, NULL, 0, SQLFLT8, ++i);
    if (rc != SUCCEEDED)
        HandleErrorDBC(c_hdbc1);

```

```

    rc = bcp_bind(c_hdbc1, (BYTE *) &c_payment_cnt, 0,
SQL_VARLEN_DATA, NULL, 0, SQLINT2, ++i);
    if (rc != SUCCEEDED)
        HandleErrorDBC(c_hdbc1);
    rc = bcp_bind(c_hdbc1, (BYTE *) &c_delivery_cnt, 0,
SQL_VARLEN_DATA, NULL, 0, SQLINT2, ++i);
    if (rc != SUCCEEDED)
        HandleErrorDBC(c_hdbc1);
    rc = bcp_bind(c_hdbc1, (BYTE *) c_street_1, 0,
ADDRESS_LEN, NULL, 0, 0, ++i);
    if (rc != SUCCEEDED)
        HandleErrorDBC(c_hdbc1);
    rc = bcp_bind(c_hdbc1, (BYTE *) c_street_2, 0,
ADDRESS_LEN, NULL, 0, 0, ++i);
    if (rc != SUCCEEDED)
        HandleErrorDBC(c_hdbc1);
    rc = bcp_bind(c_hdbc1, (BYTE *) c_city, 0,
ADDRESS_LEN, NULL, 0, 0, ++i);
    if (rc != SUCCEEDED)
        HandleErrorDBC(c_hdbc1);
    rc = bcp_bind(c_hdbc1, (BYTE *) c_state, 0,
STATE_LEN, NULL, 0, 0, ++i);
    if (rc != SUCCEEDED)
        HandleErrorDBC(c_hdbc1);
    rc = bcp_bind(c_hdbc1, (BYTE *) c_zip, 0, ZIP_LEN,
NULL, 0, 0, ++i);
    if (rc != SUCCEEDED)
        HandleErrorDBC(c_hdbc1);
    rc = bcp_bind(c_hdbc1, (BYTE *) c_phone, 0,
PHONE_LEN, NULL, 0, 0, ++i);
    if (rc != SUCCEEDED)
        HandleErrorDBC(c_hdbc1);
    rc = bcp_bind(c_hdbc1, (BYTE *) &c_since, 0,
C_SINCE_LEN, NULL, 0, SQLCHARACTER, ++i);
    if (rc != SUCCEEDED)
        HandleErrorDBC(c_hdbc1);
    rc = bcp_bind(c_hdbc1, (BYTE *) c_middle, 0,
MIDDLE_NAME_LEN, NULL, 0, 0, ++i);
    if (rc != SUCCEEDED)
        HandleErrorDBC(c_hdbc1);
    rc = bcp_bind(c_hdbc1, (BYTE *) c_data, 0,
C_DATA_LEN, NULL, 0, 0, ++i);
    if (rc != SUCCEEDED)
        HandleErrorDBC(c_hdbc1);

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

        strcpy(c_first,
customer_buf[i].c_first);
        strcpy(c_middle,
customer_buf[i].c_middle);
        strcpy(c_last,
customer_buf[i].c_last);
        strcpy(c_street_1,
customer_buf[i].c_street_1);
        strcpy(c_street_2,
customer_buf[i].c_street_2);
        strcpy(c_city,
customer_buf[i].c_city);
        strcpy(c_state,
customer_buf[i].c_state);
        strcpy(c_zip,
customer_buf[i].c_zip);
        strcpy(c_phone,
customer_buf[i].c_phone);
        strcpy(c_credit,
customer_buf[i].c_credit);

```

```

        FormatDate(&c_since);

        c_credit_lim =
customer_buf[i].c_credit_lim;
        c_discount =
customer_buf[i].c_discount;
        strcpy(c_balance,
customer_buf[i].c_balance);
        c_ytd_payment =
customer_buf[i].c_ytd_payment;
        c_payment_cnt =
customer_buf[i].c_payment_cnt;
        c_delivery_cnt =
customer_buf[i].c_delivery_cnt;
        strcpy(c_data,
customer_buf[i].c_data);

        // Send data to server
        rc = bcp_sendrow(c_hdbc1);
        if (rc != SUCCEEDED)
            HandleErrorDBC(c_hdbc1);

        customer_rows_loaded++;
        CheckForCommit(c_hdbc1, c_hstmt1,
customer_rows_loaded, "customer", &customer_time_start-
>time_start);
    }
}
//=====
// Function : LoadHistoryTable
//=====
void LoadHistoryTable(LOADER_TIME_STRUCT
*history_time_start)
{
    long          i;
    long          c_id;
    short         c_d_id;
    long          c_w_id;
    double        h_amount;
    char          h_data[H_DATA_LEN+1];
    char          h_date[H_DATE_LEN+1];
    RETCODE      rc;

    i = 0;
    rc = bcp_bind(c_hdbc2, (BYTE *) &c_id, 0,
SQL_VARLEN_DATA, NULL, 0, SQLINT4, ++i);
    if (rc != SUCCEEDED)
        HandleErrorDBC(c_hdbc2);
    rc = bcp_bind(c_hdbc2, (BYTE *) &c_d_id, 0,
SQL_VARLEN_DATA, NULL, 0, SQLINT2, ++i);
    if (rc != SUCCEEDED)
        HandleErrorDBC(c_hdbc2);
    rc = bcp_bind(c_hdbc2, (BYTE *) &c_w_id, 0,
SQL_VARLEN_DATA, NULL, 0, SQLINT4, ++i);
    if (rc != SUCCEEDED)
        HandleErrorDBC(c_hdbc2);
    rc = bcp_bind(c_hdbc2, (BYTE *) &c_d_id, 0,
SQL_VARLEN_DATA, NULL, 0, SQLINT2, ++i);
    if (rc != SUCCEEDED)
        HandleErrorDBC(c_hdbc2);
    rc = bcp_bind(c_hdbc2, (BYTE *) &c_w_id, 0,
SQL_VARLEN_DATA, NULL, 0, SQLINT4, ++i);
    if (rc != SUCCEEDED)
        HandleErrorDBC(c_hdbc2);

```

```

rc = bcp_bind(c_hdbc2, (BYTE *) &h_date, 0,
H_DATE_LEN, NULL, 0, SQLCHARACTER, ++i);
if (rc != SUCCEEDED)
    HandleErrorDBC(c_hdbc2);
rc = bcp_bind(c_hdbc2, (BYTE *) &h_amount, 0,
SQL_VARCHAR_LEN, NULL, 0, SQLFLT8, ++i);
if (rc != SUCCEEDED)
    HandleErrorDBC(c_hdbc2);
rc = bcp_bind(c_hdbc2, (BYTE *) h_data, 0,
H_DATA_LEN, NULL, 0, 0, ++i);
if (rc != SUCCEEDED)
    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;
customer_buf[i].h_data;
customer_buf[i].h_data);

    FormatDate(&h_date);

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

    history_rows_loaded++;
    CheckForCommit(c_hdbc2, c_hstmt2,
>time_start);
}
}
}

//=====
// Function : LoadOrders
//=====
void LoadOrders()
{
    LOADER_TIME_STRUCT    orders_time_start;
    LOADER_TIME_STRUCT    new_order_time_start;
    LOADER_TIME_STRUCT
order_line_time_start;
    long
w_id;
    short
d_id;
    DWORD
dwThreadId[MAX_ORDER_THREADS];
    HANDLE
hThread[MAX_ORDER_THREADS];
    char
name[20];
    RETCODE
rc;
    char
bcphint[128];
    char
err_log_path_ord[256];
    char
err_log_path_nord[256];
    char
err_log_path_ord1[256];

```

```

// seed with unique number
seed(6);

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

// if build index before load...
if ((aptr->build_index == 1) && (aptr-
>index_order == 1))
{
    BuildIndex("idxordc1");
    BuildIndex("idxnodc1");
    BuildIndex("idxodc1");
}

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

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

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

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

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

rc = bcp_init(o_hdbc3, name, NULL,
"logs\\ordline.err", DB_IN);
strcpy(err_log_path_ord1, aptr->log_path);
strcat(err_log_path_ord1, "ordline.err");

```

```

rc = bcp_init(o_hdbc3, name, NULL,
err_log_path_ord1, DB_IN);
if (rc != SUCCEEDED)
    HandleErrorDBC(o_hdbc3);

if ((aptr->build_index == 1) && (aptr->index_order
== 1))
{
    sprintf(bcphint, "tablock, order
(o1_w_id, o1_d_id, o1_o_id, o1_number), ROWS_PER_BATCH
= %u", (aptr->num_warehouses * 30000));
    rc = bcp_control(o_hdbc3, BCPHINTS,
(void*) bcphint);
    if (rc != SUCCEEDED)
        HandleErrorDBC(o_hdbc3);
}

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

OrdersBufInit();

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

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

        // start parallel loading
        // start orders table
        printf("...Loading order
table for: d_id = %d, w_id = %d\n", d_id, w_id);
        hThread[0] =
CreateThread(NULL,
0,
(LPTHREAD_START_ROUTINE) LoadOrdersTable,
&orders_time_start,
0,
&dwThreadId[0]);

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

        // start NewOrder table
        thread

```

```

    printf("...Loading New-
Order Table for: d_id = %d, w_id = %d\n", d_id, w_id);
    hThread[1] =
CreateThread(NULL,
              0,
(LPTHREAD_START_ROUTINE) LoadNewOrderTable,
&new_order_time_start,
              0,
&dwThreadID[1]);
    if (hThread[1] == NULL)
    {
        printf("Error,
failed in creating creating thread = 1.\n");
        exit(-1);
    }
    // start Order-Line table
    thread
    printf("...Loading Order-
Line Table for: d_id = %d, w_id = %d\n", d_id, w_id);
    hThread[2] =
CreateThread(NULL,
              0,
(LPTHREAD_START_ROUTINE) LoadOrderLineTable,
&order_line_time_start,
              0,
&dwThreadID[2]);
    if (hThread[2] == NULL)
    {
        printf("Error,
failed in creating creating thread = 2.\n");
        exit(-1);
    }
    WaitForSingleObject(
hThread[0], INFINITE );
    WaitForSingleObject(
hThread[1], INFINITE );
    WaitForSingleObject(
hThread[2], INFINITE );
    if
(CloseHandle(hThread[0]) == FALSE)
    {
        printf("Error,
failed in closing Orders thread handle with errno:
%d\n", GetLastError());
    }
    if
(CloseHandle(hThread[1]) == FALSE)
    {

```

```

        printf("Error,
failed in closing NewOrder thread handle with errno:
%d\n", GetLastError());
    }
    if
(CloseHandle(hThread[2]) == FALSE)
    {
        printf("Error,
failed in closing OrderLine thread handle with errno:
%d\n", GetLastError());
    }
    }
    printf("Finished loading orders.\n");
    return;
}
//=====
// Function : OrdersBufInit
// Clears shared buffer for ORDERS, NEWORDER, and
ORDERLINE
//=====
void OrdersBufInit()
{
    int i;
    int j;
    for (i=0;i<orders_per_district;i++)
    {
        orders_buf[i].o_id = 0;
        orders_buf[i].o_d_id = 0;
        orders_buf[i].o_w_id = 0;
        orders_buf[i].o_c_id = 0;
        orders_buf[i].o_carrier_id = 0;
        orders_buf[i].o_ol_cnt = 0;
        orders_buf[i].o_all_local = 0;
        for (j=0;j<=14;j++)
        {
            orders_buf[i].o_ol[j].ol
= 0;
            orders_buf[i].o_ol[j].ol_i_id = 0;
            orders_buf[i].o_ol[j].ol_supply_w_id = 0;
            orders_buf[i].o_ol[j].ol_quantity = 0;
            orders_buf[i].o_ol[j].ol_amount = 0;
            strcpy(orders_buf[i].o_ol[j].ol_dist_info,"")
;
        }
    }
}
//=====
// Function : OrdersBufLoad
// Fills shared buffer for ORDERS, NEWORDER, and
ORDERLINE
//=====

```

```

//=====
void OrdersBufLoad(short d_id, long w_id)
{
    int cust[ORDERS_PER_DISTRICT+1];
    long o_id;
    long ol;
    printf("...Loading Order Buffer for: d_id =
%d, w_id = %d\n",
              d_id, w_id);
    GetPermutation(cust, orders_per_district);
    for (o_id=0;o_id<orders_per_district;o_id++)
    {
        // Generate ORDER and NEW-ORDER
        data
            orders_buf[o_id].o_d_id = d_id;
            orders_buf[o_id].o_w_id = w_id;
            orders_buf[o_id].o_id = o_id+1;
            orders_buf[o_id].o_c_id =
cust[o_id+1];
            orders_buf[o_id].o_ol_cnt =
(short)RandomNumber(5L, 15L);
            if (o_id < first_new_order)
            {
                orders_buf[o_id].o_carrier_id =
(short)RandomNumber(1L, 10L);
                orders_buf[o_id].o_all_local = 1;
            }
            else
            {
                orders_buf[o_id].o_carrier_id = 0;
                orders_buf[o_id].o_all_local = 1;
            }
            for (ol=0;
ol<orders_buf[o_id].o_ol_cnt; ol++)
            {
                orders_buf[o_id].o_ol[ol].ol = ol+1;
                orders_buf[o_id].o_ol[ol].ol_i_id =
RandomNumber(1L, max_items);
                orders_buf[o_id].o_ol[ol].ol_supply_w_id =
w_id;
                orders_buf[o_id].o_ol[ol].ol_quantity = 5;
                MakeAlphaString(24, 24,
OL_DIST_INFO_LEN,
&orders_buf[o_id].o_ol[ol].ol_dist_info);
            }
        // Generate ORDER-LINE
        data
            if (o_id <
first_new_order)
            {
                orders_buf[o_id].o_ol[ol].ol_amount = 0;
                // Added to
insure ol_delivery_d set properly during load
                FormatDate(&orders_buf[o_id].o_ol[ol].ol_de1i

```



```

long      long      i;
long      long      j;
long      short     o_id;
          short     o_d_id;
          long      o_w_id;
          double    ol;
          long      ol_i_id;
          long      ol_supply_w_id;
short     double    ol_quantity;
          double    ol_amount;
char      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
i = 0;
rc = bcp_bind(o_hdbc3, (BYTE *) &o_id, 0,
SQL_VARLEN_DATA, NULL, 0, SQLINT4, ++i);
if (rc != SUCCEEDED)
    HandleErrorDBC(o_hdbc3);
rc = bcp_bind(o_hdbc3, (BYTE *) &o_d_id, 0,
SQL_VARLEN_DATA, NULL, 0, SQLINT2, ++i);
if (rc != SUCCEEDED)
    HandleErrorDBC(o_hdbc3);
rc = bcp_bind(o_hdbc3, (BYTE *) &o_w_id, 0,
SQL_VARLEN_DATA, NULL, 0, SQLINT4, ++i);
if (rc != SUCCEEDED)
    HandleErrorDBC(o_hdbc3);
rc = bcp_bind(o_hdbc3, (BYTE *) &ol, 0,
SQL_VARLEN_DATA, NULL, 0, SQLFLT8, ++i);
if (rc != SUCCEEDED)
    HandleErrorDBC(o_hdbc3);
rc = bcp_bind(o_hdbc3, (BYTE *) &ol_i_id, 0,
SQL_VARLEN_DATA, NULL, 0, SQLINT4, ++i);
if (rc != SUCCEEDED)
    HandleErrorDBC(o_hdbc3);
rc = bcp_bind(o_hdbc3, (BYTE *) &ol_supply_w_id, 0,
SQL_VARLEN_DATA, NULL, 0, SQLINT4, ++i);
if (rc != SUCCEEDED)
    HandleErrorDBC(o_hdbc3);
rc = bcp_bind(o_hdbc3, (BYTE *) &ol_quantity, 0,
SQL_VARLEN_DATA, NULL, 0, SQLINT2, ++i);
if (rc != SUCCEEDED)
    HandleErrorDBC(o_hdbc3);
rc = bcp_bind(o_hdbc3, (BYTE *) ol_dist_info, 0,
DIST_INFO_LEN, NULL, 0, 0, ++i);
if (rc != SUCCEEDED)
    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);

bcp_sendrow(o_hdbc3);          rc =
                                if (rc != SUCCEEDED)
                                    HandleErrorDBC(o_hdbc3);
                                order_line_rows_loaded++;

                                CheckForCommit_Big(o_hdbc3, o_hstmt3,
order_line_rows_loaded, "order_line",
&order_line_time_start->time_start);
                                }
                                if ((o_w_id == apr->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 ((apr->build_index == 1) &&
(apr->index_order == 0))
                                        BuildIndex("idxodlcl");
                                }
                                }
//=====
// Function : GetPermutation
//=====
void GetPermutation(int perm[], int n)
{
    int i, r, t;
    for (i=1;i<n;i++)
        perm[i] = i;

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

```

```

    }          perm[r] = t;
}
}
//=====
// Function : CheckForCommit
//=====
void CheckForCommit(HDBC hdbc,          HSTMT
hstmt,          long
rows_loaded,          char
*table_name,          long
*time_start)
{
    long time_end, time_diff;
    if ( !(rows_loaded % apr->batch) )
    {
        time_end = (TimeNow() / MILLI);
        time_diff = time_end - *time_start;

        printf("-> Loaded %ld rows into %s
in %ld sec - Total = %d (%.2f rps)\n",
apr->batch,
table_name,
time_diff,
rows_loaded,
(float) apr->
batch / (time_diff ? time_diff : 1L));
        *time_start = time_end;
    }
    return;
}
//=====
// Function : CheckForCommit_Big
//=====
void CheckForCommit_Big(HDBC hdbc,          HSTMT
hstmt,          double rows_loaded,          char
*table_name,          long
*time_start)
{
    long time_end, time_diff;
    if ( !(fmod(rows_loaded,apr->batch) ) )
    {
        time_end = (TimeNow() / MILLI);
        time_diff = time_end - *time_start;

        printf("-> Loaded %ld rows into %s
in %ld sec - Total = %.0f (%.2f rps)\n",
apr->batch,

```

```

        table_name,
        time_diff,
        rows_loaded, (float) apr-
>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",

```

```

    apr->server,
    apr->user,
    apr->password,
    apr->database );

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

    rc = SQLDriverConnect ( i_hdbc1,
    NULL,

    (SQLCHAR*)&szDriverString[0] ,
    SQL_NTS,

    (SQLCHAR*)&szDriverStringOut[0],
    sizeof(szDriverStringOut),
    &cbDriverStringOut,
    SQL_DRIVER_NOPROMPT );
    if ( (rc != SUCCEED) &&
    (rc != SQL_SUCCESS_WITH_INFO) )
    {
        HandleErrorDBC(i_hdbc1);
        printf("TPC-C Loader aborted!\n");
        exit(9);
    }

    // Connection 2
    sprintf( szDriverString, "DRIVER={SQL
    Server};SERVER=%s;UID=%s;PWD=%s;DATABASE=%s",

    apr->server,
    apr->user,
    apr->password,
    apr->database );

    rc = SQLSetConnectOption (w_hdbc1,
    SQL_PACKET_SIZE, apr->pack_size);
    if (rc != SUCCEED)
        HandleErrorDBC(w_hdbc1);

    rc = SQLDriverConnect ( w_hdbc1,
    NULL,

    (SQLCHAR*)&szDriverString[0] ,
    SQL_NTS,

    (SQLCHAR*)&szDriverStringOut[0],
    sizeof(szDriverStringOut),
    &cbDriverStringOut,
    SQL_DRIVER_NOPROMPT );

    if ( (rc != SUCCEED) &&

```

```

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

    // Connection 3
    sprintf( szDriverString, "DRIVER={SQL
    Server};SERVER=%s;UID=%s;PWD=%s;DATABASE=%s",

    apr->server,
    apr->user,
    apr->password,
    apr->database );

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

    rc = SQLDriverConnect ( c_hdbc1,
    NULL,

    (SQLCHAR*)&szDriverString[0] ,
    SQL_NTS,

    (SQLCHAR*)&szDriverStringOut[0],
    sizeof(szDriverStringOut),
    &cbDriverStringOut,
    SQL_DRIVER_NOPROMPT );
    if ( (rc != SUCCEED) &&
    (rc != SQL_SUCCESS_WITH_INFO) )
    {
        HandleErrorDBC(c_hdbc1);
        printf("TPC-C Loader aborted!\n");
        exit(9);
    }

    // Connection 4
    sprintf( szDriverString, "DRIVER={SQL
    Server};SERVER=%s;UID=%s;PWD=%s;DATABASE=%s",

    apr->server,
    apr->user,
    apr->password,
    apr->database );

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

    rc = SQLDriverConnect ( c_hdbc2,
    NULL,

    (SQLCHAR*)&szDriverString[0] ,
    SQL_NTS,

```



```

        (SQLCHAR*)&szDriverStringOut[0],
        sizeof(szDriverStringOut),
        &cbDriverStringOut,
        SQL_DRIVER_NOPROMPT );
if ( (rc != SUCCEED) &&
    (rc != SQL_SUCCESS_WITH_INFO) )
{
    HandleErrorDBC(c_hdbc2);
    printf("TPC-C Loader aborted!\n");
    exit(9);
}

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

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

rc = SQLDriverConnect ( o_hdbc1,
        NULL,
        (SQLCHAR*)&szDriverString[0] ,
        SQL_NTS,
        (SQLCHAR*)&szDriverStringOut[0],
        sizeof(szDriverStringOut),
        &cbDriverStringOut,
        SQL_DRIVER_NOPROMPT );
if ( (rc != SUCCEED) &&
    (rc != SQL_SUCCESS_WITH_INFO) )
{
    HandleErrorDBC(o_hdbc1);
    printf("TPC-C Loader aborted!\n");
    exit(9);
}

// Connection 6
sprintf( szDriverString , "DRIVER={SQL
Server};SERVER=%s;UID=%s;PWD=%s;DATABASE=%s" ,
        aptr->server,
        aptr->user,
        aptr->password,
        aptr->database );

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

```

```

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

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

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

rc = SQLDriverConnect ( o_hdbc3,
        NULL,
        (SQLCHAR*)&szDriverString[0] ,
        SQL_NTS,
        (SQLCHAR*)&szDriverStringOut[0],
        sizeof(szDriverStringOut),
        &cbDriverStringOut,
        SQL_DRIVER_NOPROMPT );
if ( (rc != SUCCEED) &&
    (rc != SQL_SUCCESS_WITH_INFO) )
{
    HandleErrorDBC(o_hdbc3);
    printf("TPC-C Loader aborted!\n");
    exit(9);
}

}

//=====
//
// Function name: BuildIndex
//=====

```

```

void BuildIndex(char      *index_script)
{
    char      cmd[256];

    printf("Starting index creation:
%s\n",index_script);

    sprintf(cmd, "osql -S%s -U%s -P%s -e -
i%s\\%s.sql > %s%s.log",
        aptr->server,
        aptr->user,
        aptr->password,
        aptr-
>index_script_path,
        index_script,
        aptr->log_path,
        index_script);

    system(cmd);

    printf("Finished index creation:
%s\n",index_script);
}

//=====
//
// Function name: HandleErrorDBC
//=====

void HandleErrorDBC (SQLHDBC hdbc1)
{
    SQLCHAR      SqlState[6],
    Msg[SQL_MAX_MESSAGE_LENGTH];
    SLEN         NativeError;
    SQLSMALLINT i, MsgLen;
    SQLRETURN    rc2;
    char         timebuf[128];
    char         datebuf[128];
    char         err_log_path[256];
    FILE         *fp1;

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

            _strtime(timebuf);
            _strdate(datebuf);

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

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

                fclose(fp1);
            }
        }
    }
}

```

```

    }
    }
    i++;
}

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

    i = 1;
    while ((rc2 = SQLGetDiagRec(SQL_HANDLE_STMT
, hstmt1, i, SqlState, &NativeError,
sizeo(Msg), &MsgLen)) != SQL_NO_DATA )
    {
        MAX_SQL_ERRORS)
        {
            if (total_db_errors >=
            {
                printf(">>>> Maximum SQL
errors of %d exceeded. Terminating
TPCCDR.<<<<<\n",total_db_errors);
                exit(9);
            }
            total_db_errors++;
            sprintf( szLastError , "%s" , Msg
);
            _strtime(timebuf);
            _strdate(datebuf);
            printf( "[%s : %s] %s\nSQLState:
%s\n" , datebuf, timebuf, szLastError, SqlState);
            strcpy(err_log_path,aptr-
>log_path);
            strcat(err_log_path,"tpccldr,err");
            fp1 = fopen(err_log_path,"a+");
            if (fp1 == NULL)
                printf("ERROR: Unable to
open errorlog file.\n");
            else
            {
                fprintf(fp1, "[%s : %s]
%s\nSQLState: %s\n" , datebuf, timebuf, szLastError,
SqlState);
                fclose(fp1);
            }
            i++;
        }
    }
}
//=====
//

```

```

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

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

    mktime( &when );

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

    return;
}

```

### random.c

```

// File: RANDOM.C Microsoft TPC-C
// Kit Ver. 4.62 Copyright
// Microsoft, 1996, 1997, 1998, 1999, 2000, 2001, 2002,
// 2005 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; /* temp value for speed */
#ifdef DEBUG
printf("[%d]DBG: Entering irandO...\n", (int)
GetCurrentThreadId());
}
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 drandO
{
#ifdef DEBUG
printf("[%d]DBG: Entering drandO...\n", (int)
GetCurrentThreadId());
}
return( (double)irandO / 2147483647.0);
}
/*****
*
* * Function : RandomNumber
* * Description:
* *****/
long RandomNumber(long lower, long upper)
{
long rand_num;
#ifdef DEBUG
printf("[%d]DBG: Entering RandomNumberO...\n",
(int) GetCurrentThreadId());
#endif
perf enhancement /* return lower;
upper++;
if ( upper <= lower )
rand_num = upper;
else
rand_num = lower + irandO % (upper
- lower); /* pgd 08-13-96 perf enhancement */
}

```

```

#ifdef DEBUG
printf("[%d]DBG: RandomNumber between %ld & %ld
==> %ld\n",
(int)
GetCurrentThreadId(), lower, upper, rand_num);
#endif
return rand_num;
}
#ifdef 0
//Original code pgd 08/13/96
long RandomNumber(long lower, long upper)
{
long rand_num;
#ifdef DEBUG
printf("[%d]DBG: Entering RandomNumberO...\n",
(int) GetCurrentThreadId());
#endif
upper++;
if (upper <= lower)
rand_num = lower + irandO %
((upper > lower) ? upper - lower : upper);
else
rand_num = lower + irandO %
((upper > lower) ? upper - lower : upper);
}
#ifdef DEBUG
printf("[%d]DBG: RandomNumber between %ld & %ld
==> %ld\n",
(int)
GetCurrentThreadId(), lower, upper, rand_num);
#endif
return rand_num;
}
/*****
*
* * Function : NURand
* * Description:
* *****/
long NURand(int iConst,
long x,
long y,
long C)
{
long rand_num;
#ifdef DEBUG
printf("[%d]DBG: Entering NURandO...\n", (int)
GetCurrentThreadId());
#endif
rand_num = ((RandomNumberO, iConst) |
RandomNumber(x,y) + C) % (y-x+1)+x;
#ifdef DEBUG
printf("[%d]DBG: NURand: num = %d\n", (int)
GetCurrentThreadId(), rand_num);
#endif
}

```

```

#endif
return rand_num;
}
}

strings.c
// File: STRINGS.C Microsoft TPC-C
// Kit Ver. 4.51 Copyright
// Microsoft, 1996, 1997, 1998, 1999, 2000, 2001, 2002,
// 2003
// Purpose: Source file for database loader
// string functions
// 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("[%d]DBG: Entering MakeAddressO\n", (int)
GetCurrentThreadId());
#endif
MakeAlphaString (10, 20, ADDRESS_LEN, street_1);
MakeAlphaString (10, 20, ADDRESS_LEN, street_2);
MakeAlphaString (10, 20, ADDRESS_LEN, street_3);
MakeAlphaString (2, STATE_LEN, state);
MakeZipNumberString( 9, 9, ZIP_LEN, zip);
#ifdef DEBUG
printf("[%d]DBG: MakeAddress: street_1: %s,
street_2: %s, city: %s, state: %s, zip: %s\n",
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",
"ERING",
    };
#ifdef DEBUG
    printf("[%d]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 <= 999\n", num);
            exit(-1);
        }
    }

#ifdef DEBUG
    printf("[%d]DBG: LastName: num = [%d] ==>
[%d][%d][%d]\n",
(int)
GetCurrentThreadId(), num, num/100, (num/10)%10,
num%10);
    printf("[%d]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[] =
"0123456789ABCDEFGHIJKLMNQRSTUUVWXYZabcdefghijklmnopqr
stuvwxyz";
    static int chArrayMax = 61;

#ifdef DEBUG
    printf("[%d]DBG: Entering MakeAlphaString()\n",
(int) GetCurrentThreadId());
#endif
    len= RandomNumber(x, y);
    for (i=0; i<len; i++)
        str[i] =
chArray[RandomNumber(0, chArrayMax)];
    str[len] = 0;

    return len;
}

int MakeAlphaStringPadded( int minLen, int maxLen,
int padLen, char *str)
{
    int len;
    int i;
    char cc = 'a';
    static char chArray[] =
"0123456789ABCDEFGHIJKLMNQRSTUUVWXYZabcdefghijklmnopqr
stuvwxyz";
    static int chArrayMax = 61;

#ifdef DEBUG
    printf("[%d]DBG: Entering
MakeAlphaStringPadded()\n", (int)
GetCurrentThreadId());
#endif
    len= RandomNumber(minLen, maxLen);
    for (i=0; i<len; i++)
        str[i] =
chArray[RandomNumber(0, chArrayMax)];
    if (len < padLen)
        memset(str+len, ' ', padLen - len);
    str[padLen] = 0;
    return padLen;
}

//=====
//
// Function name: MakeOriginalAlphaString
//
//=====

```

```

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

#ifdef DEBUG
    printf("[%d]DBG: Entering
MakeOriginalAlphaString()\n", (int)
GetCurrentThreadId());
#endif
    // verify percentage is valid
    if ((percent < 0) || (percent > 100))
    {
        printf("MakeOriginalAlphaString:
%d\n", percent);
        exit(-1);
    }
    // verify string is at least 8 chars in length
    if (x < 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("[%d]DBG: MakeOriginalAlphaString: : %s\n",
(int)
GetCurrentThreadId(), str);
#endif
    return len;
}

//=====
//
// 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("[%d]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. 4.62
// Copyright
// Microsoft, 1996, 1997, 1998, 1999, 2000, 2001, 2002,
// 2005
// 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("[%d]DBG: Entering TimeNow()\n", (int)
GetCurrentThreadId());
#endif

        _ftime(&el_time);

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

return time_now;
}

```

## Appendix C: Tunable Parameters

### Microsoft SQL Server 2005 Startup Parameters

Microsoft SQL Server was started with the following command-line options:

```
"C:\Program Files (x86)\Microsoft SQL
Server\MSSQL.1\MSSQL\Binn\sqlservr.exe" -e"C:\Program
Files (x86)\Microsoft SQL
Server\MSSQL.1\MSSQL\LOG\errorlog" -c -x -t3502 -t661 -
t677 -t697 -t827 -t834 -t836 -t1229 -t8011 -t8012 -
t8018 -t8019 -t8020 -t8193 -t8710 -g150
```

### Boot.ini

```
[boot loader]
timeout=30
default=multi(0)disk(0)rdisk(0)partition(1)\WINDOWS
[operating systems]
multi(0)disk(0)rdisk(0)partition(1)\WINDOWS="Windows
Server 2003 Enterprise x64 Edition" /noexecute=optout
/fastdetect
```

### Microsoft Windows Server 2003 x64 EE Configuration (Enabled Services)

These Windows services are started:

- Application Experience Lookup Service
- COM+ Event System
- DCOM Server Process Launcher
- Distributed Transaction Coordinator
- Event Log
- Logical Disk Manager
- Network Connections
- Plug and Play
- Protected Storage
- Remote Procedure Call (RPC)
- Secondary Logon
- Security Accounts Manager
- Shell Hardware Detection
- windows Management Instrumentation

### Microsoft SQL Server 2005 Configuration Parameters

name	config_value	run_value	minimum	maximum
Ad Hoc Distributed Queries	0	0	1	0
affinity I/O mask	-2147483648	0	2147483647	
affinity mask	-2147483648	255	2147483647	
Agent XPs	0	1	0	0
allow updates	0	1	0	0
awe enabled	0	1	1	1
blocked process threshold	0	5	86400	0
c2 audit mode	0	1	0	0
clr enabled	0	1	0	0
cost threshold for parallelism	5	5	0	32767
cross db ownership chaining	0	0	1	0
cursor threshold	-1	-1	2147483647	-1
Database Mail XPs	0	1	0	0
default full-text language	1033	1033	0	2147483647
default language	0	0	9999	0
default trace enabled	0	1	1	1
disallow results from triggers	0	0	0	1
fill factor (%)	0	0	100	0
ft crawl bandwidth (max)	100	0	32767	100
ft crawl bandwidth (min)	0	0	32767	0
ft notify bandwidth (max)	100	0	32767	100
ft notify bandwidth (min)	0	0	32767	0
in-doubt xact resolution	0	0	2	0
index create memory (KB)	0	0	704	2147483647
lightweight pooling	0	1	1	1
locks	5000	2147483647	0	0
max degree of parallelism	0	1	64	1
max full-text crawl range	0	0	256	4
max server memory (MB)	30720	30720	16	2147483647
max text repl size (B)	65536	65536	0	2147483647
max worker threads	128	128	32767	450
media retention	0	0	365	0
min memory per query (KB)	1024	1024	512	2147483647
min server memory (MB)	28672	28672	0	2147483647
nested triggers	0	1	1	1
network packet size (B)	4096	4096	512	32767
ole Automation Procedures	0	0	1	0

open objects	0	2147483647	0	0
PH timeout (s)	1	3600	60	60
precompute rank	0	1	0	0
priority boost	0	1	1	1
query governor cost limit	0	0	2147483647	
query wait (s)	-1	-1	2147483647	-1
recovery interval (min)	0	0	32767	32767
remote access	0	1	1	1
remote admin connections	0	0	1	0
remote login timeout (s)	0	0	2147483647	
remote proc trans	0	1	0	0
remote query timeout (s)	0	0	2147483647	
Replication XPs	0	1	0	0
scan for startup procs	0	0	1	0
server trigger recursion	0	0	1	1
set working set size	0	0	1	0
show advanced options	0	1	1	1
SMO and DMO XPs	0	1	1	1
SQL Mail XPs	0	1	0	0
transform noise words	0	0	1	0
two digit year cutoff	2049	1753	9999	2049
user connections	0	32767	0	0
user options	0	32767	0	0
Web Assistant Procedures	0	0	1	0
xp_cmdshell	0	1	0	0

### Disk Controller Driver Registry Parameters

Windows Registry Editor Version 5.00

```
[HKEY_LOCAL_MACHINE\SYSTEM\CurrentControlSet\Services\m
raid35x]
"ErrorControl"=dword:00000001
"Group"="SCSI miniport"
"Start"=dword:00000000
"Tag"=dword:0000002b
"Type"=dword:00000001
"ImagePath"=hex(2):73,00,79,00,73,00,74,00,65,00,6d,00,
33,00,32,00,5c,00,44,00,\
52,00,49,00,56,00,45,00,52,00,53,00,5c,00,6d,00,72,00,6
1,00,69,00,64,00,33,\
00,35,00,78,00,2e,00,73,00,79,00,73,00,00,00
[HKEY_LOCAL_MACHINE\SYSTEM\CurrentControlSet\Services\m
raid35x\Parameters]
"BusType"=dword:00000008
[HKEY_LOCAL_MACHINE\SYSTEM\CurrentControlSet\Services\m
raid35x\Parameters\Device]
"NumberOfRequests"=dword:000000bd
```

"CreateInitiatorLU"=dword:00000001

[HKEY\_LOCAL\_MACHINE\SYSTEM\CurrentControlSet\Services\raid35x\Parameters\PnpInterface]
"5"=dword:00000001

[HKEY\_LOCAL\_MACHINE\SYSTEM\CurrentControlSet\Services\raid35x\Enum]
"0"="PCI\VEN\_1000&DEV\_0408&SUBSYS\_00021000&REV\_07\5&B3BB31&0&700008"
"Count"=dword:00000007
"NextInstance"=dword:00000007
"1"="PCI\VEN\_1000&DEV\_0408&SUBSYS\_00021000&REV\_07\5&376317&0&700010"
"2"="PCI\VEN\_1000&DEV\_0408&SUBSYS\_00021000&REV\_07\5&1058b1a0&0&700020"
"3"="PCI\VEN\_1000&DEV\_0408&SUBSYS\_00021000&REV\_07\5&359270c&0&700028"
"4"="PCI\VEN\_1000&DEV\_0407&SUBSYS\_05311000&REV\_02\6&39d01c69&0&00100030"
"5"="PCI\VEN\_1000&DEV\_0407&SUBSYS\_05311000&REV\_02\6&348b5ea3&0&00300238"
"6"="PCI\VEN\_1000&DEV\_0407&SUBSYS\_05321000&REV\_02\6&2d8a86b5&0&00380238"

Processor EM64T Family 15 Model 4 Stepping 8
GenuineIntel ~2993 Mhz
Processor EM64T Family 15 Model 4 Stepping 8
GenuineIntel ~2993 Mhz
Processor EM64T Family 15 Model 4 Stepping 8
GenuineIntel ~2993 Mhz
Processor EM64T Family 15 Model 4 Stepping 8
GenuineIntel ~2993 Mhz
Processor EM64T Family 15 Model 4 Stepping 8
GenuineIntel ~2993 Mhz
Processor EM64T Family 15 Model 4 Stepping 8
GenuineIntel ~2993 Mhz
Processor EM64T Family 15 Model 4 Stepping 8
GenuineIntel ~2993 Mhz
BIOS Version/Date Intel Corporation
SHW40.866.P.06.00.0031.102420051454, 10/24/2005
SMBIOS Version 2.3
Windows Directory C:\WINDOWS
System Directory C:\WINDOWS\system32
Boot Device \Device\HarddiskVolume19
Locale United States
Hardware Abstraction Layer Version = "5.2.3790.1830
(srv03\_sp1\_rtm.050324-1447)"
User Name NOCONA\_QUAD\Administrator
Time Zone E. South America Standard Time
Total Physical Memory 32,761.11 MB
Available Physical Memory 30.37 GB
Total Virtual Memory 32.71 GB
Available Virtual Memory 32.36 GB
Page File Space 2.00 GB
Page File C:\pagefile.sys

[Hardware Resources]

[Conflicts/Sharing]

Resource Device PCI bus
I/O Port 0x00000000-0x00000CF7 Direct memory
I/O Port 0x00000000-0x00000CF7 access controller
Memory Address 0x64600000-0x646FFFFF PCI standard
PCI-to-PCI bridge
Memory Address 0x64600000-0x646FFFFF MegaRAID SCSI
320-4X RAID Controller
Memory Address 0x64900000-0x649FFFFF PCI standard
PCI-to-PCI bridge
Memory Address 0x64900000-0x649FFFFF MegaRAID SCSI
320-4X RAID Controller
Memory Address 0x64A00000-0x64AFFFFF PCI standard
PCI-to-PCI bridge
Memory Address 0x64A00000-0x64AFFFFF LSI Logic PCI-X
Ultra320 SCSI Host Adapter
Memory Address 0x64800000-0x648FFFFF PCI standard
PCI-to-PCI bridge
Memory Address 0x64800000-0x648FFFFF PCI standard
PCI-to-PCI bridge
Memory Address 0x64800000-0x648FFFFF PCI standard
PCI-to-PCI bridge
Memory Address 0x64800000-0x648FFFFF MegaRAID SCSI
320-2X RAID Controller
Memory Address 0x5C200000-0x5E2FFFFF PCI standard
PCI-to-PCI bridge
Memory Address 0x5C200000-0x5E2FFFFF PCI standard
PCI-to-PCI bridge
Memory Address 0x5C200000-0x5E2FFFFF MegaRAID SCSI
320-2E RAID Controller

Memory Address 0x69100000-0x6A1FFFFF PCI standard
PCI-to-PCI bridge
Memory Address 0x69100000-0x6A1FFFFF PCI standard
PCI-to-PCI bridge
Memory Address 0x69100000-0x6A1FFFFF MegaRAID SCSI
320-2E RAID Controller
Memory Address 0xFFC00000-0xFFDFFFFF PCI bus
Memory Address 0xFFC00000-0xFFDFFFFF Intel(R) 82802
Firmware Hub Device
Memory Address 0x68000000-0x690FFFFF PCI standard
PCI-to-PCI bridge
Memory Address 0x68000000-0x690FFFFF PCI standard
PCI-to-PCI bridge
Memory Address 0x68000000-0x690FFFFF MegaRAID SCSI
320-2E RAID Controller
I/O Port 0x00003000-0x00003FFF PCI standard
PCI-to-PCI bridge
I/O Port 0x00003000-0x00003FFF PCI standard
PCI-to-PCI bridge
I/O Port 0x00003000-0x00003FFF LSI Logic PCI-X
Ultra320 SCSI Host Adapter
Memory Address 0x60400000-0x644FFFFF PCI standard
PCI-to-PCI bridge
Memory Address 0x60400000-0x644FFFFF Intel(R)
6700PXH PCI Express-to-PCI Bridge A - 0329
Memory Address 0x60400000-0x644FFFFF PCI standard
PCI-to-PCI bridge
Memory Address 0x60400000-0x644FFFFF MegaRAID SCSI
320-4X RAID Controller
Memory Address 0x64C00000-0x66EFFFFF PCI standard
PCI-to-PCI bridge
Memory Address 0x64C00000-0x66EFFFFF Intel(R)
6700PXH PCI Express-to-PCI Bridge B - 032A
Memory Address 0x64C00000-0x66EFFFFF Broadcom
NetXtreme Gigabit Ethernet #2
IRQ 9 Microsoft ACPI-Compliant System
IRQ 9 Intel(R) 82801EB SMBus Controller - 24D3
Memory Address 0x6A200000-0x6B2FFFFF PCI standard
PCI-to-PCI bridge
Memory Address 0x6A200000-0x6B2FFFFF PCI standard
PCI-to-PCI bridge
Memory Address 0x6A200000-0x6B2FFFFF MegaRAID SCSI
320-2E RAID Controller
IRQ 16 Intel(R) 82801EB USB Universal Host
Controller - 24D2
IRQ 16 Radeon 7000 / RADEON VE Family (Microsoft
Corporation)
IRQ 18 MegaRAID SCSI 320-2E RAID Controller
IRQ 18 MegaRAID SCSI 320-2E RAID Controller
IRQ 18 MegaRAID SCSI 320-2E RAID Controller
IRQ 18 Intel(R) 82801EB USB Universal Host
Controller - 24D7
Memory Address 0x50000000-0xFDFFFFFFFF PCI bus
Memory Address 0x50000000-0xFDFFFFFFFF Radeon 7000 /
RADEON VE Family (Microsoft Corporation)
Memory Address 0x5E300000-0x603FFFFF PCI standard
PCI-to-PCI bridge
Memory Address 0x5E300000-0x603FFFFF PCI standard
PCI-to-PCI bridge

System Summary

System Information report written at: 11/30/05 17:48:34
System Name: NOCONA\_QUAD
[System Summary]

Item Value
OS Name Microsoft(R) Windows(R) Server 2003
Enterprise x64 Edition
Version 5.2.3790 Service Pack 1 Build 3790
Other OS Description Not Available
OS Manufacturer Microsoft Corporation
Activation Status Activation Pending (25 days
remaining)
System Name NOCONA\_QUAD
System Manufacturer Itautec
System Model ZX400
System Type x64-based PC
Processor EM64T Family 15 Model 4 Stepping 8
GenuineIntel ~2993 Mhz
Processor EM64T Family 15 Model 4 Stepping 8
GenuineIntel ~2993 Mhz
Processor EM64T Family 15 Model 4 Stepping 8
GenuineIntel ~2993 Mhz
Processor EM64T Family 15 Model 4 Stepping 8
GenuineIntel ~2993 Mhz
Processor EM64T Family 15 Model 4 Stepping 8
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Processor EM64T Family 15 Model 4 Stepping 8
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Processor EM64T Family 15 Model 4 Stepping 8
GenuineIntel ~2993 Mhz
Processor EM64T Family 15 Model 4 Stepping 8
GenuineIntel ~2993 Mhz
Processor EM64T Family 15 Model 4 Stepping 8
GenuineIntel ~2993 Mhz
Processor EM64T Family 15 Model 4 Stepping 8
GenuineIntel ~2993 Mhz
Processor EM64T Family 15 Model 4 Stepping 8
GenuineIntel ~2993 Mhz
Processor EM64T Family 15 Model 4 Stepping 8
GenuineIntel ~2993 Mhz

Memory Address 0x5E300000-0x603FFFFF MegaRAID SCSI 320-2E RAID Controller

Memory Address 0xA0000-0xBFFFF PCI bus  
Memory Address 0xA0000-0xBFFFF Radeon 7000 / RADEON VE Family (Microsoft Corporation)

Memory Address 0x64D00000-0x65DFFFFF Intel(R) 6700PXH PCI Express-to-PCI Bridge A - 0329  
Memory Address 0x64D00000-0x65DFFFFF PCI standard PCI-to-PCI bridge  
Memory Address 0x64D00000-0x65DFFFFF MegaRAID SCSI 320-4X RAID Controller

Memory Address 0x5A100000-0x5C1FFFFF PCI standard PCI-to-PCI bridge  
Memory Address 0x5A100000-0x5C1FFFFF PCI standard PCI-to-PCI bridge  
Memory Address 0x5A100000-0x5C1FFFFF MegaRAID SCSI 320-2E RAID Controller

Memory Address 0x58000000-0x5A0FFFFF PCI standard PCI-to-PCI bridge  
Memory Address 0x58000000-0x5A0FFFFF PCI standard PCI-to-PCI bridge  
Memory Address 0x58000000-0x5A0FFFFF MegaRAID SCSI 320-2E RAID Controller

Memory Address 0x64500000-0x646FFFFF PCI standard PCI-to-PCI bridge  
Memory Address 0x64500000-0x646FFFFF PCI standard PCI-to-PCI bridge  
Memory Address 0x64500000-0x646FFFFF PCI standard PCI-to-PCI bridge  
Memory Address 0x64500000-0x646FFFFF MegaRAID SCSI 320-2X RAID Controller

I/O Port 0x00004000-0x00005FFF PCI standard PCI-to-PCI bridge  
I/O Port 0x00004000-0x00005FFF Intel(R) 6700PXH PCI Express-to-PCI Bridge A - 0329

Memory Address 0x66F00000-0x677FFFFF PCI standard PCI-to-PCI bridge  
Memory Address 0x66F00000-0x677FFFFF PCI standard PCI-to-PCI bridge  
Memory Address 0x66F00000-0x677FFFFF MegaRAID SCSI 320-2E RAID Controller

Memory Address 0xFFE00000-0xFFFFFFFF PCI bus  
Memory Address 0xFFE00000-0xFFFFFFFF Intel(R) 82802 Firmware Hub Device

[DMA]

Resource Device Status  
Channel 4 Direct memory access controller OK

[Forced Hardware]

Device PNP Device ID

[I/O]

Resource Device Status  
0x00000000-0x00000CF7 PCI bus OK  
0x00000000-0x00000CF7 Direct memory access controller OK  
0x00000D00-0x0000FFFF PCI bus OK

0x00009000-0x00009FFF PCI standard PCI-to-PCI bridge OK  
0x00008000-0x00008FFF PCI standard PCI-to-PCI bridge OK  
0x00007000-0x00007FFF PCI standard PCI-to-PCI bridge OK  
0x00006000-0x00006FFF PCI standard PCI-to-PCI bridge OK  
0x00004000-0x00005FFF PCI standard PCI-to-PCI bridge OK  
0x00003000-0x00003FFF PCI standard PCI-to-PCI bridge OK  
0x00003000-0x00003FFF PCI standard PCI-to-PCI bridge OK  
0x00003000-0x00003FFF LSI Logic PCI-X Ultra320 SCSI Host Adapter OK  
0x00003C00-0x00003CFF LSI Logic PCI-X Ultra320 SCSI Host Adapter OK  
0x0000A060-0x0000A07F Intel(R) 82801EB USB Universal Host Controller - 24D2 OK  
0x0000A040-0x0000A05F Intel(R) 82801EB USB Universal Host Controller - 24D4 OK  
0x0000A020-0x0000A03F Intel(R) 82801EB USB Universal Host Controller - 24D7 OK  
0x00002000-0x000020FF Radeon 7000 / RADEON VE Family (Microsoft Corporation) OK  
0x0000380-0x00003BB Family (Microsoft Corporation) OK  
0x000003C0-0x000003DF Radeon 7000 / RADEON VE Family (Microsoft Corporation) OK  
0x00000080-0x00000091 Direct memory access controller OK  
0x00000093-0x0000009F Direct memory access controller OK  
0x000000C0-0x000000DF Direct memory access controller OK  
0x00000070-0x00000077 System CMOS/real time clock OK  
0x00000020-0x0000003D Programmable interrupt controller OK  
0x000000A0-0x000000BD Programmable interrupt controller OK  
0x000004D0-0x000004D1 Programmable interrupt controller OK  
0x000000F0-0x000000F0 Numeric data processor OK  
0x00000040-0x00000043 System timer OK  
0x00000050-0x00000053 System timer OK  
0x00000061-0x00000061 System speaker OK  
0x00000400-0x000004BF Motherboard resources OK  
0x00000092-0x00000092 Motherboard resources OK  
0x00000800-0x0000087F Motherboard resources OK  
0x000003F0-0x000003F5 Motherboard resources OK  
0x000003F7-0x000003F7 Motherboard resources OK  
0x00000880-0x00000883 Motherboard resources OK  
0x00000CA2-0x00000CA3 Motherboard resources OK  
0x00000CA4-0x00000CA5 Motherboard resources OK  
0x000003F8-0x000003FF Communications Port (COM1) OK

0x000002F8-0x000002FF Communications Port (COM2) OK  
0x00000060-0x00000060 Motherboard resources OK  
0x00000064-0x00000064 Motherboard resources OK  
0x00000CA6-0x00000CA6 Microsoft ACPI-Compliant Embedded Controller OK  
0x00000CA7-0x00000CA7 Microsoft ACPI-Compliant Embedded Controller OK  
0x0000A080-0x0000A08F Intel(R) 82801EB Ultra ATA Storage Controllers - 24D1 OK  
0x000001F0-0x000001F7 Primary IDE Channel OK  
0x000003F6-0x000003F6 Primary IDE Channel OK  
0x00000170-0x00000177 Secondary IDE Channel OK  
0x00000376-0x00000376 Secondary IDE Channel OK  
0x0000A000-0x0000A01F Intel(R) 82801EB SMBus Controller - 24D3 OK

[IRQs]

Resource Device Status  
IRQ 9 Microsoft ACPI-Compliant System OK  
IRQ 9 Intel(R) 82801EB SMBus Controller - 24D3 OK  
IRQ 18 MegaRAID SCSI 320-2E RAID Controller OK  
IRQ 18 MegaRAID SCSI 320-2E RAID Controller OK  
IRQ 18 MegaRAID SCSI 320-2E RAID Controller OK  
IRQ 18 MegaRAID SCSI 320-2E RAID Controller OK  
IRQ 18 Intel(R) 82801EB USB Universal Host Controller - 24D7 OK  
IRQ 47 Intel(R) 6700PXH PCI Express-to-PCI Bridge A - 0329 OK  
IRQ 24 MegaRAID SCSI 320-4X RAID Controller OK  
IRQ 48 Broadcom NetXtreme Gigabit Ethernet #2 OK  
IRQ 72 LSI Logic PCI-X Ultra320 SCSI Host Adapter OK  
IRQ 73 LSI Logic PCI-X Ultra320 SCSI Host Adapter OK  
IRQ 100 MegaRAID SCSI 320-4X RAID Controller OK  
IRQ 102 MegaRAID SCSI 320-2X RAID Controller OK  
IRQ 16 Intel(R) 82801EB USB Universal Host Controller - 24D2 OK  
IRQ 16 Radeon 7000 / RADEON VE Family (Microsoft Corporation) OK  
IRQ 19 Intel(R) 82801EB USB Universal Host Controller - 24D4 OK  
IRQ 23 Intel(R) 82801EB USB2 Enhanced Host Controller - 24DD OK  
IRQ 8 System CMOS/real time clock OK  
IRQ 13 Numeric data processor OK  
IRQ 0 System timer OK  
IRQ 4 Communications Port (COM1) OK  
IRQ 3 Communications Port (COM2) OK  
IRQ 14 Primary IDE Channel OK  
IRQ 15 Secondary IDE Channel OK

[Memory]



Resource	Device	Status
0xA0000	0xBFFFF	PCI bus OK
0xA0000	0xBFFFF	Radeon 7000 / RADEON VE Family (Microsoft Corporation)
0x4000000	0x4FFFFFF	PCI bus OK
0x5000000	0xFDFDFDF	PCI bus OK
0x5000000	0xFDFDFDF	Radeon 7000 / RADEON VE Family (Microsoft Corporation)
0xFEC0000	0xFECFFFF	PCI bus OK
0xFED0000	0xFEDFFFF	PCI bus OK
0xFFC0000	0xFFDFFFF	PCI bus OK
0xFFC0000	0xFFDFFFF	Intel(R) 82802 Firmware Hub Device
0xFFE0000	0xFFFFFFF	PCI bus OK
0xFFE0000	0xFFFFFFF	Intel(R) 82802 Firmware Hub Device
0x6A20000	0x6B2FFFF	PCI standard PCI-to-PCI bridge OK
0x6A20000	0x6B2FFFF	PCI standard PCI-to-PCI bridge OK
0x6A20000	0x6B2FFFF	MegaRAID SCSI 320-2E RAID Controller
0x5800000	0x5A0FFFF	PCI standard PCI-to-PCI bridge OK
0x5800000	0x5A0FFFF	PCI standard PCI-to-PCI bridge OK
0x5800000	0x5A0FFFF	MegaRAID SCSI 320-2E RAID Controller
0x6910000	0x6A1FFFF	PCI standard PCI-to-PCI bridge OK
0x6910000	0x6A1FFFF	PCI standard PCI-to-PCI bridge OK
0x6910000	0x6A1FFFF	MegaRAID SCSI 320-2E RAID Controller
0x5A10000	0x5C1FFFF	PCI standard PCI-to-PCI bridge OK
0x5A10000	0x5C1FFFF	PCI standard PCI-to-PCI bridge OK
0x5A10000	0x5C1FFFF	MegaRAID SCSI 320-2E RAID Controller
0x6800000	0x690FFFF	PCI standard PCI-to-PCI bridge OK
0x6800000	0x690FFFF	PCI standard PCI-to-PCI bridge OK
0x6800000	0x690FFFF	MegaRAID SCSI 320-2E RAID Controller
0x5C20000	0x5E2FFFF	PCI standard PCI-to-PCI bridge OK
0x5C20000	0x5E2FFFF	PCI standard PCI-to-PCI bridge OK
0x5C20000	0x5E2FFFF	MegaRAID SCSI 320-2E RAID Controller
0x66F0000	0x677FFFF	PCI standard PCI-to-PCI bridge OK
0x66F0000	0x677FFFF	PCI standard PCI-to-PCI bridge OK
0x66F0000	0x677FFFF	MegaRAID SCSI 320-2E RAID Controller
0x5E30000	0x603FFFF	PCI standard PCI-to-PCI bridge OK
0x5E30000	0x603FFFF	PCI standard PCI-to-PCI bridge OK
0x5E30000	0x603FFFF	MegaRAID SCSI 320-2E RAID Controller
0x64C0000	0x66EFFFF	PCI standard PCI-to-PCI bridge OK
0x64C0000	0x66EFFFF	Intel(R) 6700PXH PCI Express-to-PCI Bridge
0x64C0000	0x66EFFFF	Broadcom NetXtreme Gigabit Ethernet #2
0x6040000	0x644FFFF	PCI standard PCI-to-PCI bridge OK

0x6040000	0x644FFFF	Intel(R) 6700PXH PCI Express-to-PCI Bridge
0x6040000	0x644FFFF	PCI standard PCI-to-PCI bridge OK
0x6040000	0x644FFFF	MegaRAID SCSI 320-4X RAID Controller
0x65E0000	0x65E0FFF	Intel(R) 6700PXH PCI Express-to-PCI Bridge
0x64D0000	0x65DFFFF	Intel(R) 6700PXH PCI Express-to-PCI Bridge
0x64D0000	0x65DFFFF	PCI standard PCI-to-PCI bridge OK
0x64D0000	0x65DFFFF	MegaRAID SCSI 320-4X RAID Controller
0x6480000	0x64BFFFF	PCI standard PCI-to-PCI bridge OK
0x6480000	0x64BFFFF	PCI standard PCI-to-PCI bridge OK
0x6480000	0x64BFFFF	PCI standard PCI-to-PCI bridge OK
0x6480000	0x64BFFFF	MegaRAID SCSI 320-2X RAID Controller
0x6450000	0x646FFFF	PCI standard PCI-to-PCI bridge OK
0x6450000	0x646FFFF	PCI standard PCI-to-PCI bridge OK
0x6450000	0x646FFFF	PCI standard PCI-to-PCI bridge OK
0x6450000	0x646FFFF	MegaRAID SCSI 320-2X RAID Controller
0x64A0000	0x64AFFFF	PCI standard PCI-to-PCI bridge OK
0x64A0000	0x64AFFFF	LSI Logic PCI-X Ultra320 SCSI Host Adapter
0x64A1000	0x64A1FFF	LSI Logic PCI-X Ultra320 SCSI Host Adapter
0x64A2000	0x64A2FFF	LSI Logic PCI-X Ultra320 SCSI Host Adapter
0x64A3000	0x64A3FFF	LSI Logic PCI-X Ultra320 SCSI Host Adapter
0x6490000	0x649FFFF	PCI standard PCI-to-PCI bridge OK
0x6490000	0x649FFFF	MegaRAID SCSI 320-4X RAID Controller
0x6460000	0x646FFFF	PCI standard PCI-to-PCI bridge OK
0x6460000	0x646FFFF	MegaRAID SCSI 320-4X RAID Controller
0x6B30000	0x6B303FF	Intel(R) 82801EB USB2 Enhanced Host Controller - 24D
0x6470000	0x647FFFF	Radeon 7000 / RADEON VE Family (Microsoft Corporation)

[Components]

[Multimedia]

[Audio Codecs]

CODEC	Manufacturer	Description	File	Version	Size
c:\windows\system32\msgsm32.acm	Microsoft Corporation				
c:\windows\system32\msgsm32.acm					
c:\windows\system32\msgsm32.acm					
c:\windows\system32\msgsm32.acm					
AM					

c:\windows\system32\imaadp32.acm	Microsoft Corporation				
c:\windows\system32\imaadp32.acm					
AM					

c:\windows\system32\msg711.acm	Microsoft Corporation				
c:\windows\system32\msg711.acm					
AM					

c:\windows\system32\tssoft32.acm	DSP GROUP, INC.				
c:\windows\system32\tssoft32.acm					
AM					

c:\windows\system32\msadp32.acm	Microsoft Corporation				
c:\windows\system32\msadp32.acm					
AM					

[Video Codecs]

CODEC	Manufacturer	Description	Status	File	Version	Size
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c:\windows\system32\msrle32.dll	Microsoft Corporation					
c:\windows\system32\msrle32.dll						
AM						

c:\windows\system32\tsbyuv.dll	Microsoft Corporation					
c:\windows\system32\tsbyuv.dll						
PM						

c:\windows\system32\msyuv.dll	Microsoft Corporation					
c:\windows\system32\msyuv.dll						
AM						

c:\windows\system32\iyuv_32.dll	Microsoft Corporation					
c:\windows\system32\iyuv_32.dll						
PM						

c:\windows\system32\msvidc32.dll	Microsoft Corporation					
c:\windows\system32\msvidc32.dll						
AM						

[CD-ROM]

Item	Drive	Value
CD-ROM Drive	K:	CD-ROM Drive
Description		No
Media Loaded		CD-ROM
Media Type		CD-ROM
Name		QSI DVD-ROM SDR-083
Manufacturer		(Standard CD-ROM drives)
Status		OK
Transfer Rate		Not Available
SCSI Target ID		0

PNP Device ID IDE\CDROMQSI\_DVD-ROM\_SDR-083\_MX13\_5&GFEE0D8&0&0.0.0

Driver c:\windows\system32\drivers\cdrom.sys (5.2.3790.1830 (srv03\_sp1\_rtm.050324-1447), 75.50 KB (77,312 bytes), 3/25/2005 9:00 AM)

[Sound Device]

Item Value

[Display]

Item Value

Name Radeon 7000 / RADEON VE Family (Microsoft Corporation)  
PNP Device ID PCI\VEN\_1002&DEV\_5159&SUBSYS\_34498086&REV\_00\4&1FE6A6B6&0&00F0  
Adapter Type ATI display adapter (0x5159), ATI Technologies Inc. compatible  
Adapter Description Radeon 7000 / RADEON VE Family (Microsoft Corporation)  
Adapter RAM 16.00 MB (16,777,216 bytes)  
Installed Drivers ati2dvag.dll  
Driver Version 6.14.10.6509  
INF File atiixpag.inf (ati2mtag\_RV100 section)  
Color Planes 1  
Color Table Entries 4294967296  
Resolution 1024 x 768 x 60 hertz  
Bits/Pixel 32  
Memory Address 0x50000000-0xFDFFFFFFFF  
I/O Port 0x00002000-0x000020FF  
Memory Address 0x64700000-0x6470FFFF  
IRQ Channel IRQ 16  
I/O Port 0x00000380-0x000003BB  
I/O Port 0x000003C0-0x000003DF  
Memory Address 0xA0000-0xBFFFFF  
Driver c:\windows\system32\drivers\ati2mtag.sys (6.14.10.6509, 1.39 MB (1,452,544 bytes), 11/24/2005 4:01 PM)

[Infrared]

Item Value

[Input]

[Keyboard]

Item Value

Description USB Human Interface Device  
Name Enhanced (101- or 102-key)  
Layout 00010416  
PNP Device ID USB\VID\_0A81&PID\_0205&MI\_00\6&911F78F&0&0000

Number of Function Keys 12  
Driver c:\windows\system32\drivers\hidusb.sys (5.2.3790.1830 (srv03\_sp1\_rtm.050324-1447), 18.50 KB (18,944 bytes), 3/25/2005 9:00 AM)

[Pointing Device]

Item Value

Hardware Type HID-compliant mouse  
Number of Buttons 5  
Status OK

PNP Device ID HID\VID\_0A81&PID\_0205&MI\_01&COL01\7&2845102F&0&0000  
Power Management Supported No  
Double Click Threshold 6  
Handedness Right Handed Operation  
Driver c:\windows\system32\drivers\mouhid.sys (5.2.3790.1830 (srv03\_sp1\_rtm.050324-1447), 19.00 KB (19,456 bytes), 3/24/2005 2:21 PM)

[Modem]

Item Value

[Network]

[Adapter]

Item Value

Name [00000001] Broadcom NetXtreme Gigabit Ethernet  
Adapter Type Not Available  
Product Type Broadcom NetXtreme Gigabit Ethernet

Installed Yes

PNP Device ID PCI\VEN\_14E4&DEV\_1648&SUBSYS\_34498086&REV\_10\5&188E7AD5&0&110230  
Last Reset 11/30/2005 4:05 AM  
Index 1  
Service Name b57nd  
IP Address Not Available  
IP Subnet Not Available  
Default IP Gateway Not Available  
DHCP Enabled Yes  
DHCP Server Not Available  
DHCP Lease Expires Not Available  
DHCP Lease Obtained Not Available  
MAC Address Not Available  
Driver c:\windows\system32\drivers\b57amd64.sys (7.98.0.0 built by: windDK, 187.00 KB (191,488 bytes), 11/24/2005 4:02 PM)

Name [00000002] Broadcom NetXtreme Gigabit Ethernet

Ethernet  
Adapter Type Ethernet 802.3  
Product Type Broadcom NetXtreme Gigabit Ethernet

Installed Yes

PNP Device ID PCI\VEN\_14E4&DEV\_1648&SUBSYS\_34498086&REV\_10\5&188E7AD5&0&110230  
Last Reset 11/30/2005 4:05 AM  
Index 2  
Service Name b57nd  
IP Address 192.168.0.10  
IP Subnet 255.255.255.0  
Default IP Gateway Not Available  
DHCP Enabled No  
DHCP Server Not Available  
DHCP Lease Expires Not Available  
DHCP Lease Obtained Not Available  
MAC Address 00:0E:0C:42:91:9D  
Memory Address 0x64C00000-0x66EFFFFFFF  
IRQ Channel IRQ 48  
Driver c:\windows\system32\drivers\b57amd64.sys (7.98.0.0 built by: windDK, 187.00 KB (191,488 bytes), 11/24/2005 4:02 PM)

Name [00000003] RAS Async Adapter

Adapter Type Not Available  
Product Type RAS Async Adapter

Installed Yes  
PNP Device ID Not Available  
Last Reset 11/30/2005 4:05 AM  
Index 3  
Service Name AsyncMac  
IP Address Not Available  
IP Subnet Not Available  
Default IP Gateway Not Available  
DHCP Enabled No  
DHCP Server Not Available  
DHCP Lease Expires Not Available  
DHCP Lease Obtained Not Available  
MAC Address Not Available

Name [00000004] WAN Miniport (L2TP)

Adapter Type Not Available  
Product Type WAN Miniport (L2TP)  
Installed Yes  
PNP Device ID ROOT\MS\_L2TPMINIPORT\0000  
Last Reset 11/30/2005 4:05 AM  
Index 4  
Service Name Rasl2tp  
IP Address Not Available  
IP Subnet Not Available  
Default IP Gateway Not Available  
DHCP Enabled No  
DHCP Server Not Available  
DHCP Lease Expires Not Available  
DHCP Lease Obtained Not Available  
MAC Address Not Available  
Driver c:\windows\system32\drivers\rasl2tp.sys (5.2.3790.1830 (srv03\_sp1\_rtm.050324-1447), 132.00 KB (135,168 bytes), 3/25/2005 9:00 AM)

Name [00000005] WAN Miniport (PPTP)  
Adapter Type Wide Area Network (WAN)  
Product Type WAN Miniport (PPTP)  
Installed Yes

PNP Device ID ROOT\MS\_PPTPMINIPORT\0000  
Last Reset 11/30/2005 4:05 AM  
Index 5  
Service Name PptpMiniport  
IP Address Not Available  
IP Subnet Not Available  
Default IP Gateway Not Available  
DHCP Enabled No  
DHCP Server Not Available  
DHCP Lease Expires Not Available  
DHCP Lease Obtained Not Available  
MAC Address 50:50:54:50:30:30  
Driver c:\windows\system32\drivers\raspptp.sys (5.2.3790.1830 (srv03\_sp1\_rtm.050324-1447), 117.50 KB (120,320 bytes), 3/25/2005 9:00 AM)

Name [00000006] WAN Miniport (PPPOE)  
Adapter Type Wide Area Network (WAN)  
Product Type WAN Miniport (PPPOE)

Installed Yes  
PNP Device ID ROOT\MS\_PPPOEMINIPORT\0000  
Last Reset 11/30/2005 4:05 AM  
Index 6  
Service Name Rasppoe  
IP Address Not Available  
IP Subnet Not Available  
Default IP Gateway Not Available  
DHCP Enabled No  
DHCP Server Not Available  
DHCP Lease Expires Not Available  
DHCP Lease Obtained Not Available  
MAC Address 33:50:6F:45:30:30

Driver c:\windows\system32\drivers\rasppoe.sys  
(5.2.3790.1830 (srv03\_sp1\_rtm.050324-1447), 67.50 KB  
(69,120 bytes), 3/25/2005 9:00 AM)

Name [00000007] Direct Parallel  
Adapter Type Not Available  
Product Type Direct Parallel  
Installed Yes  
PNP Device ID ROOT\MS\_TTIMINIPOINT\0000  
Last Reset 11/30/2005 4:05 AM  
Index 7

Service Name Raspti  
IP Address Not Available  
IP Subnet Not Available  
Default IP Gateway Not Available  
DHCP Enabled No  
DHCP Server Not Available  
DHCP Lease Expires Not Available  
DHCP Lease Obtained Not Available  
MAC Address Not Available  
Driver c:\windows\system32\drivers\raspti.sys  
(5.2.3790.1830 (srv03\_sp1\_rtm.050324-1447), 30.50 KB  
(31,232 bytes), 3/25/2005 9:00 AM)

Name [00000008] WAN Miniport (IP)  
Adapter Type Not Available  
Product Type WAN Miniport (IP)  
Installed Yes  
PNP Device ID ROOT\MS\_NDISWANIP\0000  
Last Reset 11/30/2005 4:05 AM  
Index 8

Service Name Ndiswan  
IP Address Not Available  
IP Subnet Not Available  
Default IP Gateway Not Available  
DHCP Enabled No  
DHCP Server Not Available  
DHCP Lease Expires Not Available  
DHCP Lease Obtained Not Available  
MAC Address Not Available  
Driver c:\windows\system32\drivers\ndiswan.sys  
(5.2.3790.1830 (srv03\_sp1\_rtm.050324-1447), 157.50 KB  
(161,280 bytes), 3/25/2005 9:00 AM)

[Protocol]

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

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

Message Oriented Yes  
Minimum Address Size 16 bytes  
Pseudo Stream Oriented No  
Supports Broadcasting Yes  
Supports Connect Data No  
Supports Disconnect Data No  
Supports Encryption No  
Supports Expedited Data No  
Supports Graceful Closing No  
Supports Guaranteed Bandwidth No  
Supports Multicasting Yes

Name RSVP UDP Service Provider  
Connectionless Service Yes  
Guarantees Delivery No  
Guarantees Sequencing No  
Maximum Address Size 16 bytes  
Maximum Message Size 63.93 KB (65,467 bytes)

Message Oriented Yes  
Minimum Address Size 16 bytes  
Pseudo Stream Oriented No  
Supports Broadcasting Yes  
Supports Connect Data No  
Supports Disconnect Data No  
Supports Encryption Yes  
Supports Expedited Data No  
Supports Graceful Closing No  
Supports Guaranteed Bandwidth No  
Supports Multicasting Yes

Name RSVP TCP Service Provider  
Connectionless Service No  
Guarantees Delivery Yes  
Guarantees Sequencing Yes  
Maximum Address Size 16 bytes  
Maximum Message Size 0 bytes  
Message Oriented No  
Minimum Address Size 16 bytes  
Pseudo Stream Oriented No

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

[Winsock]

Item Value  
Name c:\windows\system32\wsock32.dll  
File c:\windows\system32\wsock32.dll  
Size 24.50 KB (25,088 bytes)  
Version 5.2.3790.1830 (srv03\_sp1\_rtm.050324-1447)

[Ports]

[Serial]

Item Value  
Name Communications Port (COM1)  
Status OK  
PNP Device ID ACPI\PNP0501\1  
Maximum Input Buffer Size 0  
Maximum Output Buffer Size No  
Settable Baud Rate Yes  
Settable Data Bits Yes  
Settable Flow Control Yes

Settable Parity Yes  
Settable Parity Check Yes  
Settable Stop Bits Yes  
Settable RLSO Yes  
Supports RLSO Yes  
Supports 16 Bit Mode No  
Supports Special Characters No  
Baud Rate 9600  
Bits/Byte 8  
Stop Bits 1  
Parity None  
Busy No

Abort Read/write on Error No  
Binary Mode Enabled Yes  
Continue Xmit on Xoff No  
CTS Outflow Control No  
Discard NULL Bytes No  
DSR Outflow Control 0  
DSR Sensitivity 0  
DTR Flow Control Type Enable  
EOF Character 0  
Error Replace Character 0  
Error Replacement Enabled No  
Event Character 0  
Parity Check Enabled No  
RTS Flow Control Type Enable  
Xoff Character 19  
XoffXmit Threshold 512  
Xon Character 17  
XonXmit Threshold 2048  
XonXoff Inflow Control 0  
XonXoff Outflow Control 0  
I/O Port 0x000003F8-0x000003FF  
IRQ Channel IRQ 4

Driver c:\windows\system32\drivers\serial.sys  
(5.2.3790.1830 (srv03\_sp1\_rtm.050324-1447), 118.50 KB  
(121,344 bytes), 3/25/2005 9:00 AM)

Name Communications Port (COM2)  
Status OK  
PNP Device ID ACPI\PNP0501\2  
Maximum Input Buffer Size 0  
Maximum Output Buffer Size No  
Settable Baud Rate Yes  
Settable Data Bits Yes  
Settable Flow Control Yes  
Settable Parity Yes  
Settable Parity Check Yes  
Settable Stop Bits Yes  
Settable RLSO Yes  
Supports RLSO Yes  
Supports 16 Bit Mode No  
Supports Special Characters No  
Baud Rate 9600  
Bits/Byte 8  
Stop Bits 1  
Parity None  
Busy No  
Abort Read/write on Error No  
Binary Mode Enabled Yes  
Continue Xmit on Xoff No  
CTS Outflow Control No  
Discard NULL Bytes No  
DSR Outflow Control 0  
DSR Sensitivity 0  
DTR Flow Control Type Enable  
EOF Character 0  
Error Replace Character 0  
Error Replacement Enabled No  
Event Character 0  
Parity Check Enabled No  
RTS Flow Control Type Enable

Xoff Character 19  
 XoffXmit Threshold 512  
 Xon Character 17  
 XonXmit Threshold 2048  
 XonXoff InFlow Control 0  
 XonXoff OutFlow Control 0  
 I/O Port 0x000002F8-0x000002FF  
 IRQ Channel IRQ 3  
 Driver c:\windows\system32\drivers\serial.sys  
 (5.2.3790.1830 (srv03\_spl\_rtm.050324-1447), 118.50 KB  
 (121,344 bytes), 3/25/2005 9:00 AM)

[Parallel]

Item Value

[Storage]

[Drives]

Item Value  
 Drive C:  
 Description Local Fixed Disk  
 Compressed No  
 File System NTFS  
 Size 34.24 GB (36,766,965,760 bytes)  
 Free Space 28.91 GB (31,041,069,056 bytes)

Volume Name Files  
 Volume Serial Number 0CD4E390

Drive D:  
 Description Local Fixed Disk  
 Compressed No  
 File System NTFS  
 Size 34.18 GB (36,701,163,520 bytes)  
 Free Space 32.05 GB (34,413,453,312 bytes)

Volume Name Files  
 Volume Serial Number 18EA0649

Drive K:  
 Description CD-ROM Disc

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 X:  
 Description Removable Disk

[Disks]

Item Value  
 Description Disk drive  
 Manufacturer (Standard disk drives)  
 Model MAXTOR ATLAS15K2\_36SCA SCSI Disk Device  
 Bytes/Sector 512  
 Media Loaded Yes  
 Media Type Fixed hard disk  
 Partitions 1  
 SCSI Bus 0  
 SCSI Logical Unit 0  
 SCSI Port 9  
 SCSI Target ID 0

Sectors/Track 63  
 Size 34.25 GB (36,775,226,880 bytes)  
 Total Cylinders 4,471  
 Total Sectors 71,826,615  
 Total Tracks 1,140,105  
 Tracks/Cylinder 255  
 Partition Disk #10, Partition #0  
 Partition Size 34.24 GB (36,766,969,344 bytes)

Partition Starting Offset 32,256 bytes

Description Disk drive  
 Manufacturer (Standard disk drives)  
 Model MEGARAID LD 0 MEGARAID SCSI Disk Device

Bytes/Sector 512  
 Media Loaded Yes  
 Media Type Fixed hard disk  
 Partitions 6  
 SCSI Bus 3  
 SCSI Logical Unit 0  
 SCSI Port 6  
 SCSI Target ID 0  
 Sectors/Track 63  
 Size 957.00 GB (1,027,567,779,840 bytes)  
 Total Cylinders 124,928  
 Total Sectors 2,006,968,320  
 Total Tracks 31,856,640  
 Tracks/Cylinder 255  
 Partition Disk #5, Partition #0  
 Partition Size 48.83 GB (52,436,127,744 bytes)

Partition Starting Offset 32,256 bytes  
 Partition Disk #5, Partition #1  
 Partition Size 97.66 GB (104,864,094,720 bytes)

Partition Starting Offset 52,436,160,000 bytes

Partition Disk #5, Partition #2  
 Partition Size 585.94 GB (629,151,667,200 bytes)

Partition Starting Offset 157,300,254,720 bytes

Partition Disk #5, Partition #3  
 Partition Size 224.56 GB (241,115,857,920 bytes)

Partition Starting Offset 786,451,921,920 bytes

Description Disk drive  
 Manufacturer (Standard disk drives)  
 Model MEGARAID LD 0 MEGARAID SCSI Disk Device

Bytes/Sector 512  
 Media Loaded Yes  
 Media Type Fixed hard disk  
 Partitions 4  
 SCSI Bus 3  
 SCSI Logical Unit 0  
 SCSI Port 4  
 SCSI Target ID 0  
 Sectors/Track 63  
 Size 957.00 GB (1,027,567,779,840 bytes)  
 Total Cylinders 124,928  
 Total Sectors 2,006,968,320  
 Total Tracks 31,856,640  
 Tracks/Cylinder 255  
 Partition Disk #2, Partition #0  
 Partition Size 48.83 GB (52,436,127,744 bytes)

Partition Starting Offset 32,256 bytes

Partition Disk #2, Partition #1

Partition Size 97.66 GB (104,864,094,720 bytes)

Partition Starting Offset 52,436,160,000 bytes

Partition Disk #2, Partition #2  
 Partition Size 810.50 GB (870,267,525,120 bytes)

Partition Starting Offset 157,300,254,720 bytes

Description Disk drive  
 Manufacturer (Standard disk drives)  
 Model MEGARAID LD 0 MEGARAID SCSI Disk Device

Bytes/Sector 512  
 Media Loaded Yes  
 Media Type Fixed hard disk  
 Partitions 5  
 SCSI Bus 3  
 SCSI Logical Unit 0  
 SCSI Port 2  
 SCSI Target ID 0  
 Sectors/Track 63  
 Size 957.00 GB (1,027,567,779,840 bytes)  
 Total Cylinders 124,928  
 Total Sectors 2,006,968,320  
 Total Tracks 31,856,640  
 Tracks/Cylinder 255  
 Partition Disk #0, Partition #0  
 Partition Size 48.83 GB (52,436,127,744 bytes)

Partition Starting Offset 32,256 bytes  
 Partition Disk #0, Partition #1  
 Partition Size 97.66 GB (104,864,094,720 bytes)

Partition Starting Offset 52,436,160,000 bytes

Partition Disk #0, Partition #2  
 Partition Size 585.94 GB (629,151,667,200 bytes)

Partition Starting Offset 157,300,254,720 bytes

Partition Disk #0, Partition #3  
 Partition Size 224.56 GB (241,115,857,920 bytes)

Partition Starting Offset 786,451,921,920 bytes

Description Disk drive  
 Manufacturer (Standard disk drives)  
 Model MEGARAID LD 0 MEGARAID SCSI Disk Device

Bytes/Sector 512  
 Media Loaded Yes  
 Media Type Fixed hard disk  
 Partitions 2  
 SCSI Bus 3  
 SCSI Logical Unit 0  
 SCSI Port 8  
 SCSI Target ID 0  
 Sectors/Track 63  
 Size 478.50 GB (513,783,889,920 bytes)  
 Total Cylinders 62,464  
 Total Sectors 1,003,484,160  
 Total Tracks 15,928,320  
 Tracks/Cylinder 255  
 Partition Disk #8, Partition #0  
 Partition Size 239.25 GB (256,891,912,704 bytes)

Partition Starting Offset 32,256 bytes

Partition Disk #8, Partition #1

Partition Size 229.24 GB (246,149,729,280 bytes)  
Partition Starting Offset 267,634,160,640 bytes

Description Disk drive  
Manufacturer (Standard disk drives)  
Model MEGARAID LD 0 MEGARAID SCSI Disk Device

Bytes/Sector 512  
Media Loaded Yes  
Media Type Fixed hard disk  
Partitions 4  
SCSI Bus 5  
SCSI Logical Unit 0  
SCSI Port 5  
SCSI Target ID 0  
Sectors/Track 63  
Size 957.00 GB (1,027,567,779,840 bytes)  
Total Cylinders 124,928  
Total Sectors 2,006,968,320  
Total Tracks 31,856,640  
Tracks/Cylinder 255  
Partition Disk #3, Partition #0  
Partition Size 48.83 GB (52,436,127,744 bytes)

Partition Starting Offset 32,256 bytes  
Partition Disk #3, Partition #1  
Partition Size 97.66 GB (104,864,094,720 bytes)

Partition Starting Offset 52,436,160,000 bytes

Partition Disk #3, Partition #2  
Partition Size 810.50 GB (870,267,525,120 bytes)  
Partition Starting Offset 157,300,254,720 bytes

Description Disk drive  
Manufacturer (Standard disk drives)  
Model MEGARAID LD 0 MEGARAID SCSI Disk Device

Bytes/Sector 512  
Media Loaded Yes  
Media Type Fixed hard disk  
Partitions 5  
SCSI Bus 3  
SCSI Logical Unit 0  
SCSI Port 3  
SCSI Target ID 0  
Sectors/Track 63  
Size 957.00 GB (1,027,567,779,840 bytes)  
Total Cylinders 124,928  
Total Sectors 2,006,968,320  
Total Tracks 31,856,640  
Tracks/Cylinder 255  
Partition Disk #1, Partition #0  
Partition Size 48.83 GB (52,436,127,744 bytes)

Partition Starting Offset 32,256 bytes  
Partition Disk #1, Partition #1  
Partition Size 97.66 GB (104,864,094,720 bytes)

Partition Starting Offset 52,436,160,000 bytes

Partition Disk #1, Partition #2  
Partition Size 585.94 GB (629,151,667,200 bytes)

Partition Starting Offset 157,300,254,720 bytes

Partition Disk #1, Partition #3

Partition Size 224.56 GB (241,115,857,920 bytes)  
Partition Starting Offset 786,451,921,920 bytes

Description Disk drive  
Manufacturer (Standard disk drives)  
Model MEGARAID LD 0 MEGARAID SCSI Disk Device

Bytes/Sector 512  
Media Loaded Yes  
Media Type Fixed hard disk  
Partitions 5  
SCSI Bus 5  
SCSI Logical Unit 0  
SCSI Port 7  
SCSI Target ID 0  
Sectors/Track 63  
Size 957.00 GB (1,027,567,779,840 bytes)  
Total Cylinders 124,928  
Total Sectors 2,006,968,320  
Total Tracks 31,856,640  
Tracks/Cylinder 255  
Partition Disk #6, Partition #0  
Partition Size 48.83 GB (52,436,127,744 bytes)

Partition Starting Offset 32,256 bytes  
Partition Disk #6, Partition #1  
Partition Size 97.66 GB (104,864,094,720 bytes)

Partition Starting Offset 52,436,160,000 bytes

Partition Disk #6, Partition #2  
Partition Size 585.94 GB (629,151,667,200 bytes)  
Partition Starting Offset 157,300,254,720 bytes

Partition Disk #6, Partition #3  
Partition Size 224.56 GB (241,115,857,920 bytes)  
Partition Starting Offset 786,451,921,920 bytes

Description Disk drive  
Manufacturer (Standard disk drives)  
Model MEGARAID LD 1 MEGARAID SCSI Disk Device

Bytes/Sector 512  
Media Loaded Yes  
Media Type Fixed hard disk  
Partitions 2  
SCSI Bus 3  
SCSI Logical Unit 0  
SCSI Port 8  
SCSI Target ID 1  
Sectors/Track 63  
Size 478.53 GB (513,816,791,040 bytes)  
Total Cylinders 62,468  
Total Sectors 1,003,548,420  
Total Tracks 15,929,340  
Tracks/Cylinder 255  
Partition Disk #9, Partition #0  
Partition Size 24.42 GB (26,222,160,384 bytes)

Partition Starting Offset 32,256 bytes  
Partition Disk #9, Partition #1  
Partition Size 48.83 GB (52,436,160,000 bytes)

Partition Starting Offset 26,222,192,640 bytes

Description Disk drive

Manufacturer (Standard disk drives)  
Model MEGARAID LD 1 MEGARAID SCSI Disk Device

Bytes/Sector 512  
Media Loaded Yes  
Media Type Fixed hard disk  
Partitions 4  
SCSI Bus 5  
SCSI Logical Unit 0  
SCSI Port 5  
SCSI Target ID 1  
Sectors/Track 63  
Size 957.00 GB (1,027,567,779,840 bytes)  
Total Cylinders 124,928  
Total Sectors 2,006,968,320  
Total Tracks 31,856,640  
Tracks/Cylinder 255  
Partition Disk #4, Partition #0  
Partition Size 48.83 GB (52,436,127,744 bytes)

Partition Starting Offset 32,256 bytes  
Partition Disk #4, Partition #1  
Partition Size 97.66 GB (104,864,094,720 bytes)

Partition Starting Offset 52,436,160,000 bytes

Partition Disk #4, Partition #2  
Partition Size 810.50 GB (870,267,525,120 bytes)

Partition Starting Offset 157,300,254,720 bytes

Description Disk drive  
Manufacturer (Standard disk drives)  
Model MEGARAID LD 1 MEGARAID SCSI Disk Device

Bytes/Sector 512  
Media Loaded Yes  
Media Type Fixed hard disk  
Partitions 3  
SCSI Bus 5  
SCSI Logical Unit 0  
SCSI Port 7  
SCSI Target ID 1  
Sectors/Track 63  
Size 957.00 GB (1,027,567,779,840 bytes)  
Total Cylinders 124,928  
Total Sectors 2,006,968,320  
Total Tracks 31,856,640  
Tracks/Cylinder 255  
Partition Disk #7, Partition #0  
Partition Size 48.83 GB (52,436,127,744 bytes)

Partition Starting Offset 32,256 bytes  
Partition Disk #7, Partition #1  
Partition Size 97.66 GB (104,864,094,720 bytes)

Partition Starting Offset 52,436,160,000 bytes

Partition Disk #7, Partition #2  
Partition Size 585.94 GB (629,151,667,200 bytes)

Partition Starting Offset 157,300,254,720 bytes

Description Disk drive  
Manufacturer (Standard disk drives)  
Model SEAGATE ST336753LC SCSI Disk Device  
Bytes/Sector 512  
Media Loaded Yes  
Media Type Fixed hard disk  
Partitions 1

SCSI Bus 0  
SCSI Logical Unit 0  
SCSI Port 9  
SCSI Target ID 1  
Sectors/Track 63  
Size 34.18 GB (36,701,199,360 bytes)  
Total Cylinders 4,462  
Total Sectors 71,682,030  
Total Tracks 1,137,810  
Tracks/Cylinder 255  
Partition Disk #11, Partition #0  
Partition Size 34.18 GB (36,701,167,104 bytes)

Partition Starting Offset 32,256 bytes

Description Disk drive  
Manufacturer (Standard disk drives)  
Model Flash Drive OT\_USB20 USB Device  
Bytes/Sector 512  
Media Loaded Yes  
Media Type Removable media  
Partitions 1  
SCSI Bus Not Available  
SCSI Logical Unit Not Available  
SCSI Port Not Available  
SCSI Target ID Not Available  
Sectors/Track 63  
Size 117.66 MB (123,379,200 bytes)  
Total Cylinders 15  
Total Sectors 240,975  
Total Tracks 3,825  
Tracks/Cylinder 255  
Partition Disk #12, Partition #0  
Partition Size 124.98 MB (131,055,104 bytes)  
Partition Starting Offset 16,384 bytes

#### [SCSI]

Item Value  
Name MegaRAID SCSI 320-2E RAID Controller  
Manufacturer LSI Logic Corp.,  
Status OK  
PNP Device ID PCI\VEN\_1000&DEV\_0408&SUBSYS\_00021000&REV\_07\5&5B3B31A0&700008  
Memory Address 0x58000000-0x5A0FFFFFFF  
Memory Address 0x6A200000-0x6B2FFFFFFF  
IRQ Channel IRQ 18  
Driver c:\windows\system32\drivers\mraid35x.sys (6.45.3.64 built by: winddk, 29.00 KB (29,696 bytes), 3/25/2005 9:00 AM)

Name MegaRAID SCSI 320-2E RAID Controller  
Manufacturer LSI Logic Corp.,  
Status OK  
PNP Device ID PCI\VEN\_1000&DEV\_0408&SUBSYS\_00021000&REV\_07\5&1376317A&0700010  
Memory Address 0x5A100000-0x5C1FFFFFFF  
Memory Address 0x69100000-0x6A1FFFFFFF  
IRQ Channel IRQ 18  
Driver c:\windows\system32\drivers\mraid35x.sys (6.45.3.64 built by: winddk, 29.00 KB (29,696 bytes), 3/25/2005 9:00 AM)

Name MegaRAID SCSI 320-2E RAID Controller  
Manufacturer LSI Logic Corp.,  
Status OK  
PNP Device ID PCI\VEN\_1000&DEV\_0408&SUBSYS\_00021000&REV\_07\5&1058B1A0&0700020  
Memory Address 0x5C200000-0x5E2FFFFFFF

Memory Address 0x68000000-0x690FFFFFFF  
IRQ Channel IRQ 18  
Driver c:\windows\system32\drivers\mraid35x.sys (6.45.3.64 built by: winddk, 29.00 KB (29,696 bytes), 3/25/2005 9:00 AM)

Name MegaRAID SCSI 320-2E RAID Controller  
Manufacturer LSI Logic Corp.,  
Status OK  
PNP Device ID PCI\VEN\_1000&DEV\_0408&SUBSYS\_00021000&REV\_07\5&3359270C&08700028  
Memory Address 0x5E300000-0x603FFFFFFF  
Memory Address 0x66F00000-0x67FFFFFFF  
IRQ Channel IRQ 18  
Driver c:\windows\system32\drivers\mraid35x.sys (6.45.3.64 built by: winddk, 29.00 KB (29,696 bytes), 3/25/2005 9:00 AM)

Name MegaRAID SCSI 320-4X RAID Controller  
Manufacturer LSI Logic Corp.,  
Status OK  
PNP Device ID PCI\VEN\_1000&DEV\_0407&SUBSYS\_05311000&REV\_02\6&39D01C69&0&0100030  
Memory Address 0x60400000-0x644FFFFFFF  
Memory Address 0x64D00000-0x65DFFFFFFF  
IRQ Channel IRQ 24  
Driver c:\windows\system32\drivers\mraid35x.sys (6.45.3.64 built by: winddk, 29.00 KB (29,696 bytes), 3/25/2005 9:00 AM)

Name LSI Logic PCI-X Ultra320 SCSI Host Adapter  
Manufacturer LSI Logic Inc.  
Status OK  
PNP Device ID PCI\VEN\_1000&DEV\_0030&SUBSYS\_34498086&REV\_08\5&203851D0&280038  
I/O Port 0x00003C00-0x00003CFF  
Memory Address 0x64A00000-0x64AFFFFFFF  
Memory Address 0x64A10000-0x64A1FFFFF  
IRQ Channel IRQ 72  
Driver c:\windows\system32\drivers\symmpi.sys (1.10.05.00 (NT.041118-1101), 83.00 KB (84,992 bytes), 3/25/2005 9:00 AM)

Name LSI Logic PCI-X Ultra320 SCSI Host Adapter  
Manufacturer LSI Logic Inc.  
Status OK  
PNP Device ID PCI\VEN\_1000&DEV\_0030&SUBSYS\_34498086&REV\_08\5&203851D0&290038  
I/O Port 0x00003000-0x00003FFF  
Memory Address 0x64A20000-0x64A2FFFFF  
Memory Address 0x64A30000-0x64A3FFFFF  
IRQ Channel IRQ 73  
Driver c:\windows\system32\drivers\symmpi.sys (1.10.05.00 (NT.041118-1101), 83.00 KB (84,992 bytes), 3/25/2005 9:00 AM)

Name MegaRAID SCSI 320-4X RAID Controller  
Manufacturer LSI Logic Corp.,  
Status OK  
PNP Device ID PCI\VEN\_1000&DEV\_0407&SUBSYS\_05311000&REV\_02\6&348B5EA3&0&0300238  
Memory Address 0x64600000-0x646FFFFFFF  
Memory Address 0x64900000-0x649FFFFFFF  
IRQ Channel IRQ 100

Driver c:\windows\system32\drivers\mraid35x.sys (6.45.3.64 built by: winddk, 29.00 KB (29,696 bytes), 3/25/2005 9:00 AM)

Name MegaRAID SCSI 320-2X RAID Controller  
Manufacturer LSI Logic Corp.,  
Status OK  
PNP Device ID PCI\VEN\_1000&DEV\_0407&SUBSYS\_05321000&REV\_02\6&2D8A86B5&0&00380238  
Memory Address 0x64500000-0x646FFFFFFF  
Memory Address 0x64800000-0x648FFFFFFF  
IRQ Channel IRQ 102  
Driver c:\windows\system32\drivers\mraid35x.sys (6.45.3.64 built by: winddk, 29.00 KB (29,696 bytes), 3/25/2005 9:00 AM)

#### [IDE]

Item Value  
Name Intel(R) 82801EB Ultra ATA Storage  
Controllers - 24D1  
Manufacturer Intel  
Status OK  
PNP Device ID PCI\VEN\_8086&DEV\_24D1&SUBSYS\_34498086&REV\_02\3&1FCE7BBF&0&FA  
I/O Port 0x0000A080-0x0000A08F  
Driver c:\windows\system32\drivers\intelide.sys (5.2.3790.1830 (srv03\_spl\_rtm.050324-1447), 9.00 KB (9,216 bytes), 11/24/2005 4:00 PM)

Name Primary IDE Channel  
Manufacturer (Standard IDE ATA/ATAPI controllers)  
Status OK  
PNP Device ID PCI\IDE\IDECHANNEL\4&6EDE9F8&0&0

I/O Port 0x000001F0-0x000001FF  
I/O Port 0x000003F6-0x000003FF  
IRQ Channel IRQ 14  
Driver c:\windows\system32\drivers\atapi.sys (5.2.3790.1830 (srv03\_spl\_rtm.050324-1447), 145.00 KB (148,480 bytes), 3/25/2005 9:00 AM)

Name Secondary IDE Channel  
Manufacturer (Standard IDE ATA/ATAPI controllers)  
Status OK  
PNP Device ID PCI\IDE\IDECHANNEL\4&6EDE9F8&0&1

I/O Port 0x00000170-0x0000017F  
I/O Port 0x00000376-0x0000037F  
IRQ Channel IRQ 15  
Driver c:\windows\system32\drivers\atapi.sys (5.2.3790.1830 (srv03\_spl\_rtm.050324-1447), 145.00 KB (148,480 bytes), 3/25/2005 9:00 AM)

#### [Printing]

Name Driver Port Name Server Name

#### [Problem Devices]

Device PNP Device ID Error Code  
Broadcom NetXtreme Gigabit Ethernet  
PCI\VEN\_14E4&DEV\_1648&SUBSYS\_34498086&REV\_10\5&188E7AD5&0&110230 This device is disabled.

#### [USB]

Device PNP Device ID

```

Intel(R) 82801EB USB Universal Host Controller - 24D2
PCI\VEN_8086&DEV_24D2&SUBSYS_34498086&REV_02\
3&1FCE7BBF&0&E8
Intel(R) 82801EB USB Universal Host Controller - 24D4
PCI\VEN_8086&DEV_24D4&SUBSYS_34498086&REV_02\
3&1FCE7BBF&0&E9
Intel(R) 82801EB USB Universal Host Controller - 24D7
PCI\VEN_8086&DEV_24D7&SUBSYS_34498086&REV_02\
3&1FCE7BBF&0&EA
Intel(R) 82801EB USB2 Enhanced Host Controller - 24DD
PCI\VEN_8086&DEV_24DD&SUBSYS_34498086&REV_02\
3&1FCE7BBF&0&EF

```

[Software Environment]

[System Drivers]

Name	Description	File	Type	Started	Start Mode	Status	Error Control	Accept	Pause
abiosdsk	Abiosdsk	Not Available	Kernel Driver	No	Disabled	Stopped	OK		
acpi	Microsoft ACPI Driver	c:\windows\system32\drivers\acpi.sys	Kernel Driver	Running	OK	Normal	No	Yes	
acpiec	Microsoft Embedded Controller Driver	c:\windows\system32\drivers\acpiec.sys	Kernel Driver	Running	OK	Normal	No	Yes	
adpu160m	adpu160m	Not Available	Kernel Driver	No	Disabled	Stopped	OK		
adpu320	adpu320	Not Available	Kernel Driver	No	Disabled	Stopped	OK		
afd	AFD	c:\windows\system32\drivers\afd.sys	Kernel Driver	Running	OK	Normal	No	Yes	
aic78u2	aic78u2	Not Available	Kernel Driver	No	Disabled	Stopped	OK		
aic78xx	aic78xx	Not Available	Kernel Driver	No	Disabled	Stopped	OK		
aliide	AliIde	Not Available	Kernel Driver	No	Disabled	Stopped	OK		
amdide	AmdIde	Not Available	Kernel Driver	No	Disabled	Stopped	OK		
arc	arc	Not Available	Kernel Driver	No	Disabled	Stopped	OK		
asynmac	RAS Asynchronous Media Driver	c:\windows\system32\drivers\asynmac.sys	Kernel Driver	Stopped	OK	Normal	No	No	
atapi	Standard IDE/ESDI Hard Disk Controller	c:\windows\system32\drivers\atapi.sys	Kernel Driver	Running	OK	Normal	No	Yes	

atdisk	Atdisk	Not Available	Kernel Driver	No	Disabled	Stopped	OK		
ati2mtag	ati2mtag	c:\windows\system32\drivers\ati2mtag.sys	Kernel Driver	Running	OK	Ignore	No	Yes	
atmarpc	ATM ARP Client Protocol	c:\windows\system32\drivers\atmarpc.sys	Kernel Driver	Stopped	OK	Normal	No	No	
audstub	Audio Stub Driver	c:\windows\system32\drivers\audstub.sys	Kernel Driver	Running	OK	Normal	No	Yes	
b57nd	Broadcom NetXtreme Gigabit Ethernet	c:\windows\system32\drivers\b57amd64.sys	Kernel Driver	Running	OK	Normal	No	Yes	
beep	Beep	c:\windows\system32\drivers\beep.sys	Kernel Driver	Running	OK	Normal	No	Yes	
cdac15ba	CdaC15BA	c:\windows\system32\drivers\cdac15ba.sys	Kernel Driver	Running	OK	Normal	No	Yes	
cdad10ba	Cdad10BA	c:\windows\system32\drivers\cdad10ba.sys	Kernel Driver	Running	OK	Normal	No	Yes	
cdfs	Cdfs	c:\windows\system32\drivers\cdfs.sys	System Driver	Running	OK	Normal	No	Yes	
cdrom	CD-ROM Driver	c:\windows\system32\drivers\cdrom.sys	Kernel Driver	Running	OK	Normal	No	Yes	
changer	Changer	Not Available	Kernel Driver	No	System	Stopped	OK		
clusdisk	Cluster Disk Driver	c:\windows\system32\drivers\clusdisk.sys	Kernel Driver	Stopped	OK	Normal	No	No	
cmdide	CmdIde	Not Available	Kernel Driver	No	Disabled	Stopped	OK		
cpqccissm	cpqccissm	Not Available	Kernel Driver	No	Disabled	Stopped	OK		
crcdisk	CRC Disk Filter Driver	c:\windows\system32\drivers\crcdisk.sys	Kernel Driver	Running	OK	Normal	No	Yes	
dfsdriver	DfsDriver	c:\windows\system32\drivers\dfs.sys	File System Driver	Running	OK	Normal	No	Yes	
disk	Disk Driver	c:\windows\system32\drivers\disk.sys							

	Kernel Driver	Running	OK	Yes	Normal	Boot	No	Yes	
dmboot	dmboot	c:\windows\system32\drivers\dmboot.sys	Kernel Driver	Stopped	OK	Normal	No	No	
dmio	Logical Disk Manager Driver	c:\windows\system32\drivers\dmio.sys	Kernel Driver	Running	OK	Normal	Yes	Boot	Yes
dmload	dmload	c:\windows\system32\drivers\dmload.sys	Kernel Driver	Running	OK	Normal	Yes	Boot	Yes
dpti2o	dpti2o	Not Available	Kernel Driver	No	Disabled	Stopped	OK		
elxstor	elxstor	Not Available	Kernel Driver	No	Disabled	Stopped	OK		
fastfat	Fastfat	c:\windows\system32\drivers\fastfat.sys	File System Driver	Running	OK	Normal	Yes	Running	OK
fdc	Fdc	c:\windows\system32\drivers\fdc.sys	Kernel Driver	Stopped	OK	Ignore	No	System	No
fips	Fips	c:\windows\system32\drivers\fips.sys	Kernel Driver	Running	OK	Normal	No	System	Yes
flpydisk	Flpydisk	c:\windows\system32\drivers\flpydisk.sys	Kernel Driver	Stopped	OK	Ignore	No	System	No
fltmgr	Fltmgr	c:\windows\system32\drivers\fltmgr.sys	System Driver	Running	OK	Normal	Yes	Boot	Running
ftdisk	Volume Manager Driver	c:\windows\system32\drivers\ftdisk.sys	Kernel Driver	Running	OK	Yes	Normal	Boot	Yes
gpc	Generic Packet Classifier	c:\windows\system32\drivers\msgpc.sys	Kernel Driver	Running	OK	Normal	Yes	Manual	Yes
hidusb	Microsoft HID Class Driver	c:\windows\system32\drivers\hidusb.sys	Kernel Driver	Running	OK	Ignore	No	Manual	Yes
hpcisss	hpcisss	Not Available	Kernel Driver	No	Disabled	Stopped	OK		
http	HTTP	c:\windows\system32\drivers\http.sys	Kernel Driver	Stopped	OK	Normal	No	Manual	No
i2omgmt	i2omgmt	Not Available	Kernel Driver	No	System	Stopped	OK		

i8042prt	i8042prt c:\windows\system32\drivers\i8042prt.sys Kernel Driver Stopped OK Ignore No No
iirsp	iirsp Not Available Kernel Driver No Disabled Stopped OK Normal No No
imapi	CD-Burning Filter Driver c:\windows\system32\drivers\imapi.sys Kernel Driver Stopped OK Normal No No
intelide	IntelIde c:\windows\system32\drivers\intelide.sys Kernel Driver Running OK Yes Boot No Yes
intelppm	Intel Processor Driver c:\windows\system32\drivers\intelppm.sys Kernel Driver Running OK Yes Manual No Yes
ip6fw	IPv6 Windows Firewall Driver c:\windows\system32\drivers\ip6fw.sys Kernel Driver Stopped OK No Manual No No
ipfilterdriver	IP Traffic Filter Driver c:\windows\system32\drivers\ipfltdrv.sys Kernel Driver Stopped OK No Manual No No
ipinip	IP in IP Tunnel Driver c:\windows\system32\drivers\ipinip.sys Kernel Driver Stopped OK No Manual No No
ipnat	IP Network Address Translator c:\windows\system32\drivers\ipnat.sys Kernel Driver Stopped OK No Manual No No
ipsec	IPSEC driver c:\windows\system32\drivers\ipsec.sys Kernel Driver Running OK Yes System Normal No Yes
isapnp	PnP ISA/EISA Bus Driver c:\windows\system32\drivers\isapnp.sys Kernel Driver Running OK Yes Boot Critical No Yes
kbdclass	Keyboard Class Driver c:\windows\system32\drivers\kbdclass.sys Kernel Driver Running OK Yes System Normal No Yes
kbdhid	Keyboard HID Driver c:\windows\system32\drivers\kbdhid.sys Kernel Driver Running OK Yes System Ignore No Yes
ksecdd	KSecDD c:\windows\system32\drivers\ksecdd.sys Kernel Driver Running OK Yes Boot Normal No Yes
ksthunk	Kernel Streaming WOW64 Thunk Service c:\windows\system32\drivers\ksthunk.sys Kernel Driver Yes Manual

lp6nds35	lp6nds35 Not Available Kernel Driver No Disabled Stopped OK Normal No No
mnmdd	mnmdd c:\windows\system32\drivers\mnmdd.sys Kernel Driver Running OK Yes System Ignore No Yes
modem	Modem c:\windows\system32\drivers\modem.sys Kernel Driver Stopped OK No Manual No No
mouclass	Mouse Class Driver c:\windows\system32\drivers\mouclass.sys Kernel Driver Running OK Yes System Normal No Yes
mouhid	Mouse HID Driver c:\windows\system32\drivers\mouhid.sys Kernel Driver Running OK Yes Manual Ignore No Yes
mountmgr	Mount Point Manager c:\windows\system32\drivers\mountmgr.sys Kernel Driver Running OK Yes Boot Normal No Yes
mraid35x	mraid35x c:\windows\system32\drivers\mraid35x.sys Kernel Driver Running OK Yes Boot Normal No Yes
mrxdav	WebDav Client Redirector c:\windows\system32\drivers\mrxdav.sys System Driver No Manual Stopped OK Normal No No
mrxsmmb	MRXSMB c:\windows\system32\drivers\mrxsmmb.sys System Driver No System Stopped OK Normal No No
msfs	Msfs c:\windows\system32\drivers\msfs.sys System Driver Yes System Running OK Normal No Yes
mssmbios	Microsoft System Management BIOS Driver c:\windows\system32\drivers\mssmbios.sys Kernel Driver Running OK Yes Manual Yes Normal No Yes
mup	Mup c:\windows\system32\drivers\mup.sys File System Driver Running OK Yes Boot Normal No Yes
ndis	NDIS System Driver c:\windows\system32\drivers\ndis.sys Kernel Driver Running OK Yes Boot Normal No Yes
ndistapi	Remote Access NDIS TAPI Driver c:\windows\system32\drivers\ndistapi.sys Kernel Driver Running OK Yes Manual Normal No Yes
ndisuio	NDIS Usermode I/O Protocol c:\windows\system32\drivers\ndisuio.sys Kernel Driver Stopped OK No Manual No No

ndiswan	Remote Access NDIS WAN Driver c:\windows\system32\drivers\ndiswan.sys Kernel Driver Running OK Yes Normal No Yes
ndproxy	NDIS Proxy c:\windows\system32\drivers\ndproxy.sys Kernel Driver Running OK Yes Manual Normal No Yes
netbios	NetBIOS Interface c:\windows\system32\drivers\netbios.sys System Driver Normal No Yes System Running OK
netbt	NetBios over Tcpip c:\windows\system32\drivers\netbt.sys Kernel Driver Running OK Yes System Normal No Yes
nfrd960	nfrd960 Not Available Kernel Driver No Disabled Stopped OK Normal No No
npfs	Npfs c:\windows\system32\drivers\npfs.sys System Driver Normal No Yes System Running OK
ntfs	Ntfs c:\windows\system32\drivers\ntfs.sys System Driver Normal No Yes Disabled Running OK
null	Null c:\windows\system32\drivers\null.sys Kernel Driver Running OK Yes System Normal No Yes
parport	Parport c:\windows\system32\drivers\parport.sys Kernel Driver Stopped OK No Manual No No
partmgr	Partition Manager c:\windows\system32\drivers\partmgr.sys Kernel Driver Running OK Yes Boot Normal No Yes
pci	PCI Bus Driver c:\windows\system32\drivers\pci.sys Kernel Driver Running OK Yes Boot Critical No Yes
pciide	PCIIde c:\windows\system32\drivers\pciide.sys Kernel Driver Running OK Yes Boot Normal No Yes
pcmcia	Pcmcia c:\windows\system32\drivers\pcmcia.sys Kernel Driver Stopped OK No Normal No No
pdcomp	PDCOMP Not Available Kernel Driver No Manual Stopped OK Ignore No No
pdframe	PDFRAME Not Available Kernel Driver No Manual Stopped OK Ignore No No
pdreli	PDRELI Not Available Kernel Driver No Manual Stopped OK Ignore No No
pdrframe	PDFRAME Not Available Kernel Driver No Manual Stopped OK Ignore No No



pptpminiport WAN Miniport (PPTP)  
 c:\windows\system32\drivers\rasppptp.sys  
 Kernel Driver Yes Manual No Yes  
 Running OK Normal No Yes

ptilink Direct Parallel Link Driver  
 c:\windows\system32\drivers\ptilink.sys  
 Kernel Driver Yes Manual No Yes  
 Running OK Normal No Yes

ql2300 ql2300 Not Available Kernel Driver  
 No Disabled Stopped OK  
 Normal No No

rasacd Remote Access Auto Connection Driver  
 c:\windows\system32\drivers\rasacd.sys  
 Kernel Driver Yes System No Yes  
 Running OK Normal No Yes

rasl2tp WAN Miniport (L2TP)  
 c:\windows\system32\drivers\rasl2tp.sys  
 Kernel Driver Yes Manual No Yes  
 Running OK Normal No Yes

raspppoe Remote Access PPPoE Driver  
 c:\windows\system32\drivers\raspppoe.sys  
 Kernel Driver Yes Manual No Yes  
 Running OK Normal No Yes

raspti Direct Parallel  
 c:\windows\system32\drivers\raspti.sys  
 Kernel Driver Yes Manual No Yes  
 Running OK Normal No Yes

rdbss Rdbss  
 c:\windows\system32\drivers\rdbss.sys File  
 System Driver No System Stopped OK  
 Normal No No

rdpcdd RDPcDD  
 c:\windows\system32\drivers\rdpcdd.sys  
 Kernel Driver Yes System No Yes  
 Running OK Ignore No Yes

rdpdr Terminal Server Device Redirector Driver  
 c:\windows\system32\drivers\rdpdr.sys  
 Kernel Driver Yes Manual No Yes  
 Running OK Normal No Yes

rdpwd RDPWD  
 c:\windows\system32\drivers\rdpwd.sys  
 Kernel Driver No Manual No  
 Stopped OK Ignore No No

redbook Digital CD Audio Playback Filter Driver  
 c:\windows\system32\drivers\redbook.sys  
 Kernel Driver Yes System No Yes  
 Running OK Normal No Yes

secdrv Security Driver  
 c:\windows\system32\drivers\secdrv.sys  
 Kernel Driver Yes Auto No Yes  
 Running OK Normal No Yes

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

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

sfloppy Sfloppy  
 c:\windows\system32\drivers\sfloppy.sys  
 Kernel Driver No System No  
 Stopped OK Ignore No No

simbad Simbad Not Available Kernel Driver  
 No Disabled Stopped OK  
 Normal No No

srv Srv  
 c:\windows\system32\drivers\srv.sys  
 File System Driver No Manual No  
 Stopped OK Normal No No

swenum Software Bus Driver  
 c:\windows\system32\drivers\swenum.sys  
 Kernel Driver Yes Manual No Yes  
 Running OK Normal No Yes

symc8xx symc8xx Not Available Kernel Driver  
 No Disabled Stopped OK  
 Normal No No

symmpi symmpi  
 c:\windows\system32\drivers\symmpi.sys  
 Kernel Driver Yes Boot No Yes  
 Running OK Normal No Yes

sym\_hi sym\_hi Not Available Kernel Driver  
 No Disabled Stopped OK  
 Normal No No

sym\_u3 sym\_u3 Not Available Kernel Driver  
 No Disabled Stopped OK  
 Normal No No

tcpip TCP/IP Protocol Driver  
 c:\windows\system32\drivers\tcpip.sys  
 Kernel Driver Yes System No Yes  
 Running OK Normal No Yes

tdpipe TDPIPE  
 c:\windows\system32\drivers\tdpipe.sys  
 Kernel Driver No Manual No  
 Stopped OK Ignore No No

tdtcp TDTCP  
 c:\windows\system32\drivers\tdtcp.sys  
 Kernel Driver No Manual No  
 Stopped OK Ignore No No

termdd Terminal Device Driver  
 c:\windows\system32\drivers\termdd.sys  
 Kernel Driver Yes System No Yes  
 Running OK Normal No Yes

toside Toside Not Available Kernel Driver  
 No Disabled Stopped OK  
 Normal No No

udfs udfs  
 c:\windows\system32\drivers\udfs.sys File  
 System Driver No Disabled Stopped OK  
 Normal No No

ultra ultra Not Available Kernel Driver  
 No Disabled Stopped OK  
 Normal No No

update Microcode Update Driver  
 c:\windows\system32\drivers\update.sys  
 Kernel Driver Yes Manual No Yes  
 Running OK Normal No Yes

usbccgp Microsoft USB Generic Parent Driver  
 c:\windows\system32\drivers\usbccgp.sys  
 Kernel Driver Yes Manual No Yes  
 Running OK Normal No Yes

usbhcci Microsoft USB 2.0 Enhanced Host Controller  
 Miniport Driver  
 c:\windows\system32\drivers\usbhcci.sys  
 Kernel Driver Yes Manual No Yes  
 Running OK Normal No Yes

usbhub USB2 Enabled Hub  
 c:\windows\system32\drivers\usbhub.sys  
 Kernel Driver Yes Manual No Yes  
 Running OK Normal No Yes

usbstor USB Mass Storage Driver  
 c:\windows\system32\drivers\usbstor.sys  
 Kernel Driver Yes Manual No Yes  
 Running OK Normal No Yes

usbuhci Microsoft USB Universal Host Controller  
 Miniport Driver  
 c:\windows\system32\drivers\usbuhci.sys  
 Kernel Driver Yes Manual No Yes  
 Running OK Normal No Yes

vgasave VGA Display Controller.  
 c:\windows\system32\drivers\vga.sys  
 Kernel Driver Yes System No Yes  
 Running OK Ignore No Yes

viaide ViaIde Not Available Kernel Driver  
 No Disabled Stopped OK  
 Normal No No

volsnap Storage volumes  
 c:\windows\system32\drivers\volsnap.sys  
 Kernel Driver Yes Boot No Yes  
 Running OK Normal No Yes

wanarp Remote Access IP ARP Driver  
 c:\windows\system32\drivers\wanarp.sys  
 Kernel Driver Yes Manual No Yes  
 Running OK Normal No Yes

wdica WDICA Not Available Kernel Driver  
 No Manual Stopped OK  
 Ignore No No

wlbs Network Load Balancing  
 c:\windows\system32\drivers\wlbs.sys  
 Kernel Driver No Manual No  
 Stopped OK Normal No No

[Signed Drivers]

Device Name	Signed Driver Version	Device Class	Driver Date
Manufacturer	INF Name	Driver Name	Device ID
Microsoft	System Management	BIOS Driver	Yes
	SYSTEM	5.2.3790.1830	10/1/2002
	(Standard system devices)	machine.inf	
	Not Available	ROOT\SYSTEM\0002	
Microcode	Update Device	Yes	SYSTEM
	5.2.3790.1830	10/1/2002	(Standard
system devices)	machine.inf	Not Available	
	ROOT\SYSTEM\0001		
Plug and Play	Software Device Enumerator		Yes
	SYSTEM	5.2.3790.1830	10/1/2002
	(Standard system devices)	machine.inf	
	Not Available	ROOT\SYSTEM\0000	
Terminal Server	Mouse Driver	Yes	SYSTEM
	5.2.3790.1830	10/1/2002	(Standard
system devices)	machine.inf	Not Available	
	ROOT\RDP_MOU\0000		



Generic volume Yes VOLUME 5.2.3790.1830  
 10/1/2002 Microsoft volume.inf Not  
 Available STORAGE\VOLUME\1&30A96598&&SIGNATUREBB5A9A7B  
 OFFSET249FD3E600LENGTH4E22C6E00  
 Generic volume Yes VOLUME 5.2.3790.1830  
 10/1/2002 Microsoft volume.inf Not  
 Available STORAGE\VOLUME\1&30A96598&&SIGNATUREBB5A9A79  
 OFFSET249FD3E600LENGTH4E22C6E00  
 Generic volume Yes VOLUME 5.2.3790.1830  
 10/1/2002 Microsoft volume.inf Not  
 Available STORAGE\VOLUME\1&30A96598&&SIGNATUREE05BAAC0  
 OFFSET249FD3E600LENGTH4E22C6E00  
 Generic volume Yes VOLUME 5.2.3790.1830  
 10/1/2002 Microsoft volume.inf Not  
 Available STORAGE\VOLUME\1&30A96598&&SIGNATUREEFC13A2C  
 OFFSETB71C307A00LENGTH4E22C6E00  
 Generic volume Yes VOLUME 5.2.3790.1830  
 10/1/2002 Microsoft volume.inf Not  
 Available STORAGE\VOLUME\1&30A96598&&SIGNATUREBB5A9A7F  
 OFFSETB71C307A00LENGTH4E22C6E00  
 Generic volume Yes VOLUME 5.2.3790.1830  
 10/1/2002 Microsoft volume.inf Not  
 Available STORAGE\VOLUME\1&30A96598&&SIGNATUREEFC13A2C  
 OFFSET249FD3E600LENGTH927C5C9400  
 Generic volume Yes VOLUME 5.2.3790.1830  
 10/1/2002 Microsoft volume.inf Not  
 Available STORAGE\VOLUME\1&30A96598&&SIGNATUREEFC13A2C  
 OFFSETC35704E00LENGTH186A631A00  
 Generic volume Yes VOLUME 5.2.3790.1830  
 10/1/2002 Microsoft volume.inf Not  
 Available STORAGE\VOLUME\1&30A96598&&SIGNATUREEFC13A2C  
 OFFSET7E00LENGTH356FD000  
 Generic volume Yes VOLUME 5.2.3790.1830  
 10/1/2002 Microsoft volume.inf Not  
 Available STORAGE\VOLUME\1&30A96598&&SIGNATUREBB5A9A7B  
 OFFSETC35704E00LENGTH186A631A00  
 Generic volume Yes VOLUME 5.2.3790.1830  
 10/1/2002 Microsoft volume.inf Not  
 Available STORAGE\VOLUME\1&30A96598&&SIGNATUREBB5A9A7B  
 OFFSET7E00LENGTH356FD000  
 Generic volume Yes VOLUME 5.2.3790.1830  
 10/1/2002 Microsoft volume.inf Not  
 Available STORAGE\VOLUME\1&30A96598&&SIGNATUREBB5A9A79  
 OFFSETC35704E00LENGTH186A631A00  
 Generic volume Yes VOLUME 5.2.3790.1830  
 10/1/2002 Microsoft volume.inf Not  
 Available STORAGE\VOLUME\1&30A96598&&SIGNATUREBB5A9A79  
 OFFSET7E00LENGTH356FD000  
 Generic volume Yes VOLUME 5.2.3790.1830  
 10/1/2002 Microsoft volume.inf Not  
 Available STORAGE\VOLUME\1&30A96598&&SIGNATURE9B35433F  
 OFFSET7E00LENGTH88B8F5E00  
 Generic volume Yes VOLUME 5.2.3790.1830  
 10/1/2002 Microsoft volume.inf Not  
 Available STORAGE\VOLUME\1&30A96598&&SIGNATUREC540C530  
 FFSET7E00LENGTH88F786E00  
 Generic volume Yes VOLUME 5.2.3790.1830  
 10/1/2002 Microsoft volume.inf Not

Available STORAGE\VOLUME\1&30A96598&&SIGNATUREBB5A9A05  
 OFFSET249FD3E600LENGTH927C5C9400  
 Generic volume Yes VOLUME 5.2.3790.1830  
 10/1/2002 Microsoft volume.inf Not  
 Available STORAGE\VOLUME\1&30A96598&&SIGNATUREBB5A9A05  
 OFFSETC35704E00LENGTH186A631A00  
 Generic volume Yes VOLUME 5.2.3790.1830  
 10/1/2002 Microsoft volume.inf Not  
 Available STORAGE\VOLUME\1&30A96598&&SIGNATUREBB5A9A05  
 OFFSET7E00LENGTH356FD000  
 Generic volume Yes VOLUME 5.2.3790.1830  
 10/1/2002 Microsoft volume.inf Not  
 Available STORAGE\VOLUME\1&30A96598&&SIGNATUREBB5A9A7A  
 OFFSET249FD3E600LENGTH927C5C9400  
 Generic volume Yes VOLUME 5.2.3790.1830  
 10/1/2002 Microsoft volume.inf Not  
 Available STORAGE\VOLUME\1&30A96598&&SIGNATUREBB5A9A7A  
 OFFSETC35704E00LENGTH186A631A00  
 Generic volume Yes VOLUME 5.2.3790.1830  
 10/1/2002 Microsoft volume.inf Not  
 Available STORAGE\VOLUME\1&30A96598&&SIGNATUREBB5A9A7A  
 OFFSET7E00LENGTH356FD000  
 Generic volume Yes VOLUME 5.2.3790.1830  
 10/1/2002 Microsoft volume.inf Not  
 Available STORAGE\VOLUME\1&30A96598&&SIGNATUREC88FDF74  
 OFFSET61AF6E800LENGTHC35704E00  
 Generic volume Yes VOLUME 5.2.3790.1830  
 10/1/2002 Microsoft volume.inf Not  
 Available STORAGE\VOLUME\1&30A96598&&SIGNATUREC88FDF74  
 OFFSET7E00LENGTH61AF66A00  
 Generic volume Yes VOLUME 5.2.3790.1830  
 10/1/2002 Microsoft volume.inf Not  
 Available STORAGE\VOLUME\1&30A96598&&SIGNATUREC9A1B6DB  
 OFFSET7E00LENGTH3BCFF38200  
 Generic volume Yes VOLUME 5.2.3790.1830  
 10/1/2002 Microsoft volume.inf Not  
 Available STORAGE\VOLUME\1&30A96598&&SIGNATURE11869B48  
 OFFSET249FD3E600LENGTH927C5C9400  
 Generic volume Yes VOLUME 5.2.3790.1830  
 10/1/2002 Microsoft volume.inf Not  
 Available STORAGE\VOLUME\1&30A96598&&SIGNATURE11869B48  
 OFFSETC35704E00LENGTH186A631A00  
 Generic volume Yes VOLUME 5.2.3790.1830  
 10/1/2002 Microsoft volume.inf Not  
 Available STORAGE\VOLUME\1&30A96598&&SIGNATURE11869B48  
 OFFSET7E00LENGTH356FD000  
 Generic volume Yes VOLUME 5.2.3790.1830  
 10/1/2002 Microsoft volume.inf Not  
 Available STORAGE\VOLUME\1&30A96598&&SIGNATUREB05BAAC0  
 OFFSETC35704E00LENGTH186A631A00  
 Generic volume Yes VOLUME 5.2.3790.1830  
 10/1/2002 Microsoft volume.inf Not  
 Available STORAGE\VOLUME\1&30A96598&&SIGNATUREB05BAAC0  
 OFFSET7E00LENGTH356FD000  
 Generic volume Yes VOLUME 5.2.3790.1830  
 10/1/2002 Microsoft volume.inf Not

STORAGE\VOLUME\1&30A96598&&SIGNATUREBB5A9A7F  
 OFFSET249FD3E600LENGTH927C5C9400  
 Generic volume Yes VOLUME 5.2.3790.1830  
 10/1/2002 Microsoft volume.inf Not  
 Available STORAGE\VOLUME\1&30A96598&&SIGNATUREBB5A9A7F  
 OFFSETC35704E00LENGTH186A631A00  
 Generic volume Yes VOLUME 5.2.3790.1830  
 10/1/2002 Microsoft volume.inf Not  
 Available STORAGE\VOLUME\1&30A96598&&SIGNATUREBB5A9A7F  
 OFFSET7E00LENGTH356FD000  
 Volume Manager Yes SYSTEM 5.2.3790.1830  
 10/1/2002 (Standard system devices)  
 machine.inf Not Available  
 ROOT\FTDISK\0000  
 Logical Disk Manager Yes SYSTEM  
 5.2.3790.1830 10/1/2002 (Standard  
 system devices) machine.inf Not Available  
 ROOT\DMIO\0000  
 ACPI Fixed Feature Button Yes SYSTEM  
 5.2.3790.1830 10/1/2002 (Standard  
 system devices) machine.inf Not Available  
 ACPI\FIXEDBUTTON\2&DABA3FF&0  
 Intel(R) 82801EB SMBus Controller - 24D3 Yes  
 SYSTEM 5.2.3790.1830 10/1/2002 Intel  
 machine.inf Not Available  
 PCI\VEN\_8086&DEV\_24D3&SUBSYS\_34498086&REV\_02\  
 3&1FCE7BF&0&FB  
 Secondary IDE Channel Yes HDC  
 5.2.3790.1830 10/1/2002 (Standard IDE  
 ATA/ATAPI controllers) mshdc.inf Not Available  
 PCIIDE\IDECHANNEL\4&6EDE9F8&0&1  
 CD-ROM Drive Yes CDROM 5.2.3790.1830  
 10/1/2002 (Standard CD-ROM drives)  
 cdrom.inf Not Available  
 IDE\CDROMQSI\_DVD-ROM\_SDR-  
 083\_\_\_\_\_MX13\_\_\_\_\5&6FEE0D8&0&0.0.0  
 Primary IDE Channel Yes HDC 5.2.3790.1830  
 10/1/2002 (Standard IDE ATA/ATAPI  
 controllers) mshdc.inf Not Available  
 PCIIDE\IDECHANNEL\4&6EDE9F8&0&0  
 Intel(R) 82801EB Ultra ATA Storage Controllers - 24D1  
 Yes HDC 5.2.3790.1830  
 10/1/2002 Intel mshdc.inf Not Available  
 PCI\VEN\_8086&DEV\_24D1&SUBSYS\_34498086&REV\_02\  
 3&1FCE7BF&0&FA  
 Microsoft ACPI-Compliant Embedded Controller Yes  
 SYSTEM 5.2.3790.1830 10/1/2002  
 Microsoft acpi.inf Not Available  
 ACPI\PNP0C09\4&2745F95E&0  
 Motherboard resources Yes SYSTEM  
 5.2.3790.1830 10/1/2002 (Standard  
 system devices) machine.inf Not Available  
 ACPI\PNP0C02\2  
 Communications Port Yes PORTS 5.2.3790.1830  
 10/1/2002 (Standard port types)  
 msports.inf Not Available  
 ACPI\PNP0501\2  
 Communications Port Yes PORTS 5.2.3790.1830  
 10/1/2002 (Standard port types)  
 msports.inf Not Available  
 ACPI\PNP0501\1  
 Motherboard resources Yes SYSTEM  
 5.2.3790.1830 10/1/2002 (Standard  
 system devices) machine.inf Not Available  
 ACPI\PNP0C02\1  
 Intel(R) 82802 Firmware Hub Device Yes  
 SYSTEM 5.2.3790.1830 10/1/2002 Intel  
 machine.inf Not Available  
 ACPI\INT0800\4&2745F95E&0

System speaker Yes SYSTEM 5.2.3790.1830  
 10/1/2002 (Standard system devices)  
 machine.inf Not Available  
 ACPI\PNP0800\4&2745F95E&0

System timer Yes SYSTEM 5.2.3790.1830  
 10/1/2002 (Standard system devices)  
 machine.inf Not Available  
 ACPI\PNP0100\4&2745F95E&0

Numeric data processor Yes SYSTEM  
 5.2.3790.1830 10/1/2002 (Standard  
 system devices) machine.inf Not Available  
 ACPI\PNP0C04\4&2745F95E&0

Programmable interrupt controller Yes  
 SYSTEM 5.2.3790.1830 10/1/2002  
 (Standard system devices) machine.inf  
 Not Available ACPI\PNP0000\4&2745F95E&0

System CMOS/real time clock Yes SYSTEM  
 5.2.3790.1830 10/1/2002 (Standard  
 system devices) machine.inf Not Available  
 ACPI\PNP0B00\4&2745F95E&0

Direct memory access controller Yes  
 SYSTEM 5.2.3790.1830 10/1/2002  
 (Standard system devices) machine.inf  
 Not Available ACPI\PNP0200\4&2745F95E&0

Intel(R) 82801EB LPC Interface Controller - 24D0 Yes  
 SYSTEM 5.2.3790.1830 10/1/2002 Intel  
 machine.inf Not Available  
 PCI\VEN\_8086&DEV\_24D0&SUBSYS\_00000000&REV\_02\

3&1FCE7BBF&0&E8

Plug and Play Monitor Yes MONITOR  
 5.2.3790.1830 10/1/2002 (Standard  
 monitor types) monitor.inf Not Available  
 DISPLAY\SAM0025\5&1604DC1B&0&10000080&1C&00

Default Monitor Yes MONITOR 5.2.3790.1830  
 10/1/2002 (Standard monitor types)  
 monitor.inf Not Available  
 DISPLAY\DEFAULT\_MONITOR\5&1604DC1B&0&10000001

&1C&00

Radeon 7000 / RADEON VE Family (Microsoft Corporation)  
 Yes DISPLAY 6.14.10.6508  
 12/3/2004 ATI Technologies Inc.  
 ati1xpag.inf Not Available  
 PCI\VEN\_1002&DEV\_5159&SUBSYS\_34498086&REV\_00\

4&1FE6A6B&0&00F0

Intel(R) 82801 PCI Bridge - 244E Yes  
 SYSTEM 5.2.3790.1830 10/1/2002 Intel  
 machine.inf Not Available  
 PCI\VEN\_8086&DEV\_244E&SUBSYS\_00000000&REV\_C2\

3&1FCE7BBF&0&F0

Generic volume Yes VOLUME 5.2.3790.1830  
 10/1/2002 Microsoft volume.inf Not  
 Available STORAGE\REMOVABLEMEDIA\8&EAF53AF&0&RM

Disk drive Yes DISKDRIVE 5.2.3790.1830  
 10/1/2002 (Standard disk drives)  
 disk.inf Not Available  
 USBSTOR\DISK&VEN\_FLASH&PROD\_DRIVE\_OT\_USB20&RE

V\_2.00\382F41ACD2950022&0

USB Mass Storage Device Yes USB  
 5.2.3790.1830 10/1/2002 Compatible USB  
 storage device usbstor.inf Not Available  
 USB\VID\_0EAO&PID\_2168\382F41ACD2950022

Generic USB Hub Yes USB 5.2.3790.1830  
 10/1/2002 (Generic USB Hub) usb.inf Not  
 Available USB\VID\_0424&PID\_A700\5&11A3801C&0&3

USB Root Hub Yes USB 5.2.3790.1830  
 10/1/2002 (Standard USB Host Controller)  
 usbport.inf Not Available  
 USB\ROOT\_HUB20\4&14643EC&0

Intel(R) 82801EB USB2 Enhanced Host Controller - 24DD  
 Yes USB 5.2.3790.1830  
 10/1/2002 Intel usbport.inf Not

Available PCI\VEN\_8086&DEV\_24DD&SUBSYS\_34498086&REV\_02\  
 3&1FCE7BBF&0&EF

HID-compliant consumer control device Yes  
 HIDCLASS 5.2.3790.1830 10/1/2002  
 Microsoft hidserv.inf Not Available  
 HID\VID\_0A81&PID\_0205&MTI\_01&COL03\7&2845102F&

0&0002

HID-compliant device Yes HIDCLASS  
 5.2.3790.1830 10/1/2002 (Standard  
 system devices) input.inf Not Available  
 HID\VID\_0A81&PID\_0205&MTI\_01&COL02\7&2845102F&

0&0001

HID-compliant mouse Yes MOUSE 5.2.3790.1830  
 10/1/2002 Microsoft msmouse.inf Not

Available HID\VID\_0A81&PID\_0205&MTI\_01&COL01\7&2845102F&

0&0000

USB Human Interface Device Yes HIDCLASS  
 5.2.3790.1830 10/1/2002 (Standard  
 system devices) input.inf Not Available  
 USB\VID\_0A81&PID\_0205&MTI\_01\6&911F78F&0&0001

HID Keyboard Device Yes KEYBOARD 5.2.3790.1830  
 10/1/2002 (Standard keyboards)  
 keyboard.inf Not Available  
 HID\VID\_0A81&PID\_0205&MTI\_00\7&3B752C6D&0&0000

USB Human Interface Device Yes HIDCLASS  
 5.2.3790.1830 10/1/2002 (Standard  
 system devices) input.inf Not Available  
 USB\VID\_0A81&PID\_0205&MTI\_00\6&911F78F&0&0000

USB Composite Device Yes USB  
 5.2.3790.1830 10/1/2002 (Standard USB  
 Host Controller) usb.inf Not Available  
 USB\VID\_0A81&PID\_0205\5&2AF48C9C&0&1

USB Root Hub Yes USB 5.2.3790.1830  
 10/1/2002 (Standard USB Host Controller)  
 usbport.inf Not Available  
 USB\ROOT\_HUB4\4&125B048B&0

Intel(R) 82801EB USB Universal Host Controller - 24D7  
 Yes USB 5.2.3790.1830  
 10/1/2002 Intel usbport.inf Not

Available PCI\VEN\_8086&DEV\_24D7&SUBSYS\_34498086&REV\_02\  
 3&1FCE7BBF&0&EA

USB Root Hub Yes USB 5.2.3790.1830  
 10/1/2002 (Standard USB Host Controller)  
 usbport.inf Not Available  
 USB\ROOT\_HUB4\4&8ED2B9C&0

Intel(R) 82801EB USB Universal Host Controller - 24D4  
 Yes USB 5.2.3790.1830  
 10/1/2002 Intel usbport.inf Not

Available PCI\VEN\_8086&DEV\_24D4&SUBSYS\_34498086&REV\_02\  
 3&1FCE7BBF&0&E9

USB Root Hub Yes USB 5.2.3790.1830  
 10/1/2002 (Standard USB Host Controller)  
 usbport.inf Not Available  
 USB\ROOT\_HUB4\4&3AA34C4&0

Intel(R) 82801EB USB Universal Host Controller - 24D2  
 Yes USB 5.2.3790.1830  
 10/1/2002 Intel usbport.inf Not

Available PCI\VEN\_8086&DEV\_24D2&SUBSYS\_34498086&REV\_02\  
 3&1FCE7BBF&0&E8

PCI standard host CPU bridge Yes SYSTEM  
 5.2.3790.1830 10/1/2002 (Standard

system devices) machine.inf Not Available  
 PCI\VEN\_8086&DEV\_261E&SUBSYS\_00000000&REV\_10\  
 3&1FCE7BBF&0&9F

PCI standard host CPU bridge Yes SYSTEM  
 5.2.3790.1830 10/1/2002 (Standard  
 system devices) machine.inf Not Available  
 PCI\VEN\_8086&DEV\_261D&SUBSYS\_00000000&REV\_10\  
 3&1FCE7BBF&0&9E

PCI standard host CPU bridge Yes SYSTEM  
 5.2.3790.1830 10/1/2002 (Standard  
 system devices) machine.inf Not Available  
 PCI\VEN\_8086&DEV\_261C&SUBSYS\_00000000&REV\_10\  
 3&1FCE7BBF&0&9D

PCI standard host CPU bridge Yes SYSTEM  
 5.2.3790.1830 10/1/2002 (Standard  
 system devices) machine.inf Not Available  
 PCI\VEN\_8086&DEV\_261B&SUBSYS\_00000000&REV\_10\  
 3&1FCE7BBF&0&9C

PCI standard host CPU bridge Yes SYSTEM  
 5.2.3790.1830 10/1/2002 (Standard  
 system devices) machine.inf Not Available  
 PCI\VEN\_8086&DEV\_261A&SUBSYS\_00000000&REV\_10\  
 3&1FCE7BBF&0&9B

PCI standard host CPU bridge Yes SYSTEM  
 5.2.3790.1830 10/1/2002 (Standard  
 system devices) machine.inf Not Available  
 PCI\VEN\_8086&DEV\_2619&SUBSYS\_00000000&REV\_10\  
 3&1FCE7BBF&0&9A

PCI standard host CPU bridge Yes SYSTEM  
 5.2.3790.1830 10/1/2002 (Standard  
 system devices) machine.inf Not Available  
 PCI\VEN\_8086&DEV\_2618&SUBSYS\_00000000&REV\_10\  
 3&1FCE7BBF&0&99

PCI standard host CPU bridge Yes SYSTEM  
 5.2.3790.1830 10/1/2002 (Standard  
 system devices) machine.inf Not Available  
 PCI\VEN\_8086&DEV\_2617&SUBSYS\_00000000&REV\_10\  
 3&1FCE7BBF&0&98

PCI standard host CPU bridge Yes SYSTEM  
 5.2.3790.1830 10/1/2002 (Standard  
 system devices) machine.inf Not Available  
 PCI\VEN\_8086&DEV\_2615&SUBSYS\_00000000&REV\_10\  
 3&1FCE7BBF&0&8A

PCI standard host CPU bridge Yes SYSTEM  
 5.2.3790.1830 10/1/2002 (Standard  
 system devices) machine.inf Not Available  
 PCI\VEN\_8086&DEV\_2614&SUBSYS\_00000000&REV\_10\  
 3&1FCE7BBF&0&89

PCI standard host CPU bridge Yes SYSTEM  
 5.2.3790.1830 10/1/2002 (Standard  
 system devices) machine.inf Not Available  
 PCI\VEN\_8086&DEV\_2613&SUBSYS\_00000000&REV\_10\  
 3&1FCE7BBF&0&88

PCI standard host CPU bridge Yes SYSTEM  
 5.2.3790.1830 10/1/2002 (Standard  
 system devices) machine.inf Not Available  
 PCI\VEN\_8086&DEV\_2612&SUBSYS\_00000000&REV\_10\  
 3&1FCE7BBF&0&82

PCI standard host CPU bridge Yes SYSTEM  
 5.2.3790.1830 10/1/2002 (Standard  
 system devices) machine.inf Not Available  
 PCI\VEN\_8086&DEV\_2611&SUBSYS\_00000000&REV\_10\  
 3&1FCE7BBF&0&81

PCI standard host CPU bridge Yes SYSTEM  
 5.2.3790.1830 10/1/2002 (Standard  
 system devices) machine.inf Not Available  
 PCI\VEN\_8086&DEV\_2610&SUBSYS\_00000000&REV\_10\  
 3&1FCE7BBF&0&80

PCI standard RAM Controller Yes SYSTEM  
 5.2.3790.1830 10/1/2002 (Standard  
 system devices) machine.inf Not Available



Disk drive Yes DISKDRIVE 5.2.3790.1830  
 10/1/2002 (Standard disk drives)  
 disk.inf Not Available  
 SCSI\DISK&VEN\_MEGARAID&PROD\_LD\_0\_MEGARAID&R  
 EV\_7&2B241BAC&0&500  
 RAID Virtual Device Yes SYSTEM 5.2.3790.1830  
 10/1/2002 American Megatrends, Inc.  
 scsidev.inf Not Available  
 SCSI\OTHER&VEN\_RAID&PROD\_DUMMYDEVICE&REV\_0  
 000\7&2B241BAC&0&4390  
 EuroLogc ULTRAbloc SCSI Processor Device Not  
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 Not Available Not Available Not Available  
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 V\_0017\7&2B241BAC&0&3F0  
 EuroLogc ULTRAbloc SCSI Processor Device Not  
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 EuroLogc ULTRAbloc SCSI Processor Device Not  
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 Not Available Not Available Not Available  
 Available SCSI\PROCESSOR&VEN\_EUROLOGC&PROD\_ULTRABLOC&R  
 V\_0017\7&2B241BAC&0&1F0  
 EuroLogc ULTRAbloc SCSI Processor Device Not  
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 Not Available Not Available Not Available  
 Available SCSI\PROCESSOR&VEN\_EUROLOGC&PROD\_ULTRABLOC&R  
 V\_0017\7&2B241BAC&0&0F0  
 MegaRAID SCSI 320-4X RAID Controller Yes  
 SCSIADAPTER 6.45.3.64 8/18/2004 LSI  
 Logic Corp., oem0.inf Not Available  
 PCI\VEN\_1000&DEV\_0407&SUBSYS\_05311000&REV\_02\  
 6&348B5EA3&0&00300238  
 PCI standard PCI-to-PCI bridge Yes  
 SYSTEM 5.2.3790.1830 10/1/2002  
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 PCI\VEN\_1014&DEV\_01A7&SUBSYS\_00000000&REV\_02\  
 5&8AF1E42&0&300238  
 PCI standard PCI-to-PCI bridge Yes  
 SYSTEM 5.2.3790.1830 10/1/2002  
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 Not Available  
 PCI\VEN\_8086&DEV\_0332&SUBSYS\_00000000&REV\_07\  
 4&3463CAB2&0&0238  
 SCA Hotswap Backplane Yes SYSTEM  
 5.2.3790.1830 10/1/2002 ESG-SHV  
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 SHV&PROD\_SCA\_HSBP\_M35&REV\_1\_06\6&3A113296&0&060  
 LSI Logic PCI-X Ultra320 SCSI Host Adapter Yes  
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 10/1/2002 LSI Logic Inc. pnpscsi.inf  
 Not Available  
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Disk drive Yes DISKDRIVE 5.2.3790.1830  
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 LSI Logic PCI-X Ultra320 SCSI Host Adapter Yes  
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 10/1/2002 LSI Logic Inc. pnpscsi.inf  
 Not Available  
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 Broadcom NetXtreme Gigabit Ethernet Yes NET  
 7.98.0.0 10/1/2002 Broadcom net57amd.inf  
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 PCI\VEN\_14E4&DEV\_1648&SUBSYS\_34498086&REV\_10\  
 5&188E7AD5&0&110230  
 Broadcom NetXtreme Gigabit Ethernet Yes NET  
 7.98.0.0 10/1/2002 Broadcom net57amd.inf  
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 5&188E7AD5&0&100230  
 Intel(R) 6700PXH PCI Express-to-PCI Bridge B - 032A  
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 Disk drive Yes DISKDRIVE 5.2.3790.1830  
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 RAID Virtual Device Yes SYSTEM 5.2.3790.1830  
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EuroLogc ULTRAbloc SCSI Processor Device Not  
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 Not Available Not Available Not Available  
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 MegaRAID SCSI 320-4X RAID Controller Yes  
 SCSIADAPTER 6.45.3.64 8/18/2004 LSI  
 Logic Corp., oem0.inf Not Available  
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 PCI standard PCI-to-PCI bridge Yes  
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 Yes SYSTEM 5.2.3790.1830  
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 PCI standard PCI-to-PCI bridge Yes  
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 (Standard system devices) machine.inf  
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 PCI standard PCI-to-PCI bridge Yes  
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 Disk drive Yes DISKDRIVE 5.2.3790.1830  
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 disk.inf Not Available  
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 Disk drive Yes DISKDRIVE 5.2.3790.1830  
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 RAID Virtual Device Yes SYSTEM 5.2.3790.1830  
 10/1/2002 American Megatrends, Inc.  
 scsidev.inf Not Available  
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 EuroLogc ULTRAbloc SCSI Processor Device Not  
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 Available SCSI\PROCESSOR&VEN\_EUROLOGC&PROD\_ULTRABLOC&R  
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 SCSIADAPTER 6.45.3.64 8/18/2004 LSI  
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 PCI standard PCI-to-PCI bridge Yes  
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 (Standard system devices) machine.inf  
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PCI standard PCI-to-PCI bridge Yes  
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PCI standard PCI-to-PCI bridge Yes  
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Not Available  
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Disk drive Yes DISKDRIVE 5.2.3790.1830  
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disk.inf Not Available  
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RAID Virtual Device Yes SYSTEM 5.2.3790.1830  
10/1/2002 American Megatrends, Inc.  
scsidev.inf Not Available  
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Available Not Available Not Available Not  
Available Not Available Not Available Not  
Available  
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EuroLogc ULTRAbloc SCSI Processor Device Not  
Available Not Available Not Available Not  
Available Not Available Not Available Not  
Available  
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V\_0017\6&18B9E3E9&0&0F0  
MegaRAID SCSI 320-2E RAID Controller Yes  
SCSIADAPTER 6.45.3.64 8/18/2004 LSI  
Logic Corp., oem0.inf Not Available  
PCI\VEN\_1000&DEV\_0408&SUBSYS\_00021000&REV\_07\  
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PCI standard PCI-to-PCI bridge Yes  
SYSTEM 5.2.3790.1830 10/1/2002  
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PCI standard PCI-to-PCI bridge Yes  
SYSTEM 5.2.3790.1830 10/1/2002  
(Standard system devices) machine.inf  
Not Available  
PCI\VEN\_8086&DEV\_2604&SUBSYS\_00000000&REV\_10\  
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PCI standard PCI-to-PCI bridge Yes  
SYSTEM 5.2.3790.1830 10/1/2002  
(Standard system devices) machine.inf  
Not Available  
PCI\VEN\_8086&DEV\_2603&SUBSYS\_00000000&REV\_10\  
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PCI standard PCI-to-PCI bridge Yes  
SYSTEM 5.2.3790.1830 10/1/2002  
(Standard system devices) machine.inf  
Not Available  
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Disk drive Yes DISKDRIVE 5.2.3790.1830  
10/1/2002 (Standard disk drives)  
disk.inf Not Available  
SCSI\DISK\VEN\_MEGARAID&PROD\_\_LD\_0\_MEGARAID&R  
EV\_6&1C3FA6A7&0&300  
RAID Virtual Device Yes SYSTEM 5.2.3790.1830  
10/1/2002 American Megatrends, Inc.

scsidev.inf Not Available  
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Available Not Available Not Available Not  
Available Not Available Not Available Not  
Available  
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EuroLogc ULTRAbloc SCSI Processor Device Not  
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MegaRAID SCSI 320-2E RAID Controller Yes  
SCSIADAPTER 6.45.3.64 8/18/2004 LSI  
Logic Corp., oem0.inf Not Available  
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PCI standard PCI-to-PCI bridge Yes  
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PCI standard PCI-to-PCI bridge Yes  
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PCI\VEN\_8086&DEV\_0332&SUBSYS\_00000000&REV\_07\  
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Disk drive Yes DISKDRIVE 5.2.3790.1830  
10/1/2002 (Standard disk drives)  
disk.inf Not Available  
SCSI\DISK\VEN\_MEGARAID&PROD\_\_LD\_0\_MEGARAID&R  
EV\_6&9FD89E2&0&300  
RAID Virtual Device Yes SYSTEM 5.2.3790.1830  
10/1/2002 American Megatrends, Inc.  
scsidev.inf Not Available  
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EuroLogc ULTRAbloc SCSI Processor Device Not  
Available Not Available Not Available Not  
Available Not Available Not Available Not  
Available  
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EuroLogc ULTRAbloc SCSI Processor Device Not  
Available Not Available Not Available Not  
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Available  
SCSI\PROCESSOR&VEN\_EUROLOGC&PROD\_ULTRABLOC&R  
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MegaRAID SCSI 320-2E RAID Controller Yes  
SCSIADAPTER 6.45.3.64 8/18/2004 LSI  
Logic Corp., oem0.inf Not Available  
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PCI standard PCI-to-PCI bridge Yes  
SYSTEM 5.2.3790.1830 10/1/2002  
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PCI standard host CPU bridge Yes SYSTEM  
5.2.3790.1830 10/1/2002 (Standard  
system devices) machine.inf Not Available  
PCI\VEN\_8086&DEV\_2600&SUBSYS\_00000000&REV\_10\  
3&1FCE7BBF&0&00  
PCI bus Yes SYSTEM 5.2.3790.1830  
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machine.inf Not Available  
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Intel Processor Yes PROCESSOR 5.2.3790.1830  
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\_EM64T\_FAMILY\_15\_MODEL\_4\15  
Intel Processor Yes PROCESSOR 5.2.3790.1830  
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10/1/2002 Intel cpu.inf Not Available
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_EM64T_FAMILY_15_MODEL_4_0
Microsoft ACPI-Compliant System Yes
SYSTEM 5.2.3790.1830 10/1/2002
Microsoft acpi.inf Not Available
ACPI_HAL\PNP0C08\0
ACPI Multiprocessor x64-based PC Yes
COMPUTER 5.2.3790.1830 10/1/2002
(Standard Computers) hal.inf Not
Available ROOT\ACPI_HAL\0000
Not Available Not Available Not Available Not
Available Not Available Not Available Not
Available Not Available Not Available Not
HTREE\ROOT\0

```

[Environment Variables]

```

Variable Value User Name
ComSpec %SystemRoot%\system32\cmd.exe <SYSTEM>
Path %SystemRoot%\system32;%SystemRoot%;%SystemRo
ot%\System32\Wbem;c:\Program Files (x86)\Microsoft SQL
Server\80\Tools\Binn\;c:\Program Files (x86)\Microsoft
SQL Server\90\Tools\Binn\;c:\Program Files
(x86)\Microsoft SQL Server\90\DTS\Binn\;c:\Program
Files (x86)\Microsoft SQL
Server\90\Tools\Binn\VSSTh1\Common7\IDE\
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windir %SystemRoot% <SYSTEM>
FP_NO_HOST_CHECK NO <SYSTEM>
OS Windows_NT <SYSTEM>
PROCESSOR_ARCHITECTURE AMD64 <SYSTEM>
PROCESSOR_LEVEL 15 <SYSTEM>
PROCESSOR_IDENTIFIER EM64T Family 15 Model 4
Stepping 8, GenuineIntel <SYSTEM>
PROCESSOR_REVISION 0408 <SYSTEM>
NUMBER_OF_PROCESSORS 16 <SYSTEM>
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<SYSTEM>
PATHEXT .COM;.EXE;.BAT;.CMD;.VBS;.VBE;.JS;.JSE;.WSF;.
WSH <SYSTEM>
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TMP %SystemRoot%\Temp <SYSTEM>
TEMP %USERPROFILE%\Local Settings\Temp NT
AUTHORITY\SYSTEM
TMP %USERPROFILE%\Local Settings\Temp NT
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TEMP %USERPROFILE%\Local Settings\Temp NT
AUTHORITY\NETWORK SERVICE
TMP %USERPROFILE%\Local Settings\Temp NT
AUTHORITY\NETWORK SERVICE
TEMP %USERPROFILE%\Local Settings\Temp
NOCONA_QUAD\Administrator
TMP %USERPROFILE%\Local Settings\Temp
NOCONA_QUAD\Administrator

```

[Print Jobs]

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

[Network Connections]

Local Name	Status	Remote Name	User Name	Type
[Running Tasks]				
Name	Path	Process ID	Priority	Min
Working Set	Version	Max Working Set	File Date	Start Time
system idle process	Not Available	Not Available	0	0
Available	Not Available	Not Available	Not	Not
Available	Not Available	Not Available	Not	Not
system	Not Available	4	8	0
smss.exe	Not Available	1413120	Not Available	Not Available
Available	Not Available	380	11	
csrss.exe	Not Available	204800	1413120	11/30/2005 4:06 AM
Available	Not Available	544	13	Not
winlogon.exe	Not Available	11/30/2005 4:06 AM	Not	Not
592	13	204800	1413120	
(srv03_sp1_rtm.050324-1447)	901.00 KB (922,624 bytes)	5.2.3790.1830	3/25/2005 9:00 AM	
services.exe	c:\windows\system32\services.exe	652	9	204800
(srv03_sp1_rtm.050324-1447)	216.50 KB (221,696 bytes)	5.2.3790.1830	3/25/2005 9:00 AM	
lsass.exe	c:\windows\system32\lsass.exe	664	9	204800
(srv03_sp1_rtm.050324-1447)	14.00 KB (14,336 bytes)	5.2.3790.1830	3/25/2005 9:00 AM	
svchost.exe	c:\windows\system32\svchost.exe	836	8	204800
(srv03_sp1_rtm.050324-1447)	24.50 KB (25,088 bytes)	5.2.3790.1830	3/25/2005 9:00 AM	
svchost.exe	Not Available	936	8	
Available	Not Available	Not Available	Not	Not
svchost.exe	c:\windows\system32\svchost.exe	1000	8	204800
(srv03_sp1_rtm.050324-1447)	24.50 KB (25,088 bytes)	5.2.3790.1830	3/25/2005 9:00 AM	
explorer.exe	c:\windows\explorer.exe	728	8	204800
AM	6.00.3790.1830 (srv03_sp1_rtm.050324-1447)	1.30 MB (1,364,480 bytes)	3/25/2005 9:00 AM	
wmiprvse.exe	Not Available	1604	8	
Available	Not Available	Not Available	Not	Not
wpabaln.exe	c:\windows\system32\wpabaln.exe	232	8	204800
(srv03_sp1_rtm.050324-1447)	33.50 KB (34,304 bytes)	5.2.3790.1830	3/25/2005 9:00 AM	
spyserv.exe	c:\windows\system32\gamserv\spyserv.exe	568	8	204800
12:52 PM	Not Available	264.00 KB (270,336 bytes)	11/25/2005 10:07 PM	
gamscm.exe	c:\windows\system32\gamserv\gamscm.exe	488		

12:52 PM	8	204800	1413120	11/30/2005
gamdrv.exe	Not Available	71.55 KB (73,266 bytes)	11/25/2005 10:07 PM	
c:\windows\system32\gamserv\gamdrv.exe	884	8	204800	1413120
12:52 PM	Not Available	Not Available	Not	Not
gamserv.exe	c:\windows\system32\gamserv\gamserv.exe	804	8	204800
12:52 PM	Not Available	Not Available	Not	Not
gamevent.exe	c:\windows\system32\gamserv\gamevent.exe	1088	8	204800
Available	Not Available	Not Available	Not	Not
gamevlog.exe	c:\windows\system32\gamserv\gamevlog.exe	2028	8	204800
Available	Not Available	Not Available	Not	Not
wmiprvse.exe	Not Available	2848	8	
Available	Not Available	Not Available	Not	Not
cmd.exe	c:\windows\system32\cmd.exe	2480	8	204800
AM	538.50 KB (551,424 bytes)	5.2.3790.1830 (srv03_sp1_rtm.050324-1447)	3/25/2005 9:00 AM	
sqlservr.exe	c:\program files (x86)\microsoft sql server\mssql.1\mssql\bin\sqlservr.exe	2784	13	204800
PM	2005.090.1399.00	27.44 MB (28,768,528 bytes)	10/14/2005 3:51 AM	
helpctr.exe	c:\windows\pchealth\helpctr\binaries\helpctr.exe	2920	8	204800
(srv03_sp1_rtm.050324-1447)	1.30 MB (1,363,456 bytes)	5.2.3790.1830	3/25/2005 9:00 AM	
helpsvc.exe	c:\windows\pchealth\helpctr\binaries\helpsvc.exe	2916	8	204800
(srv03_sp1_rtm.050324-1447)	1.52 MB (1,591,296 bytes)	5.2.3790.1830	3/25/2005 9:00 AM	

[Loaded Modules]

Name	Version	Size	File Date	Manufacturer
winlogon	5.2.3790.1830 (srv03_sp1_rtm.050324-1447)	901.00 KB (922,624 bytes)	3/25/2005 9:00 AM	Microsoft Corporation
ntdll	c:\windows\system32\winlogon.exe	5.2.3790.1830 (srv03_sp1_rtm.050324-1447)	1.20 MB (1,257,472 bytes)	3/25/2005 9:00 AM
kernel32	c:\windows\system32\ntdll.dll	5.2.3790.1830 (srv03_sp1_rtm.050324-1447)	1.43 MB (1,500,160 bytes)	3/25/2005 9:00 AM
advapi32	c:\windows\system32\kernel32.dll	5.2.3790.1830 (srv03_sp1_rtm.050324-1447)	1.00 MB (1,051,136 bytes)	3/25/2005 9:00 AM
rpcrt4	c:\windows\system32\advapi32.dll	5.2.3790.1830 (srv03_sp1_rtm.050324-1447)	1.63 MB (1,714,176 bytes)	3/25/2005 9:00 AM



AM Microsoft Corporation  
c:\windows\system32\rpcrt4.dll  
crypt32 5.131.3790.1830 (srv03\_sp1\_rtm.050324-1447)  
1.36 MB (1,428,992 bytes) 3/25/2005 9:00  
AM Microsoft Corporation  
c:\windows\system32\crypt32.dll  
msasn1 5.2.3790.1830 (srv03\_sp1\_rtm.050324-1447)  
152.50 KB (156,160 bytes) 3/25/2005 9:00  
AM Microsoft Corporation  
c:\windows\system32\msasn1.dll  
msvcrt 7.0.3790.1830 (srv03\_sp1\_rtm.050324-1447)  
508.00 KB (520,192 bytes) 3/25/2005 9:00  
AM Microsoft Corporation  
c:\windows\system32\msvcrt.dll  
user32 5.2.3790.1830 (srv03\_sp1\_rtm.050324-1447)  
1.04 MB (1,085,952 bytes) 3/25/2005 9:00  
AM Microsoft Corporation  
c:\windows\system32\user32.dll  
gdi32 5.2.3790.1830 (srv03\_sp1\_rtm.050324-1447)  
592.00 KB (606,208 bytes) 3/25/2005 9:00  
AM Microsoft Corporation  
c:\windows\system32\gdi32.dll  
nddeapi 5.2.3790.1830 (srv03\_sp1\_rtm.050324-1447)  
25.00 KB (25,600 bytes) 3/25/2005 9:00  
AM Microsoft Corporation  
c:\windows\system32\nddeapi.dll  
profmap 5.2.3790.1830 (srv03\_sp1\_rtm.050324-1447)  
36.00 KB (36,864 bytes) 3/25/2005 9:00  
AM Microsoft Corporation  
c:\windows\system32\profmap.dll  
netapi32 5.2.3790.1830 (srv03\_sp1\_rtm.050324-1447)  
589.00 KB (603,136 bytes) 3/25/2005 9:00  
AM Microsoft Corporation  
c:\windows\system32\netapi32.dll  
userenv 5.2.3790.1830 (srv03\_sp1\_rtm.050324-1447)  
1.02 MB (1,069,056 bytes) 3/25/2005 9:00  
AM Microsoft Corporation  
c:\windows\system32\userenv.dll  
psapi 5.2.3790.1830 (srv03\_sp1\_rtm.050324-1447)  
29.00 KB (29,696 bytes) 3/25/2005 9:00  
AM Microsoft Corporation  
c:\windows\system32\psapi.dll  
regapi 5.2.3790.1830 (srv03\_sp1\_rtm.050324-1447)  
108.50 KB (111,104 bytes) 3/25/2005 9:00  
AM Microsoft Corporation  
c:\windows\system32\regapi.dll  
secur32 5.2.3790.1830 (srv03\_sp1\_rtm.050324-1447)  
120.00 KB (122,880 bytes) 3/25/2005 9:00  
AM Microsoft Corporation  
c:\windows\system32\secur32.dll  
setupapi 5.2.3790.1830 (srv03\_sp1\_rtm.050324-1447)  
1.45 MB (1,523,200 bytes) 3/25/2005 9:00  
AM Microsoft Corporation  
c:\windows\system32\setupapi.dll  
version 5.2.3790.1830 (srv03\_sp1\_rtm.050324-1447)  
28.00 KB (28,672 bytes) 3/25/2005 9:00  
AM Microsoft Corporation  
c:\windows\system32\version.dll  
winsta 5.2.3790.1830 (srv03\_sp1\_rtm.050324-1447)  
89.00 KB (91,136 bytes) 3/25/2005 9:00  
AM Microsoft Corporation  
c:\windows\system32\winsta.dll  
ws2\_32 5.2.3790.1830 (srv03\_sp1\_rtm.050324-1447)  
176.50 KB (180,736 bytes) 3/25/2005 9:00  
AM Microsoft Corporation  
c:\windows\system32\ws2\_32.dll  
ws2help 5.2.3790.1830 (srv03\_sp1\_rtm.050324-1447)  
30.50 KB (31,232 bytes) 3/25/2005 9:00  
AM Microsoft Corporation  
c:\windows\system32\ws2help.dll  
msgina 5.2.3790.1830 (srv03\_sp1\_rtm.050324-1447)  
1.14 MB (1,193,472 bytes) 3/25/2005 9:00

AM Microsoft Corporation  
c:\windows\system32\msgina.dll  
shsvcs 6.00.3790.1830 (srv03\_sp1\_rtm.050324-1447)  
193.50 KB (198,144 bytes) 3/25/2005 9:00  
AM Microsoft Corporation  
c:\windows\system32\shsvcs.dll  
shlwapi 6.00.3790.1830 (srv03\_sp1\_rtm.050324-1447)  
606.50 KB (621,056 bytes) 3/25/2005 9:00  
AM Microsoft Corporation  
c:\windows\system32\shlwapi.dll  
sfc 5.2.3790.1830 (srv03\_sp1\_rtm.050324-1447)  
6.00 KB (6,144 bytes) 3/25/2005 9:00  
AM Microsoft Corporation  
c:\windows\system32\sfc.dll  
sfc\_os 5.2.3790.1830 (srv03\_sp1\_rtm.050324-1447)  
183.50 KB (187,904 bytes) 3/25/2005 9:00  
AM Microsoft Corporation  
c:\windows\system32\sfc\_os.dll  
wintrust 5.131.3790.1830 (srv03\_sp1\_rtm.050324-1447)  
297.50 KB (304,640 bytes) 3/25/2005 9:00  
AM Microsoft Corporation  
c:\windows\system32\wintrust.dll  
imagehlp 5.2.3790.1830 (srv03\_sp1\_rtm.050324-1447)  
57.50 KB (58,880 bytes) 3/25/2005 9:00  
AM Microsoft Corporation  
c:\windows\system32\imagehlp.dll  
ole32 5.2.3790.1830 (srv03\_sp1\_rtm.050324-1447)  
2.43 MB (2,543,616 bytes) 3/25/2005 9:00  
AM Microsoft Corporation  
c:\windows\system32\ole32.dll  
comctl32 6.0 (srv03\_sp1\_rtm.050324-1447) 1.51  
MB (1,584,128 bytes) 11/24/2005 3:49 PM  
AM Microsoft Corporation  
c:\windows\winsxs\amd64\_microsoft.windows.com  
mon-control\_s\_6595b64144ccfd1f\_6.0.3790.1830\_x-  
ww\_4d792d2a\comctl32.dll  
winscard 5.2.3790.1830 (srv03\_sp1\_rtm.050324-1447)  
230.00 KB (235,520 bytes) 3/25/2005 9:00  
AM Microsoft Corporation  
c:\windows\system32\winscard.dll  
wtsapi32 5.2.3790.1830 (srv03\_sp1\_rtm.050324-1447)  
29.00 KB (29,696 bytes) 3/25/2005 9:00  
AM Microsoft Corporation  
c:\windows\system32\wtsapi32.dll  
shell32 6.00.3790.1830 (srv03\_sp1\_rtm.050324-1447)  
10.01 MB (10,492,416 bytes) 3/25/2005 9:00  
AM Microsoft Corporation  
c:\windows\system32\shell32.dll  
sxs 5.2.3790.1830 (srv03\_sp1\_rtm.050324-1447)  
1.91 MB (2,003,968 bytes) 3/25/2005 9:00  
AM Microsoft Corporation  
c:\windows\system32\sxs.dll  
rsaenh 5.2.3790.1830 (srv03\_sp1\_rtm.050324-1447)  
241.96 KB (247,768 bytes) 3/25/2005 9:00  
AM Microsoft Corporation  
c:\windows\system32\rsaenh.dll  
wldap32 5.2.3790.1830 (srv03\_sp1\_rtm.050324-1447)  
390.00 KB (399,360 bytes) 3/25/2005 9:00  
AM Microsoft Corporation  
c:\windows\system32\wldap32.dll  
cscd11 5.2.3790.1830 (srv03\_sp1\_rtm.050324-1447)  
151.50 KB (155,136 bytes) 3/25/2005 9:00  
AM Microsoft Corporation  
c:\windows\system32\cscd11.dll  
dimefont 5.2.3790.1830 (srv03\_sp1\_rtm.050324-1447)  
28.00 KB (28,672 bytes) 3/25/2005 9:00  
AM Microsoft Corporation  
c:\windows\system32\dimefont.dll  
wlnotify 5.2.3790.1830 (srv03\_sp1\_rtm.050324-1447)  
148.00 KB (151,552 bytes) 3/25/2005 9:00  
AM Microsoft Corporation  
c:\windows\system32\wlnotify.dll

mpr 5.2.3790.1830 (srv03\_sp1\_rtm.050324-1447)  
115.00 KB (117,760 bytes) 3/25/2005 9:00  
AM Microsoft Corporation  
c:\windows\system32\mpr.dll  
oleaut32 5.2.3790.1830 1.06 MB (1,116,160 bytes)  
3/25/2005 9:00 AM Microsoft Corporation  
c:\windows\system32\oleaut32.dll  
winmm 5.2.3790.1830 (srv03\_sp1\_rtm.050324-1447)  
303.50 KB (310,784 bytes) 3/25/2005 9:00  
AM Microsoft Corporation  
c:\windows\system32\winmm.dll  
winspool 5.2.3790.1830 (srv03\_sp1\_rtm.050324-1447)  
247.00 KB (252,928 bytes) 3/25/2005 9:00  
AM Microsoft Corporation  
c:\windows\system32\winspool.drv  
comctl32 5.82 (srv03\_sp1\_rtm.050324-1447)  
934.50 KB (956,928 bytes) 11/24/2005 3:49  
PM Microsoft Corporation  
c:\windows\winsxs\amd64\_microsoft.windows.com  
mon-control\_s\_6595b64144ccfd1f\_5.82.3790.1830\_x-  
ww\_4d792d2a\comctl32.dll  
uxtheme 6.00.3790.1830 (srv03\_sp1\_rtm.050324-1447)  
494.50 KB (506,368 bytes) 3/25/2005 9:00  
AM Microsoft Corporation  
c:\windows\system32\uxtheme.dll  
mprapi 5.2.3790.1830 (srv03\_sp1\_rtm.050324-1447)  
154.50 KB (158,208 bytes) 3/25/2005 9:00  
AM Microsoft Corporation  
c:\windows\system32\mprapi.dll  
activeds 5.2.3790.1830 (srv03\_sp1\_rtm.050324-1447)  
348.50 KB (356,864 bytes) 3/25/2005 9:00  
AM Microsoft Corporation  
c:\windows\system32\activeds.dll  
adsltdpc 5.2.3790.1830 (srv03\_sp1\_rtm.050324-1447)  
240.50 KB (246,272 bytes) 3/25/2005 9:00  
AM Microsoft Corporation  
c:\windows\system32\adsltdpc.dll  
credui 5.2.3790.1830 (srv03\_sp1\_rtm.050324-1447)  
202.00 KB (206,848 bytes) 3/25/2005 9:00  
AM Microsoft Corporation  
c:\windows\system32\credui.dll  
atl 3.05.2284.96.50 KB (98,816 bytes)  
3/25/2005 9:00 AM Microsoft Corporation  
c:\windows\system32\atl.dll  
rtutils 5.2.3790.1830 (srv03\_sp1\_rtm.050324-1447)  
66.00 KB (67,584 bytes) 3/25/2005 9:00  
AM Microsoft Corporation  
c:\windows\system32\rtutils.dll  
samlib 5.2.3790.1830 (srv03\_sp1\_rtm.050324-1447)  
69.00 KB (70,656 bytes) 3/25/2005 9:00  
AM Microsoft Corporation  
c:\windows\system32\samlib.dll  
cscui 5.2.3790.1830 (srv03\_sp1\_rtm.050324-1447)  
441.00 KB (451,584 bytes) 3/25/2005 9:00  
AM Microsoft Corporation  
c:\windows\system32\cscui.dll  
clbcatq 2001.12.4720.1830 (srv03\_sp1\_rtm.050324-1447)  
865.00 KB (885,760 bytes) 11/24/2005 7:12  
PM Microsoft Corporation  
c:\windows\system32\clbcatq.dll  
comres 2001.12.4720.1830 (srv03\_sp1\_rtm.050324-1447)  
779.50 KB (798,208 bytes) 3/25/2005 9:00  
AM Microsoft Corporation  
c:\windows\system32\comres.dll  
ntmarta 5.2.3790.1830 (srv03\_sp1\_rtm.050324-1447)  
222.50 KB (227,840 bytes) 3/25/2005 9:00  
AM Microsoft Corporation  
c:\windows\system32\ntmarta.dll  
xpsp2res 5.2.3790.1830 (srv03\_sp1\_rtm.050324-1447)  
2.77 MB (2,899,456 bytes) 3/25/2005 9:00  
AM Microsoft Corporation  
c:\windows\system32\xpsp2res.dll

wbemprox 5.2.3790.1830 (srv03\_sp1\_rtm.050324-1447)  
38.00 KB (38,912 bytes) 11/24/2005 7:12  
PM Microsoft Corporation  
c:\windows\system32\wbem\wbemprox.dll

wbemcomm 5.2.3790.1830 (srv03\_sp1\_rtm.050324-1447)  
524.00 KB (536,576 bytes) 3/25/2005 9:00  
AM Microsoft Corporation  
c:\windows\system32\wbem\wbemcomm.dll

wbemsvcs 5.2.3790.1830 (srv03\_sp1\_rtm.050324-1447)  
58.00 KB (59,392 bytes) 11/24/2005 7:12  
PM Microsoft Corporation  
c:\windows\system32\wbem\wbemsvcs.dll

fastprox 5.2.3790.1830 (srv03\_sp1\_rtm.050324-1447)  
866.50 KB (887,296 bytes) 11/24/2005 7:12  
PM Microsoft Corporation  
c:\windows\system32\wbem\fastprox.dll

msvcpl60 7.0.3790.1830 (srv03\_sp1\_rtm.050324-1447)  
919.50 KB (941,568 bytes) 3/25/2005 9:00  
AM Microsoft Corporation  
c:\windows\system32\msvcpl60.dll

ntdsapi 5.2.3790.1830 (srv03\_sp1\_rtm.050324-1447)  
127.50 KB (130,560 bytes) 3/25/2005 9:00  
AM Microsoft Corporation  
c:\windows\system32\ntdsapi.dll

dnsapi 5.2.3790.1830 (srv03\_sp1\_rtm.050324-1447)  
297.50 KB (304,640 bytes) 3/25/2005 9:00  
AM Microsoft Corporation  
c:\windows\system32\dnsapi.dll

services 5.2.3790.1830 (srv03\_sp1\_rtm.050324-1447)  
216.50 KB (221,696 bytes) 3/25/2005 9:00  
AM Microsoft Corporation  
c:\windows\system32\services.exe

ncobjapi 5.2.3790.1830 (srv03\_sp1\_rtm.050324-1447)  
80.00 KB (81,920 bytes) 3/25/2005 9:00  
AM Microsoft Corporation  
c:\windows\system32\ncobjapi.dll

scesrv 5.2.3790.1830 (srv03\_sp1\_rtm.050324-1447)  
594.50 KB (608,768 bytes) 3/25/2005 9:00  
AM Microsoft Corporation  
c:\windows\system32\scesrv.dll

authz 5.2.3790.1830 (srv03\_sp1\_rtm.050324-1447)  
167.00 KB (171,008 bytes) 3/25/2005 9:00  
AM Microsoft Corporation  
c:\windows\system32\authz.dll

umpnpgmr 5.2.3790.1830 (srv03\_sp1\_rtm.050324-1447)  
205.00 KB (209,920 bytes) 3/25/2005 9:00  
AM Microsoft Corporation  
c:\windows\system32\umpnpgmr.dll

eventlog 5.2.3790.1830 (srv03\_sp1\_rtm.050324-1447)  
127.00 KB (130,048 bytes) 3/25/2005 9:00  
AM Microsoft Corporation  
c:\windows\system32\eventlog.dll

cabinet 5.2.3790.1830 (srv03\_sp1\_rtm.050324-1447)  
138.50 KB (141,824 bytes) 3/25/2005 9:00  
AM Microsoft Corporation  
c:\windows\system32\cabinet.dll

cryptnet 5.131.3790.1830 (srv03\_sp1\_rtm.050324-1447)  
108.50 KB (111,104 bytes) 3/25/2005 9:00  
AM Microsoft Corporation  
c:\windows\system32\cryptnet.dll

sensapi 5.2.3790.1830 (srv03\_sp1\_rtm.050324-1447)  
10.50 KB (10,752 bytes) 3/25/2005 9:00  
AM Microsoft Corporation  
c:\windows\system32\sensapi.dll

imm32 5.2.3790.1830 (srv03\_sp1\_rtm.050324-1447)  
208.00 KB (212,992 bytes) 3/25/2005 9:00  
AM Microsoft Corporation  
c:\windows\system32\imm32.dll

apphelp 5.2.3790.1830 (srv03\_sp1\_rtm.050324-1447)  
241.00 KB (246,784 bytes) 3/25/2005 9:00  
AM Microsoft Corporation  
c:\windows\system32\apphelp.dll

lsass 5.2.3790.1830 (srv03\_sp1\_rtm.050324-1447)  
14.00 KB (14,336 bytes) 3/25/2005 9:00  
AM Microsoft Corporation  
c:\windows\system32\lsass.exe

lsasrv 5.2.3790.1830 (srv03\_sp1\_rtm.050324-1447)  
1.50 MB (1,568,256 bytes) 3/25/2005 9:00  
AM Microsoft Corporation  
c:\windows\system32\lsasrv.dll

samsrv 5.2.3790.1830 (srv03\_sp1\_rtm.050324-1447)  
1.01 MB (1,059,328 bytes) 3/25/2005 9:00  
AM Microsoft Corporation  
c:\windows\system32\samsrv.dll

cryptdll 5.2.3790.1830 (srv03\_sp1\_rtm.050324-1447)  
47.00 KB (48,128 bytes) 3/25/2005 9:00  
AM Microsoft Corporation  
c:\windows\system32\cryptdll.dll

msprivs 5.2.3790.1830 (srv03\_sp1\_rtm.050324-1447)  
47.50 KB (48,640 bytes) 3/25/2005 9:00  
AM Microsoft Corporation  
c:\windows\system32\msprivs.dll

kerberos 5.2.3790.1830 (srv03\_sp1\_rtm.050324-1447)  
698.00 KB (714,752 bytes) 3/25/2005 9:00  
AM Microsoft Corporation  
c:\windows\system32\kerberos.dll

msv1\_0 5.2.3790.1830 (srv03\_sp1\_rtm.050324-1447)  
253.00 KB (259,072 bytes) 3/25/2005 9:00  
AM Microsoft Corporation  
c:\windows\system32\msv1\_0.dll

iphlpapi 5.2.3790.1830 (srv03\_sp1\_rtm.050324-1447)  
177.00 KB (181,248 bytes) 3/25/2005 9:00  
AM Microsoft Corporation  
c:\windows\system32\iphlpapi.dll

netlogon 5.2.3790.1830 (srv03\_sp1\_rtm.050324-1447)  
666.00 KB (681,984 bytes) 3/25/2005 9:00  
AM Microsoft Corporation  
c:\windows\system32\netlogon.dll

w32time 5.2.3790.1830 (srv03\_sp1\_rtm.050324-1447)  
400.50 KB (410,112 bytes) 3/25/2005 9:00  
AM Microsoft Corporation  
c:\windows\system32\w32time.dll

schannel 5.2.3790.1830 (srv03\_sp1\_rtm.050324-1447)  
248.00 KB (253,952 bytes) 3/25/2005 9:00  
AM Microsoft Corporation  
c:\windows\system32\schannel.dll

wdigest 5.2.3790.1830 (srv03\_sp1\_rtm.050324-1447)  
130.50 KB (133,632 bytes) 3/25/2005 9:00  
AM Microsoft Corporation  
c:\windows\system32\wdigest.dll

rassfm 5.2.3790.1830 (srv03\_sp1\_rtm.050324-1447)  
36.00 KB (36,864 bytes) 3/25/2005 9:00  
AM Microsoft Corporation  
c:\windows\system32\rassfm.dll

kdcsvc 5.2.3790.1830 (srv03\_sp1\_rtm.050324-1447)  
409.00 KB (418,816 bytes) 3/25/2005 9:00  
AM Microsoft Corporation  
c:\windows\system32\kdcsvc.dll

ntdsa 5.2.3790.1830 (srv03\_sp1\_rtm.050324-1447)  
2.81 MB (2,948,096 bytes) 3/25/2005 9:00  
AM Microsoft Corporation  
c:\windows\system32\ntdsa.dll

esent 5.2.3790.1830 (srv03\_sp1\_rtm.050324-1447)  
2.26 MB (2,366,976 bytes) 3/25/2005 9:00  
AM Microsoft Corporation  
c:\windows\system32\esent.dll

ntdsatq 5.2.3790.1830 (srv03\_sp1\_rtm.050324-1447)  
51.00 KB (52,224 bytes) 3/25/2005 9:00  
AM Microsoft Corporation  
c:\windows\system32\ntdsatq.dll

mswsock 5.2.3790.1830 (srv03\_sp1\_rtm.050324-1447)  
478.00 KB (489,472 bytes) 3/25/2005 9:00  
AM Microsoft Corporation  
c:\windows\system32\mswsock.dll

scecli 5.2.3790.1830 (srv03\_sp1\_rtm.050324-1447)  
308.00 KB (315,392 bytes) 3/25/2005 9:00  
AM Microsoft Corporation  
c:\windows\system32\scecli.dll

ws03res 5.2.3790.1830 (srv03\_sp1\_rtm.050324-1447)  
794.00 KB (813,056 bytes) 3/25/2005 9:00  
AM Microsoft Corporation  
c:\windows\system32\ws03res.dll

pstorsvc 5.2.3790.1830 (srv03\_sp1\_rtm.050324-1447)  
36.00 KB (36,864 bytes) 3/25/2005 9:00  
AM Microsoft Corporation  
c:\windows\system32\pstorsvc.dll

psbase 5.2.3790.1830 (srv03\_sp1\_rtm.050324-1447)  
124.00 KB (126,976 bytes) 3/25/2005 9:00  
AM Microsoft Corporation  
c:\windows\system32\psbase.dll

hnetcfg 5.2.3790.1830 (srv03\_sp1\_rtm.050324-1447)  
561.00 KB (574,464 bytes) 3/25/2005 9:00  
AM Microsoft Corporation  
c:\windows\system32\hnetcfg.dll

wshtccip 5.2.3790.1830 (srv03\_sp1\_rtm.050324-1447)  
29.00 KB (29,696 bytes) 3/25/2005 9:00  
AM Microsoft Corporation  
c:\windows\system32\wshtccip.dll

dssenh 5.2.3790.1830 (srv03\_sp1\_rtm.050324-1447)  
226.96 KB (232,408 bytes) 3/25/2005 9:00  
AM Microsoft Corporation  
c:\windows\system32\dssenh.dll

svchost 5.2.3790.1830 (srv03\_sp1\_rtm.050324-1447)  
24.50 KB (25,088 bytes) 3/25/2005 9:00  
AM Microsoft Corporation  
c:\windows\system32\svchost.exe

rpcss 5.2.3790.1830 (srv03\_sp1\_rtm.050324-1447)  
672.00 KB (688,128 bytes) 3/25/2005 9:00  
AM Microsoft Corporation  
c:\windows\system32\rpcss.dll

aelupsvc 5.2.3790.1830 (srv03\_sp1\_rtm.050324-1447)  
31.50 KB (32,256 bytes) 3/25/2005 9:00  
AM Microsoft Corporation  
c:\windows\system32\aelupsvc.dll

dmserver 5.2.3790.1830 (srv03\_sp1\_rtm.050324-1447)  
36.50 KB (37,376 bytes) 3/25/2005 9:00  
AM Microsoft Corporation  
c:\windows\system32\dmserver.dll

es 2001.12.4720.1830 (srv03\_sp1\_rtm.050324-1447)  
357.00 KB (365,568 bytes) 3/25/2005 9:00  
AM Microsoft Corporation  
c:\windows\system32\es.dll

seclogon 5.2.3790.1830 (srv03\_sp1\_rtm.050324-1447)  
27.50 KB (28,160 bytes) 3/25/2005 9:00  
AM Microsoft Corporation  
c:\windows\system32\seclogon.dll

wmisvc 5.2.3790.1830 (srv03\_sp1\_rtm.050324-1447)  
227.00 KB (232,448 bytes) 11/24/2005 7:12  
PM Microsoft Corporation  
c:\windows\system32\wbem\wmisvc.dll

vssapi 5.2.3790.1830 (srv03\_sp1\_rtm.050324-1447)  
1.26 MB (1,320,960 bytes) 3/25/2005 9:00  
AM Microsoft Corporation  
c:\windows\system32\vssapi.dll

wiarpc 5.2.3790.1830 (srv03\_sp1\_rtm.050324-1447)  
57.00 KB (58,368 bytes) 3/25/2005 9:00  
AM Microsoft Corporation  
c:\windows\system32\wiarpc.dll

comsvcs 2001.12.4720.1830 (srv03\_sp1\_rtm.050324-1447)  
2.06 MB (2,156,544 bytes) 11/24/2005 7:12  
PM Microsoft Corporation  
c:\windows\system32\comsvcs.dll

sens 5.2.3790.1830 (srv03\_sp1\_rtm.050324-1447)  
63.50 KB (65,024 bytes) 3/25/2005 9:00  
AM Microsoft Corporation  
c:\windows\system32\sens.dll

wbemcore 5.2.3790.1830 (srv03\_sp1\_rtm.050324-1447)  
1.24 MB (1,299,968 bytes) 11/24/2005 7:12  
PM Microsoft Corporation  
c:\windows\system32\wbem\wbemcore.dll

esscli 5.2.3790.1830 (srv03\_sp1\_rtm.050324-1447)  
626.50 KB (641,536 bytes) 11/24/2005 7:12  
PM Microsoft Corporation  
c:\windows\system32\wbem\esscli.dll

wmiutils 5.2.3790.1830 (srv03\_sp1\_rtm.050324-1447)  
171.00 KB (175,104 bytes) 11/24/2005 7:12  
PM Microsoft Corporation  
c:\windows\system32\wbem\wmiutils.dll

repdrvfs 5.2.3790.1830 (srv03\_sp1\_rtm.050324-1447)  
353.50 KB (361,984 bytes) 11/24/2005 7:12  
PM Microsoft Corporation  
c:\windows\system32\wbem\repdrvfs.dll

wmiprvsd 5.2.3790.1830 (srv03\_sp1\_rtm.050324-1447)  
743.00 KB (760,832 bytes) 11/24/2005 7:12  
PM Microsoft Corporation  
c:\windows\system32\wbem\wmiprvsd.dll

wbemess 5.2.3790.1830 (srv03\_sp1\_rtm.050324-1447)  
532.50 KB (545,280 bytes) 11/24/2005 7:12  
PM Microsoft Corporation  
c:\windows\system32\wbem\wbemess.dll

netman 5.2.3790.1830 (srv03\_sp1\_rtm.050324-1447)  
457.00 KB (467,968 bytes) 3/25/2005 9:00  
AM Microsoft Corporation  
c:\windows\system32\netman.dll

netshell 5.2.3790.1830 (srv03\_sp1\_rtm.050324-1447)  
2.32 MB (2,437,120 bytes) 3/25/2005 9:00  
AM Microsoft Corporation  
c:\windows\system32\netshell.dll

clusapi 5.2.3790.1830 (srv03\_sp1\_rtm.050324-1447)  
127.00 KB (130,048 bytes) 3/25/2005 9:00  
AM Microsoft Corporation  
c:\windows\system32\clusapi.dll

rasapi32 5.2.3790.1830 (srv03\_sp1\_rtm.050324-1447)  
410.00 KB (419,840 bytes) 3/25/2005 9:00  
AM Microsoft Corporation  
c:\windows\system32\rasapi32.dll

rasman 5.2.3790.1830 (srv03\_sp1\_rtm.050324-1447)  
95.50 KB (97,792 bytes) 3/25/2005 9:00  
AM Microsoft Corporation  
c:\windows\system32\rasman.dll

tapi32 5.2.3790.1830 (srv03\_sp1\_rtm.050324-1447)  
332.50 KB (340,480 bytes) 3/25/2005 9:00  
AM Microsoft Corporation  
c:\windows\system32\tapi32.dll

wininet 6.00.3790.1830 (srv03\_sp1\_rtm.050324-1447)  
1.13 MB (1,186,304 bytes) 3/25/2005 9:00  
AM Microsoft Corporation  
c:\windows\system32\wininet.dll

wzcsapi 5.2.3790.1830 (srv03\_sp1\_rtm.050324-1447)  
49.00 KB (50,176 bytes) 3/24/2005 2:35  
PM Microsoft Corporation  
c:\windows\system32\wzcsapi.dll

wzcsvc 5.2.3790.1830 (srv03\_sp1\_rtm.050324-1447)  
492.00 KB (503,808 bytes) 3/24/2005 2:35  
PM Microsoft Corporation  
c:\windows\system32\wzcsvc.dll

wmi 5.2.3790.1830 (srv03\_sp1\_rtm.050324-1447)  
5.50 KB (5,632 bytes) 3/25/2005 9:00  
AM Microsoft Corporation  
c:\windows\system32\wmi.dll

dhcpcsvc 5.2.3790.1830 (srv03\_sp1\_rtm.050324-1447)  
219.00 KB (224,256 bytes) 3/25/2005 9:00  
AM Microsoft Corporation  
c:\windows\system32\dhcpcsvc.dll

rasdlg 5.2.3790.1830 (srv03\_sp1\_rtm.050324-1447)  
859.50 KB (880,128 bytes) 3/25/2005 9:00  
AM Microsoft Corporation  
c:\windows\system32\rasdlg.dll

ncprov 5.2.3790.1830 (srv03\_sp1\_rtm.050324-1447)  
73.00 KB (74,752 bytes) 11/24/2005 7:12  
PM Microsoft Corporation  
c:\windows\system32\wbem\ncprov.dll

pchsvc 5.2.3790.1830 (srv03\_sp1\_rtm.050324-1447)  
76.00 KB (77,824 bytes) 11/24/2005 7:14  
PM Microsoft Corporation  
c:\windows\pchealth\helpctr\binaries\pchsvc.dll

ll

wkssvc 5.2.3790.1830 (srv03\_sp1\_rtm.050324-1447)  
221.00 KB (226,304 bytes) 3/25/2005 9:00  
AM Microsoft Corporation  
c:\windows\system32\wkssvc.dll

srvsvc 5.2.3790.1830 (srv03\_sp1\_rtm.050324-1447)  
156.50 KB (160,256 bytes) 3/25/2005 9:00  
AM Microsoft Corporation  
c:\windows\system32\srvsvc.dll

browser 5.2.3790.1830 (srv03\_sp1\_rtm.050324-1447)  
125.50 KB (128,512 bytes) 3/25/2005 9:00  
AM Microsoft Corporation  
c:\windows\system32\browser.dll

netrap 5.2.3790.1830 (srv03\_sp1\_rtm.050324-1447)  
26.00 KB (26,624 bytes) 3/25/2005 9:00  
AM Microsoft Corporation  
c:\windows\system32\netrap.dll

cryptsvc 5.2.3790.1830 (srv03\_sp1\_rtm.050324-1447)  
114.00 KB (116,736 bytes) 3/25/2005 9:00  
AM Microsoft Corporation  
c:\windows\system32\cryptsvc.dll

certcli 5.2.3790.1830 (srv03\_sp1\_rtm.050324-1447)  
372.00 KB (380,928 bytes) 3/25/2005 9:00  
AM Microsoft Corporation  
c:\windows\system32\certcli.dll

explorer 6.00.3790.1830 (srv03\_sp1\_rtm.050324-1447)  
1.30 MB (1,364,480 bytes) 3/25/2005 9:00  
AM Microsoft Corporation  
c:\windows\explorer.exe

browseui 6.00.3790.1830 (srv03\_sp1\_rtm.050324-1447)  
1.53 MB (1,601,536 bytes) 3/25/2005 9:00  
AM Microsoft Corporation  
c:\windows\system32\browseui.dll

shdocvw 6.00.3790.1830 (srv03\_sp1\_rtm.050324-1447)  
2.30 MB (2,416,128 bytes) 3/25/2005 9:00  
AM Microsoft Corporation  
c:\windows\system32\shdocvw.dll

cryptui 5.131.3790.1830 (srv03\_sp1\_rtm.050324-1447)  
705.50 KB (722,432 bytes) 3/25/2005 9:00  
AM Microsoft Corporation  
c:\windows\system32\cryptui.dll

themeui 6.00.3790.1830 (srv03\_sp1\_rtm.050324-1447)  
530.50 KB (543,232 bytes) 3/25/2005 9:00  
AM Microsoft Corporation  
c:\windows\system32\themeui.dll

msimg32 5.2.3790.1830 (srv03\_sp1\_rtm.050324-1447)  
6.50 KB (6,656 bytes) 3/25/2005 9:00  
AM Microsoft Corporation  
c:\windows\system32\msimg32.dll

linkinfo 5.2.3790.1830 (srv03\_sp1\_rtm.050324-1447)  
30.00 KB (30,720 bytes) 3/25/2005 9:00  
AM Microsoft Corporation  
c:\windows\system32\linkinfo.dll

ntshrui 6.00.3790.1830 (srv03\_sp1\_rtm.050324-1447)  
184.00 KB (188,416 bytes) 3/25/2005 9:00  
AM Microsoft Corporation  
c:\windows\system32\ntshrui.dll

webcheck 6.00.3790.1830 (srv03\_sp1\_rtm.050324-1447)  
439.00 KB (449,536 bytes) 3/25/2005 9:00  
AM Microsoft Corporation  
c:\windows\system32\webcheck.dll

wsock32 5.2.3790.1830 (srv03\_sp1\_rtm.050324-1447)  
24.50 KB (25,088 bytes) 3/25/2005 9:00

AM Microsoft Corporation  
c:\windows\system32\wsock32.dll

stobjct 5.2.3790.1830 (srv03\_sp1\_rtm.050324-1447)  
142.50 KB (145,920 bytes) 3/25/2005 9:00  
AM Microsoft Corporation  
c:\windows\system32\stobjct.dll

batmeter 6.00.3790.1830 (srv03\_sp1\_rtm.050324-1447)  
41.50 KB (42,496 bytes) 3/25/2005 9:00  
AM Microsoft Corporation  
c:\windows\system32\batmeter.dll

powrprof 6.00.3790.1830 (srv03\_sp1\_rtm.050324-1447)  
32.50 KB (33,280 bytes) 3/25/2005 9:00  
AM Microsoft Corporation  
c:\windows\system32\powrprof.dll

drprov 5.2.3790.1830 (srv03\_sp1\_rtm.050324-1447)  
24.00 KB (24,576 bytes) 3/25/2005 9:00  
AM Microsoft Corporation  
c:\windows\system32\drprov.dll

ntlanman 5.2.3790.1830 (srv03\_sp1\_rtm.050324-1447)  
71.50 KB (73,216 bytes) 3/25/2005 9:00  
AM Microsoft Corporation  
c:\windows\system32\ntlanman.dll

netui0 5.2.3790.1830 (srv03\_sp1\_rtm.050324-1447)  
130.00 KB (133,120 bytes) 3/25/2005 9:00  
AM Microsoft Corporation  
c:\windows\system32\netui0.dll

netuil 5.2.3790.1830 (srv03\_sp1\_rtm.050324-1447)  
338.50 KB (346,624 bytes) 3/25/2005 9:00  
AM Microsoft Corporation  
c:\windows\system32\netuil.dll

davclnt 5.2.3790.1830 (srv03\_sp1\_rtm.050324-1447)  
38.00 KB (38,912 bytes) 3/25/2005 9:00  
AM Microsoft Corporation  
c:\windows\system32\davclnt.dll

browseui 6.00.3790.1830 (srv03\_sp1\_rtm.050324-1447)  
63.00 KB (64,512 bytes) 3/25/2005 9:00  
AM Microsoft Corporation  
c:\windows\system32\browseui.dll

urlmon 6.00.3790.1830 (srv03\_sp1\_rtm.050324-1447)  
1.02 MB (1,074,176 bytes) 3/25/2005 9:00  
AM Microsoft Corporation  
c:\windows\system32\urlmon.dll

mlang 6.00.3790.1830 (srv03\_sp1\_rtm.050324-1447)  
686.00 KB (702,464 bytes) 3/25/2005 9:00  
AM Microsoft Corporation  
c:\windows\system32\mlang.dll

shdoclc 6.00.3790.1830 (srv03\_sp1\_rtm.050324-1447)  
589.50 KB (603,648 bytes) 3/25/2005 9:00  
AM Microsoft Corporation  
c:\windows\system32\shdoclc.dll

mydocs 6.00.3790.1830 (srv03\_sp1\_rtm.050324-1447)  
101.00 KB (103,424 bytes) 3/25/2005 9:00  
AM Microsoft Corporation  
c:\windows\system32\mydocs.dll

jscrip 5.6.0.8827 974.50 KB (997,888 bytes)  
3/25/2005 9:00 AM Microsoft Corporation  
c:\windows\system32\jscrip.dll

winnr 5.2.3790.1830 (srv03\_sp1\_rtm.050324-1447)  
30.00 KB (30,720 bytes) 3/25/2005 9:00  
AM Microsoft Corporation  
c:\windows\system32\winnr.dll

dfshim 2.0.50727.42 (RTM.050727-4200) 95.00  
KB (97,280 bytes) 9/22/2005 11:52 PM Microsoft  
Corporation c:\windows\system32\dfshim.dll

mscoree 2.0.50727.42 (RTM.050727-4200)  
441.00 KB (451,584 bytes) 9/22/2005 11:37  
PM Microsoft Corporation  
c:\windows\system32\mscoree.dll

rasadhlp 5.2.3790.1830 (srv03\_sp1\_rtm.050324-1447)  
12.00 KB (12,288 bytes) 3/25/2005 9:00

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AM      Microsoft Corporation
wpabaln 5.2.3790.1830 (srv03_sp1_rtm.050324-1447)
33.50 KB (34,304 bytes) 3/25/2005 9:00
AM      Microsoft Corporation
spyserv c:\windows\system32\wpabaln.exe
Not Available 264.00 KB (270,336 bytes)
11/25/2005 10:07 PM Not Available
wow64 c:\windows\system32\wow64\gamserv\spyserv.exe
5.2.3790.1830 (srv03_sp1_rtm.050324-1447)
245.00 KB (250,880 bytes) 3/25/2005 9:00
AM      Microsoft Corporation
wow64win c:\windows\system32\wow64.dll
5.2.3790.1830 (srv03_sp1_rtm.050324-1447)
280.00 KB (286,720 bytes) 3/25/2005 9:00
AM      Microsoft Corporation
wow64cpu c:\windows\system32\wow64win.dll
5.2.3790.1830 (srv03_sp1_rtm.050324-1447)
18.50 KB (18,944 bytes) 3/25/2005 9:00
AM      Microsoft Corporation
gamscm c:\windows\system32\wow64cpu.dll
Not Available 71.55 KB (73,266 bytes)
11/25/2005 10:07 PM Not Available
c:\windows\system32\gamserv\gamscm.exe
" c:\windows\system32\gamserv\gamdrv.exe"
" c:\windows\system32\gamserv\gamdrv.exe"
" c:\windows\system32\gamserv\gamserv.exe"
" c:\windows\system32\gamserv\gamserv.exe"
" c:\windows\system32\gamserv\gamevent.exe"
" c:\windows\system32\gamserv\gamevent.exe"
" c:\windows\system32\gamserv\gamevlog.exe"
" c:\windows\system32\gamserv\gamevlog.exe"
cmd 5.2.3790.1830 (srv03_sp1_rtm.050324-1447)
538.50 KB (551,424 bytes) 3/25/2005 9:00
AM      Microsoft Corporation
sqlservr c:\windows\system32\cmd.exe
2005.090.1399.00 27.44 MB (28,768,528
bytes) 10/14/2005 3:51 AM Microsoft Corporation
c:\program files (x86)\microsoft sql
server\mssql\bin\sqlservr.exe
helpctr 5.2.3790.1830 (srv03_sp1_rtm.050324-1447)
1.30 MB (1,363,456 bytes) 11/24/2005 7:14
PM      Microsoft Corporation
c:\windows\pchealth\helpctr\binaries\helpctr.
exe
hcappres 5.2.3790.1830 (srv03_sp1_rtm.050324-1447)
7.50 KB (7,680 bytes) 11/24/2005 7:14
PM      Microsoft Corporation
c:\windows\pchealth\helpctr\binaries\hcappres
.dll
itss 5.2.3790.1830 (srv03_sp1_rtm.050324-1447)
208.00 KB (212,992 bytes) 3/25/2005 9:00
AM      Microsoft Corporation
c:\windows\system32\itss.dll
msxml3 8.70.1104.0 2.04 MB (2,141,184 bytes)
3/25/2005 9:00 AM Microsoft Corporation
c:\windows\system32\msxml3.dll
pchshell 5.2.3790.1830 (srv03_sp1_rtm.050324-1447)
155.00 KB (158,720 bytes) 11/24/2005 7:14
PM      Microsoft Corporation
c:\windows\pchealth\helpctr\binaries\pchshell
.dll
mshtml 6.00.3790.1830 (srv03_sp1_rtm.050324-1447)
5.65 MB (5,928,448 bytes) 3/25/2005 9:00

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AM      Microsoft Corporation
msls31 c:\windows\system32\mshtml.dll
3.10.349.0 357.00 KB (365,568 bytes)
3/25/2005 9:00 AM Microsoft Corporation
msimtf c:\windows\system32\msls31.dll
5.2.3790.1830 (srv03_sp1_rtm.050324-1447)
380.50 KB (389,632 bytes) 3/25/2005 9:00
AM      Microsoft Corporation
msctf c:\windows\system32\msimtf.dll
5.2.3790.1830 (srv03_sp1_rtm.050324-1447)
617.50 KB (632,320 bytes) 3/25/2005 9:00
AM      Microsoft Corporation
mshtml c:\windows\system32\msctf.dll
6.00.3790.1830 (srv03_sp1_rtm.050324-1447)
905.50 KB (927,232 bytes) 3/25/2005 9:00
AM      Microsoft Corporation
vbscript c:\windows\system32\mshtml.dll
5.6.0.8827 646.50 KB (662,016 bytes)
3/25/2005 9:00 AM Microsoft Corporation
c:\windows\system32\vbscript.dll
msinfo 5.2.3790.1830 (srv03_sp1_rtm.050324-1447)
636.00 KB (651,264 bytes) 11/24/2005 7:14
PM      Microsoft Corporation
c:\windows\pchealth\helpctr\binaries\msinfo.d
ll
mfc42u 6.50.9146.0 1.39 MB (1,462,272 bytes)
3/25/2005 9:00 AM Microsoft Corporation
c:\windows\system32\mfc42u.dll
comdlg32 6.00.3790.1830 (srv03_sp1_rtm.050324-1447)
446.50 KB (457,216 bytes) 3/25/2005 9:00
AM      Microsoft Corporation
riched32 c:\windows\system32\comdlg32.dll
5.2.3790.1830 (srv03_sp1_rtm.050324-1447)
7.00 KB (7,168 bytes) 3/25/2005 9:00
AM      Microsoft Corporation
riched20 c:\windows\system32\riched32.dll
5.31.23.1224 1.10 MB (1,157,120 bytes)
3/25/2005 9:00 AM Microsoft Corporation
c:\windows\system32\riched20.dll
helpsvc 5.2.3790.1830 (srv03_sp1_rtm.050324-1447)
1.52 MB (1,591,296 bytes) 11/24/2005 7:14
PM      Microsoft Corporation
c:\windows\pchealth\helpctr\binaries\helpsvc.
exe
[Services]
Display Name Name State Start Mode
Service Type Path Error Control
Start Name Tag ID
Application Experience Lookup Service AeLookupSvc
Running Auto Share Process
c:\windows\system32\svchost.exe -k netsvcs
Normal LocalSystem 0
Alerter Alerter Stopped Manual Share Process
c:\windows\system32\svchost.exe -k
LocalService Normal NT AUTHORITY\LocalService
0
Application Layer Gateway Service ALG
Stopped Disabled Own Process
c:\windows\system32\alg.exe Normal NT
AUTHORITY\LocalService 0
Application Management AppMgmt Stopped
Disabled Share Process
c:\windows\system32\svchost.exe -k netsvcs
Normal LocalSystem 0
ASP.NET State Service aspnet_state
Stopped Manual Own Process
c:\windows\microsoft.net\framework64\v2.0.507
27\aspnet_state.exe Normal NT
AUTHORITY\NetworkService 0

```

```

Windows Audio AudioSrv Stopped Disabled Share
Process c:\windows\system32\svchost.exe -k netsvcs
Normal LocalSystem 0
Background Intelligent Transfer Service BITS
Stopped Disabled Share Process
c:\windows\system32\svchost.exe -k netsvcs
Normal LocalSystem 0
Computer Browser Browser Stopped Manual Share
Process c:\windows\system32\svchost.exe -k netsvcs
Normal LocalSystem 0
Indexing Service CIsvc Stopped Disabled Share
Process c:\windows\system32\cisvc.exe Normal
LocalSystem 0
Clipboard Clipsrv Stopped Disabled Own Process
c:\windows\system32\clipsrv.exe
Normal LocalSystem 0
.NET Runtime Optimization Service v2.0.50727_x86
clr_optimization_v2.0.50727_32
Stopped Manual Own Process
c:\windows\microsoft.net\framework\v2.0.50727
\mscorlib.exe Ignore LocalSystem 0
.NET Runtime Optimization Service v2.0.50727_x64
clr_optimization_v2.0.50727_64
Stopped Manual Own Process
c:\windows\microsoft.net\framework64\v2.0.507
27\mscorlib.exe Ignore LocalSystem 0
COM+ System Application COMSysApp Stopped
Disabled Own Process
c:\windows\system32\clbcatq.dll
/processid:{02d4b3f1-fd88-11d1-960d-00805fc79235}
Normal LocalSystem 0
Cryptographic Services CryptSvc Running
Manual Share Process
c:\windows\system32\svchost.exe -k netsvcs
Normal LocalSystem 0
DCOM Server Process Launcher DcomLaunch
Running Auto Share Process
c:\windows\system32\svchost.exe -k dcomlaunch
Normal LocalSystem 0
Distributed File System Dfs Stopped
Disabled Own Process
c:\windows\system32\dfsvc.exe
Normal LocalSystem 0
DHCP Client Dhcp Stopped Disabled Share
Process c:\windows\system32\svchost.exe -k
networkservice Normal NT
AUTHORITY\NetworkService 0
Logical Disk Manager Administrative Service
dmdadmin Stopped Manual Share Process
c:\windows\system32\dmdadmin.exe /com
Normal LocalSystem 0
Logical Disk Manager dmserver Running Auto
Share Process
c:\windows\system32\svchost.exe -k netsvcs
Normal LocalSystem 0
DNS Client Dnscache Stopped Disabled Share
Process c:\windows\system32\svchost.exe -k
networkservice Normal NT
AUTHORITY\NetworkService 0
Error Reporting Service ERSvc Stopped
Disabled Share Process
c:\windows\system32\svchost.exe -k winerr
Ignore LocalSystem 0
Event Log Eventlog Running Auto Share Process
c:\windows\system32\services.exe
Normal LocalSystem 0
COM+ Event System EventSystem Running Auto
Share Process
c:\windows\system32\svchost.exe -k netsvcs
Normal LocalSystem 0

```

```

Mylex Global Array Manager Server gamscm
Running Manual Own Process
c:\windows\system32\gamscm.exe
Normal LocalSystem 0
Help and Support helpsvcs Running Manual Share
Process c:\windows\system32\svchost.exe -k netsvcs
Normal LocalSystem 0
HID Input Service HidServ Stopped Disabled Share
Process c:\windows\system32\svchost.exe -k netsvcs
Normal LocalSystem 0
HTTP SSL HTTPFilter Stopped Disabled Share
Process c:\windows\system32\lsass.exe Normal
LocalSystem 0
IAS Jet Database Access IASJet Stopped
Disabled Share Process
c:\windows\system32\svchost.exe -k iasjet
Normal LocalSystem 0
IMAPI CD-Burning COM Service ImapiService
Stopped Disabled Own Process
c:\windows\system32\imapi.exe Normal
LocalSystem 0
Intersite Messaging IsmServ Stopped Disabled Own
Process c:\windows\system32\ismerv.exe
Normal LocalSystem 0
Kerberos Key Distribution Center kdc
Stopped Disabled Share Process
c:\windows\system32\lsass.exe Normal
LocalSystem 0
Server lanmanserver Stopped Manual Share
Process c:\windows\system32\svchost.exe -k netsvcs
Normal LocalSystem 0
Workstation lanmanworkstation Stopped
Manual Share Process
c:\windows\system32\svchost.exe -k netsvcs
Normal LocalSystem 0
License Logging LicenseService Stopped
Disabled Own Process
c:\windows\system32\llssrv.exe
Normal NT AUTHORITY\NetworkService 0

TCP/IP NetBIOS Helper LmHosts Stopped
Manual Share Process
c:\windows\system32\svchost.exe -k
localservice Normal NT AUTHORITY\LocalService
0
Messenger Messenger Stopped Disabled Share Process
c:\windows\system32\svchost.exe -k netsvcs
Normal LocalSystem 0
NetMeeting Remote Desktop Sharing mmsrvc
Stopped Disabled Own Process
c:\windows\system32\mmsrvc.exe
Normal LocalSystem 0
Distributed Transaction Coordinator MSDTC
Stopped Manual Own Process
c:\windows\system32\msdtc.exe Normal NT
AUTHORITY\NetworkService 0
SQL Server FullText Search (MSSQLSERVER)
msftesql Stopped Disabled Own Process
"c:\program files (x86)\microsoft sql
server\mssql.1\mssql\bin\msftesql.exe" -s:mssql.1 -
f:mssqlserver Normal LocalSystem 0
Windows Installer MSIServer Stopped Manual Share
Process c:\windows\system32\msiexec.exe /v
Normal LocalSystem 0
SQL Server (MSSQLSERVER) MSSQLSERVER
Stopped Manual Own Process
"c:\program files (x86)\microsoft sql
server\mssql.1\mssql\bin\sqlservr.exe" -smssqlserver
Normal LocalSystem 0
SQL Server Active Directory Helper
MSSQLServerADHelper Stopped Disabled Own

```

```

Process "c:\program files (x86)\microsoft sql
server\90\shared\sqladhlp90.exe" Normal NT
AUTHORITY\NetworkService 0
Network DDE NetDDE Stopped Disabled Share
Process c:\windows\system32\netdde.exe
Normal LocalSystem 0
Network DDE DSDM NetDDEdsdm Stopped
Disabled Share Process
c:\windows\system32\netdde.exe
Normal LocalSystem 0
Net Logon NetLogon Stopped Disabled Share Process
c:\windows\system32\lsass.exe Normal
LocalSystem 0
Network Connections Netman Running Manual Share
Process c:\windows\system32\svchost.exe -k netsvcs
Normal LocalSystem 0
Network Location Awareness (NLA) Nla
Stopped Disabled Share Process
c:\windows\system32\svchost.exe -k netsvcs
Normal LocalSystem 0
File Replication Ntfrs Stopped Disabled Own
Process c:\windows\system32\ntfrs.exe Ignore
LocalSystem 0
NT LM Security Support Provider NtLmSsp
Stopped Manual Share Process
c:\windows\system32\lsass.exe Normal
LocalSystem 0
Removable Storage Ntmsvc Stopped Disabled Share
Process c:\windows\system32\svchost.exe -k netsvcs
Normal LocalSystem 0
Office Source Engine ose Stopped
Manual Own Process "c:\program
files (x86)\common files\microsoft shared\source
engine\ose.exe" Normal LocalSystem 0
Plug and Play PlugPlay Running Auto Share
Process c:\windows\system32\services.exe
Normal LocalSystem 0
IPSEC Services PolicyAgent Stopped
Disabled Share Process
c:\windows\system32\lsass.exe Normal
LocalSystem 0
Protected Storage ProtectedStorage Running Auto
Share Process
c:\windows\system32\lsass.exe Normal
LocalSystem 0
Remote Access Auto Connection Manager RasAuto
Stopped Disabled Share Process
c:\windows\system32\svchost.exe -k netsvcs
Normal LocalSystem 0
Remote Access Connection Manager RasMan
Stopped Manual Share Process
c:\windows\system32\svchost.exe -k netsvcs
Normal LocalSystem 0
Remote Desktop Help Session Manager RDSessMgr
Stopped Disabled Own Process
c:\windows\system32\sessmgr.exe
Normal LocalSystem 0
Routing and Remote Access RemoteAccess
Stopped Disabled Share Process
c:\windows\system32\svchost.exe -k netsvcs
Normal LocalSystem 0
Remote Registry RemoteRegistry Stopped
Manual Share Process
c:\windows\system32\svchost.exe -k regsvc
Normal NT AUTHORITY\LocalService 0
Remote Command Service RMSYS Stopped
Manual Own Process "c:\program
files (x86)\benchcraft\rsys.exe"
.\Administrator 0

```

```

Remote Procedure Call (RPC) Locator RpcLocator
Stopped Disabled Own Process
c:\windows\system32\locator.exe
Normal NT AUTHORITY\NetworkService 0
Remote Procedure Call (RPC) RpcSs Running Auto
Share Process
c:\windows\system32\svchost.exe -k rpcss
Normal NT AUTHORITY\NetworkService 0
Resultant Set of Policy Provider RSOPProv
Stopped Disabled Share Process
c:\windows\system32\rsopprov.exe
Normal LocalSystem 0
Special Administration Console Helper sacsvr
Stopped Disabled Share Process
c:\windows\system32\svchost.exe -k netsvcs
Normal LocalSystem 0
Security Accounts Manager SamSs Running Auto
Share Process
c:\windows\system32\lsass.exe Normal
LocalSystem 0
Smart Card SCardSvr Stopped Manual Share
Process c:\windows\system32\scardsvr.exe
Ignore NT AUTHORITY\LocalService 0
Task Scheduler Schedule Stopped Manual Share
Process c:\windows\system32\svchost.exe -k netsvcs
Normal LocalSystem 0
Secondary Logon seclogon Running Auto Share
Process c:\windows\system32\svchost.exe -k netsvcs
Ignore LocalSystem 0
System Event Notification SENS Running
Manual Share Process
c:\windows\system32\svchost.exe -k netsvcs
Normal LocalSystem 0
Windows Firewall/Internet Connection Sharing (ICS)
SharedAccess Stopped Disabled Share
Process c:\windows\system32\svchost.exe -k netsvcs
Normal LocalSystem 0
Shell Hardware Detection ShellHWDetection
Running Auto Share Process
c:\windows\system32\svchost.exe -k netsvcs
Ignore LocalSystem 0
Print Spooler Spooler Stopped Disabled Own
Process c:\windows\system32\spoolsv.exe
Normal LocalSystem 0
SpySer SpySer Running Manual Own Process
c:\windows\system32\gamscm\spyserv.exe
Normal LocalSystem 0
SQL Server Browser SQLBrowser Stopped
Disabled Own Process "c:\program
files (x86)\microsoft sql
server\90\shared\sqlbrowser.exe"
Normal
LocalSystem 0
SQL Server Agent (MSSQLSERVER) SQLSERVERAGENT
Stopped Manual Own Process
"c:\program files (x86)\microsoft sql
server\mssql.1\mssql\bin\sqlagent90.exe" -i
mssqlserver Normal LocalSystem 0
SQL Server VSS Writer SQLWriter Stopped
Manual Own Process "c:\program
files\microsoft sql server\90\shared\sqlwriter.exe"
Normal LocalSystem 0
Windows Image Acquisition (WIA) stisvc
Stopped Disabled Share Process
c:\windows\system32\svchost.exe -k imgsvc
Normal NT AUTHORITY\LocalService 0
Microsoft Software Shadow Copy Provider swprv
Stopped Disabled Own Process

```

```

c:\windows\system32\svchost.exe -k swprv
Normal LocalSystem 0
Performance Logs and Alerts SysmonLog Stopped Auto
Own Process
c:\windows\system32\smlogsvc.exe
Normal NT AUTHORITY\NetworkService 0
Telephony Tapisrv Stopped Disabled Share Process
c:\windows\system32\svchost.exe -k tapisrv
Normal LocalSystem 0
Terminal Services TermService Stopped
Disabled Share Process
c:\windows\system32\svchost.exe -k termsvc
Normal LocalSystem 0
Themes Themes Stopped Disabled Share Process
c:\windows\system32\svchost.exe -k netsvcs
Normal LocalSystem 0
Telnet TlntSvr Stopped Disabled Own Process
c:\windows\system32\tlntsvr.exe
Normal NT AUTHORITY\LocalService 0
Distributed Link Tracking Server TrkSvr
Stopped Disabled Share Process
c:\windows\system32\svchost.exe -k netsvcs
Normal LocalSystem 0
Distributed Link Tracking Client TrkKws
Stopped Disabled Share Process
c:\windows\system32\svchost.exe -k netsvcs
Normal LocalSystem 0
Terminal Services Session Directory Tssdis
Stopped Disabled Own Process
c:\windows\system32\tssdis.exe
Normal LocalSystem 0
Windows User Mode Driver Framework UMWdf
Stopped Manual Own Process
c:\windows\system32\wdfmgr.exe
Normal NT AUTHORITY\LocalService 0
Uninterruptible Power Supply UPS Stopped
Disabled Own Process
c:\windows\system32\ups.exe Normal NT
AUTHORITY\LocalService 0
Virtual Disk Service vds Stopped
Manual Own Process
c:\windows\system32\vds.exe Normal
LocalSystem 0
Volume shadow copy VSS Stopped Disabled Own
Process c:\windows\system32\vssvc.exe Normal
LocalSystem 0
Windows Time W32Time Stopped Disabled Share
Process c:\windows\system32\svchost.exe -k
localservice Normal NT AUTHORITY\LocalService
0
WebClient WebClient Stopped Disabled Share Process
c:\windows\system32\svchost.exe -k
localservice Normal NT AUTHORITY\LocalService
0
WinHTTP Web Proxy Auto-Discovery Service
WinHttpAutoProxySvc Stopped Disabled Share
Process c:\windows\system32\svchost.exe -k
localservice Normal NT AUTHORITY\LocalService
0
Windows Management Instrumentation winmgmt
Running Auto Share Process
c:\windows\system32\svchost.exe -k netsvcs
Ignore LocalSystem 0
Portable Media Serial Number Service WndmPmsN
Stopped Disabled Share Process
c:\windows\system32\svchost.exe -k netsvcs
Normal LocalSystem 0
Windows Management Instrumentation Driver Extensions
Wmi Stopped Disabled Share Process

```

```

c:\windows\system32\svchost.exe -k netsvcs
Normal LocalSystem 0
WMI Performance Adapter WmiApSrv Stopped
Manual Own Process
c:\windows\system32\wbem\wmiapsrv.exe
Normal LocalSystem 0
Automatic Updates wuauerv Stopped Manual Share
Process c:\windows\system32\svchost.exe -k netsvcs
Normal LocalSystem 0
Wireless Configuration WZCSVC Stopped
Disabled Share Process
c:\windows\system32\svchost.exe -k netsvcs
Normal LocalSystem 0
Network Provisioning Service xmlprov Stopped
Disabled Share Process
c:\windows\system32\svchost.exe -k netsvcs
Normal LocalSystem 0
[Program Groups]
Group Name Name User Name
Accessories Default User:Accessories
Default User
Accessories\Accessibility Default
User:Accessories\Accessibility Default User
Accessories\Entertainment Default
User:Accessories\Entertainment Default User
Startup Default User:Startup Default User
Accessories All Users:Accessories All
Users
Accessories\Accessibility All
Users:Accessories\Accessibility All Users
Accessories\Communications All
Users:Accessories\Communications All Users
Accessories\Entertainment All
Users:Accessories\Entertainment All Users
Accessories\System Tools All
Users:Accessories\System Tools All Users
Administrative Tools All Users:Administrative
Tools All Users
Microsoft SQL Server 2005 All Users:Microsoft SQL
Server 2005 All Users
Microsoft SQL Server 2005\Analysis Services All
Users:Microsoft SQL Server 2005\Analysis Services All
Users
Microsoft SQL Server 2005\Configuration Tools All
Users:Microsoft SQL Server 2005\Configuration Tools
All Users
Microsoft SQL Server 2005\Performance Tools All
Users:Microsoft SQL Server 2005\Performance Tools All
Users
Startup All Users:Startup All Users
Accessories NT AUTHORITY\SYSTEM:Accessories
NT AUTHORITY\SYSTEM
Accessories\Accessibility NT
AUTHORITY\SYSTEM:Accessories\Accessibility NT
AUTHORITY\SYSTEM
Accessories\Entertainment NT
AUTHORITY\SYSTEM:Accessories\Entertainment NT
AUTHORITY\SYSTEM
Startup NT AUTHORITY\SYSTEM:Startup NT
AUTHORITY\SYSTEM
Accessories
NOCONA_QUAD\Administrator:Accessories
NOCONA_QUAD\Administrator
Accessories\Accessibility
NOCONA_QUAD\Administrator:Accessories\Accessi
bility NOCONA_QUAD\Administrator

```

```

Accessories\Entertainment
NOCONA_QUAD\Administrator:Accessories\Enterta
inment NOCONA_QUAD\Administrator
Administrative Tools
NOCONA_QUAD\Administrator:Administrative
Tools NOCONA_QUAD\Administrator
Benchcraft
NOCONA_QUAD\Administrator:Benchcraft
NOCONA_QUAD\Administrator
Startup
NOCONA_QUAD\Administrator:Startup
NOCONA_QUAD\Administrator
[Startup Programs]
Program Command User Name Location
desktop desktop.ini NT AUTHORITY\SYSTEM
Startup
desktop desktop.ini NOCONA_QUAD\Administrator
Startup
desktop desktop.ini .DEFAULT Startup
desktop desktop.ini All Users Common Startup
[OLE Registration]
Object Local Server
Sound (OLE2) sndrec32.exe
Media Clip mplay32.exe
Video Clip mplay32.exe /avi
MIDI Sequence mplay32.exe /mid
Sound Not Available
Media Clip Not Available
WordPad Document "%programfiles%\windows
nt\accessories\wordpad.exe"
Bitmap Image mspaint.exe
[Windows Error Reporting]
Time Type Details
[Internet Settings]
[Internet Explorer]
[ Following are sub-categories of this main category ]
[Summary]
Item Value
Version 6.0.3790.1830
Build 63790.1830
Application Path C:\Program Files\Internet Explorer
Language English (United States)
Active Printer Not Available
Cipher Strength 128-bit
Content Advisor Disabled
IEAK Install No
[File Versions]
File Version Size Date Path
Company
actxprxy.dll 6.0.3790.1830 221 KB
3/25/2005 9:00:00 AM
C:\WINDOWS\system32 Microsoft Corporation
advpack.dll 6.0.3790.1830 146 KB
3/25/2005 9:00:00 AM

```

```

C:\WINDOWS\system32 Microsoft Corporation
asctrls.ocx 6.0.3790.1830 147 KB
3/25/2005 9:00:00 AM
C:\WINDOWS\system32 Microsoft Corporation
browsei.c.dll 6.0.3790.1830 63 KB
3/25/2005 9:00:00 AM
C:\WINDOWS\system32 Microsoft Corporation
browseui.dll 6.0.3790.1830 1,564 KB
3/25/2005 9:00:00 AM
C:\WINDOWS\system32 Microsoft Corporation
cdfview.dll 6.0.3790.1830 216 KB
3/25/2005 9:00:00 AM
C:\WINDOWS\system32 Microsoft Corporation
comctl32.dll 5.82.3790.1830 935 KB
3/25/2005 9:00:00 AM
C:\WINDOWS\system32 Microsoft Corporation
dxtrans.dll 6.3.3790.1830 320 KB
3/25/2005 9:00:00 AM
C:\WINDOWS\system32 Microsoft Corporation
dxtmsft.dll 6.3.3790.1830 549 KB
3/25/2005 9:00:00 AM
C:\WINDOWS\system32 Microsoft Corporation
iecont.dll <File Missing> Not Available
Not Available Not Available Not
Available
iecontlc.dll <File Missing> Not Available
Not Available Not Available Not
Available
iedkcs32.dll 16.0.3790.1830 417 KB
3/25/2005 9:00:00 AM
C:\WINDOWS\system32 Microsoft Corporation
iepeers.dll 6.0.3790.1830 361 KB
3/25/2005 9:00:00 AM
C:\WINDOWS\system32 Microsoft Corporation
iesetup.dll 6.0.3790.1830 71 KB
3/25/2005 9:00:00 AM
C:\WINDOWS\system32 Microsoft Corporation
iewinit.inf Not Available 24 KB
3/25/2005 9:00:00 AM
C:\WINDOWS\system32 Not Available
iexplore.exe 6.0.3790.1830 94 KB
3/25/2005 9:00:00 AM C:\Program
Files\Internet Explorer Microsoft Corporation
imgutil.dll 6.0.3790.1830 61 KB
3/25/2005 9:00:00 AM
C:\WINDOWS\system32 Microsoft Corporation
inetcp1.cp1 6.0.3790.1830 428 KB
3/25/2005 9:00:00 AM
C:\WINDOWS\system32 Microsoft Corporation
inetcp1c.dll 6.0.3790.1830 110 KB
3/25/2005 9:00:00 AM
C:\WINDOWS\system32 Microsoft Corporation
inseng.dll 6.0.3790.1830 147 KB
3/25/2005 9:00:00 AM
C:\WINDOWS\system32 Microsoft Corporation

```

```

mlang.dll 6.0.3790.1830 686 KB 3/25/2005
9:00:00 AM C:\WINDOWS\system32 Microsoft
Corporation
msencode.dll <File Missing> Not Available
Not Available Not Available Not
Available
mshta.exe 6.0.3790.1830 38 KB 3/25/2005
9:00:00 AM C:\WINDOWS\system32 Microsoft
Corporation
mshtml.dll 6.0.3790.1830 5,790 KB
3/25/2005 9:00:00 AM
C:\WINDOWS\system32 Microsoft Corporation
mshtml.tlb 6.0.3790.1830 1,320 KB
3/25/2005 9:00:00 AM
C:\WINDOWS\system32 Microsoft Corporation
mshtml.ed.dll 6.0.3790.1830 906 KB
3/25/2005 9:00:00 AM
C:\WINDOWS\system32 Microsoft Corporation
mshtmlr.dll 6.0.3790.1830 56 KB
3/25/2005 9:00:00 AM
C:\WINDOWS\system32 Microsoft Corporation
msident.dll 6.0.3790.1830 69 KB
3/25/2005 9:00:00 AM
C:\WINDOWS\system32 Microsoft Corporation
msidntld.dll 6.0.3790.1830 16 KB
3/25/2005 9:00:00 AM
C:\WINDOWS\system32 Microsoft Corporation
msieftp.dll 6.0.3790.1830 369 KB
3/25/2005 9:00:00 AM
C:\WINDOWS\system32 Microsoft Corporation
msrating.dll 6.0.3790.1830 240 KB
3/25/2005 9:00:00 AM
C:\WINDOWS\system32 Microsoft Corporation
mstime.dll 6.0.3790.1830 878 KB
3/25/2005 9:00:00 AM
C:\WINDOWS\system32 Microsoft Corporation
occache.dll 6.0.3790.1830 126 KB
3/25/2005 9:00:00 AM
C:\WINDOWS\system32 Microsoft Corporation
proctexe.ocx <File Missing> Not Available
Not Available Not Available Not
Available
sendmail.dll 6.0.3790.1830 64 KB
3/25/2005 9:00:00 AM
C:\WINDOWS\system32 Microsoft Corporation
shdoc1c.dll 6.0.3790.1830 590 KB
3/25/2005 9:00:00 AM
C:\WINDOWS\system32 Microsoft Corporation
shdocvw.dll 6.0.3790.1830 2,360 KB
3/25/2005 9:00:00 AM
C:\WINDOWS\system32 Microsoft Corporation
shfolder.dll 6.0.3790.1830 34 KB
3/25/2005 9:00:00 AM
C:\WINDOWS\system32 Microsoft Corporation
shlwapi.dll 6.0.3790.1830 607 KB
3/25/2005 9:00:00 AM
C:\WINDOWS\system32 Microsoft Corporation

```

```

tdc.ocx 1.3.0.3130 91 KB 3/25/2005
9:00:00 AM C:\WINDOWS\system32 Microsoft
Corporation
url.dll 6.0.3790.1830 40 KB 3/25/2005
9:00:00 AM C:\WINDOWS\system32 Microsoft
Corporation
urlmon.dll 6.0.3790.1830 1,049 KB
3/25/2005 9:00:00 AM
C:\WINDOWS\system32 Microsoft Corporation
webcheck.dll 6.0.3790.1830 439 KB
3/25/2005 9:00:00 AM
C:\WINDOWS\system32 Microsoft Corporation
wininet.dll 6.0.3790.1830 1,159 KB
3/25/2005 9:00:00 AM
C:\WINDOWS\system32 Microsoft Corporation

```

[Connectivity]

```

Item Value
Connection Preference Never dial

```

LAN Settings

```

AutoConfigProxy wininet.dll
AutoProxyDetectMode Disabled
AutoConfigURL
Proxy Disabled
ProxyServer
ProxyOverride

```

[Cache]

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

```

Item Value
Page Refresh Type Automatic
Temporary Internet Files Folder C:\Documents
and Settings\Administrator\Local Settings\Temporary
Internet Files
Total Disk Space Not Available
Available Disk Space Not Available
Maximum Cache Size Not Available
Available Cache Size Not Available

```

[List of Objects]

```

Program File Status CodeBase
No cached object information available

```

[Content]

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

```

Item Value
Content Advisor Disabled

```

[Personal Certificates]

```

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

```

[Other People Certificates]

```

Issued To Issued By Validity Signature Algorithm

```







```

0xA0000-0xBFFFF PCI bus OK
0xA0000-0xBFFFF RAGE XL PCI Family (Microsoft
Corporation) OK
0x40000000-0xFFEFFFFFF PCI bus OK
0xFEBFFC00-0xFEBFFFFFF Standard Enhanced PCI to
USB Host Controller OK
0xFD000000-0xFDFFFFFF RAGE XL PCI Family
(Microsoft Corporation) OK
0xFEAF000-0xFEAF000 RAGE XL PCI Family
(Microsoft Corporation) OK
0xFEAFE000-0xFEAFEFFF Intel(R) PRO/100 s Server
Adapter OK
0xFEAA0000-0xFEABFFFF Intel(R) PRO/100 s Server
Adapter OK
0xFE800000-0xFE9FFFF Intel(R) PRO/1000 MT
Network Connection OK
0xFED20000-0xFED8FFFF Motherboard resources
OK
0xFFB00000-0xFFBFFFFF Motherboard resources
OK
0xFEC00000-0xFEC00FFF Motherboard resources
OK
0xFEE00000-0xFEE00FFF Motherboard resources
OK
0xFFEFC00-0xFFEFFFFFF Intel(R) 82801EB Ultra
ATA Storage Controllers - 24DB OK
0x0000-0x9FFFF System board OK
0xC0000-0xDFFFF System board OK
0xE0000-0xFFFF System board OK
0x100000-0x3FFFFFFF System board OK
0xFFFF0000-0xFFFFFFFF system board OK

```

[Components]

[Multimedia]

[Audio Codecs]

CODEC	Manufacturer	File	Description	Size
	Status	File	Version	
	Creation Date			
c:\windows\system32\s1_anet.acm	OK	Sipro Lab Telecom Inc. Sipro Lab Telecom Audio Codec	OK	3.02
		C:\WINDOWS\system32\SLANET.ACM		84,00 KB (86.016 bytes)
				25/3/2003 09:00
c:\windows\system32\msaud32.acm	OK	Microsoft Corporation Windows Media Audio	OK	
		C:\WINDOWS\system32\MSAUD32.ACM		8.00.00.4487
				25/3/2003 09:00
c:\windows\system32\l3codeca.acm	OK	Fraunhofer Institut Integrierte Schaltungen IIS	OK	
		C:\WINDOWS\system32\L3CODECA.ACM		1, 9,
				284,00 KB (290.816 bytes)
				25/3/2003 09:00
c:\windows\system32\vct3216.acm	OK	Voxware, Inc. Voxware Compression Toolkit	OK	
		C:\WINDOWS\system32\VCT3216.ACM		1.6.0.17
				81,00 KB (82.944 bytes)
				2/3/2001 19:46
c:\windows\system32\msgsm32.acm	OK	Microsoft Corporation	OK	
		C:\WINDOWS\system32\MSGSM32.ACM		5.2.3790.0 (srv03_rtm.030324-2048)
				20,50
				KB (20.992 bytes)
				25/3/2003 09:00

```

c:\windows\system32\tsoft32.acm DSP GROUP, INC.
OK
C:\WINDOWS\system32\TSSOFT32.ACM 1.01
9,50 KB (9.728 bytes) 25/3/2003 09:00

```

```

c:\windows\system32\msg711.acm Microsoft
Corporation OK
C:\WINDOWS\system32\MSG711.ACM
5.2.3790.0 (srv03_rtm.030324-2048) 10,00
KB (10.240 bytes) 25/3/2003 09:00
c:\windows\system32\msg723.acm Microsoft
Corporation OK
C:\WINDOWS\system32\MSG723.ACM
5.2.3790.1830 120,00 KB (122.880 bytes)
20/11/2005 21:15
c:\windows\system32\msadp32.acm Microsoft
Corporation OK
C:\WINDOWS\system32\MSADP32.ACM
5.2.3790.0 (srv03_rtm.030324-2048) 14,50
KB (14.848 bytes) 25/3/2003 09:00
c:\windows\system32\imaadp32.acm Microsoft
Corporation OK
C:\WINDOWS\system32\IMAADP32.ACM
5.2.3790.0 (srv03_rtm.030324-2048) 15,50
KB (15.872 bytes) 25/3/2003 09:00

```

[Video Codecs]

CODEC	Manufacturer	File	Description	Size
	Status	File	Version	
	Creation Date			
c:\windows\system32\tsccvid.dll	OK	TechSmith Corporation TechSmith Screen Capture Codec	OK	
		C:\WINDOWS\system32\TSCCVID.DLL		2.0.4
				108,00 KB (110.592 bytes)
				23/10/2005 23:09
c:\windows\system32\msh261.drv	OK	Microsoft Corporation	OK	
		C:\WINDOWS\system32\MSH261.DRV		5.2.3790.1830
				184,00 KB (188.416 bytes)
				20/11/2005 21:15
c:\windows\system32\iyuv_32.dll	OK	Microsoft Corporation	OK	
		C:\WINDOWS\system32\IYUV_32.DLL		5.2.3790.1830 (srv03_sp1_rtm.050324-1447)
				46,50 KB (47.616 bytes)
				20/11/2005
21:15				
c:\windows\system32\msyuv.dll	OK	Microsoft Corporation	OK	
		C:\WINDOWS\system32\MSYUV.DLL		5.2.3790.0 (srv03_rtm.030324-2048)
				16,50 KB (16.896 bytes)
				24/3/2003 22:49
c:\windows\system32\msrle32.dll	OK	Microsoft Corporation	OK	
		C:\WINDOWS\system32\MSRLE32.DLL		5.2.3790.0 (srv03_rtm.030324-2048)
				10,50
				KB (10.752 bytes)
				25/3/2003 09:00
c:\windows\system32\msvidc32.dll	OK	Microsoft Corporation	OK	
		C:\WINDOWS\system32\MSVIDC32.DLL		5.2.3790.0 (srv03_rtm.030324-2048)
				26,50
				KB (27.136 bytes)
				25/3/2003 09:00
c:\windows\system32\msh263.drv	OK	Microsoft Corporation	OK	
		C:\WINDOWS\system32\MSH263.DRV		5.2.3790.1830
				288,00 KB (294.912 bytes)
				20/11/2005 21:15
c:\windows\system32\tsbyuv.dll	OK	Microsoft Corporation	OK	
		C:\WINDOWS\system32\TSBYUV.DLL		5.2.3790.0 (srv03_rtm.030324-2048)
				8,00
				KB (8.192 bytes)
				24/3/2003 22:50

[CD-ROM]

```

Item Value
Drive E:
Description CD-ROM Drive
Media Loaded No
Media Type CD-ROM
Name TEAC CD-224E
Manufacturer (Standard CD-ROM drives)
Status OK
Transfer Rate Not Available
SCSI Target ID 0
PNP Device ID IDE\CDROMTEAC_CD-224E
1.9A\589154BEF&0&0.0.0
Driver c:\windows\system32\drivers\cdrom.sys
(5.2.3790.1830 (srv03_sp1_rtm.050324-1447), 51,00 KB
(52.224 bytes), 25/3/2003 09:00)

```

[Sound Device]

```

Item Value
Name RAGE XL PCI Family (Microsoft Corporation)

```

[Display]

```

Item Value
Name RAGE XL PCI Family (Microsoft Corporation)
PNP Device ID PCI\VEN_1002&DEV_4752&SUBSYS_80081002&REV_27\
482E98101C&0&20F0
Adapter Type ATI RAGE XL PCI (B41), ATI
Technologies Inc. compatible
Adapter Description RAGE XL PCI Family (Microsoft
Corporation)
Adapter RAM 8,00 MB (8.388.608 bytes)
Installed Drivers ati2drad.dll
Driver Version 5.10.3663.6013
INF File atiixpad.inf (ati2mpad section)
Color Planes 1
Color Table Entries 4294967296
Resolution 1024 x 768 x 60 hertz
Bits/Pixel 32
Memory Address 0xFD000000-0xFDFFFFFF
I/O Port 0x0000B800-0x0000B8FF
Memory Address 0xFEAF000-0xFEFFFFFF
IRQ channel IRQ 21
I/O Port 0x000003B0-0x000003BB
I/O Port 0x000003C0-0x000003DF
Memory Address 0xA0000-0xBFFFFF
Driver c:\windows\system32\drivers\ati2mpad.sys
(5.10.3663.6013, 335,38 KB (343.424 bytes), 14/11/2005
07:02)

```

[Infrared]

```
Item Value
```

[Input]

```
Item Value
```

[Keyboard]

```

Item Value
Description Standard 101/102-Key or Microsoft
Natural PS/2 Keyboard
Name Enhanced (101- or 102-key)
Layout 00010416
PNP Device ID ACPI\PNP0303\4&35F762C4&0
Number of Function Keys 12

```

I/O Port 0x00000060-0x00000060  
I/O Port 0x00000064-0x00000064  
IRQ Channel IRQ 1  
Driver c:\windows\system32\drivers\i804prt.sys  
(5.2.3790.1830 (srv03\_sp1\_rtm.050324-1447), 54,50 KB  
(55.808 bytes), 25/3/2003 09:00)

[Pointing Device]

Item Value  
Hardware Type Microsoft PS/2 Mouse  
Number of Buttons 5  
Status OK  
PNP Device ID ACPI\PNP0F03\4&35F762C4&  
Power Management Supported No  
Double Click Threshold 6  
Handedness Right Handed Operation  
IRQ Channel IRQ 12  
Driver c:\windows\system32\drivers\i804prt.sys  
(5.2.3790.1830 (srv03\_sp1\_rtm.050324-1447), 54,50 KB  
(55.808 bytes), 25/3/2003 09:00)

[Modem]

Item Value

[Network]

[Adapter]

Item Value  
Name [00000001] Intel(R) PRO/100 S Server Adapter  
Adapter Type Ethernet 802.3  
Product Type Intel(R) PRO/100 S Server Adapter

Installed Yes  
PNP Device ID PCI\VEN\_8086&DEV\_1229&SUBSYS\_10508086&REV\_10\  
4&2E98101C&0&38F0  
Last Reset 25/11/2005 11:17  
Index 1  
Service Name E100B  
IP Address 192.168.1.25  
IP Subnet 255.255.255.0  
Default IP Gateway Not Available  
DHCP Enabled No  
DHCP Server Not Available  
DHCP Lease Expires Not Available  
DHCP Lease Obtained Not Available  
MAC Address 00:30:48:73:93:B8  
Memory Address 0xFEAFE000-0xFEAF0000  
I/O Port 0x0000BC00-0x0000BC3F  
Memory Address 0xFEAA0000-0xFEABFFFF  
IRQ Channel IRQ 22  
Driver c:\windows\system32\drivers\e100b325.sys  
(6.6.8.1 built by: winDDK, 138,50 KB (141.824 bytes),  
14/11/2005 07:02)

Name [00000002] RAS Async Adapter  
Adapter Type Not Available  
Product Type RAS Async Adapter  
Installed Yes  
PNP Device ID Not Available  
Last Reset 25/11/2005 11:17  
Index 2  
Service Name AsyncMac  
IP Address Not Available  
IP Subnet Not Available  
Default IP Gateway Not Available

DHCP Enabled No  
DHCP Server Not Available  
DHCP Lease Expires Not Available  
DHCP Lease Obtained Not Available  
MAC Address Not Available

Name [00000003] WAN Miniport (L2TP)  
Adapter Type Not Available  
Product Type WAN Miniport (L2TP)  
Installed Yes  
PNP Device ID ROOT\MS\_L2TPMINIPORT\0000  
Last Reset 25/11/2005 11:17  
Index 3  
Service Name Rasl2tp  
IP Address Not Available  
IP Subnet Not Available  
Default IP Gateway Not Available  
DHCP Enabled No  
DHCP Server Not Available  
DHCP Lease Expires Not Available  
DHCP Lease Obtained Not Available  
MAC Address Not Available  
Driver c:\windows\system32\drivers\rasl2tp.sys  
(5.2.3790.1830 (srv03\_sp1\_rtm.050324-1447), 66,00 KB  
(67.584 bytes), 25/3/2003 09:00)

Name [00000004] WAN Miniport (PPTP)  
Adapter Type Wide Area Network (WAN)  
Product Type WAN Miniport (PPTP)  
Installed Yes  
PNP Device ID ROOT\MS\_PPTPMINIPORT\0000  
Last Reset 25/11/2005 11:17  
Index 4  
Service Name Pptpminiport  
IP Address Not Available  
IP Subnet Not Available  
Default IP Gateway Not Available  
DHCP Enabled No  
DHCP Server Not Available  
DHCP Lease Expires Not Available  
DHCP Lease Obtained Not Available  
MAC Address 50:50:54:50:30:30  
Driver c:\windows\system32\drivers\raspptp.sys  
(5.2.3790.1830 (srv03\_sp1\_rtm.050324-1447), 61,00 KB  
(62.464 bytes), 25/3/2003 09:00)

Name [00000005] WAN Miniport (PPPOE)  
Adapter Type Wide Area Network (WAN)  
Product Type WAN Miniport (PPPOE)  
Installed Yes  
PNP Device ID ROOT\MS\_PPPOEMINIPORT\0000  
Last Reset 25/11/2005 11:17  
Index 5  
Service Name Raspppoe  
IP Address Not Available  
IP Subnet Not Available  
Default IP Gateway Not Available  
DHCP Enabled No  
DHCP Server Not Available  
DHCP Lease Expires Not Available  
DHCP Lease Obtained Not Available  
MAC Address 33:50:6F:45:30:30  
Driver c:\windows\system32\drivers\raspppoe.sys  
(5.2.3790.1830 (srv03\_sp1\_rtm.050324-1447), 40,00 KB  
(40.960 bytes), 25/3/2003 09:00)

Name [00000006] Direct Parallel  
Adapter Type Not Available  
Product Type Direct Parallel  
Installed Yes  
PNP Device ID ROOT\MS\_PTMINIPORT\0000  
Last Reset 25/11/2005 11:17

Index 6  
Service Name Raspti  
IP Address Not Available  
IP Subnet Not Available  
Default IP Gateway Not Available  
DHCP Enabled No  
DHCP Server Not Available  
DHCP Lease Expires Not Available  
DHCP Lease Obtained Not Available  
MAC Address Not Available  
Driver c:\windows\system32\drivers\raspti.sys  
(5.2.3790.1830 (srv03\_sp1\_rtm.050324-1447), 19,50 KB  
(19.968 bytes), 25/3/2003 09:00)

Name [00000007] WAN Miniport (IP)  
Adapter Type Not Available  
Product Type WAN Miniport (IP)  
Installed Yes  
PNP Device ID ROOT\MS\_NDISWANIP\0000  
Last Reset 25/11/2005 11:17  
Index 7  
Service Name Ndiswan  
IP Address Not Available  
IP Subnet Not Available  
Default IP Gateway Not Available  
DHCP Enabled No  
DHCP Server Not Available  
DHCP Lease Expires Not Available  
DHCP Lease Obtained Not Available  
MAC Address Not Available  
Driver c:\windows\system32\drivers\ndiswan.sys  
(5.2.3790.1830 (srv03\_sp1\_rtm.050324-1447), 91,00 KB  
(93.184 bytes), 25/3/2003 09:00)

Name [00000008] Intel(R) PRO/1000 MT Network  
Connection  
Adapter Type Ethernet 802.3  
Product Type Intel(R) PRO/1000 MT Network  
Connection  
Installed Yes  
PNP Device ID PCI\VEN\_8086&DEV\_1076&SUBSYS\_10768086&REV\_00\  
4&2E98101C&0&40F0  
Last Reset 25/11/2005 11:17  
Index 8  
Service Name E1000  
IP Address 192.168.0.25  
IP Subnet 255.255.255.0  
Default IP Gateway Not Available  
DHCP Enabled No  
DHCP Server Not Available  
DHCP Lease Expires Not Available  
DHCP Lease Obtained Not Available  
MAC Address 00:30:48:73:93:B9  
Memory Address 0xFE800000-0xFE900000  
I/O Port 0x0000B400-0x0000B43F  
IRQ Channel IRQ 23  
Driver c:\windows\system32\drivers\e1000325.sys  
(7.2.17.0 built by: winDDK, 123,00 KB (125.952 bytes),  
15/11/2005 08:56)

[Protocol]

Item Value  
Name MSAFD Tcpip [TCP/IP]  
Connectionless Service No  
Guarantees Delivery Yes  
Guarantees Sequencing Yes  
Maximum Address Size 16 bytes  
Maximum Message Size 0 bytes  
Message Oriented No  
Minimum Address Size 16 bytes

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

Name MSAFD Tcpip [UDP/IP]  
 Connectionless Service Yes  
 Guarantees Delivery No  
 Guarantees Sequencing No  
 Maximum Address Size 16 bytes  
 Maximum Message Size 63,93 KB (65.467 bytes)

Message Oriented Yes  
 Minimum Address Size 16 bytes  
 Pseudo Stream Oriented No  
 Supports Broadcasting Yes  
 Supports Connect Data No  
 Supports Disconnect Data No  
 Supports Encryption No  
 Supports Expedited Data No  
 Supports Graceful Closing No  
 Supports Guaranteed Bandwidth No  
 Supports Multicasting Yes

Name RSVP UDP Service Provider  
 Connectionless Service Yes  
 Guarantees Delivery No  
 Guarantees Sequencing No  
 Maximum Address Size 16 bytes  
 Maximum Message Size 63,93 KB (65.467 bytes)

Message Oriented Yes  
 Minimum Address Size 16 bytes  
 Pseudo Stream Oriented No  
 Supports Broadcasting Yes  
 Supports Connect Data No  
 Supports Disconnect Data No  
 Supports Encryption Yes  
 Supports Expedited Data No  
 Supports Graceful Closing No  
 Supports Guaranteed Bandwidth No  
 Supports Multicasting Yes

Name RSVP TCP Service Provider  
 Connectionless Service No  
 Guarantees Delivery Yes  
 Guarantees Sequencing Yes  
 Maximum Address Size 16 bytes  
 Maximum Message Size 0 bytes

Message Oriented No  
 Minimum Address Size 16 bytes  
 Pseudo Stream Oriented No  
 Supports Broadcasting No  
 Supports Connect Data No  
 Supports Disconnect Data No  
 Supports Encryption Yes  
 Supports Expedited Data Yes  
 Supports Graceful Closing Yes  
 Supports Guaranteed Bandwidth No  
 Supports Multicasting No

Name MSAFD NetBIOS [\Device\NetBT\_Tcpip\_{BB4F85D4-76A0-4886-AB39-2F978EBA8872}] SEQPACKET 3  
 Connectionless Service No  
 Guarantees Delivery Yes  
 Guarantees Sequencing Yes  
 Maximum Address Size 20 bytes

Maximum Message Size 62,50 KB (64.000 bytes)

Message Oriented Yes  
 Minimum Address Size 20 bytes  
 Pseudo Stream Oriented No  
 Supports Broadcasting No  
 Supports Connect Data No  
 Supports Disconnect Data No  
 Supports Encryption No  
 Supports Expedited Data No  
 Supports Graceful Closing No  
 Supports Guaranteed Bandwidth No  
 Supports Multicasting No

Name MSAFD NetBIOS [\Device\NetBT\_Tcpip\_{BB4F85D4-76A0-4886-AB39-2F978EBA8872}] DATAGRAM 3  
 Connectionless Service Yes  
 Guarantees Delivery No  
 Guarantees Sequencing No  
 Maximum Address Size 20 bytes  
 Maximum Message Size 62,50 KB (64.000 bytes)

Message Oriented Yes  
 Minimum Address Size 20 bytes  
 Pseudo Stream Oriented No  
 Supports Broadcasting Yes  
 Supports Connect Data No  
 Supports Disconnect Data No  
 Supports Encryption No  
 Supports Expedited Data No  
 Supports Graceful Closing No  
 Supports Guaranteed Bandwidth No  
 Supports Multicasting No

Name MSAFD NetBIOS [\Device\NetBT\_Tcpip\_{CD5FE741-489A-43EA-8D57-EAF372BEBA34}] SEQPACKET 0  
 Connectionless Service No  
 Guarantees Delivery Yes  
 Guarantees Sequencing Yes  
 Maximum Address Size 20 bytes  
 Maximum Message Size 62,50 KB (64.000 bytes)

Message Oriented Yes  
 Minimum Address Size 20 bytes  
 Pseudo Stream Oriented No  
 Supports Broadcasting No  
 Supports Connect Data No  
 Supports Disconnect Data No  
 Supports Encryption No  
 Supports Expedited Data No  
 Supports Graceful Closing No  
 Supports Guaranteed Bandwidth No  
 Supports Multicasting No

Name MSAFD NetBIOS [\Device\NetBT\_Tcpip\_{CD5FE741-489A-43EA-8D57-EAF372BEBA34}] DATAGRAM 0  
 Connectionless Service Yes  
 Guarantees Delivery No  
 Guarantees Sequencing No  
 Maximum Address Size 20 bytes  
 Maximum Message Size 62,50 KB (64.000 bytes)

Message Oriented Yes  
 Minimum Address Size 20 bytes  
 Pseudo Stream Oriented No  
 Supports Broadcasting Yes  
 Supports Connect Data No  
 Supports Disconnect Data No  
 Supports Encryption No  
 Supports Expedited Data No  
 Supports Graceful Closing No  
 Supports Guaranteed Bandwidth No

Supports Multicasting No

Name MSAFD NetBIOS [\Device\NetBT\_Tcpip\_{7CDE5FC8-B675-42BA-9E69-3D315D299285}] SEQPACKET 1  
 Connectionless Service No  
 Guarantees Delivery Yes  
 Guarantees Sequencing Yes  
 Maximum Address Size 20 bytes  
 Maximum Message Size 62,50 KB (64.000 bytes)

Message Oriented Yes  
 Minimum Address Size 20 bytes  
 Pseudo Stream Oriented No  
 Supports Broadcasting No  
 Supports Connect Data No  
 Supports Disconnect Data No  
 Supports Encryption No  
 Supports Expedited Data No  
 Supports Graceful Closing No  
 Supports Guaranteed Bandwidth No  
 Supports Multicasting No

Name MSAFD NetBIOS [\Device\NetBT\_Tcpip\_{7CDE5FC8-B675-42BA-9E69-3D315D299285}] DATAGRAM 1  
 Connectionless Service Yes  
 Guarantees Delivery No  
 Guarantees Sequencing No  
 Maximum Address Size 20 bytes  
 Maximum Message Size 62,50 KB (64.000 bytes)

Message Oriented Yes  
 Minimum Address Size 20 bytes  
 Pseudo Stream Oriented No  
 Supports Broadcasting Yes  
 Supports Connect Data No  
 Supports Disconnect Data No  
 Supports Encryption No  
 Supports Expedited Data No  
 Supports Graceful Closing No  
 Supports Guaranteed Bandwidth No  
 Supports Multicasting No

Name MSAFD NetBIOS [\Device\NetBT\_Tcpip\_{6802E33D-F0CD-47F4-853D-8A0B4788E689}] SEQPACKET 2  
 Connectionless Service No  
 Guarantees Delivery Yes  
 Guarantees Sequencing Yes  
 Maximum Address Size 20 bytes  
 Maximum Message Size 62,50 KB (64.000 bytes)

Message Oriented Yes  
 Minimum Address Size 20 bytes  
 Pseudo Stream Oriented No  
 Supports Broadcasting No  
 Supports Connect Data No  
 Supports Disconnect Data No  
 Supports Encryption No  
 Supports Expedited Data No  
 Supports Graceful Closing No  
 Supports Guaranteed Bandwidth No  
 Supports Multicasting No

Name MSAFD NetBIOS [\Device\NetBT\_Tcpip\_{6802E33D-F0CD-47F4-853D-8A0B4788E689}] DATAGRAM 2  
 Connectionless Service Yes  
 Guarantees Delivery No  
 Guarantees Sequencing No  
 Maximum Address Size 20 bytes  
 Maximum Message Size 62,50 KB (64.000 bytes)

Message Oriented Yes  
 Minimum Address Size 20 bytes

```

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

```

[WinSock]

```

Item Value
File c:\windows\system32\winsock.dll
Size 2,80 KB (2.864 bytes)
Version 3.10

File c:\windows\system32\wsock32.dll
Size 22,00 KB (22.528 bytes)
Version 5.2.3790.0 (srv03_rtm.030324-2048)

```

[Ports]

[Serial]

```

Item Value
Name Communications Port (COM1)
Status OK
PNP Device ID ACPI\PNP0501\1
Maximum Input Buffer Size 0
Maximum Output Buffer Size No
Settable Baud Rate Yes
Settable Data Bits Yes
Settable Flow Control Yes
Settable Parity Yes
Settable Parity Check Yes
Settable Stop Bits Yes
Settable RLSD Yes
Supports RLSD Yes
Supports 16 Bit Mode No
Supports Special Characters No
Baud Rate 9600
Bits/Byte 8
Stop Bits 1
Parity None
Busy No
Abort Read/Write on Error No
Binary Mode Enabled Yes
Continue Xmit on Xoff No
CTS Outflow Control No
Discard NULL Bytes No
DSR Outflow Control 0
DSR Sensitivity 0
DTR Flow Control Type Enable
EOF Character 0
Error Replace Character 0
Error Replacement Enabled No
Event Character 0
Parity Check Enabled No
RTS Flow Control Type Enable
Xoff Character 19
XoffXmit Threshold 512
Xon Character 17
XonXmit Threshold 2048
XonXoff InFlow Control 0
XonXoff OutFlow Control 0
I/O Port 0x000003F8-0x000003FF
IRQ Channel IRQ 4

```

```

Driver c:\windows\system32\drivers\serial.sys
(5.2.3790.1830 (srv03_sp1_rtm.050324-1447), 64,00 KB
(65.536 bytes), 25/3/2003 09:00)

```

Name Communications Port (COM2)

```

Status OK
PNP Device ID ACPI\PNP0501\2
Maximum Input Buffer Size 0
Maximum Output Buffer Size No
Settable Baud Rate Yes
Settable Data Bits Yes
Settable Flow Control Yes
Settable Parity Yes
Settable Parity Check Yes
Settable Stop Bits Yes
Settable RLSD Yes
Supports RLSD Yes
Supports 16 Bit Mode No
Supports Special Characters No
Baud Rate 9600
Bits/Byte 8
Stop Bits 1
Parity None
Busy No
Abort Read/Write on Error No
Binary Mode Enabled Yes
Continue Xmit on Xoff No
CTS Outflow Control No
Discard NULL Bytes No
DSR Outflow Control 0
DSR Sensitivity 0
DTR Flow Control Type Enable
EOF Character 0
Error Replace Character 0
Error Replacement Enabled No
Event Character 0
Parity Check Enabled No
RTS Flow Control Type Enable
Xoff Character 19
XoffXmit Threshold 512
Xon Character 17
XonXmit Threshold 2048
XonXoff InFlow Control 0
XonXoff OutFlow Control 0
I/O Port 0x000002F8-0x000002FF
IRQ Channel IRQ 3
Driver c:\windows\system32\drivers\serial.sys
(5.2.3790.1830 (srv03_sp1_rtm.050324-1447), 64,00 KB
(65.536 bytes), 25/3/2003 09:00)

```

[Parallel]

```

Item Value
Name LPT1
PNP Device ID ACPI\PNP0400\4&35F762C4&0
I/O Port 0x00000378-0x0000037F
Driver c:\windows\system32\drivers\parport.sys
(5.2.3790.1830 (srv03_sp1_rtm.050324-1447), 79,50 KB
(81.408 bytes), 24/3/2003 20:04)

```

[Storage]

[Drives]

```

Item Value
Drive A:
Description 3 1/2 Inch Floppy Drive

Drive C:
Description Local Fixed Disk

```

```

Compressed No
File System NTFS
Size 29,29 GB (31.453.437.952 bytes)
Free Space 23,14 GB (24.848.166.912 bytes)

```

```

Volume Name
Volume Serial Number DC852C68

```

```

Drive D:
Description Local Fixed Disk
Compressed No
File System NTFS
Size 47,03 GB (50.494.959.616 bytes)
Free Space 46,59 GB (50.030.514.176 bytes)

```

```

Volume Name
Volume Serial Number FC891810

```

```

Drive E:
Description CD-ROM Disc

```

[Disks]

```

Item Value
Description Disk drive
Manufacturer (standard disk drives)
Model Maxtor 6Y080M0
Bytes/Sector 512
Media Loaded Yes
Media Type Fixed hard disk
Partitions 2
SCSI Bus 0
SCSI Logical Unit 0
SCSI Port 1
SCSI Target ID 0
Sectors/Track 63
Size 76,33 GB (81.956.689.920 bytes)
Total Cylinders 9.964
Total Sectors 160.071.660
Total Tracks 2.540.820
Tracks/Cylinder 255
Partition Disk #0, Partition #0
Partition Size 29,29 GB (31.453.438.464 bytes)
Partition Starting Offset 32.256 bytes
Partition Disk #0, Partition #1
Partition Size 47,03 GB (50.494.993.920 bytes)
Partition Starting Offset 31.453.470.720 bytes

```

[SCSI]

```

Item Value
Name Intel(R) 82801EB Ultra ATA Storage
Controllers - 24DB
Manufacturer Intel
Status OK
PNP Device ID PCI\VEN_8086&DEV_24DB&SUBSYS_498015D9&REV_02\
3&267A616A&0&F9
I/O Port 0x0000FC00-0x0000FC0F
Memory Address 0xFFEFC00-0xFFEFFFFF
Driver c:\windows\system32\drivers\intelide.sys
(5.2.3790.1830 (srv03_sp1_rtm.050324-1447), 7,50 KB
(7.680 bytes), 14/11/2005 07:01)

```

[IDE]

```

Name Value
Primary IDE Channel

```

Manufacturer (Standard IDE ATA/ATAPI controllers)  
 Status OK  
 PNP Device ID PCI\IDE\DECHANNEL\4&973A536&0&0

I/O Port 0x000001F0-0x000001F7  
 I/O Port 0x000003F6-0x000003F6  
 IRQ Channel IRQ 14  
 Driver c:\windows\system32\drivers\atapi.sys (5.2.3790.1830 (srv03\_sp1\_rtm.050324-1447), 93,50 KB (95.744 bytes), 25/3/2003 09:00)

Name Secondary IDE Channel  
 Manufacturer (Standard IDE ATA/ATAPI controllers)  
 Status OK  
 PNP Device ID PCI\IDE\DECHANNEL\4&973A536&0&1

I/O Port 0x00000170-0x00000177  
 I/O Port 0x00000376-0x00000376  
 IRQ Channel IRQ 15  
 Driver c:\windows\system32\drivers\atapi.sys (5.2.3790.1830 (srv03\_sp1\_rtm.050324-1447), 93,50 KB (95.744 bytes), 25/3/2003 09:00)

Name Intel(R) 82801EB Ultra ATA Storage Controllers - 24D1  
 Manufacturer Intel  
 Status OK  
 PNP Device ID PCI\VEN\_8086&DEV\_24D1&SUBSYS\_498015D9&REV\_02\3&267A616A&0&FA

I/O Port 0x0000EC00-0x0000EC07  
 I/O Port 0x0000E800-0x0000E803  
 I/O Port 0x0000E400-0x0000E407  
 I/O Port 0x0000E000-0x0000E003  
 I/O Port 0x0000DC00-0x0000DC0F  
 IRQ Channel IRQ 18  
 Driver c:\windows\system32\drivers\intelide.sys (5.2.3790.1830 (srv03\_sp1\_rtm.050324-1447), 7,50 KB (7.680 bytes), 14/11/2005 07:01)

Name Primary IDE Channel  
 Manufacturer (Standard IDE ATA/ATAPI controllers)  
 Status OK  
 PNP Device ID PCI\IDE\DECHANNEL\4&3A65566&0&0

Driver c:\windows\system32\drivers\atapi.sys (5.2.3790.1830 (srv03\_sp1\_rtm.050324-1447), 93,50 KB (95.744 bytes), 25/3/2003 09:00)

Name Secondary IDE Channel  
 Manufacturer (Standard IDE ATA/ATAPI controllers)  
 Status OK  
 PNP Device ID PCI\IDE\DECHANNEL\4&3A65566&0&1

Driver c:\windows\system32\drivers\atapi.sys (5.2.3790.1830 (srv03\_sp1\_rtm.050324-1447), 93,50 KB (95.744 bytes), 25/3/2003 09:00)

[Printing]

Name Driver Port Name Server Name  
 PDF995 PDF995 Printer Driver PDF995PORT

Microsoft Office Document Image Writer Microsoft Office Document Image Writer Driver Microsoft Document Imaging writer Port:

[Problem Devices]

Device	PNP Device ID	Error Code				
[USB]						
Device	PNP Device ID					
Standard Universal PCI to USB Host Controller	PCI\VEN_8086&DEV_24D2&SUBSYS_498015D9&REV_02\3&267A616A&0&E8					
Standard Universal PCI to USB Host Controller	PCI\VEN_8086&DEV_24D4&SUBSYS_498015D9&REV_02\3&267A616A&0&E9					
Standard Universal PCI to USB Host Controller	PCI\VEN_8086&DEV_24D7&SUBSYS_498015D9&REV_02\3&267A616A&0&EA					
Standard Enhanced PCI to USB Host Controller	PCI\VEN_8086&DEV_24DD&SUBSYS_498015D9&REV_02\3&267A616A&0&EF					
[Software Environment]						
[System Drivers]						
Name	Description	File	Type	Started	Start Mode	State
				Status	Error Control	Accept Pause
abiosdsk	Abiosdsk	Not Available	Kernel Driver	Stopped	OK	
acpi	Microsoft ACPI Driver	c:\windows\system32\drivers\acpi.sys	Kernel Driver	Running	OK	Normal No Yes
acpiec	ACPIEC	c:\windows\system32\drivers\acpiec.sys	Kernel Driver	Stopped	OK	Normal No No
adpu160m	adpu160m	Not Available	Kernel Driver	Stopped	OK	
adpu320	adpu320	Not Available	Kernel Driver	Stopped	OK	
afcmt	afcmt	Not Available	Kernel Driver	Stopped	OK	
afd	AFD Networking Support Environment	c:\windows\system32\drivers\afd.sys	Kernel Driver	Running	OK	Normal No Yes
aha154x	Aha154x	Not Available	Kernel Driver	Stopped	OK	
aic78u2	aic78u2	Not Available	Kernel Driver	Stopped	OK	
aic78xx	aic78xx	Not Available	Kernel Driver	Stopped	OK	
aliide	AliIde	Not Available	Kernel Driver	Stopped	OK	
asynmcac	RAS Asynchronous Media Driver	c:\windows\system32\drivers\asynmcac.sys	Kernel Driver	Running	OK	Normal No Manual

atapi	Standard IDE/ESDI Hard Disk Controller	c:\windows\system32\drivers\atapi.sys	Kernel Driver	Running	OK	Normal No Yes
atdisk	Atdisk	Not Available	Kernel Driver	Stopped	OK	
ati2mpad	ati2mpad	Not Available	Kernel Driver	Running	OK	Normal No Yes
atmarpc	ATM ARP Client Protocol	c:\windows\system32\drivers\atmarpc.sys	Kernel Driver	Stopped	OK	Normal No No
audstub	Audio Stub Driver	c:\windows\system32\drivers\audstub.sys	Kernel Driver	Running	OK	Normal No Yes
beep	Beep	c:\windows\system32\drivers\beep.sys	Kernel Driver	Running	OK	Yes System No Yes
cbidf2k	cbidf2k	c:\windows\system32\drivers\cbidf2k.sys	Kernel Driver	Stopped	OK	Normal No No
cd20xrnt	cd20xrnt	Not Available	Kernel Driver	Stopped	OK	
cdfs	Cdfs	c:\windows\system32\drivers\cdfs.sys	System Driver	Running	OK	Normal Yes Disabled Running OK
cdrom	CD-ROM Driver	c:\windows\system32\drivers\cdrom.sys	Kernel Driver	Running	OK	Yes System No Yes
changer	Changer	Not Available	Kernel Driver	Stopped	OK	
clusdisk	Cluster Disk Driver	c:\windows\system32\drivers\clusdisk.sys	Kernel Driver	Stopped	OK	Normal No Disabled No
cmdide	CmdIde	Not Available	Kernel Driver	Stopped	OK	
cpqarray	Cpqarray	Not Available	Kernel Driver	Stopped	OK	
cpqarray2	Cpqarray2	Not Available	Kernel Driver	Stopped	OK	
cpqcissm	Cpqcissm	Not Available	Kernel Driver	Stopped	OK	
cpqfcalm	Cpqfcalm	Not Available	Kernel Driver	Stopped	OK	
crcdisk	CRC Disk Filter Driver	c:\windows\system32\drivers\crcdisk.sys	Kernel Driver	Running	OK	Normal No No

	Kernel Driver	Yes	Boot	Yes
	Running OK	Normal	No	
dac960nt	dac960nt Not Available No Disabled Stopped Normal No No	Kernel Driver	OK	
dellcerc	dellcerc Not Available No Disabled Stopped Normal No No	Kernel Driver	OK	
dfsdriver	DfsDriver c:\windows\system32\drivers\dfs.sys File System Driver Yes Running OK Normal No	Boot	Yes	
disk	Disk Driver c:\windows\system32\drivers\disk.sys Kernel Driver Yes Running OK Normal No	Boot	Yes	
dmboot	dmboot c:\windows\system32\drivers\dmboot.sys Kernel Driver No Stopped OK Normal No	Disabled	No	
dmio	Logical Disk Manager Driver c:\windows\system32\drivers\dmio.sys Kernel Driver Yes Running OK Normal No	Boot	Yes	
dmload	dmload c:\windows\system32\drivers\dmload.sys Kernel Driver Yes Running OK Normal No	Boot	Yes	
dpti2o	dpti2o Not Available No Disabled Stopped Normal No No	Kernel Driver	OK	
e1000	Intel(R) PRO/1000 Adapter Driver c:\windows\system32\drivers\e1000325.sys Kernel Driver Yes Running OK Normal No	Manual	Yes	
e100b	Intel(R) PRO Adapter Driver c:\windows\system32\drivers\e100b325.sys Kernel Driver Yes Running OK Normal No	Manual	Yes	
fastfat	Fastfat c:\windows\system32\drivers\fastfat.sys System Driver No Normal No No	File	OK	
fdc	Floppy Disk Controller Driver c:\windows\system32\drivers\fdc.sys Kernel Driver Yes Running OK Normal No	Manual	Yes	
fips	Fips c:\windows\system32\drivers\fips.sys Kernel Driver Yes Running OK Normal No	System	Yes	
flpydisk	Floppy Disk Driver c:\windows\system32\drivers\flpydisk.sys Kernel Driver Yes Running OK Normal No	Manual	Yes	
fltMgr	FltMgr c:\windows\system32\drivers\fltMgr.sys System Driver Yes Normal No Yes	File	Running OK	
ftdisk	Volume Manager Driver c:\windows\system32\drivers\ftdisk.sys Kernel Driver Yes	Boot		

	Running	OK	Normal	No	Yes
gpc	Generic Packet Classifier c:\windows\system32\drivers\msgpc.sys Kernel Driver Yes Running OK Normal No	Manual	Yes		
hpn	hpn Not Available No Disabled Stopped Normal No No	Kernel Driver	OK		
hpt3xx	hpt3xx Not Available No Disabled Stopped Normal No No	Kernel Driver	OK		
http	HTTP c:\windows\system32\drivers\http.sys Kernel Driver Yes Running OK Normal No	Manual	Yes		
i2omgmt	i2omgmt Not Available No System Stopped Normal No No	Kernel Driver	OK		
i2omp	i2omp Not Available No Disabled Stopped Normal No No	Kernel Driver	OK		
i8042prt	i8042 Keyboard and PS/2 Mouse Port Driver c:\windows\system32\drivers\i8042prt.sys Kernel Driver Yes Running OK Normal No	System	Yes		
iirsp	iirsp Not Available No Disabled Stopped Normal No No	Kernel Driver	OK		
imapi	CD-Burning Filter Driver c:\windows\system32\drivers\imapi.sys Kernel Driver No Stopped OK Normal No	System	No		
intelide	IntelIde c:\windows\system32\drivers\intelide.sys Kernel Driver Yes Running OK Normal No	Boot	Yes		
intelppm	Intel Processor Driver c:\windows\system32\drivers\intelppm.sys Kernel Driver Yes Running OK Normal No	Manual	Yes		
ip6fw	IPv6 Windows Firewall Driver c:\windows\system32\drivers\ip6fw.sys Kernel Driver No Stopped OK Normal No	Manual	No		
ipfilterdriver	IP Traffic Filter Driver c:\windows\system32\drivers\ipfltdrv.sys Kernel Driver No Stopped OK Normal No	Manual	No		
ipinip	IP in IP Tunnel Driver c:\windows\system32\drivers\ipinip.sys Kernel Driver No Stopped OK Normal No	Manual	No		
ipnat	IP Network Address Translator c:\windows\system32\drivers\ipnat.sys Kernel Driver No Stopped OK Normal No	Manual	No		
ipsec	IPSEC driver c:\windows\system32\drivers\ipsec.sys Kernel Driver Yes Running OK Normal No	System	Yes		

ipsraidn	ipsraidn Not Available No Disabled Stopped Normal No No	Kernel Driver	OK		
irenum	IR Enumerator Service c:\windows\system32\drivers\irenum.sys Kernel Driver No Stopped OK Normal No	Manual	No		
isapnp	PnP ISA/EISA Bus Driver c:\windows\system32\drivers\isapnp.sys Kernel Driver Yes Running OK Critical No	Boot	Yes		
kbdclass	Keyboard Class Driver c:\windows\system32\drivers\kbdclass.sys Kernel Driver Yes Running OK Normal No	System	Yes		
ksecdd	KSecDD c:\windows\system32\drivers\ksecdd.sys Kernel Driver Yes Running OK Normal No	Boot	Yes		
lp6nds35	lp6nds35 Not Available No Disabled Stopped Normal No No	Kernel Driver	OK		
mmdd	mmdd c:\windows\system32\drivers\mmdd.sys Kernel Driver Yes Running OK Ignore No	System	Yes		
modem	Modem c:\windows\system32\drivers\modem.sys Kernel Driver No Stopped OK Ignore No	Manual	No		
mouclass	Mouse Class Driver c:\windows\system32\drivers\mouclass.sys Kernel Driver Yes Running OK Normal No	System	Yes		
mountmgr	Mount Point Manager c:\windows\system32\drivers\mountmgr.sys Kernel Driver Yes Running OK Normal No	Boot	Yes		
mraid35x	mraid35x Not Available No Disabled Stopped Normal No No	Kernel Driver	OK		
mrxdav	WebDav Client Redirector c:\windows\system32\drivers\mrxdav.sys System Driver No Normal No No	File	Stopped OK		
mrxsm	MRXSMB c:\windows\system32\drivers\mrxsm.sys System Driver Yes Normal No Yes	File	Running OK		
msfs	Msfs c:\windows\system32\drivers\msfs.sys System Driver Yes Normal No Yes	File	Running OK		
mssmbios	Microsoft System Management BIOS Driver c:\windows\system32\drivers\mssmbios.sys Kernel Driver Yes Running OK Normal No	Manual	Yes		
mup	Mup c:\windows\system32\drivers\mup.sys File System Driver Yes Running OK Normal No	Boot	Yes		
ndis	NDIS System Driver c:\windows\system32\drivers\ndis.sys				

	Kernel Driver	Yes	Boot		Yes
	Running OK	Normal	No		
ndistapi	Remote Access NDIS TAPI Driver c:\windows\system32\drivers\ndistapi.sys	Yes	Manual		Yes
	Kernel Driver	Yes	Manual		
	Running OK	Normal	No		Yes
ndisuio	NDIS Usermode I/O Protocol c:\windows\system32\drivers\ndisuio.sys	Yes	Manual		Yes
	Kernel Driver	Yes	Manual		
	Running OK	Normal	No		Yes
ndiswan	Remote Access NDIS WAN Driver c:\windows\system32\drivers\ndiswan.sys	Yes	Manual		Yes
	Kernel Driver	Yes	Manual		
	Running OK	Normal	No		Yes
ndproxy	NDIS Proxy c:\windows\system32\drivers\ndproxy.sys	Yes	Manual		Yes
	Kernel Driver	Yes	Manual		
	Running OK	Normal	No		Yes
netbios	NetBIOS Interface c:\windows\system32\drivers\netbios.sys	File			
System Driver	Yes	System	Running	OK	
	Normal	No	Yes		
netbt	NetBios over Tcpip c:\windows\system32\drivers\netbt.sys	Yes	System		Yes
	Kernel Driver	Yes	System		
	Running OK	Normal	No		Yes
nfrd960	nfrd960 Not Available No Disabled Stopped			Kernel Driver	
	Normal No			OK	
npfs	Npfs c:\windows\system32\drivers\npfs.sys	File			
System Driver	Yes	System	Running	OK	
	Normal No	Yes			
ntfs	Ntfs c:\windows\system32\drivers\ntfs.sys	File			
System Driver	Yes	Disabled	Running	OK	
	Normal No	Yes			
null	Null c:\windows\system32\drivers\null.sys	Kernel Driver	Yes	System	
	Running OK	Normal	No		Yes
parport	Parallel port driver c:\windows\system32\drivers\parport.sys	Kernel Driver	Yes	Manual	
	Running OK	Normal	No		Yes
partmgr	Partition Manager c:\windows\system32\drivers\partmgr.sys	Kernel Driver	Yes	Boot	
	Running OK	Normal	No		Yes
parvdm	Parvdm c:\windows\system32\drivers\parvdm.sys	Kernel Driver	Yes	Auto	
	Running OK	Ignore	No		Yes
pci	PCI Bus Driver c:\windows\system32\drivers\pci.sys	Kernel Driver	Yes	Boot	
	Running OK	Critical	No		Yes
pciide	PCIide c:\windows\system32\drivers\pciide.sys	Kernel Driver	Yes	Boot	

	Running	OK	Normal	No	Yes
pcmcia	Pcmcia c:\windows\system32\drivers\pcmcia.sys	Kernel Driver	No	Disabled	
	Stopped OK	Normal	No		No
pdcomp	PDCOMP Not Available No Manual Stopped			Kernel Driver	
	Ignore No	No		OK	
pdframe	PDFFRAME Not Available No Manual Stopped			Kernel Driver	
	Ignore No	No		OK	
pdreli	PDRELI Not Available No Manual Stopped			Kernel Driver	
	Ignore No	No		OK	
pdrframe	PDRFRAME Not Available No Manual Stopped			Kernel Driver	
	Ignore No	No		OK	
perc2	perc2 Not Available No Disabled Stopped			Kernel Driver	
	Normal No	No		OK	
perc2hib	perc2hib Not Available No Disabled Stopped			Kernel Driver	
	Normal No	No		OK	
pptpminiport	WAN Miniport (PPTP) c:\windows\system32\drivers\rasppptp.sys	Kernel Driver	Yes	Manual	
	Running OK	Normal	No		Yes
processor	Processor Driver c:\windows\system32\drivers\processr.sys	Kernel Driver	No	Manual	
	Stopped OK	Normal	No		No
ptilink	Direct Parallel Link Driver c:\windows\system32\drivers\ptilink.sys	Kernel Driver	Yes	Manual	
	Running OK	Normal	No		Yes
ql1080	ql1080 Not Available No Disabled Stopped			Kernel Driver	
	Normal No	No		OK	
ql10wnt	ql10wnt Not Available No Disabled Stopped			Kernel Driver	
	Normal No	No		OK	
ql12160	ql12160 Not Available No Disabled Stopped			Kernel Driver	
	Normal No	No		OK	
ql1240	ql1240 Not Available No Disabled Stopped			Kernel Driver	
	Normal No	No		OK	
ql1280	ql1280 Not Available No Disabled Stopped			Kernel Driver	
	Normal No	No		OK	
ql2100	ql2100 Not Available No Disabled Stopped			Kernel Driver	
	Normal No	No		OK	
ql2200	ql2200 Not Available No Disabled Stopped			Kernel Driver	
	Normal No	No		OK	
ql2300	ql2300 Not Available No Disabled Stopped			Kernel Driver	
	Normal No	No		OK	
rasacd	Remote Access Auto Connection Driver c:\windows\system32\drivers\rasacd.sys	Kernel Driver	Yes	System	
	Running OK	Normal	No		Yes
rasl2tp	WAN Miniport (L2TP) c:\windows\system32\drivers\rasl2tp.sys	Kernel Driver	Yes	Manual	

	Running	OK	Normal	No	Yes
raspppoe	Remote Access PPPoE Driver c:\windows\system32\drivers\raspppoe.sys	Kernel Driver	Yes	Manual	
	Running OK	Normal	No		Yes
raspti	Direct Parallel c:\windows\system32\drivers\raspti.sys	Kernel Driver	Yes	Manual	
	Running OK	Normal	No		Yes
rdbss	Rdbss c:\windows\system32\drivers\rdbss.sys	File			
System Driver	Yes	System	Running	OK	
	Normal No	Yes			
rdpcdd	RDPCDD c:\windows\system32\drivers\rdpcdd.sys	Kernel Driver	Yes	System	
	Running OK	Ignore	No		Yes
rdpdr	Terminal Server Device Redirector Driver c:\windows\system32\drivers\rdpdr.sys	Kernel Driver	Yes	Manual	
	Running OK	Normal	No		Yes
rdpwd	RDPWD c:\windows\system32\drivers\rdpwd.sys	Kernel Driver	Yes	Manual	
	Running OK	Ignore	No		Yes
redbook	Digital CD Audio Playback Filter Driver c:\windows\system32\drivers\redbook.sys	Kernel Driver	Yes	System	
	Running OK	Normal	No		Yes
secdrv	Secdrv c:\windows\system32\drivers\secdrv.sys	Kernel Driver	No	Manual	
	Stopped OK	Normal	No		No
serenum	Serenum Filter Driver c:\windows\system32\drivers\serenum.sys	Kernel Driver	Yes	Manual	
	Running OK	Normal	No		Yes
serial	Serial port driver c:\windows\system32\drivers\serial.sys	Kernel Driver	Yes	System	
	Running OK	Ignore	No		Yes
sfloppy	Sfloppy c:\windows\system32\drivers\sfloppy.sys	Kernel Driver	No	System	
	Stopped OK	Ignore	No		No
simbad	Simbad Not Available No Disabled Stopped			Kernel Driver	
	Normal No	No		OK	
sparrow	Sparrow Not Available No Disabled Stopped			Kernel Driver	
	Normal No	No		OK	
srv	Srv c:\windows\system32\drivers\srv.sys	File System Driver	Yes	Manual	
	Running OK	Normal	No		Yes
swenum	Software Bus Driver c:\windows\system32\drivers\swenum.sys	Kernel Driver	Yes	Manual	
	Running OK	Normal	No		Yes



symc810	symc810	Not Available	Kernel Driver
	No	Disabled	Stopped
	Normal	No	OK
symc8xx	symc8xx	Not Available	Kernel Driver
	No	Disabled	Stopped
	Normal	No	OK
symmpi	symmpi	Not Available	Kernel Driver
	No	Disabled	Stopped
	Normal	No	OK
sym_hi	sym_hi	Not Available	Kernel Driver
	No	Disabled	Stopped
	Normal	No	OK
sym_u3	sym_u3	Not Available	Kernel Driver
	No	Disabled	Stopped
	Normal	No	OK
tcpip	TCP/IP Protocol Driver		
	c:\windows\system32\drivers\tcpip.sys	Kernel Driver	Yes
	Running	OK	Normal
tdpipe	TDPIPE		
	c:\windows\system32\drivers\tdpipe.sys	Kernel Driver	No
	Stopped	OK	Ignore
tdtcp	TDTCP		
	c:\windows\system32\drivers\tdtcp.sys	Kernel Driver	Yes
	Running	OK	Ignore
termdd	Terminal Device Driver		
	c:\windows\system32\drivers\termdd.sys	Kernel Driver	Yes
	Running	OK	Normal
toside	TosIde	Not Available	Kernel Driver
	No	Disabled	Stopped
	Normal	No	OK
udfs	Udfs		
	c:\windows\system32\drivers\udfs.sys	File System Driver	OK
	Normal	No	Disabled
ultra	ultra	Not Available	Kernel Driver
	No	Disabled	Stopped
	Normal	No	OK
update	Microcode Update Driver		
	c:\windows\system32\drivers\update.sys	Kernel Driver	Yes
	Running	OK	Normal
usbhci	Microsoft USB 2.0 Enhanced Host Controller Miniport Driver		
	c:\windows\system32\drivers\usbhci.sys	Kernel Driver	Yes
	Running	OK	Normal
usbhub	USB2 Enabled Hub		
	c:\windows\system32\drivers\usbhub.sys	Kernel Driver	Yes
	Running	OK	Normal
usbstor	USB Mass Storage Driver		
	c:\windows\system32\drivers\usbstor.sys	Kernel Driver	No
	Stopped	OK	Normal
usbuhci	Microsoft USB Universal Host Controller Miniport Driver		
	c:\windows\system32\drivers\usbuhci.sys	Kernel Driver	Yes
	Running	OK	Normal

vgasave	VGA Display Controller.		
	c:\windows\system32\drivers\vgasave.sys	Kernel Driver	Yes
	Running	OK	Ignore
viaide	ViaIde		
	No	Disabled	Stopped
	Normal	No	OK
volsnap	Storage volumes		
	c:\windows\system32\drivers\volsnap.sys	Kernel Driver	Yes
	Running	OK	Normal
wanarp	Remote Access IP ARP Driver		
	c:\windows\system32\drivers\wanarp.sys	Kernel Driver	Yes
	Running	OK	Normal
wdica	WDICA		
	No	Manual	Stopped
	Ignore	No	No
wlbs	Network Load Balancing		
	c:\windows\system32\drivers\wlbs.sys	Kernel Driver	No
	Stopped	OK	Normal

[Signed Drivers]

Device Name	Signed Driver Version	Device Class
Manufacturer	INF Name	Driver Name
Device ID		
Microsoft	System Management BIOS Driver	Yes
	SYSTEM 5.2.3790.1830	10/1/2002
	(Standard system devices)	machine.inf
	Not Available	ROOT\SYSTEM\0002
Microcode	Update Device	Yes
	5.2.3790.0	10/1/2002
	(Standard system devices)	machine.inf
	Not Available	ROOT\SYSTEM\0001
Plug and Play	Software Device Enumerator	Yes
	SYSTEM 5.2.3790.0	10/1/2002
	(Standard system devices)	machine.inf
	Not Available	ROOT\SYSTEM\0000
Terminal Server	Mouse Driver	Yes
	5.2.3790.0	10/1/2002
	(Standard system devices)	SYSTEM
	Not Available	ROOT\RDP_MOU\0000
Terminal Server	Keyboard Driver	Yes
	SYSTEM 5.2.3790.0	10/1/2002
	(Standard system devices)	machine.inf
	Not Available	ROOT\RDP_KBD\0000
Terminal Server	Device Redirector	Yes
	SYSTEM 5.2.3790.0	10/1/2002
	(Standard system devices)	machine.inf
	Not Available	ROOT\RDPDR\0000
Direct Parallel	Yes	NET
	10/1/2002	Microsoft netrasa.inf
	Available	ROOT\MS_PTMINIPORT\0000
WAN Miniport (PPTP)	Yes	NET
	10/1/2002	Microsoft netrasa.inf
	Available	ROOT\MS_PPTPMINIPORT\0000
WAN Miniport (PPPOE)	Yes	NET
	5.2.3790.0	10/1/2002
	Microsoft netrasa.inf	Not Available
	Available	ROOT\MS_PPPOEMINIPORT\0000
WAN Miniport (IP)	Yes	NET
	10/1/2002	Microsoft netrasa.inf
	Available	ROOT\MS_NDISWANIP\0000

WAN Miniport (L2TP)	Yes	NET	5.2.3790.0
	10/1/2002	Microsoft netrasa.inf	Not Available
	Available	ROOT\MS_L2TPMINIPORT\0000	
Video Codecs	Yes	MEDIA	5.2.3790.0
	10/1/2002	(Standard system devices)	wave.inf
	Not Available	ROOT\MEDIA\MS_MMVID	
Legacy Video Capture Devices	Yes	MEDIA	5.2.3790.0
	10/1/2002	(Standard system devices)	wave.inf
	Not Available	ROOT\MEDIA\MS_MMVCD	
Media Control Devices	Yes	MEDIA	5.2.3790.0
	10/1/2002	(Standard system devices)	wave.inf
	Not Available	ROOT\MEDIA\MS_MMCICI	
Legacy Audio Drivers	Yes	MEDIA	5.2.3790.0
	10/1/2002	(Standard system devices)	wave.inf
	Not Available	ROOT\MEDIA\MS_MMDRV	
Audio Codecs	Yes	MEDIA	5.2.3790.0
	10/1/2002	(Standard system devices)	wave.inf
	Not Available	ROOT\MEDIA\MS_MMACM	
Remote Access IP ARP Driver	Not Available		
	LEGACYDRIVER	Not Available	Not Available
	Available	ROOT\LEGACY_WANARP\0000	
volsnap	Not Available	LEGACYDRIVER	Not Available
	Available	Not Available	Not Available
	Available	ROOT\LEGACY_VOLSNAP\0000	
VGA Display Controller.	Not Available		
	LEGACYDRIVER	Not Available	Not Available
	Available	Not Available	Not Available
	Available	ROOT\LEGACY_VGASAVE\0000	
TDTCP	Not Available	LEGACYDRIVER	Not Available
	Available	Not Available	Not Available
	Available	ROOT\LEGACY_TDTCP\0000	
TCP/IP Protocol Driver	Not Available		
	LEGACYDRIVER	Not Available	Not Available
	Available	Not Available	Not Available
	Available	ROOT\LEGACY_TCP\0000	
RDPWD	Not Available	LEGACYDRIVER	Not Available
	Available	Not Available	Not Available
	Available	ROOT\LEGACY_RDPWD\0000	
RDPDCC	Not Available	LEGACYDRIVER	Not Available
	Available	Not Available	Not Available
	Available	ROOT\LEGACY_RDPDCC\0000	
Remote Access Auto Connection Driver	Not Available		
	LEGACYDRIVER	Not Available	Not Available
	Available	Not Available	Not Available
	Available	ROOT\LEGACY_RASACD\0000	
PCIIDE	Not Available	LEGACYDRIVER	Not Available
	Available	Not Available	Not Available
	Available	ROOT\LEGACY_PCIIDE\0000	
Parvdm	Not Available	LEGACYDRIVER	Not Available
	Available	Not Available	Not Available
	Available	ROOT\LEGACY_PARVDM\0000	
Partition Manager	Not Available	LEGACYDRIVER	Not Available
	Available	Not Available	Not Available
	Available	Not Available	Not Available
	Available	ROOT\LEGACY_PARTMGR\0000	
Null	Not Available	LEGACYDRIVER	Not Available
	Available	Not Available	Not Available
	Available	Not Available	Not Available
	Available	ROOT\LEGACY_NULL\0000	

NetBios over Tcpip	Not Available	LEGACYDRIVER	Not Available	LEGACYDRIVER	Not Available	STORAGE\VOLUME\1830A96598&0&SIGNATUREBB17BB17				
Available	Not Available	Not Available	Not Available	Not Available	Not Available	OFFSET75C65E00LENGHBC1BBF800	Yes	VOLUME	5.2.3790.0	Not Available
NDProxy	Not Available	LEGACYDRIVER	Not Available	LEGACYDRIVER	Not Available	Generic volume	10/1/2002	Microsoft	volume.inf	Not Available
Available	Not Available	Not Available	Not Available	Not Available	Not Available	Available	10/1/2002	Microsoft	volume.inf	Not Available
NDIS Use mode I/O Protocol	Not Available	LEGACYDRIVER	Not Available	LEGACYDRIVER	Not Available	OFFSET7E00LENGHTH752C56200	Yes	SYSTEM	5.2.3790.0	Not Available
Available	Not Available	LEGACYDRIVER	Not Available	LEGACYDRIVER	Not Available	Volume Manager	10/1/2002	Standard	system devices	Not Available
Remote Access	Not Available	LEGACYDRIVER	Not Available	LEGACYDRIVER	Not Available	Logical disk manager	10/1/2002	Standard	system devices	Not Available
Available	Not Available	LEGACYDRIVER	Not Available	LEGACYDRIVER	Not Available	System devices	10/1/2002	Standard	system devices	Not Available
NDIS System Driver	Not Available	LEGACYDRIVER	Not Available	LEGACYDRIVER	Not Available	ACPI Fixed Feature Button	Yes	SYSTEM	5.2.3790.0	Not Available
Available	Not Available	LEGACYDRIVER	Not Available	LEGACYDRIVER	Not Available	ACPI Fixed Feature Button	Yes	SYSTEM	5.2.3790.0	Not Available
mountmgr	Not Available	LEGACYDRIVER	Not Available	LEGACYDRIVER	Not Available	System devices	10/1/2002	Standard	system devices	Not Available
Available	Not Available	LEGACYDRIVER	Not Available	LEGACYDRIVER	Not Available	ACPI Sleep Button	Yes	SYSTEM	5.2.3790.0	Not Available
Available	Not Available	LEGACYDRIVER	Not Available	LEGACYDRIVER	Not Available	ACPI Power Button	Yes	SYSTEM	5.2.3790.0	Not Available
mmdvd	Not Available	LEGACYDRIVER	Not Available	LEGACYDRIVER	Not Available	System board	10/1/2002	Standard	system devices	Not Available
Available	Not Available	LEGACYDRIVER	Not Available	LEGACYDRIVER	Not Available	System board	10/1/2002	Standard	system devices	Not Available
ksecdd	Not Available	LEGACYDRIVER	Not Available	LEGACYDRIVER	Not Available	Intel(R) 82801EM SMBus Controller	Yes	SYSTEM	5.2.3790.0	Not Available
Available	Not Available	LEGACYDRIVER	Not Available	LEGACYDRIVER	Not Available	Intel(R) 82801EM SMBus Controller	Yes	SYSTEM	5.2.3790.0	Not Available
IPSEC driver	Not Available	LEGACYDRIVER	Not Available	LEGACYDRIVER	Not Available	Machine.inf	10/1/2002	Standard	system devices	Not Available
Available	Not Available	LEGACYDRIVER	Not Available	LEGACYDRIVER	Not Available	Machine.inf	10/1/2002	Standard	system devices	Not Available
HTTP	Not Available	LEGACYDRIVER	Not Available	LEGACYDRIVER	Not Available	Machine.inf	10/1/2002	Standard	system devices	Not Available
Available	Not Available	LEGACYDRIVER	Not Available	LEGACYDRIVER	Not Available	Machine.inf	10/1/2002	Standard	system devices	Not Available
Generic Packet Classifier	Not Available	LEGACYDRIVER	Not Available	LEGACYDRIVER	Not Available	Machine.inf	10/1/2002	Standard	system devices	Not Available
Available	Not Available	LEGACYDRIVER	Not Available	LEGACYDRIVER	Not Available	Machine.inf	10/1/2002	Standard	system devices	Not Available
FIPS	Not Available	LEGACYDRIVER	Not Available	LEGACYDRIVER	Not Available	Machine.inf	10/1/2002	Standard	system devices	Not Available
Available	Not Available	LEGACYDRIVER	Not Available	LEGACYDRIVER	Not Available	Machine.inf	10/1/2002	Standard	system devices	Not Available
dmload	Not Available	LEGACYDRIVER	Not Available	LEGACYDRIVER	Not Available	Machine.inf	10/1/2002	Standard	system devices	Not Available
Available	Not Available	LEGACYDRIVER	Not Available	LEGACYDRIVER	Not Available	Machine.inf	10/1/2002	Standard	system devices	Not Available
dmboot	Not Available	LEGACYDRIVER	Not Available	LEGACYDRIVER	Not Available	Machine.inf	10/1/2002	Standard	system devices	Not Available
Available	Not Available	LEGACYDRIVER	Not Available	LEGACYDRIVER	Not Available	Machine.inf	10/1/2002	Standard	system devices	Not Available
CRC disk Filter Driver	Not Available	LEGACYDRIVER	Not Available	LEGACYDRIVER	Not Available	Machine.inf	10/1/2002	Standard	system devices	Not Available
Available	Not Available	LEGACYDRIVER	Not Available	LEGACYDRIVER	Not Available	Machine.inf	10/1/2002	Standard	system devices	Not Available
Beeper	Not Available	LEGACYDRIVER	Not Available	LEGACYDRIVER	Not Available	Machine.inf	10/1/2002	Standard	system devices	Not Available
Available	Not Available	LEGACYDRIVER	Not Available	LEGACYDRIVER	Not Available	Machine.inf	10/1/2002	Standard	system devices	Not Available
AFD Networking Support Environment	Not Available	LEGACYDRIVER	Not Available	LEGACYDRIVER	Not Available	Machine.inf	10/1/2002	Standard	system devices	Not Available
Available	Not Available	LEGACYDRIVER	Not Available	LEGACYDRIVER	Not Available	Machine.inf	10/1/2002	Standard	system devices	Not Available
Generic volume	Yes	VOLUME	5.2.3790.0	LEGACYDRIVER	Not Available	Machine.inf	10/1/2002	Standard	system devices	Not Available
Available	Not Available	LEGACYDRIVER	Not Available	LEGACYDRIVER	Not Available	Machine.inf	10/1/2002	Standard	system devices	Not Available

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(Standard system devices) machine.inf
Not Available ACPI\PNP0000\4&35F762C4&0

ISAPNP Read Data Port Yes SYSTEM
5.2.3790.0 10/1/2002 (Standard
system devices) machine.inf Not Available
ISAPNP\READDATA\PORT\0
Intel(R) 82801EB LPC Interface Controller - 24D0 Yes
SYSTEM 5.2.3790.1830 10/1/2002 Intel
machine.inf Not Available
PCI\VEN_8086&DEV_24D0&SUBSYS_00000000&REV_02\
3&267A616A&0&F8
Intel(R) PRO/1000 MT Network Connection Yes NET
7.2.17.0 14/8/2003 Intel oem0.inf Not
Available
PCI\VEN_8086&DEV_1076&SUBSYS_10768086&REV_00\
4&2E98101C&0&40F0
Intel(R) PRO/100 S Server Adapter Yes NET
6.6.8.1 10/1/2002 Intel net557.inf Not
Available
PCI\VEN_8086&DEV_1229&SUBSYS_10508086&REV_10\
4&2E98101C&0&38F0
Plug and Play Monitor Yes MONITOR
5.1.2001.0 6/6/2001 (Standard
monitor types) monitor.inf Not Available
DISPLAY\SAM0025\5&237DE87D&0&80000001&01&04

RAGE XL PCI Family (Microsoft Corporation) Yes
DISPLAY 5.10.2600.6014 8/8/2001 ATI
Technologies Inc. atiixpad.inf Not Available
PCI\VEN_1002&DEV_4752&SUBSYS_80081002&REV_27\
4&2E98101C&0&20F0
Intel(R) 82801 PCI Bridge - 244E Yes
SYSTEM 5.2.3790.1830 10/1/2002 Intel
machine.inf Not Available
PCI\VEN_8086&DEV_244E&SUBSYS_00000000&REV_C2\
3&267A616A&0&F0
USB Root Hub Yes USB 5.2.3790.0
10/1/2002 (Standard USB Host Controller)
usbport.inf Not Available
USB\ROOT_HUB20\4&846DC72&0
Standard Enhanced PCI to USB Host Controller Yes
USB 5.2.3790.0 10/1/2002
(Standard USB Host Controller)
usbport.inf Not Available
PCI\VEN_8086&DEV_24DD&SUBSYS_498015D9&REV_02\
3&267A616A&0&EF
USB Root Hub Yes USB 5.2.3790.0
10/1/2002 (Standard USB Host Controller)
usbport.inf Not Available
USB\ROOT_HUB\4&33D404DA&0
Standard Universal PCI to USB Host Controller Yes
USB 5.2.3790.0 10/1/2002
(Standard USB Host Controller)
usbport.inf Not Available
PCI\VEN_8086&DEV_24D7&SUBSYS_498015D9&REV_02\
3&267A616A&0&EA
USB Root Hub Yes USB 5.2.3790.0
10/1/2002 (Standard USB Host Controller)
usbport.inf Not Available
USB\ROOT_HUB\4&36AE36F1&0
Standard Universal PCI to USB Host Controller Yes
USB 5.2.3790.0 10/1/2002
(Standard USB Host Controller)
usbport.inf Not Available
PCI\VEN_8086&DEV_24D4&SUBSYS_498015D9&REV_02\
3&267A616A&0&E9
USB Root Hub Yes USB 5.2.3790.0
10/1/2002 (Standard USB Host Controller)
usbport.inf Not Available
USB\ROOT_HUB\4&6EA0A9A&0

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Standard Universal PCI to USB Host Controller Yes
USB 5.2.3790.0 10/1/2002
(Standard USB Host Controller)
usbport.inf Not Available
PCI\VEN_8086&DEV_24D2&SUBSYS_498015D9&REV_02\
3&267A616A&0&E8
Intel(R) E7501 Chipset Host Controller - 254C Yes
SYSTEM 5.2.3790.0 10/1/2002 Intel
machine.inf Not Available
PCI\VEN_8086&DEV_254C&SUBSYS_00000000&REV_01\
3&267A616A&0&00
PCI bus Yes SYSTEM 5.2.3790.0
10/1/2002 (Standard system devices)
machine.inf Not Available
ACPI\PNP0A03\0
Intel Processor Yes PROCESSOR 5.2.3790.1830
10/1/2002 Intel cpu.inf Not Available
ACPI\GENUINEINTEL_-_X86_FAMILY_15_MODEL_2_\_1
Intel Processor Yes PROCESSOR 5.2.3790.1830
10/1/2002 Intel cpu.inf Not Available
ACPI\GENUINEINTEL_-_X86_FAMILY_15_MODEL_2_\_0
Microsoft ACPI-Compliant System Yes
SYSTEM 5.2.3790.0 10/1/2002
Microsoft acpi.inf Not Available
ACPI_HAL\PNP0C08\0
ACPI Multiprocessor PC Yes COMPUTER
5.2.3790.0 10/1/2002 (Standard
computers) hal.inf Not Available
ROOT\ACPI_HAL\0000
Not Available Not Available Not Available
Available Not Available Not Available
Not Available Not Available Not Available
Not Available Yes Not Available
Available Not Available Not Available
Available Not Available No Not Available
Available Not Available Not Available
Available Not Available Microsoft Office Document
Image Writer

[Environment Variables]
Variable Value User Name
ComSpec %SystemRoot%\system32\cmd.exe <SYSTEM>
Path %SystemRoot%\system32;%SystemRoot%;%SystemRo
ot%\System32\wbem <SYSTEM>
windir %SystemRoot% <SYSTEM>
OS Windows_NT <SYSTEM>
PROCESSOR_ARCHITECTURE x86 <SYSTEM>
PROCESSOR_LEVEL 15 <SYSTEM>
PROCESSOR_IDENTIFIER x86 Family 15 Model 2
Stepping 9, GenuineIntel <SYSTEM>
PROCESSOR_REVISION 0209 <SYSTEM>
NUMBER_OF_PROCESSORS 2 <SYSTEM>
ClusterLog C:\WINDOWS\cluster\cluster.log
<SYSTEM>
PATHEXT .COM;.EXE;.BAT;.CMD;.VBS;.VBE;.JS;.JSE;.WSF;.
WSH <SYSTEM>
TEMP %SystemRoot%\TEMP <SYSTEM>
TMP %SystemRoot%\TEMP <SYSTEM>
FP_NO_HOST_CHECK NO <SYSTEM>
TEMP %USERPROFILE%\Local Settings\Temp NT
AUTHORITY\SYSTEM
TMP %USERPROFILE%\Local Settings\Temp NT
AUTHORITY\SYSTEM
TEMP %USERPROFILE%\Local Settings\Temp NT
AUTHORITY\LOCAL SERVICE

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TMP %USERPROFILE%\Local Settings\Temp NT
AUTHORITY\LOCAL SERVICE
TEMP %USERPROFILE%\Local Settings\Temp NT
AUTHORITY\NETWORK SERVICE
TMP %USERPROFILE%\Local Settings\Temp NT
AUTHORITY\NETWORK SERVICE
TEMP %USERPROFILE%\Local Settings\Temp
CLI05\Administrator
TMP %USERPROFILE%\Local Settings\Temp
CLI05\Administrator

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

[Network Connections]
Local Name Remote Name Type
Status User Name

[Running Tasks]
Name Path Process ID Priority Min
Working Set Max Working Set Start Time
Version File Date
system idle process Not Available 0 0
Available Not Available Not Available Not
Available Not Available Not Available Not
system Not Available 4 8 0
1413120 Not Available Not Available
smss.exe Not Available 644 11
204800 1413120 25/11/2005 11:18 Not
Available Not Available Not Available
csrss.exe Not Available 744 13 Not
Available Not Available 25/11/2005 11:18 Not
Available Not Available Not Available
winlogon.exe c:\windows\system32\winlogon.exe
896 13 204800 1413120
25/11/2005 11:18 5.2.3790.1830
(srv03_spl_rtm.050324-1447) 497,00 KB (508.928 bytes)
services.exe c:\windows\system32\services.exe
956 9 204800 1413120
25/11/2005 11:18 5.2.3790.1830
(srv03_spl_rtm.050324-1447) 107,50 KB (110.080 bytes)
lsass.exe c:\windows\system32\lsass.exe 968 9
204800 1413120 25/11/2005 11:18
5.2.3790.0 (srv03_rtm.030324-2048) 13,00
KB (13.312 bytes) 25/3/2003 09:00
svchost.exe c:\windows\system32\svchost.exe
1176 8 204800 1413120
25/11/2005 11:18 5.2.3790.1830
(srv03_spl_rtm.050324-1447) 14,00 KB (14.336 bytes)
svchost.exe Not Available 1248 8
Not Available Not Available
Available Not Available Not Available Not
svchost.exe Not Available 1340 8
Not Available Not Available Not
Available Not Available Not Available
svchost.exe Not Available 1416 8
Not Available Not Available

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25/11/2005 11:18 Not Available Not
Available Not Available
svchost.exe c:\windows\system32\svchost.exe
1428 8 204800 1413120
25/11/2005 11:18 5.2.3790.1830
(srv03_sp1_rtm.050324-1447) 14,00 KB (14.336 bytes)
20/11/2005 21:14
spoolsv.exe c:\windows\system32\spoolsv.exe
1948 8 204800 1413120
25/11/2005 11:18 5.2.3790.1830
(srv03_sp1_rtm.050324-1447) 57,00 KB (58.368 bytes)
20/11/2005 21:14
msdtc.exe Not Available 1980 8 Not
Available Not Available 25/11/2005 11:18 Not
Available Not Available Not Available
svchost.exe c:\windows\system32\svchost.exe
340 8 204800 1413120
25/11/2005 11:18 5.2.3790.1830
(srv03_sp1_rtm.050324-1447) 14,00 KB (14.336 bytes)
20/11/2005 21:14
inetinfo.exe
c:\windows\system32\inetinfo.exe
432 8 204800 1413120
25/11/2005 11:18 6.0.3790.1830
(srv03_sp1_rtm.050324-1447) 14,00 KB (14.336 bytes)
20/11/2005 21:16
mdm.exe c:\program files\microsoft
shared\vsdebug\mdm.exe 456 8
204800 1413120 25/11/2005 11:18
7,00.9466 314,57 KB (322.120 bytes)
19/6/2003 23:25
svchost.exe Not Available 528 8
Not Available Not Available
25/11/2005 11:18 Not Available Not
Available Not Available 25/11/2005 11:18 Not
Available Not Available 25/11/2005 11:18 Not
Available Not Available
svchost.exe c:\windows\system32\svchost.exe
1644 8 204800 1413120
25/11/2005 11:18 5.2.3790.1830
(srv03_sp1_rtm.050324-1447) 14,00 KB (14.336 bytes)
20/11/2005 21:14
explorer.exe c:\windows\explorer.exe 1820
8 204800 1413120 25/11/2005
11:18 6.00.3790.1830 (srv03_sp1_rtm.050324-1447)
1,00 MB (1.050.624 bytes) 20/11/2005
21:15
svchost.exe c:\windows\system32\svchost.exe
1892 8 204800 1413120
25/11/2005 11:18 5.2.3790.1830
(srv03_sp1_rtm.050324-1447) 14,00 KB (14.336 bytes)
20/11/2005 21:14
ctfmon.exe c:\windows\system32\ctfmon.exe
568 8 204800 1413120
25/11/2005 11:18 5.2.3790.1830
(srv03_sp1_rtm.050324-1447) 15,00 KB (15.360 bytes)
20/11/2005 21:15
wmiprvse.exe Not Available 1964 8
Not Available Not Available
25/11/2005 11:19 Not Available Not
Available Not Available
wpabaln.exe c:\windows\system32\wpabaln.exe
3052 8 204800 1413120
25/11/2005 11:20 5.2.3790.0
(srv03_rtm.030324-2048) 31,00 KB (31.744 bytes)
25/3/2003 09:00
w3wp.exe c:\windows\system32\inetrv\w3wp.exe 3772
8 204800 1413120 25/11/2005
11:36 6.0.3790.1830 (srv03_sp1_rtm.050324-1447)
7,00 KB (7.168 bytes) 20/11/2005
21:16

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helpctr.exe
c:\windows\pchealth\helpctr\binaries\helpctr.
exe 2176 8 204800 1413120
25/11/2005 11:39 5.2.3790.1830
(srv03_sp1_rtm.050324-1447) 778,00 KB (796.672 bytes)
20/11/2005 21:16
wmiprvse.exe Not Available 2024 8
Not Available Not Available
25/11/2005 11:39 Not Available Not
Available Not Available
helpsvc.exe
c:\windows\pchealth\helpctr\binaries\helpsvc.
exe 2376 8 204800 1413120
25/11/2005 11:39 5.2.3790.1830
(srv03_sp1_rtm.050324-1447) 745,00 KB (762.880 bytes)
20/11/2005 21:16

[Loaded Modules]
Name Version Size File Date Manufacturer
Path
winlogon 5.2.3790.1830 (srv03_sp1_rtm.050324-1447)
497,00 KB (508.928 bytes) 20/11/2005
21:14 Microsoft Corporation
c:\windows\system32\winlogon.exe
ntdll 5.2.3790.1830 (srv03_sp1_rtm.050324-1447)
748,50 KB (766.464 bytes) 25/3/2003 09:00
Microsoft Corporation
c:\windows\system32\ntdll.dll
kernel32 5.2.3790.1830 (srv03_sp1_rtm.050324-1447)
1,014,00 KB (1,038.336 bytes) 20/11/2005
Microsoft Corporation
c:\windows\system32\kernel32.dll
advapi32 5.2.3790.1830 (srv03_sp1_rtm.050324-1447)
605,50 KB (620.032 bytes) 25/3/2003 09:00
Microsoft Corporation
c:\windows\system32\advapi32.dll
rpcrt4 5.2.3790.1830 (srv03_sp1_rtm.050324-1447)
627,00 KB (642.048 bytes) 20/11/2005
Microsoft Corporation
c:\windows\system32\rpcrt4.dll
crypt32 5.131.3790.1830 (srv03_sp1_rtm.050324-1447)
582,00 KB (595.968 bytes) 20/11/2005
Microsoft Corporation
c:\windows\system32\crypt32.dll
msasn1 5.2.3790.1830 (srv03_sp1_rtm.050324-1447)
56,50 KB (57.856 bytes) 20/11/2005
Microsoft Corporation
c:\windows\system32\msasn1.dll
msvcrt 7.0.3790.1830 (srv03_sp1_rtm.050324-1447)
340,50 KB (348.672 bytes) 20/11/2005
Microsoft Corporation
c:\windows\system32\msvcrt.dll
user32 5.2.3790.1830 (srv03_sp1_rtm.050324-1447)
574,50 KB (588.288 bytes) 20/11/2005
Microsoft Corporation
c:\windows\system32\user32.dll
gdi32 5.2.3790.1830 (srv03_sp1_rtm.050324-1447)
273,00 KB (279.552 bytes) 20/11/2005
Microsoft Corporation
c:\windows\system32\gdi32.dll
nddeapi 5.2.3790.0 (srv03_rtm.030324-2048) 16,00
KB (16.384 bytes) 25/3/2003 09:00 Microsoft
Corporation c:\windows\system32\nddeapi.dll
profmap 5.2.3790.1830 (srv03_sp1_rtm.050324-1447)
22,50 KB (23.040 bytes) 20/11/2005
Microsoft Corporation
c:\windows\system32\profmap.dll
netapi32 5.2.3790.1830 (srv03_sp1_rtm.050324-1447)
341,50 KB (349.696 bytes) 20/11/2005

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21:14 Microsoft Corporation
c:\windows\system32\netapi32.dll
userenv 5.2.3790.1830 (srv03_sp1_rtm.050324-1447)
771,00 KB (789.504 bytes) 25/3/2003 09:00
Microsoft Corporation
c:\windows\system32\userenv.dll
psapi 5.2.3790.1830 (srv03_sp1_rtm.050324-1447)
20,00 KB (20.480 bytes) 20/11/2005
Microsoft Corporation
21:14 c:\windows\system32\psapi.dll
regapi 5.2.3790.1830 (srv03_sp1_rtm.050324-1447)
55,00 KB (56.320 bytes) 20/11/2005
Microsoft Corporation
21:14 c:\windows\system32\regapi.dll
secur32 5.2.3790.1830 (srv03_sp1_rtm.050324-1447)
64,00 KB (65.536 bytes) 20/11/2005
Microsoft Corporation
21:14 c:\windows\system32\secur32.dll
setupapi 5.2.3790.1830 (srv03_sp1_rtm.050324-1447)
1,03 MB (1.079.808 bytes) 25/3/2003 09:00
Microsoft Corporation
c:\windows\system32\setupapi.dll
version 5.2.3790.1830 (srv03_sp1_rtm.050324-1447)
18,00 KB (18.432 bytes) 20/11/2005
Microsoft Corporation
21:14 c:\windows\system32\version.dll
winsta 5.2.3790.1830 (srv03_sp1_rtm.050324-1447)
54,50 KB (55.808 bytes) 20/11/2005
Microsoft Corporation
21:14 c:\windows\system32\winsta.dll
ws2_32 5.2.3790.1830 (srv03_sp1_rtm.050324-1447)
82,00 KB (83.968 bytes) 20/11/2005
Microsoft Corporation
21:14 c:\windows\system32\ws2_32.dll
ws2help 5.2.3790.1830 (srv03_sp1_rtm.050324-1447)
19,50 KB (19.968 bytes) 20/11/2005
Microsoft Corporation
21:14 c:\windows\system32\ws2help.dll
msgina 5.2.3790.1830 (srv03_sp1_rtm.050324-1447)
1,16 MB (1.211.904 bytes) 20/11/2005
Microsoft Corporation
21:15 c:\windows\system32\msgina.dll
shsvcs 6.00.3790.1830 (srv03_sp1_rtm.050324-1447)
131,50 KB (134.656 bytes) 20/11/2005
Microsoft Corporation
21:14 c:\windows\system32\shsvcs.dll
shlwapi 6.00.3790.1830 (srv03_sp1_rtm.050324-1447)
313,50 KB (321.024 bytes) 20/11/2005
Microsoft Corporation
21:14 c:\windows\system32\shlwapi.dll
sfc 5.2.3790.0 (srv03_rtm.030324-2048) 4,50
KB (4.608 bytes) 25/3/2003 09:00 Microsoft
Corporation c:\windows\system32\sfc.dll
sfc_os 5.2.3790.1830 (srv03_sp1_rtm.050324-1447)
138,00 KB (141.312 bytes) 20/11/2005
Microsoft Corporation
21:14 c:\windows\system32\sfc_os.dll
wintrust 5.131.3790.1830 (srv03_sp1_rtm.050324-1447)
162,00 KB (165.888 bytes) 20/11/2005
Microsoft Corporation
21:14 c:\windows\system32\wintrust.dll
imagehlp 5.2.3790.1830 (srv03_sp1_rtm.050324-1447)
145,50 KB (148.992 bytes) 25/3/2003 09:00
Microsoft Corporation
c:\windows\system32\imagehlp.dll
ole32 5.2.3790.1830 (srv03_sp1_rtm.050324-1447)
1,19 MB (1.245.184 bytes) 20/11/2005
Microsoft Corporation
21:14 c:\windows\system32\ole32.dll
comctl32 6.0 (srv03_sp1_rtm.050324-1447) 1,00
MB (1.051.136 bytes) 24/3/2005 21:41
Microsoft Corporation

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c:\windows\winsxs\x86\_microsoft.windows.commo  
n-controls\_6595b64144ccf1df\_6.0.3790.1830\_x-  
ww\_7ae38ccf\comct132.dll  
wincard 5.2.3790.0 (srv03\_rtm.030324-2048) 98,50  
KB (100.864 bytes) 25/3/2003 09:00 Microsoft  
Corporation c:\windows\system32\wincard.dll  
wtsapi32 5.2.3790.1830 (srv03\_sp1\_rtm.050324-1447)  
19,00 KB (19.456 bytes) 20/11/2005  
21:14 Microsoft Corporation  
c:\windows\system32\wtsapi32.dll  
sxs 5.2.3790.1830 (srv03\_sp1\_rtm.050324-1447)  
743,50 KB (761.344 bytes) 20/11/2005  
21:14 Microsoft Corporation  
c:\windows\system32\sxs.dll  
winmm 5.2.3790.1830 (srv03\_sp1\_rtm.050324-1447)  
172,50 KB (176.640 bytes) 20/11/2005  
21:14 Microsoft Corporation  
c:\windows\system32\winmm.dll  
shell32 6.00.3790.1830 (srv03\_sp1\_rtm.050324-1447)  
7,99 MB (8.379.392 bytes) 20/11/2005  
21:14 Microsoft Corporation  
c:\windows\system32\shell32.dll  
wldap32 5.2.3790.1830 (srv03\_sp1\_rtm.050324-1447)  
174,50 KB (178.688 bytes) 20/11/2005  
21:14 Microsoft Corporation  
c:\windows\system32\wldap32.dll  
rsaenh 5.2.3790.1830 (srv03\_sp1\_rtm.050324-1447)  
183,98 KB (188.392 bytes) 20/11/2005  
21:14 Microsoft Corporation  
c:\windows\system32\rsaenh.dll  
cscdll 5.2.3790.1830 (srv03\_sp1\_rtm.050324-1447)  
100,00 KB (102.400 bytes) 20/11/2005  
21:15 Microsoft Corporation  
c:\windows\system32\cscdll.dll  
dimeantfy 5.2.3790.1830 (srv03\_sp1\_rtm.050324-1447)  
19,00 KB (19.456 bytes) 20/11/2005  
21:18 Microsoft Corporation  
c:\windows\system32\dimeantfy.dll  
wlnotify 5.2.3790.1830 (srv03\_sp1\_rtm.050324-1447)  
94,50 KB (96.768 bytes) 20/11/2005  
21:14 Microsoft Corporation  
c:\windows\system32\wlnotify.dll  
mpr 5.2.3790.0 (srv03\_rtm.030324-2048) 56,00  
KB (57.344 bytes) 25/3/2003 09:00 Microsoft  
Corporation c:\windows\system32\mpr.dll  
oleaut32 5.2.3790.1830 543,00 KB (556.032 bytes)  
25/3/2003 09:00 Microsoft Corporation  
c:\windows\system32\oleaut32.dll  
winspool 5.2.3790.1830 (srv03\_sp1\_rtm.050324-1447)  
147,00 KB (150.528 bytes) 25/3/2003 09:00  
Microsoft Corporation  
c:\windows\system32\winspool.drv  
comct132 5.82 (srv03\_sp1\_rtm.050324-1447)  
585,00 KB (599.040 bytes) 24/3/2005 21:41  
Microsoft Corporation  
c:\windows\winsxs\x86\_microsoft.windows.commo  
n-controls\_6595b64144ccf1df\_5.82.3790.1830\_x-  
ww\_1b6f474a\comct132.dll  
uxtheme 6.00.3790.1830 (srv03\_sp1\_rtm.050324-1447)  
202,00 KB (206.848 bytes) 20/11/2005  
21:14 Microsoft Corporation  
c:\windows\system32\uxtheme.dll  
samlib 5.2.3790.1830 (srv03\_sp1\_rtm.050324-1447)  
46,50 KB (47.616 bytes) 25/3/2003 09:00  
Microsoft Corporation  
c:\windows\system32\samlib.dll  
cscui 5.2.3790.1830 (srv03\_sp1\_rtm.050324-1447)  
319,50 KB (327.168 bytes) 20/11/2005  
21:15 Microsoft Corporation  
c:\windows\system32\cscui.dll

mprapi 5.2.3790.1830 (srv03\_sp1\_rtm.050324-1447)  
89,00 KB (91.136 bytes) 20/11/2005  
21:15 Microsoft Corporation  
c:\windows\system32\mprapi.dll  
activeds 5.2.3790.1830 (srv03\_sp1\_rtm.050324-1447)  
194,00 KB (198.656 bytes) 20/11/2005  
21:15 Microsoft Corporation  
c:\windows\system32\activeds.dll  
adslrpc 5.2.3790.1830 (srv03\_sp1\_rtm.050324-1447)  
146,00 KB (149.504 bytes) 20/11/2005  
21:15 Microsoft Corporation  
c:\windows\system32\adslrpc.dll  
credui 5.2.3790.1830 (srv03\_sp1\_rtm.050324-1447)  
162,00 KB (165.888 bytes) 20/11/2005  
21:15 Microsoft Corporation  
c:\windows\system32\credui.dll  
atl 3.05.2283 83,00 KB (84.992 bytes)  
25/3/2003 09:00 Microsoft Corporation  
c:\windows\system32\atl.dll  
rtutils 5.2.3790.1830 (srv03\_sp1\_rtm.050324-1447)  
34,50 KB (35.328 bytes) 20/11/2005  
21:14 Microsoft Corporation  
c:\windows\system32\rtutils.dll  
ntmarta 5.2.3790.1830 (srv03\_sp1\_rtm.050324-1447)  
120,50 KB (123.392 bytes) 20/11/2005  
21:14 Microsoft Corporation  
c:\windows\system32\ntmarta.dll  
clbcatq 2001.12.4720.1830 (srv03\_sp1\_rtm.050324-1447)  
502,50 KB (514.560 bytes) 20/11/2005  
21:15 Microsoft Corporation  
c:\windows\system32\clbcatq.dll  
comres 2001.12.4720.0 (srv03\_rtm.030324-2048)  
778,00 KB (796.672 bytes) 25/3/2003 09:00  
Microsoft Corporation  
c:\windows\system32\comres.dll  
xpsp2res 5.2.3790.1830 (srv03\_sp1\_rtm.050324-1447)  
2,76 MB (2.897.920 bytes) 20/11/2005  
21:18 Microsoft Corporation  
c:\windows\system32\xpsp2res.dll  
services 5.2.3790.1830 (srv03\_sp1\_rtm.050324-1447)  
107,50 KB (110.080 bytes) 25/3/2003 09:00  
Microsoft Corporation  
c:\windows\system32\services.exe  
ncobjapi 5.2.3790.1830 (srv03\_sp1\_rtm.050324-1447)  
36,00 KB (36.864 bytes) 20/11/2005  
21:14 Microsoft Corporation  
c:\windows\system32\ncobjapi.dll  
msvcp60 6.05.2144.0 388,00 KB (397.312 bytes)  
25/3/2003 09:00 Microsoft Corporation  
c:\windows\system32\msvcp60.dll  
scsvrv 5.2.3790.1830 (srv03\_sp1\_rtm.050324-1447)  
327,00 KB (334.848 bytes) 20/11/2005  
21:14 Microsoft Corporation  
c:\windows\system32\scsvrv.dll  
authz 5.2.3790.1830 (srv03\_sp1\_rtm.050324-1447)  
66,50 KB (68.096 bytes) 20/11/2005  
21:15 Microsoft Corporation  
c:\windows\system32\authz.dll  
umpnpgmr 5.2.3790.1830 (srv03\_sp1\_rtm.050324-1447)  
126,50 KB (129.536 bytes) 20/11/2005  
21:14 Microsoft Corporation  
c:\windows\system32\umpnpgmr.dll  
eventlog 5.2.3790.1830 (srv03\_sp1\_rtm.050324-1447)  
67,50 KB (69.120 bytes) 20/11/2005  
21:15 Microsoft Corporation  
c:\windows\system32\eventlog.dll  
lsass 5.2.3790.0 (srv03\_rtm.030324-2048) 13,00  
KB (13.312 bytes) 25/3/2003 09:00 Microsoft  
Corporation c:\windows\system32\lsass.exe  
lsasrv 5.2.3790.1830 (srv03\_sp1\_rtm.050324-1447)  
803,00 KB (822.272 bytes) 25/3/2003 09:00

Microsoft Corporation  
c:\windows\system32\lsasrv.dll  
ntdsapi 5.2.3790.1830 (srv03\_sp1\_rtm.050324-1447)  
71,00 KB (72.704 bytes) 20/11/2005  
21:14 Microsoft Corporation  
c:\windows\system32\ntdsapi.dll  
dnsapi 5.2.3790.1830 (srv03\_sp1\_rtm.050324-1447)  
153,50 KB (157.184 bytes) 20/11/2005  
21:15 Microsoft Corporation  
c:\windows\system32\dnsapi.dll  
samsrv 5.2.3790.1830 (srv03\_sp1\_rtm.050324-1447)  
450,50 KB (461.312 bytes) 25/3/2003 09:00  
Microsoft Corporation  
c:\windows\system32\samsrv.dll  
cryptdll 5.2.3790.1830 (srv03\_sp1\_rtm.050324-1447)  
32,00 KB (32.768 bytes) 20/11/2005  
21:15 Microsoft Corporation  
c:\windows\system32\cryptdll.dll  
msprivs 5.2.3790.0 (srv03\_rtm.030324-2048) 46,50  
KB (47.616 bytes) 25/3/2003 09:00 Microsoft  
Corporation c:\windows\system32\msprivs.dll  
kerberos 5.2.3790.1830 (srv03\_sp1\_rtm.050324-1447)  
340,50 KB (348.672 bytes) 20/11/2005  
21:15 Microsoft Corporation  
c:\windows\system32\kerberos.dll  
msv1\_0 5.2.3790.1830 (srv03\_sp1\_rtm.050324-1447)  
141,00 KB (144.384 bytes) 20/11/2005  
21:14 Microsoft Corporation  
c:\windows\system32\msv1\_0.dll  
iphlpapi 5.2.3790.1830 (srv03\_sp1\_rtm.050324-1447)  
92,50 KB (94.720 bytes) 20/11/2005  
21:15 Microsoft Corporation  
c:\windows\system32\iphlpapi.dll  
netlogon 5.2.3790.1830 (srv03\_sp1\_rtm.050324-1447)  
409,50 KB (419.328 bytes) 20/11/2005  
21:14 Microsoft Corporation  
c:\windows\system32\netlogon.dll  
w32time 5.2.3790.1830 (srv03\_sp1\_rtm.050324-1447)  
222,00 KB (227.328 bytes) 20/11/2005  
21:14 Microsoft Corporation  
c:\windows\system32\w32time.dll  
schannel 5.2.3790.1830 (srv03\_sp1\_rtm.050324-1447)  
141,00 KB (144.384 bytes) 20/11/2005  
21:14 Microsoft Corporation  
c:\windows\system32\schannel.dll  
wdigest 5.2.3790.1830 (srv03\_sp1\_rtm.050324-1447)  
74,00 KB (75.776 bytes) 20/11/2005  
21:14 Microsoft Corporation  
c:\windows\system32\wdigest.dll  
rassfm 5.2.3790.1830 (srv03\_sp1\_rtm.050324-1447)  
23,00 KB (23.552 bytes) 20/11/2005  
21:16 Microsoft Corporation  
c:\windows\system32\rassfm.dll  
kdcsvc 5.2.3790.1830 (srv03\_sp1\_rtm.050324-1447)  
213,50 KB (218.624 bytes) 20/11/2005  
21:15 Microsoft Corporation  
c:\windows\system32\kdcsvc.dll  
ntdsa 5.2.3790.1830 (srv03\_sp1\_rtm.050324-1447)  
1,45 MB (1.516.032 bytes) 20/11/2005  
21:14 Microsoft Corporation  
c:\windows\system32\ntdsa.dll  
esent 5.2.3790.1830 (srv03\_sp1\_rtm.050324-1447)  
1.022,50 KB (1.047.040 bytes) 20/11/2005  
21:15 Microsoft Corporation  
c:\windows\system32\esent.dll  
ntdsatq 5.2.3790.1830 (srv03\_sp1\_rtm.050324-1447)  
29,50 KB (30.208 bytes) 20/11/2005  
21:14 Microsoft Corporation  
c:\windows\system32\ntdsatq.dll  
mswsock 5.2.3790.1830 (srv03\_sp1\_rtm.050324-1447)  
250,50 KB (256.512 bytes) 20/11/2005

21:14 Microsoft Corporation  
 scecli c:\windows\system32\mswsock.dll  
 5.2.3790.1830 (srv03\_sp1\_rtm.050324-1447)  
 186,50 KB (190.976 bytes) 20/11/2005

21:14 Microsoft Corporation  
 ws03res c:\windows\system32\scecli.dll  
 5.2.3790.1830 (srv03\_sp1\_rtm.050324-1447)  
 793,50 KB (812.544 bytes) 20/11/2005

21:18 Microsoft Corporation  
 hnetcfg c:\windows\system32\ws03res.dll  
 5.2.3790.1830 (srv03\_sp1\_rtm.050324-1447)  
 343,50 KB (351.744 bytes) 20/11/2005

21:15 Microsoft Corporation  
 wshtcpip c:\windows\system32\hnetcfg.dll  
 5.2.3790.0 (srv03\_rtm.030324-2048) 18,00  
 KB (18.432 bytes) 25/3/2003 09:00 Microsoft  
 Corporation c:\windows\system32\wshtcpip.dll

ipsecsvc 5.2.3790.1830 (srv03\_sp1\_rtm.050324-1447)  
 180,50 KB (184.832 bytes) 20/11/2005

21:15 Microsoft Corporation  
 oakley c:\windows\system32\ipsecsvc.dll  
 5.2.3790.1830 (srv03\_sp1\_rtm.050324-1447)  
 264,00 KB (270.336 bytes) 20/11/2005

21:14 Microsoft Corporation  
 winipsec c:\windows\system32\oakley.dll  
 5.2.3790.1830 (srv03\_sp1\_rtm.050324-1447)  
 35,50 KB (36.352 bytes) 20/11/2005

21:14 Microsoft Corporation  
 pstorsvc c:\windows\system32\winipsec.dll  
 5.2.3790.0 (srv03\_rtm.030324-2048) 24,00  
 KB (24.576 bytes) 25/3/2003 09:00 Microsoft  
 Corporation c:\windows\system32\pstorsvc.dll

psbase 5.2.3790.1830 (srv03\_sp1\_rtm.050324-1447)  
 84,00 KB (86.016 bytes) 20/11/2005

21:14 Microsoft Corporation  
 dsseh c:\windows\system32\psbase.dll  
 5.2.3790.1830 (srv03\_sp1\_rtm.050324-1447)  
 139,98 KB (143.336 bytes) 20/11/2005

21:15 Microsoft Corporation  
 wlbsctrl c:\windows\system32\dsseh.dll  
 5.2.3790.1830 (srv03\_sp1\_rtm.050324-1447)  
 82,00 KB (83.968 bytes) 20/11/2005

21:14 Microsoft Corporation  
 w3ssl c:\windows\system32\wlbsctrl.dll  
 6.0.3790.0 (srv03\_rtm.030324-2048) 15,00  
 KB (15.360 bytes) 25/3/2003 09:00 Microsoft  
 Corporation c:\windows\system32\w3ssl.dll

strmfilt 6.0.3790.1830 (srv03\_sp1\_rtm.050324-1447)  
 84,00 KB (86.016 bytes) 20/11/2005

21:14 Microsoft Corporation  
 httpapi c:\windows\system32\strmfilt.dll  
 5.2.3790.1830 (srv03\_sp1\_rtm.050324-1447)  
 24,00 KB (24.576 bytes) 20/11/2005

21:15 Microsoft Corporation  
 svchost c:\windows\system32\httpapi.dll  
 5.2.3790.1830 (srv03\_sp1\_rtm.050324-1447)  
 14,00 KB (14.336 bytes) 20/11/2005

21:14 Microsoft Corporation  
 rpcss c:\windows\system32\svchost.exe  
 5.2.3790.1830 (srv03\_sp1\_rtm.050324-1447)  
 406,00 KB (415.744 bytes) 20/11/2005

21:14 Microsoft Corporation  
 wzscvc c:\windows\system32\rpcss.dll  
 5.2.3790.1830 (srv03\_sp1\_rtm.050324-1447)  
 364,50 KB (373.248 bytes) 20/11/2005

21:14 Microsoft Corporation  
 wmi c:\windows\system32\wzscvc.dll  
 5.2.3790.0 (srv03\_rtm.030324-2048) 6,50  
 KB (6.656 bytes) 25/3/2003 09:00 Microsoft  
 Corporation c:\windows\system32\wmi.dll

dhcpcsvc 5.2.3790.1830 (srv03\_sp1\_rtm.050324-1447)  
 113,50 KB (116.224 bytes) 25/3/2003 09:00  
 Microsoft Corporation  
 rastls c:\windows\system32\dhcpcsvc.dll  
 5.2.3790.1830 (srv03\_sp1\_rtm.050324-1447)  
 180,00 KB (184.320 bytes) 20/11/2005

21:14 Microsoft Corporation  
 cryptui c:\windows\system32\rastls.dll  
 5.131.3790.1830 (srv03\_sp1\_rtm.050324-1447)  
 496,50 KB (508.416 bytes) 20/11/2005

21:15 Microsoft Corporation  
 rasapi32 c:\windows\system32\cryptui.dll  
 5.2.3790.1830 (srv03\_sp1\_rtm.050324-1447)  
 239,50 KB (245.248 bytes) 25/3/2003 09:00  
 Microsoft Corporation  
 rasman c:\windows\system32\rasapi32.dll  
 5.2.3790.1830 (srv03\_sp1\_rtm.050324-1447)  
 61,50 KB (62.976 bytes) 25/3/2003 09:00  
 Microsoft Corporation  
 tapi32 c:\windows\system32\rasman.dll  
 5.2.3790.1830 (srv03\_sp1\_rtm.050324-1447)  
 179,50 KB (183.808 bytes) 20/11/2005

21:14 Microsoft Corporation  
 raschap c:\windows\system32\tapi32.dll  
 5.2.3790.1830 (srv03\_sp1\_rtm.050324-1447)  
 119,50 KB (122.368 bytes) 20/11/2005

21:14 Microsoft Corporation  
 schedsvc c:\windows\system32\raschap.dll  
 5.2.3790.1830 (srv03\_sp1\_rtm.050324-1447)  
 197,50 KB (202.240 bytes) 20/11/2005

21:14 Microsoft Corporation  
 msidle c:\windows\system32\schedsvc.dll  
 6.00.3790.1830 (srv03\_sp1\_rtm.050324-1447)  
 6,50 KB (6.656 bytes) 20/11/2005

21:15 Microsoft Corporation  
 audiosrv c:\windows\system32\msidle.dll  
 5.2.3790.1830 (srv03\_sp1\_rtm.050324-1447)  
 40,50 KB (41.472 bytes) 20/11/2005

21:15 Microsoft Corporation  
 wkssvc c:\windows\system32\audiosrv.dll  
 5.2.3790.1830 (srv03\_sp1\_rtm.050324-1447)  
 130,00 KB (133.120 bytes) 25/3/2003 09:00  
 Microsoft Corporation  
 wiarpc c:\windows\system32\wkssvc.dll  
 5.2.3790.1830 (srv03\_sp1\_rtm.050324-1447)  
 32,50 KB (33.280 bytes) 20/11/2005

21:14 Microsoft Corporation  
 aelupsvc c:\windows\system32\wiarpc.dll  
 5.2.3790.1830 (srv03\_sp1\_rtm.050324-1447)  
 26,00 KB (26.624 bytes) 20/11/2005

21:18 Microsoft Corporation  
 apphelp c:\windows\system32\aelupsvc.dll  
 5.2.3790.1830 (srv03\_sp1\_rtm.050324-1447)  
 146,50 KB (150.016 bytes) 20/11/2005

21:15 Microsoft Corporation  
 cryptsvc c:\windows\system32\apphelp.dll  
 5.2.3790.1830 (srv03\_sp1\_rtm.050324-1447)  
 55,50 KB (56.832 bytes) 20/11/2005

21:15 Microsoft Corporation  
 certcli c:\windows\system32\cryptsvc.dll  
 5.2.3790.1830 (srv03\_sp1\_rtm.050324-1447)  
 227,00 KB (232.448 bytes) 20/11/2005

21:15 Microsoft Corporation  
 vssapi c:\windows\system32\certcli.dll  
 5.2.3790.1830 (srv03\_sp1\_rtm.050324-1447)  
 548,00 KB (561.152 bytes) 20/11/2005

21:14 Microsoft Corporation  
 dmserver c:\windows\system32\vssapi.dll  
 5.2.3790.1830 (srv03\_sp1\_rtm.050324-1447)  
 25,50 KB (26.112 bytes) 20/11/2005

21:15 Microsoft Corporation  
 c:\windows\system32\dmserver.dll

es 2001.12.4720.1830 (srv03\_sp1\_rtm.050324-1447)  
 233,00 KB (238.592 bytes) 20/11/2005

21:15 Microsoft Corporation  
 pchsvc c:\windows\system32\es.dll  
 5.2.3790.1830 (srv03\_sp1\_rtm.050324-1447)  
 39,00 KB (39.936 bytes) 20/11/2005

21:16 Microsoft Corporation  
 ll c:\windows\pchealth\helpctr\binaries\pchsvc.d  
 ll

srvsvc 5.2.3790.1830 (srv03\_sp1\_rtm.050324-1447)  
 93,50 KB (95.744 bytes) 25/3/2003 09:00  
 Microsoft Corporation  
 sens c:\windows\system32\srvsvc.dll  
 5.2.3790.1830 (srv03\_sp1\_rtm.050324-1447)  
 36,50 KB (37.376 bytes) 20/11/2005

21:14 Microsoft Corporation  
 wmisvc c:\windows\system32\sens.dll  
 5.2.3790.1830 (srv03\_sp1\_rtm.050324-1447)  
 140,00 KB (143.360 bytes) 20/11/2005

21:16 Microsoft Corporation  
 browser c:\windows\system32\wmisvc.dll  
 5.2.3790.1830 (srv03\_sp1\_rtm.050324-1447)  
 76,50 KB (78.336 bytes) 20/11/2005

21:15 Microsoft Corporation  
 wuauerv c:\windows\system32\browser.dll  
 5.7.3790.1830 (srv03\_sp1\_rtm.050324-1447)  
 8,00 KB (8.192 bytes) 20/11/2005

21:18 Microsoft Corporation  
 seclogon c:\windows\system32\wuauerv.dll  
 5.2.3790.1830 (srv03\_sp1\_rtm.050324-1447)  
 18,50 KB (18.944 bytes) 20/11/2005

21:14 Microsoft Corporation  
 wuaueng c:\windows\system32\seclogon.dll  
 5.7.3790.1830 (srv03\_sp1\_rtm.050324-1447)  
 1,18 MB (1.232.896 bytes) 20/11/2005

21:18 Microsoft Corporation  
 advpack c:\windows\system32\wuaueng.dll  
 6.00.3790.1830 (srv03\_sp1\_rtm.050324-1447)  
 98,00 KB (100.352 bytes) 20/11/2005

21:15 Microsoft Corporation  
 cabinet c:\windows\system32\advpack.dll  
 5.2.3790.1830 (srv03\_sp1\_rtm.050324-1447)  
 81,50 KB (83.456 bytes) 24/3/2005 20:35  
 Microsoft Corporation  
 mspatcha c:\windows\system32\cabinet.dll  
 5.2.3790.0 (srv03\_rtm.030324-2048) 29,00  
 KB (29.696 bytes) 25/3/2003 09:00 Microsoft  
 Corporation c:\windows\system32\mspatcha.dll

shfolder 6.00.3790.1830 (srv03\_sp1\_rtm.050324-1447)  
 24,50 KB (25.088 bytes) 20/11/2005

21:14 Microsoft Corporation  
 winhttp c:\windows\system32\shfolder.dll  
 5.2.3790.1830 (srv03\_sp1\_rtm.050324-1447)  
 353,00 KB (361.472 bytes) 24/3/2005 21:41  
 Microsoft Corporation  
 tp\_6595b64144ccf1df\_5.1.3790.1830\_x-  
 ww\_74150efb\winhttp.dll

trkws 5.2.3790.0 (srv03\_rtm.030324-2048) 85,00  
 KB (87.040 bytes) 25/3/2003 09:00 Microsoft  
 Corporation c:\windows\system32\trkws.dll

comsvcs 2001.12.4720.1830 (srv03\_sp1\_rtm.050324-1447)  
 1,19 MB (1.248.256 bytes) 20/11/2005

21:15 Microsoft Corporation  
 netrap c:\windows\system32\comsvcs.dll  
 5.2.3790.0 (srv03\_rtm.030324-2048) 11,50  
 KB (11.776 bytes) 25/3/2003 09:00 Microsoft  
 Corporation c:\windows\system32\netrap.dll

netman 5.2.3790.1830 (srv03\_sp1\_rtm.050324-1447) 258,50 KB (264.704 bytes) 20/11/2005  
 21:14 Microsoft Corporation  
 c:\windows\system32\netman.dll  
 netshell 5.2.3790.1830 (srv03\_sp1\_rtm.050324-1447) 1,73 MB (1.812.992 bytes) 20/11/2005  
 21:14 Microsoft Corporation  
 c:\windows\system32\netshell.dll  
 clusapi 5.2.3790.1830 (srv03\_sp1\_rtm.050324-1447) 60,00 KB (61.440 bytes) 20/11/2005  
 21:15 Microsoft Corporation  
 c:\windows\system32\clusapi.dll  
 wininet 6.0.3790.1830 (srv03\_sp1\_rtm.050324-1447) 646,00 KB (661.504 bytes) 20/11/2005  
 21:14 Microsoft Corporation  
 c:\windows\system32\wininet.dll  
 wzscapi 5.2.3790.1830 (srv03\_sp1\_rtm.050324-1447) 41,00 KB (41.984 bytes) 20/11/2005  
 21:14 Microsoft Corporation  
 c:\windows\system32\wzscapi.dll  
 wbemcomn 5.2.3790.1830 (srv03\_sp1\_rtm.050324-1447) 221,00 KB (226.304 bytes) 20/11/2005  
 21:16 Microsoft Corporation  
 c:\windows\system32\wbem\wbemcomn.dll  
 wbemcore 5.2.3790.1830 (srv03\_sp1\_rtm.050324-1447) 497,50 KB (509.440 bytes) 20/11/2005  
 21:16 Microsoft Corporation  
 c:\windows\system32\wbem\wbemcore.dll  
 esscli 5.2.3790.1830 (srv03\_sp1\_rtm.050324-1447) 250,00 KB (256.000 bytes) 20/11/2005  
 21:16 Microsoft Corporation  
 c:\windows\system32\wbem\esscli.dll  
 fastprox 5.2.3790.1830 (srv03\_sp1\_rtm.050324-1447) 471,00 KB (482.304 bytes) 20/11/2005  
 21:16 Microsoft Corporation  
 c:\windows\system32\wbem\fastprox.dll  
 wbemsvc 5.2.3790.0 (srv03\_rtm.030324-2048) 42,50 KB (43.520 bytes) 14/11/2005 10:23 Microsoft Corporation  
 c:\windows\system32\wbem\wbemsvc.dll  
 wmiutils 5.2.3790.1830 (srv03\_sp1\_rtm.050324-1447) 93,50 KB (95.744 bytes) 20/11/2005  
 21:16 Microsoft Corporation  
 c:\windows\system32\wbem\wmiutils.dll  
 repdrvfs 5.2.3790.1830 (srv03\_sp1\_rtm.050324-1447) 172,50 KB (176.640 bytes) 20/11/2005  
 21:16 Microsoft Corporation  
 c:\windows\system32\wbem\repdrvfs.dll  
 wmiprvsd 5.2.3790.1830 (srv03\_sp1\_rtm.050324-1447) 404,00 KB (413.696 bytes) 20/11/2005  
 21:16 Microsoft Corporation  
 c:\windows\system32\wbem\wmiprvsd.dll  
 wbemess 5.2.3790.1830 (srv03\_sp1\_rtm.050324-1447) 271,50 KB (278.016 bytes) 20/11/2005  
 21:16 Microsoft Corporation  
 c:\windows\system32\wbem\wbemess.dll  
 rasdlg 5.2.3790.1830 (srv03\_sp1\_rtm.050324-1447) 663,00 KB (678.912 bytes) 25/3/2003 09:00  
 Microsoft Corporation  
 c:\windows\system32\rasdlg.dll  
 rasadhlp 5.2.3790.1830 (srv03\_sp1\_rtm.050324-1447) 7,50 KB (7.680 bytes) 20/11/2005  
 21:14 Microsoft Corporation  
 c:\windows\system32\rasadhlp.dll  
 ncprov 5.2.3790.1830 (srv03\_sp1\_rtm.050324-1447) 46,50 KB (47.616 bytes) 20/11/2005  
 21:16 Microsoft Corporation  
 c:\windows\system32\wbem\ncprov.dll  
 xactsrv 5.2.3790.1830 (srv03\_sp1\_rtm.050324-1447) 90,00 KB (92.160 bytes) 20/11/2005  
 21:14 Microsoft Corporation  
 c:\windows\system32\xactsrv.dll

spoolsv 5.2.3790.1830 (srv03\_sp1\_rtm.050324-1447) 57,00 KB (58.368 bytes) 20/11/2005  
 21:14 Microsoft Corporation  
 c:\windows\system32\spoolsv.exe  
 spoolss 5.2.3790.1830 (srv03\_sp1\_rtm.050324-1447) 85,00 KB (87.040 bytes) 20/11/2005  
 21:14 Microsoft Corporation  
 c:\windows\system32\spoolss.dll  
 localspl 5.2.3790.1830 (srv03\_sp1\_rtm.050324-1447) 339,00 KB (347.136 bytes) 25/3/2003 09:00  
 Microsoft Corporation  
 c:\windows\system32\localspl.dll  
 cnbjmon 5.2.3790.1224 (dnsvr(skatar).040514-1058) 46,50 KB (47.616 bytes) 20/11/2005  
 21:15 Microsoft Corporation  
 c:\windows\system32\cnbjmon.dll  
 mdimon 11.3.1897.0 17,50 KB (17.920 bytes) 15/11/2005 15:21 Microsoft Corporation  
 c:\windows\system32\mdimon.dll  
 msi 3.1.4000.1830 2,76 MB (2.890.240 bytes) 20/11/2005 21:15 Microsoft Corporation  
 c:\windows\system32\msi.dll  
 pdf995mon Not Available 47,18 KB (48.308 bytes) 23/10/2005 21:14 Not Available  
 c:\windows\system32\pdf995mon.dll  
 comdlg32 6.0.3790.1830 (srv03\_sp1\_rtm.050324-1447) 274,50 KB (281.088 bytes) 25/3/2003 09:00  
 Microsoft Corporation  
 c:\windows\system32\comdlg32.dll  
 pjlmon 5.2.3790.1830 (srv03\_sp1\_rtm.050324-1447) 15,00 KB (15.360 bytes) 20/11/2005  
 21:14 Microsoft Corporation  
 c:\windows\system32\pjlmon.dll  
 tcpmon 5.2.3790.1830 (srv03\_sp1\_rtm.050324-1447) 47,00 KB (48.128 bytes) 20/11/2005  
 21:14 Microsoft Corporation  
 c:\windows\system32\tcpmon.dll  
 wsnmp32 5.2.3790.1830 (srv03\_sp1\_rtm.050324-1447) 43,00 KB (44.032 bytes) 20/11/2005  
 21:14 Microsoft Corporation  
 c:\windows\system32\wsnmp32.dll  
 tcpmb 5.2.3790.1830 (srv03\_sp1\_rtm.050324-1447) 17,50 KB (17.920 bytes) 20/11/2005  
 21:14 Microsoft Corporation  
 c:\windows\system32\tcpmb.dll  
 wsock32 5.2.3790.0 (srv03\_rtm.030324-2048) 22,00 KB (22.528 bytes) 25/3/2003 09:00 Microsoft Corporation  
 c:\windows\system32\wsock32.dll  
 mgmtapi 5.2.3790.1830 (srv03\_sp1\_rtm.050324-1447) 15,50 KB (15.872 bytes) 25/3/2003 09:00  
 Microsoft Corporation  
 c:\windows\system32\mgmtapi.dll  
 snmpapi 5.2.3790.1830 (srv03\_sp1\_rtm.050324-1447) 19,50 KB (19.968 bytes) 20/11/2005  
 21:14 Microsoft Corporation  
 c:\windows\system32\snmpapi.dll  
 usbmon 5.2.3790.1830 (srv03\_sp1\_rtm.050324-1447) 17,00 KB (17.408 bytes) 20/11/2005  
 21:14 Microsoft Corporation  
 c:\windows\system32\usbmon.dll  
 mdippr 11.3.1897.0 18,50 KB (18.944 bytes) 15/11/2005 15:21 Microsoft Corporation  
 c:\windows\system32\spool\prtprocs\w32x86\mdi  
 ppr.dll 5.2.3790.1830 (srv03\_sp1\_rtm.050324-1447) 17,00 KB (17.408 bytes) 20/11/2005  
 21:14 Microsoft Corporation  
 c:\windows\system32\ppr.dll  
 wshqos 5.2.3790.1830 (srv03\_sp1\_rtm.050324-1447) 24,00 KB (24.576 bytes) 20/11/2005

21:14 Microsoft Corporation  
 c:\windows\system32\wshqos.dll  
 win32spl 5.2.3790.1830 (srv03\_sp1\_rtm.050324-1447) 100,50 KB (102.912 bytes) 25/3/2003 09:00  
 Microsoft Corporation  
 c:\windows\system32\win32spl.dll  
 inetpp 5.2.3790.1830 (srv03\_sp1\_rtm.050324-1447) 75,00 KB (76.800 bytes) 20/11/2005  
 21:15 Microsoft Corporation  
 c:\windows\system32\inetpp.dll  
 icmp 5.2.3790.0 (srv03\_rtm.030324-2048) 4,50 KB (4.608 bytes) 25/3/2003 09:00 Microsoft Corporation  
 c:\windows\system32\icmp.dll  
 ersvc 5.2.3790.1830 (srv03\_sp1\_rtm.050324-1447) 24,00 KB (24.576 bytes) 20/11/2005  
 21:15 Microsoft Corporation  
 c:\windows\system32\ersvc.dll  
 inetinfo 6.0.3790.1830 (srv03\_sp1\_rtm.050324-1447) 14,00 KB (14.336 bytes) 20/11/2005  
 21:16 Microsoft Corporation  
 c:\windows\system32\inetinfo.exe  
 iisutil 6.0.3790.1830 (srv03\_sp1\_rtm.050324-1447) 164,00 KB (167.936 bytes) 20/11/2005  
 21:16 Microsoft Corporation  
 c:\windows\system32\inetinfo\iisutil.dll  
 rpcref 6.0.3790.1830 (srv03\_sp1\_rtm.050324-1447) 4,00 KB (4.096 bytes) 20/11/2005  
 21:16 Microsoft Corporation  
 c:\windows\system32\inetinfo\rpcref.dll  
 iisrsl 6.0.3790.1830 (srv03\_sp1\_rtm.050324-1447) 138,50 KB (141.824 bytes) 20/11/2005  
 21:15 Microsoft Corporation  
 c:\windows\system32\iisrsl.dll  
 iisadmin 6.0.3790.1830 (srv03\_sp1\_rtm.050324-1447) 21,00 KB (21.504 bytes) 20/11/2005  
 21:16 Microsoft Corporation  
 c:\windows\system32\inetinfo\iisadmin.dll  
 coadmin 6.0.3790.1830 (srv03\_sp1\_rtm.050324-1447) 62,50 KB (64.000 bytes) 20/11/2005  
 21:16 Microsoft Corporation  
 c:\windows\system32\inetinfo\coadmin.dll  
 admwprox 6.0.3790.1830 (srv03\_sp1\_rtm.050324-1447) 47,00 KB (48.128 bytes) 20/11/2005  
 21:15 Microsoft Corporation  
 c:\windows\system32\inetinfo\admwprox.dll  
 iiscfg 6.0.3790.1830 (srv03\_sp1\_rtm.050324-1447) 1,08 MB (1.133.056 bytes) 20/11/2005  
 21:16 Microsoft Corporation  
 c:\windows\system32\inetinfo\iiscfg.dll  
 metadata 6.0.3790.1830 (srv03\_sp1\_rtm.050324-1447) 229,00 KB (234.496 bytes) 20/11/2005  
 21:16 Microsoft Corporation  
 c:\windows\system32\inetinfo\metadata.dll  
 msxml3 8.70.1104.0 1,06 MB (1.107.456 bytes) 20/11/2005 21:14 Microsoft Corporation  
 c:\windows\system32\msxml3.dll  
 svcext 6.0.3790.1830 (srv03\_sp1\_rtm.050324-1447) 43,50 KB (44.544 bytes) 20/11/2005  
 21:16 Microsoft Corporation  
 c:\windows\system32\inetinfo\svcext.dll  
 security 5.2.3790.0 (srv03\_rtm.030324-2048) 5,50 KB (5.632 bytes) 25/3/2003 09:00 Microsoft Corporation  
 c:\windows\system32\security.dll  
 iismap 6.0.3790.1830 (srv03\_sp1\_rtm.050324-1447) 58,50 KB (59.904 bytes) 20/11/2005  
 21:15 Microsoft Corporation  
 c:\windows\system32\iismap.dll

wamreg 6.0.3790.1830 (srv03\_sp1\_rtm.050324-1447) 54,50 KB (55.808 bytes) 20/11/2005  
 21:16 Microsoft Corporation  
 c:\windows\system32\inetsrv\wamreg.dll  
 mdm 7.00.9466 314,57 KB (322.120 bytes)  
 19/6/2003 23:25 Microsoft Corporation  
 c:\program files\common files\microsoft  
 shared\vs7debug\mdm.exe  
 iisw3adm 6.0.3790.1830 (srv03\_sp1\_rtm.050324-1447) 211,00 KB (216.064 bytes) 20/11/2005  
 21:16 Microsoft Corporation  
 c:\windows\system32\inetsrv\iisw3adm.dll  
 w3cache 6.0.3790.1830 (srv03\_sp1\_rtm.050324-1447) 19,00 KB (19.456 bytes) 20/11/2005  
 21:16 Microsoft Corporation  
 c:\windows\system32\inetsrv\w3cache.dll  
 w3tp 6.0.3790.1830 (srv03\_sp1\_rtm.050324-1447) 13,00 KB (13.312 bytes) 20/11/2005  
 21:16 Microsoft Corporation  
 c:\windows\system32\inetsrv\w3tp.dll  
 lonsint 6.0.3790.1830 (srv03\_sp1\_rtm.050324-1447) 13,00 KB (13.312 bytes) 20/11/2005  
 21:16 Microsoft Corporation  
 c:\windows\system32\inetsrv\lonsint.dll  
 explorer 6.00.3790.1830 (srv03\_sp1\_rtm.050324-1447) 1,00 MB (1.050.624 bytes) 20/11/2005  
 21:15 Microsoft Corporation  
 c:\windows\explorer.exe  
 browseui 6.00.3790.1830 (srv03\_sp1\_rtm.050324-1447) 1,009,00 KB (1.032.216 bytes) 20/11/2005  
 21:15 Microsoft Corporation  
 c:\windows\system32\browseui.dll  
 shdocvw 6.00.3790.1830 (srv03\_sp1\_rtm.050324-1447) 1,43 MB (1.502.720 bytes) 20/11/2005  
 21:14 Microsoft Corporation  
 c:\windows\system32\shdocvw.dll  
 themeui 6.00.3790.1830 (srv03\_sp1\_rtm.050324-1447) 377,50 KB (386.560 bytes) 20/11/2005  
 21:14 Microsoft Corporation  
 c:\windows\system32\themeui.dll  
 msimg32 5.2.3790.0 (srv03\_rtm.030324-2048) 4,50 KB (4.608 bytes) 25/3/2003 09:00 Microsoft Corporation  
 c:\windows\system32\msimg32.dll  
 linkinfo 5.2.3790.1830 (srv03\_sp1\_rtm.050324-1447) 19,00 KB (19.456 bytes) 20/11/2005  
 21:15 Microsoft Corporation  
 c:\windows\system32\linkinfo.dll  
 ntshrui 6.00.3790.1830 (srv03\_sp1\_rtm.050324-1447) 140,00 KB (143.360 bytes) 20/11/2005  
 21:14 Microsoft Corporation  
 c:\windows\system32\ntshrui.dll  
 urlmon 6.00.3790.1830 (srv03\_sp1\_rtm.050324-1447) 673,00 KB (689.152 bytes) 20/11/2005  
 21:14 Microsoft Corporation  
 c:\windows\system32?urlmon.dll  
 msctf 5.2.3790.1830 (srv03\_sp1\_rtm.050324-1447) 311,00 KB (318.464 bytes) 20/11/2005  
 21:15 Microsoft Corporation  
 c:\windows\system32\msctf.dll  
 mslbui 5.2.3790.1830 (srv03\_sp1\_rtm.050324-1447) 29,50 KB (30.208 bytes) 20/11/2005  
 21:15 Microsoft Corporation  
 c:\windows\system32\mslbui.dll  
 webcheck 6.00.3790.1830 (srv03\_sp1\_rtm.050324-1447) 272,50 KB (279.040 bytes) 20/11/2005  
 21:14 Microsoft Corporation  
 c:\windows\system32\webcheck.dll  
 stobject 5.2.3790.1830 (srv03\_sp1\_rtm.050324-1447) 120,50 KB (123.392 bytes) 20/11/2005

21:14 Microsoft Corporation  
 c:\windows\system32\stobject.dll  
 batmeter 6.00.3790.1830 (srv03\_sp1\_rtm.050324-1447) 31,50 KB (32.256 bytes) 20/11/2005  
 21:15 Microsoft Corporation  
 c:\windows\system32\batmeter.dll  
 powrprof 6.00.3790.1830 (srv03\_sp1\_rtm.050324-1447) 16,50 KB (16.896 bytes) 20/11/2005  
 21:14 Microsoft Corporation  
 c:\windows\system32\powrprof.dll  
 drprov 5.2.3790.1830 (srv03\_sp1\_rtm.050324-1447) 14,00 KB (14.336 bytes) 20/11/2005  
 21:15 Microsoft Corporation  
 c:\windows\system32\drprov.dll  
 ntlanman 5.2.3790.1830 (srv03\_sp1\_rtm.050324-1447) 43,50 KB (44.544 bytes) 20/11/2005  
 21:14 Microsoft Corporation  
 c:\windows\system32\ntlanman.dll  
 netui0 5.2.3790.0 (srv03\_rtm.030324-2048) 75,50 KB (77.312 bytes) 25/3/2003 09:00 Microsoft Corporation  
 c:\windows\system32\netui0.dll  
 netui1 5.2.3790.0 (srv03\_rtm.030324-2048) 184,00 KB (188.416 bytes) 25/3/2003 09:00 Microsoft Corporation  
 c:\windows\system32\netui1.dll  
 davclnt 5.2.3790.0 (srv03\_rtm.030324-2048) 23,50 KB (24.064 bytes) 25/3/2003 09:00 Microsoft Corporation  
 c:\windows\system32\davclnt.dll  
 browsei 6.00.3790.0 (srv03\_rtm.030324-2048) 62,00 KB (63.488 bytes) 25/3/2003 09:00 Microsoft Corporation  
 c:\windows\system32\browsei.dll  
 termsrv 5.2.3790.1830 (srv03\_sp1\_rtm.050324-1447) 239,00 KB (244.736 bytes) 20/11/2005  
 21:14 Microsoft Corporation  
 c:\windows\system32\termsrv.dll  
 icaapi 5.2.3790.1830 (srv03\_sp1\_rtm.050324-1447) 12,50 KB (12.800 bytes) 20/11/2005  
 21:15 Microsoft Corporation  
 c:\windows\system32\icaapi.dll  
 mstlsapi 5.2.3790.1830 (srv03\_sp1\_rtm.050324-1447) 116,00 KB (118.784 bytes) 20/11/2005  
 21:15 Microsoft Corporation  
 c:\windows\system32\mstlsapi.dll  
 rdpwsx 5.2.3790.1830 (srv03\_sp1\_rtm.050324-1447) 101,63 KB (104.072 bytes) 20/11/2005  
 21:14 Microsoft Corporation  
 c:\windows\system32\rdpwsx.dll  
 ctfmon 5.2.3790.1830 (srv03\_sp1\_rtm.050324-1447) 15,00 KB (15.360 bytes) 20/11/2005  
 21:15 Microsoft Corporation  
 c:\windows\system32\ctfmon.exe  
 msutb 5.2.3790.1830 (srv03\_sp1\_rtm.050324-1447) 191,00 KB (195.584 bytes) 20/11/2005  
 21:14 Microsoft Corporation  
 c:\windows\system32\msutb.dll  
 wpabaln 5.2.3790.0 (srv03\_rtm.030324-2048) 31,00 KB (31.744 bytes) 25/3/2003 09:00 Microsoft Corporation  
 c:\windows\system32\wpabaln.exe  
 w3wp 6.0.3790.1830 (srv03\_sp1\_rtm.050324-1447) 7,00 KB (7.168 bytes) 20/11/2005  
 21:16 Microsoft Corporation  
 c:\windows\system32\inetsrv\w3wp.exe  
 w3core 6.0.3790.1830 (srv03\_sp1\_rtm.050324-1447) 340,50 KB (348.672 bytes) 20/11/2005  
 21:16 Microsoft Corporation  
 c:\windows\system32\inetsrv\w3core.dll  
 w3comlog 6.0.3790.1830 (srv03\_sp1\_rtm.050324-1447) 10,50 KB (10.752 bytes) 20/11/2005

21:16 Microsoft Corporation  
 c:\windows\system32\inetsrv\w3comlog.dll  
 w3dt 6.0.3790.1830 (srv03\_sp1\_rtm.050324-1447) 38,50 KB (39.424 bytes) 20/11/2005  
 21:16 Microsoft Corporation  
 c:\windows\system32\inetsrv\w3dt.dll  
 iisres 6.0.3790.1830 (srv03\_sp1\_rtm.050324-1447) 120,00 KB (122.880 bytes) 20/11/2005  
 21:16 Microsoft Corporation  
 c:\windows\system32\inetsrv\iisres.dll  
 aspnet\_filter 2.0.50727.42 (RTM.050727-4200) 10,50 KB (10.752 bytes) 23/9/2005 07:28 Microsoft Corporation  
 c:\windows\microsoft.net\framework\v2.0.50727  
 \aspnet\_filter.dll  
 msvcr80 8.00.50727.42 612,00 KB (626.688 bytes) 23/9/2005 07:29 Microsoft Corporation  
 c:\windows\winsxs\x86\_microsoft.vc80.crt\_lfc8  
 b3b9a1e18e3b\_8.0.50727.42\_x-ww\_0de06acd\msvcr80.dll  
 w3isapi 6.0.3790.1830 (srv03\_sp1\_rtm.050324-1447) 61,00 KB (62.464 bytes) 20/11/2005  
 21:16 Microsoft Corporation  
 c:\windows\system32\inetsrv\w3isapi.dll  
 gzip 6.0.3790.1830 (srv03\_sp1\_rtm.050324-1447) 25,00 KB (25.600 bytes) 20/11/2005  
 21:16 Microsoft Corporation  
 c:\windows\system32\inetsrv\gzip.dll  
 "\\?\c:\inetpub\wwwroot\tpcc.dll"  
 msvcr70 7.00.9466.0 336,00 KB (344.064 bytes) 20/11/2005 14:46 Microsoft Corporation  
 c:\windows\system32\msvcr70.dll  
 tpcc\_com Not Available 10,50 KB (10.752 bytes) 20/11/2005 14:46 Not Available  
 c:\inetpub\wwwroot\tpcc\_com.dll  
 tpcc\_odbc Not Available 20,00 KB (20.480 bytes) 20/11/2005 14:46 Not Available  
 c:\inetpub\wwwroot\tpcc\_odbc.dll  
 odbc32 3.526.1830.0 (srv03\_sp1\_rtm.050324-1447) 240,00 KB (245.760 bytes) 20/11/2005  
 21:14 Microsoft Corporation  
 c:\windows\system32\odbc32.dll  
 odbcint 3.526.1830.0 (srv03\_sp1\_rtm.050324-1447) 92,00 KB (94.208 bytes) 20/11/2005  
 21:14 Microsoft Corporation  
 c:\windows\system32\odbcint.dll  
 sqlsrv32 2000.086.1830.00 (srv03\_sp1\_rtm.050324-1447) 436,00 KB (446.464 bytes) 20/11/2005  
 21:14 Microsoft Corporation  
 c:\windows\system32\sqlsrv32.dll  
 sqlunirl 2000.080.0728.00 176,56 KB (180.800 bytes) 20/11/2005 21:14 Microsoft Corporation  
 c:\windows\system32\sqlunirl.dll  
 sqlsrv32 2000.086.1830.00 (srv03\_sp1\_rtm.050324-1447) 88,00 KB (90.112 bytes) 20/11/2005  
 21:14 Microsoft Corporation  
 c:\windows\system32\sqlsrv32.rll  
 odbccp32 3.526.1830.0 (srv03\_sp1\_rtm.050324-1447) 100,00 KB (102.400 bytes) 20/11/2005  
 21:14 Microsoft Corporation  
 c:\windows\system32\odbccp32.dll  
 dbnetlib 2000.086.1830 (srv03\_sp1\_rtm.050324-1447) 112,00 KB (114.688 bytes) 20/11/2005  
 21:15 Microsoft Corporation  
 c:\windows\system32\dbnetlib.dll  
 helpctr 5.2.3790.1830 (srv03\_sp1\_rtm.050324-1447) 778,00 KB (796.672 bytes) 20/11/2005  
 21:16 Microsoft Corporation



```

exe c:\windows\pchealth\helpctr\binaries\helpctr.
hcappres 5.2.3790.0 (srv03_rtm.030324-2048) 6,50
KB (6.656 bytes) 14/11/2005 10:26 Microsoft
Corporation
c:\windows\pchealth\helpctr\binaries\hcappres
.dll
itss 5.2.3790.1830 (srv03_sp1_rtm.050324-1447)
133,50 KB (136.704 bytes) 20/11/2005
21:15 Microsoft Corporation
c:\windows\system32\itss.dll
msoxmlmf 11.0.5510.38,56 KB (39.488 bytes)
14/7/2003 22:45 Microsoft Corporation
c:\program files\common files\microsoft
shared\office11\msoxmlmf.dll
pchshell 5.2.3790.1830 (srv03_sp1_rtm.050324-1447)
104,50 KB (107.008 bytes) 20/11/2005
21:16 Microsoft Corporation
c:\windows\pchealth\helpctr\binaries\pchshell
.dll
mlang 6.00.3790.1830 (srv03_sp1_rtm.050324-1447)
577,50 KB (591.360 bytes) 20/11/2005
21:15 Microsoft Corporation
c:\windows\system32\mlang.dll
mshtml 6.00.3790.1830 (srv03_sp1_rtm.050324-1447)
2,96 MB (3.108.864 bytes) 20/11/2005
21:15 Microsoft Corporation
c:\windows\system32\mshtml.dll
msls31 3.10.349.0 142,00 KB (145.408 bytes)
20/11/2005 21:15 Microsoft Corporation
c:\windows\system32\msls31.dll
msimtf 5.2.3790.1830 (srv03_sp1_rtm.050324-1447)
156,00 KB (159.744 bytes) 20/11/2005
21:15 Microsoft Corporation
c:\windows\system32\msimtf.dll
skchui 1.0.1038.0 356,06 KB (364.607 bytes)
7/2/2001 02:17 Microsoft Corporation
c:\program files\common files\microsoft
shared\ink\skchui.dll
shdoclc 6.00.3790.0 (srv03_rtm.030324-2048)
588,50 KB (602.624 bytes) 25/3/2003 09:00
Microsoft Corporation
c:\windows\system32\shdoclc.dll
jscript 5.6.0.8827 448,00 KB (458.752 bytes)
20/11/2005 21:15 Microsoft Corporation
c:\windows\system32\jscript.dll
mshtml 6.00.3790.1830 (srv03_sp1_rtm.050324-1447)
434,50 KB (446.408 bytes) 20/11/2005
21:15 Microsoft Corporation
c:\windows\system32\mshtml.dll
vbscript 5.6.0.8827 392,00 KB (401.408 bytes)
20/11/2005 21:14 Microsoft Corporation
c:\windows\system32\vbscript.dll
msinfo 5.2.3790.1830 (srv03_sp1_rtm.050324-1447)
376,00 KB (385.024 bytes) 20/11/2005
21:16 Microsoft Corporation
c:\windows\pchealth\helpctr\binaries\msinfo.d
ll
mfc42u 6.06.8063.0 1,11 MB (1.163.776 bytes)
20/11/2005 21:15 Microsoft Corporation
c:\windows\system32\mfc42u.dll
riched32 5.2.3790.0 (srv03_rtm.030324-2048) 3,50
KB (3.584 bytes) 25/3/2003 09:00 Microsoft
Corporation
c:\windows\system32\riched32.dll
riched20 5.31.23.1224 439,00 KB (449.536 bytes)
20/11/2005 21:14 Microsoft Corporation
c:\windows\system32\riched20.dll
oinfo11 11.0.5510.716,05 KB (733.240 bytes)
14/7/2003 23:03 Microsoft Corporation
c:\progra~1\common~1\microso~1\msinfo\oinfo11.
ocx

```

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oleacc 4.2.5406.0 (srv03_rtm.030324-2048)
171,00 KB (175.104 bytes) 25/3/2003 09:00
Microsoft Corporation
c:\windows\system32\oleacc.dll
wbemprox 5.2.3790.1830 (srv03_sp1_rtm.050324-1447)
20,50 KB (20.992 bytes) 20/11/2005
21:16 Microsoft Corporation
c:\windows\system32\wbem\wbemprox.dll
helpsvc 5.2.3790.1830 (srv03_sp1_rtm.050324-1447)
745,00 KB (762.880 bytes) 20/11/2005
21:16 Microsoft Corporation
c:\windows\pchealth\helpctr\binaries\helpsvc.
exe
[Services]
Display Name Name State Start Mode
Service Type Path Error Control
Start Name Tag ID
Application Experience Lookup Service AeLookupSvc
Running Auto Share Process
c:\windows\system32\svchost.exe -k netsvcs
Normal LocalSystem 0
Alerter Alerter Stopped Disabled Share Process
c:\windows\system32\svchost.exe -k
LocalService Normal NT AUTHORITY\LocalService
0
Application Layer Gateway Service ALG
Stopped Manual Own Process
c:\windows\system32\alg.exe Normal NT
AUTHORITY\LocalService 0
Application Management AppMgmt Stopped
Manual Share Process
c:\windows\system32\svchost.exe -k netsvcs
Normal LocalSystem 0
ASP.NET State Service aspnet_state
Stopped Manual Own Process
c:\windows\microsoft.net\framework\v2.0.50727
\aspnet_state.exe Normal NT
AUTHORITY\NetworkService 0
Windows Audio AudioSrv Running Auto Share
Process c:\windows\system32\svchost.exe -k netsvcs
Normal LocalSystem 0
Background Intelligent Transfer Service BITS
Stopped Manual Share Process
c:\windows\system32\svchost.exe -k netsvcs
Normal LocalSystem 0
Computer Browser Browser Running Auto Share
Process c:\windows\system32\svchost.exe -k netsvcs
Normal LocalSystem 0
Indexing Service Ciscv Stopped Disabled Share
Process c:\windows\system32\cisvc.exe Normal
LocalSystem 0
ClipBook Clipsrv Stopped Disabled Own Process
c:\windows\system32\clipsrv.exe
Normal LocalSystem 0
.NET Runtime Optimization Service v2.0.50727_x86
clr_optimization_v2.0.50727_32
Stopped Manual Own Process
c:\windows\microsoft.net\framework\v2.0.50727
\mscorsvw.exe Ignore LocalSystem 0
COM+ System Application COMSysApp Stopped
Manual Own Process
c:\windows\system32\dllhost.exe
/processid:{02d4b3f1-fd88-11d1-960d-00805fc79235}
Normal LocalSystem 0
Cryptographic Services CryptSvc Running Auto
Share Process
c:\windows\system32\svchost.exe -k netsvcs
Normal LocalSystem 0

```

```

DCOM Server Process Launcher DcomLaunch
Running Auto Share Process
c:\windows\system32\svchost.exe -k dcomlaunch
Normal LocalSystem 0
Distributed File System Dfs Stopped
Manual Own Process
c:\windows\system32\dfssvc.exe
Normal LocalSystem 0
DHCP Client Dhcp Running Auto Share
Process c:\windows\system32\svchost.exe -k
networkservice Normal NT
AUTHORITY\NetworkService 0
Logical Disk Manager Administrative Service
dmadmin Stopped Manual Share Process
c:\windows\system32\dmadmin.exe /com
Normal LocalSystem 0
Logical Disk Manager dmserver Running Auto
Share Process
c:\windows\system32\svchost.exe -k netsvcs
Normal LocalSystem 0
DNS Client Dnscache Running Auto Share
Process c:\windows\system32\svchost.exe -k
networkservice Normal NT
AUTHORITY\NetworkService 0
Error Reporting Service ERSvc Running Auto
Share Process
c:\windows\system32\svchost.exe -k winerr
Ignore LocalSystem 0
Event Log Eventlog Running Auto Share Process
c:\windows\system32\services.exe
Normal LocalSystem 0
COM+ Event System EventsSystem Running Auto
Share Process
c:\windows\system32\svchost.exe -k netsvcs
Normal LocalSystem 0
Help and Support helpsvc Running Auto Share
Process c:\windows\system32\svchost.exe -k netsvcs
Normal LocalSystem 0
Human Interface Device Access HidServ Stopped
Disabled Share Process
c:\windows\system32\svchost.exe -k netsvcs
Normal LocalSystem 0
HTTP SSL HTTPFilter Running Manual Share
Process c:\windows\system32\lsass.exe Normal
LocalSystem 0
IIS Admin Service IISADMIN Running Auto Share
Process c:\windows\system32\inetinfo.exe
Normal LocalSystem 0
IMAPI CD-Burning COM Service ImapiService
Stopped Disabled Own Process
c:\windows\system32\imapi.exe Normal
LocalSystem 0
Intersite Messaging Ismserv Stopped Disabled Own
Process c:\windows\system32\ismserv.exe
Normal LocalSystem 0
Kerberos Key Distribution Center kdc
Stopped Disabled Share Process
c:\windows\system32\lsass.exe Normal
LocalSystem 0
Server lanmanserver Running Auto Share
Process c:\windows\system32\svchost.exe -k netsvcs
Normal LocalSystem 0
Workstation lanmanworkstation Running Auto
Share Process
c:\windows\system32\svchost.exe -k netsvcs
Normal LocalSystem 0
License Logging LicenseService Stopped
Disabled Own Process
c:\windows\system32\llssrv.exe
Normal NT AUTHORITY\NetworkService 0

```

TCP/IP NetBIOS Helper LmHosts Running Auto  
 Share Process  
 c:\windows\system32\svchost.exe -k  
 localService Normal NT AUTHORITY\LocalService  
 0  
 Machine Debug Manager MDM Running Auto  
 Own Process "c:\program files\common  
 files\microsoft shared\vs7debug\mdm.exe"  
 Normal LocalSystem 0  
 Messenger Messenger Stopped Disabled Share Process  
 c:\windows\system32\svchost.exe -k netsvcs  
 Normal LocalSystem 0  
 NetMeeting Remote Desktop Sharing mnmsrvc  
 Stopped Disabled Own Process  
 c:\windows\system32\mnmsrvc.exe  
 Normal LocalSystem 0  
 Distributed Transaction Coordinator MSDTC  
 Running Auto Own Process  
 c:\windows\system32\msdtc.exe Normal NT  
 AUTHORITY\NetworkService 0  
 Windows Installer MSIServer Stopped Manual Share  
 Process c:\windows\system32\msiexec.exe /v  
 Normal LocalSystem 0  
 Network DDE NetDDE Stopped Disabled Share  
 Process c:\windows\system32\netdde.exe  
 Normal LocalSystem 0  
 Network DDE DSM NetDDEdsdm Stopped  
 Disabled Share Process  
 c:\windows\system32\netdde.exe  
 Normal LocalSystem 0  
 Net Logon NetLogon Stopped Manual Share Process  
 c:\windows\system32\nlss.exe Normal  
 LocalSystem 0  
 Network Connections Netman Running Manual Share  
 Process c:\windows\system32\svchost.exe -k netsvcs  
 Normal LocalSystem 0  
 Network Location Awareness (NLA) Nla  
 Running Manual Share Process  
 c:\windows\system32\svchost.exe -k netsvcs  
 Normal LocalSystem 0  
 File Replication NtFrs Stopped Manual Own  
 Process c:\windows\system32\ntfrs.exe Ignore  
 LocalSystem 0  
 NT LM Security Support Provider NtLmSsp  
 Stopped Manual Share Process  
 c:\windows\system32\nlss.exe Normal  
 LocalSystem 0  
 Removable Storage NtmsSvc Stopped Manual Share  
 Process c:\windows\system32\svchost.exe -k netsvcs  
 Normal LocalSystem 0  
 Office Source Engine ose Stopped  
 files\common files\microsoft shared\source  
 engine\ose.exe Manual Own Process c:\program  
 Normal LocalSystem 0

Plug and Play PlugPlay Running Auto Share  
 Process c:\windows\system32\services.exe  
 Normal LocalSystem 0  
 IPSEC Services PolicyAgent Running Auto  
 Share Process  
 c:\windows\system32\nlss.exe Normal  
 LocalSystem 0  
 Protected Storage ProtectedStorage Running Auto  
 Share Process  
 c:\windows\system32\nlss.exe Normal  
 LocalSystem 0  
 Remote Access Auto Connection Manager RasAuto  
 Stopped Manual Share Process  
 c:\windows\system32\svchost.exe -k netsvcs  
 Normal LocalSystem 0  
 Remote Access Connection Manager RasMan  
 Stopped Manual Share Process

c:\windows\system32\svchost.exe -k netsvcs  
 Normal LocalSystem 0  
 Remote Desktop Help Session Manager RDSessMgr  
 Stopped Manual Own Process  
 c:\windows\system32\sessmgr.exe  
 Normal LocalSystem 0  
 Routing and Remote Access RemoteAccess  
 Stopped Disabled Share Process  
 c:\windows\system32\svchost.exe -k netsvcs  
 Normal LocalSystem 0  
 Remote Registry RemoteRegistry Running Auto  
 Share Process  
 c:\windows\system32\svchost.exe -k regsvc  
 Normal NT AUTHORITY\LocalService 0  
 Remote Command Service RMSYS Running Auto  
 Own Process "c:\program  
 files\benchmark\rsys.exe" Normal .\Administrator  
 0  
 Remote Procedure Call (RPC) Locator RpcLocator  
 Stopped Manual Own Process  
 c:\windows\system32\locator.exe  
 Normal NT AUTHORITY\NetworkService 0  
 Remote Procedure Call (RPC) RpcSs Running Auto  
 Share Process  
 c:\windows\system32\svchost.exe -k rpcss  
 Normal NT Authority\NetworkService 0  
 Resultant Set of Policy Provider RSOPProv  
 Stopped Manual Share Process  
 c:\windows\system32\rsopprov.exe  
 Normal LocalSystem 0  
 Special Administration Console Helper sacsvr  
 Stopped Manual Share Process  
 c:\windows\system32\svchost.exe -k netsvcs  
 Normal LocalSystem 0  
 Security Accounts Manager SamSs Running Auto  
 Share Process  
 c:\windows\system32\nlss.exe Normal  
 LocalSystem 0  
 Smart Card SCardSvr Stopped Manual Share  
 Process c:\windows\system32\scardsvr.exe  
 Ignore NT AUTHORITY\LocalService 0  
 Task Scheduler Schedule Running Auto Share  
 Process c:\windows\system32\svchost.exe -k netsvcs  
 Normal LocalSystem 0  
 Secondary Logon seclogon Running Auto Share  
 Process c:\windows\system32\svchost.exe -k netsvcs  
 Ignore LocalSystem 0  
 System Event Notification SENS Running Auto  
 Share Process  
 c:\windows\system32\svchost.exe -k netsvcs  
 Normal LocalSystem 0  
 Windows Firewall/Internet Connection Sharing (ICS)  
 SharedAccess Stopped Disabled Share  
 Process c:\windows\system32\svchost.exe -k netsvcs  
 Normal LocalSystem 0  
 Shell Hardware Detection ShellHWDetection  
 Running Auto Share Process  
 c:\windows\system32\svchost.exe -k netsvcs  
 Ignore LocalSystem 0  
 Print Spooler Spooler Running Auto Own  
 Process c:\windows\system32\spoolsv.exe  
 Normal LocalSystem 0  
 windows Image Acquisition (WIA) stisvc  
 Stopped Disabled Share Process  
 c:\windows\system32\svchost.exe -k imgsvc  
 Normal NT AUTHORITY\LocalService 0

Microsoft Software Shadow Copy Provider swprv  
 Stopped Manual Own Process  
 c:\windows\system32\svchost.exe -k swprv  
 Normal LocalSystem 0  
 Performance Logs and Alerts SysmonLog Stopped  
 Manual Own Process  
 c:\windows\system32\smlogsvc.exe  
 Normal NT Authority\NetworkService 0  
 Telephony Tapisrv Stopped Manual Share Process  
 c:\windows\system32\svchost.exe -k tapisrv  
 Normal LocalSystem 0  
 Terminal Services TermsService Running  
 Manual Share Process  
 c:\windows\system32\svchost.exe -k termsvc  
 Normal LocalSystem 0  
 Themes Themes Stopped Disabled Share Process  
 c:\windows\system32\svchost.exe -k netsvcs  
 Normal LocalSystem 0  
 Telnet TlntSvr Stopped Disabled Own Process  
 c:\windows\system32\tlntsvr.exe  
 Normal NT AUTHORITY\LocalService 0  
 Distributed Link Tracking Server TrkSvr  
 Stopped Disabled Share Process  
 c:\windows\system32\svchost.exe -k netsvcs  
 Normal LocalSystem 0  
 Distributed Link Tracking Client TrkKws  
 Running Auto Share Process  
 c:\windows\system32\svchost.exe -k netsvcs  
 Normal LocalSystem 0  
 Terminal Services Session Directory Tssdis  
 Stopped Disabled Own Process  
 c:\windows\system32\tssdis.exe  
 Normal LocalSystem 0  
 Windows User Mode Driver Framework UMdf  
 Stopped Manual Own Process  
 c:\windows\system32\wdfmggr.exe  
 Normal NT AUTHORITY\LocalService 0  
 Upload Manager uploadmgr Stopped Manual Share  
 Process c:\windows\system32\svchost.exe -k netsvcs  
 Normal LocalSystem 0  
 Uninterruptible Power Supply UPS Stopped  
 Manual Own Process  
 c:\windows\system32\ups.exe Normal NT  
 AUTHORITY\LocalService 0  
 Virtual Disk Service vds Stopped  
 Manual Own Process  
 c:\windows\system32\vds.exe Normal  
 LocalSystem 0  
 Volume Shadow Copy VSS Stopped Manual Own  
 Process c:\windows\system32\vssvc.exe Normal  
 LocalSystem 0  
 Windows Time w32Time Running Auto Share  
 Process c:\windows\system32\svchost.exe -k  
 localService Normal NT AUTHORITY\LocalService  
 0  
 world wide web Publishing Service W3SVC  
 Running Auto Share Process  
 c:\windows\system32\svchost.exe -k iissvcs  
 Normal LocalSystem 0  
 WebClient WebClient Stopped Disabled Share Process  
 c:\windows\system32\svchost.exe -k  
 localService Normal NT AUTHORITY\LocalService  
 0  
 WinHTTP web Proxy Auto-Discovery Service  
 WinHttpAutoProxySvc Stopped Manual Share  
 Process c:\windows\system32\svchost.exe -k  
 localService Normal NT AUTHORITY\LocalService  
 0

```

Windows Management Instrumentation winmgmt
Running Auto Share Process
c:\windows\system32\svchost.exe -k netsvcs
Ignore LocalSystem 0
Portable Media Serial Number Service wmdmPmsN
Stopped Manual Share Process
c:\windows\system32\svchost.exe -k netsvcs
Normal LocalSystem 0
Windows Management Instrumentation Driver Extensions
Wmi Stopped Manual Share Process
c:\windows\system32\svchost.exe -k netsvcs
Normal LocalSystem 0
WMI Performance Adapter wmiApSrv Stopped
Manual Own Process
c:\windows\system32\wbem\wmiapsrv.exe
Normal LocalSystem 0
Automatic Updates wuauclt Running Auto Share
Process c:\windows\system32\svchost.exe -k netsvcs
Normal LocalSystem 0
Wireless Configuration WZCSVC Running Auto
Share Process
c:\windows\system32\svchost.exe -k netsvcs
Normal LocalSystem 0
Network Provisioning Service xmlprov Stopped
Manual Share Process
c:\windows\system32\svchost.exe -k netsvcs
Normal LocalSystem 0

```

[Program Groups]

Group Name	Name	User Name
Accessories	Default User:Accessories	
	Default User	
Accessories\Accessibility	Default	Default User
User:Accessories\Accessibility		
Accessories\Entertainment	Default	Default User
User:Accessories\Entertainment		
Startup	Default User:Startup	Default User
Accessories	All Users:Accessories	All Users
Accessories\Accessibility	All Users:Accessories\Accessibility	All Users
Accessories\Communications	All Users:Accessories\Communications	All Users
Accessories\Entertainment	All Users:Accessories\Entertainment	All Users
Accessories\System Tools	All Users:Accessories\System Tools	All Users
Administrative Tools	All Users:Administrative Tools	All Users
Camtasia Studio	All Users:Camtasia Studio	All Users
Camtasia Studio\Applications	All Users:Camtasia Studio\Applications	All Users
Microsoft Office	All Users:Microsoft Office	All Users
Microsoft Office\Microsoft Office Tools	All Users:Microsoft Office\Microsoft Office Tools	All Users
Microsoft Visual Studio 6.0	All Users:Microsoft Visual Studio 6.0	All Users
Microsoft Visual Studio 6.0\Tools	All Users:Microsoft Visual Studio 6.0\Tools	All Users
Startup	All Users:Startup	All Users
UltraEdit	All Users:UltraEdit	All Users
Accessories	NT AUTHORITY\SYSTEM:Accessories	
	NT AUTHORITY\SYSTEM	

```

Accessories\Accessibility NT
AUTHORITY\SYSTEM:Accessories\Accessibility NT
AUTHORITY\SYSTEM
Accessories\Entertainment NT
AUTHORITY\SYSTEM:Accessories\Entertainment NT
AUTHORITY\SYSTEM
Startup NT AUTHORITY\SYSTEM:Startup NT
AUTHORITY\SYSTEM
Accessories CLI05\Administrator:Accessories
CLI05\Administrator
Accessories\Accessibility
CLI05\Administrator:Accessories\Accessibility
CLI05\Administrator
Accessories\Entertainment
CLI05\Administrator:Accessories\Entertainment
CLI05\Administrator
Administrative Tools
CLI05\Administrator:Administrative Tools
CLI05\Administrator
Benchcraft CLI05\Administrator:Benchcraft
CLI05\Administrator
Microsoft web Publishing
CLI05\Administrator:Microsoft web Publishing
CLI05\Administrator
Startup
CLI05\Administrator:Startup
CLI05\Administrator

```

[Startup Programs]

Program	Command	User Name	Location
desktop	desktop.ini		NT AUTHORITY\SYSTEM
	Startup		
CTFMON.EXE	c:\windows\system32\ctfmon.exe		
	NT AUTHORITY\SYSTEM HKU\S-1-5-		
18\SOFTWARE\Microsoft\Windows\CurrentVersion\Run			
CTFMON.EXE	c:\windows\system32\ctfmon.exe		
	NT AUTHORITY\LOCAL SERVICE HKU\S-1-5-		
19\SOFTWARE\Microsoft\Windows\CurrentVersion\Run			
CTFMON.EXE	c:\windows\system32\ctfmon.exe		
	NT AUTHORITY\NETWORK SERVICE HKU\S-1-5-		
20\SOFTWARE\Microsoft\Windows\CurrentVersion\Run			
desktop	desktop.ini		CLI05\Administrator
	Startup		
ctfmon.exe	c:\windows\system32\ctfmon.exe		
	CLI05\Administrator HKU\S-1-5-21-2392490809-		
1698773603-1200131486-			
500\SOFTWARE\Microsoft\Windows\CurrentVersion\Run			
desktop	desktop.ini		.DEFAULT Startup
CTFMON.EXE	c:\windows\system32\ctfmon.exe		
	.DEFAULT		
ntVersion\Run	HKU.DEFAULT\SOFTWARE\Microsoft\Windows\Curre		
desktop	desktop.ini		All Users Common Startup

[OLE Registration]

Object	Local Server
Microsoft Graph Chart	c:\progra-1\micros-1\office11\graph.exe
Microsoft Office Excel Worksheet	Not Available
Microsoft Office Excel Chart	Not Available
Microsoft Office Excel Worksheet	c:\progra-1\micros-1\office11\excel.exe
Microsoft Office Excel Chart	c:\progra-1\micros-1\office11\excel.exe
Microsoft Word 6.0 - 7.0 Document	Not Available
Microsoft Word 6.0 - 7.0 Picture	Not Available

```

Microsoft Word Document
c:\progra-1\micros-1\office11\winword.exe
Microsoft Word Picture
c:\progra-1\micros-1\office11\winword.exe
Sound (OLE2) sndrec32.exe
Media Clip mplay32.exe
Video Clip mplay32.exe /avi
MIDI Sequence mplay32.exe /mid
Microsoft Equation 3.0
c:\progra-1\common-1\micros-1\equation\eqnedt
32.exe
Microsoft Office Excel Chart Not Available
Microsoft Excel 4.0 Macro Not Available
Sound Not Available
Media Clip Not Available
Microsoft PowerPoint Presentation
c:\progra-1\micros-1\office11\powerpnt.exe
Microsoft PowerPoint Slide
c:\progra-1\micros-1\office11\powerpnt.exe
WordPad Document "%programfiles%\windows
nt\accessories\wordpad.exe"
Windows Media Services DRM Storage object Not
Available
Bitmap Image mspaint.exe
Snapshot File
c:\progra-1\common-1\micros-1\snaph-1\snapi
ew.exe

```

[Windows Error Reporting]

Time	Type	Details
23/10/2005 21:46	Application Error	Faulting application Gam2cl.exe, version 2.0.0.0, faulting module Gam2cl.exe, version 2.0.0.0, fault address 0x00007386.&#x000d;&#x000a;

[Internet Settings]

[Internet Explorer]

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

Item	Value
Version	6.0.3790.1830
Build	63790.1830
Application Path	C:\Program Files\Internet Explorer

Language English (United States)  
Active Printer Microsoft Office Document Image  
Writer,winspool,Ne01:

Cipher Strength	128-bit
Content Advisor	Disabled
IEAK Install	No

[File Versions]

File	Version	Size	Date	Path
actxprxy.dll	6.0.3790.1830	97 KB		
	24/3/2005 17:55:26			C:\WINDOWS\system32
	Microsoft Corporation			
advpack.dll	6.0.3790.1830	98 KB		
	24/3/2005 17:55:28			C:\WINDOWS\system32
	Microsoft Corporation			

```

asctrls.ocx 6.0.3790.0 90 KB
25/3/2003 09:00:00 C:\WINDOWS\system32
Microsoft Corporation
browselc.dll 6.0.3790.0 62 KB
25/3/2003 09:00:00 C:\WINDOWS\system32
Microsoft Corporation
browseui.dll 6.0.3790.1830 1.009 KB
24/3/2005 17:56:10 C:\WINDOWS\system32
Microsoft Corporation
cdfview.dll 6.0.3790.1830 149 KB
24/3/2005 17:56:32 C:\WINDOWS\system32
Microsoft Corporation
comctl32.dll 6.0.3790.1830 585 KB
24/3/2005 17:57:56 C:\WINDOWS\system32
Microsoft Corporation
dxtrans.dll 6.0.3790.1830 205 KB
24/3/2005 18:00:58 C:\WINDOWS\system32
Microsoft Corporation
dxtmsft.dll 6.0.3790.1830 355 KB
24/3/2005 18:00:58 C:\WINDOWS\system32
Microsoft Corporation
iecont.dll <File Missing> Not Available
Not Available Not Available Not
Available
iecontlc.dll <File Missing> Not Available
Not Available Not Available Not
Available
iedkcs32.dll 6.0.3790.1830 324 KB
24/3/2005 18:04:58 C:\WINDOWS\system32
Microsoft Corporation
iepeers.dll 6.0.3790.1830 248 KB
24/3/2005 18:04:58 C:\WINDOWS\system32
Microsoft Corporation
iesetup.dll 6.0.3790.1830 61 KB
24/3/2005 18:04:58 C:\WINDOWS\system32
Microsoft Corporation
ieunit.inf Not Available 24 KB
24/3/2005 18:04:58 C:\WINDOWS\system32 Not
Available
iexplore.exe 6.0.3790.1830 92 KB
24/3/2005 18:04:58 C:\Program Files\Internet
Explorer Microsoft Corporation
imgutil.dll 6.0.3790.1830 38 KB
24/3/2005 18:05:04 C:\WINDOWS\system32
Microsoft Corporation
inetctl.cpl 6.0.3790.1830 358 KB
24/3/2005 18:05:06 C:\WINDOWS\system32
Microsoft Corporation
inetctlc.dll 6.0.3790.0 109 KB
25/3/2003 09:00:00 C:\WINDOWS\system32
Microsoft Corporation
inseng.dll 6.0.3790.1830 94 KB
24/3/2005 18:05:06 C:\WINDOWS\system32
Microsoft Corporation
mlang.dll 6.0.3790.1830 578 KB 24/3/2005
18:07:20 C:\WINDOWS\system32 Microsoft Corporation

msencode.dll 2002.10.4.0 112 KB
25/3/2003 09:00:00 C:\WINDOWS\system32
Microsoft Corporation
mshta.exe 6.0.3790.1830 30 KB 24/3/2005
18:07:26 C:\WINDOWS\system32 Microsoft Corporation

mshtml.dll 6.0.3790.1830 3.036 KB
24/3/2005 18:07:26 C:\WINDOWS\system32
Microsoft Corporation
mshtml.tlb 6.0.3790.1830 1.320 KB
24/3/2005 18:07:26 C:\WINDOWS\system32
Microsoft Corporation

```

```

mshtml.dll 6.0.3790.1830 455 KB
24/3/2005 18:07:26 C:\WINDOWS\system32
Microsoft Corporation
mshtmlr.dll 6.0.3790.1830 56 KB
24/3/2005 18:07:26 C:\WINDOWS\system32
Microsoft Corporation
msident.dll 6.0.3790.1830 48 KB
24/3/2005 18:07:28 C:\WINDOWS\system32
Microsoft Corporation
msidntld.dll 6.0.3790.0 15 KB
25/3/2003 09:00:00 C:\WINDOWS\system32
Microsoft Corporation
msieftp.dll 6.0.3790.1830 244 KB
24/3/2005 18:07:28 C:\WINDOWS\system32
Microsoft Corporation
msrating.dll 6.0.3790.1830 144 KB
24/3/2005 18:07:36 C:\WINDOWS\system32
Microsoft Corporation
mstime.dll 6.0.3790.1830 523 KB
24/3/2005 18:07:38 C:\WINDOWS\system32
Microsoft Corporation
occache.dll 6.0.3790.1830 94 KB
24/3/2005 18:08:34 C:\WINDOWS\system32
Microsoft Corporation
proctexe.ocx 6.3.3790.1830 83 KB
24/3/2005 18:12:26 C:\WINDOWS\system32 Intel
Corporation
sendmail.dll 6.0.3790.1830 56 KB
24/3/2005 18:13:36 C:\WINDOWS\system32
Microsoft Corporation
shdoclc.dll 6.0.3790.0 589 KB
25/3/2003 09:00:00 C:\WINDOWS\system32
Microsoft Corporation
shdocvw.dll 6.0.3790.1830 1.468 KB
24/3/2005 18:13:36 C:\WINDOWS\system32
Microsoft Corporation
shfolder.dll 6.0.3790.1830 25 KB
24/3/2005 18:13:36 C:\WINDOWS\system32
Microsoft Corporation
shlwapi.dll 6.0.3790.1830 314 KB
24/3/2005 18:13:40 C:\WINDOWS\system32
Microsoft Corporation
tdc.ocx 1.3.0.3130 58 KB 25/3/2003
09:00:00 C:\WINDOWS\system32 Microsoft Corporation
url.dll 6.0.3790.1830 37 KB 24/3/2005
18:26:12 C:\WINDOWS\system32 Microsoft Corporation
urlmon.dll 6.0.3790.1830 673 KB
24/3/2005 18:26:12 C:\WINDOWS\system32
Microsoft Corporation
webcheck.dll 6.0.3790.1830 273 KB
24/3/2005 18:26:16 C:\WINDOWS\system32
Microsoft Corporation
wininet.dll 6.0.3790.1830 646 KB
24/3/2005 18:26:18 C:\WINDOWS\system32
Microsoft Corporation

[Connectivity]
Item Value
Connection Preference Never dial

LAN Settings
AutoConfigProxy wininet.dll
AutoProxyDetectMode Disabled
AutoConfigURL
Proxy Disabled
ProxyServer
ProxyOverride

```

```

[Cache]
[ Following are sub-categories of this main category ]
[Summary]
Item Value
Page Refresh Type Automatic
Temporary Internet Files Folder C:\Documents
and Settings\Administrator\Local Settings\Temporary
Internet Files
Total Disk Space Not Available
Available Disk Space Not Available
Maximum Cache Size Not Available
Available Cache Size Not Available

[List of Objects]
Program File Status CodeBase
No cached object information available

[Content]
[ Following are sub-categories of this main category ]
[Summary]
Item Value Disabled
Content Advisor Disabled

[Personal Certificates]
Issued To Issued By Validity Signature Algorithm
No personal certificate information available

[Other People Certificates]
Issued To Issued By Validity Signature Algorithm
No other people certificate information available

[Publishers]
Name
No publisher information available

[Security]
Zone Security Level
My Computer Custom
Local intranet Custom
Trusted sites Custom
Internet Custom
Restricted sites Custom

[Office 2003 Applications]
[Microsoft Office word 2003]

[Summary]
Item Value
Application name Microsoft Office word
Version 11
Build 5604
Product ID Not Available
Application path C:\Program Files\Microsoft
Office\OFFICE11\

```

Language ??(??) (??)  
System language designation English (United States)

Active printer Microsoft Office Document Image  
Writer, Ne01:

Documents open Not Available  
Document name This value is not available unless  
Word is running.  
Document path This value is not available unless  
Word is running.  
Document size Not Available  
Document create date Not Available

Templates Not Available  
Add-Ins Not Available

[Startup Folder]

Item Value  
Startup Folder

[COM Add-Ins]

Item Value  
Microsoft Office word 2003 is not available. Verify  
that word 2003 is installed and running and then choose  
Refresh from the View or Action menu.

[Active Document]

Item Value  
Microsoft Office word 2003 is not available. Verify  
that word 2003 is installed and running and then choose  
Refresh from the View or Action menu.

[Fields]

Item Value  
Microsoft Office word 2003 is not available. Verify  
that word 2003 is installed and running and then choose  
Refresh from the View or Action menu.

[File Converters]

Item Value  
Microsoft Office word 2003 is not available. Verify  
that word 2003 is installed and running and then choose  
Refresh from the View or Action menu.

[Fonts]

Item Value  
Microsoft Office word 2003 is not available. Verify  
that word 2003 is installed and running and then choose  
Refresh from the View or Action menu.

[Headers and Footers]

Item Value  
Microsoft Office word 2003 is not available. Verify  
that word 2003 is installed and running and then choose  
Refresh from the View or Action menu.

[Hyperlinks]

Item Value  
Microsoft Office word 2003 is not available. Verify  
that word 2003 is installed and running and then choose  
Refresh from the View or Action menu.

[Mail Merge]

Item Value  
Microsoft Office word 2003 is not available. Verify  
that word 2003 is installed and running and then choose  
Refresh from the View or Action menu.

[Page Numbers]

Item Value  
Microsoft Office word 2003 is not available. Verify  
that word 2003 is installed and running and then choose  
Refresh from the View or Action menu.

[Page Setup]

Item Value  
Microsoft Office word 2003 is not available. Verify  
that word 2003 is installed and running and then choose  
Refresh from the View or Action menu.

[Styles]

Item Value  
Microsoft Office word 2003 is not available. Verify  
that word 2003 is installed and running and then choose  
Refresh from the View or Action menu.

[Settings]

Item Value  
Microsoft Office word 2003 is not available. Verify  
that word 2003 is installed and running and then choose  
Refresh from the View or Action menu.

[Tables]

Item Value  
Microsoft Office word 2003 is not available. Verify  
that word 2003 is installed and running and then choose  
Refresh from the View or Action menu.

[Microsoft Office Excel 2003]

[Summary]

Item Value  
Application name Microsoft Office Excel  
Version 11.  
Build 5612  
Product ID Not Available  
Application path C:\Program Files\Microsoft  
Office\OFFICE11\  
Language ??(??) (??)

workbooks Not Available

[COM Add-Ins]

Item Value  
Microsoft Office Excel 2003 is not available. Verify  
that Excel 2003 is installed and running and then  
choose Refresh from the View or Action menu.

[Active workbook]

Item Value  
Microsoft Office Excel 2003 is not available. Verify  
that Excel 2003 is installed and running and then

choose Refresh from the View or Action menu.

[Add-Ins]

Item Value  
Microsoft Office Excel 2003 is not available. Verify  
that Excel 2003 is installed and running and then  
choose Refresh from the View or Action menu.

[Charts in Active workbook]

Item Value  
Microsoft Office Excel 2003 is not available. Verify  
that Excel 2003 is installed and running and then  
choose Refresh from the View or Action menu.

[Microsoft Office PowerPoint 2003]

[Summary]

Item Value  
Application name Microsoft Office PowerPoint  
Version 11.  
Build 5529  
Product ID Not Available  
Application path C:\Program Files\Microsoft  
Office\OFFICE11\  
Language ??(??) (??)

Presentations Not Available

[Active Presentation]

Item Value  
Microsoft Office PowerPoint 2003 is not available.  
Verify that Powerpoint 2003 is installed and running  
and then choose Refresh from the View or Action menu.

[COM Add-Ins]

Item Value  
Microsoft Office PowerPoint 2003 is not available.  
Verify that Powerpoint 2003 is installed and running  
and then choose Refresh from the View or Action menu.

[Hyperlinks]

Item Value  
Microsoft Office PowerPoint 2003 is not available.  
Verify that Powerpoint 2003 is installed and running  
and then choose Refresh from the View or Action menu.

[Microsoft Office Outlook 2003]

[Summary]

Item Value  
Application name Microsoft Office Outlook  
Version 11.  
Build 5510  
Product ID Not Available  
Language ??(??) (??)

Application Path C:\Program Files\Microsoft Office\OFFICE11\
System Language English (United States)
Mail Support Not Available
Current folder Not Available
Current item Not Available

[COM Add-Ins]

Item Value
Microsoft Office Outlook 2003 is not available. Verify that Outlook 2003 is installed and running and then choose Refresh from the View or Action menu.

[Microsoft Office Access 2003]

[Summary]

Item Value
Application name Microsoft Office Access
Version
Build
Product ID Not Available
Application path C:\Program Files\Microsoft Office\OFFICE11\
Language ??(??) (??)
ADO version Not Available
VBA version Not Available
References Not Available

[COM Add-Ins]

Item Value
Microsoft Office Access 2003 is not available. Verify that Access 2003 is installed and running and then choose Refresh from the View or Action menu.

[Jet Core Components]

Item Value
Description Jet 2.x
Path C:\WINDOWS\system32\MSRD2X35.DLL
Version 3.51.0623.0
Description Jet 3.5
Path Not Available
Version
Description ODBC
Path Not Available
Version

[Microsoft Office Publisher 2003]

[Summary]

Item Value
Application name Microsoft Office Publisher
System Language Designation English (United States)
ActivePrinter Microsoft Office Document Image
Writer, Ne01:
Product ID 73931-640-0000106-57746
Version 11.0.5614.0
Language English (United States)

Registered owner Itautec Performance Lab
Registered company CIN/UFPE
Application path (Admin) C:\Program Files\Microsoft Office\
Application installed from D:\MSOCache\All Users\90000409-6000-11D3-8CFE-0150048383C9\
Local package C:\WINDOWS\Installer\5475241.msi

Date installed 20051115
Help link (Admin) http://www.microsoft.com/support

Product info site (Admin) http://www.microsoft.com/support
Product update site (Admin)

[Active Document]

Item Value
Microsoft Office Publisher 2003 is not available. Verify that Publisher 2003 is installed and running and then choose Refresh from the View or Action menu.

[Microsoft Office FrontPage 2003]

[Summary]

Item Value
Microsoft Office FrontPage 2003 is not available. Verify that FrontPage 2003 is installed and running and then choose Refresh from the View or Action menu.

[Active web]

Item Value
Microsoft Office FrontPage 2003 is not available. Verify that FrontPage 2003 is installed and running and then choose Refresh from the View or Action menu.

[Active Page]

Item Value
Microsoft Office FrontPage 2003 is not available. Verify that FrontPage 2003 is installed and running and then choose Refresh from the View or Action menu.

[COM Add-Ins]

Item Value
Microsoft Office FrontPage 2003 is not available. Verify that FrontPage 2003 is installed and running and then choose Refresh from the View or Action menu.

[Themes]

Item Value
Microsoft Office FrontPage 2003 is not available. Verify that FrontPage 2003 is installed and running and then choose Refresh from the View or Action menu.

[Microsoft Office 2003 Environment]

[Last Web Connection Error]

Item Value
No error messages have been generated.

[Local Web Server Extensions]

Item Value
The server 2003 extensions have not been installed

[Language]

Item Value
UI Language 0
Help Language 0
Install Language 1033
SKU Language 1033
Web Locale 0

[Transport]

Item Value
Microsoft OLE DB Provider for Internet Publishing True
Microsoft Office Internet Publishing False

[ODBC Drivers]

[Core Components]

Item Value
Description Administrator
Version 3.526.1830.0
File C:\WINDOWS\system32\odbccp32.dll
Description Control Panel Device
Version 3.526.1830.0
File C:\WINDOWS\system32\odbccp32.cpl
Description Control Panel Startup
Version 3.526.1830.0
File C:\WINDOWS\system32\odbccad32.exe
Description Cursor Library
Version 3.526.1830.0
File C:\WINDOWS\system32\odbccr32.dll
Description Driver Manager
Version 3.526.1830.0
File C:\WINDOWS\system32\odbc32.dll
Description Localized Resource DLL
Version 3.526.1830.0
File C:\WINDOWS\system32\odbcint.dll
Description Unicode Cursor Library
Version 3.526.1830.0
File C:\WINDOWS\system32\odbccu32.dll

[Drivers]

Item Value
Name SQL Server
File sqlsrv32.dll
Date 24/3/2005 18:14:10
Version 2000.86.1830.0
Name Microsoft Access Driver (\*.mdb)

File odbcjt32.dll  
Date 24/3/2005 18:08:34  
Version 4.0.6305.0

Name Microsoft Text Driver (\*.txt; \*.csv)  
File odbcjt32.dll  
Date 24/3/2005 18:08:34  
Version 4.0.6305.0

Name Microsoft Excel Driver (\*.xls)  
File odbcjt32.dll  
Date 24/3/2005 18:08:34  
Version 4.0.6305.0

Name Microsoft dBase Driver (\*.dbf)  
File odbcjt32.dll  
Date 24/3/2005 18:08:34  
Version 4.0.6305.0

Name Microsoft Paradox Driver (\*.db )  
File odbcjt32.dll  
Date 24/3/2005 18:08:34  
Version 4.0.6305.0

Name Microsoft Visual FoxPro Driver  
File vfpodbc.dll  
Date 16/6/1998  
Version 6.0.8167.0

Name Microsoft FoxPro VFP Driver (\*.dbf)  
File vfpodbc.dll  
Date 16/6/1998  
Version 6.0.8167.0

Name Microsoft dBase VFP Driver (\*.dbf)  
File vfpodbc.dll  
Date 16/6/1998  
Version 6.0.8167.0

Name Microsoft Access-Treiber (\*.mdb)  
File odbcjt32.dll  
Date 24/3/2005 18:08:34  
Version 4.0.6305.0

Name Microsoft Text-Treiber (\*.txt; \*.csv)  
File odbcjt32.dll  
Date 24/3/2005 18:08:34  
Version 4.0.6305.0

Name Microsoft Excel-Treiber (\*.xls)  
File odbcjt32.dll  
Date 24/3/2005 18:08:34  
Version 4.0.6305.0

Name Microsoft dBase-Treiber (\*.dbf)  
File odbcjt32.dll  
Date 24/3/2005 18:08:34  
Version 4.0.6305.0

Name Microsoft Paradox-Treiber (\*.db )  
File odbcjt32.dll  
Date 24/3/2005 18:08:34  
Version 4.0.6305.0

Name Microsoft Visual FoxPro-Treiber  
File vfpodbc.dll  
Date 16/6/1998  
Version 6.0.8167.0

Name Driver do Microsoft Access (\*.mdb)  
File odbcjt32.dll  
Date 24/3/2005 18:08:34

Version 4.0.6305.0

Name Driver da Microsoft para arquivos texto (\*.txt; \*.csv)  
File odbcjt32.dll  
Date 24/3/2005 18:08:34  
Version 4.0.6305.0

Name Driver do Microsoft Excel (\*.xls)  
File odbcjt32.dll  
Date 24/3/2005 18:08:34  
Version 4.0.6305.0

Name Driver do Microsoft dBase (\*.dbf)  
File odbcjt32.dll  
Date 24/3/2005 18:08:34  
Version 4.0.6305.0

Name Driver do Microsoft Paradox (\*.db )  
File odbcjt32.dll  
Date 24/3/2005 18:08:34  
Version 4.0.6305.0

Name Driver para o Microsoft Visual FoxPro  
File vfpodbc.dll  
Date 16/6/1998  
Version 6.0.8167.0

Name Microsoft ODBC for Oracle  
File msorc132.dll  
Date 24/3/2005 18:07:34  
Version 2.576.1830.0

[OLE DB Providers]

Item	Value
MediaCatalogDB OLE DB Provider	Not Available
Microsoft OLE DB Provider for SQL Server	2000.86.1830.0
MediaCatalogMergedDB OLE DB Provider	Not Available
Microsoft OLE DB Provider For Data Mining Services	8.0.760.0
MSDataShape	2.82.1830.0
OLE DB Provider for Microsoft Directory Services	5.2.3790.1830
MediaCatalogWebDB OLE DB Provider	Not Available
Microsoft OLE DB DM Enumerator	8.0.760.0
Microsoft OLE DB Provider for OLAP Services 8.0	8.0.760.0
Microsoft OLE DB Provider for OLAP Services 8.0	8.0.760.0
Microsoft OLE DB Provider for ODBC Drivers	2.82.1830.0
Microsoft OLE DB Enumerator for ODBC Drivers	2.82.1830.0
Microsoft OLE DB Provider for Outlook Search	1.0.0.3723
Microsoft Jet 3.51 OLE DB Provider	3.52.1527.4
Microsoft Jet 4.0 OLE DB Provider	4.0.8227.0
Microsoft OLE DB Enumerator for SQL Server	2000.86.1830.0
Microsoft OLE DB Simple Provider	2.82.1830.0
Microsoft OLE DB Provider for Oracle	2.82.1830.0

Microsoft OLE DB Provider for Indexing Service  
5.2.3790.1830

[Jet Core Components]

Item	Value
Description	Jet 2.x
Path	C:\WINDOWS\system32\MSRD2X35.DLL
Version	3.51.0623.0
Description	Jet 3.5
Path	Not Available
Version	
Description	ODBC
Path	Not Available
Version	

[ADO Core Components]

Item	Value
Description	ADOConnectObject.ADOConnectObject.1
File	C:\Program Files\Common Files\Microsoft Shared\MSDesigners98\mdt2fw.dll
Version	2.00.00.8171
Description	ADODB.Command
File	C:\Program Files\Common Files\system\ado\msado15.dll
Version	2.82.1830.0 (srv03_sp1_rtm.050324-1447)
Description	ADODB.Command
File	C:\Program Files\Common Files\system\ado\msado15.dll
Version	2.82.1830.0 (srv03_sp1_rtm.050324-1447)
Description	ADOMD.Catalog
File	C:\Program Files\Common Files\System\ado\msadomd.dll
Version	2.82.1830.0 (srv03_sp1_rtm.050324-1447)
Description	ADOR.Recordset
File	C:\Program Files\Common Files\system\ado\msado15.dll
Version	2.82.1830.0 (srv03_sp1_rtm.050324-1447)
Description	ADOX.Catalog
File	C:\Program Files\Common Files\System\ado\msadox.dll
Version	2.82.1830.0 (srv03_sp1_rtm.050324-1447)
Description	RDS.DataControl
File	C:\Program Files\Common Files\system\msadc\msadco.dll
Version	2.82.1830.0 (srv03_sp1_rtm.050324-1447)
Description	JRO.JetEngine
File	C:\Program Files\Common Files\System\ado\msjro.dll
Version	2.82.1830.0 (srv03_sp1_rtm.050324-1447)

[RDO Core Components]

Item	Value
Description	MicrosoftRDO.rdoEngine2.0
File	C:\WINDOWS\system32\MSRDO20.DLL
Version	6.00.8862
Description	MicrosoftRDO.rdoQuery2.0

File C:\WINDOWS\system32\MSRDO20.DLL  
 Version 6.00.8862  
 Description MicrosoftRDO.rdoConnection2.0  
 File C:\WINDOWS\system32\MSRDO20.DLL  
 Version 6.00.8862

[Office Event/Application Fault]

Item Value  
 No Office Event/Application Fault Entries in the Event Log

Configured Users: 6860  
 Pipe Name: DRIVER31865578  
 Connect Rate: 100  
 Start Rate: 100  
 Max. Concurrency: -1  
 Concurrency Rate: 10  
 CLIENT\_NURAND: 233  
 CPU: 1  
 Additional Options:

Driver Engine: DRIVER4  
 IIS Server: cli01  
 SQL Server: sqlquad  
 Database: tpcc  
 User: sa  
 Protocol: HTML  
 w\_id Range: 2060 - 2746  
 w\_id Min Warehouse: 1  
 w\_id Max Warehouse: 2746  
 Scale: Normal  
 User Count: 6870  
 District id: 1  
 Scale Down: No

\\rte01\c\$\logfile

Name: DRIVER4  
 Description: Slave  
 Directory: \\rte01-1.log  
 Machine: rte01  
 Parameter Set: PARAM2  
 Index: 300000000  
 Seed: 25987  
 Configured Users: 6870  
 Pipe Name: DRIVER41934265  
 Connect Rate: 100  
 Start Rate: 100  
 Max. Concurrency: -1  
 Concurrency Rate: 10  
 CLIENT\_NURAND: 233  
 CPU: 0  
 Additional Options:

Number of Parameter Sets: 2

## Benchcraft Profile

Profile: 2746w  
 File Path: C:\Documents and Settings\Administrator\Desktop\2746w.pro  
 Version: 4

Number of Engines: 4

Name: DRIVER1  
 Description: Master  
 Directory: c:\logfile\rte02-0.log  
 Machine: rte02  
 Parameter Set: PARAM2  
 Index: 0  
 Seed: 25987  
 Configured Users: 6860  
 Pipe Name: DRIVER1557781  
 Connect Rate: 100  
 Start Rate: 100  
 Max. Concurrency: -1  
 Concurrency Rate: 10  
 CLIENT\_NURAND: 233  
 CPU: 1  
 Additional Options:

Name: DRIVER2  
 Description: Master  
 Directory: c:\logfile\rte02-1.log  
 Machine: rte02  
 Parameter Set: PARAM2  
 Index: 100000000  
 Seed: 25987  
 Configured Users: 6870  
 Pipe Name: DRIVER2579890  
 Connect Rate: 100  
 Start Rate: 100  
 Max. Concurrency: -1  
 Concurrency Rate: 10  
 CLIENT\_NURAND: 233  
 CPU: 0  
 Additional Options:

Name: DRIVER3  
 Description: Slave  
 Directory: \\rte01-0.log  
 Machine: rte01  
 Parameter Set: PARAM2  
 Index: 200000000  
 Seed: 25987

Number of User groups: 4

Driver Engine: DRIVER1  
 IIS Server: cli05  
 SQL Server: sqlquad  
 Database: tpcc  
 User: sa  
 Protocol: HTML  
 w\_id Range: 1 - 686  
 w\_id Min Warehouse: 1  
 w\_id Max Warehouse: 2746  
 Scale: Normal  
 User Count: 6860  
 District id: 1  
 Scale Down: No

Driver Engine: DRIVER2  
 IIS Server: cli05  
 SQL Server: sqlquad  
 Database: tpcc  
 User: sa  
 Protocol: HTML  
 w\_id Range: 687 - 1373  
 w\_id Min Warehouse: 1  
 w\_id Max Warehouse: 2746  
 Scale: Normal  
 User Count: 6870  
 District id: 1  
 Scale Down: No

Driver Engine: DRIVER3  
 IIS Server: cli01  
 SQL Server: sqlquad  
 Database: tpcc  
 User: sa  
 Protocol: HTML  
 w\_id Range: 1374 - 2059  
 w\_id Min Warehouse: 1  
 w\_id Max Warehouse: 2746  
 Scale: Normal  
 User Count: 6860  
 District id: 1  
 Scale Down: No

RT	RT	Menu	Delay	Txn	Think	Key
Time	Delay	Fence	Delay	weight	Time	
12.05	18.01	New Order	0.10	5.00	10.00	0.10
12.05	3.01	Payment	0.10	5.00	10.00	0.10
5.05	2.01	Delivery	0.10	5.00	1.00	0.10
5.05	2.01	Stock Level	0.10	20.00	1.00	0.10
10.05	2.01	Order Status	0.10	5.00	1.00	0.10
PARAM2						
RT	RT	Menu	Delay	Txn	Think	Key
Time	Delay	Fence	Delay	weight	Time	
12.07	18.01	New Order	0.10	5.00	44.92	0.10
12.07	3.01	Payment	0.10	5.00	43.02	0.10
5.07	2.01	Delivery	0.10	5.00	4.02	0.10
5.07	2.01	Stock Level	0.10	20.00	4.02	0.10
10.07	2.01	Order Status	0.10	5.00	4.02	0.10



# Appendix D – 60-Day Space

TPC-C 60 Day Space Requirements																																																													
Warehouses	6800				TpmC	85.858,78																																																							
Table	Rows	Data KB	Index KB	Extra 5% KB	8hr Space	Total Space KB																																																							
Warehouse	6800	728	80	40		848																																																							
District	68000	7560	96	383		8039																																																							
Customer	204000000	148363656	9257032	7.881.034		165501722																																																							
History	204000000	11912416	44536		2.568.708	11956952																																																							
NewOrder	61199998	1090432	2792	54.661		1147885																																																							
Orders	204000000	6661248	3249464		8.159.734	9910712																																																							
OrderLine	2039997667	133770360	315136		49.505.987	134085496																																																							
Item	100000	9416	96	476		9988																																																							
Stock	680000000	217600008	458872	10.902.944		228961824																																																							
Total		519.415.824	13.328.104	18.839.538	60.234.430	551.583.466																																																							
MB																																																													
Dynamic Space	148.773	Sum of Data for Order, Orderline and History																																																											
Static Space	389.882	Sum of Data+Index+5%-Dynamic Space																																																											
Free Space	na	Total Allocated Spac - ( Dynamic + Static Space)																																																											
Daily Growth	30.055	(Dynamic Space/(W*62.5))*tpmc																																																											
Daily Spread	-	(Free Space -1.5*Daily Growth) Zero Assumed																																																											
60 Day Space MB	2.193.201																																																												
60 Day Space GB	2.141,80	GB																																																											
Log Size	200.000,00	MB																																																											
KB Per New Order	5,31	KB																																																											
8 hr log MB	213.698	MB																																																											
8 hr log GB	208,6894	GB																																																											
<table border="1"> <thead> <tr> <th></th> <th>Disks</th> <th>Disks</th> <th>Formatted</th> <th>Space</th> </tr> <tr> <th>Space Usage</th> <th>GB Needed</th> <th>Measured</th> <th>Size</th> <th>Available</th> </tr> </thead> <tbody> <tr> <td>180 Day Space DB</td> <td>2.141,80</td> <td>0</td> <td>18GB</td> <td>16,900</td> </tr> <tr> <td></td> <td></td> <td>238</td> <td>36GB</td> <td>34,332</td> </tr> <tr> <td></td> <td></td> <td></td> <td>4GB</td> <td>3,999</td> </tr> <tr> <td>Total DB</td> <td></td> <td>238,00</td> <td></td> <td>8171,02</td> </tr> <tr> <td>8-hr log + mirror</td> <td>417,3789</td> <td>14</td> <td>36GB</td> <td>34,332</td> </tr> <tr> <td></td> <td></td> <td></td> <td></td> <td>480,65</td> </tr> <tr> <td>OS, Swap</td> <td>3</td> <td>1</td> <td>9GB</td> <td>34,332</td> </tr> <tr> <td></td> <td></td> <td></td> <td></td> <td>34,33</td> </tr> <tr> <td>Total Storage</td> <td>2.562,18</td> <td></td> <td></td> <td>8.686,00</td> </tr> </tbody> </table>								Disks	Disks	Formatted	Space	Space Usage	GB Needed	Measured	Size	Available	180 Day Space DB	2.141,80	0	18GB	16,900			238	36GB	34,332				4GB	3,999	Total DB		238,00		8171,02	8-hr log + mirror	417,3789	14	36GB	34,332					480,65	OS, Swap	3	1	9GB	34,332					34,33	Total Storage	2.562,18			8.686,00
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Total Storage	2.562,18			8.686,00																																																									

The file groups are reported in 8K pages from the sysfile table.

Misc_fg	CS_fg
848	
8039	
0	165501722
14525660	
1147885	
18070446	
183591483	
9988	
0	228961824
217.354.350	394.463.546
files=	8
size=	5.120.000
Total=	43.520.000
8K blocks	348.160.000
Needed =	217.354.350
OK	OK

tpmc										
85.858,78										
	Data Before KB	Index Before KB	Data After KB	Index After KB	Data Grow KB	Index Grow KB	Total Grow KB	KB/New-Order	8-Hr Growth KB	8-Hr Growth MB
History	11.912.416	44.536	13408272	88832	1.495.856	44.296	1.540.152	0,0623	2.568.708,38	2.508,50
Order	6.661.248	3.249.464	8332648	6470496	1.671.400	3.221.032	4.892.432	0,1980	8.159.734,30	7.968,49
Order-Line	133.770.360	315.136	163142384	626024	29.372.024	310.888	29.682.912	1,2012	49.505.987,02	48.345,69
										58.822,69
	sum(*) Before		sum(*) After		Num New-Order					
d next o id	204.068.000		228.778.113		24.710.113					
	Before MB		After MB		Grow MB			KB/New-Order	8-Hr Growth MB	8-Hr Growth GB
Log	522,48		128652,01		128129,53			5,3098	213.697,99	208,69
Database tpc log used (%)								5.437,1887	bytes	
200000	0,26124048		64,326004							