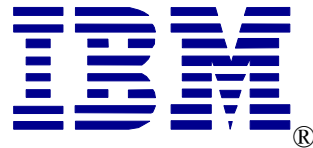


**TPC Benchmark™ C**  
**Full Disclosure Report**  
**for**  
**IBM® @server® xSeries® 445**  
**using**  
**Microsoft® SQL Server 2000 Enterprise Edition**  
**and**  
**Microsoft Windows® Server 2003 Datacenter Edition**

**TPC-C Revision 5.2**

**Submitted for Review**  
**March 26, 2004**



## **First Edition - March 2004**

THE INFORMATION CONTAINED IN THIS DOCUMENT IS DISTRIBUTED ON AN AS IS BASIS WITHOUT ANY WARRANTY EITHER EXPRESSED OR IMPLIED. The use of this information or the implementation of any of these techniques is the customer's responsibility and depends on the customer's ability to evaluate and integrate them into the customer's operational environment. While each item has been reviewed by IBM for accuracy in a specific situation, there is no guarantee that the same or similar results will be obtained elsewhere. Customers attempting to adapt these techniques to their own environment do so at their own risk.

In this document, any references made to an IBM licensed program are not intended to state or imply that only IBM's licensed program may be used; any functionally equivalent program may be used.

This publication was produced in the United States. IBM may not offer the products, services, or features discussed in this document in other countries, and the information is subject to change without notice. Consult your local IBM representative for information on products and services available in your area.

© Copyright International Business Machines Corporation 2004. All rights reserved.

Permission is hereby granted to reproduce this document in whole or in part, provided the copyright notice as printed above is set forth in full text on the title page of each item reproduced.

U.S. Government Users - Documentation related to restricted rights: Use, duplication, or disclosure is subject to restrictions set forth in GSA ADP Schedule Contract with IBM Corp.

### ***Trademarks***

IBM, the IBM and eServer logos, eServer, xSeries and TotalStorage are trademarks or registered trademarks of International Business Machines Corporation.

The following terms used in this publication are trademarks of other companies as follows: TPC Benchmark, tpmC, and \$/tpmC trademark of Transaction Processing Performance Council; Intel and Xeon are trademarks or registered trademarks of Intel Corporation; Microsoft, Windows and BenchCraft are trademarks or registered trademarks of Microsoft Corporation. Other company, product, or service names, which may be denoted by two asterisks (\*\*), may be trademarks or service marks of others.

### ***Notes***

<sup>1</sup> GHz and MHz only measures microprocessor internal clock speed, not application performance. Many factors affect application performance.

<sup>2</sup> When referring to hard disk capacity, GB, or gigabyte, means one thousand million bytes. Total user-accessible capacity may be less.

---

## Abstract

IBM Corporation conducted the TPC Benchmark™ C on the IBM® @server® xSeries® 445 configured as a client/server system. This report documents the full disclosure information required by the TPC Benchmark C Standard Specification, Revision 5.2, including the methodology used to achieve the reported results. All testing fully complied with this revision level.

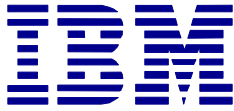
The software used on the xSeries 445 system includes Microsoft® Windows® Server2003 Datacenter Edition with QFE KB834628, and Microsoft SQL Server 2000 Enterprise Edition with SP3 with QFE.

Two standard metrics, transactions per minute-C (tpmC) and price per tpmC (\$/tpmC), are reported as required by the TPC Benchmark C Standard Specification.

The benchmark results are summarized in the following table.

Hardware	Software	Total System Cost	tpmC	\$/tpmC	Total Solution Availability Date
IBM @server xSeries 445	Microsoft SQL Server 2000 Enterprise Edition SP3 with QFE  Microsoft Windows Server 2003 Datacenter Edition with QFE KB834628	\$1,879,684	215,485.89	\$8.72	August 31, 2004

The results of the benchmark and test methodology used were audited by Francois Raab of InfoSizing, Inc. The auditor's attestation letter is contained in Section 9 of this report.



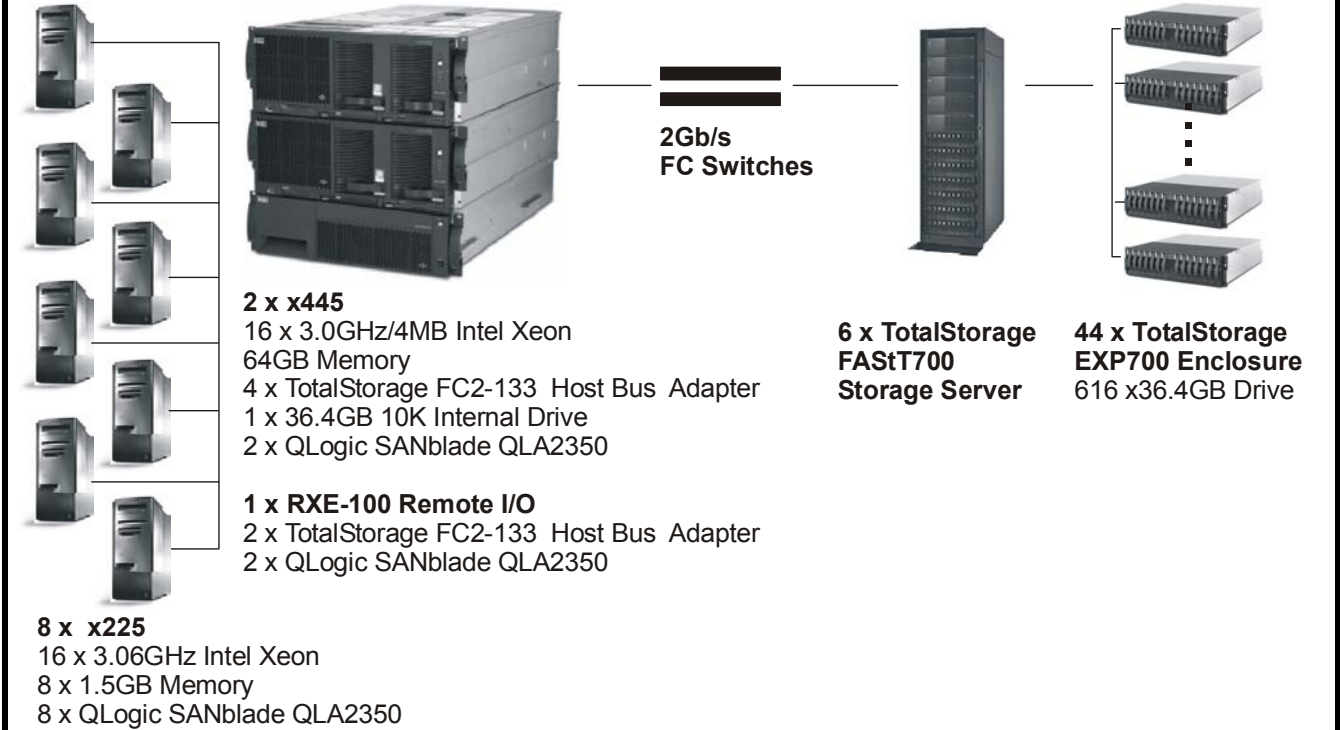
**IBM® @server® xSeries® 445 c/s**  
**with**  
**Microsoft® SQL Server 2000**

TPC-C Revision 5.2

Report Date: March 26, 2004

Total System Cost	TPC-C Throughput	Price/Performance	Availability Date
<b>\$1,879,684</b>	<b>215,485.89 tpmC</b>	<b>\$8.72 / tpmC</b>	<b>Aug. 31, 2004</b>

Database Server	Database Manager	Operating System	Other Software	Number of Users
<b>Processors/Cores/Threads: 16/16/32</b> <b>Intel Xeon MP Processor 3.0GHz</b>	<b>Microsoft SQL Server 2000 Enterprise Edition SP3 w/QFE</b>	<b>Microsoft Windows® Server 2003 Datacenter Edition w/QFE KB834628</b>	<b>Microsoft Visual C++ 6.0 Win32 Microsoft COM+</b>	<b>172,000</b>



System Component	Qty	Server:	Qty	Each Client:
Processors/Cores/Threads	16/16/32	<b>3.0GHz Xeon Processor MP w/4MB L3 Cache</b>	2/2/4	<b>3.06GHz Xeon DP w/512KB L2 Cache</b>
Cache				
Memory	64	<b>1GB ECC SDRAM</b>	1	<b>1.5GB Memory</b>
Disk Controllers	6	<b>TotalStorage FC2-133 Host Bus Adapter</b>	1	<b>Ultra320 SCSI Interface</b>
Disk Drives	616	<b>36.4GB (15000 rpm)</b>	1	<b>36.4GB (10000 rpm)</b>
	1	<b>36.4GB (10000 rpm)</b>		
Total Storage Priced		<b>20891.62GB</b>		
Tape Drive	1	<b>20/40GB SCSI Tape Drive</b>		

IBM Corporation		IBM @server xSeries 445 c/s with Microsoft SQL Server 2000			TPC-C Revision 5.2		
				Report Date: March 26, 2004			
Description	Part Number	Third Party Brand	Unit Price Pricing	Quantity	Extended Price	3-Yr. Maint. Price	
<b>Server Hardware</b>							
x445 with 2 x 3.0GHz/4MB Xeon Processor	8870-4BX	IBM	1	26,599	2	53,198	
3 YR onsite repair 24x7x4 hour (x445)	96P2688	IBM	1	3,390	2	6,780	
xSeries 3.0GHz/4MB Processor	13N0271	IBM	1	6,599	12	79,188	
xSeries 445 SMP Expansion Module	02R1870	IBM	1	4,849	2	9,698	
xSeries 445 Two-Chassis 16-Way Configuration Kit	02R2013	IBM	1	4,999	1	4,999	
1GB PC2100 DDR ECC SDRAM RDIMM	33L5039	IBM	1	619	64	39,616	
36.4GB 10K Ultra320 SCSI Drive	32P0726	IBM	1	275	1	275	
IBM TotalStorage FASTT FC2-133 Host Bus Adapter	24P0960	IBM	1	1,485	4	5,940	
3.5M Interconnect Management Cable Kit	31P6087	IBM	1	49	5	245	
QLogic SANBlade QLA2350 FC-VI Adapter (2 spares)	QLA2350-BK	QLogic	1	2,027	6	12,162	
E54 15" (13.8" Viewable) Color Monitor	633147N	IBM	1	119	1	119	
3 YR onsite exch. 24x7x4 hour (E54 Monitor)	30L9183	IBM	1	90	1	90	
IBM Preferred Pro Full-Size Keyboard PS/2	31P7415	IBM	1	29	1	29	
IBM Sleek 2-Button Mouse	28L3673	IBM	1	15	1	15	
<b>Subtotal</b>					<b>205,484</b>	<b>6,870</b>	
<b>Server Storage</b>							
IBM RXE-100 Remote Expansion Enclosure	8684-1RX	IBM	1	4,569	1	4,569	
3 YR onsite repair 24x7x4 hour (RXE-100)	96P2469	IBM	1	1,330	1	1,330	
IBM Remote I/O PCI-X 6-Slot Expansion Kit	31P5998	IBM	1	1,699	1	1,699	
IBM TotalStorage FASTT FC2-133 Host Bus Adapter	24P0960	IBM	1	1,485	2	2,970	
IBM TotalStorage FASTT700 Storage Server	17421RU	IBM	1	46,499	6	278,994	
3 YR onsite repair 24x7x4 hour (FASTT700)	41L2768	IBM	1	760	6	4,560	
IBM FASTT700 Mini Hub	19K1269	IBM	1	899	10	8,990	
IBM Short Wave SFP Module	19K1271	IBM	1	499	186	92,814	
IBM 1m LC-LC Fibre Channel Cable	19K1247	IBM	1	79	68	5,372	
IBM 5m LC-LC Fibre Channel Cable	19K1248	IBM	1	129	38	4,902	
IBM TotalStorage FASTT EXP700 Storage Exp. Unit	17401RU	IBM	1	6,000	44	264,000	
3 YR onsite repair 24x7x4 hour (EXP700)	41L2768	IBM	1	760	44	33,440	
2Gbps FC 36.4GB 15K Hot-Swap HDD	06P5772	IBM	1	1,115	616	686,840	
20/40GB DDS/4 Tape AutoLoader	00N7991	IBM	1	699	1	699	
IBM NetBAY Tape Enclosure	0034BOX	IBM	1	849	1	849	
NetBAY42SX Standard Rack	9306421	IBM	1	1,439	5	7,195	
3 YR onsite repair 24x7x4 hour (NetBAY Rack)	41L2758	IBM	1	168	5	840	
IBM UPS 500	33L3477	IBM	1	99	1	99	
Enterprise Rack Prep Fee	06P7514	IBM	1	400	5	2,000	
Enterprise Rack Installation Fee	06P7515	IBM	1	160	5	800	
Option Integration Fee	58P8665	IBM	1	110	5	550	
Image Load Fee	06P7505	IBM	1	35	1	35	
<b>Subtotal</b>					<b>1,363,377</b>	<b>40,170</b>	
<b>Server Software</b>							
Microsoft SQL Server 2000 Enterprise Edition	810-00846	Microsoft	2	16,541	16	264,656	
Database Software Support Package		Microsoft	2	1,950	3	5,850	
IBM Preload Kit for Datacenter 2003 (1-16 Processors)	4816-7DU	IBM	1	54,555	1	54,555	
3 Years of Support for Datacenter - MAPS 10 incidents at \$9000/year	23L9991	IBM	1	9,000	3	27,000	
IBM Maintenance Update Subscription (1-16 Processors - 1 Year)	4816-DDX	IBM	1	5,119	3	15,357	
<b>Subtotal</b>					<b>319,211</b>	<b>48,207</b>	
<b>Client Hardware</b>							
x225 with 3.06GHz/512KB Xeon DP, 1 x 36.4GB Drive	8647-62X	IBM	1	1,775	8	14,200	
3 YR onsite repair 24x7x4 hour (x225)	96P2250	IBM	1	1,000	8	8,000	
3.06GHz/512KB Xeon DP Processor Upgrade	24P8122	IBM	1	999	8	7,992	
512MB PC2100 ECC SDRAM RDIMM	33L5038	IBM	1	249	16	3,984	
NetXtreme 1000T Dual-Port Ethernet Adapter	31P6401	IBM	1	269	16	4,304	
Adaptec Quartet64 4-Port Adapter (2 spares)	ANA64044	Adaptec	1	550	8	4,400	
QLogic SANblade QLA 2350 FC-VI Adapter	QLA2350-BK	QLogic	1	2,027	8	16,216	
E54 15" (13.8" Viewable) Color Monitor	633147N	IBM	1	119	8	952	
3 YR onsite repair 24x7x4 hour (E54)	30L9183	IBM	1	90	8	720	
<b>Subtotal</b>					<b>52,048</b>	<b>8,720</b>	
<b>Client Software</b>							
Microsoft Windows 2000 Server with COM+	C11-00821	Microsoft	2	738	8	5,904	
Microsoft Visual C++ Professional 6.0	254-00170	Microsoft	2	109	1	109	
<b>Subtotal</b>					<b>6,013</b>		
<b>Network Components</b>							
IBM TotalStorage SAN Fibre Channel Switch Model F08	3534F08	IBM	1	5,250	4	21,000	
3 YR onsite repair 24x7x4 hour (Switch)	96P2047	IBM	1	1,152	4	4,608	
IBM Short Wave SFP Module	19K1271	IBM	1	499	8	3,992	
IBM 5M LC-LC Fibre Channel Cable	19K1248	IBM	1	129	12	1,548	
<b>Subtotal</b>					<b>26,540</b>	<b>4,608</b>	
<b>Total</b>					<b>1,972,673</b>	<b>108,575</b>	
Compsat Technology large volume purchase discount.				1	<b>Discount</b>	<b>190,083</b>	
<b>Grand Totals</b>					<b>1,782,590</b>	<b>97,094</b>	
Pricing: 1- Compsat Technology discount is based on the total dollar volume of those components in the configuration; 2 - Microsoft Audited by Francois Raab, InfoSizing, Inc.				<b>Three-Year Cost of Ownership:</b>		<b>\$1,879,684</b>	
						<b>tpmC:</b> 215,485.89	
						<b>\$/tpmC:</b> \$8.72	

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 stated prices are not available according to these terms, please inform the TPC at pricing@tpc.org.

<b>Numerical Quantities Summary</b>			
<b>MQTh, Computed Maximum Qualified Throughput:</b> 215,485.89 tpmC			
<b>Response Times (in seconds)</b>	<b>90th Percentile</b>	<b>Average</b>	<b>Maximum</b>
<b>New-Order</b>	0.71	0.39	6.81
<b>Payment</b>	0.65	0.33	6.69
<b>Delivery (Interactive)</b>	0.11	0.10	0.74
<b>Stock Level</b>	1.44	0.85	6.50
<b>Order Status</b>	0.69	0.37	5.94
<b>Delivery (Deferred)</b>	0.32	0.17	5.05
<b>Menu</b>	0.11	0.10	1.05
<b>Response time delay added for emulated components:</b> 0.1 Seconds			
<b>Transaction Mix (in percent of total transactions)</b>			<b>Percent</b>
<b>New-Order</b>			44.94
<b>Payment</b>			43.03
<b>Delivery</b>			4.01
<b>Stock Level</b>			4.01
<b>Order Status</b>			4.01
<b>Keying/Think Times (in seconds)</b>	<b>Minimum</b>	<b>Average</b>	<b>Maximum</b>
<b>New-Order</b>	18.00 / 0.00	18.02 / 12.05	18.04 / 120.51
<b>Payment</b>	3.00 / 0.00	3.02 / 12.05	3.04 / 120.51
<b>Delivery</b>	2.00 / 0.00	2.02 / 5.06	2.04 / 50.51
<b>Stock Level</b>	2.00 / 0.00	2.02 / 5.05	2.04 / 50.51
<b>Order Status</b>	2.00 / 0.00	2.02 / 10.04	2.04 / 100.51
<b>Test Duration</b>			
<b>Ramp-up time</b>			46 minutes 30 seconds
<b>Measurement interval</b>			120 minutes
<b>Number of checkpoints</b>			4
<b>Checkpoint interval</b>			30 minutes
<b>Number of transactions (all types) completed in measurement interval</b>			59,839,936

## Table of Contents

<b>Abstract</b>	3
<b>Numerical Quantities Summary</b>	3
<b>Preface</b>	11
<b>General Items</b>	12
Application Code Disclosure and Definition Statements	12
Benchmark Sponsor	12
Parameter Settings	12
Configuration Diagrams	12
<b>Clause 1: Logical Database Design Related Items</b>	15
Table Definitions	15
Physical Organization of the Database	15
Insert and Delete Operations	15
Horizontal or Vertical Partitioning	15
Replication	15
Table Attributes	15
<b>Clause 2: Transaction and Terminal Profiles Related Items</b>	16
Random Number Generation	16
Screen Layout	16
Terminal Verification	16
Intelligent Terminals	16
Transaction Profiles	16
Deferred Delivery Mechanism	17
<b>Clause 3: Transaction and System Properties Related Items</b>	18
Atomicity Requirements	18
Consistency Requirements	18
Isolation Requirements	19
Durability Requirements	19
<b>Clause 4: Scaling and Database Population Related Items</b>	21
Cardinality of Tables	21
Distribution of Tables and Logs	21
Database Model Implemented	22
Partitions/Replications Mapping	23
60-Day Space Requirement	23
<b>Clause 5: Performance Metrics and Response Time Related Items</b>	24
Measured tpmC	24
Response Times	24
Keying/Think Times	24
Response Time Frequency Distribution Curves	25
Performance Curve for Response Time vs. Throughput	27
New Order Think Time Distribution	28
Throughput vs. Elapsed Time	28
Steady State Methodology	29
Work Performed during Steady State	29
Checkpoints	29
Measurement Interval	29
Transaction Mix	29
Percentage of Total Mix	30
Number of Checkpoints	30
<b>Clause 6: SUT, Driver and Communication Definition Related Items</b>	32
Description of RTE	32
Emulated Components	32
Benchmarked and Targeted System Configuration Diagrams	32
Network Configuration	32

Network Bandwidth .....	32
Operator Intervention .....	32
<b>Clause 7: Pricing Related Items</b> .....	<b>33</b>
Hardware and Software Components .....	33
Availability Date .....	33
Measured tpmC .....	33
Country-Specific Pricing .....	33
Usage Pricing .....	33
System Pricing .....	34
<b>Clause 9: Audit Related Items</b> .....	<b>35</b>
Auditor .....	35
Availability of the Full Disclosure Report .....	35
<i>Attestation letter</i> .....	36
<b>Appendix A: Source Code</b> .....	<b>38</b>
Web Client Source Code .....	38
<i>db_odbc_dll.dsp</i> .....	38
<i>dlldata.c</i> .....	39
<i>error.h</i> .....	39
<i>install.C</i> .....	42
<i>install.dsp</i> .....	49
<i>install.h</i> .....	51
<i>install.rC</i> .....	51
<i>install_com.cpp</i> .....	54
<i>Install.Resource.h</i> .....	56
<i>isapi_dll.dsp</i> .....	57
<i>Isapi_dll_Resource.h</i> .....	58
<i>license.txt</i> .....	59
<i>Methods.h</i> .....	60
<i>Null-txns.sql</i> .....	62
<i>Readregistry.cpp</i> .....	65
<i>Readregistry.h</i> .....	66
<i>restore.vbs</i> .....	66
<i>runsqlcfg.vbs</i> .....	68
<i>rtetime.h</i> .....	69
<i>setup.vbs</i> .....	69
<i>spinlock.h</i> .....	76
<i>tm_com_dll.dsp</i> .....	77
<i>tpcc.cpp</i> .....	100
<i>tpcc.def</i> .....	123
<i>tpcc.h</i> .....	123
<i>tpcc.rc</i> .....	124
<i>tpcc_com.cpp</i> .....	125
<i>tpcc_com.h</i> .....	127
<i>Tpcc_com_all.cpp</i> .....	128
<i>Tpcc_com_all.def</i> .....	132
<i>Tpcc_com_all.dsp</i> .....	132
<i>Tpcc_com_all.h</i> .....	134
<i>Tpcc_com_all.idl</i> .....	135
<i>Tpcc_com_all.rc</i> .....	136
<i>Tpcc_com_all.rgs</i> .....	137
<i>Tpcc_com_all_i.c</i> .....	137
<i>Tpcc_com_all_resource.h</i> .....	138
<i>Tpcc_com_no.rgs</i> .....	139
<i>Tpcc_com_os.rgs</i> .....	139
<i>Tpcc_com_pay.rgs</i> .....	139



<i>Tpcc_com_ps.def</i>	139
<i>Tpcc_com_ps.dsp</i>	139
<i>Tpcc_com_ps.h</i>	141
<i>Tpcc_com_ps.idl</i>	143
<i>Tpcc_com_ps_i.c</i>	144
<i>Tpcc_com_ps_p.c</i>	145
<i>Tpcc_com_sl.rgs</i>	165
<i>tpcc_odbc.cpp</i>	165
<i>tpcc_odbc.h</i>	173
<i>trans.h</i>	175
<i>txn_base.h</i>	176
<i>txnlog.h</i>	177
<i>webclnt.dsp</i>	180
Stored Procedures	181
<i>neword.sql</i>	181
<i>payment.sql</i>	183
<i>ordstat.sql</i>	185
<i>delivery.sql</i>	186
<i>Stocklev.sql</i>	187
<i>version.sql</i>	187
<b>Appendix B: Database Design</b>	188
Database Build	188
<i>createdb.sql</i>	188
<i>dbop1.sql</i>	189
<i>dbopt2.sql</i>	190
<i>idxcuscl.sql</i>	190
<i>idxcusnc.sql</i>	190
<i>idxdiscl.sql</i>	191
<i>idxhiscl.sql</i>	191
<i>idxitmcl.sql</i>	191
<i>idxnodcl.sql</i>	191
<i>idxodlcl.sql</i>	192
<i>idxordcl.sql</i>	192
<i>idxstkcl.sql</i>	192
<i>idxwardcl.sql</i>	192
<i>sqlshutdown.sql</i>	192
<i>Tables.sql</i>	193
Load Source Code	194
<i>getargs.c</i>	194
<i>random.c</i>	196
<i>strings.c</i>	197
<i>time.c</i>	200
<i>tpcc.h</i>	200
<i>tpccldr.c</i>	201
<i>tpccldr.mak</i>	225
<i>VerifyTpccLoad.sql</i>	227
<i>version.sql</i>	228
<b>Appendix C: Tunable Parameters</b>	229
Microsoft SQL Server 2000 Configuration Parameters	229
Microsoft Windows Server 2003 Datacenter Edition	230
<i>Changes to the SUT</i>	230
<i>SUT System Information Report</i>	233
Disk Controller Configuration Parameters	292
<i>TotalStorage FC2-133 Host Bus Adapter 1</i>	292
<i>TotalStorage FC2-133 Host Bus Adapter 2</i>	301

<i>TotalStorage FC2-133 Host Bus Adapter 3</i> .....	331
<i>TotalStorage FC2-133 Host Bus Adapter 4</i> .....	361
<i>TotalStorage FC2-133 Host Bus Adapter 5</i> .....	388
<i>TotalStorage FC2-133 Host Bus Adapter 6</i> .....	415
Microsoft Windows 2000 Server .....	442
<i>Client System Information Report</i> .....	442
Client Configuration Parameters .....	466
RTE Input Parameters .....	468
<b>Appendix D: 60-Day Space</b> .....	483
<b>Appendix E: Third-Party Quotations</b> .....	484

---

## Preface

The TPC Benchmark™ C was developed by the Transaction Processing Performance Council (TPC). The TPC was founded to define transaction processing benchmarks and to disseminate objective, verifiable performance data to the industry. This full disclosure report is based on the TPC Benchmark C Standard Specification Version 5.2.

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

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

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

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

Despite the fact that this benchmark offers a rich environment that emulates many OLTP 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

### Benchmark Sponsor

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

This benchmark was sponsored by International Business Machines Corporation.

### Application Code Disclosure 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 and 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 that 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.*
- *Compilation and linkage options and run-time optimizations used to create/install applications, OS, and/or databases.*

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

Appendix C contains the tunable parameters 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 configuration diagrams for the tested and priced systems are provided on the following pages.

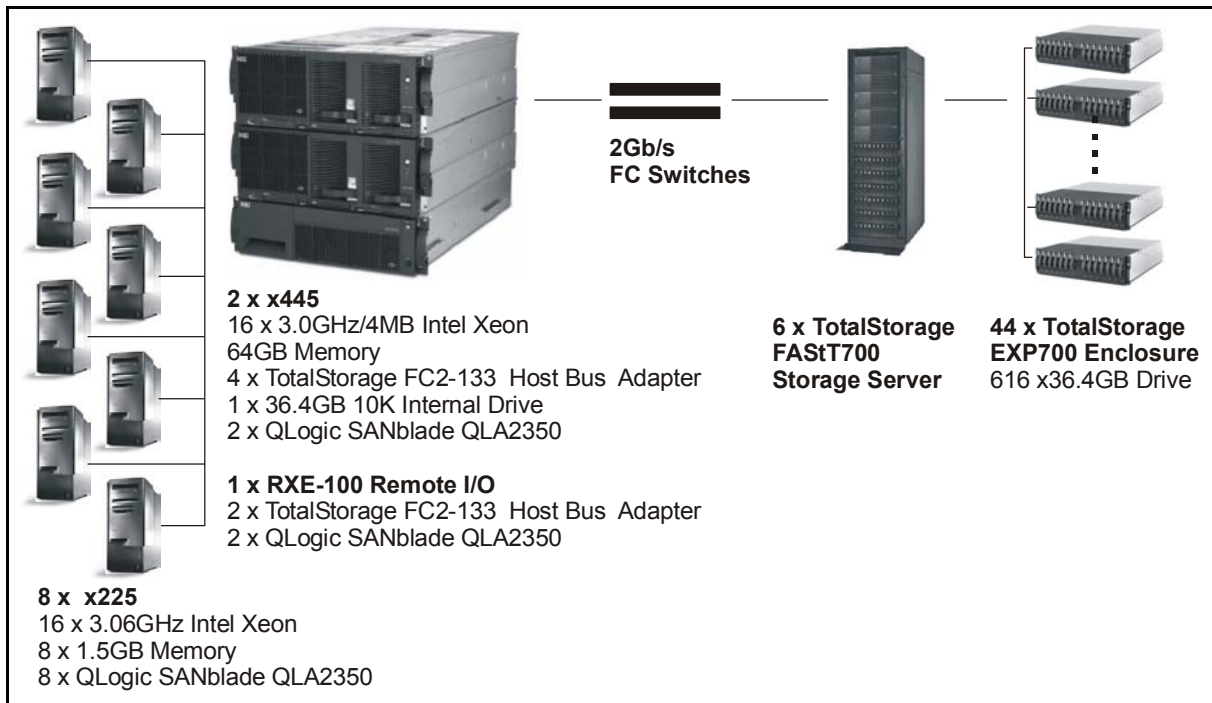
The Remote Terminal Emulator (RTE) used for these TPC Benchmark C tests is the Microsoft BenchCraft RTE. Under Version 5.2, the components of the configuration being emulated by the RTE are the workstations and the Ethernet hubs. Appendix C contains a listing of the RTE scripts and inputs used in the benchmark testing.

The measured configuration used eight IBM xSeries 225 systems, each configured with two 3.06GHz Xeon processors, as clients, which executed the terminal I/O and submitted transactions to COM+ servers, which were also running on the clients. These COM+ servers forwarded the transaction requests to the server, and returned the results to the RTE. Microsoft SQL Server 2000 Enterprise Edition was the DBMS executing on the server.

The server's disk subsystem capability was enhanced by using the IBM RXE-100 Expansion Enclosure to increase the number of PCI buses available. The RXE-100 added twelve PCI slots and six PCI buses to the server. The RAID HBA and LAN controllers were optimally distributed between the server and the RXE-100.

Controller	PCI Slot Location
TotalStorage FC2-133 Host Bus Adapter	Primary Server Slot 1
TotalStorage FC2-133 Host Bus Adapter	Primary Server Slot 5
TotalStorage FC2-133 Host Bus Adapter	Secondary Server Slot 1
TotalStorage FC2-133 Host Bus Adapter	Secondary Server Slot 3
QLogic SANblade QLA2350 FC -VI Adapter	Primary Server Slot 2
QLogic SANblade QLA2350 FC -VI Adapter	Secondary Server Slot 2
TotalStorage FC2-133 Host Bus Adapter	RXE-100 Slot 3
TotalStorage FC2-133 Host Bus Adapter	RXE-100 Slot 8
QLogic SANblade QLA2350 FC -VI Adapter	RXE-100 Slot 1
QLogic SANblade QLA2350 FC -VI Adapter	RXE-100 Slot 7

## Measured Configuration



The measured and priced configuration are identical.

---

## Clause 1: Logical Database Design Related Items

### 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 indexes within the database must be disclosed. Physical space was allocated to Microsoft SQL Server on the server disks as detailed in Figure 4-2.*

### 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.*

All insert and delete functions were fully operational during the running of the benchmark. The space required for an additional 5 percent of the initial table cardinality was allocated to Microsoft SQL Server 2000 and priced as static space.

### 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

### Random Number Generation

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

The seeds and offsets for the random number generator were collected and verified to be different for each driver. The auditor selected samples of the generated numbers from the database. The samples were verified to have no discernible patterns.

### Screen Layout

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

All screen layouts followed the TPC Benchmark C Standard Specification.

### 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 must for the demonstration in 8.1.3.3 must be disclosed and commercially available (including supporting software and maintenance).*

The auditor verified terminal features by direct experimentation. The benchmarked configuration uses Microsoft Internet Explorer 6.0 and HTML scripts as the terminal interface.

### Intelligent Terminals

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

The terminals emulated in the priced configuration are IBM PC desktop computer systems. All processing of the input/output screens was handled by the x225 clients. The screen input/output was managed via HTML strings that comply with the HTML Version 2.0 specification. A listing of the code used to implement the intelligent terminals is provided in Appendix A. All data manipulation was handled by the x445 database server.

### 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 were 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.*

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



**Table 2-1. Transaction Statistics**

<b>New Order</b>	<b>Value (%)</b>
Home warehouse order lines	99.00
Remote warehouse order lines	1.00
Rolled back transactions	1.00
Average number of items per order	10.00
<b>Payment</b>	
Home warehouse payment transactions	0.85
Remote warehouse payment transactions	0.15
<b>Non-Primary Key Access</b>	
Payment transactions using C_LAST	60.00
Order-Status transactions using C_LAST	60.08
<b>Delivery</b>	
Delivery transactions skipped	0
<b>Transaction Mix</b>	
New-Order	44.94
Payment	43.03
Delivery	4.01
Stock Level	4.01
Order Status	4.01

### **Deferred Delivery Mechanism**

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

The deferred delivery operation is queued by making an entry in an array within the application process (tpcc.dll) running on the client. Background threads within the application asynchronously process the queued delivery transactions.

The source code is listed in Appendix A.

---

## Clause 3: Transaction and System Properties Related Items

*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.*

### Atomicity Requirements

*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.*

All ACID tests were conducted according to specification.

### Completed Transactions

The following steps were performed to verify the Atomicity of completed transactions.

1. The balance was retrieved from the CUSTOMER table for a random Customer, District and Warehouse, giving BALANCE\_1.
2. The Payment transaction was executed for the Customer, District and Warehouse used in step 1.
3. The balance was retrieved again for the Customer used in step 1 and step 2, giving BALANCE\_2. It was verified that BALANCE\_1 was greater than BALANCE\_2 by AMT.

### Aborted Transactions

The following steps were performed to verify the Atomicity of the aborted Payment transaction:

1. The Payment application code was changed to execute a rollback of the transaction instead of performing the commit.
2. Using the balance, BALANCE\_2, from the CUSTOMER table retrieved for the completed transaction, the Payment transaction was executed for the Customer, District and Warehouse used in step 1 of section 3.1.1. The transaction rolled back due to the change in the application code from step 1.
3. The balance was retrieved again for the Customer used for step 2, giving BALANCE\_3. It was verified that BALANCE\_2 was equal to BALANCE\_3.

### Consistency Requirements

*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 bat file to issue queries to the database. The results of the queries demonstrated that the database was consistent for all four tests.

## Isolation Requirements

*Sufficient conditions must be enabled at either the system or the application level to ensure that the required isolation defined in Clause 3.4.1 is obtained.*

Isolation tests one through seven were run using the bat files to issue queries to the database. Each file included time stamps to demonstrate the concurrency of operations. The results of the queries were captured and placed in files. The auditor reviewed the results and verified that the isolation requirements had been met.

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

Case A was followed for Isolation test seven.

## Durability Requirements

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

- *Permanent irrecoverable failure of any single durable medium containing TPC-C database tables or recovery log data (this test includes failure of all or part of memory)*
- *Instantaneous interruption (system crash/system hang) in processing that requires system reboot to recover*
- *Failure of all or part of memory (loss of contents)*

## Loss of Data Test

The following steps were successfully performed to pass the Durability test of failure of a disk unit with database tables:

1. The contents of the database were backed up to several database dump devices during the initial database load. There were no dump devices on the disk array from which a drive was removed as part of this test.
2. The current count of the total number of orders was determined by the sum of D\_NEXT\_O\_ID for all rows in the district table giving SUM1.
3. A test was started with 14 percent of the users submitting transactions.
4. A disk containing a portion of each of the tables in the tpcc database was removed causing SQL Server to report errors accessing that device.
5. The run was aborted and SQL Server was restarted. Upon restart, the database tpcc reported numerous errors relating to the failed database device.
6. The transaction log was dumped to disk and the failed disk was replaced with a spare disk and was recovered.
7. The database was recovered and restored from the backup dump devices. Afterwards, the transaction log was applied to the database.
8. Step 2 was repeated to obtain the current count of the total number of orders giving SUM2.
9. It was verified that the sum of D\_NEXT\_O\_ID after the database is recovered is greater than or equal to the sum of D\_NEXT\_O\_ID before the run, plus all new order transactions completed during the run minus any rollback transactions.
10. Consistency Condition 3 was verified.

## Loss of System (Instantaneous Interruption and Loss of Memory)

1. The current count of the total number of orders was determined by the sum of D\_NEXT\_O\_ID for all rows in the district table giving SUM1.
2. A test was started under full load with all users submitting transactions.
3. The test continued and the system continued to run for another 7 minutes after all users were connected to the server.
4. The server under test was powered off, which removed power from the system and the memory.
5. The server was powered on again.

6. SQL Server was started to initiate automatic recovery from its log.
7. Step 1 was repeated to obtain the current count of the total number of orders giving SUM2.
8. It was verified that the sum of D\_NEXT\_O\_ID after the database is recovered is greater than or equal to the sum of D\_NEXT\_O\_ID before the run, plus all new order transactions completed during the run minus any rollback transactions.

### ***Loss of Log Disk and Log Cache***

1. The current count of the total number of orders was determined by the sum of D\_NEXT\_O\_ID for all rows in the district table giving SUM1.
2. This test was executed on a full-scale benchmark run.
3. The test continued with a checkpoint issued and completed.
4. One disk from the log array was removed. Since the disk was RAID-1 mirrored, SQL Server continued to process transactions without interruption.
5. The test continued to run for another 5 minutes.
6. Since write caching and write cache mirroring were enabled on the log's Fibre Channel controller pair, one of the controllers and its cache was then failed. Disk I/O paused briefly while the remaining log controller's cache was flushed and the write policy was automatically changed to write-through mode.
7. The test was allowed to run for another 5 minutes.
8. Step 1 was repeated to obtain the current count of the total number of orders giving SUM2.
9. It was verified that the sum of D\_NEXT\_O\_ID after the database is stopped is greater than or equal to the sum of D\_NEXT\_O\_ID before the run, plus all new order transactions completed during the run minus any rollback transactions.

---

## Clause 4: Scaling and Database Population Related Items

### Cardinality of Tables

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

The database was built with 17,200 warehouses and the audited run used all 17,200 warehouses.

**Table 4-1. Initial Cardinality of Tables**

Table Name	Rows
Warehouse	17,200
District	172,000
Item	100,000
New Order	154,800,000
History	516,000,000
Orders	516,000,000
Customer	516,000,000
Order Line	5,159,987,284
Stock	1,720,200,000
Inactive Warehouses	0

### Distribution of Tables and Logs

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

Figure 4-2 depicts the priced database configuration of the tested system to meet the 8-hour steady state requirement

**Figure 4-2. Data Distribution for the Benchmarked Configuration**

Disk #	Drives	Partition	Size	Use
0	28 - 36.4GB	E: F:	460.45GB 41.50GB (NTFS)	Logfile MDF File
1	28 - 36.4GB	C:\mp\m1 C:\mp\c1 M:	49.32GB 27.84GB 870.12GB (NTFS)	Customer and Stock Miscellaneous Files Backup files
2	28 - 36.4GB	C:\mp\m2 C:\mp\c2 N:	49.32GB 27.84GB 870.12GB (NTFS)	Customer and Stock Miscellaneous Files Backup files
3	28 - 36.4GB	C:\mp\m3 C:\mp\c3 disk20:	49.32GB 27.84GB 870.12GB (NTFS)	Customer and Stock Miscellaneous Files Backup files
4	28 - 36.4GB	C:\mp\m4 C:\mp\c4 disk21:	49.32GB 27.84GB 870.12GB (NTFS)	Customer and Stock Miscellaneous Files Backup files
5	14 - 36.4GB	C:\mp\m5 C:\mp\c5 disk22:	24.42GB 13.67GB 436.06 (NTFS)	Customer and Stock Miscellaneous Files Backup files
6	28 - 36.4GB	C:\mp\m6 C:\mp\c6 O:	49.32GB 27.84GB 870.12GB (NTFS)	Customer and Stock Miscellaneous Files Backup files
7	28 - 36.4GB	C:\mp\m7 C:\mp\c7 P:	49.32GB 27.84GB 870.12GB (NTFS)	Customer and Stock Miscellaneous Files Backup files
8	28 - 36.4GB	C:\mp\m8 C:\mp\c8 Q:	49.32GB 27.84GB 870.12GB (NTFS)	Customer and Stock Miscellaneous Files Backup files
9	28 - 36.4GB	C:\mp\m9 C:\mp\c9 R:	49.32GB 27.84GB 870.12GB (NTFS)	Customer and Stock Miscellaneous Files Backup files
10	28 - 36.4GB	C:\mp\m10 C:\mp\c10 S:	49.32GB 27.84GB 870.12GB (NTFS)	Customer and Stock Miscellaneous Files Backup files
11	28 - 36.4GB	C:\mp\m11 C:\mp\c11 T:	49.32GB 27.84GB 870.12GB (NTFS)	Customer and Stock Miscellaneous Files Backup files
12	28 - 36.4GB	C:\mp\m12 C:\mp\c12 U:	49.32GB 27.84GB 870.12GB (NTFS)	Customer and Stock Miscellaneous Files Backup files
13	28 - 36.4GB	C:\mp\m13 C:\mp\c13 V:	49.32GB 27.84GB 870.12GB (NTFS)	Customer and Stock Miscellaneous Files Backup files
14	28 - 36.4GB	C:\mp\m18 C:\mp\c18 disk15:	49.32GB 27.84GB 870.12GB (NTFS)	Customer and Stock Miscellaneous Files Backup files
15	28 - 36.4GB	C:\mp\m19 C:\mp\c19 disk16:	49.32GB 27.84GB 870.12GB (NTFS)	Customer and Stock Miscellaneous Files Backup files
16	14 - 36.4GB	C:\mp\m20 C:\mp\c20 disk17:	24.42GB 13.67GB 436.06 (NTFS)	Customer and Stock Miscellaneous Files Backup files

17	28 - 36.4GB	C:\mplm21 C:\mp\c21 disk18:	49.32GB 27.84GB 870.12GB (NTFS)	Customer and Stock Miscellaneous Files Backup files
18	28 - 36.4GB	C:\mplm22 C:\mp\c22 disk19:	49.32GB 27.84GB 870.12GB (NTFS)	Customer and Stock Miscellaneous Files Backup files
19	28 - 36.4GB	C:\mplm14 C:\mp\c14 W:	49.32GB 27.84GB 870.12GB (NTFS)	Customer and Stock Miscellaneous Files Backup files
20	28 - 36.4GB	C:\mplm15 C:\mp\c15 disk12:	49.32GB 27.84GB 870.12GB (NTFS)	Customer and Stock Miscellaneous Files Backup files
21	28 - 36.4GB	C:\mplm16 C:\mp\c16 disk13:	49.32GB 27.84GB 870.12GB (NTFS)	Customer and Stock Miscellaneous Files Backup files
22	28 - 36.4GB	C:\mplm17 C:\mp\c17 disk14:	49.32GB 27.84GB 870.12GB (NTFS)	Customer and Stock Miscellaneous Files Backup files
23	1 - 18.2GB	C:	16.94GB (NTFS)	Operating System

## Database Model Implemented

*A statement must be provided that describes:*

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

Microsoft SQL Server 2000 Enterprise Edition is a relational database. The interface used was Microsoft SQL Server stored procedures accessed with Remote Procedure Calls embedded in C code using the Microsoft ODBC interface.

## Partitions/Replications Mapping

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

The database was neither partitioned nor replicated.

## 60-Day Space Requirement

*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).*

See Appendix D for details about how the 60-day space requirements were calculated.

---

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

### Measured tpmC

*Measured tpmC must be reported.*

Measured tpmC: 215,485.89 tpmC

Price per tpmC: \$8.72 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.*

The TPC-C requirements for the average response time and the 90th percentile were met. Table 5-1 provides the response times for each of the transaction types and the menu for the measured system.

**Table 5-1. Response Times in Seconds**

Transaction Type	Average	Maximum	90 %-tile
New-Order	0.39	6.81	0.71
Payment	0.33	6.69	0.65
Delivery	0.10	0.74	0.11
Stock Level	0.85	6.50	1.44
Order Status	0.37	5.94	0.69
Delivery (Deferred)	0.17	5.05	0.32
Menu	0.10	1.05	0.11

### Keying/Think Times

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

Table 5-2 lists the keying/think times for the measured system.

**Table 5-2. Keying/Think Times**

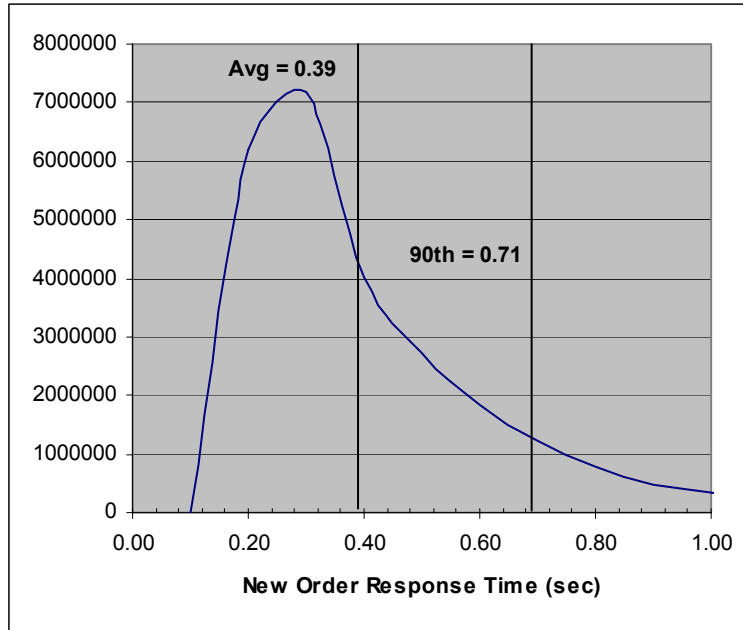
Transaction Type	Average	Minimum	Maximum
New-Order	18.02 / 12.05	18.00 / 0.00	18.04 / 120.51
Payment	3.02 / 12.05	3.00 / 0.00	3.04 / 120.51
Delivery	2.02 / 5.06	2.00 / 0.00	2.04 / 50.51
Stock Level	2.02 / 5.05	2.00 / 0.00	2.04 / 50.51
Order Status	2.02 / 10.04	2.00 / 0.00	2.04 / 100.51



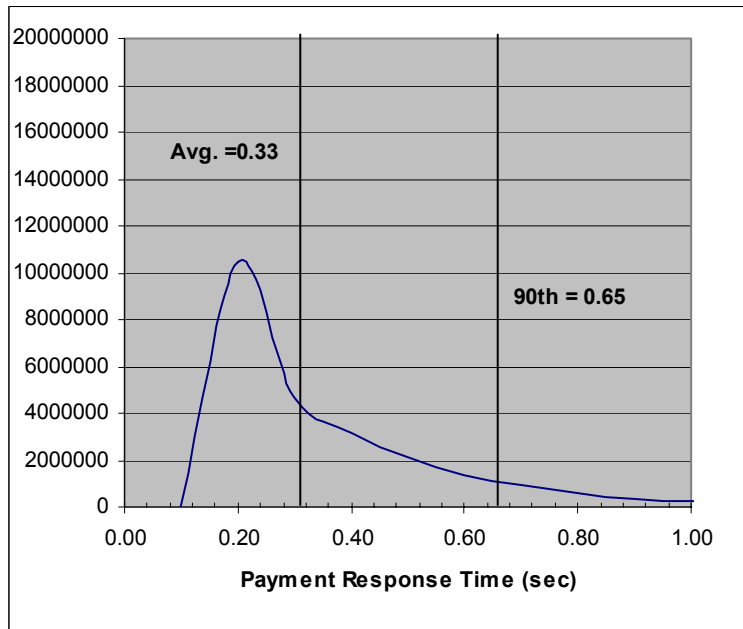
## Response Time Frequency Distribution Curves

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

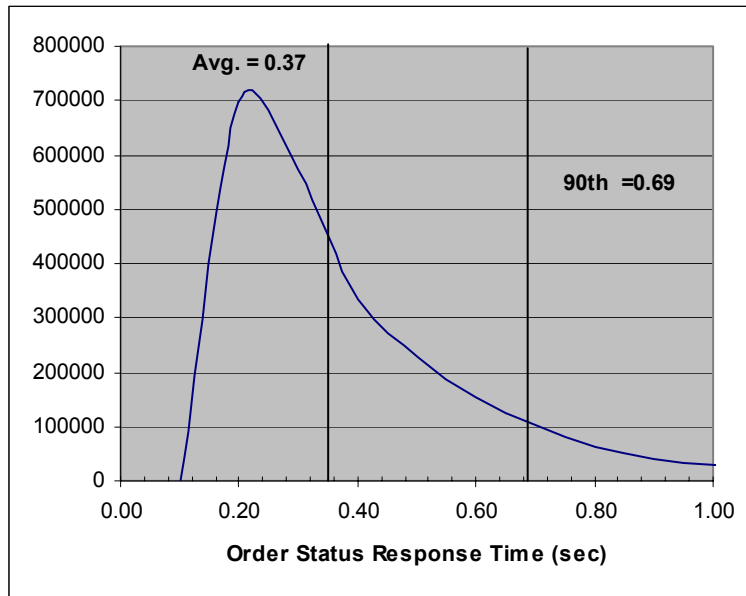
**Figure 5-1. New-Order Transaction - Response Time Frequency Distribution**



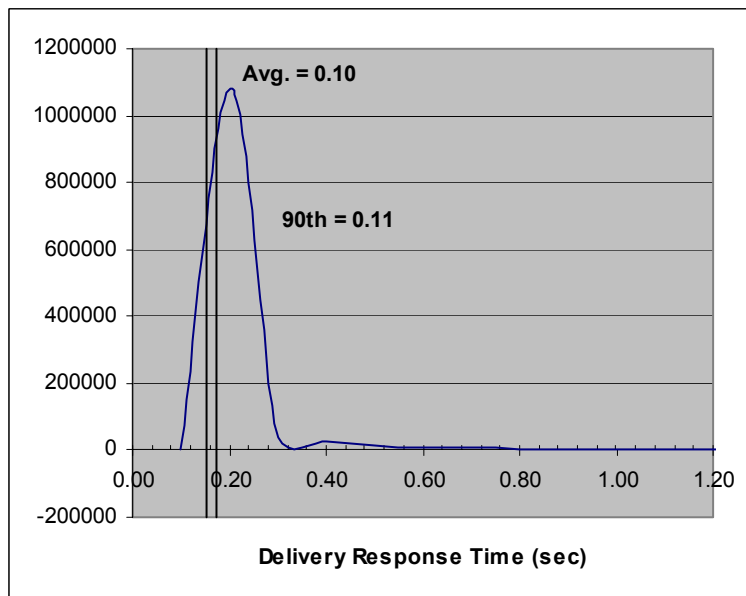
**Figure 5-2. Payment Transaction - Response Time Frequency Distribution**



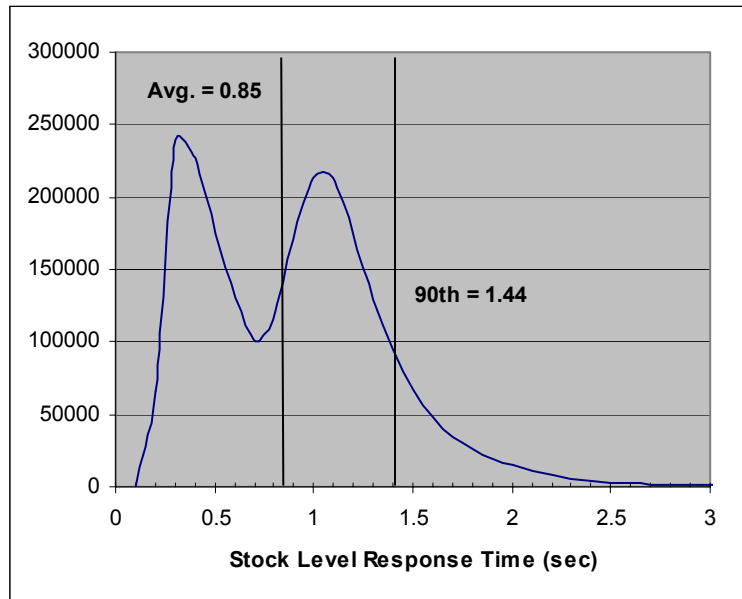
**Figure 5-3. Order-Status Transaction - Response Time Frequency Distribution**



**Figure 5-4. Delivery Transaction - Response Time Frequency Distribution**



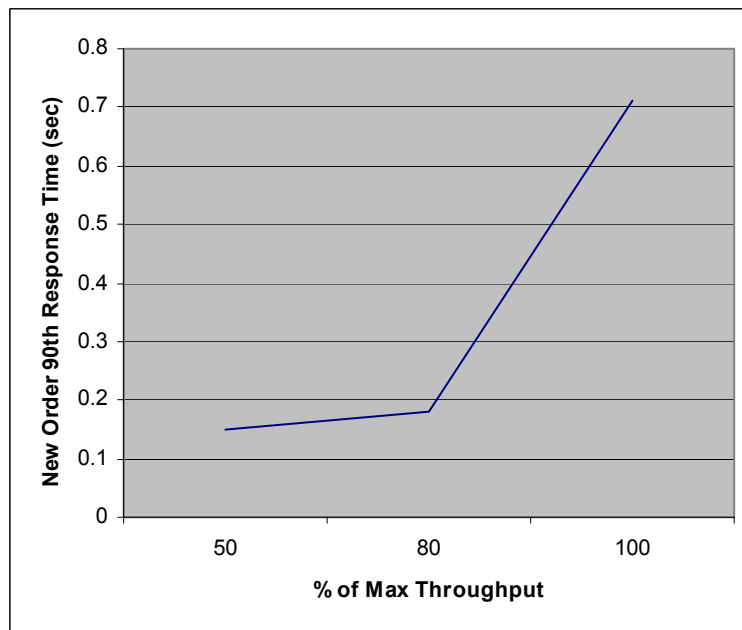
**Figure 5-5. Stock-Level Transaction - Response Time Frequency Distribution**



### Performance Curve for Response Time vs. Throughput

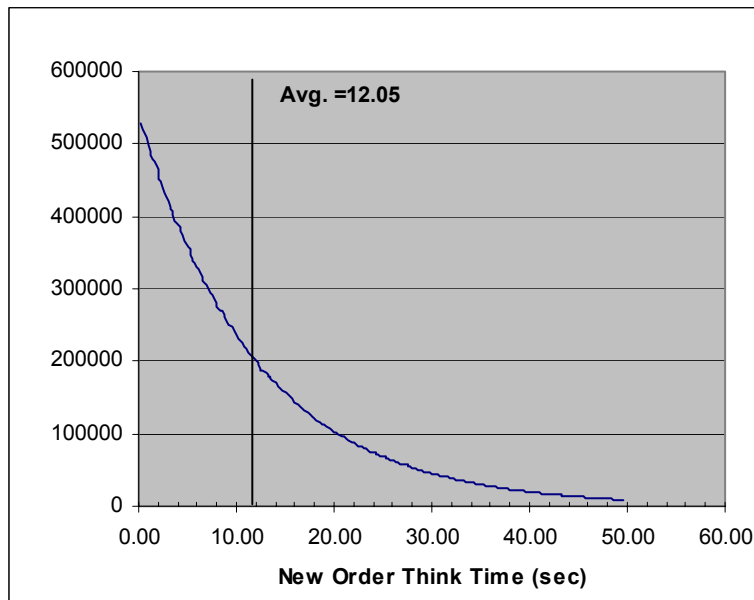
*The performance curve for response time vs. throughput (see Clause 5.6.2) must be reported for the New-Order transaction.*

**Figure 5-6. New-Order Response Time vs. Throughput**



## New Order Think Time Distribution

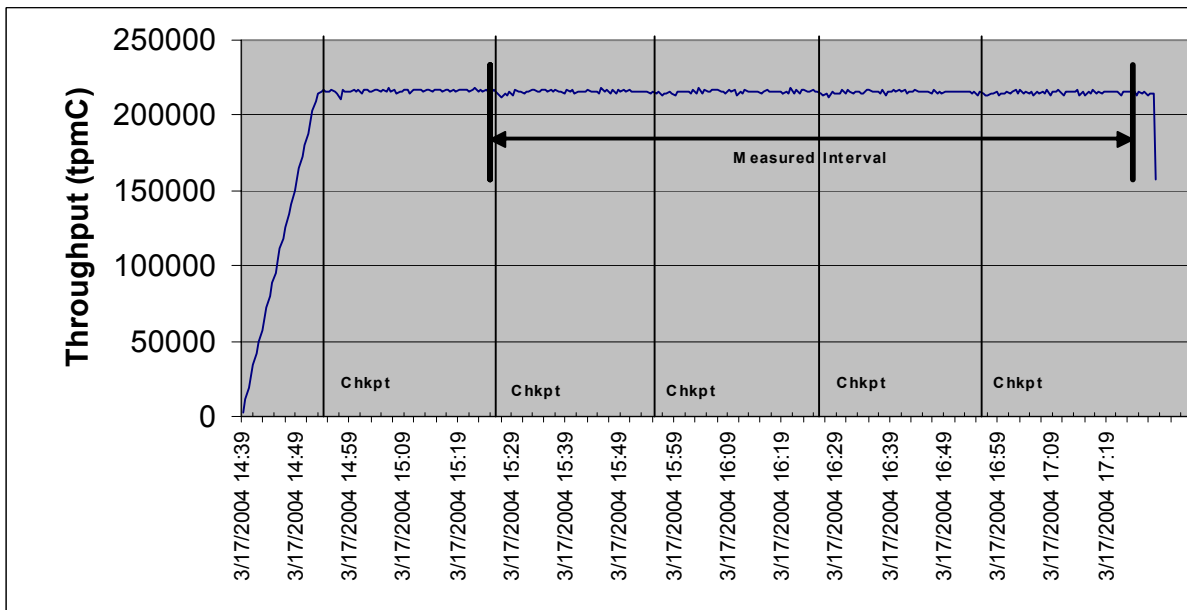
Figure 5-7. New-Order Think Time Distribution



## Throughput vs. Elapsed Time

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

Figure 5-8. New-Order Throughput vs. Elapsed Time



## 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.*

Figure 5-8 shows that the system was in steady state at the beginning of the measurement interval.

## Work Performed during Steady State

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

### Transaction Flow

The RTE generated the required input data to choose a transaction from the menu. This data was time-stamped. The response for the requested transaction was verified and time-stamped in the RTE log files.

The RTE generated the required input data for the chosen transaction. It waited to complete the minimum required key time before transmitting the input screen. The transmission was time-stamped. The return of the screen with the required response data was time-stamped. The difference between these two time-stamps was the response time for that transaction and was logged in the RTE log. The RTE then waited the required think time interval before repeating the process starting at selecting another transaction from the menu.

The RTE transmissions were sent to application processes running on the client machines through Ethernet LANs. These client application processes handled all screen I/O as well as all requests to the database on the server. The applications communicated with the database server over a 2Gb/s Fibre Channel network using Microsoft SQL Server ODBC library and RPC calls.

## Checkpoints

Checkpoints were executed on the server during the ramp-up phase and at 30-minute intervals. The measured run contained four checkpoints. SQL Server was started with trace flag 3502, which caused it to log the occurrence of the checkpoint. This information was used to verify that the checkpoints occurred at the appropriate times during the test run.

During a checkpoint, SQL Server flushes all dirty pages from its cache to disk. It places a record in the database transaction log indicating that the checkpoint has completed and that all transactions, which were committed prior to the checkpoint have been written to disk.

## Measurement Interval

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

The measurement interval was 120 minutes.

## Transaction Mix

*The method of regulation of the transaction mix (e.g., card decks or weighted random distribution) must be described. If weighted distribution is used and the RTE adjusts the weights associated with each transaction type, the maximum adjustments to the weight from the initial value must be disclosed. (8.1.6.13)*

See Table 5-3.

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

## Percentage of Total Mix

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

See Table 5-3.

**Table 5-3. Transaction Statistics and Transaction Mix**

<b>New Order</b>	<b>Value (%)</b>
Home warehouse order lines	99.00
Remote warehouse order lines	1.00
Rolled back transactions	1.00
Average number of items per order	10.00
<b>Payment</b>	
Home warehouse payment transactions	0.85
Remote warehouse payment transactions	0.15
<b>Non-Primary Key Access</b>	
Payment transactions using C_LAST	60.00
Order-Status transactions using C_LAST	60.08
<b>Delivery</b>	
Delivery transactions skipped	0
<b>Transaction Mix</b>	
New-Order	44.94
Payment	43.03
Delivery	4.01
Stock Level	4.01
Order-Status	4.01

## Number of Checkpoints

*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.*

Checkpoints were performed during the ramp-up period and during each measured run interval. The first measurement interval checkpoint started 59 seconds after the start of the measurement interval. The four checkpoints in the measured interval are shown in Table 5-4.

**Table 5-4. Checkpoint Start Time and Duration**

<b>Checkpoint</b>	<b>Start Time</b>	<b>Duration</b>
1	15:26:28 p.m.	28 minutes
2	15:56:26 p.m.	28 minutes
3	16:26:23 p.m.	28 minutes
4	16:56:20 p.m.	28 minutes

The checkpoint interval was 30 minutes.

---

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

### Description of RTE

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

The RTE used was Microsoft BenchCraft RTE. Benchcraft is a proprietary tool provided by Microsoft and is not commercially available. The RTE input is listed in Appendix C.

### 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.*

No components were emulated.

### Benchmarked and Targeted System Configuration Diagrams

*A complete functional diagram of both the benchmarked 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).*

The driver RTE generated the transaction input data and transmitted it to the client in HTML format. The driver RTE received the output from the System under Test, time-stamped it, and forwarded it to the Master RTE for post-test processing. No other functionality was included on the driver RTE.

Detailed diagrams of the benchmarked and priced configurations are provided in the section called “General Items” at the beginning of this document.

### 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 with the Driver System must be disclosed (see Clause 6.6.4).*

See the measured and priced configuration diagrams for details about the network configuration.

### Network Bandwidth

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

The Ethernet used in the LAN connecting the clients and driver RTEs complies with the IEEE.802.3 standard. The Ethernet LAN had a bandwidth of 10Mbps. The LAN that connected the clients to the server was a Fibre Channel network whose bandwidth was 2Gb/s.

### Operator Intervention

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

The configuration did not require any operator intervention to sustain the reported throughput.



---

## Clause 7: Pricing Related Items

### Hardware and Software Components

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

*Pricing source(s) and effective date(s) must also be reported.*

*The total 3-year price of the entire configuration must be reported, including: hardware, software, and maintenance charges. Separate component pricing is recommended. The basis of all discounts used must be disclosed.*

A detailed list of all hardware and software, including the 3-year price, is provided in the Executive Summary at the front of this report. All third-party quotations are included in Appendix E at the end of this document.

### 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 for the priced system must be the date at which all components are committed to be available.*

The total system as priced will be available August 31, 2004.

### Measured tpmC

*A statement of the measured tpmC, as well as the respective calculations for the 3-year pricing, price/performance (price/tpmC) and the availability date must be included.*

- Maximum Qualified Throughput: 215,485.89 tpmC
- Price per tpmC: \$8.72 per tpmC
- Three-year cost of ownership: \$1,879,684

### 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.*

The configuration is priced for the United States of America.

### Usage Pricing

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

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

The component pricing based on usage is shown below:

- Microsoft Windows Server 2003 Datacenter Edition (1-16 processors)
- 16 Microsoft SQL Server 2000 Enterprise Edition (based on per-processor price)
- 8 Microsoft Windows 2000 Server

- 3-year support for hardware components (except for components for which 10 percent spares are provided)

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

A detailed list of all hardware and software, including the 3-year price, is provided in the Executive Summary at the front of this report. All third-party quotations are included in Appendix E at the end of this document.

---

## **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.*

This implementation of the TPC-C benchmark was audited by Francois Raab of InfoSizing, Inc. The auditor's attestation letter is provided in this section.

### **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<sup>TM</sup>C," the Full Disclosure Report must have been submitted to the TPC Administrator as well as written permission obtained to distribute same.*

The TPC Benchmark C Full Disclosure Report can be obtained from [www.tpc.org](http://www.tpc.org).

Benchmark Sponsor: Kamran Amini  
 Manager, xSeries Performance  
 IBM Systems and Technology Group  
 3039 Cornwallis Road  
 Research Triangle Park, NC 27709

March 25, 2004

I verified the TPC Benchmark™ C performance for the following Client/Server configuration:

Platform: **IBM @server xSeries 445 c/s**  
 Operating system: **Microsoft Windows Server 2003 Datacenter Edition w/QFE KB834628**  
 Database Manager: **Microsoft SQL Server 2000 Enterprise Edition SP3 w/QFE**  
 Transaction Manager: **Microsoft COM+**

The results were:

CPU's Speed	Memory	Disks	NewOrder 90% Response Time	tpmC
<b>Server: two (2) IBM @server xSeries 445 (Specification for each)</b>				
8 x Xeon MP (3.0GHz)	32 GB Main (4 MB L3 Cache per processor)	616 x 36.4 GB ext. 1 x 36.4 GB int.	0.71 Seconds	<b>215,485.89</b>
<b>Clients: eight (8) IBM @server xSeries 225 (Specification for each)</b>				
2 x Xeon DP (3.06 GHz)	1.5 GB Main (512 KB L2 Cache per processor)	1 x 36.4 GB	n/a	n/a

In my opinion, these performance results were produced in compliance with the TPC's requirements for the benchmark.

The following verification items were given special attention:

- The database records were the proper size
- The database was properly scaled and populated
- The required ACID properties were met
- The transactions were correctly implemented
- Input data was generated according to the specified percentages
- The transaction cycle times included the required keying and think times
- The reported response times were correctly measured.
- All 90% response times were under the specified maximums
- At least 90% of all delivery transactions met the 80 Second completion time limit
- The reported measurement interval was 120 minutes (7200 seconds)
- The reported measurement interval was representative of steady state conditions
- Four checkpoints were taken during the reported measurement interval
- The 60 day storage requirement was correctly computed
- The system pricing was verified for major components and maintenance

Additional Audit Notes:

None.

Respectfully Yours,

A handwritten signature in black ink, appearing to read "François Raab", with a long horizontal flourish extending to the right.

François Raab, President

# Appendix A: Source Code

## Web Client Source Code

### db\_odbc\_dll.dsp

```
# Microsoft Developer Studio Project File - Name="db_odbc_dll" - Package
Owner=<4>
# Microsoft Developer Studio Generated Build File, Format Version 6.00
# ** DO NOT EDIT **
```

```
# TARGTYPE "Win32 (x86) Dynamic-Link Library" 0x0102
```

```
CFG=db_odbc_dll - Win32 IceCAP
!MESSAGE This is not a valid makefile. To build this project using NMAKE,
!MESSAGE use the Export Makefile command and run
!MESSAGE
!MESSAGE NMAKE /f "db_odbc_dll.mak".
!MESSAGE
!MESSAGE You can specify a configuration when running NMAKE
!MESSAGE by defining the macro CFG on the command line. For example:
!MESSAGE
!MESSAGE NMAKE /f "db_odbc_dll.mak" CFG="db_odbc_dll - Win32
IceCAP"
!MESSAGE
!MESSAGE Possible choices for configuration are:
!MESSAGE
!MESSAGE "db_odbc_dll - Win32 Release" (based on "Win32 (x86)
Dynamic-Link Library")
!MESSAGE "db_odbc_dll - Win32 Debug" (based on "Win32 (x86)
Dynamic-Link Library")
!MESSAGE "db_odbc_dll - Win32 IceCAP" (based on "Win32 (x86)
Dynamic-Link Library")
!MESSAGE
```

```
# Begin Project
# PROP AllowPerConfigDependencies 0
# PROP Scc_ProjName ""
# PROP Scc_LocalPath ""
CPP=cl.exe
MTL=midl.exe
RSC=rc.exe
```

```
!IF "$(CFG)" == "db_odbc_dll - Win32 Release"
```

```
# PROP BASE Use_MFC 0
# PROP BASE Use_Debug_Libraries 0
# PROP BASE Output_Dir "Release"
# PROP BASE Intermediate_Dir "Release"
# PROP BASE Target_Dir ""
# PROP Use_MFC 0
# PROP Use_Debug_Libraries 0
# PROP Output_Dir ".\bin"
# PROP Intermediate_Dir ".\obj"
# PROP Ignore_Export_Lib 0
# PROP Target_Dir ""
# ADD BASE CPP /nologo /MT /W3 /GX /O2 /D "WIN32" /D "NDEBUG" /D
"_WINDOWS" /YX /FD /c
# ADD CPP /nologo /MD /W3 /GX /O2 /D "WIN32" /D "NDEBUG" /D
"_WINDOWS" /YX /FD /c
# ADD BASE MTL /nologo /D "NDEBUG" /mktyplib203 /o /win32 "NUL"
# ADD MTL /nologo /D "NDEBUG" /mktyplib203 /o /win32 "NUL"
# ADD BASE RSC /I 0x409 /d "NDEBUG"
# ADD RSC /I 0x409 /d "NDEBUG"
BSC32=bscmake.exe
```

```
# ADD BASE BSC32 /nologo
# ADD BSC32 /nologo
LINK32=link.exe
# ADD BASE LINK32 kernel32.lib user32.lib gdi32.lib winspool.lib
comdlg32.lib advapi32.lib shell32.lib ole32.lib oleaut32.lib uuid.lib odbccp32.lib
odbccp32.lib /nologo /subsystem:windows /dll /machine:I386
# ADD LINK32 kernel32.lib user32.lib gdi32.lib winspool.lib comdlg32.lib
advapi32.lib shell32.lib ole32.lib oleaut32.lib uuid.lib odbccp32.lib
/nologo /subsystem:windows /dll /machine:I386 /out:".bin\tpcc_odbc.dll"
```

```
!ELSEIF "$(CFG)" == "db_odbc_dll - Win32 Debug"
```

```
# PROP BASE Use_MFC 0
# PROP BASE Use_Debug_Libraries 1
# PROP BASE Output_Dir "Debug"
# PROP BASE Intermediate_Dir "Debug"
# PROP BASE Target_Dir ""
# PROP Use_MFC 0
# PROP Use_Debug_Libraries 1
# PROP Output_Dir ".\bin"
# PROP Intermediate_Dir ".\obj"
# PROP Ignore_Export_Lib 0
# PROP Target_Dir ""
# ADD BASE CPP /nologo /MTd /W3 /Gm /GX /Zi /Od /D "WIN32" /D
"_DEBUG" /D "_WINDOWS" /YX /FD /c
# ADD CPP /nologo /MDd /W3 /GX /Zi /Od /D "WIN32" /D "_DEBUG" /D
"_WINDOWS" /YX /FD /c
# ADD BASE MTL /nologo /D "_DEBUG" /mktyplib203 /o /win32 "NUL"
# ADD MTL /nologo /D "_DEBUG" /mktyplib203 /o /win32 "NUL"
# ADD BASE RSC /I 0x409 /d "_DEBUG"
# ADD RSC /I 0x409 /d "_DEBUG"
BSC32=bscmake.exe
# ADD BASE BSC32 /nologo
# ADD BSC32 /nologo
LINK32=link.exe
# ADD BASE LINK32 kernel32.lib user32.lib gdi32.lib winspool.lib
comdlg32.lib advapi32.lib shell32.lib ole32.lib oleaut32.lib uuid.lib odbccp32.lib
odbccp32.lib /nologo /subsystem:windows /dll /debug /machine:I386
/pdbtype:sept
# ADD LINK32 kernel32.lib user32.lib gdi32.lib winspool.lib comdlg32.lib
advapi32.lib shell32.lib ole32.lib oleaut32.lib uuid.lib odbccp32.lib
/nologo /subsystem:windows /dll /debug /machine:I386
/out:".bin\tpcc_odbc.dll" /pdbtype:sept
```

```
!ELSEIF "$(CFG)" == "db_odbc_dll - Win32 IceCAP"
```

```
# PROP BASE Use_MFC 0
# PROP BASE Use_Debug_Libraries 1
# PROP BASE Output_Dir "db_odbc_"
# PROP BASE Intermediate_Dir "db_odbc_"
# PROP BASE Ignore_Export_Lib 0
# PROP BASE Target_Dir ""
# PROP Use_MFC 0
# PROP Use_Debug_Libraries 1
# PROP Output_Dir ".\bin"
# PROP Intermediate_Dir ".\obj"
# PROP Ignore_Export_Lib 0
# PROP Target_Dir ""
# ADD BASE CPP /nologo /MDd /W3 /Gm /GX /Zi /Od /D "WIN32" /D
"_DEBUG" /D "_WINDOWS" /YX /FD /Gh /c
# ADD CPP /nologo /MD /W3 /Gm /GX /Zi /O2 /D "WIN32" /D "NDEBUG"
/D "_WINDOWS" /D "ICECAP" /YX /FD /Gh /c
# ADD BASE MTL /nologo /D "_DEBUG" /mktyplib203 /o /win32 "NUL"
# ADD MTL /nologo /D "_DEBUG" /mktyplib203 /o /win32 "NUL"
# ADD BASE RSC /I 0x409 /d "_DEBUG"
# ADD RSC /I 0x409 /d "_DEBUG"
BSC32=bscmake.exe
# ADD BASE BSC32 /nologo
```

```

# ADD BSC32 /nologo
LINK32=link.exe
# ADD BASE LINK32 kernel32.lib user32.lib gdi32.lib winspool.lib
comdlg32.lib advapi32.lib shell32.lib ole32.lib oleaut32.lib uuid.lib odbcc32.lib
odbccp32.lib /nologo /subsystem:windows /dll /debug /machine:I386
/out:".bin\tpcc_odbc.dll" /pdbtype:sept
# ADD LINK32 icap.lib kernel32.lib user32.lib gdi32.lib winspool.lib
comdlg32.lib advapi32.lib shell32.lib ole32.lib oleaut32.lib uuid.lib odbcc32.lib
odbccp32.lib /nologo /subsystem:windows /dll /debug /machine:I386
/out:".bin\tpcc_odbc.dll" /pdbtype:sept

!ENDIF

# Begin Target

# Name "db_odbc_dll - Win32 Release"
# Name "db_odbc_dll - Win32 Debug"
# Name "db_odbc_dll - Win32 IceCAP"
# Begin Group "Source"

# PROP Default_Filter "*.cpp"
# Begin Source File

SOURCE=.src\tpcc_odbc.cpp
# End Source File
# End Group
# Begin Group "Header"

# PROP Default_Filter "*.h"
# Begin Source File

SOURCE=..\common\src\error.h
# End Source File
# Begin Source File

SOURCE=.src\tpcc_odbc.h
# End Source File
# Begin Source File

SOURCE=..\common\src\trans.h
# End Source File
# Begin Source File

SOURCE=..\common\src\txn_base.h
# End Source File
# End Group
# End Target
# End Project

```

## 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 */

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

#ifdef _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;
//error id of message
char szMsg[256]; //message to
sent to browser
} SERRORMSG;

typedef enum _ErrorLevel
{
ERR_FATAL_LEVEL = 1,
ERR_WARNING_LEVEL = 2,
ERR_INFORMATION_LEVEL = 3
} 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
// 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_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:
    CBaseErr(LPCTSTR szLoc = NULL)
    {
        m_idMsg = INV_ERROR_CODE;

        if (szLoc)
        {
            m_szLoc = new char[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[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 = wsprintf(szTmp, "%s\n", szStr);
    if (ErrorNum() != INV_ERROR_CODE)
        j += wsprintf(szTmp+j, "Error = %d\n",
ErrorNum());
    if (m_szLoc)
        j += wsprintf(szTmp+j, "Location = %s\n",
GetLocation());

    j += wsprintf(szTmp+j, "%s\n", ErrorText());

    ::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 *ErrorText() = 0; // a string (i.e., human readable)
representation of 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,
        eWSASendImage,
        eWSAGetOverlappedResult,
        eWSARecv,
        eWSARecvImage,
        eWSAWaitForMultipleEvents,
        eWSAStartup,
        eWSAResetEvent,
        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 *ErrorText(void);
};

```

```

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,
        eFSeek,
        eFRead,
        eFWrite,
        eTmpFile,
        eSetFilePointer,
        eNew,
    };

    CSystemErr(Action eAction, LPCTSTR
szLocation);

    CSystemErr(int iError, Action eAction,
LPCTSTR szLocation);

    int      ErrorType() { return ERR_TYPE_OS;};
    char      *ErrorText(void);
    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 *ErrorText() {return ERR_INS_MEMORY;}
};

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

    int ErrorType() {return ERR_BUF_OVERFLOW;}

    char *ErrorText() {return ERR_INS_BUF_OVERFLOW;}
};

```

## install.c

```

/*      FILE:          INSTALL.C
 *
 *      Microsoft TPC-C Kit Ver.
 *
 *      4.20.000
 *
 *      Copyright Microsoft, 1999
 *
 *      All Rights Reserved
 *
 *
 *
 *      not audited
 *
 *      PURPOSE:      Automated installation application for TPC-C
 *
 *      Web Kit
 *      Contact:      Charles Levine (clevine@microsoft.com)
 *
 *      * Change history:
 *      *      4.20.000 - added COM installation steps
 */

```

```

#include <windows.h>
#include <direct.h>
#include <io.h>
#include <stdlib.h>
#include <stdio.h>
#include <commctrl.h>
#include "..\..\common\src\ReadRegistry.h"

#include "resource.h"

#define WM_INITTEXT WM_USER+100

HICON hIcon;
HINSTANCE hInst;

DWORD versionExeMS;
DWORD versionExeLS;
DWORD versionExeMM;
DWORD versionDllMS;
DWORD versionDllLS;

// TPC-C registry settings
TPCCREGISTRYDATA Reg;

static int iPoolThreadLimit;
static int iThreadTimeout;
static int iListenBackLog;

```

```

static int iAcceptExOutstanding;

static int iMaxPhysicalMemory;
//max physical memory in MB
static char szLastFileName[64]; // last file we worked
on (for error reporting)

BOOL CALLBACK LicenseDlgProc(HWND hwnd, UINT uMsg,
WPARAM wParam, LPARAM lParam);
BOOL CALLBACK UpdatedDlgProc(HWND hwnd, UINT uMsg,
WPARAM wParam, LPARAM lParam);
BOOL CALLBACK MainDlgProc(HWND hwnd, UINT uMsg,
WPARAM wParam, LPARAM lParam);
BOOL CALLBACK CopyDlgProc(HWND hwnd, UINT uMsg,
WPARAM wParam, LPARAM lParam);
static void ProcessOK(HWND hwnd, char *szDllPath);
static void ReadRegistrySettings(void);
static void WriteRegistrySettings(char *szDllPath);
static BOOL RegisterDLL(char *szFileName);
static int CopyFiles(HWND hDlg, char
*szDllPath);
static BOOL GetInstallPath(char *szDllPath);
static void GetVersionInfo(char *szDllPath, char
*szExePath);
static BOOL CheckWWWService(void);
static BOOL StartWWWService(void);
static BOOL StopWWWService(void);
static void UpdateDialog(HWND hDlg);

BOOL install_com(char *szDllPath);

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

int WINAPI WinMain( HINSTANCE hInstance, HINSTANCE hPrevInstance,
LPSTR lpCmdLine, int nCmdShow )
{
    int iRc;

    hInst = hInstance;

    InitCommonControls();

    hIcon = LoadIcon(hInstance,
MAKEINTRESOURCE(IDI_ICON1));

    iRc = DialogBox(hInstance,
MAKEINTRESOURCE(IDD_DIALOG4), GetDesktopWindow(),
LicenseDlgProc);
    if ( iRc )
    {
        iRc = DialogBox(hInstance,
MAKEINTRESOURCE(IDD_DIALOG1), GetDesktopWindow(),
MainDlgProc);
        if ( iRc )
        {
            DialogBoxParam(hInstance,
MAKEINTRESOURCE(IDD_DIALOG2), GetDesktopWindow(),
UpdatedDlgProc, (LPARAM)iRc);
        }
    }

    DestroyIcon(hIcon);
    return 0;
}

BOOL CALLBACK LicenseDlgProc(HWND hwnd, UINT uMsg, WPARAM
wParam, LPARAM lParam)

```

```

{
    HGLOBAL          hRes;
    HRSRC            hResInfo;
    BYTE             *pSrc, *pDst;
    DWORD            dwSize;
    static HFONT     hFont;

    switch(uMsg)
    {
        case WM_INITDIALOG:
            hFont = CreateFont(-12, 0, 0, 0, 400, 0, 0, 0,
0, 0, 0, 0, "Arial");
            SendMessage( GetDlgItem(hwnd,
IDR_LICENSE1), WM_SETFONT, (LPARAM)hFont, MAKELPARAM(0, 0)
);
            PostMessage(hwnd, WM_INITTEXT,
(WPARAM)0, (LPARAM)0);
            return TRUE;
        case WM_INITTEXT:
            hResInfo = FindResource(hInst,
MAKEINTRESOURCE(IDR_LICENSE1), "LICENSE");
            dwSize = SizeofResource(hInst, hResInfo);
            hRes = LoadResource(hInst, hResInfo);
            pSrc = (BYTE *)LockResource(hRes);
            pDst = (unsigned char *)malloc(dwSize+1);
            if ( pDst )
            {
                memcpy(pDst, pSrc, dwSize);
                pDst[dwSize] = 0;
                SetDlgItemText(hwnd,
IDC_LICENSE, (const char *)pDst);
            }
            else
                SetDlgItemText(hwnd,
IDC_LICENSE, (const char *)pSrc);
            return TRUE;
        case WM_DESTROY:
            DeleteObject(hFont);
            return TRUE;
        case WM_COMMAND:
            if ( wParam == IDOK )
                EndDialog(hwnd, TRUE);
            if ( wParam == IDCANCEL )
                EndDialog(hwnd, FALSE);
        default:
            break;
    }
    return FALSE;
}

BOOL CALLBACK UpdatedDlgProc(HWND hwnd, UINT uMsg, WPARAM
wParam, LPARAM lParam)
{
    switch(uMsg)
    {
        case WM_INITDIALOG:
            switch(lParam)
            {
                case 1:
                case 2:
                    SetDlgItemText(hwnd,
IDC_RESULTS, "TPC-C Web Client Installed");
                    break;
            }
            return TRUE;
        case WM_COMMAND:
            if ( wParam == IDOK )
                EndDialog(hwnd, TRUE);
            default:
                break;
    }
    return FALSE;
}

}

PAINTSTRUCT ps;
MEMORYSTATUS memoryStatus;
OSVERSIONINFO VI;
char szTmp[256];
static char szDllPath[256];
static char szExePath[256];

switch(uMsg)
{
    case WM_INITDIALOG:
        GlobalMemoryStatus(&memoryStatus);
        iMaxPhysicalMemory=
(memoryStatus.dwTotalPhys/ 1048576);

        if ( GetInstallPath(szDllPath) )
        {
            MessageBox(hwnd, "Error internet
service inetsrv is not installed.", NULL, MB_ICONSTOP | MB_OK);
            EndDialog(hwnd, FALSE);
            return TRUE;
        }

        // set default values
        ZeroMemory( &Reg, sizeof(Reg) );
        Reg.dwNumberOfDeliveryThreads = 4;
        Reg.dwMaxConnections = 100;
        Reg.dwMaxPendingDeliveries = 100;
        Reg.eDB_Protocol = DBLIB;
        Reg.eTxnMon = None;
        strcpy(Reg.szDbServer,
"" );
        strcpy(Reg.szDbName,
"tpcc");
        strcpy(Reg.szDbUser,
"sa");
        strcpy(Reg.szDbPassword,
"" );

        iPoolThreadLimit = iMaxPhysicalMemory *
2;

        iThreadTimeout = 86400;
        iListenBackLog = 15;
        iAcceptExOutstanding = 40;

        ReadTPCCRegistrySettings( &Reg );
        ReadRegistrySettings();

        GetModuleFileName(hInst, szExePath,
sizeof(szExePath));
        GetVersionInfo(szDllPath, szExePath);

        wsprintf(szTmp, "Version %d.%2.2d.%3.3d",
versionExeMS, versionExeMM, versionExeLS);
        SetDlgItemText(hwnd, IDC_VERSION,
szTmp);

        SetDlgItemText(hwnd, IDC_PATH,
szDllPath);
}
}

```

```

Reg.szDbServer);
SetDlgItemText(hwnd, ED_DB_SERVER,
Reg.szDbUser);
SetDlgItemText(hwnd, ED_DB_USER_ID,
ED_DB_PASSWORD, Reg.szDbPassword);
SetDlgItemText(hwnd, ED_DB_NAME,
Reg.szDbName);
SetDlgItemInt(hwnd, ED_THREADS,
Reg.dwNumberOfDeliveryThreads, FALSE);
SetDlgItemInt(hwnd,
ED_MAXCONNECTION, Reg.dwMaxConnections, FALSE);
SetDlgItemInt(hwnd,
ED_MAXDELIVERIES, Reg.dwMaxPendingDeliveries, FALSE);
SetDlgItemInt(hwnd,
ED_IIS_MAX_THREAD_POOL_LIMIT, iPoolThreadLimit, FALSE);
SetDlgItemInt(hwnd,
ED_IIS_THREAD_TIMEOUT, iThreadTimeout, FALSE);
SetDlgItemInt(hwnd,
ED_IIS_LISTEN_BACKLOG, iListenBackLog, FALSE);
SetDlgItemInt(hwnd,
ED_WEB_SERVICE_BACKLOG_QUEUE_SIZE, iAcceptExOutstanding,
FALSE);

CheckDlgButton(hwnd, IDC_DBLIB, 0);
CheckDlgButton(hwnd, IDC_ODBC, 0);
if ( Reg.eDB_Protocol == DBLIB )
    CheckDlgButton(hwnd,
IDC_DBLIB, 1);
else
    CheckDlgButton(hwnd,
IDC_ODBC, 1);

// check OS version level for COM. Must be
at least Windows 2000
VI.dwOSVersionInfoSize = sizeof(VI);
GetVersionEx( &VI );
if (VI.dwMajorVersion < 5)
{
    HWND hDlg = GetDlgItem(
hwnd, IDC_TM_MTS );
    EnableWindow( hDlg, 0 ); //
disable COM option
    if (Reg.eTxnMon == COM)
        Reg.eTxnMon = None;
}

CheckDlgButton(hwnd, IDC_TM_NONE,
0);
CheckDlgButton(hwnd, IDC_TM_TUXEDO,
0);
CheckDlgButton(hwnd, IDC_TM_MTS, 0);
CheckDlgButton(hwnd, IDC_TM_ENCINA,
0);

switch (Reg.eTxnMon)
{
case None:
    CheckDlgButton(hwnd,
IDC_TM_NONE, 1);
    break;
case TUXEDO:
    CheckDlgButton(hwnd,
IDC_TM_TUXEDO, 1);
    break;
case ENCINA:
    CheckDlgButton(hwnd,
IDC_TM_ENCINA, 1);
}

break;
case COM:
    CheckDlgButton(hwnd,
IDC_TM_MTS, 1);
    break;
}

return TRUE;
case WM_PAINT:
    if ( IsIconic(hwnd) )
    {
        BeginPaint(hwnd, &ps);
        DrawIcon(ps.hdc, 0, 0, hIcon);
        EndPaint(hwnd, &ps);
        return TRUE;
    }
    break;
case WM_COMMAND:
    if ( HIWORD(wParam) == BN_CLICKED )
    {
        switch( LOWORD(wParam) )
        {
            case IDC_DBLIB:
                return
TRUE;
            case IDC_ODBC:
                return
TRUE;
            case IDOK:
                ProcessOK(hwnd, szDllPath);
                return
TRUE;
            case IDCANCEL:
                EndDialog(hwnd, FALSE);
                return
TRUE;
            default:
                return
FALSE;
        }
    }
    break;
}
default:
    break;
}
return FALSE;
}

static void ProcessOK(HWND hwnd, char *szDllPath)
{
    int d;
    HWND hDlg;
    int rc;

    char szFullName[256];
    char szErrMsg[128];

    // read settings from dialog
    Reg.dwNumberOfDeliveryThreads = GetDlgItemInt(hwnd,
ED_THREADS, &d, FALSE);
    Reg.dwMaxConnections = GetDlgItemInt(hwnd,
ED_MAXCONNECTION, &d, FALSE);
    Reg.dwMaxPendingDeliveries = GetDlgItemInt(hwnd,
ED_MAXDELIVERIES, &d, FALSE);

```

```

        GetDlgItemText(hwnd, ED_DB_SERVER, Reg.szDbServer,
sizeof(Reg.szDbServer));
        GetDlgItemText(hwnd, ED_DB_USER_ID, Reg.szDbUser,
sizeof(Reg.szDbUser));
        GetDlgItemText(hwnd, ED_DB_PASSWORD, Reg.szDbPassword,
sizeof(Reg.szDbPassword));
        GetDlgItemText(hwnd, ED_DB_NAME, Reg.szDbName,
sizeof(Reg.szDbName));

        if ( IsDlgButtonChecked(hwnd, IDC_DBLIB) )
        {
                Reg.eDB_Protocol = DBLIB;
                rc = 1;
        }
        else if ( IsDlgButtonChecked(hwnd, IDC_ODBC) )
        {
                Reg.eDB_Protocol = ODBC;
                rc = 2;
        }

        if ( IsDlgButtonChecked(hwnd, IDC_TM_NONE) )
                Reg.eTxnMon = None;
        else if ( IsDlgButtonChecked(hwnd, IDC_TM_TUXEDO) )
                Reg.eTxnMon = TUXEDO;
        else if ( IsDlgButtonChecked(hwnd, IDC_TM_MTS) )
                Reg.eTxnMon = COM;
        else if ( IsDlgButtonChecked(hwnd, IDC_TM_ENCINA) )
                Reg.eTxnMon = ENCINA;

        iPoolThreadLimit = GetDlgItemInt(hwnd,
ED_IIS_MAX_THREAD_POOL_LIMIT, &d, FALSE);
        iThreadTimeout = GetDlgItemInt(hwnd,
ED_IIS_THREAD_TIMEOUT, &d, FALSE);
        iListenBackLog = GetDlgItemInt(hwnd,
ED_IIS_LISTEN_BACKLOG, &d, FALSE);
        iAcceptExOutstanding = GetDlgItemInt(hwnd,
ED_WEB_SERVICE_BACKLOG_QUEUE_SIZE, &d, FALSE);

        ShowWindow(hwnd, SW_HIDE);
        hDlg = CreateDialog(hInst,
MAKEINTRESOURCE(IDD_DIALOG3), hwnd, CopyDlgProc);
        ShowWindow(hDlg, SW_SHOWNA);
        UpdateDialog(hDlg);

        // write binaries to inetpub\wwwroot
        rc = CopyFiles(hDlg, szDllPath);
        if ( !rc )
        {
                ShowWindow(hwnd, SW_SHOWNA);
                DestroyWindow(hDlg);
                strcpy( szErrTxt, "Error(s) ocured when creating " );
                strcat( szErrTxt, szLastFileName );
                MessageBox(hwnd, szErrTxt, NULL, MB_ICONSTOP |
MB_OK);

                EndDialog(hwnd, 0);
                return;
        }

        // update registry
        SetDlgItemText(hDlg, IDC_STATUS, "Updating Registry.");
        SendDlgItemMessage(hDlg, IDC_PROGRESS1, PBM_STEPIT, 0,
0);

        UpdateDialog(hDlg);
        WriteRegistrySettings(szDllPath);

        // register com proxy stub

```

```

        strcpy(szFullName, szDllPath);
        strcat(szFullName, "tpcc_com_ps.dll");
        if (!RegisterDLL(szFullName))
        {
                ShowWindow(hwnd, SW_SHOWNA);
                DestroyWindow(hDlg);
                strcpy( szErrTxt, "Error ocured when registering " );
                strcat( szErrTxt, szFullName );
                MessageBox(hwnd, szErrTxt, NULL, MB_ICONSTOP |
MB_OK);

                EndDialog(hwnd, 0);
                return;
        }

        // if using COM
        if (Reg.eTxnMon == COM)
        {
                SetDlgItemText(hDlg, IDC_STATUS, "Configuring
COM.");
                SendDlgItemMessage(hDlg, IDC_PROGRESS1,
PBM_STEPIT, 0, 0);
                UpdateDialog(hDlg);

                if (install_com(szDllPath))
                {
                        ShowWindow(hwnd, SW_SHOWNA);
                        DestroyWindow(hDlg);
                        strcpy( szErrTxt, "Error ocured when
configuring COM settings." );
                        MessageBox(hwnd, szErrTxt, NULL,
MB_ICONSTOP | MB_OK);

                        EndDialog(hwnd, 0);
                        return;
                }

                Sleep(100);

                ShowWindow(hwnd, SW_SHOWNA);
                DestroyWindow(hDlg);

                EndDialog(hwnd, rc);
                return;
        }

static void ReadRegistrySettings(void)
{
        HKEY    hKey;
        DWORD  size;
        DWORD  type;

        if ( RegOpenKeyEx(HKEY_LOCAL_MACHINE,
"SYSTEM\CurrentControlSet\Services\Inetinfo\Parameters", 0,
KEY_READ, &hKey) == ERROR_SUCCESS )
        {
                size = sizeof(iPoolThreadLimit);
                if ( RegQueryValueEx(hKey, "PoolThreadLimit", 0,
&type, (char *)&iPoolThreadLimit, &size) == ERROR_SUCCESS )
                        if ( !iPoolThreadLimit )
                                iPoolThreadLimit =
iMaxPhysicalMemory * 2;

                size = sizeof(iThreadTimeout);
                if ( RegQueryValueEx(hKey, "ThreadTimeout", 0,
&type, (char *)&iThreadTimeout, &size) == ERROR_SUCCESS )
                        if ( !iThreadTimeout )
                                iThreadTimeout = 86400;

```

```

        size = sizeof(iListenBackLog);
        if ( RegQueryValueEx(hKey, "ListenBackLog", 0,
&type, (char *)&iListenBackLog, &size) == ERROR_SUCCESS )
            if ( !iListenBackLog )
                iListenBackLog = 15;

        RegCloseKey(hKey);
    }

    if ( RegOpenKeyEx(HKEY_LOCAL_MACHINE,
"SYSTEM\\CurrentControlSet\\Services\\W3SVC\\Parameters", 0,
KEY_READ, &hKey) == ERROR_SUCCESS )
    {
        size = sizeof(iAcceptExOutstanding);
        if ( RegQueryValueEx(hKey, "AcceptExOutstanding", 0,
&type, (char *)&iAcceptExOutstanding, &size) == ERROR_SUCCESS )
            if ( !iAcceptExOutstanding )
                iAcceptExOutstanding = 40;

        RegCloseKey(hKey);
    }
}

static void WriteRegistrySettings(char *szDllPath)
{
    HKEY    hKey;
    DWORD   dwDisposition;
    char    szTmp[256];
    char    *ptr;
    int     iRc;

    if ( RegCreateKeyEx(HKEY_LOCAL_MACHINE,
"SOFTWARE\\Microsoft\\TPCC", 0, NULL,
REG_OPTION_NON_VOLATILE, KEY_ALL_ACCESS, NULL, &hKey,
&dwDisposition) == ERROR_SUCCESS )
    {
        strcpy(szTmp, szDllPath);
        ptr = strstr(szTmp, "tpcc");
        if ( ptr )
            *ptr = 0;

        RegSetValueEx(hKey, "Path", 0, REG_SZ, szTmp,
strlen(szTmp)+1);

        RegSetValueEx(hKey, "NumberOfDeliveryThreads", 0,
REG_DWORD, (char *)&Reg.dwNumberOfDeliveryThreads,
sizeof(Reg.dwNumberOfDeliveryThreads));
        RegSetValueEx(hKey, "MaxConnections", 0,
REG_DWORD, (char *)&Reg.dwMaxConnections,
sizeof(Reg.dwMaxConnections));
        RegSetValueEx(hKey, "MaxPendingDeliveries", 0,
REG_DWORD, (char *)&Reg.dwMaxPendingDeliveries,
sizeof(Reg.dwMaxPendingDeliveries));

        RegSetValueEx(hKey, "DB_Protocol", 0, REG_SZ,
szDBNames[Reg.eDB_Protocol], strlen(szDBNames[Reg.eDB_Protocol])+1);
        RegSetValueEx(hKey, "TxnMonitor", 0, REG_SZ,
szTxnMonNames[Reg.eTxnMon], strlen(szTxnMonNames[Reg.eTxnMon])+1);

        RegSetValueEx(hKey, "DbServer", 0, REG_SZ,
Reg.szDbServer, strlen(Reg.szDbServer)+1);
        RegSetValueEx(hKey, "DbName", 0, REG_SZ,
Reg.szDbName, strlen(Reg.szDbName)+1);
        RegSetValueEx(hKey, "DbUser", 0, REG_SZ,
Reg.szDbUser, strlen(Reg.szDbUser)+1);
        RegSetValueEx(hKey, "DbPassword", 0, REG_SZ,
Reg.szDbPassword, strlen(Reg.szDbPassword)+1);

```

```

        strcpy(szTmp, "YES");
        RegSetValueEx(hKey, "COM_SinglePool", 0, REG_SZ,
szTmp, strlen(szTmp)+1);

        RegFlushKey(hKey);
        RegCloseKey(hKey);
    }

    if ( (iRc=RegCreateKeyEx(HKEY_LOCAL_MACHINE,
"SYSTEM\\CurrentControlSet\\Services\\Inetinfo\\Parameters", 0, NULL,
REG_OPTION_NON_VOLATILE, KEY_ALL_ACCESS, NULL, &hKey,
&dwDisposition)) == ERROR_SUCCESS )
    {
        RegSetValueEx(hKey, "PoolThreadLimit", 0,
REG_DWORD, (char *)&iPoolThreadLimit, sizeof(iPoolThreadLimit));
        RegSetValueEx(hKey, "ThreadTimeout", 0,
REG_DWORD, (char *)&iThreadTimeout, sizeof(iThreadTimeout));
        RegSetValueEx(hKey, "ListenBackLog", 0,
REG_DWORD, (char *)&iListenBackLog, sizeof(iListenBackLog));

        RegFlushKey(hKey);
        RegCloseKey(hKey);
    }

    if ( (iRc=RegCreateKeyEx(HKEY_LOCAL_MACHINE,
"SYSTEM\\CurrentControlSet\\Services\\W3SVC\\Parameters", 0, NULL,
REG_OPTION_NON_VOLATILE, KEY_ALL_ACCESS, NULL, &hKey,
&dwDisposition)) == ERROR_SUCCESS )
    {
        RegSetValueEx(hKey, "AcceptExOutstanding", 0,
REG_DWORD, (char *)&iAcceptExOutstanding,
sizeof(iAcceptExOutstanding));

        RegFlushKey(hKey);
        RegCloseKey(hKey);
    }

    return;
}

BOOL CALLBACK CopyDlgProc(HWND hwnd, UINT uMsg, WPARAM
wParam, LPARAM lParam)
{
    if ( uMsg == WM_INITDIALOG )
    {
        SendDlgItemMessage(hwnd, IDC_PROGRESS1,
PBM_SETRANGE, 0, MAKELPARAM(0, 16));
        SendDlgItemMessage(hwnd, IDC_PROGRESS1,
PBM_SETSTEP, (WPARAM)1, 0);
        return TRUE;
    }
    return FALSE;
}

BOOL RegisterDLL(char *szFileName)
{
    HINSTANCE    hLib;
    FARPROC      lpDllEntryPoint;

    hLib = LoadLibrary(szFileName);
    if ( hLib == NULL )
        return FALSE;
    // Find the entry point.
    lpDllEntryPoint = GetProcAddress(hLib, "DllRegisterServer");
    if (lpDllEntryPoint != NULL)
    {
        return ((*lpDllEntryPoint)() == S_OK);
    }
}

```

```

else
    return FALSE;    //unable to locate entry point
}

BOOL FileFromResource( char *szResourceName, int iResourceId, char
*szDllPath, char *szFileName )
{
    HGLOBAL          hDLL;
    HRSRC            hResInfo;
    HANDLE           hFile;
    DWORD            dwSize;
    BYTE             *pSrc;
    DWORD            d;
    char              szFullName[256];

    hResInfo = FindResource(hInst,
MAKEINTRESOURCE(iResourceId), szResourceName);

    strcpy(szFullName, szDllPath);
    strcat(szFullName, szFileName);

    dwSize = SizeofResource(hInst, hResInfo);
    hDLL = LoadResource(hInst, hResInfo );
    pSrc = (BYTE *)LockResource(hDLL);
    remove(szFullName);

    if ( !(hFile = CreateFile(szFullName, GENERIC_WRITE, 0, NULL,
CREATE_ALWAYS, FILE_ATTRIBUTE_NORMAL, NULL)) )
        return FALSE;

    if ( !WriteFile(hFile, pSrc, dwSize, &d, NULL) )
        return FALSE;

    CloseHandle(hFile);

    UnlockResource(hDLL);
    FreeResource(hDLL);
    return TRUE;
}

static int CopyFiles(HWND hDlg, char *szDllPath)
{
    BOOL            bSvcRunning;

    bSvcRunning = CheckWWWebService();
    if ( bSvcRunning )
    {
        SetDlgItemText(hDlg, IDC_STATUS, "Stopping Web
Service.");
        SendDlgItemMessage(hDlg, IDC_PROGRESS1,
PBM_STEPIT, 0, 0);
        UpdateDialog(hDlg);

        StopWWWebService();
        SendDlgItemMessage(hDlg, IDC_PROGRESS1,
PBM_STEPIT, 0, 0);
        UpdateDialog(hDlg);
    }

    SetDlgItemText(hDlg, IDC_STATUS, "Copying Files...");
    SendDlgItemMessage(hDlg, IDC_PROGRESS1, PBM_STEPIT, 0,
0);
    UpdateDialog(hDlg);

    // install TPCC.DLL
    strcpy( szLastFileName, "tpcc.dll" );
    if (!FileFromResource( "TPCCDLL", IDR_TPCCDLL, szDllPath,
szLastFileName ))
        return 0;
    SendDlgItemMessage(hDlg, IDC_PROGRESS1, PBM_STEPIT, 0,
0);
    UpdateDialog(hDlg);

    // install tpcc_dblib.dll
    strcpy( szLastFileName, "tpcc_dblib.dll" );
    if (!FileFromResource( "DBLIB_DLL", IDR_DBLIB_DLL,
szDllPath, szLastFileName ))
        return 0;
    SendDlgItemMessage(hDlg, IDC_PROGRESS1, PBM_STEPIT, 0,
0);
    UpdateDialog(hDlg);

    // install tpcc_odbc.dll
    strcpy( szLastFileName, "tpcc_odbc.dll" );
    if (!FileFromResource( "ODBC_DLL", IDR_ODBC_DLL,
szDllPath, szLastFileName ))
        return 0;
    SendDlgItemMessage(hDlg, IDC_PROGRESS1, PBM_STEPIT, 0,
0);
    UpdateDialog(hDlg);

    // install tuxapp.exe
    strcpy( szLastFileName, "tuxapp.exe" );
    if (!FileFromResource( "TUXEDO_APP", IDR_TUXEDO_APP,
szDllPath, szLastFileName ))
        return 0;
    SendDlgItemMessage(hDlg, IDC_PROGRESS1, PBM_STEPIT, 0,
0);
    UpdateDialog(hDlg);

    // install tpcc_tuxedo.dll
    strcpy( szLastFileName, "tpcc_tuxedo.dll" );
    if (!FileFromResource( "TUXEDO_DLL", IDR_TUXEDO_DLL,
szDllPath, szLastFileName ))
        return 0;
    SendDlgItemMessage(hDlg, IDC_PROGRESS1, PBM_STEPIT, 0,
0);
    UpdateDialog(hDlg);

    // install tpcc_com.dll
    strcpy( szLastFileName, "tpcc_com.dll" );
    if (!FileFromResource( "COM_DLL", IDR_COM_DLL, szDllPath,
szLastFileName ))
        return 0;
    SendDlgItemMessage(hDlg, IDC_PROGRESS1, PBM_STEPIT, 0,
0);
    UpdateDialog(hDlg);

    // install tpcc_com_all.tlb
    strcpy( szLastFileName, "tpcc_com_all.tlb" );
    if (!FileFromResource( "COM_TYPLIB",
IDR_COMTYPLIB_DLL, szDllPath, szLastFileName ))
        return 0;
    SendDlgItemMessage(hDlg, IDC_PROGRESS1, PBM_STEPIT, 0,
0);
    UpdateDialog(hDlg);

    // install tpcc_com_ps.dll
    strcpy( szLastFileName, "tpcc_com_ps.dll" );
    if (!FileFromResource( "COM_PS_DLL", IDR_COMPS_DLL,
szDllPath, szLastFileName ))
        return 0;
    SendDlgItemMessage(hDlg, IDC_PROGRESS1, PBM_STEPIT, 0,
0);
    UpdateDialog(hDlg);
}

```

```

// install tpcc_com_all.dll
strcpy( szLastFileName, "tpcc_com_all.dll" );
if (!FileFromResource( "COM_ALL_DLL", IDR_COMALL_DLL,
szDllPath, szLastFileName ))
    return 0;
SendDlgItemMessage(hDlg, IDC_PROGRESS1, PBM_STEPIT, 0,
0);
UpdateDialog(hDlg);

//if we stopped service restart it.
if ( bSvcRunning )
{
    SetDlgItemText(hDlg, IDC_STATUS, "Starting Web
Service.");
    SendDlgItemMessage(hDlg, IDC_PROGRESS1,
PBM_STEPIT, 0, 0);
    UpdateDialog(hDlg);
    StartWWWebService();
}

SendDlgItemMessage(hDlg, IDC_PROGRESS1, PBM_STEPIT, 0,
0);
UpdateDialog(hDlg);

return 1;
}

static BOOL GetInstallPath(char *szDllPath)
{
    HKEY hKey;
    BYTE szData[256];
    DWORD sv;
    BOOL bRc;
    int len;
    int iRc;

    // Registry key
    HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\InetStp\PathWWWRoot
is used to find the
    // IIS default web site directory and determine that IIS is installed.

    szDllPath[0] = 0;
    bRc = TRUE;
    if ( RegOpenKeyEx(HKEY_LOCAL_MACHINE,
"SOFTWARE\Microsoft\InetStp", 0, KEY_ALL_ACCESS, &hKey) ==
ERROR_SUCCESS )
    {
        sv = sizeof(szData);
        iRc = RegQueryValueEx( hKey, "PathWWWRoot",
NULL, NULL, szData, &sv ); // used by IIS 5.0 & 6.0
        if (iRc == ERROR_SUCCESS)
        {
            bRc = FALSE;
            strcpy(szDllPath, szData);
            len = strlen(szDllPath);
            if ( szDllPath[len-1] != '\\ )
            {
                szDllPath[len] = '\\;
                szDllPath[len+1] = 0;
            }
        }

        RegCloseKey(hKey);
    }

    return bRc;
}

```

```

static void GetVersionInfo(char *szDLLPath, char *szExePath)
{
    DWORD d;
    DWORD dwSize;
    DWORD dwBytes;
    char *ptr;
    VS_FIXEDFILEINFO *vs;

    versionDllMS = 0;
    versionDllLS = 0;
    if ( _access(szDLLPath, 00) == 0 )
    {
        dwSize = GetFileVersionInfoSize(szDLLPath, &d);
        if ( dwSize )
        {
            ptr = (char *)malloc(dwSize);
            GetFileVersionInfo(szDLLPath, 0, dwSize,
ptr);

            VerQueryValue(ptr, "\\", &vs, &dwBytes);
            versionDllMS = vs->dwProductVersionMS;
            versionDllLS = vs->dwProductVersionLS;
            free(ptr);
        }
    }

    versionExeMS = 0x7FFF;
    versionExeLS = 0x7FFF;
    dwSize = GetFileVersionInfoSize(szExePath, &d);
    if ( dwSize )
    {
        ptr = (char *)malloc(dwSize);
        GetFileVersionInfo(szExePath, 0, dwSize, ptr);
        VerQueryValue(ptr, "\\", &vs, &dwBytes);

        versionExeMS = vs->dwProductVersionMS;
        versionExeLS = LOWORD(vs->dwProductVersionLS);
        versionExeMM = HIWORD(vs->dwProductVersionLS);
        free(ptr);
    }

    return;
}

static BOOL CheckWWWWebService(void)
{
    SC_HANDLE schSCManager;
    SC_HANDLE schService;
    SERVICE_STATUS ssStatus;

    schSCManager = OpenSCManager(NULL, NULL,
SC_MANAGER_ALL_ACCESS);
    schService = OpenService(schSCManager, TEXT("W3SVC"),
SERVICE_ALL_ACCESS);
    if (schService == NULL)
        return FALSE;

    if (! QueryServiceStatus(schService, &ssStatus) )
        goto ServiceNotRunning;

    if (! ControlService(schService, SERVICE_CONTROL_STOP,
&ssStatus) )
        goto ServiceNotRunning;
    //start Service pending, Check the status until the service is running.
    if (! QueryServiceStatus(schService, &ssStatus) )
        goto ServiceNotRunning;

    CloseServiceHandle(schService);
    return TRUE;
}

```



```

ServiceNotRunning:
    CloseServiceHandle(schService);
    return FALSE;
}

static BOOL StartWWWebService(void)
{
    SC_HANDLE          schSCManager;
    SC_HANDLE          schService;
    SERVICE_STATUS     ssStatus;
    DWORD              dwOldCheckPoint;

    schSCManager = OpenSCManager(NULL, NULL,
    SC_MANAGER_ALL_ACCESS);
    schService = OpenService(schSCManager, TEXT("W3SVC"),
    SERVICE_ALL_ACCESS);
    if (schService == NULL)
        return FALSE;

    if (! StartService(schService, 0, NULL) )
        goto StartWWWebErr;
    //start Service pending, Check the status until the service is running.
    if (! QueryServiceStatus(schService, &ssStatus) )
        goto StartWWWebErr;
    while( ssStatus.dwCurrentState != SERVICE_RUNNING)
    {
        dwOldCheckPoint = ssStatus.dwCheckPoint;
        //Save the current checkpoint.
        Sleep(ssStatus.dwWaitHint);
        //Wait for the specified interval.
        if ( !QueryServiceStatus(schService, &ssStatus) )
            //Check the status again.
            break;
        if (dwOldCheckPoint >= ssStatus.dwCheckPoint)
            //Break if the checkpoint has not been incremented.
            break;
    }

    if (ssStatus.dwCurrentState == SERVICE_RUNNING)
        goto StartWWWebErr;

    CloseServiceHandle(schService);
    return TRUE;

StartWWWebErr:
    CloseServiceHandle(schService);
    return FALSE;
}

static BOOL StopWWWebService(void)
{
    SC_HANDLE          schSCManager;
    SC_HANDLE          schService;
    SERVICE_STATUS     ssStatus;
    DWORD              dwOldCheckPoint;

    schSCManager = OpenSCManager(NULL, NULL,
    SC_MANAGER_ALL_ACCESS);
    schService = OpenService(schSCManager, TEXT("W3SVC"),
    SERVICE_ALL_ACCESS);
    if (schService == NULL)
        return FALSE;

    if (! QueryServiceStatus(schService, &ssStatus) )
        goto StopWWWebErr;

```

```

        if ( !ControlService(schService, SERVICE_CONTROL_STOP,
        &ssStatus) )
            goto StopWWWebErr;
        //start Service pending, Check the status until the service is running.
        if (! QueryServiceStatus(schService, &ssStatus) )
            goto StopWWWebErr;
        while( ssStatus.dwCurrentState == SERVICE_RUNNING)
        {
            dwOldCheckPoint = ssStatus.dwCheckPoint;
            //Save the current checkpoint.
            Sleep(ssStatus.dwWaitHint);
            //Wait for the specified interval.
            if ( !QueryServiceStatus(schService, &ssStatus) )
                //Check the status again.
                break;
            if (dwOldCheckPoint >= ssStatus.dwCheckPoint)
                //Break if the checkpoint has not been incremented.
                break;
        }

        if (ssStatus.dwCurrentState == SERVICE_RUNNING)
            goto StopWWWebErr;

        CloseServiceHandle(schService);
        return TRUE;

StopWWWebErr:
    CloseServiceHandle(schService);
    return FALSE;
}

static void UpdateDialog(HWND hDlg)
{
    MSG msg;

    UpdateWindow(hDlg);
    while( PeekMessage(&msg, hDlg, 0, 0, PM_REMOVE) )
    {
        TranslateMessage(&msg);
        DispatchMessage(&msg);
    }
    Sleep(250);
    return;
}

```

## **install.dsp**

```

# Microsoft Developer Studio Project File - Name="install" - Package
Owner=<4>
# Microsoft Developer Studio Generated Build File, Format Version 6.00
# ** DO NOT EDIT **

# TARGETTYPE "Win32 (x86) Application" 0x0101

CFG=install - Win32 Release
!MESSAGE This is not a valid makefile. To build this project using NMAKE,
!MESSAGE use the Export Makefile command and run
!MESSAGE
!MESSAGE NMAKE /f "install.mak".
!MESSAGE
!MESSAGE You can specify a configuration when running NMAKE
!MESSAGE by defining the macro CFG on the command line. For example:
!MESSAGE
!MESSAGE NMAKE /f "install.mak" CFG="install - Win32 Release"
!MESSAGE

```

```

!MESSAGE Possible choices for configuration are:
!MESSAGE
!MESSAGE "install - Win32 Release" (based on "Win32 (x86) Application")
!MESSAGE "install - Win32 Debug" (based on "Win32 (x86) Application")
!MESSAGE

```

```

# Begin Project
# PROP AllowPerConfigDependencies 0
# PROP Scc_ProjName ""
# PROP Scc_LocalPath ""
CPP=cl.exe
MTL=midl.exe
RSC=rc.exe

```

```

!IF "$(CFG)" == "install - Win32 Release"

```

```

# PROP BASE Use_MFC 0
# PROP BASE Use_Debug_Libraries 0
# PROP BASE Output_Dir ".\Release"
# PROP BASE Intermediate_Dir ".\Release"
# PROP BASE Target_Dir ""
# PROP Use_MFC 0
# PROP Use_Debug_Libraries 0
# PROP Output_Dir ".\bin"
# PROP Intermediate_Dir ".\obj"
# PROP Ignore_Export_Lib 0
# PROP Target_Dir ""
# ADD BASE CPP /nologo /W3 /GX /O2 /D "WIN32" /D "NDEBUG" /D
 "_WINDOWS" /YX /c
# ADD CPP /nologo /W3 /GX /O2 /D "WIN32" /D "NDEBUG" /D
 "_WINDOWS" /YX /FD /c
# ADD BASE MTL /nologo /D "NDEBUG" /win32
# ADD MTL /nologo /D "NDEBUG" /mktyplib203 /win32
# ADD BASE RSC /I 0x409 /d "NDEBUG"
# ADD RSC /I 0x409 /d "NDEBUG"
BSC32=bscmake.exe
# ADD BASE BSC32 /nologo
# ADD BSC32 /nologo
LINK32=link.exe
# ADD BASE LINK32 kernel32.lib user32.lib gdi32.lib winspool.lib
 comdlg32.lib advapi32.lib shell32.lib ole32.lib oleaut32.lib uuid.lib odbcc32.lib
 odbccp32.lib /nologo /subsystem:windows /machine:I386
# ADD LINK32 version.lib comctl32.lib kernel32.lib user32.lib gdi32.lib
 winspool.lib comdlg32.lib advapi32.lib shell32.lib ole32.lib oleaut32.lib
 uuid.lib odbcc32.lib odbccp32.lib /nologo /subsystem:windows /machine:I386
/out:"..\bin\install.exe"

```

```

!ELSEIF "$(CFG)" == "install - Win32 Debug"

```

```

# PROP BASE Use_MFC 0
# PROP BASE Use_Debug_Libraries 1
# PROP BASE Output_Dir ".\Debug"
# PROP BASE Intermediate_Dir ".\Debug"
# PROP BASE Target_Dir ""
# PROP Use_MFC 0
# PROP Use_Debug_Libraries 1
# PROP Output_Dir ".\bin"
# PROP Intermediate_Dir ".\obj"
# PROP Ignore_Export_Lib 0
# PROP Target_Dir ""
# ADD BASE CPP /nologo /W3 /Gm /GX /Zi /Od /D "WIN32" /D "_DEBUG"
 /D "_WINDOWS" /YX /c
# ADD CPP /nologo /W3 /Gm /GX /Zi /Od /D "WIN32" /D "_DEBUG" /D
 "_WINDOWS" /YX /FD /c
# ADD BASE MTL /nologo /D "_DEBUG" /win32
# ADD MTL /nologo /D "_DEBUG" /mktyplib203 /win32
# ADD BASE RSC /I 0x409 /d "_DEBUG"
# ADD RSC /I 0x409 /d "_DEBUG"

```

```

BSC32=bscmake.exe
# ADD BASE BSC32 /nologo
# ADD BSC32 /nologo
LINK32=link.exe
# ADD BASE LINK32 kernel32.lib user32.lib gdi32.lib winspool.lib
 comdlg32.lib advapi32.lib shell32.lib ole32.lib oleaut32.lib uuid.lib odbcc32.lib
 odbccp32.lib /nologo /subsystem:windows /debug /machine:I386
# ADD LINK32 version.lib comctl32.lib kernel32.lib user32.lib gdi32.lib
 winspool.lib comdlg32.lib advapi32.lib shell32.lib ole32.lib oleaut32.lib
 uuid.lib odbcc32.lib odbccp32.lib /nologo /subsystem:windows /debug
 /machine:I386 /out:"..\bin\install.exe"

```

```

!ENDIF

```

```

# Begin Target

```

```

# Name "install - Win32 Release"
# Name "install - Win32 Debug"
# Begin Group "Source Files"

```

```

# PROP Default_Filter "cpp;c;cxx;rc;def;r;odl;hpj;bat;for;f90"
# Begin Source File

```

```

SOURCE=\src\install.c
# End Source File
# Begin Source File

```

```

SOURCE=\src\install.rc
# ADD BASE RSC /I 0x409 /i "src"
# ADD RSC /I 0x409 /i "src" /i ".\src"
# End Source File
# Begin Source File

```

```

SOURCE=\src\install_com.cpp
# End Source File
# End Group
# Begin Group "Header Files"

```

```

# PROP Default_Filter "h;hpp;hxx;hm;inl;fi;fd"
# End Group
# Begin Group "Resource Files"

```

```

# PROP Default_Filter "ico;cur;bmp;dlg;rc2;rct;bin;cnt;rtf;gif;jpg;jpeg;jpe"
# Begin Source File

```

```

SOURCE=\SRC\ICON1.ICO
# End Source File
# Begin Source File

```

```

SOURCE=\SRC\ICON2.ICO
# End Source File
# End Group
# Begin Source File

```

```

SOURCE=\SRC\LICENSE.TXT
# End Source File
# Begin Source File

```

```

SOURCE=.\isapi_dll\bin\tpcc.dll
# End Source File
# Begin Source File

```

```

SOURCE=.\tm_com_dll\bin\tpcc_com.dll
# End Source File
# Begin Source File

```

```

SOURCE=.\tpcc_com_all\bin\tpcc_com_all.dll
# End Source File

```

```

# Begin Source File

SOURCE=..\tpcc_com_ps\bin\tpcc_com_ps.dll
# End Source File
# Begin Source File

SOURCE=..\db_dblib_dll\bin\tpcc_dblib.dll
# End Source File
# Begin Source File

SOURCE=..\db_odbc_dll\bin\tpcc_odbc.dll
# End Source File
# Begin Source File

SOURCE=..\tm_tuxedo_dll\bin\tpcc_tuxedo.dll
# End Source File
# Begin Source File

SOURCE=..\tuxapp\bin\tuxapp.exe
# End Source File
# End Target
# End Project

```

## install.h

```

//{{NO_DEPENDENCIES}}
// Microsoft Developer Studio generated include file.
// Used by install.rc
//

#define IDD_DIALOG1                101
#define IDI_ICON1                  102
#define IDR_TPCCDLL                103
#define IDD_DIALOG2                105
#define IDI_ICON2                  106
#define IDR_DELIVERY               107
#define IDD_DIALOG3                108

#define BN_LOG                      1001
#define ED_KEEP                     1002
#define ED_THREADS                  1003
#define ED_THREADS2                 1004
#define IDC_PATH                    1007
#define IDC_VERSION                 1009
#define IDC_RESULTS                 1010
#define IDC_PROGRESS1              1011
#define IDC_STATUS                  1012
#define IDC_BUTTON1                 1013
#define ED_MAXCONNECTION           1014
#define ED_IIS_MAX_THREAD_POOL_LIMIT 1015
#define ED_WEB_SERVICE_BACKLOG_QUEUE_SIZE 1017
#define ED_IIS_THREAD_TIMEOUT       1018
#define ED_IIS_LISTEN_BACKLOG      1019
#define IDC_DBLIB                   1021
#define IDC_ODBC                     1022
#define IDC_CONNECT_POOL            1023
#define ED_USER_CONNECT_DELAY_TIME 1024

// Next default values for new objects
//

```

## install.rc

```

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

#define APSTUDIO_READONLY_SYMBOLS
////////////////////////////////////
//
// Generated from the TEXTINCLUDE 2 resource.
//
#include "afxres.h"

////////////////////////////////////
#undef APSTUDIO_READONLY_SYMBOLS

////////////////////////////////////
// English (U.S.) resources

#if !defined(AFX_RESOURCE_DLL) || defined(AFX_TARG_ENU)
#ifndef _WIN32
LANGUAGE LANG_ENGLISH, SUBLANG_ENGLISH_US
#pragma code_page(1252)
#endif // _WIN32

////////////////////////////////////
//
// Dialog
//

IDD_DIALOG1 DIALOGEX 0, 0, 219, 351
STYLE DS_MODALFRAME | DS_CENTER | WS_MINIMIZEBOX |
WS_POPUP | WS_CAPTION |
WS_SYSMENU
CAPTION "TPC-C Web Client Installation Utility"
FONT 8, "MS Sans Serif"
BEGIN
    EDITTEXT    ED_THREADS,164,45,34,12,ES_RIGHT | ES_NUMBER,
                WS_EX_RTLREADING
    EDITTEXT    ED_MAXDELIVERIES,164,59,34,12,ES_RIGHT |
ES_NUMBER,
                WS_EX_RTLREADING
    EDITTEXT    ED_MAXCONNECTION,164,73,34,12,ES_RIGHT |
ES_NUMBER,
                WS_EX_RTLREADING
    CONTROL
"None",IDC_TM_NONE,"Button",BS_AUTORADIOBUTTON |
WS_GROUP | WS_TABSTOP,43,100,33,10
    CONTROL
"COM",IDC_TM_MTS,"Button",BS_AUTORADIOBUTTON |
WS_TABSTOP,43,113,32,10
    CONTROL
"TUXEDO",IDC_TM_TUXEDO,"Button",BS_AUTORADIOBUTTON |
WS_TABSTOP,106,100,46,10
    CONTROL
"ENCINA",IDC_TM_ENCINA,"Button",BS_AUTORADIOBUTTON |
WS_DISABLED | WS_TABSTOP,106,113,43,10
    EDITTEXT    ED_DB_SERVER,131,152,67,12,ES_AUTOHSCROLL
    EDITTEXT    ED_DB_USER_ID,131,165,67,12,ES_AUTOHSCROLL
    EDITTEXT    ED_DB_PASSWORD,131,178,67,12,ES_AUTOHSCROLL
    EDITTEXT    ED_DB_NAME,131,191,67,12,ES_AUTOHSCROLL
    CONTROL
"DBLIB",IDC_DBLIB,"Button",BS_AUTORADIOBUTTON | WS_GROUP |
WS_TABSTOP,45,219,39,12
    CONTROL
"ODBC",IDC_ODBC,"Button",BS_AUTORADIOBUTTON | WS_TABSTOP,
91,219,39,12
    EDITTEXT
ED_IIS_MAX_THREAD_POOL_LIMIT,164,263,34,12,ES_RIGHT |
ES_NUMBER,WS_EX_RTLREADING

```

```

EDITTEXT
ED_WEB_SERVICE_BACKLOG_QUEUE_SIZE,164,277,34,12,ES_RIGHT |
  ES_NUMBER,WS_EX_RTREADING
EDITTEXT ED_IIS_THREAD_TIMEOUT,164,291,34,12,ES_RIGHT |
ES_NUMBER,
  WS_EX_RTREADING
EDITTEXT ED_IIS_LISTEN_BACKLOG,164,305,34,12,ES_RIGHT |
ES_NUMBER,
  WS_EX_RTREADING
DEFPUSHBUTTON "OK",IDOK,53,331,50,14
PUSHBUTTON "Cancel",IDCANCEL,119,331,50,14
EDITTEXT IDC_PATH,106,26,91,13,ES_AUTOHSCROLL |
ES_READONLY
LTEXT "Number of Delivery Threads:",IDC_STATIC,35,45,115,12
LTEXT "Max Number of Connections:",IDC_STATIC,35,73,115,12
RTEXT "Version 4.11",IDC_VERSION,120,4,89,9
LTEXT "IIS Max Thread Pool Limit:",IDC_STATIC,36,263,115,12
LTEXT "Web Service Backlog Queue
Size:",IDC_STATIC,36,277,115,
  12
LTEXT "IIS Thread Timeout (seconds):",IDC_STATIC,36,291,115,12
LTEXT "IIS Listen Backlog:",IDC_STATIC,36,307,115,10
GROUPBOX "Database
Interface",IDC_STATIC,35,208,163,27,WS_GROUP
LTEXT "Installation directory:",IDC_STATIC,35,29,71,10
GROUPBOX "Transaction Monitor",IDC_STATIC,33,90,165,37
LTEXT "Server Name:",IDC_STATIC,35,155,56,8
LTEXT "User ID:",IDC_STATIC,35,168,60,8
LTEXT "User Password:",IDC_STATIC,35,181,83,8
LTEXT "Database Name:",IDC_STATIC,35,194,54,8
GROUPBOX "SQL Server Connection
Properties",IDC_STATIC,22,139,187,
  102
GROUPBOX "Web Client Properties",IDC_STATIC,22,15,187,118
GROUPBOX "IIS Settings",IDC_STATIC,22,247,187,79
LTEXT "Max Pending Deliveries:",IDC_STATIC,35,59,115,12
END

IDD_DIALOG2 DIALOGEX 0, 0, 117, 62
STYLE DS_SETFOREGROUND | DS_3DLOOK | DS_CENTER |
WS_POPUP | WS_BORDER
EXSTYLE WS_EX_STATICEDGE
FONT 12, "MS Sans Serif", 0, 0, 0x1
BEGIN
  DEFPUSHBUTTON "OK",IDOK,33,45,50,9
  CTEXT "HTML TPC-C Installation
Successful",IDC_RESULTS,7,22,
  102,18,0,WS_EX_CLIENTEDGE
  ICON IDI_ICON2,IDC_STATIC,50,7,18,20,SS_REALSIZEIMAGE,
  WS_EX_TRANSPARENT
END

IDD_DIALOG3 DIALOG DISCARDABLE 0, 0, 91, 40
STYLE DS_SYSMODAL | DS_MODALFRAME | DS_3DLOOK |
DS_CENTER | WS_CAPTION
CAPTION "Installing TPC-C Web Client"
FONT 12, "Arial Black"
BEGIN
  CONTROL
"Progress1",IDC_PROGRESS1,"msctls_progress32",WS_BORDER,
  7,20,77,13
  CTEXT "Static",IDC_STATUS,7,7,77,12,SS_SUNKEN
END

IDD_DIALOG4 DIALOG DISCARDABLE 0, 0, 291, 202
STYLE DS_MODALFRAME | DS_CENTER | WS_POPUP | WS_CAPTION |
WS_SYSMENU
CAPTION "Client End User License"

```

```

FONT 8, "MS Sans Serif"
BEGIN
  EDITTEXT IDC_LICENSE,7,7,271,167,ES_MULTILINE |
ES_AUTOVSCROLL |
  ES_AUTOHSCROLL | ES_READONLY | WS_VSCROLL |
WS_HSCROLL
  DEFPUSHBUTTON "I &Agree",IDOK,87,181,50,14
  PUSHBUTTON "&Cancel",IDCANCEL,153,181,50,14
END

////////////////////////////////////
//
// DESIGNINFO
//

#ifdef APSTUDIO_INVOKED
GUIDELINES DESIGNINFO DISCARDABLE
BEGIN
  IDD_DIALOG1, DIALOG
  BEGIN
    LEFTMARGIN, 22
    RIGHTMARGIN, 209
    VERTGUIDE, 35
    VERTGUIDE, 198
    TOPMARGIN, 4
    BOTTOMMARGIN, 345
  END

  IDD_DIALOG2, DIALOG
  BEGIN
    LEFTMARGIN, 7
    RIGHTMARGIN, 109
    TOPMARGIN, 7
    BOTTOMMARGIN, 54
  END

  IDD_DIALOG3, DIALOG
  BEGIN
    LEFTMARGIN, 7
    RIGHTMARGIN, 84
    TOPMARGIN, 7
    BOTTOMMARGIN, 33
  END

  IDD_DIALOG4, DIALOG
  BEGIN
    LEFTMARGIN, 7
    RIGHTMARGIN, 278
    TOPMARGIN, 7
    BOTTOMMARGIN, 195
  END
END
#endif // APSTUDIO_INVOKED

#ifdef APSTUDIO_INVOKED
////////////////////////////////////
//
// TEXTINCLUDE
//

1 TEXTINCLUDE DISCARDABLE
BEGIN
  "resource.h\0"
END

2 TEXTINCLUDE DISCARDABLE

```

```

BEGIN
#include ""afxres.h""r\n"
"0"
END

3 TEXTINCLUDE DISCARDABLE
BEGIN
"r\n"
"0"
END

#endif // APSTUDIO_INVOKED

////////////////////////////////////
//
// Icon
//

// Icon with lowest ID value placed first to ensure application icon
// remains consistent on all systems.
IDI_ICON1      ICON  DISCARDABLE  "icon1.ico"
IDI_ICON2      ICON  DISCARDABLE  "icon2.ico"

////////////////////////////////////
//
// TPCDLL
//

IDR_TPCDLL      TPCDLL DISCARDABLE
"..\\..\\isapi_dll\\bin\\tpcc.dll"

#ifndef _MAC
////////////////////////////////////
//
// Version
//

VS_VERSION_INFO VERSIONINFO
FILEVERSION 0,4,20,0
PRODUCTVERSION 0,4,20,0
FILEFLAGSMASK 0x3fL
#ifdef _DEBUG
FILEFLAGS 0x1L
#else
FILEFLAGS 0x0L
#endif
FILEOS 0x40004L
FILETYPE 0x1L
FILESUBTYPE 0x0L
BEGIN
BLOCK "StringFileInfo"
BEGIN
BLOCK "040904b0"
BEGIN
VALUE "Comments", "TPC-C Web Client Installer\0"
VALUE "CompanyName", "Microsoft\0"
VALUE "FileDescription", "install\0"
VALUE "FileVersion", "0, 4, 20, 0\0"
VALUE "InternalName", "install\0"
VALUE "LegalCopyright", "Copyright © 1999\0"
VALUE "OriginalFilename", "install.exe\0"
VALUE "ProductName", "Microsoft install\0"
VALUE "ProductVersion", "0, 4, 20, 0\0"
END
END
BLOCK "VarFileInfo"
BEGIN

```

```

VALUE "Translation", 0x409, 1200
END
END

#endif // !_MAC

////////////////////////////////////
//
// LICENSE
//

IDR_LICENSE1      LICENSE DISCARDABLE  "license.txt"

////////////////////////////////////
//
// DBLIB_DLL
//

IDR_DBLIB_DLL      DBLIB_DLL DISCARDABLE
"..\\..\\db_dblib_dll\\bin\\tpcc_dblib.dll"

////////////////////////////////////
//
// ODBC_DLL
//

IDR_ODBC_DLL      ODBC_DLL DISCARDABLE
"..\\..\\db_odbc_dll\\bin\\tpcc_odbc.dll"

////////////////////////////////////
//
// TUXEDO_APP
//

IDR_TUXEDO_APP      TUXEDO_APP DISCARDABLE
"..\\..\\tuxapp\\bin\\tuxapp.exe"

////////////////////////////////////
//
// TUXEDO_DLL
//

IDR_TUXEDO_DLL      TUXEDO_DLL DISCARDABLE
"..\\..\\tm_tuxedo_dll\\bin\\tpcc_tuxedo.dll"

////////////////////////////////////
//
// COM_DLL
//

IDR_COM_DLL      COM_DLL DISCARDABLE
"..\\..\\tm_com_dll\\bin\\tpcc_com.dll"

////////////////////////////////////
//
// COM_PS_DLL
//

IDR_COMPS_DLL      COM_PS_DLL DISCARDABLE
"..\\..\\tpcc_com_ps\\bin\\tpcc_com_ps.dll"

////////////////////////////////////
//
// COM_ALL_DLL
//

```

```
IDR_COMALL_DLL COM_ALL_DLL DISCARDABLE
"..\\..\\tpcc_com_all\\bin\\tpcc_com_all.dll"
```

```
////////////////////////////////////
//
// COM_TYPLIB
//
```

```
IDR_COMTYPLIB_DLL COM_TYPLIB DISCARDABLE
"..\\..\\tpcc_com_all\\src\\tpcc_com_all.tlb"
```

```
#endif // English (U.S.) resources
////////////////////////////////////
```

```
#ifndef APSTUDIO_INVOKED
////////////////////////////////////
//
// Generated from the TEXTINCLUDE 3 resource.
//
```

```
////////////////////////////////////
#endif // not APSTUDIO_INVOKED
```

### install\_com.cpp

```
/* FILE: INSTALL_COM.CPP
 * Microsoft TPC-C Kit Ver.
4.20.000
 * Copyright Microsoft, 1999
 * All Rights Reserved
 *
 * not audited
 *
 * PURPOSE: installation code for COM application for
TPC-C Web Kit
 * Contact: Charles Levine (clevine@microsoft.com)
 *
 * Change history:
 * 4.20.000 - first version
 */
```

```
#define _WIN32_WINNT 0x0500
```

```
#include <comdef.h>
#include <comadmin.h>
#include <stdio.h>
#include <tchar.h>
```

```
extern "C"
{
    BOOL install_com(char *szDllPath);
}
```

```
BOOL install_com(char *szDllPath)
{
    ICOMAdminCatalog* pCOMAdminCat = NULL;
    ICatalogCollection* pCatalogCollectionApp = NULL;
    ICatalogCollection* pCatalogCollectionCo = NULL;
    ICatalogCollection* pCatalogCollectionItf = NULL;
    ICatalogCollection* pCatalogCollectionMethod = NULL;

    ICatalogObject* pCatalogObjectApp = NULL;
```

```
ICatalogObject* pCatalogObjectCo = NULL;
ICatalogObject* pCatalogObjectItf = NULL;
ICatalogObject* pCatalogObjectMethod = NULL;
```

```
    _bstr_t bstrTemp, bstrTemp2,
    bstrTemp3, bstrTemp4;
    _bstr_t bstrDllPath =
szDllPath;
    _variant_t vTmp, vKey;
    long lActProp, lCount,
    ICountCo, ICountItf, ICountMethod;
    bool bTmp;
```

```
CoInitializeEx(NULL, COINIT_MULTITHREADED);
```

```
HRESULT hr = CoCreateInstance(CLSID_COMAdminCatalog,
    NULL,
```

```
CLSCTX_INPROC_SERVER,
```

```
IID_ICOMAdminCatalog,
```

```
(void**) &pCOMAdminCat);
```

```
if (!SUCCEEDED(hr)) goto Error;
```

```
bstrTemp = "Applications";
```

```
// Attempt to connect to "Applications" in the Catalog
hr = pCOMAdminCat->GetCollection(bstrTemp,
```

```
(IDispatch**) &pCatalogCollectionApp);
if (!SUCCEEDED(hr)) goto Error;
```

```
// Attempt to load the "Applications" collection
hr = pCatalogCollectionApp->Populate();
if (!SUCCEEDED(hr)) goto Error;
```

```
hr = pCatalogCollectionApp->get_Count(&lCount);
if (!SUCCEEDED(hr)) goto Error;
```

```
(if any) // iterate through applications to delete existing "TPC-C" application
```

```
while (lCount > 0)
```

```
{
    hr = pCatalogCollectionApp->get_Item(lCount - 1,
    (IDispatch**) &pCatalogObjectApp);
    if (!SUCCEEDED(hr)) goto Error;
```

```
    hr = pCatalogObjectApp->get_Name(&vTmp);
    if (!SUCCEEDED(hr)) goto Error;
```

```
    if (wcsncmp(vTmp.bstrVal, L"TPC-C"))
```

```
    {
        lCount--;
        continue;
```

```
    }
    else
```

```
    {
        hr = pCatalogCollectionApp->Remove(lCount
```

```
- 1);
```

```
        if (!SUCCEEDED(hr)) goto Error;
        break;
```

```
    }
```

```
}
```

```

hr = pCatalogCollectionApp->SaveChanges(&lActProp);
if (!SUCCEEDED(hr)) goto Error;

// add the new application
hr = pCatalogCollectionApp->Add((IDispatch**)
&pCatalogObjectApp);
if (!SUCCEEDED(hr)) goto Error;

// set properties
bstrTemp = "Name";
vTmp = "TPC-C";
hr = pCatalogObjectApp->put_Value(bstrTemp, vTmp);
if (!SUCCEEDED(hr)) goto Error;

// set as a library (in process) application
bstrTemp = "Activation";
lActProp = COMAdminActivationInproc;
vTmp = lActProp;
hr = pCatalogObjectApp->put_Value(bstrTemp, vTmp);
if (!SUCCEEDED(hr)) goto Error;

// set security level to process
bstrTemp = "AccessChecksLevel";
lActProp = COMAdminAccessChecksApplicationLevel;
vTmp = lActProp;
hr = pCatalogObjectApp->put_Value(bstrTemp, vTmp);
if (!SUCCEEDED(hr)) goto Error;

// save key to get the Components collection later
hr = pCatalogObjectApp->get_Key(&vKey);
if (!SUCCEEDED(hr)) goto Error;

// save changes (app creation) so component installation will work
hr = pCatalogCollectionApp->SaveChanges(&lActProp);
if (!SUCCEEDED(hr)) goto Error;

pCatalogObjectApp->Release();
pCatalogObjectApp = NULL;

bstrTemp = "TPC-C"; //
app name bstrTemp2 = bstrDllPath + "tpcc_com_all.dll"; //
DLL bstrTemp3 = bstrDllPath + "tpcc_com_all.tlb"; //
type library (TLB) bstrTemp4 = bstrDllPath + "tpcc_com_ps.dll"; //
proxy/stub dll

hr = pCOMAdminCat->InstallComponent(bstrTemp,
bstrTemp2,
bstrTemp3,
bstrTemp4);
if (!SUCCEEDED(hr)) goto Error;

bstrTemp = "Components";
hr = pCatalogCollectionApp->GetCollection(bstrTemp, vKey,
(IDispatch**) &pCatalogCollectionCo);
if (!SUCCEEDED(hr)) goto Error;

hr = pCatalogCollectionCo->Populate();
if (!SUCCEEDED(hr)) goto Error;

hr = pCatalogCollectionCo->get_Count(&lCountCo);
if (!SUCCEEDED(hr)) goto Error;

```

```

// iterate through components in application and set the properties
while (lCountCo > 0)
{
hr = pCatalogCollectionCo->get_Item(lCountCo - 1,
(IDispatch**) &pCatalogObjectCo);
if (!SUCCEEDED(hr)) goto Error;

// used for debugging (view the name)
hr = pCatalogObjectCo->get_Name(&vTmp);
if (!SUCCEEDED(hr)) goto Error;

bstrTemp = "ConstructionEnabled";
bTmp = TRUE;
vTmp = bTmp;
hr = pCatalogObjectCo->put_Value(bstrTemp, vTmp);
if (!SUCCEEDED(hr)) goto Error;

bstrTemp = "ConstructorString";
bstrTemp2 = "dummy string (do not remove)";
vTmp = bstrTemp2;
hr = pCatalogObjectCo->put_Value(bstrTemp, vTmp);
if (!SUCCEEDED(hr)) goto Error;

bstrTemp = "JustInTimeActivation";
bTmp = TRUE;
vTmp = bTmp;
hr = pCatalogObjectCo->put_Value(bstrTemp, vTmp);
if (!SUCCEEDED(hr)) goto Error;

bstrTemp = "MaxPoolSize";
vTmp.Clear(); // clear variant so it isn't stored as a
bool (_variant_t feature)
vTmp = (long)30;
hr = pCatalogObjectCo->put_Value(bstrTemp, vTmp);
if (!SUCCEEDED(hr)) goto Error;

bstrTemp = "ObjectPoolingEnabled";
bTmp = TRUE;
vTmp = bTmp;
hr = pCatalogObjectCo->put_Value(bstrTemp, vTmp);
if (!SUCCEEDED(hr)) goto Error;

// save key to get the InterfacesForComponent collection
hr = pCatalogObjectCo->get_Key(&vKey);
if (!SUCCEEDED(hr)) goto Error;

bstrTemp = "InterfacesForComponent";
hr = pCatalogCollectionCo->GetCollection(bstrTemp,
vKey, (IDispatch**) &pCatalogCollectionItf);
if (!SUCCEEDED(hr)) goto Error;

hr = pCatalogCollectionItf->Populate();
if (!SUCCEEDED(hr)) goto Error;

hr = pCatalogCollectionItf->get_Count(&lCountItf);
if (!SUCCEEDED(hr)) goto Error;

// iterate through interfaces in component
while (lCountItf > 0)
{
hr =
pCatalogCollectionItf->get_Item(lCountItf - 1, (IDispatch**)
&pCatalogObjectItf);
if (!SUCCEEDED(hr)) goto Error;

```

```

collection // save key to get the MethodsForInterface
hr = pCatalogObjectItf->get_Key(&vKey);
if (!SUCCEEDED(hr)) goto Error;

bstrTemp = "MethodsForInterface";
hr =
pCatalogCollectionItf->GetCollection(bstrTemp, vKey, (IDispatch**)
&pCatalogCollectionMethod);
if (!SUCCEEDED(hr)) goto Error;

hr = pCatalogCollectionMethod->Populate();
if (!SUCCEEDED(hr)) goto Error;

hr =
pCatalogCollectionMethod->get_Count(&lCountMethod);
if (!SUCCEEDED(hr)) goto Error;

// iterate through methods of interface
while (lCountMethod > 0)
{
    hr =
pCatalogCollectionMethod->get_Item(lCountMethod - 1, (IDispatch**)
&pCatalogObjectMethod);
    if (!SUCCEEDED(hr)) goto Error;

    bstrTemp = "AutoComplete";
    bTmp = TRUE;
    vTmp = bTmp;
    hr =
pCatalogObjectMethod->put_Value(bstrTemp, vTmp);
    if (!SUCCEEDED(hr)) goto Error;

pCatalogObjectMethod->Release();
    pCatalogObjectMethod = NULL;

    lCountMethod--;
}

// save changes
hr =
pCatalogCollectionMethod->SaveChanges(&lActProp);
if (!SUCCEEDED(hr)) goto Error;

pCatalogObjectItf->Release();
pCatalogObjectItf = NULL;

lCountItf--;
}

pCatalogObjectCo->Release();
pCatalogObjectCo = NULL;

lCountCo--;
}

// save changes
hr = pCatalogCollectionCo->SaveChanges(&lActProp);
if (!SUCCEEDED(hr)) goto Error;

pCatalogCollectionApp->Release();
pCatalogCollectionApp = NULL;

pCatalogCollectionCo->Release();

pCatalogCollectionCo = NULL;

pCatalogCollectionItf->Release();
pCatalogCollectionItf = NULL;

pCatalogCollectionMethod->Release();
pCatalogCollectionMethod = NULL;

Error:
CoUninitialize();

if (!SUCCEEDED(hr))
{
    LPTSTR lpBuf;
    DWORD dwRes =
FormatMessage(FORMAT_MESSAGE_ALLOCATE_BUFFER |
FORMAT_MESSAGE_FROM_SYSTEM,
    NULL,
    hr,
    MAKELANGID(LANG_NEUTRAL, SUBLANG_DEFAULT),
    (LPTSTR) &lpBuf,
    0,
    NULL);
// _tprintf(_T("Error adding components. HRESULT:
0x%x\n%s"), hr, lpBuf);
    return TRUE;
}
else
    return FALSE;
}

Install.Resource.h
//{{NO_DEPENDENCIES}}
// Microsoft Developer Studio generated include file.
// Used by install.rc
//
#define IDD_DIALOG1 101
#define IDI_ICON1 102
#define IDR_TPCCDLL 103
#define IDD_DIALOG2 105
#define IDI_ICON2 106
#define IDR_DELIVERY 107
#define IDD_DIALOG3 108
#define IDR_LICENSE1 112
#define IDD_DIALOG4 113
#define IDR_TPCCOBJ1 117
#define IDR_TPCCSTUB1 118
#define IDR_DBLIB_DLL 122
#define IDR_ODBC_DLL 123
#define IDR_TUXEDO_APP 124
#define IDR_TUXEDO_DLL 125
#define IDR_COM_DLL 126
#define IDR_COMPS_DLL 127
#define IDR_COMALL_DLL 128
#define IDR_COMTYPLIB_DLL 129
#define BN_LOG 1001
#define ED_KEEP 1002
#define ED_THREADS 1003
#define ED_THREADS2 1004
#define IDC_PATH 1007

```



```

#define IDC_VERSION          1009
#define IDC_RESULTS         1010
#define IDC_PROGRESS1       1011
#define IDC_STATUS          1012
#define IDC_BUTTON1         1013
#define ED_MAXCONNECTION    1014
#define ED_IIS_MAX_THREAD_POOL_LIMIT 1015
#define ED_MAXDELIVERIES    1016
#define ED_WEB_SERVICE_BACKLOG_QUEUE_SIZE 1017
#define ED_IIS_THREAD_TIMEOUT 1018
#define ED_IIS_LISTEN_BACKLOG 1019
#define IDC_DBLIB           1021
#define IDC_LICENSE         1022
#define IDC_ODBC            1022
#define IDC_CONNECT_POOL   1023
#define ED_DB_SERVER        1023
#define ED_USER_CONNECT_DELAY_TIME 1024
#define ED_DB_USER_ID       1024
#define IDC_MTS             1025
#define IDC_TM_MTS          1025
#define IDC_TM_TUXEDO       1026
#define IDC_TM_NONE         1027
#define ED_DB_PASSWORD      1028
#define ED_DB_NAME          1029
#define IDC_TM_ENCINA       1030

// Next default values for new objects
//
#ifdef APSTUDIO_INVOKED
#ifndef APSTUDIO_READONLY_SYMBOLS
#define _APS_NEXT_RESOURCE_VALUE 130
#define _APS_NEXT_COMMAND_VALUE 4001
#define _APS_NEXT_CONTROL_VALUE 1031
#define _APS_NEXT_SYMED_VALUE 101
#endif
#endif

isapi_dll.dsp

# Microsoft Developer Studio Project File - Name="isapi_dll" - Package
Owner=<<4>
# Microsoft Developer Studio Generated Build File, Format Version 6.00
# ** DO NOT EDIT **

# TARGETTYPE "Win32 (x86) Dynamic-Link Library" 0x0102

CFG=isapi_dll - Win32 IceCAP
!MESSAGE This is not a valid makefile. To build this project using NMAKE,
!MESSAGE use the Export Makefile command and run
!MESSAGE
!MESSAGE NMAKE /f "isapi_dll.mak".
!MESSAGE
!MESSAGE You can specify a configuration when running NMAKE
!MESSAGE by defining the macro CFG on the command line. For example:
!MESSAGE
!MESSAGE NMAKE /f "isapi_dll.mak" CFG="isapi_dll - Win32 IceCAP"
!MESSAGE
!MESSAGE Possible choices for configuration are:
!MESSAGE
!MESSAGE "isapi_dll - Win32 Release" (based on "Win32 (x86)
Dynamic-Link Library")
!MESSAGE "isapi_dll - Win32 Debug" (based on "Win32 (x86) Dynamic-Link
Library")
!MESSAGE "isapi_dll - Win32 IceCAP" (based on "Win32 (x86)
Dynamic-Link Library")
!MESSAGE

```

```

# Begin Project
# PROP AllowPerConfigDependencies 0
# PROP Scc_ProjName ""
# PROP Scc_LocalPath ""
CPP=cl.exe
MTL=midl.exe
RSC=rc.exe

!IF "$(CFG)" == "isapi_dll - Win32 Release"

# PROP BASE Use_MFC 0
# PROP BASE Use_Debug_Libraries 0
# PROP BASE Output_Dir "Release"
# PROP BASE Intermediate_Dir "Release"
# PROP BASE Target_Dir ""
# PROP Use_MFC 0
# PROP Use_Debug_Libraries 0
# PROP Output_Dir ".\bin"
# PROP Intermediate_Dir ".\obj"
# PROP Ignore_Export_Lib 0
# PROP Target_Dir ""
# ADD BASE CPP /nologo /MT /W3 /GX /O2 /D "WIN32" /D "NDEBUG" /D
"_WINDOWS" /YX /FD /c
# ADD CPP /nologo /MD /W3 /GX /O2 /D "NDEBUG" /D "WIN32" /D
"_WINDOWS" /YX /FD /c
# ADD BASE MTL /nologo /D "NDEBUG" /mktyplib203 /o "NUL" /win32
# ADD MTL /nologo /D "NDEBUG" /mktyplib203 /o "NUL" /win32
# ADD BASE RSC /I 0x409 /d "NDEBUG"
# ADD RSC /I 0x409 /d "NDEBUG"
BSC32=bscmake.exe
# ADD BASE BSC32 /nologo
# ADD BSC32 /nologo
LINK32=link.exe
# ADD BASE LINK32 kernel32.lib user32.lib gdi32.lib winspool.lib
comdlg32.lib advapi32.lib shell32.lib ole32.lib oleaut32.lib uuid.lib odbccp32.lib
# ADD LINK32 ..\common\txnl\lib\release\rttime.lib
..\common\txnl\lib\release\spinlock.lib ..\common\txnl\lib\release\error.lib
..\common\txnl\lib\release\txnl.lib wsock32.lib kernel32.lib user32.lib
gdi32.lib winspool.lib comdlg32.lib advapi32.lib shell32.lib ole32.lib
oleaut32.lib uuid.lib odbccp32.lib /nologo /subsystem:windows /dll
/machine:I386 /nodefaultlib:"LIBCMT" /out:".bin\tpcc.dll"
# SUBTRACT LINK32 /nodefaultlib

!ELSEIF "$(CFG)" == "isapi_dll - Win32 Debug"

# PROP BASE Use_MFC 0
# PROP BASE Use_Debug_Libraries 1
# PROP BASE Output_Dir "Debug"
# PROP BASE Intermediate_Dir "Debug"
# PROP BASE Target_Dir ""
# PROP Use_MFC 0
# PROP Use_Debug_Libraries 1
# PROP Output_Dir ".\bin"
# PROP Intermediate_Dir ".\obj"
# PROP Ignore_Export_Lib 0
# PROP Target_Dir ""
# ADD BASE CPP /nologo /MTd /W3 /Gm /GX /ZI /Od /D "WIN32" /D
"_DEBUG" /D "_WINDOWS" /YX /FD /c
# ADD CPP /nologo /MDd /W3 /GX /ZI /Od /D "_DEBUG" /D "WIN32" /D
"_WINDOWS" /FR /YX /FD /c
# ADD BASE MTL /nologo /D "_DEBUG" /mktyplib203 /o "NUL" /win32
# ADD MTL /nologo /D "_DEBUG" /mktyplib203 /o "NUL" /win32
# ADD BASE RSC /I 0x409 /d "_DEBUG"
# ADD RSC /I 0x409 /d "_DEBUG"
BSC32=bscmake.exe
# ADD BASE BSC32 /nologo
# ADD BSC32 /nologo

```

```

LINK32=link.exe
# ADD BASE LINK32 kernel32.lib user32.lib gdi32.lib winspool.lib
comdlg32.lib advapi32.lib shell32.lib ole32.lib oleaut32.lib uuid.lib odbcc32.lib
odbccp32.lib /nologo /subsystem:windows /dll /debug /machine:I386
/pdbtype:sept
# ADD LINK32 ..\common\txnlog\lib\debug\rtetime.lib
..\common\txnlog\lib\debug\spinlock.lib ..\common\txnlog\lib\debug\error.lib
..\common\txnlog\lib\debug\txnlog.lib wsock32.lib kernel32.lib user32.lib
gdi32.lib winspool.lib comdlg32.lib advapi32.lib shell32.lib ole32.lib
oleaut32.lib uuid.lib odbcc32.lib odbccp32.lib /nologo /subsystem:windows /dll
/debug /machine:I386 /nodefaultlib:"LIBCMDT" /out:".bin\tpcc.dll"
/pdbtype:sept
# SUBTRACT LINK32 /profile /pdb:none /nodefaultlib

!ELSEIF "$(CFG)" == "isapi_dll - Win32 IceCAP"

# PROP BASE Use_MFC 0
# PROP BASE Use_Debug_Libraries 1
# PROP BASE Output_Dir "isapi_dll"
# PROP BASE Intermediate_Dir "isapi_dll"
# PROP BASE Ignore_Export_Lib 0
# PROP BASE Target_Dir ""
# PROP Use_MFC 0
# PROP Use_Debug_Libraries 1
# PROP Output_Dir ".\bin"
# PROP Intermediate_Dir ".\obj"
# PROP Ignore_Export_Lib 0
# PROP Target_Dir ""
# ADD BASE CPP /nologo /MDd /W3 /GX /Zi /Od /D "_DEBUG" /D
"WIN32" /D "_WINDOWS" /FR /YX /FD /Gh /c
# ADD CPP /nologo /MD /W3 /GX /Zi /O2 /D "NDEBUG" /D "ICECAP" /D
"WIN32" /D "_WINDOWS" /FR /YX /FD /Gh /c
# ADD BASE MTL /nologo /D "_DEBUG" /mktyplib203 /o "NUL" /win32
# ADD MTL /nologo /D "_DEBUG" /mktyplib203 /o "NUL" /win32
# ADD BASE RSC /I 0x409 /d "_DEBUG"
# ADD RSC /I 0x409 /d "_DEBUG"
BSC32=bscmake.exe
# ADD BASE BSC32 /nologo
# ADD BSC32 /nologo
LINK32=link.exe
# ADD BASE LINK32 kernel32.lib user32.lib gdi32.lib winspool.lib
comdlg32.lib advapi32.lib shell32.lib ole32.lib oleaut32.lib uuid.lib odbcc32.lib
odbccp32.lib /nologo /subsystem:windows /dll /debug /machine:I386
/out:".bin\tpcc.dll" /pdbtype:sept
# SUBTRACT BASE LINK32 /profile /pdb:none
# ADD LINK32 icap.lib ..\common\txnlog\lib\release\rtetime.lib
..\common\txnlog\lib\release\spinlock.lib ..\common\txnlog\lib\release\error.lib
..\common\txnlog\lib\release\txnlog.lib wsock32.lib kernel32.lib user32.lib
gdi32.lib winspool.lib comdlg32.lib advapi32.lib shell32.lib ole32.lib
oleaut32.lib uuid.lib odbcc32.lib odbccp32.lib /nologo /subsystem:windows /dll
/debug /machine:I386 /out:".bin\tpcc.dll" /pdbtype:sept
# SUBTRACT LINK32 /profile /pdb:none /map

!ENDIF

# Begin Target

# Name "isapi_dll - Win32 Release"
# Name "isapi_dll - Win32 Debug"
# Name "isapi_dll - Win32 IceCAP"
# Begin Group "Source"

# PROP Default_Filter "*.cpp, *.def, *.rc"
# Begin Source File

SOURCE=. \src\tpcc.cpp
# End Source File
# Begin Source File

```

```

SOURCE=. \src\tpcc.def
# End Source File
# Begin Source File

SOURCE=. \src\tpcc.rc
# End Source File
# End Group
# Begin Group "Header Files"

# PROP Default_Filter "*.h, *.hpp"
# Begin Source File

SOURCE=. \common\src\error.h
# End Source File
# Begin Source File

SOURCE=. \common\src\ReadRegistry.h
# End Source File
# Begin Source File

SOURCE=. \src\tpcc.h
# End Source File
# Begin Source File

SOURCE=. \db_dblib_dll\src\tpcc_dblib.h
# End Source File
# Begin Source File

SOURCE=. \db_odbc_dll\src\tpcc_odbc.h
# End Source File
# Begin Source File

SOURCE=. \tm_tuxedo_dll\src\tpcc_tux.h
# End Source File
# Begin Source File

SOURCE=. \common\src\trans.h
# End Source File
# Begin Source File

SOURCE=. \common\src\txn_base.h
# End Source File
# End Group
# End Target
# End Project

Isapi_dll_Resource.h

//{{NO_DEPENDENCIES}}
// Microsoft Developer Studio generated include file.
// Used by tpcc.rc
//
#define IDD_DIALOG1 101

// Next default values for new objects
//
#ifdef APSTUDIO_INVOKED
#ifndef APSTUDIO_READONLY_SYMBOLS
#define _APS_NEXT_RESOURCE_VALUE 102
#define _APS_NEXT_COMMAND_VALUE 40001
#define _APS_NEXT_CONTROL_VALUE 1000
#define _APS_NEXT_SYMED_VALUE 101
#endif
#endif

```

## license.txt

### END-USER LICENSE AGREEMENT FOR MICROSOFT TPC-C BENCHMARK KIT

**IMPORTANT READ CAREFULLY:** This Microsoft End-User License Agreement (EULA) is a legal agreement between you (either an individual or a single entity) and Microsoft Corporation for the Microsoft software product identified above, which includes computer software and may include associated media, printed materials, and online or electronic documentation (SOFTWARE PRODUCT). By installing, copying, or otherwise using the SOFTWARE PRODUCT, you agree to be bound by the terms of this EULA. If you do not agree to the terms of this Agreement, you are not authorized to use the SOFTWARE PRODUCT.

The SOFTWARE PRODUCT is protected by copyright laws and international copyright treaties, as well as other intellectual property laws and treaties. The SOFTWARE PRODUCT is licensed, not sold.

1. **GRANT OF LICENSE.** This EULA grants you the following rights:

Use. Microsoft grants to you the right to install and use copies of the SOFTWARE PRODUCT only in conjunction with validly licensed copies of Microsoft SQL Server and/or Microsoft Windows NT Server software. You may also make copies of the SOFTWARE PRODUCT for backup and archival purposes.

2. **RESTRICTIONS.**

--You must maintain all copyright notices on all copies of the SOFTWARE PRODUCT.

--You may not distribute copies of the SOFTWARE PRODUCT to third parties.

--You may not rent, lease or lend the SOFTWARE PRODUCT.

--You may not use the SOFTWARE PRODUCT or any derivative works thereof to internally test database management system software other than Microsoft SQL Server and/or operating system software other than Microsoft Windows NT.

-- You may not disclose the results of any benchmark tests using the SOFTWARE PRODUCT to any third party without Microsoft's prior written approval.

-- You may not disclose or provide the SOFTWARE PRODUCT or any derivative works thereof, or any information relating to the SOFTWARE PRODUCT (including the existence of the SOFTWARE PRODUCT or the results of use and testing or benchmark testing), to any third party without Microsoft's written permission.

3. **TERMINATION.** Without prejudice to any other rights, Microsoft may terminate this EULA if you fail to comply with the terms and conditions of this EULA. In such event, you must destroy all copies of the SOFTWARE PRODUCT.

4. **COPYRIGHT.** All title and copyrights in and to the SOFTWARE PRODUCT and any copies thereof are owned by Microsoft or its suppliers. All title and intellectual property rights in and to the content which may be accessed through use of the SOFTWARE PRODUCT is the property of the respective content owner and may be protected by applicable copyright or other intellectual property laws and treaties. This EULA grants you no rights to use such content.

5. **UPGRADES.** If the SOFTWARE PRODUCT is labeled as

an upgrade, you must be properly licensed to use a product identified by Microsoft as being eligible for the upgrade in order to use the SOFTWARE PRODUCT. A SOFTWARE PRODUCT labeled as an upgrade replaces and/or supplements the product that formed the basis for your eligibility for the upgrade. You may use the resulting upgraded product only in accordance with the terms of this EULA.

6. **U.S. GOVERNMENT RESTRICTED RIGHTS.**

The SOFTWARE PRODUCT is provided with RESTRICTED RIGHTS. Use, duplication, or disclosure by the Government is subject to restrictions as set forth in subparagraph (c)(1)(ii) of the Rights in Technical Data and Computer Software clause at DFARS 252.227-7013 or subparagraphs (c)(1) and (2) of the Commercial Computer Software Restricted Rights at 48 CFR 52.227-19, as applicable. Manufacturer is Microsoft Corporation/One Microsoft Way/Redmond, WA 98052-6399.

7. **EXPORT RESTRICTIONS.**

You agree that you will not export or re-export the SOFTWARE PRODUCT to any country, person, entity or end user subject to U.S.A. export restrictions. Restricted countries currently include, but are not necessarily limited to Cuba, Iran, Iraq, Libya, North Korea, Syria, and the Federal Republic of Yugoslavia (Serbia and Montenegro, U.N. Protected Areas and areas of Republic of Bosnia and Herzegovina under the control of Bosnian Serb forces). You warrant and represent that neither the U.S.A. Bureau of Export Administration nor any other federal agency has suspended, revoked or denied your export privileges.

8. **NO WARRANTY. ANY USE OF THE SOFTWARE PRODUCT IS AT YOUR OWN RISK. THE SOFTWARE PRODUCT IS PROVIDED FOR USE ONLY WITH MICROSOFT SQL SERVER AND/OR MICROSOFT WINDOWS NT SERVER SOFTWARE. TO THE MAXIMUM EXTENT PERMITTED BY APPLICABLE LAW, MICROSOFT AND ITS SUPPLIERS DISCLAIM ALL WARRANTIES AND CONDITIONS, EITHER EXPRESS OR IMPLIED, INCLUDING, BUT NOT LIMITED TO, IMPLIED WARRANTIES OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE, AND NONINFRINGEMENT.**

9. **NO LIABILITY FOR CONSEQUENTIAL DAMAGES. TO THE MAXIMUM EXTENT PERMITTED BY APPLICABLE LAW, IN NO EVENT SHALL MICROSOFT OR ITS SUPPLIERS BE LIABLE FOR ANY SPECIAL, INCIDENTAL, INDIRECT, OR CONSEQUENTIAL DAMAGES WHATSOEVER (INCLUDING, WITHOUT LIMITATION, DAMAGES FOR LOSS OF BUSINESS PROFITS, BUSINESS INTERRUPTION, LOSS OF BUSINESS INFORMATION, OR ANY OTHER PECUNIARY LOSS) ARISING OUT OF THE USE OF OR INABILITY TO USE THE SOFTWARE PRODUCT, EVEN IF MICROSOFT HAS BEEN ADVISED OF THE POSSIBILITY OF SUCH DAMAGES. BECAUSE SOME STATES AND JURISDICTIONS DO NOT ALLOW THE EXCLUSION OR LIMITATION OF LIABILITY FOR CONSEQUENTIAL OR INCIDENTAL DAMAGES, THE ABOVE LIMITATION MAY NOT APPLY TO YOU.**

10. **LIMITATION OF LIABILITY. MICROSOFT'S ENTIRE LIABILITY AND YOUR EXCLUSIVE REMEDY UNDER THIS EULA SHALL NOT EXCEED FIVE DOLLARS (US\$5.00).**

11. **MISCELLANEOUS**

This EULA is governed by the laws of the State of Washington, U.S.A. Should you have any questions concerning this EULA, or if you desire to contact Microsoft for any reason, please contact the Microsoft subsidiary serving your country, or write: Microsoft Sales Information Center/One Microsoft Way/Redmond, WA 98052-6399.

Si vous avez acquis votre produit Microsoft au CANADA, la garantie limitée suivante vous concerne:

**EXCLUSION DE GARANTIES.** Microsoft renonce entièrement ... toute garantie pour le LOGICIEL. Le LOGICIEL et toute autre documentation s'y rapportant sont fournis ® comme tels sans aucune garantie quelle qu'elle soit, expresse ou implicite, y compris, mais ne se limitant pas aux garanties implicites de la qualité, marchande ou un usage particulier. Le risque total d'écoulement de l'utilisation ou de la performance du LOGICIEL est entre vos mains.

**RESPONSABILITÉ LIMITÉE.** La seule obligation de Microsoft et votre recours exclusif concernant ce contrat n'excéderont pas cinq dollars (US\$5.00).

**ABSENCE DE RESPONSABILITÉ POUR LES DOMMAGES INDIRECTS.** Microsoft ou ses fournisseurs ne pourront être tenus responsables en aucune circonstance de tout dommage quel qu'il soit (y compris mais non de façon limitative les dommages directs ou indirects causés par la perte de bénéfices commerciaux, l'interruption des affaires, la perte d'information commerciale ou toute autre perte pécuniaire) résultant de l'utilisation ou de l'impossibilité d'utilisation de ce produit, et ce, même si la société, Microsoft a, à l'occasion, avisé de l'existence de tels dommages. Certains États/juridictions ne permettent pas l'exclusion ou la limitation de responsabilité relative aux dommages indirects ou consécutifs, et la limitation ci-dessus peut ne pas s'appliquer ... votre regard. La présente Convention est régie par les lois de la province d'Ontario, Canada. Chacune des parties ... la présente reconnaît irrévocablement la compétence des tribunaux de la province d'Ontario et consent ... instituer tout litige qui pourrait découler de la présente auprès des tribunaux situés dans le district judiciaire de York, province d'Ontario. Au cas où vous auriez des questions concernant cette licence ou que vous désiriez vous mettre en rapport avec Microsoft pour quelque raison que ce soit, veuillez contacter la succursale Microsoft desservant votre pays, dont l'adresse est fournie dans ce produit, ou écrire ... : Microsoft Customer Sales and Service, One Microsoft Way, Redmond, Washington 98052 6399.

**methods.h**

```

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

```

```

enum COMPONENT_ERROR
{
    ERR_MISSING_REGISTRY_ENTRIES = 1,
    ERR_LOADDLL_FAILED,
    ERR_GETPROCADDR_FAILED,
    ERR_UNKNOWN_DB_PROTOCOL
};

class CCOMPONENT_ERR : public CBaseErr
{
public:
    CCOMPONENT_ERR(COMPONENT_ERROR Err)
    {
        m_Error = Err;
        m_szTextDetail = NULL;
        m_SystemErr = 0;
        m_szErrorText = NULL;
    };

    CCOMPONENT_ERR(COMPONENT_ERROR Err,
char *szTextDetail, DWORD dwSystemErr)
    {
        m_Error = Err;
        m_szTextDetail = new
char[strlen(szTextDetail)+1];
        strcpy(m_szTextDetail, szTextDetail);
        m_SystemErr = dwSystemErr;
        m_szErrorText = NULL;
    };

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

    COMPONENT_ERROR      m_Error;
    char                  *m_szTextDetail;
    char                  *m_szErrorText;
    DWORD                 m_SystemErr;

    int ErrorType() {return ERR_TYPE_COMPONENT;};
    int ErrorNum() {return m_Error;};
    char *ErrorText();
};

static void WriteMessageToEventLog(LPTSTR lpszMsg);

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

```

```

        CTPCC_Common();
        ~CTPCC_Common();

// ITPCC
public:
    HRESULT __stdcall NewOrder(          VARIANT txn_in,
    VARIANT* txn_out);
    HRESULT __stdcall Payment(          VARIANT txn_in,
    VARIANT* txn_out);
    HRESULT __stdcall Delivery(         VARIANT txn_in,
    VARIANT* txn_out) {return E_NOTIMPL;}
    HRESULT __stdcall StockLevel(VARIANT txn_in, VARIANT*
    txn_out);
    HRESULT __stdcall OrderStatus(      VARIANT txn_in,
    VARIANT* txn_out);

    HRESULT __stdcall CallSetComplete();

// IObjectControl
    STDMETHODIMP_(BOOL) CanBePooled() { return
    m_bCanBePooled; }
    STDMETHODIMP Activate() { return S_OK; } // we don't
    support COM Services transactions (no enlistment)
    STDMETHODIMP_(void) Deactivate() { /* nothing to do */ }

// IObjectConstruct
    STDMETHODIMP Construct(IDispatch * pUnk);

// helper methods
private:
    BOOL          m_bCanBePooled;
    CTPCC_BASE    *m_pTxn;

    struct COM_DATA
    {
        int retval;
        int error;
        union
        {
            NEW_ORDER_DATA
            PAYMENT_DATA          Payment;
            DELIVERY_DATA        Delivery;
            STOCK_LEVEL_DATA     StockLevel;
            ORDER_STATUS_DATA    OrderStatus;
        };
    };

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

    BEGIN_COM_MAP(CTPCC)
        COM_INTERFACE_ENTRY2(IUnknown, CComObjectRootEx)
        COM_INTERFACE_ENTRY_CHAIN(CTPCC_Common)
    END_COM_MAP()

};

// CNewOrder
class CNewOrder :
    public CTPCC_Common,
    public CComCoClass<CNewOrder, &CLSID_NewOrder>
{
public:
    DECLARE_REGISTRY_RESOURCEID(IDR_NEWORDER)

    BEGIN_COM_MAP(CNewOrder)
        COM_INTERFACE_ENTRY2(IUnknown, CComObjectRootEx)
        COM_INTERFACE_ENTRY_CHAIN(CTPCC_Common)
    END_COM_MAP()

// ITPCC
public:
    HRESULT __stdcall NewOrder(          VARIANT txn_in,
    VARIANT* txn_out) {return E_NOTIMPL;}
    HRESULT __stdcall Payment(          VARIANT txn_in,
    VARIANT* txn_out) {return E_NOTIMPL;}
    HRESULT __stdcall StockLevel(VARIANT txn_in, VARIANT*
    txn_out) {return E_NOTIMPL;}
    HRESULT __stdcall OrderStatus(      VARIANT txn_in,
    VARIANT* txn_out) {return E_NOTIMPL;}
};

// COrderStatus
class COrderStatus :
    public CTPCC_Common,
    public CComCoClass<COrderStatus, &CLSID_OrderStatus>
{
public:
    DECLARE_REGISTRY_RESOURCEID(IDR_ORDERSTATUS)

    BEGIN_COM_MAP(COrderStatus)
        COM_INTERFACE_ENTRY2(IUnknown, CComObjectRootEx)
        COM_INTERFACE_ENTRY_CHAIN(CTPCC_Common)
    END_COM_MAP()

// ITPCC
public:
    HRESULT __stdcall NewOrder(          VARIANT txn_in,
    VARIANT* txn_out) {return E_NOTIMPL;}
    HRESULT __stdcall Payment(          VARIANT txn_in,
    VARIANT* txn_out) {return E_NOTIMPL;}
    HRESULT __stdcall StockLevel(VARIANT txn_in, VARIANT*
    txn_out) {return E_NOTIMPL;}
    HRESULT __stdcall OrderStatus(      VARIANT txn_in,
    VARIANT* txn_out) {return E_NOTIMPL;}
};

// CPayment
class CPayment :
    public CTPCC_Common,
    public CComCoClass<CPayment, &CLSID_Payment>
{
public:
    DECLARE_REGISTRY_RESOURCEID(IDR_PAYMENT)

    BEGIN_COM_MAP(CPayment)
        COM_INTERFACE_ENTRY2(IUnknown, CComObjectRootEx)
        COM_INTERFACE_ENTRY_CHAIN(CTPCC_Common)
    END_COM_MAP()

// ITPCC

```

```

public:
    HRESULT __stdcall NewOrder(          VARIANT txn_in,
    VARIANT* txn_out) {return E_NOTIMPL;}
    //    HRESULT __stdcall Payment(      VARIANT txn_in,
    VARIANT* txn_out) {return E_NOTIMPL;}
    HRESULT __stdcall StockLevel(VARIANT txn_in, VARIANT*
    txn_out) {return E_NOTIMPL;}
    HRESULT __stdcall OrderStatus(      VARIANT txn_in,
    VARIANT* txn_out) {return E_NOTIMPL;}
};

////////////////////////////////////
// CStockLevel
class CStockLevel :
    public CTPCC_Common,
    public CComCoClass<CStockLevel, &CLSID_StockLevel>
{
public:
    DECLARE_REGISTRY_RESOURCEID(IDR_STOCKLEVEL)

    BEGIN_COM_MAP(CStockLevel)
        COM_INTERFACE_ENTRY2(IUnknown, CComObjectRootEx)
        COM_INTERFACE_ENTRY_CHAIN(CTPCC_Common)
    END_COM_MAP()

    // ITPCC
public:
    HRESULT __stdcall NewOrder(          VARIANT txn_in,
    VARIANT* txn_out) {return E_NOTIMPL;}
    HRESULT __stdcall Payment(          VARIANT txn_in,
    VARIANT* txn_out) {return E_NOTIMPL;}
    //    HRESULT __stdcall StockLevel(VARIANT txn_in, VARIANT*
    txn_out) {return E_NOTIMPL;}
    HRESULT __stdcall OrderStatus(      VARIANT txn_in,
    VARIANT* txn_out) {return E_NOTIMPL;}
};

```

## Null-txns.sql

```

-- File:  NULL-TXNS.SQL
-- Microsoft TPC-C Benchmark Kit Ver. 4.41
-- Copyright Microsoft, 2001
--
-- Purpose: This script will create stored procs which accept the same paramete-
rs and
-- return correctly formed results sets to match the standard TPC-C stored
-- procs. Of course, the advantage is that these stored procs place almost
-- no load on SQL Server and do not require a database.
--
-- The purpose of these stored procs is to size and test the web
client without
-- the need of a fully scaled database.
--
drop proc tpcc_delivery
drop proc tpcc_neworder
drop proc tpcc_orderstatus
drop proc tpcc_payment
drop proc tpcc_stocklevel
drop proc tpcc_version
drop table order_line_null
go

create proc tpcc_delivery      @w_id      int,
                              @o_carrier_id  smallint

```

```

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

declare @delaytime varchar(30)

-- uniform random delay of 0 - 1 second; avg = 0.50
select @delaytime = '00:00:0' + cast((cast((rand()*1.00) as decimal(4,3)) as
char(5)))
waitfor delay @delaytime

select 3001, 3001, 3001, 3001, 3001, 3001, 3001, 3001, 3001, 3001, 3001

GO

create proc tpcc_neworder

        @w_id      int,
        @d_id      tinyint,
        @c_id      int,
        @o_ol_cnt  tinyint,
        @o_all_local tinyint,
        @i_id1     int = 0,
        @i_id2     int = 0,
        @i_id3     int = 0,
        @i_id4     int = 0,
        @i_id5     int = 0,
        @i_id6     int = 0,
        @i_id7     int = 0,
        @i_id8     int = 0,
        @i_id9     int = 0,
        @i_id10    int = 0,
        @i_id11    int = 0,
        @i_id12    int = 0,
        @i_id13    int = 0,
        @i_id14    int = 0,
        @i_id15    int = 0,

        @s_w_id1  int = 0, @ol_qty1  smallint = 0,
        @s_w_id2  int = 0, @ol_qty2  smallint = 0,
        @s_w_id3  int = 0, @ol_qty3  smallint = 0,
        @s_w_id4  int = 0, @ol_qty4  smallint = 0,
        @s_w_id5  int = 0, @ol_qty5  smallint = 0,
        @s_w_id6  int = 0, @ol_qty6  smallint = 0,
        @s_w_id7  int = 0, @ol_qty7  smallint = 0,
        @s_w_id8  int = 0, @ol_qty8  smallint = 0,
        @s_w_id9  int = 0, @ol_qty9  smallint = 0,
        @s_w_id10 int = 0, @ol_qty10 smallint = 0,
        @s_w_id11 int = 0, @ol_qty11 smallint = 0,
        @s_w_id12 int = 0, @ol_qty12 smallint = 0,
        @s_w_id13 int = 0, @ol_qty13 smallint = 0,
        @s_w_id14 int = 0, @ol_qty14 smallint = 0,
        @s_w_id15 int = 0, @ol_qty15 smallint = 0

as

```

```

declare @w_tax numeric(4,4),
        @d_tax numeric(4,4),
        @c_last char(16),
        @c_credit char(2),
        @c_discount numeric(4,4),
        @i_price numeric(5,2),
        @i_name char(24),
        @o_entry_d datetime,
        @li_no int,
        @o_id int,
        @commit_flag tinyint,
        @li_id int,
        @li_qty smallint

declare @delaytime varchar(30)

begin
-- uniform random delay of 0 - 0.6 second; avg = 0.3
select @delaytime = '00:00:0' + cast(cast((rand()*0.60) as decimal(4,3)) as
char(5))
waitfor delay @delaytime

-- process orderlines

select @commit_flag = 1, @li_no = 0

while (@li_no < @o_ol_cnt)
begin

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

select @li_no = @li_no + 1
select @i_price = 23.45, @li_qty = @li_no

if (@li_id = 999999)
begin
select ',0,',0,0
select @commit_flag = 0
end

else
begin
select 'Item Name blah',17,'G', @i_price, @i_price *
@li_qty

end

end

-- return order data to client

select @w_tax = 0.1234,
        @d_tax = 0.0987,

```

```

        @o_id = 3001,
        @c_last = 'BAROUGHTABLE',
        @c_discount = 0.2198,
        @c_credit = 'GC',
        @o_entry_d = getdate()

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

end

GO

create proc tpcc_orderstatus @w_id int,
                             @d_id tinyint,
                             @c_id int,
                             @c_last char(16) = ""

as

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

declare @delaytime varchar(30)

-- uniform random delay of 0 - 0.2 second; avg = 0.1
select @delaytime = '00:00:0' + cast(cast((rand()*0.20) as decimal(4,3)) as
char(5))
waitfor delay @delaytime

select
        @c_id = 113,
        @c_balance = -10.00,
        @c_first = '8YCodgytqCj8',
        @c_middle = 'OE',
        @c_last = 'OUGHTOUGHTABLE',
        @o_id = 3456,
        @o_entry_d = getdate(),
        @o_carrier_id = 1

select @ol_cnt = (rand() * 11) + 5
SET ROWCOUNT @ol_cnt

select
        ol_supply_w_id,
        ol_i_id,
        ol_quantity,
        ol_amount,
        ol_delivery_d
from order_line_null

select @c_id,
        @c_last,
        @c_first,
        @c_middle,

```

```

        @o_entry_d,
        @o_carrier_id,
        @c_balance,
        @o_id

GO

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

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

declare @delaytime varchar(30)

-- uniform random delay of 0 - 0.3 second; avg = 0.15
select @delaytime = '00:00:0' + cast(cast((rand()*0.30) as decimal(4,3)) as
char(5))
waitfor delay @delaytime

select @screen_data = ""

-- get customer info and update balances

select
        @d_street_1 = 'rqSHHakqyV',

```

```

        @d_street_2 = 'zZ98nW3BR2s',
        @d_city     = 'ArNr4GNFV9',
        @d_state    = 'aV',
        @d_zip      = '453511111'

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

select
        @w_street_1 = 'rqSHHakqyV',
        @w_street_2 = 'zZ98nW3BR2s',
        @w_city     = 'ArNr4GNFV9',
        @w_state    = 'aV',
        @w_zip      = '453511111'

select
        @c_id       = 123,
        @c_balance  = -10000.00,
        @c_first    = 'KmR03Xureb',
        @c_middle   = 'OE',
        @c_last     = 'BAROUGHTBAR',
        @c_street_1 = 'QpGdOHjv8mR9vNI8V',
        @c_street_2 = 'dzKcCObBqbC3yu',
        @c_city     = 'zAKZXdC037FQxqj',
        @c_state    = 'QA',
        @c_zip      = '700311111',
        @c_phone    = '2967264064528555',
        @c_credit   = 'GC',
        @c_credit_lim = 50000.00,
        @c_discount = 0.3069,
        @c_since    = getdate(),
        @datetime   = getdate()

-- return data to client

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

GO

create proc tpcc_stocklevel @w_id      int,

```



```

                                @d_id      tinyint,
                                @threshhold smallint
as
declare @delaytime varchar(30)

-- uniform random delay of 0 - 3.6 second; avg = 1.8
select @delaytime = '00:00:0' + cast(cast((rand()*3.60) as decimal(4,3)) as
char(5))
waitfor delay @delaytime

select 49

GO

create proc tpcc_version
as
declare @version char(8)

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

GO

CREATE TABLE order_line_null (
    [ol_i_id] [int] NOT NULL ,
    [ol_supply_w_id] [int] NOT NULL ,
    [ol_delivery_d] [datetime] NOT NULL ,
    [ol_quantity] [smallint] NOT NULL ,
    [ol_amount] [numeric](6, 2) NOT NULL
) ON [PRIMARY]
GO

insert into order_line_null values ( 101, 1, getdate(), 1, 123.45 )
insert into order_line_null values ( 102, 1, getdate(), 2, 123.45 )
insert into order_line_null values ( 103, 1, getdate(), 3, 123.45 )
insert into order_line_null values ( 104, 1, getdate(), 4, 123.45 )
insert into order_line_null values ( 105, 1, getdate(), 5, 123.45 )
insert into order_line_null values ( 106, 1, getdate(), 1, 123.45 )
insert into order_line_null values ( 107, 1, getdate(), 2, 123.45 )
insert into order_line_null values ( 108, 1, getdate(), 3, 123.45 )
insert into order_line_null values ( 109, 1, getdate(), 4, 123.45 )
insert into order_line_null values ( 110, 1, getdate(), 5, 123.45 )
insert into order_line_null values ( 111, 1, getdate(), 1, 123.45 )
insert into order_line_null values ( 112, 1, getdate(), 2, 123.45 )
insert into order_line_null values ( 113, 1, getdate(), 3, 123.45 )
insert into order_line_null values ( 114, 1, getdate(), 4, 123.45 )
insert into order_line_null values ( 115, 1, getdate(), 5, 123.45 )

GO

```

## ReadRegistry.cpp

```

/*      FILE:          READREGISTRY.CPP
 *
 *      4.20.000
 *
 *      All Rights Reserved
 *
 *
 *      Copyright Microsoft, 1999
 *
 *      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. There 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;

    RegCloseKey(hKey);

    return FALSE;
}

```

## 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];
} TPCCREGISTRYDATA, *PTPCCREGISTRYDATA;

BOOL ReadTPCCRegistrySettings( TPCCREGISTRYDATA *pReg );

```

## restore.vbs

```

'-----
'--- FILE:    RESTORE.VBS
'---         Microsoft TPC-C Kit Ver. 4.41
'---         Copyright Microsoft, 2001
'---         All Rights Reserved
'---
'--- PURPOSE: This module executes a database restore
'---
'-----
'--- open an windows scripting object
'-----
set WshShell = CreateObject("WScript.Shell")
'-----
'--- display a banner message
'-----
wScript.Echo
"*****"
*****"
wScript.Echo "*"
wScript.Echo "*" Microsoft TPC-C V3 Benchmark Kit Ver. 4.41 - Restore
*"
wScript.Echo "*"
wScript.Echo
"*****"
*****"
'-----
'--- define function to check for any error messages
'-----
Function CheckSQLOutput(SQL_Out)
    ErrorFlag = 0
    Set SQL_fso = CreateObject("Scripting.FileSystemObject")
    Set SQL_Out_File = SQL_fso.OpenTextFile(SQL_Out,1)
    Do While SQL_Out_File.AtEndOfStream <> True
        SQL_Line = SQL_Out_File.ReadLine
        'first check to see if the output contains a message about
the login password
        If InStr(SQL_Line, "Login failed") Then
            'display the messages and get out of here
            ErrorFlag = 1
            wScript.Echo "The login for userid 'sa' failed."
            wScript.Echo "Please restart SETUP with the
correct password."
        Else

```

```

                If InStr(SQL_Line, "Msg") Then
'find out where the "Msg" indicator is in the line
LocMsg = InStr(SQL_Line, "Msg")
'find out where the comma is after the error code
LocComma = InStr(SQL_Line, ",")
'now isolate the error code
ErrorCode = Mid(SQL_Line, (LocMsg + 4), (LocComma -
(LocMsg + 4)))
                Select Case ErrorCode
                    Case "15069"
                        ErrorFlag = 1
                        wScript.Echo "One or more users are using the
database."
                        wScript.Echo "The requested operation cannot be
completed."
                    Case "3201"
                        ErrorFlag = 1
                        wScript.Echo "Cannot open backup device."
                        wScript.Echo "Device error or device off-line."
                        wScript.Echo "SQL Server Error 3201."
                        wScript.Echo "See the SQL Server error log for more
details."
                End Select
            End If
        End If
    Loop
        SQL_Out_File.Close
        CheckSQLOutput = ErrorFlag
End Function
'-----
'--- end function
'-----
'--- open a file system object
'-----
Set fs = CreateObject("Scripting.FileSystemObject")
'-----
'--- grab the current directory value
'-----
SetupDirectory = WshShell.CurrentDirectory & "\\"
'-----
'--- now calculate the other directories
'-----
ScriptDirectory = SetupDirectory & "SCRIPTS\"
LogDirectory = SetupDirectory & "LOGS\"
'-----
'--- check to see if the user passed in the server name and sa password
'-----
Set objArgs = wScript.Arguments
Select Case objArgs.Length
    Case 0
        '-----
        '--- the user did not pass us anything
        '--- grab the Computer Name from Windows
        '-----
        ServerName =
WshShell.ExpandEnvironmentStrings("%COMPUTERNAME%")
        '-----
        '--- prompt the user to confirm the server name
        '-----
        ServerName = InputBox("Enter your server
name",Test_Name,ServerName)
        Do While ServerName = ""
            rc = MsgBox ("You must enter a valid server
name.",21)
            If rc = 2 Then
                wScript.Echo ""

```

```

                wScript.Echo "TPC-C Setup
cancelled by user."
                wScript.Quit
            End If
            ServerName =
WshShell.ExpandEnvironmentStrings("%COMPUTERNAME%")
            ServerName = InputBox("Enter your server
name", "Database Server Name", ServerName)
        Loop
        '-----
        '--- prompt the user for the sa password
        '-----
        saPassword = InputBox("Enter the 'sa'
password",Test_Name)
        Case 1
            '-----
            '--- the user passed 1 argument, so assume it is the server
name
            '-----
            ServerName = objArgs(0)
            '-----
            '--- prompt the user for the sa password
            '-----
            saPassword = InputBox("Enter the 'sa'
password",Test_Name)
        Case 2
            '-----
            '--- the user passed 2 arguments, so try to use them
            '-----
            ServerName = objArgs(0)
            saPassword = objArgs(1)
        End Select
        '-----
        '--- now that we have all the variables filled in, let's get to work
        '-----
        If fs.FileExists(LogDirectory & "restore.log") Then
            fs.DeleteFile LogDirectory & "restore.log"
        End If
        Wscript.Echo "Restoring database from backup..."
        Set oExec = WshShell.Exec("osql -Usa -P" & saPassword & " -S" &
ServerName & " -e -i" & ScriptDirectory & NumberWarehouses &
".war\database\restore.sql -o" & LogDirectory & "restore.log")
        Do While oExec.Status = 0
            wScript.Sleep 100
        Loop
        rc = CheckSQLOutput(LogDirectory & "restore.log")
        If rc <> 0 Then
            wScript.Quit
        End If
        wScript.Echo ""
        wScript.Echo
        "*****"
        "*****"
        wScript.Echo "*"
        wScript.Echo "*" Microsoft TPC-C Benchmark Kit Ver. 4.41
        "*"
        wScript.Echo "*"
        wScript.Echo "*" Database restore complete.
        wScript.Echo "*"
        wScript.Echo
        "*****"
        "*****"

```

**runsqlcfg.vbs**

```

-----
'--- FILE:   RESTORE.VBS
'---       Microsoft TPC-C Kit Ver. 4.41
'---       Copyright Microsoft, 2001
'---       All Rights Reserved
'---
'--- PURPOSE: This module executes a database restore
'---
-----
'--- open an windows scripting object
'---
set WshShell = CreateObject("WScript.Shell")
'---
'--- display a banner message
'---
wScript.Echo
*****
wScript.Echo "*"
wScript.Echo "* Microsoft TPC-C V3 Benchmark Kit Ver. 4.41 - Configure
SQL Server      *"
wScript.Echo "*"
wScript.Echo
*****
'---
'--- define function to check for any error messages
'---
Function CheckSQLOutput(SQL_Out)
    ErrorFlag = 0
    Set SQL_fso = CreateObject("Scripting.FileSystemObject")
    Set SQL_Out_File = SQL_fso.OpenTextFile(SQL_Out,1)
    Do While SQL_Out_File.AtEndOfStream <> True
        SQL_Line = SQL_Out_File.ReadLine
        'first check to see if the output contains a message about
the login password
        If InStr(SQL_Line, "Login failed") Then
            'display the messages and get out of here
            ErrorFlag = 1
            Wscript.Echo "The login for userid 'sa'
failed."
            Wscript.Echo "Please restart SETUP with the
correct password."
        End If
    Loop
    SQL_Out_File.Close
    CheckSQLOutput = ErrorFlag
End Function
'---
'--- end function
'---
'--- open a file system object
'---
Set fs = CreateObject("Scripting.FileSystemObject")
'---
'--- grab the current directory value
'---
SetupDirectory = WshShell.CurrentDirectory & "\"
'---
'--- now calculate the other directories
'---
ScriptDirectory = SetupDirectory & "SCRIPTS\"
LogDirectory = SetupDirectory & "LOGS\"
'---
'--- check to see if the user passed in the server name and sa password
'---

```

```

Set objArgs = wScript.Arguments
Select Case objArgs.Length
    Case 0
        '-----
        '--- the user did not pass us anything
        '--- grab the Computer Name from Windows
        '-----
        ServerName =
WshShell.ExpandEnvironmentStrings("%COMPUTERNAME%")
        '-----
        '--- prompt the user to confirm the server name
        '-----
        ServerName = InputBox("Enter your server
name",Test_Name,ServerName)
        Do While ServerName = ""
            rc = MsgBox ("You must enter a valid server
name.",21)
            If rc = 2 Then
                wScript.Echo ""
                wScript.Echo "TPC-C Setup
cancelled by user."
                wScript.Quit
            End If
            ServerName =
WshShell.ExpandEnvironmentStrings("%COMPUTERNAME%")
            ServerName = InputBox("Enter your server
name","Database Server Name",ServerName)
        Loop
        '-----
        '--- prompt the user for the sa password
        '-----
        saPassword = InputBox("Enter the 'sa'
password",Test_Name)
        Case 1
            '-----
            '--- the user passed 1 argument, so assume it is the server
name
            '-----
            ServerName = objArgs(0)
            '-----
            '--- prompt the user for the sa password
            '-----
            saPassword = InputBox("Enter the 'sa'
password",Test_Name)
        Case 2
            '-----
            '--- the user passed 2 arguments, so try to use them
            '-----
            ServerName = objArgs(0)
            saPassword = objArgs(1)
        End Select
'-----
'--- now that we have all the variables filled in, let's get to work
'-----
If fs.FileExists(LogDirectory & "runsqlcfg.log") Then
    fs.DeleteFile LogDirectory & "runsqlcfg.log"
End If
'-----
'--- configure SQL Server
'-----
wScript.Echo " "
wScript.Echo "Configuring Microsoft SQL Server installation..."
Set oExec = WshShell.Exec("osql -Usa -P" & saPassword & " -S" &
ServerName & " -e -i" & ScriptDirectory & "utility\runsqlcfg.sql -o" &
LogDirectory & "runsqlcfg.log")
Do While oExec.Status = 0
    WScript.Sleep 100
Loop

```

```
rc = CheckSQLOutput(LogDirectory & "runsqlcfg.log")
If rc <> 0 Then
    Wscript.Quit
End If
wScript.Echo " "
wScript.Echo "SQL Server Configuration Complete."
'-----
'--- shutdown SQL Server
'-----
wScript.Echo " "
wScript.Echo "Shutting down SQL Server..."
Set oExec = WshShell.Exec("osql -Usa -P" & saPassword & " -S" &
ServerName & " -e -i" & ScriptDirectory & "utility\sqlshutdown.sql")
wScript.Echo " "
wScript.Echo "Waiting for SQL Server to shutdown..."
Set oExec = WshShell.Exec("..tools\sleep\sleep.exe 20")
Do While oExec.Status = 0
    WScript.Sleep 100
Loop
'-----
'--- Restarting SQL Server
'-----
wScript.Echo " "
wScript.Echo "Restarting SQL Server..."
wScript.Echo " "
CMD_String = "start sqlservr.exe -c -t3502"
oExec = WshShell.Run(CMD_String, 2, false)
wScript.Echo ""
wScript.Echo
*****
wScript.Echo "*****"
wScript.Echo "Microsoft TPC-C Benchmark Kit Ver. 4.41"
wScript.Echo "*****"
wScript.Echo "SQL Server configuration complete."
wScript.Echo "*****"
wScript.Echo "*****"
```

**rtetime.h**

```
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
0x7FFFFFFF
#define JULIAN_TIME _int64
#define TC_TIME DWORD
extern "C"
{
    BOOL InitJulianTime(LPSYSTEMTIME lpInitTime);
    JULIAN_TIME GetJulianTime(void);
```

```
DWORD MyTickCount(void);
void GetJulianAndTC(JULIAN_TIME *pJulian, DWORD
*pTC);
JULIAN_TIME ConvertTo64BitTime(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 );
}
```

**setup.vbs**

```
'-----
'--- FILE: SETUP.VBS
'--- Microsoft TPC-C Kit Ver. 4.41
'--- Copyright Microsoft, 2001
'--- All Rights Reserved
'---
'--- PURPOSE: This module performs the tasks to create and populate a
TPC-C database
'-----
'-----
'--- open an windows scripting object
'-----
set WshShell = CreateObject("WScript.Shell")
'-----
'--- before we go any further, make sure that
'--- we are running Windows Scripting Host 5.6
'--- or higher
'-----
If WScript.Version < 5.6 Then
    WScript.Echo
    "!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!"
    WScript.Echo "!! !!
    WScript.Echo "!! You do not have the proper version of the
    Windows Scripting Host !!
    WScript.Echo "!! installed. Please install the latest Windows
    Scripting Host from !!
    WScript.Echo "!! ..tools\wsh\scripten.exe and restart setup.
    !!
    WScript.Echo "!! !!
    WScript.Echo "!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!"
    WScript.Quit
End If
'-----
'--- display banner message
'-----
WScript.Echo
*****
WScript.Echo "Microsoft TPC-C Benchmark Kit Ver. 4.41 - Setup"
WScript.Echo "*****"
WScript.Echo "*****"
'-----
'--- define function to check for any error messages
'-----
Function CheckSQLOutput(SQL_Out)
    ErrorFlag = 0
    Set SQL_fso = CreateObject("Scripting.FileSystemObject")
```

<pre> If SQL_fso.FileExists(SQL_Out) Then     Set SQL_Out_File = SQL_fso.OpenTextFile(SQL_Out,1)     Do While SQL_Out_File.AtEndOfStream &lt;&gt; True         SQL_Line = SQL_Out_File.ReadLine         'first check to see if the output contains a message about the login password         If InStr(SQL_Line, "Login failed") Then             'display the messages and get out             ErrorFlag = 1             wScript.Echo "The login for userid 'sa' failed."             wScript.Echo "Please restart SETUP with the correct password."         Else             If InStr(SQL_Line, "Msg") Then                 'find out where the                 LocMsg =                 'find out where the                 LocComma =                 'now isolate the error                 ErrorCode =                 Mid(SQL_Line, (LocMsg + 4), (LocComma - (LocMsg + 4)))                 Select Case ErrorCode                     Case " 170"                         ErrorFlag = 1                         wScript.Echo "!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!"                         wScript.Echo "Syntax Error."                         wScript.Echo "SQL Server Error 170."                         wScript.Echo "Check CREATEDB.SQL."                         wScript.Echo "!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!"                     Case "1801"                         ErrorFlag = 1                         wScript.Echo "!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!"                         wScript.Echo "Database 'tpcc' already exists."                         wScript.Echo "SQL Server Error 1801."                         wScript.Echo "Check CREATEDB.SQL."                         wScript.Echo "!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!"                     Case "1802"                         ErrorFlag = 1                         wScript.Echo "!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!"                         wScript.Echo "CREATE DATABASE failed."                         wScript.Echo "SQL Server Error 1802."                         wScript.Echo "Check CREATEDB.SQL."                 End Select             End If         End If     Loop End If </pre>	<pre> wScript.Echo "!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!" ErrorFlag = 1 wScript.Echo "!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!" wScript.Echo "CREATE INDEX failed." wScript.Echo "SQL Server Error 1921." wScript.Echo "Check " &amp; SQL_Out &amp; "." wScript.Echo "!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!" ErrorFlag = 1 wScript.Echo "!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!" wScript.Echo "BACKUP DATABASE is terminating abnormally." wScript.Echo "SQL Server Error 3013." wScript.Echo "Check the SQL Server error log for more details." wScript.Echo "!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!" ErrorFlag = 1 wScript.Echo "!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!" wScript.Echo "Cannot open backup device." wScript.Echo "Device error or device off-line." wScript.Echo "SQL Server Error 3201." wScript.Echo "See the SQL Server error log for more details." wScript.Echo "!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!" ErrorFlag = 1 wScript.Echo "!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!" wScript.Echo "Device Activation Error." wScript.Echo "SQL Server Error 5105." wScript.Echo "Check CREATEDB.SQL." wScript.Echo "!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!" ErrorFlag = 1 wScript.Echo "!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!" wScript.Echo "Cannot create one or more files because it already exists." wScript.Echo "SQL Server Error 5170." wScript.Echo "Check CREATEDB.SQL." wScript.Echo "!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!" "15010","15012" </pre>	<pre> Case "1921" Case "3013" Case "3201" Case "5105" Case "5170" Case </pre>
------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------	--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------	-------------------------------------------------------------------------------

```

ErrorFlag = 0
"15069"
ErrorFlag = 1
wScript.Echo "!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!"
wScript.Echo "One or more users are using the database."
wScript.Echo "The requested operation cannot be completed."
wScript.Echo "!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!"
Case Else
ErrorFlag = 1
wScript.Echo "!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!"
wScript.Echo "An error occurred."
wScript.Echo "SQL Server Error Code: " & ErrorCode & "."
wScript.Echo "Check " & SQL_Out & " for more information."
wScript.Echo "!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!!"
End Select
End If
Loop
SQL_Out_File.Close
End If
CheckSQLOutput = ErrorFlag
End Function
'-----
'--- end function
'-----
'--- define function to prompt for user input if necessary
'-----
Function GetUserInput(UserInput)
Select Case UserInput
Case "ServerName"
'--- pre-fill the prompt with the machine name
TempServerName =
WshShell.ExpandEnvironmentStrings("%COMPUTERNAME%")
'--- prompt the use for the setup particulars
TempResponse = InputBox("Enter your server
name","TPC-C Setup",TempServerName)
Do While TempResponse = ""
rc = MsgBox ("You must enter a
valid server name.",21)
If rc = 2 Then
wScript.Echo ""
wScript.Echo "TPC-C
Setup cancelled by user."
wScript.Quit
End If
TempResponse =
WshShell.ExpandEnvironmentStrings("%COMPUTERNAME%")
TempResponse = InputBox("Enter
your server name","TPC-C Setup",TempServerName)
Loop
Case "saPassword"
TempResponse = InputBox("Enter the 'sa'
password")
Case "NumberWarehouses"

```

```

TempResponse = InputBox("Enter the number
of warehouses to build","TPC-C Setup")
Do While TempResponse = ""
rc = MsgBox ("You must enter a
value for Number of Warehouses.",21)
If rc = 2 Then
wScript.Echo ""
wScript.Echo "TPC-C
Setup cancelled by user."
wScript.Quit
End If
TempResponse = InputBox("Enter
the number of warehouses to build","TPC-C Setup")
Loop
Case "BuildOption"
TempResponse = InputBox("Build Option" &
Chr(13) &
"(full,builddb,objects,objectsfull,bulkload,bulkloadfull,backup)","TPC-C
Setup","full")
Flag = 0
Do While Flag = 0
Select Case TempResponse
Case
"full","Full","FULL"
TempResponse = "full"
Case
"builddb","BuildDB","Builddb","BUILDDB"
TempResponse = "builddb"
Case
"objects","Objects","OBJECTS"
TempResponse = "objects"
Case
"objectsfull","ObjectsFull","Objectsfull","OBJECTSFULL"
TempResponse = "objectsfull"
Case
"bulkload","BulkLoad","Bulkload","BULKLOAD"
TempResponse = "bulkload"
Case
"bulkloadfull","BulkLoadFull","Bulkloadfull","BULKLOADFULL"
TempResponse = "bulkloadfull"
Case
"backup","Backup","BACKUP"
TempResponse = "backup"
Case Else
rc =
MsgBox ("Invalid Database Build Option.",21)
If rc = 2
Then
wScript.Echo ""
wScript.Echo "TPC-C Setup cancelled by user."

```

```

wScript.Quit

End If
Flag = 0

TempResponse = InputBox("Build Option" & Chr(13) &
"(full,builddb,objects,objectsfull,bulkload,bulkloadfull,backup)",,"full")

End Select
Loop
Case "DatabaseType"
TempResponse = InputBox("Database Type"
& Chr(13) & "(normal or scale_down)","TPC-C Setup","normal")
'--- set flag
Flag = 0
Do While Flag = 0
Select Case TempResponse
Case
"normal","Normal","NORMAL"

TempResponse = "0"

Flag = 1
Case
"scale_down","Scale_Down","Scale_down","SCALE_DOWN"

TempResponse = "1"

Flag = 1
Case Else
rc =
If rc = 2

Then

wScript.Echo ""

wScript.Echo "TPC-C Setup cancelled by user."

wScript.Quit

End If
Flag = 0

TempResponse = InputBox("Database Type" & Chr(13) & "(normal or
scale_down)",,"normal")

End Select
Loop
End Select
GetUserInput = TempResponse
End Function
'-----
'--- end function
'-----
'--- Initialize an array of the TPC-C table names
'-----
Dim TableArray(8)
TableArray(0) = "warehouse"
TableArray(1) = "district"
TableArray(2) = "customer"
TableArray(3) = "history"
TableArray(4) = "new_order"
TableArray(5) = "orders"
TableArray(6) = "order_line"
TableArray(7) = "item"
TableArray(8) = "stock"
'-----
'--- Initialize an array of the TPC-C build log file names
'-----
Dim LogFileArray(21)

```

```

LogFileArray(0) = "version.log"
LogFileArray(1) = "removedb.log"
LogFileArray(2) = "createdb.log"
LogFileArray(3) = "tables.log"
LogFileArray(4) = "dbopt1.log"
LogFileArray(5) = "idxordcl.log"
LogFileArray(6) = "idxitmcl.log"
LogFileArray(7) = "idxwarcl.log"
LogFileArray(8) = "idxcuscl.log"
LogFileArray(9) = "idxnodcl.log"
LogFileArray(10) = "idxdiscl.log"
LogFileArray(11) = "idxstkcl.log"
LogFileArray(12) = "idxodlcl.log"
LogFileArray(13) = "idxcusnc.log"
LogFileArray(14) = "idxhiscl.log"
LogFileArray(15) = "idxordnc.log"
LogFileArray(16) = "bulkload.log"
LogFileArray(17) = "dbopt2.log"
LogFileArray(18) = "nurand_load.log"
LogFileArray(19) = "backupdev.log"
LogFileArray(20) = "backupdev.log"
LogFileArray(21) = "verifyload.log"
'-----
'--- open a file system object
'-----
Set fs = CreateObject("Scripting.FileSystemObject")
'-----
'--- grab the current directory value
'-----
SetupDirectory = WshShell.CurrentDirectory & "\"
'SetupDirectory = "C:\MSTPCC.441\"
'-----
'--- now calculate the other directories
'-----
ACIDDirectory = LEFT(SetupDirectory,(LEN(SetupDirectory)-6))
ScriptDirectory = SetupDirectory & "SCRIPTS\"
LogDirectory = SetupDirectory & "LOGS\"
'-----
'--- now determine if the user passed us any parameters.
'--- the order should be ServerName, sa Password, Number of Warehouses,
'--- Build Option, and Database Type
'-----
Set objArgs = wScript.Arguments
Select Case objArgs.Length
Case 0
'-----
'--- get the server name
'-----
ServerName = GetUserInput("ServerName")
'-----
'--- get the sa password
'-----
saPassword = GetUserInput("saPassword")
'-----
'--- get the number of warehouses
'-----
NumberWarehouses =
GetUserInput("NumberWarehouses")
'-----
'--- get the build option
'-----
BuildOption = GetUserInput("BuildOption")
'-----
'--- get the database type
'-----
DatabaseType = GetUserInput("DatabaseType")
Case 1
'-----

```



```

'--- assume that the server name was passed correctly
'-----
'--- store the server name
'-----
ServerName = objArgs(0)
'-----
'--- get the sa password
'-----
saPassword = GetUserInput("saPassword")
'-----
'--- get the number of warehouses
'-----
NumberWarehouses =
GetUserInput("NumberWarehouses")
'-----
'--- get the build option
'-----
BuildOption = GetUserInput("BuildOption")
'-----
'--- get the database type
'-----
DatabaseType = GetUserInput("DatabaseType")
If DatabaseType = "scale_down" or DatabaseType =
"Scale_Down" or DatabaseType = "Scale_down" Then
    DatabaseType = 1
Else
    DatabaseType = 0
End If
Case 2
'-----
'--- assume that the server name and sa password was
passed correctly
'-----
'--- store the server name
'-----
ServerName = objArgs(0)
'-----
'--- store the sa password
'-----
saPassword = objArgs(1)
'-----
'--- get the number of warehouses
'-----
NumberWarehouses =
GetUserInput("NumberWarehouses")
'-----
'--- get the build option
'-----
BuildOption = GetUserInput("BuildOption")
'-----
'--- get the database type
'-----
DatabaseType = GetUserInput("DatabaseType")
If DatabaseType = "scale_down" or DatabaseType =
"Scale_Down" or DatabaseType = "Scale_down" Then
    DatabaseType = 1
Else
    DatabaseType = 0
End If
Case 3
'-----
'--- assume that the server name,sa password, and number
of warehouses was passed correctly
'-----

```

```

'-----
'--- store the server name
'-----
ServerName = objArgs(0)
'-----
'--- store the sa password
'-----
saPassword = objArgs(1)
'-----
'--- store the number of warehouses
'-----
NumberWarehouses = objArgs(2)
'-----
'--- get the build option
'-----
BuildOption = GetUserInput("BuildOption")
'-----
'--- get the database type
'-----
DatabaseType = GetUserInput("DatabaseType")
If DatabaseType = "scale_down" or DatabaseType =
"Scale_Down" or DatabaseType = "Scale_down" Then
    DatabaseType = 1
Else
    DatabaseType = 0
End If
Case 4
'-----
'--- assume that the server name,sa password,number of
warehouses, and build option was passed correctly
'-----
'-----
'-----
'--- store the server name
'-----
ServerName = objArgs(0)
'-----
'--- store the sa password
'-----
saPassword = objArgs(1)
'-----
'--- store the number of warehouses
'-----
NumberWarehouses = objArgs(2)
'-----
'--- store the build option
'-----
BuildOption = objArgs(3)
'-----
'--- get the database type
'-----
DatabaseType = GetUserInput("DatabaseType")
If DatabaseType = "scale_down" or DatabaseType =
"Scale_Down" or DatabaseType = "Scale_down" Then
    DatabaseType = 1
Else
    DatabaseType = 0
End If
Case 5
'-----
'--- assume all the parameters were passed in correctly
'-----
'--- store the server name
'-----

```

```

ServerName = objArgs(0)
'-----
'--- store the sa password
'-----
saPassword = objArgs(1)
'-----
'--- store the number of warehouses
'-----
NumberWarehouses = objArgs(2)
'-----
'--- store the build option
'-----
BuildOption = objArgs(3)
'-----
'--- get the database type
'-----
DatabaseType = objArgs(4)
If DatabaseType = "scale_down" or DatabaseType =
"Scale_Down" or DatabaseType = "Scale_down" Then
    DatabaseType = 1
Else
    DatabaseType = 0
End If

End Select
'-----
'--- now that we have all the variables filled in, let's get to work
'--- cleanup any old .err files
'-----
For i = 0 to 8
    If fs.FileExists(LogPath & TableArray(i) & ".err") Then
        fs.DeleteFile LogPath & TableArray(i) & ".err"
    End If
Next
For i = 0 to 21
    If fs.FileExists(LogPath & LogFileArray(i)) Then
        fs.DeleteFile LogPath & LogFileArray(i)
    End If
Next
'-----
'--- now grab the version of SQL Server you are running this against
'-----
Set oExec = WshShell.Exec("isql -Usa -P" & saPassword & " -S" &
ServerName & " -e -i" & ScriptDirectory & "utility\version.sql -o" &
LogDirectory & "version.log")
Do While oExec.Status = 0
    wScript.Sleep 100
Loop
rc = CheckSQLOutput(LogDirectory & "version.log")
If rc <> 0 Then
    wScript.Quit
End If
If (BuildOption = "full" OR BuildOption = "bulddb") Then
    wScript.Echo "Removing any existing TPCC database and backup
devices..."
    Set oExec = WshShell.Exec("isql -Usa -P" & saPassword & " -S" &
ServerName & " -e -i" & ScriptDirectory & NumberWarehouses &
".war\database\removedb.sql -o" & LogDirectory & "removedb.log")
    Do While oExec.Status = 0
        wScript.Sleep 100
    Loop
    rc = CheckSQLOutput(LogDirectory & "removedb.log")
    If rc <> 0 Then
        wScript.Quit
    End If
    wScript.Echo "Building database files and database..."
    Set oExec = WshShell.Exec("isql -Usa -P" & saPassword & " -S" &
ServerName & " -e -i" & ScriptDirectory & NumberWarehouses &
".war\database\createdb.sql -o" & LogDirectory & "createdb.log")

```

```

Do While oExec.Status = 0
    wScript.Sleep 100
Loop
rc = CheckSQLOutput(LogDirectory & "createdb.log")
If rc <> 0 Then
    wScript.Quit
End If
End If
'-----
'--- build tables and stored procedures
'-----
If (BuildOption = "full" OR BuildOption = "bulddb" _
OR BuildOption = "objects" OR BuildOption = "objectsfull") Then
    wScript.Echo "Creating TPC-C database tables..."
    Set oExec = WshShell.Exec("isql -Usa -P" & saPassword & " -S" &
ServerName & " -e -i" & ScriptDirectory & NumberWarehouses &
".war\ddl\tables.sql -o" & LogDirectory & "tables.log")
    Do While oExec.Status = 0
        wScript.Sleep 100
    Loop
    rc = CheckSQLOutput(LogDirectory & "tables.log")
    If rc <> 0 Then
        wScript.Quit
    End If
    wScript.Echo "Creating database objects..."
    Set oExec = WshShell.Exec("isql -Usa -P" & saPassword & " -S" &
ServerName & " -e -i" & ScriptDirectory & "dml\neword.sql -o" &
LogDirectory & "sp_neword.log")
    Do While oExec.Status = 0
        wScript.Sleep 100
    Loop
    rc = CheckSQLOutput(LogDirectory & "sp_neword.log")
    If rc <> 0 Then
        wScript.Quit
    End If
    Set oExec = WshShell.Exec("isql -Usa -P" & saPassword & " -S" &
ServerName & " -e -i" & ScriptDirectory & "dml\payment.sql -o" &
LogDirectory & "sp_payment.log")
    Do While oExec.Status = 0
        wScript.Sleep 100
    Loop
    rc = CheckSQLOutput(LogDirectory & "sp_payment.log")
    If rc <> 0 Then
        wScript.Quit
    End If
    Set oExec = WshShell.Exec("isql -Usa -P" & saPassword & " -S" &
ServerName & " -e -i" & ScriptDirectory & "dml\ordstat.sql -o" &
LogDirectory & "sp_ordstat.log")
    Do While oExec.Status = 0
        wScript.Sleep 100
    Loop
    rc = CheckSQLOutput(LogDirectory & "sp_ordstat.log")
    If rc <> 0 Then
        wScript.Quit
    End If
    Set oExec = WshShell.Exec("isql -Usa -P" & saPassword & " -S" &
ServerName & " -e -i" & ScriptDirectory & "dml\delivery.sql -o" &
LogDirectory & "sp_delivery.log")
    Do While oExec.Status = 0
        wScript.Sleep 100
    Loop
    rc = CheckSQLOutput(LogDirectory & "sp_delivery.log")
    If rc <> 0 Then
        wScript.Quit
    End If
    Set oExec = WshShell.Exec("isql -Usa -P" & saPassword & " -S" &
ServerName & " -e -i" & ScriptDirectory & "dml\stocklev.sql -o" &
LogDirectory & "sp_stocklev.log")

```

```

Do While oExec.Status = 0
    wScript.Sleep 100
Loop
rc = CheckSQLOutput(LogDirectory & "sp_stocklev.log")
If rc <> 0 Then
    wScript.Quit
End If
Set oExec = WshShell.Exec("isql -Usa -P" & saPassword & " -S" &
ServerName & " -e -i" & ScriptDirectory & "dml\version.sql -o" &
LogDirectory & "sp_version.log")
Do While oExec.Status = 0
    wScript.Sleep 100
Loop
rc = CheckSQLOutput(LogDirectory & "sp_version.log")
If rc <> 0 Then
    wScript.Quit
End If
wScript.Echo "Database object creation complete..."
End If
If (BuildOption = "full" OR BuildOption = "bulddb" _
OR BuildOption = "objects" OR BuildOption = "objectsfull" _
OR BuildOption = "bulkload" OR BuildOption = "bulkloadfull") Then
    wScript.Echo "Setting database options before load..."
    Set oExec = WshShell.Exec("isql -Usa -P" & saPassword & " -S" &
ServerName & " -e -i" & ScriptDirectory & "utility\dbopt1.sql -o" &
LogDirectory & "dbopt1.log")
    Do While oExec.Status = 0
        wScript.Sleep 100
    Loop
    rc = CheckSQLOutput(LogDirectory & "dbopt1.log")
    If rc <> 0 Then
        wScript.Quit
    End If
    '-----
    '--- before we start tpccldr.exe, check the registry
    '--- to ensure that the Shared Memory Protocol is off.
    '--- if it is on, store the setting so we can return
    '--- the system to the pre-tpccldr state.
    '-----
    SharedMemoryRegKey =
WshShell.RegRead("HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\MS
SQLServer\Client\SharedMemoryOn")
    If SharedMemoryRegKey = 1 Then
        WshShell.RegWrite
"HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\MSSQLServer\Client\S
haredMemoryOn", 0, "REG_DWORD"
    End If
    wScript.Echo "Beginning data load and index creation..."
    CMD_String = SetupDirectory & "\loader\bin\tpccldr.exe"
    CMD_String = CMD_String & " -S" & ServerName
    CMD_String = CMD_String & " -Usa"
    CMD_String = CMD_String & " -P" & saPassword
    CMD_String = CMD_String & " -W" & NumberWarehouses
    CMD_String = CMD_String & " -f" & LogDirectory &
"bulkload.log"
    CMD_String = CMD_String & " -L" & LogDirectory
    CMD_String = CMD_String & " -d" & ScriptDirectory &
NumberWarehouses & ".war\ddl"
    CMD_String = CMD_String & " -c" & DatabaseType
    oExec = WshShell.Run(CMD_String, 2, true)
    '-----
    '--- now that the loader is finished, put the
    '--- SharedMemoryOn registry key back to its original
    '--- value.
    '-----
    If SharedMemoryRegKey = 1 Then

```

```

        WshShell.RegWrite
"HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\MSSQLServer\Client\S
haredMemoryOn", 1, "REG_DWORD"
    End If
    wScript.Echo "Setting database options after load..."
    Set oExec = WshShell.Exec("isql -Usa -P" & saPassword & " -S" &
ServerName & " -e -i" & ScriptDirectory & "utility\dbopt2.sql -o" &
LogDirectory & "dbopt2.log")
    Do While oExec.Status = 0
        wScript.Sleep 100
    Loop
    rc = CheckSQLOutput(LogDirectory & "dbopt2.log")
    If rc <> 0 Then
        wScript.Quit
    End If
    wScript.Echo "Data load and index creation complete."
    '-----
    '--- now parse the index creation logs
    '--- to see if there were any errors
    '--- there.
    '-----
    For i = 5 to 15
        rc = CheckSQLOutput(LogDirectory & LogFileArray(i))
        If rc <> 0 Then
            wScript.Quit
        End If
    Next
    wScript.Echo "Calculating initial database space usage...."
    Set oExec = WshShell.Exec("isql -Usa -P" & saPassword & " -S" &
ServerName & " -e -i" & ACIDDirectory & "space\scripts\spused.sql -o" &
ACIDDirectory & "space\spused.ver")
    Do While oExec.Status = 0
        wScript.Sleep 100
    Loop
    Set oExec = WshShell.Exec("isql -Usa -P" & saPassword & " -S" &
ServerName & " -e -i" & ACIDDirectory & "space\scripts\splog.sql -o" &
ACIDDirectory & "space\splog.ver")
    Do While oExec.Status = 0
        wScript.Sleep 100
    Loop
    Set oExec = WshShell.Exec("isql -Usa -P" & saPassword & " -S" &
ServerName & " -e -i" & ACIDDirectory & "space\scripts\spfiles.sql -o" &
ACIDDirectory & "space\spfiles.ver")
    Do While oExec.Status = 0
        wScript.Sleep 100
    Loop
    '-----
    '--- now that the loader is finished
    '--- check the .err files and if they
    '--- are of zero length, delete them.
    '-----
    Set fsErr = CreateObject("Scripting.FileSystemObject")
    Set fErr = fsErr.GetFolder(LogDirectory)
    Set fcErr = fErr.Files
    For Each fl In fcErr
        If fl.Type = "ERR File" Then
            If fl.Size = 0 Then
                fl.Delete
            End If
        End If
    Next
    Set fcErr = Nothing
    Set fErr = Nothing
    Set fsErr = Nothing
End If
If (BuildOption = "full" _
OR BuildOption = "objectsfull" _
OR BuildOption = "bulkloadfull" _

```

```

OR BuildOption = "backup") Then
    wScript.Echo "Creating Backup Device(s)..."
    Set oExec = WshShell.Exec("isql -Usa -P" & saPassword & " -S" &
ServerName & " -e -i" & ScriptDirectory & NumberWarehouses &
".war\database\backupdev.sql -o" & LogDirectory & "backupdev.log")
    Do While oExec.Status = 0
        wScript.Sleep 100
    Loop
    rc = CheckSQLOutput(LogDirectory & "backupdev.log")
    If rc <> 0 Then
        wScript.Quit
    End If
    wScript.Echo "Backing up database..."
    Set oExec = WshShell.Exec("isql -Usa -P" & saPassword & " -S" &
ServerName & " -e -i" & ScriptDirectory & NumberWarehouses &
".war\database\backup.sql -o" & LogDirectory & "backup.log")
    Do While oExec.Status = 0
        wScript.Sleep 100
    Loop
    rc = CheckSQLOutput(LogDirectory & "backup.log")
    If rc <> 0 Then
        wScript.Quit
    End If
    wScript.Echo "Database backup complete."
End If
If (BuildOption = "full"
OR BuildOption = "objectsfull"
OR BuildOption = "bulkloadfull") Then
    wScript.Echo "Verifying TPC-C database load..."
    Set oExec = WshShell.Exec("isql -Usa -P" & saPassword & " -S" &
ServerName & " -e -i" & ScriptDirectory & "utility\verifytpccload.sql -o" &
LogDirectory & "verifyload.log")
    Do While oExec.Status = 0
        wScript.Sleep 100
    Loop
    rc = CheckSQLOutput(LogDirectory & "verifyload.log")
    If rc <> 0 Then
        wScript.Quit
    End If
    wScript.Echo "Check logs\verifyload.log to verify database load."
End If
'-----
'--- display banner message
'-----
wScript.Echo
"*****"
wScript.Echo "*"
wScript.Echo "*" Microsoft TPC-C Benchmark Kit Ver. 4.41 - Setup Complete
*"
wScript.Echo "*"
wScript.Echo "*"
"*****"

```

## 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

```

## tm\_com\_dll.dsp

# Microsoft Developer Studio Project File - Name="tm\_com\_dll" - Package Owner=<4>

# Microsoft Developer Studio Generated Build File, Format Version 6.00  
# \*\* DO NOT EDIT \*\*

# TARGETTYPE "Win32 (x86) Dynamic-Link Library" 0x0102

CFG=tm\_com\_dll - Win32 Debug

!MESSAGE This is not a valid makefile. To build this project using NMAKE,  
!MESSAGE use the Export Makefile command and run

```

!MESSAGE
!MESSAGE NMAKE /f "tm_com_dll.mak".
!MESSAGE
!MESSAGE You can specify a configuration when running NMAKE
!MESSAGE by defining the macro CFG on the command line. For example:
!MESSAGE
!MESSAGE NMAKE /f "tm_com_dll.mak" CFG="tm_com_dll - Win32
Debug"
!MESSAGE
!MESSAGE Possible choices for configuration are:
!MESSAGE
!MESSAGE "tm_com_dll - Win32 Release" (based on "Win32 (x86)
Dynamic-Link Library")
!MESSAGE "tm_com_dll - Win32 Debug" (based on "Win32 (x86)
Dynamic-Link Library")
!MESSAGE

# Begin Project
# PROP AllowPerConfigDependencies 0
# PROP Scc_ProjName ""
# PROP Scc_LocalPath ""
CPP=cl.exe
MTL=midl.exe
RSC=rc.exe

!IF "$(CFG)" == "tm_com_dll - Win32 Release"

# PROP BASE Use_MFC 0
# PROP BASE Use_Debug_Libraries 0
# PROP BASE Output_Dir "Release"
# PROP BASE Intermediate_Dir "Release"
# PROP BASE Target_Dir ""
# PROP Use_MFC 0
# PROP Use_Debug_Libraries 0
# PROP Output_Dir ".\bin"
# PROP Intermediate_Dir ".\obj"
# PROP Ignore_Export_Lib 0
# PROP Target_Dir ""
# ADD BASE CPP /nologo /MT /W3 /GX /O2 /D "WIN32" /D "NDEBUG" /D
"_WINDOWS" /YX /FD /c
# ADD CPP /nologo /MD /W3 /GX /O2 /D "WIN32" /D "NDEBUG" /D
"_WINDOWS" /YX /FD /c
# ADD BASE MTL /nologo /D "NDEBUG" /mktyplib203 /o "NUL" /win32
# ADD MTL /nologo /D "NDEBUG" /mktyplib203 /o "NUL" /win32
# ADD BASE RSC /I 0x409 /d "NDEBUG"
# ADD RSC /I 0x409 /d "NDEBUG"
BSC32=bscmake.exe
# ADD BASE BSC32 /nologo
# ADD BSC32 /nologo
LINK32=link.exe
# ADD BASE LINK32 kernel32.lib user32.lib gdi32.lib winspool.lib
comdlg32.lib advapi32.lib shell32.lib ole32.lib oleaut32.lib uuid.lib odbcc32.lib
odbccp32.lib /nologo /subsystem:windows /dll /machine:I386
# ADD LINK32 kernel32.lib user32.lib gdi32.lib winspool.lib comdlg32.lib
advapi32.lib shell32.lib ole32.lib oleaut32.lib uuid.lib odbcc32.lib odbccp32.lib
/nologo /subsystem:windows /dll /machine:I386 /out:".bin\tpcc_com.dll"

!ELSEIF "$(CFG)" == "tm_com_dll - Win32 Debug"

# PROP BASE Use_MFC 0
# PROP BASE Use_Debug_Libraries 1
# PROP BASE Output_Dir "Debug"
# PROP BASE Intermediate_Dir "Debug"
# PROP BASE Target_Dir ""
# PROP Use_MFC 0
# PROP Use_Debug_Libraries 1
# PROP Output_Dir ".\bin"
# PROP Intermediate_Dir ".\obj"

```

```

# PROP Ignore_Export_Lib 0
# PROP Target_Dir ""
# ADD BASE CPP /nologo /MTd /W3 /Gm /GX /ZI /Od /D "WIN32" /D
" _DEBUG" /D " _WINDOWS" /YX /FD /c
# ADD CPP /nologo /MDd /W3 /Gm /GX /ZI /Od /D "WIN32" /D " _DEBUG"
/D " _WINDOWS" /YX /FD /c
# ADD BASE MTL /nologo /D " _DEBUG" /mktyplib203 /o "NUL" /win32
# ADD MTL /nologo /D " _DEBUG" /mktyplib203 /o "NUL" /win32
# ADD BASE RSC /I 0x409 /d " _DEBUG"
# ADD RSC /I 0x409 /d " _DEBUG"
BSC32=bscmake.exe
# ADD BASE BSC32 /nologo
# ADD BSC32 /nologo
LINK32=link.exe
# ADD BASE LINK32 kernel32.lib user32.lib gdi32.lib winspool.lib
comdlg32.lib advapi32.lib shell32.lib ole32.lib oleaut32.lib uuid.lib odbc32.lib
odbc32.lib /nologo /subsystem:windows /dll /debug /machine:I386
/pdbtype:sept
# ADD LINK32 kernel32.lib user32.lib gdi32.lib winspool.lib comdlg32.lib
advapi32.lib shell32.lib ole32.lib oleaut32.lib uuid.lib odbc32.lib odbc32.lib
/nologo /subsystem:windows /dll /debug /machine:I386
/out:"\bin\tpcc_com.dll" /pdbtype:sept

!ENDIF

# Begin Target

# Name "tm_com_dll - Win32 Release"
# Name "tm_com_dll - Win32 Debug"
# Begin Source File

SOURCE=\src\tpcc_com.cpp
# End Source File
# Begin Source File

SOURCE=\src\tpcc_com.h
# End Source File
# End Target
# End Project

```

## tpcc.cpp

```

/*      FILE:                TPCC.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 <char.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 definations 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.

#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 "410"

static CRITICAL_SECTION TermCriticalSection;

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

```

```

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

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

/* FUNCTION: DIIMain
*
* 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
*           DWORD ul_reason_for_call
reason for call
*           LPVOID lpReserved
reserved for future use
*
* RETURNS: BOOL FALSE
errors occurred in initialization
*           TRUE
DLL successfully initialized
*/

BOOL WINAPI DIIMain(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 );

        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
        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)
                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 );
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)
        throw new
CWEBCLNT_ERR( ERR_GETPROCADDR_FAILED, szDllName,
GetLastError() );
        }
        else if (Reg.eTxnMon == COM)
        {
                strcpy( szDllName,
Reg.szPath );
                strcat( szDllName,
"tpcc_com.dll");
LoadLibrary( szDllName );
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)
        throw new
CWEBCLNT_ERR( ERR_GETPROCADDR_FAILED, szDllName,
GetLastError() );
        }
// load DLL for database
connection
(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
        hLibInstanceDb = LoadLibrary( szDllName );
        if
(hLibInstanceDb == NULL)
        throw new CWEBCLNT_ERR( ERR_LOADDLL_FAILED, szDllName,
GetLastError() );
// get
function pointer to wrapper for class constructor
        pCTPCC_ODBC_new = (TYPE_CTPCC_ODBC*)
GetProcAddress(hLibInstanceDb,"CTPCC_ODBC_new");
        if
(pCTPCC_ODBC_new == NULL)
        throw new CWEBCLNT_ERR( ERR_GETPROCADDR_FAILED, szDllName,
GetLastError() );
        }
        if (dwNumDeliveryThreads)
        {
                // for deferred delivery
txns:
                hDoneEvent =
CreateEvent( NULL, TRUE /* manual reset */, FALSE /* initially not signalled
*/, NULL );
InitializeCriticalSection(&DelBuffCriticalSection);
                hWorkerSemaphore =
CreateSemaphore( NULL, 0, dwDelBuffSize, NULL );
                dwDelBuffFreeCount =
dwDelBuffSize;
                InitJulianTime(NULL);
// create unique log file
                name based on delilog-yymmdd-hhmm.log
                SYSTEMTIME Time;
                GetLocalTime( &Time
);
                wsprintf( szLogFile,
"%sdelivery-%2.2d%2.2d-%2.2d-%2.2d.log",
Reg.szPath, Time.wYear % 100, Time.wMonth, Time.wDay, Time.wHour,
Time.wMinute );
                txnDelilog = new
CTxnLog(szLogFile, TXN_LOG_WRITE);
//write event into txn
                log for START

```



```

txnDelilog->WriteCtrlRecToLog(TXN_EVENT_START,
szMyComputerName, sizeof(szMyComputerName));

// allocate structures for
delivery buffers and thread mgmt
HANDLE[dwNumDeliveryThreads];
pDeliHandles = new
DELIVERY_TRANSACTION[dwDelBuffSize];
pDelBuff = new
// launch
DeliveryWorkerThread to perform actual delivery txns
for(i=0;
i<dwNumDeliveryThreads; i++)
{
pDeliHandles[i] = (HANDLE) _beginthread( DeliveryWorkerThread, 0, NULL
);
if
(pDeliHandles[i] == INVALID_HANDLE_VALUE)
throw new CWEBCLNT_ERR( ERR_DELIVERY_THREAD_FAILED );
}
break;
case DLL_PROCESS_DETACH:
if (dwNumDeliveryThreads)
{
if (txnDelilog !=
NULL)
{
//write event
into txn log for STOP
txnDelilog->WriteCtrlRecToLog(TXN_EVENT_STOP, szMyComputerName,
sizeof(szMyComputerName));
// This will
CTxnLog
*txnDelilogLocal = txnDelilog;
txnDelilog=
NULL;
delete
txnDelilogLocal;
}
delete [] pDeliHandles;
delete [] pDelBuff;
CloseHandle(
hWorkerSemaphore );
CloseHandle(
hDoneEvent );
DeleteCriticalSection(&DelBuffCriticalSection);
}
DeleteCriticalSection(&TermCriticalSection);
if (hLibInstanceTm != NULL)
FreeLibrary(
hLibInstanceTm );
hLibInstanceTm = NULL;

```

```

if (hLibInstanceDb != NULL)
FreeLibrary(
hLibInstanceDb = NULL;
Sleep(500);
break;
default:
/* nothing */;
}
}
catch (CBaseErr *e)
{
WriteMessageToEventLog( e->ErrorText() );
delete e;
TerminateExtension(0);
return FALSE;
}
catch (...)
{
WriteMessageToEventLog(TEXT("Unhandled
exception. DLL could not load."));
TerminateExtension(0);
return FALSE;
}
return TRUE;
}
/* 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.
*
* RETURNS: TRUE inet service expected return value.
*/
BOOL WINAPI TerminateExtension( DWORD dwFlags )
{

```

```

        if (pDeliHandles)
        {
            SetEvent( hDoneEvent );
            for(DWORD i=0; i<dwNumDeliveryThreads; i++)
                WaitForSingleObject( pDeliHandles[i],
INFINITE );
        }

        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.
*
* 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];
                sprintf( 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);
            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;
            }
            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
        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, 0, TermId,
iSyncId, "Error: Unhandled exception in Web Client.", szBuffer );
}

#ifdef ICECAP
    StopCAP();
#endif

lpbSize = strlen(szBuffer);
wsprintf(szHeader1,
        "Content-Type: text/html\r\n"
        "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;
        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
(LPCTSTR *)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 txnDeliRec;

    DWORD index;
    HANDLE handles[2];

    SYSTEMTIME trans_end; //delivery
transaction finished time
    SYSTEMTIME trans_start; //delivery transaction
start time

```

```

assert(txnDelilog != NULL);

try
{
    if (Reg.eDB_Protocol == ODBC)
        pTxn = pCTPCC_ODBC_new(
Reg.szDbServer, Reg.szDbUser, Reg.szDbPassword, szMyComputerName,
Reg.szDbName );
    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 (...)
{
    WriteMessageToEventLog(TEXT("Unhandled exception
caught in DeliveryWorkerThread.));
    goto ErrorExit;
}

while (TRUE)
{
    try
    {
        //while delivery thread running, i.e. user has
        not requested termination
        while (TRUE)
        {
            // need to wait for multiple objects:
            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);
            delivery =
*(pDelBuff+dwDelBuffBusyIndex);
            dwDelBuffFreeCount++;
            dwDelBuffBusyIndex++;
            if (dwDelBuffBusyIndex ==
dwDelBuffSize) // wrap-around if at end of buffer
                dwDelBuffBusyIndex =
0;

```

```

LeaveCriticalSection(&DelBuffCriticalSection);

pDeliveryData->w_id =
delivery.w_id;
pDeliveryData->o_carrier_id =
delivery.o_carrier_id;

txnDeliRec.w_id =
pDeliveryData->w_id;
txnDeliRec.o_carrier_id =
pDeliveryData->o_carrier_id;
txnDeliRec.TxnStartT0 =
Get64BitTime(&delivery.queue);

GetLocalTime( &trans_start );
pTxn->Delivery();
GetLocalTime( &trans_end );

//log txn
txnDeliRec.TxnStatus =
ERR_SUCCESS;
for (int i=0; i<10; i++)
    txnDeliRec.o_id[i] =
pDeliveryData->o_id[i];
txnDeliRec.DeltaT4 =
(int)(Get64BitTime(&trans_end) - txnDeliRec.TxnStartT0);
txnDeliRec.DeltaTxnExec =
(int)(Get64BitTime(&trans_end) - Get64BitTime(&trans_start));

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

    // log the error txn
    txnDeliRec.TxnStatus = e->ErrorType();
    if (txnDelilog != NULL)
        txnDelilog->WriteToLog(&txnDeliRec);
    delete e;
}
catch (...)
{
    // unhandled exception; shouldn't happen; not
    much we can do...
    WriteMessageToEventLog(TEXT("Unhandled exception caught in
DeliveryWorkerThread.));
}
}
ErrorExit:
    delete pTxn;
    _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(short w_id, short o_carrier_id)
{
    BOOL bError;

    EnterCriticalSection(&DelBuffCriticalSection);
    if (dwDelBuffFreeCount > 0)
    {
        bError = FALSE;
        (pDelBuff+dwDelBuffFreeIndex)->w_id
= w_id;
        (pDelBuff+dwDelBuffFreeIndex)->o_carrier_id
= o_carrier_id;

        GetLocalTime(&(pDelBuff+dwDelBuffFreeIndex)->queue);

        dwDelBuffFreeCount--;
        dwDelBuffFreeIndex++;
        if (dwDelBuffFreeIndex == dwDelBuffSize)
            dwDelBuffFreeIndex = 0;
//
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 relevent information out of the
http command passed in from
*
*                                     the browser.
*
* COMMENTS:     If this is the initial connection i.e. 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. CMD=command
static char *szCmds[] =
{
    "Process", "..NewOrder..", "..Payment..", "..Delivery..",
"..Order-Status..", "..Stock-Level..",
    "..Exit..", "Submit", "Menu", "Clear", "Stats", ""
};

*pCmd = 0; // default is the login screen
*pTermId = 0;

// if no params (i.e., empty query string), then return login screen
if (strlen(pECB->lpszQueryString) == 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
GetIntKeyValue(&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
        throw new CWEBCLNT_ERR(
ERR_COMMAND_UNDEFINED);
    if ( !strcmp(szCmds[i], szBuffer) )
    {
        *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>"
" <font
ACTION="tpcc.dll" METHOD="GET">"
" <INPUT
TYPE="hidden" NAME="STATUSID" VALUE="0">"

```

```

TYPE="hidden" NAME="ERROR" VALUE="0">
TYPE="hidden" NAME="FORMID" VALUE="1">
TYPE="hidden" NAME="TERMIN" VALUE="0">
TYPE="hidden" NAME="SYNCID" VALUE="0">
TYPE="hidden" NAME="VERSION" VALUE=""
WEBCLIENT_VERSION ">
);

printf( szTmp, "Configuration Settings: <BR><font
face="Courier New" color="blue"><PRE>
<B>%s</B><BR>"
"Txn Monitor =
"Database protocol
"Max Connections
"# of Delivery Threads
"Max Pending
Deliveries = <B>%d</B><BR>"
, szTxnMonNames[Reg.eTxnMon],
szDBNames[Reg.eDB_Protocol],
Reg.dwMaxConnections,
dwNumDeliveryThreads, dwDelBuffSize );
strcat( szBuffer, szTmp);

if (Reg.eTxnMon == COM)
{
printf( szTmp, "COM Single Pool =
<B>%s</B><BR>",
Reg.bCOM_SinglePool ? "YES" : "NO" );
strcat( szBuffer, szTmp);
}
strcat( szBuffer, "</PRE></font>");

if (Reg.eTxnMon == None)
// connection options may be specified when not using a
txn monitor
printf( szTmp, "Please enter your database options
for this connection:<BR>"
"<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
// if using a txn monitor, connection options are
determined from registry; can't
// set per user. show options fyi
printf( szTmp, "Database options which will be
used by the transaction monitor:<BR>"
"<font
face="Courier New" color="blue"><PRE>"
= <B>%s</B><BR>"
ID = <B>%s</B><BR>"
Password = <B>%s</B><BR>"
= <B>%s</B><BR>"

"</PRE></font>"
, Reg.szDbServer, Reg.szDbUser,
Reg.szDbPassword, Reg.szDbName );
strcat( szBuffer, szTmp);

printf( szTmp, "Please enter your Warehouse and District for
this session:<BR>"
"<font face="Courier
New" color="blue"><PRE>");
strcat( szBuffer, szTmp);
strcat( szBuffer, "Warehouse ID = <INPUT NAME="w_id"
SIZE=4><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 );
        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 iTotals;

```

```

EnterCriticalSection(&TermCriticalSection);

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

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>"
    , iTotals );
}

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_TERMID,
"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)
        sprintf( 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                *pQueryString
http string from client browser
*
* pKey         char
key value to look for
*
* pValue       char
character array into which to place key's value
*
* iMax         int
maximum length of key value array.
*
* err          WEBERROR
error value to throw
*
* RETURNS:     nothing.
*
* ERROR:       if (the pKey value is not found) then
if (err == 0)
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                *pQueryString
http string from client browser
*
* pKey         char
key value to look for
*
* NoKeyErr     WEBERROR
error value to throw if key not found
*
* NotIntErr    WEBERROR
error value to throw if value not numeric
*
* RETURNS:     integer
*
* ERROR:       if (the pKey value is not found) then
if (NoKeyErr !=
NO_ERR)
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
*
*                TPC-C input 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.iMasterSyncId = 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
    // allocated as an actual terminal.
    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 )
{
    wsprintf(szBuffer,
        "<HTML><HEAD><TITLE>TPC-C
Error</TITLE></HEAD><BODY>"
        "<FORM ACTION=\"tpcc.dll\" 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 Occured</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)
{
    wsprintf(szForm,
        "<HTML><HEAD><TITLE>TPC-C Main
Menu</TITLE></HEAD><BODY>"
        "Select Desired Transaction.<BR><HR>"
        "<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=\"%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.dll\\"
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: %4.4d 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: </font><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> <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>";

    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.dll\\" METHOD=\\"GET\\>"
        "<INPUT TYPE=\\"hidden\\" NAME=\\"STATUSID\\"
VALUE=\\"%d\\>"
        "<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\\>"
New Order<BR>"
        , bValid ? 0 : ERR_BAD_ITEM_ID,
NEW_ORDER_FORM, iTermId, Term.pClientData[iTermId].iSyncId);

    if ( bInput )
    {
        c += sprintf(szForm+c, "Warehouse: %4.4d ",
Term.pClientData[iTermId].w_id );

        strcpy( szForm+c,

```

```

        "District: <INPUT NAME=\"DID*\"
SIZE=1>      Date:<BR>"
        "Customer: <INPUT NAME=\"CID*\"
SIZE=4> Name:      Credit: %Disc:<BR>"
        "Order Number:      Number of Lines:
W_tax:      D_tax:<BR><BR>"
        " Supp_W Item_Id Item Name      Qty
Stock B/G Price Amount<BR>"
        " <INPUT NAME=\"SP00*\" SIZE=4>
<INPUT NAME=\"IID00*\" SIZE=6>      <INPUT
NAME=\"Qty00*\" SIZE=1><BR>"
        " <INPUT NAME=\"SP01*\" SIZE=4>
<INPUT NAME=\"IID01*\" SIZE=6>      <INPUT
NAME=\"Qty01*\" SIZE=1><BR>"
        " <INPUT NAME=\"SP02*\" SIZE=4>
<INPUT NAME=\"IID02*\" SIZE=6>      <INPUT
NAME=\"Qty02*\" SIZE=1><BR>"
        " <INPUT NAME=\"SP03*\" SIZE=4>
<INPUT NAME=\"IID03*\" SIZE=6>      <INPUT
NAME=\"Qty03*\" SIZE=1><BR>"
        " <INPUT NAME=\"SP04*\" SIZE=4>
<INPUT NAME=\"IID04*\" SIZE=6>      <INPUT
NAME=\"Qty04*\" SIZE=1><BR>"
        " <INPUT NAME=\"SP05*\" SIZE=4>
<INPUT NAME=\"IID05*\" SIZE=6>      <INPUT
NAME=\"Qty05*\" SIZE=1><BR>"
        " <INPUT NAME=\"SP06*\" SIZE=4>
<INPUT NAME=\"IID06*\" SIZE=6>      <INPUT
NAME=\"Qty06*\" SIZE=1><BR>"
        " <INPUT NAME=\"SP07*\" SIZE=4>
<INPUT NAME=\"IID07*\" SIZE=6>      <INPUT
NAME=\"Qty07*\" SIZE=1><BR>"
        " <INPUT NAME=\"SP08*\" SIZE=4>
<INPUT NAME=\"IID08*\" SIZE=6>      <INPUT
NAME=\"Qty08*\" SIZE=1><BR>"
        " <INPUT NAME=\"SP09*\" SIZE=4>
<INPUT NAME=\"IID09*\" SIZE=6>      <INPUT
NAME=\"Qty09*\" SIZE=1><BR>"
        " <INPUT NAME=\"SP10*\" SIZE=4>
<INPUT NAME=\"IID10*\" SIZE=6>      <INPUT
NAME=\"Qty10*\" SIZE=1><BR>"
        " <INPUT NAME=\"SP11*\" SIZE=4>
<INPUT NAME=\"IID11*\" SIZE=6>      <INPUT
NAME=\"Qty11*\" SIZE=1><BR>"
        " <INPUT NAME=\"SP12*\" SIZE=4>
<INPUT NAME=\"IID12*\" SIZE=6>      <INPUT
NAME=\"Qty12*\" SIZE=1><BR>"
        " <INPUT NAME=\"SP13*\" SIZE=4>
<INPUT NAME=\"IID13*\" SIZE=6>      <INPUT
NAME=\"Qty13*\" SIZE=1><BR>"
        " <INPUT NAME=\"SP14*\" SIZE=4>
<INPUT NAME=\"IID14*\" SIZE=6>      <INPUT
NAME=\"Qty14*\" SIZE=1><BR>"
        "Execution Status:
Total:<BR>"
        "</font></PRE><HR>"
        "<INPUT TYPE=\"submit\" NAME=\"CMD\"
VALUE=\"Process\">"
        "<INPUT TYPE=\"submit\" NAME=\"CMD\"
VALUE=\"Menu\">"
        "</FORM></HTML>"
    };
    }
    else
    {
        c += sprintf(szForm+c, "Warehouse: %4.4d 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_id,
        pNewOrderData->c_last, pNewOrderData->c_credit);
        if ( bValid )
        {
            c += sprintf(szForm+c,
"%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_ol_cnt,
        100.0 * pNewOrderData->w_tax,
        100.0 * pNewOrderData->d_tax);
        for(i=0; i<pNewOrderData->o_ol_cnt; i++)
        {
            c += sprintf(szForm+c, " %4.4d
%6.6d %-24s %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>"

```

```

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 blnput, char *szForm)
{
int c;

c = sprintf(szForm,
"<HTML><HEAD><TITLE>TPC-C
Payment</TITLE></HEAD><BODY>"
"<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=\"%d\">"
"<INPUT TYPE=\"hidden\" NAME=\"TERMINID\"
VALUE=\"%d\">"
"<INPUT TYPE=\"hidden\" NAME=\"SYNCID\"
VALUE=\"%d\">"
"<PRE><font face=\"Courier\">
Payment<BR>"
"Date: "

```

```

, PAYMENT_FORM, iTermId,
Term.pClientData[iTermId].iSyncId);

if ( !blnput )
{
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 ( blnput )
{
c += sprintf(szForm+c,
"<BR> <BR>Warehouse: %4.4d"
" District: <INPUT
NAME=\"DID*\" SIZE=1><BR> <BR> <BR> <BR>
SIZE=4>"
"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> <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: %4.4d
District: %2.2d<BR>"
"%0-20s %0-20s<BR>"
"%0-20s %0-20s<BR>"
"%0-20s %0-2s %5.5s-%4.4s %0-20s %0-2s
%5.5s-%4.4s<BR> <BR>"
"Customer: %4.4d Cust-Warehouse: %4.4d
Cust-District: %2.2d<BR>"
"Name: %0-16s %0-2s %0-16s Since:
%2.2d-%2.2d-%4.4d<BR>"
" %0-20s Credit: %0-2s<BR>"
, Term.pClientData[iTermId].w_id,
pPaymentData->w_street_1,
pPaymentData->w_street_2,
pPaymentData->w_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_w_id, pPaymentData->c_d_id
        , pPaymentData->c_first,
pPaymentData->c_middle, 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    %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_city,
pPaymentData->c_state, 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>
%-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,
            " <BR></font></PRE><HR>"
            "TYPE=\"submit\" NAME=\"CMD\" VALUE=\"..NewOrder..\">"
            "TYPE=\"submit\" NAME=\"CMD\" VALUE=\"..Payment..\">"
            "TYPE=\"submit\" NAME=\"CMD\" VALUE=\"..Delivery..\">"
            "TYPE=\"submit\" NAME=\"CMD\" VALUE=\"..Order-Status..\">"
            "TYPE=\"submit\" NAME=\"CMD\" VALUE=\"..Stock-Level..\">"
            "TYPE=\"submit\" NAME=\"CMD\" VALUE=\"..Exit..\">"
            "</BODY></FORM></HTML>");
    }
}

/* FUNCTION: MakeOrderStatusForm
*

```

```

* 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 MakeOrderStatusForm(int iTermId, ORDER_STATUS_DATA
*pOrderStatusData, BOOL bInput, char *szForm)
{
    int                i, c;
    static char szBR[] = "<BR> <BR> <BR> <BR> <BR> <BR> <BR>
<BR> <BR> <BR> <BR> <BR> <BR> <BR> <BR>";

    c = sprintf(szForm,
        "<HTML><HEAD><TITLE>TPC-C
Order-Status</TITLE></HEAD><BODY>"
        "<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=\"%d\">"
        "<INPUT TYPE=\"hidden\" NAME=\"TERMINID\"
VALUE=\"%d\">"
        "<INPUT TYPE=\"hidden\" NAME=\"SYNCID\"
VALUE=\"%d\">"
        "<PRE><font face=\"Courier\">
Order-Status<BR>"
        "Warehouse: %4.4d    ",
        ORDER_STATUS_FORM, iTermId,
        Term.pClientData[iTermId].iSyncId, Term.pClientData[iTermId].w_id);

    if ( bInput )
    {
        strcpy(szForm+c,
            "District: <INPUT NAME=\"DID*\"
SIZE=1><BR>"
            "Customer: <INPUT NAME=\"CID*\"
SIZE=4> Name:    <INPUT NAME=\"CLT*\" SIZE=23><BR>"
            "Cust-Balance:<BR> <BR>"
            "Order-Number:    Entry-Date:
Carrier-Number:<BR>"
            "Supply-W Item-Id Qty Amount
Delivery-Date<BR> <BR> <BR> <BR> <BR>
" <BR> <BR> <BR> <BR> <BR> <BR> <BR> <BR>
<BR> <BR> <BR> <BR> <BR></font></PRE>"
            "<HR><INPUT TYPE=\"submit\"
NAME=\"CMD\" VALUE=\"Process\"><INPUT TYPE=\"submit\"
NAME=\"CMD\" VALUE=\"Menu\">"
            "</BODY></FORM></HTML> ");
    }
    else
    {
        c += sprintf(szForm+c,
            "District: %2.2d<BR>"
            "Customer: %4.4d Name: %-16s %-2s
%-16s<BR>",
            pOrderStatusData->d_id,
            pOrderStatusData->c_first,
            pOrderStatusData->c_middle, pOrderStatusData->c_last);

        c += sprintf(szForm+c, "Cust-Balance: %9.2f<BR>
<BR>",
            pOrderStatusData->c_balance);

        c += sprintf(szForm+c,

```

```

                "Order-Number: %8.8d Entry-Date:
%2.2d-%2.2d-%4.4d %2.2d:%2.2d:%2.2d Carrier-Number: %2.2d<BR>"
                "Supply-W Item-Id Qty Amount
Delivery-Date<BR>",
                pOrderStatusData->o_id,
                pOrderStatusData->o_entry_d.day,
                pOrderStatusData->o_entry_d.month,
                pOrderStatusData->o_entry_d.year,
                pOrderStatusData->o_entry_d.hour,
                pOrderStatusData->o_entry_d.minute,
                pOrderStatusData->o_entry_d.second,
                pOrderStatusData->o_carrier_id);

        for(i=0; i< pOrderStatusData->o_ol_cnt; i++)
        {
                c += sprintf(szForm+c, " %4.4d %6.6d
%2.2d %$8.2f %2.2d-%2.2d-%4.4d<BR>",
                pOrderStatusData->OL[i].ol_supply_w_id,
                pOrderStatusData->OL[i].ol_i_id,
                pOrderStatusData->OL[i].ol_quantity,
                pOrderStatusData->OL[i].ol_amount,
                pOrderStatusData->OL[i].ol_delivery_d.day,
                pOrderStatusData->OL[i].ol_delivery_d.month,
                pOrderStatusData->OL[i].ol_delivery_d.year);
        }

        strncpy( szForm+c, szBR, (15-i)*5 );
        c += (15-i)*5;

        strcpy(szForm+c,
                "</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..\">"
                "</BODY></FORM></HTML>");
        }
}

/* FUNCTION: MakeDeliveryForm
*
* 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 MakeDeliveryForm(int iTermId, DELIVERY_DATA *pDeliveryData,
BOOL bInput, char *szForm)
{
        int c;

        c = sprintf(szForm,
                "<HTML><HEAD><TITLE>TPC-C
Delivery</TITLE></HEAD><BODY>"

```

```

                "<FORM ACTION=\"tpcc.dll\" METHOD=\"GET\">"
                "<INPUT TYPE=\"hidden\" NAME=\"STATUSID\"
VALUE=\"%d\">"
                "<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\">
Delivery<BR>"
                "Warehouse: %4.4d<BR> <BR>",
                (!bInput && (pDeliveryData->exec_status_code !=
eOK)) ? ERR_TYPE_DELIVERY_POST : 0,
                DELIVERY_FORM, iTermId,
                Term.pClientData[iTermId].iSynclId, Term.pClientData[iTermId].w_id);

        if ( bInput )
        {
                strcpy( szForm+c,
                "Carrier Number: <INPUT NAME=\"OCD\"*
SIZE=1><BR> <BR>"
                "Execution Status: <BR> <BR> <BR> <BR>
<BR> <BR> <BR> <BR>"
                " <BR> <BR> <BR> <BR> <BR> <BR>
<BR> <BR> </font></PRE><HR>"
                "<INPUT TYPE=\"submit\" NAME=\"CMD\"
VALUE=\"Process\">"
                "<INPUT TYPE=\"submit\" NAME=\"CMD\"
VALUE=\"Menu\">"
                "</BODY></FORM></HTML>");
        }
        else
        {
                wsprintf( szForm+c,
                "Carrier Number: %2.2d<BR> <BR>"
                "Execution Status: %s <BR> <BR> <BR>
<BR> <BR> <BR> <BR> <BR> <BR>
<BR> <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..\">"
                "</BODY></FORM></HTML>"
                , pDeliveryData->o_carrier_id,
                (pDeliveryData->exec_status_code == eOK) ?
"Delivery has been queued." : "Delivery Post Failed "
                );
        }
}

/* FUNCTION: ProcessNewOrderForm
*
* PURPOSE: This function gets and validates the input data from the
new order form

```



```

*           filling in the required input variables. It then
calls the SQLNewOrder
*           transaction, constructs the output form and
writes it back to client
*           browser.
*/

```

```

void ProcessNewOrderForm(EXTENSION_CONTROL_BLOCK *pECB, int
iTermId, char *szBuffer)

```

```

{
    PNEW_ORDER_DATA          pNewOrder;

    pNewOrder =
Term.pClientData[iTermId].pTxn->BuffAddr_NewOrder();

    ZeroMemory(pNewOrder, sizeof(NEW_ORDER_DATA));
    pNewOrder->w_id = Term.pClientData[iTermId].w_id;
    GetNewOrderData(pECB->lpszQueryString, pNewOrder);

    Term.pClientData[iTermId].pTxn->NewOrder();

    pNewOrder =
Term.pClientData[iTermId].pTxn->BuffAddr_NewOrder();
    MakeNewOrderForm(iTermId, pNewOrder, OUTPUT_FORM,
szBuffer );
}

```

```

/* FUNCTION: void ProcessPaymentForm

```

```

*
* PURPOSE:      This function gets and validates the input data from the
payment form
*           filling in the required input variables. It then
calls the SQLPayment
*           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 ProcessPaymentForm(EXTENSION_CONTROL_BLOCK *pECB, int
iTermId, char *szBuffer)

```

```

{
    PPAYMENT_DATA pPayment;

    pPayment =
Term.pClientData[iTermId].pTxn->BuffAddr_Payment();
    ZeroMemory(pPayment, sizeof(PAYMENT_DATA));
    pPayment->w_id = Term.pClientData[iTermId].w_id;
    GetPaymentData(pECB->lpszQueryString, pPayment);

    Term.pClientData[iTermId].pTxn->Payment();

    pPayment =
Term.pClientData[iTermId].pTxn->BuffAddr_Payment();
    MakePaymentForm(iTermId, pPayment, OUTPUT_FORM,
szBuffer);
}

```

```

/* FUNCTION: ProcessOrderStatusForm

```

```

*
* PURPOSE:      This function gets and validates the input data from the
Order Status

```

```

*           form filling in the required input variables. It
then calls the
*           SQLOrderStatus 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 ProcessOrderStatusForm(EXTENSION_CONTROL_BLOCK *pECB, int
iTermId, char *szBuffer)

```

```

{
    PORDER_STATUS_DATA      pOrderStatus;

    pOrderStatus =
Term.pClientData[iTermId].pTxn->BuffAddr_OrderStatus();
    ZeroMemory(pOrderStatus, sizeof(ORDER_STATUS_DATA));
    pOrderStatus->w_id = Term.pClientData[iTermId].w_id;
    GetOrderStatusData(pECB->lpszQueryString, pOrderStatus);

    Term.pClientData[iTermId].pTxn->OrderStatus();

    pOrderStatus =
Term.pClientData[iTermId].pTxn->BuffAddr_OrderStatus();
    MakeOrderStatusForm(iTermId, pOrderStatus, OUTPUT_FORM,
szBuffer);
}

```

```

/* FUNCTION: ProcessDeliveryForm

```

```

*
* PURPOSE:      This function gets and validates the input data from the
delivery form
*           filling in the required input variables. It then
calls the PostDeliveryInfo
*           Api, The client is then informed that the
transaction has been posted.
*
* ARGUMENTS:   EXTENSION_CONTROL_BLOCK      *pECB
passed in structure pointer from inetsrv.
*           int
*           iTermId  client browser terminal id
*/

```

```

void ProcessDeliveryForm(EXTENSION_CONTROL_BLOCK *pECB, int
iTermId, char *szBuffer)

```

```

{
    char      *ptr = pECB->lpszQueryString;

    PDELIVERY_DATA pDelivery;

    pDelivery =
Term.pClientData[iTermId].pTxn->BuffAddr_Delivery();
    ZeroMemory(pDelivery, sizeof(DELIVERY_DATA));
    pDelivery->w_id = Term.pClientData[iTermId].w_id;

    pDelivery->o_carrier_id = GetIntKeyValue(&ptr, "OCD*",
ERR_DELIVERY_MISSING_OCD_KEY,
ERR_DELIVERY_CARRIER_INVALID);
    if ( pDelivery->o_carrier_id > 10 || pDelivery->o_carrier_id < 1 )
        throw new CWEBCLNT_ERR(
ERR_DELIVERY_CARRIER_ID_RANGE );

    if (dwNumDeliveryThreads)

```

```

    {
        //post delivery info
        if ( PostDeliveryInfo(pDelivery->w_id,
pDelivery->o_carrier_id)
                pDelivery->exec_status_code =
eDeliveryFailed;
                else
                pDelivery->exec_status_code = eOK;
        }
    else // delivery is done synchronously if no delivery threads
configured
        Term.pClientData[iTermId].pTxn->Delivery();

        pDelivery =
Term.pClientData[iTermId].pTxn->BuffAddr_Delivery();
        MakeDeliveryForm(iTermId, pDelivery, OUTPUT_FORM,
szBuffer);
    }

```

/\* FUNCTION: ProcessStockLevelForm

\* PURPOSE: This function gets and validates the input data from the Stock Level 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 lpszQueryString  
client browser http command string

\* NEW\_ORDER\_DATA  
\* 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] =
    { "SP00*", "SP01*", "SP02*", "SP03*", "SP04*",
      "SP05*", "SP06*", "SP07*", "SP08*", "SP09*",
      "SP10*", "SP11*", "SP12*", "SP13*", "SP14*" };
    static char szIID[MAX_OL_NEW_ORDER_ITEMS][7] =
    { "IID00*", "IID01*", "IID02*", "IID03*", "IID04*",
      "IID05*", "IID06*", "IID07*", "IID08*", "IID09*",
      "IID10*", "IID11*", "IID12*", "IID13*", "IID14*" };
    static char szQty[MAX_OL_NEW_ORDER_ITEMS][7] =
    { "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
= (short)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                lpszQueryString
client browser http command string
*
*               PAYMENT_DATA
* pPaymentData pointer to payment data structure
*/

void GetPaymentData(LPSTR lpszQueryString, PAYMENT_DATA
*pPaymentData)
{
    char    szTmp[26];
    char    *ptr = lpszQueryString;
    BOOL    bCustIdBlank;

    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(pPaymentData->c_last) > LAST_NAME_LEN
            )
                throw new CWEBCLNT_ERR(
            ERR_PAYMENT_LAST_NAME_TO_LONG );
            strcpy(pPaymentData->c_last, szTmp);
        }
        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;

    pOrderStatusData->d_id = GetIntKeyValue(&ptr, "DID*",
    ERR_ORDERSTATUS_MISSING_DID_KEY,
    ERR_ORDERSTATUS_DID_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(pOrderStatusData->c_last) >
LAST_NAME_LEN )
            throw new CWEBCLNT_ERR(
ERR_ORDERSTATUS_CLT_RANGE );
            strcpy(pOrderStatusData->c_last, szTmp);
        }
        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;
}

```

### tpcc.cpp

```

/* FILE:          TPCC.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.

#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 "410"

static CRITICAL_SECTION TermCriticalSection;

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

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

#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
* DWORD ul_reason_for_call
reason for call
* LPVOID lpReserved
reserved for future use
*
* RETURNS: BOOL FALSE
errors occured 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] = "";
    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 );

        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
        if (Reg.eTxnMon == TUXEDO)
        {
            strcpy( szDllName,
Reg.szPath );
            strcat( szDllName,
"tpcc_tuxedo.dll");
            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)
                throw new
CWEBCLNT_ERR( ERR_GETPROCADDR_FAILED, szDllName,
GetLastError() );
        }
        else if (Reg.eTxnMon ==
ENCINA)
        {
            strcpy( szDllName,
Reg.szPath );
            strcat( szDllName,
"tpcc_encina.dll");
            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)

```

```

                throw new
CWEBCLNT_ERR( ERR_GETPROCADDR_FAILED, szDllName,
GetLastError() );
        }
        else if (Reg.eTxnMon == COM)
        {
            strcpy( szDllName,
Reg.szPath );
            strcat( szDllName,
"tpcc_com.dll");
            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)
                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)
            {
                strcpy(
szDllName, Reg.szPath );
                strcat(
szDllName, "tpcc_odbc.dll");

```

<pre> hLibInstanceDb = LoadLibrary( szDllName ); (hLibInstanceDb == NULL) throw new CWEBCLNT_ERR( ERR_LOADDLL_FAILED, szDllName, GetLastError() );  // get function pointer to wrapper for class constructor pCTPCC_ODBC_new = (TYPE_CTPCC_ODBC*) GetProcAddress(hLibInstanceDb,"CTPCC_ODBC_new"); (pCTPCC_ODBC_new == NULL) throw new CWEBCLNT_ERR( ERR_GETPROCADDR_FAILED, szDllName, GetLastError() ); } if (dwNumDeliveryThreads) { // for deferred delivery txns: hDoneEvent = CreateEvent( NULL, TRUE /* manual reset */, FALSE /* initially not signalled */, NULL ); InitializeCriticalSection(&amp;DelBuffCriticalSection); hWorkerSemaphore = CreateSemaphore( NULL, 0, dwDelBuffSize, NULL ); dwDelBuffFreeCount = dwDelBuffSize; InitJulianTime(NULL); // create unique log file name based on delilog-yymmdd-hhmm.log SYSTEMTIME Time; GetLocalTime( &amp;Time ); ); wsprintf( szLogFile, "%sdelivery-%2.2d%2.2d%2.2d-%2.2d%2.2d.log", Reg.szPath, Time.wYear % 100, Time.wMonth, Time.wDay, Time.wHour, Time.wMinute ); txndelilog = new CTxnLog(szLogFile, TXN_LOG_WRITE); //write event into txn log for START txndelilog-&gt;WriteCtrlRecToLog(TXN_EVENT_START, szMyComputerName, sizeof(szMyComputerName)); // allocate structures for delivery buffers and thread mgmt HANDLE[dwNumDeliveryThreads]; pDeliHandles = new pDelBuff = new DELIVERY_TRANSACTION[dwDelBuffSize]; // launch DeliveryWorkerThread to perform actual delivery txns for(i=0; i&lt;dwNumDeliveryThreads; i++) { </pre>	<pre> pDeliHandles[i] = (HANDLE) _beginthread( DeliveryWorkerThread, 0, NULL ); if (pDeliHandles[i] == INVALID_HANDLE_VALUE) throw new CWEBCLNT_ERR( ERR_DELIVERY_THREAD_FAILED ); } } break; case DLL_PROCESS_DETACH: if (dwNumDeliveryThreads) { if (txndelilog != NULL) { //write event into txn log for STOP txndelilog-&gt;WriteCtrlRecToLog(TXN_EVENT_STOP, szMyComputerName, sizeof(szMyComputerName)); // This will do a clean shutdown of the delivery log file CTxnLog *txndelilogLocal = txndelilog; txndelilog= delete txndelilogLocal; } delete [] pDeliHandles; delete [] pDelBuff; CloseHandle( hWorkerSemaphore ); CloseHandle( hDoneEvent ); DeleteCriticalSection(&amp;DelBuffCriticalSection); } DeleteCriticalSection(&amp;TermCriticalSection); if (hLibInstanceTm != NULL) FreeLibrary( hLibInstanceTm = NULL; if (hLibInstanceDb != NULL) FreeLibrary( hLibInstanceDb = NULL; Sleep(500); break; default: /* nothing */; } } catch (CBaseErr *e) { WriteMessageToEventLog( e-&gt;ErrorText() ); </pre>
-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------	-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------

```

        delete e;
        TerminateExtension(0);
        return FALSE;
    }
    catch (...)
    {
        WriteMessageToEventLog(TEXT("Unhandled
exception. DLL could not load.));
        TerminateExtension(0);
        return FALSE;
    }

    return TRUE;
}

/* 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++)
            WaitForSingleObject( pDeliHandles[i],
INFINITE );
    }

    TermDeleteAll();
    return TRUE;
}

/* FUNCTION: HttpExtensionProc
*

```

```

* PURPOSE:      This function is the main entry point for the TPCC DLL.
The internet service
*
* ARGUMENTS:   EXTENSION_CONTROL_BLOCK      *pECB
structure pointer to passed in internet
*
* 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);
        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;
        }
        break;
    case 2:
        // new-order selected from menu; display
        new-order input form
        INPUT_FORM, szBuffer);
        MakeNewOrderForm(TermId, NULL,
        break;
    case 3:
        // payment selected from menu; display
        payment input form
        INPUT_FORM, szBuffer);
        MakePaymentForm(TermId, NULL,
        break;
    case 4:
        // delivery selected from menu; display
        delivery input form
        INPUT_FORM, szBuffer);
        MakeDeliveryForm(TermId, NULL,
        break;
    case 5:
        // order-status selected from menu; display
        order-status input form
        INPUT_FORM, szBuffer);
        MakeOrderStatusForm(TermId, NULL,
        break;
    case 6:
        // stock-level selected from menu; display
        stock-level input form
        INPUT_FORM, szBuffer);
        MakeStockLevelForm(TermId, NULL,
        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, 0, TermId,
        iSyncId, "Error: Unhandled exception in Web Client.", szBuffer );
    }
#endif ICECAP
    StopCAP();
#endif

    lpbSize = strlen(szBuffer);
    wsprintf(szHeader1,
        "Content-Type: text/html\r\n"
        "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;
    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"));

```

```

    _sprintf(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
            (LPCTSTR *)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 txnDeliRec;

    DWORD index;
    HANDLE handles[2];

    SYSTEMTIME trans_end; //delivery
transaction finished time
    SYSTEMTIME trans_start; //delivery transaction
start time

    assert(txnDeliLog != NULL);

    try
    {
        if (Reg.eDB_Protocol == ODBC)
            pTxn = pCTPCC_ODBC_new(
                Reg.szDbServer, Reg.szDbUser, Reg.szDbPassword, szMyComputerName,
                Reg.szDbName);
        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];
        sprintf( 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 (...)
    {
        WriteMessageToEventLog(TEXT("Unhandled exception
caught in DeliveryWorkerThread. "));
        goto ErrorExit;
    }

    while (TRUE)
    {
        try
        {
            //while delivery thread running, i.e. user has
not 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);
                delivery =
                *(pDelBuff+dwDelBuffBusyIndex);
                dwDelBuffFreeCount++;
                dwDelBuffBusyIndex++;
                if (dwDelBuffBusyIndex ==
                dwDelBuffSize) // wrap-around if at end of buffer
                    dwDelBuffBusyIndex =
                0;

                LeaveCriticalSection(&DelBuffCriticalSection);

                pDeliveryData->w_id =
                delivery.w_id;
                pDeliveryData->o_carrier_id =
                delivery.o_carrier_id;

                txnDeliRec.w_id =
                pDeliveryData->w_id;
                txnDeliRec.o_carrier_id =
                pDeliveryData->o_carrier_id;
                txnDeliRec.TxnStartT0 =
                Get64BitTime(&delivery.queue);
            }
        }
    }
}

```

```

        GetLocalTime( &trans_start );
        pTxn->Delivery();
        GetLocalTime( &trans_end );

        //log txn
        txnDeliRec.TxnStatus =
ERR_SUCCESS;

        for (int i=0; i<10; i++)
            txnDeliRec.o_id[i] =
pDeliveryData->o_id[i];

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

        if (txnDelilog != NULL)

txnDelilog->WriteToLog(&txnDeliRec);
    }
    catch (CBaseErr *e)
    {
        char szTmp[1024];
        sprintf( szTmp, "Error in Delivery Txn
thread. %s", e->ErrorText() );
        WriteMessageToEventLog( szTmp );

        // log the error txn
        txnDeliRec.TxnStatus = e->ErrorType();
        if (txnDelilog != NULL)

txnDelilog->WriteToLog(&txnDeliRec);

        delete e;
    }
    catch (...)
    {
        // unhandled exception; shouldn't happen; not
much we can do...

WriteMessageToEventLog(TEXT("Unhandled exception caught in
DeliveryWorkerThread.));
    }

ErrorExit:
    delete pTxn;
    _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(short w_id, short o_carrier_id)
{
    BOOL bError;

    EnterCriticalSection(&DelBuffCriticalSection);
    if (dwDelBuffFreeCount > 0)

```

```

    {
        bError = FALSE;
        (pDelBuff+dwDelBuffFreeIndex)->w_id
= w_id;
        (pDelBuff+dwDelBuffFreeIndex)->o_carrier_id
=
o_carrier_id;

        GetLocalTime(&(pDelBuff+dwDelBuffFreeIndex)->queue);

        dwDelBuffFreeCount--;
        dwDelBuffFreeIndex++;
        if (dwDelBuffFreeIndex == dwDelBuffSize)
            dwDelBuffFreeIndex = 0;
        //
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 relevent information out of the
http command passed in from
the browser.
*
* COMMENTS:     If this is the initial connection i.e. 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 *pSynclId)
{
    char *ptr = pECB->lpszQueryString;
    char szBuffer[25];
    int i;

    //allowable client command strings i.e. CMD=command
    static char *szCmds[] =
{
        "Process", "..NewOrder..", "..Payment..", "..Delivery..",
"..Order-Status..", "..Stock-Level..",
        "..Exit..", "Submit", "Menu", "Clear", "Stats", ""
    };

    *pCmd = 0;
    *pTermId = 0;
    // default is the login screen

    // if no params (i.e., empty query string), then return login screen
if (strlen(pECB->lpszQueryString) == 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
GetKeyValue(&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
        throw new CWEBCLNT_ERR(
ERR_COMMAND_UNDEFINED);
    if ( !strcmp(szCmds[i], szBuffer) )
    {
        *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\\" color=\\"blue\\"><PRE>"
" __DATE__ ", "__TIME__ " <BR>"
"Source:
" <FORM
" <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=\\""
WEBCIENT_VERSION "\\">"
);

    sprintf( 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, dwDelBuffSize );
strcat( szBuffer, szTmp);

if (Reg.eTxnMon == COM)
{
    sprintf( szTmp, "COM Single Pool =
<B>%s</B><BR>",
Reg.bCOM_SinglePool ? "YES" : "NO" );
    strcat( szBuffer, szTmp);
}
strcat( szBuffer, "</PRE></font>");

if (Reg.eTxnMon == None)
    // connection options may be specified when not using a
txn monitor
    sprintf( szTmp, "Please enter your database options
for this connection:<BR>"
" <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
    // if using a txn monitor, connection options are
determined from registry; can't
// set per user. show options fyi
    sprintf( szTmp, "Database options which will be
used by the transaction monitor:<BR>"
" <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 );
strcat( szBuffer, szTmp);

```

```

        sprintf( szTmp, "Please enter your Warehouse and District for
this session:<BR>"
                "<font face=\"Courier
New\" color=\"blue\"><PRE>" );
        strcat( szBuffer, szTmp);
        strcat( szBuffer, "Warehouse ID = <INPUT NAME=\"w_id\"
SIZE=4><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 );
        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 iTot;

    EnterCriticalSection(&TermCriticalSection);

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

    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>"
        , iTot);
}

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_TERMID,
            "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)
        sprintf( 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                *pQueryString
http string from client browser
*
* pKey         char                key value to look for
*
* pValue       char                character array into which to place key's value
*
* iMax         int                 maximum length of key value array.
*
* err          WEBERROR           error value to throw
*
* RETURNS:     nothing.
*
* ERROR:       if (the pKey value is not found) then
if (err == 0)
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                *pQueryString
http string from client browser
 *
 * pKey          char
                key value to look for
 *
 * NoKeyErr      WEBERROR
                error value to throw if key not found
 *
 * NotIntErr     WEBERROR
                error value to throw if value not numeric
 *
 * RETURNS:      integer
 *
 * ERROR:        if (the pKey value is not found) then
                if (NoKeyErr !=
NO_ERR)
                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=value0. This DLL formats
 *
 *               TPC-C input 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 TPC.C.DLL
 *
 *               is first loaded by the inet service.
 *
 *
 */

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

    Term.iMasterSyncId = 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
    // allocated as an actual terminal.
    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 )
{
    wsprintf(szBuffer,
"<HTML><HEAD><TITLE>TPC-C
Error</TITLE></HEAD><BODY>"
"<FORM ACTION='tpcc.dll' METHOD='GET'>"

```

```

VALUE="%d\>"      "<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=\"TERMIN\"
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)
{
    wsprintf(szForm,
              "<HTML><HEAD><TITLE>TPC-C Main
Menu</TITLE></HEAD><BODY>\"
              \"Select Desired Transaction.<BR><HR>\"
              "<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="\"%d\>"
              "<INPUT TYPE=\"hidden\" NAME=\"TERMIN\"
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 = wsprintf(szForm,
                "<HTML><HEAD><TITLE>TPC-C Stock
Level</TITLE></HEAD><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="\"%d\>"
                "<INPUT TYPE=\"hidden\" NAME=\"TERMIN\"
VALUE="\"%d\>"
                "<INPUT TYPE=\"hidden\" NAME=\"SYNCID\"
VALUE="\"%d\>"
                "<PRE><font face=\"Courier\">
Stock-Level<BR>\"
                \"Warehouse: %4.4d 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: </font><BR> <BR> <BR>
<BR> <BR> <BR> <BR> <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
    {
        wsprintf(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> <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..\">\"

```

```

VALUE="\"..Exit..\">"
" <INPUT TYPE=\"submit\" NAME=\"CMD\"
" </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.dll\" METHOD=\"GET\">"
" <INPUT TYPE=\"hidden\" NAME=\"STATUSID\"
VALUE=\"%d\">"
" <INPUT TYPE=\"hidden\" NAME=\"ERROR\"
VALUE=\"0\">"
" <INPUT TYPE=\"hidden\" NAME=\"FORMID\"
VALUE=\"%d\">"
" <INPUT TYPE=\"hidden\" NAME=\"TERMIN\"
VALUE=\"%d\">"
" <INPUT TYPE=\"hidden\" NAME=\"SYCNID\"
VALUE=\"%d\">"
" <PRE><font face=\"Courier\">
New Order<BR>"
, bValid ? 0 : ERR_BAD_ITEM_ID,
NEW_ORDER_FORM, iTermId, Term.pClientData[iTermId].iSynclId);

    if ( bInput )
    {
        c += sprintf(szForm+c, "Warehouse: %4.4d ",
Term.pClientData[iTermId].w_id );

        strcpy( szForm+c,
"District: <INPUT NAME=\"DID*\"
SIZE=1>
Date: <BR>"
"Customer: <INPUT NAME=\"CID*\"
SIZE=4> Name: Credit: %Disc:<BR>"
"Order Number: Number of Lines:
W_tax: D_tax:<BR> <BR>"
" Supp_W Item_Id Item Name Qty
Stock B/G Price Amount<BR>"
" <INPUT NAME=\"SP00*\" SIZE=4>
<INPUT NAME=\"IID00*\" SIZE=6> <INPUT
NAME=\"Qty00*\" SIZE=1><BR>"

```

```

" <INPUT NAME=\"SP01*\" SIZE=4>
<INPUT NAME=\"IID01*\" SIZE=6> <INPUT
NAME=\"Qty01*\" SIZE=1><BR>"
" <INPUT NAME=\"SP02*\" SIZE=4>
<INPUT NAME=\"IID02*\" SIZE=6> <INPUT
NAME=\"Qty02*\" SIZE=1><BR>"
" <INPUT NAME=\"SP03*\" SIZE=4>
<INPUT NAME=\"IID03*\" SIZE=6> <INPUT
NAME=\"Qty03*\" SIZE=1><BR>"
" <INPUT NAME=\"SP04*\" SIZE=4>
<INPUT NAME=\"IID04*\" SIZE=6> <INPUT
NAME=\"Qty04*\" SIZE=1><BR>"
" <INPUT NAME=\"SP05*\" SIZE=4>
<INPUT NAME=\"IID05*\" SIZE=6> <INPUT
NAME=\"Qty05*\" SIZE=1><BR>"
" <INPUT NAME=\"SP06*\" SIZE=4>
<INPUT NAME=\"IID06*\" SIZE=6> <INPUT
NAME=\"Qty06*\" SIZE=1><BR>"
" <INPUT NAME=\"SP07*\" SIZE=4>
<INPUT NAME=\"IID07*\" SIZE=6> <INPUT
NAME=\"Qty07*\" SIZE=1><BR>"
" <INPUT NAME=\"SP08*\" SIZE=4>
<INPUT NAME=\"IID08*\" SIZE=6> <INPUT
NAME=\"Qty08*\" SIZE=1><BR>"
" <INPUT NAME=\"SP09*\" SIZE=4>
<INPUT NAME=\"IID09*\" SIZE=6> <INPUT
NAME=\"Qty09*\" SIZE=1><BR>"
" <INPUT NAME=\"SP10*\" SIZE=4>
<INPUT NAME=\"IID10*\" SIZE=6> <INPUT
NAME=\"Qty10*\" SIZE=1><BR>"
" <INPUT NAME=\"SP11*\" SIZE=4>
<INPUT NAME=\"IID11*\" SIZE=6> <INPUT
NAME=\"Qty11*\" SIZE=1><BR>"
" <INPUT NAME=\"SP12*\" SIZE=4>
<INPUT NAME=\"IID12*\" SIZE=6> <INPUT
NAME=\"Qty12*\" SIZE=1><BR>"
" <INPUT NAME=\"SP13*\" SIZE=4>
<INPUT NAME=\"IID13*\" SIZE=6> <INPUT
NAME=\"Qty13*\" SIZE=1><BR>"
" <INPUT NAME=\"SP14*\" SIZE=4>
<INPUT NAME=\"IID14*\" SIZE=6> <INPUT
NAME=\"Qty14*\" SIZE=1><BR>"
"Execution Status:
Total:<BR>"
" </font></PRE><HR>"
" <INPUT TYPE=\"submit\" NAME=\"CMD\"
VALUE=\"Process\">"
" <INPUT TYPE=\"submit\" NAME=\"CMD\"
VALUE=\"Menu\">"
" </FORM></HTML>"
);
}
else
{
    c += sprintf(szForm+c, "Warehouse: %4.4d 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_id,
pNewOrderData->c_last, pNewOrderData->c_credit);

    if ( bValid )
    {
        c += sprintf(szForm+c,
                    "%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_ol_cnt,
                    100.0 * pNewOrderData->w_tax,
                    100.0 * pNewOrderData->d_tax);

        for(i=0; i<pNewOrderData->o_ol_cnt; i++)
        {
            c += sprintf(szForm+c, " %4.4d
%6.6d %-24s %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 )

```

```

Transaction committed.
        c += sprintf(szForm+c, "Execution Status:
Total: %8.2f ",
                    pNewOrderData->total_amount);
    else
        c += sprintf(szForm+c, "Execution Status:
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 blnInput, char *szForm)
{
    int c;

    c = sprintf(szForm,
                "<HTML><HEAD><TITLE>TPC-C
Payment</TITLE></HEAD><BODY>"
                "<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='\"%d\"'>"
                "<INPUT TYPE='hidden' NAME='\"TERMINID\"'
                VALUE='\"%d\"'>"
                "<INPUT TYPE='hidden' NAME='\"SYNCID\"'
                VALUE='\"%d\"'>"
                "<PRE><font face='\"Courier\"'>
Payment<BR>"
                "Date: "
                , PAYMENT_FORM, iTermId,
                Term.pClientData[iTermId].iSyncId);

    if ( !blnInput )
    {
        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: %4.4d"
            "          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> <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: %4.4d
District: %2.2d<BR>"
            "%-20s          %-20s<BR>"
            "%-20s          %-20s<BR>"
            "%-20s %-2s %-5.5s-%4.4s    %-20s %-2s
%-5.5s-%4.4s<BR> <BR>"
            "Customer: %4.4d Cust-Warehouse: %4.4d
Cust-District: %2.2d<BR>"
            "Name:  %-16s %-2s %-16s  Since:
%-2.2d-%2.2d-%4.4d<BR>"
            "          %-20s          Credit: %-2s<BR>"
            , 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_w_id, pPaymentData->c_d_id,
            pPaymentData->c_first,
            pPaymentData->c_middle, 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_city,
            pPaymentData->c_state, 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>
%-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,
            " <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..\">"
            "</BODY></FORM></HTML>");
    }
}
/* FUNCTION: MakeOrderStatusForm
*
* 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 MakeOrderStatusForm(int iTermId, ORDER_STATUS_DATA
*pOrderStatusData, BOOL bInput, char *szForm)
{
    int          i, c;

```

```

static char szBR[] = " <BR> <BR> <BR> <BR> <BR> <BR> <BR>
<BR> <BR> <BR> <BR> <BR> <BR> <BR> <BR> <BR> <BR> <BR>";

c = sprintf(szForm,
" <HTML><HEAD><TITLE>TPC-C
Order-Status</TITLE></HEAD><BODY>"
" <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=\"%d\">"
" <INPUT TYPE=\"hidden\" NAME=\"TERMINID\"
VALUE=\"%d\">"
" <INPUT TYPE=\"hidden\" NAME=\"SYNCDID\"
VALUE=\"%d\">"
" <PRE><font face=\"Courier\">
Order-Status<BR>"
" Warehouse: %4.4d ",
ORDER_STATUS_FORM, iTermId,
Term.pClientData[iTermId].iSyncId, Term.pClientData[iTermId].w_id);

if ( bInput )
{
strcpy(szForm+c,
"District: <INPUT NAME=\"DID*\"
SIZE=1><BR>"
"Customer: <INPUT NAME=\"CID*\"
SIZE=4> Name: <INPUT NAME=\"CLT*\" SIZE=23><BR>"
" Cust-Balance: <BR> <BR>"
"Order-Number:      Entry-Date:
Carrier-Number: <BR>"
"Supply-W Item-Id Qty Amount
Delivery-Date <BR> <BR> <BR> <BR> <BR>"
" <BR> <BR> <BR> <BR> <BR> <BR> <BR> <BR> <BR> <BR> <BR> <BR> <BR>
<BR> <BR> <BR> <BR> <BR></font></PRE>"
" <HR><INPUT TYPE=\"submit\"
NAME=\"CMD\" VALUE=\"Process\"><INPUT TYPE=\"submit\"
NAME=\"CMD\" VALUE=\"Menu\">"
" </BODY></FORM></HTML> ");
}
else
{
c += sprintf(szForm+c,
"District: %2.2d<BR>"
"Customer: %4.4d Name: %-16s %-2s
%-16s<BR>",
pOrderStatusData->d_id,
pOrderStatusData->c_first,
pOrderStatusData->c_middle, pOrderStatusData->c_last);

c += sprintf(szForm+c, "Cust-Balance: %9.2f<BR>
<BR>",
pOrderStatusData->c_balance);

c += sprintf(szForm+c,
"Order-Number: %8.8d Entry-Date:
%2.2d-%2.2d-%4.4d %2.2d:%2.2d Carrier-Number: %2.2d<BR>"
"Supply-W Item-Id Qty Amount
Delivery-Date<BR>",
pOrderStatusData->o_id,
pOrderStatusData->o_entry_d.day,
pOrderStatusData->o_entry_d.month,
pOrderStatusData->o_entry_d.year,
pOrderStatusData->o_entry_d.hour,
pOrderStatusData->o_entry_d.minute,

```

```

pOrderStatusData->o_entry_d.second,
pOrderStatusData->o_carrier_id);

for(i=0; i< pOrderStatusData->o_ol_cnt; i++)
{
c += sprintf(szForm+c, " %4.4d %6.6d
%2.2d %8.2f %2.2d-%2.2d-%4.4d<BR>",
pOrderStatusData->OL[i].ol_supply_w_id,
pOrderStatusData->OL[i].ol_i_id,
pOrderStatusData->OL[i].ol_quantity,
pOrderStatusData->OL[i].ol_amount,
pOrderStatusData->OL[i].ol_delivery_d.day,
pOrderStatusData->OL[i].ol_delivery_d.month,
pOrderStatusData->OL[i].ol_delivery_d.year);
}

strncpy( szForm+c, szBR, (15-i)*5 );
c += (15-i)*5;

strcpy(szForm+c,
" </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..\">"
" </BODY></FORM></HTML> );
}
}

/* FUNCTION: MakeDeliveryForm
*
* 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 MakeDeliveryForm(int iTermId, DELIVERY_DATA *pDeliveryData,
BOOL bInput, char *szForm)
{
int c;

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

```

```

VALUE="%d\ ">
    "<INPUT TYPE="hidden" NAME="SYNCID"
Delivery<BR>"
    "<PRE><font face="Courier">
        "Warehouse: %4.4d<BR> <BR>",
        (!bInput && (pDeliveryData->exec_status_code !=
eOK)) ? ERR_TYPE_DELIVERY_POST : 0,
        DELIVERY_FORM, iTermId,
Term.pClientData[iTermId].iSyncId, Term.pClientData[iTermId].w_id);

    if ( bInput )
    {
        strcpy( szForm+c,
                "Carrier Number: <INPUT NAME="OCD*"
SIZE=1><BR> <BR>"
                "Execution Status: <BR> <BR> <BR> <BR>
<BR> <BR> <BR> <BR>"
                " <BR> <BR> <BR> <BR> <BR> <BR> <BR>
<BR> <BR> </font></PRE><HR>"
                "<INPUT TYPE="submit" NAME="CMD\"
VALUE="Process\">"
                "<INPUT TYPE="submit" NAME="CMD\"
VALUE="Menu\">"
                "</BODY></FORM></HTML>");
    }
    else
    {
        sprintf( szForm+c,
                "Carrier Number: %2.2d<BR> <BR>"
                "Execution Status: %s <BR> <BR> <BR>
<BR> <BR> <BR> <BR> <BR> <BR> <BR>
<BR> <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..\">"
                "</BODY></FORM></HTML>"
                , pDeliveryData->o_carrier_id,
                (pDeliveryData->exec_status_code == eOK) ?
"Delivery has been queued." : "Delivery Post Failed "
                );
    }
}

/* FUNCTION: ProcessNewOrderForm
*
* PURPOSE:      This function gets and validates the input data from the
new order form
*
*              filling in the required input variables. it then
calls the SQLNewOrder
*              transaction, constructs the output form and
writes it back to client
*              browser.
*/

void ProcessNewOrderForm(EXTENSION_CONTROL_BLOCK *pECB, int
iTermId, char *szBuffer)
{

```

```

PNEW_ORDER_DATA
    pNewOrder;

    pNewOrder =
Term.pClientData[iTermId].pTxn->BuffAddr_NewOrder();

    ZeroMemory(pNewOrder, sizeof(NEW_ORDER_DATA));
    pNewOrder->w_id = Term.pClientData[iTermId].w_id;
    GetNewOrderData(pECB->lpszQueryString, pNewOrder);

    Term.pClientData[iTermId].pTxn->NewOrder();

    pNewOrder =
Term.pClientData[iTermId].pTxn->BuffAddr_NewOrder();
    MakeNewOrderForm(iTermId, pNewOrder, OUTPUT_FORM,
szBuffer);
}

/* FUNCTION: void ProcessPaymentForm
*
* PURPOSE:      This function gets and validates the input data from the
payment form
*
*              filling in the required input variables. It then
calls the SQLPayment
*              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 ProcessPaymentForm(EXTENSION_CONTROL_BLOCK *pECB, int
iTermId, char *szBuffer)
{
    PPAYMENT_DATA pPayment;

    pPayment =
Term.pClientData[iTermId].pTxn->BuffAddr_Payment();
    ZeroMemory(pPayment, sizeof(PAYMENT_DATA));
    pPayment->w_id = Term.pClientData[iTermId].w_id;
    GetPaymentData(pECB->lpszQueryString, pPayment);

    Term.pClientData[iTermId].pTxn->Payment();

    pPayment =
Term.pClientData[iTermId].pTxn->BuffAddr_Payment();
    MakePaymentForm(iTermId, pPayment, OUTPUT_FORM,
szBuffer);
}

/* FUNCTION: ProcessOrderStatusForm
*
* PURPOSE:      This function gets and validates the input data from the
Order Status
*
*              form filling in the required input variables. It
then calls the
*              SQLOrderStatus 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 ProcessOrderStatusForm(EXTENSION_CONTROL_BLOCK *pECB, int
iTermId, char *szBuffer)
{
    PORDER_STATUS_DATA    pOrderStatus;

    pOrderStatus =
Term.pClientData[iTermId].pTxn->BuffAddr_OrderStatus();
ZeroMemory(pOrderStatus, sizeof(ORDER_STATUS_DATA));
pOrderStatus->w_id = Term.pClientData[iTermId].w_id;
GetOrderStatusData(pECB->lpszQueryString, pOrderStatus);

    Term.pClientData[iTermId].pTxn->OrderStatus();

    pOrderStatus =
Term.pClientData[iTermId].pTxn->BuffAddr_OrderStatus();
MakeOrderStatusForm(iTermId, pOrderStatus, OUTPUT_FORM,
szBuffer);
}

/* FUNCTION: ProcessDeliveryForm
*
* PURPOSE:      This function gets and validates the input data from the
delivery form
*
*              filling in the required input variables. It then
calls the PostDeliveryInfo
*
*              Api, The client is then informed that the
transaction has been posted.
*
* ARGUMENTS:   EXTENSION_CONTROL_BLOCK    *pECB
passed in structure pointer from inetsrv.
*
*              int
iTermId    client browser terminal id
*/

void ProcessDeliveryForm(EXTENSION_CONTROL_BLOCK *pECB, int
iTermId, char *szBuffer)
{
    char    *ptr = pECB->lpszQueryString;

    PDELIVERY_DATA pDelivery;

    pDelivery =
Term.pClientData[iTermId].pTxn->BuffAddr_Delivery();
ZeroMemory(pDelivery, sizeof(DELIVERY_DATA));
pDelivery->w_id = Term.pClientData[iTermId].w_id;

    pDelivery->o_carrier_id    = GetIntKeyValue(&ptr, "OCD*",
ERR_DELIVERY_MISSING_OCD_KEY,
ERR_DELIVERY_CARRIER_INVALID);
    if ( pDelivery->o_carrier_id > 10 || pDelivery->o_carrier_id < 1 )
        throw new CWEBCLNT_ERR(
ERR_DELIVERY_CARRIER_ID_RANGE );

    if (dwNumDeliveryThreads)
    {
        //post delivery info
        if ( PostDeliveryInfo(pDelivery->w_id,
pDelivery->o_carrier_id )
            pDelivery->exec_status_code =
eDeliveryFailed;
        else
            pDelivery->exec_status_code = eOK;
    }
    else // delivery is done synchronously if no delivery threads
configured

```

```

Term.pClientData[iTermId].pTxn->Delivery();

    pDelivery =
Term.pClientData[iTermId].pTxn->BuffAddr_Delivery();
MakeDeliveryForm(iTermId, pDelivery, OUTPUT_FORM,
szBuffer);
}

/* FUNCTION: ProcessStockLevelForm
*
* PURPOSE:      This function gets and validates the input data from the
Stock Level
*
*              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                                lpszQueryString
client browser http command string
*
*              NEW_ORDER_DATA
*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] =
        { "SP00*", "SP01*", "SP02*", "SP03*", "SP04*",
          "SP05*", "SP06*", "SP07*", "SP08*", "SP09*",
          "SP10*", "SP11*", "SP12*", "SP13*", "SP14*" };
    static char szIID[MAX_OL_NEW_ORDER_ITEMS][7] =
        { "IID00*", "IID01*", "IID02*", "IID03*", "IID04*",
          "IID05*", "IID06*", "IID07*", "IID08*", "IID09*",
          "IID10*", "IID11*", "IID12*", "IID13*", "IID14*" };
    static char szQty[MAX_OL_NEW_ORDER_ITEMS][7] =
        { "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
= (short)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                lpszQueryString
client browser http command string
                PAYMENT_DATA
*pPaymentData pointer to payment data structure
*/

void GetPaymentData(LPSTR lpszQueryString, PAYMENT_DATA
*pPaymentData)
{
    char    szTmp[26];
    char    *ptr = lpszQueryString;
    BOOL    bCustIdBlank;

    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(pPaymentData->c_last) > LAST_NAME_LEN
)
        throw new CWEBCLNT_ERR(
ERR_PAYMENT_LAST_NAME_TO_LONG );
        strcpy(pPaymentData->c_last, szTmp);
    }
    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;

    pOrderStatusData->d_id = GetIntKeyValue(&ptr, "DID*",
ERR_ORDERSTATUS_MISSING_DID_KEY,
ERR_ORDERSTATUS_DID_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(pOrderStatusData->c_last) >
LAST_NAME_LEN )
            throw new CWEBCLNT_ERR(
ERR_ORDERSTATUS_CLT_RANGE );
        strcpy(pOrderStatusData->c_last, szTmp);
    }
    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;
}

```

## tpcc.def

LIBRARY TPCC.DLL

EXPORTS

```

GetExtensionVersion @1
HttpExtensionProc @2
TerminateExtension @3

```

## tpcc.h

```

// File: TPCC.H
// Microsoft TPC-C Kit Ver. 4.41
// Copyright Microsoft, 1996, 1997,
1998, 1999, 2000, 2001
// Purpose: Header file for TPC-C database loader

```

```

// Build number of TPC Benchmark Kit
#define TPCKIT_VER "4.41"

```

```

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

```

```

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

```

```

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

```

```

// Default environment constants
#define SERVER ""
#define DATABASE "tpcc"

```

```

#define USER "sa"
#define PASSWORD ""

// Default loader arguments
#define BATCH 10000
#define DEFLDPACKSIZE 32768
#define LOADER_RES_FILE "C:\\MSTPCC.440\\SETUP\\logs\\load.out"
#define LOG_PATH "C:\\MSTPCC.440\\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 table_warehouse; //
set if loading WAREHOUSE, DISTRICT, and STOCK
    BOOL table_customer;
// set if loading CUSTOMER and HISTORY
    BOOL table_orders;
// set if loading NEW-ORDER, ORDERS, ORDER-LINE
    long num_warehouses;
    long batch;
    long verbose;
    long pack_size;
    char *loader_res_file;
    char *log_path;
    char *synch_servername;
    long case_sensitivity;
    long starting_warehouse;
    long build_index;
    long index_order;
    long scale_down;
    char *index_script_path;
} TPCC_LDR_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          24

23 #define H_DATE_LEN

23 #define OL_DELIVERY_D_LEN      23
#define O_ENTRY_D_LEN          23

```

// Functions in random.c

```

void seed();
long irand();
double drand();
void WUCreate();
short WURand();
long RandomNumber(long lower, long upper);

```

// Functions in getargs.c;

```

void GetArgsLoader();
void GetArgsLoaderUsage();

```

// Functions in time.c

```

long TimeNow();

```

// Functions in strings.c

```

void MakeAddress();
void LastName();
int MakeAlphaString();
int MakeOriginalAlphaString();
int MakeNumberString();
int MakeZipNumberString();
void InitString();
void InitAddress();
void PaddString();

```

## tpcc.rc

//Microsoft Developer Studio generated resource script.

```

//
#include "resource.h"

```

```

#define APSTUDIO_READONLY_SYMBOLS
//

```

// Generated from the TEXTINCLUDE 2 resource.

```

//
#include "afxres.h"

```

```

//
#define APSTUDIO_READONLY_SYMBOLS

```

// English (U.S.) resources

```

#if !defined(AFX_RESOURCE_DLL) || defined(AFX_TARG_ENU)
#ifdef _WIN32
LANGUAGE LANG_ENGLISH, SUBLANG_ENGLISH_US
#pragma code_page(1252)

```

#endif // \_WIN32

```

#ifdef _MAC
//
// Version
//

```

```

VS_VERSION_INFO VERSIONINFO
FILEVERSION 0,4,0,0
PRODUCTVERSION 0,4,0,0
FILEFLAGSMASK 0x3fL

```

```

#ifdef _DEBUG
FILEFLAGS 0x1L

```

```

#else
FILEFLAGS 0x0L

```

```

#endif
FILEOS 0x40004L
FILETYPE 0x2L
FILESUBTYPE 0x0L

```

```

BEGIN
BLOCK "StringFileInfo"
BEGIN
BLOCK "040904b0"
BEGIN
VALUE "Comments", "TPC-C HTML DLL Server (DBLIB)0"
VALUE "CompanyName", "Microsoft0"
VALUE "FileDescription", "TPC-C HTML DLL Server (DBLIB)0"
VALUE "FileVersion", "0, 4, 0, 0\0"
VALUE "InternalName", "tpcc0"
VALUE "LegalCopyright", "Copyright © 19970"
VALUE "OriginalFilename", "tpcc.dll\0"
VALUE "ProductName", "Microsoft tpcc0"
VALUE "ProductVersion", "0, 4, 0, 0\0"
END
END

```

```

END
BLOCK "VarFileInfo"
BEGIN
VALUE "Translation", 0x409, 1200
END
END

```

#endif // !\_MAC

```

#ifdef APSTUDIO_INVOKED
//
// TEXTINCLUDE
//

```

```

1 TEXTINCLUDE DISCARDABLE
BEGIN
"resource.h\0"
END

```

```

2 TEXTINCLUDE DISCARDABLE
BEGIN
#include ""afxres.h""\r\n"
"\0"
END

```

```

3 TEXTINCLUDE DISCARDABLE
BEGIN
"\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
////////////////////////////////////

#ifdef APSTUDIO_INVOKED
////////////////////////////////////
//
// Generated from the TEXTINCLUDE 3 resource.
//

////////////////////////////////////
#endif // not APSTUDIO_INVOKED

tpcc_com.cpp

/*      FILE:          TPCC_COM.CPP
 *
 *      Microsoft TPC-C Kit Ver.
 *
 *      Copyright Microsoft, 1999
 *
 *      All Rights Reserved
 *
 *      not yet audited
 *
 *      PURPOSE:      Source file for TPC-C COM+ class
 *      implementation.
 *      Contact:      Charles Levine (clevine@microsoft.com)
 *
 *      Change history:

```

```

 *
 *      4.20.000 - first version
 */

// needed for CoInitializeEx
#define _WIN32_WINNT 0x0400

#include <windows.h>

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

#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 "tpcc_com.h"

#include "..\..\tpcc_com_ps\src\tpcc_com_ps_i.c"
#include "..\..\tpcc_com_all\src\tpcc_com_all_i.c"

// wrapper routine for class constructor
_declspec(dllexport) CTPCC_COM* CTPCC_COM_new(BOOL
bSinglePool)
{
    return new CTPCC_COM(bSinglePool);
}

CTPCC_COM::CTPCC_COM(BOOL bSinglePool)
{
    HRESULT hr = NULL;
    long lRet = 0;
    ULONG ulTmpSize = 0;

    m_pTxn = NULL;
    m_pNewOrder = NULL;
    m_pPayment = NULL;
    m_pStockLevel = NULL;
    m_pOrderStatus = NULL;

    m_bSinglePool = bSinglePool;

    ulTmpSize = (ULONG) sizeof(COM_DATA);
    VariantInit(&m_vTxn);
    m_vTxn.vt = VT_SAFEARRAY;

    m_vTxn.parray = SafeArrayCreateVector(VT_UI1, ulTmpSize,
ulTmpSize);
    if (!m_vTxn.parray)
        throw new CCOMERR( E_FAIL );

    memset((void*)m_vTxn.parray->pvData,0,ulTmpSize);
    m_pTxn = (COM_DATA*)m_vTxn.parray->pvData;

    hr = CoInitializeEx(NULL, COINIT_MULTITHREADED);
    if (FAILED(hr))
    {
        throw new CCOMERR( hr );
    }

    // create components
    if (m_bSinglePool)
    {
        hr = CoCreateInstance(CLSID_TPCC, NULL,
CLSCTX_SERVER, IID_ITPCC, (void **)&m_pNewOrder);
        if (FAILED(hr))
            throw new CCOMERR(hr);

        // all txns will use same component

```

```

        m_pPayment = m_pNewOrder;
        m_pStockLevel = m_pNewOrder;
        m_pOrderStatus = m_pNewOrder;
    }
    else
    {
        // use different components for each txn

        hr = CoCreateInstance(CLSID_NewOrder, NULL,
            CLSCTX_SERVER, IID_ITPCC, (void **)&m_pNewOrder);
        if (FAILED(hr))
            throw new CCOMERR(hr);

        hr = CoCreateInstance(CLSID_Payment, NULL,
            CLSCTX_SERVER, IID_ITPCC, (void **)&m_pPayment);
        if (FAILED(hr))
            throw new CCOMERR(hr);

        hr = CoCreateInstance(CLSID_StockLevel, NULL,
            CLSCTX_SERVER, IID_ITPCC, (void **)&m_pStockLevel);
        if (FAILED(hr))
            throw new CCOMERR(hr);

        hr = CoCreateInstance(CLSID_OrderStatus, NULL,
            CLSCTX_SERVER, IID_ITPCC, (void **)&m_pOrderStatus);
        if (FAILED(hr))
            throw new CCOMERR(hr);
    }

    // call setcomplete to release each component back into pool
    hr = m_pNewOrder->CallSetComplete();
    if (FAILED(hr))
        throw new CCOMERR(hr);

    if (!m_bSinglePool)
    {
        hr = m_pPayment->CallSetComplete();
        if (FAILED(hr))
            throw new CCOMERR(hr);

        hr = m_pStockLevel->CallSetComplete();
        if (FAILED(hr))
            throw new CCOMERR(hr);

        hr = m_pOrderStatus->CallSetComplete();
        if (FAILED(hr))
            throw new CCOMERR(hr);
    }
}

CTPCC_COM::~CTPCC_COM()
{
    if (m_pTxn)
        SafeArrayDestroy(m_vTxn.parray);

    ReleaseInterface(m_pNewOrder);
    if (!m_bSinglePool)
    {
        ReleaseInterface(m_pPayment);
        ReleaseInterface(m_pStockLevel);
        ReleaseInterface(m_pOrderStatus);
    }
    CoUninitialize();
}

void CTPCC_COM::NewOrder()
{
    VARIANT vTxn_out;

```

```

        HRESULT hr = m_pNewOrder->NewOrder(m_vTxn, &vTxn_out);
        if (FAILED(hr))
            throw new CCOMERR( hr );
        memcpy(m_pTxn, (void
            *)vTxn_out.parray->pvData, vTxn_out.parray->rgsabound[0].cElements);
        SafeArrayDestroy(vTxn_out.parray);

        if ( m_pTxn->ErrorType != ERR_SUCCESS )
            throw new CCOMERR( m_pTxn->ErrorType,
                m_pTxn->error );
    }

void CTPCC_COM::Payment()
{
    VARIANT vTxn_out;

    HRESULT hr = m_pPayment->Payment(m_vTxn, &vTxn_out);
    if (FAILED(hr))
        throw new CCOMERR( hr );
    memcpy(m_pTxn, (void
        *)vTxn_out.parray->pvData, vTxn_out.parray->rgsabound[0].cElements);
    SafeArrayDestroy(vTxn_out.parray);

    if ( m_pTxn->ErrorType != ERR_SUCCESS )
        throw new CCOMERR( m_pTxn->ErrorType,
            m_pTxn->error );
}

void CTPCC_COM::StockLevel()
{
    VARIANT vTxn_out;

    HRESULT hr = m_pStockLevel->StockLevel(m_vTxn,
        &vTxn_out);
    if (FAILED(hr))
        throw new CCOMERR( hr );
    memcpy(m_pTxn, (void
        *)vTxn_out.parray->pvData, vTxn_out.parray->rgsabound[0].cElements);
    SafeArrayDestroy(vTxn_out.parray);

    if ( m_pTxn->ErrorType != ERR_SUCCESS )
        throw new CCOMERR( m_pTxn->ErrorType,
            m_pTxn->error );
}

void CTPCC_COM::OrderStatus()
{
    VARIANT vTxn_out;

    HRESULT hr = m_pOrderStatus->OrderStatus(m_vTxn,
        &vTxn_out);
    if (FAILED(hr))
        throw new CCOMERR( hr );
    memcpy(m_pTxn, (void
        *)vTxn_out.parray->pvData, vTxn_out.parray->rgsabound[0].cElements);
    SafeArrayDestroy(vTxn_out.parray);

    if ( m_pTxn->ErrorType != ERR_SUCCESS )
        throw new CCOMERR( m_pTxn->ErrorType,
            m_pTxn->error );
}
}

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.
#ifndef 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 = iErrorType;
        m_iError = iError;
        m_hr = S_OK;
    }

    int          m_hr;
    int          m_iErrorType;
    int          m_iError;

    // A CCOMERR class can impersonate another class,
    // which happens if the error
    // was not actually a COM Services error, but was simply
    // transmitted back via COM.
    int ErrorType()
    {
        if (m_iErrorType == 0)
            return ERR_TYPE_COM;
        else
            return m_iErrorType;
    }

    int ErrorNum() {return m_hr;}

    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 DllDecl 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
            PAYMENT_DATA
            DELIVERY_DATA
            STOCK_LEVEL_DATA
            ORDER_STATUS_DATA
        } u;
    } *m_pTxn;

public:
    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
    CCOMERR(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.cpp***

```

/*      FILE:          TPCC_COM_ALL.CPP
 *
 *      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:       Implementation for TPC-C Tuxedo class.
 *      Contact:      Charles Levine (clevine@microsoft.com)
 *
 *
 *      Change history:
 *      4.20.000 - updated rev number to match kit
 */

#define STRICT
#define _WIN32_WINNT 0x0400
#define _ATL_APARTMENT_THREADED

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

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

#include <sqltypes.h>
#include <sql.h>
#include <sqlext.h>

#include "tpcc_com_ps.h"
#include "..\..\common\src\trans.h"
//tpckit transaction header contains definations of structures specific to TPC-C
#include "..\..\common\src\txn_base.h"
#include "..\..\common\src\error.h"
#include "..\..\common\src\ReadRegistry.h"
#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

#include "resource.h"
#include "tpcc_com_all.h"
#include "tpcc_com_all_i.c"
#include "Methods.h"
#include "..\..\tpcc_com_ps\src\tpcc_com_ps_i.c"
#include "..\..\common\src\ReadRegistry.cpp"

```

```

CComModule _Module;

BEGIN_OBJECT_MAP(ObjectMap)
    OBJECT_ENTRY(CLSID_TPCC, CTPCC)
    OBJECT_ENTRY(CLSID_NewOrder, CNewOrder)
    OBJECT_ENTRY(CLSID_OrderStatus, COrderStatus)
    OBJECT_ENTRY(CLSID_Payment, CPayment)
    OBJECT_ENTRY(CLSID_StockLevel, CStockLevel)
END_OBJECT_MAP()

// configuration settings from registry
TPCCREGISTRYDATA      Reg;
char
szMyComputerName[MAX_COMPUTERNAME_LENGTH+1];

static HINSTANCE hLibInstanceDb = NULL;

TYPE_CTPCC_DBLIB      *pCTPCC_DBLIB_new;
TYPE_CTPCC_ODBC       *pCTPCC_ODBC_new;

////////////////////////////////////////////////////////////////////////////////////////////////////////////////////////////////
// DLL Entry Point
extern "C"
BOOL WINAPI DllMain(HINSTANCE hInstance, DWORD dwReason,
LPVOID /**lpReserved*/)
{
    char szDllName[128];

    try
    {
        if (dwReason == DLL_PROCESS_ATTACH)
        {
            _Module.Init(ObjectMap, hInstance);
            DisableThreadLibraryCalls(hInstance);

            DWORD dwSize =
MAX_COMPUTERNAME_LENGTH+1;
            GetComputerName(szMyComputerName,
&dwSize);
            szMyComputerName[dwSize] = 0;

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

            if (Reg.eDB_Protocol == DBLIB)
            {
                strcpy( szDllName, Reg.szPath );
                strcat( szDllName,
"tpcc_dblib.dll");
                hLibInstanceDb = LoadLibrary(
szDllName );
                if (hLibInstanceDb == NULL)
                    throw new
CCOMPONENT_ERR( ERR_LOADDLL_FAILED, szDllName,
GetLastError() );

                // get function pointer to wrapper
                pCTPCC_DBLIB_new =
(TYPE_CTPCC_DBLIB*)
GetProcAddress(hLibInstanceDb,"CTPCC_DBLIB_new");
            }
        }
    }
}

```



```

        if (pCTPCC_DBLIB_new ==
NULL)
        throw new
CCOMPONENT_ERR( ERR_GETPROCADDR_FAILED, szDllName,
GetLastError());
    }
    else if (Reg.eDB_Protocol == ODBC)
    {
        strcpy( szDllName, Reg.szPath );
        strcat( szDllName,
"tpcc_odbc.dll");
        hLibInstanceDb = LoadLibrary(
szDllName );
        if (hLibInstanceDb == NULL)
            throw new
CCOMPONENT_ERR( ERR_LOADDLL_FAILED, szDllName,
GetLastError());

        // get function pointer to wrapper
for class constructor
        pCTPCC_ODBC_new =
(TYPE_CTPCC_ODBC*)
GetProcAddress(hLibInstanceDb,"CTPCC_ODBC_new");
        if (pCTPCC_ODBC_new ==
NULL)
            throw new
CCOMPONENT_ERR( ERR_GETPROCADDR_FAILED, szDllName,
GetLastError());
    }
    else
        throw new CCOMPONENT_ERR(
ERR_UNKNOWN_DB_PROTOCOL );
    }
    else if (dwReason == DLL_PROCESS_DETACH)
        _Module.Term();
}
catch (CBaseErr *e)
{
    WriteMessageToEventLog(e->ErrorText());
    delete e;
    return FALSE;
}
catch (...)
{
    WriteMessageToEventLog(TEXT("Unhandled exception
in object DllMain"));
    return FALSE;
}

return TRUE; // OK
}

////////////////////////////////////
// Used to determine whether the DLL can be unloaded by OLE

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

////////////////////////////////////
// Returns a class factory to create an object of the requested type

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

////////////////////////////////////
// DllRegisterServer - Adds entries to the system registry

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

////////////////////////////////////
// DllUnregisterServer - Removes entries from the system registry

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

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

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

    _sprintf(szMsg, TEXT("Error in COM+ TPC-C Component: "));
    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
(LPCTSTR *)lpszStrings, // array of error strings
NULL); // no raw data

        (VOID) DeregisterEventSource(hEventSource);
    }
}

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

/* FUNCTION: CCOMPONENT_ERR::ErrorText
*
*/

char* CCOMPONENT_ERR::ErrorText(void)
{
    static SERRORMSG errorMsgs[] =
    {

```

```

        { ERR_MISSING_REGISTRY_ENTRIES, "Required
entries missing from registry." },
        { ERR_LOADDLL_FAILED,
"Load of DLL failed. DLL="
},
        { ERR_GETPROCADDR_FAILED,
"Could not map proc in DLL. GetProcAddr error. DLL="
},
        { ERR_UNKNOWN_DB_PROTOCOL,
"Unknown database protocol specified in registry."
},
        { 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)
    vsprintf( szTmp+strlen(szTmp), " Error=%d",
m_SystemErr );

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

CTPCC_Common::CTPCC_Common()
{
    m_pTxn = NULL;
    m_bCanBePooled = TRUE;
}

CTPCC_Common::~CTPCC_Common()
{
    if (m_pTxn)
        delete m_pTxn;
}

HRESULT CTPCC_Common::CallSetComplete()
{
    IObjectContext* pObjContext = NULL;

    // get our object context
    HRESULT hr = CoGetObjectContext( IID_IObjectContext, (void
**) &pObjContext );
    pObjContext->SetComplete();
    ReleaseInterface(pObjContext);
    return hr;
}

//
// called by the ctor activator
//
//
//
// Code to access construction string, if needed later...
//
// if (!pUnk)
//
//     return E_UNEXPECTED;
//
// IObjectConstructString * pString = NULL;
//
// HRESULT hr =
pUnk->QueryInterface(IID_IObjectConstructString, (void **) &pString);
//
// pString->Release();
//
//
//
//
// try
//
// {
//
//     if (Reg.eDB_Protocol == ODBC)
//         m_pTxn = pCTPCC_ODBC_new(
Reg.szDbServer, Reg.szDbUser, Reg.szDbPassword, szMyComputerName,
Reg.szDbName );
//
//     else if (Reg.eDB_Protocol == DBLIB)
//         m_pTxn = pCTPCC_DBLIB_new(
Reg.szDbServer, Reg.szDbUser, Reg.szDbPassword, szMyComputerName,
Reg.szDbName );
//
// }
//
// catch (CBaseErr *e)
//
// {
//
//     WriteMessageToEventLog(e->ErrorText());
//     delete e;
//     return E_FAIL;
//
// }
//
// catch (...)
//
// {
//
//     WriteMessageToEventLog(TEXT("Unhandled exception
in object::Construct"));
//     return E_FAIL;
//
// }
//
// return S_OK;
//
}

HRESULT CTPCC_Common::NewOrder(VARIANT txn_in, VARIANT*
txn_out)
{
    {
        PNEW_ORDER_DATA    pNewOrder;
        COM_DATA            *pData;
        try
        {
            pData = (COM_DATA*)txn_in.parray->pvData;
            pNewOrder = m_pTxn->BuffAddr_NewOrder();

            memcpy(pNewOrder, &pData->u.NewOrder,
sizeof(NEW_ORDER_DATA));

            m_pTxn->NewOrder(); // do the
actual txn

            VariantInit(txn_out);
            txn_out->vt = VT_SAFEARRAY;
            txn_out->parray = SafeArrayCreateVector(VT_UI1,
txn_in.parray->rgsabound->cElements,
txn_in.parray->rgsabound->cElements);
            pData = (COM_DATA*) txn_out->parray->pvData;

            memcpy( &pData->u.NewOrder, pNewOrder,
sizeof(NEW_ORDER_DATA));

            pData->retval = ERR_SUCCESS;
        }
    }
}

```

```

        pData->error = 0;
        return S_OK;
    }
    catch (CBaseErr *e)
    {
        // check for lost database connection; if yes, component is
toast
        if ( ((e->ErrorType() == ERR_TYPE_DBLIB) &&
(e->ErrorNum() == 10005)) ||
        ((e->ErrorType() == ERR_TYPE_ODBC)
&& (e->ErrorNum() == 10054)) )
            m_bCanBePooled = FALSE;

        pData->retval = e->ErrorType();
        pData->error = e->ErrorNum();
        delete e;
        return E_FAIL;
    }
    catch (...)
    {
        WriteMessageToEventLog(TEXT("Unhandled
exception."));
        pData->retval = ERR_TYPE_LOGIC;
        pData->error = 0;
        m_bCanBePooled = FALSE;
        return E_FAIL;
    }
}

HRESULT CTPCC_Common::Payment(VARIANT txn_in, VARIANT*
txn_out)
{
    PPAYMENT_DATA pPayment;
    COM_DATA      *pData;
    try
    {
        pData = (COM_DATA*)txn_in.parray->pvData;
        pPayment = m_pTxn->BuffAddr_Payment();

        memcpy(pPayment, &pData->u.Payment,
sizeof(PAYMENT_DATA));

        m_pTxn->Payment();          // do the actual txn

        VariantInit(txn_out);
        txn_out->vt = VT_SAFEARRAY;
        txn_out->parray = SafeArrayCreateVector( VT_UI1,
txn_in.parray->rgsabound->cElements,
txn_in.parray->rgsabound->cElements);
        pData = (COM_DATA*) txn_out->parray->pvData;

        memcpy( &pData->u.Payment, pPayment,
sizeof(PAYMENT_DATA));

        pData->retval = ERR_SUCCESS;
        pData->error = 0;
        return S_OK;
    }
    catch (CBaseErr *e)
    {
        // check for lost database connection; if yes, component is
toast
        if ( ((e->ErrorType() == ERR_TYPE_DBLIB) &&
(e->ErrorNum() == 10005)) ||
        ((e->ErrorType() == ERR_TYPE_ODBC)
&& (e->ErrorNum() == 10054)) )
            m_bCanBePooled = FALSE;

        pData->retval = e->ErrorType();
        pData->error = e->ErrorNum();
        delete e;
        return E_FAIL;
    }
    catch (...)
    {
}
}

        m_bCanBePooled = FALSE;

        pData->retval = e->ErrorType();
        pData->error = e->ErrorNum();
        delete e;
        return E_FAIL;
    }
    catch (...)
    {
        WriteMessageToEventLog(TEXT("Unhandled
exception."));
        pData->retval = ERR_TYPE_LOGIC;
        pData->error = 0;
        m_bCanBePooled = FALSE;
        return E_FAIL;
    }
}

HRESULT CTPCC_Common::StockLevel(VARIANT txn_in, VARIANT*
txn_out)
{
    PSTOCK_LEVEL_DATA    pStockLevel;
    COM_DATA              *pData;

    try
    {
        pData = (COM_DATA*)txn_in.parray->pvData;
        pStockLevel = m_pTxn->BuffAddr_StockLevel();

        memcpy(pStockLevel, &pData->u.StockLevel,
sizeof(STOCK_LEVEL_DATA));

        m_pTxn->StockLevel();

        VariantInit(txn_out);
        txn_out->vt = VT_SAFEARRAY;
        txn_out->parray = SafeArrayCreateVector( VT_UI1,
txn_in.parray->rgsabound->cElements,
txn_in.parray->rgsabound->cElements);
        pData = (COM_DATA*) txn_out->parray->pvData;

        memcpy( &pData->u.StockLevel, pStockLevel,
sizeof(STOCK_LEVEL_DATA));

        pData->retval = ERR_SUCCESS;
        pData->error = 0;
        return S_OK;
    }
    catch (CBaseErr *e)
    {
        // check for lost database connection; if yes, component is
toast
        if ( ((e->ErrorType() == ERR_TYPE_DBLIB) &&
(e->ErrorNum() == 10005)) ||
        ((e->ErrorType() == ERR_TYPE_ODBC)
&& (e->ErrorNum() == 10054)) )
            m_bCanBePooled = FALSE;

        pData->retval = e->ErrorType();
        pData->error = e->ErrorNum();
        delete e;
        return E_FAIL;
    }
    catch (...)
    {
}
}

```

```

        WriteMessageToEventLog(TEXT("Unhandled
exception.));
    pData->retval = ERR_TYPE_LOGIC;
    pData->error = 0;
    m_bCanBePooled = FALSE;
    return E_FAIL;
}
}
HRESULT CTPCC_Common::OrderStatus(VARIANT txn_in, VARIANT*
txn_out)
{
    PORDER_STATUS_DATA    pOrderStatus;
    COM_DATA                *pData;
    try
    {
        pData = (COM_DATA*)txn_in.parray->pvData;
        pOrderStatus = m_pTxn->BuffAddr_OrderStatus();

        memcpy(pOrderStatus, &pData->u.OrderStatus,
sizeof(ORDER_STATUS_DATA));

        m_pTxn->OrderStatus();

        VariantInit(txn_out);
        txn_out->vt = VT_SAFEARRAY;
        txn_out->parray = SafeArrayCreateVector( VT_UI1,

txn_in.parray->rgsabound->cElements,

txn_in.parray->rgsabound->cElements);
        pData = (COM_DATA*)txn_out->parray->pvData;

        memcpy(&pData->u.OrderStatus, pOrderStatus,
sizeof(ORDER_STATUS_DATA));

        pData->retval = ERR_SUCCESS;
        pData->error = 0;
        return S_OK;
    }
    catch (CBaseErr *e)
    {
        // check for lost database connection; if yes, component is
toast
        if ( ((e->ErrorType() == ERR_TYPE_DBLIB) &&
(e->ErrorNum() == 10005)) ||
                ((e->ErrorType() == ERR_TYPE_ODBC)
&& (e->ErrorNum() == 10054)) )
            m_bCanBePooled = FALSE;

        pData->retval = e->ErrorType();
        pData->error = e->ErrorNum();
        delete e;
        return E_FAIL;
    }
    catch (...)
    {
        WriteMessageToEventLog(TEXT("Unhandled
exception.));
        pData->retval = ERR_TYPE_LOGIC;
        pData->error = 0;
        m_bCanBePooled = FALSE;
        return E_FAIL;
    }
}

```

## ***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.dsp***

```

# Microsoft Developer Studio Project File - Name="tpcc_com_all" - Package
Owner=<4>
# Microsoft Developer Studio Generated Build File, Format Version 6.00
# ** DO NOT EDIT **

# TARGETTYPE "Win32 (x86) Dynamic-Link Library" 0x0102

CFG=tpcc_com_all - Win32 Debug
!MESSAGE This is not a valid makefile. To build this project using NMAKE,
!MESSAGE use the Export Makefile command and run
!MESSAGE
!MESSAGE NMAKE /f "tpcc_com_all.mak".
!MESSAGE
!MESSAGE You can specify a configuration when running NMAKE
!MESSAGE by defining the macro CFG on the command line. For example:
!MESSAGE
!MESSAGE NMAKE /f "tpcc_com_all.mak" CFG="tpcc_com_all - Win32
Debug"
!MESSAGE
!MESSAGE Possible choices for configuration are:
!MESSAGE
!MESSAGE "tpcc_com_all - Win32 Release" (based on "Win32 (x86)
Dynamic-Link Library")
!MESSAGE "tpcc_com_all - Win32 Debug" (based on "Win32 (x86)
Dynamic-Link Library")
!MESSAGE

# Begin Project
# PROP AllowPerConfigDependencies 0
# PROP Scc_ProjName ""
# PROP Scc_LocalPath ""
CPP=cl.exe
MTL=midl.exe
RSC=rc.exe

!IF "$(CFG)" == "tpcc_com_all - Win32 Release"

# PROP BASE Use_MFC 0
# PROP BASE Use_Debug_Libraries 0
# PROP BASE Output_Dir "Release"
# PROP BASE Intermediate_Dir "Release"
# PROP BASE Target_Dir ""
# PROP Use_MFC 0
# PROP Use_Debug_Libraries 0
# PROP Output_Dir ".\bin"
# PROP Intermediate_Dir ".\obj"
# PROP Ignore_Export_Lib 0
# PROP Target_Dir ""
# ADD BASE CPP /nologo /MT /W3 /GX /O2 /D "WIN32" /D "NDEBUG" /D
" _WINDOWS" /YX /FD /c
# ADD BASE CPP /nologo /MT /W3 /GX /O2 /D "WIN32" /D "NDEBUG" /D
" _WINDOWS" /YX /FD /c
# ADD BASE MTL /nologo /D "NDEBUG" /mktyplib203 /o "NUL" /win32
# ADD MTL /nologo /D "NDEBUG" /mktyplib203 /o "NUL" /win32
# ADD BASE RSC /I 0x409 /d "NDEBUG"

```

```

# ADD RSC /I 0x409 /d "NDEBUG"
BSC32=bscmake.exe
# ADD BASE BSC32 /nologo
# ADD BSC32 /nologo
LINK32=link.exe
# ADD BASE LINK32 kernel32.lib user32.lib gdi32.lib winspool.lib
comdlg32.lib advapi32.lib shell32.lib ole32.lib oleaut32.lib uuid.lib odbccp32.lib
odbccp32.lib /nologo /subsystem:windows /dll /machine:I386
# ADD LINK32 ..\db_dblib_dll\bin\tpcc_dblib.lib
..\db_odbc_dll\bin\tpcc_odbc.lib kernel32.lib user32.lib gdi32.lib winspool.lib
comdlg32.lib advapi32.lib shell32.lib ole32.lib oleaut32.lib uuid.lib odbccp32.lib
odbccp32.lib /nologo /subsystem:windows /dll /machine:I386

!ELSEIF "$(CFG)" == "tpcc_com_all - Win32 Debug"

# PROP BASE Use_MFC 0
# PROP BASE Use_Debug_Libraries 1
# PROP BASE Output_Dir "Debug"
# PROP BASE Intermediate_Dir "Debug"
# PROP BASE Target_Dir ""
# PROP Use_MFC 0
# PROP Use_Debug_Libraries 1
# PROP Output_Dir ".\bin"
# PROP Intermediate_Dir ".\obj"
# PROP Ignore_Export_Lib 0
# PROP Target_Dir ""
# ADD BASE CPP /nologo /MTd /W3 /Gm /GX /ZI /Od /D "WIN32" /D
"_DEBUG" /D "_WINDOWS" /YX /FD /c
# ADD CPP /nologo /MTd /W3 /Gm /GX /ZI /Od /D "WIN32" /D "_DEBUG"
/D "_WINDOWS" /YX /FD /c
# ADD BASE MTL /nologo /D "_DEBUG" /mktyplib203 /o "NUL" /win32
# ADD MTL /nologo /D "_DEBUG" /mktyplib203 /o "NUL" /win32
# ADD BASE RSC /I 0x409 /d "_DEBUG"
# ADD RSC /I 0x409 /d "_DEBUG"
BSC32=bscmake.exe
# ADD BASE BSC32 /nologo
# ADD BSC32 /nologo
LINK32=link.exe
# ADD BASE LINK32 kernel32.lib user32.lib gdi32.lib winspool.lib
comdlg32.lib advapi32.lib shell32.lib ole32.lib oleaut32.lib uuid.lib odbccp32.lib
odbccp32.lib /nologo /subsystem:windows /dll /debug /machine:I386
/pdbtype:sept
# ADD LINK32 ..\db_dblib_dll\bin\tpcc_dblib.lib
..\db_odbc_dll\bin\tpcc_odbc.lib kernel32.lib user32.lib gdi32.lib winspool.lib
comdlg32.lib advapi32.lib shell32.lib ole32.lib oleaut32.lib uuid.lib odbccp32.lib
odbccp32.lib /nologo /subsystem:windows /dll /debug /machine:I386
/pdbtype:sept

!ENDIF

# Begin Target

# Name "tpcc_com_all - Win32 Release"
# Name "tpcc_com_all - Win32 Debug"
# Begin Group "Source"

# PROP Default_Filter "*.cpp, *.c"
# Begin Source File

SOURCE=.\src\tpcc_com_all.cpp
# SUBTRACT CPP /YX
# End Source File
# Begin Source File

SOURCE=.\src\tpcc_com_all.def
# End Source File
# Begin Source File

```

```

SOURCE=.\src\tpcc_com_all.idl

!IF "$(CFG)" == "tpcc_com_all - Win32 Release"

# PROP Ignore_Default_Tool 1
# Begin Custom Build - Performing MIDL step
InputPath=.\src\tpcc_com_all.idl

BuildCmds= \
        midl /Oicf /h "tpcc_com_all.h" /iid "tpcc_com_all_i.c"
".\src\tpcc_com_all.idl" /out ".\src"

".\src\tpcc_com_all.tlb" : $(SOURCE) "$(INTDIR)" "$(OUTDIR)"
$(BuildCmds)

".\src\tpcc_com_all.h" : $(SOURCE) "$(INTDIR)" "$(OUTDIR)"
$(BuildCmds)

".\src\tpcc_com_all_i.c" : $(SOURCE) "$(INTDIR)" "$(OUTDIR)"
$(BuildCmds)
# End Custom Build

!ELSEIF "$(CFG)" == "tpcc_com_all - Win32 Debug"

# PROP Ignore_Default_Tool 1
# Begin Custom Build - Performing MIDL step
InputPath=.\src\tpcc_com_all.idl

BuildCmds= \
        midl /Oicf /h "tpcc_com_all.h" /iid "tpcc_com_all_i.c"
".\src\tpcc_com_all.idl" /out ".\src"

".\src\tpcc_com_all.tlb" : $(SOURCE) "$(INTDIR)" "$(OUTDIR)"
$(BuildCmds)

".\src\tpcc_com_all.h" : $(SOURCE) "$(INTDIR)" "$(OUTDIR)"
$(BuildCmds)

".\src\tpcc_com_all_i.c" : $(SOURCE) "$(INTDIR)" "$(OUTDIR)"
$(BuildCmds)
# End Custom Build

!ENDIF

# End Source File
# End Group
# Begin Group "Header"

# PROP Default_Filter "*.h"
# Begin Source File

SOURCE=.\src\Methods.h
# End Source File
# Begin Source File

SOURCE=.\src\resource.h
# End Source File
# End Group
# Begin Source File

SOURCE=.\src\tpcc_com_all.rc
# End Source File
# End Target
# End Project

```

***Tpcc\_com\_all.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 5.03.0280 */
/* at Thu Dec 13 23:13:14 2001
*/
/* Compiler settings for \src\tpcc_com_all.idl:
Oicf (OptLev=i2), W1, Zp8, env=Win32 (32b run), 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*/
#ifndef __REQUIRED_RPCNDR_H_VERSION__
#define __REQUIRED_RPCNDR_H_VERSION__ 440
#endif

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

#ifndef __tpcc_com_all_h__
#define __tpcc_com_all_h__

/* Forward Declarations */

#ifndef __TPCC_FWD_DEFINED__
#define __TPCC_FWD_DEFINED__

#ifdef __cplusplus
typedef class TPCC TPCC;
#else
typedef struct TPCC TPCC;
#endif /* __cplusplus */

#endif /* __TPCC_FWD_DEFINED__ */

#ifndef __NewOrder_FWD_DEFINED__
#define __NewOrder_FWD_DEFINED__

#ifdef __cplusplus
typedef class NewOrder NewOrder;
#else
typedef struct NewOrder NewOrder;
#endif /* __cplusplus */

#endif /* __NewOrder_FWD_DEFINED__ */

#ifndef __OrderStatus_FWD_DEFINED__
#define __OrderStatus_FWD_DEFINED__

#ifdef __cplusplus
typedef class OrderStatus OrderStatus;
#else
typedef struct OrderStatus OrderStatus;
#endif /* __cplusplus */

#endif /* __OrderStatus_FWD_DEFINED__ */

#endif /* __tpcc_com_all_h__ */

#ifdef __cplusplus
typedef class Payment Payment;
#else
typedef struct Payment Payment;
#endif /* __cplusplus */

#endif /* __Payment_FWD_DEFINED__ */

#ifndef __StockLevel_FWD_DEFINED__
#define __StockLevel_FWD_DEFINED__

#ifdef __cplusplus
typedef class StockLevel StockLevel;
#else
typedef struct StockLevel StockLevel;
#endif /* __cplusplus */

#endif /* __StockLevel_FWD_DEFINED__ */

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

#ifdef __cplusplus
extern "C" {
#endif

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

/* interface __MIDL_itf_tpcc_com_all_0000 */
/* [local] */

extern RPC_IF_HANDLE __MIDL_itf_tpcc_com_all_0000_v0_0_c_ifspec;
extern RPC_IF_HANDLE __MIDL_itf_tpcc_com_all_0000_v0_0_s_ifspec;

#ifndef __TPCCLib_LIBRARY_DEFINED__
#define __TPCCLib_LIBRARY_DEFINED__

/* library TPCCLib */
/* [helpstring][version][uuid] */

EXTERN_C const IID LIBID_TPCCLib;

EXTERN_C const CLSID CLSID_TPCC;

#ifdef __cplusplus
class DECLSPEC_UUID("122A3128-2520-11D3-BA71-00C04FBFE08B")
TPCC;
#endif

EXTERN_C const CLSID CLSID_NewOrder;

#ifdef __cplusplus
class DECLSPEC_UUID("975BAABF-84A7-11D2-BA47-00C04FBFE08B")
NewOrder;
#endif

```

```

EXTERN_C const CLSID CLSID_OrderStatus;

#ifdef __cplusplus

class DECLSPEC_UUID("266836AD-A50D-11D2-BA4E-00C04FBFE08B")
OrderStatus;
#endif

EXTERN_C const CLSID CLSID_Payment;

#ifdef __cplusplus

class DECLSPEC_UUID("CD02F7EF-A4FA-11D2-BA4E-00C04FBFE08B")
Payment;
#endif

EXTERN_C const CLSID CLSID_StockLevel;

#ifdef __cplusplus

class DECLSPEC_UUID("2668369E-A50D-11D2-BA4E-00C04FBFE08B")
StockLevel;
#endif
#endif /* __TPCCLib_LIBRARY_DEFINED__ */

/* Additional Prototypes for ALL interfaces */

/* end of Additional Prototypes */

#ifdef __cplusplus
}
#endif

#endif

```

### ***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 "oaidl.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.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

#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""\r\n"
    "\0"
END

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

#endif // APSTUDIO_INVOKED

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

VS_VERSION_INFO VERSIONINFO
FILEVERSION 1,0,0,1
PRODUCTVERSION 1,0,0,1
FILEFLAGSMASK 0x3fL
#ifdef _DEBUG
FILEFLAGS 0x1L
#else
FILEFLAGS 0x0L
#endif
FILEOS 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

#endif // !_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

#endif // English (U.S.) resources
////////////////////////////////////

#ifdef APSTUDIO_INVOKED
////////////////////////////////////
//
// Generated from the TEXTINCLUDE 3 resource.
//
1 TYPELIB "tpcc_com_all.tlb"

////////////////////////////////////
#endif // not APSTUDIO_INVOKED

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 'TPCC.AllTxns.1'
        VersionIndependentProgID = s
'TPCC.AllTxns'
        InprocServer32 = s '%MODULE%'
        {
            val ThreadingModel = s 'Both'
        }
    }
}

```

## 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 5.03.0280 */
/* at Thu Dec 13 23:13:14 2001
*/
/* Compiler settings for \src\tpcc_com_all.idl:
Oicf (OptLev=i2), W1, Zp8, env=Win32 (32b run), 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_AXP64)

#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

#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_

#ifndef __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 // 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}}

#endif // !_MIDL_USE_GUIDDEF_

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

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

MIDL_DEFINE_GUID(CLSID,
CLSID_NewOrder,0x975BAABF,0x84A7,0x11D2,0xBA,0x47,0x00,0xC0,0x4
F,0xBF,0xE0,0x8B);

MIDL_DEFINE_GUID(CLSID,
CLSID_OrderStatus,0x266836AD,0xA50D,0x11D2,0xBA,0x4E,0x00,0xC0,0x
4F,0xBF,0xE0,0x8B);

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

MIDL_DEFINE_GUID(CLSID,
CLSID_StockLevel,0x2668369E,0xA50D,0x11D2,0xBA,0x4E,0x00,0xC0,0x4
F,0xBF,0xE0,0x8B);

#undef MIDL_DEFINE_GUID

#ifdef __cplusplus
}
#endif

#endif /* !defined(_M_IA64) && !defined(_M_AXP64) */

#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 5.03.0280 */
/* at Thu Dec 13 23:13:14 2001
*/
/* Compiler settings for \src\tpcc_com_all.idl:
Oicf (OptLev=i2), W1, Zp8, env=Win64 (32b run,appending), 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_AXP64)

#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

#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_

#ifndef __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 /* 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}}

#endif /* !_MIDL_USE_GUIDDEF_

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

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

MIDL_DEFINE_GUID(CLSID,
CLSID_NewOrder,0x975BAABF,0x84A7,0x11D2,0xBA,0x47,0x00,0xC0,0x4
F,0xBF,0xE0,0x8B);

```

```

MIDL_DEFINE_GUID(CLSID,
CLSID_OrderStatus,0x266836AD,0xA50D,0x11D2,0xBA,0x4E,0x00,0xC0,0x
4F,0xBF,0xE0,0x8B);

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

MIDL_DEFINE_GUID(CLSID,
CLSID_StockLevel,0x2668369E,0xA50D,0x11D2,0xBA,0x4E,0x00,0xC0,0x4
F,0xBF,0xE0,0x8B);

#undef MIDL_DEFINE_GUID

#ifdef __cplusplus
}
#endif

#endif /* defined(_M_IA64) || defined(_M_AXP64)*/

```

## ***Tpcc\_com\_all\_resource.h***

```

//{{NO_DEPENDENCIES}}
// Microsoft Developer Studio generated include file.
// Used by tpcc_com_all.rc
//
#define IDS_PROJNAME            100
#define IDR_TPCC                101
#define IDR_NEWORDER            102
#define IDR_ORDERSTATUS        103
#define IDR_PAYMENT             104
#define IDR_STOCKLEVEL         105

// Next default values for new objects
//
#ifdef APSTUDIO_INVOKED
#ifndef APSTUDIO_READONLY_SYMBOLS
#define _APS_NEXT_RESOURCE_VALUE        202
#define _APS_NEXT_COMMAND_VALUE        32768
#define _APS_NEXT_CONTROL_VALUE        201
#define _APS_NEXT_SYMED_VALUE         106
#endif
#endif

```

## ***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\_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\_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\_ps.def

```

LIBRARY "tpcc_com_ps"

DESCRIPTION 'Proxy/Stub DLL'

EXPORTS
    DllGetClassObject @1 PRIVATE
    DllCanUnloadNow @2 PRIVATE
    GetProxyDllInfo @3 PRIVATE
    DllRegisterServer @4 PRIVATE
    DllUnregisterServer @5 PRIVATE

```

### Tpcc\_com\_ps.dsp

```

# Microsoft Developer Studio Project File - Name="tpcc_com_ps" - Package
Owner=<<4>
# Microsoft Developer Studio Generated Build File, Format Version 6.00
# ** DO NOT EDIT **

# TARGETTYPE "Win32 (x86) Application" 0x0101

CFG=tpcc_com_ps - Win32 Debug
!MESSAGE This is not a valid makefile. To build this project using NMAKE,
!MESSAGE use the Export Makefile command and run
!MESSAGE
!MESSAGE NMAKE /f "tpcc_com_ps.mak".
!MESSAGE
!MESSAGE You can specify a configuration when running NMAKE
!MESSAGE by defining the macro CFG on the command line. For example:
!MESSAGE
!MESSAGE NMAKE /f "tpcc_com_ps.mak" CFG="tpcc_com_ps - Win32
Debug"
!MESSAGE
!MESSAGE Possible choices for configuration are:
!MESSAGE
!MESSAGE "tpcc_com_ps - Win32 Release" (based on "Win32 (x86)
Application")
!MESSAGE "tpcc_com_ps - Win32 Debug" (based on "Win32 (x86)
Application")
!MESSAGE

# Begin Project
# PROP AllowPerConfigDependencies 0
# PROP Scc_ProjName ""
# PROP Scc_LocalPath ""
CPP=cl.exe
MTL=midl.exe
RSC=rc.exe

!IF "$(CFG)" == "tpcc_com_ps - Win32 Release"

# PROP BASE Use_MFC 0
# PROP BASE Use_Debug_Libraries 0
# PROP BASE Output_Dir "Release"
# PROP BASE Intermediate_Dir "Release"
# PROP BASE Target_Dir ""
# PROP Use_MFC 0
# PROP Use_Debug_Libraries 0
# PROP Output_Dir ".\bin"
# PROP Intermediate_Dir ".\obj"
# PROP Ignore_Export_Lib 0
# PROP Target_Dir ""

```

```

# ADD BASE CPP /nologo /W3 /GX /O2 /D "WIN32" /D "NDEBUG" /D
" _WINDOWS" /YX /FD /c
# ADD CPP /nologo /W3 /GX /O2 /D "WIN32" /D "NDEBUG" /D
_WIN32_WINNT=0x0400 /D "REGISTER_PROXY_DLL" /FD /c
# SUBTRACT CPP /YX
# ADD BASE MTL /nologo /D "NDEBUG" /mktyplib203 /o "NUL" /win32
# ADD MTL /nologo /D "NDEBUG" /mktyplib203 /o "NUL" /win32
# ADD BASE RSC /I 0x409 /d "NDEBUG"
# ADD RSC /I 0x409 /d "NDEBUG"
BSC32=bscmake.exe
# ADD BASE BSC32 /nologo
# ADD BSC32 /nologo
LINK32=link.exe
# ADD BASE LINK32 kernel32.lib user32.lib gdi32.lib winspool.lib
comdlg32.lib advapi32.lib shell32.lib ole32.lib oleaut32.lib uuid.lib odbcc32.lib
odbccp32.lib /nologo /subsystem:windows /machine:I386
# ADD LINK32 kernel32.lib rpcndr.lib rpcns4.lib rpert4.lib oleaut32.lib
uuid.lib /nologo /entry:"DllMain" /subsystem:windows /dll /pdb:none
/machine:I386 /def:"\src\tpcc_com_ps.def"
# Begin Custom Build - Copying tpcc_com_ps.h
InputPath=\bin\tpcc_com_ps.dll
SOURCE="$(InputPath)"

..\tpcc_com_all\src\tpcc_com_ps.h" : $(SOURCE) "$(INTDIR)" "$(OUTDIR)"
copy \src\tpcc_com_ps.h \src\tpcc_com_all\src\

# End Custom Build

!ELSEIF "$(CFG)" == "tpcc_com_ps - Win32 Debug"

# PROP BASE Use_MFC 0
# PROP BASE Use_Debug_Libraries 1
# PROP BASE Output_Dir "Debug"
# PROP BASE Intermediate_Dir "Debug"
# PROP BASE Target_Dir ""
# PROP Use_MFC 0
# PROP Use_Debug_Libraries 1
# PROP Output_Dir ".\bin"
# PROP Intermediate_Dir ".\obj"
# PROP Ignore_Export_Lib 0
# PROP Target_Dir ""
# ADD BASE CPP /nologo /W3 /Gm /GX /Zi /Od /D "WIN32" /D "_DEBUG"
/D " _WINDOWS" /YX /FD /c
# ADD CPP /nologo /ZI /Od /D "WIN32" /D "_DEBUG" /D
_WIN32_WINNT=0x0400 /D "REGISTER_PROXY_DLL" /FD /c
# ADD BASE MTL /nologo /D "_DEBUG" /mktyplib203 /o "NUL" /win32
# ADD MTL /nologo /D "_DEBUG" /mktyplib203 /o "NUL" /win32
# ADD BASE RSC /I 0x409 /d "_DEBUG"
# ADD RSC /I 0x409 /d "_DEBUG"
BSC32=bscmake.exe
# ADD BASE BSC32 /nologo
# ADD BSC32 /nologo
LINK32=link.exe
# ADD BASE LINK32 kernel32.lib user32.lib gdi32.lib winspool.lib
comdlg32.lib advapi32.lib shell32.lib ole32.lib oleaut32.lib uuid.lib odbcc32.lib
odbccp32.lib /nologo /subsystem:windows /debug /machine:I386 /pdbtype:sept
# ADD LINK32 kernel32.lib rpcndr.lib rpcns4.lib rpert4.lib oleaut32.lib
uuid.lib /nologo /entry:"DllMain" /dll /debug /machine:IX86
/def:"\src\tpcc_com_ps.def" /pdbtype:sept
# SUBTRACT LINK32 /pdb:none
# Begin Custom Build - Copying tpcc_com_ps.h
InputPath=\bin\tpcc_com_ps.dll
SOURCE="$(InputPath)"

..\tpcc_com_all\src\tpcc_com_ps.h" : $(SOURCE) "$(INTDIR)" "$(OUTDIR)"
copy \src\tpcc_com_ps.h \src\tpcc_com_all\src\

# End Custom Build
!ENDIF

# Begin Target

# Name "tpcc_com_ps - Win32 Release"
# Name "tpcc_com_ps - Win32 Debug"
# Begin Group "Source"

# PROP Default_Filter ""
# Begin Source File

SOURCE=\src\dll\data.c
# End Source File
# Begin Source File

SOURCE=\src\tpcc_com_ps.def
# PROP Exclude_From_Build 1
# End Source File
# Begin Source File

SOURCE=\src\tpcc_com_ps.idl

!IF "$(CFG)" == "tpcc_com_ps - Win32 Release"

# PROP Ignore_Default_Tool 1
# Begin Custom Build
InputPath=\src\tpcc_com_ps.idl

BuildCmds= \
midl /Oicf /h "tpcc_com_ps.h" /iid "tpcc_com_ps_i.c"
"\src\tpcc_com_ps.idl" /out ".\src"

"\src\tpcc_com_ps.h" : $(SOURCE) "$(INTDIR)" "$(OUTDIR)"
$(BuildCmds)

"\src\tpcc_com_ps_i.c" : $(SOURCE) "$(INTDIR)" "$(OUTDIR)"
$(BuildCmds)

"\src\dll\data.c" : $(SOURCE) "$(INTDIR)" "$(OUTDIR)"
$(BuildCmds)

"\src\tpcc_com_ps.p.c" : $(SOURCE) "$(INTDIR)" "$(OUTDIR)"
$(BuildCmds)
# End Custom Build

!ELSEIF "$(CFG)" == "tpcc_com_ps - Win32 Debug"

# PROP Ignore_Default_Tool 1
# Begin Custom Build
InputPath=\src\tpcc_com_ps.idl

BuildCmds= \
midl /Oicf /h "tpcc_com_ps.h" /iid "tpcc_com_ps_i.c"
"\src\tpcc_com_ps.idl" /out ".\src"

"\src\tpcc_com_ps.h" : $(SOURCE) "$(INTDIR)" "$(OUTDIR)"
$(BuildCmds)

"\src\tpcc_com_ps_i.c" : $(SOURCE) "$(INTDIR)" "$(OUTDIR)"
$(BuildCmds)

"\src\dll\data.c" : $(SOURCE) "$(INTDIR)" "$(OUTDIR)"
$(BuildCmds)

"\src\tpcc_com_ps.p.c" : $(SOURCE) "$(INTDIR)" "$(OUTDIR)"
$(BuildCmds)
# End Custom Build

```

```
!ENDIF
```

```
# End Source File  
# Begin Source File
```

```
SOURCE=.\src\tpcc_com_ps_i.c  
# End Source File  
# Begin Source File
```

```
SOURCE=.\src\tpcc_com_ps_p.c  
# End Source File  
# End Group  
# End Target  
# End Project
```

## ***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 5.03.0280 */  
/* at Thu Dec 13 23:13:08 2001  
*/
```

```
/* Compiler settings for \src\tpcc_com_ps.idl:  
Oicf (OptLev=i2), W1, Zp8, env=Win32 (32b run), 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*/  
#ifndef __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__
```

```
/* 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"
```

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

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

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

```
extern RPC_IF_HANDLE __MIDL_itf_tpcc_com_ps_0000_v0_0_c_ifspec;  
extern RPC_IF_HANDLE __MIDL_itf_tpcc_com_ps_0000_v0_0_s_ifspec;
```

```
#ifndef __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 __RPC_FAR *txn_out) = 0;
```

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

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

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

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

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

```
};
```

```
#else /* C style interface */
```

```
typedef struct ITPCCVtbl  
{  
BEGIN_INTERFACE
```

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

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

```

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

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

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

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

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

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

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

    END_INTERFACE
} ITPCCVtbl;

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

#ifdef COBJMACROS

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

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

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

#define ITPCC_NewOrder(This,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 __stdcall ITPCC_NewOrder_Proxy(
    ITPCC __RPC_FAR * This,
    /* [in] */ VARIANT txn_in,
    /* [out] */ VARIANT __RPC_FAR *txn_out);

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

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

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

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

void __RPC_STUB ITPCC_Delivery_Stub(
    IRpcStubBuffer *This,
    IRpcChannelBuffer *pRpcChannelBuffer,
    PRPC_MESSAGE pRpcMessage,
    DWORD *pdwStubPhase);

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

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

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

void __RPC_STUB ITPCC_OrderStatus_Stub(
    IRpcStubBuffer *This,
    IRpcChannelBuffer *pRpcChannelBuffer,

```

```

PRPC_MESSAGE_pRpcMessage,
DWORD *_pdwStubPhase);

HRESULT __stdcall ITPCC_CallSetComplete_Proxy(
    ITPCC __RPC_FAR * This);

void __RPC_STUB ITPCC_CallSetComplete_Stub(
    IRpcStubBuffer *This,
    IRpcChannelBuffer *_pRpcChannelBuffer,
    PRPC_MESSAGE_pRpcMessage,
    DWORD *_pdwStubPhase);

#endif /* __ITPCC_INTERFACE_DEFINED__ */

/* Additional Prototypes for ALL interfaces */

unsigned long __RPC_USER VARIANT_UserSize( unsigned long
__RPC_FAR *, unsigned long , VARIANT __RPC_FAR * );
unsigned char __RPC_FAR * __RPC_USER VARIANT_UserMarshal(
unsigned long __RPC_FAR *, unsigned char __RPC_FAR *, VARIANT
__RPC_FAR * );
unsigned char __RPC_FAR * __RPC_USER
VARIANT_UserUnmarshal(unsigned long __RPC_FAR *, unsigned char
__RPC_FAR *, VARIANT __RPC_FAR * );
void __RPC_USER VARIANT_UserFree( unsigned long
__RPC_FAR *, VARIANT __RPC_FAR * );

/* end of Additional Prototypes */

#ifdef __cplusplus
}
#endif

#endif

```

## ***Tpcc\_com\_ps.idl***

```

/* FILE: ITPCC.IDL
 * Microsoft TPC-C Kit Ver.
4.20.000
 * Copyright Microsoft, 1999
 * All Rights Reserved
 *
 * not yet audited
 *
 * PURPOSE: Defines the interface used by TPCC. This
interface can be implemented by C++ components.
 *
 * Change history:
 * 4.20.000 - first version
 */

```

```

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

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

```

```

{
    HRESULT __stdcall NewOrder
    (
        [in]
        VARIANT txn_in,
        [out]
        VARIANT *txn_out
    );

    HRESULT __stdcall Payment
    (
        [in]
        VARIANT txn_in,
        [out]
        VARIANT *txn_out
    );

    HRESULT __stdcall Delivery
    (
        [in]
        VARIANT txn_in,
        [out]
        VARIANT *txn_out
    );

    HRESULT __stdcall StockLevel
    (
        [in]
        VARIANT txn_in,
        [out]
        VARIANT *txn_out
    );

    HRESULT __stdcall OrderStatus
    (
        [in]
        VARIANT txn_in,
        [out]
        VARIANT *txn_out
    );

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

```

## ***Tpcc\_com\_ps\_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 5.03.0280 */
/* at Thu Dec 13 23:13:08 2001
 */
/* Compiler settings for .\src\tpcc_com_ps.idl:
Oicf (OptLev=i2), W1, Zp8, env=Win32 (32b run), 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_AXP64)

#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

#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_

#ifndef __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 // 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}}

#endif !_MIDL_USE_GUIDDEF_

MIDL_DEFINE_GUID(IID,
IID_ITPCC,0xFEEE6AA2,0x84B1,0x11d2,0xBA,0x47,0x00,0xC0,0x4F,0xBF,
0xE0,0x8B);

#undef MIDL_DEFINE_GUID

#ifdef __cplusplus
}
#endif

#endif /* !defined(_M_IA64) && !defined(_M_AXP64)*/

#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 5.03.0280 */
/* at Thu Dec 13 23:13:08 2001
*/
/* Compiler settings for .\src\tpcc_com_ps.idl:
Oicf (OptLev=i2), W1, Zp8, env=Win64 (32b run,appending), 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_AXP64)

#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

#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_

#ifndef __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 // 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}}

#endif !_MIDL_USE_GUIDDEF_

MIDL_DEFINE_GUID(IID,
IID_ITPCC,0xFEEE6AA2,0x84B1,0x11d2,0xBA,0x47,0x00,0xC0,0x4F,0xBF,
0xE0,0x8B);

#undef MIDL_DEFINE_GUID

```



```

#ifdef __cplusplus
}
#endif

#ifdef defined(_M_IA64) || defined(_M_AXP64)*/

Tpcc_com_ps_p.c

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

/* this ALWAYS GENERATED file contains the proxy stub code */

/* File created by MIDL compiler version 5.03.0280 */
/* at Thu Dec 13 23:13:08 2001
*/
/* Compiler settings for \src\tpcc_com_ps.idl:
Oicf (OptLev=i2), W1, Zp8, env=Win32 (32b run), 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( )

#ifdef !defined(_M_IA64) && !defined(_M_AXP64)
#define USE_STUBLESS_PROXY

/* verify that the <rpcproxy.h> version is high enough to compile this file*/
#ifdef __REDQ_RPCPROXY_H_VERSION__
#define __REQUIRED_RPCPROXY_H_VERSION__ 440
#endif

#include "rpcproxy.h"
#ifdef __RPCPROXY_H_VERSION__
#error this stub requires an updated version of <rpcproxy.h>
#endif // __RPCPROXY_H_VERSION__

#include "tpcc_com_ps.h"

#define TYPE_FORMAT_STRING_SIZE 997
#define PROC_FORMAT_STRING_SIZE 193
#define TRANSMIT_AS_TABLE_SIZE 0
#define WIRE_MARSHAL_TABLE_SIZE 1

typedef struct _MIDL_TYPE_FORMAT_STRING
{
    short Pad;
    unsigned char Format[ TYPE_FORMAT_STRING_SIZE ];
} MIDL_TYPE_FORMAT_STRING;

typedef struct _MIDL_PROC_FORMAT_STRING
{
    short Pad;
    unsigned char Format[ PROC_FORMAT_STRING_SIZE ];
} MIDL_PROC_FORMAT_STRING;

extern const MIDL_TYPE_FORMAT_STRING __MIDL_TypeFormatString;
extern const MIDL_PROC_FORMAT_STRING __MIDL_ProcFormatString;

/* Standard interface: __MIDL_itf_tpcc_com_ps_0000, ver. 0.0,

```

```

GUID={0x00000000,0x0000,0x0000,{0x00,0x00,0x00,0x00,0x00,0x00,0x00,0x00,0x00,0x00}} */

/* Object interface: IUnknown, ver. 0.0,

GUID={0x00000000,0x0000,0x0000,{0xC0,0x00,0x00,0x00,0x00,0x00,0x00,0x00,0x46}} */

/* Object interface: ITPCC, ver. 0.0,

GUID={0xFEEE6AA2,0x84B1,0x11d2,{0xBA,0x47,0x00,0xC0,0x4F,0xBF,0xE0,0x8B}} */

extern const MIDL_STUB_DESC Object_StubDesc;

extern const MIDL_SERVER_INFO ITPCC_ServerInfo;

#pragma code_seg(".orpc")
static const unsigned short ITPCC_FormatStringOffsetTable[] =
{
    0,
    34,
    68,
    102,
    136,
    170
};

static const MIDL_SERVER_INFO ITPCC_ServerInfo =
{
    &Object_StubDesc,
    0,
    __MIDL_ProcFormatString.Format,
    &ITPCC_FormatStringOffsetTable[-3],
    0,
    0,
    0,
    0,
    0
};

static const MIDL_STUBLESS_PROXY_INFO ITPCC_ProxyInfo =
{
    &Object_StubDesc,
    __MIDL_ProcFormatString.Format,
    &ITPCC_FormatStringOffsetTable[-3],
    0,
    0,
    0
};

CINTERFACE_PROXY_VTABLE(9) _ITPCCProxyVtbl =
{
    &ITPCC_ProxyInfo,
    &IID_ITPCC,
    IUnknown_QueryInterface_Proxy,
    IUnknown_AddRef_Proxy,
    IUnknown_Release_Proxy ,
    (void *)-1 /* ITPCC::NewOrder */,
    (void *)-1 /* ITPCC::Payment */,
    (void *)-1 /* ITPCC::Delivery */,
    (void *)-1 /* ITPCC::StockLevel */,
    (void *)-1 /* ITPCC::OrderStatus */,
    (void *)-1 /* ITPCC::CallSetComplete */

```

```

};

const CInterfaceStubVtbl _ITPCCStubVtbl =
{
    &IID_ITPCC,
    &ITPCC_ServerInfo,
    9,
    0, /* pure interpreted */
    CStdStubBuffer_METHODS
};

extern const USER_MARSHAL_ROUTINE_QUADRUPLE
UserMarshalRoutines[ WIRE_MARSHAL_TABLE_SIZE ];

static const MIDL_STUB_DESC Object_StubDesc =
{
    0,
    NdrOleAllocate,
    NdrOleFree,
    0,
    0,
    0,
    0,
    0,
    0,
    0,
    _MIDL_TypeFormatString.Format,
    1, /* -error bounds_check flag */
    0x20000, /* Ndr library version */
    0,
    0x5030118, /* MIDL Version 5.3.280 */
    0,
    UserMarshalRoutines,
    0, /* notify & notify_flag routine table */
    0x1, /* MIDL flag */
    0, /* Reserved3 */
    0, /* Reserved4 */
    0 /* Reserved5 */
};

#pragma data_seg(".rdata")

static const USER_MARSHAL_ROUTINE_QUADRUPLE
UserMarshalRoutines[ WIRE_MARSHAL_TABLE_SIZE ] =
{
    {
        VARIANT_UserSize
    ,VARIANT_UserMarshal
    ,VARIANT_UserUnmarshal
    ,VARIANT_UserFree
    }
};

#if !defined(__RPC_WIN32__)
#error Invalid build platform for this stub.
#endif

#if !(TARGET_IS_NT40_OR_LATER)
#error You need a Windows NT 4.0 or later to run this stub because it uses
these features:
#error -Oif or -Oicf, [wire_marshal] or [user_marshal] attribute.
#error However, your C/C++ compilation flags indicate you intend to run this
app on earlier systems.
#error This app will die there with the RPC_X_WRONG_STUB_VERSION
error.
#endif

```

```

static const MIDL_PROC_FORMAT_STRING __MIDL_ProcFormatString =
{
    0,
    {
        /* Procedure NewOrder */

        FC_AUTO_HANDLE /*/
        0x33, /*
        0x6c, /* Old Flags: object,
        Oi2 */
        /* 2 */ NdrFcLong( 0x0 ), /* 0 */
        /* 6 */ NdrFcShort( 0x3 ), /* 3 */
#ifdef _ALPHA_
#ifdef _PPC_
#if !defined(_MIPS_)
/* 8 */ NdrFcShort( 0x1c ), /* x86 Stack size/offset = 28 */
#else
NdrFcShort( 0x20 ), /* MIPS Stack
size/offset = 32 */
#endif
#endif
#else
NdrFcShort( 0x20 ), /* PPC Stack size/offset
= 32 */
#endif
#else
NdrFcShort( 0x28 ), /* Alpha Stack
size/offset = 40 */
#endif
/* 10 */ NdrFcShort( 0x0 ), /* 0 */
/* 12 */ NdrFcShort( 0x8 ), /* 8 */
/* 14 */ 0x7, /* Oi2 Flags: srv must size, clt must size, has
return, */
0x3, /* 3 */

        /* Parameter txn_in */

        /* 16 */ NdrFcShort( 0x8b ), /* Flags: must size, must free, in, by val, */
#ifdef _ALPHA_
#ifdef _PPC_
#if !defined(_MIPS_)
/* 18 */ NdrFcShort( 0x4 ), /* x86 Stack size/offset = 4 */
#else
NdrFcShort( 0x8 ), /* MIPS Stack
size/offset = 8 */
#endif
#else
NdrFcShort( 0x8 ), /* PPC Stack size/offset
= 8 */
#endif
#else
NdrFcShort( 0x8 ), /* Alpha Stack
size/offset = 8 */
#endif
#endif
/* 20 */ NdrFcShort( 0x3c8 ), /* Type Offset=968 */

        /* Parameter txn_out */

        /* 22 */ NdrFcShort( 0x4113 ), /* Flags: must size, must free, out,
simple ref, srv alloc size=16 */
#ifdef _ALPHA_
#ifdef _PPC_
#if !defined(_MIPS_)
/* 24 */ NdrFcShort( 0x14 ), /* x86 Stack size/offset = 20 */
#else
NdrFcShort( 0x18 ), /* MIPS Stack
size/offset = 24 */

```

```

#endif
#else
= 24 */
#endif
#else
size/offset = 24 */
#endif
/* 26 */ NdrFcShort( 0x3da ), /* Type Offset=986 */

/* Return value */

/* 28 */ NdrFcShort( 0x70 ), /* Flags: out, return, base type, */
#ifndef _ALPHA_
#ifndef _PPC_
#if !defined(_MIPS_)
/* 30 */ NdrFcShort( 0x18 ), /* x86 Stack size/offset = 24 */
#else
size/offset = 28 */
#endif
#else
= 28 */
#endif
#else
NdrFcShort( 0x1c ), /* MIPS Stack

size/offset = 28 */
#endif
#else
NdrFcShort( 0x1c ), /* PPC Stack size/offset

= 28 */
#endif
#else
NdrFcShort( 0x20 ), /* Alpha Stack

size/offset = 32 */
#endif
/* 32 */ 0x8, /* FC_LONG */
0x0, /* 0 */

/* Procedure Payment */

/* 34 */ 0x33, /* FC_AUTO_HANDLE */
0x6c, /* Old Flags: object,

Oi2 */
/* 36 */ NdrFcLong( 0x0 ), /* 0 */
/* 40 */ NdrFcShort( 0x4 ), /* 4 */
#ifndef _ALPHA_
#ifndef _PPC_
#if !defined(_MIPS_)
/* 42 */ NdrFcShort( 0x1c ), /* x86 Stack size/offset = 28 */
#else
NdrFcShort( 0x20 ), /* MIPS Stack

size/offset = 32 */
#endif
#else
NdrFcShort( 0x20 ), /* PPC Stack size/offset

= 32 */
#endif
#else
NdrFcShort( 0x28 ), /* Alpha Stack

size/offset = 40 */
#endif
/* 44 */ NdrFcShort( 0x0 ), /* 0 */
/* 46 */ NdrFcShort( 0x8 ), /* 8 */
/* 48 */ 0x7, /* Oi2 Flags: srv must size, clt must size, has
return, */
0x3, /* 3 */

/* Parameter txn_in */

/* 50 */ NdrFcShort( 0x8b ), /* Flags: must size, must free, in, by val, */
#ifndef _ALPHA_
#ifndef _PPC_
#if !defined(_MIPS_)
/* 52 */ NdrFcShort( 0x4 ), /* x86 Stack size/offset = 4 */
#else
NdrFcShort( 0x8 ), /* MIPS Stack

size/offset = 8 */
#endif
#else
= 8 */
#endif
#else
NdrFcShort( 0x8 ), /* PPC Stack size/offset

= 8 */
#endif
#else
NdrFcShort( 0x8 ), /* Alpha Stack

size/offset = 8 */
#endif
/* 54 */ NdrFcShort( 0x3c8 ), /* Type Offset=968 */

/* Parameter txn_out */

/* 56 */ NdrFcShort( 0x4113 ), /* Flags: must size, must free, out,
simple ref, srv alloc size=16 */
#ifndef _ALPHA_
#ifndef _PPC_
#if !defined(_MIPS_)
/* 58 */ NdrFcShort( 0x14 ), /* x86 Stack size/offset = 20 */
#else
NdrFcShort( 0x18 ), /* MIPS Stack

size/offset = 24 */
#endif
#else
= 24 */
#endif
#else
NdrFcShort( 0x18 ), /* PPC Stack size/offset

= 24 */
#endif
#else
NdrFcShort( 0x18 ), /* Alpha Stack

size/offset = 24 */
#endif
/* 60 */ NdrFcShort( 0x3da ), /* Type Offset=986 */

/* Return value */

/* 62 */ NdrFcShort( 0x70 ), /* Flags: out, return, base type, */
#ifndef _ALPHA_
#ifndef _PPC_
#if !defined(_MIPS_)
/* 64 */ NdrFcShort( 0x18 ), /* x86 Stack size/offset = 24 */
#else
NdrFcShort( 0x1c ), /* MIPS Stack

size/offset = 28 */
#endif
#else
NdrFcShort( 0x1c ), /* PPC Stack size/offset

= 28 */
#endif
#else
NdrFcShort( 0x20 ), /* Alpha Stack

size/offset = 32 */
#endif
/* 66 */ 0x8, /* FC_LONG */
0x0, /* 0 */

/* Procedure Delivery */

/* 68 */ 0x33, /* FC_AUTO_HANDLE */
0x6c, /* Old Flags: object,

Oi2 */
/* 70 */ NdrFcLong( 0x0 ), /* 0 */
/* 74 */ NdrFcShort( 0x5 ), /* 5 */
#ifndef _ALPHA_
#ifndef _PPC_

```

```

#if !defined(_MIPS_)
/* 76 */ NdrFcShort( 0x1c ), /* x86 Stack size/offset = 28 */
#else
NdrFcShort( 0x20 ), /* MIPS Stack
size/offset = 32 */
#endif
#else
NdrFcShort( 0x20 ), /* PPC Stack size/offset
= 32 */
#endif
#else
NdrFcShort( 0x28 ), /* Alpha Stack
size/offset = 40 */
#endif
/* 78 */ NdrFcShort( 0x0 ), /* 0 */
/* 80 */ NdrFcShort( 0x8 ), /* 8 */
/* 82 */ 0x7, /* Oi2 Flags: srv must size, clt must size, has
return, */
0x3, /* 3 */
/* Parameter txn_in */
/* 84 */ NdrFcShort( 0x8b ), /* Flags: must size, must free, in, by val, */
#ifdef _ALPHA_
#ifdef _PPC_
#if !defined(_MIPS_)
/* 86 */ NdrFcShort( 0x4 ), /* x86 Stack size/offset = 4 */
#else
NdrFcShort( 0x8 ), /* MIPS Stack
size/offset = 8 */
#endif
#else
NdrFcShort( 0x8 ), /* PPC Stack size/offset
= 8 */
#endif
#else
NdrFcShort( 0x8 ), /* Alpha Stack
size/offset = 8 */
#endif
/* 88 */ NdrFcShort( 0x3c8 ), /* Type Offset=968 */
/* Parameter txn_out */
/* 90 */ NdrFcShort( 0x4113 ), /* Flags: must size, must free, out,
simple ref, srv alloc size=16 */
#ifdef _ALPHA_
#ifdef _PPC_
#if !defined(_MIPS_)
/* 92 */ NdrFcShort( 0x14 ), /* x86 Stack size/offset = 20 */
#else
NdrFcShort( 0x18 ), /* MIPS Stack
size/offset = 24 */
#endif
#else
NdrFcShort( 0x18 ), /* PPC Stack size/offset
= 24 */
#endif
#else
NdrFcShort( 0x18 ), /* Alpha Stack
size/offset = 24 */
#endif
/* 94 */ NdrFcShort( 0x3da ), /* Type Offset=986 */
/* Return value */
/* 96 */ NdrFcShort( 0x70 ), /* Flags: out, return, base type, */
#ifdef _ALPHA_
#ifdef _PPC_

```

```

#if !defined(_MIPS_)
/* 98 */ NdrFcShort( 0x18 ), /* x86 Stack size/offset = 24 */
#else
NdrFcShort( 0x1c ), /* MIPS Stack
size/offset = 28 */
#endif
#else
NdrFcShort( 0x1c ), /* PPC Stack size/offset
= 28 */
#endif
#else
NdrFcShort( 0x20 ), /* Alpha Stack
size/offset = 32 */
#endif
/* 100 */ 0x8, /* FC_LONG */
0x0, /* 0 */
/* Procedure StockLevel */
/* 102 */ 0x33, /* FC_AUTO_HANDLE */
0x6c, /* Old Flags: object,
Oi2 */
/* 104 */ NdrFcLong( 0x0 ), /* 0 */
/* 108 */ NdrFcShort( 0x6 ), /* 6 */
#ifdef _ALPHA_
#ifdef _PPC_
#if !defined(_MIPS_)
/* 110 */ NdrFcShort( 0x1c ), /* x86 Stack size/offset = 28 */
#else
NdrFcShort( 0x20 ), /* MIPS Stack
size/offset = 32 */
#endif
#else
NdrFcShort( 0x20 ), /* PPC Stack size/offset
= 32 */
#endif
#else
NdrFcShort( 0x28 ), /* Alpha Stack
size/offset = 40 */
#endif
/* 112 */ NdrFcShort( 0x0 ), /* 0 */
/* 114 */ NdrFcShort( 0x8 ), /* 8 */
/* 116 */ 0x7, /* Oi2 Flags: srv must size, clt must size, has
return, */
0x3, /* 3 */
/* Parameter txn_in */
/* 118 */ NdrFcShort( 0x8b ), /* Flags: must size, must free, in, by val, */
#ifdef _ALPHA_
#ifdef _PPC_
#if !defined(_MIPS_)
/* 120 */ NdrFcShort( 0x4 ), /* x86 Stack size/offset = 4 */
#else
NdrFcShort( 0x8 ), /* MIPS Stack
size/offset = 8 */
#endif
#else
NdrFcShort( 0x8 ), /* PPC Stack size/offset
= 8 */
#endif
#else
NdrFcShort( 0x8 ), /* Alpha Stack
size/offset = 8 */
#endif
/* 122 */ NdrFcShort( 0x3c8 ), /* Type Offset=968 */
/* Parameter txn_out */

```

```

/* 124 */ NdrFcShort( 0x4113 ), /* Flags: must size, must free, out,
simple ref, srv alloc size=16 */
#ifdef _ALPHA_
#ifdef _PPC_
#if !defined( _MIPS_ )
/* 126 */ NdrFcShort( 0x14 ), /* x86 Stack size/offset = 20 */
#else
NdrFcShort( 0x18 ), /* MIPS Stack
size/offset = 24 */
#endif
#else
NdrFcShort( 0x18 ), /* PPC Stack size/offset
= 24 */
#endif
#else
NdrFcShort( 0x18 ), /* Alpha Stack
size/offset = 24 */
#endif
/* 128 */ NdrFcShort( 0x3da ), /* Type Offset=986 */

/* Return value */

/* 130 */ NdrFcShort( 0x70 ), /* Flags: out, return, base type, */
#ifdef _ALPHA_
#ifdef _PPC_
#if !defined( _MIPS_ )
/* 132 */ NdrFcShort( 0x18 ), /* x86 Stack size/offset = 24 */
#else
NdrFcShort( 0x1c ), /* MIPS Stack
size/offset = 28 */
#endif
#else
NdrFcShort( 0x1c ), /* PPC Stack size/offset
= 28 */
#endif
#else
NdrFcShort( 0x20 ), /* Alpha Stack
size/offset = 32 */
#endif
/* 134 */ 0x8, /* FC_LONG */
0x0, /* 0 */

/* Procedure OrderStatus */

/* 136 */ 0x33, /* FC_AUTO_HANDLE */
0x6c, /* Old Flags: object,
Oi2 */
/* 138 */ NdrFcLong( 0x0 ), /* 0 */
/* 142 */ NdrFcShort( 0x7 ), /* 7 */
#ifdef _ALPHA_
#ifdef _PPC_
#if !defined( _MIPS_ )
/* 144 */ NdrFcShort( 0x1c ), /* x86 Stack size/offset = 28 */
#else
NdrFcShort( 0x20 ), /* MIPS Stack
size/offset = 32 */
#endif
#else
NdrFcShort( 0x20 ), /* PPC Stack size/offset
= 32 */
#endif
#else
NdrFcShort( 0x28 ), /* Alpha Stack
size/offset = 40 */
#endif
/* 146 */ NdrFcShort( 0x0 ), /* 0 */
/* 148 */ NdrFcShort( 0x8 ), /* 8 */

/* 150 */ 0x7, /* Oi2 Flags: srv must size, clt must size, has
return, */
0x3, /* 3 */

/* Parameter txn_in */

/* 152 */ NdrFcShort( 0x8b ), /* Flags: must size, must free, in, by val, */
#ifdef _ALPHA_
#ifdef _PPC_
#if !defined( _MIPS_ )
/* 154 */ NdrFcShort( 0x4 ), /* x86 Stack size/offset = 4 */
#else
NdrFcShort( 0x8 ), /* MIPS Stack
size/offset = 8 */
#endif
#else
NdrFcShort( 0x8 ), /* PPC Stack size/offset
= 8 */
#endif
#else
NdrFcShort( 0x8 ), /* Alpha Stack
size/offset = 8 */
#endif
/* 156 */ NdrFcShort( 0x3c8 ), /* Type Offset=968 */

/* Parameter txn_out */

/* 158 */ NdrFcShort( 0x4113 ), /* Flags: must size, must free, out,
simple ref, srv alloc size=16 */
#ifdef _ALPHA_
#ifdef _PPC_
#if !defined( _MIPS_ )
/* 160 */ NdrFcShort( 0x14 ), /* x86 Stack size/offset = 20 */
#else
NdrFcShort( 0x18 ), /* MIPS Stack
size/offset = 24 */
#endif
#else
NdrFcShort( 0x18 ), /* PPC Stack size/offset
= 24 */
#endif
#else
NdrFcShort( 0x20 ), /* Alpha Stack
size/offset = 24 */
#endif
/* 162 */ NdrFcShort( 0x3da ), /* Type Offset=986 */

/* Return value */

/* 164 */ NdrFcShort( 0x70 ), /* Flags: out, return, base type, */
#ifdef _ALPHA_
#ifdef _PPC_
#if !defined( _MIPS_ )
/* 166 */ NdrFcShort( 0x18 ), /* x86 Stack size/offset = 24 */
#else
NdrFcShort( 0x1c ), /* MIPS Stack
size/offset = 28 */
#endif
#else
NdrFcShort( 0x1c ), /* PPC Stack size/offset
= 28 */
#endif
#else
NdrFcShort( 0x20 ), /* Alpha Stack
size/offset = 32 */
#endif
/* 168 */ 0x8, /* FC_LONG */
0x0, /* 0 */

```

```

/* Procedure CallSetComplete */

/* 170 */ 0x33, /* FC_AUTO_HANDLE */
           0x6c, /* Old Flags: object,
Oi2 */
/* 172 */ NdrFcLong( 0x0 ), /* 0 */
/* 176 */ NdrFcShort( 0x8 ), /* 8 */
#ifdef _ALPHA_
/* 178 */ NdrFcShort( 0x8 ), /* x86, MIPS, PPC Stack size/offset = 8 */
#else
           NdrFcShort( 0x10 ), /* Alpha Stack
size/offset = 16 */
#endif
/* 180 */ NdrFcShort( 0x0 ), /* 0 */
/* 182 */ NdrFcShort( 0x8 ), /* 8 */
/* 184 */ 0x4, /* Oi2 Flags: has return, */
           0x1, /* 1 */

/* Return value */

/* 186 */ NdrFcShort( 0x70 ), /* Flags: out, return, base type, */
#ifdef _ALPHA_
/* 188 */ NdrFcShort( 0x4 ), /* x86, MIPS, PPC Stack size/offset = 4 */
#else
           NdrFcShort( 0x8 ), /* Alpha Stack
size/offset = 8 */
#endif
/* 190 */ 0x8, /* FC_LONG */
           0x0, /* 0 */

           0x0

}
};

static const MIDL_TYPE_FORMAT_STRING __MIDL_TypeFormatString =
{
    0,
    {
        NdrFcShort( 0x0 ), /* 0 */

/* 2 */
        0x12, 0x0, /* FC_UP */
/* 4 */ NdrFcShort( 0x3b0 ), /* Offset= 944 (948) */
/* 6 */
        0x2b, /*
FC_NON_ENCAPSULATED_UNION */
        0x9, /* FC_ULONG */
/* 8 */ 0x7, /* Corr desc: FC_USHORT */
           0x0, /* */
/* 10 */ NdrFcShort( 0xffff ), /* -8 */
/* 12 */ NdrFcShort( 0x2 ), /* Offset= 2 (14) */
/* 14 */ NdrFcShort( 0x10 ), /* 16 */
/* 16 */ NdrFcShort( 0x2b ), /* 43 */
/* 18 */ NdrFcLong( 0x3 ), /* 3 */
/* 22 */ NdrFcShort( 0x8008 ), /* Simple arm type: FC_LONG */
/* 24 */ NdrFcLong( 0x11 ), /* 17 */
/* 28 */ NdrFcShort( 0x8001 ), /* Simple arm type: FC_BYTE */
/* 30 */ NdrFcLong( 0x2 ), /* 2 */
/* 34 */ NdrFcShort( 0x8006 ), /* Simple arm type: FC_SHORT */
/* 36 */ NdrFcLong( 0x4 ), /* 4 */
/* 40 */ NdrFcShort( 0x800a ), /* Simple arm type: FC_FLOAT */
/* 42 */ NdrFcLong( 0x5 ), /* 5 */
/* 46 */ NdrFcShort( 0x800c ), /* Simple arm type: FC_DOUBLE */
           */
/* 48 */ NdrFcLong( 0xb ), /* 11 */
/* 52 */ NdrFcShort( 0x8006 ), /* Simple arm type: FC_SHORT */
/* 54 */ NdrFcLong( 0xa ), /* 10 */
/* 58 */ NdrFcShort( 0x8008 ), /* Simple arm type: FC_LONG */

/* 60 */ NdrFcLong( 0x6 ), /* 6 */
/* 64 */ NdrFcShort( 0xd6 ), /* Offset= 214 (278) */
/* 66 */ NdrFcLong( 0x7 ), /* 7 */
/* 70 */ NdrFcShort( 0x800c ), /* Simple arm type: FC_DOUBLE */
           */
/* 72 */ NdrFcLong( 0x8 ), /* 8 */
/* 76 */ NdrFcShort( 0xd0 ), /* Offset= 208 (284) */
/* 78 */ NdrFcLong( 0xd ), /* 13 */
/* 82 */ NdrFcShort( 0xe2 ), /* Offset= 226 (308) */
/* 84 */ NdrFcLong( 0x9 ), /* 9 */
/* 88 */ NdrFcShort( 0xee ), /* Offset= 238 (326) */
/* 90 */ NdrFcLong( 0x2000 ), /* 8192 */
/* 94 */ NdrFcShort( 0xfa ), /* Offset= 250 (344) */
/* 96 */ NdrFcLong( 0x24 ), /* 36 */
/* 100 */ NdrFcShort( 0x308 ), /* Offset= 776 (876) */
/* 102 */ NdrFcLong( 0x4024 ), /* 16420 */
/* 106 */ NdrFcShort( 0x302 ), /* Offset= 770 (876) */
/* 108 */ NdrFcLong( 0x4011 ), /* 16401 */
/* 112 */ NdrFcShort( 0x300 ), /* Offset= 768 (880) */
/* 114 */ NdrFcLong( 0x4002 ), /* 16386 */
/* 118 */ NdrFcShort( 0x2fe ), /* Offset= 766 (884) */
/* 120 */ NdrFcLong( 0x4003 ), /* 16387 */
/* 124 */ NdrFcShort( 0x2fc ), /* Offset= 764 (888) */
/* 126 */ NdrFcLong( 0x4004 ), /* 16388 */
/* 130 */ NdrFcShort( 0x2fa ), /* Offset= 762 (892) */
/* 132 */ NdrFcLong( 0x4005 ), /* 16389 */
/* 136 */ NdrFcShort( 0x2f8 ), /* Offset= 760 (896) */
/* 138 */ NdrFcLong( 0x400b ), /* 16395 */
/* 142 */ NdrFcShort( 0x2e6 ), /* Offset= 742 (884) */
/* 144 */ NdrFcLong( 0x400a ), /* 16394 */
/* 148 */ NdrFcShort( 0x2e4 ), /* Offset= 740 (888) */
/* 150 */ NdrFcLong( 0x4006 ), /* 16390 */
/* 154 */ NdrFcShort( 0x2ea ), /* Offset= 746 (900) */
/* 156 */ NdrFcLong( 0x4007 ), /* 16391 */
/* 160 */ NdrFcShort( 0x2e0 ), /* Offset= 736 (896) */
/* 162 */ NdrFcLong( 0x4008 ), /* 16392 */
/* 166 */ NdrFcShort( 0x2e2 ), /* Offset= 738 (904) */
/* 168 */ NdrFcLong( 0x400d ), /* 16397 */
/* 172 */ NdrFcShort( 0x2e0 ), /* Offset= 736 (908) */
/* 174 */ NdrFcLong( 0x4009 ), /* 16393 */
/* 178 */ NdrFcShort( 0x2de ), /* Offset= 734 (912) */
/* 180 */ NdrFcLong( 0x6000 ), /* 24576 */
/* 184 */ NdrFcShort( 0x2dc ), /* Offset= 732 (916) */
/* 186 */ NdrFcLong( 0x400c ), /* 16396 */
/* 190 */ NdrFcShort( 0x2da ), /* Offset= 730 (920) */
/* 192 */ NdrFcLong( 0x10 ), /* 16 */
/* 196 */ NdrFcShort( 0x8002 ), /* Simple arm type: FC_CHAR */
/* 198 */ NdrFcLong( 0x12 ), /* 18 */
/* 202 */ NdrFcShort( 0x8006 ), /* Simple arm type: FC_SHORT */
/* 204 */ NdrFcLong( 0x13 ), /* 19 */
/* 208 */ NdrFcShort( 0x8008 ), /* Simple arm type: FC_LONG */
/* 210 */ NdrFcLong( 0x16 ), /* 22 */
/* 214 */ NdrFcShort( 0x8008 ), /* Simple arm type: FC_LONG */
/* 216 */ NdrFcLong( 0x17 ), /* 23 */
/* 220 */ NdrFcShort( 0x8008 ), /* Simple arm type: FC_LONG */
/* 222 */ NdrFcLong( 0xe ), /* 14 */
/* 226 */ NdrFcShort( 0x2be ), /* Offset= 702 (928) */
/* 228 */ NdrFcLong( 0x400e ), /* 16398 */
/* 232 */ NdrFcShort( 0x2c4 ), /* Offset= 708 (940) */
/* 234 */ NdrFcLong( 0x4010 ), /* 16400 */
/* 238 */ NdrFcShort( 0x2c2 ), /* Offset= 706 (944) */
/* 240 */ NdrFcLong( 0x4012 ), /* 16402 */
/* 244 */ NdrFcShort( 0x280 ), /* Offset= 640 (884) */
/* 246 */ NdrFcLong( 0x4013 ), /* 16403 */
/* 250 */ NdrFcShort( 0x27e ), /* Offset= 638 (888) */
/* 252 */ NdrFcLong( 0x4016 ), /* 16406 */
/* 256 */ NdrFcShort( 0x278 ), /* Offset= 632 (888) */
/* 258 */ NdrFcLong( 0x4017 ), /* 16407 */

```

```

/* 262 */ NdrFcShort( 0x272 ), /* Offset= 626 (888) */
/* 264 */ NdrFcLong( 0x0 ), /* 0 */
/* 268 */ NdrFcShort( 0x0 ), /* Offset= 0 (268) */
/* 270 */ NdrFcLong( 0x1 ), /* 1 */
/* 274 */ NdrFcShort( 0x0 ), /* Offset= 0 (274) */
/* 276 */ NdrFcShort( 0xffffffff ), /* Offset= -1 (275) */
/* 278 */
0x15, /* FC_STRUCT */
0x7, /* 7 */
/* 280 */ NdrFcShort( 0x8 ), /* 8 */
/* 282 */ 0xb, /* FC_HYPER */
0x5b, /* FC_END */
/* 284 */
0x12, 0x0, /* FC_UP */
/* 286 */ NdrFcShort( 0xc ), /* Offset= 12 (298) */
/* 288 */
0x1b, /* FC_CARRAY */
0x1, /* 1 */
/* 290 */ NdrFcShort( 0x2 ), /* 2 */
/* 292 */ 0x9, /* Corr desc: FC_ULONG */
0x0, /* */
/* 294 */ NdrFcShort( 0xfffc ), /* -4 */
/* 296 */ 0x6, /* FC_SHORT */
0x5b, /* FC_END */
/* 298 */
0x17, /* FC_CSTRUCT */
0x3, /* 3 */
/* 300 */ NdrFcShort( 0x8 ), /* 8 */
/* 302 */ NdrFcShort( 0xffffffff2 ), /* Offset= -14 (288) */
/* 304 */ 0x8, /* FC_LONG */
0x8, /* FC_LONG */
/* 306 */ 0x5c, /* FC_PAD */
0x5b, /* FC_END */
/* 308 */
0x2f, /* FC_IP */
0x5a, /*
FC_CONSTANT_IID */
/* 310 */ NdrFcLong( 0x0 ), /* 0 */
/* 314 */ NdrFcShort( 0x0 ), /* 0 */
/* 316 */ NdrFcShort( 0x0 ), /* 0 */
/* 318 */ 0xc0, /* 192 */
0x0, /* 0 */
/* 320 */ 0x0, /* 0 */
0x0, /* 0 */
/* 322 */ 0x0, /* 0 */
0x0, /* 0 */
/* 324 */ 0x0, /* 0 */
0x46, /* 70 */
/* 326 */
0x2f, /* FC_IP */
0x5a, /*
FC_CONSTANT_IID */
/* 328 */ NdrFcLong( 0x20400 ), /* 132096 */
/* 332 */ NdrFcShort( 0x0 ), /* 0 */
/* 334 */ NdrFcShort( 0x0 ), /* 0 */
/* 336 */ 0xc0, /* 192 */
0x0, /* 0 */
/* 338 */ 0x0, /* 0 */
0x0, /* 0 */
/* 340 */ 0x0, /* 0 */
0x0, /* 0 */
/* 342 */ 0x0, /* 0 */
0x46, /* 70 */
/* 344 */
0x12, 0x10, /* FC_UP
[pointer_deref] */
/* 346 */ NdrFcShort( 0x2 ), /* Offset= 2 (348) */
/* 348 */
0x12, 0x0, /* FC_UP */
/* 350 */ NdrFcShort( 0x1fc ), /* Offset= 508 (858) */
/* 352 */
0x2a, /*
FC_ENCAPSULATED_UNION */
0x49, /* 73 */
/* 354 */ NdrFcShort( 0x18 ), /* 24 */
/* 356 */ NdrFcShort( 0xa ), /* 10 */
/* 358 */ NdrFcLong( 0x8 ), /* 8 */
/* 362 */ NdrFcShort( 0x58 ), /* Offset= 88 (450) */
/* 364 */ NdrFcLong( 0xd ), /* 13 */
/* 368 */ NdrFcShort( 0x78 ), /* Offset= 120 (488) */
/* 370 */ NdrFcLong( 0x9 ), /* 9 */
/* 374 */ NdrFcShort( 0x94 ), /* Offset= 148 (522) */
/* 376 */ NdrFcLong( 0xc ), /* 12 */
/* 380 */ NdrFcShort( 0xbc ), /* Offset= 188 (568) */
/* 382 */ NdrFcLong( 0x24 ), /* 36 */
/* 386 */ NdrFcShort( 0x114 ), /* Offset= 276 (662) */
/* 388 */ NdrFcLong( 0x800d ), /* 32781 */
/* 392 */ NdrFcShort( 0x130 ), /* Offset= 304 (696) */
/* 394 */ NdrFcLong( 0x10 ), /* 16 */
/* 398 */ NdrFcShort( 0x148 ), /* Offset= 328 (726) */
/* 400 */ NdrFcLong( 0x2 ), /* 2 */
/* 404 */ NdrFcShort( 0x160 ), /* Offset= 352 (756) */
/* 406 */ NdrFcLong( 0x3 ), /* 3 */
/* 410 */ NdrFcShort( 0x178 ), /* Offset= 376 (786) */
/* 412 */ NdrFcLong( 0x14 ), /* 20 */
/* 416 */ NdrFcShort( 0x190 ), /* Offset= 400 (816) */
/* 418 */ NdrFcShort( 0xffffffff ), /* Offset= -1 (417) */
/* 420 */
0x1b, /* FC_CARRAY */
0x3, /* 3 */
/* 422 */ NdrFcShort( 0x4 ), /* 4 */
/* 424 */ 0x19, /* Corr desc: field pointer, FC_ULONG */
0x0, /* */
/* 426 */ NdrFcShort( 0x0 ), /* 0 */
/* 428 */
0x4b, /* FC_PP */
0x5c, /* FC_PAD */
/* 430 */
0x48, /*
FC_VARIABLE_REPEAT */
0x49, /*
FC_FIXED_OFFSET */
/* 432 */ NdrFcShort( 0x4 ), /* 4 */
/* 434 */ NdrFcShort( 0x0 ), /* 0 */
/* 436 */ NdrFcShort( 0x1 ), /* 1 */
/* 438 */ NdrFcShort( 0x0 ), /* 0 */
/* 440 */ NdrFcShort( 0x0 ), /* 0 */
/* 442 */ 0x12, 0x0, /* FC_UP */
/* 444 */ NdrFcShort( 0xffffffff6e ), /* Offset= -146 (298) */
/* 446 */
0x5b, /* FC_END */
0x8, /* FC_LONG */
/* 448 */ 0x5c, /* FC_PAD */
0x5b, /* FC_END */
/* 450 */
0x16, /* FC_PSTRUCT */
0x3, /* 3 */
/* 452 */ NdrFcShort( 0x8 ), /* 8 */
/* 454 */
0x4b, /* FC_PP */
0x5c, /* FC_PAD */
/* 456 */
0x46, /* FC_NO_REPEAT */
0x5c, /* FC_PAD */
/* 458 */ NdrFcShort( 0x4 ), /* 4 */

```

```

/* 460 */ NdrFcShort( 0x4 ), /* 4 */
/* 462 */ 0x11, 0x0, /* FC_RP */
/* 464 */ NdrFcShort( 0xfffffd4 ), /* Offset= -44 (420) */
/* 466 */
                                0x5b, /* FC_END */
                                0x8, /* FC_LONG */
/* 468 */ 0x8, /* FC_LONG */
                                0x5b, /* FC_END */
/* 470 */
                                0x21, /*
FC_BOGUS_ARRAY */
                                0x3, /* 3 */
/* 472 */ NdrFcShort( 0x0 ), /* 0 */
/* 474 */ 0x19, /* Corr desc: field pointer, FC_ULONG */
                                0x0, /* */
/* 476 */ NdrFcShort( 0x0 ), /* 0 */
/* 478 */ NdrFcLong( 0xffffffff ), /* -1 */
/* 482 */ 0x4c, /* FC_EMBEDDED_COMPLEX */
                                0x0, /* 0 */
/* 484 */ NdrFcShort( 0xfffff50 ), /* Offset= -176 (308) */
/* 486 */ 0x5c, /* FC_PAD */
                                0x5b, /* FC_END */
/* 488 */
                                0x1a, /*
FC_BOGUS_STRUCT */
                                0x3, /* 3 */
/* 490 */ NdrFcShort( 0x8 ), /* 8 */
/* 492 */ NdrFcShort( 0x0 ), /* 0 */
/* 494 */ NdrFcShort( 0x6 ), /* Offset= 6 (500) */
/* 496 */ 0x8, /* FC_LONG */
                                0x36, /* FC_POINTER */
/* 498 */ 0x5c, /* FC_PAD */
                                0x5b, /* FC_END */
/* 500 */
                                0x11, 0x0, /* FC_RP */
/* 502 */ NdrFcShort( 0xfffffe0 ), /* Offset= -32 (470) */
/* 504 */
                                0x21, /*
FC_BOGUS_ARRAY */
                                0x3, /* 3 */
/* 506 */ NdrFcShort( 0x0 ), /* 0 */
/* 508 */ 0x19, /* Corr desc: field pointer, FC_ULONG */
                                0x0, /* */
/* 510 */ NdrFcShort( 0x0 ), /* 0 */
/* 512 */ NdrFcLong( 0xffffffff ), /* -1 */
/* 516 */ 0x4c, /* FC_EMBEDDED_COMPLEX */
                                0x0, /* 0 */
/* 518 */ NdrFcShort( 0xfffff40 ), /* Offset= -192 (326) */
/* 520 */ 0x5c, /* FC_PAD */
                                0x5b, /* FC_END */
/* 522 */
                                0x1a, /*
FC_BOGUS_STRUCT */
                                0x3, /* 3 */
/* 524 */ NdrFcShort( 0x8 ), /* 8 */
/* 526 */ NdrFcShort( 0x0 ), /* 0 */
/* 528 */ NdrFcShort( 0x6 ), /* Offset= 6 (534) */
/* 530 */ 0x8, /* FC_LONG */
                                0x36, /* FC_POINTER */
/* 532 */ 0x5c, /* FC_PAD */
                                0x5b, /* FC_END */
/* 534 */
                                0x11, 0x0, /* FC_RP */
/* 536 */ NdrFcShort( 0xfffffe0 ), /* Offset= -32 (504) */
/* 538 */
                                0x1b, /* FC_CARRY */
                                0x3, /* 3 */
/* 540 */ NdrFcShort( 0x4 ), /* 4 */
/* 542 */ 0x19, /* Corr desc: field pointer, FC_ULONG */
                                0x0, /* */
/* 544 */ NdrFcShort( 0x0 ), /* 0 */
/* 546 */
                                0x4b, /* FC_PP */
                                0x5c, /* FC_PAD */
                                0x48, /*
FC_VARIABLE_REPEAT */
                                0x49, /*
FC_FIXED_OFFSET */
/* 550 */ NdrFcShort( 0x4 ), /* 4 */
/* 552 */ NdrFcShort( 0x0 ), /* 0 */
/* 554 */ NdrFcShort( 0x1 ), /* 1 */
/* 556 */ NdrFcShort( 0x0 ), /* 0 */
/* 558 */ NdrFcShort( 0x0 ), /* 0 */
/* 560 */ 0x12, 0x0, /* FC_UP */
/* 562 */ NdrFcShort( 0x182 ), /* Offset= 386 (948) */
/* 564 */
                                0x5b, /* FC_END */
                                0x8, /* FC_LONG */
/* 566 */ 0x5c, /* FC_PAD */
                                0x5b, /* FC_END */
/* 568 */
                                0x1a, /*
FC_BOGUS_STRUCT */
                                0x3, /* 3 */
/* 570 */ NdrFcShort( 0x8 ), /* 8 */
/* 572 */ NdrFcShort( 0x0 ), /* 0 */
/* 574 */ NdrFcShort( 0x6 ), /* Offset= 6 (580) */
/* 576 */ 0x8, /* FC_LONG */
                                0x36, /* FC_POINTER */
/* 578 */ 0x5c, /* FC_PAD */
                                0x5b, /* FC_END */
/* 580 */
                                0x11, 0x0, /* FC_RP */
/* 582 */ NdrFcShort( 0xfffffd4 ), /* Offset= -44 (538) */
/* 584 */
                                0x2f, /* FC_IP */
                                0x5a, /*
FC_CONSTANT_IID */
/* 586 */ NdrFcLong( 0x2f ), /* 47 */
/* 590 */ NdrFcShort( 0x0 ), /* 0 */
/* 592 */ NdrFcShort( 0x0 ), /* 0 */
/* 594 */ 0xc0, /* 192 */
                                0x0, /* 0 */
/* 596 */ 0x0, /* 0 */
                                0x0, /* 0 */
/* 598 */ 0x0, /* 0 */
                                0x0, /* 0 */
/* 600 */ 0x0, /* 0 */
                                0x46, /* 70 */
/* 602 */
                                0x1b, /* FC_CARRY */
                                0x0, /* 0 */
/* 604 */ NdrFcShort( 0x1 ), /* 1 */
/* 606 */ 0x19, /* Corr desc: field pointer, FC_ULONG */
                                0x0, /* */
/* 608 */ NdrFcShort( 0x4 ), /* 4 */
/* 610 */ 0x1, /* FC_BYTE */
                                0x5b, /* FC_END */
/* 612 */
                                0x1a, /*
FC_BOGUS_STRUCT */
                                0x3, /* 3 */
/* 614 */ NdrFcShort( 0x10 ), /* 16 */

```



/* 616 */ NdrFcShort( 0x0 ), /* 0 */	0x4c, /*
/* 618 */ NdrFcShort( 0xa ), /* Offset= 10 (628) */	FC_EMBEDDED_COMPLEX /*
/* 620 */ 0x8, /* FC_LONG */	/* 692 */ 0x0, /* 0 */
/* 622 */ 0x4c, /* FC_EMBEDDED_COMPLEX */	NdrFcShort( 0xffffffffl ), /* Offset=
/* 624 */ NdrFcShort( 0xffffffff8 ), /* Offset= -40 (584) */	-15 (678) */
/* 626 */ 0x36, /* FC_POINTER */	0x5b, /* FC_END */
/* 628 */ 0x5b, /* FC_END */	0x1a, /*
/* 630 */ NdrFcShort( 0xffffffffe4 ), /* Offset= -28 (602) */	FC_BOGUS_STRUCT /*
/* 632 */ 0x12, 0x0, /* FC_UP */	0x3, /* 3 */
/* 634 */ NdrFcShort( 0xffffffffe4 ), /* Offset= -28 (602) */	/* 698 */ NdrFcShort( 0x18 ), /* 24 */
/* 636 */ 0x1b, /* FC_CARRY */	/* 700 */ NdrFcShort( 0x0 ), /* 0 */
/* 638 */ NdrFcShort( 0x0 ), /* 0 */	/* 702 */ NdrFcShort( 0xa ), /* Offset= 10 (712) */
/* 640 */ 0x4b, /* FC_PP */	/* 704 */ 0x8, /* FC_LONG */
/* 642 */ 0x5c, /* FC_PAD */	0x36, /* FC_POINTER */
FC_VARIABLE_REPEAT /*	/* 706 */ 0x4c, /* FC_EMBEDDED_COMPLEX */
FC_FIXED_OFFSET /*	0x0, /* 0 */
/* 644 */ NdrFcShort( 0x4 ), /* 4 */	/* 708 */ NdrFcShort( 0xffffffffe8 ), /* Offset= -24 (684) */
/* 646 */ NdrFcShort( 0x0 ), /* 0 */	/* 710 */ 0x5c, /* FC_PAD */
/* 648 */ NdrFcShort( 0x1 ), /* 1 */	/* 712 */ 0x5b, /* FC_END */
/* 650 */ NdrFcShort( 0x0 ), /* 0 */	/* 714 */ NdrFcShort( 0xffffffff0c ), /* Offset= -244 (470) */
/* 652 */ NdrFcShort( 0x0 ), /* 0 */	/* 716 */ 0x11, 0x0, /* FC_RP */
/* 654 */ 0x12, 0x0, /* FC_UP */	/* 718 */ NdrFcShort( 0x1 ), /* 1 */
/* 656 */ NdrFcShort( 0xffffffffd4 ), /* Offset= -44 (612) */	/* 720 */ 0x19, /* Corr desc: field pointer, FC_ULONG */
/* 658 */ 0x5b, /* FC_END */	0x0, /* 0 */
/* 660 */ 0x5c, /* FC_PAD */	/* 722 */ NdrFcShort( 0x0 ), /* 0 */
/* 662 */ 0x5b, /* FC_END */	/* 724 */ 0x1, /* FC_BYTE */
/* 664 */ 0x1a, /*	0x5b, /* FC_END */
FC_BOGUS_STRUCT /*	/* 726 */ 0x16, /* FC_PSTRUCT */
/* 666 */ NdrFcShort( 0x8 ), /* 8 */	0x3, /* 3 */
/* 668 */ NdrFcShort( 0x0 ), /* 0 */	/* 728 */ NdrFcShort( 0x8 ), /* 8 */
/* 670 */ NdrFcShort( 0x6 ), /* Offset= 6 (674) */	/* 730 */ 0x4b, /* FC_PP */
/* 672 */ 0x8, /* FC_LONG */	0x5c, /* FC_PAD */
/* 674 */ 0x5c, /* FC_PAD */	/* 732 */ 0x46, /* FC_NO_REPEAT */
/* 676 */ 0x5b, /* FC_END */	0x5c, /* FC_PAD */
/* 678 */ 0x11, 0x0, /* FC_RP */	/* 734 */ NdrFcShort( 0x4 ), /* 4 */
/* 680 */ NdrFcShort( 0xffffffffd4 ), /* Offset= -44 (632) */	/* 736 */ NdrFcShort( 0x4 ), /* 4 */
/* 682 */ 0x1d, /* FC_SMFARRAY */	/* 738 */ 0x12, 0x0, /* FC_UP */
/* 684 */ 0x0, /* 0 */	/* 740 */ NdrFcShort( 0xffffffffe8 ), /* Offset= -24 (716) */
/* 686 */ NdrFcShort( 0x8 ), /* 8 */	/* 742 */ 0x5b, /* FC_END */
/* 688 */ 0x1, /* FC_BYTE */	0x8, /* FC_LONG */
/* 690 */ 0x6, /* FC_SHORT */	/* 744 */ 0x8, /* FC_LONG */
	0x5b, /* FC_END */
	/* 746 */ 0x11, 0x0, /* FC_RP */
	0x1b, /* FC_CARRY */
	0x1, /* 1 */
	/* 748 */ NdrFcShort( 0x2 ), /* 2 */
	/* 750 */ 0x19, /* Corr desc: field pointer, FC_ULONG */
	0x0, /* 0 */
	/* 752 */ NdrFcShort( 0x0 ), /* 0 */
	/* 754 */ 0x6, /* FC_SHORT */
	0x5b, /* FC_END */
	/* 756 */ 0x16, /* FC_PSTRUCT */
	0x3, /* 3 */
	/* 758 */ NdrFcShort( 0x8 ), /* 8 */
	/* 760 */ 0x4b, /* FC_PP */
	0x5c, /* FC_PAD */

/* 762 */			0x46,	/* FC_NO_REPEAT */	/* 834 */	0x8,	/* FC_LONG */
			0x5c,	/* FC_PAD */		0x5b,	/* FC_END */
/* 764 */	NdrFcShort( 0x4 ),	/* 4 */			/* 836 */		
/* 766 */	NdrFcShort( 0x4 ),	/* 4 */				0x15,	/* FC_STRUCT */
/* 768 */	0x12, 0x0, /* FC_UP */					0x3,	/* 3 */
/* 770 */	NdrFcShort( 0xfffffe8 ),	/* Offset= -24 (746) */			/* 838 */	NdrFcShort( 0x8 ),	/* 8 */
/* 772 */			0x5b,	/* FC_END */	/* 840 */	0x8,	/* FC_LONG */
			0x8,	/* FC_LONG */	/* 842 */	0x5c,	/* FC_PAD */
/* 774 */	0x8,	/* FC_LONG */	0x5b,	/* FC_END */	/* 844 */	0x5b,	/* FC_END */
/* 776 */			0x1b,	/* FC_CARRAY */		0x1b,	/* FC_CARRAY */
			0x3,	/* 3 */	/* 846 */	NdrFcShort( 0x8 ),	/* 8 */
/* 778 */	NdrFcShort( 0x4 ),	/* 4 */			/* 848 */	0x7,	/* Corr desc: FC_USHORT */
/* 780 */	0x19,	/* Corr desc: field pointer, FC_ULONG */			/* 850 */	NdrFcShort( 0xffd8 ),	/* -40 */
		/* */	0x0,	/* */	/* 852 */	0x4c,	/* FC_EMBEDDED_COMPLEX */
/* 782 */	NdrFcShort( 0x0 ),	/* 0 */				0x0,	/* 0 */
/* 784 */	0x8,	/* FC_LONG */	0x5b,	/* FC_END */	/* 854 */	NdrFcShort( 0xfffffee ),	/* Offset= -18 (836) */
/* 786 */			0x16,	/* FC_PSTRUCT */	/* 856 */	0x5c,	/* FC_PAD */
			0x3,	/* 3 */		0x5b,	/* FC_END */
/* 788 */	NdrFcShort( 0x8 ),	/* 8 */			/* 858 */		0x1a,
/* 790 */			0x4b,	/* FC_PP */			/* FC_BOGUS_STRUCT */
			0x5c,	/* FC_PAD */		0x3,	/* 3 */
/* 792 */			0x46,	/* FC_NO_REPEAT */	/* 860 */	NdrFcShort( 0x28 ),	/* 40 */
			0x5c,	/* FC_PAD */	/* 862 */	NdrFcShort( 0xfffffee ),	/* Offset= -18 (844) */
/* 794 */	NdrFcShort( 0x4 ),	/* 4 */			/* 864 */	NdrFcShort( 0x0 ),	/* Offset= 0 (864) */
/* 796 */	NdrFcShort( 0x4 ),	/* 4 */			/* 866 */	0x6,	/* FC_SHORT */
/* 798 */	0x12, 0x0, /* FC_UP */				/* 868 */	0x38,	/* FC_ALIGNM4 */
/* 800 */	NdrFcShort( 0xfffffe8 ),	/* Offset= -24 (776) */			/* 870 */	0x8,	/* FC_LONG */
/* 802 */			0x5b,	/* FC_END */		0x4c,	/* FC_EMBEDDED_COMPLEX */
			0x8,	/* FC_LONG */	/* 872 */	0x0,	/* 0 */
/* 804 */	0x8,	/* FC_LONG */	0x5b,	/* FC_END */			NdrFcShort( 0xfffffd7 ),
/* 806 */			0x1b,	/* FC_CARRAY */			/* Offset=
			0x7,	/* 7 */	/* 876 */		0x5b,
/* 808 */	NdrFcShort( 0x8 ),	/* 8 */				0x12, 0x0, /* FC_UP */	/* FC_UP */
/* 810 */	0x19,	/* Corr desc: field pointer, FC_ULONG */			/* 878 */	NdrFcShort( 0xfffffe6 ),	/* Offset= -266 (612) */
		/* */	0x0,	/* */	/* 880 */		0x12, 0x8, /* FC_UP [simple_pointer] */
/* 812 */	NdrFcShort( 0x0 ),	/* 0 */				0x5c,	/* FC_BYTE */
/* 814 */	0xb,	/* FC_HYPER */	0x5b,	/* FC_END */	/* 884 */		/* FC_PAD */
/* 816 */			0x16,	/* FC_PSTRUCT */	/* 886 */	0x6,	/* FC_UP [simple_pointer] */
			0x3,	/* 3 */		0x5c,	/* FC_SHORT */
/* 818 */	NdrFcShort( 0x8 ),	/* 8 */			/* 888 */		/* FC_PAD */
/* 820 */			0x4b,	/* FC_PP */	/* 890 */	0x8,	0x12, 0x8, /* FC_UP [simple_pointer] */
			0x5c,	/* FC_PAD */			/* FC_LONG */
/* 822 */			0x46,	/* FC_NO_REPEAT */	/* 892 */		0x5c,
			0x5c,	/* FC_PAD */	/* 894 */	0xa,	/* FC_FLOAT */
/* 824 */	NdrFcShort( 0x4 ),	/* 4 */			/* 896 */		0x12, 0x8, /* FC_UP [simple_pointer] */
/* 826 */	NdrFcShort( 0x4 ),	/* 4 */			/* 898 */	0xc,	/* FC_DOUBLE */
/* 828 */	0x12, 0x0, /* FC_UP */				/* 900 */		0x5c,
/* 830 */	NdrFcShort( 0xfffffe8 ),	/* Offset= -24 (806) */					/* FC_PAD */
/* 832 */			0x5b,	/* FC_END */	/* 902 */	NdrFcShort( 0xffffd90 ),	/* Offset= -624 (278) */
					/* 904 */		

```

                                0x12, 0x10,          /* FC_UP
[pointer_deref] */
/* 906 */ NdrFcShort( 0xfffffd92 ), /* Offset= -622 (284) */
/* 908 */
                                0x12, 0x10,          /* FC_UP
[pointer_deref] */
/* 910 */ NdrFcShort( 0xffffda6 ), /* Offset= -602 (308) */
/* 912 */
                                0x12, 0x10,          /* FC_UP
[pointer_deref] */
/* 914 */ NdrFcShort( 0xffffdb4 ), /* Offset= -588 (326) */
/* 916 */
                                0x12, 0x10,          /* FC_UP
[pointer_deref] */
/* 918 */ NdrFcShort( 0xffffdc2 ), /* Offset= -574 (344) */
/* 920 */
                                0x12, 0x10,          /* FC_UP
[pointer_deref] */
/* 922 */ NdrFcShort( 0x2 ), /* Offset= 2 (924) */
/* 924 */
                                0x12, 0x0, /* FC_UP */
/* 926 */ NdrFcShort( 0x16 ), /* Offset= 22 (948) */
/* 928 */
                                0x15,          /* FC_STRUCT */
                                0x7,          /* 7 */
/* 930 */ NdrFcShort( 0x10 ), /* 16 */
/* 932 */ 0x6, /* FC_SHORT */
                                0x1,          /* FC_BYTE */
/* 934 */ 0x1, /* FC_BYTE */
                                0x38,        /* FC_ALIGNM4 */
/* 936 */ 0x8, /* FC_LONG */
                                0x39,        /* FC_ALIGNM8 */
/* 938 */ 0xb, /* FC_HYPER */
                                0x5b,        /* FC_END */
/* 940 */
                                0x12, 0x0, /* FC_UP */
/* 942 */ NdrFcShort( 0xfffff2 ), /* Offset= -14 (928) */
/* 944 */
                                0x12, 0x8, /* FC_UP [simple_pointer] */
/* 946 */ 0x2, /* FC_CHAR */
                                0x5c,        /* FC_PAD */
/* 948 */
                                0x1a,          /*
FC_BOGUS_STRUCT */
                                0x7,          /* 7 */
/* 950 */ NdrFcShort( 0x20 ), /* 32 */
/* 952 */ NdrFcShort( 0x0 ), /* 0 */
/* 954 */ NdrFcShort( 0x0 ), /* Offset= 0 (954) */
/* 956 */ 0x8, /* FC_LONG */
                                0x8,          /* FC_LONG */
/* 958 */ 0x6, /* FC_SHORT */
                                0x6,          /* FC_SHORT */
/* 960 */ 0x6, /* FC_SHORT */
                                0x6,          /* FC_SHORT */
/* 962 */ 0x4c, /* FC_EMBEDDED_COMPLEX */
                                0x0,          /* 0 */
/* 964 */ NdrFcShort( 0xfffffc42 ), /* Offset= -958 (6) */
/* 966 */ 0x5c, /* FC_PAD */
                                0x5b,        /* FC_END */
/* 968 */ 0xb4, /* FC_USER_MARSHAL */
                                0x83,        /* 131 */
/* 970 */ NdrFcShort( 0x0 ), /* 0 */
/* 972 */ NdrFcShort( 0x10 ), /* 16 */
/* 974 */ NdrFcShort( 0x0 ), /* 0 */
/* 976 */ NdrFcShort( 0xfffffc32 ), /* Offset= -974 (2) */
/* 978 */
                                0x11, 0x4, /* FC_RP [allocated_on_stack] */
/* 980 */ NdrFcShort( 0x6 ), /* Offset= 6 (986) */
/* 982 */
                                0x13, 0x0, /* FC_OP */
/* 984 */ NdrFcShort( 0xfffffde ), /* Offset= -36 (948) */
/* 986 */ 0xb4, /* FC_USER_MARSHAL */
                                0x83,        /* 131 */
/* 988 */ NdrFcShort( 0x0 ), /* 0 */
/* 990 */ NdrFcShort( 0x10 ), /* 16 */
/* 992 */ NdrFcShort( 0x0 ), /* 0 */
/* 994 */ NdrFcShort( 0xffffff4 ), /* Offset= -12 (982) */
                                0x0
}
};
const CInterfaceProxyVtbl * _tpcc_com_ps_ProxyVtblList[] =
{
( CInterfaceProxyVtbl *) &_ITPCCProxyVtbl,
0
};
const CInterfaceStubVtbl * _tpcc_com_ps_StubVtblList[] =
{
( CInterfaceStubVtbl *) &_ITPCCStubVtbl,
0
};
PCInterfaceName const _tpcc_com_ps_InterfaceNamesList[] =
{
"ITPCC",
0
};
#define _tpcc_com_ps_CHECK_IID(n) IID_GENERIC_CHECK_IID(
_tpcc_com_ps, pIID, n)
int __stdcall _tpcc_com_ps_IID_Lookup( const IID * pIID, int * pIndex )
{
if(! _tpcc_com_ps_CHECK_IID(0))
{
*pIndex = 0;
return 1;
}
return 0;
}
const ExtendedProxyFileInfo tpcc_com_ps_ProxyFileInfo =
{
(PCInterfaceProxyVtblList *) &_tpcc_com_ps_ProxyVtblList,
(PCInterfaceStubVtblList *) &_tpcc_com_ps_StubVtblList,
(const PCInterfaceName *) &_tpcc_com_ps_InterfaceNamesList,
0, // no delegation
&_tpcc_com_ps_IID_Lookup,
1,
2,
0, /* table of [async_uuid] interfaces */
0, /* Filler1 */
0, /* Filler2 */
0 /* Filler3 */
};
#endif /* !defined(_M_IA64) && !defined(_M_AXP64)*/
#pragma warning( disable: 4049 ) /* more than 64k source lines */

```

```

/* this ALWAYS GENERATED file contains the proxy stub code */

/* File created by MIDL compiler version 5.03.0280 */
/* at Thu Dec 13 23:13:08 2001
*/
/* Compiler settings for \src\tpcc_com_ps.idl:
Oicf (OptLev=i2), W1, Zp8, env=Win64 (32b run,appending), 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( )

#ifdef _M_IA64 || defined(_M_AXP64)
#define USE_STUBLESS_PROXY

/* verify that the <rpcproxy.h> version is high enough to compile this file*/
#ifndef __REDQ_RPCPROXY_H_VERSION__
#define __REQUIRED_RPCPROXY_H_VERSION__ 475
#endif

#include "rpcproxy.h"
#ifndef __RPCPROXY_H_VERSION__
#error this stub requires an updated version of <rpcproxy.h>
#endif // __RPCPROXY_H_VERSION__

#include "tpcc_com_ps.h"

#define TYPE_FORMAT_STRING_SIZE 979
#define PROC_FORMAT_STRING_SIZE 253
#define TRANSMIT_AS_TABLE_SIZE 0
#define WIRE_MARSHAL_TABLE_SIZE 1

typedef struct _MIDL_TYPE_FORMAT_STRING
{
    short Pad;
    unsigned char Format[ TYPE_FORMAT_STRING_SIZE ];
} MIDL_TYPE_FORMAT_STRING;

typedef struct _MIDL_PROC_FORMAT_STRING
{
    short Pad;
    unsigned char Format[ PROC_FORMAT_STRING_SIZE ];
} MIDL_PROC_FORMAT_STRING;

extern const MIDL_TYPE_FORMAT_STRING __MIDL_TypeFormatString;
extern const MIDL_PROC_FORMAT_STRING __MIDL_ProcFormatString;

/* Standard interface: __MIDL_itf_tpcc_com_ps_0000, ver. 0.0,
GUID={0x00000000,0x0000,0x0000,{0x00,0x00,0x00,0x00,0x00,0x00,0x00,0
x00}} */

/* Object interface: IUnknown, ver. 0.0,
GUID={0x00000000,0x0000,0x0000,{0xC0,0x00,0x00,0x00,0x00,0x00,0x00,
0x46}} */

```

```

/* Object interface: ITPCC, ver. 0.0,
GUID={0xFEE6AA2,0x84B1,0x11d2,{0xBA,0x47,0x00,0xC0,0x4F,0xBF,0xE0,0x8B}} */

extern const MIDL_STUB_DESC Object_StubDesc;

extern const MIDL_SERVER_INFO ITPCC_ServerInfo;

#pragma code_seg("orpc")
static const unsigned short ITPCC_FormatStringOffsetTable[] =
{
    0,
    44,
    88,
    132,
    176,
    220
};

static const MIDL_SERVER_INFO ITPCC_ServerInfo =
{
    &Object_StubDesc,
    0,
    __MIDL_ProcFormatString.Format,
    &ITPCC_FormatStringOffsetTable[-3],
    0,
    0,
    0,
    0
};

static const MIDL_STUBLESS_PROXY_INFO ITPCC_ProxyInfo =
{
    &Object_StubDesc,
    __MIDL_ProcFormatString.Format,
    &ITPCC_FormatStringOffsetTable[-3],
    0,
    0,
    0
};

CINTERFACE_PROXY_VTABLE(9) _ITPCCProxyVtbl =
{
    &ITPCC_ProxyInfo,
    &IID_ITPCC,
    IUnknown_QueryInterface_Proxy,
    IUnknown_AddRef_Proxy,
    IUnknown_Release_Proxy ,
    (void *)-1 /* ITPCC::NewOrder */ ,
    (void *)-1 /* ITPCC::Payment */ ,
    (void *)-1 /* ITPCC::Delivery */ ,
    (void *)-1 /* ITPCC::StockLevel */ ,
    (void *)-1 /* ITPCC::OrderStatus */ ,
    (void *)-1 /* ITPCC::CallSetComplete */
};

const CInterfaceStubVtbl _ITPCCStubVtbl =
{
    &IID_ITPCC,
    &ITPCC_ServerInfo,
    9,
    0, /* pure interpreted */
    CStdStubBuffer_METHODS
};

```

```

extern const USER_MARSHAL_ROUTINE_QUADRUPLE
UserMarshalRoutines[ WIRE_MARSHAL_TABLE_SIZE ];

static const MIDL_STUB_DESC Object_StubDesc =
{
    0,
    NdrOleAllocate,
    NdrOleFree,
    0,
    0,
    0,
    0,
    0,
    0,
    0,
    __MIDL_TypeFormatString.Format,
    1, /* -error bounds_check flag */
    0x50002, /* Ndr library version */
    0,
    0x5030118, /* MIDL Version 5.3.280 */
    0,
    UserMarshalRoutines,
    0, /* notify & notify_flag routine table */
    0x1, /* MIDL flag */
    0, /* Reserved3 */
    0, /* Reserved4 */
    0 /* Reserved5 */
};

#pragma data_seg(".rdata")

static const USER_MARSHAL_ROUTINE_QUADRUPLE
UserMarshalRoutines[ WIRE_MARSHAL_TABLE_SIZE ] =
{
    {
        VARIANT_UserSize
    ,VARIANT_UserMarshal
    ,VARIANT_UserUnmarshal
    ,VARIANT_UserFree
    }
};

#ifdef __RPC_WIN64__
#error Invalid build platform for this stub.
#endif

static const MIDL_PROC_FORMAT_STRING __MIDL_ProcFormatString =
{
    {
        0,
        {
            /* Procedure NewOrder */
            FC_AUTO_HANDLE /*
            Oi2 */
            /* 2 */ NdrFcLong( 0x0 ), /* 0 */
            /* 6 */ NdrFcShort( 0x3 ), /* 3 */
            #ifdef _ALPHA_
            /* 8 */ NdrFcShort( 0x38 ), /* ia64 Stack size/offset = 56 */
            #else
            NdrFcShort( 0x30 ), /* axp64 Stack
            size/offset = 48 */
            #endif
            /* 10 */ NdrFcShort( 0x0 ), /* 0 */
        }
    }
};

```

```

/* 12 */ NdrFcShort( 0x8 ), /* 8 */
/* 14 */ 0x47, /* Oi2 Flags: srv must size, clt must size, has
return, has ext, */
0x3, /* 3 */
/* 16 */ 0xa, /* 10 */
0x7, /* Ext Flags: new corr
desc, clt corr check, srv corr check, */
/* 18 */ NdrFcShort( 0x20 ), /* 32 */
/* 20 */ NdrFcShort( 0x20 ), /* 32 */
/* 22 */ NdrFcShort( 0x0 ), /* 0 */
/* 24 */ NdrFcShort( 0x0 ), /* 0 */
/* Parameter txn_in */
/* 26 */ NdrFcShort( 0x8b ), /* Flags: must size, must free, in, by val, */
#ifdef _ALPHA_
/* 28 */ NdrFcShort( 0x10 ), /* ia64 Stack size/offset = 16 */
#else
NdrFcShort( 0x8 ), /* axp64 Stack
size/offset = 8 */
#endif
/* 30 */ NdrFcShort( 0x3b6 ), /* Type Offset=950 */
/* Parameter txn_out */
/* 32 */ NdrFcShort( 0x6113 ), /* Flags: must size, must free, out,
simple ref, srv alloc size=24 */
#ifdef _ALPHA_
/* 34 */ NdrFcShort( 0x28 ), /* ia64 Stack size/offset = 40 */
#else
NdrFcShort( 0x20 ), /* axp64 Stack
size/offset = 32 */
#endif
/* 36 */ NdrFcShort( 0x3c8 ), /* Type Offset=968 */
/* Return value */
/* 38 */ NdrFcShort( 0x70 ), /* Flags: out, return, base type, */
#ifdef _ALPHA_
/* 40 */ NdrFcShort( 0x30 ), /* ia64 Stack size/offset = 48 */
#else
NdrFcShort( 0x28 ), /* axp64 Stack
size/offset = 40 */
#endif
/* 42 */ 0x8, /* FC_LONG */
0x0, /* 0 */
/* Procedure Payment */
/* 44 */ 0x33, /* FC_AUTO_HANDLE */
0x6c, /* Old Flags: object,
Oi2 */
/* 46 */ NdrFcLong( 0x0 ), /* 0 */
/* 50 */ NdrFcShort( 0x4 ), /* 4 */
#ifdef _ALPHA_
/* 52 */ NdrFcShort( 0x38 ), /* ia64 Stack size/offset = 56 */
#else
NdrFcShort( 0x30 ), /* axp64 Stack
size/offset = 48 */
#endif
/* 54 */ NdrFcShort( 0x0 ), /* 0 */
/* 56 */ NdrFcShort( 0x8 ), /* 8 */
/* 58 */ 0x47, /* Oi2 Flags: srv must size, clt must size, has
return, has ext, */
0x3, /* 3 */
/* 60 */ 0xa, /* 10 */
0x7, /* Ext Flags: new corr
desc, clt corr check, srv corr check, */

```

```

/* 62 */ NdrFcShort( 0x20 ), /* 32 */
/* 64 */ NdrFcShort( 0x20 ), /* 32 */
/* 66 */ NdrFcShort( 0x0 ), /* 0 */
/* 68 */ NdrFcShort( 0x0 ), /* 0 */

/* Parameter txn_in */

/* 70 */ NdrFcShort( 0x8b ), /* Flags: must size, must free, in, by val, */
#ifdef _ALPHA_
/* 72 */ NdrFcShort( 0x10 ), /* ia64 Stack size/offset = 16 */
#else
NdrFcShort( 0x8 ), /* axp64 Stack
size/offset = 8 */
#endif
/* 74 */ NdrFcShort( 0x3b6 ), /* Type Offset=950 */

/* Parameter txn_out */

/* 76 */ NdrFcShort( 0x6113 ), /* Flags: must size, must free, out,
simple ref, srv alloc size=24 */
#ifdef _ALPHA_
/* 78 */ NdrFcShort( 0x28 ), /* ia64 Stack size/offset = 40 */
#else
NdrFcShort( 0x20 ), /* axp64 Stack
size/offset = 32 */
#endif
/* 80 */ NdrFcShort( 0x3c8 ), /* Type Offset=968 */

/* Return value */

/* 82 */ NdrFcShort( 0x70 ), /* Flags: out, return, base type, */
#ifdef _ALPHA_
/* 84 */ NdrFcShort( 0x30 ), /* ia64 Stack size/offset = 48 */
#else
NdrFcShort( 0x28 ), /* axp64 Stack
size/offset = 40 */
#endif
/* 86 */ 0x8, /* FC_LONG */
0x0, /* 0 */

/* Procedure Delivery */

/* 88 */ 0x33, /* FC_AUTO_HANDLE */
0x6c, /* Old Flags: object,
Oi2 */
/* 90 */ NdrFcLong( 0x0 ), /* 0 */
/* 94 */ NdrFcShort( 0x5 ), /* 5 */
#ifdef _ALPHA_
/* 96 */ NdrFcShort( 0x38 ), /* ia64 Stack size/offset = 56 */
#else
NdrFcShort( 0x30 ), /* axp64 Stack
size/offset = 48 */
#endif
/* 98 */ NdrFcShort( 0x0 ), /* 0 */
/* 100 */ NdrFcShort( 0x8 ), /* 8 */
/* 102 */ 0x47, /* Oi2 Flags: srv must size, clt must size, has
return, has ext, */
0x3, /* 3 */
/* 104 */ 0xa, /* 10 */
0x7, /* Ext Flags: new corr
desc, clt corr check, srv corr check, */
/* 106 */ NdrFcShort( 0x20 ), /* 32 */
/* 108 */ NdrFcShort( 0x20 ), /* 32 */
/* 110 */ NdrFcShort( 0x0 ), /* 0 */
/* 112 */ NdrFcShort( 0x0 ), /* 0 */

/* Parameter txn_in */

/* 114 */ NdrFcShort( 0x8b ), /* Flags: must size, must free, in, by val, */
#ifdef _ALPHA_
/* 116 */ NdrFcShort( 0x10 ), /* ia64 Stack size/offset = 16 */
#else
NdrFcShort( 0x8 ), /* axp64 Stack
size/offset = 8 */
#endif
/* 118 */ NdrFcShort( 0x3b6 ), /* Type Offset=950 */

/* Parameter txn_out */

/* 120 */ NdrFcShort( 0x6113 ), /* Flags: must size, must free, out,
simple ref, srv alloc size=24 */
#ifdef _ALPHA_
/* 122 */ NdrFcShort( 0x28 ), /* ia64 Stack size/offset = 40 */
#else
NdrFcShort( 0x20 ), /* axp64 Stack
size/offset = 32 */
#endif
/* 124 */ NdrFcShort( 0x3c8 ), /* Type Offset=968 */

/* Return value */

/* 126 */ NdrFcShort( 0x70 ), /* Flags: out, return, base type, */
#ifdef _ALPHA_
/* 128 */ NdrFcShort( 0x30 ), /* ia64 Stack size/offset = 48 */
#else
NdrFcShort( 0x28 ), /* axp64 Stack
size/offset = 40 */
#endif
/* 130 */ 0x8, /* FC_LONG */
0x0, /* 0 */

/* Procedure StockLevel */

/* 132 */ 0x33, /* FC_AUTO_HANDLE */
0x6c, /* Old Flags: object,
Oi2 */
/* 134 */ NdrFcLong( 0x0 ), /* 0 */
/* 138 */ NdrFcShort( 0x6 ), /* 6 */
#ifdef _ALPHA_
/* 140 */ NdrFcShort( 0x38 ), /* ia64 Stack size/offset = 56 */
#else
NdrFcShort( 0x30 ), /* axp64 Stack
size/offset = 48 */
#endif
/* 142 */ NdrFcShort( 0x0 ), /* 0 */
/* 144 */ NdrFcShort( 0x8 ), /* 8 */
/* 146 */ 0x47, /* Oi2 Flags: srv must size, clt must size, has
return, has ext, */
0x3, /* 3 */
/* 148 */ 0xa, /* 10 */
0x7, /* Ext Flags: new corr
desc, clt corr check, srv corr check, */
/* 150 */ NdrFcShort( 0x20 ), /* 32 */
/* 152 */ NdrFcShort( 0x20 ), /* 32 */
/* 154 */ NdrFcShort( 0x0 ), /* 0 */
/* 156 */ NdrFcShort( 0x0 ), /* 0 */

/* Parameter txn_in */

/* 158 */ NdrFcShort( 0x8b ), /* Flags: must size, must free, in, by val, */
#ifdef _ALPHA_
/* 160 */ NdrFcShort( 0x10 ), /* ia64 Stack size/offset = 16 */
#else
NdrFcShort( 0x8 ), /* axp64 Stack
size/offset = 8 */
#endif

```

```

/* 162 */ NdrFcShort( 0x3b6 ), /* Type Offset=950 */
        /* Parameter txn_out */

/* 164 */ NdrFcShort( 0x6113 ), /* Flags: must size, must free, out,
simple ref, srv alloc size=24 */
#ifdef _ALPHA_
/* 166 */ NdrFcShort( 0x28 ), /* ia64 Stack size/offset = 40 */
#else
        NdrFcShort( 0x20 ), /* axp64 Stack
size/offset = 32 */
#endif
/* 168 */ NdrFcShort( 0x3c8 ), /* Type Offset=968 */

        /* Return value */

/* 170 */ NdrFcShort( 0x70 ), /* Flags: out, return, base type, */
#ifdef _ALPHA_
/* 172 */ NdrFcShort( 0x30 ), /* ia64 Stack size/offset = 48 */
#else
        NdrFcShort( 0x28 ), /* axp64 Stack
size/offset = 40 */
#endif
/* 174 */ 0x8, /* FC_LONG */
        0x0, /* 0 */

        /* Procedure OrderStatus */

/* 176 */ 0x33, /* FC_AUTO_HANDLE */
        0x6c, /* Old Flags: object,
Oi2 */
/* 178 */ NdrFcLong( 0x0 ), /* 0 */
/* 182 */ NdrFcShort( 0x7 ), /* 7 */
#ifdef _ALPHA_
/* 184 */ NdrFcShort( 0x38 ), /* ia64 Stack size/offset = 56 */
#else
        NdrFcShort( 0x30 ), /* axp64 Stack
size/offset = 48 */
#endif
/* 186 */ NdrFcShort( 0x0 ), /* 0 */
/* 188 */ NdrFcShort( 0x8 ), /* 8 */
/* 190 */ 0x47, /* Oi2 Flags: srv must size, clt must size, has
return, has ext, */
        0x3, /* 3 */
/* 192 */ 0xa, /* 10 */
        0x7, /* Ext Flags: new corr
desc, clt corr check, srv corr check, */
/* 194 */ NdrFcShort( 0x20 ), /* 32 */
/* 196 */ NdrFcShort( 0x20 ), /* 32 */
/* 198 */ NdrFcShort( 0x0 ), /* 0 */
/* 200 */ NdrFcShort( 0x0 ), /* 0 */

        /* Parameter txn_in */

/* 202 */ NdrFcShort( 0x8b ), /* Flags: must size, must free, in, by val, */
#ifdef _ALPHA_
/* 204 */ NdrFcShort( 0x10 ), /* ia64 Stack size/offset = 16 */
#else
        NdrFcShort( 0x8 ), /* axp64 Stack
size/offset = 8 */
#endif
/* 206 */ NdrFcShort( 0x3b6 ), /* Type Offset=950 */

        /* Parameter txn_out */

/* 208 */ NdrFcShort( 0x6113 ), /* Flags: must size, must free, out,
simple ref, srv alloc size=24 */
#ifdef _ALPHA_
/* 210 */ NdrFcShort( 0x28 ), /* ia64 Stack size/offset = 40 */
#else
        NdrFcShort( 0x20 ), /* axp64 Stack
size/offset = 32 */
#endif
/* 212 */ NdrFcShort( 0x3c8 ), /* Type Offset=968 */

        /* Return value */

/* 214 */ NdrFcShort( 0x70 ), /* Flags: out, return, base type, */
#ifdef _ALPHA_
/* 216 */ NdrFcShort( 0x30 ), /* ia64 Stack size/offset = 48 */
#else
        NdrFcShort( 0x28 ), /* axp64 Stack
size/offset = 40 */
#endif
/* 218 */ 0x8, /* FC_LONG */
        0x0, /* 0 */

        /* Procedure CallSetComplete */

/* 220 */ 0x33, /* FC_AUTO_HANDLE */
        0x6c, /* Old Flags: object,
Oi2 */
/* 222 */ NdrFcLong( 0x0 ), /* 0 */
/* 226 */ NdrFcShort( 0x8 ), /* 8 */
/* 228 */ NdrFcShort( 0x10 ), /* ia64, axp64 Stack size/offset = 16 */
/* 230 */ NdrFcShort( 0x0 ), /* 0 */
/* 232 */ NdrFcShort( 0x8 ), /* 8 */
/* 234 */ 0x44, /* Oi2 Flags: has return, has ext, */
        0x1, /* 1 */
/* 236 */ 0xa, /* 10 */
        0x1, /* Ext Flags: new corr
desc, */
/* 238 */ NdrFcShort( 0x0 ), /* 0 */
/* 240 */ NdrFcShort( 0x0 ), /* 0 */
/* 242 */ NdrFcShort( 0x0 ), /* 0 */
/* 244 */ NdrFcShort( 0x0 ), /* 0 */

        /* Return value */

/* 246 */ NdrFcShort( 0x70 ), /* Flags: out, return, base type, */
/* 248 */ NdrFcShort( 0x8 ), /* ia64, axp64 Stack size/offset = 8 */
/* 250 */ 0x8, /* FC_LONG */
        0x0, /* 0 */

        0x0
    }
};

static const MIDL_TYPE_FORMAT_STRING __MIDL_TypeFormatString =
{
    0,
    {
        NdrFcShort( 0x0 ), /* 0 */
/* 2 */
        0x12, 0x0, /* FC_UP */
/* 4 */ NdrFcShort( 0x39e ), /* Offset= 926 (930) */
/* 6 */
        0x2b, /*
FC_NON_ENCAPSULATED_UNION */
        0x9, /* FC_ULONG */
/* 8 */ 0x7, /* Corr desc: FC_USHORT */
        0x0, /* */
/* 10 */ NdrFcShort( 0xffff8 ), /* -8 */
/* 12 */ NdrFcShort( 0x1 ), /* Corr flags: early, */
/* 14 */ NdrFcShort( 0x2 ), /* Offset= 2 (16) */
/* 16 */ NdrFcShort( 0x10 ), /* 16 */

```

```

/* 18 */ NdrFcShort( 0x2b ), /* 43 */
/* 20 */ NdrFcLong( 0x3 ), /* 3 */
/* 24 */ NdrFcShort( 0x8008 ), /* Simple arm type: FC_LONG */
/* 26 */ NdrFcLong( 0x11 ), /* 17 */
/* 30 */ NdrFcShort( 0x8001 ), /* Simple arm type: FC_BYTE */
/* 32 */ NdrFcLong( 0x2 ), /* 2 */
/* 36 */ NdrFcShort( 0x8006 ), /* Simple arm type: FC_SHORT */
/* 38 */ NdrFcLong( 0x4 ), /* 4 */
/* 42 */ NdrFcShort( 0x800a ), /* Simple arm type: FC_FLOAT */
/* 44 */ NdrFcLong( 0x5 ), /* 5 */
/* 48 */ NdrFcShort( 0x800c ), /* Simple arm type: FC_DOUBLE */
/*
/* 50 */ NdrFcLong( 0xb ), /* 11 */
/* 54 */ NdrFcShort( 0x8006 ), /* Simple arm type: FC_SHORT */
/* 56 */ NdrFcLong( 0xa ), /* 10 */
/* 60 */ NdrFcShort( 0x8008 ), /* Simple arm type: FC_LONG */
/* 62 */ NdrFcLong( 0x6 ), /* 6 */
/* 66 */ NdrFcShort( 0xd6 ), /* Offset= 214 (280) */
/* 68 */ NdrFcLong( 0x7 ), /* 7 */
/* 72 */ NdrFcShort( 0x800c ), /* Simple arm type: FC_DOUBLE */
/*
/* 74 */ NdrFcLong( 0x8 ), /* 8 */
/* 78 */ NdrFcShort( 0xd0 ), /* Offset= 208 (286) */
/* 80 */ NdrFcLong( 0xd ), /* 13 */
/* 84 */ NdrFcShort( 0xe4 ), /* Offset= 228 (312) */
/* 86 */ NdrFcLong( 0x9 ), /* 9 */
/* 90 */ NdrFcShort( 0xf0 ), /* Offset= 240 (330) */
/* 92 */ NdrFcLong( 0x2000 ), /* 8192 */
/* 96 */ NdrFcShort( 0xfc ), /* Offset= 252 (348) */
/* 98 */ NdrFcLong( 0x24 ), /* 36 */
/* 102 */ NdrFcShort( 0x2f4 ), /* Offset= 756 (858) */
/* 104 */ NdrFcLong( 0x4024 ), /* 16420 */
/* 108 */ NdrFcShort( 0x2ee ), /* Offset= 750 (858) */
/* 110 */ NdrFcLong( 0x4011 ), /* 16401 */
/* 114 */ NdrFcShort( 0x2ec ), /* Offset= 748 (862) */
/* 116 */ NdrFcLong( 0x4002 ), /* 16386 */
/* 120 */ NdrFcShort( 0x2ea ), /* Offset= 746 (866) */
/* 122 */ NdrFcLong( 0x4003 ), /* 16387 */
/* 126 */ NdrFcShort( 0x2e8 ), /* Offset= 744 (870) */
/* 128 */ NdrFcLong( 0x4004 ), /* 16388 */
/* 132 */ NdrFcShort( 0x2e6 ), /* Offset= 742 (874) */
/* 134 */ NdrFcLong( 0x4005 ), /* 16389 */
/* 138 */ NdrFcShort( 0x2e4 ), /* Offset= 740 (878) */
/* 140 */ NdrFcLong( 0x400b ), /* 16395 */
/* 144 */ NdrFcShort( 0x2d2 ), /* Offset= 722 (866) */
/* 146 */ NdrFcLong( 0x400a ), /* 16394 */
/* 150 */ NdrFcShort( 0x2d0 ), /* Offset= 720 (870) */
/* 152 */ NdrFcLong( 0x4006 ), /* 16390 */
/* 156 */ NdrFcShort( 0x2d6 ), /* Offset= 726 (882) */
/* 158 */ NdrFcLong( 0x4007 ), /* 16391 */
/* 162 */ NdrFcShort( 0x2cc ), /* Offset= 716 (878) */
/* 164 */ NdrFcLong( 0x4008 ), /* 16392 */
/* 168 */ NdrFcShort( 0x2ce ), /* Offset= 718 (886) */
/* 170 */ NdrFcLong( 0x400d ), /* 16397 */
/* 174 */ NdrFcShort( 0x2cc ), /* Offset= 716 (890) */
/* 176 */ NdrFcLong( 0x4009 ), /* 16393 */
/* 180 */ NdrFcShort( 0x2ca ), /* Offset= 714 (894) */
/* 182 */ NdrFcLong( 0x6000 ), /* 24576 */
/* 186 */ NdrFcShort( 0x2c8 ), /* Offset= 712 (898) */
/* 188 */ NdrFcLong( 0x400c ), /* 16396 */
/* 192 */ NdrFcShort( 0x2c6 ), /* Offset= 710 (902) */
/* 194 */ NdrFcLong( 0x10 ), /* 16 */
/* 198 */ NdrFcShort( 0x8002 ), /* Simple arm type: FC_CHAR */
/* 200 */ NdrFcLong( 0x12 ), /* 18 */
/* 204 */ NdrFcShort( 0x8006 ), /* Simple arm type: FC_SHORT */
/* 206 */ NdrFcLong( 0x13 ), /* 19 */
/* 210 */ NdrFcShort( 0x8008 ), /* Simple arm type: FC_LONG */
/* 212 */ NdrFcLong( 0x16 ), /* 22 */
/* 216 */ NdrFcShort( 0x8008 ), /* Simple arm type: FC_LONG */
/* 218 */ NdrFcLong( 0x17 ), /* 23 */
/* 222 */ NdrFcShort( 0x8008 ), /* Simple arm type: FC_LONG */
/* 224 */ NdrFcLong( 0xe ), /* 14 */
/* 228 */ NdrFcShort( 0x2aa ), /* Offset= 682 (910) */
/* 230 */ NdrFcLong( 0x400e ), /* 16398 */
/* 234 */ NdrFcShort( 0x2b0 ), /* Offset= 688 (922) */
/* 236 */ NdrFcLong( 0x4010 ), /* 16400 */
/* 240 */ NdrFcShort( 0x2ae ), /* Offset= 686 (926) */
/* 242 */ NdrFcLong( 0x4012 ), /* 16402 */
/* 246 */ NdrFcShort( 0x26c ), /* Offset= 620 (866) */
/* 248 */ NdrFcLong( 0x4013 ), /* 16403 */
/* 252 */ NdrFcShort( 0x26a ), /* Offset= 618 (870) */
/* 254 */ NdrFcLong( 0x4016 ), /* 16406 */
/* 258 */ NdrFcShort( 0x264 ), /* Offset= 612 (870) */
/* 260 */ NdrFcLong( 0x4017 ), /* 16407 */
/* 264 */ NdrFcShort( 0x25e ), /* Offset= 606 (870) */
/* 266 */ NdrFcLong( 0x0 ), /* 0 */
/* 270 */ NdrFcShort( 0x0 ), /* Offset= 0 (270) */
/* 272 */ NdrFcLong( 0x1 ), /* 1 */
/* 276 */ NdrFcShort( 0x0 ), /* Offset= 0 (276) */
/* 278 */ NdrFcShort( 0xffffffff ), /* Offset= -1 (277) */
/* 280 */
0x15, /* FC_STRUCT */
0x7, /* 7 */
/* 282 */ NdrFcShort( 0x8 ), /* 8 */
/* 284 */ 0xb, /* FC_HYPER */
0x5b, /* FC_END */
/* 286 */
0x12, 0x0, /* FC_UP */
/* 288 */ NdrFcShort( 0xe ), /* Offset= 14 (302) */
/* 290 */
0x1b, /* FC_CARRAY */
0x1, /* 1 */
/* 292 */ NdrFcShort( 0x2 ), /* 2 */
/* 294 */ 0x9, /* Corr desc: FC_ULONG */
0x0, /* */
/* 296 */ NdrFcShort( 0xfffc ), /* -4 */
/* 298 */ NdrFcShort( 0x1 ), /* Corr flags: early, */
/* 300 */ 0x6, /* FC_SHORT */
0x5b, /* FC_END */
/* 302 */
0x17, /* FC_CSTRUCT */
0x3, /* 3 */
/* 304 */ NdrFcShort( 0x8 ), /* 8 */
/* 306 */ NdrFcShort( 0xffffffff0 ), /* Offset= -16 (290) */
/* 308 */ 0x8, /* FC_LONG */
0x8, /* FC_LONG */
/* 310 */ 0x5c, /* FC_PAD */
0x5b, /* FC_END */
/* 312 */
0x2f, /* FC_IP */
0x5a, /*
FC_CONSTANT_IID */
/* 314 */ NdrFcLong( 0x0 ), /* 0 */
/* 318 */ NdrFcShort( 0x0 ), /* 0 */
/* 320 */ NdrFcShort( 0x0 ), /* 0 */
/* 322 */ 0xc0, /* 192 */
0x0, /* 0 */
/* 324 */ 0x0, /* 0 */
0x0, /* 0 */
/* 326 */ 0x0, /* 0 */
0x0, /* 0 */
/* 328 */ 0x0, /* 0 */
0x46, /* 70 */
/* 330 */
0x2f, /* FC_IP */

```



```

0x5a, /*
FC_CONSTANT_IID */
/* 332 */ NdrFcLong( 0x20400 ), /* 132096 */
/* 336 */ NdrFcShort( 0x0 ), /* 0 */
/* 338 */ NdrFcShort( 0x0 ), /* 0 */
/* 340 */ 0xc0, /* 192 */
/* 342 */ 0x0, /* 0 */
/* 344 */ 0x0, /* 0 */
/* 346 */ 0x0, /* 0 */
/* 348 */ 0x46, /* 70 */
0x12, 0x10, /* FC_UP
[pointer_deref] */
/* 350 */ NdrFcShort( 0x2 ), /* Offset= 2 (352) */
/* 352 */ 0x12, 0x0, /* FC_UP */
/* 354 */ NdrFcShort( 0x1e6 ), /* Offset= 486 (840) */
/* 356 */ 0x2a, /*
FC_ENCAPSULATED_UNION */
/* 358 */ NdrFcShort( 0x20 ), /* 32 */
/* 360 */ NdrFcShort( 0xa ), /* 10 */
/* 362 */ NdrFcLong( 0x8 ), /* 8 */
/* 366 */ NdrFcShort( 0x50 ), /* Offset= 80 (446) */
/* 368 */ NdrFcLong( 0xd ), /* 13 */
/* 372 */ NdrFcShort( 0x70 ), /* Offset= 112 (484) */
/* 374 */ NdrFcLong( 0x9 ), /* 9 */
/* 378 */ NdrFcShort( 0x90 ), /* Offset= 144 (522) */
/* 380 */ NdrFcLong( 0xc ), /* 12 */
/* 384 */ NdrFcShort( 0xb0 ), /* Offset= 176 (560) */
/* 386 */ NdrFcLong( 0x24 ), /* 36 */
/* 390 */ NdrFcShort( 0x104 ), /* Offset= 260 (650) */
/* 392 */ NdrFcLong( 0x800d ), /* 32781 */
/* 396 */ NdrFcShort( 0x120 ), /* Offset= 288 (684) */
/* 398 */ NdrFcLong( 0x10 ), /* 16 */
/* 402 */ NdrFcShort( 0x13a ), /* Offset= 314 (716) */
/* 404 */ NdrFcLong( 0x2 ), /* 2 */
/* 408 */ NdrFcShort( 0x150 ), /* Offset= 336 (744) */
/* 410 */ NdrFcLong( 0x3 ), /* 3 */
/* 414 */ NdrFcShort( 0x166 ), /* Offset= 358 (772) */
/* 416 */ NdrFcLong( 0x14 ), /* 20 */
/* 420 */ NdrFcShort( 0x17c ), /* Offset= 380 (800) */
/* 422 */ NdrFcShort( 0xffffffff ), /* Offset= -1 (421) */
/* 424 */ 0x21, /*
FC_BOGUS_ARRAY */
/* 426 */ NdrFcShort( 0x0 ), /* 0 */
/* 428 */ 0x19, /* Corr desc: field pointer, FC_ULONG */
/* 430 */ NdrFcShort( 0x0 ), /* 0 */
/* 432 */ NdrFcShort( 0x1 ), /* Corr flags: early, */
/* 434 */ NdrFcLong( 0xffffffff ), /* -1 */
/* 438 */ NdrFcShort( 0x0 ), /* Corr flags: */
/* 440 */ 0x12, 0x0, /* FC_UP */
/* 442 */ NdrFcShort( 0xffffffff74 ), /* Offset= -140 (302) */
/* 444 */ 0x5c, /* FC_PAD */
/* 446 */ 0x5b, /* FC_END */
0x1a, /*
FC_BOGUS_STRUCT */
/* 448 */ NdrFcShort( 0x10 ), /* 16 */
/* 450 */ NdrFcShort( 0x0 ), /* 0 */
/* 452 */ NdrFcShort( 0x6 ), /* Offset= 6 (458) */
/* 454 */ 0x8, /* FC_LONG */
/* 456 */ 0x36, /* FC_POINTER */
/* 458 */ 0x5b, /* FC_END */
0x11, 0x0, /* FC_RP */
/* 460 */ NdrFcShort( 0xffffffffdc ), /* Offset= -36 (424) */
/* 462 */ 0x21, /*
FC_BOGUS_ARRAY */
/* 464 */ NdrFcShort( 0x0 ), /* 0 */
/* 466 */ 0x19, /* Corr desc: field pointer, FC_ULONG */
/* 468 */ NdrFcShort( 0x0 ), /* 0 */
/* 470 */ NdrFcShort( 0x1 ), /* Corr flags: early, */
/* 472 */ NdrFcLong( 0xffffffff ), /* -1 */
/* 476 */ NdrFcShort( 0x0 ), /* Corr flags: */
/* 478 */ 0x4c, /* FC_EMBEDDED_COMPLEX */
/* 480 */ NdrFcShort( 0xffffffff58 ), /* Offset= -168 (312) */
/* 482 */ 0x5c, /* FC_PAD */
/* 484 */ 0x5b, /* FC_END */
0x1a, /*
FC_BOGUS_STRUCT */
/* 486 */ NdrFcShort( 0x10 ), /* 16 */
/* 488 */ NdrFcShort( 0x0 ), /* 0 */
/* 490 */ NdrFcShort( 0x6 ), /* Offset= 6 (496) */
/* 492 */ 0x8, /* FC_LONG */
/* 494 */ 0x36, /* FC_POINTER */
/* 496 */ 0x5b, /* FC_END */
0x11, 0x0, /* FC_RP */
/* 498 */ NdrFcShort( 0xffffffffdc ), /* Offset= -36 (462) */
/* 500 */ 0x21, /*
FC_BOGUS_ARRAY */
/* 502 */ NdrFcShort( 0x0 ), /* 0 */
/* 504 */ 0x19, /* Corr desc: field pointer, FC_ULONG */
/* 506 */ NdrFcShort( 0x0 ), /* 0 */
/* 508 */ NdrFcShort( 0x1 ), /* Corr flags: early, */
/* 510 */ NdrFcLong( 0xffffffff ), /* -1 */
/* 514 */ NdrFcShort( 0x0 ), /* Corr flags: */
/* 516 */ 0x4c, /* FC_EMBEDDED_COMPLEX */
/* 518 */ NdrFcShort( 0xffffffff44 ), /* Offset= -188 (330) */
/* 520 */ 0x5c, /* FC_PAD */
/* 522 */ 0x5b, /* FC_END */
0x1a, /*
FC_BOGUS_STRUCT */
/* 524 */ NdrFcShort( 0x10 ), /* 16 */
/* 526 */ NdrFcShort( 0x0 ), /* 0 */
/* 528 */ NdrFcShort( 0x6 ), /* Offset= 6 (534) */
/* 530 */ 0x8, /* FC_LONG */
/* 532 */ 0x36, /* FC_POINTER */
/* 534 */ 0x5b, /* FC_END */
0x11, 0x0, /* FC_RP */

```

```

/* 536 */ NdrFcShort( 0xfffffd6 ), /* Offset= -36 (500) */
/* 538 */
FC_BOGUS_ARRAY */
0x21, /*
0x3, /* 3 */
/* 540 */ NdrFcShort( 0x0 ), /* 0 */
/* 542 */ 0x19, /* Corr desc: field pointer, FC_ULONG */
0x0, /* */
/* 544 */ NdrFcShort( 0x0 ), /* 0 */
/* 546 */ NdrFcShort( 0x1 ), /* Corr flags: early, */
/* 548 */ NdrFcLong( 0xffffffff ), /* -1 */
/* 552 */ NdrFcShort( 0x0 ), /* Corr flags: */
/* 554 */
0x12, 0x0, /* FC_UP */
/* 556 */ NdrFcShort( 0x176 ), /* Offset= 374 (930) */
/* 558 */ 0x5c, /* FC_PAD */
0x5b, /* FC_END */
/* 560 */
0x1a, /*
FC_BOGUS_STRUCT */
0x3, /* 3 */
/* 562 */ NdrFcShort( 0x10 ), /* 16 */
/* 564 */ NdrFcShort( 0x0 ), /* 0 */
/* 566 */ NdrFcShort( 0x6 ), /* Offset= 6 (572) */
/* 568 */ 0x8, /* FC_LONG */
0x39, /* FC_ALIGNM8 */
/* 570 */ 0x36, /* FC_POINTER */
0x5b, /* FC_END */
/* 572 */
0x11, 0x0, /* FC_RP */
/* 574 */ NdrFcShort( 0xfffffd6 ), /* Offset= -36 (538) */
/* 576 */
0x2f, /* FC_IP */
0x5a, /*
FC_CONSTANT_IID */
/* 578 */ NdrFcLong( 0x2f ), /* 47 */
/* 582 */ NdrFcShort( 0x0 ), /* 0 */
/* 584 */ NdrFcShort( 0x0 ), /* 0 */
/* 586 */ 0xc0, /* 192 */
0x0, /* 0 */
/* 588 */ 0x0, /* 0 */
0x0, /* 0 */
/* 590 */ 0x0, /* 0 */
0x0, /* 0 */
/* 592 */ 0x0, /* 0 */
0x46, /* 70 */
/* 594 */
0x1b, /* FC_CARRAY */
0x0, /* 0 */
/* 596 */ NdrFcShort( 0x1 ), /* 1 */
/* 598 */ 0x19, /* Corr desc: field pointer, FC_ULONG */
0x0, /* */
/* 600 */ NdrFcShort( 0x4 ), /* 4 */
/* 602 */ NdrFcShort( 0x1 ), /* Corr flags: early, */
/* 604 */ 0x1, /* FC_BYTE */
0x5b, /* FC_END */
/* 606 */
0x1a, /*
FC_BOGUS_STRUCT */
0x3, /* 3 */
/* 608 */ NdrFcShort( 0x18 ), /* 24 */
/* 610 */ NdrFcShort( 0x0 ), /* 0 */
/* 612 */ NdrFcShort( 0xc ), /* Offset= 12 (624) */
/* 614 */ 0x8, /* FC_LONG */
0x8, /* FC_LONG */
/* 616 */ 0x4c, /* FC_EMBEDDED_COMPLEX */
0x0, /* 0 */
/* 618 */ NdrFcShort( 0xfffffd6 ), /* Offset= -42 (576) */
/* 620 */ 0x39, /* FC_ALIGNM8 */
0x36, /* FC_POINTER */
/* 622 */ 0x5c, /* FC_PAD */
0x5b, /* FC_END */
/* 624 */
0x12, 0x0, /* FC_UP */
/* 626 */ NdrFcShort( 0xfffffe0 ), /* Offset= -32 (594) */
/* 628 */
0x21, /*
FC_BOGUS_ARRAY */
0x3, /* 3 */
/* 630 */ NdrFcShort( 0x0 ), /* 0 */
/* 632 */ 0x19, /* Corr desc: field pointer, FC_ULONG */
0x0, /* */
/* 634 */ NdrFcShort( 0x0 ), /* 0 */
/* 636 */ NdrFcShort( 0x1 ), /* Corr flags: early, */
/* 638 */ NdrFcLong( 0xffffffff ), /* -1 */
/* 642 */ NdrFcShort( 0x0 ), /* Corr flags: */
/* 644 */
0x12, 0x0, /* FC_UP */
/* 646 */ NdrFcShort( 0xfffffd8 ), /* Offset= -40 (606) */
/* 648 */ 0x5c, /* FC_PAD */
0x5b, /* FC_END */
/* 650 */
0x1a, /*
FC_BOGUS_STRUCT */
0x3, /* 3 */
/* 652 */ NdrFcShort( 0x10 ), /* 16 */
/* 654 */ NdrFcShort( 0x0 ), /* 0 */
/* 656 */ NdrFcShort( 0x6 ), /* Offset= 6 (662) */
/* 658 */ 0x8, /* FC_LONG */
0x39, /* FC_ALIGNM8 */
/* 660 */ 0x36, /* FC_POINTER */
0x5b, /* FC_END */
/* 662 */
0x11, 0x0, /* FC_RP */
/* 664 */ NdrFcShort( 0xfffffd6 ), /* Offset= -36 (628) */
/* 666 */
0x1d, /* FC_SMFARRAY */
0x0, /* 0 */
/* 668 */ NdrFcShort( 0x8 ), /* 8 */
/* 670 */ 0x1, /* FC_BYTE */
0x5b, /* FC_END */
/* 672 */
0x15, /* FC_STRUCT */
0x3, /* 3 */
/* 674 */ NdrFcShort( 0x10 ), /* 16 */
/* 676 */ 0x8, /* FC_LONG */
0x6, /* FC_SHORT */
/* 678 */ 0x6, /* FC_SHORT */
0x4c, /*
FC_EMBEDDED_COMPLEX */
/* 680 */ 0x0, /* 0 */
NdrFcShort( 0xfffffd1 ), /* Offset=
-15 (666) */
0x5b, /* FC_END */
/* 684 */
0x1a, /*
FC_BOGUS_STRUCT */
0x3, /* 3 */
/* 686 */ NdrFcShort( 0x20 ), /* 32 */
/* 688 */ NdrFcShort( 0x0 ), /* 0 */
/* 690 */ NdrFcShort( 0xa ), /* Offset= 10 (700) */
/* 692 */ 0x8, /* FC_LONG */
0x39, /* FC_ALIGNM8 */
/* 694 */ 0x36, /* FC_POINTER */
0x4c, /*
FC_EMBEDDED_COMPLEX */

```

```

/* 696 */ 0x0, /* 0 */
-25 (672) */ NdrFcShort( 0xffffffe7 ), /* Offset=
0x5b, /* FC_END */
/* 700 */ 0x11, 0x0, /* FC_RP */
/* 702 */ NdrFcShort( 0xfffff10 ), /* Offset=-240 (462) */
/* 704 */ 0x1b, /* FC_CARRAY */
0x0, /* 0 */
/* 706 */ NdrFcShort( 0x1 ), /* 1 */
/* 708 */ 0x19, /* Corr desc: field pointer, FC_ULONG */
0x0, /* */
/* 710 */ NdrFcShort( 0x0 ), /* 0 */
/* 712 */ NdrFcShort( 0x1 ), /* Corr flags: early, */
/* 714 */ 0x1, /* FC_BYTE */
0x5b, /* FC_END */
/* 716 */ 0x1a, /*
FC_BOGUS_STRUCT */
0x3, /* 3 */
/* 718 */ NdrFcShort( 0x10 ), /* 16 */
/* 720 */ NdrFcShort( 0x0 ), /* 0 */
/* 722 */ NdrFcShort( 0x6 ), /* Offset= 6 (728) */
/* 724 */ 0x8, /* FC_LONG */
0x39, /* FC_ALIGNM8 */
/* 726 */ 0x36, /* FC_POINTER */
0x5b, /* FC_END */
/* 728 */ 0x12, 0x0, /* FC_UP */
/* 730 */ NdrFcShort( 0xfffffe6 ), /* Offset=-26 (704) */
/* 732 */ 0x1b, /* FC_CARRAY */
0x1, /* 1 */
/* 734 */ NdrFcShort( 0x2 ), /* 2 */
/* 736 */ 0x19, /* Corr desc: field pointer, FC_ULONG */
0x0, /* */
/* 738 */ NdrFcShort( 0x0 ), /* 0 */
/* 740 */ NdrFcShort( 0x1 ), /* Corr flags: early, */
/* 742 */ 0x6, /* FC_SHORT */
0x5b, /* FC_END */
/* 744 */ 0x1a, /*
FC_BOGUS_STRUCT */
0x3, /* 3 */
/* 746 */ NdrFcShort( 0x10 ), /* 16 */
/* 748 */ NdrFcShort( 0x0 ), /* 0 */
/* 750 */ NdrFcShort( 0x6 ), /* Offset= 6 (756) */
/* 752 */ 0x8, /* FC_LONG */
0x39, /* FC_ALIGNM8 */
/* 754 */ 0x36, /* FC_POINTER */
0x5b, /* FC_END */
/* 756 */ 0x12, 0x0, /* FC_UP */
/* 758 */ NdrFcShort( 0xfffffe6 ), /* Offset=-26 (732) */
/* 760 */ 0x1b, /* FC_CARRAY */
0x3, /* 3 */
/* 762 */ NdrFcShort( 0x4 ), /* 4 */
/* 764 */ 0x19, /* Corr desc: field pointer, FC_ULONG */
0x0, /* */
/* 766 */ NdrFcShort( 0x0 ), /* 0 */
/* 768 */ NdrFcShort( 0x1 ), /* Corr flags: early, */
/* 770 */ 0x8, /* FC_LONG */
0x5b, /* FC_END */
/* 772 */ 0x1a, /*
FC_BOGUS_STRUCT */
0x3, /* 3 */
/* 774 */ NdrFcShort( 0x10 ), /* 16 */
/* 776 */ NdrFcShort( 0x0 ), /* 0 */
/* 778 */ NdrFcShort( 0x6 ), /* Offset= 6 (784) */
/* 780 */ 0x8, /* FC_LONG */
0x39, /* FC_ALIGNM8 */
/* 782 */ 0x36, /* FC_POINTER */
0x5b, /* FC_END */
/* 784 */ 0x12, 0x0, /* FC_UP */
/* 786 */ NdrFcShort( 0xfffffe6 ), /* Offset=-26 (760) */
/* 788 */ 0x1b, /* FC_CARRAY */
0x7, /* 7 */
/* 790 */ NdrFcShort( 0x8 ), /* 8 */
/* 792 */ 0x19, /* Corr desc: field pointer, FC_ULONG */
0x0, /* */
/* 794 */ NdrFcShort( 0x0 ), /* 0 */
/* 796 */ NdrFcShort( 0x1 ), /* Corr flags: early, */
/* 798 */ 0xb, /* FC_HYPER */
0x5b, /* FC_END */
/* 800 */ 0x1a, /*
FC_BOGUS_STRUCT */
0x3, /* 3 */
/* 802 */ NdrFcShort( 0x10 ), /* 16 */
/* 804 */ NdrFcShort( 0x0 ), /* 0 */
/* 806 */ NdrFcShort( 0x6 ), /* Offset= 6 (812) */
/* 808 */ 0x8, /* FC_LONG */
0x39, /* FC_ALIGNM8 */
/* 810 */ 0x36, /* FC_POINTER */
0x5b, /* FC_END */
/* 812 */ 0x12, 0x0, /* FC_UP */
/* 814 */ NdrFcShort( 0xfffffe6 ), /* Offset=-26 (788) */
/* 816 */ 0x15, /* FC_STRUCT */
0x3, /* 3 */
/* 818 */ NdrFcShort( 0x8 ), /* 8 */
/* 820 */ 0x8, /* FC_LONG */
0x8, /* FC_LONG */
/* 822 */ 0x5c, /* FC_PAD */
0x5b, /* FC_END */
/* 824 */ 0x1b, /* FC_CARRAY */
0x3, /* 3 */
/* 826 */ NdrFcShort( 0x8 ), /* 8 */
/* 828 */ 0x7, /* Corr desc: FC_USHORT */
0x0, /* */
/* 830 */ NdrFcShort( 0xffc8 ), /* -56 */
/* 832 */ NdrFcShort( 0x1 ), /* Corr flags: early, */
/* 834 */ 0x4c, /* FC_EMBEDDED_COMPLEX */
0x0, /* 0 */
/* 836 */ NdrFcShort( 0xfffffec ), /* Offset=-20 (816) */
/* 838 */ 0x5c, /* FC_PAD */
0x5b, /* FC_END */
/* 840 */ 0x1a, /*
FC_BOGUS_STRUCT */
0x3, /* 3 */
/* 842 */ NdrFcShort( 0x38 ), /* 56 */
/* 844 */ NdrFcShort( 0xfffffec ), /* Offset=-20 (824) */
/* 846 */ NdrFcShort( 0x0 ), /* Offset= 0 (846) */
/* 848 */ 0x6, /* FC_SHORT */
0x6, /* FC_SHORT */
/* 850 */ 0x38, /* FC_ALIGNM4 */
0x8, /* FC_LONG */
/* 852 */ 0x8, /* FC_LONG */

```

```

FC_EMBEDDED_COMPLEX /*
/* 854 */ 0x4, /* 4 */
NdrFcShort( 0xfffffe0d ), /* Offset=
-499 (356) */
/* 858 */
0x5b, /* FC_END */
/* 860 */ NdrFcShort( 0xfffff02 ), /* Offset=-254 (606) */
/* 862 */
0x12, 0x8, /* FC_UP [simple_pointer] */
/* FC_BYTE */
/* 864 */ 0x1,
0x5c, /* FC_PAD */
/* 866 */
0x12, 0x8, /* FC_UP [simple_pointer] */
/* FC_SHORT */
/* 868 */ 0x6,
0x5c, /* FC_PAD */
/* 870 */
0x12, 0x8, /* FC_UP [simple_pointer] */
/* FC_LONG */
/* 872 */ 0x8,
0x5c, /* FC_PAD */
/* 874 */
0x12, 0x8, /* FC_UP [simple_pointer] */
/* FC_FLOAT */
/* 876 */ 0xa,
0x5c, /* FC_PAD */
/* 878 */
0x12, 0x8, /* FC_UP [simple_pointer] */
/* FC_DOUBLE */
/* 880 */ 0xc,
0x5c, /* FC_PAD */
/* 882 */
0x12, 0x0, /* FC_UP */
/* 884 */ NdrFcShort( 0xffffda4 ), /* Offset=-604 (280) */
/* 886 */
0x12, 0x10, /* FC_UP
[pointer_deref] */
/* 888 */ NdrFcShort( 0xffffda6 ), /* Offset=-602 (286) */
/* 890 */
0x12, 0x10, /* FC_UP
[pointer_deref] */
/* 892 */ NdrFcShort( 0xffffdbc ), /* Offset=-580 (312) */
/* 894 */
0x12, 0x10, /* FC_UP
[pointer_deref] */
/* 896 */ NdrFcShort( 0xffffdca ), /* Offset=-566 (330) */
/* 898 */
0x12, 0x10, /* FC_UP
[pointer_deref] */
/* 900 */ NdrFcShort( 0xffffdd8 ), /* Offset=-552 (348) */
/* 902 */
0x12, 0x10, /* FC_UP
[pointer_deref] */
/* 904 */ NdrFcShort( 0x2 ), /* Offset= 2 (906) */
/* 906 */
0x12, 0x0, /* FC_UP */
/* 908 */ NdrFcShort( 0x16 ), /* Offset= 22 (930) */
/* 910 */
0x15, /* FC_STRUCT */
0x7, /* 7 */
/* 912 */ NdrFcShort( 0x10 ), /* 16 */
/* 914 */ 0x6, /* FC_SHORT */
0x1, /* FC_BYTE */
/* 916 */ 0x1, /* FC_BYTE */
0x38, /* FC_ALIGNM4 */
/* 918 */ 0x8, /* FC_LONG */
0x39, /* FC_ALIGNM8 */
/* 920 */ 0xb, /* FC_HYPER */
0x5b, /* FC_END */
/* 922 */
0x12, 0x0, /* FC_UP */
/* 924 */ NdrFcShort( 0xfffff2 ), /* Offset=-14 (910) */
/* 926 */
0x12, 0x8, /* FC_UP [simple_pointer] */
/* FC_CHAR */
/* 928 */ 0x2,
0x5c, /* FC_PAD */
/* 930 */
0x1a, /*
FC_BOGUS_STRUCT */
0x7, /* 7 */
/* 932 */ NdrFcShort( 0x20 ), /* 32 */
/* 934 */ NdrFcShort( 0x0 ), /* 0 */
/* 936 */ NdrFcShort( 0x0 ), /* Offset= 0 (936) */
/* 938 */ 0x8, /* FC_LONG */
0x8, /* FC_LONG */
/* 940 */ 0x6, /* FC_SHORT */
0x6, /* FC_SHORT */
/* 942 */ 0x6, /* FC_SHORT */
0x6, /* FC_SHORT */
/* 944 */ 0x4c, /* FC_EMBEDDED_COMPLEX */
0x0, /* 0 */
/* 946 */ NdrFcShort( 0xfffffc54 ), /* Offset=-940 (6) */
/* 948 */ 0x5c, /* FC_PAD */
0x5b, /* FC_END */
/* 950 */ 0xb4, /* FC_USER_MARSHAL */
0x83, /* 131 */
/* 952 */ NdrFcShort( 0x0 ), /* 0 */
/* 954 */ NdrFcShort( 0x18 ), /* 24 */
/* 956 */ NdrFcShort( 0x0 ), /* 0 */
/* 958 */ NdrFcShort( 0xfffffc44 ), /* Offset=-956 (2) */
/* 960 */
0x11, 0x4, /* FC_RP [allocated_on_stack] */
/* 962 */ NdrFcShort( 0x6 ), /* Offset= 6 (968) */
/* 964 */
0x13, 0x0, /* FC_OP */
/* 966 */ NdrFcShort( 0xfffffdc ), /* Offset=-36 (930) */
/* 968 */ 0xb4, /* FC_USER_MARSHAL */
0x83, /* 131 */
/* 970 */ NdrFcShort( 0x0 ), /* 0 */
/* 972 */ NdrFcShort( 0x18 ), /* 24 */
/* 974 */ NdrFcShort( 0x0 ), /* 0 */
/* 976 */ NdrFcShort( 0xfffffff4 ), /* Offset=-12 (964) */
0x0
}
};
const CInterfaceProxyVtbl * _tpcc_com_ps_ProxyVtblList[] =
{
( CInterfaceProxyVtbl *) &_ITPCCProxyVtbl,
0
};
const CInterfaceStubVtbl * _tpcc_com_ps_StubVtblList[] =
{
( CInterfaceStubVtbl *) &_ITPCCStubVtbl,
0
};
PCInterfaceName const _tpcc_com_ps_InterfaceNamesList[] =
{
"ITPCC",
0
};
#define _tpcc_com_ps_CHECK_IID(n) IID_GENERIC_CHECK_IID(
_tpcc_com_ps, piID, n)

```

```

int __stdcall _tpcc_com_ps_IID_Lookup( const IID * pIID, int * pIndex )
{
    if(!_tpcc_com_ps_CHECK_IID(0))
    {
        *pIndex = 0;
        return 1;
    }

    return 0;
}

```

```

const ExtendedProxyFileInfo tpcc_com_ps_ProxyFileInfo =
{
    (PCInterfaceProxyVtblList *) & _tpcc_com_ps_ProxyVtblList,
    (PCInterfaceStubVtblList *) & _tpcc_com_ps_StubVtblList,
    (const PCInterfaceName *) & _tpcc_com_ps_InterfaceNamesList,
    0, // no delegation
    & _tpcc_com_ps_IID_Lookup,
    1,
    2,
    0, /* table of [async_uuid] interfaces */
    0, /* Filler1 */
    0, /* Filler2 */
    0 /* Filler3 */
};

```

```
#endif /* defined(_M_IA64) || defined(_M_AXP64)*/
```

## ***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\_odbc.cpp***

```

/* FILE: TPCC_ODBC.CPP
 * 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: Implements ODBC calls for TPC-C txns.
* Contact: Charles Levine (clevine@microsoft.com)
*
* Change history:
* 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
*/
#include <windows.h>
#include <stdio.h>
#include <assert.h>
#define DBNTWIN32
#include <sqltypes.h>
#include <sql.h>
#include <sqlext.h>
#include <odbcss.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_odbc.h"
// version string; must match return value from tpcc_version stored proc
const char sVersion[] = "4.10.000";
const iMaxRetries = 10; // how many retries on deadlock
const int iErrOleDbProvider = 7312;
const char sErrTimeoutExpired[] = "Timeout expired";
static SQLHENV henv = SQL_NULL_HENV;
// ODBC environment handle
BOOL WINAPI DllMain(HMODULE hModule, DWORD
ul_reason_for_call, LPVOID lpReserved)
{
    switch( ul_reason_for_call )
    {
        case DLL_PROCESS_ATTACH:
            DisableThreadLibraryCalls(hModule);
            if (
SQLAllocHandleStd(SQL_HANDLE_ENV, SQL_NULL_HANDLE, &henv)
!= SQL_SUCCESS )
                return FALSE;
                break;
        case DLL_PROCESS_DETACH:
            if (henv != NULL)
                SQLFreeEnv(henv);
            break;
    }
}

```

```

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

/* FUNCTION: CTPCC_ODBC_ERR::ErrorText
 *
 */

char* CTPCC_ODBC_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_erno == errorMsgs[i].iError )
            break;
    }
    if ( !errorMsgs[i].szMsg[0] )
        return szNotFound;
    else
        return errorMsgs[i].szMsg;
}

// wrapper routine for class constructor
__declspec(dllexport) CTPCC_ODBC* CTPCC_ODBC_new(
    LPCSTR szServer,          // name of SQL server
    LPCSTR szUser,           // user name for login
    LPCSTR szPassword,       // password for login
    LPCSTR szHost,          // not used
    LPCSTR szDatabase )     // name of database to use
{
    return new CTPCC_ODBC( szServer, szUser, szPassword, szHost,
szDatabase );
}

CTPCC_ODBC::CTPCC_ODBC (
    LPCSTR szServer,          // name of
SQL server
    LPCSTR szUser,           //
user name for login
    LPCSTR szPassword,       // password
for login
    LPCSTR szHost,          //
not used
    LPCSTR szDatabase       // name of
database to use
)
{
    RETCODE rc;

    // initialization
    m_hdbc = SQL_NULL_HDBC;
    m_hstmt = SQL_NULL_HSTMT;

    m_hstmtNewOrder = SQL_NULL_HSTMT;
    m_hstmtPayment = SQL_NULL_HSTMT;
    m_hstmtDelivery = SQL_NULL_HSTMT;
    m_hstmtOrderStatus = SQL_NULL_HSTMT;
    m_hstmtStockLevel = SQL_NULL_HSTMT;

    m_descNewOrderCols1 = SQL_NULL_HDESC;
    m_descNewOrderCols2 = SQL_NULL_HDESC;
    m_descOrderStatusCols1 = SQL_NULL_HDESC;
    m_descOrderStatusCols2 = SQL_NULL_HDESC;

    if ( SQLAllocHandle(SQL_HANDLE_DBC, henv, &m_hdbc) !=
SQL_SUCCESS )
        ThrowError(CODBCERR::eAllocHandle);

    if ( SQLSetConnectOption(m_hdbc, SQL_PACKET_SIZE, 4096) !=
SQL_SUCCESS )
        ThrowError(CODBCERR::eConnOption);

    {
        char szConnectStr[256];
        char szOutStr[1024];
        SQLSMALLINT iOutStrLen;

        sprintf( szConnectStr, "DRIVER=SQL
Server;SERVER=%s;UID=%s;PWD=%s;DATABASE=%s",
szServer, szUser, szPassword, szDatabase );

        rc = SQLDriverConnect(m_hdbc, NULL,
(SQLCHAR*)szConnectStr, sizeof(szConnectStr),
(SQLCHAR*)szOutStr, sizeof(szOutStr),
&iOutStrLen, SQL_DRIVER_NOPROMPT );

        if (rc != SQL_SUCCESS && rc !=
SQL_SUCCESS_WITH_INFO)
            ThrowError(CODBCERR::eConnect);
    }

    if (SQLAllocHandle(SQL_HANDLE_STMT, m_hdbc, &m_hstmt)
!= SQL_SUCCESS)
        ThrowError(CODBCERR::eAllocHandle);

    {
        char buffer[128];

        // set some options affecting connection behavior
strcpy(buffer, "set nocount on set XACT_ABORT ON");
rc = SQLExecDirect(m_hstmt, (unsigned char *)buffer,
SQL_NTS);

        if (rc != SQL_SUCCESS && rc !=
SQL_SUCCESS_WITH_INFO)
            ThrowError(CODBCERR::eExecDirect);

        // verify that version of stored procs on server is correct
char db_sp_version[10];
strcpy(buffer, "{call tpcc_version}");
rc = SQLExecDirect(m_hstmt, (unsigned char *)buffer,
SQL_NTS);
    }
}

```

```

        if (rc != SQL_SUCCESS && rc !=
SQL_SUCCESS_WITH_INFO)
            ThrowError(CODBCERR::eExecDirect);
        if ( SQLBindCol(m_hstmt, 1, SQL_C_CHAR,
&db_sp_version, sizeof(db_sp_version), NULL) != SQL_SUCCESS )
            ThrowError(CODBCERR::eBindCol);
        if ( SQLFetch(m_hstmt) == SQL_ERROR )
            ThrowError(CODBCERR::eFetch);
        if (strcmp(db_sp_version,sVersion))
            throw new CTPCC_ODBC_ERR(
CTPCC_ODBC_ERR::ERR_WRONG_SP_VERSION );

        SQLFreeHandle(SQL_HANDLE_STMT, m_hstmt);
    }

    // Bind parameters for each of the transactions
    InitNewOrderParams();
    InitPaymentParams();
    InitOrderStatusParams();
    InitDeliveryParams();
    InitStockLevelParams();
}

CTPCC_ODBC::~CTPCC_ODBC( void )
{
    // note: descriptors are automatically released when the connection is
dropped
    SQLFreeHandle(SQL_HANDLE_STMT, m_hstmtNewOrder);
    SQLFreeHandle(SQL_HANDLE_STMT, m_hstmtPayment);
    SQLFreeHandle(SQL_HANDLE_STMT, m_hstmtDelivery);
    SQLFreeHandle(SQL_HANDLE_STMT, m_hstmtOrderStatus);
    SQLFreeHandle(SQL_HANDLE_STMT, m_hstmtStockLevel);

    SQLDisconnect(m_hdbc);
    SQLFreeHandle(SQL_HANDLE_DBC, m_hdbc);
}

void CTPCC_ODBC::ThrowError( CODBCERR::ACTION eAction )
{
    RETCODE          rc;
    SDWORD           INativeError;
    char             szState[6];
    char             szMsg[SQL_MAX_MESSAGE_LENGTH];
    char
szTmp[6*SQL_MAX_MESSAGE_LENGTH];
    CODBCERR *pODBCErr; // not
allocated until needed (maybe never)

    pODBCErr = new CODBCERR();

    pODBCErr->m_NativeError = 0;
    pODBCErr->m_eAction = eAction;
    pODBCErr->m_bDeadLock = FALSE;

    szTmp[0] = 0;
    while (TRUE)
    {
        rc = SQLError(henv, m_hdbc, m_hstmt, (BYTE
*)&szState, &INativeError,
                                (BYTE *)&szMsg,
sizeof(szMsg), NULL);
        if (rc == SQL_NO_DATA)
            break;

        // check for deadlock
        if (INativeError == 1205 || (INativeError ==
iErrOleDbProvider &&
                                strstr(szMsg, sErrTimeoutExpired) != NULL))

```

```

        pODBCErr->m_bDeadLock = TRUE;

        // capture the (first) database error
        if (pODBCErr->m_NativeError == 0 && !INativeError !=
0)
            pODBCErr->m_NativeError = INativeError;

        // quit if there isn't enough room to concatenate error text
        if ( (strlen(szMsg) + 2) > (sizeof(szTmp) - strlen(szTmp))
)
            break;

        // include line break after first error msg
        if (szTmp[0] != 0)
            strcat( szTmp, "\n");
        strcat( szTmp, szMsg );
    }

    if (pODBCErr->m_odbcerrstr != NULL)
    {
        delete [] pODBCErr->m_odbcerrstr;
        pODBCErr->m_odbcerrstr = NULL;
    }

    if (strlen(szTmp) > 0)
    {
        pODBCErr->m_odbcerrstr = new char[ strlen(szTmp)+1
];
        strcpy( pODBCErr->m_odbcerrstr, szTmp );
    }

    SQLFreeStmt(m_hstmt, SQL_CLOSE);
    throw pODBCErr;
}

void CTPCC_ODBC::InitStockLevelParams()
{
    if ( SQLAllocHandle(SQL_HANDLE_STMT, m_hdbc,
&m_hstmtStockLevel) != SQL_SUCCESS )
        ThrowError(CODBCERR::eAllocHandle);

    m_hstmt = m_hstmtStockLevel;

    int i = 0;
    if ( SQLBindParameter(m_hstmt, ++i, SQL_PARAM_INPUT,
SQL_C_SSHORT, SQL_SMALLINT, 0, 0, &m_txn.StockLevel.w_id, 0,
NULL) != SQL_SUCCESS
        || SQLBindParameter(m_hstmt, ++i,
SQL_PARAM_INPUT, SQL_C_UTINYINT, SQL_TINYINT, 0, 0,
&m_txn.StockLevel.d_id, 0, NULL) != SQL_SUCCESS
        || SQLBindParameter(m_hstmt, ++i,
SQL_PARAM_INPUT, SQL_C_SSHORT, SQL_SMALLINT, 0, 0,
&m_txn.StockLevel.threshold, 0, NULL) != SQL_SUCCESS
    )
        ThrowError(CODBCERR::eBindParam);

    if ( SQLBindCol(m_hstmt, 1, SQL_C_SLONG,
&m_txn.StockLevel.low_stock, 0, NULL) != SQL_SUCCESS )
        ThrowError(CODBCERR::eBindCol);
}

void CTPCC_ODBC::StockLevel()
{
    RETCODE          rc;
    int              iTryCount = 0;

    m_hstmt = m_hstmtStockLevel;

```

```

while (TRUE)
{
    try
    {
        rc = SQLExecDirectW(m_hstmt,
(SQLWCHAR*)L" {call tpcc_stocklevel(?,?,?)", SQL_NTS);
        if (rc != SQL_SUCCESS && rc !=
SQL_SUCCESS_WITH_INFO)
ThrowError(CODBCERR::eExecDirect);

        if ( SQLFetch(m_hstmt) == SQL_ERROR )
ThrowError(CODBCERR::eFetch);

        SQLFreeStmt(m_hstmt, SQL_CLOSE);

        m_txn.StockLevel.exec_status_code = eOK;
        break;
    }
    catch (CODBCERR *e)
    {
        if (!e->m_bDeadLock) || (++iTryCount >
iMaxRetries))
            throw;

        // hit deadlock; backoff for increasingly longer
        period
            delete e;
            Sleep(10 * iTryCount);
    }

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

void CTPCC_ODBC::InitNewOrderParams()
{
    if ( SQLAllocHandle(SQL_HANDLE_STMT, m_hdbc,
&m_hstmtNewOrder) != SQL_SUCCESS
        || SQLAllocHandle(SQL_HANDLE_DESC, m_hdbc,
&m_descNewOrderCols1) != SQL_SUCCESS
        || SQLAllocHandle(SQL_HANDLE_DESC, m_hdbc,
&m_descNewOrderCols2) != SQL_SUCCESS
    )
        ThrowError(CODBCERR::eAllocHandle);

    m_hstmt = m_hstmtNewOrder;

    if ( SQLSetStmtAttrW(m_hstmt, SQL_ATTR_APP_ROW_DESC,
m_descNewOrderCols1, SQL_IS_POINTER ) != SQL_SUCCESS )
        ThrowError(CODBCERR::eSetStmtAttr);

    int i = 0;
    if ( SQLBindParameter(m_hstmt, ++i, SQL_PARAM_INPUT,
SQL_C_SSHORT, SQL_SMALLINT, 0, 0, &m_txn.NewOrder.w_id, 0,
NULL) != SQL_SUCCESS
        || SQLBindParameter(m_hstmt, ++i,
SQL_PARAM_INPUT, SQL_C_UTINYINT, SQL_TINYINT, 0, 0,
&m_txn.NewOrder.d_id, 0, NULL) != SQL_SUCCESS
        || SQLBindParameter(m_hstmt, ++i,
SQL_PARAM_INPUT, SQL_C_SLONG, SQL_INTEGER, 0, 0,
&m_txn.NewOrder.c_id, 0, NULL) != SQL_SUCCESS
        || SQLBindParameter(m_hstmt, ++i,
SQL_PARAM_INPUT, SQL_C_UTINYINT, SQL_TINYINT, 0, 0,
&m_txn.NewOrder.o_ol_cnt, 0, NULL) != SQL_SUCCESS
        || SQLBindParameter(m_hstmt, ++i,
SQL_PARAM_INPUT, SQL_C_UTINYINT, SQL_TINYINT, 0, 0,
&m_txn.NewOrder.o_all_local, 0, NULL) != SQL_SUCCESS
    )
        ThrowError(CODBCERR::eBindParam);

    for (int j=0; j<MAX_OL_NEW_ORDER_ITEMS; j++)
    {
        if ( SQLBindParameter(m_hstmt, ++i,
SQL_PARAM_INPUT, SQL_C_SLONG, SQL_INTEGER, 0, 0,
&m_txn.NewOrder.OL[j].ol_i_id, 0, NULL) != SQL_SUCCESS
            || SQLBindParameter(m_hstmt, ++i,
SQL_PARAM_INPUT, SQL_C_SSHORT, SQL_SMALLINT, 0, 0,
&m_txn.NewOrder.OL[j].ol_supply_w_id, 0, NULL) != SQL_SUCCESS
            || SQLBindParameter(m_hstmt, ++i,
SQL_PARAM_INPUT, SQL_C_SSHORT, SQL_SMALLINT, 0, 0,
&m_txn.NewOrder.OL[j].ol_quantity, 0, NULL) != SQL_SUCCESS
        )
            ThrowError(CODBCERR::eBindParam);
    }

    // set the bind offset pointer
    if ( SQLSetStmtAttrW(m_hstmt,
SQL_ATTR_ROW_BIND_OFFSET_PTR, &m_BindOffset,
SQL_IS_POINTER ) != SQL_SUCCESS )
        ThrowError(CODBCERR::eSetStmtAttr);

    i = 0;
    if ( SQLBindCol(m_hstmt, ++i, SQL_C_CHAR,
&m_txn.NewOrder.OL[0].ol_i_name,
sizeof(m_txn.NewOrder.OL[0].ol_i_name), NULL) != SQL_SUCCESS
        || SQLBindCol(m_hstmt, ++i, SQL_C_SSHORT,
&m_txn.NewOrder.OL[0].ol_stock, 0, NULL) != SQL_SUCCESS
        || SQLBindCol(m_hstmt, ++i, SQL_C_CHAR,
&m_txn.NewOrder.OL[0].ol_brand_generic,
sizeof(m_txn.NewOrder.OL[0].ol_brand_generic), NULL) != SQL_SUCCESS
        || SQLBindCol(m_hstmt, ++i, SQL_C_DOUBLE,
&m_txn.NewOrder.OL[0].ol_i_price, 0, NULL) != SQL_SUCCESS
        || SQLBindCol(m_hstmt, ++i, SQL_C_DOUBLE,
&m_txn.NewOrder.OL[0].ol_amount, 0, NULL) != SQL_SUCCESS
    )
        ThrowError(CODBCERR::eBindCol);

    // associate the column bindings for the second result set
    if ( SQLSetStmtAttrW(m_hstmt, SQL_ATTR_APP_ROW_DESC,
m_descNewOrderCols2, SQL_IS_POINTER ) != SQL_SUCCESS )
        ThrowError(CODBCERR::eSetStmtAttr);

    i = 0;
    if ( SQLBindCol(m_hstmt, ++i, SQL_C_DOUBLE,
&m_txn.NewOrder.w_tax, 0, NULL) != SQL_SUCCESS
        || SQLBindCol(m_hstmt, ++i, SQL_C_DOUBLE,
&m_txn.NewOrder.d_tax, 0, NULL) != SQL_SUCCESS
        || SQLBindCol(m_hstmt, ++i, SQL_C_SLONG,
&m_txn.NewOrder.o_id, 0, NULL) != SQL_SUCCESS
        || SQLBindCol(m_hstmt, ++i, SQL_C_CHAR,
&m_txn.NewOrder.c_last, sizeof(m_txn.NewOrder.c_last), NULL) !=
SQL_SUCCESS
        || SQLBindCol(m_hstmt, ++i, SQL_C_DOUBLE,
&m_txn.NewOrder.c_discount, 0, NULL) != SQL_SUCCESS
        || SQLBindCol(m_hstmt, ++i, SQL_C_CHAR,
&m_txn.NewOrder.c_credit, sizeof(m_txn.NewOrder.c_credit), NULL) !=
SQL_SUCCESS

```



```

        // SQLBindCol(m_hstmt, ++i,
SQL_C_TYPE_TIMESTAMP, &m_txn.NewOrder.o_entry_d, 0, NULL) !=
SQL_SUCCESS
        // SQLBindCol(m_hstmt, ++i, SQL_C_SLONG,
&m_no_commit_flag, 0, NULL) != SQL_SUCCESS
    )
        ThrowError(CODBCERR::eBindCol);
}

void CTPCC_ODBC::NewOrder()
{
    int
    RETCODE
    int
    i;
    rc;
    iTryCount =
0;

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

    m_hstmt = m_hstmtNewOrder;

    // associate the parameter and column bindings for this transaction
    if ( SQLSetStmtAttrW( m_hstmt, SQL_ATTR_APP_ROW_DESC,
m_descNewOrderCols1, SQL_IS_POINTER ) != SQL_SUCCESS )
        ThrowError(CODBCERR::eSetStmtAttr);

    // clip statement buffer based on number of parameters
    // fixed part is 29 chars and variable part is 6 chars per line item
    i = 29 + m_txn.NewOrder.o_ol_cnt*6;
    wcsncpy( &szSqlTemplate[i], L"");

    // check whether any order lines are for a remote warehouse
    m_txn.NewOrder.o_all_local = 1;
    for (i = 0; i < m_txn.NewOrder.o_ol_cnt; i++)
    {
        if (m_txn.NewOrder.OL[i].ol_supply_w_id !=
m_txn.NewOrder.w_id)
        {
            m_txn.NewOrder.o_all_local = 0; // at least
            one remote warehouse
            break;
        }
    }

    while (TRUE)
    {
        try
        {
            m_BindOffset = 0;
            rc = SQLExecDirectW(m_hstmt,
(SQLWCHAR*)szSqlTemplate, SQL_NTS);
            if (rc != SQL_SUCCESS && rc !=
SQL_SUCCESS_WITH_INFO)
                ThrowError(CODBCERR::eExecDirect);

            // Get order line results
            m_txn.NewOrder.total_amount = 0;
            for (i = 0; i < m_txn.NewOrder.o_ol_cnt; i++)

```

```

        {
            // set the bind offset value...
            m_BindOffset = i *
sizeof(m_txn.NewOrder.OL[0]);

            if ( SQLFetch(m_hstmt) ==
SQL_ERROR)
                ThrowError(CODBCERR::eFetch);

            // move to the next resultset
            if ( SQLMoreResults(m_hstmt) ==
SQL_ERROR )
                ThrowError(CODBCERR::eMoreResults);

            m_txn.NewOrder.total_amount +=
m_txn.NewOrder.OL[i].ol_amount;
        }

        // associate the column bindings for the
second result set
        if ( SQLSetStmtAttrW( m_hstmt,
SQL_ATTR_APP_ROW_DESC, m_descNewOrderCols2, SQL_IS_POINTER
) != SQL_SUCCESS )
            ThrowError(CODBCERR::eSetStmtAttr);

            if ( SQLFetch(m_hstmt) == SQL_ERROR)
                ThrowError(CODBCERR::eFetch);

            SQLFreeStmt(m_hstmt, SQL_CLOSE);

            if (m_no_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;

            break;
        }
        catch (CODBCERR *e)
        {
            if ((!e->m_bDeadLock) || (++iTryCount >
iMaxRetries))
                throw;

            // hit deadlock; backoff for increasingly longer
period
            delete e;
            Sleep(10 * iTryCount);
        }
    }

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

void CTPCC_ODBC::InitPaymentParams()

```

```

{
    if ( SQLAllocHandle(SQL_HANDLE_STMT, m_hdbc,
&m_hstmtPayment) != SQL_SUCCESS )
        ThrowError(CODBCERR::eAllocHandle);

    m_hstmt = m_hstmtPayment;

    int i = 0;
    if ( SQLBindParameter(m_hstmt, ++i, SQL_PARAM_INPUT,
SQL_C_SSHORT, SQL_SMALLINT, 0, 0, &m_txn.Payment.w_id, 0, NULL)
!= SQL_SUCCESS
        || SQLBindParameter(m_hstmt, ++i,
SQL_PARAM_INPUT, SQL_C_SSHORT, SQL_SMALLINT, 0, 0,
&m_txn.Payment.c_w_id, 0, NULL) != SQL_SUCCESS
        || SQLBindParameter(m_hstmt, ++i,
SQL_PARAM_INPUT, SQL_C_DOUBLE, SQL_NUMERIC, 6, 2,
&m_txn.Payment.h_amount, 0, NULL) != SQL_SUCCESS
        || SQLBindParameter(m_hstmt, ++i,
SQL_PARAM_INPUT, SQL_C_UTINYINT, SQL_TINYINT, 0, 0,
&m_txn.Payment.d_id, 0, NULL) != SQL_SUCCESS
        || SQLBindParameter(m_hstmt, ++i,
SQL_PARAM_INPUT, SQL_C_UTINYINT, SQL_TINYINT, 0, 0,
&m_txn.Payment.c_d_id, 0, NULL) != SQL_SUCCESS
        || SQLBindParameter(m_hstmt, ++i,
SQL_PARAM_INPUT, SQL_C_SLONG, SQL_INTEGER, 0, 0,
&m_txn.Payment.c_id, 0, NULL) != SQL_SUCCESS
        || SQLBindParameter(m_hstmt, ++i,
SQL_PARAM_INPUT, SQL_C_CHAR, SQL_CHAR,
sizeof(m_txn.Payment.c_last), 0, &m_txn.Payment.c_last,
sizeof(m_txn.Payment.c_last), NULL) != SQL_SUCCESS
    )
        ThrowError(CODBCERR::eBindParam);

    i = 0;
    if ( SQLBindCol(m_hstmt, ++i, SQL_C_SLONG,
&m_txn.Payment.c_id, 0, NULL) != SQL_SUCCESS
        || SQLBindCol(m_hstmt, ++i, SQL_C_CHAR,
&m_txn.Payment.c_last, sizeof(m_txn.Payment.c_last),
NULL) != SQL_SUCCESS
        || SQLBindCol(m_hstmt, ++i,
SQL_C_TYPE_TIMESTAMP, &m_txn.Payment.h_date,
0, NULL) != SQL_SUCCESS
        || SQLBindCol(m_hstmt, ++i, SQL_C_CHAR,
&m_txn.Payment.w_street_1, sizeof(m_txn.Payment.w_street_1),
SQL_SUCCESS
        || SQLBindCol(m_hstmt, ++i, SQL_C_CHAR,
&m_txn.Payment.w_street_2, sizeof(m_txn.Payment.w_street_2),
SQL_SUCCESS
        || SQLBindCol(m_hstmt, ++i, SQL_C_CHAR,
&m_txn.Payment.w_city, sizeof(m_txn.Payment.w_city),
NULL) != SQL_SUCCESS
        || SQLBindCol(m_hstmt, ++i, SQL_C_CHAR,
&m_txn.Payment.w_state, sizeof(m_txn.Payment.w_state),
NULL) != SQL_SUCCESS
        || SQLBindCol(m_hstmt, ++i, SQL_C_CHAR,
&m_txn.Payment.w_zip, sizeof(m_txn.Payment.w_zip),
NULL) != SQL_SUCCESS
        || SQLBindCol(m_hstmt, ++i, SQL_C_CHAR,
&m_txn.Payment.d_street_1, sizeof(m_txn.Payment.d_street_1),
SQL_SUCCESS
        || SQLBindCol(m_hstmt, ++i, SQL_C_CHAR,
&m_txn.Payment.d_street_2, sizeof(m_txn.Payment.d_street_2),
SQL_SUCCESS
        || SQLBindCol(m_hstmt, ++i, SQL_C_CHAR,
&m_txn.Payment.d_city, sizeof(m_txn.Payment.d_city),
NULL) != SQL_SUCCESS
        || SQLBindCol(m_hstmt, ++i, SQL_C_CHAR,
&m_txn.Payment.d_state, sizeof(m_txn.Payment.d_state),
NULL) != SQL_SUCCESS
        || SQLBindCol(m_hstmt, ++i, SQL_C_CHAR,
&m_txn.Payment.d_zip, sizeof(m_txn.Payment.d_zip),
NULL) != SQL_SUCCESS
        || SQLBindCol(m_hstmt, ++i, SQL_C_CHAR,
&m_txn.Payment.c_first, sizeof(m_txn.Payment.c_first),
NULL) != SQL_SUCCESS
        || SQLBindCol(m_hstmt, ++i, SQL_C_CHAR,
&m_txn.Payment.c_middle, sizeof(m_txn.Payment.c_middle),
SQL_SUCCESS
        || SQLBindCol(m_hstmt, ++i, SQL_C_CHAR,
&m_txn.Payment.c_street_1, sizeof(m_txn.Payment.c_street_1),
SQL_SUCCESS
        || SQLBindCol(m_hstmt, ++i, SQL_C_CHAR,
&m_txn.Payment.c_street_2, sizeof(m_txn.Payment.c_street_2),
SQL_SUCCESS
        || SQLBindCol(m_hstmt, ++i, SQL_C_CHAR,
&m_txn.Payment.c_city, sizeof(m_txn.Payment.c_city),
NULL) != SQL_SUCCESS
        || SQLBindCol(m_hstmt, ++i, SQL_C_CHAR,
&m_txn.Payment.c_state, sizeof(m_txn.Payment.c_state),
NULL) != SQL_SUCCESS
        || SQLBindCol(m_hstmt, ++i, SQL_C_CHAR,
&m_txn.Payment.c_zip, sizeof(m_txn.Payment.c_zip),
NULL) != SQL_SUCCESS
        || SQLBindCol(m_hstmt, ++i, SQL_C_CHAR,
&m_txn.Payment.c_phone, sizeof(m_txn.Payment.c_phone),
NULL) != SQL_SUCCESS
        || SQLBindCol(m_hstmt, ++i,
SQL_C_TYPE_TIMESTAMP, &m_txn.Payment.c_since,
0, NULL) != SQL_SUCCESS
        || SQLBindCol(m_hstmt, ++i, SQL_C_CHAR,
&m_txn.Payment.c_credit, sizeof(m_txn.Payment.c_credit),
SQL_SUCCESS
        || SQLBindCol(m_hstmt, ++i, SQL_C_DOUBLE,
&m_txn.Payment.c_credit_lim, 0, NULL) != SQL_SUCCESS
        || SQLBindCol(m_hstmt, ++i, SQL_C_DOUBLE,
&m_txn.Payment.c_discount, 0, NULL) != SQL_SUCCESS
        || SQLBindCol(m_hstmt, ++i, SQL_C_DOUBLE,
&m_txn.Payment.c_balance, 0, NULL) != SQL_SUCCESS
        || SQLBindCol(m_hstmt, ++i, SQL_C_CHAR,
&m_txn.Payment.c_data, sizeof(m_txn.Payment.c_data),
NULL) != SQL_SUCCESS
    )
        ThrowError(CODBCERR::eBindCol);
}

void CTPCC_ODBC::Payment()
{
    RETCODE rc;
    int iTryCount = 0;

    m_hstmt = m_hstmtPayment;

    if (m_txn.Payment.c_id != 0)
        m_txn.Payment.c_last[0] = 0;

    while (TRUE)
    {
        try
        {
            rc = SQLExecDirectW(m_hstmt,
(SQLWCHAR*)"L" {call tpcc_payment(?,?,?,?,?,?)}", SQL_NTS);
            if (rc != SQL_SUCCESS && rc !=
SQL_SUCCESS_WITH_INFO)

```

```

ThrowError(CODBCERR::eExecDirect);

        if ( SQLFetch(m_hstmt) == SQL_ERROR)

ThrowError(CODBCERR::eFetch);

        SQLFreeStmt(m_hstmt, SQL_CLOSE);

        if (m_txn.Payment.c_id == 0)
            throw new CTPCC_ODBC_ERR(
CTPCC_ODBC_ERR::ERR_INVALID_CUST );
        else
            m_txn.Payment.exec_status_code

= eOK;

                break;
            }
        catch (CODBCERR *e)
        {
            if ((!e->m_bDeadLock) || (++iTryCount >
iMaxRetries))
                throw;

            // hit deadlock; backoff for increasingly longer
            period

                delete e;
                Sleep(10 * iTryCount);
            }
        }

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

void CTPCC_ODBC::InitOrderStatusParams()
{
    if ( SQLAllocHandle(SQL_HANDLE_STMT, m_hdbc,
&m_hstmtOrderStatus) != SQL_SUCCESS
        || SQLAllocHandle(SQL_HANDLE_DESC, m_hdbc,
&m_descOrderStatusCols1) != SQL_SUCCESS
        || SQLAllocHandle(SQL_HANDLE_DESC, m_hdbc,
&m_descOrderStatusCols2) != SQL_SUCCESS
    )
        ThrowError(CODBCERR::eAllocHandle);

    m_hstmt = m_hstmtOrderStatus;

    if ( SQLSetStmtAttrW( m_hstmt, SQL_ATTR_APP_ROW_DESC,
m_descOrderStatusCols1, SQL_IS_POINTER ) != SQL_SUCCESS )
        ThrowError(CODBCERR::eSetStmtAttr);

    int i = 0;
    if ( SQLBindParameter(m_hstmt, ++i, SQL_PARAM_INPUT,
SQL_C_SSHORT, SQL_SMALLINT, 0, 0, &m_txn.OrderStatus.w_id, 0,
NULL) != SQL_SUCCESS
        || SQLBindParameter(m_hstmt, ++i,
SQL_PARAM_INPUT, SQL_C_UTINYINT, SQL_TINYINT, 0, 0,
&m_txn.OrderStatus.d_id, 0, NULL) != SQL_SUCCESS
        || SQLBindParameter(m_hstmt, ++i,
SQL_PARAM_INPUT, SQL_C_SLONG, SQL_INTEGER, 0, 0,
&m_txn.OrderStatus.c_id, 0, NULL) != SQL_SUCCESS
        || SQLBindParameter(m_hstmt, ++i,
SQL_PARAM_INPUT, SQL_C_CHAR, SQL_CHAR,
sizeof(m_txn.OrderStatus.c_last), 0, &m_txn.OrderStatus.c_last,
sizeof(m_txn.OrderStatus.c_last), NULL) != SQL_SUCCESS

```

```

)
        ThrowError(CODBCERR::eBindParam);

        // configure block cursor
        if ( SQLSetStmtAttrW(m_hstmt,
SQL_ATTR_ROW_BIND_TYPE,
(SQLPOINTER)sizeof(m_txn.OrderStatus.OL[0]), 0) != SQL_SUCCESS
            || SQLSetStmtAttrW(m_hstmt,
SQL_ATTR_ROWS_FETCHED_PTR, &m_RowsFetched, 0) !=
SQL_SUCCESS
        )
            ThrowError(CODBCERR::eSetStmtAttr);

        i = 0;
        if ( SQLBindCol(m_hstmt, ++i, SQL_C_SSHORT,
&m_txn.OrderStatus.OL[0].ol_supply_w_id, 0, NULL) != SQL_SUCCESS
            || SQLBindCol(m_hstmt, ++i, SQL_C_SLONG,
&m_txn.OrderStatus.OL[0].ol_i_id, 0, NULL) != SQL_SUCCESS
            || SQLBindCol(m_hstmt, ++i, SQL_C_SSHORT,
&m_txn.OrderStatus.OL[0].ol_quantity, 0, NULL) != SQL_SUCCESS
            || SQLBindCol(m_hstmt, ++i, SQL_C_DOUBLE,
&m_txn.OrderStatus.OL[0].ol_amount, 0, NULL) != SQL_SUCCESS
            || SQLBindCol(m_hstmt, ++i,
SQL_C_TYPE_TIMESTAMP, &m_txn.OrderStatus.OL[0].ol_delivery_d, 0,
NULL) != SQL_SUCCESS
        )
            ThrowError(CODBCERR::eBindCol);

        if ( SQLSetStmtAttrW( m_hstmt, SQL_ATTR_APP_ROW_DESC,
m_descOrderStatusCols2, SQL_IS_POINTER ) != SQL_SUCCESS )
            ThrowError(CODBCERR::eSetStmtAttr);

        i = 0;
        if ( SQLBindCol(m_hstmt, ++i, SQL_C_SLONG,
&m_txn.OrderStatus.c_id, 0, NULL) != SQL_SUCCESS
            || SQLBindCol(m_hstmt, ++i, SQL_C_CHAR,
&m_txn.OrderStatus.c_last, sizeof(m_txn.OrderStatus.c_last), NULL) !=
SQL_SUCCESS
            || SQLBindCol(m_hstmt, ++i, SQL_C_CHAR,
&m_txn.OrderStatus.c_first, sizeof(m_txn.OrderStatus.c_first), NULL) !=
SQL_SUCCESS
            || SQLBindCol(m_hstmt, ++i, SQL_C_CHAR,
&m_txn.OrderStatus.c_middle, sizeof(m_txn.OrderStatus.c_middle), NULL) !=
SQL_SUCCESS
            || SQLBindCol(m_hstmt, ++i,
SQL_C_TYPE_TIMESTAMP, &m_txn.OrderStatus.o_entry_d, 0, NULL) !=
SQL_SUCCESS
            || SQLBindCol(m_hstmt, ++i, SQL_C_SSHORT,
&m_txn.OrderStatus.o_carrier_id, 0, NULL) != SQL_SUCCESS
            || SQLBindCol(m_hstmt, ++i, SQL_C_DOUBLE,
&m_txn.OrderStatus.c_balance, 0, NULL) != SQL_SUCCESS
            || SQLBindCol(m_hstmt, ++i, SQL_C_SLONG,
&m_txn.OrderStatus.o_id, 0, NULL) != SQL_SUCCESS
        )
            ThrowError(CODBCERR::eBindCol);
    }

void CTPCC_ODBC::OrderStatus()
{
    int
iTryCount = 0;
    RETCODE
rc;

    m_hstmt = m_hstmtOrderStatus;

```

```

        if ( SQLSetStmtAttrW( m_hstmt, SQL_ATTR_APP_ROW_DESC,
m_descOrderStatusCols1, SQL_IS_POINTER ) != SQL_SUCCESS )
            ThrowError(CODBCERR::eSetStmtAttr);

        if (m_txn.OrderStatus.c_id != 0)
            m_txn.OrderStatus.c_last[0] = 0;

        while (TRUE)
        {
            try
            {
                // configure block cursor
                if ( SQLSetStmtAttrW(m_hstmt,
SQL_ATTR_ROW_ARRAY_SIZE, (SQLPOINTER)1, 0) != SQL_SUCCESS )
                    ThrowError(CODBCERR::eSetStmtAttr);

                rc = SQLExecDirectW(m_hstmt,
(SQLWCHAR*)L" {call tpcc_orderstatus(?,?,?)", SQL_NTS);
                if ( ((rc == SQL_SUCCESS_WITH_INFO)
&& (m_RowsFetched != 0)) || (rc == SQL_ERROR) )
                    ThrowError(CODBCERR::eExecDirect);

                // configure block cursor
                if ( SQLSetStmtAttrW(m_hstmt,
SQL_ATTR_ROW_ARRAY_SIZE,
(SQLPOINTER)MAX_OL_ORDER_STATUS_ITEMS, 0) != SQL_SUCCESS
)
                    ThrowError(CODBCERR::eSetStmtAttr);

                rc = SQLFetchScroll( m_hstmt,
SQL_FETCH_NEXT, 0 );
                if ( ((rc == SQL_SUCCESS_WITH_INFO)
&& (m_RowsFetched != 0)) || (rc == SQL_ERROR) )
                    ThrowError(CODBCERR::eFetchScroll);

                m_txn.OrderStatus.o_ol_cnt =
(short)m_RowsFetched;

                if (m_txn.OrderStatus.o_ol_cnt != 0)
                {
                    if ( SQLSetStmtAttrW( m_hstmt,
SQL_ATTR_APP_ROW_DESC, m_descOrderStatusCols2,
SQL_IS_POINTER ) != SQL_SUCCESS )
                        ThrowError(CODBCERR::eSetStmtAttr);

                    if ( SQLMoreResults(m_hstmt) ==
SQL_ERROR )
                        ThrowError(CODBCERR::eMoreResults);

                    if ( ( rc = SQLFetch(m_hstmt) ) ==
SQL_ERROR )
                        ThrowError(CODBCERR::eFetch);
                }

                SQLFreeStmt(m_hstmt, SQL_CLOSE);

                if (m_txn.OrderStatus.o_ol_cnt == 0)
                    throw new CTPCC_ODBC_ERR(
CTPCC_ODBC_ERR::ERR_NO_SUCH_ORDER );
                else if (m_txn.OrderStatus.c_id == 0 &&
m_txn.OrderStatus.c_last[0] == 0)

```

```

                    throw new CTPCC_ODBC_ERR(
CTPCC_ODBC_ERR::ERR_INVALID_CUST );
                else
                    m_txn.OrderStatus.exec_status_code = eOK;

                break;
            }
            catch (CODBCERR *e)
            {
                if ((!e->m_bDeadLock) || (++iTryCount >
iMaxRetries))
                    throw;

                // hit deadlock; backoff for increasingly longer
                period

                delete e;
                Sleep(10 * iTryCount);
            }
        }

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

    void CTPCC_ODBC::InitDeliveryParams()
    {
        if ( SQLAllocHandle(SQL_HANDLE_STMT, m_hdbc,
&m_hstmtDelivery) != SQL_SUCCESS )
            ThrowError(CODBCERR::eAllocHandle);

        m_hstmt = m_hstmtDelivery;

        int i = 0;
        if ( SQLBindParameter(m_hstmt, ++i, SQL_PARAM_INPUT,
SQL_C_SSHORT, SQL_SMALLINT, 0, 0, &m_txn.Delivery.w_id, 0, NULL)
!= SQL_SUCCESS
            || SQLBindParameter(m_hstmt, ++i,
SQL_PARAM_INPUT, SQL_C_SSHORT, SQL_SMALLINT, 0, 0,
&m_txn.Delivery.o_carrier_id, 0, NULL) != SQL_SUCCESS
        )
            ThrowError(CODBCERR::eBindParam);

        for (i=0; i<10; i++)
        {
            if ( SQLBindCol(m_hstmt, (UWORD)(i+1),
SQL_C_SLONG, &m_txn.Delivery.o_id[i], 0, NULL) != SQL_SUCCESS )
                ThrowError(CODBCERR::eBindCol);
        }
    }

    void CTPCC_ODBC::Delivery()
    {
        RETCODE rc;
        int iTryCount = 0;

        m_hstmt = m_hstmtDelivery;

        while (TRUE)
        {
            try
            {
                rc = SQLExecDirectW(m_hstmt,
(SQLWCHAR*)L" {call tpcc_delivery(?,?)", SQL_NTS);
                if (rc != SQL_SUCCESS && rc !=
SQL_SUCCESS_WITH_INFO)

```

```

ThrowError(CODBCERR::eExecDirect);
        if ( SQLFetch(m_hstmt) == SQL_ERROR )
ThrowError(CODBCERR::eFetch);
        SQLFreeStmt(m_hstmt, SQL_CLOSE);
        m_txn.Delivery.exec_status_code = eOK;
        break;
    }
    catch (CODBCERR *e)
    {
        if ((!e->m_bDeadLock) || (++iTryCount >
iMaxRetries))
            throw;

        // hit deadlock; backoff for increasingly longer
        period

        delete e;
        Sleep(10 * iTryCount);
    }

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

```

## tpcc\_odbc.h

```

/* FILE: TPCC_ODBC.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 CODBCERR : public CBaseErr
{
public:
    enum ACTION
    {
        eNone,
        eUnknown,
        eAllocConn,
        error from SQLAllocConnect
        eAllocHandle, // error from
        SQLAllocHandle
    };

```

```

        eConnOption, // error from
        SQLSetConnectOption
        eConnect, // error from
        SQLConnect
        eAllocStmt, //
        error from SQLAllocStmt
        eExecDirect, // error from
        SQLExecDirect
        eBindParam, //
        error from SQLBindParameter
        eBindCol, // error from
        SQLBindCol
        eFetch, //
        error from SQLFetch
        eFetchScroll, // error from
        SQLFetchScroll
        eMoreResults, // error from
        SQLMoreResults
        ePrepare, // error from
        SQLPrepare
        eExecute, // error from
        SQLExecute
        eSetEnvAttr, // error from
        SQLSetEnvAttr
        eSetStmtAttr // error from
        SQLSetStmtAttr
    };

    CODBCERR(void)
    {
        m_eAction = eNone;
        m_NativeError = 0;
        m_bDeadLock = FALSE;
        m_odbcerrstr = NULL;
    };

    ~CODBCERR()
    {
        if (m_odbcerrstr != NULL)
            delete [] m_odbcerrstr;
    };

    ACTION m_eAction;
    int m_NativeError;
    BOOL m_bDeadLock;
    char *m_odbcerrstr;

    int ErrorType() {return ERR_TYPE_ODBC;};
    int ErrorNum() {return m_NativeError;};
    char *ErrorText() {return m_odbcerrstr;};
};

class CTPCC_ODBC_ERR : public CBaseErr
{
public:
    enum TPCC_ODBC_ERRS
    {
        ERR_WRONG_SP_VERSION = 1, //
        "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."
    };
};

```

```

        CTPCC_ODBC_ERR( int iErr ) { m_erno = iErr;
m_iTryCount = 0; };

        CTPCC_ODBC_ERR( int iErr, int iTryCount ) {
m_erno = iErr; m_iTryCount = iTryCount; };

        int          m_erno;
        int          m_iTryCount;

        int ErrorType() {return ERR_TYPE_TPCC_ODBC;};
        int ErrorNum() {return m_erno;};

        char *ErrorText();
};

class DllDecl CTPCC_ODBC : public CTPCC_BASE
{
private:
    // declare variables and private functions here...
    BOOL          m_bDeadlock; //
transaction was selected as deadlock victim
    int          m_MaxRetries;
// retry count on deadlock

    SQLHENV          m_henv;
// ODBC environment handle
    SQLHDBC          m_hdbc;
    SQLHSTMT         m_hstmt; //
the current hstmt

    SQLHSTMT         m_hstmtNewOrder;
    SQLHSTMT         m_hstmtPayment;
    SQLHSTMT         m_hstmtDelivery;
    SQLHSTMT         m_hstmtOrderStatus;
    SQLHSTMT         m_hstmtStockLevel;

    SQLHDESC         m_descNewOrderCols1;
    SQLHDESC         m_descNewOrderCols2;
    SQLHDESC         m_descOrderStatusCols1;
    SQLHDESC         m_descOrderStatusCols2;

    // new-order specific fields
    SQLINTEGER       m_BindOffset;
    SQLINTEGER       m_RowsFetched;
    int              m_no_commit_flag;

    void ThrowError( CODBCERR::ACTION eAction );

    void InitNewOrderParams();
    void InitPaymentParams();
    void InitDeliveryParams();
    void InitStockLevelParams();
    void InitOrderStatusParams();

    union
    {
        NEW_ORDER_DATA
NewOrder;
        PAYMENT_DATA          Payment;
        DELIVERY_DATA         Delivery;
        STOCK_LEVEL_DATA      StockLevel;
        ORDER_STATUS_DATA     OrderStatus;
    } m_txn;

public:
    CTPCC_ODBC(LPCSTR szServer, LPCSTR szUser,
LPCSTR szPassword, LPCSTR szHost, LPCSTR szDatabase);
    ~CTPCC_ODBC(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        ();
};

// wrapper routine for class constructor
extern "C" DllDecl CTPCC_ODBC* CTPCC_ODBC_new
( LPCSTR szServer, LPCSTR szUser, LPCSTR szPassword,
LPCSTR szHost, LPCSTR szDatabase );

typedef CTPCC_ODBC* (TYPE_CTPCC_ODBC)(LPCSTR, LPCSTR,
LPCSTR, LPCSTR, LPCSTR);

```

## trans.h

```

/*      FILE:          TRANS.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 structure templates.
*
*      Change history:
*
*      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 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 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 dblink, 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.
#ifndef __SQLTYPES
typedef struct
{
    short
    SQLSMALLINT */ year;
    unsigned short /* SQLUSMALLINT
    */ month;
    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
    short 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
    short w_id;

```

```

short d_id;
long c_id;
short o_ol_cnt;

// output params
EXEC_STATUS exec_status_code;
char c_last[LAST_NAME_LEN+1];
char c_credit[CREDIT_LEN+1];
double c_discount;
double w_tax;
double d_tax;
long o_id;
short o_commit_flag;
TIMESTAMP_STRUCT o_entry_d;
short o_all_local;
double total_amount;
OL_NEW_ORDER_DATA
OL[MAX_OL_NEW_ORDER_ITEMS];
} NEW_ORDER_DATA, *PNEW_ORDER_DATA;

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

    // output params
    EXEC_STATUS exec_status_code;
    TIMESTAMP_STRUCT h_date;
    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 c_since;
    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;
    short ol_supply_w_id;
    short ol_quantity;
    double ol_amount;
    TIMESTAMP_STRUCT ol_delivery_d;
} OL_ORDER_STATUS_DATA;

```

```

typedef struct
{
    // input params
    short    w_id;
    short    d_id;
    long     c_id;
    char     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           c_balance;
    long             o_id;
    TIMESTAMP_STRUCT o_entry_d;
    short            o_carrier_id;
    OL_ORDER_STATUS_DATA
OL[MAX_OL_ORDER_STATUS_ITEMS];
    short            o_ol_cnt;
} ORDER_STATUS_DATA, *PORDER_STATUS_DATA;

```

```

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

    // output params
    EXEC_STATUS      exec_status_code;
    SYSTEMTIME       queue_time;
    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
    short         w_id; //delivery
    warehouse
    short         o_carrier_id; //carrier id
} DELIVERY_TRANSACTION;

```

```

typedef struct
{
    // input params
    short    w_id;
    short    d_id;
    short    threshold;

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

```

### 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;
};

```

### txnlog.h

```

/* FILE: TXNLOG.H
 * Microsoft TPC-C Kit Ver.
4.10.000
 * not yet audited
 *
 * PURPOSE: Header file for txn log class
 * Copyright Microsoft, 1999
 * All Rights Reserved
 *
 */

#pragma once

typedef struct _TXN_NEWORDER
{
    BYTE    OL_Count; //range 0 to 31
    BYTE    OL_Remote_Count; //range 0 to 31
    WORD    c_id;
    int     o_id;
} TXN_NEWORDER;

typedef struct _TXN_PAYMENT
{
    BYTE    CustByName;
    BYTE    IsRemote;
} TXN_PAYMENT;

```



```

typedef struct _TXN_ORDERSTATUS
{
    BYTE    CustByName;
} TXN_ORDERSTATUS;

typedef union _TXN_DETAILS
{
    TXN_NEWORDER    NewOrder;
    TXN_PAYMENT      Payment;
    TXN_ORDERSTATUS OrderStatus;
} TXN_DETAILS;

// Common header for all records in txn log. The TxnType field is
// a switch which identifies the particular variant.
#define TXN_REC_TYPE_CONTROL          1 //
#define TXN_REC_TYPE_TPCC            2 //
// replaces TRANSACTION_TYPE_TPCC
#define TXN_REC_TYPE_TPCC_DELIV_DEF  3 //

typedef struct _TXN_RECORD_HEADER
{
    JULIAN_TIME    TxnStartT0; //
start of txn
    BYTE    TxnType; // one of
TXN_REC_TYPE_*
    BYTE    TxnSubType; //
depends on TxnType
} TXN_RECORD_HEADER, *PTXN_RECORD_HEADER;

typedef struct _TXN_RECORD_CONTROL
{
    // common header; must exactly match
TXN_RECORD_HEADER
    JULIAN_TIME    TxnStartT0; //
start of txn
    BYTE    TxnType; // =
TXN_REC_TYPE_CONTROL
    BYTE    TxnSubType; //
depends on TxnType
// end of common header

    DWORD    Len; //
number of bytes after this field
} TXN_RECORD_CONTROL, *PTXN_RECORD_CONTROL;

// TPC-C Txn Record Layout:
//
//TxnStartT0' is a Julian timestamp corresponding to the moment the
//txn is sent to the SUT, i.e., beginning of response time. Deltas
//are in milliseconds. Note that if RTDelay > 0, then the txn was
//delayed by this amount. The delay occurs at the beginning of the
//response time. So if RTDelay > 0, then the txn was actually sent
//at TxnStartT0 + RTDelay.
//
//Graphically:
//
// time -->
//
// |--- Menu ---|--- Keying --|--- Response --|--- Think --|
// <- DeltaT1 -> <- DeltaT2 -> <- DeltaT4 -> <- DeltaT3 ->
//
//      ^
//      ^ TxnStartT0
//

```

```

//RTDelay is the amount of response time delay included in DeltaT4.
//RTDelay is recorded per txn because this value can be changed on
//the fly, and so may vary from txn to txn.
//
//TxnStatus is the txn completion code. It is used to indicate errors.
//For example, in the New Order txn, 1% of txns abort. TxnStatus will
//reflect this.

typedef struct _TXN_RECORD_TPCC
{
    // common header; must exactly match
TXN_RECORD_HEADER
    JULIAN_TIME    TxnStartT0; //
start of txn
    BYTE    TxnType; // =
TXN_REC_TYPE_TPCC
    BYTE    TxnSubType; //
depends on TxnType
// end of common header

    int    DeltaT1; // menu time (ms)
    int    DeltaT2; // keying time (ms)
    int    DeltaT3; // think time (ms)
    int    DeltaT4; // response time (ms)
    int    RTDelay; // response time delay
(ms)
    int    TxnError; // error code
providing more detail for TxnStatus
    int    w_id; //
warehouse ID
    BYTE    d_id; // assigned
district ID for this thread
    BYTE    d_id_ThisTxn; // district ID chosen for
this particular
    BYTE    TxnStatus; // completion status for
txn to indicate errors
    BYTE    reserved; // for word alignment
    TXN_DETAILS    TxnDetails; //
} TXN_RECORD_TPCC, *PTXN_RECORD_TPCC;

// TPC-C Deferred Delivery Txn Record Layout:
//
//Incorporating delivery transaction information into the above
//structure would increase the size of TXN_DETAILS from 8 to 42
bytes.
//Hence, we store delivery transaction details in a separate structure.
//
typedef struct _TXN_RECORD_TPCC_DELIV_DEF
{
    // common header; must exactly match
TXN_RECORD_HEADER
    JULIAN_TIME    TxnStartT0; //
start of txn
    BYTE    TxnType; // =
TXN_REC_TYPE_TPCC_DELIV_DEF
    BYTE    TxnSubType; //
= 0
// end of common header

    int    DeltaT4; // response time (ms)
    int    DeltaTxnExec; // execution
time (ms)
    int    w_id; //
warehouse ID
    BYTE    TxnStatus; // completion status for
txn to indicate errors
    BYTE    reserved; // for word alignment
    short    o_carrier_id; // carrier id

```

```

long o_id[10]; // returned delivery
transaction ids
} TXN_RECORD_TPCC_DELIV_DEF,
*PTXN_RECORD_TPCC_DELIV_DEF;

#define TXN_LOG_VERSION 2
#define TXN_DATA_START 4096 // offset in
log file where log records start
#define TXN_LOG_EYE_CATCHER "BC" // signature
bytes at the start of log file

////////////////////////////////////
// The transaction log has a header as the first 4K block.
//
typedef struct TXN_LOG_HEADER
{
char EyeCatcher[2]; //
signature bytes; should always be "BC"
int LogVersion;
// set to TXN_LOG_VERSION
JULIAN_TIME BeginTxnTS;
// timestamp of first (lowest) txn start
JULIAN_TIME EndTxnTS;
// timestamp of last (highest) txn completion time
int iRecCount;
// number of records in log file
BOOL bLogSorted;
int iFileSize;
// file size in bytes

// the record map provides a fast way to get close to a
particular timestamp in a sorted log file.
//
struct
//
{
JULIAN_TIME TS;
// timestamp of record
int
iPos; // byte position in file
//
}
RecMap[RecMapSize];
#define RecMapSize 200
} TXN_LOG_HEADER, *PTXN_LOG_HEADER;

/* Header of the sorted pointers blocks in Temp file (in merging). */
typedef struct BLOCK_HEADER {
long BlockPos;
__int64 CurPos;
DWORD BytesRead;
int nRecords;
BYTE *offset; /* offset of pointers to records in
the log file */
} BLOCK_HEADER, *PBLOCK_HEADER;

#define READ_BUFFER_SIZE 64*1024
#define WRITE_BUFFER_SIZE 8*1024

#define NUM_READ_BUFFERS 1
#define NUM_WRITE_BUFFERS 2
#define MAX_NUM_BUFFERS 2

// flags passed in to the constructor
#define TXN_LOG_WRITE 0x01

#define TXN_LOG_READ 0x02
#define TXN_LOG_SORTED 0x04
#define TXN_LOG_CRASHOPEN 0x08 // if set,
invalid headers will be tolerated; used for recovery

#define TXN_LOG_OS_ERROR 1
#define TXN_LOG_NOT_SORTED 2

#define SKIP_CTRL_RECS 1

class CTxnLog
{
private:
DWORD iBufferSize;
//buffer allocated size
DWORD iBytesFreeInBuffer;
//total bytes available for use in buffer
int iNumBuffers;
//buffers in use
int iActiveBuffer;
//indicates which buffer is active: 0 or 1
int iIoBuffer;
//buffer for any pending IO operation
int iFilePointer;
//position in file.
LARGE_INTEGER iFilePointer;
//position in file.
int iNextRec;
//when reading, ordinal value of next record

// A "save point" is remembered each time
GetNextRecord is called with a start time specified.
// The next time it is called, if start time is after the save
point, we start scanning from the
// save point. This is particularly useful in
FindBestInterval, where the log is scanned repeatedly.
JULIAN_TIME SavePtTime;
int
iSavePtFilePointer;
LARGE_INTEGER iSavePtFilePointer;
int
iSavePtNextRec;

JULIAN_TIME lastTS;
//when writing sorted output, used to verify records are sorted
BOOL bWrite;
//writing log file
BOOL bCrashOpen;
// tolerate bad headers and consistency checks

BOOL bLogSorted;
// is log file sorted? applies to both input and output
JULIAN_TIME BeginTxnTS;
// timestamp of first (lowest) txn start
JULIAN_TIME EndTxnTS;
// timestamp of last (highest) txn completion time
int iRecCount;
// number of records in log file

BYTE *pCurrent;
//ptr to current buffer
BYTE
*pBuffer[MAX_NUM_BUFFERS];

PTXN_RECORD_HEADER *TxnArray;
//transaction record pointer array for sort

DWORD dwError;

```

```

HANDLE          hTxnFile;
//handle to log file
HANDLE          hMapFile;
//map file used when sorting the log
HANDLE          hIoComplete;
//event to signify that there are no pending IOs
HANDLE          hLogFileIo;
//event to signal the IO thread to write the inactive buffer

Spinlock Spin;
//spin lock to protect the txn log file buffers

FILE            *tmpFile;
//temp file for merging sorted pieces
PBLOCK_HEADER  tmpHeaders;
//sorted pointers block header
BYTE           **recPointers;
//record pointer buffers for each sorted block
PTXN_RECORD_HEADER *recBuffers;
//record buffers for each sorted block
int            *PointersRead;
//# of pointers processed in each block
BOOL          *BlockAvailable;
//whether to check a particular block for jmin

int            nBlocks;
int            jmin;
//index (block-wise) of the lowest timestamp record
int            iAvgRecordLen;
//average record length

int            iSortedReturnedCount;
//keeps track of the # of sorted records returned through GetSortedRecord()

int Write(BYTE *ptr, DWORD Size);
static void LogFileIO(CTxnLog *);

void LoadBuffers(int j);
//used in sort/merge to load record buffers

public:
CTxnLog::CTxnLog(LPCTSTR szFileName, DWORD
dwOpts);
~CTxnLog(void);

int WriteToLog(PTXN_RECORD_TPCC pTxnRcrd);
int WriteToLog(PTXN_RECORD_TPCC_DELIV_DEF
pTxnRcrd);
int WriteToLog(PTXN_RECORD_CONTROL
pCtrlRec);
int WriteToLog(PTXN_RECORD_HEADER pCtrlRec);

int WriteCtrlRecToLog(BYTE SubType, LPTSTR lpStr,
DWORD dwLen);

void CloseTransactionLogFile(void);

PTXN_RECORD_HEADER GetNextRecord(BOOL
bSkipCtrlRecs = FALSE);
PTXN_RECORD_HEADER
GetNextRecord(JULIAN_TIME SeekTimeT0, BOOL bSkipCtrlRecs =
FALSE);

int Sort(void);
PTXN_RECORD_HEADER GetSortedRecord();

```

```

inline BOOL IsSorted(void) { return bLogSorted; };
inline JULIAN_TIME BeginTS(void) { return
BeginTxnTS; };
inline JULIAN_TIME EndTS(void) { return EndTxnTS;
};
inline int RecordCount(void) { return iRecCount; };

class CTXNLOG_ERR : public CBaseErr
{
public:
enum CTXNLOG_ERRS
{
ERR_BAD_FILE_FORMAT, //
"File format is invalid."
ERR_UNKNOWN_LOG_VERSION, //
"Log file version is unknown."
ERR_BROKEN_LOG_FILE, //
"Log file is broken."
ERR_LOG_NOT_SORTED,
// "Log file is not sorted"
ERR_INVALID_TIME_SEQ, //
"Internal Error: Record Time Sequence invalid."
};

CTXNLOG_ERR(int iErr) : CBaseErr(iErr) {};

int ErrorType() {return ERR_TYPE_TXNLOG;};

char *ErrorText()
{
static char *szMsgs[] = {
"File format is invalid.",
"Log file version is unknown.",
"Log file is broken.",
"Log file is not sorted",
"Internal Error: Record Time
Sequence invalid.",
""
};

for(int i = 0; szMsgs[i][0]; i++)
{
if ( m_idMsg == i )
break;
}

return(szMsgs[i][0] ? szMsgs[i] :
ERR_UNKNOWN);
};
};

```

### **webclnt.dsp**

```

# Microsoft Developer Studio Project File - Name="webclnt" - Package
Owner=<4>
# Microsoft Developer Studio Generated Build File, Format Version 5.00
# ** DO NOT EDIT **

# TARGETTYPE "Win32 (x86) Application" 0x0101

CFG=webclnt - Win32 Release
!MESSAGE This is not a valid makefile. To build this project using NMAKE,
!MESSAGE use the Export Makefile command and run
!MESSAGE
!MESSAGE NMAKE /f "Webclnt.mak".
!MESSAGE

```

```

!MESSAGE You can specify a configuration when running NMAKE
!MESSAGE by defining the macro CFG on the command line. For example:
!MESSAGE
!MESSAGE NMAKE /f "WebcInt.mak" CFG="webcInt - Win32 Release"
!MESSAGE
!MESSAGE Possible choices for configuration are:
!MESSAGE
!MESSAGE "webcInt - Win32 Release" (based on "Win32 (x86) Application")
!MESSAGE "webcInt - Win32 Debug" (based on "Win32 (x86) Application")
!MESSAGE

```

```

# Begin Project
# PROP Scc_ProjName ""
# PROP Scc_LocalPath ""
CPP=cl.exe
MTL=midl.exe
RSC=rc.exe

```

```

!IF "$(CFG)" == "webcInt - Win32 Release"

```

```

# PROP BASE Use_MFC 0
# PROP BASE Use_Debug_Libraries 0
# PROP BASE Output_Dir ".\Release"
# PROP BASE Intermediate_Dir ".\Release"
# PROP BASE Target_Dir ""
# PROP Use_MFC 0
# PROP Use_Debug_Libraries 0
# PROP Output_Dir ".\Release"
# PROP Intermediate_Dir ".\Release"
# PROP Target_Dir ""
# ADD BASE CPP /nologo /W3 /GX /O2 /D "WIN32" /D "NDEBUG" /D
" _WINDOWS" /YX /c
# ADD CPP /nologo /W3 /GX /O2 /D "WIN32" /D "NDEBUG" /D
" _WINDOWS" /YX /FD /c
# ADD BASE MTL /nologo /D "NDEBUG" /win32
# ADD MTL /nologo /D "NDEBUG" /mktyplib203 /win32
# ADD BASE RSC /I 0x409 /d "NDEBUG"
# ADD RSC /I 0x409 /d "NDEBUG"
BSC32=bscmake.exe
# ADD BASE BSC32 /nologo
# ADD BSC32 /nologo
LINK32=link.exe
# ADD BASE LINK32 kernel32.lib user32.lib gdi32.lib winspool.lib
comdlg32.lib advapi32.lib shell32.lib ole32.lib oleaut32.lib uuid.lib odbccp32.lib
odbccp32.lib /nologo /subsystem:windows /machine:I386
# ADD LINK32 kernel32.lib user32.lib gdi32.lib winspool.lib comdlg32.lib
advapi32.lib shell32.lib ole32.lib oleaut32.lib uuid.lib odbccp32.lib
/nologo /subsystem:windows /machine:I386

```

```

!ELSEIF "$(CFG)" == "webcInt - Win32 Debug"

```

```

# PROP BASE Use_MFC 0
# PROP BASE Use_Debug_Libraries 1
# PROP BASE Output_Dir ".\Debug"
# PROP BASE Intermediate_Dir ".\Debug"
# PROP BASE Target_Dir ""
# PROP Use_MFC 0
# PROP Use_Debug_Libraries 1
# PROP Output_Dir ".\Debug"
# PROP Intermediate_Dir ".\Debug"
# PROP Target_Dir ""
# ADD BASE CPP /nologo /W3 /Gm /GX /Zi /Od /D "WIN32" /D "_DEBUG"
/D " _WINDOWS" /YX /c
# ADD CPP /nologo /W3 /Gm /GX /Zi /Od /D "WIN32" /D "_DEBUG" /D
" _WINDOWS" /YX /FD /c
# ADD BASE MTL /nologo /D "_DEBUG" /win32
# ADD MTL /nologo /D "_DEBUG" /mktyplib203 /win32
# ADD BASE RSC /I 0x409 /d "_DEBUG"

```

```

# ADD RSC /I 0x409 /d "_DEBUG"
BSC32=bscmake.exe
# ADD BASE BSC32 /nologo
# ADD BSC32 /nologo
LINK32=link.exe
# ADD BASE LINK32 kernel32.lib user32.lib gdi32.lib winspool.lib
comdlg32.lib advapi32.lib shell32.lib ole32.lib oleaut32.lib uuid.lib odbccp32.lib
odbccp32.lib /nologo /subsystem:windows /debug /machine:I386
# ADD LINK32 kernel32.lib user32.lib gdi32.lib winspool.lib comdlg32.lib
advapi32.lib shell32.lib ole32.lib oleaut32.lib uuid.lib odbccp32.lib
/nologo /subsystem:windows /debug /machine:I386

```

```

!ENDIF

```

```

# Begin Target

```

```

# Name "webcInt - Win32 Release"
# Name "webcInt - Win32 Debug"
# End Target
# End Project

```

## Stored Procedures

### neword.sql

```

-- File: NEWORD.SQL
-- Microsoft TPC-C Benchmark Kit Ver. 4.42
-- Copyright Microsoft, 2002
-- Purpose: Creates new order transaction stored procedure
--
-- Interface Level: 4.10.000

use tpcc
go

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

create proc tpcc_neworder

@w_id 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,

@s_w_id2 int = 0, @ol_qty2 smallint = 0,

@s_w_id3 int = 0, @ol_qty3 smallint = 0,

@s_w_id4 int = 0, @ol_qty4 smallint = 0,

@s_w_id5 int = 0, @ol_qty5 smallint = 0,

@s_w_id6 int = 0, @ol_qty6 smallint = 0,

@s_w_id7 int = 0, @ol_qty7 smallint = 0,

@s_w_id8 int = 0, @ol_qty8 smallint = 0,

@s_w_id9 int = 0, @ol_qty9 smallint = 0,

@s_w_id10 int = 0, @ol_qty10 smallint = 0,

@i_id2 int = 0,

@i_id3 int = 0,

@i_id4 int = 0,

@i_id5 int = 0,

@i_id6 int = 0,

@i_id7 int = 0,

@i_id8 int = 0,

@i_id9 int = 0,

@i_id10 int = 0,

```

```

@s_w_id11 int = 0, @ol_qty11 smallint = 0,
@s_w_id12 int = 0, @ol_qty12 smallint = 0,
@s_w_id13 int = 0, @ol_qty13 smallint = 0,
@s_w_id14 int = 0, @ol_qty14 smallint = 0,
@s_w_id15 int = 0, @ol_qty15 smallint = 0

```

```

as
declare @w_tax numeric(4,4),
        @d_tax numeric(4,4),
        @c_last char(16),
        @c_credit char(2),
        @c_discount numeric(4,4),
        @i_price numeric(5,2),
        @i_name char(24),
        @i_data char(50),
        @o_entry_d datetime,
        @remote_flag int,
        @s_quantity smallint,
        @s_data char(50),
        @s_dist char(24),
        @li_no int,
        @o_id int,
        @commit_flag tinyint,
        @li_id int,
        @li_s_w_id 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 = @w_id and
      d_id = @d_id

```

```
-- process orderlines
```

```

while (@li_no < @o_ol_cnt)
begin

```

```
    select @li_no = @li_no + 1
```

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

```

select @li_id = case @li_no
when 1 then @i_id1
when 2 then @i_id2
when 3 then @i_id3
when 4 then @i_id4
when 5 then @i_id5
when 6 then @i_id6

```

```
@i_id11 int = 0,
```

```
@i_id12 int = 0,
```

```
@i_id13 int = 0,
```

```
@i_id14 int = 0,
```

```
@i_id15 int = 0,
```

```

when 7 then @i_id7
when 8 then @i_id8
when 9 then @i_id9
when 10 then @i_id10
when 11 then @i_id11
when 12 then @i_id12
when 13 then @i_id13
when 14 then @i_id14
when 15 then @i_id15
end,

```

```
@li_s_w_id = case @li_no
```

```

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

```

```
@li_qty = case @li_no
```

```

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

```

```
-- get item data (no one updates item)
```

```

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

```

```
-- update stock values
```

```

update stock
set s_ytd = s_ytd + @li_qty,
    @s_quantity = s_quantity - @li_qty +

```

```

case
when (s_quantity - @li_qty < 10) then 91 else 0 end,
    s_order_cnt = s_order_cnt + 1,
    s_remote_cnt = s_remote_cnt + case
when (@li_s_w_id = @w_id) then 0 else 1 end,
    @s_data = s_data,
    @s_dist = case @d_id

```

```

when 1 then
s_dist_01
when 2 then
s_dist_02
when 3 then
s_dist_03
when 4 then
s_dist_04
when 5 then
s_dist_05
when 6 then
s_dist_06
when 7 then
s_dist_07
when 8 then
s_dist_08
when 9 then
s_dist_09
when 10 then
s_dist_10
end
where s_i_id = @li_id and
s_w_id = @li_s_w_id

-- if there actually is a stock (and item) with these ids, go to work
if (@@rowcount > 0)
begin
-- insert order_line data (using data from item and stock)
insert into order_line values(@o_id,
@d_id,
@w_id,
@li_no,
@li_id,
@li_s_w_id,
1899',
@li_qty,
*@li_qty,
@s_dist)

-- send line-item data to client
select @i_name,
@s_quantity,
b_g = case when (
(patindex('%ORIGINAL%',@i_data) > 0) and
(patindex('%ORIGINAL%',@s_data) > 0) )
then 'B' else 'G' end,
@i_price,
@i_price * @li_qty
end
else
begin

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

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

-- get customer last name, discount, and credit rating
select @c_last = c_last,
@c_discount = c_discount,
@c_credit = c_credit,
@c_id_local = c_id
from customer (repeatableread)
where c_id = @c_id and
c_w_id = @w_id and
c_d_id = @d_id

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

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

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

if (@commit_flag = 1)
commit transaction n
else
-- all that work for nuthin!!!
rollback transaction n

-- return order data to client
select @w_tax,
@d_tax,
@o_id,
@c_last,
@c_discount,
@c_credit,
@o_entry_d,
@commit_flag
end
go

```

**payment.sql**

```

-- File: PAYMENT.SQL
-- Microsoft TPC-C Benchmark Kit Ver. 4.42
-- Copyright Microsoft, 2002
-- Purpose: Creates payment transaction stored procedure
--
-- Interface Level: 4.10.000

use tpcc
go

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

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

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

select @screen_data = ""

begin tran p

-- get payment date

        select      @datetime = getdate()

```

```

        if (@c_id = 0)
        begin

-- get customer id and info using last name

                select      @cnt = count(*)
                from        customer (repeatable read)
                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 (repeatable read)
                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 + @h_amount,
                   c_payment_cnt = c_payment_cnt + 1,
                   c_ytd_payment = c_ytd_payment + @h_amount,
                   @c_first = c_first,
                   @c_middle = c_middle,
                   @c_last = c_last,
                   @c_street_1 = c_street_1,
                   @c_street_2 = c_street_2,
                   @c_city = c_city,
                   @c_state = c_state,
                   @c_zip = c_zip,
                   @c_phone = c_phone,
                   @c_credit = c_credit,
                   @c_credit_lim = c_credit_lim,
                   @c_discount = c_discount,
                   @c_since = c_since,
                   @data = c_data,
                   @c_id_local = c_id
        where       c_id = @c_id and
                   c_w_id = @c_w_id and
                   c_d_id = @c_d_id

-- if customer has bad credit get some more info

        if (@c_credit = 'BC')
        begin

-- compute new info

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

```

```

-- update customer info

update customer
set c_data = @c_data

where c_id = @c_id and
      c_w_id = @c_w_id and
      c_d_id = @c_d_id

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

end

```

```

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

```

```

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

where d_w_id = @w_id and
      d_id = @d_id

```

```

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

```

```

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

where w_id = @w_id

```

```

-- create history record

```

```

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

```

```

@d_name)
commit tran p

```

```

-- return data to client

```

```

select @c_id,
       @c_last,
       @datetime,
       @w_street_1,
       @w_street_2,
       @w_city,
       @w_state,
       @w_zip,
       @d_street_1,
       @d_street_2,
       @d_city,
       @d_state,

```

```

@d_zip,
@c_first,
@c_middle,
@c_street_1,
@c_street_2,
@c_city,
@c_state,
@c_zip,
@c_phone,
@c_since,
@c_credit,
@c_credit_lim,
@c_discount,
@c_balance,
@screen_data

```

```

go

```

## ordstat.sql

```

-- File: ORDSTAT.SQL
-- Microsoft TPC-C Benchmark Kit Ver. 4.42
-- Copyright Microsoft, 2002
-- Purpose: Creates order status transaction stored procedure
--
-- Interface Level: 4.10.000

```

```

use tpcc
go

```

```

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

```

```

go

```

```

create proc tpcc_orderstatus @w_id int,
                             @d_id tinyint,
                             @c_id int,
                             @c_last char(16) = "

```

```

as

```

```

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

```

```

begin tran o

```

```

if (@c_id = 0)
begin

```

```

-- get customer id and info using last name

```

```

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

```

```

set rowcount @cnt

```

```

select @c_id = c_id,
       @c_balance = c_balance,
       @c_first = c_first,

```



```

                @c_last = c_last,
                @c_middle = c_middle
from customer (repeatable)
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 (repeatable)
where c_id = @c_id and
      c_d_id = @d_id and
      c_w_id = @w_id

select @cnt = @@rowcount

end

-- if no such customer

if (@cnt = 0)
begin
    raiserror('Customer not found',18,1)
    goto custnotfound
end

-- get order info

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

order by o_id asc

-- select order lines for the current order

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

custnotfound:

commit tran o

-- return data to client

select @c_id,

```

```

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

```

Go

## delivery.sql

```

-- File: DELIVERY.SQL
-- Microsoft TPC-C Benchmark Kit Ver. 4.42
-- Copyright Microsoft, 2002
-- Purpose: Creates delivery transaction stored procedure
--
-- Interface Level: 4.10.000

use tpcc
go

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

create proc tpcc_delivery @w_id int,
                        @o_carrier_id smallint
as

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

select @d_id = 0

begin tran d

    while (@d_id < 10)
    begin

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

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

        order by no_o_id asc

        if (@@rowcount <> 0)
        begin

```

```

-- claim the order for this district

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

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

update orders
set o_carrier_id =

@o_carrier_id,

where @c_id = o_c_id
      o_w_id = @w_id
and
      o_d_id = @d_id
and
      o_id = @o_id

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

update order_line
set ol_delivery_d = getdate(),
  @total = @total +

ol_amount
where ol_w_id = @w_id
and
      ol_d_id = @d_id
and
      ol_o_id = @o_id

-- accumulate lineitem amounts for this order into customer

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

c_delivery_cnt + 1
where c_w_id = @w_id
and
      c_d_id = @d_id
and
      c_id = @c_id

end

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

end

commit tran d

-- return delivery data to client

select @oid1,
       @oid2,
       @oid3,
       @oid4,
       @oid5,
       @oid6,

```

```

@oid7,
@oid8,
@oid9,
@oid10

```

Go

## Stocklev.sql

```

-- File: STOCKLEV.SQL
-- Microsoft TPC-C Benchmark Kit Ver. 4.42
-- Copyright Microsoft, 2002
-- Purpose: Creates stock level transaction stored procedure
--
-- Interface Level: 4.10.000

use tpc
go

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

create proc tpcc_stocklevel @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

go

```

## version.sql

```

-- File: VERSION.SQL
-- Microsoft TPC-C Benchmark Kit Ver. 4.41
-- Copyright Microsoft, 2001
-- Purpose: Returns version level of TPC-C stored procs
-- Note: Always update the return value of this proc for
-- any interface changes or 'must have' bug fixes.
--
-- The value returned by this SP defines the 'interface level',
-- which must match between the stored procs and the client code.
-- The interface level may be down rev from the current kit. This
-- indicates that the interface hasn't changed since that version.

use tpc
go

```

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

create proc tpcc_version
as
declare    @version char(8)

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

go
```

# Appendix B: Database Design

## Database Build

### createdb.sql

```
-- File:   CREATEDB.SQL
--        Microsoft TPC-C Benchmark Kit Ver. 4.41
--        Copyright Microsoft, 2001
-- Purpose: Creates tpcc database and backup files

use master
go

--        Create temporary table for timing

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

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

insert    into tpcc_timer values (0,0)
go

--        Store starting time

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

-- create main database files

CREATE DATABASE tpcc
ON PRIMARY
(
    NAME                = MSSQL_tpcc_root,
    FILENAME            = 'F:\MSSQL_tpcc_root.mdf',
    SIZE                = 8MB,
    FILEGROWTH          = 0),
FILEGROUP    MSSQL_misc_fg
(
    NAME                = MSSQL_misc7,
    FILENAME            = 'C:\mp\c7\',
    SIZE                = 27000MB,
    FILEGROWTH          = 0),
(
    NAME                = MSSQL_misc8,
    FILENAME            = 'C:\mp\c8\',
    SIZE                = 27000MB,
    FILEGROWTH          = 0),
(
    NAME                = MSSQL_misc9,
    FILENAME            = 'C:\mp\c9\',
    SIZE                = 27000MB,
    FILEGROWTH          = 0),
(
    NAME                = MSSQL_misc10,
    FILENAME            = 'C:\mp\c10\',
    SIZE                = 27000MB,
    FILEGROWTH          = 0),
(
    NAME                = MSSQL_misc11,
    FILENAME            = 'C:\mp\c11\',
    SIZE                = 27000MB,
    FILEGROWTH          = 0),
(
    NAME                = MSSQL_misc12,
```

```
FILENAME            = 'C:\mp\c12\',
SIZE                = 27000MB,
FILEGROWTH          = 0),
(
    NAME                = MSSQL_misc13,
    FILENAME            = 'C:\mp\c13\',
    SIZE                = 27000MB,
    FILEGROWTH          = 0),
(
    NAME                = MSSQL_misc14,
    FILENAME            = 'C:\mp\c14\',
    SIZE                = 27000MB,
    FILEGROWTH          = 0),
(
    NAME                = MSSQL_misc15,
    FILENAME            = 'C:\mp\c15\',
    SIZE                = 27000MB,
    FILEGROWTH          = 0),
(
    NAME                = MSSQL_misc16,
    FILENAME            = 'C:\mp\c16\',
    SIZE                = 27000MB,
    FILEGROWTH          = 0),
(
    NAME                = MSSQL_misc17,
    FILENAME            = 'C:\mp\c17\',
    SIZE                = 27000MB,
    FILEGROWTH          = 0),
(
    NAME                = MSSQL_misc18,
    FILENAME            = 'C:\mp\c18\',
    SIZE                = 27000MB,
    FILEGROWTH          = 0),
(
    NAME                = MSSQL_misc19,
    FILENAME            = 'C:\mp\c19\',
    SIZE                = 27000MB,
    FILEGROWTH          = 0),
(
    NAME                = MSSQL_misc21,
    FILENAME            = 'C:\mp\c21\',
    SIZE                = 27000MB,
    FILEGROWTH          = 0),
(
    NAME                = MSSQL_misc1,
    FILENAME            = 'C:\mp\c1\',
    SIZE                = 27000MB,
    FILEGROWTH          = 0),
(
    NAME                = MSSQL_misc2,
    FILENAME            = 'C:\mp\c2\',
    SIZE                = 27000MB,
    FILEGROWTH          = 0),
(
    NAME                = MSSQL_misc3,
    FILENAME            = 'C:\mp\c3\',
    SIZE                = 27000MB,
    FILEGROWTH          = 0),
(
    NAME                = MSSQL_misc4,
    FILENAME            = 'C:\mp\c4\',
    SIZE                = 27000MB,
    FILEGROWTH          = 0),
(
    NAME                = MSSQL_misc22,
    FILENAME            = 'C:\mp\c22\',
    SIZE                = 27000MB,
    FILEGROWTH          = 0),
(
    NAME                = MSSQL_misc6,
    FILENAME            = 'C:\mp\c6\',
    SIZE                = 27000MB,
    FILEGROWTH          = 0),
(
    NAME                = MSSQL_misc20,
    FILENAME            = 'C:\mp\c20\',
    SIZE                = 13500MB,
    FILEGROWTH          = 0),
(
    NAME                = MSSQL_misc5,
    FILENAME            = 'C:\mp\c5\',
    SIZE                = 13500MB,
    FILEGROWTH          = 0),
```

```

FILEGROUP      MSSQL_cs_fg
(
    NAME          = MSSQL_cs7,
    FILENAME      = 'c:\mp\m7\',
    SIZE          = 48000MB,
    FILEGROWTH    = 0),
(
    NAME          = MSSQL_cs8,
    FILENAME      = 'c:\mp\m8\',
    SIZE          = 48000MB,
    FILEGROWTH    = 0),
(
    NAME          = MSSQL_cs9,
    FILENAME      = 'c:\mp\m9\',
    SIZE          = 48000MB,
    FILEGROWTH    = 0),
(
    NAME          = MSSQL_cs10,
    FILENAME      = 'c:\mp\m10\',
    SIZE          = 48000MB,
    FILEGROWTH    = 0),
(
    NAME          = MSSQL_cs11,
    FILENAME      = 'c:\mp\m11\',
    SIZE          = 48000MB,
    FILEGROWTH    = 0),
(
    NAME          = MSSQL_cs12,
    FILENAME      = 'c:\mp\m12\',
    SIZE          = 48000MB,
    FILEGROWTH    = 0),
(
    NAME          = MSSQL_cs13,
    FILENAME      = 'c:\mp\m13\',
    SIZE          = 48000MB,
    FILEGROWTH    = 0),
(
    NAME          = MSSQL_cs14,
    FILENAME      = 'c:\mp\m14\',
    SIZE          = 48000MB,
    FILEGROWTH    = 0),
(
    NAME          = MSSQL_cs15,
    FILENAME      = 'c:\mp\m15\',
    SIZE          = 48000MB,
    FILEGROWTH    = 0),
(
    NAME          = MSSQL_cs16,
    FILENAME      = 'c:\mp\m16\',
    SIZE          = 48000MB,
    FILEGROWTH    = 0),
(
    NAME          = MSSQL_cs17,
    FILENAME      = 'c:\mp\m17\',
    SIZE          = 48000MB,
    FILEGROWTH    = 0),
(
    NAME          = MSSQL_cs18,
    FILENAME      = 'c:\mp\m18\',
    SIZE          = 48000MB,
    FILEGROWTH    = 0),
(
    NAME          = MSSQL_cs19,
    FILENAME      = 'c:\mp\m19\',
    SIZE          = 48000MB,
    FILEGROWTH    = 0),
(
    NAME          = MSSQL_cs21,
    FILENAME      = 'c:\mp\m21\',
    SIZE          = 48000MB,
    FILEGROWTH    = 0),
(
    NAME          = MSSQL_cs1,
    FILENAME      = 'c:\mp\m1\',
    SIZE          = 48000MB,
    FILEGROWTH    = 0),
(
    NAME          = MSSQL_cs2,
    FILENAME      = 'c:\mp\m2\',
    SIZE          = 48000MB,
    FILEGROWTH    = 0),
(
    NAME          = MSSQL_cs3,
    FILENAME      = 'c:\mp\m3\',
    SIZE          = 48000MB,

```

```

    FILEGROWTH    = 0),
(
    NAME          = MSSQL_cs4,
    FILENAME      = 'c:\mp\m4\',
    SIZE          = 48000MB,
    FILEGROWTH    = 0),
(
    NAME          = MSSQL_cs22,
    FILENAME      = 'c:\mp\m22\',
    SIZE          = 48000MB,
    FILEGROWTH    = 0),
(
    NAME          = MSSQL_cs6,
    FILENAME      = 'c:\mp\m6\',
    SIZE          = 48000MB,
    FILEGROWTH    = 0),
(
    NAME          = MSSQL_cs20,
    FILENAME      = 'c:\mp\m20\',
    SIZE          = 24000MB,
    FILEGROWTH    = 0),
(
    NAME          = MSSQL_cs5,
    FILENAME      = 'c:\mp\m5\',
    SIZE          = 24000MB,
    FILEGROWTH    = 0)

LOG ON
(
    NAME          = MSSQL_tpcc_log,
    FILENAME      = 'E:',
    SIZE          = 471000MB,
    FILEGROWTH    = 0)

COLLATE Latin1_General_BIN
go

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

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

-- remove temporary table

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

dbop1.sql

-- File: DBOPT1.SQL
-- Microsoft TPC-C Benchmark Kit Ver. 4.41
-- Copyright Microsoft, 2001
-- Purpose: Sets database options for data load

use master
go

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

use tpcc
go

checkpoint
go

```

## dbopt2.sql

```
-- File: DBOPT2.SQL
-- Microsoft TPC-C Benchmark Kit Ver. 4.41
-- Copyright Microsoft, 2001
-- Purpose: Resets database options after data load
```

```
exec sp_dboption tpcc,'select into/bulkcopy',false
exec sp_dboption tpcc,'trunc. log on chkpt.',false
exec sp_dboption tpcc,'torn page detection',false
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', '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',
TRUE
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, 'auto update statistics',FALSE
EXEC sp_dboption tpcc, 'auto create statistics', FALSE
GO
```

```
EXEC sp_tableoption 'district', 'pintable',true
EXEC sp_tableoption 'warehouse', 'pintable',true
EXEC sp_tableoption 'new_order', 'pintable',true
EXEC sp_tableoption 'item', 'pintable',true
GO
```

## idxcuscl.sql

```
-- File: IDXCUSCL.SQL
-- Microsoft TPC-C Benchmark Kit Ver. 4.41
-- Copyright Microsoft, 2001
-- Purpose: Creates clustered index on customer table
```

```
use tpcc
go
```

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

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

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

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

```
go
```

## idxcusnc.sql

```
-- File: IDXCUSNC.SQL
-- Microsoft TPC-C Benchmark Kit Ver. 4.41
-- Copyright Microsoft, 2001
-- Purpose: Creates non-clustered index on customer table
```

```
use tpcc
go
```

```
declare @startdate datetime
declare @enddate datetime
```

```

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

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

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

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

go

```

### ***idxdiscl.sql***

```

-- File:  IDXDISCL.SQL
--      Microsoft TPC-C Benchmark Kit Ver. 4.41
--      Copyright Microsoft, 2001
-- Purpose:  Creates clustered index on district table

use tpcc
go

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

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

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

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

go

```

### ***idxhiscl.sql***

```

-- File:  IDXHISCL.SQL
--      Microsoft TPC-C Benchmark Kit Ver. 4.41
--      Copyright Microsoft, 2001
-- Purpose:  Creates clustered index on history table
--
-- CAUTION: *****
-- CAUTION: This index is only beneficial for systems
-- CAUTION: with 8 or more processors.
-- CAUTION: It may negatively impact performance on
-- CAUTION: on systems with less than 8 processors.
-- CAUTION: *****

use tpcc
go

declare @startdate datetime
declare @enddate datetime
select @startdate = getdate()

```

```

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

if exists ( select name from sysindexes where name = 'history_c1' )
    drop index history.history_c1

create unique clustered index history_c1 on history(h_c_w_id, h_date,
h_c_d_id, h_c_id, h_amount)
    on MSSQL_misc_fg

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

go

```

### ***idxitmcl.sql***

```

-- File:  IDXITMCL.SQL
--      Microsoft TPC-C Benchmark Kit Ver. 4.41
--      Copyright Microsoft, 2001
-- Purpose:  Creates clustered index on item table

use tpcc
go

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

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

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

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

go

```

### ***idxnodcl.sql***

```

-- File:  IDXNODCL.SQL
--      Microsoft TPC-C Benchmark Kit Ver. 4.41
--      Copyright Microsoft, 2001
-- Purpose:  Creates clustered index on new_order table

use tpcc
go

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

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

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

```

```

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

go

```

### ***idxodlcl.sql***

```

-- File:  IDXODLCL.SQL
--      Microsoft TPC-C Benchmark Kit Ver. 4.41
--      Copyright Microsoft, 2001
-- Purpose:  Creates clustered index on order_line table

use tpcc
go

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

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

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

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

go

```

### ***idxordcl.sql***

```

-- File:  IDXORDCL.SQL
--      Microsoft TPC-C Benchmark Kit Ver. 4.41
--      Copyright Microsoft, 2001
-- Purpose:  Creates clustered index on orders table

use tpcc
go

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

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

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

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

Go

```

### ***idxstkcl.sql***

```

-- File:  IDXSTKCL.SQL
--      Microsoft TPC-C Benchmark Kit Ver. 4.41
--      Copyright Microsoft, 2001
-- Purpose:  Creates clustered index on stock table

use tpcc
go

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

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

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

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

go

```

### ***idxwarcl.sql***

```

-- File:  IDXWARCL.SQL
--      Microsoft TPC-C Benchmark Kit Ver. 4.41
--      Copyright Microsoft, 2001
-- Purpose:  Creates clustered index on warehouse table

use tpcc
go

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

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

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

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

go

```

### ***sqlshutdown.sql***

```

-- File:  SQLSHUTDOWN.SQL
--      Microsoft TPC-C Benchmark Kit Ver. 4.41
--      Copyright Microsoft, 2001
-- Purpose:  Checkpoints tpcc database and issues a shutdown
--

```



```

use tpcc
go
checkpoint
go
shutdown
go

```

## Tables.sql

```

-- File: TABLES.SQL
-- Microsoft TPC-C Benchmark Kit Ver. 4.42
-- Copyright Microsoft, 2002
-- Purpose: 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_name              char(10),
    w_street_1          char(20),
    w_street_2          char(20),
    w_city              char(20),
    w_state             char(2),
    w_zip               char(9),

```

```

    w_tax               numeric(4,4),
    w_ytd               numeric(12,2)
) on MSSQL_misc_fg
go

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

create table customer
(
    c_id                int,
    c_d_id              tinyint,
    c_w_id              int,
    c_first              char(16),
    c_middle            char(2),
    c_last              char(16),
    c_street_1          char(20),
    c_street_2          char(20),
    c_city              char(20),
    c_state             char(2),
    c_zip               char(9),
    c_phone             char(16),
    c_since             datetime,
    c_credit            char(2),
    c_credit_lim        numeric(12,2),
    c_discount          numeric(4,4),
    c_balance           numeric(12,2),
    c_ytd_payment      numeric(12,2),
    c_payment_cnt       smallint,
    c_delivery_cnt      smallint,
    c_data              char(500)
) on MSSQL_cs_fg
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            numeric(6,2),
    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_entry_d           datetime,
    o_carrier_id        tinyint,
    o_ol_cnt            tinyint,
    o_all_local         tinyint
) 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_supply_w_id     int,
    ol_delivery_d       datetime,
    ol_quantity         smallint,
    ol_amount           numeric(6,2),
    ol_dist_info        char(24)
) on MSSQL_misc_fg
go

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

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

```

## Load Source Code

### getargs.c

```

//      File:                GETARGS.C
//                                  Microsoft TPC-C Kit Ver. 4.41

```

```

//                                  Copyright Microsoft, 1996, 1997,
//                                  1998, 1999, 2000, 2001
//                                  Purpose:  Source file for command line processing

// Includes
#include "tpcc.h"

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

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

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

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

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

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

        ptr = argv[i];

        switch (ptr[1])
        {
            case '?': /* Fall through */

```

```

        GetArgsLoaderUsage();
        break;
    case 'D':
        pargs->database = ptr+2;
        break;
    case 'P':
        pargs->password = ptr+2;
        break;
    case 'S':
        pargs->server = ptr+2;
        break;
    case 'U':
        pargs->user = ptr+2;
        break;
    case 'b':
        pargs->batch = atol(ptr+2);
        break;
    case 'W':
        pargs->num_warehouses =
atol(ptr+2);
        break;
    case 's':
        pargs->starting_warehouse =
atol(ptr+2);
        break;
    case 't':
    {
        pargs->tables_all =
FALSE;
        if (strcmp(ptr+2,"item")
== 0)
            pargs->table_item = TRUE;
        else if
        (strcmp(ptr+2,"warehouse") == 0)
            pargs->table_warehouse = TRUE;
        else if
        (strcmp(ptr+2,"customer") == 0)
            pargs->table_customer = TRUE;
        else if
        (strcmp(ptr+2,"orders") == 0)
            pargs->table_orders = TRUE;
        else
        {
            printf("\nUnrecognized
command");
            GetArgsLoaderUsage();
            exit(1);
        }
        break;
    }
    case 'f':
        pargs->loader_res_file = ptr+2;
        break;
    case 'L':
        pargs->log_path = ptr+2;
        break;
    case 'p':
        pargs->pack_size = atol(ptr+2);
        break;
    case 'i':
        pargs->build_index = atol(ptr+2);
        break;
    case 'o':
        pargs->index_order = atol(ptr+2);
        break;
    case 'c':
        pargs->scale_down = atol(ptr+2);
        break;
    case 'd':
        pargs->index_script_path = ptr+2;
        break;
    default:
        GetArgsLoaderUsage();
        exit(-1);
        break;
    }
}

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

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

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

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

```

```

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

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

exit(0);
}

```

## random.c

```

// File:                RANDOM.C
//                      Microsoft TPC-C Kit Ver. 4.41
//                      Copyright Microsoft, 1996, 1997,
1998, 1999, 2000, 2001
// Purpose: Random number generation routines for database loader

// Includes
#include "tpcc.h"
#include "math.h"

// Defines
#define A      16807
#define M      2147483647
#define Q      127773 /* M div A */
#define R      2836 /* M mod A */
#define Thread __declspec(thread)

// Globals
long Thread Seed = 0; /* thread local seed */

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

```

```

*
* Machine Dependencies:
* long must be 2 ^ 31 - 1 or greater.
*
*****/

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

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

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

Seed = val;
}

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

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

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

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

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

```

```

    return( Seed );
}

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

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

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

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

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

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

    upper++;

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

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

    return rand_num;
}

#if 0

//Original code pgd 08/13/96

long RandomNumber(long lower,
                  long upper)
{

```

```

    long rand_num;

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

    upper++;

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

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

    return rand_num;
}

#endif

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

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

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

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

    return rand_num;
}

strings.c

// File: STRINGS.C
// Microsoft TPC-C Kit Ver. 4.41
// Copyright Microsoft, 1996, 1997,
1998, 1999, 2000, 2001
// 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 MakeAddress()\n", (int) GetCurrentThreadId());
#endif

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

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

    return;
}

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

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

#ifdef DEBUG
    printf("[%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 <%d> out of range
(0,999)\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[] =
    "0123456789ABCDEFGHIJKLMNOPQRSTUVWXYZabcdefghijklmnopqrstuvwxyz";
    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++)
    {
        cc = chArray[RandomNumber(0, chArrayMax)];
        str[i] = cc;
    }
}

```

```

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

    return len;
}

=====
//
// Function name: MakeOriginalAlphaString
//
=====

int MakeOriginalAlphaString(int x,
                            int y,
                            int z,
                            char *str,
                            int percent)
{
    int    len;
    int    val;
    int    start;

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

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

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

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

    val = RandomNumber(1,100);
    if (val <= percent)
    {
        start = RandomNumber(0, len - 8);
        strncpy(str + start, "ORIGINAL", 8);
    }

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

    return strlen(str);
}

```

```

=====
//
// Function name: MakeNumberString
//
=====

int MakeNumberString(int x, int y, int z, char *str)
{
    char tmp[16];

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

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

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

    str[16] = 0;

    return 16;
}

=====
//
// Function name: MakeZipNumberString
//
=====

int MakeZipNumberString(int x, int y, int z, char *str)
{
    char tmp[16];

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

    strcpy(str, "000011111");

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

    return 9;
}

=====
//
// Function name: InitString
//
=====

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

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

```

```

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

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

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

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

```

```

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

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

    return;
}

```

### time.c

```

// File: TIME.C
// Microsoft TPC-C Kit Ver. 4.41
// Copyright Microsoft, 1996, 1997,
1998, 1999, 2000, 2001
// Purpose: Source file for time functions

// Includes
#include "tpcc.h"

// Globals
static long start_sec;

//=====
//

```

```

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

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

    _ftime(&el_time);

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

    return time_now;
}

```

### tpcc.h

```

// File: TPCC.H
// Microsoft TPC-C Kit Ver. 4.41
// Copyright Microsoft, 1996, 1997,
1998, 1999, 2000, 2001
// Purpose: Header file for TPC-C database loader

// Build number of TPC Benchmark Kit
#define TPCKIT_VER "4.41"

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

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

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

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

// Default loader arguments
#define BATCH 10000
#define DEFLDPACKSIZE 32768

```



```

#define LOADER_RES_FILE
"C:\MSTPCC.440\SETUP\logs\load.out"
#define LOG_PATH "C:\MSTPCC.440\SETUP\LOGS\";
#define LOADER_NURAND_C 123
#define DEF_STARTING_WAREHOUSE 1
#define BUILD_INDEX 1 23
// build both data and indexes
#define INDEX_ORDER 1 23
// build indexes before load
#define SCALE_DOWN 0
// build a normal scale database
#define INDEX_SCRIPT_PATH "scripts"

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

// String length constants
#define SERVER_NAME_LEN 20
#define DATABASE_NAME_LEN 20
#define USER_NAME_LEN 20
#define PASSWORD_LEN 20
#define TABLE_NAME_LEN 20
#define I_DATA_LEN 50
#define I_NAME_LEN 24
#define BRAND_LEN 1
#define LAST_NAME_LEN 16
#define W_NAME_LEN 10
#define ADDRESS_LEN 20
#define STATE_LEN 2
#define ZIP_LEN 9
#define S_DIST_LEN 24
#define S_DATA_LEN 50
#define D_NAME_LEN 10
#define FIRST_NAME_LEN 16
#define MIDDLE_NAME_LEN 2
#define PHONE_LEN 16
#define CREDIT_LEN 2
#define C_DATA_LEN 500
#define H_DATA_LEN 24
#define DIST_INFO_LEN 24

```

```

#define MAX_OL_NEW_ORDER_ITEMS 15
#define MAX_OL_ORDER_STATUS_ITEMS 15
#define STATUS_LEN 25
#define OL_DIST_INFO_LEN 24
#define C_SINCE_LEN
#define H_DATE_LEN
#define OL_DELIVERY_D_LEN 23
#define O_ENTRY_D_LEN 23

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

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

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

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

tpccldr.c

// File: TPCCLDR.C
// Microsoft TPC-C Kit Ver. 4.41
// Copyright Microsoft, 1996, 1997,
1998, 1999, 2000, 2001
// Purpose: Source file for TPC-C database loader

// Includes
#include "tpcc.h"
#include "search.h"

// Defines
#define MAXITEMS 10000
#define MAXITEMS_SCALE_DOWN 100
#define CUSTOMERS_PER_DISTRICT 3000
#define CUSTOMERS_SCALE_DOWN 30
#define DISTRICT_PER_WAREHOUSE 10
#define ORDERS_PER_DISTRICT 3000
#define ORDERS_SCALE_DOWN 30
#define MAX_CUSTOMER_THREADS 2
#define MAX_ORDER_THREADS 3
#define MAX_MAIN_THREADS 4

// Functions declarations
void HandleErrorDBC (SQLHDBC hdbc1);

```

```

void CheckDataBase();

long NURand();
void LoadItem();
void LoadWarehouse();

void Stock();
void District();

void LoadCustomer();
void CustomerBuffInit();
void CustomerBufLoad();
void LoadCustomerTable();
void LoadHistoryTable();

void LoadOrders();
void OrdersBuffInit();
void OrdersBufLoad();
void LoadOrdersTable();
void LoadNewOrderTable();
void LoadOrderLineTable();
void GetPermutation();
void CheckForCommit();
void OpenConnections();
void BuildIndex();
void FormatDate ();

// Shared memory structures

typedef struct
{
    long    ol;
    long    ol_i_id;
    short   ol_supply_w_id;
    short   ol_quantity;
    double  ol_amount;
    char    ol_dist_info[DIST_INFO_LEN+1];
    char
ol_delivery_d[OL_DELIVERY_D_LEN+1];
} ORDER_LINE_STRUCT;

typedef struct
{
    long    o_id;
    short   o_d_id;
    short   o_w_id;
    long    o_c_id;
    short   o_carrier_id;
    short   o_ol_cnt;
    short   o_all_local;
    ORDER_LINE_STRUCT  o_ol[15];
} ORDERS_STRUCT;

typedef struct
{
    long                c_id;
    short               c_d_id;
    short               c_w_id;
    char
c_first[FIRST_NAME_LEN+1];
c_middle[MIDDLE_NAME_LEN+1];
char
c_last[LAST_NAME_LEN+1];
c_street_1[ADDRESS_LEN+1];
c_street_2[ADDRESS_LEN+1];
c_city[ADDRESS_LEN+1];
c_state[STATE_LEN+1];
c_zip[ZIP_LEN+1];
char
c_phone[PHONE_LEN+1];
char
c_credit[CREDIT_LEN+1];
double
c_credit_lim;
double
c_discount;
// fix to avoid ODBC float to numeric conversion problem.
// double
c_balance;
char
c_balance[6];

double
c_ytd_payment;
short
c_payment_cnt;
short
c_delivery_cnt;
c_data[C_DATA_LEN+1];
double
h_amount;
char
h_data[H_DATA_LEN+1];
} CUSTOMER_STRUCT;

typedef struct
{
    char
c_last[LAST_NAME_LEN+1];
char
c_first[FIRST_NAME_LEN+1];
long
c_id;
} CUSTOMER_SORT_STRUCT;

typedef struct
{
    long    time_start;
} LOADER_TIME_STRUCT;

// Global variables

char    szLastError[300];

HENV    henv;

HDBC    v_hdbc;
//
for SQL Server version verification
HDBC    i_hdbc1;
// for ITEM
table
HDBC    w_hdbc1;
// for
WAREHOUSE, DISTRICT, STOCK
HDBC    c_hdbc1;
// for
CUSTOMER
HDBC    c_hdbc2;
// for
HISTORY
HDBC    o_hdbc1;
// for
ORDERS
HDBC    o_hdbc2;
// for
NEW-ORDER
HDBC    o_hdbc3;
// for
ORDER-LINE

HSTMT    v_hstmt;
// for SQL
Server version verification
HSTMT    i_hstmt1;
HSTMT    w_hstmt1;
HSTMT    c_hstmt1, c_hstmt2;
HSTMT    o_hstmt1, o_hstmt2, o_hstmt3;

ORDERS_STRUCT  orders_buf[ORDERS_PER_DISTRICT];
CUSTOMER_STRUCT customer_buf[CUSTOMERS_PER_DISTRICT];
long    orders_rows_loaded;
long    new_order_rows_loaded;
long    order_line_rows_loaded;
long    history_rows_loaded;

```

```

long    customer_rows_loaded;
long    stock_rows_loaded;
long    district_rows_loaded;
long    item_rows_loaded;
long    warehouse_rows_loaded;
long    main_time_start;
long    main_time_end;
long    max_items;
long    customers_per_district;
long    orders_per_district;
long    first_new_order;
long    last_new_order;

TPCCLDR_ARGS  *aptr, args;

//=====
//
// Function name: main
//
//=====

int main(int argc, char **argv)
{
    DWORD      dwThreadID[MAX_MAIN_THREADS];
    HANDLE     hThread[MAX_MAIN_THREADS];
    FILE       *fLoader;
    char       buffer[255];
    int        i;

    for (i=0; i<MAX_MAIN_THREADS; i++)
        hThread[i] = NULL;

    printf("\n*****");
    printf("\n*                *");
    printf("\n* Microsoft SQL Server *");
    printf("\n*                *");
    printf("\n* TPC-C BENCHMARK KIT: Database loader *");
    printf("\n* Version %s *", TPCKIT_VER);
    printf("\n*                *");

    printf("\n*****\n\n");

    // process command line arguments

    aptr = &args;
    GetArgsLoader(argc, argv, aptr);

    // verify database and tables exist before attempting to load
    //CheckDataBase();

    printf("Build interface is ODBC.\n");

    if (aptr->build_index == 0)
        printf("Data load only - no index creation.\n");
    else
        printf("Data load and index creation.\n");

    if (aptr->index_order == 0)
        printf("Clustered indexes will be created after bulk
load.\n");
    else
        printf("Clustered indexes will be created before bulk
load.\n");

```

```

// set database scale values
if (aptr->scale_down == 1)
{
    printf("*** Scaled Down Database ***\n");
    max_items = MAXITEMS_SCALE_DOWN;
    customers_per_district =
CUSTOMERS_SCALE_DOWN;
    orders_per_district = ORDERS_SCALE_DOWN;
    first_new_order = 0;
    last_new_order = 30;
}
else
{
    max_items = MAXITEMS;
    customers_per_district =
CUSTOMERS_PER_DISTRICT;
    orders_per_district = ORDERS_PER_DISTRICT;
    first_new_order = 2100;
    last_new_order = 3000;
}

// open connections to SQL Server

OpenConnections();

// open file for loader results
fLoader = fopen(aptr->loader_res_file, "w");

if (fLoader == NULL)
{
    printf("Error, loader result file open failed.");
    exit(-1);
}

// start loading data

sprintf(buffer, "TPC-C load started for %ld
warehouses.\n", aptr->num_warehouses);

printf("%s", buffer);
fprintf(fLoader, "%s", buffer);

main_time_start = (TimeNow() / MILLI);

// start parallel load threads

if (aptr->tables_all || aptr->table_item)
{
    fprintf(fLoader, "\nStarting loader threads for: item\n");

    hThread[0] = CreateThread(NULL,
0,
(LPTHREAD_START_ROUTINE) LoadItem,
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()
{
    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(1);

```

```

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);

sprintf(name, "%s..%s", aptr->database, "item");

//rc = bcp_init(i_hdbc1, name, NULL, "logs\item.err", DB_IN);
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 != SUCCEED)
    HandleErrorDBC(i_hdbc1);

if ((aptr->build_index == 1) && (aptr->index_order == 1))
{
    sprintf(bcphint, "tablock, order (i_id),
ROWS_PER_BATCH = 100000");
    rc = bcp_control(i_hdbc1, BCPHINTS, (void*) bcphint);
    if (rc != SUCCEED)
        HandleErrorDBC(i_hdbc1);
}

rc = bcp_bind(i_hdbc1, (BYTE *) &i_id, 0, SQL_VARLEN_DATA,
NULL, 0, SQLINT4, 1);
if (rc != SUCCEED)
    HandleErrorDBC(i_hdbc1);

rc = bcp_bind(i_hdbc1, (BYTE *) &i_im_id, 0,
SQL_VARLEN_DATA, NULL, 0, SQLINT4, 2);
if (rc != SUCCEED)
    HandleErrorDBC(i_hdbc1);

rc = bcp_bind(i_hdbc1, (BYTE *) i_name, 0, I_NAME_LEN,
NULL, 0, 0, 3);
if (rc != SUCCEED)
    HandleErrorDBC(i_hdbc1);

rc = bcp_bind(i_hdbc1, (BYTE *) &i_price, 0,
SQL_VARLEN_DATA, NULL, 0, SQLFLT8, 4);
if (rc != SUCCEED)
    HandleErrorDBC(i_hdbc1);

rc = bcp_bind(i_hdbc1, (BYTE *) i_data, 0, I_DATA_LEN, NULL,
0, 0, 5);
if (rc != SUCCEED)
    HandleErrorDBC(i_hdbc1);

time_start = (TimeNow() / MILLI);

item_rows_loaded = 0;

for (i_id = 1; i_id <= max_items; i_id++)
{
    i_im_id = RandomNumber(1L, 10000L);

    MakeAlphaString(14, 24, I_NAME_LEN, i_name);

    i_price = ((float) RandomNumber(100L, 10000L))/100.0;

    MakeOriginalAlphaString(26, 50, I_DATA_LEN, i_data,
10);

    rc = bcp_sendrow(i_hdbc1);

```

```

if (rc != SUCCEED)
    HandleErrorDBC(i_hdbc1);

item_rows_loaded++;
CheckForCommit(i_hdbc1, i_hstmt1, item_rows_loaded,
"item", &time_start);
}

rcint = bcp_done(i_hdbc1);
if (rcint < 0)
    HandleErrorDBC(i_hdbc1);

printf("Finished loading item table.\n");

SQLFreeStmt(i_hstmt1, SQL_DROP);
SQLDisconnect(i_hdbc1);
SQLFreeConnect(i_hdbc1);

// if build index after load
if ((aptr->build_index == 1) && (aptr->index_order == 0))
    BuildIndex("idxitmc1");

//=====
//
// Function : LoadWarehouse
//
// Loads WAREHOUSE table and loads Stock and District as Warehouses are
// created
//=====

void LoadWarehouse()
{
    short w_id;
    char w_name[W_NAME_LEN+1];
    char w_street_1[ADDRESS_LEN+1];
    char w_street_2[ADDRESS_LEN+1];
    char w_city[ADDRESS_LEN+1];
    char w_state[STATE_LEN+1];
    char w_zip[ZIP_LEN+1];
    double w_tax;
    double w_ytd;
    char name[20];
    long time_start;
    RETCODE rc;
    DBINT rcint;
    char bcphint[128];
    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");

```

```

//rc = bcp_init(w_hdbc1, name, NULL, "logs\whouse.err", DB_IN);

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);
}

rc = bcp_bind(w_hdbc1, (BYTE *) &w_id, 0,
SQL_VARLEN_DATA, NULL, 0, SQLINT2, 1);
if (rc != SUCCEEDED)
    HandleErrorDBC(w_hdbc1);

rc = bcp_bind(w_hdbc1, (BYTE *) w_name, 0, W_NAME_LEN,
NULL, 0, 0, 2);
if (rc != SUCCEEDED)
    HandleErrorDBC(w_hdbc1);

rc = bcp_bind(w_hdbc1, (BYTE *) w_street_1, 0, ADDRESS_LEN,
NULL, 0, 0, 3);
if (rc != SUCCEEDED)
    HandleErrorDBC(w_hdbc1);

rc = bcp_bind(w_hdbc1, (BYTE *) w_street_2, 0, ADDRESS_LEN,
NULL, 0, 0, 4);
if (rc != SUCCEEDED)
    HandleErrorDBC(w_hdbc1);

rc = bcp_bind(w_hdbc1, (BYTE *) w_city, 0, ADDRESS_LEN,
NULL, 0, 0, 5);
if (rc != SUCCEEDED)
    HandleErrorDBC(w_hdbc1);

rc = bcp_bind(w_hdbc1, (BYTE *) w_state, 0, STATE_LEN,
NULL, 0, 0, 6);
if (rc != SUCCEEDED)
    HandleErrorDBC(w_hdbc1);

rc = bcp_bind(w_hdbc1, (BYTE *) w_zip, 0, ZIP_LEN, NULL, 0, 0,
7);
if (rc != SUCCEEDED)
    HandleErrorDBC(w_hdbc1);

rc = bcp_bind(w_hdbc1, (BYTE *) &w_tax, 0,
SQL_VARLEN_DATA, NULL, 0, SQLFLT8, 8);
if (rc != SUCCEEDED)
    HandleErrorDBC(w_hdbc1);

rc = bcp_bind(w_hdbc1, (BYTE *) &w_ytd, 0,
SQL_VARLEN_DATA, NULL, 0, SQLFLT8, 9);
if (rc != SUCCEEDED)
    HandleErrorDBC(w_hdbc1);

time_start = (TimeNow() / MILLI);

warehouse_rows_loaded = 0;

for (w_id = (short)aptr->starting_warehouse; w_id <=
aptr->num_warehouses; w_id++)
{
    MakeAlphaString(6,10, W_NAME_LEN, w_name);

    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_hstml,
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("idxward!");

stock_rows_loaded = 0;
district_rows_loaded = 0;

District();
Stock();
}

//=====
//
// Function : District
//=====

void District()
{
    short d_id;
    short d_w_id;
    char d_name[D_NAME_LEN+1];
    char d_street_1[ADDRESS_LEN+1];
    char d_street_2[ADDRESS_LEN+1];
    char d_city[ADDRESS_LEN+1];
    char d_state[STATE_LEN+1];
    char d_zip[ZIP_LEN+1];
    double d_tax;
    double d_ytd;
    char name[20];
    long d_next_o_id;
    long time_start;
    int w_id;
    RETCODE rc;
    DBINT rcint;
    char bcphint[128];
    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("idxdiscl");

InitString(d_name, D_NAME_LEN+1);
InitAddress(d_street_1, d_street_2, d_city, d_state, d_zip);
sprintf(name, "%s.%s", aptr->database, "district");

//rc = bcp_init(w_hdbc1, name, NULL, "logs\\district.err", DB_IN);
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 != SUCCEED)
    HandleErrorDBC(w_hdbc1);

if((aptr->build_index == 1) && (aptr->index_order == 1))
{
    sprintf(bcphint, "tablock, order (d_w_id, d_id),
ROWS_PER_BATCH = %u", (aptr->num_warehouses * 10));
    rc = bcp_control(w_hdbc1, BCPHINTS, (void*)
bcphint);
    if (rc != SUCCEED)
        HandleErrorDBC(w_hdbc1);
}

rc = bcp_bind(w_hdbc1, (BYTE *) &d_id, 0,
SQL_VARLEN_DATA, NULL, 0, SQLINT2, 1);
if (rc != SUCCEED)
    HandleErrorDBC(w_hdbc1);

rc = bcp_bind(w_hdbc1, (BYTE *) &d_w_id, 0,
SQL_VARLEN_DATA, NULL, 0, SQLINT2, 2);
if (rc != SUCCEED)
    HandleErrorDBC(w_hdbc1);

rc = bcp_bind(w_hdbc1, (BYTE *) d_name, 0, D_NAME_LEN,
NULL, 0, 0, 3);
if (rc != SUCCEED)
    HandleErrorDBC(w_hdbc1);

rc = bcp_bind(w_hdbc1, (BYTE *) d_street_1, 0, ADDRESS_LEN,
NULL, 0, 0, 4);
if (rc != SUCCEED)
    HandleErrorDBC(w_hdbc1);

rc = bcp_bind(w_hdbc1, (BYTE *) d_street_2, 0, ADDRESS_LEN,
NULL, 0, 0, 5);
if (rc != SUCCEED)
    HandleErrorDBC(w_hdbc1);

rc = bcp_bind(w_hdbc1, (BYTE *) d_city, 0, ADDRESS_LEN,
NULL, 0, 0, 6);
if (rc != SUCCEED)
    HandleErrorDBC(w_hdbc1);

rc = bcp_bind(w_hdbc1, (BYTE *) d_state, 0, STATE_LEN, NULL,
0, 0, 7);
if (rc != SUCCEED)
    HandleErrorDBC(w_hdbc1);

rc = bcp_bind(w_hdbc1, (BYTE *) d_zip, 0, ZIP_LEN, NULL, 0, 0,
8);

```

```

if (rc != SUCCEED)
    HandleErrorDBC(w_hdbc1);

rc = bcp_bind(w_hdbc1, (BYTE *) &d_tax, 0,
SQL_VARLEN_DATA, NULL, 0, SQLFLT8, 9);
if (rc != SUCCEED)
    HandleErrorDBC(w_hdbc1);

rc = bcp_bind(w_hdbc1, (BYTE *) &d_ytd, 0,
SQL_VARLEN_DATA, NULL, 0, SQLFLT8, 10);
if (rc != SUCCEED)
    HandleErrorDBC(w_hdbc1);

rc = bcp_bind(w_hdbc1, (BYTE *) &d_next_o_id, 0,
SQL_VARLEN_DATA, NULL, 0, SQLINT4, 11);
if (rc != SUCCEED)
    HandleErrorDBC(w_hdbc1);

d_ytd = 30000.0;

d_next_o_id = orders_per_district+1;

time_start = (TimeNow() / MILLI);

for (w_id = aptr->starting_warehouse; w_id <=
aptr->num_warehouses; w_id++)
{
    d_w_id = w_id;

    for (d_id = 1; d_id <= DISTRICT_PER_WAREHOUSE;
d_id++)
    {
        MakeAlphaString(6,10,D_NAME_LEN,
d_name);

        MakeAddress(d_street_1, d_street_2, d_city,
d_state, d_zip);

        d_tax = ((float)
RandomNumber(0L,2000L))/10000.00;

rc = bcp_sendrow(w_hdbc1);
if (rc != SUCCEED)
    HandleErrorDBC(w_hdbc1);

        district_rows_loaded++;
        CheckForCommit(w_hdbc1, w_hstmt1,
district_rows_loaded, "district", &time_start);
    }
}

rcint = bcp_done(w_hdbc1);
if (rcint < 0)
    HandleErrorDBC(w_hdbc1);

printf("Finished loading district table.\n");

// if build index after load...
if((aptr->build_index == 1) && (aptr->index_order == 0))
    BuildIndex("idxdiscl");

return;
}

//=====
//

```

```

// Function : Stock
//
//=====
=====

void Stock()
{
    long   s_i_id;
    short  s_w_id;
    short  s_quantity;
    char   s_dist_01[S_DIST_LEN+1];
    char   s_dist_02[S_DIST_LEN+1];
    char   s_dist_03[S_DIST_LEN+1];
    char   s_dist_04[S_DIST_LEN+1];
    char   s_dist_05[S_DIST_LEN+1];
    char   s_dist_06[S_DIST_LEN+1];
    char   s_dist_07[S_DIST_LEN+1];
    char   s_dist_08[S_DIST_LEN+1];
    char   s_dist_09[S_DIST_LEN+1];
    char   s_dist_10[S_DIST_LEN+1];
    long   s_ytd;
    short  s_order_cnt;
    short  s_remote_cnt;
    char   s_data[S_DATA_LEN+1];
    short  len;
    char   name[20];
    long   time_start;
    RETCODE rc;
    DBINT  rcint;
    char   bcphint[128];
    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("idxstkcl");

    sprintf(name, "%s..%s", aptr->database, "stock");

    //rc = bcp_init(w_hdbc1, name, NULL, "logs\\stock.err", DB_IN);
    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);
    }

    rc = bcp_bind(w_hdbc1, (BYTE *) &s_i_id, 0,
SQL_VARLEN_DATA, NULL, 0, SQLINT4, 1);
    if (rc != SUCCEEDED)
        HandleErrorDBC(w_hdbc1);

    bcp_bind(w_hdbc1, (BYTE *) &s_w_id, 0, SQL_VARLEN_DATA,
NULL, 0, SQLINT2, 2);
    if (rc != SUCCEEDED)
        HandleErrorDBC(w_hdbc1);

```

```

        rc = bcp_bind(w_hdbc1, (BYTE *) &s_quantity, 0,
SQL_VARLEN_DATA, NULL, 0, SQLINT2, 3);
        if (rc != SUCCEEDED)
            HandleErrorDBC(w_hdbc1);

        rc = bcp_bind(w_hdbc1, (BYTE *) s_dist_01, 0, S_DIST_LEN,
NULL, 0, 0, 4);
        if (rc != SUCCEEDED)
            HandleErrorDBC(w_hdbc1);

        rc = bcp_bind(w_hdbc1, (BYTE *) s_dist_02, 0, S_DIST_LEN,
NULL, 0, 0, 5);
        if (rc != SUCCEEDED)
            HandleErrorDBC(w_hdbc1);

        rc = bcp_bind(w_hdbc1, (BYTE *) s_dist_03, 0, S_DIST_LEN,
NULL, 0, 0, 6);
        if (rc != SUCCEEDED)
            HandleErrorDBC(w_hdbc1);

        rc = bcp_bind(w_hdbc1, (BYTE *) s_dist_04, 0, S_DIST_LEN,
NULL, 0, 0, 7);
        if (rc != SUCCEEDED)
            HandleErrorDBC(w_hdbc1);

        rc = bcp_bind(w_hdbc1, (BYTE *) s_dist_05, 0, S_DIST_LEN,
NULL, 0, 0, 8);
        if (rc != SUCCEEDED)
            HandleErrorDBC(w_hdbc1);

        rc = bcp_bind(w_hdbc1, (BYTE *) s_dist_06, 0, S_DIST_LEN,
NULL, 0, 0, 9);
        if (rc != SUCCEEDED)
            HandleErrorDBC(w_hdbc1);

        rc = bcp_bind(w_hdbc1, (BYTE *) s_dist_07, 0, S_DIST_LEN,
NULL, 0, 0, 10);
        if (rc != SUCCEEDED)
            HandleErrorDBC(w_hdbc1);

        rc = bcp_bind(w_hdbc1, (BYTE *) s_dist_08, 0, S_DIST_LEN,
NULL, 0, 0, 11);
        if (rc != SUCCEEDED)
            HandleErrorDBC(w_hdbc1);

        rc = bcp_bind(w_hdbc1, (BYTE *) s_dist_09, 0, S_DIST_LEN,
NULL, 0, 0, 12);
        if (rc != SUCCEEDED)
            HandleErrorDBC(w_hdbc1);

        rc = bcp_bind(w_hdbc1, (BYTE *) s_dist_10, 0, S_DIST_LEN,
NULL, 0, 0, 13);
        if (rc != SUCCEEDED)
            HandleErrorDBC(w_hdbc1);

        rc = bcp_bind(w_hdbc1, (BYTE *) &s_ytd, 0,
SQL_VARLEN_DATA, NULL, 0, SQLINT4, 14);
        if (rc != SUCCEEDED)
            HandleErrorDBC(w_hdbc1);

        rc = bcp_bind(w_hdbc1, (BYTE *) &s_order_cnt, 0,
SQL_VARLEN_DATA, NULL, 0, SQLINT2, 15);
        if (rc != SUCCEEDED)
            HandleErrorDBC(w_hdbc1);

        rc = bcp_bind(w_hdbc1, (BYTE *) &s_remote_cnt, 0,
SQL_VARLEN_DATA, NULL, 0, SQLINT2, 16);
        if (rc != SUCCEEDED)

```



```

        HandleErrorDBC(w_hdbc1);

        rc = bcp_bind(w_hdbc1, (BYTE *) s_data, 0, S_DATA_LEN,
NULL, 0, 0, 17);
        if (rc != SUCCEED)
            HandleErrorDBC(w_hdbc1);

        s_ytd = s_order_cnt = s_remote_cnt = 0;

        time_start = (TimeNow() / MILLI);

        printf("...Loading stock table\n");

        for (s_i_id=1; s_i_id <= max_items; s_i_id++)
        {

            for (s_w_id = (short)aptr->starting_warehouse; s_w_id
<= aptr->num_warehouses; s_w_id++)
            {

                s_quantity =
(short)RandomNumber(10L,100L);
                len = MakeAlphaString(24,24,S_DIST_LEN,
s_dist_01);
                len = MakeAlphaString(24,24,S_DIST_LEN,
s_dist_02);
                len = MakeAlphaString(24,24,S_DIST_LEN,
s_dist_03);
                len = MakeAlphaString(24,24,S_DIST_LEN,
s_dist_04);
                len = MakeAlphaString(24,24,S_DIST_LEN,
s_dist_05);
                len = MakeAlphaString(24,24,S_DIST_LEN,
s_dist_06);
                len = MakeAlphaString(24,24,S_DIST_LEN,
s_dist_07);
                len = MakeAlphaString(24,24,S_DIST_LEN,
s_dist_08);
                len = MakeAlphaString(24,24,S_DIST_LEN,
s_dist_09);
                len = MakeAlphaString(24,24,S_DIST_LEN,
s_dist_10);

                len = MakeOriginalAlphaString(26,50,
S_DATA_LEN, s_data,10);

                rc = bcp_sendrow(w_hdbc1);
                if (rc != SUCCEED)
                    HandleErrorDBC(w_hdbc1);

                stock_rows_loaded++;
                CheckForCommit(w_hdbc1, w_hstmt1,
stock_rows_loaded, "stock", &time_start);

            }

        }

        rcint = bcp_done(w_hdbc1);
        if (rcint < 0)
            HandleErrorDBC(w_hdbc1);

        printf("Finished loading stock table.\n");

        SQLFreeStmt(w_hstmt1, SQL_DROP);
        SQLDisconnect(w_hdbc1);
        SQLFreeConnect(w_hdbc1);

        // if build index after load...

        if ((aptr->build_index == 1) && (aptr->index_order == 0))
            BuildIndex("idxstkcl");

        return;
    }

//=====
//
// Function : LoadCustomer
//
//=====

void LoadCustomer()
{
    LOADER_TIME_STRUCT    customer_time_start;
    LOADER_TIME_STRUCT    history_time_start;
    short                  w_id;

    short                  d_id;

    DWORD                  dwThreadID[MAX_CUSTOMER_THREADS];
    HANDLE                  hThread[MAX_CUSTOMER_THREADS];
    char                    name[20];
    RETCODE                 rc;

    DBINT                  rcint;
    char                    bcphint[128];
    char                    cmd[256];
    int                     num_procs;
    char                    err_log_path_cust[256];
    char                    err_log_path_hist[256];
    // SQLRETURN                 rc_1;
    // SQLSMALLINT                recnum,

    MsgLen;
    // SQLCHAR
    SqlState[6], Msg[SQL_MAX_MESSAGE_LENGTH];
    // SQLINTEGER                 NativeError;

    // Seed with unique number
    seed(5);

    printf("Loading customer and history tables...\n");

    // if build index before load...
    if ((aptr->build_index == 1) && (aptr->index_order == 1))
    {
        BuildIndex("idxcuscl");
        // 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("idxhiscl");
    }

    // Initialize bulk copy
    sprintf(name, "%s..%s", aptr->database, "customer");

    //rc = bcp_init(c_hdbc1, name, NULL, "logs\customer.err",
DB_IN);

```

```

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 != SUCCEED)
    HandleErrorDBC(c_hdbc1);

if ((aptr->build_index == 1) && (aptr->index_order == 1))
{
    sprintf(bcphint, "tablock, order (c_w_id, c_d_id, c_id),
ROWS_PER_BATCH = %u", (aptr->num_warehouses * 30000));
    rc = bcp_control(c_hdbc1, BCPHINTS, (void*) bcphint);

    if (rc != SUCCEED)
        HandleErrorDBC(c_hdbc1);
}

sprintf(name, "%s.%s", aptr->database, "history");

rc = bcp_init(c_hdbc2, name, NULL, "logs\\history.err", DB_IN);
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 != SUCCEED)
    HandleErrorDBC(c_hdbc2);

sprintf(bcphint, "tablock");
rc = bcp_control(c_hdbc2, BCPHINTS, (void*) bcphint);
if (rc != SUCCEED)
    HandleErrorDBC(c_hdbc2);

customer_rows_loaded = 0;
history_rows_loaded = 0;

CustomerBufInit();

customer_time_start.time_start = (TimeNow() / MILLI);
history_time_start.time_start = (TimeNow() / MILLI);

for (w_id = (short)aptr->starting_warehouse; w_id <=
aptr->num_warehouses; w_id++)
{
    for (d_id = 1; d_id <= DISTRICT_PER_WAREHOUSE;
d_id++)
    {
        CustomerBufLoad(d_id, w_id);

        // Start parallel loading threads here...

        // Start customer table thread

        printf("...Loading customer table for: d_id =
%d, w_id = %d\n", d_id, w_id);

        hThread[0] = CreateThread(NULL,

0,

(LPTHREAD_START_ROUTINE) LoadCustomerTable,

&customer_time_start,

0,

&dwThreadID[0]);

        if (hThread[0] == NULL)
        {
            printf("Error, failed in creating
creating thread = 0.\n");
            exit(-1);
        }

        // Start History table thread

        printf("...Loading history table for: d_id = %d,
w_id = %d\n", d_id, w_id);

        hThread[1] = CreateThread(NULL,

0,

(LPTHREAD_START_ROUTINE) LoadHistoryTable,

&history_time_start,

0,

&dwThreadID[1]);

        if (hThread[1] == NULL)
        {
            printf("Error, failed in creating
creating thread = 1.\n");
            exit(-1);
        }

        WaitForSingleObject( hThread[0], INFINITE

);

        WaitForSingleObject( hThread[1], INFINITE

);

        if (CloseHandle(hThread[0]) == FALSE)
        {
            printf("Error, failed in closing
customer thread handle with errno: %d\n", GetLastError());
        }

        if (CloseHandle(hThread[1]) == FALSE)
        {
            printf("Error, failed in closing
history thread handle with errno: %d\n", GetLastError());
        }

    }

}

// flush the bulk connection
rcint = bcp_done(c_hdbc1);
if (rcint < 0)
    HandleErrorDBC(c_hdbc1);

rcint = bcp_done(c_hdbc2);
if (rcint < 0)
    HandleErrorDBC(c_hdbc2);

printf("Finished loading customer table.\n");

// if build index after load...
if ((aptr->build_index == 1) && (aptr->index_order == 0))
{
    BuildIndex("idxcuscl");
    // 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("idxhiscl");
    }

    // 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\" >
logs\\nurand_load.log",
        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()
{
    int i;

    for (i=0;i<customers_per_district;i++)
    {
        customer_buf[i].c_id = 0;
        customer_buf[i].c_d_id = 0;
        customer_buf[i].c_w_id = 0;

        strcpy(customer_buf[i].c_first,"");
        strcpy(customer_buf[i].c_middle,"");
        strcpy(customer_buf[i].c_last,"");
        strcpy(customer_buf[i].c_street_1,"");
        strcpy(customer_buf[i].c_street_2,"");
        strcpy(customer_buf[i].c_city,"");
        strcpy(customer_buf[i].c_state,"");

```

```

        strcpy(customer_buf[i].c_zip,"");
        strcpy(customer_buf[i].c_phone,"");
        strcpy(customer_buf[i].c_credit,"");

        customer_buf[i].c_credit_lim = 0;
        customer_buf[i].c_discount = (float) 0;

        // fix to avoid ODBC float to numeric conversion
        // customer_buf[i].c_balance = 0;
        strcpy(customer_buf[i].c_balance,"");

        customer_buf[i].c_ytd_payment = 0;
        customer_buf[i].c_payment_cnt = 0;
        customer_buf[i].c_delivery_cnt = 0;

        strcpy(customer_buf[i].c_data,"");

        customer_buf[i].h_amount = 0;

        strcpy(customer_buf[i].h_data,"");
    }
}

//=====
//
// Function : CustomerBufLoad
//
// Fills shared buffer for HISTORY and CUSTOMER
//=====

void CustomerBufLoad(int d_id, int w_id)
{
    long i;
    CUSTOMER_SORT_STRUCT c[CUSTOMERS_PER_DISTRICT];

    for (i=0;i<customers_per_district;i++)
    {
        if (i < 1000)
            LastName(i, c[i].c_last);
        else
            LastName(NURand(255,0,999,LOADER_NURAND_C), c[i].c_last);

        MakeAlphaString(8,16,FIRST_NAME_LEN,
c[i].c_first);

        c[i].c_id = i+1;
    }

    printf("...Loading customer buffer for: d_id = %d, w_id = %d\n",
        d_id, w_id);

    for (i=0;i<customers_per_district;i++)
    {
        customer_buf[i].c_d_id = d_id;
        customer_buf[i].c_w_id = w_id;
        customer_buf[i].h_amount = 10.0;

```

```

customer_buf[i].c_ytd_payment = 10.0;

customer_buf[i].c_payment_cnt = 1;
customer_buf[i].c_delivery_cnt = 0;

// Generate CUSTOMER and HISTORY data

customer_buf[i].c_id = c[i].c_id;

strcpy(customer_buf[i].c_first, c[i].c_first);
strcpy(customer_buf[i].c_last, c[i].c_last);

customer_buf[i].c_middle[0] = 'O';
customer_buf[i].c_middle[1] = 'E';

MakeAddress(customer_buf[i].c_street_1,
            customer_buf[i].c_street_2,
            customer_buf[i].c_city,
            customer_buf[i].c_state,
            customer_buf[i].c_zip);

MakeNumberString(16, 16, PHONE_LEN,
customer_buf[i].c_phone);

if (RandomNumber(1L, 100L) > 10)
    customer_buf[i].c_credit[0] = 'G';
else
    customer_buf[i].c_credit[0] = 'B';
customer_buf[i].c_credit[1] = 'C';

customer_buf[i].c_credit_lim = 50000.0;
customer_buf[i].c_discount = ((float)
RandomNumber(0L, 5000L)) / 10000.0;

// fix to avoid ODBC float to numeric conversion
problem.

// customer_buf[i].c_balance = -10.0;
strcpy(customer_buf[i].c_balance, "-10.0");

MakeAlphaString(300, 500, C_DATA_LEN,
customer_buf[i].c_data);

// Generate HISTORY data
MakeAlphaString(12, 24, H_DATA_LEN,
customer_buf[i].h_data);
}
}

//=====
//
// Function : LoadCustomerTable
//
//=====

void LoadCustomerTable(LOADER_TIME_STRUCT *customer_time_start)
{
    int i;
    long c_id;
    short c_d_id;
    short c_w_id;
    char c_first[FIRST_NAME_LEN+1];
    char c_middle[MIDDLE_NAME_LEN+1];
    char c_last[LAST_NAME_LEN+1];
    char c_street_1[ADDRESS_LEN+1];
    char c_street_2[ADDRESS_LEN+1];

    char c_city[ADDRESS_LEN+1];
    char c_state[STATE_LEN+1];
    char c_zip[ZIP_LEN+1];
    char c_phone[PHONE_LEN+1];
    char c_credit[CREDIT_LEN+1];
    double c_credit_lim;
    double c_discount;

    // fix to avoid ODBC float to numeric conversion.
    // double c_balance;
    char c_balance[6];

    double c_ytd_payment;
    short c_payment_cnt;
    short c_delivery_cnt;
    char c_data[C_DATA_LEN+1];
    char c_since[C_SINCE_LEN+1];
    RETCODE rc;

    rc = bcp_bind(c_hdbc1, (BYTE *) &c_id, 0, SQL_VARLEN_DATA, NULL,
0, SQLINT4, 1);
    if (rc != SUCCEEDED)
        HandleErrorDBC(c_hdbc1);

    rc = bcp_bind(c_hdbc1, (BYTE *) &c_d_id, 0, SQL_VARLEN_DATA,
NULL, 0, SQLINT2, 2);
    if (rc != SUCCEEDED)
        HandleErrorDBC(c_hdbc1);

    rc = bcp_bind(c_hdbc1, (BYTE *) &c_w_id, 0,
SQL_VARLEN_DATA, NULL, 0, SQLINT2, 3);
    if (rc != SUCCEEDED)
        HandleErrorDBC(c_hdbc1);

    rc = bcp_bind(c_hdbc1, (BYTE *) c_first, 0, FIRST_NAME_LEN, NULL, 0,
0, 4);
    if (rc != SUCCEEDED)
        HandleErrorDBC(c_hdbc1);

    rc = bcp_bind(c_hdbc1, (BYTE *) c_middle, 0,
MIDDLE_NAME_LEN, NULL, 0, 0, 5);
    if (rc != SUCCEEDED)
        HandleErrorDBC(c_hdbc1);

    rc = bcp_bind(c_hdbc1, (BYTE *) c_last, 0, LAST_NAME_LEN, NULL, 0,
0, 6);
    if (rc != SUCCEEDED)
        HandleErrorDBC(c_hdbc1);

    rc = bcp_bind(c_hdbc1, (BYTE *) c_street_1, 0, ADDRESS_LEN, NULL, 0,
0, 7);
    if (rc != SUCCEEDED)
        HandleErrorDBC(c_hdbc1);

    rc = bcp_bind(c_hdbc1, (BYTE *) c_street_2, 0, ADDRESS_LEN,
NULL, 0, 0, 8);
    if (rc != SUCCEEDED)
        HandleErrorDBC(c_hdbc1);

    rc = bcp_bind(c_hdbc1, (BYTE *) c_city, 0, ADDRESS_LEN, NULL, 0, 0,
9);
    if (rc != SUCCEEDED)
        HandleErrorDBC(c_hdbc1);

    rc = bcp_bind(c_hdbc1, (BYTE *) c_state, 0, STATE_LEN, NULL, 0, 0, 0,
10);
    if (rc != SUCCEEDED)
        HandleErrorDBC(c_hdbc1);

```

```

rc = bcp_bind(c_hdbc1, (BYTE *) c_zip, 0, ZIP_LEN, NULL, 0, 0, 11);
    if (rc != SUCCEED)
        HandleErrorDBC(c_hdbc1);

rc = bcp_bind(c_hdbc1, (BYTE *) c_phone, 0, PHONE_LEN, NULL, 0, 0,
12);
    if (rc != SUCCEED)
        HandleErrorDBC(c_hdbc1);

rc = bcp_bind(c_hdbc1, (BYTE *) &c_since, 0, C_SINCE_LEN,
NULL, 0, SQLCHARACTER, 13);
    if (rc != SUCCEED)
        HandleErrorDBC(c_hdbc1);

rc = bcp_bind(c_hdbc1, (BYTE *) c_credit, 0, CREDIT_LEN, NULL, 0, 0,
14);
    if (rc != SUCCEED)
        HandleErrorDBC(c_hdbc1);

rc = bcp_bind(c_hdbc1, (BYTE *) &c_credit_lim, 0,
SQL_VARLEN_DATA, NULL, 0, SQLFLT8, 15);
    if (rc != SUCCEED)
        HandleErrorDBC(c_hdbc1);

rc = bcp_bind(c_hdbc1, (BYTE *) &c_discount, 0, SQL_VARLEN_DATA,
NULL, 0, SQLFLT8, 16);
    if (rc != SUCCEED)
        HandleErrorDBC(c_hdbc1);

// fix to avoid ODBC float to numeric conversion problem.

// rc = bcp_bind(c_hdbc1, (BYTE *) &c_balance, 0,
SQL_VARLEN_DATA, NULL, 0, SQLFLT8, 17);
// if (rc != SUCCEED)
//     HandleErrorDBC(c_hdbc1);
rc = bcp_bind(c_hdbc1, (BYTE *) c_balance, 0, 5, NULL, 0,
SQLCHARACTER, 17);
    if (rc != SUCCEED)
        HandleErrorDBC(c_hdbc1);

rc = bcp_bind(c_hdbc1, (BYTE *) &c_ytd_payment, 0,
SQL_VARLEN_DATA, NULL, 0, SQLFLT8, 18);
    if (rc != SUCCEED)
        HandleErrorDBC(c_hdbc1);

rc = bcp_bind(c_hdbc1, (BYTE *) &c_payment_cnt, 0,
SQL_VARLEN_DATA, NULL, 0, SQLINT2, 19);
    if (rc != SUCCEED)
        HandleErrorDBC(c_hdbc1);

rc = bcp_bind(c_hdbc1, (BYTE *) &c_delivery_cnt, 0,
SQL_VARLEN_DATA, NULL, 0, SQLINT2, 20);
    if (rc != SUCCEED)
        HandleErrorDBC(c_hdbc1);

rc = bcp_bind(c_hdbc1, (BYTE *) c_data, 0, 500, NULL, 0, 0, 21);
    if (rc != SUCCEED)
        HandleErrorDBC(c_hdbc1);

for (i = 0; i < customers_per_district; i++)
{
    c_id = customer_buf[i].c_id;
    c_d_id = customer_buf[i].c_d_id;
    c_w_id = customer_buf[i].c_w_id;

    strcpy(c_first, customer_buf[i].c_first);

```

```

strcpy(c_middle, customer_buf[i].c_middle);
strcpy(c_last, customer_buf[i].c_last);
strcpy(c_street_1, customer_buf[i].c_street_1);
strcpy(c_street_2, customer_buf[i].c_street_2);
strcpy(c_city, customer_buf[i].c_city);
strcpy(c_state, customer_buf[i].c_state);
strcpy(c_zip, customer_buf[i].c_zip);
strcpy(c_phone, customer_buf[i].c_phone);
strcpy(c_credit, customer_buf[i].c_credit);

FormatDate(&c_since);

c_credit_lim = customer_buf[i].c_credit_lim;
c_discount = customer_buf[i].c_discount;

// fix to avoid ODBC float to numeric conversion
// problem.
// c_balance = customer_buf[i].c_balance;
strcpy(c_balance, customer_buf[i].c_balance);

c_ytd_payment = customer_buf[i].c_ytd_payment;
c_payment_cnt = customer_buf[i].c_payment_cnt;
c_delivery_cnt = customer_buf[i].c_delivery_cnt;

strcpy(c_data, customer_buf[i].c_data);

// Send data to server
rc = bcp_sendrow(c_hdbc1);
if (rc != SUCCEED)
    HandleErrorDBC(c_hdbc1);

customer_rows_loaded++;
CheckForCommit(c_hdbc1, c_hstmt1,
customer_rows_loaded, "customer", &customer_time_start->time_start);
}
}

//=====
//
// Function : LoadHistoryTable
//=====

void LoadHistoryTable(LOADER_TIME_STRUCT *history_time_start)
{
    int i;
    long c_id;
    short c_d_id;
    short c_w_id;
    double h_amount;
    char h_data[H_DATA_LEN+1];
    char h_date[H_DATE_LEN+1];
    RETCODE rc;

    rc = bcp_bind(c_hdbc2, (BYTE *) &c_id, 0, SQL_VARLEN_DATA, NULL,
0, SQLINT4, 1);
    if (rc != SUCCEED)
        HandleErrorDBC(c_hdbc2);

    rc = bcp_bind(c_hdbc2, (BYTE *) &c_d_id, 0, SQL_VARLEN_DATA,
NULL, 0, SQLINT2, 2);
    if (rc != SUCCEED)
        HandleErrorDBC(c_hdbc2);

```

```

rc = bcp_bind(c_hdbc2, (BYTE *) &c_w_id, 0, SQL_VARLEN_DATA,
NULL, 0, SQLINT2, 3);
if (rc != SUCCEEDED)
    HandleErrorDBC(c_hdbc2);

rc = bcp_bind(c_hdbc2, (BYTE *) &c_d_id, 0, SQL_VARLEN_DATA,
NULL, 0, SQLINT2, 4);
if (rc != SUCCEEDED)
    HandleErrorDBC(c_hdbc2);

rc = bcp_bind(c_hdbc2, (BYTE *) &c_w_id, 0, SQL_VARLEN_DATA,
NULL, 0, SQLINT2, 5);
if (rc != SUCCEEDED)
    HandleErrorDBC(c_hdbc2);

rc = bcp_bind(c_hdbc2, (BYTE *) &h_date, 0, H_DATE_LEN,
NULL, 0, SQLCHARACTER, 6);
if (rc != SUCCEEDED)
    HandleErrorDBC(c_hdbc2);

rc = bcp_bind(c_hdbc2, (BYTE *) &h_amount, 0, SQL_VARLEN_DATA,
NULL, 0, SQLFLT8, 7);
if (rc != SUCCEEDED)
    HandleErrorDBC(c_hdbc2);

rc = bcp_bind(c_hdbc2, (BYTE *) h_data, 0, H_DATA_LEN, NULL, 0, 0,
8);
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;
    strcpy(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,
history_rows_loaded, "history", &history_time_start->time_start);
}

}

//=====
//
// Function : LoadOrders
//=====

void LoadOrders()
{
    LOADER_TIME_STRUCT orders_time_start;
    LOADER_TIME_STRUCT new_order_time_start;
    LOADER_TIME_STRUCT order_line_time_start;
    short w_id;

```

```

short d_id;
DWORD
dwThreadId[MAX_ORDER_THREADS];
HANDLE
hThread[MAX_ORDER_THREADS];
char name[20];
RETCODE
rc;
char
bcphint[128];
char
err_log_path_ord[256];
char
err_log_path_nord[256];
char
err_log_path_ordl[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("idxordcl");
    BuildIndex("idxnodcl");
    BuildIndex("idxodlcl");
}

// initialize bulk copy
sprintf(name, "%s..%s", aptr->database, "orders");

rc = bcp_init(o_hdbc1, name, NULL, "logs\\orders.err", DB_IN);
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", apr->database, "order_line");

rc = bcp_init(o_hdbc3, name, NULL, "logs\\ordline.err", DB_IN);
strcpy(err_log_path_ordl, apr->log_path);
strcat(err_log_path_ordl, "ordline.err");
rc = bcp_init(o_hdbc3, name, NULL, err_log_path_ordl, DB_IN);
if (rc != SUCCEED)
    HandleErrorDBC(o_hdbc3);

if ((aptr->build_index == 1) && (aptr->index_order == 1))
{
    sprintf(bcphint, "tablock, order (ol_w_id, ol_d_id,
ol_o_id, ol_number), ROWS_PER_BATCH = %u", (aptr->num_warehouses *
300000));
    rc = bcp_control(o_hdbc3, BCPHINTS, (void*) bcphint);
    if (rc != SUCCEED)
        HandleErrorDBC(o_hdbc3);
}

orders_rows_loaded = 0;
new_order_rows_loaded = 0;
order_line_rows_loaded = 0;

OrdersBufInit();

orders_time_start.time_start = (TimeNow() / MILLI);
new_order_time_start.time_start = (TimeNow() / MILLI);
order_line_time_start.time_start = (TimeNow() / MILLI);

for (w_id = (short)aptr->starting_warehouse; w_id <=
aptr->num_warehouses; w_id++)
{
    for (d_id = 1; d_id <= DISTRICT_PER_WAREHOUSE;
d_id++)
    {
        OrdersBufLoad(d_id, w_id);

        // start parallel loading threads here...

        // start Orders table thread
        printf("...Loading Order Table for: d_id = %d,
w_id = %d\n", d_id, w_id);

        hThread[0] = CreateThread(NULL,

0,

(LPTHREAD_START_ROUTINE) LoadOrdersTable,

&orders_time_start,

0,

&dwThreadID[0]);

        if (hThread[0] == NULL)
        {
            printf("Error, failed in creating
creating thread = 0.\n");
            exit(-1);
        }

        // start NewOrder table thread

```

```

        printf("...Loading New-Order Table for: d_id
= %d, w_id = %d\n", d_id, w_id);

        hThread[1] = CreateThread(NULL,

0,

(LPTHREAD_START_ROUTINE) LoadNewOrderTable,

&new_order_time_start,

0,

&dwThreadID[1]);

        if (hThread[1] == NULL)
        {
            printf("Error, failed in creating
creating thread = 1.\n");
            exit(-1);
        }

        // start Order-Line table thread

        printf("...Loading Order-Line Table for: d_id
= %d, w_id = %d\n", d_id, w_id);

        hThread[2] = CreateThread(NULL,

0,

(LPTHREAD_START_ROUTINE) LoadOrderLineTable,

&order_line_time_start,

0,

&dwThreadID[2]);

        if (hThread[2] == NULL)
        {
            printf("Error, failed in creating
creating thread = 2.\n");
            exit(-1);
        }

        WaitForSingleObject( hThread[0], INFINITE
);
        WaitForSingleObject( hThread[1], INFINITE
);
        WaitForSingleObject( hThread[2], INFINITE
);

        if (CloseHandle(hThread[0]) == FALSE)
        {
            printf("Error, failed in closing
Orders thread handle with errno: %d\n", GetLastError());
        }

        if (CloseHandle(hThread[1]) == FALSE)
        {
            printf("Error, failed in closing
NewOrder thread handle with errno: %d\n", GetLastError());
        }

        if (CloseHandle(hThread[2]) == FALSE)
        {

```

```

        printf("Error, failed in closing
OrderLine thread handle with errno: %d\n", GetLastError());
    }
}

printf("Finished loading orders.\n");

return;
}

```

```

=====
//
// Function : OrdersBufInit
//
// Clears shared buffer for ORDERS, NEWORDER, and ORDERLINE
//
=====

```

```

void OrdersBufInit()
{
    int i;
    int j;

    for (i=0;i<orders_per_district;i++)
    {
        orders_buf[i].o_id = 0;
        orders_buf[i].o_d_id = 0;
        orders_buf[i].o_w_id = 0;
        orders_buf[i].o_c_id = 0;
        orders_buf[i].o_carrier_id = 0;
        orders_buf[i].o_ol_cnt = 0;
        orders_buf[i].o_all_local = 0;

        for (j=0;j<=14;j++)
        {
            orders_buf[i].o_ol[j].ol = 0;
            orders_buf[i].o_ol[j].ol_i_id = 0;

            orders_buf[i].o_ol[j].ol_supply_w_id = 0;
            orders_buf[i].o_ol[j].ol_quantity = 0;
            orders_buf[i].o_ol[j].ol_amount = 0;
            strcpy(orders_buf[i].o_ol[j].ol_dist_info,"");
        }
    }
}

```

```

=====
//
// Function : OrdersBufLoad
//
// Fills shared buffer for ORDERS, NEWORDER, and ORDERLINE
//
=====

```

```

void OrdersBufLoad(int d_id, int w_id)
{

```

```

    int cust[ORDERS_PER_DISTRICT+1];
    long o_id;
    short ol;

    printf("...Loading Order Buffer for: d_id = %d, w_id = %d\n",
        d_id, w_id);

    GetPermutation(cust, orders_per_district);

    for (o_id=0;o_id<orders_per_district;o_id++)
    {
        // Generate ORDER and NEW-ORDER data

        orders_buf[o_id].o_d_id = d_id;
        orders_buf[o_id].o_w_id = w_id;
        orders_buf[o_id].o_id = o_id+1;
        orders_buf[o_id].o_c_id = cust[o_id+1];
        orders_buf[o_id].o_ol_cnt = (short)RandomNumber(5L,
15L);

        if (o_id < first_new_order)
        {
            orders_buf[o_id].o_carrier_id =
(short)RandomNumber(1L, 10L);
            orders_buf[o_id].o_all_local = 1;
        }
        else
        {
            orders_buf[o_id].o_carrier_id = 0;
            orders_buf[o_id].o_all_local = 1;
        }

        for (ol=0; ol<orders_buf[o_id].o_ol_cnt; ol++)
        {
            orders_buf[o_id].o_ol[ol].ol = ol+1;
            orders_buf[o_id].o_ol[ol].ol_i_id =
RandomNumber(1L, max_items);
            orders_buf[o_id].o_ol[ol].ol_supply_w_id =
w_id;
            orders_buf[o_id].o_ol[ol].ol_quantity = 5;
            MakeAlphaString(24, 24,
OL_DIST_INFO_LEN, &orders_buf[o_id].o_ol[ol].ol_dist_info);

            // Generate ORDER-LINE data
            if (o_id < first_new_order)
            {
                orders_buf[o_id].o_ol[ol].ol_amount = 0;
                // Added to insure ol_delivery_d
                set properly during load

                FormatDate(&orders_buf[o_id].o_ol[ol].ol_delivery_d);
            }
            else
            {
                orders_buf[o_id].o_ol[ol].ol_amount = RandomNumber(1,999999)/100.0;
                // Added to insure ol_delivery_d
                set properly during load

                // odbc datetime format

```



```

strcpy(orders_buf[o_id].o_ol[ol].ol_delivery_d,"1899-12-31 00:00:00.000");
    }
}
}
}

```

```

=====
//
// Function : LoadOrdersTable
//
=====

```

```

void LoadOrdersTable(LOADER_TIME_STRUCT *orders_time_start)

```

```

{
    int i;
    long o_id;
    short o_d_id;
    short o_w_id;

    long o_c_id;
    short o_carrier_id;
    short o_ol_cnt;
    short o_all_local;
    char o_entry_d[O_ENTRY_D_LEN+1];
    RETCODE rc;
    DBINT rcint;

    // bind ORDER data
    rc = bcp_bind(o_hdbc1, (BYTE *) &o_id, 0, SQL_VARLEN_DATA,
    NULL, 0, SQLINT4, 1);
    if (rc != SUCCEED)
        HandleErrorDBC(o_hdbc1);

    rc = bcp_bind(o_hdbc1, (BYTE *) &o_d_id, 0, SQL_VARLEN_DATA,
    NULL, 0, SQLINT2, 2);
    if (rc != SUCCEED)
        HandleErrorDBC(o_hdbc1);

    rc = bcp_bind(o_hdbc1, (BYTE *) &o_w_id, 0, SQL_VARLEN_DATA,
    NULL, 0, SQLINT2, 3);
    if (rc != SUCCEED)
        HandleErrorDBC(o_hdbc1);

    rc = bcp_bind(o_hdbc1, (BYTE *) &o_c_id, 0, SQL_VARLEN_DATA,
    NULL, 0, SQLINT4, 4);
    if (rc != SUCCEED)
        HandleErrorDBC(o_hdbc1);

    rc = bcp_bind(o_hdbc1, (BYTE *) &o_entry_d, 0,
    O_ENTRY_D_LEN, NULL, 0, SQLCHARACTER, 5);
    if (rc != SUCCEED)
        HandleErrorDBC(o_hdbc1);

    rc = bcp_bind(o_hdbc1, (BYTE *) &o_carrier_id, 0,
    SQL_VARLEN_DATA, NULL, 0, SQLINT2, 6);
    if (rc != SUCCEED)
        HandleErrorDBC(o_hdbc1);

    rc = bcp_bind(o_hdbc1, (BYTE *) &o_ol_cnt, 0, SQL_VARLEN_DATA,
    NULL, 0, SQLINT2, 7);
    if (rc != SUCCEED)
        HandleErrorDBC(o_hdbc1);
}

```

```

rc = bcp_bind(o_hdbc1, (BYTE *) &o_all_local, 0, SQL_VARLEN_DATA,
NULL, 0, SQLINT2, 8);
if (rc != SUCCEED)
    HandleErrorDBC(o_hdbc1);

for (i = 0; i < orders_per_district; i++)
{
    o_id = orders_buf[i].o_id;
    o_d_id = orders_buf[i].o_d_id;
    o_w_id = orders_buf[i].o_w_id;
    o_c_id = orders_buf[i].o_c_id;
    o_carrier_id = orders_buf[i].o_carrier_id;
    o_ol_cnt = orders_buf[i].o_ol_cnt;
    o_all_local = orders_buf[i].o_all_local;

    FormatDate(&o_entry_d);

    // send data to server
    rc = bcp_sendrow(o_hdbc1);
    if (rc != SUCCEED)
        HandleErrorDBC(o_hdbc1);

    orders_rows_loaded++;
    CheckForCommit(o_hdbc1, o_hstmt1,
orders_rows_loaded, "orders", &orders_time_start->time_start);
}

// rcint = bcp_batch(o_hdbc1);
// if (rcint < 0)
//     HandleErrorDBC(o_hdbc1);

if ((o_w_id == aptr->num_warehouses) && (o_d_id == 10))
{
    rcint = bcp_done(o_hdbc1);
    if (rcint < 0)
        HandleErrorDBC(o_hdbc1);

    SQLFreeStmt(o_hstmt1, SQL_DROP);
    SQLDisconnect(o_hdbc1);
    SQLFreeConnect(o_hdbc1);

    // if build index after load...
    if ((aptr->build_index == 1) && (aptr->index_order ==
0))
        BuildIndex("idxordcl");

    // build non-clustered index
    if (aptr->build_index == 1)
        BuildIndex("idxordnc");
}
}

```

```

=====
//
// Function : LoadNewOrderTable
//
=====

```

```

void LoadNewOrderTable(LOADER_TIME_STRUCT *new_order_time_start)
{
    int i;
    long o_id;
    short o_d_id;
    short o_w_id;
}

```

```

    RETCODE          rc;
    DBINT            rcint;

    // Bind NEW-ORDER data

    rc = bcp_bind(o_hdbc2, (BYTE *) &o_id, 0, SQL_VARLEN_DATA,
    NULL, 0, SQLINT4, 1);
    if (rc != SUCCEEDED)
        HandleErrorDBC(o_hdbc2);

    rc = bcp_bind(o_hdbc2, (BYTE *) &o_d_id, 0, SQL_VARLEN_DATA,
    NULL, 0, SQLINT2, 2);
    if (rc != SUCCEEDED)
        HandleErrorDBC(o_hdbc2);

    rc = bcp_bind(o_hdbc2, (BYTE *) &o_w_id, 0, SQL_VARLEN_DATA,
    NULL, 0, SQLINT2, 3);
    if (rc != SUCCEEDED)
        HandleErrorDBC(o_hdbc2);

    for (i = first_new_order; i < last_new_order; i++)
    {
        o_id = orders_buf[i].o_id;
        o_d_id = orders_buf[i].o_d_id;
        o_w_id = orders_buf[i].o_w_id;

        rc = bcp_sendrow(o_hdbc2);
        if (rc != SUCCEEDED)
            HandleErrorDBC(o_hdbc2);

        new_order_rows_loaded++;
        CheckForCommit(o_hdbc2, o_hstmt2,
        new_order_rows_loaded, "new_order", &new_order_time_start->time_start);
    }

    // rcint = bcp_batch(o_hdbc2);
    // if (rcint < 0)
    //     HandleErrorDBC(o_hdbc2);

    if ((o_w_id == apr->num_warehouses) && (o_d_id == 10))
    {
        rcint = bcp_done(o_hdbc2);
        if (rcint < 0)
            HandleErrorDBC(o_hdbc2);

        SQLFreeStmt(o_hstmt2, SQL_DROP);
        SQLDisconnect(o_hdbc2);
        SQLFreeConnect(o_hdbc2);

        // if build index after load...
        if ((aptr->build_index == 1) && (aptr->index_order ==
0))
            BuildIndex("idxnodcl");
    }
}

//=====
//
// Function : LoadOrderLineTable
//
//=====

void LoadOrderLineTable(LOADER_TIME_STRUCT *order_line_time_start)

```

```

{
    int    ij;
    long   o_id;
    short  o_d_id;
    short  o_w_id;

    long   ol;
    long   ol_i_id;
    short  ol_supply_w_id;
    short  ol_quantity;
    double ol_amount;
    char   ol_dist_info[DIST_INFO_LEN+1];
    char   ol_delivery_d[OL_DELIVERY_D_LEN+1];
    RETCODE          rc;
    DBINT            rcint;

    // bind ORDER-LINE data
    rc = bcp_bind(o_hdbc3, (BYTE *) &o_id, 0, SQL_VARLEN_DATA,
    NULL, 0, SQLINT4, 1);
    if (rc != SUCCEEDED)
        HandleErrorDBC(o_hdbc3);

    rc = bcp_bind(o_hdbc3, (BYTE *) &o_d_id, 0, SQL_VARLEN_DATA,
    NULL, 0, SQLINT2, 2);
    if (rc != SUCCEEDED)
        HandleErrorDBC(o_hdbc3);

    rc = bcp_bind(o_hdbc3, (BYTE *) &o_w_id, 0, SQL_VARLEN_DATA,
    NULL, 0, SQLINT2, 3);
    if (rc != SUCCEEDED)
        HandleErrorDBC(o_hdbc3);

    rc = bcp_bind(o_hdbc3, (BYTE *) &ol, 0, SQL_VARLEN_DATA, NULL,
    0, SQLINT4, 4);
    if (rc != SUCCEEDED)
        HandleErrorDBC(o_hdbc3);

    rc = bcp_bind(o_hdbc3, (BYTE *) &ol_i_id, 0, SQL_VARLEN_DATA,
    NULL, 0, SQLINT4, 5);
    if (rc != SUCCEEDED)
        HandleErrorDBC(o_hdbc3);

    rc = bcp_bind(o_hdbc3, (BYTE *) &ol_supply_w_id, 0,
    SQL_VARLEN_DATA, NULL, 0, SQLINT2, 6);
    if (rc != SUCCEEDED)
        HandleErrorDBC(o_hdbc3);

    rc = bcp_bind(o_hdbc3, (BYTE *) &ol_delivery_d, 0,
    OL_DELIVERY_D_LEN, NULL, 0, SQLCHARACTER, 7);
    if (rc != SUCCEEDED)
        HandleErrorDBC(o_hdbc3);

    rc = bcp_bind(o_hdbc3, (BYTE *) &ol_quantity, 0, SQL_VARLEN_DATA,
    NULL, 0, SQLINT2, 8);
    if (rc != SUCCEEDED)
        HandleErrorDBC(o_hdbc3);

    rc = bcp_bind(o_hdbc3, (BYTE *) &ol_amount, 0, SQL_VARLEN_DATA,
    NULL, 0, SQLFLT8, 9);
    if (rc != SUCCEEDED)
        HandleErrorDBC(o_hdbc3);

    rc = bcp_bind(o_hdbc3, (BYTE *) ol_dist_info, 0, DIST_INFO_LEN,
    NULL, 0, 0, 10);
    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);

    rc = bcp_sendrow(o_hdbc3);
    if (rc != SUCCEED)
        HandleErrorDBC(o_hdbc3);

    order_line_rows_loaded++;
    CheckForCommit(o_hdbc3, o_hstmt3,
order_line_rows_loaded, "order_line", &order_line_time_start->time_start);
}

}

// rcint = bcp_batch(o_hdbc3);
// if (rcint < 0)
//     HandleErrorDBC(o_hdbc3);

if ((o_w_id == aptr->num_warehouses) && (o_d_id == 10))
{
    rcint = bcp_done(o_hdbc3);
    if (rcint < 0)
        HandleErrorDBC(o_hdbc3);

    SQLFreeStmt(o_hstmt3, SQL_DROP);
    SQLDisconnect(o_hdbc3);
    SQLFreeConnect(o_hdbc3);

    // if build index after load...
    if ((aptr->build_index == 1) && (aptr->index_order ==
0))
        BuildIndex("idxodlcl");

}

}

//=====
//
// Function : GetPermutation
//
//=====

void GetPermutation(int perm[], int n)
{
    int i, r, t;

    for (i=1; i<=n; i++)

```

```

        perm[i] = i;

    for (i=1; i<=n; i++)
    {
        r = RandomNumber(i,n);
        t = perm[i];
        perm[i] = perm[r];
        perm[r] = t;
    }
}

//=====
//
// Function : CheckForCommit
//
//=====

void CheckForCommit(HDBC hdbc,
                    HSTMT hstmt,
                    int rows_loaded,
                    char *table_name,
                    long *time_start)
{
    long time_end, time_diff;
    // DBINT rcint;

    if (!(rows_loaded % aptr->batch))
    {
        // rcint = bcp_batch(hdbc);
        // if (rcint < 0)
        //     HandleErrorDBC(hdbc);

        time_end = (TimeNow() / MILLI);
        time_diff = time_end - *time_start;

        printf("> Loaded %ld rows into %s in %ld sec - Total =
%d (%.2f rps)\n",
                aptr->batch,
                table_name,
                time_diff,
                rows_loaded,
                (float) aptr->batch / (time_diff ?
time_diff : 1L));

        *time_start = time_end;
    }

    return;
}

//=====
//
// Function : OpenConnections
//
//=====

void OpenConnections()
{

```

```

RETCODE    rc;

char        szDriverString[300];
char        szDriverStringOut[1024];
SQLSMALLINT cbDriverStringOut;

SQLAllocHandle(SQL_HANDLE_ENV, SQL_NULL_HANDLE,
&henv );

SQLSetEnvAttr(henv, SQL_ATTR_ODBC_VERSION,
(void*)SQL_OV_ODBC3, 0);

SQLAllocHandle(SQL_HANDLE_DBC, henv , &i_hdbc1);
SQLAllocHandle(SQL_HANDLE_DBC, henv , &w_hdbc1);
SQLAllocHandle(SQL_HANDLE_DBC, henv , &c_hdbc1);
SQLAllocHandle(SQL_HANDLE_DBC, henv , &c_hdbc2);
SQLAllocHandle(SQL_HANDLE_DBC, henv , &o_hdbc1);
SQLAllocHandle(SQL_HANDLE_DBC, henv , &o_hdbc2);
SQLAllocHandle(SQL_HANDLE_DBC, henv , &o_hdbc3);

SQLSetConnectAttr(i_hdbc1, SQL_COPT_SS_BCP, (void
*)SQL_BCP_ON, SQL_IS_INTEGER);
SQLSetConnectAttr(w_hdbc1, SQL_COPT_SS_BCP, (void
*)SQL_BCP_ON, SQL_IS_INTEGER);
SQLSetConnectAttr(c_hdbc1, SQL_COPT_SS_BCP, (void
*)SQL_BCP_ON, SQL_IS_INTEGER);
SQLSetConnectAttr(c_hdbc2, SQL_COPT_SS_BCP, (void
*)SQL_BCP_ON, SQL_IS_INTEGER);
SQLSetConnectAttr(o_hdbc1, SQL_COPT_SS_BCP, (void
*)SQL_BCP_ON, SQL_IS_INTEGER);
SQLSetConnectAttr(o_hdbc2, SQL_COPT_SS_BCP, (void
*)SQL_BCP_ON, SQL_IS_INTEGER);
SQLSetConnectAttr(o_hdbc3, SQL_COPT_SS_BCP, (void
*)SQL_BCP_ON, SQL_IS_INTEGER);

// Open connections to SQL Server

// Connection 1

sprintf( szDriverString , "DRIVER={SQL
Server};SERVER=%s;UID=%s;PWD=%s;DATABASE=%s" ,
aptr->server,
aptr->password,
aptr->database );

rc = SQLSetConnectOption ( i_hdbc1, SQL_PACKET_SIZE,
aptr->pack_size);
if (rc != SUCCEED)
    HandleErrorDBC(i_hdbc1);

rc = SQLDriverConnect ( i_hdbc1,
NULL,
(SQLCHAR*)&szDriverString[0] ,
SQL_NTS,
(SQLCHAR*)&szDriverStringOut[0],
sizeof(szDriverStringOut),
&cbDriverStringOut,
SQL_DRIVER_NOPROMPT );

if (rc != SUCCEED)
    HandleErrorDBC(i_hdbc1);

// Connection 2

sprintf( szDriverString , "DRIVER={SQL
Server};SERVER=%s;UID=%s;PWD=%s;DATABASE=%s" ,
aptr->server,
aptr->password,
aptr->database );

rc = SQLSetConnectOption ( w_hdbc1, SQL_PACKET_SIZE,
aptr->pack_size);
if (rc != SUCCEED)
    HandleErrorDBC(w_hdbc1);

rc = SQLDriverConnect ( w_hdbc1,
NULL,
(SQLCHAR*)&szDriverString[0] ,
SQL_NTS,
(SQLCHAR*)&szDriverStringOut[0],
sizeof(szDriverStringOut),
&cbDriverStringOut,
SQL_DRIVER_NOPROMPT );
if (rc != SUCCEED)
    HandleErrorDBC(w_hdbc1);

// Connection 3

sprintf( szDriverString , "DRIVER={SQL
Server};SERVER=%s;UID=%s;PWD=%s;DATABASE=%s" ,
aptr->server,
aptr->password,
aptr->database );

rc = SQLSetConnectOption ( c_hdbc1, SQL_PACKET_SIZE,
aptr->pack_size);
if (rc != SUCCEED)
    HandleErrorDBC(c_hdbc1);

rc = SQLDriverConnect ( c_hdbc1,
NULL,
(SQLCHAR*)&szDriverString[0] ,
SQL_NTS,
(SQLCHAR*)&szDriverStringOut[0],
sizeof(szDriverStringOut),
&cbDriverStringOut,
SQL_DRIVER_NOPROMPT );
if (rc != SUCCEED)
    HandleErrorDBC(c_hdbc1);

```

```

SQL_DRIVER_NOPROMPT );
    if (rc != SUCCEED)
        HandleErrorDBC(c_hdbc1);

    // Connection 4

    sprintf( szDriverString , "DRIVER={SQL
Server};SERVER=%s;UID=%s;PWD=%s;DATABASE=%s" ,
aptr->server,

aptr->password,

aptr->database );

    rc = SQLSetConnectOption ( c_hdbc2, SQL_PACKET_SIZE,
aptr->pack_size);
    if (rc != SUCCEED)
        HandleErrorDBC(c_hdbc2);

    rc = SQLDriverConnect ( c_hdbc2,

NULL,

(SQLCHAR*)&szDriverString[0] ,

SQL_NTS,

(SQLCHAR*)&szDriverStringOut[0],

sizeof(szDriverStringOut),

&cbDriverStringOut,

SQL_DRIVER_NOPROMPT );
    if (rc != SUCCEED)
        HandleErrorDBC(c_hdbc2);

    // Connection 5

    sprintf( szDriverString , "DRIVER={SQL
Server};SERVER=%s;UID=%s;PWD=%s;DATABASE=%s" ,
aptr->server,

aptr->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),

```

aptr->user,

aptr->user,

```

&cbDriverStringOut,

SQL_DRIVER_NOPROMPT );
    if (rc != SUCCEED)
        HandleErrorDBC(o_hdbc1);

    // Connection 6

    sprintf( szDriverString , "DRIVER={SQL
Server};SERVER=%s;UID=%s;PWD=%s;DATABASE=%s" ,
aptr->server,

aptr->password,

aptr->database );

    rc = SQLSetConnectOption ( o_hdbc2, SQL_PACKET_SIZE,
aptr->pack_size);
    if (rc != SUCCEED)
        HandleErrorDBC(o_hdbc2);

    rc = SQLDriverConnect ( o_hdbc2,

NULL,

(SQLCHAR*)&szDriverString[0] ,

SQL_NTS,

(SQLCHAR*)&szDriverStringOut[0],

sizeof(szDriverStringOut),

&cbDriverStringOut,

SQL_DRIVER_NOPROMPT );
    if (rc != SUCCEED)
        HandleErrorDBC(o_hdbc2);

    // Connection 7

    sprintf( szDriverString , "DRIVER={SQL
Server};SERVER=%s;UID=%s;PWD=%s;DATABASE=%s" ,
aptr->server,

aptr->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],

```

aptr->user,

aptr->user,

```

sizeof(szDriverStringOut),
&cbDriverStringOut,
SQL_DRIVER_NOPROMPT );
    if (rc != SUCCEED)
        HandleErrorDBC(o_hdbc3);
}

//=====
//
// Function name: BuildIndex
//
//=====

void BuildIndex(char *index_script)
{
    char    cmd[256];

    printf("Starting index creation: %s\n",index_script);

    sprintf(cmd, "osql -S%s -U%s -P%s -e -i%\s\\%s.sql > %s%s.log",
            apr->server,
            apr->user,
            apr->password,
            apr->index_script_path,
            index_script,
            apr->log_path,
            index_script);

    system(cmd);

    printf("Finished index creation: %s\n",index_script);
}

void HandleErrorDBC (SQLHDBC hdbc1)
{
    SQLCHAR          SqlState[6],
    Msg[SQL_MAX_MESSAGE_LENGTH];
    SQLINTEGER NativeError;
    SQLSMALLINT i, MsgLen;
    SQLRETURN rc2;
    char    timebuf[128];
    char    datebuf[128];
    char    err_log_path[256];
    FILE    *fp1;

    i = 1;
    while (( rc2 = SQLGetDiagRec(SQL_HANDLE_DBC , hdbc1, i,
    SqlState , &NativeError,
                                Msg, sizeof(Msg) , &MsgLen ))
    != SQL_NO_DATA )
    {

        sprintf( szLastError , "%s" , Msg );

        _strtime(timebuf);
        _strdate(datebuf);

        printf( "[%s : %s] %s\n" , datebuf, timebuf, szLastError);

        strcpy(err_log_path,aptr->log_path);
    }
}

```

```

        strcat(err_log_path,"tpcldr.err");
        fp1 = fopen(err_log_path,"w");
        //fp1 = fopen("logs\\tpcldr.err","w");
        if (fp1 == NULL)
            printf("ERROR: Unable to open errorlog
file.\n");
        else
        {
            fprintf(fp1, "[%s : %s] %s\n" , datebuf,
timebuf, szLastError);
            fclose(fp1);
        }
        i++;
    }
}

void HandleErrorSTMT (HSTMT hstmt1)
{
    SQLCHAR          SqlState[6],
    Msg[SQL_MAX_MESSAGE_LENGTH];
    SQLINTEGER NativeError;
    SQLSMALLINT i, MsgLen;
    SQLRETURN rc2;
    char    timebuf[128];
    char    datebuf[128];
    char    err_log_path[256];
    FILE    *fp1;

    i = 1;
    while (( rc2 = SQLGetDiagRec(SQL_HANDLE_STMT , hstmt1, i,
    SqlState , &NativeError,
                                Msg, sizeof(Msg) , &MsgLen ))
    != SQL_NO_DATA )
    {

        sprintf( szLastError , "%s" , Msg );

        _strtime(timebuf);
        _strdate(datebuf);

        printf( "[%s : %s] %s\n" , datebuf, timebuf, szLastError);

        strcpy(err_log_path,aptr->log_path);
        strcat(err_log_path,"tpcldr.err");
        fp1 = fopen(err_log_path,"w");
        //fp1 = fopen("logs\\tpcldr.err","w");
        if (fp1 == NULL)
            printf("ERROR: Unable to open errorlog
file.\n");
        else
        {
            fprintf(fp1, "[%s : %s] %s\n" , datebuf,
timebuf, szLastError);
            fclose(fp1);
        }
        i++;
    }
}

void FormatDate ( char* szTimeCOutput )
{

```

```

struct tm when;
time_t now;

time( &now );
when = *localtime( &now );

mktime( &when );

// odbc datetime format
strftime( szTimeCOutput , 30 , "%Y-%m-%d %H:%M:%S.000",
&when );

return;
}

//=====
//
// Function : CheckDataBase
//
//=====

void CheckDataBase()
{
    RETCODE rc;

    char szDriverString[300];
    char szDriverStringOut[1024];
    char TablesBitMap[9] =
{"000000000"};
    int i, ExitFlag;

    SQLSMALLINT cbDriverStringOut;
    SQLCHAR TabName[10];
    SQLINTEGER TabNameInd, TabCount,
TabCountInd;

    ExitFlag = 0;

    SQLAllocHandle(SQL_HANDLE_ENV, SQL_NULL_HANDLE,
&henv );

    SQLSetEnvAttr(henv, SQL_ATTR_ODBC_VERSION,
(void*)SQL_OV_ODBC3, 0 );

    SQLAllocHandle(SQL_HANDLE_DBC, henv , &v_hdbc);

    SQLSetConnectAttr(v_hdbc, SQL_COPT_SS_BCP, (void
*)SQL_BCP_ON, SQL_IS_INTEGER );

    // Open connection to SQL Server

    sprintf( szDriverString , "DRIVER={SQL
Server};SERVER=%s;UID=%s;PWD=%s;DATABASE=%s" ,
aptr->server,
aptr->user,
aptr->password,
aptr->database );

    rc = SQLSetConnectAttr( v_hdbc, SQL_ATTR_PACKET_SIZE,
(SQLPOINTER)aptr->pack_size, SQL_IS_UIINTEGER );

```

```

if (rc != SQL_SUCCESS)
    HandleErrorDBC(v_hdbc);

rc = SQLDriverConnect ( v_hdbc,
NULL,
(SQLCHAR*)&szDriverString[0] ,
SQL_NTS,
(SQLCHAR*)&szDriverStringOut[0],
sizeof(szDriverStringOut),
&cbDriverStringOut,
SQL_DRIVER_NOPROMPT );

// if the rc is SQL_ERROR, the the TPCC database probably does
not exist
if (rc == SQL_ERROR)
{
    printf("The database TPCC does not exist!\n");
    printf("\nCheck LOGS\ directory for database creation
errors.\n");

    // cleanup database connections and handles
    SQLFreeHandle(SQL_HANDLE_STMT, v_hstmt);
    SQLDisconnect(v_hdbc);
    SQLFreeHandle(SQL_HANDLE_DBC, v_hdbc);

    // since there is not a database, exit back to SETUP.CMD
    exit(1);
}

if ( SQLAllocHandle(SQL_HANDLE_STMT, v_hdbc , &v_hstmt)
!= SQL_SUCCESS )
    HandleErrorDBC(v_hdbc);

if ( SQLBindCol(v_hstmt, 1, SQL_C_ULONG, &TabCount, 0,
&TabCountInd) != SQL_SUCCESS )
    HandleErrorSTMT(v_hstmt);

// count the number of user tables from sysobjects
rc = SQLExecDirect(v_hstmt, "select count(*) from sysobjects
where xtype = 'U'", SQL_NTS);
if ((rc != SQL_SUCCESS) && (rc !=
SQL_SUCCESS_WITH_INFO))
    HandleErrorSTMT(v_hstmt);

if ( SQLFetch(v_hstmt) != SQL_SUCCESS )
    HandleErrorSTMT(v_hstmt);

// if the number of tables is less than 9, select all the user tables in
TPCC
if (TabCount != 9)
{
    SQLFreeHandle(SQL_HANDLE_STMT, v_hstmt);

    SQLAllocHandle(SQL_HANDLE_STMT, v_hdbc ,
&v_hstmt);

    if ( SQLBindCol(v_hstmt, 1, SQL_C_CHAR,
&TabName, sizeof(TabName), &TabNameInd) != SQL_SUCCESS )
        HandleErrorSTMT(v_hstmt);

    // select the list of user tables into a result set
    rc = SQLExecDirect(v_hstmt, "select * from sysobjects
where xtype = 'U'", SQL_NTS);

```

```

        if((rc != SQL_SUCCESS) && (rc !=
SQL_SUCCESS_WITH_INFO))
            HandleErrorSTMT(v_hstmt);

// go through the result set and set the bitmap for each
found table
// set the bitmap to '1' if the table name is found
while ((rc = SQLFetch(v_hstmt)) != SQL_NO_DATA)
{
    switch( TabName[0] )
    {
        case 'w':
            TablesBitMap[0] = '1';
            break;
        case 'd':
            TablesBitMap[1] = '1';
            break;
        case 'c':
            TablesBitMap[2] = '1';
            break;
        case 'h':
            TablesBitMap[3] = '1';
            break;
        case 'n':
            TablesBitMap[4] = '1';
            break;
        case 'o':
            if (TabName[5] = 's')
                TablesBitMap[5] = '1';
            if (TabName[5] = '_')
                TablesBitMap[6] = '1';
            break;
        case 'i':
            TablesBitMap[7] = '1';
            break;
        case 's':
            TablesBitMap[8] = '1';
            break;
    }

// a '0' ExitFlag means do NOT exit the loader early, a '1'
means exit the loader early
ExitFlag = 0;

// iterate through the bitmap to display which table(s) is
actually missing
for (i = 0; i <= 8; i++)
{
    switch(i)
    {
        case 0:
            if (TablesBitMap[i] == '0')
            {
                printf("The Warehouse
table is missing or damaged.\n");
                ExitFlag = 1;
            }
            break;
        case 1:
            if (TablesBitMap[i] == '0')
            {
                printf("The District
table is missing or damaged.\n");
                ExitFlag = 1;
            }
            break;
        case 2:
            if (TablesBitMap[i] == '0')
            {
                printf("The Customer
table is missing or damaged.\n");
                ExitFlag = 1;
            }
            break;
        case 3:
            if (TablesBitMap[i] == '0')
            {
                printf("The History
table is missing or damaged.\n");
                ExitFlag = 1;
            }
            break;
        case 4:
            if (TablesBitMap[i] == '0')
            {
                printf("The New_Order
table is missing or damaged.\n");
                ExitFlag = 1;
            }
            break;
        case 5:
            if (TablesBitMap[i] == '0')
            {
                printf("The Orders table
is missing or damaged.\n");
                ExitFlag = 1;
            }
            break;
        case 6:
            if (TablesBitMap[i] == '0')
            {
                printf("The Order_Line
table is missing or damaged.\n");
                ExitFlag = 1;
            }
            break;
        case 7:
            if (TablesBitMap[i] == '0')
            {
                printf("The Item table is
missing or damaged.\n");
                ExitFlag = 1;
            }
            break;
        case 8:
            if (TablesBitMap[i] == '0')
            {
                printf("The Stock table
is missing or damaged.\n");
                ExitFlag = 1;
            }
            break;
    }
}

// if one or more tables are missing, display message and
exit the loader
if (ExitFlag = 1)
{
    printf("\nExiting TPC-C Loader!\n");
    printf("\nCheck LOGS\ directory for
database\n");
    printf("or table creation errors.\n");
}

```



```

        // cleanup database connections and handles
        SQLFreeHandle(SQL_HANDLE_STMT,
v_hstmt);
        SQLDisconnect(v_hdbc);
        SQLFreeHandle(SQL_HANDLE_DBC,
v_hdbc);
    }
    exit(1);
}

// cleanup database connections and handles
SQLFreeHandle(SQL_HANDLE_STMT, v_hstmt);
SQLDisconnect(v_hdbc);
SQLFreeHandle(SQL_HANDLE_DBC, v_hdbc);

return;
}

```

## tpccldr.mak

```

# Microsoft Developer Studio Generated NMAKE File, Format Version 4.10
# ** DO NOT EDIT **

```

```

# TARGETTYPE "Win32 (x86) Console Application" 0x0103

```

```

!IF "$(CFG)" == ""
CFG=tpccldr - Win32 Debug
!MESSAGE No configuration specified. Defaulting to tpccldr - Win32 Debug.
!ENDIF

```

```

!IF "$(CFG)" != "tpccldr - Win32 Release" && "$(CFG)" !=
"tpccldr - Win32 Debug"
!MESSAGE Invalid configuration "$(CFG)" specified.
!MESSAGE You can specify a configuration when running NMAKE on this
makefile
!MESSAGE by defining the macro CFG on the command line. For example:
!MESSAGE
!MESSAGE NMAKE /f "tpccldr.mak" CFG="tpccldr - Win32 Debug"
!MESSAGE
!MESSAGE Possible choices for configuration are:
!MESSAGE
!MESSAGE "tpccldr - Win32 Release" (based on "Win32 (x86) Console
Application")
!MESSAGE "tpccldr - Win32 Debug" (based on "Win32 (x86) Console
Application")
!MESSAGE
!ERROR An invalid configuration is specified.
!ENDIF

```

```

!IF "$(OS)" == "Windows_NT"
NULL=
!ELSE
NULL=nul
!ENDIF
#####
#####
# Begin Project
# PROP Target_Last_Scanned "tpccldr - Win32 Debug"
RSC=rc.exe
CPP=cl.exe

```

```

!IF "$(CFG)" == "tpccldr - Win32 Release"

```

```

# PROP BASE Use_MFC 0
# PROP BASE Use_Debug_Libraries 0
# PROP BASE Output_Dir "Release"

```

```

# PROP BASE Intermediate_Dir "Release"
# PROP BASE Target_Dir ""
# PROP Use_MFC 0
# PROP Use_Debug_Libraries 0
# PROP Output_Dir "bin"
# PROP Intermediate_Dir "objects"
# PROP Target_Dir ""
OUTDIR=.bin
INTDIR=.objects

```

```

ALL : "$(OUTDIR)\tpccldr.exe"

```

```

CLEAN :
    -@erase "$(INTDIR)\getargs.obj"
    -@erase "$(INTDIR)\random.obj"
    -@erase "$(INTDIR)\strings.obj"
    -@erase "$(INTDIR)\time.obj"
    -@erase "$(INTDIR)\tpccldr.obj"
    -@erase "$(OUTDIR)\tpccldr.exe"

```

```

"$(OUTDIR)" :
    if not exist "$(OUTDIR)/$(NULL)" mkdir "$(OUTDIR)"

```

```

"$(INTDIR)" :
    if not exist "$(INTDIR)/$(NULL)" mkdir "$(INTDIR)"

```

```

# ADD BASE CPP /nologo /W3 /GX /O2 /D "WIN32" /D "NDEBUG" /D
"_CONSOLE" /YX /c

```

```

# ADD CPP /nologo /MT /W3 /GX /O2 /I "c:\mssql\dblib\include" /D
"NDEBUG" /D "WIN32" /D "_CONSOLE" /D "DBNTWIN32" /c
# SUBTRACT CPP /YX

```

```

CPP_PROJ=/nologo /MT /W3 /GX /O2 /I "c:\mssql\dblib\include" /D
"NDEBUG" /D\
"WIN32" /D "_CONSOLE" /D "DBNTWIN32" /Fo"$(INTDIR)"/ /c

```

```

CPP_OBJS=.objects\

```

```

CPP_SBRS=.

```

```

# ADD BASE RSC /I 0x409 /d "NDEBUG"

```

```

# ADD RSC /I 0x409 /d "NDEBUG"

```

```

BSC32=bscmake.exe

```

```

# ADD BASE BSC32 /nologo

```

```

# ADD BSC32 /nologo

```

```

BSC32_FLAGS=/nologo /o"$(OUTDIR)\tpccldr.bsc"

```

```

BSC32_SBRS= \

```

```

LINK32=link.exe

```

```

# ADD BASE LINK32 kernel32.lib user32.lib gdi32.lib winspool.lib
comdlg32.lib advapi32.lib shell32.lib ole32.lib oleaut32.lib uuid.lib odbcc32.lib
odbccp32.lib /nologo /subsystem:console /machine:I386

```

```

# ADD LINK32 c:\mssql\dblib\lib\ntwdblib.lib kernel32.lib user32.lib gdi32.lib
winspool.lib comdlg32.lib advapi32.lib shell32.lib ole32.lib oleaut32.lib
uuid.lib odbcc32.lib odbccp32.lib /nologo /subsystem:console /pdb:none
/machine:I386

```

```

LINK32_FLAGS=c:\mssql\dblib\lib\ntwdblib.lib kernel32.lib user32.lib
gdi32.lib\

```

```

winspool.lib comdlg32.lib advapi32.lib shell32.lib ole32.lib oleaut32.lib\
uuid.lib odbcc32.lib odbccp32.lib /nologo /subsystem:console /pdb:none\
/machine:I386 /out:"$(OUTDIR)\tpccldr.exe"

```

```

LINK32_OBJS= \

```

```

    "$(INTDIR)\getargs.obj" \

```

```

    "$(INTDIR)\random.obj" \

```

```

    "$(INTDIR)\strings.obj" \

```

```

    "$(INTDIR)\time.obj" \

```

```

    "$(INTDIR)\tpccldr.obj"

```

```

"$(OUTDIR)\tpccldr.exe" : "$(OUTDIR)" $(DEF_FILE) $(LINK32_OBJS)
    $(LINK32) @<<
    $(LINK32_FLAGS) $(LINK32_OBJS)
<<

```

```

ELSEIF "$(CFG)" == "tpcldr - Win32 Debug"

# PROP BASE Use_MFC 0
# PROP BASE Use_Debug_Libraries 1
# PROP BASE Output_Dir "Debug"
# PROP BASE Intermediate_Dir "Debug"
# PROP BASE Target_Dir ""
# PROP Use_MFC 0
# PROP Use_Debug_Libraries 1
# PROP Output_Dir "bin"
# PROP Intermediate_Dir "objects"
# PROP Target_Dir ""
OUTDIR=.bin
INTDIR=.objects

ALL : "$(OUTDIR)\tpcldr.exe"

CLEAN :
    -@erase "$(INTDIR)\getargs.obj"
    -@erase "$(INTDIR)\random.obj"
    -@erase "$(INTDIR)\strings.obj"
    -@erase "$(INTDIR)\time.obj"
    -@erase "$(INTDIR)\tpcldr.obj"
    -@erase "$(INTDIR)\vc40.idb"
    -@erase "$(INTDIR)\vc40.pdb"
    -@erase "$(OUTDIR)\tpcldr.exe"

"$(OUTDIR)" :
    if not exist "$(OUTDIR)/$(NULL)" mkdir "$(OUTDIR)"

"$(INTDIR)" :
    if not exist "$(INTDIR)/$(NULL)" mkdir "$(INTDIR)"

# ADD BASE CPP /nologo /W3 /Gm /GX /Zi /Od /D "WIN32" /D "_DEBUG"
/D "_CONSOLE" /YX /c
# ADD CPP /nologo /MTd /W3 /Gm /GX /Zi /Od /I "c:\mssql\dblib\include" /D
"_DEBUG" /D "WIN32" /D "_CONSOLE" /D "DBNTWIN32" /c
# SUBTRACT CPP /YX
CPP_PROJ=/nologo /MTd /W3 /Gm /GX /Zi /Od /I "c:\mssql\dblib\include" /D
"_DEBUG" /D "WIN32" /D "_CONSOLE" /D "DBNTWIN32"
/Fo"$(INTDIR)/"
/Fd"$(INTDIR)/" /c
CPP_OBJS=.objects\
CPP_SBRS=.
# ADD BASE RSC /I 0x409 /d "_DEBUG"
# ADD RSC /I 0x409 /d "_DEBUG"
BSC32=bscmake.exe
# ADD BASE BSC32 /nologo
# ADD BSC32 /nologo
BSC32_FLAGS=/nologo /o"$(OUTDIR)\tpcldr.bsc"
BSC32_SBRS= \

LINK32=link.exe
# ADD BASE LINK32 kernel32.lib user32.lib gdi32.lib winspool.lib
comdlg32.lib advapi32.lib shell32.lib ole32.lib oleaut32.lib uuid.lib odbccp32.lib
/nologo /subsystem:console /debug /machine:I386
# ADD LINK32 c:\mssql\dblib\lib\ntwdblib.lib kernel32.lib user32.lib gdi32.lib
winspool.lib comdlg32.lib advapi32.lib shell32.lib ole32.lib oleaut32.lib
uuid.lib odbccp32.lib /nologo /subsystem:console /pdb:none /debug
/machine:I386
LINK32_FLAGS=c:\mssql\dblib\lib\ntwdblib.lib kernel32.lib user32.lib
gdi32.lib
winspool.lib comdlg32.lib advapi32.lib shell32.lib ole32.lib oleaut32.lib\
uuid.lib odbccp32.lib /nologo /subsystem:console /pdb:none /debug\
/machine:I386 /out:"$(OUTDIR)\tpcldr.exe"
LINK32_OBJS= \
    "$(INTDIR)\getargs.obj" \

```

```

"$(INTDIR)\random.obj" \
"$(INTDIR)\strings.obj" \
"$(INTDIR)\time.obj" \
"$(INTDIR)\tpcldr.obj"

"$(OUTDIR)\tpcldr.exe" : "$(OUTDIR)" $(DEF_FILE) $(LINK32_OBJS)
$(LINK32) @<<
$(LINK32_FLAGS) $(LINK32_OBJS)
<<

!ENDIF

c{$(CPP_OBJS)}.obj:
$(CPP) $(CPP_PROJ) $<

.cpp{$(CPP_OBJS)}.obj:
$(CPP) $(CPP_PROJ) $<

.cxx{$(CPP_OBJS)}.obj:
$(CPP) $(CPP_PROJ) $<

.c{$(CPP_SBRS)}.sbr:
$(CPP) $(CPP_PROJ) $<

.cpp{$(CPP_SBRS)}.sbr:
$(CPP) $(CPP_PROJ) $<

.cxx{$(CPP_SBRS)}.sbr:
$(CPP) $(CPP_PROJ) $<

#####
#####
# Begin Target

# Name "tpcldr - Win32 Release"
# Name "tpcldr - Win32 Debug"

!IF "$(CFG)" == "tpcldr - Win32 Release"

!ELSEIF "$(CFG)" == "tpcldr - Win32 Debug"

!ENDIF

#####
#####
# Begin Source File

SOURCE=.src\random.c
DEP_CPP_RANDO=\
    ".src\tpcc.h" \
    "mssql\dblib\include\sqlldb.h" \
    "mssql\dblib\include\sqlfront.h" \

"$(INTDIR)\random.obj" : $(SOURCE) $(DEP_CPP_RANDO) "$(INTDIR)"
$(CPP) $(CPP_PROJ) $(SOURCE)

# End Source File
#####
#####
# Begin Source File

SOURCE=.src\strings.c
DEP_CPP_STRIN=\
    ".src\tpcc.h" \
    "mssql\dblib\include\sqlldb.h" \
    "mssql\dblib\include\sqlfront.h" \

```

```
"$(INTDIR)\strings.obj" : $(SOURCE) $(DEP_CPP_STRIN) "$(INTDIR)"
$(CPP) $(CPP_PROJ) $(SOURCE)
```

```
# End Source File
```

```
#####
#####
```

```
# Begin Source File
```

```
SOURCE=. \src\time.c
DEP_CPP_TIME_=\
    ".\src\tpcc.h"
    "\mssql\dblib\include\sqldb.h"
    "\mssql\dblib\include\sqlfront.h"
```

```
"$(INTDIR)\time.obj" : $(SOURCE) $(DEP_CPP_TIME_) "$(INTDIR)"
$(CPP) $(CPP_PROJ) $(SOURCE)
```

```
# End Source File
```

```
#####
#####
```

```
# Begin Source File
```

```
SOURCE=. \src\tpccldr.c
DEP_CPP_TPCC=\
    ".\src\tpcc.h"
    "\mssql\dblib\include\sqldb.h"
    "\mssql\dblib\include\sqlfront.h"
```

```
"$(INTDIR)\tpccldr.obj" : $(SOURCE) $(DEP_CPP_TPCC) "$(INTDIR)"
$(CPP) $(CPP_PROJ) $(SOURCE)
```

```
# End Source File
```

```
#####
#####
```

```
# Begin Source File
```

```
SOURCE=. \src\getargs.c
DEP_CPP_GETAR=\
    ".\src\tpcc.h"
    "\mssql\dblib\include\sqldb.h"
    "\mssql\dblib\include\sqlfront.h"
```

```
"$(INTDIR)\getargs.obj" : $(SOURCE) $(DEP_CPP_GETAR) "$(INTDIR)"
$(CPP) $(CPP_PROJ) $(SOURCE)
```

```
# End Source File
```

```
# End Target
```

```
# End Project
```

```
#####
#####
```

## VerifyTpccLoad.sql

```
-- File: VERIFYTPCCLOAD.SQL
-- Microsoft TPC-C Benchmark Kit Ver. 4.41
-- Copyright Microsoft, 2001
-- Purpose: Performs series of TPCC database checks to verify
```

```
-- that database load completed correctly

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

use tpcc
go

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

print 'WAREHOUSE TABLE'

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

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

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

print 'ITEM TABLE = 100,000'

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

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

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

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

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

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

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

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

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

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

select count_big(*)
```

```

from order_line
go

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

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

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

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

use tpcc
go

sp_helpindex customer
go

sp_helpindex stock
go

sp_helpindex district
go

sp_helpindex item
go

sp_helpindex new_order
go

sp_helpindex orders
go

sp_helpindex order_line
go

sp_helpindex warehouse
go

```

### ***version.sql***

```

-- File: VERSION.SQL
-- Microsoft TPC-C Benchmark Kit Ver. 4.41
-- Copyright Microsoft, 2001
-- Purpose: Extracts current version of SQL Server

use master
go

SELECT CONVERT(char(20), SERVERPROPERTY('ProductVersion'))
go

SELECT CONVERT(char(20), SERVERPROPERTY('ProductLevel'))
go

SELECT CONVERT(char(30), getdate(),9)
go

```

# Appendix C: Tunable Parameters

## Microsoft SQL Server 2000 Configuration Parameters

1> 2> 3> 4> 5> 6> 7> 8> 9> 10> 11>

```
-- File:  VERSION.SQL
--      Microsoft TPC-C Benchmark Kit Ver. 4.22
--      Copyright Microsoft, 2001
-- Purpose: Returns SQL Server version string
```

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

```
-----
Mar 18 2004 2:59:03:463PM
```

(1 row affected)

```
1> 2> 3>
select @@version
```

```
-----
-----
-----
```

```
Microsoft SQL Server 2000 - 8.00.883 (Intel X86)
Nov 19 2003 09:33:09
Cop
yright (c) 1988-2003 Microsoft Corporation
Enterprise Edition on Windo
ws NT 5.2 (Build 3790: )
```

(1 row affected)

```
1> 2>
1> 2> 3> 4> 5> 6> 7> 8> 9> 10>
-- File:  CONFIG.SQL
--      Microsoft TPC-C Benchmark Kit Ver. 4.22
--      Copyright Microsoft, 2001
-- Purpose: Collects SQL Server configuration parameters
```

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

```
-----
Mar 18 2004 2:59:05:493PM
```

(1 row affected)

```
1> 2> 3> DBCC execution completed. If DBCC printed error messages, contact
your system administrator.
Configuration option 'show advanced options' changed from 1 to 1. Run the
RECONFIGURE statement to install.
```

```
sp_configure "show advanced",1
1> 2> reconfigure with override
1> 2> sp_configure
```

name	minimum	maximum
config_value run_value		
-----		
affinity mask	-2147483648	2147483647
-524289 -524289		
allow updates	0	1 0
0		
awe enabled	0	1 1
1		
c2 audit mode	0	1 0
0		
cost threshold for parallelism	0	32767
5 5		
Cross DB Ownership Chaining		0 1
0 0		
cursor threshold	-1	2147483647
-1 -1		
default full-text language	0	2147483647
1033 1033		
default language	0	9999 0
0		
fill factor (%)	0	100 0
0		
index create memory (KB)		704 2147483647
0 0		
lightweight pooling	0	1 1
1		
locks	5000	2147483647 0
0		
max degree of parallelism	0	32 1
1		
max server memory (MB)	4	2147483647
62600 62600		
max text repl size (B)	0	2147483647
65536 65536		
max worker threads	32	32767
700 700		
media retention	0	365 0
0		
min memory per query (KB)		512 2147483647
1024 1024		
min server memory (MB)	0	2147483647
0 0		
nested triggers	0	1 1
1		
network packet size (B)	512	65536
4096 4096		
open objects	0	2147483647 0
0		
priority boost	0	1 1
1		
query governor cost limit	0	2147483647
0 0		
query wait (s)	-1	2147483647 -1
-1		
recovery interval (min)	0	32767
112 112		
remote access	0	1 1
1		
remote login timeout (s)	0	2147483647
0 0		
remote proc trans	0	1 0
0		
remote query timeout (s)	0	2147483647
0 0		
scan for startup procs	0	1 0
0		

```

set working set size          0    1    0
0
show advanced options        0    1    1
1
two digit year cutoff        1753  9999
2049  2049
user connections             0    32767  0
0
user options                 0    32767  0
0
l>

```

## Microsoft Windows Server 2003 Datacenter Edition

### Changes to the SUT

Changes made to the default installation Windows Server 2003 DataCenter Edition on the SUT  
 Installed hotfix from Microsoft, KB834628  
 All services were left in their default setup.  
 Control Panel - System - Advanced - Performance Options - Visual Effects - Adjust for best performance  
 Control Panel - System - Advanced - Performance Options - Advanced - Memory usage - Adjust for best performance of: Programs  
 c:\boot.ini added /PAE /hal=halx440.dll  
 gpedit.msc - Computer Configuration - Windows Settings - Security Settings - Local Policies - User Rights Assignments - policy 'Lock pages in memory' added group 'Administrators'  
 Enabled VIA protocol for SQL Server  
 Microsoft SQL Server Startup Parameters  
 C:\Program Files\Microsoft SQL Server\MSSQL\Binn\sqlservr -c -x -t3502 -T3428  
 where:  
 -c Start SQL Server independent of the Service Control Manager  
 -x Disable the keeping of CPU time and cache hit ratio statistic  
 -t3502 writes a message to the SQL Server Errorlog showing the beginning and ending time of each checkpoint  
 -T3428 allows for faster recovery of corrupt database

In a command prompt run the following prior to starting SQL Server:

```

set logaffinity=19
This ties SQL log affinity to the 19th processor in the system.
regedit
Added DWORD value to
HKLM\SYSTEM\CurrentControlSet\Services\tcpip\Parameters
"MaxUserPort" 0x9c40
Key Name:
HKEY_LOCAL_MACHINE\SYSTEM\CurrentControlSet\Control\Session
Manager\Memory Management
Class Name: <NO CLASS>
Last Write Time: 1/23/2003 - 2:44 PM
Value 0
Name: ClearPageFileAtShutdown
Type: REG_DWORD
Data: 0
Value 1
Name: DisablePagingExecutive
Type: REG_DWORD
Data: 0
Value 2
Name: LargeSystemCache
Type: REG_DWORD

```

```

Data: 0
Value 3
Name: NonPagedPoolQuota
Type: REG_DWORD
Data: 0
Value 4
Name: NonPagedPoolSize
Type: REG_DWORD
Data: 0
Value 5
Name: PagedPoolQuota
Type: REG_DWORD
Data: 0
Value 6
Name: PagedPoolSize
Type: REG_DWORD
Data: 0
Value 7
Name: SecondLevelDataCache
Type: REG_DWORD
Data: 0
Value 8
Name: SystemPages
Type: REG_DWORD
Data: 0x33000
Value 9
Name: PagingFiles
Type: REG_MULTI_SZ
Data: c:\pagefile.sys 2046 4092
Value 10
Name: PhysicalAddressExtension
Type: REG_DWORD
Data: 0x1
Value 11
Name: WriteWatch
Type: REG_DWORD
Data: 0x1
Value 12
Name: SessionViewSize
Type: REG_DWORD
Data: 0x30
Value 13
Name: SessionPoolSize
Type: REG_DWORD
Data: 0x4
Value 14
Name: DontVerifyRandomDrivers
Type: REG_DWORD
Data: 0x1
Key Name:
HKEY_LOCAL_MACHINE\SYSTEM\CurrentControlSet\Control\Session
Manager\I/O System
Class Name: <NO CLASS>
Last Write Time: 1/23/2003 - 1:41 PM
Value 0

```

Name: CountOperations  
Type: REG\_DWORD  
Data: 0

Key Name:  
HKEY\_LOCAL\_MACHINE\SYSTEM\CurrentControlSet\Services\qlvika  
Class Name: <NO CLASS>  
Last Write Time: 3/18/2004 - 9:53 AM

Value 0  
Name: ErrorControl  
Type: REG\_DWORD  
Data: 0x1

Value 1  
Name: start  
Type: REG\_DWORD  
Data: 0x2

Value 2  
Name: type  
Type: REG\_DWORD  
Data: 0x1

Value 3  
Name: Tag  
Type: REG\_DWORD  
Data: 0x1

Value 4  
Name: group  
Type: REG\_SZ  
Data: MVIA

Value 5  
Name: ImagePath  
Type: REG\_EXPAND\_SZ  
Data: system32\DRIVERS\qlvika.sys

Key Name:  
HKEY\_LOCAL\_MACHINE\SYSTEM\CurrentControlSet\Services\qlvika\Adapters  
Class Name: <NO CLASS>  
Last Write Time: 5/19/2003 - 4:13 PM

Key Name:  
HKEY\_LOCAL\_MACHINE\SYSTEM\CurrentControlSet\Services\qlvika\Adapters\210000E08B0723B0  
Class Name: <NO CLASS>  
Last Write Time: 4/16/2003 - 1:13 PM

Value 0  
Name: IPAddress  
Type: REG\_MULTI\_SZ  
Data: 192.168.191.1

Value 1  
Name: VIDeviceNumber  
Type: REG\_DWORD  
Data: 0

Key Name:  
HKEY\_LOCAL\_MACHINE\SYSTEM\CurrentControlSet\Services\qlvika\Adapters\210000E08B07E5AF  
Class Name: <NO CLASS>  
Last Write Time: 4/16/2003 - 1:13 PM

Value 0  
Name: IPAddress

Type: REG\_MULTI\_SZ  
Data: 192.168.195.1

Value 1  
Name: VIDeviceNumber  
Type: REG\_DWORD  
Data: 0x1

Key Name:  
HKEY\_LOCAL\_MACHINE\SYSTEM\CurrentControlSet\Services\qlvika\Adapters\210000E08B09315a  
Class Name: <NO CLASS>  
Last Write Time: 4/16/2003 - 1:13 PM

Value 0  
Name: IPAddress  
Type: REG\_MULTI\_SZ  
Data: 192.168.193.1

Value 1  
Name: VIDeviceNumber  
Type: REG\_DWORD  
Data: 0x2

Key Name:  
HKEY\_LOCAL\_MACHINE\SYSTEM\CurrentControlSet\Services\qlvika\Adapters\210000E08B09335a  
Class Name: <NO CLASS>  
Last Write Time: 4/16/2003 - 1:13 PM

Value 0  
Name: IPAddress  
Type: REG\_MULTI\_SZ  
Data: 192.168.197.1

Value 1  
Name: VIDeviceNumber  
Type: REG\_DWORD  
Data: 0x3

Key Name:  
HKEY\_LOCAL\_MACHINE\SYSTEM\CurrentControlSet\Services\qlvika\Adapters\210000E08B09A05A  
Class Name: Key  
Last Write Time: 5/19/2003 - 4:17 PM

Value 0  
Name: IPAddress  
Type: REG\_MULTI\_SZ  
Data: 192.168.199.1

Value 1  
Name: VIDeviceNumber  
Type: REG\_DWORD  
Data: 0x6

Key Name:  
HKEY\_LOCAL\_MACHINE\SYSTEM\CurrentControlSet\Services\qlvika\Adapters\210000E08B0BCEf0  
Class Name: Key  
Last Write Time: 5/19/2003 - 2:03 PM

Value 0  
Name: IPAddress  
Type: REG\_MULTI\_SZ  
Data: 192.168.192.1

Value 1

Name: VIDeviceNumber  
Type: REG\_DWORD  
Data: 0x4

Key Name:  
HKEY\_LOCAL\_MACHINE\SYSTEM\CurrentControlSet\Services\qlvika\Adapters\210000E08B0BCFF0

Class Name: Key  
Last Write Time: 5/19/2003 - 2:02 PM

Value 0  
Name: IPAddress  
Type: REG\_MULTI\_SZ  
Data: 192.168.194.1

Value 1  
Name: VIDeviceNumber  
Type: REG\_DWORD  
Data: 0x5

Key Name:  
HKEY\_LOCAL\_MACHINE\SYSTEM\CurrentControlSet\Services\qlvika\Adapters\210000E08B0BD1F0

Class Name: Key  
Last Write Time: 5/19/2003 - 2:02 PM

Value 0  
Name: IPAddress  
Type: REG\_MULTI\_SZ  
Data: 192.168.198.1

Value 1  
Name: VIDeviceNumber  
Type: REG\_DWORD  
Data: 0x7

Key Name:  
HKEY\_LOCAL\_MACHINE\SYSTEM\CurrentControlSet\Services\qlvika\Parameters

Class Name: <NO CLASS>  
Last Write Time: 10/1/2003 - 1:56 PM

Value 0  
Name: MaxRegisterMBytes  
Type: REG\_DWORD  
Data: 0x200

Value 1  
Name: MaxRegisterRdmaMBytes  
Type: REG\_DWORD  
Data: 0x200

Value 2  
Name: MaxCQEntries  
Type: REG\_DWORD  
Data: 0x2000

Value 3  
Name: MaxRegisterRegions  
Type: REG\_DWORD  
Data: 0x1000

Value 4  
Name: MaxVIs  
Type: REG\_DWORD  
Data: 0x400

Value 5

Name: MaxCQs  
Type: REG\_DWORD  
Data: 0x400

Value 6  
Name: MaxTransferSize  
Type: REG\_DWORD  
Data: 0x10000

Value 7  
Name: MaxPTags  
Type: REG\_DWORD  
Data: 0x800

Value 8  
Name: IuBuffers  
Type: REG\_DWORD  
Data: 0x100

Value 9  
Name: SendDescQuota  
Type: REG\_DWORD  
Data: 0x8

Value 10  
Name: RecvDescQuota  
Type: REG\_DWORD  
Data: 0x8

Value 11  
Name: SupportPrototypeCards  
Type: REG\_DWORD  
Data: 0

Value 12  
Name: HostFile  
Type: REG\_MULTI\_SZ  
Data: C:\WINDOWS\system32\drivers\etc\hosts

Key Name:  
HKEY\_LOCAL\_MACHINE\SYSTEM\CurrentControlSet\Services\qlvika\Security

Class Name: <NO CLASS>  
Last Write Time: 4/16/2003 - 1:09 PM

Value 0  
Name: Security  
Type: REG\_BINARY  
Data:

00000000 01 00 14 80 90 00 00 00 - 9c 00 00 00 14 00 00 00 .....  
00000010 30 00 00 00 02 00 1c 00 - 01 00 00 00 02 80 14 00 0.....  
00000020 ff 01 0f 00 01 01 00 00 - 00 00 00 01 00 00 00 00 ý.....  
00000030 02 00 60 00 04 00 00 00 - 00 00 14 00 fd 01 02 00 ..'.....ý...  
00000040 01 01 00 00 00 00 00 05 - 12 00 00 00 00 00 18 00 .....  
00000050 ff 01 0f 00 01 02 00 00 - 00 00 00 05 20 00 00 00 ý.....  
00000060 20 02 00 00 00 00 14 00 - 8d 01 02 00 01 01 00 00 .....  
00000070 00 00 00 05 0b 00 00 00 - 00 00 18 00 fd 01 02 00 .....ý...  
00000080 01 02 00 00 00 00 00 05 - 20 00 00 00 23 02 00 00 .....#...  
00000090 01 01 00 00 00 00 00 05 - 12 00 00 00 01 01 00 00 .....  
00 00 00 05 12 00 00 00 - .....

Key Name:  
HKEY\_LOCAL\_MACHINE\SYSTEM\CurrentControlSet\Services\qlvika\Enum

Class Name: <NO CLASS>  
Last Write Time: 3/18/2004 - 9:53 AM

Value 0



Name: 0  
Type: REG\_SZ  
Data: Root\LEGACY\_QLVIKA\0000

Value 1  
Name: Count  
Type: REG\_DWORD  
Data: 0x1

Value 2  
Name: NextInstance  
Type: REG\_DWORD  
Data: 0x1

## SUT System Information Report

System Information report written at: 03/18/04 15:04:05

System Name: IBMSERV4

[System Summary]

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

OS Name	Microsoft(R) Windows(R) Server 2003, Datacenter Edition
---------	---------------------------------------------------------

Version	5.2.3790 Build 3790
---------	---------------------

OS Manufacturer	Microsoft Corporation
-----------------	-----------------------

System Name	IBMSERV4
-------------	----------

System Manufacturer	IBM
---------------------	-----

System Model	eserver xSeries 445 -[88704RX]-
--------------	---------------------------------

System Type	X86-based PC
-------------	--------------

Processor	x86 Family 15 Model 2 Stepping 6 GenuineIntel ~3000 Mhz
-----------	---------------------------------------------------------

Processor	x86 Family 15 Model 2 Stepping 6 GenuineIntel ~2999 Mhz
-----------	---------------------------------------------------------

Processor	x86 Family 15 Model 2 Stepping 6 GenuineIntel ~2999 Mhz
-----------	---------------------------------------------------------

Processor	x86 Family 15 Model 2 Stepping 6 GenuineIntel ~2999 Mhz
-----------	---------------------------------------------------------

Processor	x86 Family 15 Model 2 Stepping 6 GenuineIntel ~2999 Mhz
-----------	---------------------------------------------------------

Processor	x86 Family 15 Model 2 Stepping 6 GenuineIntel ~3000 Mhz
-----------	---------------------------------------------------------

Processor	x86 Family 15 Model 2 Stepping 6 GenuineIntel ~3000 Mhz
-----------	---------------------------------------------------------

Processor	x86 Family 15 Model 2 Stepping 6 GenuineIntel ~3000 Mhz
-----------	---------------------------------------------------------

Processor	x86 Family 15 Model 2 Stepping 6 GenuineIntel ~2999 Mhz
-----------	---------------------------------------------------------

Processor	x86 Family 15 Model 2 Stepping 6 GenuineIntel ~2999 Mhz
-----------	---------------------------------------------------------

Processor	x86 Family 15 Model 2 Stepping 6 GenuineIntel ~2999 Mhz
-----------	---------------------------------------------------------

Processor	x86 Family 15 Model 2 Stepping 6 GenuineIntel ~2999 Mhz
-----------	---------------------------------------------------------

Processor	x86 Family 15 Model 2 Stepping 6 GenuineIntel ~2999 Mhz
-----------	---------------------------------------------------------

Processor	x86 Family 15 Model 2 Stepping 6 GenuineIntel ~3000 Mhz
-----------	---------------------------------------------------------

Processor	x86 Family 15 Model 2 Stepping 6 GenuineIntel ~3000 Mhz
-----------	---------------------------------------------------------

Processor	x86 Family 15 Model 2 Stepping 6 GenuineIntel ~3000 Mhz
-----------	---------------------------------------------------------

Processor	x86 Family 15 Model 2 Stepping 6 GenuineIntel ~2999 Mhz
-----------	---------------------------------------------------------

Processor	x86 Family 15 Model 2 Stepping 6 GenuineIntel ~2999 Mhz
-----------	---------------------------------------------------------

Processor	x86 Family 15 Model 2 Stepping 6 GenuineIntel ~2999 Mhz
-----------	---------------------------------------------------------

Processor	x86 Family 15 Model 2 Stepping 6 GenuineIntel ~2999 Mhz
-----------	---------------------------------------------------------

Processor	x86 Family 15 Model 2 Stepping 6 GenuineIntel ~3000 Mhz
-----------	---------------------------------------------------------

Processor	x86 Family 15 Model 2 Stepping 6 GenuineIntel ~3000 Mhz
-----------	---------------------------------------------------------

Processor	x86 Family 15 Model 2 Stepping 6 GenuineIntel ~2999 Mhz
-----------	---------------------------------------------------------

Processor	x86 Family 15 Model 2 Stepping 6 GenuineIntel ~3000 Mhz
-----------	---------------------------------------------------------

Processor	x86 Family 15 Model 2 Stepping 6 GenuineIntel ~2999 Mhz
-----------	---------------------------------------------------------

Processor	x86 Family 15 Model 2 Stepping 6 GenuineIntel ~2999 Mhz
-----------	---------------------------------------------------------

Processor	x86 Family 15 Model 2 Stepping 6 GenuineIntel ~2999 Mhz
-----------	---------------------------------------------------------

Processor	x86 Family 15 Model 2 Stepping 6 GenuineIntel ~3000 Mhz
-----------	---------------------------------------------------------

Processor	x86 Family 15 Model 2 Stepping 6 GenuineIntel ~3000 Mhz
-----------	---------------------------------------------------------

Processor	x86 Family 15 Model 2 Stepping 6 GenuineIntel ~3000 Mhz
-----------	---------------------------------------------------------

Processor	x86 Family 15 Model 2 Stepping 6 GenuineIntel ~3000 Mhz
-----------	---------------------------------------------------------

Processor	x86 Family 15 Model 2 Stepping 6 GenuineIntel ~3000 Mhz
-----------	---------------------------------------------------------

BIOS Version/Date	IBM -[REE136PF1-1.0;]-, 2/9/2004
-------------------	----------------------------------

SMBIOS Version	2.3
----------------	-----

Windows Directory	C:\WINDOWS
-------------------	------------

System Directory	C:\WINDOWS\system32
------------------	---------------------

Boot Device	\Device\HarddiskVolume1
-------------	-------------------------

Locale	United States
--------	---------------

Hardware Abstraction Layer	Version = "1.20.0000 built by: (x86chk_i)"
----------------------------	--------------------------------------------

User Name	IBMSERV4\Administrator
-----------	------------------------

Time Zone	Eastern Standard Time
-----------	-----------------------

Total Physical Memory	65,536.00 MB
-----------------------	--------------

Available Physical Memory	62.24 GB
---------------------------	----------

Total Virtual Memory	127.43 GB
----------------------	-----------

Available Virtual Memory	126.49 GB
--------------------------	-----------

Page File Space	64.43 GB
-----------------	----------

Page File	C:\pagefile.sys
-----------	-----------------

[Hardware Resources]

[Conflicts/Sharing]

Resource Device

I/O Port 0x00000000-0x00001FFF PCI bus  
 I/O Port 0x00000000-0x00001FFF Direct memory access controller  
 Memory Address 0xF4000000-0xF5FFFFFF PCI bus  
 Memory Address 0xF4000000-0xF5FFFFFF RAGE XL PCI  
 I/O Port 0x0000C400-0x0000C5FF PCI bus  
 I/O Port 0x0000C400-0x0000C5FF QLogic QLA23xx PCI Fibre Channel Adapter  
 I/O Port 0x00002000-0x000027FF PCI bus  
 I/O Port 0x00002000-0x000027FF LSI Logic PCI-X Ultra320 SCSI Host Adapter  
 Memory Address 0xEC400000-0xEC4FFFFFF Intel 21154 PCI to PCI bridge  
 Memory Address 0xEC400000-0xEC4FFFFFF Intel(R) PRO/100 S Dual Port Server Adapter #3  
 I/O Port 0x0000E000-0x0000FFFF PCI bus  
 I/O Port 0x0000E000-0x0000FFFF Intel 21154 PCI to PCI bridge  
 I/O Port 0x0000E000-0x0000FFFF Intel(R) PRO/100 S Dual Port Server Adapter #3  
 I/O Port 0x0000C200-0x0000C3FF PCI bus  
 I/O Port 0x0000C200-0x0000C3FF LSI Logic PCI-X Ultra320 SCSI Host Adapter  
 I/O Port 0x00002800-0x000029FF PCI bus  
 I/O Port 0x00002800-0x000029FF QLogic QLA23xx PCI Fibre Channel Adapter  
 I/O Port 0x0000D400-0x0000D5FF PCI bus  
 I/O Port 0x0000D400-0x0000D5FF QLogic QLA23xx PCI Fibre Channel Adapter  
 Memory Address 0xE9000000-0xE90FFFFFF PCI bus  
 Memory Address 0xE9000000-0xE90FFFFFF LSI Logic PCI-X Ultra320 SCSI Host Adapter  
 Memory Address 0xA0000-0xA7FFF PCI bus  
 Memory Address 0xA0000-0xA7FFF RAGE XL PCI  
 Memory Address 0xF7600000-0xF76FFFFFF PCI bus  
 Memory Address 0xF7600000-0xF76FFFFFF LSI Logic PCI-X Ultra320 SCSI Host Adapter

I/O Port 0x0000C600-0x0000C7FF PCI bus  
 I/O Port 0x0000C600-0x0000C7FF QLogic QLA23xx PCI Fibre Channel Adapter

Memory Address 0xE8C00000-0xE8DFFFFFF PCI bus  
 Memory Address 0xE8C00000-0xE8DFFFFFF Other PCI Bridge Device

[DMA]

Resource Device Status

Channel 2 Standard floppy disk controller OK  
 Channel 4 Direct memory access controller OK

[Forced Hardware]

Device PNP Device ID

[I/O]

Resource Device Status

0x00000000-0x00001FFF PCI bus OK  
 0x00000000-0x00001FFF Direct memory access controller OK  
 0x00001800-0x000018FF RAGE XL PCI OK  
 0x000003B0-0x000003BB RAGE XL PCI OK  
 0x000003C0-0x000003DF RAGE XL PCI OK  
 0x00001900-0x0000197F Other PCI Bridge Device OK  
 0x00000A79-0x00000A79 ISAPNP Read Data Port OK  
 0x00000279-0x00000279 ISAPNP Read Data Port OK  
 0x00000274-0x00000277 ISAPNP Read Data Port OK  
 0x00000430-0x00000437 Motherboard resources OK  
 0x00000438-0x00000439 Motherboard resources OK  
 0x0000002E-0x0000002F Motherboard resources OK  
 0x00000064-0x00000064 Standard 101/102-Key or Microsoft Natural PS/2 Keyboard OK  
 0x00000060-0x00000060 Standard 101/102-Key or Microsoft Natural PS/2 Keyboard OK  
 0x000003F0-0x000003F5 Standard floppy disk controller OK  
 0x000003F7-0x000003F7 Standard floppy disk controller OK  
 0x00000020-0x00000021 Advanced programmable interrupt controller OK  
 0x000000A0-0x000000A1 Advanced programmable interrupt controller OK  
 0x00000080-0x0000008F Direct memory access controller OK

0x000000C0-0x000000DF	Direct memory access controller	OK	0x0000C300-0x0000C3FF	LSI Logic PCI-X Ultra320 SCSI Host Adapter	OK
0x00000040-0x00000043	System timer	OK	0x0000C400-0x0000C5FF	PCI bus	OK
0x00000070-0x00000073	System CMOS/real time clock	OK	0x0000C400-0x0000C5FF	QLogic QLA23xx PCI Fibre Channel Adapter	OK
0x00000061-0x00000061	System speaker	OK	0x0000C500-0x0000C5FF	QLogic QLA23xx PCI Fibre Channel Adapter	OK
0x000000F0-0x000000FF	Numeric data processor	OK	0x0000C600-0x0000C7FF	PCI bus	OK
0x00000092-0x00000092	Motherboard resources	OK	0x0000C600-0x0000C7FF	QLogic QLA23xx PCI Fibre Channel Adapter	OK
0x000000A8-0x000000A9	Motherboard resources	OK	0x0000C800-0x0000C9FF	PCI bus	OK
0x00000440-0x0000044F	Motherboard resources	OK	0x0000CC00-0x0000CFFF	PCI bus	OK
0x000004C0-0x000004C3	Motherboard resources	OK	0x0000CE00-0x0000CEFF	QLogic QLA23xx PCI Fibre Channel Adapter	OK
0x000004D0-0x000004D1	Motherboard resources	OK	0x00008000-0x000083FF	PCI bus	OK
0x000004E0-0x000004FF	Motherboard resources	OK	0x00008400-0x000087FF	PCI bus	OK
0x00000500-0x0000057F	Motherboard resources	OK	0x00008600-0x000086FF	QLogic QLA23xx PCI Fibre Channel Adapter	OK
0x00000700-0x0000070F	VIA Bus Master IDE Controller	OK	0x0000A000-0x0000BFFF	PCI bus	OK
0x000001F0-0x000001F7	Primary IDE Channel	OK	0x0000B000-0x0000B0FF	QLogic QLA23xx PCI Fibre Channel Adapter	OK
0x000003F6-0x000003F6	Primary IDE Channel	OK	0x0000E000-0x0000FFFF	PCI bus	OK
0x00000170-0x00000177	Secondary IDE Channel	OK	0x0000E000-0x0000FFFF	Intel 21154 PCI to PCI bridge	OK
0x00000376-0x00000376	Secondary IDE Channel	OK	0x0000E000-0x0000FFFF	Intel(R) PRO/100 S Dual Port Server Adapter #3	OK
0x00002000-0x000027FF	PCI bus	OK	0x0000E040-0x0000E07F	Intel(R) PRO/100 S Dual Port Server Adapter #4	OK
0x00002000-0x000027FF	LSI Logic PCI-X Ultra320 SCSI Host Adapter	OK	0x0000D000-0x0000D3FF	PCI bus	OK
0x00002100-0x000021FF	LSI Logic PCI-X Ultra320 SCSI Host Adapter	OK	0x0000D400-0x0000D5FF	PCI bus	OK
0x00004000-0x00005FFF	PCI bus	OK	0x0000D400-0x0000D5FF	QLogic QLA23xx PCI Fibre Channel Adapter	OK
0x00005000-0x000050FF	QLogic QLA23xx PCI Fibre Channel Adapter	OK	0x0000D500-0x0000D5FF	QLogic QLA23xx PCI Fibre Channel Adapter	OK
0x00003000-0x00003FFF	PCI bus	OK	[IRQs]		
0x00002800-0x000029FF	PCI bus	OK	Resource	Device	Status
0x00002800-0x000029FF	QLogic QLA23xx PCI Fibre Channel Adapter	OK	IRQ 9	Microsoft ACPI-Compliant System	OK
0x00006000-0x00007FFF	PCI bus	OK	IRQ 39	RAGE XL PCI	OK
0x00007000-0x000070FF	QLogic QLA23xx PCI Fibre Channel Adapter	OK	IRQ 4	Other PCI Bridge Device	OK
0x0000C000-0x0000C1FF	PCI bus	OK	IRQ 1	Standard 101/102-Key or Microsoft Natural PS/2 Keyboard	OK
0x0000C100-0x0000C17F	Other PCI Bridge Device	OK			
0x0000C200-0x0000C3FF	PCI bus	OK			
0x0000C200-0x0000C3FF	LSI Logic PCI-X Ultra320 SCSI Host Adapter	OK			

IRQ 12	PS/2 Compatible Mouse	OK	0xF5200000-0xF5200FFF	RAGE XL PCI	OK
IRQ 6	Standard floppy disk controller	OK	0xF5000000-0xF51FFFFFFF	Other PCI Bridge Device	OK
IRQ 0	System timer	OK	0x0400-0x04FF	System board	OK
IRQ 8	System CMOS/real time clock	OK	0x100000-0xBFF9C33F	Memory Module	OK
IRQ 13	Numeric data processor	OK	0xF7600000-0xF76FFFFFFF	PCI bus	OK
IRQ 14	Primary IDE Channel	OK	0xF7600000-0xF76FFFFFFF	LSI Logic PCI-X Ultra320 SCSI Host Adapter	OK
IRQ 15	Secondary IDE Channel	OK	0xF7610000-0xF761FFFFFFF	LSI Logic PCI-X Ultra320 SCSI Host Adapter	OK
IRQ 40	LSI Logic PCI-X Ultra320 SCSI Host Adapter	OK	0xF7620000-0xF762FFFFFFF	LSI Logic PCI-X Ultra320 SCSI Host Adapter	OK
IRQ 41	LSI Logic PCI-X Ultra320 SCSI Host Adapter	OK	0xF7630000-0xF763FFFFFFF	LSI Logic PCI-X Ultra320 SCSI Host Adapter	OK
IRQ 44	QLogic QLA23xx PCI Fibre Channel Adapter	OK	0xF6000000-0xF67FFFFFFF	PCI bus	OK
IRQ 60	QLogic QLA23xx PCI Fibre Channel Adapter	OK	0xF8000000-0xF83FFFFFFF	PCI bus	OK
IRQ 52	QLogic QLA23xx PCI Fibre Channel Adapter	OK	0xF6420000-0xF6420FFF	QLogic QLA23xx PCI Fibre Channel Adapter	OK
IRQ 10	Other PCI Bridge Device	OK	0xF7000000-0xF73FFFFFFF	PCI bus	OK
IRQ 172	LSI Logic PCI-X Ultra320 SCSI Host Adapter	OK	0xF8400000-0xF87FFFFFFF	PCI bus	OK
IRQ 173	LSI Logic PCI-X Ultra320 SCSI Host Adapter	OK	0xF7800000-0xF78FFFFFFF	PCI bus	OK
IRQ 152	QLogic QLA23xx PCI Fibre Channel Adapter	OK	0xF7820000-0xF7820FFF	QLogic QLA23xx PCI Fibre Channel Adapter	OK
IRQ 153	QLogic QLA23xx PCI Fibre Channel Adapter	OK	0xF6800000-0xF6FFFFFFF	PCI bus	OK
IRQ 154	QLogic QLA23xx PCI Fibre Channel Adapter	OK	0xF8800000-0xF8BFFFFFFF	PCI bus	OK
IRQ 156	QLogic QLA23xx PCI Fibre Channel Adapter	OK	0xF6C20000-0xF6C20FFF	QLogic QLA23xx PCI Fibre Channel Adapter	OK
IRQ 95	QLogic QLA23xx PCI Fibre Channel Adapter	OK	0xE8C00000-0xE8DFFFFFFF	PCI bus	OK
IRQ 88	QLogic QLA23xx PCI Fibre Channel Adapter	OK	0xE8C00000-0xE8DFFFFFFF	Other PCI Bridge Device	OK
IRQ 127	Intel(R) PRO/100 S Dual Port Server Adapter #3	OK	0xE9000000-0xE90FFFFFFF	PCI bus	OK
IRQ 128	Intel(R) PRO/100 S Dual Port Server Adapter #4	OK	0xE9000000-0xE90FFFFFFF	LSI Logic PCI-X Ultra320 SCSI Host Adapter	OK
IRQ 109	QLogic QLA23xx PCI Fibre Channel Adapter	OK	0xE9010000-0xE901FFFFFFF	LSI Logic PCI-X Ultra320 SCSI Host Adapter	OK
IRQ 113	QLogic QLA23xx PCI Fibre Channel Adapter	OK	0xE9020000-0xE902FFFFFFF	LSI Logic PCI-X Ultra320 SCSI Host Adapter	OK
[Memory]			0xE9030000-0xE903FFFFFFF	LSI Logic PCI-X Ultra320 SCSI Host Adapter	OK
Resource	Device	Status	0xE9100000-0xE91FFFFFFF	LSI Logic PCI-X Ultra320 SCSI Host Adapter	OK
0xA0000-0xA7FFF	PCI bus	OK	0xE9200000-0xE92FFFFFFF	LSI Logic PCI-X Ultra320 SCSI Host Adapter	OK
0xA0000-0xA7FFF	RAGE XL PCI	OK	0xE9300000-0xE93FFFFFFF	LSI Logic PCI-X Ultra320 SCSI Host Adapter	OK
0xA8000-0xAFFFF	PCI bus	OK	0xE9100000-0xE91FFFFFFF	PCI bus	OK
0xB0000-0xB7FFF	PCI bus	OK	0xE9120000-0xE9120FFF	QLogic QLA23xx PCI Fibre Channel Adapter	OK
0xB8000-0xBFFFF	PCI bus	OK			
0xF4000000-0xF5FFFFFFF	PCI bus	OK			
0xF4000000-0xF5FFFFFFF	RAGE XL PCI	OK			

0xE9121000-0xE9121FFF OK	QLogic QLA23xx PCI Fibre Channel Adapter		[Components]
0xE9300000-0xE93FFFFF	PCI bus	OK	[Multimedia]
0xE9320000-0xE9320FFF OK	QLogic QLA23xx PCI Fibre Channel Adapter		[Audio Codecs]
0xE8800000-0xE8BFFFFF	PCI bus	OK	CODEC    Manufacturer            Description            Status    File Version    Size            Creation Date
0xEA000000-0xEA3FFFFF	PCI bus	OK	c:\windows\system32\tsoft32.acm            DSP GROUP, INC. OK            C:\WINDOWS\system32\TSSOFT32.ACM 1.01            9.50 KB (9,728 bytes)            3/25/2003 7:00 AM
0xE8000000-0xE87FFFFF	PCI bus	OK	
0xEA400000-0xEA7FFFFF	PCI bus	OK	c:\windows\system32\msg723.acm            Microsoft Corporation OK            C:\WINDOWS\system32\MSG723.ACM 4.4.4000            116.00 KB (118,784 bytes)            4/10/2003 10:26 AM
0xE8420000-0xE8420FFF OK	QLogic QLA23xx PCI Fibre Channel Adapter		
0xF0000000-0xF07FFFFF	PCI bus	OK	c:\windows\system32\sl_anet.acm            Sipro Lab Telecom Inc. Sipro Lab Telecom Audio Codec OK
0xF2000000-0xF27FFFFF	PCI bus	OK	C:\WINDOWS\system32\SL_ANET.ACM 3.02            84.00 KB (86,016 bytes)            3/25/2003 7:00 AM
0xF0800000-0xF0FFFFFF	PCI bus	OK	
0xF2800000-0xF2BFFFFF	PCI bus	OK	c:\windows\system32\msg711.acm            Microsoft Corporation OK            C:\WINDOWS\system32\MSG711.ACM 5.2.3790.0 (srv03_rtm.030324-2048)            10.00 KB (10,240 bytes)            3/25/2003 7:00 AM
0xF0C20000-0xF0C20FFF OK	QLogic QLA23xx PCI Fibre Channel Adapter		
0xF1000000-0xF17FFFFF	PCI bus	OK	c:\windows\system32\msaud32.acm            Microsoft Corporation Windows Media Audio Codec OK
0xF2C00000-0xF2FFFFFF	PCI bus	OK	C:\WINDOWS\system32\MSAUD32.ACM 8.00.00.4487            288.00 KB (294,912 bytes)            3/25/2003 7:00 AM
0xF1420000-0xF1420FFF OK	QLogic QLA23xx PCI Fibre Channel Adapter		
0xEC000000-0xEC7FFFFF	PCI bus	OK	
0xEE800000-0xEEBFFFFF	PCI bus	OK	c:\windows\system32\imaadp32.acm            Microsoft Corporation OK            C:\WINDOWS\system32\IMAADP32.ACM5.2.3790.0 (srv03_rtm.030324-2048)            15.50 KB (15,872 bytes)            3/25/2003 7:00 AM
0xEC400000-0xEC4FFFFF	Intel 21154 PCI to PCI bridge	OK	
0xEC400000-0xEC4FFFFF #3            OK	Intel(R) PRO/100 S Dual Port Server Adapter		c:\windows\system32\msadp32.acm            Microsoft Corporation OK            C:\WINDOWS\system32\MSADP32.ACM 5.2.3790.0 (srv03_rtm.030324-2048)            14.50 KB (14,848 bytes)            3/25/2003 7:00 AM
0xEC440000-0xEC440FFF #3            OK	Intel(R) PRO/100 S Dual Port Server Adapter		
0xEC441000-0xEC441FFF #4            OK	Intel(R) PRO/100 S Dual Port Server Adapter		[Video Codecs]
0xEC420000-0xEC43FFFF #4            OK	Intel(R) PRO/100 S Dual Port Server Adapter		CODEC    Manufacturer            Description            Status    File Version    Size            Creation Date
0xEC800000-0xECFFFFFF	PCI bus	OK	c:\windows\system32\msrle32.dllMicrosoft Corporation OK            C:\WINDOWS\system32\MSRLE32.DLL 5.2.3790.0 (srv03_rtm.030324-2048)            10.50 KB (10,752 bytes)            3/25/2003 7:00 AM
0xEE000000-0xEE7FFFFF	PCI bus	OK	
0xED200000-0xED2FFFFF	PCI bus	OK	c:\windows\system32\tsbyuv.dll Microsoft Corporation OK            C:\WINDOWS\system32\TSBYUV.DLL 5.2.3790.0 (srv03_rtm.030324-2048)            8.00 KB (8,192 bytes)3/24/2003 8:50 PM
0xED220000-0xED220FFF OK	QLogic QLA23xx PCI Fibre Channel Adapter		
0xED221000-0xED221FFF OK	QLogic QLA23xx PCI Fibre Channel Adapter		c:\windows\system32\msvidc32.dll            Microsoft Corporation OK            C:\WINDOWS\system32\MSVIDC32.DLL 5.2.3790.0 (srv03_rtm.030324-2048)            26.50 KB (27,136 bytes)            3/25/2003 7:00 AM

c:\windows\system32\iyuv\_32.dll Microsoft Corporation  
OK C:\WINDOWS\system32\IYUV\_32.DLL 5.2.3790.0  
(srv03\_rtm.030324-2048) 45.00 KB (46,080 bytes) 3/24/2003  
8:49 PM

c:\windows\system32\msh261.drv Microsoft Corporation  
OK C:\WINDOWS\system32\MSH261.DRV 4.4.4000 180.00 KB  
(184,320 bytes) 4/10/2003 10:26 AM

c:\windows\system32\msyuv.dll Microsoft Corporation  
OK C:\WINDOWS\system32\MSYUV.DLL 5.2.3790.0  
(srv03\_rtm.030324-2048) 16.50 KB (16,896 bytes) 3/24/2003  
8:49 PM

c:\windows\system32\msh263.drv Microsoft Corporation  
OK C:\WINDOWS\system32\MSH263.DRV 4.4.4000 284.00 KB  
(290,816 bytes) 3/24/2003 8:46 PM

[CD-ROM]

Item Value

Drive D:

Description CD-ROM Drive

Media Loaded No

Media Type CD-ROM

Name HL-DT-ST DVD-ROM GDR8081N

Manufacturer (Standard CD-ROM drives)

Status OK

Transfer Rate Not Available

SCSI Target ID 0

PNP Device ID

IDE\CDROMHL-DT-ST\_DVD-ROM\_GDR8081N\_\_\_\_\_0012\_\_\_\_  
\_5&CBC355F&0&0.0.0

Driver c:\windows\system32\drivers\cdrom.sys (5.2.3790.0  
(srv03\_rtm.030324-2048), 49.50 KB (50,688 bytes), 3/25/2003 7:00 AM)

[Sound Device]

Item Value

[Display]

Item Value

Name RAGE XL PCI

PNP Device ID

PCI\VEN\_1002&DEV\_4752&SUBSYS\_02401014&REV\_27\3&267A616A&  
0&18

Adapter Type ATI RAGE XL PCI (B41), ATI Technologies Inc.  
compatible

Adapter Description RAGE XL PCI

Adapter RAM 8.00 MB (8,388,608 bytes)

Installed Drivers ati2drad.dll

Driver Version 5.00.2195.5012

INF File oem10.inf (ati2mpad section)

Color Planes 1

Color Table Entries 4294967296

Resolution 1152 x 864 x 70 hertz

Bits/Pixel 32

Memory Address 0xF4000000-0xF5FFFFFF

I/O Port 0x00001800-0x000018FF

Memory Address 0xF5200000-0xF5200FFF

IRQ Channel IRQ 39

I/O Port 0x000003B0-0x000003BB

I/O Port 0x000003C0-0x000003DF

Memory Address 0xA0000-0xA7FFF

Driver c:\windows\system32\drivers\ati2mpad.sys (5.00.2195.5012, 316.20  
KB (323,793 bytes), 12/21/2001 11:09 AM)

[Infrared]

Item Value

[Input]

[Keyboard]

Item Value

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

Name Enhanced (101- or 102-key)

Layout 00000409

PNP Device ID ACPI\PNP0303\4&7FD7688&0

Number of Function Keys 12

IRQ Channel IRQ 1

I/O Port 0x00000064-0x00000064

I/O Port 0x00000060-0x00000060

Driver c:\windows\system32\drivers\i8042prt.sys (5.2.3790.0  
(srv03\_rtm.030324-2048), 68.50 KB (70,144 bytes), 3/25/2003 7:00 AM)

[Pointing Device]

Item Value

Hardware Type PS/2 Compatible Mouse

Number of Buttons 3

Status OK

PNP Device ID ACPI\PNP0F13\4&7FD7688&0

Power Management Supported No

Double Click Threshold 6

Handedness Right Handed Operation

IRQ Channel IRQ 12

Driver c:\windows\system32\drivers\i8042prt.sys (5.2.3790.0 (srv03\_rtm.030324-2048), 68.50 KB (70,144 bytes), 3/25/2003 7:00 AM)

[Modem]

Item Value

[Network]

[Adapter]

Item Value

Name [00000001] RAS Async Adapter

Adapter Type Not Available

Product Type RAS Async Adapter

Installed Yes

PNP Device ID Not Available

Last Reset 3/18/2004 9:55 AM

Index 1

Service Name AsyncMac

IP Address Not Available

IP Subnet Not Available

Default IP Gateway Not Available

DHCP Enabled No

DHCP Server Not Available

DHCP Lease Expires Not Available

DHCP Lease Obtained Not Available

MAC Address Not Available

Name [00000002] WAN Miniport (L2TP)

Adapter Type Not Available

Product Type WAN Miniport (L2TP)

Installed Yes

PNP Device ID ROOT\MMS\_L2TPMINIPORT\0000

Last Reset 3/18/2004 9:55 AM

Index 2

Service Name Rasl2tp

IP Address Not Available

IP Subnet Not Available

Default IP Gateway Not Available

DHCP Enabled No

DHCP Server Not Available

DHCP Lease Expires Not Available

DHCP Lease Obtained Not Available

MAC Address Not Available

Driver c:\windows\system32\drivers\rasl2tp.sys (5.2.3790.0 (srv03\_rtm.030324-2048), 77.00 KB (78,848 bytes), 3/25/2003 7:00 AM)

Name [00000003] WAN Miniport (PPTP)

Adapter Type Wide Area Network (WAN)

Product Type WAN Miniport (PPTP)

Installed Yes

PNP Device ID ROOT\MMS\_PPTPMINIPORT\0000

Last Reset 3/18/2004 9:55 AM

Index 3

Service Name PptpMiniport

IP Address Not Available

IP Subnet Not Available

Default IP Gateway Not Available

DHCP Enabled No

DHCP Server Not Available

DHCP Lease Expires Not Available

DHCP Lease Obtained Not Available

MAC Address 50:50:54:50:30:30

Driver c:\windows\system32\drivers\raspptp.sys (5.2.3790.0 (srv03\_rtm.030324-2048), 70.50 KB (72,192 bytes), 3/25/2003 7:00 AM)

Name [00000004] WAN Miniport (PPPOE)

Adapter Type Wide Area Network (WAN)

Product Type WAN Miniport (PPPOE)

Installed Yes

PNP Device ID ROOT\MS\_PPPOEMINIPOINT\0000  
Last Reset 3/18/2004 9:55 AM  
Index 4  
Service Name RasPppoe  
IP Address Not Available  
IP Subnet Not Available  
Default IP Gateway Not Available  
DHCP Enabled No  
DHCP Server Not Available  
DHCP Lease Expires Not Available  
DHCP Lease Obtained Not Available  
MAC Address 33:50:6F:45:30:30  
Driver c:\windows\system32\drivers\rasppoe.sys (5.2.3790.0 (srv03\_rtm.030324-2048), 38.00 KB (38,912 bytes), 3/25/2003 7:00 AM)  
Name [00000005] Direct Parallel

Adapter Type Not Available  
Product Type Direct Parallel  
Installed Yes

PNP Device ID ROOT\MS\_PTMINIPOINT\0000

Last Reset 3/18/2004 9:55 AM

Index 5  
Service Name Raspti

IP Address Not Available  
IP Subnet Not Available  
Default IP Gateway Not Available  
DHCP Enabled No  
DHCP Server Not Available  
DHCP Lease Expires Not Available  
DHCP Lease Obtained Not Available

MAC Address Not Available

Driver c:\windows\system32\drivers\raspti.sys (5.2.3790.0 (srv03\_rtm.030324-2048), 18.50 KB (18,944 bytes), 3/25/2003 7:00 AM)

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

Installed Yes

PNP Device ID ROOT\MS\_NDISWANIP\0000

Last Reset 3/18/2004 9:55 AM

Index 6  
Service Name NdisWan

IP Address Not Available  
IP Subnet Not Available  
Default IP Gateway Not Available  
DHCP Enabled No  
DHCP Server Not Available  
DHCP Lease Expires Not Available  
DHCP Lease Obtained Not Available

MAC Address Not Available

Driver c:\windows\system32\drivers\ndiswan.sys (5.2.3790.0 (srv03\_rtm.030324-2048), 96.50 KB (98,816 bytes), 3/25/2003 7:00 AM)

Name [00000007] 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\_02A61014&REV\_02\3&13C0B0C5&0&20

Last Reset 3/18/2004 9:55 AM

Index 7  
Service Name b57w2k

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\b57xp32.sys (6.34.0.0 built by: WinDDK, 166.88 KB (170,880 bytes), 4/16/2003 9:56 AM)

Name [00000008] 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\_02A61014&REV\_02\3&13C0B0C5  
&0&21

Last Reset 3/18/2004 9:55 AM

Index 8

Service Name b57w2k

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\b57xp32.sys (6.34.0.0 built by:  
WinDDK, 166.88 KB (170,880 bytes), 4/16/2003 9:56 AM)

Name [00000009] 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\_02A61014&REV\_02\3&1D521019&  
0&20

Last Reset 3/18/2004 9:55 AM

Index 9

Service Name b57w2k

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\b57xp32.sys (6.34.0.0 built by:  
WinDDK, 166.88 KB (170,880 bytes), 4/16/2003 9:56 AM)

Name [00000010] 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\_02A61014&REV\_02\3&1D521019&  
0&21

Last Reset 3/18/2004 9:55 AM

Index 10

Service Name b57w2k

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\b57xp32.sys (6.34.0.0 built by:  
WinDDK, 166.88 KB (170,880 bytes), 4/16/2003 9:56 AM)

Name [00000011] Intel(R) PRO/100 S Dual Port Server Adapter

Adapter Type Not Available

Product Type Intel(R) PRO/100 S Dual Port Server Adapter

Installed Yes

PNP Device ID Not Available

Last Reset 3/18/2004 9:55 AM

Index 11

Service Name E100B

IP Address Not Available

IP Subnet Not Available

Default IP Gateway Not Available

DHCP Enabled No

DHCP Server Not Available

DHCP Lease Expires Not Available

DHCP Lease Obtained Not Available  
 MAC Address Not Available  
 Name [00000012] Intel(R) PRO/100 S Dual Port Server Adapter  
 Adapter Type Not Available  
 Product Type Intel(R) PRO/100 S Dual Port Server Adapter  
 Installed Yes  
 PNP Device ID Not Available  
 Last Reset 3/18/2004 9:55 AM  
 Index 12  
 Service Name E100B  
 IP Address Not Available  
 IP Subnet Not Available  
 Default IP Gateway Not Available  
 DHCP Enabled No  
 DHCP Server Not Available  
 DHCP Lease Expires Not Available  
 DHCP Lease Obtained Not Available  
 MAC Address Not Available  
 Name [00000013] Intel(R) PRO/100 S Dual Port Server Adapter  
 Adapter Type Ethernet 802.3  
 Product Type Intel(R) PRO/100 S Dual Port Server Adapter  
 Installed Yes  
 PNP Device ID  
 PCI\VEN\_8086&DEV\_1229&SUBSYS\_10158086&REV\_0D\4&18FB0D9C  
 &0&2010  
 Last Reset 3/18/2004 9:55 AM  
 Index 13  
 Service Name E100B  
 IP Address 192.168.125.232  
 IP Subnet 255.255.255.0  
 Default IP Gateway Not Available  
 DHCP Enabled No  
 DHCP Server Not Available  
 DHCP Lease Expires Not Available  
 DHCP Lease Obtained Not Available

MAC Address 00:02:B3:A7:30:63  
 Memory Address 0xEC440000-0xEC440FFF  
 I/O Port 0x0000E000-0x0000FFFF  
 Memory Address 0xEC400000-0xEC4FFFFF  
 IRQ Channel IRQ 127  
 Driver c:\windows\system32\drivers\le100b325.sys (7.0.26.0 built by:  
 WinDDK, 142.00 KB (145,408 bytes), 3/4/2003 10:56 AM)  
 Name [00000014] Intel(R) PRO/100 S Dual Port Server Adapter  
 Adapter Type Ethernet 802.3  
 Product Type Intel(R) PRO/100 S Dual Port Server Adapter  
 Installed Yes  
 PNP Device ID  
 PCI\VEN\_8086&DEV\_1229&SUBSYS\_10158086&REV\_0D\4&18FB0D9C  
 &0&2810  
 Last Reset 3/18/2004 9:55 AM  
 Index 14  
 Service Name E100B  
 IP Address 192.168.128.10  
 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 00:02:B3:A7:30:64  
 Memory Address 0xEC441000-0xEC441FFF  
 I/O Port 0x0000E040-0x0000E07F  
 Memory Address 0xEC420000-0xEC43FFFF  
 IRQ Channel IRQ 128  
 Driver c:\windows\system32\drivers\le100b325.sys (7.0.26.0 built by:  
 WinDDK, 142.00 KB (145,408 bytes), 3/4/2003 10:56 AM)  
 [Protocol]  
 Item Value  
 Name MSAFD Tcpip [TCP/IP]  
 Connectionless Service No  
 Guarantees Delivery Yes

Guarantees Sequencing	Yes
Maximum Address Size	16 bytes
Maximum Message Size	0 bytes
Message Oriented	No
Minimum Address Size	16 bytes
Pseudo Stream Oriented	No
Supports Broadcasting	No
Supports Connect Data	No
Supports Disconnect Data	No
Supports Encryption	No
Supports Expedited Data	Yes
Supports Graceful Closing	Yes
Supports Guaranteed Bandwidth	No
Supports Multicasting	No
Name	MSAFD Tcpip [UDP/IP]
Connectionless Service	Yes
Guarantees Delivery	No
Guarantees Sequencing	No
Maximum Address Size	16 bytes
Maximum Message Size	63.93 KB (65,467 bytes)
Message Oriented	Yes
Minimum Address Size	16 bytes
Pseudo Stream Oriented	No
Supports Broadcasting	Yes
Supports Connect Data	No
Supports Disconnect Data	No
Supports Encryption	No
Supports Expedited Data	No
Supports Graceful Closing	No
Supports Guaranteed Bandwidth	No
Supports Multicasting	Yes
Name	RSVP UDP Service Provider
Connectionless Service	Yes
Guarantees Delivery	No

Guarantees Sequencing	No
Maximum Address Size	16 bytes
Maximum Message Size	63.93 KB (65,467 bytes)
Message Oriented	Yes
Minimum Address Size	16 bytes
Pseudo Stream Oriented	No
Supports Broadcasting	Yes
Supports Connect Data	No
Supports Disconnect Data	No
Supports Encryption	Yes
Supports Expedited Data	No
Supports Graceful Closing	No
Supports Guaranteed Bandwidth	No
Supports Multicasting	Yes
Name	RSVP TCP Service Provider
Connectionless Service	No
Guarantees Delivery	Yes
Guarantees Sequencing	Yes
Maximum Address Size	16 bytes
Maximum Message Size	0 bytes
Message Oriented	No
Minimum Address Size	16 bytes
Pseudo Stream Oriented	No
Supports Broadcasting	No
Supports Connect Data	No
Supports Disconnect Data	No
Supports Encryption	Yes
Supports Expedited Data	Yes
Supports Graceful Closing	Yes
Supports Guaranteed Bandwidth	No
Supports Multicasting	No
Name	MSAFD NetBIOS [\Device\NetBT_Tcpip_{17A02C9E-6E11-4588-835C-DCA46ADAB834}] SEQPACKET 9
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\_{17A02C9E-6E11-4588-835C-DCA46ADAB834}]  
 DATAGRAM 9  
 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\_{73066ADB-3CD3-4429-B6D7-F12D6A3D9FA7}]  
 SEQPACKET 8  
 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\_{73066ADB-3CD3-4429-B6D7-F12D6A3D9FA7}]  
 DATAGRAM 8  
 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\_{5B5E9384-911D-4840-9799-608987251691}]  
 SEQPACKET 7

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\_{5B5E9384-911D-4840-9799-608987251691}]  
 DATAGRAM 7

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\_{0F0205EF-A50D-4D31-996A-D4B587F902F0}]  
 SEQPACKET 6

Connectionless Service No

Guarantees Delivery Yes

Guarantees Sequencing Yes

Maximum Address Size 20 bytes

Maximum Message Size 62.50 KB (64,000 bytes)

Message Oriented Yes

Minimum Address Size 20 bytes

Pseudo Stream Oriented No

Supports Broadcasting No

Supports Connect Data No

Supports Disconnect Data No

Supports Encryption No

Supports Expedited Data No

Supports Graceful Closing No

Supports Guaranteed Bandwidth No

Supports Multicasting No

Name MSAFD NetBIOS  
 [\Device\NetBT\_Tcpip\_{0F0205EF-A50D-4D31-996A-D4B587F902F0}]  
 DATAGRAM 6

Connectionless Service Yes

Guarantees Delivery No

Guarantees Sequencing No

Maximum Address Size 20 bytes

Maximum Message Size 62.50 KB (64,000 bytes)

Message Oriented Yes

Minimum Address Size 20 bytes

Pseudo Stream Oriented No

Supports Broadcasting Yes

Supports Connect Data No

Supports Disconnect Data	No
Supports Encryption	No
Supports Expedited Data	No
Supports Graceful Closing	No
Supports Guaranteed Bandwidth	No
Supports Multicasting	No
Name MSAFD NetBIOS [\\Device\\NetBT_Tcpip_{AF999C9B-2C8C-4C05-B890-0FA343F778B6}] SEQPACKET 5	
Connectionless Service	No
Guarantees Delivery	Yes
Guarantees Sequencing	Yes
Maximum Address Size	20 bytes
Maximum Message Size	62.50 KB (64,000 bytes)
Message Oriented	Yes
Minimum Address Size	20 bytes
Pseudo Stream Oriented	No
Supports Broadcasting	No
Supports Connect Data	No
Supports Disconnect Data	No
Supports Encryption	No
Supports Expedited Data	No
Supports Graceful Closing	No
Supports Guaranteed Bandwidth	No
Supports Multicasting	No
Name MSAFD NetBIOS [\\Device\\NetBT_Tcpip_{AF999C9B-2C8C-4C05-B890-0FA343F778B6}] DATAGRAM 5	
Connectionless Service	Yes
Guarantees Delivery	No
Guarantees Sequencing	No
Maximum Address Size	20 bytes
Maximum Message Size	62.50 KB (64,000 bytes)
Message Oriented	Yes
Minimum Address Size	20 bytes
Pseudo Stream Oriented	No

Supports Broadcasting	Yes
Supports Connect Data	No
Supports Disconnect Data	No
Supports Encryption	No
Supports Expedited Data	No
Supports Graceful Closing	No
Supports Guaranteed Bandwidth	No
Supports Multicasting	No
Name MSAFD NetBIOS [\\Device\\NetBT_Tcpip_{811C0403-9D5B-43AA-AFE0-F13D1D459C5F}] SEQPACKET 4	
Connectionless Service	No
Guarantees Delivery	Yes
Guarantees Sequencing	Yes
Maximum Address Size	20 bytes
Maximum Message Size	62.50 KB (64,000 bytes)
Message Oriented	Yes
Minimum Address Size	20 bytes
Pseudo Stream Oriented	No
Supports Broadcasting	No
Supports Connect Data	No
Supports Disconnect Data	No
Supports Encryption	No
Supports Expedited Data	No
Supports Graceful Closing	No
Supports Guaranteed Bandwidth	No
Supports Multicasting	No
Name MSAFD NetBIOS [\\Device\\NetBT_Tcpip_{811C0403-9D5B-43AA-AFE0-F13D1D459C5F}] DATAGRAM 4	
Connectionless Service	Yes
Guarantees Delivery	No
Guarantees Sequencing	No
Maximum Address Size	20 bytes
Maximum Message Size	62.50 KB (64,000 bytes)
Message Oriented	Yes

Minimum Address Size	20 bytes
Pseudo Stream Oriented	No
Supports Broadcasting	Yes
Supports Connect Data	No
Supports Disconnect Data	No
Supports Encryption	No
Supports Expedited Data	No
Supports Graceful Closing	No
Supports Guaranteed Bandwidth	No
Supports Multicasting	No
Name MSAFD NetBIOS [\Device\NetBT_Tcpip_{747202E3-E6E5-47BF-9288-D55EB9D7EF32}] 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_{747202E3-E6E5-47BF-9288-D55EB9D7EF32}] 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_{378CE042-9BCA-4EC4-A2FE-CC343D7A841E}] 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_{378CE042-9BCA-4EC4-A2FE-CC343D7A841E}] 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_{45083998-E918-40EA-AFD3-1D5597364964}] 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_{45083998-E918-40EA-AFD3-1D5597364964}] 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_{21365DBD-7EE7-4802-ACC1-D5C0E5FC2966}] 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\_{21365DBD-7EE7-4802-ACC1-D5C0E5FC2966}]  
 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
------	-------

[Parallel]

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

[Storage]

[Drives]

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

Drive A:  
 Description 3 1/2 Inch Floppy Drive

Drive C:  
 Description Local Fixed Disk  
 Compressed No  
 File System NTFS  
 Size 16.94 GB (18,194,284,544 bytes)  
 Free Space 9.63 GB (10,337,968,128 bytes)  
 Volume Name

Volume Serial Number 980D5B00

Drive D:  
 Description CD-ROM Disc

Drive E:  
 Description Local Fixed Disk  
 Compressed Not Available  
 File System Not Available  
 Size Not Available  
 Free Space Not Available

Volume Name Not Available  
 Volume Serial Number Not Available

Drive F:  
 Description Local Fixed Disk  
 Compressed No  
 File System NTFS  
 Size 12.70 GB (13,637,480,448 bytes)  
 Free Space 12.62 GB (13,552,693,248 bytes)

Volume Name F\_drive  
 Volume Serial Number 1C572A54

Drive G:  
 Description Local Fixed Disk  
 Compressed No  
 File System NTFS  
 Size 438.48 GB (470,814,994,432 bytes)  
 Free Space 8.57 GB (9,200,934,912 bytes)

Volume Name G\_Backup1  
Volume Serial Number 84DE7204  
Drive H:  
Description Local Fixed Disk  
Compressed No  
File System NTFS  
Size 438.48 GB (470,814,994,432 bytes)  
Free Space 8.57 GB (9,200,930,816 bytes)  
Volume Name H\_backup2  
Volume Serial Number 08EBCCF1  
Drive I:  
Description Local Fixed Disk  
Compressed No  
File System NTFS  
Size 438.48 GB (470,814,994,432 bytes)  
Free Space 8.57 GB (9,200,930,816 bytes)  
Volume Name I\_backup3  
Volume Serial Number 60F85D49  
Drive J:  
Description Local Fixed Disk  
Compressed No  
File System NTFS  
Size 438.48 GB (470,814,994,432 bytes)  
Free Space 8.57 GB (9,200,930,816 bytes)  
Volume Name J\_backup4  
Volume Serial Number C0062820  
Drive K:  
Description Local Fixed Disk  
Compressed No  
File System NTFS  
Size 438.48 GB (470,814,994,432 bytes)  
Free Space 8.57 GB (9,200,930,816 bytes)  
Volume Name K\_backup5  
Volume Serial Number ECD8CD54

Drive L:  
Description Local Fixed Disk  
Compressed No  
File System NTFS  
Size 438.48 GB (470,814,994,432 bytes)  
Free Space 8.57 GB (9,200,996,352 bytes)  
Volume Name L\_backup6  
Volume Serial Number F4E67E1B  
Drive M:  
Description Local Fixed Disk  
Compressed No  
File System NTFS  
Size 870.12 GB (934,284,845,056 bytes)  
Free Space 654.34 GB (702,597,046,272 bytes)  
Volume Name M\_drive  
Volume Serial Number F46DC6E0  
Drive N:  
Description Local Fixed Disk  
Compressed No  
File System NTFS  
Size 870.12 GB (934,284,845,056 bytes)  
Free Space 654.34 GB (702,597,046,272 bytes)  
Volume Name N\_drive  
Volume Serial Number D8654497  
Drive O:  
Description Local Fixed Disk  
Compressed No  
File System NTFS  
Size 870.12 GB (934,284,845,056 bytes)  
Free Space 655.88 GB (704,248,336,384 bytes)  
Volume Name O\_drive  
Volume Serial Number CCB25E34  
Drive P:  
Description Local Fixed Disk

Compressed No

File System NTFS

Size 870.12 GB (934,284,845,056 bytes)

Free Space 655.88 GB (704,248,356,864 bytes)

Volume Name P\_drive

Volume Serial Number 34CA60D2

Drive Q:

Description Local Fixed Disk

Compressed No

File System NTFS

Size 870.12 GB (934,284,845,056 bytes)

Free Space 655.88 GB (704,248,356,864 bytes)

Volume Name Q\_drive

Volume Serial Number C8DCD87F

Drive R:

Description Local Fixed Disk

Compressed No

File System NTFS

Size 870.12 GB (934,284,845,056 bytes)

Free Space 655.88 GB (704,248,356,864 bytes)

Volume Name R\_drive

Volume Serial Number ECEF4490

Drive S:

Description Local Fixed Disk

Compressed No

File System NTFS

Size 870.12 GB (934,284,845,056 bytes)

Free Space 655.88 GB (704,248,356,864 bytes)

Volume Name S\_drive

Volume Serial Number 4CFF1801

Drive T:

Description Local Fixed Disk

Compressed No

File System NTFS

Size 870.12 GB (934,284,845,056 bytes)

Free Space 655.88 GB (704,248,356,864 bytes)

Volume Name T\_drive

Volume Serial Number F41378B1

Drive U:

Description Local Fixed Disk

Compressed No

File System NTFS

Size 870.12 GB (934,284,845,056 bytes)

Free Space 654.34 GB (702,597,046,272 bytes)

Volume Name U\_drive

Volume Serial Number 3C28FE9C

Drive V:

Description Local Fixed Disk

Compressed No

File System NTFS

Size 870.12 GB (934,284,845,056 bytes)

Free Space 654.34 GB (702,597,046,272 bytes)

Volume Name V\_drive

Volume Serial Number FC3D986F

Drive W:

Description Local Fixed Disk

Compressed No

File System NTFS

Size 870.12 GB (934,284,845,056 bytes)

Free Space 654.34 GB (702,597,046,272 bytes)

Volume Name W\_drive

Volume Serial Number B476FD9F

Drive Z:

Description Network Connection

Provider Name \\fsserv\edrive

[Disks]

Item	Value
Description	Disk drive

Manufacturer (Standard disk drives)  
 Model IBM 1742 SCSI Disk Device  
 Bytes/Sector 512  
 Media Loaded Yes  
 Media Type Fixed hard disk  
 Partitions 3  
 SCSI Bus 0  
 SCSI Logical Unit 0  
 SCSI Port 9  
 SCSI Target ID 0  
 Sectors/Track 63  
 Size 948.14 GB (1,018,059,356,160 bytes)  
 Total Cylinders 123,772  
 Total Sectors 1,988,397,180  
 Total Tracks 31,561,860  
 Tracks/Cylinder 255  
 Partition Disk #14, Partition #0  
 Partition Size 49.32 GB (52,954,320,384 bytes)  
 Partition Starting Offset 8,257,536 bytes  
 Partition Disk #14, Partition #1  
 Partition Size 27.84 GB (29,890,635,264 bytes)  
 Partition Starting Offset 52,962,610,176 bytes  
 Partition Disk #14, Partition #2  
 Partition Size 870.12 GB (934,284,847,104 bytes)  
 Partition Starting Offset 82,853,277,696 bytes  
 Description Disk drive  
 Manufacturer (Standard disk drives)  
 Model IBM 1742 SCSI Disk Device  
 Bytes/Sector 512  
 Media Loaded Yes  
 Media Type Fixed hard disk  
 Partitions 3  
 SCSI Bus 0  
 SCSI Logical Unit 1

SCSI Port 9  
 SCSI Target ID 0  
 Sectors/Track 63  
 Size 948.14 GB (1,018,059,356,160 bytes)  
 Total Cylinders 123,772  
 Total Sectors 1,988,397,180  
 Total Tracks 31,561,860  
 Tracks/Cylinder 255  
 Partition Disk #15, Partition #0  
 Partition Size 49.32 GB (52,954,320,384 bytes)  
 Partition Starting Offset 8,257,536 bytes  
 Partition Disk #15, Partition #1  
 Partition Size 27.84 GB (29,890,635,264 bytes)  
 Partition Starting Offset 52,962,610,176 bytes  
 Partition Disk #15, Partition #2  
 Partition Size 870.12 GB (934,284,847,104 bytes)  
 Partition Starting Offset 82,853,277,696 bytes  
 Description Disk drive  
 Manufacturer (Standard disk drives)  
 Model IBM 1742 SCSI Disk Device  
 Bytes/Sector 512  
 Media Loaded Yes  
 Media Type Fixed hard disk  
 Partitions 3  
 SCSI Bus 0  
 SCSI Logical Unit 4  
 SCSI Port 9  
 SCSI Target ID 0  
 Sectors/Track 63  
 Size 474.07 GB (509,029,678,080 bytes)  
 Total Cylinders 61,886  
 Total Sectors 994,198,590  
 Total Tracks 15,780,930  
 Tracks/Cylinder 255

Partition Disk #16, Partition #0	Partition Starting Offset	82,853,277,696 bytes
Partition Size 24.42 GB (26,222,160,384 bytes)	Description	Disk drive
Partition Starting Offset 8,257,536 bytes	Manufacturer	(Standard disk drives)
Partition Disk #16, Partition #1	Model	IBM 1742 SCSI Disk Device
Partition Size 13.67 GB (14,682,092,544 bytes)	Bytes/Sector	512
Partition Starting Offset 26,230,450,176 bytes	Media Loaded	Yes
Partition Disk #16, Partition #2	Media Type	Fixed hard disk
Partition Size 435.06 GB (467,146,520,064 bytes)	Partitions	3
Partition Starting Offset 40,912,574,976 bytes	SCSI Bus	0
Description	SCSI Logical Unit	3
Manufacturer (Standard disk drives)	SCSI Port	9
Model IBM 1742 SCSI Disk Device	SCSI Target ID	1
Bytes/Sector 512	Sectors/Track	63
Media Loaded Yes	Size	948.14 GB (1,018,059,356,160 bytes)
Media Type Fixed hard disk	Total Cylinders	123,772
Partitions 3	Total Sectors	1,988,397,180
SCSI Bus 0	Total Tracks	31,561,860
SCSI Logical Unit 2	Tracks/Cylinder	255
SCSI Port 9	Partition Disk #18, Partition #0	
SCSI Target ID 1	Partition Size	49.32 GB (52,954,320,384 bytes)
Sectors/Track 63	Partition Starting Offset	8,257,536 bytes
Size 948.14 GB (1,018,059,356,160 bytes)	Partition Disk #18, Partition #1	
Total Cylinders 123,772	Partition Size	27.84 GB (29,890,635,264 bytes)
Total Sectors 1,988,397,180	Partition Starting Offset	52,962,610,176 bytes
Total Tracks 31,561,860	Partition Disk #18, Partition #2	
Tracks/Cylinder 255	Partition Size	870.12 GB (934,284,847,104 bytes)
Partition Disk #17, Partition #0	Partition Starting Offset	82,853,277,696 bytes
Partition Size 49.32 GB (52,954,320,384 bytes)	Description	Disk drive
Partition Starting Offset 8,257,536 bytes	Manufacturer	(Standard disk drives)
Partition Disk #17, Partition #1	Model	IBM 1742 SCSI Disk Device
Partition Size 27.84 GB (29,890,635,264 bytes)	Bytes/Sector	512
Partition Starting Offset 52,962,610,176 bytes	Media Loaded	Yes
Partition Disk #17, Partition #2	Media Type	Fixed hard disk
Partition Size 870.12 GB (934,284,847,104 bytes)	Partitions	3

SCSI Bus 0  
 SCSI Logical Unit 0  
 SCSI Port 8  
 SCSI Target ID 0  
 Sectors/Track 63  
 Size 948.14 GB (1,018,059,356,160 bytes)  
 Total Cylinders 123,772  
 Total Sectors 1,988,397,180  
 Total Tracks 31,561,860  
 Tracks/Cylinder 255  
 Partition Disk #10, Partition #0  
 Partition Size 49.32 GB (52,954,320,384 bytes)  
 Partition Starting Offset 8,257,536 bytes  
 Partition Disk #10, Partition #1  
 Partition Size 27.84 GB (29,890,635,264 bytes)  
 Partition Starting Offset 52,962,610,176 bytes  
 Partition Disk #10, Partition #2  
 Partition Size 870.12 GB (934,284,847,104 bytes)  
 Partition Starting Offset 82,853,277,696 bytes  
 Description Disk drive  
 Manufacturer (Standard disk drives)  
 Model IBM 1742 SCSI Disk Device  
 Bytes/Sector 512  
 Media Loaded Yes  
 Media Type Fixed hard disk  
 Partitions 3  
 SCSI Bus 0  
 SCSI Logical Unit 1  
 SCSI Port 8  
 SCSI Target ID 0  
 Sectors/Track 63  
 Size 948.14 GB (1,018,059,356,160 bytes)  
 Total Cylinders 123,772  
 Total Sectors 1,988,397,180

Total Tracks 31,561,860  
 Tracks/Cylinder 255  
 Partition Disk #11, Partition #0  
 Partition Size 49.32 GB (52,954,320,384 bytes)  
 Partition Starting Offset 8,257,536 bytes  
 Partition Disk #11, Partition #1  
 Partition Size 27.84 GB (29,890,635,264 bytes)  
 Partition Starting Offset 52,962,610,176 bytes  
 Partition Disk #11, Partition #2  
 Partition Size 870.12 GB (934,284,847,104 bytes)  
 Partition Starting Offset 82,853,277,696 bytes  
 Description Disk drive  
 Manufacturer (Standard disk drives)  
 Model IBM 1742 SCSI Disk Device  
 Bytes/Sector 512  
 Media Loaded Yes  
 Media Type Fixed hard disk  
 Partitions 3  
 SCSI Bus 0  
 SCSI Logical Unit 2  
 SCSI Port 8  
 SCSI Target ID 1  
 Sectors/Track 63  
 Size 948.14 GB (1,018,059,356,160 bytes)  
 Total Cylinders 123,772  
 Total Sectors 1,988,397,180  
 Total Tracks 31,561,860  
 Tracks/Cylinder 255  
 Partition Disk #12, Partition #0  
 Partition Size 49.32 GB (52,954,320,384 bytes)  
 Partition Starting Offset 8,257,536 bytes  
 Partition Disk #12, Partition #1  
 Partition Size 27.84 GB (29,890,635,264 bytes)  
 Partition Starting Offset 52,962,610,176 bytes

Partition	Disk #12, Partition #2	Media Type	Fixed hard disk
Partition Size	870.12 GB (934,284,847,104 bytes)	Partitions	3
Partition Starting Offset	82,853,277,696 bytes	SCSI Bus	0
Description	Disk drive	SCSI Logical Unit	0
Manufacturer	(Standard disk drives)	SCSI Port	4
Model	IBM 1742 SCSI Disk Device	SCSI Target ID	0
Bytes/Sector	512	Sectors/Track	63
Media Loaded	Yes	Size	948.14 GB (1,018,059,356,160 bytes)
Media Type	Fixed hard disk	Total Cylinders	123,772
Partitions	3	Total Sectors	1,988,397,180
SCSI Bus	0	Total Tracks	31,561,860
SCSI Logical Unit	3	Tracks/Cylinder	255
SCSI Port	8	Partition	Disk #6, Partition #0
SCSI Target ID	1	Partition Size	49.32 GB (52,954,320,384 bytes)
Sectors/Track	63	Partition Starting Offset	8,257,536 bytes
Size	948.14 GB (1,018,059,356,160 bytes)	Partition	Disk #6, Partition #1
Total Cylinders	123,772	Partition Size	27.84 GB (29,890,635,264 bytes)
Total Sectors	1,988,397,180	Partition Starting Offset	52,962,610,176 bytes
Total Tracks	31,561,860	Partition	Disk #6, Partition #2
Tracks/Cylinder	255	Partition Size	870.12 GB (934,284,847,104 bytes)
Partition	Disk #13, Partition #0	Partition Starting Offset	82,853,277,696 bytes
Partition Size	49.32 GB (52,954,320,384 bytes)	Description	Disk drive
Partition Starting Offset	8,257,536 bytes	Manufacturer	(Standard disk drives)
Partition	Disk #13, Partition #1	Model	IBM 1742 SCSI Disk Device
Partition Size	27.84 GB (29,890,635,264 bytes)	Bytes/Sector	512
Partition Starting Offset	52,962,610,176 bytes	Media Loaded	Yes
Partition	Disk #13, Partition #2	Media Type	Fixed hard disk
Partition Size	870.12 GB (934,284,847,104 bytes)	Partitions	3
Partition Starting Offset	82,853,277,696 bytes	SCSI Bus	0
Description	Disk drive	SCSI Logical Unit	1
Manufacturer	(Standard disk drives)	SCSI Port	4
Model	IBM 1742 SCSI Disk Device	SCSI Target ID	0
Bytes/Sector	512	Sectors/Track	63
Media Loaded	Yes	Size	948.14 GB (1,018,059,356,160 bytes)

Total Cylinders	123,772	Partition Size	27.84 GB (29,890,635,264 bytes)
Total Sectors	1,988,397,180	Partition Starting Offset	52,962,610,176 bytes
Total Tracks	31,561,860	Partition	Disk #8, Partition #2
Tracks/Cylinder	255	Partition Size	870.12 GB (934,284,847,104 bytes)
Partition	Disk #7, Partition #0	Partition Starting Offset	82,853,277,696 bytes
Partition Size	49.32 GB (52,954,320,384 bytes)	Description	Disk drive
Partition Starting Offset	8,257,536 bytes	Manufacturer	(Standard disk drives)
Partition	Disk #7, Partition #1	Model	IBM 1742 SCSI Disk Device
Partition Size	27.84 GB (29,890,635,264 bytes)	Bytes/Sector	512
Partition Starting Offset	52,962,610,176 bytes	Media Loaded	Yes
Partition	Disk #7, Partition #2	Media Type	Fixed hard disk
Partition Size	870.12 GB (934,284,847,104 bytes)	Partitions	3
Partition Starting Offset	82,853,277,696 bytes	SCSI Bus	0
Description	Disk drive	SCSI Logical Unit	3
Manufacturer	(Standard disk drives)	SCSI Port	4
Model	IBM 1742 SCSI Disk Device	SCSI Target ID	1
Bytes/Sector	512	Sectors/Track	63
Media Loaded	Yes	Size	948.14 GB (1,018,059,356,160 bytes)
Media Type	Fixed hard disk	Total Cylinders	123,772
Partitions	3	Total Sectors	1,988,397,180
SCSI Bus	0	Total Tracks	31,561,860
SCSI Logical Unit	2	Tracks/Cylinder	255
SCSI Port	4	Partition	Disk #9, Partition #0
SCSI Target ID	1	Partition Size	49.32 GB (52,954,320,384 bytes)
Sectors/Track	63	Partition Starting Offset	8,257,536 bytes
Size	948.14 GB (1,018,059,356,160 bytes)	Partition	Disk #9, Partition #1
Total Cylinders	123,772	Partition Size	27.84 GB (29,890,635,264 bytes)
Total Sectors	1,988,397,180	Partition Starting Offset	52,962,610,176 bytes
Total Tracks	31,561,860	Partition	Disk #9, Partition #2
Tracks/Cylinder	255	Partition Size	870.12 GB (934,284,847,104 bytes)
Partition	Disk #8, Partition #0	Partition Starting Offset	82,853,277,696 bytes
Partition Size	49.32 GB (52,954,320,384 bytes)	Description	Disk drive
Partition Starting Offset	8,257,536 bytes	Manufacturer	(Standard disk drives)
Partition	Disk #8, Partition #1	Model	IBM 1742 SCSI Disk Device



Bytes/Sector	512	Sectors/Track	63
Media Loaded	Yes	Size	948.14 GB (1,018,059,356,160 bytes)
Media Type	Fixed hard disk	Total Cylinders	123,772
Partitions	3	Total Sectors	1,988,397,180
SCSI Bus	0	Total Tracks	31,561,860
SCSI Logical Unit	0	Tracks/Cylinder	255
SCSI Port	3	Partition	Disk #2, Partition #0
SCSI Target ID	0	Partition Size	49.32 GB (52,954,320,384 bytes)
Sectors/Track	63	Partition Starting Offset	8,257,536 bytes
Size	948.14 GB (1,018,059,356,160 bytes)	Partition	Disk #2, Partition #1
Total Cylinders	123,772	Partition Size	27.84 GB (29,890,635,264 bytes)
Total Sectors	1,988,397,180	Partition Starting Offset	52,962,610,176 bytes
Total Tracks	31,561,860	Partition	Disk #2, Partition #2
Tracks/Cylinder	255	Partition Size	870.12 GB (934,284,847,104 bytes)
Partition	Disk #1, Partition #0	Partition Starting Offset	82,853,277,696 bytes
Partition Size	49.32 GB (52,954,320,384 bytes)	Description	Disk drive
Partition Starting Offset	8,257,536 bytes	Manufacturer	(Standard disk drives)
Partition	Disk #1, Partition #1	Model	IBM 1742 SCSI Disk Device
Partition Size	27.84 GB (29,890,635,264 bytes)	Bytes/Sector	512
Partition Starting Offset	52,962,610,176 bytes	Media Loaded	Yes
Partition	Disk #1, Partition #2	Media Type	Fixed hard disk
Partition Size	870.12 GB (934,284,847,104 bytes)	Partitions	3
Partition Starting Offset	82,853,277,696 bytes	SCSI Bus	0
Description	Disk drive	SCSI Logical Unit	2
Manufacturer	(Standard disk drives)	SCSI Port	3
Model	IBM 1742 SCSI Disk Device	SCSI Target ID	1
Bytes/Sector	512	Sectors/Track	63
Media Loaded	Yes	Size	948.14 GB (1,018,059,356,160 bytes)
Media Type	Fixed hard disk	Total Cylinders	123,772
Partitions	3	Total Sectors	1,988,397,180
SCSI Bus	0	Total Tracks	31,561,860
SCSI Logical Unit	1	Tracks/Cylinder	255
SCSI Port	3	Partition	Disk #3, Partition #0
SCSI Target ID	0	Partition Size	49.32 GB (52,954,320,384 bytes)

Partition Starting Offset	8,257,536 bytes	Manufacturer	(Standard disk drives)
Partition	Disk #3, Partition #1	Model	IBM 1742 SCSI Disk Device
Partition Size	27.84 GB (29,890,635,264 bytes)	Bytes/Sector	512
Partition Starting Offset	52,962,610,176 bytes	Media Loaded	Yes
Partition	Disk #3, Partition #2	Media Type	Fixed hard disk
Partition Size	870.12 GB (934,284,847,104 bytes)	Partitions	3
Partition Starting Offset	82,853,277,696 bytes	SCSI Bus	0
Description	Disk drive	SCSI Logical Unit	4
Manufacturer	(Standard disk drives)	SCSI Port	3
Model	IBM 1742 SCSI Disk Device	SCSI Target ID	1
Bytes/Sector	512	Sectors/Track	63
Media Loaded	Yes	Size	474.07 GB (509,029,678,080 bytes)
Media Type	Fixed hard disk	Total Cylinders	61,886
Partitions	3	Total Sectors	994,198,590
SCSI Bus	0	Total Tracks	15,780,930
SCSI Logical Unit	3	Tracks/Cylinder	255
SCSI Port	3	Partition	Disk #5, Partition #0
SCSI Target ID	1	Partition Size	24.42 GB (26,222,160,384 bytes)
Sectors/Track	63	Partition Starting Offset	8,257,536 bytes
Size	948.14 GB (1,018,059,356,160 bytes)	Partition	Disk #5, Partition #1
Total Cylinders	123,772	Partition Size	13.67 GB (14,682,092,544 bytes)
Total Sectors	1,988,397,180	Partition Starting Offset	26,230,450,176 bytes
Total Tracks	31,561,860	Partition	Disk #5, Partition #2
Tracks/Cylinder	255	Partition Size	435.06 GB (467,146,520,064 bytes)
Partition	Disk #4, Partition #0	Partition Starting Offset	40,912,574,976 bytes
Partition Size	49.32 GB (52,954,320,384 bytes)	Description	Disk drive
Partition Starting Offset	8,257,536 bytes	Manufacturer	(Standard disk drives)
Partition	Disk #4, Partition #1	Model	IBM 1742 SCSI Disk Device
Partition Size	27.84 GB (29,890,635,264 bytes)	Bytes/Sector	512
Partition Starting Offset	52,962,610,176 bytes	Media Loaded	Yes
Partition	Disk #4, Partition #2	Media Type	Fixed hard disk
Partition Size	870.12 GB (934,284,847,104 bytes)	Partitions	3
Partition Starting Offset	82,853,277,696 bytes	SCSI Bus	0
Description	Disk drive	SCSI Logical Unit	0

SCSI Port 11

SCSI Target ID 0

Sectors/Track 63

Size 948.14 GB (1,018,059,356,160 bytes)

Total Cylinders 123,772

Total Sectors 1,988,397,180

Total Tracks 31,561,860

Tracks/Cylinder 255

Partition Disk #19, Partition #0

Partition Size 49.32 GB (52,954,320,384 bytes)

Partition Starting Offset 8,257,536 bytes

Partition Disk #19, Partition #1

Partition Size 27.84 GB (29,890,635,264 bytes)

Partition Starting Offset 52,962,610,176 bytes

Partition Disk #19, Partition #2

Partition Size 870.12 GB (934,284,847,104 bytes)

Partition Starting Offset 82,853,277,696 bytes

Description Disk drive

Manufacturer (Standard disk drives)

Model IBM 1742 SCSI Disk Device

Bytes/Sector 512

Media Loaded Yes

Media Type Fixed hard disk

Partitions 3

SCSI Bus 0

SCSI Logical Unit 1

SCSI Port 11

SCSI Target ID 0

Sectors/Track 63

Size 948.14 GB (1,018,059,356,160 bytes)

Total Cylinders 123,772

Total Sectors 1,988,397,180

Total Tracks 31,561,860

Tracks/Cylinder 255

Partition Disk #20, Partition #0

Partition Size 49.32 GB (52,954,320,384 bytes)

Partition Starting Offset 8,257,536 bytes

Partition Disk #20, Partition #1

Partition Size 27.84 GB (29,890,635,264 bytes)

Partition Starting Offset 52,962,610,176 bytes

Partition Disk #20, Partition #2

Partition Size 870.12 GB (934,284,847,104 bytes)

Partition Starting Offset 82,853,277,696 bytes

Description Disk drive

Manufacturer (Standard disk drives)

Model IBM 1742 SCSI Disk Device

Bytes/Sector 512

Media Loaded Yes

Media Type Fixed hard disk

Partitions 3

SCSI Bus 0

SCSI Logical Unit 2

SCSI Port 11

SCSI Target ID 1

Sectors/Track 63

Size 948.14 GB (1,018,059,356,160 bytes)

Total Cylinders 123,772

Total Sectors 1,988,397,180

Total Tracks 31,561,860

Tracks/Cylinder 255

Partition Disk #21, Partition #0

Partition Size 49.32 GB (52,954,320,384 bytes)

Partition Starting Offset 8,257,536 bytes

Partition Disk #21, Partition #1

Partition Size 27.84 GB (29,890,635,264 bytes)

Partition Starting Offset 52,962,610,176 bytes

Partition Disk #21, Partition #2

Partition Size 870.12 GB (934,284,847,104 bytes)

Partition Starting Offset 82,853,277,696 bytes  
 Description Disk drive  
 Manufacturer (Standard disk drives)  
 Model IBM 1742 SCSI Disk Device  
 Bytes/Sector 512  
 Media Loaded Yes  
 Media Type Fixed hard disk  
 Partitions 3  
 SCSI Bus 0  
 SCSI Logical Unit 3  
 SCSI Port 11  
 SCSI Target ID 1  
 Sectors/Track 63  
 Size 948.14 GB (1,018,059,356,160 bytes)  
 Total Cylinders 123,772  
 Total Sectors 1,988,397,180  
 Total Tracks 31,561,860  
 Tracks/Cylinder 255  
 Partition Disk #22, Partition #0  
 Partition Size 49.32 GB (52,954,320,384 bytes)  
 Partition Starting Offset 8,257,536 bytes  
 Partition Disk #22, Partition #1  
 Partition Size 27.84 GB (29,890,635,264 bytes)  
 Partition Starting Offset 52,962,610,176 bytes  
 Partition Disk #22, Partition #2  
 Partition Size 870.12 GB (934,284,847,104 bytes)  
 Partition Starting Offset 82,853,277,696 bytes  
 Description Disk drive  
 Manufacturer (Standard disk drives)  
 Model IBM 1742 SCSI Disk Device  
 Bytes/Sector 512  
 Media Loaded Yes  
 Media Type Fixed hard disk  
 Partitions 1

SCSI Bus 0  
 SCSI Logical Unit 1  
 SCSI Port 12  
 SCSI Target ID 1  
 Sectors/Track 63  
 Size 440.20 GB (472,665,715,200 bytes)  
 Total Cylinders 57,465  
 Total Sectors 923,175,225  
 Total Tracks 14,653,575  
 Tracks/Cylinder 255  
 Partition Disk #23, Partition #0  
 Partition Size 438.48 GB (470,814,994,944 bytes)  
 Partition Starting Offset 8,257,536 bytes  
 Description Disk drive  
 Manufacturer (Standard disk drives)  
 Model IBM 1742 SCSI Disk Device  
 Bytes/Sector 512  
 Media Loaded Yes  
 Media Type Fixed hard disk  
 Partitions 1  
 SCSI Bus 0  
 SCSI Logical Unit 2  
 SCSI Port 12  
 SCSI Target ID 1  
 Sectors/Track 63  
 Size 440.20 GB (472,665,715,200 bytes)  
 Total Cylinders 57,465  
 Total Sectors 923,175,225  
 Total Tracks 14,653,575  
 Tracks/Cylinder 255  
 Partition Disk #24, Partition #0  
 Partition Size 438.48 GB (470,814,994,944 bytes)  
 Partition Starting Offset 8,257,536 bytes  
 Description Disk drive

Manufacturer (Standard disk drives)  
 Model IBM 1742 SCSI Disk Device  
 Bytes/Sector 512  
 Media Loaded Yes  
 Media Type Fixed hard disk  
 Partitions 1  
 SCSI Bus 0  
 SCSI Logical Unit 3  
 SCSI Port 12  
 SCSI Target ID 1  
 Sectors/Track 63  
 Size 440.20 GB (472,665,715,200 bytes)  
 Total Cylinders 57,465  
 Total Sectors 923,175,225  
 Total Tracks 14,653,575  
 Tracks/Cylinder 255  
 Partition Disk #25, Partition #0  
 Partition Size 438.48 GB (470,814,994,944 bytes)  
 Partition Starting Offset 8,257,536 bytes  
 Description Disk drive  
 Manufacturer (Standard disk drives)  
 Model IBM 1742 SCSI Disk Device  
 Bytes/Sector 512  
 Media Loaded Yes  
 Media Type Fixed hard disk  
 Partitions 1  
 SCSI Bus 0  
 SCSI Logical Unit 4  
 SCSI Port 12  
 SCSI Target ID 1  
 Sectors/Track 63  
 Size 440.20 GB (472,665,715,200 bytes)  
 Total Cylinders 57,465  
 Total Sectors 923,175,225

Total Tracks 14,653,575  
 Tracks/Cylinder 255  
 Partition Disk #26, Partition #0  
 Partition Size 438.48 GB (470,814,994,944 bytes)  
 Partition Starting Offset 8,257,536 bytes  
 Description Disk drive  
 Manufacturer (Standard disk drives)  
 Model IBM 1742 SCSI Disk Device  
 Bytes/Sector 512  
 Media Loaded Yes  
 Media Type Fixed hard disk  
 Partitions 1  
 SCSI Bus 0  
 SCSI Logical Unit 5  
 SCSI Port 12  
 SCSI Target ID 1  
 Sectors/Track 63  
 Size 440.20 GB (472,665,715,200 bytes)  
 Total Cylinders 57,465  
 Total Sectors 923,175,225  
 Total Tracks 14,653,575  
 Tracks/Cylinder 255  
 Partition Disk #27, Partition #0  
 Partition Size 438.48 GB (470,814,994,944 bytes)  
 Partition Starting Offset 8,257,536 bytes  
 Description Disk drive  
 Manufacturer (Standard disk drives)  
 Model IBM 1742 SCSI Disk Device  
 Bytes/Sector 512  
 Media Loaded Yes  
 Media Type Fixed hard disk  
 Partitions 1  
 SCSI Bus 0  
 SCSI Logical Unit 6

SCSI Port 12

SCSI Target ID 1

Sectors/Track 63

Size 440.20 GB (472,665,715,200 bytes)

Total Cylinders 57,465

Total Sectors 923,175,225

Total Tracks 14,653,575

Tracks/Cylinder 255

Partition Disk #28, Partition #0

Partition Size 438.48 GB (470,814,994,944 bytes)

Partition Starting Offset 8,257,536 bytes

Description Disk drive

Manufacturer (Standard disk drives)

Model IBM 1742 SCSI Disk Device

Bytes/Sector 512

Media Loaded Yes

Media Type Fixed hard disk

Partitions 2

SCSI Bus 0

SCSI Logical Unit 0

SCSI Port 2

SCSI Target ID 0

Sectors/Track 63

Size 474.07 GB (509,029,678,080 bytes)

Total Cylinders 61,886

Total Sectors 994,198,590

Total Tracks 15,780,930

Tracks/Cylinder 255

Partition Disk #0, Partition #0

Partition Size 460.45 GB (494,405,097,984 bytes)

Partition Starting Offset 8,257,536 bytes

Partition Disk #0, Partition #1

Partition Size 12.70 GB (13,637,481,984 bytes)

Partition Starting Offset 494,413,387,776 bytes

Description Disk drive

Manufacturer (Standard disk drives)

Model IBM-PSG ST318203LC !# 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 13

SCSI Target ID 0

Sectors/Track 63

Size 16.94 GB (18,194,319,360 bytes)

Total Cylinders 2,212

Total Sectors 35,535,780

Total Tracks 564,060

Tracks/Cylinder 255

Partition Disk #29, Partition #0

Partition Size 16.94 GB (18,194,287,104 bytes)

Partition Starting Offset 32,256 bytes

[SCSI]

Item	Value
Name	LSI Logic PCI-X Ultra320 SCSI Host Adapter
Manufacturer	LSI Logic Inc.
Status	OK
PNP Device ID	PCI\VEN_1000&DEV_0030&SUBSYS_02921014&REV_07\3&13C0B0C5&0&18
I/O Port	0x00002000-0x000027FF
Memory Address	0xF7600000-0xF76FFFFF
Memory Address	0xF7610000-0xF761FFFF
IRQ Channel	IRQ 40
Driver	c:\windows\system32\drivers\symmpi.sys (1.08.18.00 (NT.021001-2000), 25.88 KB (26,496 bytes), 3/25/2003 7:00 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\_02921014&REV\_07\3&13C0B0C5&0&19

I/O Port 0x00002100-0x000021FF

Memory Address 0xF7620000-0xF762FFFF

Memory Address 0xF7630000-0xF763FFFF

IRQ Channel IRQ 41

Driver c:\windows\system32\drivers\symmpi.sys (1.08.18.00 (NT.021001-2000), 25.88 KB (26,496 bytes), 3/25/2003 7:00 AM)

Name QLogic QLA23xx PCI Fibre Channel Adapter

Manufacturer QLogic

Status OK

PNP Device ID

PCI\VEN\_1077&DEV\_2312&SUBSYS\_01001077&REV\_02\3&1070020&0&08

I/O Port 0x00005000-0x000050FF

Memory Address 0xF6420000-0xF6420FFF

IRQ Channel IRQ 44

Driver c:\windows\system32\drivers\ql2300.sys (8.2.3.61 (w32 VI), 456.92 KB (467,890 bytes), 9/30/2003 2:37 PM)

Name QLogic QLA23xx PCI Fibre Channel Adapter

Manufacturer QLogic

Status OK

PNP Device ID

PCI\VEN\_1077&DEV\_2312&SUBSYS\_01001077&REV\_02\3&172E68DD&0&18

I/O Port 0x00002800-0x000029FF

Memory Address 0xF7820000-0xF7820FFF

IRQ Channel IRQ 60

Driver c:\windows\system32\drivers\ql2300.sys (8.2.3.61 (w32 VI), 456.92 KB (467,890 bytes), 9/30/2003 2:37 PM)

Name QLogic QLA23xx PCI Fibre Channel Adapter

Manufacturer QLogic

Status OK

PNP Device ID

PCI\VEN\_1077&DEV\_2312&SUBSYS\_010C1077&REV\_02\3&474B838&0&08

I/O Port 0x00007000-0x000070FF

Memory Address 0xF6C20000-0xF6C20FFF

IRQ Channel IRQ 52

Driver c:\windows\system32\drivers\ql2300.sys (8.2.3.61 (w32 VI), 456.92 KB (467,890 bytes), 9/30/2003 2:37 PM)

Name LSI Logic PCI-X Ultra320 SCSI Host Adapter

Manufacturer LSI Logic Inc.

Status OK

PNP Device ID

PCI\VEN\_1000&DEV\_0030&SUBSYS\_02921014&REV\_07\3&1D521019&0&18

I/O Port 0x0000C200-0x0000C3FF

Memory Address 0xE9000000-0xE900FFFF

Memory Address 0xE9010000-0xE901FFFF

IRQ Channel IRQ 172

Driver c:\windows\system32\drivers\symmpi.sys (1.08.18.00 (NT.021001-2000), 25.88 KB (26,496 bytes), 3/25/2003 7:00 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\_02921014&REV\_07\3&1D521019&0&19

I/O Port 0x0000C300-0x0000C3FF

Memory Address 0xE9020000-0xE902FFFF

Memory Address 0xE9030000-0xE903FFFF

IRQ Channel IRQ 173

Driver c:\windows\system32\drivers\symmpi.sys (1.08.18.00 (NT.021001-2000), 25.88 KB (26,496 bytes), 3/25/2003 7:00 AM)

Name QLogic QLA23xx PCI Fibre Channel Adapter

Manufacturer QLogic

Status OK

PNP Device ID

PCI\VEN\_1077&DEV\_2312&SUBSYS\_01001077&REV\_02\3&300BC0BE&0&08

I/O Port 0x0000C400-0x0000C5FF

Memory Address 0xE9120000-0xE9120FFF

IRQ Channel IRQ 152

Driver c:\windows\system32\drivers\ql2300.sys (8.2.3.61 (w32 VI), 456.92 KB (467,890 bytes), 9/30/2003 2:37 PM)

Name QLogic QLA23xx PCI Fibre Channel Adapter  
 Manufacturer QLogic  
 Status OK

PNP Device ID  
 PCI\VEN\_1077&DEV\_2312&SUBSYS\_010C1077&REV\_02\3&300BC0BE  
 &0&10

I/O Port 0x0000C500-0x0000C5FF

Memory Address 0xE9121000-0xE9121FFF

IRQ Channel IRQ 153

Driver c:\windows\system32\drivers\ql2300.sys (8.2.3.61 (w32 VI), 456.92  
 KB (467,890 bytes), 9/30/2003 2:37 PM)

Name QLogic QLA23xx PCI Fibre Channel Adapter  
 Manufacturer QLogic  
 Status OK

PNP Device ID  
 PCI\VEN\_1077&DEV\_2312&SUBSYS\_01001077&REV\_02\3&72AA75C&0  
 &20

I/O Port 0x0000C600-0x0000C7FF

Memory Address 0xE9320000-0xE9320FFF

IRQ Channel IRQ 154

Driver c:\windows\system32\drivers\ql2300.sys (8.2.3.61 (w32 VI), 456.92  
 KB (467,890 bytes), 9/30/2003 2:37 PM)

Name QLogic QLA23xx PCI Fibre Channel Adapter  
 Manufacturer QLogic  
 Status OK

PNP Device ID  
 PCI\VEN\_1077&DEV\_2312&SUBSYS\_01001077&REV\_02\3&2C9E08A6&  
 0&08

I/O Port 0x0000CE00-0x0000CEFF

Memory Address 0xE8420000-0xE8420FFF

IRQ Channel IRQ 156

Driver c:\windows\system32\drivers\ql2300.sys (8.2.3.61 (w32 VI), 456.92  
 KB (467,890 bytes), 9/30/2003 2:37 PM)

Name QLogic QLA23xx PCI Fibre Channel Adapter  
 Manufacturer QLogic  
 Status OK

PNP Device ID  
 PCI\VEN\_1077&DEV\_2312&SUBSYS\_01001077&REV\_02\3&F2FC708&0  
 &08

I/O Port 0x00008600-0x000086FF

Memory Address 0xF0C20000-0xF0C20FFF

IRQ Channel IRQ 95

Driver c:\windows\system32\drivers\ql2300.sys (8.2.3.61 (w32 VI), 456.92  
 KB (467,890 bytes), 9/30/2003 2:37 PM)

Name QLogic QLA23xx PCI Fibre Channel Adapter  
 Manufacturer QLogic  
 Status OK

PNP Device ID  
 PCI\VEN\_1077&DEV\_2312&SUBSYS\_010C1077&REV\_02\3&21E977AD&  
 0&08

I/O Port 0x0000B000-0x0000B0FF

Memory Address 0xF1420000-0xF1420FFF

IRQ Channel IRQ 88

Driver c:\windows\system32\drivers\ql2300.sys (8.2.3.61 (w32 VI), 456.92  
 KB (467,890 bytes), 9/30/2003 2:37 PM)

Name QLogic QLA23xx PCI Fibre Channel Adapter  
 Manufacturer QLogic  
 Status OK

PNP Device ID  
 PCI\VEN\_1077&DEV\_2312&SUBSYS\_010C1077&REV\_02\3&3ACAD158  
 &0&08

I/O Port 0x0000D400-0x0000D5FF

Memory Address 0xED220000-0xED220FFF

IRQ Channel IRQ 109

Driver c:\windows\system32\drivers\ql2300.sys (8.2.3.61 (w32 VI), 456.92  
 KB (467,890 bytes), 9/30/2003 2:37 PM)

Name QLogic QLA23xx PCI Fibre Channel Adapter  
 Manufacturer QLogic  
 Status OK

PNP Device ID  
 PCI\VEN\_1077&DEV\_2312&SUBSYS\_01001077&REV\_02\3&3ACAD158  
 &0&10

I/O Port 0x0000D500-0x0000D5FF

Memory Address 0xED221000-0xED221FFF

IRQ Channel IRQ 113



Driver c:\windows\system32\drivers\ql2300.sys (8.2.3.61 (w32 VI), 456.92 KB (467,890 bytes), 9/30/2003 2:37 PM)

[IDE]

Item Value

Name VIA Bus Master IDE Controller

Manufacturer VIA Technologies, Inc.

Status OK

PNP Device ID

PCI\VEN\_1106&DEV\_0571&SUBSYS\_02A61014&REV\_06\3&267A616A&0&29

I/O Port 0x00000700-0x0000070F

Driver c:\windows\system32\drivers\vviaide.sys (1.00.01.00, 7.00 KB (7,168 bytes), 3/25/2003 7:00 AM)

Name Primary IDE Channel

Manufacturer (Standard IDE ATA/ATAPI controllers)

Status OK

PNP Device ID PCI\IDE\IDECHANNEL\4&29582549&0&0

I/O Port 0x000001F0-0x000001F7

I/O Port 0x000003F6-0x000003F6

IRQ Channel IRQ 14

Driver c:\windows\system32\drivers\atapi.sys (5.2.3790.0 (srv03\_rtm.030324-2048), 89.00 KB (91,136 bytes), 3/25/2003 7:00 AM)

Name Secondary IDE Channel

Manufacturer (Standard IDE ATA/ATAPI controllers)

Status OK

PNP Device ID PCI\IDE\IDECHANNEL\4&29582549&0&1

I/O Port 0x00000170-0x00000177

I/O Port 0x00000376-0x00000376

IRQ Channel IRQ 15

Driver c:\windows\system32\drivers\atapi.sys (5.2.3790.0 (srv03\_rtm.030324-2048), 89.00 KB (91,136 bytes), 3/25/2003 7:00 AM)

[Printing]

Name Driver Port Name Server Name

[Problem Devices]

Device PNP Device ID Error Code

Not Available ACPI\IBM37D4\2&DABA3FF&0 The drivers for this device are not installed.

Other PCI Bridge Device

PCI\VEN\_1014&DEV\_010F&SUBSYS\_01131014&REV\_00\3&267A616A&0&20 The drivers for this device are not installed.

VIA Rev 5 or later USB Universal Host Controller

PCI\VEN\_1106&DEV\_3038&SUBSYS\_02A61014&REV\_16\3&267A616A&0&2A This device is disabled.

VIA Rev 5 or later USB Universal Host Controller

PCI\VEN\_1106&DEV\_3038&SUBSYS\_02A61014&REV\_16\3&267A616A&0&2B This device is disabled.

Broadcom NetXtreme Gigabit Ethernet

PCI\VEN\_14E4&DEV\_1648&SUBSYS\_02A61014&REV\_02\3&13C0B0C5&0&20 This device is disabled.

Broadcom NetXtreme Gigabit Ethernet #2

PCI\VEN\_14E4&DEV\_1648&SUBSYS\_02A61014&REV\_02\3&13C0B0C5&0&21 This device is disabled.

Other PCI Bridge Device

PCI\VEN\_1014&DEV\_010F&SUBSYS\_01131014&REV\_00\3&A985F74&0&20 The drivers for this device are not installed.

VIA Rev 5 or later USB Universal Host Controller

PCI\VEN\_1106&DEV\_3038&SUBSYS\_02A61014&REV\_16\3&A985F74&0&2A This device is disabled.

VIA Rev 5 or later USB Universal Host Controller

PCI\VEN\_1106&DEV\_3038&SUBSYS\_02A61014&REV\_16\3&A985F74&0&2B This device is disabled.

Broadcom NetXtreme Gigabit Ethernet #3

PCI\VEN\_14E4&DEV\_1648&SUBSYS\_02A61014&REV\_02\3&1D521019&0&20 This device is disabled.

Broadcom NetXtreme Gigabit Ethernet #4

PCI\VEN\_14E4&DEV\_1648&SUBSYS\_02A61014&REV\_02\3&1D521019&0&21 This device is disabled.

[USB]

Device PNP Device ID

VIA Rev 5 or later USB Universal Host Controller

PCI\VEN\_1106&DEV\_3038&SUBSYS\_02A61014&REV\_16\3&267A616A&0&2A

VIA Rev 5 or later USB Universal Host Controller

PCI\VEN\_1106&DEV\_3038&SUBSYS\_02A61014&REV\_16\3&267A616A&0&2B

VIA Rev 5 or later USB Universal Host Controller

PCI\VEN\_1106&DEV\_3038&SUBSYS\_02A61014&REV\_16\3&A985F74&0&2A

VIA Rev 5 or later USB Universal Host Controller

PCI\VEN\_1106&DEV\_3038&SUBSYS\_02A61014&REV\_16\3&A985F74&0&2B

[Software Environment]

[System Drivers]

Name	Description	File	Type	Started	Start Mode	beep	Beep	c:\windows\system32\drivers\beep.sys	Kernel	
State	Status	Error Control	Accept	Pause	Accept Stop	Driver	Yes	System	Running	
		OK	Ignore	No	No	Yes	Yes	OK	Normal	No
abiosdsk	Abiosdsk	Not Available	Kernel Driver		No					
Disabled	Stopped	OK	No	No		cbidf2k	cbidf2k	c:\windows\system32\drivers\cbidf2k.sys	Kernel	
		Ignore	No	No		Driver	No	Disabled	Stopped	OK
			Normal					OK	Normal	No
acpi	Microsoft ACPI Driver		Kernel Driver		Yes					
c:\windows\system32\drivers\acpi.sys			No	Yes						
Boot	Running	OK	Normal	No	Yes	cdfs	Cdfs	c:\windows\system32\drivers\cdfs.sys	File System	
			OK	Normal	No	Driver	Yes	Disabled	Running	OK
			Normal					OK	Normal	No
acpiec	ACPIEC	c:\windows\system32\drivers\acpiec.sys	Kernel		No					
Driver	No	Disabled	Stopped	OK	Normal					
No			OK	Normal	No	cdrom	CD-ROM Driver	c:\windows\system32\drivers\cdrom.sys	Kernel Driver	
			Yes	System	Running	OK	Normal			
			OK	Normal	No	No	Yes			
adpu160m	adpu160m	Not Available	Kernel Driver		No					
Disabled	Stopped	OK	No	No		changer	Changer	Not Available	Kernel Driver	
			No	No		System	Stopped	OK	Ignore	No
			Normal					No	No	No
adpu320	adpu320	Not Available	Kernel Driver		No					
Disabled	Stopped	OK	No	No		clusdisk	Cluster Disk Driver	c:\windows\system32\drivers\clusdisk.sys	Kernel Driver	
			No	No		Kernel Driver	No	Disabled	Stopped	OK
			Normal			No	No	Normal	Normal	No
afcnt	afcnt	Not Available	Kernel Driver		No					
Disabled	Stopped	OK	No	No		cmdide	CmdIde	Not Available	Kernel Driver	
			No	No		Disabled	Stopped	OK	Normal	No
			Normal					No	No	No
afd	AFD Networking Support Environment		Kernel Driver		Yes					
c:\windows\system32\drivers\afd.sys			No	Yes		cpqarray	Cpqarray	Not Available	Kernel Driver	
Auto	Running	OK	Normal	No	Yes	Disabled	Stopped	OK	Normal	No
			Normal					No	No	No
aha154x	Aha154x	Not Available	Kernel Driver		No					
Disabled	Stopped	OK	No	No		cpqarry2	cpqarry2	Not Available	Kernel Driver	
			No	No		Disabled	Stopped	OK	Normal	No
			Normal					No	No	No
aic78u2	aic78u2	Not Available	Kernel Driver		No					
Disabled	Stopped	OK	No	No		cpqcissm	cpqcissm	Not Available	Kernel Driver	
			No	No		Disabled	Stopped	OK	Normal	No
			Normal					No	No	No
aic78xx	aic78xx	Not Available	Kernel Driver		No					
Disabled	Stopped	OK	No	No		cpqfcalm	cpqfcalm	Not Available	Kernel Driver	
			No	No		Disabled	Stopped	OK	Normal	No
			Normal					No	No	No
aliide	AliIde	Not Available	Kernel Driver		No					
Disabled	Stopped	OK	No	No		credisk	CRC Disk Filter Driver	c:\windows\system32\drivers\credisk.sys	Kernel Driver	
			No	No		Boot	Running	OK	Normal	No
			Normal					OK	Normal	Yes
asynmac	RAS Asynchronous Media Driver		Kernel Driver		No					
c:\windows\system32\drivers\asynmac.sys			No	No		dac960nt	dac960nt	Not Available	Kernel Driver	
Manual	Stopped	OK	Normal	No	No	Disabled	Stopped	OK	Normal	No
			Normal					No	No	No
atapi	Standard IDE/ESDI Hard Disk Controller		Kernel Driver		Yes					
c:\windows\system32\drivers\atapi.sys			No	Yes		dellcerc	dellcerc	Not Available	Kernel Driver	
Boot	Running	OK	Normal	No	Yes	Disabled	Stopped	OK	Normal	No
			Normal					No	No	No
atdisk	Atdisk	Not Available	Kernel Driver		No					
Disabled	Stopped	OK	No	No		dfsdriver	DfsDriver	c:\windows\system32\drivers\dfs.sys	File System	
			No	No		Driver	Yes	Boot	Running	OK
			Ignore			Yes		OK	Normal	No
ati2mpad	ati2mpad	c:\windows\system32\drivers\ati2mpad.sys	Kernel		No					
Driver	Yes	Manual	Running	OK	Ignore					
Yes			OK	Ignore	No	disk	Disk Driver	c:\windows\system32\drivers\disk.sys	Kernel Driver	
			Normal			Kernel Driver	Yes	Boot	Running	OK
			Normal			No	Yes	OK	Normal	No
atmarpc	ATM ARP Client Protocol		Kernel Driver		No					
c:\windows\system32\drivers\atmarpc.sys			No	No		dmboot	dmboot	c:\windows\system32\drivers\dmboot.sys	Kernel	
Manual	Stopped	OK	Normal	No	No	Driver	No	Disabled	Stopped	OK
			Normal			No		OK	Normal	No
audstub	Audio Stub Driver	c:\windows\system32\drivers\audstub.sys	Kernel Driver		Normal					
Kernel Driver	Yes	Manual	Running	OK	Normal					
No	Yes		OK	Normal		dmio	Logical Disk Manager Driver	c:\windows\system32\drivers\dmio.sys	Kernel Driver	
			Normal			Boot	Running	OK	Normal	No
			Normal					No	Yes	Yes
b57w2k	Broadcom NetXtreme Gigabit Ethernet		Kernel Driver		No					
c:\windows\system32\drivers\b57xp32.sys			No	No		dmload	dmload	c:\windows\system32\drivers\dmload.sys	Kernel	
Manual	Stopped	OK	Normal	No	No	Driver	Yes	Boot	Running	OK
			Normal			Yes		OK	Normal	No
			Normal					OK	Normal	No







wanarp Remote Access IP ARP Driver  
 c:\windows\system32\drivers\wanarp.sys Kernel Driver Yes  
 Manual Running OK Normal No Yes

wdica WDICA Not Available Kernel Driver No  
 Manual Stopped OK Ignore No No

wlbs Network Load Balancing  
 c:\windows\system32\drivers\wlbs.sys Kernel Driver No  
 Manual Stopped OK Normal No No

[Signed Drivers]

Device Name	Signed	Device Class	Driver Version
Driver Date	Manufacturer	INF Name	Driver Name
Device ID			

Not Available	Not Available	Not Available	Not Available
Available	Not Available	Not Available	Not Available
Not Available	HTREE\ROOT\0		

ACPI Multiprocessor Node	No	COMPUTER	1.20.0.0
2/11/2002 (Node-based Computers)		oem0.inf	Not Available
ROOT\ACPI_HAL\0000			

Microsoft ACPI-Compliant System	Yes	SYSTEM	5.2.3790.0
10/1/2002 Microsoft acpi.inf	Not Available		
ACPI_HAL\PNP0C08\0			

Not Available	Not Available	Not Available	Not Available
Available	Not Available	Not Available	Not Available
Not Available	ACPI\IBM37D4\2&DABA3FF&0		

PCI bus (Standard system devices)	Yes	SYSTEM	5.2.3790.0
	machine.inf	Not Available	10/1/2002 (Standard system devices)
		ACPI\PNP0A03\0	

PCI standard host CPU bridge (Standard system devices)	Yes	SYSTEM	5.2.3790.0
	machine.inf	Not Available	10/1/2002 (Standard system devices)
		PCI\VEN_1014&DEV_0302&SUBSYS_00000000&REV_05\3&267A616A&0&00	

RAGE XL PCI ATI Technologies Inc.	No	DISPLAY	5.0.2195.5012
		oem10.inf	Not Available
		PCI\VEN_1002&DEV_4752&SUBSYS_02401014&REV_27\3&267A616A&0&18	12/28/2001

Default Monitor (Standard monitor types)	Yes	MONITOR	5.1.2001.0
		monitor.inf	6/6/2001
		DISPLAY\DEFAULT_MONITOR\4&F17EA7B&0&80000000&00&03	Not Available

Other PCI Bridge Device	Not Available	UNKNOWN	
Not Available	Not Available	Not Available	Not Available
Available	Not Available		
		PCI\VEN_1014&DEV_010F&SUBSYS_01131014&REV_00\3&267A616A&0&20	

VIA Tech PCI to ISA bridge	Yes	SYSTEM	5.2.3790.0
	machine.inf	Not Available	10/1/2002 (Standard system devices)
		PCI\VEN_1106&DEV_0686&SUBSYS_00000000&REV_40\3&267A616A&0&28	

ISAPNP Read Data Port (Standard system devices)	Yes	SYSTEM	5.2.3790.0
	machine.inf	Not Available	10/1/2002 (Standard system devices)
		ISAPNP\READDATAPORT\0	

Motherboard resources (Standard system devices)	Yes	SYSTEM	5.2.3790.0
	machine.inf	Not Available	10/1/2002 (Standard system devices)
		ACPI\PNP0C02\2	

Standard 101/102-Key or Microsoft Natural PS/2 Keyboard	Yes		
KEYBOARD	5.2.3790.0	10/1/2002 (Standard keyboards)	keyboard.inf
Not Available	ACPI\PNP0303\4&7FD7688&0		

PS/2 Compatible Mouse	Yes	MOUSE	5.2.3790.0
Microsoft msmouse.inf	Not Available		10/1/2002 (Standard system devices)
		ACPI\PNP0F13\4&7FD7688&0	

Standard floppy disk controller (Standard floppy disk controllers)	Yes	FDC	5.2.3790.0
		fdc.inf	10/1/2002 (Standard system devices)
		ACPI\PNP0700\4&7FD7688&0	Not Available

Floppy disk drive (Standard floppy disk drives)	Yes	FLOPPYDISK	5.2.3790.0
		fldisk.inf	10/1/2002 (Standard system devices)
		FDC\GENERIC_FLOPPY_DRIVE\5&17D92A40&0&0	Not Available

Advanced programmable interrupt controller (Standard system devices)	Yes	SYSTEM	5.2.3790.0
		machine.inf	10/1/2002 (Standard system devices)
		ACPI\PNP0003\4&7FD7688&0	Not Available

Direct memory access controller (Standard system devices)	Yes	SYSTEM	5.2.3790.0
		machine.inf	10/1/2002 (Standard system devices)
		ACPI\PNP0200\4&7FD7688&0	Not Available

System timer (Standard system devices)	Yes	SYSTEM	5.2.3790.0
		machine.inf	10/1/2002 (Standard system devices)
		ACPI\PNP0100\4&7FD7688&0	Not Available

System CMOS/real time clock (Standard system devices)	Yes	SYSTEM	5.2.3790.0
		machine.inf	10/1/2002 (Standard system devices)
		ACPI\PNP0B00\4&7FD7688&0	Not Available

System speaker (Standard system devices)	Yes	SYSTEM	5.2.3790.0
		machine.inf	10/1/2002 (Standard system devices)
		ACPI\PNP0800\4&7FD7688&0	Not Available

Numeric data processor (Standard system devices)	Yes	SYSTEM	5.2.3790.0
		machine.inf	10/1/2002 (Standard system devices)
		ACPI\PNP0C04\4&7FD7688&0	Not Available

Motherboard resources (Standard system devices)	Yes	SYSTEM	5.2.3790.0
		machine.inf	10/1/2002 (Standard system devices)
		ACPI\PNP0C02\3	Not Available

VIA Bus Master IDE Controller	Yes	HDC	5.2.3790.0
VIA Technologies, Inc.		mshdc.inf	10/1/2002 (Standard system devices)
		PCI\VEN_1106&DEV_0571&SUBSYS_02A61014&REV_06\3&267A616A&0&29	Not Available

Primary IDE Channel (Standard IDE ATA/ATAPI controllers)	Yes	HDC	5.2.3790.0
		mshdc.inf	10/1/2002 (Standard IDE ATA/ATAPI controllers)
		PCI\IDE\IDECHANNEL\4&29582549&0&0	Not Available

CD-ROM Drive (Standard CD-ROM drives)	Yes	CDROM	5.2.3790.0
		cdrom.inf	10/1/2002 (Standard system devices)
		IDE\CDROMHL-DT-ST_DVD-ROM_GDR8081N_____0012_____\5&CBC355F&0&0.0.0	

Secondary IDE Channel (Standard IDE ATA/ATAPI controllers)	Yes	HDC	5.2.3790.0
		mshdc.inf	10/1/2002 (Standard IDE ATA/ATAPI controllers)
		PCI\IDE\IDECHANNEL\4&29582549&0&1	Not Available

VIA Rev 5 or later USB Universal Host Controller	Yes	USB	5.2.3790.0
		usbport.inf	10/1/2002 (Standard system devices)
		PCI\VEN_1106&DEV_3038&SUBSYS_02A61014&REV_16\3&267A616A&0&2A	Not Available

VIA Rev 5 or later USB Universal Host Controller	Yes	USB	5.2.3790.0	10/1/2002	VIA Technologies	usbport.inf	Not Available	PCI\VEN_1106&DEV_3038&SUBSYS_02A61014&REV_16\3&267A616A&0&2B
VIA Tech Power Management controller	Yes	SYSTEM	5.2.3790.0	10/1/2002	VIA	machine.inf	Not Available	PCI\VEN_1106&DEV_3057&SUBSYS_02A61014&REV_40\3&267A616A&0&2C
System board system devices)	Yes	SYSTEM	5.2.3790.0	10/1/2002	SYSTEM	machine.inf	Not Available	ACPI\PNP0C01\1
ACPI Fixed Feature Button (Standard system devices)	Yes	SYSTEM	5.2.3790.0	10/1/2002	SYSTEM	machine.inf	Not Available	ACPI\FIXEDBUTTON\2&DABA3FF&0
Processor (Standard processor types)	Yes	PROCESSOR	5.2.3790.0	10/1/2002	INTEL	cpu.inf	Not Available	ACPI\GENUINEINTEL_-_X86_FAMILY_15_MODEL_2\0
Processor (Standard processor types)	Yes	PROCESSOR	5.2.3790.0	10/1/2002	INTEL	cpu.inf	Not Available	ACPI\GENUINEINTEL_-_X86_FAMILY_15_MODEL_2\1
Processor (Standard processor types)	Yes	PROCESSOR	5.2.3790.0	10/1/2002	INTEL	cpu.inf	Not Available	ACPI\GENUINEINTEL_-_X86_FAMILY_15_MODEL_2\2
Processor (Standard processor types)	Yes	PROCESSOR	5.2.3790.0	10/1/2002	INTEL	cpu.inf	Not Available	ACPI\GENUINEINTEL_-_X86_FAMILY_15_MODEL_2\3
Processor (Standard processor types)	Yes	PROCESSOR	5.2.3790.0	10/1/2002	INTEL	cpu.inf	Not Available	ACPI\GENUINEINTEL_-_X86_FAMILY_15_MODEL_2\4
Processor (Standard processor types)	Yes	PROCESSOR	5.2.3790.0	10/1/2002	INTEL	cpu.inf	Not Available	ACPI\GENUINEINTEL_-_X86_FAMILY_15_MODEL_2\5
Processor (Standard processor types)	Yes	PROCESSOR	5.2.3790.0	10/1/2002	INTEL	cpu.inf	Not Available	ACPI\GENUINEINTEL_-_X86_FAMILY_15_MODEL_2\6
Processor (Standard processor types)	Yes	PROCESSOR	5.2.3790.0	10/1/2002	INTEL	cpu.inf	Not Available	ACPI\GENUINEINTEL_-_X86_FAMILY_15_MODEL_2\7
Processor (Standard processor types)	Yes	PROCESSOR	5.2.3790.0	10/1/2002	INTEL	cpu.inf	Not Available	ACPI\GENUINEINTEL_-_X86_FAMILY_15_MODEL_2\8
Processor (Standard processor types)	Yes	PROCESSOR	5.2.3790.0	10/1/2002	INTEL	cpu.inf	Not Available	ACPI\GENUINEINTEL_-_X86_FAMILY_15_MODEL_2\9
Processor (Standard processor types)	Yes	PROCESSOR	5.2.3790.0	10/1/2002	INTEL	cpu.inf	Not Available	ACPI\GENUINEINTEL_-_X86_FAMILY_15_MODEL_2\10
Processor (Standard processor types)	Yes	PROCESSOR	5.2.3790.0	10/1/2002	INTEL	cpu.inf	Not Available	ACPI\GENUINEINTEL_-_X86_FAMILY_15_MODEL_2\11
Processor (Standard processor types)	Yes	PROCESSOR	5.2.3790.0	10/1/2002	INTEL	cpu.inf	Not Available	ACPI\GENUINEINTEL_-_X86_FAMILY_15_MODEL_2\12
Processor (Standard processor types)	Yes	PROCESSOR	5.2.3790.0	10/1/2002	INTEL	cpu.inf	Not Available	ACPI\GENUINEINTEL_-_X86_FAMILY_15_MODEL_2\13
Processor (Standard processor types)	Yes	PROCESSOR	5.2.3790.0	10/1/2002	INTEL	cpu.inf	Not Available	ACPI\GENUINEINTEL_-_X86_FAMILY_15_MODEL_2\14
Processor (Standard processor types)	Yes	PROCESSOR	5.2.3790.0	10/1/2002	INTEL	cpu.inf	Not Available	ACPI\GENUINEINTEL_-_X86_FAMILY_15_MODEL_2\15
Memory Module	Yes	MEMORY	5.2.3790.0	10/1/2002	Microsoft	memory.inf	Not Available	ACPI\PNP0C80\0
Memory Module	Yes	MEMORY	5.2.3790.0	10/1/2002	Microsoft	memory.inf	Not Available	ACPI\PNP0C80\2
PCI bus devices)	Yes	SYSTEM	5.2.3790.0	10/1/2002	SYSTEM	machine.inf	Not Available	ACPI\PNP0A03\1
PCI standard host CPU bridge (Standard system devices)	Yes	SYSTEM	5.2.3790.0	10/1/2002	INTEL	machine.inf	Not Available	PCI\VEN_1014&DEV_0302&SUBSYS_00000000&REV_05\3&13C0B0C5&0&00
LSI Logic PCI-X Ultra320 SCSI Host Adapter	Yes	SCSIADAPTER	5.2.3790.0	10/1/2002	LSI Logic Inc.	pnpscsi.inf	Not Available	PCI\VEN_1000&DEV_0030&SUBSYS_02921014&REV_07\3&13C0B0C5&0&18
Disk drive	Yes	DISKDRIVE	5.2.3790.0	10/1/2002	IBM	disk.inf	Not Available	SCSI\DISK&VEN_IBM-PSG&PROD_ST318203LC_!#&REV_B227\4&3CF91A&0&000
SCSI Processor Device	Yes	SYSTEM	5.2.3790.0	10/1/2002	IBM	scsidesv.inf	Not Available	SCSI\PROCESSOR&VEN_IBM&PROD_25P3495A_S320_1&REV_1\4&3CF91A&0&080
IBM Dummy Device	Yes	SYSTEM	5.2.3790.0	10/1/2002	IBM	scsidesv.inf	Not Available	SCSI\BRIDGE&VEN_IBM&PROD_DUMMY_DEVICE&REV_4.80\4&3CF91A&0&100
LSI Logic PCI-X Ultra320 SCSI Host Adapter	Yes	SCSIADAPTER	5.2.3790.0	10/1/2002	LSI Logic Inc.	pnpscsi.inf	Not Available	PCI\VEN_1000&DEV_0030&SUBSYS_02921014&REV_07\3&13C0B0C5&0&19
IBM Dummy Device	Yes	SYSTEM	5.2.3790.0	10/1/2002	IBM	scsidesv.inf	Not Available	SCSI\BRIDGE&VEN_IBM&PROD_DUMMY_DEVICE&REV_4.80\4&12F6A9BF&0&100
Broadcom NetXtreme Gigabit Ethernet	Yes	NET	6.34.0.0	2/17/2003	Broadcom	oem1.inf	Not Available	PCI\VEN_14E4&DEV_1648&SUBSYS_02A61014&REV_02\3&13C0B0C5&0&20

Broadcom NetXtreme Gigabit Ethernet Yes NET 6.34.0.0  
 2/17/2003 Broadcom oem1.inf Not Available  
 PCI\VEN\_14E4&DEV\_1648&SUBSYS\_02A61014&REV\_02\3&13C0B0C5  
 &0&21

PCI bus Yes SYSTEM 5.2.3790.0 10/1/2002 (Standard system  
 devices) machine.inf Not Available ACPI\PNP0A03\2

PCI standard host CPU bridge Yes SYSTEM 5.2.3790.0 10/1/2002  
 (Standard system devices) machine.inf Not Available  
 PCI\VEN\_1014&DEV\_0302&SUBSYS\_00000000&REV\_05\3&1070020&0  
 &00

QLogic QLA23xx PCI Fibre Channel Adapter Yes  
 SCSIADAPTER 8.2.3.61 7/25/2003 QLogic oem18.inf Not  
 Available  
 PCI\VEN\_1077&DEV\_2312&SUBSYS\_01001077&REV\_02\3&1070020&0  
 &08

Disk drive Yes DISKDRIVE 5.2.3790.0 10/1/2002 (Standard  
 disk drives) disk.inf Not Available  
 SCSI\DISK&VEN\_IBM&PROD\_1742&REV\_0520\4&3B4E3515&1&000

Qlogic processor device Yes SYSTEM 5.2.3790.0 10/1/2002  
 QLOGIC scsidev.inf Not Available  
 SCSI\PROCESSOR&VEN\_QLOGIC&PROD\_PSEUDO\_LUN&REV\_4&3B4  
 E3515&1&07F0

PCI bus Yes SYSTEM 5.2.3790.0 10/1/2002 (Standard system  
 devices) machine.inf Not Available ACPI\PNP0A03\3

PCI standard host CPU bridge Yes SYSTEM 5.2.3790.0 10/1/2002  
 (Standard system devices) machine.inf Not Available  
 PCI\VEN\_1014&DEV\_0302&SUBSYS\_00000000&REV\_05\3&29E1982&0  
 &00

PCI bus Yes SYSTEM 5.2.3790.0 10/1/2002 (Standard system  
 devices) machine.inf Not Available ACPI\PNP0A03\4

PCI standard host CPU bridge Yes SYSTEM 5.2.3790.0 10/1/2002  
 (Standard system devices) machine.inf Not Available  
 PCI\VEN\_1014&DEV\_0302&SUBSYS\_00000000&REV\_05\3&172E68DD&  
 0&00

QLogic QLA23xx PCI Fibre Channel Adapter Yes  
 SCSIADAPTER 8.2.3.61 7/25/2003 QLogic oem18.inf Not  
 Available  
 PCI\VEN\_1077&DEV\_2312&SUBSYS\_01001077&REV\_02\3&172E68DD&  
 0&18

Disk drive Yes DISKDRIVE 5.2.3790.0 10/1/2002 (Standard  
 disk drives) disk.inf Not Available  
 SCSI\DISK&VEN\_IBM&PROD\_1742&REV\_0520\4&26D408A5&0&000

Disk drive Yes DISKDRIVE 5.2.3790.0 10/1/2002 (Standard  
 disk drives) disk.inf Not Available  
 SCSI\DISK&VEN\_IBM&PROD\_1742&REV\_0520\4&26D408A5&0&001

Disk drive Yes DISKDRIVE 5.2.3790.0 10/1/2002 (Standard  
 disk drives) disk.inf Not Available  
 SCSI\DISK&VEN\_IBM&PROD\_1742&REV\_0520\4&26D408A5&0&012

Disk drive Yes DISKDRIVE 5.2.3790.0 10/1/2002 (Standard  
 disk drives) disk.inf Not Available  
 SCSI\DISK&VEN\_IBM&PROD\_1742&REV\_0520\4&26D408A5&0&013

Qlogic processor device Yes SYSTEM 5.2.3790.0 10/1/2002  
 QLOGIC scsidev.inf Not Available

SCSI\PROCESSOR&VEN\_QLOGIC&PROD\_PSEUDO\_LUN&REV\_4&26D  
 408A5&0&07F0

PCI bus Yes SYSTEM 5.2.3790.0 10/1/2002 (Standard system  
 devices) machine.inf Not Available ACPI\PNP0A03\5

PCI standard host CPU bridge Yes SYSTEM 5.2.3790.0 10/1/2002  
 (Standard system devices) machine.inf Not Available  
 PCI\VEN\_1014&DEV\_0302&SUBSYS\_00000000&REV\_05\3&474B838&0  
 &00

QLogic QLA23xx PCI Fibre Channel Adapter Yes  
 SCSIADAPTER 8.2.3.61 7/25/2003 QLogic oem18.inf Not  
 Available  
 PCI\VEN\_1077&DEV\_2312&SUBSYS\_010C1077&REV\_02\3&474B838&0  
 &08

QLOGIC PSEUDO LUN Yes SYSTEM 8.2.3.61 7/25/2003  
 QLogic Corp oem19.inf Not Available  
 SCSI\PROCESSOR&VEN\_QLOGIC&PROD\_PSEUDO\_LUN&REV\_4&400  
 1865&1&07F0

Motherboard resources Yes SYSTEM 5.2.3790.0 10/1/2002  
 (Standard system devices) machine.inf Not Available  
 ACPI\PNP0C02\10

Processor Yes PROCESSOR 5.2.3790.0 10/1/2002 (Standard  
 processor types) cpu.inf Not Available  
 ACPI\GENUINEINTEL\_-X86\_FAMILY\_15\_MODEL\_2\16

Processor Yes PROCESSOR 5.2.3790.0 10/1/2002 (Standard  
 processor types) cpu.inf Not Available  
 ACPI\GENUINEINTEL\_-X86\_FAMILY\_15\_MODEL\_2\17

Processor Yes PROCESSOR 5.2.3790.0 10/1/2002 (Standard  
 processor types) cpu.inf Not Available  
 ACPI\GENUINEINTEL\_-X86\_FAMILY\_15\_MODEL\_2\18

Processor Yes PROCESSOR 5.2.3790.0 10/1/2002 (Standard  
 processor types) cpu.inf Not Available  
 ACPI\GENUINEINTEL\_-X86\_FAMILY\_15\_MODEL\_2\19

Processor Yes PROCESSOR 5.2.3790.0 10/1/2002 (Standard  
 processor types) cpu.inf Not Available  
 ACPI\GENUINEINTEL\_-X86\_FAMILY\_15\_MODEL\_2\20

Processor Yes PROCESSOR 5.2.3790.0 10/1/2002 (Standard  
 processor types) cpu.inf Not Available  
 ACPI\GENUINEINTEL\_-X86\_FAMILY\_15\_MODEL\_2\21

Processor Yes PROCESSOR 5.2.3790.0 10/1/2002 (Standard  
 processor types) cpu.inf Not Available  
 ACPI\GENUINEINTEL\_-X86\_FAMILY\_15\_MODEL\_2\22

Processor Yes PROCESSOR 5.2.3790.0 10/1/2002 (Standard  
 processor types) cpu.inf Not Available  
 ACPI\GENUINEINTEL\_-X86\_FAMILY\_15\_MODEL\_2\23

Processor Yes PROCESSOR 5.2.3790.0 10/1/2002 (Standard  
 processor types) cpu.inf Not Available  
 ACPI\GENUINEINTEL\_-X86\_FAMILY\_15\_MODEL\_2\24

Processor Yes PROCESSOR 5.2.3790.0 10/1/2002 (Standard  
 processor types) cpu.inf Not Available  
 ACPI\GENUINEINTEL\_-X86\_FAMILY\_15\_MODEL\_2\25



Processor (Standard processor types)	Yes	PROCESSOR	5.2.3790.0	10/1/2002	(Standard processor types)	cpu.inf	Not Available	ACPI\GENUINEINTEL_-X86_FAMILY_15_MODEL_2\26
Processor (Standard processor types)	Yes	PROCESSOR	5.2.3790.0	10/1/2002	(Standard processor types)	cpu.inf	Not Available	ACPI\GENUINEINTEL_-X86_FAMILY_15_MODEL_2\27
Processor (Standard processor types)	Yes	PROCESSOR	5.2.3790.0	10/1/2002	(Standard processor types)	cpu.inf	Not Available	ACPI\GENUINEINTEL_-X86_FAMILY_15_MODEL_2\28
Processor (Standard processor types)	Yes	PROCESSOR	5.2.3790.0	10/1/2002	(Standard processor types)	cpu.inf	Not Available	ACPI\GENUINEINTEL_-X86_FAMILY_15_MODEL_2\29
Processor (Standard processor types)	Yes	PROCESSOR	5.2.3790.0	10/1/2002	(Standard processor types)	cpu.inf	Not Available	ACPI\GENUINEINTEL_-X86_FAMILY_15_MODEL_2\30
Processor (Standard processor types)	Yes	PROCESSOR	5.2.3790.0	10/1/2002	(Standard processor types)	cpu.inf	Not Available	ACPI\GENUINEINTEL_-X86_FAMILY_15_MODEL_2\31
Memory Module memory.inf	Yes	MEMORY	5.2.3790.0	10/1/2002	Microsoft	memory.inf	Not Available	ACPI\PNP0C80\10
Memory Module memory.inf	Yes	MEMORY	5.2.3790.0	10/1/2002	Microsoft	memory.inf	Not Available	ACPI\PNP0C80\12
PCI bus (Standard system devices)	Yes	SYSTEM	5.2.3790.0	10/1/2002	(Standard system devices)	machine.inf	Not Available	ACPI\PNP0A03\10
PCI standard host CPU bridge (Standard system devices)	Yes	SYSTEM	5.2.3790.0	10/1/2002	(Standard system devices)	machine.inf	Not Available	PCI\VEN_1014&DEV_0302&SUBSYS_00000000&REV_05\3&A985F74&0&00
Other PCI Bridge Device	Not Available	Not Available	Not Available	Not Available	Not Available	Not Available	Not Available	PCI\VEN_1014&DEV_010F&SUBSYS_01131014&REV_00\3&A985F74&0&20
VIA Tech PCI to ISA bridge	Yes	SYSTEM	5.2.3790.0	10/1/2002	VIA Technologies	machine.inf	Not Available	PCI\VEN_1106&DEV_0686&SUBSYS_00000000&REV_40\3&A985F74&0&28
VIA Rev 5 or later USB Universal Host Controller	Yes	USB	5.2.3790.0	10/1/2002	VIA Technologies	usbport.inf	Not Available	PCI\VEN_1106&DEV_3038&SUBSYS_02A61014&REV_16\3&A985F74&0&2A
VIA Rev 5 or later USB Universal Host Controller	Yes	USB	5.2.3790.0	10/1/2002	VIA Technologies	usbport.inf	Not Available	PCI\VEN_1106&DEV_3038&SUBSYS_02A61014&REV_16\3&A985F74&0&2B
VIA Tech Power Management controller	Yes	SYSTEM	5.2.3790.0	10/1/2002	VIA	machine.inf	Not Available	PCI\VEN_1106&DEV_3057&SUBSYS_02A61014&REV_40\3&A985F74&0&2C
PCI bus (Standard system devices)	Yes	SYSTEM	5.2.3790.0	10/1/2002	(Standard system devices)	machine.inf	Not Available	ACPI\PNP0A03\11
PCI standard host CPU bridge (Standard system devices)	Yes	SYSTEM	5.2.3790.0	10/1/2002	(Standard system devices)	machine.inf	Not Available	PCI\VEN_1014&DEV_0302&SUBSYS_00000000&REV_05\3&1D521019&0&00
LSI Logic PCI-X Ultra320 SCSI Host Adapter	Yes	SYSTEM	5.2.3790.0	10/1/2002	LSI Logic Inc.	pnpscsi.inf	Not Available	PCI\VEN_1000&DEV_0030&SUBSYS_02921014&REV_07\3&1D521019&0&18
SCSI Processor Device	Yes	SYSTEM	5.2.3790.0	10/1/2002	IBM	scsidev.inf	Not Available	SCSI\PROCESSOR&VEN_IBM&PROD_25P3495A_S320__1&REV_1\4&8B18983&0&080
IBM Dummy Device	Yes	SYSTEM	5.2.3790.0	10/1/2002	IBM	scsidev.inf	Not Available	SCSI\BRIDGE&VEN_IBM&PROD_DUMMY_DEVICE&REV_4.80\4&8B18983&0&100
LSI Logic PCI-X Ultra320 SCSI Host Adapter	Yes	SYSTEM	5.2.3790.0	10/1/2002	LSI Logic Inc.	pnpscsi.inf	Not Available	PCI\VEN_1000&DEV_0030&SUBSYS_02921014&REV_07\3&1D521019&0&19
IBM Dummy Device	Yes	SYSTEM	5.2.3790.0	10/1/2002	IBM	scsidev.inf	Not Available	SCSI\BRIDGE&VEN_IBM&PROD_DUMMY_DEVICE&REV_4.80\4&1B6B3A28&0&100
Broadcom NetXtreme Gigabit Ethernet	Yes	NET	6.34.0.0	2/17/2003	Broadcom	oem1.inf	Not Available	PCI\VEN_14E4&DEV_1648&SUBSYS_02A61014&REV_02\3&1D521019&0&20
Broadcom NetXtreme Gigabit Ethernet	Yes	NET	6.34.0.0	2/17/2003	Broadcom	oem1.inf	Not Available	PCI\VEN_14E4&DEV_1648&SUBSYS_02A61014&REV_02\3&1D521019&0&21
PCI bus (Standard system devices)	Yes	SYSTEM	5.2.3790.0	10/1/2002	(Standard system devices)	machine.inf	Not Available	ACPI\PNP0A03\12
PCI standard host CPU bridge (Standard system devices)	Yes	SYSTEM	5.2.3790.0	10/1/2002	(Standard system devices)	machine.inf	Not Available	PCI\VEN_1014&DEV_0302&SUBSYS_00000000&REV_05\3&300BC0BE&0&00
QLogic QLA23xx PCI Fibre Channel Adapter	Yes	SYSTEM	8.2.3.61	7/25/2003	QLogic	oem18.inf	Not Available	PCI\VEN_1077&DEV_2312&SUBSYS_01001077&REV_02\3&300BC0BE&0&08
Disk drive (Standard disk drives)	Yes	DISKDRIVE	5.2.3790.0	10/1/2002	(Standard disk drives)	disk.inf	Not Available	SCSI\DISK&VEN_IBM&PROD_1742&REV_0520\4&266D7871&0&000
Disk drive (Standard disk drives)	Yes	DISKDRIVE	5.2.3790.0	10/1/2002	(Standard disk drives)	disk.inf	Not Available	SCSI\DISK&VEN_IBM&PROD_1742&REV_0520\4&266D7871&0&001
Disk drive (Standard disk drives)	Yes	DISKDRIVE	5.2.3790.0	10/1/2002	(Standard disk drives)	disk.inf	Not Available	SCSI\DISK&VEN_IBM&PROD_1742&REV_0520\4&266D7871&0&012

Disk drive Yes disk drives)	DISKDRIVE disk.inf	5.2.3790.0	10/1/2002	(Standard Not Available	PCI\VEN_1014&DEV_0302&SUBSYS_00000000&REV_05\3&19E45801&0&00					
SCSI\DISK&VEN_IBM&PROD_1742&REV_0520\4&266D7871&0&013					PCI bus Yes devices) machine.inf	SYSTEM Not Available	5.2.3790.0	10/1/2002	(Standard system ACPI\PNP0A03\15	
Qlogic processor device QLOGIC	Yes scsidev.inf	SYSTEM	5.2.3790.0	10/1/2002 Not Available	PCI standard host CPU bridge (Standard system devices)	Yes machine.inf	SYSTEM	5.2.3790.0	10/1/2002 Not Available	
SCSI\PROCESSOR&VEN_QLOGIC&PROD_PSEUDO_LUN&REV_4&266D7871&0&07F0					PCI\VEN_1014&DEV_0302&SUBSYS_00000000&REV_05\3&2C9E08A6&0&00					
QLogic QLA23xx PCI Fibre Channel Adapter SCSIADAPTER	Yes 8.2.3.61	7/25/2003	QLogic	oem18.inf	Available Not Available					
PCI\VEN_1077&DEV_2312&SUBSYS_010C1077&REV_02\3&300BC0BE&0&10					QLogic QLA23xx PCI Fibre Channel Adapter SCSIADAPTER	Yes 8.2.3.61	7/25/2003	QLogic	oem18.inf	Not Available
QLOGIC PSEUDO LUN QLogic Corp					Yes oem19.inf	SYSTEM	8.2.3.61	7/25/2003	Not Available	PCI\VEN_1077&DEV_2312&SUBSYS_01001077&REV_02\3&2C9E08A6&0&08
SCSI\PROCESSOR&VEN_QLOGIC&PROD_PSEUDO_LUN&REV_4&D88F85E&1&07F0					Disk drive Yes disk drives)	DISKDRIVE disk.inf	5.2.3790.0	10/1/2002	(Standard Not Available	
PCI bus Yes devices) machine.inf					SYSTEM	5.2.3790.0	10/1/2002	(Standard system ACPI\PNP0A03\13		
PCI standard host CPU bridge (Standard system devices)	Yes machine.inf	SYSTEM	5.2.3790.0	10/1/2002 Not Available						
PCI\VEN_1014&DEV_0302&SUBSYS_00000000&REV_05\3&72AA75C&0&00					Disk drive Yes disk drives)	DISKDRIVE disk.inf	5.2.3790.0	10/1/2002	(Standard Not Available	
QLogic QLA23xx PCI Fibre Channel Adapter SCSIADAPTER					Yes 8.2.3.61	7/25/2003	QLogic	oem18.inf	Not Available	
PCI\VEN_1077&DEV_2312&SUBSYS_01001077&REV_02\3&72AA75C&0&20					Disk drive Yes disk drives)	DISKDRIVE disk.inf	5.2.3790.0	10/1/2002	(Standard Not Available	
Disk drive Yes disk drives)					DISKDRIVE disk.inf	5.2.3790.0	10/1/2002	(Standard Not Available		
SCSI\DISK&VEN_IBM&PROD_1742&REV_0520\4&36847BB2&0&011										
Disk drive Yes disk drives)					DISKDRIVE disk.inf	5.2.3790.0	10/1/2002	(Standard Not Available		
SCSI\DISK&VEN_IBM&PROD_1742&REV_0520\4&36847BB2&0&012										
Disk drive Yes disk drives)					DISKDRIVE disk.inf	5.2.3790.0	10/1/2002	(Standard Not Available		
SCSI\DISK&VEN_IBM&PROD_1742&REV_0520\4&36847BB2&0&013										
Disk drive Yes disk drives)					DISKDRIVE disk.inf	5.2.3790.0	10/1/2002	(Standard Not Available		
SCSI\DISK&VEN_IBM&PROD_1742&REV_0520\4&36847BB2&0&014										
Disk drive Yes disk drives)					DISKDRIVE disk.inf	5.2.3790.0	10/1/2002	(Standard Not Available		
SCSI\DISK&VEN_IBM&PROD_1742&REV_0520\4&36847BB2&0&015										
Disk drive Yes disk drives)					DISKDRIVE disk.inf	5.2.3790.0	10/1/2002	(Standard Not Available		
SCSI\DISK&VEN_IBM&PROD_1742&REV_0520\4&36847BB2&0&016										
Qlogic processor device QLOGIC	Yes scsidev.inf	SYSTEM	5.2.3790.0	10/1/2002 Not Available	Motherboard resources (Standard system devices)	Yes machine.inf	SYSTEM	5.2.3790.0	10/1/2002 Not Available	
SCSI\PROCESSOR&VEN_QLOGIC&PROD_PSEUDO_LUN&REV_4&36847BB2&0&07F0					ACPI\PNP0C02\11					
PCI bus Yes devices) machine.inf					SYSTEM	5.2.3790.0	10/1/2002	(Standard system ACPI\PNP0A03\80		
PCI standard host CPU bridge (Standard system devices)	Yes machine.inf	SYSTEM	5.2.3790.0	10/1/2002 Not Available						
PCI\VEN_1014&DEV_0302&SUBSYS_00000000&REV_03\3&389E99D&0&00					PCI bus Yes devices) machine.inf	SYSTEM	5.2.3790.0	10/1/2002	(Standard system ACPI\PNP0A03\81	
PCI standard host CPU bridge (Standard system devices)					Yes machine.inf	SYSTEM	5.2.3790.0	10/1/2002	Not Available	
PCI\VEN_1014&DEV_0302&SUBSYS_00000000&REV_03\3&F2FC708&0&00										
QLogic QLA23xx PCI Fibre Channel Adapter SCSIADAPTER	Yes 8.2.3.61	7/25/2003	QLogic	oem18.inf	Available Not Available					
PCI\VEN_1077&DEV_2312&SUBSYS_01001077&REV_02\3&F2FC708&0&08					Disk drive Yes disk drives)	DISKDRIVE disk.inf	5.2.3790.0	10/1/2002	(Standard Not Available	
PCI standard host CPU bridge (Standard system devices)					Yes machine.inf	SYSTEM	5.2.3790.0	10/1/2002	Not Available	
SCSI\DISK&VEN_IBM&PROD_1742&REV_0520\4&16EDCAB3&0&000										

Disk drive Yes disk drives) SCSI\DISK&VEN_IBM&PROD_1742&REV_0520\4&16EDCAB3&0&001	DISKDRIVE disk.inf Not Available	5.2.3790.0 10/1/2002 (Standard	PCI bus Yes devices) machine.inf	SYSTEM 5.2.3790.0 10/1/2002 (Standard system Not Available	ACPI\PNP0A03\89
Disk drive Yes disk drives) SCSI\DISK&VEN_IBM&PROD_1742&REV_0520\4&16EDCAB3&0&004	DISKDRIVE disk.inf Not Available	5.2.3790.0 10/1/2002 (Standard	PCI standard host CPU bridge (Standard system devices)	Yes SYSTEM 5.2.3790.0 10/1/2002 machine.inf Not Available	PCI\VEN_1014&DEV_0302&SUBSYS_00000000&REV_03\3&1F67E9C9&0&00
Disk drive Yes disk drives) SCSI\DISK&VEN_IBM&PROD_1742&REV_0520\4&16EDCAB3&0&012	DISKDRIVE disk.inf Not Available	5.2.3790.0 10/1/2002 (Standard	PCI bus Yes devices) machine.inf	SYSTEM 5.2.3790.0 10/1/2002 (Standard system Not Available	ACPI\PNP0A03\8A
Disk drive Yes disk drives) SCSI\DISK&VEN_IBM&PROD_1742&REV_0520\4&16EDCAB3&0&013	DISKDRIVE disk.inf Not Available	5.2.3790.0 10/1/2002 (Standard	PCI standard host CPU bridge (Standard system devices)	Yes SYSTEM 5.2.3790.0 10/1/2002 machine.inf Not Available	PCI\VEN_1014&DEV_0302&SUBSYS_00000000&REV_03\3&3ACAD158&0&00
QLogic processor device QLOGIC scsidev.inf SCSI\PROCESSOR&VEN_QLOGIC&PROD_PSEUDO_LUN&REV_4&16E DCAB3&0&07F0	Yes SYSTEM 5.2.3790.0 10/1/2002 Not Available		QLogic QLA23xx PCI Fibre Channel Adapter SCSIADAPTER	Yes 8.2.3.61 7/25/2003 QLogic oem18.inf Not Available	PCI\VEN_1077&DEV_2312&SUBSYS_010C1077&REV_02\3&3ACAD158&0&08
PCI bus Yes devices) machine.inf	SYSTEM 5.2.3790.0 10/1/2002 (Standard system Not Available	ACPI\PNP0A03\82	QLOGIC PSEUDO LUN QLogic Corp	Yes SYSTEM 8.2.3.61 7/25/2003 oem19.inf Not Available	SCSI\PROCESSOR&VEN_QLOGIC&PROD_PSEUDO_LUN&REV_4&CD 65BEB&1&07F0
PCI standard host CPU bridge (Standard system devices)	Yes SYSTEM 5.2.3790.0 10/1/2002 machine.inf Not Available	PCI\VEN_1014&DEV_0302&SUBSYS_00000000&REV_03\3&21E977AD&0&00	QLogic QLA23xx PCI Fibre Channel Adapter SCSIADAPTER	Yes 8.2.3.61 7/25/2003 QLogic oem18.inf Not Available	PCI\VEN_1077&DEV_2312&SUBSYS_01001077&REV_02\3&3ACAD158&0&10
QLogic QLA23xx PCI Fibre Channel Adapter Available PCI\VEN_1077&DEV_2312&SUBSYS_010C1077&REV_02\3&21E977AD&0&08	Yes 8.2.3.61 7/25/2003 QLogic oem18.inf Not Available		Disk drive Yes disk drives) SCSI\DISK&VEN_IBM&PROD_1742&REV_0520\4&28321759&0&000	5.2.3790.0 10/1/2002 (Standard disk.inf Not Available	
QLOGIC PSEUDO LUN QLogic Corp	Yes SYSTEM 8.2.3.61 7/25/2003 oem19.inf Not Available	SCSI\PROCESSOR&VEN_QLOGIC&PROD_PSEUDO_LUN&REV_4&1A6 4A01B&1&07F0	Disk drive Yes disk drives) SCSI\DISK&VEN_IBM&PROD_1742&REV_0520\4&28321759&0&001	5.2.3790.0 10/1/2002 (Standard disk.inf Not Available	
Motherboard resources (Standard system devices) ACPI\PNP0C02\20	Yes SYSTEM 5.2.3790.0 10/1/2002 machine.inf Not Available		Disk drive Yes disk drives) SCSI\DISK&VEN_IBM&PROD_1742&REV_0520\4&28321759&0&012	5.2.3790.0 10/1/2002 (Standard disk.inf Not Available	
PCI bus Yes devices) machine.inf	SYSTEM 5.2.3790.0 10/1/2002 (Standard system Not Available	ACPI\PNP0A03\88	Disk drive Yes disk drives) SCSI\DISK&VEN_IBM&PROD_1742&REV_0520\4&28321759&0&013	5.2.3790.0 10/1/2002 (Standard disk.inf Not Available	
PCI standard host CPU bridge (Standard system devices)	Yes SYSTEM 5.2.3790.0 10/1/2002 machine.inf Not Available	PCI\VEN_1014&DEV_0302&SUBSYS_00000000&REV_03\3&32219A6E&0&00	Disk drive Yes disk drives) SCSI\DISK&VEN_IBM&PROD_1742&REV_0520\4&28321759&0&014	5.2.3790.0 10/1/2002 (Standard disk.inf Not Available	
Intel 21154 PCI to PCI bridge Intel machine.inf	Yes SYSTEM 5.2.3790.0 10/1/2002 Not Available	PCI\VEN_8086&DEV_B154&SUBSYS_00000000&REV_00\3&32219A6E&0&10	Qlogic processor device QLOGIC scsidev.inf	Yes SYSTEM 5.2.3790.0 10/1/2002 Not Available	SCSI\PROCESSOR&VEN_QLOGIC&PROD_PSEUDO_LUN&REV_4&283 21759&0&07F0
Intel(R) PRO/100 S Dual Port Server Adapter 7.0.26.0 3/4/2003 Intel oem6.inf	Yes NET Not Available	PCI\VEN_8086&DEV_1229&SUBSYS_10158086&REV_0D\4&18FB0D9C &0&2010	Motherboard resources (Standard system devices) ACPI\PNP0C02\21	Yes SYSTEM 5.2.3790.0 10/1/2002 machine.inf Not Available	
Intel(R) PRO/100 S Dual Port Server Adapter 7.0.26.0 3/4/2003 Intel oem6.inf	Yes NET Not Available	PCI\VEN_8086&DEV_1229&SUBSYS_10158086&REV_0D\4&18FB0D9C &0&2810	Logical Disk Manager system devices)	Yes SYSTEM 5.2.3790.0 10/1/2002 (Standard machine.inf Not Available	ROOT\DMIO\0000

Volume Manager system devices) ROOT\FTDISK\0000	Yes machine.inf	SYSTEM 5.2.3790.0 10/1/2002 (Standard Not Available
Generic volume volume.inf\not Available STORAGE\VOLUME\1&30A96598&0&SIGNATUREB6CAB6CAOFFSET7 E00LENGTH43C76CA00	Yes	VOLUME 5.2.3790.0 10/1/2002 Microsoft
Generic volume volume.inf\not Available STORAGE\VOLUME\1&30A96598&0&SIGNATUREEE1E6C76OFFSET7E0 000LENGTH731CD71A00	Yes	VOLUME 5.2.3790.0 10/1/2002 Microsoft
Generic volume volume.inf\not Available STORAGE\VOLUME\1&30A96598&0&SIGNATUREEE1E6C76OFFSET731 D559800LENGTH32CDB7600	Yes	VOLUME 5.2.3790.0 10/1/2002 Microsoft
Generic volume volume.inf\not Available STORAGE\VOLUME\1&30A96598&0&SIGNATUREB96F4D16OFFSET7E 0000LENGTHC5452CE00	Yes	VOLUME 5.2.3790.0 10/1/2002 Microsoft
Generic volume volume.inf\not Available STORAGE\VOLUME\1&30A96598&0&SIGNATUREB96F4D16OFFSETC5 4D14C00LENGTH6F59EE600	Yes	VOLUME 5.2.3790.0 10/1/2002 Microsoft
Generic volume volume.inf\not Available STORAGE\VOLUME\1&30A96598&0&SIGNATUREB96F4D16OFFSET13 4A70B000LENGTHD987B76800	Yes	VOLUME 5.2.3790.0 10/1/2002 Microsoft
Generic volume volume.inf\not Available STORAGE\VOLUME\1&30A96598&0&SIGNATUREB96F4D17OFFSET7E 0000LENGTHC5452CE00	Yes	VOLUME 5.2.3790.0 10/1/2002 Microsoft
Generic volume volume.inf\not Available STORAGE\VOLUME\1&30A96598&0&SIGNATUREB96F4D17OFFSETC5 4D14C00LENGTH6F59EE600	Yes	VOLUME 5.2.3790.0 10/1/2002 Microsoft
Generic volume volume.inf\not Available STORAGE\VOLUME\1&30A96598&0&SIGNATUREB96F4D17OFFSET13 4A70B000LENGTHD987B76800	Yes	VOLUME 5.2.3790.0 10/1/2002 Microsoft
Generic volume volume.inf\not Available STORAGE\VOLUME\1&30A96598&0&SIGNATUREB96F4D15OFFSET7E 0000LENGTHC5452CE00	Yes	VOLUME 5.2.3790.0 10/1/2002 Microsoft
Generic volume volume.inf\not Available STORAGE\VOLUME\1&30A96598&0&SIGNATUREB96F4D15OFFSETC5 4D14C00LENGTH6F59EE600	Yes	VOLUME 5.2.3790.0 10/1/2002 Microsoft
Generic volume volume.inf\not Available STORAGE\VOLUME\1&30A96598&0&SIGNATUREB96F4D15OFFSET13 4A70B000LENGTHD987B76800	Yes	VOLUME 5.2.3790.0 10/1/2002 Microsoft
Generic volume volume.inf\not Available STORAGE\VOLUME\1&30A96598&0&SIGNATUREB96F4D1BOFFSET7E 0000LENGTHC5452CE00	Yes	VOLUME 5.2.3790.0 10/1/2002 Microsoft
Generic volume volume.inf\not Available STORAGE\VOLUME\1&30A96598&0&SIGNATUREB96F4D1BOFFSETC5 4D14C00LENGTH6F59EE600	Yes	VOLUME 5.2.3790.0 10/1/2002 Microsoft
Generic volume volume.inf\not Available STORAGE\VOLUME\1&30A96598&0&SIGNATUREB96F4D1BOFFSET13 4A70B000LENGTHD987B76800	Yes	VOLUME 5.2.3790.0 10/1/2002 Microsoft
Generic volume volume.inf\not Available STORAGE\VOLUME\1&30A96598&0&SIGNATUREB96F4D1BOFFSET7E 0000LENGTHC5452CE00	Yes	VOLUME 5.2.3790.0 10/1/2002 Microsoft
Generic volume volume.inf\not Available STORAGE\VOLUME\1&30A96598&0&SIGNATUREB96F4D1BOFFSETC5 4D14C00LENGTH6F59EE600	Yes	VOLUME 5.2.3790.0 10/1/2002 Microsoft
Generic volume volume.inf\not Available STORAGE\VOLUME\1&30A96598&0&SIGNATUREB96F4D1BOFFSET13 4A70B000LENGTHD987B76800	Yes	VOLUME 5.2.3790.0 10/1/2002 Microsoft
Generic volume volume.inf\not Available STORAGE\VOLUME\1&30A96598&0&SIGNATUREB96F4D1BOFFSET7E 0000LENGTHC5452CE00	Yes	VOLUME 5.2.3790.0 10/1/2002 Microsoft

STORAGE\VOLUME1&30A96598&0&SIGNATUREB55C8B44OFFSET134A70B000LENGTHD987B76800	Generic volume	Yes	VOLUME 5.2.3790.0 10/1/2002	Microsoft	volume.infNot Available
STORAGE\VOLUME1&30A96598&0&SIGNATURE60429F8DOFFSET7E000LENGTH6D9EC2B200	Generic volume	Yes	VOLUME 5.2.3790.0 10/1/2002	Microsoft	volume.infNot Available
STORAGE\VOLUME1&30A96598&0&SIGNATURE60429F8COFFSET7E000LENGTH6D9EC2B200	Generic volume	Yes	VOLUME 5.2.3790.0 10/1/2002	Microsoft	volume.infNot Available
STORAGE\VOLUME1&30A96598&0&SIGNATURE60429F8FOFFSET7E000LENGTH6D9EC2B200	Generic volume	Yes	VOLUME 5.2.3790.0 10/1/2002	Microsoft	volume.infNot Available
STORAGE\VOLUME1&30A96598&0&SIGNATURE60429F8EOFFSET7E000LENGTH6D9EC2B200	Generic volume	Yes	VOLUME 5.2.3790.0 10/1/2002	Microsoft	volume.infNot Available
STORAGE\VOLUME1&30A96598&0&SIGNATURE60429FB1OFFSET7E000LENGTH6D9EC2B200	Generic volume	Yes	VOLUME 5.2.3790.0 10/1/2002	Microsoft	volume.infNot Available
STORAGE\VOLUME1&30A96598&0&SIGNATURE60429FB0OFFSET7E000LENGTH6D9EC2B200	Generic volume	Yes	VOLUME 5.2.3790.0 10/1/2002	Microsoft	volume.infNot Available
STORAGE\VOLUME1&30A96598&0&SIGNATUREB55C8B5EOFFSET7E0000LENGTHC5452CE00	Generic volume	Yes	VOLUME 5.2.3790.0 10/1/2002	Microsoft	volume.infNot Available
STORAGE\VOLUME1&30A96598&0&SIGNATUREB55C8B5EOFFSETC54D14C00LENGTH6F59EE600	Generic volume	Yes	VOLUME 5.2.3790.0 10/1/2002	Microsoft	volume.infNot Available
STORAGE\VOLUME1&30A96598&0&SIGNATUREB55C8B5EOFFSET134A70B000LENGTHD987B76800	Generic volume	Yes	VOLUME 5.2.3790.0 10/1/2002	Microsoft	volume.infNot Available
STORAGE\VOLUME1&30A96598&0&SIGNATUREB55C8B5DOFFSET7E0000LENGTHC5452CE00	Generic volume	Yes	VOLUME 5.2.3790.0 10/1/2002	Microsoft	volume.infNot Available
STORAGE\VOLUME1&30A96598&0&SIGNATUREB55C8B5DOFFSETC54D14C00LENGTH6F59EE600	Generic volume	Yes	VOLUME 5.2.3790.0 10/1/2002	Microsoft	volume.infNot Available
STORAGE\VOLUME1&30A96598&0&SIGNATUREB55C8B5DOFFSET134A70B000LENGTHD987B76800	Generic volume	Yes	VOLUME 5.2.3790.0 10/1/2002	Microsoft	volume.infNot Available
STORAGE\VOLUME1&30A96598&0&SIGNATUREB55C8B5DOFFSET7E0000LENGTHC5452CE00	Generic volume	Yes	VOLUME 5.2.3790.0 10/1/2002	Microsoft	volume.infNot Available
STORAGE\VOLUME1&30A96598&0&SIGNATUREB55C8B5DOFFSETC54D14C00LENGTH6F59EE600	Generic volume	Yes	VOLUME 5.2.3790.0 10/1/2002	Microsoft	volume.infNot Available
STORAGE\VOLUME1&30A96598&0&SIGNATUREB55C8B5DOFFSET134A70B000LENGTHD987B76800	Generic volume	Yes	VOLUME 5.2.3790.0 10/1/2002	Microsoft	volume.infNot Available
STORAGE\VOLUME1&30A96598&0&SIGNATUREB55C8B5COFFSET7E0000LENGTHC5452CE00	Generic volume	Yes	VOLUME 5.2.3790.0 10/1/2002	Microsoft	volume.infNot Available

STORAGE\VOLUME\1&30A96598&0&SIGNATUREC803A9A70FFSET986945A00LENGTH6CC41A3600	Generic volume	Yes	VOLUME 5.2.3790.0 10/1/2002	Microsoft	volume.inf	Not Available	STORAGE\VOLUME\1&30A96598&0&SIGNATUREB96F4D13OFFSETC54D14C00LENGTH6F59EE600
STORAGE\VOLUME\1&30A96598&0&SIGNATUREB55C8B58OFFSET7E0000LENGTHC5452CE00	Generic volume	Yes	VOLUME 5.2.3790.0 10/1/2002	Microsoft	volume.inf	Not Available	STORAGE\VOLUME\1&30A96598&0&SIGNATUREB96F4D13OFFSET134A70B000LENGTHD987B76800
STORAGE\VOLUME\1&30A96598&0&SIGNATUREB55C8B58OFFSETC54D14C00LENGTH6F59EE600	Generic volume	Yes	VOLUME 5.2.3790.0 10/1/2002	Microsoft	volume.inf	Not Available	STORAGE\VOLUME\1&30A96598&0&SIGNATUREB96F4D10OFFSET7E0000LENGTHC5452CE00
STORAGE\VOLUME\1&30A96598&0&SIGNATUREB55C8B58OFFSET134A70B000LENGTHD987B76800	Generic volume	Yes	VOLUME 5.2.3790.0 10/1/2002	Microsoft	volume.inf	Not Available	STORAGE\VOLUME\1&30A96598&0&SIGNATUREB96F4D10OFFSETC54D14C00LENGTH6F59EE600
STORAGE\VOLUME\1&30A96598&0&SIGNATURE8CC2A930OFFSET7E0000LENGTHC5452CE00	Generic volume	Yes	VOLUME 5.2.3790.0 10/1/2002	Microsoft	volume.inf	Not Available	STORAGE\VOLUME\1&30A96598&0&SIGNATUREB96F4D10OFFSET134A70B000LENGTHD987B76800
STORAGE\VOLUME\1&30A96598&0&SIGNATURE8CC2A930OFFSETC54D14C00LENGTH6F59EE600	Generic volume	Yes	VOLUME 5.2.3790.0 10/1/2002	Microsoft	volume.inf	Not Available	STORAGE\VOLUME\1&30A96598&0&SIGNATUREC803A9A4OFFSET7E0000LENGTH61AF66A00
STORAGE\VOLUME\1&30A96598&0&SIGNATURE8CC2A930OFFSET134A70B000LENGTHD987B76800	Generic volume	Yes	VOLUME 5.2.3790.0 10/1/2002	Microsoft	volume.inf	Not Available	STORAGE\VOLUME\1&30A96598&0&SIGNATUREC803A9A4OFFSET61B74E800LENGTH36B1EF400
STORAGE\VOLUME\1&30A96598&0&SIGNATUREB96F4D0DOFFSET7E0000LENGTHC5452CE00	Generic volume	Yes	VOLUME 5.2.3790.0 10/1/2002	Microsoft	volume.inf	Not Available	STORAGE\VOLUME\1&30A96598&0&SIGNATUREC803A9A4OFFSET986945A00LENGTH6CC41A3600
STORAGE\VOLUME\1&30A96598&0&SIGNATUREB96F4D0DOFFSETC54D14C00LENGTH6F59EE600	AFD Networking Support Environment	Not Available	LEGACYDRIVER	Not Available	Not Available	Not Available	Not Available
STORAGE\VOLUME\1&30A96598&0&SIGNATUREB96F4D0DOFFSET134A70B000LENGTHD987B76800	Beep	Not Available	LEGACYDRIVER	Not Available	Not Available	Not Available	Not Available
STORAGE\VOLUME\1&30A96598&0&SIGNATUREB96F4D12OFFSET7E0000LENGTHC5452CE00	CRC Disk Filter Driver	Not Available	LEGACYDRIVER	Not Available	Not Available	Not Available	Not Available
STORAGE\VOLUME\1&30A96598&0&SIGNATUREB96F4D12OFFSETC54D14C00LENGTH6F59EE600	dmboot	Not Available	LEGACYDRIVER	Not Available	Not Available	Not Available	Not Available
STORAGE\VOLUME\1&30A96598&0&SIGNATUREB96F4D12OFFSET134A70B000LENGTHD987B76800	dmload	Not Available	LEGACYDRIVER	Not Available	Not Available	Not Available	Not Available
STORAGE\VOLUME\1&30A96598&0&SIGNATUREB96F4D13OFFSET7E0000LENGTHC5452CE00	em	Not Available	LEGACYDRIVER	Not Available	Not Available	Not Available	Not Available
	Fips	Not Available	LEGACYDRIVER	Not Available	Not Available	Not Available	Not Available

Generic Packet Classifier Not Available LEGACYDRIVER  
 Not Available Not Available Not Available Not  
 Available Not Available ROOT\LEGACY\_GPC\0000

IPSEC driver Not Available LEGACYDRIVER Not  
 Available Not Available Not Available Not Available  
 Not Available ROOT\LEGACY\_IPSEC\0000

ksecdd Not Available LEGACYDRIVER Not Available  
 Not Available Not Available Not Available Not  
 Available ROOT\LEGACY\_KSECDD\0000

mmdd Not Available LEGACYDRIVER Not Available  
 Not Available Not Available Not Available Not  
 Available ROOT\LEGACY\_MMDD\0000

mountmgr Not Available LEGACYDRIVER Not Available  
 Not Available Not Available Not Available Not  
 Available ROOT\LEGACY\_MOUNTMGR\0000

NDIS System Driver Not Available LEGACYDRIVER Not  
 Available Not Available Not Available Not Available  
 Not Available ROOT\LEGACY\_NDIS\0000

Remote Access NDIS TAPI Driver Not Available  
 LEGACYDRIVER Not Available Not Available Not  
 Available Not Available Not Available  
 ROOT\LEGACY\_NDISTAPI\0000

NDIS Usermode I/O Protocol Not Available LEGACYDRIVER  
 Not Available Not Available Not Available Not  
 Available Not Available ROOT\LEGACY\_NDISUIO\0000

NDProxy Not Available LEGACYDRIVER Not Available  
 Not Available Not Available Not Available Not  
 Available ROOT\LEGACY\_NDPROXY\0000

NetBios over Tcpi Not Available LEGACYDRIVER Not  
 Available Not Available Not Available Not Available  
 Not Available ROOT\LEGACY\_NETBT\0000

Null Not Available LEGACYDRIVER Not Available  
 Not Available Not Available Not Available Not  
 Available ROOT\LEGACY\_NULL\0000

Partition Manager Not Available LEGACYDRIVER Not  
 Available Not Available Not Available Not Available  
 Not Available ROOT\LEGACY\_PARTMGR\0000

PCVIEW Not Available LEGACYDRIVER Not Available  
 Not Available Not Available Not Available Not  
 Available ROOT\LEGACY\_PCVIEW\0000

ql2300vi Not Available LEGACYDRIVER Not Available  
 Not Available Not Available Not Available Not  
 Available ROOT\LEGACY\_QL2300VI\0000

qldirect Not Available LEGACYDRIVER Not Available  
 Not Available Not Available Not Available Not  
 Available ROOT\LEGACY\_QLDIRECT\0000

qlvika Not Available LEGACYDRIVER Not Available  
 Not Available Not Available Not Available Not  
 Available ROOT\LEGACY\_QLVIKA\0000

Remote Access Auto Connection Driver Not Available  
 LEGACYDRIVER Not Available Not Available Not

Available Not Available Not Available  
 ROOT\LEGACY\_RASACD\0000

RDPCCD Not Available LEGACYDRIVER Not Available  
 Not Available Not Available Not Available Not  
 Available ROOT\LEGACY\_RDPCCD\0000

RDPWD Not Available LEGACYDRIVER Not Available  
 Not Available Not Available Not Available Not  
 Available ROOT\LEGACY\_RDPWD\0000

TCP/IP Protocol Driver Not Available LEGACYDRIVER  
 Not Available Not Available Not Available Not  
 Available Not Available ROOT\LEGACY\_TCPIP\0000

TDTCP Not Available LEGACYDRIVER Not Available  
 Not Available Not Available Not Available Not  
 Available ROOT\LEGACY\_TDTCP\0000

ttpf Not Available LEGACYDRIVER Not Available  
 Not Available Not Available Not Available Not  
 Available ROOT\LEGACY\_TTPERF\0000

VGA Display Controller. Not Available LEGACYDRIVER  
 Not Available Not Available Not Available Not  
 Available Not Available ROOT\LEGACY\_VGASAVE\0000

volsnap Not Available LEGACYDRIVER Not Available  
 Not Available Not Available Not Available Not  
 Available ROOT\LEGACY\_VOLSNAP\0000

Remote Access IP ARP Driver Not Available LEGACYDRIVER  
 Not Available Not Available Not Available Not  
 Available Not Available ROOT\LEGACY\_WANARP\0000

Audio Codecs Yes MEDIA 5.2.3790.0 10/1/2002 (Standard  
 system devices) wave.inf Not Available  
 ROOT\MEDIA\MS\_MMCM

Legacy Audio Drivers Yes MEDIA 5.2.3790.0 10/1/2002 (Standard  
 system devices) wave.inf Not Available  
 ROOT\MEDIA\MS\_MMDRV

Media Control Devices Yes MEDIA 5.2.3790.0 10/1/2002  
 (Standard system devices) wave.inf Not Available  
 ROOT\MEDIA\MS\_MMMCI

Legacy Video Capture Devices Yes MEDIA 5.2.3790.0 10/1/2002  
 (Standard system devices) wave.inf Not Available  
 ROOT\MEDIA\MS\_MMVCD

Video Codecs Yes MEDIA 5.2.3790.0 10/1/2002 (Standard  
 system devices) wave.inf Not Available  
 ROOT\MEDIA\MS\_MMVID

WAN Miniport (L2TP) Yes NET 5.2.3790.0 10/1/2002  
 Microsoft netrasa.inf Not Available  
 ROOT\MS\_L2TPMINIPORT\0000

WAN Miniport (IP) Yes NET 5.2.3790.0 10/1/2002 Microsoft  
 netrasa.inf Not Available ROOT\MS\_NDISWANIP\0000

WAN Miniport (PPPOE) Yes NET 5.2.3790.0 10/1/2002  
 Microsoft netrasa.inf Not Available  
 ROOT\MS\_PPPOEMINIPORT\0000

WAN Miniport (PPTP) Yes NET 5.2.3790.0 10/1/2002  
Microsoft netrasa.inf Not Available  
ROOT\MS\_PPTPMINIPORT\0000

Direct Parallel Yes NET 5.2.3790.0 10/1/2002 Microsoft  
netrasa.inf Not Available ROOT\MS\_PTMINIPORT\0000

Terminal Server Device Redirector Yes SYSTEM 5.2.3790.0  
10/1/2002 (Standard system devices) machine.inf Not  
Available ROOT\RDPDR\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 Mouse Driver Yes SYSTEM 5.2.3790.0 10/1/2002  
(Standard system devices) machine.inf Not Available  
ROOT\RDP\_MOU\0000

Plug and Play Software Device Enumerator Yes SYSTEM 5.2.3790.0  
10/1/2002 (Standard system devices) machine.inf Not  
Available ROOT\SYSTEM\0000

Microcode Update Device Yes SYSTEM 5.2.3790.0 10/1/2002  
(Standard system devices) machine.inf Not Available  
ROOT\SYSTEM\0001

[Environment Variables]

Variable	Value	User Name
ClusterLog	C:\WINDOWS\Cluster\cluster.log	<SYSTEM>
ComSpec	%SystemRoot%\system32\cmd.exe	<SYSTEM>
NUMBER_OF_PROCESSORS	32	<SYSTEM>
OS	Windows_NT	<SYSTEM>
Path	%SystemRoot%\system32;%SystemRoot%;%SystemRoot%\System32\Wbem; C:\Dot_net_kernrate;C:\Program Files\Microsoft SQL Server\80\Tools\BINN <SYSTEM>	
PATHEXT	.COM;.EXE;.BAT;.CMD;.VBS;.VBE;.JS;.JSE;.WSF;.WSH	<SYSTEM>
PROCESSOR_ARCHITECTURE	x86	<SYSTEM>
PROCESSOR_IDENTIFIER	x86 Family 15 Model 2 Stepping 6, GenuineIntel	<SYSTEM>
PROCESSOR_LEVEL	15	<SYSTEM>
PROCESSOR_REVISION	0206	<SYSTEM>
TEMP	%SystemRoot%\TEMP	<SYSTEM>
TMP	%SystemRoot%\TEMP	<SYSTEM>
windir	%SystemRoot%	<SYSTEM>
TEMP	%USERPROFILE%\Local Settings\Temp	NT AUTHORITY\SYSTEM
TMP	%USERPROFILE%\Local Settings\Temp	NT AUTHORITY\SYSTEM

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

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

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

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

TEMP %USERPROFILE%\Local Settings\Temp  
IBMSERV4\Administrator

TMP %USERPROFILE%\Local Settings\Temp  
IBMSERV4\Administrator

[Print Jobs]

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

[Network Connections]

Local Name	Remote Name	Type	Status	User Name
Z:	\\fsserv\edrive	Disk	Current Connection	
IBMSERV4				Administrator

[Running Tasks]

Name	Path	Process ID	Priority	Min Working Set	Max Working Set
Working Set		Start Time	Version	Size	File Date
system idle process		Not Available		0	0
Available		Not Available	Not Available	Not Available	Not Available
Not Available		Not Available			
system	Not Available	4		8	0
Not Available		Not Available		Not Available	Not Available
Available					
smss.exe	Not Available	544		11	204800
3/18/2004 9:56 AM		Not Available		Not Available	Not Available
Available					
csrss.exe	Not Available	600		13	Not Available
Not Available		3/18/2004 10:00 AM		Not Available	Not Available
Available		Not Available			
winlogon.exe	c:\windows\system32\winlogon.exe				624
13	204800	1413120	3/18/2004 10:00 AM	5.2.3790.0	
(srv03_rtm.030324-2048)			536.50 KB (549,376 bytes)		3/25/2003 7:00 AM
services.exe	c:\windows\system32\services.exe				668
204800	1413120	3/18/2004 10:00 AM	5.2.3790.0		9
(srv03_rtm.030324-2048)			102.00 KB (104,448 bytes)		3/25/2003 7:00 AM
lsass.exe	c:\windows\system32\lsass.exe	680		9	204800
1413120	3/18/2004 10:00 AM	5.2.3790.0	(srv03_rtm.030324-2048)		
13.00 KB (13,312 bytes)			3/25/2003 7:00 AM		



svchost.exe	c:\windows\system32\svchost.exe	848	8		(srv03_rtm.030324-2048)	720.00 KB (737,280 bytes)	4/10/2003 10:27 AM
204800	1413120	3/18/2004 10:00 AM	5.2.3790.0				
(srv03_rtm.030324-2048)		13.00 KB (13,312 bytes)		3/25/2003	[Loaded Modules]		
7:00 AM					Name	Version	Size
					File Date	Manufacturer	Path
svchost.exe	c:\windows\system32\svchost.exe	888	8		winlogon	5.2.3790.0 (srv03_rtm.030324-2048)	536.50 KB (549,376 bytes)
204800	1413120	3/18/2004 10:00 AM	5.2.3790.0			3/25/2003 7:00 AM	Microsoft Corporation
(srv03_rtm.030324-2048)		13.00 KB (13,312 bytes)		3/25/2003	c:\windows\system32\winlogon.exe		
7:00 AM							
svchost.exe	Not Available	1068	8	Not Available	ntdll	5.2.3790.0 (srv03_rtm.030324-2048)	722.50 KB (739,840 bytes)
Available	Not Available	3/18/2004 10:03 AM	Not Available	Not Available		3/25/2003 7:00 AM	Microsoft Corporation
Not Available	Not Available				c:\windows\system32\ntdll.dll		
svchost.exe	Not Available	1124	8	Not Available	kernel32	5.2.3790.0 (srv03_rtm.030324-2048)	965.00 KB (988,160 bytes)
Available	Not Available	3/18/2004 10:03 AM	Not Available	Not Available		3/25/2003 7:00 AM	Microsoft Corporation
Not Available	Not Available				c:\windows\system32\kernel32.dll		
svchost.exe	c:\windows\system32\svchost.exe	1180	8		msvcrt	7.0.3790.0 (srv03_rtm.030324-2048)	319.50 KB (327,168 bytes)
204800	1413120	3/18/2004 10:03 AM	5.2.3790.0			3/25/2003 7:00 AM	Microsoft Corporation
(srv03_rtm.030324-2048)		13.00 KB (13,312 bytes)		3/25/2003	c:\windows\system32\msvcrt.dll		
7:00 AM							
msdtc.exe	Not Available	1300	8	Not Available	advapi32	5.2.3790.0 (srv03_rtm.030324-2048)	559.50 KB (572,928 bytes)
Not Available	Not Available	3/18/2004 10:03 AM	Not Available	Not Available		3/25/2003 7:00 AM	Microsoft Corporation
Available	Not Available				c:\windows\system32\advapi32.dll		
svchost.exe	Not Available	1852	8	Not Available	rpert4	5.2.3790.0 (srv03_rtm.030324-2048)	643.50 KB (658,944 bytes)
Available	Not Available	3/18/2004 10:03 AM	Not Available	Not Available		3/25/2003 7:00 AM	Microsoft Corporation
Not Available	Not Available				c:\windows\system32\rpert4.dll		
explorer.exe	c:\windows\explorer.exe	596	8		user32	5.2.3790.0 (srv03_rtm.030324-2048)	562.00 KB (575,488 bytes)
204800	1413120	3/18/2004 10:04 AM	6.00.3790.0			3/25/2003 7:00 AM	Microsoft Corporation
(srv03_rtm.030324-2048)		1,008.50 KB (1,032,704 bytes)		3/25/2003	c:\windows\system32\user32.dll		
7:00 AM							
pronomgr.exe	c:\program files\intel\ncs\proset\pronomgr.exe	740	8		gdi32	5.2.3790.0 (srv03_rtm.030324-2048)	263.00 KB (269,312 bytes)
204800	1413120	3/18/2004 10:04 AM	6.2.35.0			3/25/2003 7:00 AM	Microsoft Corporation
84.00 KB (86,016 bytes)		3/11/2003 3:24 PM			c:\windows\system32\gdi32.dll		
atiptaxx.exe	c:\windows\system32\atiptaxx.exe	1032	8		userenv	5.2.3790.0 (srv03_rtm.030324-2048)	732.50 KB (750,080 bytes)
204800	1413120	3/18/2004 10:04 AM	6.13.2523	264.00 KB (270,336 bytes)		3/25/2003 7:00 AM	Microsoft Corporation
10/10/2001 4:59 PM					c:\windows\system32\userenv.dll		
wmiprvse.exe	Not Available	2096	8	Not Available	nddeapi	5.2.3790.0 (srv03_rtm.030324-2048)	16.00 KB (16,384 bytes)
Available	Not Available	3/18/2004 10:06 AM	Not Available	Not Available		3/25/2003 7:00 AM	Microsoft Corporation
Not Available	Not Available				c:\windows\system32\nddeapi.dll		
cmd.exe	c:\windows\system32\cmd.exe	4016	8	204800	crypt32	5.131.3790.0 (srv03_rtm.030324-2048)	598.00 KB (612,352 bytes)
1413120	3/18/2004 2:43 PM	5.2.3790.0 (srv03_rtm.030324-2048)				3/25/2003 7:00 AM	Microsoft Corporation
374.00 KB (382,976 bytes)		3/25/2003 7:00 AM			c:\windows\system32\crypt32.dll		
cmd.exe	c:\windows\system32\cmd.exe	1244	8	204800	msasn1	5.2.3790.0 (srv03_rtm.030324-2048)	58.00 KB (59,392 bytes)
1413120	3/18/2004 2:58 PM	5.2.3790.0 (srv03_rtm.030324-2048)				3/25/2003 7:00 AM	Microsoft Corporation
374.00 KB (382,976 bytes)		3/25/2003 7:00 AM			c:\windows\system32\msasn1.dll		
helpctr.exe	c:\windows\pchealth\helpctr\binaries\helpctr.exe	2136	8		secur32	5.2.3790.0 (srv03_rtm.030324-2048)	63.00 KB (64,512 bytes)
204800	1413120	3/18/2004 3:02 PM	5.2.3790.0			3/25/2003 7:00 AM	Microsoft Corporation
(srv03_rtm.030324-2048)		764.00 KB (782,336 bytes)		4/10/2003	c:\windows\system32\secur32.dll		
10:26 AM							
wmiprvse.exe	Not Available	384	8	Not Available	winsta	5.2.3790.0 (srv03_rtm.030324-2048)	51.00 KB (52,224 bytes)
Available	Not Available	3/18/2004 3:02 PM	Not Available	Not Available		3/25/2003 7:00 AM	Microsoft Corporation
Not Available	Not Available				c:\windows\system32\winsta.dll		
helpsvc.exe	c:\windows\pchealth\helpctr\binaries\helpsvc.exe	1812	8		netapi32	5.2.3790.0 (srv03_rtm.030324-2048)	317.00 KB (324,608 bytes)
204800	1413120	3/18/2004 3:02 PM	5.2.3790.0			3/25/2003 7:00 AM	Microsoft Corporation
					c:\windows\system32\netapi32.dll		

profmap	5.2.3790.0 (srv03_rtm.030324-2048)	22.00 KB (22,528 bytes)	3/25/2003 7:00 AM	Microsoft Corporation	c:\windows\system32\profmap.dll
regapi	5.2.3790.0 (srv03_rtm.030324-2048)	48.50 KB (49,664 bytes)	3/25/2003 7:00 AM	Microsoft Corporation	c:\windows\system32\regapi.dll
ws2_32	5.2.3790.0 (srv03_rtm.030324-2048)	87.50 KB (89,600 bytes)	3/25/2003 7:00 AM	Microsoft Corporation	c:\windows\system32\ws2_32.dll
ws2help	5.2.3790.0 (srv03_rtm.030324-2048)	19.50 KB (19,968 bytes)	3/25/2003 7:00 AM	Microsoft Corporation	c:\windows\system32\ws2help.dll
psapi	5.2.3790.0 (srv03_rtm.030324-2048)	21.50 KB (22,016 bytes)	3/25/2003 7:00 AM	Microsoft Corporation	c:\windows\system32\psapi.dll
version	5.2.3790.0 (srv03_rtm.030324-2048)	17.00 KB (17,408 bytes)	3/25/2003 7:00 AM	Microsoft Corporation	c:\windows\system32\version.dll
setupapi	5.2.3790.0 (srv03_rtm.030324-2048)	1,014.50 KB (1,038,848 bytes)	3/25/2003 7:00 AM	Microsoft Corporation	c:\windows\system32\setupapi.dll
msgina	5.2.3790.0 (srv03_rtm.030324-2048)	1.14 MB (1,191,936 bytes)	3/25/2003 7:00 AM	Microsoft Corporation	c:\windows\system32\msgina.dll
shsvcs	6.00.3790.0 (srv03_rtm.030324-2048)	121.50 KB (124,416 bytes)	3/25/2003 7:00 AM	Microsoft Corporation	c:\windows\system32\shsvcs.dll
shlwapi	6.00.3790.0 (srv03_rtm.030324-2048)	281.00 KB (287,744 bytes)	3/25/2003 7:00 AM	Microsoft Corporation	c:\windows\system32\shlwapi.dll
sfc	5.2.3790.0 (srv03_rtm.030324-2048)	4.50 KB (4,608 bytes)	3/25/2003 7:00 AM	Microsoft Corporation	c:\windows\system32\sfc.dll
sfc_os	5.2.3790.0 (srv03_rtm.030324-2048)	133.00 KB (136,192 bytes)	3/25/2003 7:00 AM	Microsoft Corporation	c:\windows\system32\sfc_os.dll
wintrust	5.131.3790.0 (srv03_rtm.030324-2048)	161.50 KB (165,376 bytes)	3/25/2003 7:00 AM	Microsoft Corporation	c:\windows\system32\wintrust.dll
ole32	5.2.3790.0 (srv03_rtm.030324-2048)	1.13 MB (1,187,328 bytes)	3/25/2003 7:00 AM	Microsoft Corporation	c:\windows\system32\ole32.dll
imagehlp	5.2.3790.0 (srv03_rtm.030324-2048)	142.50 KB (145,920 bytes)	3/25/2003 7:00 AM	Microsoft Corporation	c:\windows\system32\imagehlp.dll
comctl32	6.0 (srv03_rtm.030324-2048)	907.00 KB (928,768 bytes)	4/10/2003 5:01 AM	Microsoft Corporation	c:\windows\winsxs\x86_microsoft.windows.common-controls_6595b64144ccfd_f_6.0.100.0_x-ww_8417450b\comctl32.dll
winscard	5.2.3790.0 (srv03_rtm.030324-2048)	98.50 KB (100,864 bytes)	3/25/2003 7:00 AM	Microsoft Corporation	c:\windows\system32\winscard.dll
wtsapi32	5.2.3790.0 (srv03_rtm.030324-2048)	17.50 KB (17,920 bytes)	3/25/2003 7:00 AM	Microsoft Corporation	c:\windows\system32\wtsapi32.dll
winmm	5.2.3790.0 (srv03_rtm.030324-2048)	166.00 KB (169,984 bytes)	3/25/2003 7:00 AM	Microsoft Corporation	c:\windows\system32\winmm.dll
sxs	5.2.3790.0 (srv03_rtm.030324-2048)	733.00 KB (750,592 bytes)	3/25/2003 7:00 AM	Microsoft Corporation	c:\windows\system32\sxs.dll
shell32	6.00.3790.0 (srv03_rtm.030324-2048)	7.79 MB (8,166,400 bytes)	3/25/2003 7:00 AM	Microsoft Corporation	c:\windows\system32\shell32.dll
wldap32	5.2.3790.0 (srv03_rtm.030324-2048)	158.00 KB (161,792 bytes)	3/25/2003 7:00 AM	Microsoft Corporation	c:\windows\system32\wldap32.dll
rsaenh	5.2.3790.0 (srv03_rtm.030324-2048)	176.83 KB (181,072 bytes)	3/25/2003 7:00 AM	Microsoft Corporation	c:\windows\system32\rsaenh.dll
csdll	5.2.3790.0 (srv03_rtm.030324-2048)	99.00 KB (101,376 bytes)	3/25/2003 7:00 AM	Microsoft Corporation	c:\windows\system32\csdll.dll
wlnotify	5.2.3790.0 (srv03_rtm.030324-2048)	87.50 KB (89,600 bytes)	3/25/2003 7:00 AM	Microsoft Corporation	c:\windows\system32\wlnotify.dll
winspool	5.2.3790.0 (srv03_rtm.030324-2048)	140.00 KB (143,360 bytes)	3/25/2003 7:00 AM	Microsoft Corporation	c:\windows\system32\winspool.drv
mpr	5.2.3790.0 (srv03_rtm.030324-2048)	56.00 KB (57,344 bytes)	3/25/2003 7:00 AM	Microsoft Corporation	c:\windows\system32\mpr.dll
comctl32	5.82 (srv03_rtm.030324-2048)	561.00 KB (574,464 bytes)	4/10/2003 5:01 AM	Microsoft Corporation	c:\windows\winsxs\x86_microsoft.windows.common-controls_6595b64144ccfd_f_5.82.0.0_x-ww_8a69ba05\comctl32.dll
uxtheme	6.00.3790.0 (srv03_rtm.030324-2048)	196.00 KB (200,704 bytes)	3/25/2003 7:00 AM	Microsoft Corporation	c:\windows\system32\uxtheme.dll
mprapi	5.2.3790.0 (srv03_rtm.030324-2048)	81.00 KB (82,944 bytes)	3/25/2003 7:00 AM	Microsoft Corporation	c:\windows\system32\mprapi.dll
activeds	5.2.3790.0 (srv03_rtm.030324-2048)	189.00 KB (193,536 bytes)	3/25/2003 7:00 AM	Microsoft Corporation	c:\windows\system32\activeds.dll
adslsdp	5.2.3790.0 (srv03_rtm.030324-2048)	142.50 KB (145,920 bytes)	3/25/2003 7:00 AM	Microsoft Corporation	c:\windows\system32\adslsdp.dll
credui	5.2.3790.0 (srv03_rtm.030324-2048)	159.00 KB (162,816 bytes)	3/25/2003 7:00 AM	Microsoft Corporation	c:\windows\system32\credui.dll
atl	3.05.2283	83.00 KB (84,992 bytes)	3/25/2003 7:00 AM	Microsoft Corporation	c:\windows\system32\atl.dll

oleaut32	5.2.3790.0	486.00 KB (497,664 bytes)	3/25/2003 7:00 AM	Microsoft Corporation	c:\windows\system32\oleaut32.dll
rtutils	5.2.3790.0 (srv03_rtm.030324-2048)	32.00 KB (32,768 bytes)	3/25/2003 7:00 AM	Microsoft Corporation	c:\windows\system32\rtutils.dll
samlib	5.2.3790.0 (srv03_rtm.030324-2048)	49.00 KB (50,176 bytes)	3/25/2003 7:00 AM	Microsoft Corporation	c:\windows\system32\samlib.dll
cscui	5.2.3790.0 (srv03_rtm.030324-2048)	305.00 KB (312,320 bytes)	3/25/2003 7:00 AM	Microsoft Corporation	c:\windows\system32\cscui.dll
clbcatq	2001.12.4720.0 (srv03_rtm.030324-2048)	481.00 KB (492,544 bytes)	4/10/2003 10:23 AM	Microsoft Corporation	c:\windows\system32\clbcatq.dll
comres	2001.12.4720.0 (srv03_rtm.030324-2048)	778.00 KB (796,672 bytes)	3/25/2003 7:00 AM	Microsoft Corporation	c:\windows\system32\comres.dll
ntmarta	5.2.3790.0 (srv03_rtm.030324-2048)	114.00 KB (116,736 bytes)	3/25/2003 7:00 AM	Microsoft Corporation	c:\windows\system32\ntmarta.dll
wbemprox	5.2.3790.0 (srv03_rtm.030324-2048)	17.50 KB (17,920 bytes)	4/10/2003 10:23 AM	Microsoft Corporation	c:\windows\system32\wbem\wbemprox.dll
wbemcomn	5.2.3790.0 (srv03_rtm.030324-2048)	211.50 KB (216,576 bytes)	3/25/2003 7:00 AM	Microsoft Corporation	c:\windows\system32\wbem\wbemcomn.dll
wbemsvc	5.2.3790.0 (srv03_rtm.030324-2048)	42.50 KB (43,520 bytes)	4/10/2003 10:23 AM	Microsoft Corporation	c:\windows\system32\wbem\wbemsvc.dll
fastprox	5.2.3790.0 (srv03_rtm.030324-2048)	443.00 KB (453,632 bytes)	4/10/2003 10:23 AM	Microsoft Corporation	c:\windows\system32\wbem\fastprox.dll
msvcp60	6.05.2144.0	388.00 KB (397,312 bytes)	3/25/2003 7:00 AM	Microsoft Corporation	c:\windows\system32\msvcp60.dll
ntdsapi	5.2.3790.0 (srv03_rtm.030324-2048)	76.00 KB (77,824 bytes)	3/25/2003 7:00 AM	Microsoft Corporation	c:\windows\system32\ntdsapi.dll
dnsapi	5.2.3790.0 (srv03_rtm.030324-2048)	147.50 KB (151,040 bytes)	3/25/2003 7:00 AM	Microsoft Corporation	c:\windows\system32\dnsapi.dll
services	5.2.3790.0 (srv03_rtm.030324-2048)	102.00 KB (104,448 bytes)	3/25/2003 7:00 AM	Microsoft Corporation	c:\windows\system32\services.exe
scesrv	5.2.3790.0 (srv03_rtm.030324-2048)	316.50 KB (324,096 bytes)	3/25/2003 7:00 AM	Microsoft Corporation	c:\windows\system32\scesrv.dll
authz	5.2.3790.0 (srv03_rtm.030324-2048)	67.00 KB (68,608 bytes)	3/25/2003 7:00 AM	Microsoft Corporation	c:\windows\system32\authz.dll
umpnpmgr	5.2.3790.0 (srv03_rtm.030324-2048)	121.50 KB (124,416 bytes)	3/25/2003 7:00 AM	Microsoft Corporation	c:\windows\system32\umpnpmgr.dll
ncobjapi	5.2.3790.0 (srv03_rtm.030324-2048)	34.50 KB (35,328 bytes)	3/25/2003 7:00 AM	Microsoft Corporation	c:\windows\system32\ncobjapi.dll
eventlog	5.2.3790.0 (srv03_rtm.030324-2048)	60.50 KB (61,952 bytes)	3/25/2003 7:00 AM	Microsoft Corporation	c:\windows\system32\eventlog.dll
lsass	5.2.3790.0 (srv03_rtm.030324-2048)	13.00 KB (13,312 bytes)	3/25/2003 7:00 AM	Microsoft Corporation	c:\windows\system32\lsass.exe
lsasrv	5.2.3790.0 (srv03_rtm.030324-2048)	780.50 KB (799,232 bytes)	3/25/2003 7:00 AM	Microsoft Corporation	c:\windows\system32\lsasrv.dll
samsrv	5.2.3790.0 (srv03_rtm.030324-2048)	452.00 KB (462,848 bytes)	3/25/2003 7:00 AM	Microsoft Corporation	c:\windows\system32\samsrv.dll
cryptdll	5.2.3790.0 (srv03_rtm.030324-2048)	34.00 KB (34,816 bytes)	3/25/2003 7:00 AM	Microsoft Corporation	c:\windows\system32\cryptdll.dll
msprivs	5.2.3790.0 (srv03_rtm.030324-2048)	46.50 KB (47,616 bytes)	3/25/2003 7:00 AM	Microsoft Corporation	c:\windows\system32\msprivs.dll
kerberos	5.2.3790.0 (srv03_rtm.030324-2048)	332.50 KB (340,480 bytes)	3/25/2003 7:00 AM	Microsoft Corporation	c:\windows\system32\kerberos.dll
msv1_0	5.2.3790.0 (srv03_rtm.030324-2048)	127.00 KB (130,048 bytes)	3/25/2003 7:00 AM	Microsoft Corporation	c:\windows\system32\msv1_0.dll
netlogon	5.2.3790.0 (srv03_rtm.030324-2048)	409.00 KB (418,816 bytes)	3/25/2003 7:00 AM	Microsoft Corporation	c:\windows\system32\netlogon.dll
w32time	5.2.3790.0 (srv03_rtm.030324-2048)	216.00 KB (221,184 bytes)	3/25/2003 7:00 AM	Microsoft Corporation	c:\windows\system32\w32time.dll
iphlpapi	5.2.3790.0 (srv03_rtm.030324-2048)	82.50 KB (84,480 bytes)	3/25/2003 7:00 AM	Microsoft Corporation	c:\windows\system32\iphlpapi.dll
schannel	5.2.3790.0 (srv03_rtm.030324-2048)	149.50 KB (153,088 bytes)	3/25/2003 7:00 AM	Microsoft Corporation	c:\windows\system32\schannel.dll
wdigest	5.2.3790.0 (srv03_rtm.030324-2048)	61.00 KB (62,464 bytes)	3/25/2003 7:00 AM	Microsoft Corporation	c:\windows\system32\wdigest.dll
rassfm	5.2.3790.0 (srv03_rtm.030324-2048)	20.50 KB (20,992 bytes)	3/25/2003 7:00 AM	Microsoft Corporation	c:\windows\system32\rassfm.dll
kdcsvc	5.2.3790.0 (srv03_rtm.030324-2048)	221.00 KB (226,304 bytes)	3/25/2003 7:00 AM	Microsoft Corporation	c:\windows\system32\kdcsvc.dll

ntdsa	5.2.3790.0 (srv03_rtm.030324-2048)	1.45 MB (1,520,640 bytes)	3/25/2003 7:00 AM	Microsoft Corporation	c:\windows\system32\ntdsa.dll
ntdsatq	5.2.3790.0 (srv03_rtm.030324-2048)	32.00 KB (32,768 bytes)	3/25/2003 7:00 AM	Microsoft Corporation	c:\windows\system32\ntdsatq.dll
msocket	5.2.3790.0 (srv03_rtm.030324-2048)	254.00 KB (260,096 bytes)	3/25/2003 7:00 AM	Microsoft Corporation	c:\windows\system32\msocket.dll
esent	5.2.3790.0 (srv03_rtm.030324-2048)	1.01 MB (1,056,256 bytes)	3/25/2003 7:00 AM	Microsoft Corporation	c:\windows\system32\esent.dll
scecli	5.2.3790.0 (srv03_rtm.030324-2048)	179.50 KB (183,808 bytes)	3/25/2003 7:00 AM	Microsoft Corporation	c:\windows\system32\scecli.dll
wshhcpip	5.2.3790.0 (srv03_rtm.030324-2048)	18.00 KB (18,432 bytes)	3/25/2003 7:00 AM	Microsoft Corporation	c:\windows\system32\wshhcpip.dll
ipsecsvc	5.2.3790.0 (srv03_rtm.030324-2048)	162.50 KB (166,400 bytes)	3/25/2003 7:00 AM	Microsoft Corporation	c:\windows\system32\ipsecsvc.dll
oakley	5.2.3790.0 (srv03_rtm.030324-2048)	325.50 KB (333,312 bytes)	3/25/2003 7:00 AM	Microsoft Corporation	c:\windows\system32\oakley.dll
winipsec	5.2.3790.0 (srv03_rtm.030324-2048)	34.50 KB (35,328 bytes)	3/25/2003 7:00 AM	Microsoft Corporation	c:\windows\system32\winipsec.dll
dsenh	5.2.3790.0 (srv03_rtm.030324-2048)	131.33 KB (134,480 bytes)	3/25/2003 7:00 AM	Microsoft Corporation	c:\windows\system32\dsenh.dll
wbctrl	5.2.3790.0 (srv03_rtm.030324-2048)	78.00 KB (79,872 bytes)	3/25/2003 7:00 AM	Microsoft Corporation	c:\windows\system32\wbctrl.dll
svchost	5.2.3790.0 (srv03_rtm.030324-2048)	13.00 KB (13,312 bytes)	3/25/2003 7:00 AM	Microsoft Corporation	c:\windows\system32\svchost.exe
rps	5.2.3790.0 (srv03_rtm.030324-2048)	276.50 KB (283,136 bytes)	3/25/2003 7:00 AM	Microsoft Corporation	c:\windows\system32\rps.dll
termsrv	5.2.3790.0 (srv03_rtm.030324-2048)	216.50 KB (221,696 bytes)	4/10/2003 10:23 AM	Microsoft Corporation	c:\windows\system32\termsrv.dll
icaapi	5.2.3790.0 (srv03_rtm.030324-2048)	10.50 KB (10,752 bytes)	4/10/2003 10:23 AM	Microsoft Corporation	c:\windows\system32\icaapi.dll
mstlsapi	5.2.3790.0 (srv03_rtm.030324-2048)	104.50 KB (107,008 bytes)	3/25/2003 7:00 AM	Microsoft Corporation	c:\windows\system32\mstlsapi.dll
schedsvc	5.2.3790.0 (srv03_rtm.030324-2048)	176.00 KB (180,224 bytes)	4/10/2003 10:26 AM	Microsoft Corporation	c:\windows\system32\schedsvc.dll
mside	6.00.3790.0 (srv03_rtm.030324-2048)	5.50 KB (5,632 bytes)	3/25/2003 7:00 AM	Microsoft Corporation	c:\windows\system32\mside.dll
wkssvc	5.2.3790.0 (srv03_rtm.030324-2048)	125.00 KB (128,000 bytes)	3/25/2003 7:00 AM	Microsoft Corporation	c:\windows\system32\wkssvc.dll
wiarpc	5.2.3790.0 (srv03_rtm.030324-2048)	30.00 KB (30,720 bytes)	3/25/2003 7:00 AM	Microsoft Corporation	c:\windows\system32\wiarpc.dll
cryptsvc	5.2.3790.0 (srv03_rtm.030324-2048)	51.00 KB (52,224 bytes)	3/25/2003 7:00 AM	Microsoft Corporation	c:\windows\system32\cryptsvc.dll
certcli	5.2.3790.0 (srv03_rtm.030324-2048)	228.00 KB (233,472 bytes)	3/25/2003 7:00 AM	Microsoft Corporation	c:\windows\system32\certcli.dll
vssapi	5.2.3790.0 (srv03_rtm.030324-2048)	528.00 KB (540,672 bytes)	3/25/2003 7:00 AM	Microsoft Corporation	c:\windows\system32\vssapi.dll
dmserver	5.2.3790.0 (srv03_rtm.030324-2048)	24.00 KB (24,576 bytes)	3/25/2003 7:00 AM	Microsoft Corporation	c:\windows\system32\dmserver.dll
es	2001.12.4720.0 (srv03_rtm.030324-2048)	221.50 KB (226,816 bytes)	3/25/2003 7:00 AM	Microsoft Corporation	c:\windows\system32\es.dll
srvc	5.2.3790.0 (srv03_rtm.030324-2048)	89.00 KB (91,136 bytes)	3/25/2003 7:00 AM	Microsoft Corporation	c:\windows\system32\srvc.dll
seclogon	5.2.3790.0 (srv03_rtm.030324-2048)	16.50 KB (16,896 bytes)	3/25/2003 7:00 AM	Microsoft Corporation	c:\windows\system32\seclogon.dll
wmisvc	5.2.3790.0 (srv03_rtm.030324-2048)	131.00 KB (134,144 bytes)	4/10/2003 10:23 AM	Microsoft Corporation	c:\windows\system32\wbem\wmisvc.dll
sens	5.2.3790.0 (srv03_rtm.030324-2048)	35.50 KB (36,352 bytes)	3/25/2003 7:00 AM	Microsoft Corporation	c:\windows\system32\sens.dll
comsvcs	2001.12.4720.0 (srv03_rtm.030324-2048)	1.14 MB (1,199,616 bytes)	4/10/2003 10:23 AM	Microsoft Corporation	c:\windows\system32\comsvcs.dll
netman	5.2.3790.0 (srv03_rtm.030324-2048)	209.00 KB (214,016 bytes)	3/25/2003 7:00 AM	Microsoft Corporation	c:\windows\system32\netman.dll
rasapi32	5.2.3790.0 (srv03_rtm.030324-2048)	227.50 KB (232,960 bytes)	3/25/2003 7:00 AM	Microsoft Corporation	c:\windows\system32\rasapi32.dll
rasman	5.2.3790.0 (srv03_rtm.030324-2048)	56.50 KB (57,856 bytes)	3/25/2003 7:00 AM	Microsoft Corporation	c:\windows\system32\rasman.dll
tapi32	5.2.3790.0 (srv03_rtm.030324-2048)	175.00 KB (179,200 bytes)	3/25/2003 7:00 AM	Microsoft Corporation	c:\windows\system32\tapi32.dll

wzcsvc	5.2.3790.0 (srv03_rtm.030324-2048)	272.50 KB (279,040 bytes)	3/25/2003 7:15 AM	Microsoft Corporation	c:\windows\system32\wzcsvc.dll
wmi	5.2.3790.0 (srv03_rtm.030324-2048)	6.50 KB (6,656 bytes)	3/25/2003 7:00 AM	Microsoft Corporation	c:\windows\system32\wmi.dll
dhcpcsvc	5.2.3790.0 (srv03_rtm.030324-2048)	101.50 KB (103,936 bytes)	3/25/2003 7:00 AM	Microsoft Corporation	c:\windows\system32\dhcpcsvc.dll
wzcsapi	5.2.3790.0 (srv03_rtm.030324-2048)	24.50 KB (25,088 bytes)	3/25/2003 7:15 AM	Microsoft Corporation	c:\windows\system32\wzcsapi.dll
netshell	5.2.3790.0 (srv03_rtm.030324-2048)	1.67 MB (1,747,456 bytes)	3/25/2003 7:00 AM	Microsoft Corporation	c:\windows\system32\netshell.dll
clusapi	5.2.3790.0 (srv03_rtm.030324-2048)	56.00 KB (57,344 bytes)	3/25/2003 7:00 AM	Microsoft Corporation	c:\windows\system32\clusapi.dll
hnetcfg	5.2.3790.0 (srv03_rtm.030324-2048)	243.50 KB (249,344 bytes)	3/25/2003 7:00 AM	Microsoft Corporation	c:\windows\system32\hnetcfg.dll
wininet	6.00.3790.0 (srv03_rtm.030324-2048)	609.00 KB (623,616 bytes)	3/25/2003 7:00 AM	Microsoft Corporation	c:\windows\system32\wininet.dll
wbemcore	5.2.3790.0 (srv03_rtm.030324-2048)	457.00 KB (467,968 bytes)	4/10/2003 10:23 AM	Microsoft Corporation	c:\windows\system32\wbem\wbemcore.dll
esscli	5.2.3790.0 (srv03_rtm.030324-2048)	235.50 KB (241,152 bytes)	4/10/2003 10:23 AM	Microsoft Corporation	c:\windows\system32\wbem\esscli.dll
wmiutils	5.2.3790.0 (srv03_rtm.030324-2048)	90.50 KB (92,672 bytes)	4/10/2003 10:23 AM	Microsoft Corporation	c:\windows\system32\wbem\wmiutils.dll
repdrvfs	5.2.3790.0 (srv03_rtm.030324-2048)	165.00 KB (168,960 bytes)	4/10/2003 10:23 AM	Microsoft Corporation	c:\windows\system32\wbem\repdrvfs.dll
wmiprvsd	5.2.3790.0 (srv03_rtm.030324-2048)	405.50 KB (415,232 bytes)	4/10/2003 10:23 AM	Microsoft Corporation	c:\windows\system32\wbem\wmiprvsd.dll
wbemess	5.2.3790.0 (srv03_rtm.030324-2048)	256.50 KB (262,656 bytes)	4/10/2003 10:23 AM	Microsoft Corporation	c:\windows\system32\wbem\wbemess.dll
rasdlg	5.2.3790.0 (srv03_rtm.030324-2048)	642.00 KB (657,408 bytes)	3/25/2003 7:00 AM	Microsoft Corporation	c:\windows\system32\rasdlg.dll
ncprov	5.2.3790.0 (srv03_rtm.030324-2048)	43.00 KB (44,032 bytes)	4/10/2003 10:23 AM	Microsoft Corporation	c:\windows\system32\wbem\ncprov.dll
rasadhlp	5.2.3790.0 (srv03_rtm.030324-2048)	6.50 KB (6,656 bytes)	3/25/2003 7:00 AM	Microsoft Corporation	c:\windows\system32\rasadhlp.dll
pchsvc	5.2.3790.0 (srv03_rtm.030324-2048)	31.50 KB (32,256 bytes)	4/10/2003 10:27 AM	Microsoft Corporation	c:\windows\pchealth\helpctr\binaries\pchsvc.dll
wbemcons	5.2.3790.0 (srv03_rtm.030324-2048)	69.00 KB (70,656 bytes)	4/10/2003 10:23 AM	Microsoft Corporation	c:\windows\system32\wbem\wbemcons.dll
explorer	6.00.3790.0 (srv03_rtm.030324-2048)	1,008.50 KB (1,032,704 bytes)	3/25/2003 7:00 AM	Microsoft Corporation	c:\windows\explorer.exe
browseui	6.00.3790.0 (srv03_rtm.030324-2048)	1.01 MB (1,057,280 bytes)	3/25/2003 7:00 AM	Microsoft Corporation	c:\windows\system32\browseui.dll
shdocvw	6.00.3790.0 (srv03_rtm.030324-2048)	1.33 MB (1,393,664 bytes)	3/25/2003 7:00 AM	Microsoft Corporation	c:\windows\system32\shdocvw.dll
apphelp	5.2.3790.0 (srv03_rtm.030324-2048)	122.00 KB (124,928 bytes)	3/25/2003 7:00 AM	Microsoft Corporation	c:\windows\system32\apphelp.dll
themeui	6.00.3790.0 (srv03_rtm.030324-2048)	360.50 KB (369,152 bytes)	3/25/2003 7:00 AM	Microsoft Corporation	c:\windows\system32\themeui.dll
msimg32	5.2.3790.0 (srv03_rtm.030324-2048)	4.50 KB (4,608 bytes)	3/25/2003 7:00 AM	Microsoft Corporation	c:\windows\system32\msimg32.dll
linkinfo	5.2.3790.0 (srv03_rtm.030324-2048)	16.50 KB (16,896 bytes)	3/25/2003 7:00 AM	Microsoft Corporation	c:\windows\system32\linkinfo.dll
ntshrui	6.00.3790.0 (srv03_rtm.030324-2048)	136.00 KB (139,264 bytes)	3/25/2003 7:00 AM	Microsoft Corporation	c:\windows\system32\ntshrui.dll
urlmon	6.00.3790.0 (srv03_rtm.030324-2048)	501.50 KB (513,536 bytes)	3/25/2003 7:00 AM	Microsoft Corporation	c:\windows\system32\urlmon.dll
webcheck	6.00.3790.0 (srv03_rtm.030324-2048)	261.50 KB (267,776 bytes)	3/25/2003 7:00 AM	Microsoft Corporation	c:\windows\system32\webcheck.dll
wsock32	5.2.3790.0 (srv03_rtm.030324-2048)	22.00 KB (22,528 bytes)	3/25/2003 7:00 AM	Microsoft Corporation	c:\windows\system32\wsock32.dll
stobject	5.2.3790.0 (srv03_rtm.030324-2048)	117.50 KB (120,320 bytes)	3/25/2003 7:00 AM	Microsoft Corporation	c:\windows\system32\stobject.dll
batmeter	6.00.3790.0 (srv03_rtm.030324-2048)	28.50 KB (29,184 bytes)	3/25/2003 7:00 AM	Microsoft Corporation	c:\windows\system32\batmeter.dll
powrprof	6.00.3790.0 (srv03_rtm.030324-2048)	14.50 KB (14,848 bytes)	3/25/2003 7:00 AM	Microsoft Corporation	c:\windows\system32\powrprof.dll
printui	5.2.3790.0 (srv03_rtm.030324-2048)	536.50 KB (549,376 bytes)	3/25/2003 7:00 AM	Microsoft Corporation	c:\windows\system32\printui.dll

cfgmgr32	5.2.3790.0 (srv03_rtm.030324-2048)	17.50 KB (17,920 bytes)	3/25/2003 7:00 AM	Microsoft Corporation	c:\windows\system32\cfgmgr32.dll
drprov	5.2.3790.0 (srv03_rtm.030324-2048)	12.50 KB (12,800 bytes)	3/25/2003 7:00 AM	Microsoft Corporation	c:\windows\system32\drprov.dll
ntlanman	5.2.3790.0 (srv03_rtm.030324-2048)	41.00 KB (41,984 bytes)	3/25/2003 7:00 AM	Microsoft Corporation	c:\windows\system32\ntlanman.dll
netui0	5.2.3790.0 (srv03_rtm.030324-2048)	75.50 KB (77,312 bytes)	3/25/2003 7:00 AM	Microsoft Corporation	c:\windows\system32\netui0.dll
netui1	5.2.3790.0 (srv03_rtm.030324-2048)	184.00 KB (188,416 bytes)	3/25/2003 7:00 AM	Microsoft Corporation	c:\windows\system32\netui1.dll
davclnt	5.2.3790.0 (srv03_rtm.030324-2048)	23.50 KB (24,064 bytes)	3/25/2003 7:00 AM	Microsoft Corporation	c:\windows\system32\davclnt.dll
browsecl	6.00.3790.0 (srv03_rtm.030324-2048)	62.00 KB (63,488 bytes)	3/25/2003 7:00 AM	Microsoft Corporation	c:\windows\system32\browsecl.dll
shdoclc	6.00.3790.0 (srv03_rtm.030324-2048)	588.50 KB (602,624 bytes)	3/25/2003 7:00 AM	Microsoft Corporation	c:\windows\system32\shdoclc.dll
mprui	5.2.3790.0 (srv03_rtm.030324-2048)	49.00 KB (50,176 bytes)	3/25/2003 7:00 AM	Microsoft Corporation	c:\windows\system32\mprui.dll
netui2	5.2.3790.0 (srv03_rtm.030324-2048)	309.50 KB (316,928 bytes)	3/25/2003 7:00 AM	Microsoft Corporation	c:\windows\system32\netui2.dll
comdlg32	6.00.3790.0 (srv03_rtm.030324-2048)	261.00 KB (267,264 bytes)	3/25/2003 7:00 AM	Microsoft Corporation	c:\windows\system32\comdlg32.dll
netmsg	5.2.3790.0 (srv03_rtm.030324-2048)	178.00 KB (182,272 bytes)	3/25/2003 7:00 AM	Microsoft Corporation	c:\windows\system32\netmsg.dll
netplwiz	5.2.3790.0 (srv03_rtm.030324-2048)	843.00 KB (863,232 bytes)	3/25/2003 7:00 AM	Microsoft Corporation	c:\windows\system32\netplwiz.dll
zipfldr	6.00.3790.0 (srv03_rtm.030324-2048)	316.00 KB (323,584 bytes)	3/25/2003 7:00 AM	Microsoft Corporation	c:\windows\system32\zipfldr.dll
actxprxy	6.00.3790.0 (srv03_rtm.030324-2048)	95.00 KB (97,280 bytes)	3/25/2003 7:00 AM	Microsoft Corporation	c:\windows\system32\actxprxy.dll
mydocs	6.00.3790.0 (srv03_rtm.030324-2048)	88.00 KB (90,112 bytes)	3/25/2003 7:00 AM	Microsoft Corporation	c:\windows\system32\mydocs.dll
pronomgr	6.2.35.0	84.00 KB (86,016 bytes)	3/11/2003 3:24 PM	Intel(R) Corporation	c:\program files\intel\ncs\proset\pronomgr.exe
enupguir	6.2.35.0	340.00 KB (348,160 bytes)	3/11/2003 3:15 PM	Intel(R) Corporation	c:\program files\intel\ncs\proset\enupguir.dll
pnc802_3	6.2.35.0	84.00 KB (86,016 bytes)	3/11/2003 3:33 PM	Intel(R) Corporation	c:\program files\intel\ncs\proset\8023\pnc802_3.dll
enupcmrs	6.2.35.0	344.07 KB (352,325 bytes)	3/11/2003 3:20 PM	Intel(R) Corporation	c:\program files\intel\ncs\proset\8023\enupcmrs.dll
atiptaxx	6.13.2523	264.00 KB (270,336 bytes)	10/10/2001 4:59 PM	ATI Technologies, Inc.	c:\windows\system32\atiptaxx.exe
atrpuixx	6.13.2523	48.00 KB (49,152 bytes)	10/10/2001 5:02 PM	ATI Technologies, Inc.	c:\windows\system32\atrpuixx.enu
atipdsxx	6.13.2523	160.00 KB (163,840 bytes)	10/10/2001 4:58 PM	ATI Technologies, Inc.	c:\windows\system32\atipdsxx.dll
cmd	5.2.3790.0 (srv03_rtm.030324-2048)	374.00 KB (382,976 bytes)	3/25/2003 7:00 AM	Microsoft Corporation	c:\windows\system32\cmd.exe
helpctr	5.2.3790.0 (srv03_rtm.030324-2048)	764.00 KB (782,336 bytes)	4/10/2003 10:26 AM	Microsoft Corporation	c:\windows\pchealth\helpctr\binaries\helpctr.exe
hcappres	5.2.3790.0 (srv03_rtm.030324-2048)	6.50 KB (6,656 bytes)	4/10/2003 10:26 AM	Microsoft Corporation	c:\windows\pchealth\helpctr\binaries\hcappres.dll
itss	5.2.3790.0 (srv03_rtm.030324-2048)	119.50 KB (122,368 bytes)	3/25/2003 7:00 AM	Microsoft Corporation	c:\windows\system32\itss.dll
msxml3	8.40.9419.0	1.28 MB (1,337,344 bytes)	3/25/2003 7:00 AM	Microsoft Corporation	c:\windows\system32\msxml3.dll
pchshell	5.2.3790.0 (srv03_rtm.030324-2048)	100.50 KB (102,912 bytes)	4/10/2003 10:27 AM	Microsoft Corporation	c:\windows\pchealth\helpctr\binaries\pchshell.dll
mlang	6.00.3790.0 (srv03_rtm.030324-2048)	570.00 KB (583,680 bytes)	3/25/2003 7:00 AM	Microsoft Corporation	c:\windows\system32\mlang.dll
mshtml	6.00.3790.0 (srv03_rtm.030324-2048)	2.78 MB (2,916,352 bytes)	3/25/2003 7:00 AM	Microsoft Corporation	c:\windows\system32\mshtml.dll
msimtf	5.2.3790.0 (srv03_rtm.030324-2048)	149.00 KB (152,576 bytes)	3/25/2003 7:00 AM	Microsoft Corporation	c:\windows\system32\msimtf.dll
msctf	5.2.3790.0 (srv03_rtm.030324-2048)	287.00 KB (293,888 bytes)	3/25/2003 7:00 AM	Microsoft Corporation	c:\windows\system32\msctf.dll
jscrip	5.6.0.8515	436.00 KB (446,464 bytes)	3/25/2003 7:00 AM	Microsoft Corporation	c:\windows\system32\jscrip.dll
msls31	3.10.349.0	147.00 KB (150,528 bytes)	3/25/2003 7:00 AM	Microsoft Corporation	c:\windows\system32\msls31.dll
imm32	5.2.3790.0 (srv03_rtm.030324-2048)	105.50 KB (108,032 bytes)	3/25/2003 7:00 AM	Microsoft Corporation	c:\windows\system32\imm32.dll

mshtml 6.00.3790.0 (srv03\_rtm.030324-2048) 443.50 KB (454,144 bytes) 3/25/2003 7:00 AM Microsoft Corporation  
c:\windows\system32\mshtml.dll

vbscript 5.6.0.8515 404.00 KB (413,696 bytes) 3/25/2003 7:00 AM Microsoft Corporation  
c:\windows\system32\vbscript.dll

mfc42 6.05.3014.0 960.00 KB (983,040 bytes) 3/25/2003 7:00 AM Microsoft Corporation  
c:\windows\system32\mfc42.dll

msinfo 5.2.3790.0 (srv03\_rtm.030324-2048) 358.50 KB (367,104 bytes) 4/10/2003 10:27 AM Microsoft Corporation  
c:\windows\pchealth\helpctr\binaries\msinfo.dll

mfc42u 6.05.3014.0 960.00 KB (983,040 bytes) 3/25/2003 7:00 AM Microsoft Corporation  
c:\windows\system32\mfc42u.dll

riched32 5.2.3790.0 (srv03\_rtm.030324-2048) 3.50 KB (3,584 bytes) 3/25/2003 7:00 AM Microsoft Corporation  
c:\windows\system32\riched32.dll

riched20 5.31.23.1218 406.00 KB (415,744 bytes) 3/25/2003 7:00 AM Microsoft Corporation  
c:\windows\system32\riched20.dll

helpsvc 5.2.3790.0 (srv03\_rtm.030324-2048) 720.00 KB (737,280 bytes) 4/10/2003 10:27 AM 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	
Alerter	Alerter	Stopped	Disabled	Share Process
c:\windows\system32\svchost.exe	-k localservice	0	Normal	NT AUTHORITY\LocalService
Application Layer Gateway Service	ALG	Stopped	Manual	Own Process
c:\windows\system32\alg.exe	0	Normal	NT AUTHORITY\LocalService	
Application Management	AppMgmt	Stopped	Manual	Share Process
c:\windows\system32\svchost.exe	-k netsvcs	0	Normal	LocalSystem
Windows Audio	AudioSrv	Stopped	Disabled	Share Process
c:\windows\system32\svchost.exe	-k netsvcs	0	Normal	LocalSystem
Background Intelligent Transfer Service	BITS	Stopped	Manual	Share Process
c:\windows\system32\svchost.exe	-k netsvcs	0	Normal	LocalSystem
Computer Browser	Browser	Stopped	Manual	Share Process
c:\windows\system32\svchost.exe	-k netsvcs	0	Normal	LocalSystem
Indexing Service	CiSvc	Stopped	Disabled	Share Process
c:\windows\system32\cisvc.exe	0	Normal	LocalSystem	
ClipBook	ClipSrv	Stopped	Disabled	Own Process
c:\windows\system32\clipsrv.exe	0	Normal	LocalSystem	
COM+ System Application	COMSysApp	Stopped	Manual	Own Process
c:\windows\system32\dllhost.exe	/processid:{02d4b3f1-fd88-11d1-960d-00805fc79235}	0	Normal	LocalSystem

Cryptographic Services	CryptSvc	Running	Auto	Share Process
c:\windows\system32\svchost.exe	-k netsvcs	0	Normal	LocalSystem
Distributed File System	Dfs	Stopped	Disabled	Own Process
c:\windows\system32\dfsrv.exe	0	Normal	LocalSystem	
DHCP Client	Dhcp	Running	Auto	Share Process
c:\windows\system32\svchost.exe	-k networkservice	0	Normal	NT AUTHORITY\NetworkService
Logical Disk Manager Administrative Service	dmadmin	Stopped	Manual	Share Process
c:\windows\system32\dmadmin.exe	/com	0	Normal	LocalSystem
Logical Disk Managerdmserver	dmserver	Running	Auto	Share Process
c:\windows\system32\svchost.exe	-k netsvcs	0	Normal	LocalSystem
DNS Client	Dnscache	Running	Auto	Share Process
c:\windows\system32\svchost.exe	-k networkservice	0	Normal	NT AUTHORITY\NetworkService
Error Reporting Service	ERSvc	Stopped	Manual	Share Process
c:\windows\system32\svchost.exe	-k winerr	0	Ignore	LocalSystem
Event Log	Eventlog	Running	Auto	Share Process
c:\windows\system32\services.exe	0	Normal	LocalSystem	
COM+ Event System	EventSystem	Running	Manual	Share Process
c:\windows\system32\svchost.exe	-k netsvcs	0	Normal	LocalSystem
Help and Support	helpsvc	Running	Manual	Share Process
c:\windows\system32\svchost.exe	-k netsvcs	0	Normal	LocalSystem
Human Interface Device Access	HidServ	Stopped	Disabled	Share Process
c:\windows\system32\svchost.exe	-k netsvcs	0	Normal	LocalSystem
HTTP SSLHTTPFilter	HttpFilter	Stopped	Manual	Share Process
c:\windows\system32\lsass.exe	0	Normal	LocalSystem	
IMAPI CD-Burning COM Service	ImapiService	Stopped	Disabled	Own Process
c:\windows\system32\imapi.exe	0	Normal	LocalSystem	
Intersite Messaging	IsmServ	Stopped	Disabled	Own Process
c:\windows\system32\ismserv.exe	0	Normal	LocalSystem	
Kerberos Key Distribution Center	kdc	Stopped	Disabled	Share Process
c:\windows\system32\lsass.exe	0	Normal	LocalSystem	
Server	lanmanserver	Running	Auto	Share Process
c:\windows\system32\svchost.exe	-k netsvcs	0	Normal	LocalSystem
Workstation	lanmanworkstation	Running	Auto	Share Process
c:\windows\system32\svchost.exe	-k netsvcs	0	Normal	LocalSystem
License Logging	LicenseService	Stopped	Disabled	Own Process
c:\windows\system32\llssrv.exe	0	Normal	NT AUTHORITY\NetworkService	
TCP/IP NetBIOS Helper	LmHosts	Running	Auto	Share Process
c:\windows\system32\svchost.exe	-k localservice	0	Normal	NT AUTHORITY\LocalService

Messenger Messenger Stopped Disabled 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	
NetMeeting Remote Desktop Sharing mnmsrvc Stopped Disabled Own Process c:\windows\system32\mnmsrvc.exe Normal LocalSystem 0		Routing and Remote Access RemoteAccess Stopped Disabled Share Process c:\windows\system32\svchost.exe -k netsvcs Normal LocalSystem 0	
Distributed Transaction Coordinator MSDTC Running Auto Own Process c:\windows\system32\msdtc.exe Normal NT AUTHORITY\NetworkService 0		Remote Registry RemoteRegistry Running Auto Share Process c:\windows\system32\svchost.exe -k regsvc Normal NT AUTHORITY\LocalService 0	
Windows Installer MSIServer Stopped Manual Share Process c:\windows\system32\msiexec.exe /v Normal LocalSystem	0	Remote Procedure Call (RPC) Locator RpcLocator Stopped Manual Own Process c:\windows\system32\locator.exe Normal NT AUTHORITY\NetworkService 0	
MSSQLSERVER MSSQLSERVER Stopped Manual Own Process c:\progra~1\microso~1\mssql\bin\sqlservr.exe Normal LocalSystem 0		Remote Procedure Call (RPC) RpcSs Running Auto Share Process c:\windows\system32\svchost -k rpsvc Normal LocalSystem 0	
MSSQLServerADHelper MSSQLServerADHelper Stopped Manual Own Process c:\program files\microsoft sql server\80\tools\bin\sqladhlp.exe Normal LocalSystem 0		Resultant Set of Policy Provider RSoPProv Stopped Manual Share Process c:\windows\system32\rsopprov.exe Normal LocalSystem 0	
Network DDE NetDDE Stopped Disabled Share Process c:\windows\system32\netdde.exe Normal LocalSystem 0		Special Administration Console Helper sacsvr Stopped Manual Share Process c:\windows\system32\svchost.exe -k netsvcs Normal LocalSystem 0	
Network DDE DSDMNetDDEdsdm Stopped Disabled Share Process c:\windows\system32\netdde.exe Normal LocalSystem	0	Security Accounts Manager SamSs Running Auto Share Process c:\windows\system32\lsass.exe Normal LocalSystem 0	
Net Logon Netlogon Stopped Manual 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	
Network Connections Netman Running Manual Share Process c:\windows\system32\svchost.exe -k netsvcs Normal LocalSystem	0	Task Scheduler Schedule Running Auto Share Process c:\windows\system32\svchost.exe -k netsvcs Normal LocalSystem 0	
Intel NCS NetService NetSvc Stopped Manual Own Process c:\program files\intel\ncs\sync\netsvc.exe Normal LocalSystem	0	Secondary Logon seclogon Running Auto Share Process c:\windows\system32\svchost.exe -k netsvcs Ignore LocalSystem 0	
Network Location Awareness (NLA) Nla Running Manual Share Process c:\windows\system32\svchost.exe -k netsvcs Normal LocalSystem 0		System Event Notification SENS Running Auto 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		Shell Hardware Detection ShellHWDetection Running Auto Share Process c:\windows\system32\svchost.exe -k netsvcs Ignore LocalSystem 0	
NT LM Security Support Provider NtLmSsp Stopped Manual Share Process c:\windows\system32\lsass.exe Normal LocalSystem 0		Print Spooler Spooler Stopped Disabled Own Process c:\windows\system32\spoolsv.exe Normal LocalSystem 0	
Removable Storage NtmsSvc Stopped Manual Share Process c:\windows\system32\svchost.exe -k netsvcs Normal LocalSystem	0	SQLSERVERAGENT SQLSERVERAGENT Stopped Manual Own Process c:\progra~1\microso~1\mssql\bin\sqlagent.exe Normal LocalSystem 0	
Plug and Play PlugPlay Running Auto Share Process c:\windows\system32\services.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	
IPSEC Services PolicyAgent Running Auto Share Process c:\windows\system32\lsass.exe Normal LocalSystem	0	Microsoft Software Shadow Copy Provider swprv Stopped Manual Own Process c:\windows\system32\svchost.exe -k swprv Normal LocalSystem 0	
Protected Storage ProtectedStorage Stopped Disabled Share Process c:\windows\system32\lsass.exe Normal LocalSystem	0	Performance Logs and Alerts SysmonLog Stopped Manual Own Process c:\windows\system32\smlogsvc.exe Normal NT Authority\NetworkService 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			



Telephony TapiSrv	Stopped	Manual	Share Process						Wireless Configuration	WZCSVC	Stopped	Manual	Share					
c:\windows\system32\svchost.exe -k tapisrv			Normal	LocalSystem	0				Process c:\windows\system32\svchost.exe -k netsvcs		Normal	LocalSystem	0					
Terminal Services	TermService		Running	Manual	Share				[Program Groups]									
Process c:\windows\system32\svchost.exe -k termsvcs				Normal	LocalSystem	0			Group Name	Name	User Name							
Themes	Themes	Stopped	Disabled	Share Process					Accessories	Default User:Accessories	Default User							
c:\windows\system32\svchost.exe -k netsvcs			Normal	LocalSystem	0				Accessories\Accessibility	Default User:Accessories\Accessibility	Default User							
Telnet	TlntSvr	Stopped	Disabled	Own Process					Accessories\Entertainment	Default User:Accessories\Entertainment	Default User							
c:\windows\system32\tlntsvr.exe			Normal	NT AUTHORITY\LocalService	0				Startup	Default User:Startup	Default User							
Distributed Link Tracking Server	TrkSvr	Stopped	Disabled	Share					Accessories	All Users:Accessories	All Users							
Process c:\windows\system32\svchost.exe -k netsvcs			Normal	LocalSystem	0				Accessories\Accessibility	All Users:Accessories\Accessibility	All Users							
Distributed Link Tracking Client	TrkWks	Stopped	Disabled	Share					Accessories\Communications	All Users:Accessories\Communications	All Users							
Process c:\windows\system32\svchost.exe -k netsvcs			Normal	LocalSystem	0				Accessories\Entertainment	All Users:Accessories\Entertainment	All Users							
Terminal Services Session Directory	Tssdis	Stopped	Disabled	Own Process					Accessories\System Tools	All Users:Accessories\System Tools	All Users							
Process c:\windows\system32\tssdis.exe			Normal	LocalSystem	0				Administrative Tools	All Users:Administrative Tools	All Users							
Upload Manager	uploadmgr	Stopped	Disabled	Share Process					Debugging Tools for Windows	All Users:Debugging Tools for Windows	All Users							
c:\windows\system32\svchost.exe -k netsvcs			Normal	LocalSystem	0				Intel Network Adapters	All Users:Intel Network Adapters	All Users							
Uninterruptible Power Supply	UPS	Stopped	Manual	Own					Microsoft SQL Server	All Users:Microsoft SQL Server	All Users							
Process c:\windows\system32\ups.exe			Normal	NT AUTHORITY\LocalService	0				Startup	All Users:Startup	All Users							
Virtual Disk Service	vds	Stopped	Manual	Own Process					Accessories	NT AUTHORITY\SYSTEM:Accessories	NT AUTHORITY\SYSTEM							
c:\windows\system32\vds.exe			Normal	LocalSystem	0				Accessories\Accessibility	NT AUTHORITY\SYSTEM:Accessories\Accessibility	NT AUTHORITY\SYSTEM							
Volume Shadow Copy	VSS	Stopped	Manual	Own					Accessories\Entertainment	NT AUTHORITY\SYSTEM:Accessories\Entertainment	NT AUTHORITY\SYSTEM							
Process c:\windows\system32\vssvc.exe			Normal	LocalSystem	0				Startup	NT AUTHORITY\SYSTEM:Startup	NT AUTHORITY\SYSTEM							
Windows Time	W32Time	Stopped	Manual	Share Process					Accessories	IBMSERV4\Administrator:Accessories	IBMSERV4\Administrator							
c:\windows\system32\svchost.exe -k netsvcs			Normal	LocalSystem	0				Accessories\Accessibility	IBMSERV4\Administrator:Accessories\Accessibility	IBMSERV4\Administrator							
WebClient	WebClient	Stopped	Disabled	Share Process					Accessories\Accessibility	NT AUTHORITY\SYSTEM:Accessories\Accessibility	NT AUTHORITY\SYSTEM							
c:\windows\system32\svchost.exe -k localservice			Normal	NT AUTHORITY\LocalService	0				Accessories\Entertainment	NT AUTHORITY\SYSTEM:Accessories\Entertainment	NT AUTHORITY\SYSTEM							
WinHTTP Web Proxy	Auto-Discovery Service			WinHttpAutoProxySvc					Startup	NT AUTHORITY\SYSTEM:Startup	NT AUTHORITY\SYSTEM							
Stopped Manual Share Process				c:\windows\system32\svchost.exe -k localservice					Accessories	IBMSERV4\Administrator:Accessories	IBMSERV4\Administrator							
Normal NT AUTHORITY\LocalService				0					Accessories\Accessibility	IBMSERV4\Administrator:Accessories\Accessibility	IBMSERV4\Administrator							
Windows Management Instrumentation	winmgmt	Running	Auto	Share Process					Accessories\Entertainment	IBMSERV4\Administrator:Accessories\Entertainment	IBMSERV4\Administrator							
Process c:\windows\system32\svchost.exe -k netsvcs			Ignore	LocalSystem	0				Startup	NT AUTHORITY\SYSTEM:Startup	NT AUTHORITY\SYSTEM							
Portable Media Serial Number Service	WmdmPmSN	Stopped		Manual	Share Process				Accessories	IBMSERV4\Administrator:Accessories	IBMSERV4\Administrator							
Manual Share Process				c:\windows\system32\svchost.exe -k netsvcs					Accessories\Accessibility	IBMSERV4\Administrator:Accessories\Accessibility	IBMSERV4\Administrator							
Normal LocalSystem				0					Accessories\Entertainment	IBMSERV4\Administrator:Accessories\Entertainment	IBMSERV4\Administrator							
Windows Management Instrumentation Driver Extensions	Wmi	Stopped	Manual	Share Process					Accessories\Entertainment	IBMSERV4\Administrator:Accessories\Entertainment	IBMSERV4\Administrator							
-k netsvcs Normal LocalSystem				c:\windows\system32\svchost.exe -k netsvcs					Accessories\Entertainment	IBMSERV4\Administrator:Accessories\Entertainment	IBMSERV4\Administrator							
0				0					Accessories\Entertainment	IBMSERV4\Administrator:Accessories\Entertainment	IBMSERV4\Administrator							
WMI Performance Adapter	WmiApSrv	Stopped	Manual	Own Process					Accessories\Entertainment	IBMSERV4\Administrator:Accessories\Entertainment	IBMSERV4\Administrator							
Process c:\windows\system32\wbem\wmiapsrv.exe			Normal	LocalSystem	0				Accessories\Entertainment	IBMSERV4\Administrator:Accessories\Entertainment	IBMSERV4\Administrator							
Automatic Updates	wuauerv	Stopped	Manual	Share Process					Accessories\Entertainment	IBMSERV4\Administrator:Accessories\Entertainment	IBMSERV4\Administrator							
c:\windows\system32\svchost.exe -k netsvcs			Normal	LocalSystem	0				Accessories\Entertainment	IBMSERV4\Administrator:Accessories\Entertainment	IBMSERV4\Administrator							

QLogic Corporation IBMSERV4\Administrator:QLogic Corporation  
IBMSERV4\Administrator

QLogic Corporation\SANblade Control VIXIBMSERV4\Administrator:QLogic  
Corporation\SANblade Control VIX IBMSERV4\Administrator

Startup IBMSERV4\Administrator:Startup  
IBMSERV4\Administrator

[Startup Programs]

Program Command User NameLocation

desktop desktop.ini NT AUTHORITY\SYSTEM Startup

desktop desktop.ini IBMSERV4\Administrator Startup

desktop desktop.ini DEFAULT Startup

desktop desktop.ini All Users Common Startup

synctime synctime.cmd All Users Common Startup

PRONoMgr.exe c:\program files\intel\ncs\proset\pronomgr.exe  
All Users HKLM\SOFTWARE\Microsoft\Windows\CurrentVersion\Run

KernelFaultCheck %systemroot%\system32\dumprep 0 -k All Users  
HKLM\SOFTWARE\Microsoft\Windows\CurrentVersion\Run

AtiPTA atiptaxx.exe All Users  
HKLM\SOFTWARE\Microsoft\Windows\CurrentVersion\Run

[OLE Registration]

Object Local Server

Sound (OLE2) sndrec32.exe

Media Clip mplay32.exe

Video Clip mplay32.exe /avi

MIDI Sequence mplay32.exe /mid

Sound Not Available

Media Clip Not Available

WordPad Document "%programfiles%\windows nt\accessories\wordpad.exe"

Windows Media Services DRM Storage object Not Available

Bitmap Image mspaint.exe

[Windows Error Reporting]

Time Type Details

[Internet Settings]

[Internet Explorer]

[ Following are sub-categories of this main category ]

[Summary]

Item Value

Version 6.0.3790.0

Build 63790

Application Path C:\Program Files\Internet Explorer

Language English (United States)

Active Printer Not Available

Cipher Strength 128-bit

Content Advisor Disabled

IEAK Install No

[File Versions]

File	Version	Size	Date	Path	Company
------	---------	------	------	------	---------

actxprxy.dll	6.0.3790.0	95 KB	3/25/2003 7:00:00 AM	C:\WINDOWS\system32	Microsoft Corporation
--------------	------------	-------	----------------------	---------------------	-----------------------

advpack.dll	6.0.3790.0	94 KB	3/25/2003 7:00:00 AM	C:\WINDOWS\system32	Microsoft Corporation
-------------	------------	-------	----------------------	---------------------	-----------------------

asctrls.ocx	6.0.3790.0	90 KB	3/25/2003 7:00:00 AM	C:\WINDOWS\system32	Microsoft Corporation
-------------	------------	-------	----------------------	---------------------	-----------------------

browsecl.dll	6.0.3790.0	62 KB	3/25/2003 7:00:00 AM	C:\WINDOWS\system32	Microsoft Corporation
--------------	------------	-------	----------------------	---------------------	-----------------------

browseui.dll	6.0.3790.0	1,033 KB	3/25/2003 7:00:00 AM	C:\WINDOWS\system32	Microsoft Corporation
--------------	------------	----------	----------------------	---------------------	-----------------------

cdfview.dll	6.0.3790.0	144 KB	3/25/2003 7:00:00 AM	C:\WINDOWS\system32	Microsoft Corporation
-------------	------------	--------	----------------------	---------------------	-----------------------

comctl32.dll	5.82.3790.0	561 KB	3/25/2003 7:00:00 AM	C:\WINDOWS\system32	Microsoft Corporation
--------------	-------------	--------	----------------------	---------------------	-----------------------

dxtrans.dll	6.3.3790.0	198 KB	3/25/2003 7:00:00 AM	C:\WINDOWS\system32	Microsoft Corporation
-------------	------------	--------	----------------------	---------------------	-----------------------

dxtmsft.dll	6.3.3790.0	344 KB	3/25/2003 7:00:00 AM	C:\WINDOWS\system32	Microsoft Corporation
-------------	------------	--------	----------------------	---------------------	-----------------------

iecont.dll	<File Missing>	Not Available	Not Available	Not Available	Not Available
------------	----------------	---------------	---------------	---------------	---------------

iecontlc.dll	<File Missing>	Not Available	Not Available	Not Available	Not Available
--------------	----------------	---------------	---------------	---------------	---------------

iedkcs32.dll	16.0.3790.0	300 KB	3/25/2003 7:00:00 AM	C:\WINDOWS\system32	Microsoft Corporation
--------------	-------------	--------	----------------------	---------------------	-----------------------

iepeers.dll	6.0.3790.0	230 KB	3/25/2003 7:00:00 AM	C:\WINDOWS\system32	Microsoft Corporation
-------------	------------	--------	----------------------	---------------------	-----------------------

iesetup.dll	6.0.3790.0	59 KB	3/25/2003 7:00:00 AM	C:\WINDOWS\system32	Microsoft Corporation
-------------	------------	-------	----------------------	---------------------	-----------------------

ieuinit.inf	Not Available	20 KB	3/25/2003 7:00:00 AM	C:\WINDOWS\system32	Not Available
-------------	---------------	-------	----------------------	---------------------	---------------

ieexplore.exe	6.0.3790.0	90 KB	3/25/2003 7:00:00 AM	C:\Program Files\Internet Explorer	Microsoft Corporation
---------------	------------	-------	----------------------	------------------------------------	-----------------------

imgutil.dll	5.2.3790.0	35 KB	3/25/2003 7:00:00 AM	Microsoft Corporation
C:\WINDOWS\system32				
inetctl.cpl	6.0.3790.0	303 KB	3/25/2003 7:00:00 AM	Microsoft Corporation
C:\WINDOWS\system32				
inetctl.dll	6.0.3790.0	109 KB	3/25/2003 7:00:00 AM	Microsoft Corporation
C:\WINDOWS\system32				
inseng.dll	6.0.3790.0	72 KB	3/25/2003 7:00:00 AM	Microsoft Corporation
C:\WINDOWS\system32				
mlang.dll	6.0.3790.0	570 KB	3/25/2003 7:00:00 AM	Microsoft Corporation
C:\WINDOWS\system32				
msencode.dll	2002.10.4.0	112 KB	3/25/2003 7:00:00 AM	Not Available
C:\WINDOWS\system32				
mshta.exe	6.0.3790.0	26 KB	3/25/2003 7:00:00 AM	Microsoft Corporation
C:\WINDOWS\system32				
mshtml.dll	6.0.3790.0	2,848 KB	3/25/2003 7:00:00 AM	Microsoft Corporation
C:\WINDOWS\system32				
mshtml.tlb	6.0.3790.0	1,319 KB	3/25/2003 7:00:00 AM	Microsoft Corporation
C:\WINDOWS\system32				
mshtmlmed.dll	6.0.3790.0	444 KB	3/25/2003 7:00:00 AM	Microsoft Corporation
C:\WINDOWS\system32				
mshtmlmer.dll	6.0.3790.0	55 KB	3/25/2003 7:00:00 AM	Microsoft Corporation
C:\WINDOWS\system32				
msident.dll	6.0.3790.0	47 KB	3/25/2003 7:00:00 AM	Microsoft Corporation
C:\WINDOWS\system32				
msidntld.dll	6.0.3790.0	15 KB	3/25/2003 7:00:00 AM	Microsoft Corporation
C:\WINDOWS\system32				
msieftp.dll	6.0.3790.0	230 KB	3/25/2003 7:00:00 AM	Microsoft Corporation
C:\WINDOWS\system32				
msrating.dll	6.0.3790.0	132 KB	3/25/2003 7:00:00 AM	Microsoft Corporation
C:\WINDOWS\system32				
mstime.dll	6.0.3790.0	491 KB	3/25/2003 7:00:00 AM	Microsoft Corporation
C:\WINDOWS\system32				
occache.dll	6.0.3790.0	89 KB	3/25/2003 7:00:00 AM	Microsoft Corporation
C:\WINDOWS\system32				
proctexe.ocx	6.3.3790.0	78 KB	3/25/2003 7:00:00 AM	Intel Corporation
C:\WINDOWS\system32				
sendmail.dll	6.0.3790.0	52 KB	3/25/2003 7:00:00 AM	Microsoft Corporation
C:\WINDOWS\system32				
shdoclc.dll	6.0.3790.0	589 KB	3/25/2003 7:00:00 AM	Microsoft Corporation
C:\WINDOWS\system32				
shdocvw.dll	6.0.3790.0	1,361 KB	3/25/2003 7:00:00 AM	Microsoft Corporation
C:\WINDOWS\system32				
shfolder.dll	6.0.3790.0	23 KB	3/25/2003 7:00:00 AM	Microsoft Corporation
C:\WINDOWS\system32				
shlwapi.dll	6.0.3790.0	281 KB	3/25/2003 7:00:00 AM	Microsoft Corporation
C:\WINDOWS\system32				

tdc.ocx	1.3.0.3130	58 KB	3/25/2003 7:00:00 AM	Microsoft Corporation
C:\WINDOWS\system32				
url.dll	6.0.3790.0	36 KB	3/25/2003 7:00:00 AM	Microsoft Corporation
C:\WINDOWS\system32				
urlmon.dll	6.0.3790.0	502 KB	3/25/2003 7:00:00 AM	Microsoft Corporation
C:\WINDOWS\system32				
webcheck.dll	6.0.3790.0	262 KB	3/25/2003 7:00:00 AM	Microsoft Corporation
C:\WINDOWS\system32				
wininet.dll	6.0.3790.0	609 KB	3/25/2003 7:00:00 AM	Microsoft Corporation
C:\WINDOWS\system32				

[Connectivity]

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

Connection Preference	Never dial
-----------------------	------------

LAN Settings

AutoConfigProxy	Not Available
-----------------	---------------

AutoProxyDetectMode	Disabled
---------------------	----------

AutoConfigURL	
---------------	--

Proxy	Disabled
-------	----------

ProxyServer	
-------------	--

ProxyOverride	
---------------	--

[Cache]

[ Following are sub-categories of this main category ]

[Summary]

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

Page Refresh Type	Automatic
-------------------	-----------

Temporary Internet Files Folder	C:\Documents and Settings\NetworkService\Local Settings\Temporary Internet Files
---------------------------------	----------------------------------------------------------------------------------

Total Disk Space	Not Available
------------------	---------------

Available Disk Space	Not Available
----------------------	---------------

Maximum Cache Size	Not Available
--------------------	---------------

Available Cache Size	Not Available
----------------------	---------------

[List of Objects]

Program File	Status	CodeBase
--------------	--------	----------

No cached object information available

[Content]

[ Following are sub-categories of this main category ]

[Summary]

Item Value

Content Advisor Disabled

[Personal Certificates]

Issued To Issued By Validity Signature Algorithm

No personal certificate information available

[Other People Certificates]

Issued To Issued By Validity Signature Algorithm

No other people certificate information available

[Publishers]

Name

No publisher information available

[Security]

Zone Security Level

My Computer Custom  
Local intranet Medium-low

Trusted sites Medium

Internet High

Restricted sites High

## Disk Controller Configuration Parameters

### TotalStorage FC2-133 Host Bus Adapter 1

PROFILE FOR STORAGE SUBSYSTEM: Flute1log (3/18/04 1:58:35 PM)

SUMMARY-----

Number of controllers: 2  
Number of arrays: 1  
Total number of logical drives (includes an access logical drive): 2 of 2048 used

Number of standard logical drives: 1  
Number of access logical drives: 1  
Number of drives: 28  
Access logical drive: None mapped  
Default host type: Windows 2000/Server 2003 Non-Clustered (Host type index 2)

Firmware version: 05.40.06.00  
NVS RAM version: N1742F700R830V03  
NVS RAM configured for batteries?: Yes  
Start cache flushing at (in percentage): 65  
Stop cache flushing at (in percentage): 15  
Cache block size (in KB): 4  
Media scan duration (in days): Disabled  
Failover alert delay (in minutes): 5  
Feature enable identifier: 3936323531003936323537003D786B6B

CONTROLLERS-----

Number of controllers: 2

Controller in Slot A

Appware version: 05.40.06.00  
Bootware version: 05.40.02.00  
Status: Optimal  
Mode: Active  
Board ID: 4884  
Product ID: 1742  
Product revision: 0520  
Serial number: 1T21400123  
Vendor: IBM  
Date of manufacture: September 3, 2002  
Cache/processor size (MB): 1024/128  
Date/Time: Thu Mar 18 13:58:09 EST 2004  
Associated Logical Drives (\* = Preferred Owner):

flute1log\*  
Drive interface: Fibre  
Channel: 1  
Current ID: 125/0x1  
Maximum data rate: 2 Gbps  
Current data rate: 2 Gbps  
Data rate control: Switch  
Link status: Up

Drive interface: Fibre  
Channel: 2  
Current ID: 125/0x1  
Maximum data rate: 2 Gbps  
Current data rate: 2 Gbps  
Data rate control: Switch  
Link status: Up

Drive interface: Fibre  
Channel: 3  
Current ID: 125/0x1  
Maximum data rate: 2 Gbps  
Current data rate: 2 Gbps  
Data rate control: Switch  
Link status: Up

Drive interface: Fibre  
Channel: 4  
Current ID: 125/0x1  
Maximum data rate: 2 Gbps  
Current data rate: 2 Gbps  
Data rate control: Switch  
Link status: Up

Host interface: Fibre  
Port: 1  
Current ID: Not applicable/0xFFFFFFF  
Preferred ID: 126/0x0  
NL-Port ID: 0x011400  
Maximum data rate: 2 Gbps  
Current data rate: 2 Gbps  
Data rate control: Switch  
Link status: Up  
Topology: Fabric Attach  
World-wide port name: 20:04:00:a0:b8:0c:d2:30  
World-wide node name: 20:04:00:a0:b8:0c:d2:2f  
Part type: HPFC-5200 revision 11

Host interface: Fibre  
Port: 2  
Current ID: 1/0xE8  
Preferred ID: 1/0xE8  
NL-Port ID: 0x0000E8  
Maximum data rate: 2 Gbps  
Current data rate: 1 Gbps  
Data rate control: Switch  
Link status: Up  
Topology: Arbitrated Loop - Private  
World-wide port name: 20:04:00:a0:b8:0c:d2:31  
World-wide node name: 20:04:00:a0:b8:0c:d2:2f

Part type: HPFC-5200 revision 11  
Ethernet port: 0  
MAC address: 00:a0:b8:0c:d2:2f  
Host name: target  
Network configuration: Static  
IP address: 192.168.128.103  
Subnet mask: 255.255.255.0  
Gateway: 0.0.0.0  
Remote login: Disabled

Controller in Slot B

Appware version: 05.40.06.00  
Bootware version: 05.40.02.00  
Status: Optimal  
Mode: Active  
Board ID: 4884  
Product ID: 1742  
Product revision: 0520  
Serial number: 1T23355626  
Vendor: IBM  
Date of manufacture: August 29, 2002  
Cache/processor size (MB): 1024/128  
Date/Time: Thu Mar 18 13:58:11 EST 2004  
Associated Logical Drives (\* = Preferred Owner): None  
Drive interface: Fibre  
Channel: 1  
Current ID: 124/0x2  
Maximum data rate: 2 Gbps  
Current data rate: 2 Gbps  
Data rate control: Switch  
Link status: Up  
Drive interface: Fibre  
Channel: 2  
Current ID: 124/0x2  
Maximum data rate: 2 Gbps  
Current data rate: 2 Gbps  
Data rate control: Switch  
Link status: Up  
Drive interface: Fibre  
Channel: 3  
Current ID: 124/0x2  
Maximum data rate: 2 Gbps  
Current data rate: 2 Gbps  
Data rate control: Switch  
Link status: Up  
Drive interface: Fibre  
Channel: 4  
Current ID: 124/0x2  
Maximum data rate: 2 Gbps  
Current data rate: 2 Gbps  
Data rate control: Switch  
Link status: Up  
Host interface: Fibre  
Port: 1  
Current ID: Not applicable/0xFFFFFFFF  
Preferred ID: 126/0x0  
NL-Port ID: 0x011500  
Maximum data rate: 2 Gbps  
Current data rate: 2 Gbps  
Data rate control: Switch  
Link status: Up  
Topology: Fabric Attach  
World-wide port name: 20:05:00:a0:b8:0c:d2:30  
World-wide node name: 20:05:00:a0:b8:0c:d2:2f  
Part type: HPFC-5200 revision 11  
Host interface: Fibre  
Port: 2  
Current ID: 3/0xE2

Preferred ID: 3/0xE2  
NL-Port ID: 0x0000E2  
Maximum data rate: 2 Gbps  
Current data rate: 1 Gbps  
Data rate control: Switch  
Link status: Up  
Topology: Arbitrated Loop - Private  
World-wide port name: 20:05:00:a0:b8:0c:d2:31  
World-wide node name: 20:05:00:a0:b8:0c:d2:2f  
Part type: HPFC-5200 revision 11  
Ethernet port: 0  
MAC address: 00:a0:b8:0f:0b:6d  
Host name: target  
Network configuration: Static  
IP address: 192.168.128.104  
Subnet mask: 255.255.255.0  
Gateway: 0.0.0.0  
Remote login: Disabled

ARRAYS-----

Number of arrays: 1

Array 1 (RAID 1)

Status: Online  
Current owner: Controller in slot A  
Logical Drive flute1log (474.072 GB)  
Associated drives (in piece order):  
Drive at Enclosure 0, Slot 1  
Drive at Enclosure 0, Slot 2  
Drive at Enclosure 0, Slot 3  
Drive at Enclosure 0, Slot 4  
Drive at Enclosure 0, Slot 5  
Drive at Enclosure 0, Slot 6  
Drive at Enclosure 0, Slot 7  
Drive at Enclosure 0, Slot 8  
Drive at Enclosure 0, Slot 9  
Drive at Enclosure 0, Slot 10  
Drive at Enclosure 0, Slot 11  
Drive at Enclosure 0, Slot 12  
Drive at Enclosure 0, Slot 13  
Drive at Enclosure 0, Slot 14  
Drive at Enclosure 1, Slot 1  
Drive at Enclosure 1, Slot 2  
Drive at Enclosure 1, Slot 3  
Drive at Enclosure 1, Slot 4  
Drive at Enclosure 1, Slot 5  
Drive at Enclosure 1, Slot 6  
Drive at Enclosure 1, Slot 7  
Drive at Enclosure 1, Slot 8  
Drive at Enclosure 1, Slot 9  
Drive at Enclosure 1, Slot 10  
Drive at Enclosure 1, Slot 11  
Drive at Enclosure 1, Slot 12  
Drive at Enclosure 1, Slot 13  
Drive at Enclosure 1, Slot 14

STANDARD LOGICAL DRIVES-----

SUMMARY

Number of standard logical drives: 1  
See other Logical Drives sub-tabs for premium feature information.

NAME	STATUS	CAPACITY	RAID LEVEL	ARRAY
flute1log	Optimal	474.072 GB	1	1

DETAILS

Logical Drive name: flute1log  
Logical Drive ID: 60:0a:0b:80:00:0c:d2:2f:00:00:00:3f:3e:be:2f:78

Subsystem ID (SSID): 0  
 Status: Optimal  
 Preferred owner: Controller in slot A  
 Current owner: Controller in slot A  
 Capacity: 474.072 GB  
 RAID level: 1  
 Segment size: 64 KB  
 Modification priority: High  
 Associated array: 1  
 Read cache: Disabled  
 Write cache: Enabled  
 Write cache without batteries: Disabled  
 Write cache with mirroring: Enabled  
 Flush write cache after (in seconds): 10.00  
 Cache read ahead multiplier: 1  
 Enable background media scan: Disabled  
 Media scan with redundancy check: Disabled

MISSING LOGICAL DRIVES-----

Number of missing logical drives: 0  
 See other Logical Drives sub-tabs for premium feature information

DRIVES-----

SUMMARY

Number of drives: 28

BASIC:

TRAY, SLOT	STATUS	CAPACITY	CURRENT DATA RATE
PRODUCT ID	FIRMWARE VERSION		
0, 1	Optimal	33.902 GB 2 Gbps	ST336732FC F B947
0, 2	Optimal	33.902 GB 2 Gbps	ST336732FC F B947
0, 3	Optimal	33.902 GB 2 Gbps	ST336732FC F B947
0, 4	Optimal	33.902 GB 2 Gbps	ST336732FC F B947
0, 5	Optimal	33.902 GB 2 Gbps	ST336732FC F B947
0, 6	Optimal	33.902 GB 2 Gbps	ST336732FC F B947
0, 7	Optimal	33.902 GB 2 Gbps	ST336732FC F B947
0, 8	Optimal	33.902 GB 2 Gbps	ST336732FC F B947
0, 9	Optimal	33.902 GB 2 Gbps	ST336732FC F B947
0, 10	Optimal	33.902 GB 2 Gbps	ST336732FC F B947
0, 11	Optimal	33.902 GB 2 Gbps	ST336732FC F B947
0, 12	Optimal	33.902 GB 2 Gbps	ST336732FC F B947
0, 13	Optimal	33.902 GB 2 Gbps	ST336732FC F B947
0, 14	Optimal	33.902 GB 2 Gbps	ST336732FC F B947
1, 1	Optimal	33.902 GB 2 Gbps	ST336732FC F B947
1, 2	Optimal	33.902 GB 2 Gbps	ST336732FC F B947
1, 3	Optimal	33.902 GB 2 Gbps	ST336732FC F B947
1, 4	Optimal	33.902 GB 2 Gbps	ST336732FC F B947

1, 5	Optimal	33.902 GB 2 Gbps	ST336732FC F B947
1, 6	Optimal	33.902 GB 2 Gbps	ST336732FC F B947
1, 7	Optimal	33.902 GB 2 Gbps	ST336732FC F B947
1, 8	Optimal	33.902 GB 2 Gbps	ST336732FC F B947
1, 9	Optimal	33.902 GB 2 Gbps	ST336732FC F B947
1, 10	Optimal	33.902 GB 2 Gbps	ST336732FC F B947
1, 11	Optimal	33.902 GB 2 Gbps	ST336732FC F B947
1, 12	Optimal	33.902 GB 2 Gbps	ST336732FC F B947
1, 13	Optimal	33.902 GB 2 Gbps	ST336732FC F B947
1, 14	Optimal	33.902 GB 2 Gbps	ST336732FC F B947

DRIVE CHANNELS:

TRAY, SLOT	CURRENT CHANNEL	ALTERNATE CHANNEL
0, 1	3	4
0, 2	4	3
0, 3	3	4
0, 4	4	3
0, 5	3	4
0, 6	4	3
0, 7	3	4
0, 8	4	3
0, 9	3	4
0, 10	4	3
0, 11	3	4
0, 12	4	3
0, 13	3	4
0, 14	4	3
1, 1	3	4
1, 2	4	3
1, 3	3	4
1, 4	4	3
1, 5	3	4
1, 6	4	3
1, 7	3	4
1, 8	4	3
1, 9	3	4
1, 10	4	3
1, 11	3	4
1, 12	4	3
1, 13	3	4
1, 14	4	3

DETAILS

Drive at Enclosure 0, Slot 1  
 Drive port: 1, Channel: 3, ID: 0/0xEF  
 Drive port: 2, Channel: 4, ID: 0/0xEF  
 Drive path redundancy: OK  
 Status: Optimal  
 Raw capacity: 33.902 GB  
 Usable capacity: 33.862 GB  
 Current data rate: 2 Gbps  
 Product ID: ST336732FC F  
 Firmware version: B947  
 Serial number: 3ET0TRRM00007313CKNU  
 Vendor: IBM-ESXS  
 Date of manufacture: May 15, 2002  
 World-wide name: 20:00:00:04:cf:b9:36:99

Mode: Assigned  
Associated array: Array 1

Drive at Enclosure 0, Slot 2

Drive port: 1, Channel: 4, ID: 1/0xE8  
Drive port: 2, Channel: 3, ID: 1/0xE8  
Drive path redundancy: OK  
Status: Optimal  
Raw capacity: 33.902 GB  
Usable capacity: 33.862 GB  
Current data rate: 2 Gbps  
Product ID: ST336732FC F  
Firmware version: B947  
Serial number: 3ET0TRNZ000073129EYU  
Vendor: IBM-ESXS  
Date of manufacture: May 15, 2002  
World-wide name: 20:00:00:04:cf:b9:36:be  
Mode: Assigned  
Associated array: Array 1

Drive at Enclosure 0, Slot 3

Drive port: 1, Channel: 3, ID: 2/0xE4  
Drive port: 2, Channel: 4, ID: 2/0xE4  
Drive path redundancy: OK  
Status: Optimal  
Raw capacity: 33.902 GB  
Usable capacity: 33.862 GB  
Current data rate: 2 Gbps  
Product ID: ST336732FC F  
Firmware version: B947  
Serial number: 3ET0TRIK00007312H4H8  
Vendor: IBM-ESXS  
Date of manufacture: May 15, 2002  
World-wide name: 20:00:00:04:cf:b9:3a:5c  
Mode: Assigned  
Associated array: Array 1

Drive at Enclosure 0, Slot 4

Drive port: 1, Channel: 4, ID: 3/0xE2  
Drive port: 2, Channel: 3, ID: 3/0xE2  
Drive path redundancy: OK  
Status: Optimal  
Raw capacity: 33.902 GB  
Usable capacity: 33.862 GB  
Current data rate: 2 Gbps  
Product ID: ST336732FC F  
Firmware version: B947  
Serial number: 3ET0YTDS000073214C61  
Vendor: IBM-ESXS  
Date of manufacture: May 15, 2002  
World-wide name: 20:00:00:04:cf:c0:93:4a  
Mode: Assigned  
Associated array: Array 1

Drive at Enclosure 0, Slot 5

Drive port: 1, Channel: 3, ID: 4/0xE1  
Drive port: 2, Channel: 4, ID: 4/0xE1  
Drive path redundancy: OK  
Status: Optimal  
Raw capacity: 33.902 GB  
Usable capacity: 33.862 GB  
Current data rate: 2 Gbps  
Product ID: ST336732FC F  
Firmware version: B947  
Serial number: 3ET0TSPG00007313BVZQ  
Vendor: IBM-ESXS  
Date of manufacture: May 15, 2002  
World-wide name: 20:00:00:04:cf:b9:3a:67

Mode: Assigned  
Associated array: Array 1

Drive at Enclosure 0, Slot 6

Drive port: 1, Channel: 4, ID: 5/0xE0  
Drive port: 2, Channel: 3, ID: 5/0xE0  
Drive path redundancy: OK  
Status: Optimal  
Raw capacity: 33.902 GB  
Usable capacity: 33.862 GB  
Current data rate: 2 Gbps  
Product ID: ST336732FC F  
Firmware version: B947  
Serial number: 3ET0TR7A000073126J3B  
Vendor: IBM-ESXS  
Date of manufacture: May 15, 2002  
World-wide name: 20:00:00:04:cf:b9:38:24  
Mode: Assigned  
Associated array: Array 1

Drive at Enclosure 0, Slot 7

Drive port: 1, Channel: 3, ID: 6/0xDC  
Drive port: 2, Channel: 4, ID: 6/0xDC  
Drive path redundancy: OK  
Status: Optimal  
Raw capacity: 33.902 GB  
Usable capacity: 33.862 GB  
Current data rate: 2 Gbps  
Product ID: ST336732FC F  
Firmware version: B947  
Serial number: 3ET0TRME00007304EJGT  
Vendor: IBM-ESXS  
Date of manufacture: May 15, 2002  
World-wide name: 20:00:00:04:cf:b9:38:75  
Mode: Assigned  
Associated array: Array 1

Drive at Enclosure 0, Slot 8

Drive port: 1, Channel: 4, ID: 7/0xDA  
Drive port: 2, Channel: 3, ID: 7/0xDA  
Drive path redundancy: OK  
Status: Optimal  
Raw capacity: 33.902 GB  
Usable capacity: 33.862 GB  
Current data rate: 2 Gbps  
Product ID: ST336732FC F  
Firmware version: B947  
Serial number: 3ET0TRQW00007313CLKX  
Vendor: IBM-ESXS  
Date of manufacture: May 15, 2002  
World-wide name: 20:00:00:04:cf:b9:37:28  
Mode: Assigned  
Associated array: Array 1

Drive at Enclosure 0, Slot 9

Drive port: 1, Channel: 3, ID: 80/0x55  
Drive port: 2, Channel: 4, ID: 80/0x55  
Drive path redundancy: OK  
Status: Optimal  
Raw capacity: 33.902 GB  
Usable capacity: 33.862 GB  
Current data rate: 2 Gbps  
Product ID: ST336732FC F  
Firmware version: B947  
Serial number: 3ET0TSP6000073090PTD  
Vendor: IBM-ESXS  
Date of manufacture: May 15, 2002  
World-wide name: 20:00:00:04:cf:b9:45:90

Mode: Assigned  
Associated array: Array 1

Drive at Enclosure 0, Slot 10  
Drive port: 1, Channel: 4, ID: 96/0x3A  
Drive port: 2, Channel: 3, ID: 96/0x3A  
Drive path redundancy: OK  
Status: Optimal  
Raw capacity: 33.902 GB  
Usable capacity: 33.862 GB  
Current data rate: 2 Gbps  
Product ID: ST336732FC F  
Firmware version: B947  
Serial number: 3ET0V1PD00007304EJME  
Vendor: IBM-ESXS  
Date of manufacture: May 15, 2002  
World-wide name: 20:00:00:04:cf:b9:3c:e2  
Mode: Assigned  
Associated array: Array 1

Drive at Enclosure 0, Slot 11  
Drive port: 1, Channel: 3, ID: 64/0x72  
Drive port: 2, Channel: 4, ID: 64/0x72  
Drive path redundancy: OK  
Status: Optimal  
Raw capacity: 33.902 GB  
Usable capacity: 33.862 GB  
Current data rate: 2 Gbps  
Product ID: ST336732FC F  
Firmware version: B947  
Serial number: 3ET0V44C00007312H4L9  
Vendor: IBM-ESXS  
Date of manufacture: May 15, 2002  
World-wide name: 20:00:00:04:cf:b9:32:a6  
Mode: Assigned  
Associated array: Array 1

Drive at Enclosure 0, Slot 12  
Drive port: 1, Channel: 4, ID: 72/0x67  
Drive port: 2, Channel: 3, ID: 72/0x67  
Drive path redundancy: OK  
Status: Optimal  
Raw capacity: 33.902 GB  
Usable capacity: 33.862 GB  
Current data rate: 2 Gbps  
Product ID: ST336732FC F  
Firmware version: B947  
Serial number: 3ET0V47B000073126JCP  
Vendor: IBM-ESXS  
Date of manufacture: May 15, 2002  
World-wide name: 20:00:00:04:cf:b9:32:a3  
Mode: Assigned  
Associated array: Array 1

Drive at Enclosure 0, Slot 13  
Drive port: 1, Channel: 3, ID: 88/0x4B  
Drive port: 2, Channel: 4, ID: 88/0x4B  
Drive path redundancy: OK  
Status: Optimal  
Raw capacity: 33.902 GB  
Usable capacity: 33.862 GB  
Current data rate: 2 Gbps  
Product ID: ST336732FC F  
Firmware version: B947  
Serial number: 3ET0TSKS00007313CKMB  
Vendor: IBM-ESXS  
Date of manufacture: May 15, 2002  
World-wide name: 20:00:00:04:cf:b9:37:0d

Mode: Assigned  
Associated array: Array 1

Drive at Enclosure 0, Slot 14  
Drive port: 1, Channel: 4, ID: 104/0x2E  
Drive port: 2, Channel: 3, ID: 104/0x2E  
Drive path redundancy: OK  
Status: Optimal  
Raw capacity: 33.902 GB  
Usable capacity: 33.862 GB  
Current data rate: 2 Gbps  
Product ID: ST336732FC F  
Firmware version: B947  
Serial number: 3ET0TSJ400007312H4FW  
Vendor: IBM-ESXS  
Date of manufacture: May 15, 2002  
World-wide name: 20:00:00:04:cf:b9:3a:69  
Mode: Assigned  
Associated array: Array 1

Drive at Enclosure 1, Slot 1  
Drive port: 1, Channel: 3, ID: 8/0xD9  
Drive port: 2, Channel: 4, ID: 8/0xD9  
Drive path redundancy: OK  
Status: Optimal  
Raw capacity: 33.902 GB  
Usable capacity: 33.862 GB  
Current data rate: 2 Gbps  
Product ID: ST336732FC F  
Firmware version: B947  
Serial number: 3ET0V44600007312H4GF  
Vendor: IBM-ESXS  
Date of manufacture: May 15, 2002  
World-wide name: 20:00:00:04:cf:b9:35:5f  
Mode: Assigned  
Associated array: Array 1

Drive at Enclosure 1, Slot 2  
Drive port: 1, Channel: 4, ID: 9/0xD6  
Drive port: 2, Channel: 3, ID: 9/0xD6  
Drive path redundancy: OK  
Status: Optimal  
Raw capacity: 33.902 GB  
Usable capacity: 33.862 GB  
Current data rate: 2 Gbps  
Product ID: ST336732FC F  
Firmware version: B947  
Serial number: 3ET0V4GK00007312YJFN  
Vendor: IBM-ESXS  
Date of manufacture: May 15, 2002  
World-wide name: 20:00:00:04:cf:b9:35:40  
Mode: Assigned  
Associated array: Array 1

Drive at Enclosure 1, Slot 3  
Drive port: 1, Channel: 3, ID: 10/0xD5  
Drive port: 2, Channel: 4, ID: 10/0xD5  
Drive path redundancy: OK  
Status: Optimal  
Raw capacity: 33.902 GB  
Usable capacity: 33.862 GB  
Current data rate: 2 Gbps  
Product ID: ST336732FC F  
Firmware version: B947  
Serial number: 3ET0V50H00007313BVUZ  
Vendor: IBM-ESXS  
Date of manufacture: May 15, 2002  
World-wide name: 20:00:00:04:cf:b9:2f:cb



Mode: Assigned  
Associated array: Array 1

Drive at Enclosure 1, Slot 4  
Drive port: 1, Channel: 4, ID: 11/0xD4  
Drive port: 2, Channel: 3, ID: 11/0xD4  
Drive path redundancy: OK  
Status: Optimal  
Raw capacity: 33.902 GB  
Usable capacity: 33.862 GB  
Current data rate: 2 Gbps  
Product ID: ST336732FC F  
Firmware version: B947  
Serial number: 3ET0V7DJ00007305FLRS  
Vendor: IBM-ESXS  
Date of manufacture: May 15, 2002  
World-wide name: 20:00:00:04:cf:b9:38:cb  
Mode: Assigned  
Associated array: Array 1

Drive at Enclosure 1, Slot 5  
Drive port: 1, Channel: 3, ID: 12/0xD3  
Drive port: 2, Channel: 4, ID: 12/0xD3  
Drive path redundancy: OK  
Status: Optimal  
Raw capacity: 33.902 GB  
Usable capacity: 33.862 GB  
Current data rate: 2 Gbps  
Product ID: ST336732FC F  
Firmware version: B947  
Serial number: 3ET0Z0F2000073214CGK  
Vendor: IBM-ESXS  
Date of manufacture: May 15, 2002  
World-wide name: 20:00:00:04:cf:c0:94:1a  
Mode: Assigned  
Associated array: Array 1

Drive at Enclosure 1, Slot 6  
Drive port: 1, Channel: 4, ID: 13/0xD2  
Drive port: 2, Channel: 3, ID: 13/0xD2  
Drive path redundancy: OK  
Status: Optimal  
Raw capacity: 33.902 GB  
Usable capacity: 33.862 GB  
Current data rate: 2 Gbps  
Product ID: ST336732FC F  
Firmware version: B947  
Serial number: 3ET0TT4100007313CLL4  
Vendor: IBM-ESXS  
Date of manufacture: May 15, 2002  
World-wide name: 20:00:00:04:cf:b9:37:26  
Mode: Assigned  
Associated array: Array 1

Drive at Enclosure 1, Slot 7  
Drive port: 1, Channel: 3, ID: 14/0xD1  
Drive port: 2, Channel: 4, ID: 14/0xD1  
Drive path redundancy: OK  
Status: Optimal  
Raw capacity: 33.902 GB  
Usable capacity: 33.862 GB  
Current data rate: 2 Gbps  
Product ID: ST336732FC F  
Firmware version: B947  
Serial number: 3ET0YZMF000073212G32  
Vendor: IBM-ESXS  
Date of manufacture: May 15, 2002  
World-wide name: 20:00:00:04:cf:c0:97:4b

Mode: Assigned  
Associated array: Array 1

Drive at Enclosure 1, Slot 8  
Drive port: 1, Channel: 4, ID: 15/0xCE  
Drive port: 2, Channel: 3, ID: 15/0xCE  
Drive path redundancy: OK  
Status: Optimal  
Raw capacity: 33.902 GB  
Usable capacity: 33.862 GB  
Current data rate: 2 Gbps  
Product ID: ST336732FC F  
Firmware version: B947  
Serial number: 3ET0YTYW000073212BGY  
Vendor: IBM-ESXS  
Date of manufacture: May 15, 2002  
World-wide name: 20:00:00:04:cf:c0:82:a3  
Mode: Assigned  
Associated array: Array 1

Drive at Enclosure 1, Slot 9  
Drive port: 1, Channel: 3, ID: 81/0x54  
Drive port: 2, Channel: 4, ID: 81/0x54  
Drive path redundancy: OK  
Status: Optimal  
Raw capacity: 33.902 GB  
Usable capacity: 33.862 GB  
Current data rate: 2 Gbps  
Product ID: ST336732FC F  
Firmware version: B947  
Serial number: 3ET0Z0N8000073215GGM  
Vendor: IBM-ESXS  
Date of manufacture: May 15, 2002  
World-wide name: 20:00:00:04:cf:c0:92:ef  
Mode: Assigned  
Associated array: Array 1

Drive at Enclosure 1, Slot 10  
Drive port: 1, Channel: 4, ID: 97/0x39  
Drive port: 2, Channel: 3, ID: 97/0x39  
Drive path redundancy: OK  
Status: Optimal  
Raw capacity: 33.902 GB  
Usable capacity: 33.862 GB  
Current data rate: 2 Gbps  
Product ID: ST336732FC F  
Firmware version: B947  
Serial number: 3ET0Z0GY000073215GQT  
Vendor: IBM-ESXS  
Date of manufacture: May 15, 2002  
World-wide name: 20:00:00:04:cf:c0:92:c3  
Mode: Assigned  
Associated array: Array 1

Drive at Enclosure 1, Slot 11  
Drive port: 1, Channel: 3, ID: 65/0x71  
Drive port: 2, Channel: 4, ID: 65/0x71  
Drive path redundancy: OK  
Status: Optimal  
Raw capacity: 33.902 GB  
Usable capacity: 33.862 GB  
Current data rate: 2 Gbps  
Product ID: ST336732FC F  
Firmware version: B947  
Serial number: 3ET0YYXL000073212FME  
Vendor: IBM-ESXS  
Date of manufacture: May 15, 2002  
World-wide name: 20:00:00:04:cf:c0:98:3d

Mode: Assigned  
Associated array: Array 1

Drive at Enclosure 1, Slot 12

Drive port: 1, Channel: 4, ID: 73/0x66  
Drive port: 2, Channel: 3, ID: 73/0x66  
Drive path redundancy: OK  
Status: Optimal  
Raw capacity: 33.902 GB  
Usable capacity: 33.862 GB  
Current data rate: 2 Gbps  
Product ID: ST336732FC F  
Firmware version: B947  
Serial number: 3ET0YRQW000073212BJ0  
Vendor: IBM-ESXS  
Date of manufacture: May 15, 2002  
World-wide name: 20:00:00:04:cf:c0:97:49  
Mode: Assigned  
Associated array: Array 1

Drive at Enclosure 1, Slot 13

Drive port: 1, Channel: 3, ID: 89/0x4A  
Drive port: 2, Channel: 4, ID: 89/0x4A  
Drive path redundancy: OK  
Status: Optimal  
Raw capacity: 33.902 GB  
Usable capacity: 33.862 GB  
Current data rate: 2 Gbps  
Product ID: ST336732FC F  
Firmware version: B947  
Serial number: 3ET0Z0KQ000073215GQM  
Vendor: IBM-ESXS  
Date of manufacture: May 15, 2002  
World-wide name: 20:00:00:04:cf:c0:92:b1  
Mode: Assigned  
Associated array: Array 1

Drive at Enclosure 1, Slot 14

Drive port: 1, Channel: 4, ID: 105/0x2D  
Drive port: 2, Channel: 3, ID: 105/0x2D  
Drive path redundancy: OK  
Status: Optimal  
Raw capacity: 33.902 GB  
Usable capacity: 33.862 GB  
Current data rate: 2 Gbps  
Product ID: ST336732FC F  
Firmware version: B947  
Serial number: 3ET0YRH5000073214C1T  
Vendor: IBM-ESXS  
Date of manufacture: May 15, 2002  
World-wide name: 20:00:00:04:cf:c0:92:ba  
Mode: Assigned  
Associated array: Array 1

ENCLOSURES-----

Controller Enclosure Overall Component Information

Minihub data rate mismatch: No  
Fan canister: Optimal  
Fan canister: Optimal  
Battery status: Optimal  
Age: 403 day(s)  
Days until replacement: 766 day(s)  
Power supply canister  
Status: Optimal  
Power supply canister  
Status: Optimal  
Temperature: Optimal  
Host mini-hub canister

Status: Optimal  
Location: Controller B - Port 1  
Serial number: SN 1T23664053  
Part number: PN 19K1270  
Vendor: VN IBM  
Date of manufacture: September 1, 2002  
SFP

Status: Optimal  
Location: In connection  
Supported data rate(s): 1 Gbps, 2 Gbps  
Link length: Intermediate  
Connector: LC  
Transmitter type: Shortwave Laser w/o OFC  
Transmission media: TM Multi-mode 50m(M5) TM Multi-mode

62.5m(M6)

IEEE company ID: 08 00 5a  
Revision: AA10  
Part number: IBM42P21SNY  
Serial number: 53P147600FSN2  
Vendor: IBM  
Date of manufacture: October 17, 2002

Host mini-hub canister

Status: Optimal  
Location: Controller B - Port 2  
Serial number: SN 1T20269781  
Part number: PN 19K1270  
Vendor: VN IBM  
Date of manufacture: January 1, 2002

Host mini-hub canister

Status: Optimal  
Location: Controller A - Port 1  
Serial number: SN 1T23664666  
Part number: PN 19K1270  
Vendor: VN IBM  
Date of manufacture: September 1, 2002  
SFP

Status: Optimal  
Location: In connection  
Supported data rate(s): 1 Gbps, 2 Gbps  
Link length: Intermediate  
Connector: LC  
Transmitter type: Shortwave Laser w/o OFC  
Transmission media: TM Multi-mode 50m(M5) TM Multi-mode

62.5m(M6)

IEEE company ID: 08 00 5a  
Revision: AA10  
Part number: IBM42P21SNY  
Serial number: 53P147600EUDQ  
Vendor: IBM  
Date of manufacture: October 16, 2002

Host mini-hub canister

Status: Optimal  
Location: Controller A - Port 2  
Serial number: SN 1T20270011  
Part number: PN 19K1270  
Vendor: VN IBM  
Date of manufacture: January 1, 2002

Drive mini-hub canister

Status: Optimal  
Location: Channel 1  
Serial number: SN 1T23664050  
Part number: PN 19K1270  
Vendor: VN IBM  
Date of manufacture: September 1, 2002

Drive mini-hub canister

Status: Optimal  
Location: Channel 2  
Serial number: SN 1T23663887

Part number: PN 19K1270  
Vendor: VN IBM  
Date of manufacture: September 1, 2002  
Drive mini-hub canister  
Status: Optimal  
Location: Channel 3  
Serial number: SN 1T14253107  
Part number: PN 19K1270  
Vendor: VN IBM  
Date of manufacture: November 1, 2001  
SFP  
Status: Optimal  
Location: In connection  
Supported data rate(s): 1 Gbps, 2 Gbps  
Link length: Intermediate  
Connector: LC  
Transmitter type: Shortwave Laser w/o OFC  
Transmission media: TM Multi-mode 50m(M5) TM Multi-mode  
62.5m(M6)  
IEEE company ID: 08 00 5a  
Revision: AA10  
Part number: IBM42P21SNY  
Serial number: 53P147600FPDN  
Vendor: IBM  
Date of manufacture: October 16, 2002  
Drive mini-hub canister  
Status: Optimal  
Location: Channel 4  
Serial number: SN 1T14252898  
Part number: PN 19K1270  
Vendor: VN IBM  
Date of manufacture: November 1, 2001  
SFP  
Status: Optimal  
Location: Out connection  
Supported data rate(s): 1 Gbps, 2 Gbps  
Link length: Intermediate  
Connector: LC  
Transmitter type: Shortwave Laser w/o OFC  
Transmission media: TM Multi-mode 50m(M5) TM Multi-mode  
62.5m(M6)  
IEEE company ID: 08 00 5a  
Revision: AA10  
Part number: IBM42P21SNY  
Serial number: 53P147600ELE8  
Vendor: IBM  
Date of manufacture: October 16, 2002  
Drive Enclosure 0 Overall Component Information  
Part number: PN 19K1288  
Serial number: SN 1T1321417572  
Vendor: VN IBM  
Date of manufacture: September 1, 2001  
Enclosure path redundancy: OK  
Fan canister: Optimal  
Fan canister: Optimal  
Power supply canister  
Status: Optimal  
Part number: PN 19K1289  
Serial number: SN A6842C000P0A  
Vendor: VN IBM  
Date of manufacture: July 1, 2001  
Power supply canister  
Status: Optimal  
Part number: PN 19K1289  
Serial number: SN A6842C00160A  
Vendor: VN IBM  
Date of manufacture: July 1, 2001

Temperature: Optimal  
Temperature: Optimal  
ESM card  
Status: Optimal  
Firmware version: 9325  
Maximum data rate: 2 Gbps  
Current data rate: 2 Gbps  
Location: A (left canister)  
Card communication: OK  
Product ID: EXP700  
Part number: PN 19K1287  
Serial number: SN 1T20789468  
Vendor: IBM  
Date of manufacture: March 1, 2002  
SFP  
Status: Optimal  
Location: In connection  
Supported data rate(s): 1 Gbps, 2 Gbps  
Link length: Intermediate  
Connector: LC  
Transmitter type: Shortwave Laser w/o OFC  
Transmission media: TM Multi-mode 50m(M5) TM Multi-mode  
62.5m(M6)  
IEEE company ID: 08 00 5a  
Revision: AA10  
Part number: IBM42P21SNY  
Serial number: 53P14760069MB  
Vendor: IBM  
Date of manufacture: April 13, 2002  
SFP  
Status: Optimal  
Location: Out connection  
Supported data rate(s): 1 Gbps, 2 Gbps  
Link length: Intermediate  
Connector: LC  
Transmitter type: Shortwave Laser w/o OFC  
Transmission media: TM Multi-mode 50m(M5) TM Multi-mode  
62.5m(M6)  
IEEE company ID: 08 00 5a  
Revision: AA10  
Part number: IBM42P21SNY  
Serial number: 53P1476006AAF  
Vendor: IBM  
Date of manufacture: April 14, 2002  
ESM card  
Status: Optimal  
Firmware version: 9325  
Maximum data rate: 2 Gbps  
Current data rate: 2 Gbps  
Location: B (right canister)  
Card communication: OK  
Product ID: EXP700  
Part number: PN 19K1287  
Serial number: SN 1T20582506  
Vendor: IBM  
Date of manufacture: March 1, 2002  
SFP  
Status: Optimal  
Location: Out connection  
Supported data rate(s): 1 Gbps, 2 Gbps  
Link length: Intermediate  
Connector: LC  
Transmitter type: Shortwave Laser w/o OFC  
Transmission media: TM Multi-mode 50m(M5) TM Multi-mode  
62.5m(M6)  
IEEE company ID: 08 00 5a  
Revision: AA10  
Part number: IBM42P21SNY

Serial number: 53P14760069VY  
Vendor: IBM  
Date of manufacture: April 13, 2002

Drive Enclosure 1 Overall Component Information

Part number: PN 19K1288  
Serial number: SN 1T1321417647  
Vendor: VN IBM  
Date of manufacture: September 1, 2001  
Enclosure path redundancy: OK  
Fan canister: Optimal  
Fan canister: Optimal  
Power supply canister  
Status: Optimal  
Part number: PN 19K1289  
Serial number: SN A6842C005P0A  
Vendor: VN IBM  
Date of manufacture: July 1, 2001

Power supply canister  
Status: Optimal  
Part number: PN 19K1289  
Serial number: SN A6842C005E0A  
Vendor: VN IBM  
Date of manufacture: July 1, 2001

Temperature: Optimal  
Temperature: Optimal

ESM card  
Status: Optimal  
Firmware version: 9325  
Maximum data rate: 2 Gbps  
Current data rate: 2 Gbps  
Location: A (left canister)  
Card communication: OK  
Product ID: EXP700  
Part number: PN 19K1287  
Serial number: SN 1T20789273  
Vendor: IBM  
Date of manufacture: March 1, 2002  
SFP

Status: Optimal  
Location: In connection  
Supported data rate(s): 1 Gbps, 2 Gbps  
Link length: Intermediate  
Connector: LC  
Transmitter type: Shortwave Laser w/o OFC  
Transmission media: TM Multi-mode 50m(M5) TM Multi-mode

62.5m(M6)  
IEEE company ID: 08 00 5a  
Revision: AA10  
Part number: IBM42P21SNY  
Serial number: 53P14760069WN  
Vendor: IBM  
Date of manufacture: April 13, 2002

ESM card  
Status: Optimal  
Firmware version: 9325  
Maximum data rate: 2 Gbps  
Current data rate: 2 Gbps  
Location: B (right canister)  
Card communication: OK  
Product ID: EXP700  
Part number: PN 19K1287  
Serial number: SN 1T20789700  
Vendor: IBM  
Date of manufacture: March 1, 2002  
SFP  
Status: Optimal  
Location: In connection

Supported data rate(s): 1 Gbps, 2 Gbps  
Link length: Intermediate  
Connector: LC  
Transmitter type: Shortwave Laser w/o OFC  
Transmission media: TM Multi-mode 50m(M5) TM Multi-mode

62.5m(M6)  
IEEE company ID: 08 00 5a  
Revision: AA10  
Part number: IBM42P21SNY  
Serial number: 53P14760069VM  
Vendor: IBM  
Date of manufacture: April 13, 2002  
SFP

Status: Optimal  
Location: Out connection  
Supported data rate(s): 1 Gbps, 2 Gbps  
Link length: Intermediate  
Connector: LC  
Transmitter type: Shortwave Laser w/o OFC  
Transmission media: TM Multi-mode 50m(M5) TM Multi-mode

62.5m(M6)  
IEEE company ID: 08 00 5a  
Revision: AA10  
Part number: IBM42P21SNY  
Serial number: 53P14760069PD  
Vendor: IBM  
Date of manufacture: April 13, 2002

MAPPINGS STORAGE PARTITIONING - DISABLED)-----

Logical Drive-To-LUN Mappings  
Logical Drive flute1log, LUN 0, Default Group

Topology  
[Undefined Host Ports]  
21:00:00:e0:8b:09:9d:6d

[Default Group]

NVSRAM Host Type Internal Definitions  
Index 0  
Name: Windows NT Non-Clustered (SP5 or higher)  
ADT status: Disabled  
Index 1  
Name: Windows NT Clustered (SP5 or higher)  
ADT status: Disabled  
Index 2 (DEFAULT)  
Name: Windows 2000/Server 2003 Non-Clustered  
ADT status: Disabled  
Index 3  
Name: Windows 2000/Server 2003 Clustered  
ADT status: Disabled  
Index 4  
Name: NetWare-IBMSAN  
ADT status: Disabled  
Index 5  
Name: Linux  
ADT status: Disabled  
Index 6  
Name: AIX  
ADT status: Disabled  
Index 7  
Name: HP-UX  
ADT status: Disabled  
Index 8  
Name: Solaris  
ADT status: Disabled  
Index 9  
Name: PTX

ADT status: Disabled  
Index 10  
Name: Irix  
ADT status: Disabled  
Index 11  
Name: Netware Failover  
ADT status: Disabled  
Index 12  
Name: IBM TS SAN VCE  
ADT status: Disabled  
Index 13  
Name: LNXCL  
ADT status: Disabled

## TotalStorage FC2-133 Host Bus Adapter 2

PROFILE FOR STORAGE SUBSYSTEM: Flute\_2 (3/18/04 2:00:49 PM)

### SUMMARY-----

Number of controllers: 2  
Number of arrays: 5  
Total number of logical drives (includes an access logical drive): 6 of 2048 used  
Number of standard logical drives: 5  
Number of access logical drives: 1  
Number of drives: 126  
Access logical drive: None mapped  
Default host type: Windows 2000/Server 2003 Non-Clustered (Host type index 2)  
Firmware version: 05.40.06.00  
NVSRAM version: N1742F700R830V03  
NVSRAM configured for batteries?: Yes  
Start cache flushing at (in percentage): 10  
Stop cache flushing at (in percentage): 5  
Cache block size (in KB): 4  
Media scan duration (in days): Disabled  
Failover alert delay (in minutes): 5  
Feature enable identifier: 3037373535003038303935003F379E17

### CONTROLLERS-----

Number of controllers: 2

#### Controller in Slot A

Appware version: 05.40.06.00  
Bootware version: 05.40.02.00  
Status: Optimal  
Mode: Active  
Board ID: 4884  
Product ID: 1742  
Product revision: 0520  
Serial number: 1T14251542  
Vendor: IBM  
Date of manufacture: November 21, 2001  
Cache/processor size (MB): 1024/128  
Date/Time: Thu Mar 18 14:00:16 EST 2004  
Associated Logical Drives (\* = Preferred Owner):  
flute2\_extra\*, Flute2\_lun1\*, Flute2\_lun2\*  
Drive interface: Fibre  
Channel: 1  
Current ID: 125/0x1  
Maximum data rate: 2 Gbps  
Current data rate: 2 Gbps  
Data rate control: Switch  
Link status: Up  
Drive interface: Fibre  
Channel: 2  
Current ID: 125/0x1

Maximum data rate: 2 Gbps  
Current data rate: 2 Gbps  
Data rate control: Switch  
Link status: Up  
Drive interface: Fibre  
Channel: 3  
Current ID: 125/0x1  
Maximum data rate: 2 Gbps  
Current data rate: 2 Gbps  
Data rate control: Switch  
Link status: Up  
Drive interface: Fibre  
Channel: 4  
Current ID: 125/0x1  
Maximum data rate: 2 Gbps  
Current data rate: 2 Gbps  
Data rate control: Switch  
Link status: Up  
Host interface: Fibre  
Port: 1  
Current ID: Not applicable/0xFFFFFFFF  
Preferred ID: 126/0x0  
NL-Port ID: 0x011100  
Maximum data rate: 2 Gbps  
Current data rate: 2 Gbps  
Data rate control: Switch  
Link status: Up  
Topology: Fabric Attach  
World-wide port name: 20:02:00:a0:b8:0c:c0:18  
World-wide node name: 20:02:00:a0:b8:0c:c0:17  
Part type: HPFC-5200 revision 10  
Host interface: Fibre  
Port: 2  
Current ID: 1/0xE8  
Preferred ID: 1/0xE8  
NL-Port ID: 0x0000E8  
Maximum data rate: 2 Gbps  
Current data rate: 2 Gbps  
Data rate control: Switch  
Link status: Up  
Topology: Arbitrated Loop - Private  
World-wide port name: 20:02:00:a0:b8:0c:c0:19  
World-wide node name: 20:02:00:a0:b8:0c:c0:17  
Part type: HPFC-5200 revision 10  
Ethernet port: 0  
MAC address: 00:a0:b8:0c:c0:17  
Host name: target  
Network configuration: Static  
IP address: 192.168.128.105  
Subnet mask: 255.255.255.0  
Gateway: 0.0.0.0  
Remote login: Disabled

#### Controller in Slot B

Appware version: 05.40.06.00  
Bootware version: 05.40.02.00  
Status: Optimal  
Mode: Active  
Board ID: 4884  
Product ID: 1742  
Product revision: 0520  
Serial number: 1T14758322  
Vendor: IBM  
Date of manufacture: December 3, 2001  
Cache/processor size (MB): 1024/128  
Date/Time: Thu Mar 18 14:00:17 EST 2004  
Associated Logical Drives (\* = Preferred Owner):  
flute2\_lun3\*, Flute2\_lun4\*

Drive interface: Fibre  
 Channel: 1  
 Current ID: 124/0x2  
 Maximum data rate: 2 Gbps  
 Current data rate: 2 Gbps  
 Data rate control: Switch  
 Link status: Up  
 Drive interface: Fibre  
 Channel: 2  
 Current ID: 124/0x2  
 Maximum data rate: 2 Gbps  
 Current data rate: 2 Gbps  
 Data rate control: Switch  
 Link status: Up  
 Drive interface: Fibre  
 Channel: 3  
 Current ID: 124/0x2  
 Maximum data rate: 2 Gbps  
 Current data rate: 2 Gbps  
 Data rate control: Switch  
 Link status: Up  
 Drive interface: Fibre  
 Channel: 4  
 Current ID: 124/0x2  
 Maximum data rate: 2 Gbps  
 Current data rate: 2 Gbps  
 Data rate control: Switch  
 Link status: Up  
 Host interface: Fibre  
 Port: 1  
 Current ID: Not applicable/0xFFFFFFFF  
 Preferred ID: 126/0x0  
 NL-Port ID: 0x011200  
 Maximum data rate: 2 Gbps  
 Current data rate: 2 Gbps  
 Data rate control: Switch  
 Link status: Up  
 Topology: Fabric Attach  
 World-wide port name: 20:03:00:a0:b8:0c:c0:18  
 World-wide node name: 20:03:00:a0:b8:0c:c0:17  
 Part type: HPFC-5200 revision 10  
 Host interface: Fibre  
 Port: 2  
 Current ID: 3/0xE2  
 Preferred ID: 3/0xE2  
 NL-Port ID: 0x0000E2  
 Maximum data rate: 2 Gbps  
 Current data rate: 2 Gbps  
 Data rate control: Switch  
 Link status: Up  
 Topology: Arbitrated Loop - Private  
 World-wide port name: 20:03:00:a0:b8:0c:c0:19  
 World-wide node name: 20:03:00:a0:b8:0c:c0:17  
 Part type: HPFC-5200 revision 10  
 Ethernet port: 0  
 MAC address: 00:a0:b8:0c:c2:48  
 Host name: target  
 Network configuration: Static  
 IP address: 192.168.128.106  
 Subnet mask: 255.255.255.0  
 Gateway: 0.0.0.0  
 Remote login: Disabled

ARRAYS-----

Number of arrays: 5

Array 1 (RAID 0)  
 Status: Online

Current owner: Controller in slot A  
 Logical Drive Flute2\_lun1 (948.145 GB)  
 Associated drives (in piece order):  
 Drive at Enclosure 20, Slot 1  
 Drive at Enclosure 20, Slot 2  
 Drive at Enclosure 20, Slot 3  
 Drive at Enclosure 20, Slot 4  
 Drive at Enclosure 20, Slot 5  
 Drive at Enclosure 20, Slot 6  
 Drive at Enclosure 20, Slot 7  
 Drive at Enclosure 20, Slot 8  
 Drive at Enclosure 20, Slot 9  
 Drive at Enclosure 20, Slot 10  
 Drive at Enclosure 20, Slot 11  
 Drive at Enclosure 20, Slot 12  
 Drive at Enclosure 20, Slot 13  
 Drive at Enclosure 20, Slot 14  
 Drive at Enclosure 21, Slot 1  
 Drive at Enclosure 21, Slot 2  
 Drive at Enclosure 21, Slot 3  
 Drive at Enclosure 21, Slot 4  
 Drive at Enclosure 21, Slot 5  
 Drive at Enclosure 21, Slot 6  
 Drive at Enclosure 21, Slot 7  
 Drive at Enclosure 21, Slot 8  
 Drive at Enclosure 21, Slot 9  
 Drive at Enclosure 21, Slot 10  
 Drive at Enclosure 21, Slot 11  
 Drive at Enclosure 21, Slot 12  
 Drive at Enclosure 21, Slot 13  
 Drive at Enclosure 21, Slot 14

Array 2 (RAID 0)

Status: Online  
 Current owner: Controller in slot A  
 Logical Drive Flute2\_lun2 (948.145 GB)  
 Associated drives (in piece order):  
 Drive at Enclosure 22, Slot 1  
 Drive at Enclosure 22, Slot 2  
 Drive at Enclosure 22, Slot 3  
 Drive at Enclosure 22, Slot 4  
 Drive at Enclosure 22, Slot 5  
 Drive at Enclosure 22, Slot 6  
 Drive at Enclosure 22, Slot 7  
 Drive at Enclosure 22, Slot 8  
 Drive at Enclosure 22, Slot 9  
 Drive at Enclosure 22, Slot 10  
 Drive at Enclosure 22, Slot 11  
 Drive at Enclosure 22, Slot 12  
 Drive at Enclosure 22, Slot 13  
 Drive at Enclosure 22, Slot 14  
 Drive at Enclosure 23, Slot 1  
 Drive at Enclosure 23, Slot 2  
 Drive at Enclosure 23, Slot 3  
 Drive at Enclosure 23, Slot 4  
 Drive at Enclosure 23, Slot 5  
 Drive at Enclosure 23, Slot 6  
 Drive at Enclosure 23, Slot 7  
 Drive at Enclosure 23, Slot 8  
 Drive at Enclosure 23, Slot 9  
 Drive at Enclosure 23, Slot 10  
 Drive at Enclosure 23, Slot 11  
 Drive at Enclosure 23, Slot 12  
 Drive at Enclosure 23, Slot 13  
 Drive at Enclosure 23, Slot 14

Array 3 (RAID 0)

Status: Online  
 Current owner: Controller in slot B  
 Logical Drive flute2\_lun3 (948.145 GB)

Associated drives (in piece order):

- Drive at Enclosure 24, Slot 1
- Drive at Enclosure 24, Slot 2
- Drive at Enclosure 24, Slot 3
- Drive at Enclosure 24, Slot 4
- Drive at Enclosure 24, Slot 5
- Drive at Enclosure 24, Slot 6
- Drive at Enclosure 24, Slot 7
- Drive at Enclosure 24, Slot 8
- Drive at Enclosure 24, Slot 9
- Drive at Enclosure 24, Slot 10
- Drive at Enclosure 24, Slot 11
- Drive at Enclosure 24, Slot 12
- Drive at Enclosure 24, Slot 13
- Drive at Enclosure 24, Slot 14
- Drive at Enclosure 25, Slot 1
- Drive at Enclosure 25, Slot 2
- Drive at Enclosure 25, Slot 3
- Drive at Enclosure 25, Slot 4
- Drive at Enclosure 25, Slot 5
- Drive at Enclosure 25, Slot 6
- Drive at Enclosure 25, Slot 7
- Drive at Enclosure 25, Slot 8
- Drive at Enclosure 25, Slot 9
- Drive at Enclosure 25, Slot 10
- Drive at Enclosure 25, Slot 11
- Drive at Enclosure 25, Slot 12
- Drive at Enclosure 25, Slot 13
- Drive at Enclosure 25, Slot 14

Array 4 (RAID 0)

Status: Online

Current owner: Controller in slot B

Logical Drive Flute2\_lun4 (948.145 GB)

Associated drives (in piece order):

- Drive at Enclosure 26, Slot 1
- Drive at Enclosure 26, Slot 2
- Drive at Enclosure 26, Slot 3
- Drive at Enclosure 26, Slot 4
- Drive at Enclosure 26, Slot 5
- Drive at Enclosure 26, Slot 6
- Drive at Enclosure 26, Slot 7
- Drive at Enclosure 26, Slot 8
- Drive at Enclosure 26, Slot 9
- Drive at Enclosure 26, Slot 10
- Drive at Enclosure 26, Slot 11
- Drive at Enclosure 26, Slot 12
- Drive at Enclosure 26, Slot 13
- Drive at Enclosure 26, Slot 14
- Drive at Enclosure 27, Slot 1
- Drive at Enclosure 27, Slot 2
- Drive at Enclosure 27, Slot 3
- Drive at Enclosure 27, Slot 4
- Drive at Enclosure 27, Slot 5
- Drive at Enclosure 27, Slot 6
- Drive at Enclosure 27, Slot 7
- Drive at Enclosure 27, Slot 8
- Drive at Enclosure 27, Slot 9
- Drive at Enclosure 27, Slot 10
- Drive at Enclosure 27, Slot 11
- Drive at Enclosure 27, Slot 12
- Drive at Enclosure 27, Slot 13
- Drive at Enclosure 27, Slot 14

Array 5 (RAID 0)

Status: Online

Current owner: Controller in slot A

Logical Drive flute2\_extra (474.072 GB)

Associated drives (in piece order):

- Drive at Enclosure 12, Slot 1

- Drive at Enclosure 12, Slot 2
- Drive at Enclosure 12, Slot 3
- Drive at Enclosure 12, Slot 4
- Drive at Enclosure 12, Slot 5
- Drive at Enclosure 12, Slot 6
- Drive at Enclosure 12, Slot 7
- Drive at Enclosure 12, Slot 8
- Drive at Enclosure 12, Slot 9
- Drive at Enclosure 12, Slot 10
- Drive at Enclosure 12, Slot 11
- Drive at Enclosure 12, Slot 12
- Drive at Enclosure 12, Slot 13
- Drive at Enclosure 12, Slot 14

STANDARD LOGICAL DRIVES-----

SUMMARY

Number of standard logical drives: 5

See other Logical Drives sub-tabs for premium feature information.

NAME	STATUS	CAPACITY	RAID LEVEL	ARRAY
flute2_extra	Optimal	474.072 GB	0	5
Flute2_lun1	Optimal	948.145 GB	0	1
Flute2_lun2	Optimal	948.145 GB	0	2
flute2_lun3	Optimal	948.145 GB	0	3
Flute2_lun4	Optimal	948.145 GB	0	4

DETAILS

Logical Drive name: flute2\_extra

Logical Drive ID: 60:0a:0b:80:00:0c:c0:17:00:00:00:05:40:11:29:14

Subsystem ID (SSID): 4

Status: Optimal

Preferred owner: Controller in slot A

Current owner: Controller in slot A

Capacity: 474.072 GB

RAID level: 0

Segment size: 64 KB

Modification priority: High

Associated array: 5

Read cache: Enabled

Write cache: Disabled

Write cache without batteries: Disabled

Write cache with mirroring: Disabled

Flush write cache after (in seconds): 10.00

Cache read ahead multiplier: 1

Enable background media scan: Enabled

Media scan with redundancy check: Disabled

Logical Drive name: Flute2\_lun1

Logical Drive ID: 60:0a:0b:80:00:0c:c0:17:00:00:00:01:40:0c:00:d4

Subsystem ID (SSID): 0

Status: Optimal

Preferred owner: Controller in slot A

Current owner: Controller in slot A

Capacity: 948.145 GB

RAID level: 0

Segment size: 64 KB

Modification priority: High

Associated array: 1

Read cache: Enabled

Write cache: Disabled

Write cache without batteries: Disabled

Write cache with mirroring: Disabled

Flush write cache after (in seconds): 10.00

Cache read ahead multiplier: 1

Enable background media scan: Enabled

Media scan with redundancy check: Disabled

Logical Drive name: Flute2\_lun2  
 Logical Drive ID: 60:0a:0b:80:00:0c:c0:17:00:00:00:03:40:0c:01:0c  
 Subsystem ID (SSID): 1  
 Status: Optimal  
 Preferred owner: Controller in slot A  
 Current owner: Controller in slot A  
 Capacity: 948.145 GB  
 RAID level: 0  
 Segment size: 64 KB  
 Modification priority: High  
 Associated array: 2  
 Read cache: Enabled  
 Write cache: Disabled  
 Write cache without batteries: Disabled  
 Write cache with mirroring: Disabled  
 Flush write cache after (in seconds): 10.00  
 Cache read ahead multiplier: 1  
 Enable background media scan: Enabled  
 Media scan with redundancy check: Disabled

Logical Drive name: flute2\_lun3  
 Logical Drive ID: 60:0a:0b:80:00:0c:c2:48:00:00:00:03:40:0c:02:0f  
 Subsystem ID (SSID): 2  
 Status: Optimal  
 Preferred owner: Controller in slot B  
 Current owner: Controller in slot B  
 Capacity: 948.145 GB  
 RAID level: 0  
 Segment size: 64 KB  
 Modification priority: High  
 Associated array: 3  
 Read cache: Enabled  
 Write cache: Disabled  
 Write cache without batteries: Disabled  
 Write cache with mirroring: Disabled  
 Flush write cache after (in seconds): 10.00  
 Cache read ahead multiplier: 1  
 Enable background media scan: Enabled  
 Media scan with redundancy check: Disabled

Logical Drive name: Flute2\_lun4  
 Logical Drive ID: 60:0a:0b:80:00:0c:c2:48:00:00:00:01:3f:85:8b:fb  
 Subsystem ID (SSID): 3  
 Status: Optimal  
 Preferred owner: Controller in slot B  
 Current owner: Controller in slot B  
 Capacity: 948.145 GB  
 RAID level: 0  
 Segment size: 64 KB  
 Modification priority: High  
 Associated array: 4  
 Read cache: Enabled  
 Write cache: Disabled  
 Write cache without batteries: Disabled  
 Write cache with mirroring: Disabled  
 Flush write cache after (in seconds): 10.00  
 Cache read ahead multiplier: 1  
 Enable background media scan: Enabled  
 Media scan with redundancy check: Disabled

MISSING LOGICAL DRIVES-----  
 Number of missing logical drives: 0  
 See other Logical Drives sub-tabs for premium feature information

DRIVES-----

SUMMARY

Number of drives: 126

BASIC:

TRAY, SLOT	STATUS	CAPACITY	CURRENT DATA RATE
PRODUCT ID	FIRMWARE	VERSION	
12, 1	Optimal	33.902 GB 2 Gbps	ST336753FC F B953
12, 2	Optimal	33.902 GB 2 Gbps	ST336753FC F B953
12, 3	Optimal	33.902 GB 2 Gbps	ST336753FC F B953
12, 4	Optimal	33.902 GB 2 Gbps	ST336753FC F B953
12, 5	Optimal	33.902 GB 2 Gbps	ST336753FC F B953
12, 6	Optimal	33.902 GB 2 Gbps	ST336753FC F B953
12, 7	Optimal	33.902 GB 2 Gbps	ST336753FC F B953
12, 8	Optimal	33.902 GB 2 Gbps	ST336753FC F B953
12, 9	Optimal	33.902 GB 2 Gbps	ST336753FC F B953
12, 10	Optimal	33.902 GB 2 Gbps	ST336753FC F B953
12, 11	Optimal	33.902 GB 2 Gbps	ST336753FC F B953
12, 12	Optimal	33.902 GB 2 Gbps	ST336753FC F B953
12, 13	Optimal	33.902 GB 2 Gbps	ST336753FC F B953
12, 14	Optimal	33.902 GB 2 Gbps	ST336753FC F B953
20, 1	Optimal	33.902 GB 2 Gbps	ST336753FC F B953
20, 2	Optimal	33.902 GB 2 Gbps	ST336753FC F B953
20, 3	Optimal	33.902 GB 2 Gbps	ST336753FC F B953
20, 4	Optimal	33.902 GB 2 Gbps	ST336753FC F B953
20, 5	Optimal	33.902 GB 2 Gbps	ST336753FC F B953
20, 6	Optimal	33.902 GB 2 Gbps	ST336753FC F B953
20, 7	Optimal	33.902 GB 2 Gbps	ST336753FC F B953
20, 8	Optimal	33.902 GB 2 Gbps	ST336753FC F B953
20, 9	Optimal	33.902 GB 2 Gbps	ST336753FC F B953
20, 10	Optimal	33.902 GB 2 Gbps	ST336753FC F B953
20, 11	Optimal	33.902 GB 2 Gbps	ST336753FC F B953
20, 12	Optimal	33.902 GB 2 Gbps	ST336753FC F B953
20, 13	Optimal	33.902 GB 2 Gbps	ST336753FC F B953
20, 14	Optimal	33.902 GB 2 Gbps	ST336753FC F B953
21, 1	Optimal	33.902 GB 2 Gbps	ST336753FC F B953
21, 2	Optimal	33.902 GB 2 Gbps	ST336753FC F B953
21, 3	Optimal	33.902 GB 2 Gbps	ST336753FC F B953





26, 2	Optimal	33.902 GB	2 Gbps	ST336753FC	F	B953	12, 11	3	4
26, 3	Optimal	33.902 GB	2 Gbps	ST336753FC	F	B953	12, 12	4	3
26, 4	Optimal	33.902 GB	2 Gbps	ST336753FC	F	B953	12, 13	3	4
26, 5	Optimal	33.902 GB	2 Gbps	ST336753FC	F	B953	12, 14	4	3
26, 6	Optimal	33.902 GB	2 Gbps	ST336753FC	F	B953	20, 1	3	4
26, 7	Optimal	33.902 GB	2 Gbps	ST336753FC	F	B953	20, 2	4	3
26, 8	Optimal	33.902 GB	2 Gbps	ST336753FC	F	B953	20, 3	3	4
26, 9	Optimal	33.902 GB	2 Gbps	ST336753FC	F	B953	20, 4	4	3
26, 10	Optimal	33.902 GB	2 Gbps	ST336753FC	F	B953	20, 5	3	4
26, 11	Optimal	33.902 GB	2 Gbps	ST336753FC	F	B953	20, 6	4	3
26, 12	Optimal	33.902 GB	2 Gbps	ST336753FC	F	B953	20, 7	3	4
26, 13	Optimal	33.902 GB	2 Gbps	ST336753FC	F	B953	20, 8	4	3
26, 14	Optimal	33.902 GB	2 Gbps	ST336753FC	F	B953	20, 9	3	4
27, 1	Optimal	33.902 GB	2 Gbps	ST336753FC	F	B953	20, 10	4	3
27, 2	Optimal	33.902 GB	2 Gbps	ST336753FC	F	B953	20, 11	3	4
27, 3	Optimal	33.902 GB	2 Gbps	ST336753FC	F	B953	20, 12	4	3
27, 4	Optimal	33.902 GB	2 Gbps	ST336753FC	F	B953	20, 13	3	4
27, 5	Optimal	33.902 GB	2 Gbps	ST336753FC	F	B953	20, 14	4	3
27, 6	Optimal	33.902 GB	2 Gbps	ST336753FC	F	B953	21, 1	3	4
27, 7	Optimal	33.902 GB	2 Gbps	ST336753FC	F	B953	21, 2	4	3
27, 8	Optimal	33.902 GB	2 Gbps	ST336753FC	F	B953	21, 3	3	4
27, 9	Optimal	33.902 GB	2 Gbps	ST336753FC	F	B953	21, 4	4	3
27, 10	Optimal	33.902 GB	2 Gbps	ST336753FC	F	B953	21, 5	3	4
27, 11	Optimal	33.902 GB	2 Gbps	ST336753FC	F	B953	21, 6	4	3
27, 12	Optimal	33.902 GB	2 Gbps	ST336753FC	F	B953	21, 7	3	4
27, 13	Optimal	33.902 GB	2 Gbps	ST336753FC	F	B953	21, 8	4	3
27, 14	Optimal	33.902 GB	2 Gbps	ST336753FC	F	B953	21, 9	3	4
							21, 10	4	3
							21, 11	3	4
							21, 12	4	3
							21, 13	3	4
							21, 14	4	3
							22, 1	3	4
							22, 2	4	3
							22, 3	3	4
							22, 4	4	3
							22, 5	3	4
							22, 6	4	3
							22, 7	3	4
							22, 8	4	3
							22, 9	3	4
							22, 10	4	3
							22, 11	3	4
							22, 12	4	3
							22, 13	3	4
							22, 14	4	3
							23, 1	3	4
							23, 2	4	3
							23, 3	3	4
							23, 4	4	3
							23, 5	3	4
							23, 6	4	3
							23, 7	3	4
							23, 8	4	3
							23, 9	3	4
							23, 10	4	3
							23, 11	3	4
							23, 12	4	3
							23, 13	3	4
							23, 14	4	3
							24, 1	1	2
							24, 2	2	1
							24, 3	1	2
							24, 4	2	1
							24, 5	1	2
							24, 6	2	1
							24, 7	1	2
							24, 8	2	1

DRIVE CHANNELS:

TRAY, SLOT CURRENT CHANNEL ALTERNATE CHANNEL

12, 1	3	4
12, 2	4	3
12, 3	3	4
12, 4	4	3
12, 5	3	4
12, 6	4	3
12, 7	3	4
12, 8	4	3
12, 9	3	4
12, 10	4	3

24, 9 1 2  
 24, 10 2 1  
 24, 11 1 2  
 24, 12 2 1  
 24, 13 1 2  
 24, 14 2 1  
 25, 1 1 2  
 25, 2 2 1  
 25, 3 1 2  
 25, 4 2 1  
 25, 5 1 2  
 25, 6 2 1  
 25, 7 1 2  
 25, 8 2 1  
 25, 9 1 2  
 25, 10 2 1  
 25, 11 1 2  
 25, 12 2 1  
 25, 13 1 2  
 25, 14 2 1  
 26, 1 1 2  
 26, 2 2 1  
 26, 3 1 2  
 26, 4 2 1  
 26, 5 1 2  
 26, 6 2 1  
 26, 7 1 2  
 26, 8 2 1  
 26, 9 1 2  
 26, 10 2 1  
 26, 11 1 2  
 26, 12 2 1  
 26, 13 1 2  
 26, 14 2 1  
 27, 1 1 2  
 27, 2 2 1  
 27, 3 1 2  
 27, 4 2 1  
 27, 5 1 2  
 27, 6 2 1  
 27, 7 1 2  
 27, 8 2 1  
 27, 9 1 2  
 27, 10 2 1  
 27, 11 1 2  
 27, 12 2 1  
 27, 13 1 2  
 27, 14 2 1

DETAILS

Drive at Enclosure 12, Slot 1

Drive port: 1, Channel: 3, ID: 32/0xB2  
 Drive port: 2, Channel: 4, ID: 32/0xB2  
 Drive path redundancy: OK  
 Status: Optimal  
 Raw capacity: 33.902 GB  
 Usable capacity: 33.862 GB  
 Current data rate: 2 Gbps  
 Product ID: ST336753FC F  
 Firmware version: B953  
 Serial number: 3HX0K7SN00007339TYB7  
 Vendor: IBM-ESXS  
 Date of manufacture: April 5, 2003  
 World-wide name: 20:00:00:04:cf:f9:eb:e1  
 Mode: Assigned  
 Associated array: Array 5

Drive at Enclosure 12, Slot 2

Drive port: 1, Channel: 4, ID: 33/0xB1  
 Drive port: 2, Channel: 3, ID: 33/0xB1  
 Drive path redundancy: OK  
 Status: Optimal  
 Raw capacity: 33.902 GB  
 Usable capacity: 33.862 GB  
 Current data rate: 2 Gbps  
 Product ID: ST336753FC F  
 Firmware version: B953  
 Serial number: 3HX0K5CD00007340VWJX  
 Vendor: IBM-ESXS  
 Date of manufacture: April 5, 2003  
 World-wide name: 20:00:00:04:cf:f9:ed:50  
 Mode: Assigned  
 Associated array: Array 5

Drive at Enclosure 12, Slot 3

Drive port: 1, Channel: 3, ID: 34/0xAE  
 Drive port: 2, Channel: 4, ID: 34/0xAE  
 Drive path redundancy: OK  
 Status: Optimal  
 Raw capacity: 33.902 GB  
 Usable capacity: 33.862 GB  
 Current data rate: 2 Gbps  
 Product ID: ST336753FC F  
 Firmware version: B953  
 Serial number: 3HX0JZFC000073405AAT  
 Vendor: IBM-ESXS  
 Date of manufacture: April 6, 2003  
 World-wide name: 20:00:00:04:cf:ff:0e:7d  
 Mode: Assigned  
 Associated array: Array 5

Drive at Enclosure 12, Slot 4

Drive port: 1, Channel: 4, ID: 35/0xAD  
 Drive port: 2, Channel: 3, ID: 35/0xAD  
 Drive path redundancy: OK  
 Status: Optimal  
 Raw capacity: 33.902 GB  
 Usable capacity: 33.862 GB  
 Current data rate: 2 Gbps  
 Product ID: ST336753FC F  
 Firmware version: B953  
 Serial number: 3HX0HM08000073409KFS  
 Vendor: IBM-ESXS  
 Date of manufacture: April 5, 2003  
 World-wide name: 20:00:00:04:cf:f9:dc:c1  
 Mode: Assigned  
 Associated array: Array 5

Drive at Enclosure 12, Slot 5

Drive port: 1, Channel: 3, ID: 36/0xAC  
 Drive port: 2, Channel: 4, ID: 36/0xAC  
 Drive path redundancy: OK  
 Status: Optimal  
 Raw capacity: 33.902 GB  
 Usable capacity: 33.862 GB  
 Current data rate: 2 Gbps  
 Product ID: ST336753FC F  
 Firmware version: B953  
 Serial number: 3HX0JZC900007339RG9L  
 Vendor: IBM-ESXS  
 Date of manufacture: April 6, 2003  
 World-wide name: 20:00:00:04:cf:ff:08:3c  
 Mode: Assigned  
 Associated array: Array 5

Drive at Enclosure 12, Slot 6

Drive port: 1, Channel: 4, ID: 37/0xAB  
Drive port: 2, Channel: 3, ID: 37/0xAB  
Drive path redundancy: OK  
Status: Optimal  
Raw capacity: 33.902 GB  
Usable capacity: 33.862 GB  
Current data rate: 2 Gbps  
Product ID: ST336753FC F  
Firmware version: B953  
Serial number: 3HX0HSZS000073405G73  
Vendor: IBM-ESXS  
Date of manufacture: April 5, 2003  
World-wide name: 20:00:00:04:cf:f9:e6:10  
Mode: Assigned  
Associated array: Array 5

Drive at Enclosure 12, Slot 7

Drive port: 1, Channel: 3, ID: 38/0xAA  
Drive port: 2, Channel: 4, ID: 38/0xAA  
Drive path redundancy: OK  
Status: Optimal  
Raw capacity: 33.902 GB  
Usable capacity: 33.862 GB  
Current data rate: 2 Gbps  
Product ID: ST336753FC F  
Firmware version: B953  
Serial number: 3HX0HWNPN000073405A77  
Vendor: IBM-ESXS  
Date of manufacture: April 6, 2003  
World-wide name: 20:00:00:04:cf:ff:0a:18  
Mode: Assigned  
Associated array: Array 5

Drive at Enclosure 12, Slot 8

Drive port: 1, Channel: 4, ID: 39/0xA9  
Drive port: 2, Channel: 3, ID: 39/0xA9  
Drive path redundancy: OK  
Status: Optimal  
Raw capacity: 33.902 GB  
Usable capacity: 33.862 GB  
Current data rate: 2 Gbps  
Product ID: ST336753FC F  
Firmware version: B953  
Serial number: 3HX0JYZ900007331MSFH  
Vendor: IBM-ESXS  
Date of manufacture: April 6, 2003  
World-wide name: 20:00:00:04:cf:ff:08:46  
Mode: Assigned  
Associated array: Array 5

Drive at Enclosure 12, Slot 9

Drive port: 1, Channel: 3, ID: 40/0xA7  
Drive port: 2, Channel: 4, ID: 40/0xA7  
Drive path redundancy: OK  
Status: Optimal  
Raw capacity: 33.902 GB  
Usable capacity: 33.862 GB  
Current data rate: 2 Gbps  
Product ID: ST336753FC F  
Firmware version: B953  
Serial number: 3HX0HT3L000073405FRZ  
Vendor: IBM-ESXS  
Date of manufacture: April 5, 2003  
World-wide name: 20:00:00:04:cf:f9:e5:98  
Mode: Assigned  
Associated array: Array 5

Drive at Enclosure 12, Slot 10

Drive port: 1, Channel: 4, ID: 41/0xA6  
Drive port: 2, Channel: 3, ID: 41/0xA6  
Drive path redundancy: OK  
Status: Optimal  
Raw capacity: 33.902 GB  
Usable capacity: 33.862 GB  
Current data rate: 2 Gbps  
Product ID: ST336753FC F  
Firmware version: B953  
Serial number: 3HX0HN9P00007339LX2H  
Vendor: IBM-ESXS  
Date of manufacture: April 5, 2003  
World-wide name: 20:00:00:04:cf:f9:da:3a  
Mode: Assigned  
Associated array: Array 5

Drive at Enclosure 12, Slot 11

Drive port: 1, Channel: 3, ID: 42/0xA5  
Drive port: 2, Channel: 4, ID: 42/0xA5  
Drive path redundancy: OK  
Status: Optimal  
Raw capacity: 33.902 GB  
Usable capacity: 33.862 GB  
Current data rate: 2 Gbps  
Product ID: ST336753FC F  
Firmware version: B953  
Serial number: 3HX0HT0Z000073405G78  
Vendor: IBM-ESXS  
Date of manufacture: April 5, 2003  
World-wide name: 20:00:00:04:cf:f9:e6:2f  
Mode: Assigned  
Associated array: Array 5

Drive at Enclosure 12, Slot 12

Drive port: 1, Channel: 4, ID: 43/0xA3  
Drive port: 2, Channel: 3, ID: 43/0xA3  
Drive path redundancy: OK  
Status: Optimal  
Raw capacity: 33.902 GB  
Usable capacity: 33.862 GB  
Current data rate: 2 Gbps  
Product ID: ST336753FC F  
Firmware version: B953  
Serial number: 3HX0JRAB00007339TYQB  
Vendor: IBM-ESXS  
Date of manufacture: April 5, 2003  
World-wide name: 20:00:00:04:cf:f9:e6:44  
Mode: Assigned  
Associated array: Array 5

Drive at Enclosure 12, Slot 13

Drive port: 1, Channel: 3, ID: 44/0x9F  
Drive port: 2, Channel: 4, ID: 44/0x9F  
Drive path redundancy: OK  
Status: Optimal  
Raw capacity: 33.902 GB  
Usable capacity: 33.862 GB  
Current data rate: 2 Gbps  
Product ID: ST336753FC F  
Firmware version: B953  
Serial number: 3HX0SHYM00007346PCWZ  
Vendor: IBM-ESXS  
Date of manufacture: May 16, 2003  
World-wide name: 20:00:00:0c:50:20:9a:d0  
Mode: Assigned  
Associated array: Array 5

Drive at Enclosure 12, Slot 14

Drive port: 1, Channel: 4, ID: 45/0x9E  
Drive port: 2, Channel: 3, ID: 45/0x9E  
Drive path redundancy: OK  
Status: Optimal  
Raw capacity: 33.902 GB  
Usable capacity: 33.862 GB  
Current data rate: 2 Gbps  
Product ID: ST336753FC F  
Firmware version: B953  
Serial number: 3HX0A10E000073368NV5  
Vendor: IBM-ESXS  
Date of manufacture: March 4, 2003  
World-wide name: 20:00:00:04:cf:42:5a:3a  
Mode: Assigned  
Associated array: Array 5

Drive at Enclosure 20, Slot 1

Drive port: 1, Channel: 3, ID: 0/0xEF  
Drive port: 2, Channel: 4, ID: 0/0xEF  
Drive path redundancy: OK  
Status: Optimal  
Raw capacity: 33.902 GB  
Usable capacity: 33.862 GB  
Current data rate: 2 Gbps  
Product ID: ST336753FC F  
Firmware version: B953  
Serial number: 3HX0HM51000073392DTW  
Vendor: IBM-ESXS  
Date of manufacture: April 5, 2003  
World-wide name: 20:00:00:04:cf:f9:e8:5b  
Mode: Assigned  
Associated array: Array 1

Drive at Enclosure 20, Slot 2

Drive port: 1, Channel: 4, ID: 1/0xE8  
Drive port: 2, Channel: 3, ID: 1/0xE8  
Drive path redundancy: OK  
Status: Optimal  
Raw capacity: 33.902 GB  
Usable capacity: 33.862 GB  
Current data rate: 2 Gbps  
Product ID: ST336753FC F  
Firmware version: B953  
Serial number: 3HX0K79200007339TZ0V  
Vendor: IBM-ESXS  
Date of manufacture: April 5, 2003  
World-wide name: 20:00:00:04:cf:f9:e6:0d  
Mode: Assigned  
Associated array: Array 1

Drive at Enclosure 20, Slot 3

Drive port: 1, Channel: 3, ID: 2/0xE4  
Drive port: 2, Channel: 4, ID: 2/0xE4  
Drive path redundancy: OK  
Status: Optimal  
Raw capacity: 33.902 GB  
Usable capacity: 33.862 GB  
Current data rate: 2 Gbps  
Product ID: ST336753FC F  
Firmware version: B953  
Serial number: 3HX0HSZW00007339RGEX  
Vendor: IBM-ESXS  
Date of manufacture: April 4, 2003  
World-wide name: 20:00:00:04:cf:f9:e4:f8  
Mode: Assigned  
Associated array: Array 1

Drive at Enclosure 20, Slot 4

Drive port: 1, Channel: 4, ID: 3/0xE2  
Drive port: 2, Channel: 3, ID: 3/0xE2  
Drive path redundancy: OK  
Status: Optimal  
Raw capacity: 33.902 GB  
Usable capacity: 33.862 GB  
Current data rate: 2 Gbps  
Product ID: ST336753FC F  
Firmware version: B953  
Serial number: 3HX0HM0B000073405A36  
Vendor: IBM-ESXS  
Date of manufacture: April 5, 2003  
World-wide name: 20:00:00:04:cf:f9:e8:0a  
Mode: Assigned  
Associated array: Array 1

Drive at Enclosure 20, Slot 5

Drive port: 1, Channel: 3, ID: 4/0xE1  
Drive port: 2, Channel: 4, ID: 4/0xE1  
Drive path redundancy: OK  
Status: Optimal  
Raw capacity: 33.902 GB  
Usable capacity: 33.862 GB  
Current data rate: 2 Gbps  
Product ID: ST336753FC F  
Firmware version: B953  
Serial number: 3HX0HMC4000073392DYQ  
Vendor: IBM-ESXS  
Date of manufacture: April 5, 2003  
World-wide name: 20:00:00:04:cf:f9:e2:bc  
Mode: Assigned  
Associated array: Array 1

Drive at Enclosure 20, Slot 6

Drive port: 1, Channel: 4, ID: 5/0xE0  
Drive port: 2, Channel: 3, ID: 5/0xE0  
Drive path redundancy: OK  
Status: Optimal  
Raw capacity: 33.902 GB  
Usable capacity: 33.862 GB  
Current data rate: 2 Gbps  
Product ID: ST336753FC F  
Firmware version: B953  
Serial number: 3HX0HT550000734058BL  
Vendor: IBM-ESXS  
Date of manufacture: April 5, 2003  
World-wide name: 20:00:00:04:cf:f9:e7:b8  
Mode: Assigned  
Associated array: Array 1

Drive at Enclosure 20, Slot 7

Drive port: 1, Channel: 3, ID: 6/0xDC  
Drive port: 2, Channel: 4, ID: 6/0xDC  
Drive path redundancy: OK  
Status: Optimal  
Raw capacity: 33.902 GB  
Usable capacity: 33.862 GB  
Current data rate: 2 Gbps  
Product ID: ST336753FC F  
Firmware version: B953  
Serial number: 3HX0HT250000734058G2  
Vendor: IBM-ESXS  
Date of manufacture: April 4, 2003  
World-wide name: 20:00:00:04:cf:f9:e7:dc  
Mode: Assigned  
Associated array: Array 1

Drive at Enclosure 20, Slot 8

Drive port: 1, Channel: 4, ID: 7/0xDA  
Drive port: 2, Channel: 3, ID: 7/0xDA  
Drive path redundancy: OK  
Status: Optimal  
Raw capacity: 33.902 GB  
Usable capacity: 33.862 GB  
Current data rate: 2 Gbps  
Product ID: ST336753FC F  
Firmware version: B953  
Serial number: 3HX0HNNP000073409KC2  
Vendor: IBM-ESXS  
Date of manufacture: April 5, 2003  
World-wide name: 20:00:00:04:cf:f9:db:04  
Mode: Assigned  
Associated array: Array 1

Drive at Enclosure 20, Slot 9

Drive port: 1, Channel: 3, ID: 80/0x55  
Drive port: 2, Channel: 4, ID: 80/0x55  
Drive path redundancy: OK  
Status: Optimal  
Raw capacity: 33.902 GB  
Usable capacity: 33.862 GB  
Current data rate: 2 Gbps  
Product ID: ST336753FC F  
Firmware version: B953  
Serial number: 3HX0HRPB0000734058BX  
Vendor: IBM-ESXS  
Date of manufacture: April 5, 2003  
World-wide name: 20:00:00:04:cf:f9:e8:04  
Mode: Assigned  
Associated array: Array 1

Drive at Enclosure 20, Slot 10

Drive port: 1, Channel: 4, ID: 96/0x3A  
Drive port: 2, Channel: 3, ID: 96/0x3A  
Drive path redundancy: OK  
Status: Optimal  
Raw capacity: 33.902 GB  
Usable capacity: 33.862 GB  
Current data rate: 2 Gbps  
Product ID: ST336753FC F  
Firmware version: B953  
Serial number: 3HX0HT7500007339TYEX  
Vendor: IBM-ESXS  
Date of manufacture: April 5, 2003  
World-wide name: 20:00:00:04:cf:f9:e8:46  
Mode: Assigned  
Associated array: Array 1

Drive at Enclosure 20, Slot 11

Drive port: 1, Channel: 3, ID: 64/0x72  
Drive port: 2, Channel: 4, ID: 64/0x72  
Drive path redundancy: OK  
Status: Optimal  
Raw capacity: 33.902 GB  
Usable capacity: 33.862 GB  
Current data rate: 2 Gbps  
Product ID: ST336753FC F  
Firmware version: B953  
Serial number: 3HX0HMSN000073392DXB  
Vendor: IBM-ESXS  
Date of manufacture: April 5, 2003  
World-wide name: 20:00:00:04:cf:f9:e8:58  
Mode: Assigned  
Associated array: Array 1

Drive at Enclosure 20, Slot 12

Drive port: 1, Channel: 4, ID: 72/0x67  
Drive port: 2, Channel: 3, ID: 72/0x67  
Drive path redundancy: OK  
Status: Optimal  
Raw capacity: 33.902 GB  
Usable capacity: 33.862 GB  
Current data rate: 2 Gbps  
Product ID: ST336753FC F  
Firmware version: B953  
Serial number: 3HX0K6CQ00007339TYB4  
Vendor: IBM-ESXS  
Date of manufacture: April 5, 2003  
World-wide name: 20:00:00:04:cf:f9:ea:93  
Mode: Assigned  
Associated array: Array 1

Drive at Enclosure 20, Slot 13

Drive port: 1, Channel: 3, ID: 88/0x4B  
Drive port: 2, Channel: 4, ID: 88/0x4B  
Drive path redundancy: OK  
Status: Optimal  
Raw capacity: 33.902 GB  
Usable capacity: 33.862 GB  
Current data rate: 2 Gbps  
Product ID: ST336753FC F  
Firmware version: B953  
Serial number: 3HX0HT1T000073405A7Z  
Vendor: IBM-ESXS  
Date of manufacture: April 5, 2003  
World-wide name: 20:00:00:04:cf:f9:e4:a9  
Mode: Assigned  
Associated array: Array 1

Drive at Enclosure 20, Slot 14

Drive port: 1, Channel: 4, ID: 104/0x2E  
Drive port: 2, Channel: 3, ID: 104/0x2E  
Drive path redundancy: OK  
Status: Optimal  
Raw capacity: 33.902 GB  
Usable capacity: 33.862 GB  
Current data rate: 2 Gbps  
Product ID: ST336753FC F  
Firmware version: B953  
Serial number: 3HX0HMFD00007339RGV9  
Vendor: IBM-ESXS  
Date of manufacture: April 5, 2003  
World-wide name: 20:00:00:04:cf:f9:e4:fd  
Mode: Assigned  
Associated array: Array 1

Drive at Enclosure 21, Slot 1

Drive port: 1, Channel: 3, ID: 8/0xD9  
Drive port: 2, Channel: 4, ID: 8/0xD9  
Drive path redundancy: OK  
Status: Optimal  
Raw capacity: 33.902 GB  
Usable capacity: 33.862 GB  
Current data rate: 2 Gbps  
Product ID: ST336753FC F  
Firmware version: B953  
Serial number: 3HX0HMFC00007340X558  
Vendor: IBM-ESXS  
Date of manufacture: April 5, 2003  
World-wide name: 20:00:00:04:cf:f9:e5:a6  
Mode: Assigned  
Associated array: Array 1

Drive at Enclosure 21, Slot 2

Drive port: 1, Channel: 4, ID: 9/0xD6  
Drive port: 2, Channel: 3, ID: 9/0xD6  
Drive path redundancy: OK  
Status: Optimal  
Raw capacity: 33.902 GB  
Usable capacity: 33.862 GB  
Current data rate: 2 Gbps  
Product ID: ST336753FC F  
Firmware version: B953  
Serial number: 3HX0HT2C000073409KW6  
Vendor: IBM-ESXS  
Date of manufacture: April 4, 2003  
World-wide name: 20:00:00:04:cf:f9:e5:4a  
Mode: Assigned  
Associated array: Array 1

Drive at Enclosure 21, Slot 3  
Drive port: 1, Channel: 3, ID: 10/0xD5  
Drive port: 2, Channel: 4, ID: 10/0xD5  
Drive path redundancy: OK  
Status: Optimal  
Raw capacity: 33.902 GB  
Usable capacity: 33.862 GB  
Current data rate: 2 Gbps  
Product ID: ST336753FC F  
Firmware version: B953  
Serial number: 3HX0HT5600007340X4YT  
Vendor: IBM-ESXS  
Date of manufacture: April 5, 2003  
World-wide name: 20:00:00:04:cf:f9:e5:57  
Mode: Assigned  
Associated array: Array 1

Drive at Enclosure 21, Slot 4  
Drive port: 1, Channel: 4, ID: 11/0xD4  
Drive port: 2, Channel: 3, ID: 11/0xD4  
Drive path redundancy: OK  
Status: Optimal  
Raw capacity: 33.902 GB  
Usable capacity: 33.862 GB  
Current data rate: 2 Gbps  
Product ID: ST336753FC F  
Firmware version: B953  
Serial number: 3HX0HMF00007340WVGM  
Vendor: IBM-ESXS  
Date of manufacture: April 4, 2003  
World-wide name: 20:00:00:04:cf:f9:e6:c8  
Mode: Assigned  
Associated array: Array 1

Drive at Enclosure 21, Slot 5  
Drive port: 1, Channel: 3, ID: 12/0xD3  
Drive port: 2, Channel: 4, ID: 12/0xD3  
Drive path redundancy: OK  
Status: Optimal  
Raw capacity: 33.902 GB  
Usable capacity: 33.862 GB  
Current data rate: 2 Gbps  
Product ID: ST336753FC F  
Firmware version: B953  
Serial number: 3HX0HMAV00007340WVVFY  
Vendor: IBM-ESXS  
Date of manufacture: April 5, 2003  
World-wide name: 20:00:00:04:cf:f9:e6:de  
Mode: Assigned  
Associated array: Array 1

Drive at Enclosure 21, Slot 6

Drive port: 1, Channel: 4, ID: 13/0xD2  
Drive port: 2, Channel: 3, ID: 13/0xD2  
Drive path redundancy: OK  
Status: Optimal  
Raw capacity: 33.902 GB  
Usable capacity: 33.862 GB  
Current data rate: 2 Gbps  
Product ID: ST336753FC F  
Firmware version: B953  
Serial number: 3HX0HSTJ00007339TY5  
Vendor: IBM-ESXS  
Date of manufacture: April 5, 2003  
World-wide name: 20:00:00:04:cf:f9:e6:34  
Mode: Assigned  
Associated array: Array 1

Drive at Enclosure 21, Slot 7  
Drive port: 1, Channel: 3, ID: 14/0xD1  
Drive port: 2, Channel: 4, ID: 14/0xD1  
Drive path redundancy: OK  
Status: Optimal  
Raw capacity: 33.902 GB  
Usable capacity: 33.862 GB  
Current data rate: 2 Gbps  
Product ID: ST336753FC F  
Firmware version: B953  
Serial number: 3HX0HRJN0000734058EY  
Vendor: IBM-ESXS  
Date of manufacture: April 4, 2003  
World-wide name: 20:00:00:04:cf:f9:e8:13  
Mode: Assigned  
Associated array: Array 1

Drive at Enclosure 21, Slot 8  
Drive port: 1, Channel: 4, ID: 15/0xCE  
Drive port: 2, Channel: 3, ID: 15/0xCE  
Drive path redundancy: OK  
Status: Optimal  
Raw capacity: 33.902 GB  
Usable capacity: 33.862 GB  
Current data rate: 2 Gbps  
Product ID: ST336753FC F  
Firmware version: B953  
Serial number: 3HX0K7K20000734058GD  
Vendor: IBM-ESXS  
Date of manufacture: April 5, 2003  
World-wide name: 20:00:00:04:cf:f9:e8:0e  
Mode: Assigned  
Associated array: Array 1

Drive at Enclosure 21, Slot 9  
Drive port: 1, Channel: 3, ID: 81/0x54  
Drive port: 2, Channel: 4, ID: 81/0x54  
Drive path redundancy: OK  
Status: Optimal  
Raw capacity: 33.902 GB  
Usable capacity: 33.862 GB  
Current data rate: 2 Gbps  
Product ID: ST336753FC F  
Firmware version: B953  
Serial number: 3HX0K6VE00007339TYA3  
Vendor: IBM-ESXS  
Date of manufacture: April 5, 2003  
World-wide name: 20:00:00:04:cf:f9:eb:0e  
Mode: Assigned  
Associated array: Array 1

Drive at Enclosure 21, Slot 10

Drive port: 1, Channel: 4, ID: 97/0x39  
Drive port: 2, Channel: 3, ID: 97/0x39  
Drive path redundancy: OK  
Status: Optimal  
Raw capacity: 33.902 GB  
Usable capacity: 33.862 GB  
Current data rate: 2 Gbps  
Product ID: ST336753FC F  
Firmware version: B953  
Serial number: 3HX0HT93000073392DZ2  
Vendor: IBM-ESXS  
Date of manufacture: April 5, 2003  
World-wide name: 20:00:00:04:cf:f9:e8:5d  
Mode: Assigned  
Associated array: Array 1

Drive at Enclosure 21, Slot 11

Drive port: 1, Channel: 3, ID: 65/0x71  
Drive port: 2, Channel: 4, ID: 65/0x71  
Drive path redundancy: OK  
Status: Optimal  
Raw capacity: 33.902 GB  
Usable capacity: 33.862 GB  
Current data rate: 2 Gbps  
Product ID: ST336753FC F  
Firmware version: B953  
Serial number: 3HX0HSSP00007339TZ10  
Vendor: IBM-ESXS  
Date of manufacture: April 5, 2003  
World-wide name: 20:00:00:04:cf:f9:e4:92  
Mode: Assigned  
Associated array: Array 1

Drive at Enclosure 21, Slot 12

Drive port: 1, Channel: 4, ID: 73/0x66  
Drive port: 2, Channel: 3, ID: 73/0x66  
Drive path redundancy: OK  
Status: Optimal  
Raw capacity: 33.902 GB  
Usable capacity: 33.862 GB  
Current data rate: 2 Gbps  
Product ID: ST336753FC F  
Firmware version: B953  
Serial number: 3HX0HRN00000734058BZ  
Vendor: IBM-ESXS  
Date of manufacture: April 5, 2003  
World-wide name: 20:00:00:04:cf:f9:e7:ad  
Mode: Assigned  
Associated array: Array 1

Drive at Enclosure 21, Slot 13

Drive port: 1, Channel: 3, ID: 89/0x4A  
Drive port: 2, Channel: 4, ID: 89/0x4A  
Drive path redundancy: OK  
Status: Optimal  
Raw capacity: 33.902 GB  
Usable capacity: 33.862 GB  
Current data rate: 2 Gbps  
Product ID: ST336753FC F  
Firmware version: B953  
Serial number: 3HX0HT0M00007338WARU  
Vendor: IBM-ESXS  
Date of manufacture: April 5, 2003  
World-wide name: 20:00:00:04:cf:f9:e3:d3  
Mode: Assigned  
Associated array: Array 1

Drive at Enclosure 21, Slot 14

Drive port: 1, Channel: 4, ID: 105/0x2D  
Drive port: 2, Channel: 3, ID: 105/0x2D  
Drive path redundancy: OK  
Status: Optimal  
Raw capacity: 33.902 GB  
Usable capacity: 33.862 GB  
Current data rate: 2 Gbps  
Product ID: ST336753FC F  
Firmware version: B953  
Serial number: 3HX0JCYF000073409K0V  
Vendor: IBM-ESXS  
Date of manufacture: April 5, 2003  
World-wide name: 20:00:00:04:cf:f9:db:63  
Mode: Assigned  
Associated array: Array 1

Drive at Enclosure 22, Slot 1

Drive port: 1, Channel: 3, ID: 16/0xCD  
Drive port: 2, Channel: 4, ID: 16/0xCD  
Drive path redundancy: OK  
Status: Optimal  
Raw capacity: 33.902 GB  
Usable capacity: 33.862 GB  
Current data rate: 2 Gbps  
Product ID: ST336753FC F  
Firmware version: B953  
Serial number: 3HX0HMEZ00007339TYP8  
Vendor: IBM-ESXS  
Date of manufacture: April 5, 2003  
World-wide name: 20:00:00:04:cf:f9:e6:71  
Mode: Assigned  
Associated array: Array 2

Drive at Enclosure 22, Slot 2

Drive port: 1, Channel: 4, ID: 17/0xCC  
Drive port: 2, Channel: 3, ID: 17/0xCC  
Drive path redundancy: OK  
Status: Optimal  
Raw capacity: 33.902 GB  
Usable capacity: 33.862 GB  
Current data rate: 2 Gbps  
Product ID: ST336753FC F  
Firmware version: B953  
Serial number: 3HX0K67N00007340WWIC  
Vendor: IBM-ESXS  
Date of manufacture: April 5, 2003  
World-wide name: 20:00:00:04:cf:ff:03:e5  
Mode: Assigned  
Associated array: Array 2

Drive at Enclosure 22, Slot 3

Drive port: 1, Channel: 3, ID: 18/0xCB  
Drive port: 2, Channel: 4, ID: 18/0xCB  
Drive path redundancy: OK  
Status: Optimal  
Raw capacity: 33.902 GB  
Usable capacity: 33.862 GB  
Current data rate: 2 Gbps  
Product ID: ST336753FC F  
Firmware version: B953  
Serial number: 3HX0K7JP00007339TYP5  
Vendor: IBM-ESXS  
Date of manufacture: April 5, 2003  
World-wide name: 20:00:00:04:cf:ff:05:22  
Mode: Assigned  
Associated array: Array 2

Drive at Enclosure 22, Slot 4



Drive port: 1, Channel: 4, ID: 19/0xCA  
Drive port: 2, Channel: 3, ID: 19/0xCA  
Drive path redundancy: OK  
Status: Optimal  
Raw capacity: 33.902 GB  
Usable capacity: 33.862 GB  
Current data rate: 2 Gbps  
Product ID: ST336753FC F  
Firmware version: B953  
Serial number: 3HX0K1A300007339FG7E  
Vendor: IBM-ESXS  
Date of manufacture: April 5, 2003  
World-wide name: 20:00:00:04:cf:ff:03:08  
Mode: Assigned  
Associated array: Array 2

Drive at Enclosure 22, Slot 5

Drive port: 1, Channel: 3, ID: 20/0xC9  
Drive port: 2, Channel: 4, ID: 20/0xC9  
Drive path redundancy: OK  
Status: Optimal  
Raw capacity: 33.902 GB  
Usable capacity: 33.862 GB  
Current data rate: 2 Gbps  
Product ID: ST336753FC F  
Firmware version: B953  
Serial number: 3HX0HNC2000073409K6Y  
Vendor: IBM-ESXS  
Date of manufacture: April 5, 2003  
World-wide name: 20:00:00:04:cf:f9:da:d0  
Mode: Assigned  
Associated array: Array 2

Drive at Enclosure 22, Slot 6

Drive port: 1, Channel: 4, ID: 21/0xC7  
Drive port: 2, Channel: 3, ID: 21/0xC7  
Drive path redundancy: OK  
Status: Optimal  
Raw capacity: 33.902 GB  
Usable capacity: 33.862 GB  
Current data rate: 2 Gbps  
Product ID: ST336753FC F  
Firmware version: B953  
Serial number: 3HX0HLZ4000073409KSK  
Vendor: IBM-ESXS  
Date of manufacture: April 5, 2003  
World-wide name: 20:00:00:04:cf:f9:dc:c8  
Mode: Assigned  
Associated array: Array 2

Drive at Enclosure 22, Slot 7

Drive port: 1, Channel: 3, ID: 22/0xC6  
Drive port: 2, Channel: 4, ID: 22/0xC6  
Drive path redundancy: OK  
Status: Optimal  
Raw capacity: 33.902 GB  
Usable capacity: 33.862 GB  
Current data rate: 2 Gbps  
Product ID: ST336753FC F  
Firmware version: B953  
Serial number: 3HX0HCT8000073409KWS  
Vendor: IBM-ESXS  
Date of manufacture: April 4, 2003  
World-wide name: 20:00:00:04:cf:f9:e5:49  
Mode: Assigned  
Associated array: Array 2

Drive at Enclosure 22, Slot 8

Drive port: 1, Channel: 4, ID: 23/0xC5  
Drive port: 2, Channel: 3, ID: 23/0xC5  
Drive path redundancy: OK  
Status: Optimal  
Raw capacity: 33.902 GB  
Usable capacity: 33.862 GB  
Current data rate: 2 Gbps  
Product ID: ST336753FC F  
Firmware version: B953  
Serial number: 3HX0H0EB00007339TYNH  
Vendor: IBM-ESXS  
Date of manufacture: April 5, 2003  
World-wide name: 20:00:00:04:cf:f9:e8:28  
Mode: Assigned  
Associated array: Array 2

Drive at Enclosure 22, Slot 9

Drive port: 1, Channel: 3, ID: 82/0x53  
Drive port: 2, Channel: 4, ID: 82/0x53  
Drive path redundancy: OK  
Status: Optimal  
Raw capacity: 33.902 GB  
Usable capacity: 33.862 GB  
Current data rate: 2 Gbps  
Product ID: ST336753FC F  
Firmware version: B953  
Serial number: 3HX0HRHT0000734058BR  
Vendor: IBM-ESXS  
Date of manufacture: April 5, 2003  
World-wide name: 20:00:00:04:cf:f9:e7:de  
Mode: Assigned  
Associated array: Array 2

Drive at Enclosure 22, Slot 10

Drive port: 1, Channel: 4, ID: 98/0x36  
Drive port: 2, Channel: 3, ID: 98/0x36  
Drive path redundancy: OK  
Status: Optimal  
Raw capacity: 33.902 GB  
Usable capacity: 33.862 GB  
Current data rate: 2 Gbps  
Product ID: ST336753FC F  
Firmware version: B953  
Serial number: 3HX0JNTB00007340WVZR  
Vendor: IBM-ESXS  
Date of manufacture: April 5, 2003  
World-wide name: 20:00:00:04:cf:ff:03:e4  
Mode: Assigned  
Associated array: Array 2

Drive at Enclosure 22, Slot 11

Drive port: 1, Channel: 3, ID: 66/0x6E  
Drive port: 2, Channel: 4, ID: 66/0x6E  
Drive path redundancy: OK  
Status: Optimal  
Raw capacity: 33.902 GB  
Usable capacity: 33.862 GB  
Current data rate: 2 Gbps  
Product ID: ST336753FC F  
Firmware version: B953  
Serial number: 3HX0HM2S000073409KEW  
Vendor: IBM-ESXS  
Date of manufacture: April 5, 2003  
World-wide name: 20:00:00:04:cf:f9:dc:ed  
Mode: Assigned  
Associated array: Array 2

Drive at Enclosure 22, Slot 12

Drive port: 1, Channel: 4, ID: 74/0x65  
Drive port: 2, Channel: 3, ID: 74/0x65  
Drive path redundancy: OK  
Status: Optimal  
Raw capacity: 33.902 GB  
Usable capacity: 33.862 GB  
Current data rate: 2 Gbps  
Product ID: ST336753FC F  
Firmware version: B953  
Serial number: 3HX0H0F700007339TYGM  
Vendor: IBM-ESXS  
Date of manufacture: April 4, 2003  
World-wide name: 20:00:00:04:cf:f9:d0:fc  
Mode: Assigned  
Associated array: Array 2

Drive at Enclosure 22, Slot 13

Drive port: 1, Channel: 3, ID: 90/0x49  
Drive port: 2, Channel: 4, ID: 90/0x49  
Drive path redundancy: OK  
Status: Optimal  
Raw capacity: 33.902 GB  
Usable capacity: 33.862 GB  
Current data rate: 2 Gbps  
Product ID: ST336753FC F  
Firmware version: B953  
Serial number: 3HX0HRM30000734058G3  
Vendor: IBM-ESXS  
Date of manufacture: April 5, 2003  
World-wide name: 20:00:00:04:cf:f9:e8:19  
Mode: Assigned  
Associated array: Array 2

Drive at Enclosure 22, Slot 14

Drive port: 1, Channel: 4, ID: 106/0x2C  
Drive port: 2, Channel: 3, ID: 106/0x2C  
Drive path redundancy: OK  
Status: Optimal  
Raw capacity: 33.902 GB  
Usable capacity: 33.862 GB  
Current data rate: 2 Gbps  
Product ID: ST336753FC F  
Firmware version: B953  
Serial number: 3HX0K48000073405FZ5  
Vendor: IBM-ESXS  
Date of manufacture: April 5, 2003  
World-wide name: 20:00:00:04:cf:f9:fb:78  
Mode: Assigned  
Associated array: Array 2

Drive at Enclosure 23, Slot 1

Drive port: 1, Channel: 3, ID: 24/0xC3  
Drive port: 2, Channel: 4, ID: 24/0xC3  
Drive path redundancy: OK  
Status: Optimal  
Raw capacity: 33.902 GB  
Usable capacity: 33.862 GB  
Current data rate: 2 Gbps  
Product ID: ST336753FC F  
Firmware version: B953  
Serial number: 3HX0HT7M0000734058E3  
Vendor: IBM-ESXS  
Date of manufacture: April 5, 2003  
World-wide name: 20:00:00:04:cf:f9:e7:90  
Mode: Assigned  
Associated array: Array 2

Drive at Enclosure 23, Slot 2

Drive port: 1, Channel: 4, ID: 25/0xBC  
Drive port: 2, Channel: 3, ID: 25/0xBC  
Drive path redundancy: OK  
Status: Optimal  
Raw capacity: 33.902 GB  
Usable capacity: 33.862 GB  
Current data rate: 2 Gbps  
Product ID: ST336753FC F  
Firmware version: B953  
Serial number: 3HX0K89N0000734058CP  
Vendor: IBM-ESXS  
Date of manufacture: April 5, 2003  
World-wide name: 20:00:00:04:cf:f9:e7:96  
Mode: Assigned  
Associated array: Array 2

Drive at Enclosure 23, Slot 3

Drive port: 1, Channel: 3, ID: 26/0xBA  
Drive port: 2, Channel: 4, ID: 26/0xBA  
Drive path redundancy: OK  
Status: Optimal  
Raw capacity: 33.902 GB  
Usable capacity: 33.862 GB  
Current data rate: 2 Gbps  
Product ID: ST336753FC F  
Firmware version: B953  
Serial number: 3HX0HQEV00007340WVZW  
Vendor: IBM-ESXS  
Date of manufacture: April 5, 2003  
World-wide name: 20:00:00:04:cf:ff:03:d7  
Mode: Assigned  
Associated array: Array 2

Drive at Enclosure 23, Slot 4

Drive port: 1, Channel: 4, ID: 27/0xB9  
Drive port: 2, Channel: 3, ID: 27/0xB9  
Drive path redundancy: OK  
Status: Optimal  
Raw capacity: 33.902 GB  
Usable capacity: 33.862 GB  
Current data rate: 2 Gbps  
Product ID: ST336753FC F  
Firmware version: B953  
Serial number: 3HX0HT1C00007339G3J  
Vendor: IBM-ESXS  
Date of manufacture: April 4, 2003  
World-wide name: 20:00:00:04:cf:f9:e4:9b  
Mode: Assigned  
Associated array: Array 2

Drive at Enclosure 23, Slot 5

Drive port: 1, Channel: 3, ID: 28/0xB6  
Drive port: 2, Channel: 4, ID: 28/0xB6  
Drive path redundancy: OK  
Status: Optimal  
Raw capacity: 33.902 GB  
Usable capacity: 33.862 GB  
Current data rate: 2 Gbps  
Product ID: ST336753FC F  
Firmware version: B953  
Serial number: 3HX0HSZB00007340X4RW  
Vendor: IBM-ESXS  
Date of manufacture: April 4, 2003  
World-wide name: 20:00:00:04:cf:f9:e5:96  
Mode: Assigned  
Associated array: Array 2

Drive at Enclosure 23, Slot 6

Drive port: 1, Channel: 4, ID: 29/0xB5  
Drive port: 2, Channel: 3, ID: 29/0xB5  
Drive path redundancy: OK  
Status: Optimal  
Raw capacity: 33.902 GB  
Usable capacity: 33.862 GB  
Current data rate: 2 Gbps  
Product ID: ST336753FC F  
Firmware version: B953  
Serial number: 3HX0J6PV000073409KLW  
Vendor: IBM-ESXS  
Date of manufacture: April 4, 2003  
World-wide name: 20:00:00:04:cf:f9:e5:6d  
Mode: Assigned  
Associated array: Array 2

Drive at Enclosure 23, Slot 7

Drive port: 1, Channel: 3, ID: 30/0xB4  
Drive port: 2, Channel: 4, ID: 30/0xB4  
Drive path redundancy: OK  
Status: Optimal  
Raw capacity: 33.902 GB  
Usable capacity: 33.862 GB  
Current data rate: 2 Gbps  
Product ID: ST336753FC F  
Firmware version: B953  
Serial number: 3HX0HT17000073409KWG  
Vendor: IBM-ESXS  
Date of manufacture: April 4, 2003  
World-wide name: 20:00:00:04:cf:f9:e5:69  
Mode: Assigned  
Associated array: Array 2

Drive at Enclosure 23, Slot 8

Drive port: 1, Channel: 4, ID: 31/0xB3  
Drive port: 2, Channel: 3, ID: 31/0xB3  
Drive path redundancy: OK  
Status: Optimal  
Raw capacity: 33.902 GB  
Usable capacity: 33.862 GB  
Current data rate: 2 Gbps  
Product ID: ST336753FC F  
Firmware version: B953  
Serial number: 3HX0HRLF0000734058BQ  
Vendor: IBM-ESXS  
Date of manufacture: April 4, 2003  
World-wide name: 20:00:00:04:cf:f9:e7:f6  
Mode: Assigned  
Associated array: Array 2

Drive at Enclosure 23, Slot 9

Drive port: 1, Channel: 3, ID: 83/0x52  
Drive port: 2, Channel: 4, ID: 83/0x52  
Drive path redundancy: OK  
Status: Optimal  
Raw capacity: 33.902 GB  
Usable capacity: 33.862 GB  
Current data rate: 2 Gbps  
Product ID: ST336753FC F  
Firmware version: B953  
Serial number: 3HX0K7K500007340WVF4  
Vendor: IBM-ESXS  
Date of manufacture: April 5, 2003  
World-wide name: 20:00:00:04:cf:f9:e6:e2  
Mode: Assigned  
Associated array: Array 2

Drive at Enclosure 23, Slot 10

Drive port: 1, Channel: 4, ID: 99/0x35  
Drive port: 2, Channel: 3, ID: 99/0x35  
Drive path redundancy: OK  
Status: Optimal  
Raw capacity: 33.902 GB  
Usable capacity: 33.862 GB  
Current data rate: 2 Gbps  
Product ID: ST336753FC F  
Firmware version: B953  
Serial number: 3HX0HM0J000073409K2F  
Vendor: IBM-ESXS  
Date of manufacture: April 5, 2003  
World-wide name: 20:00:00:04:cf:f9:dc:d7  
Mode: Assigned  
Associated array: Array 2

Drive at Enclosure 23, Slot 11

Drive port: 1, Channel: 3, ID: 67/0x6D  
Drive port: 2, Channel: 4, ID: 67/0x6D  
Drive path redundancy: OK  
Status: Optimal  
Raw capacity: 33.902 GB  
Usable capacity: 33.862 GB  
Current data rate: 2 Gbps  
Product ID: ST336753FC F  
Firmware version: B953  
Serial number: 3HX0K1KZ000073393FTN  
Vendor: IBM-ESXS  
Date of manufacture: April 5, 2003  
World-wide name: 20:00:00:04:cf:ff:02:f1  
Mode: Assigned  
Associated array: Array 2

Drive at Enclosure 23, Slot 12

Drive port: 1, Channel: 4, ID: 75/0x63  
Drive port: 2, Channel: 3, ID: 75/0x63  
Drive path redundancy: OK  
Status: Optimal  
Raw capacity: 33.902 GB  
Usable capacity: 33.862 GB  
Current data rate: 2 Gbps  
Product ID: ST336753FC F  
Firmware version: B953  
Serial number: 3HX0HSX400007340X5HP  
Vendor: IBM-ESXS  
Date of manufacture: April 5, 2003  
World-wide name: 20:00:00:04:cf:f9:e7:54  
Mode: Assigned  
Associated array: Array 2

Drive at Enclosure 23, Slot 13

Drive port: 1, Channel: 3, ID: 91/0x47  
Drive port: 2, Channel: 4, ID: 91/0x47  
Drive path redundancy: OK  
Status: Optimal  
Raw capacity: 33.902 GB  
Usable capacity: 33.862 GB  
Current data rate: 2 Gbps  
Product ID: ST336753FC F  
Firmware version: B953  
Serial number: 3HX0HRGS00007339TYCC  
Vendor: IBM-ESXS  
Date of manufacture: April 5, 2003  
World-wide name: 20:00:00:04:cf:f9:e6:49  
Mode: Assigned  
Associated array: Array 2

Drive at Enclosure 23, Slot 14

Drive port: 1, Channel: 4, ID: 107/0x2B  
Drive port: 2, Channel: 3, ID: 107/0x2B  
Drive path redundancy: OK  
Status: Optimal  
Raw capacity: 33.902 GB  
Usable capacity: 33.862 GB  
Current data rate: 2 Gbps  
Product ID: ST336753FC F  
Firmware version: B953  
Serial number: 3HX0JMNR00007340X5J1  
Vendor: IBM-ESXS  
Date of manufacture: April 6, 2003  
World-wide name: 20:00:00:04:cf:ff:0d:43  
Mode: Assigned  
Associated array: Array 2

Drive at Enclosure 24, Slot 1

Drive port: 1, Channel: 1, ID: 32/0xB2  
Drive port: 2, Channel: 2, ID: 32/0xB2  
Drive path redundancy: OK  
Status: Optimal  
Raw capacity: 33.902 GB  
Usable capacity: 33.862 GB  
Current data rate: 2 Gbps  
Product ID: ST336753FC F  
Firmware version: B953  
Serial number: 3HX0JXZN000073409KB8  
Vendor: IBM-ESXS  
Date of manufacture: April 6, 2003  
World-wide name: 20:00:00:04:cf:ff:0d:50  
Mode: Assigned  
Associated array: Array 3

Drive at Enclosure 24, Slot 2

Drive port: 1, Channel: 2, ID: 33/0xB1  
Drive port: 2, Channel: 1, ID: 33/0xB1  
Drive path redundancy: OK  
Status: Optimal  
Raw capacity: 33.902 GB  
Usable capacity: 33.862 GB  
Current data rate: 2 Gbps  
Product ID: ST336753FC F  
Firmware version: B953  
Serial number: 3HX0K2FX00007339PQ5Q  
Vendor: IBM-ESXS  
Date of manufacture: April 5, 2003  
World-wide name: 20:00:00:04:cf:ff:02:80  
Mode: Assigned  
Associated array: Array 3

Drive at Enclosure 24, Slot 3

Drive port: 1, Channel: 1, ID: 34/0xAE  
Drive port: 2, Channel: 2, ID: 34/0xAE  
Drive path redundancy: OK  
Status: Optimal  
Raw capacity: 33.902 GB  
Usable capacity: 33.862 GB  
Current data rate: 2 Gbps  
Product ID: ST336753FC F  
Firmware version: B953  
Serial number: 3HX0KCK1000073410HPD  
Vendor: IBM-ESXS  
Date of manufacture: April 6, 2003  
World-wide name: 20:00:00:04:cf:ff:12:ac  
Mode: Assigned  
Associated array: Array 3

Drive at Enclosure 24, Slot 4

Drive port: 1, Channel: 2, ID: 35/0xAD  
Drive port: 2, Channel: 1, ID: 35/0xAD  
Drive path redundancy: OK  
Status: Optimal  
Raw capacity: 33.902 GB  
Usable capacity: 33.862 GB  
Current data rate: 2 Gbps  
Product ID: ST336753FC F  
Firmware version: B953  
Serial number: 3HX0JRGG00007339RGE9  
Vendor: IBM-ESXS  
Date of manufacture: April 5, 2003  
World-wide name: 20:00:00:04:cf:f9:da:a7  
Mode: Assigned  
Associated array: Array 3

Drive at Enclosure 24, Slot 5

Drive port: 1, Channel: 1, ID: 36/0xAC  
Drive port: 2, Channel: 2, ID: 36/0xAC  
Drive path redundancy: OK  
Status: Optimal  
Raw capacity: 33.902 GB  
Usable capacity: 33.862 GB  
Current data rate: 2 Gbps  
Product ID: ST336753FC F  
Firmware version: B953  
Serial number: 3HX0KCLD000073405FW1  
Vendor: IBM-ESXS  
Date of manufacture: April 6, 2003  
World-wide name: 20:00:00:04:cf:ff:0d:61  
Mode: Assigned  
Associated array: Array 3

Drive at Enclosure 24, Slot 6

Drive port: 1, Channel: 2, ID: 37/0xAB  
Drive port: 2, Channel: 1, ID: 37/0xAB  
Drive path redundancy: OK  
Status: Optimal  
Raw capacity: 33.902 GB  
Usable capacity: 33.862 GB  
Current data rate: 2 Gbps  
Product ID: ST336753FC F  
Firmware version: B953  
Serial number: 3HX0KCLS000073405G61  
Vendor: IBM-ESXS  
Date of manufacture: April 6, 2003  
World-wide name: 20:00:00:04:cf:ff:0d:83  
Mode: Assigned  
Associated array: Array 3

Drive at Enclosure 24, Slot 7

Drive port: 1, Channel: 1, ID: 38/0xAA  
Drive port: 2, Channel: 2, ID: 38/0xAA  
Drive path redundancy: OK  
Status: Optimal  
Raw capacity: 33.902 GB  
Usable capacity: 33.862 GB  
Current data rate: 2 Gbps  
Product ID: ST336753FC F  
Firmware version: B953  
Serial number: 3HX0C7QW000073393FS8  
Vendor: IBM-ESXS  
Date of manufacture: April 5, 2003  
World-wide name: 20:00:00:04:cf:f9:fc:1e  
Mode: Assigned  
Associated array: Array 3

Drive at Enclosure 24, Slot 8

Drive port: 1, Channel: 2, ID: 39/0xA9  
Drive port: 2, Channel: 1, ID: 39/0xA9  
Drive path redundancy: OK  
Status: Optimal  
Raw capacity: 33.902 GB  
Usable capacity: 33.862 GB  
Current data rate: 2 Gbps  
Product ID: ST336753FC F  
Firmware version: B953  
Serial number: 3HX0K5BE00007339TYM4  
Vendor: IBM-ESXS  
Date of manufacture: April 5, 2003  
World-wide name: 20:00:00:04:cf:f9:f5:aa  
Mode: Assigned  
Associated array: Array 3

Drive at Enclosure 24, Slot 9

Drive port: 1, Channel: 1, ID: 84/0x51  
Drive port: 2, Channel: 2, ID: 84/0x51  
Drive path redundancy: OK  
Status: Optimal  
Raw capacity: 33.902 GB  
Usable capacity: 33.862 GB  
Current data rate: 2 Gbps  
Product ID: ST336753FC F  
Firmware version: B953  
Serial number: 3HX0J3HV00007340X5K3  
Vendor: IBM-ESXS  
Date of manufacture: April 5, 2003  
World-wide name: 20:00:00:04:cf:f9:e6:db  
Mode: Assigned  
Associated array: Array 3

Drive at Enclosure 24, Slot 10

Drive port: 1, Channel: 2, ID: 100/0x34  
Drive port: 2, Channel: 1, ID: 100/0x34  
Drive path redundancy: OK  
Status: Optimal  
Raw capacity: 33.902 GB  
Usable capacity: 33.862 GB  
Current data rate: 2 Gbps  
Product ID: ST336753FC F  
Firmware version: B953  
Serial number: 3HX0HT2400007339LX80  
Vendor: IBM-ESXS  
Date of manufacture: April 5, 2003  
World-wide name: 20:00:00:04:cf:f9:e4:05  
Mode: Assigned  
Associated array: Array 3

Drive at Enclosure 24, Slot 11

Drive port: 1, Channel: 1, ID: 68/0x6C  
Drive port: 2, Channel: 2, ID: 68/0x6C  
Drive path redundancy: OK  
Status: Optimal  
Raw capacity: 33.902 GB  
Usable capacity: 33.862 GB  
Current data rate: 2 Gbps  
Product ID: ST336753FC F  
Firmware version: B953  
Serial number: 3HX0HLYF00007340WVG0  
Vendor: IBM-ESXS  
Date of manufacture: April 5, 2003  
World-wide name: 20:00:00:04:cf:f9:dd:95  
Mode: Assigned  
Associated array: Array 3

Drive at Enclosure 24, Slot 12

Drive port: 1, Channel: 2, ID: 76/0x5C  
Drive port: 2, Channel: 1, ID: 76/0x5C  
Drive path redundancy: OK  
Status: Optimal  
Raw capacity: 33.902 GB  
Usable capacity: 33.862 GB  
Current data rate: 2 Gbps  
Product ID: ST336753FC F  
Firmware version: B953  
Serial number: 3HX0HSZ6000073392DZJ  
Vendor: IBM-ESXS  
Date of manufacture: April 5, 2003  
World-wide name: 20:00:00:04:cf:f9:e2:e8  
Mode: Assigned  
Associated array: Array 3

Drive at Enclosure 24, Slot 13

Drive port: 1, Channel: 1, ID: 92/0x46  
Drive port: 2, Channel: 2, ID: 92/0x46  
Drive path redundancy: OK  
Status: Optimal  
Raw capacity: 33.902 GB  
Usable capacity: 33.862 GB  
Current data rate: 2 Gbps  
Product ID: ST336753FC F  
Firmware version: B953  
Serial number: 3HX0HSJE00007339LXHR  
Vendor: IBM-ESXS  
Date of manufacture: April 5, 2003  
World-wide name: 20:00:00:04:cf:f9:e4:a7  
Mode: Assigned  
Associated array: Array 3

Drive at Enclosure 24, Slot 14

Drive port: 1, Channel: 2, ID: 108/0x2A  
Drive port: 2, Channel: 1, ID: 108/0x2A  
Drive path redundancy: OK  
Status: Optimal  
Raw capacity: 33.902 GB  
Usable capacity: 33.862 GB  
Current data rate: 2 Gbps  
Product ID: ST336753FC F  
Firmware version: B953  
Serial number: 3HX0HSVN00007339TYG3  
Vendor: IBM-ESXS  
Date of manufacture: April 4, 2003  
World-wide name: 20:00:00:04:cf:f9:e4:6d  
Mode: Assigned  
Associated array: Array 3

Drive at Enclosure 25, Slot 1

Drive port: 1, Channel: 1, ID: 40/0xA7  
Drive port: 2, Channel: 2, ID: 40/0xA7  
Drive path redundancy: OK  
Status: Optimal  
Raw capacity: 33.902 GB  
Usable capacity: 33.862 GB  
Current data rate: 2 Gbps  
Product ID: ST336753FC F  
Firmware version: B953  
Serial number: 3HX0HMAY00007340X5K6  
Vendor: IBM-ESXS  
Date of manufacture: April 4, 2003  
World-wide name: 20:00:00:04:cf:f9:e5:88  
Mode: Assigned  
Associated array: Array 3

Drive at Enclosure 25, Slot 2

Drive port: 1, Channel: 2, ID: 41/0xA6  
Drive port: 2, Channel: 1, ID: 41/0xA6  
Drive path redundancy: OK  
Status: Optimal  
Raw capacity: 33.902 GB  
Usable capacity: 33.862 GB  
Current data rate: 2 Gbps  
Product ID: ST336753FC F  
Firmware version: B953  
Serial number: 3HX0H0J000007339TYGH  
Vendor: IBM-ESXS  
Date of manufacture: April 4, 2003  
World-wide name: 20:00:00:04:cf:f9:d0:ec  
Mode: Assigned  
Associated array: Array 3

Drive at Enclosure 25, Slot 3

Drive port: 1, Channel: 1, ID: 42/0xA5  
Drive port: 2, Channel: 2, ID: 42/0xA5  
Drive path redundancy: OK  
Status: Optimal  
Raw capacity: 33.902 GB  
Usable capacity: 33.862 GB  
Current data rate: 2 Gbps  
Product ID: ST336753FC F  
Firmware version: B953  
Serial number: 3HX0K50Q00007340GTTB  
Vendor: IBM-ESXS  
Date of manufacture: April 5, 2003  
World-wide name: 20:00:00:04:cf:f9:f5:fc  
Mode: Assigned  
Associated array: Array 3

Drive at Enclosure 25, Slot 4

Drive port: 1, Channel: 2, ID: 43/0xA3  
Drive port: 2, Channel: 1, ID: 43/0xA3  
Drive path redundancy: OK  
Status: Optimal  
Raw capacity: 33.902 GB  
Usable capacity: 33.862 GB  
Current data rate: 2 Gbps  
Product ID: ST336753FC F  
Firmware version: B953  
Serial number: 3HX0K89500007339TYJJ  
Vendor: IBM-ESXS  
Date of manufacture: April 5, 2003  
World-wide name: 20:00:00:04:cf:f9:e2:a0  
Mode: Assigned  
Associated array: Array 3

Drive at Enclosure 25, Slot 5

Drive port: 1, Channel: 1, ID: 44/0x9F  
Drive port: 2, Channel: 2, ID: 44/0x9F  
Drive path redundancy: OK  
Status: Optimal  
Raw capacity: 33.902 GB  
Usable capacity: 33.862 GB  
Current data rate: 2 Gbps  
Product ID: ST336753FC F  
Firmware version: B953  
Serial number: 3HX0HQVZ000073392DX6  
Vendor: IBM-ESXS  
Date of manufacture: April 5, 2003  
World-wide name: 20:00:00:04:cf:f9:e2:73  
Mode: Assigned  
Associated array: Array 3

Drive at Enclosure 25, Slot 6

Drive port: 1, Channel: 2, ID: 45/0x9E  
Drive port: 2, Channel: 1, ID: 45/0x9E  
Drive path redundancy: OK  
Status: Optimal  
Raw capacity: 33.902 GB  
Usable capacity: 33.862 GB  
Current data rate: 2 Gbps  
Product ID: ST336753FC F  
Firmware version: B953  
Serial number: 3HX0HMPG00007339SNY2  
Vendor: IBM-ESXS  
Date of manufacture: April 5, 2003  
World-wide name: 20:00:00:04:cf:f9:f5:1f  
Mode: Assigned  
Associated array: Array 3

Drive at Enclosure 25, Slot 7

Drive port: 1, Channel: 1, ID: 46/0x9D  
Drive port: 2, Channel: 2, ID: 46/0x9D  
Drive path redundancy: OK  
Status: Optimal  
Raw capacity: 33.902 GB  
Usable capacity: 33.862 GB  
Current data rate: 2 Gbps  
Product ID: ST336753FC F  
Firmware version: B953  
Serial number: 3HX0HSNH00007339RGSB  
Vendor: IBM-ESXS  
Date of manufacture: April 5, 2003  
World-wide name: 20:00:00:04:cf:f9:e1:f2  
Mode: Assigned  
Associated array: Array 3

Drive at Enclosure 25, Slot 8

Drive port: 1, Channel: 2, ID: 47/0x9B  
Drive port: 2, Channel: 1, ID: 47/0x9B  
Drive path redundancy: OK  
Status: Optimal  
Raw capacity: 33.902 GB  
Usable capacity: 33.862 GB  
Current data rate: 2 Gbps  
Product ID: ST336753FC F  
Firmware version: B953  
Serial number: 3HX0HJCC00007339GMHM  
Vendor: IBM-ESXS  
Date of manufacture: April 5, 2003  
World-wide name: 20:00:00:04:cf:f9:e1:fc  
Mode: Assigned  
Associated array: Array 3

Drive at Enclosure 25, Slot 9

Drive port: 1, Channel: 1, ID: 85/0x4F  
Drive port: 2, Channel: 2, ID: 85/0x4F  
Drive path redundancy: OK  
Status: Optimal  
Raw capacity: 33.902 GB  
Usable capacity: 33.862 GB  
Current data rate: 2 Gbps  
Product ID: ST336753FC F  
Firmware version: B953  
Serial number: 3HX0HML000073405A6T  
Vendor: IBM-ESXS  
Date of manufacture: April 5, 2003  
World-wide name: 20:00:00:04:cf:f9:fc:04  
Mode: Assigned  
Associated array: Array 3

Drive at Enclosure 25, Slot 10

Drive port: 1, Channel: 2, ID: 101/0x33  
Drive port: 2, Channel: 1, ID: 101/0x33  
Drive path redundancy: OK  
Status: Optimal  
Raw capacity: 33.902 GB  
Usable capacity: 33.862 GB  
Current data rate: 2 Gbps  
Product ID: ST336753FC F  
Firmware version: B953  
Serial number: 3HX0K54W00007339SP69  
Vendor: IBM-ESXS  
Date of manufacture: April 5, 2003  
World-wide name: 20:00:00:04:cf:f9:f5:17  
Mode: Assigned  
Associated array: Array 3

Drive at Enclosure 25, Slot 11

Drive port: 1, Channel: 1, ID: 69/0x6B  
Drive port: 2, Channel: 2, ID: 69/0x6B  
Drive path redundancy: OK  
Status: Optimal  
Raw capacity: 33.902 GB  
Usable capacity: 33.862 GB  
Current data rate: 2 Gbps  
Product ID: ST336753FC F  
Firmware version: B953  
Serial number: 3HX0HRK00000734058EG  
Vendor: IBM-ESXS  
Date of manufacture: April 5, 2003  
World-wide name: 20:00:00:04:cf:f9:e7:a9  
Mode: Assigned  
Associated array: Array 3

Drive at Enclosure 25, Slot 12

Drive port: 1, Channel: 2, ID: 77/0x5A  
Drive port: 2, Channel: 1, ID: 77/0x5A  
Drive path redundancy: OK  
Status: Optimal  
Raw capacity: 33.902 GB  
Usable capacity: 33.862 GB  
Current data rate: 2 Gbps  
Product ID: ST336753FC F  
Firmware version: B953  
Serial number: 3HX0K78N00007340X5JU  
Vendor: IBM-ESXS  
Date of manufacture: April 5, 2003  
World-wide name: 20:00:00:04:cf:f9:e6:ae  
Mode: Assigned  
Associated array: Array 3

Drive at Enclosure 25, Slot 13

Drive port: 1, Channel: 1, ID: 93/0x45  
Drive port: 2, Channel: 2, ID: 93/0x45  
Drive path redundancy: OK  
Status: Optimal  
Raw capacity: 33.902 GB  
Usable capacity: 33.862 GB  
Current data rate: 2 Gbps  
Product ID: ST336753FC F  
Firmware version: B953  
Serial number: 3HX0JRKD00007340GTWU  
Vendor: IBM-ESXS  
Date of manufacture: April 5, 2003  
World-wide name: 20:00:00:04:cf:f9:f5:f2  
Mode: Assigned  
Associated array: Array 3

Drive at Enclosure 25, Slot 14

Drive port: 1, Channel: 2, ID: 109/0x29  
Drive port: 2, Channel: 1, ID: 109/0x29  
Drive path redundancy: OK  
Status: Optimal  
Raw capacity: 33.902 GB  
Usable capacity: 33.862 GB  
Current data rate: 2 Gbps  
Product ID: ST336753FC F  
Firmware version: B953  
Serial number: 3HX0JR9S00007340GTX7  
Vendor: IBM-ESXS  
Date of manufacture: April 5, 2003  
World-wide name: 20:00:00:04:cf:f9:f5:d5  
Mode: Assigned  
Associated array: Array 3

Drive at Enclosure 26, Slot 1

Drive port: 1, Channel: 1, ID: 48/0x98  
Drive port: 2, Channel: 2, ID: 48/0x98  
Drive path redundancy: OK  
Status: Optimal  
Raw capacity: 33.902 GB  
Usable capacity: 33.862 GB  
Current data rate: 2 Gbps  
Product ID: ST336753FC F  
Firmware version: B953  
Serial number: 3HX0D60V000073368HZC  
Vendor: IBM-ESXS  
Date of manufacture: March 4, 2003  
World-wide name: 20:00:00:04:cf:42:60:80  
Mode: Assigned  
Associated array: Array 4

Drive at Enclosure 26, Slot 2

Drive port: 1, Channel: 2, ID: 49/0x97  
Drive port: 2, Channel: 1, ID: 49/0x97  
Drive path redundancy: OK  
Status: Optimal  
Raw capacity: 33.902 GB  
Usable capacity: 33.862 GB  
Current data rate: 2 Gbps  
Product ID: ST336753FC F  
Firmware version: B953  
Serial number: 3HX0CVJA000073341F89  
Vendor: IBM-ESXS  
Date of manufacture: March 4, 2003  
World-wide name: 20:00:00:04:cf:42:57:f4  
Mode: Assigned  
Associated array: Array 4

Drive at Enclosure 26, Slot 3

Drive port: 1, Channel: 1, ID: 50/0x90  
Drive port: 2, Channel: 2, ID: 50/0x90  
Drive path redundancy: OK  
Status: Optimal  
Raw capacity: 33.902 GB  
Usable capacity: 33.862 GB  
Current data rate: 2 Gbps  
Product ID: ST336753FC F  
Firmware version: B953  
Serial number: 3HX0H46B000073393G4Y  
Vendor: IBM-ESXS  
Date of manufacture: March 31, 2003  
World-wide name: 20:00:00:04:cf:f9:47:1d  
Mode: Assigned  
Associated array: Array 4

Drive at Enclosure 26, Slot 4

Drive port: 1, Channel: 2, ID: 51/0x8F  
Drive port: 2, Channel: 1, ID: 51/0x8F  
Drive path redundancy: OK  
Status: Optimal  
Raw capacity: 33.902 GB  
Usable capacity: 33.862 GB  
Current data rate: 2 Gbps  
Product ID: ST336753FC F  
Firmware version: B953  
Serial number: 3HX0ALFK00007335SYNO  
Vendor: IBM-ESXS  
Date of manufacture: March 4, 2003  
World-wide name: 20:00:00:04:cf:42:60:93  
Mode: Assigned  
Associated array: Array 4

Drive at Enclosure 26, Slot 5

Drive port: 1, Channel: 1, ID: 52/0x88  
Drive port: 2, Channel: 2, ID: 52/0x88  
Drive path redundancy: OK  
Status: Optimal  
Raw capacity: 33.902 GB  
Usable capacity: 33.862 GB  
Current data rate: 2 Gbps  
Product ID: ST336753FC F  
Firmware version: B953  
Serial number: 3HX0CSYB00007335SYMN  
Vendor: IBM-ESXS  
Date of manufacture: March 4, 2003  
World-wide name: 20:00:00:04:cf:42:5d:73  
Mode: Assigned  
Associated array: Array 4

Drive at Enclosure 26, Slot 6

Drive port: 1, Channel: 2, ID: 53/0x84  
Drive port: 2, Channel: 1, ID: 53/0x84  
Drive path redundancy: OK  
Status: Optimal  
Raw capacity: 33.902 GB  
Usable capacity: 33.862 GB  
Current data rate: 2 Gbps  
Product ID: ST336753FC F  
Firmware version: B953  
Serial number: 3HX0D92W00007335SYKE  
Vendor: IBM-ESXS  
Date of manufacture: March 4, 2003  
World-wide name: 20:00:00:04:cf:42:60:f4  
Mode: Assigned  
Associated array: Array 4

Drive at Enclosure 26, Slot 7

Drive port: 1, Channel: 1, ID: 54/0x82  
Drive port: 2, Channel: 2, ID: 54/0x82  
Drive path redundancy: OK  
Status: Optimal  
Raw capacity: 33.902 GB  
Usable capacity: 33.862 GB  
Current data rate: 2 Gbps  
Product ID: ST336753FC F  
Firmware version: B953  
Serial number: 3HX0D7SA000073368NXX  
Vendor: IBM-ESXS  
Date of manufacture: March 4, 2003  
World-wide name: 20:00:00:04:cf:42:5b:b4  
Mode: Assigned  
Associated array: Array 4

Drive at Enclosure 26, Slot 8

Drive port: 1, Channel: 2, ID: 55/0x81  
Drive port: 2, Channel: 1, ID: 55/0x81  
Drive path redundancy: OK  
Status: Optimal  
Raw capacity: 33.902 GB  
Usable capacity: 33.862 GB  
Current data rate: 2 Gbps  
Product ID: ST336753FC F  
Firmware version: B953  
Serial number: 3HX0CVBA00007335SYFE  
Vendor: IBM-ESXS  
Date of manufacture: March 4, 2003  
World-wide name: 20:00:00:04:cf:42:5c:09  
Mode: Assigned  
Associated array: Array 4

Drive at Enclosure 26, Slot 9

Drive port: 1, Channel: 1, ID: 86/0x4D  
Drive port: 2, Channel: 2, ID: 86/0x4D  
Drive path redundancy: OK  
Status: Optimal  
Raw capacity: 33.902 GB  
Usable capacity: 33.862 GB  
Current data rate: 2 Gbps  
Product ID: ST336753FC F  
Firmware version: B953  
Serial number: 3HX0CTGE00007335SYBX  
Vendor: IBM-ESXS  
Date of manufacture: March 4, 2003  
World-wide name: 20:00:00:04:cf:42:5b:c7  
Mode: Assigned  
Associated array: Array 4

Drive at Enclosure 26, Slot 10

Drive port: 1, Channel: 2, ID: 102/0x32  
Drive port: 2, Channel: 1, ID: 102/0x32  
Drive path redundancy: OK  
Status: Optimal  
Raw capacity: 33.902 GB  
Usable capacity: 33.862 GB  
Current data rate: 2 Gbps  
Product ID: ST336753FC F  
Firmware version: B953  
Serial number: 3HX0C62H00007335SYJU  
Vendor: IBM-ESXS  
Date of manufacture: March 4, 2003  
World-wide name: 20:00:00:04:cf:42:5d:ff  
Mode: Assigned  
Associated array: Array 4

Drive at Enclosure 26, Slot 11

Drive port: 1, Channel: 1, ID: 70/0x6A  
Drive port: 2, Channel: 2, ID: 70/0x6A  
Drive path redundancy: OK  
Status: Optimal  
Raw capacity: 33.902 GB  
Usable capacity: 33.862 GB  
Current data rate: 2 Gbps  
Product ID: ST336753FC F  
Firmware version: B953  
Serial number: 3HX0D60W000073368NWZ  
Vendor: IBM-ESXS  
Date of manufacture: March 4, 2003  
World-wide name: 20:00:00:04:cf:42:60:5c  
Mode: Assigned  
Associated array: Array 4

Drive at Enclosure 26, Slot 12



Drive port: 1, Channel: 2, ID: 78/0x59  
Drive port: 2, Channel: 1, ID: 78/0x59  
Drive path redundancy: OK  
Status: Optimal  
Raw capacity: 33.902 GB  
Usable capacity: 33.862 GB  
Current data rate: 2 Gbps  
Product ID: ST336753FC F  
Firmware version: B953  
Serial number: 3HX0CV5D00007335SY9K  
Vendor: IBM-ESXS  
Date of manufacture: March 4, 2003  
World-wide name: 20:00:00:04:cf:42:5c:08  
Mode: Assigned  
Associated array: Array 4

Drive at Enclosure 26, Slot 13

Drive port: 1, Channel: 1, ID: 94/0x43  
Drive port: 2, Channel: 2, ID: 94/0x43  
Drive path redundancy: OK  
Status: Optimal  
Raw capacity: 33.902 GB  
Usable capacity: 33.862 GB  
Current data rate: 2 Gbps  
Product ID: ST336753FC F  
Firmware version: B953  
Serial number: 3HX0ALF900007335SYJ6  
Vendor: IBM-ESXS  
Date of manufacture: March 4, 2003  
World-wide name: 20:00:00:04:cf:42:60:67  
Mode: Assigned  
Associated array: Array 4

Drive at Enclosure 26, Slot 14

Drive port: 1, Channel: 2, ID: 110/0x27  
Drive port: 2, Channel: 1, ID: 110/0x27  
Drive path redundancy: OK  
Status: Optimal  
Raw capacity: 33.902 GB  
Usable capacity: 33.862 GB  
Current data rate: 2 Gbps  
Product ID: ST336753FC F  
Firmware version: B953  
Serial number: 3HX08GQ00007335SY7J  
Vendor: IBM-ESXS  
Date of manufacture: March 4, 2003  
World-wide name: 20:00:00:04:cf:42:59:d9  
Mode: Assigned  
Associated array: Array 4

Drive at Enclosure 27, Slot 1

Drive port: 1, Channel: 1, ID: 56/0x80  
Drive port: 2, Channel: 2, ID: 56/0x80  
Drive path redundancy: OK  
Status: Optimal  
Raw capacity: 33.902 GB  
Usable capacity: 33.862 GB  
Current data rate: 2 Gbps  
Product ID: ST336753FC F  
Firmware version: B953  
Serial number: 3HX0DCPL000073368NYJ  
Vendor: IBM-ESXS  
Date of manufacture: March 4, 2003  
World-wide name: 20:00:00:04:cf:42:60:2a  
Mode: Assigned  
Associated array: Array 4

Drive at Enclosure 27, Slot 2

Drive port: 1, Channel: 2, ID: 57/0x7C  
Drive port: 2, Channel: 1, ID: 57/0x7C  
Drive path redundancy: OK  
Status: Optimal  
Raw capacity: 33.902 GB  
Usable capacity: 33.862 GB  
Current data rate: 2 Gbps  
Product ID: ST336753FC F  
Firmware version: B953  
Serial number: 3HX0D814000073356JYR  
Vendor: IBM-ESXS  
Date of manufacture: March 4, 2003  
World-wide name: 20:00:00:04:cf:42:5d:b5  
Mode: Assigned  
Associated array: Array 4

Drive at Enclosure 27, Slot 3

Drive port: 1, Channel: 1, ID: 58/0x7A  
Drive port: 2, Channel: 2, ID: 58/0x7A  
Drive path redundancy: OK  
Status: Optimal  
Raw capacity: 33.902 GB  
Usable capacity: 33.862 GB  
Current data rate: 2 Gbps  
Product ID: ST336753FC F  
Firmware version: B953  
Serial number: 3HX0DLM700007335MFX2  
Vendor: IBM-ESXS  
Date of manufacture: March 4, 2003  
World-wide name: 20:00:00:04:cf:42:62:eb  
Mode: Assigned  
Associated array: Array 4

Drive at Enclosure 27, Slot 4

Drive port: 1, Channel: 2, ID: 59/0x79  
Drive port: 2, Channel: 1, ID: 59/0x79  
Drive path redundancy: OK  
Status: Optimal  
Raw capacity: 33.902 GB  
Usable capacity: 33.862 GB  
Current data rate: 2 Gbps  
Product ID: ST336753FC F  
Firmware version: B953  
Serial number: 3HX0CT200007335SYUH  
Vendor: IBM-ESXS  
Date of manufacture: March 4, 2003  
World-wide name: 20:00:00:04:cf:42:5b:39  
Mode: Assigned  
Associated array: Array 4

Drive at Enclosure 27, Slot 5

Drive port: 1, Channel: 1, ID: 60/0x76  
Drive port: 2, Channel: 2, ID: 60/0x76  
Drive path redundancy: OK  
Status: Optimal  
Raw capacity: 33.902 GB  
Usable capacity: 33.862 GB  
Current data rate: 2 Gbps  
Product ID: ST336753FC F  
Firmware version: B953  
Serial number: 3HX0DLVB000073368NWE  
Vendor: IBM-ESXS  
Date of manufacture: March 4, 2003  
World-wide name: 20:00:00:04:cf:42:64:2b  
Mode: Assigned  
Associated array: Array 4

Drive at Enclosure 27, Slot 6

Drive port: 1, Channel: 2, ID: 61/0x75  
Drive port: 2, Channel: 1, ID: 61/0x75  
Drive path redundancy: OK  
Status: Optimal  
Raw capacity: 33.902 GB  
Usable capacity: 33.862 GB  
Current data rate: 2 Gbps  
Product ID: ST336753FC F  
Firmware version: B953  
Serial number: 3HX0D89E00007335SYRL  
Vendor: IBM-ESXS  
Date of manufacture: March 4, 2003  
World-wide name: 20:00:00:04:cf:42:5b:3e  
Mode: Assigned  
Associated array: Array 4

Drive at Enclosure 27, Slot 7

Drive port: 1, Channel: 1, ID: 62/0x74  
Drive port: 2, Channel: 2, ID: 62/0x74  
Drive path redundancy: OK  
Status: Optimal  
Raw capacity: 33.902 GB  
Usable capacity: 33.862 GB  
Current data rate: 2 Gbps  
Product ID: ST336753FC F  
Firmware version: B953  
Serial number: 3HX0841S0000733524LX  
Vendor: IBM-ESXS  
Date of manufacture: March 4, 2003  
World-wide name: 20:00:00:04:cf:42:60:4f  
Mode: Assigned  
Associated array: Array 4

Drive at Enclosure 27, Slot 8

Drive port: 1, Channel: 2, ID: 63/0x73  
Drive port: 2, Channel: 1, ID: 63/0x73  
Drive path redundancy: OK  
Status: Optimal  
Raw capacity: 33.902 GB  
Usable capacity: 33.862 GB  
Current data rate: 2 Gbps  
Product ID: ST336753FC F  
Firmware version: B953  
Serial number: 3HX0CSRV000073368NVY  
Vendor: IBM-ESXS  
Date of manufacture: March 4, 2003  
World-wide name: 20:00:00:04:cf:42:59:68  
Mode: Assigned  
Associated array: Array 4

Drive at Enclosure 27, Slot 9

Drive port: 1, Channel: 1, ID: 87/0x4C  
Drive port: 2, Channel: 2, ID: 87/0x4C  
Drive path redundancy: OK  
Status: Optimal  
Raw capacity: 33.902 GB  
Usable capacity: 33.862 GB  
Current data rate: 2 Gbps  
Product ID: ST336753FC F  
Firmware version: B953  
Serial number: 3HX0DLX700007335MG0S  
Vendor: IBM-ESXS  
Date of manufacture: March 4, 2003  
World-wide name: 20:00:00:04:cf:42:62:ee  
Mode: Assigned  
Associated array: Array 4

Drive at Enclosure 27, Slot 10

Drive port: 1, Channel: 2, ID: 103/0x31  
Drive port: 2, Channel: 1, ID: 103/0x31  
Drive path redundancy: OK  
Status: Optimal  
Raw capacity: 33.902 GB  
Usable capacity: 33.862 GB  
Current data rate: 2 Gbps  
Product ID: ST336753FC F  
Firmware version: B953  
Serial number: 3HX0CNRE000073368HX3  
Vendor: IBM-ESXS  
Date of manufacture: March 4, 2003  
World-wide name: 20:00:00:04:cf:42:64:87  
Mode: Assigned  
Associated array: Array 4

Drive at Enclosure 27, Slot 11

Drive port: 1, Channel: 1, ID: 71/0x69  
Drive port: 2, Channel: 2, ID: 71/0x69  
Drive path redundancy: OK  
Status: Optimal  
Raw capacity: 33.902 GB  
Usable capacity: 33.862 GB  
Current data rate: 2 Gbps  
Product ID: ST336753FC F  
Firmware version: B953  
Serial number: 3HX0DC04000073340TQD  
Vendor: IBM-ESXS  
Date of manufacture: March 4, 2003  
World-wide name: 20:00:00:04:cf:42:60:bf  
Mode: Assigned  
Associated array: Array 4

Drive at Enclosure 27, Slot 12

Drive port: 1, Channel: 2, ID: 79/0x56  
Drive port: 2, Channel: 1, ID: 79/0x56  
Drive path redundancy: OK  
Status: Optimal  
Raw capacity: 33.902 GB  
Usable capacity: 33.862 GB  
Current data rate: 2 Gbps  
Product ID: ST336753FC F  
Firmware version: B953  
Serial number: 3HX0D9AY000073368HTG  
Vendor: IBM-ESXS  
Date of manufacture: March 4, 2003  
World-wide name: 20:00:00:04:cf:42:60:a1  
Mode: Assigned  
Associated array: Array 4

Drive at Enclosure 27, Slot 13

Drive port: 1, Channel: 1, ID: 95/0x3C  
Drive port: 2, Channel: 2, ID: 95/0x3C  
Drive path redundancy: OK  
Status: Optimal  
Raw capacity: 33.902 GB  
Usable capacity: 33.862 GB  
Current data rate: 2 Gbps  
Product ID: ST336753FC F  
Firmware version: B953  
Serial number: 3HX0T9SW00007345DYU4  
Vendor: IBM-ESXS  
Date of manufacture: May 16, 2003  
World-wide name: 20:00:00:0c:50:20:9b:52  
Mode: Assigned  
Associated array: Array 4

Drive at Enclosure 27, Slot 14

Drive port: 1, Channel: 2, ID: 111/0x26  
Drive port: 2, Channel: 1, ID: 111/0x26  
Drive path redundancy: OK  
Status: Optimal  
Raw capacity: 33.902 GB  
Usable capacity: 33.862 GB  
Current data rate: 2 Gbps  
Product ID: ST336753FC F  
Firmware version: B953  
Serial number: 3HX0CSXY000073368HU1  
Vendor: IBM-ESXS  
Date of manufacture: March 4, 2003  
World-wide name: 20:00:00:04:cf:42:5c:d8  
Mode: Assigned  
Associated array: Array 4

ENCLOSURES-----

Controller Enclosure Overall Component Information

Minihub data rate mismatch: No  
Fan canister: Optimal  
Fan canister: Optimal  
Battery status: Optimal  
Age: 404 day(s)  
Days until replacement: 765 day(s)  
Power supply canister  
Status: Optimal  
Power supply canister  
Status: Optimal  
Temperature: Optimal  
Host mini-hub canister  
Status: Optimal  
Location: Controller B - Port 1  
Serial number: SN 1T14556494  
Part number: PN 19K1270  
Vendor: VN IBM  
Date of manufacture: November 1, 2001  
SFP  
Status: Optimal  
Location: In connection  
Supported data rate(s): 1 Gbps, 2 Gbps  
Link length: Intermediate  
Connector: LC  
Transmitter type: Shortwave Laser w/o OFC  
Transmission media: TM Multi-mode 50m(M5) TM Multi-mode

62.5m(M6)

IEEE company ID: 08 00 5a  
Revision: AA10  
Part number: IBM42P21SNY  
Serial number: 53P1476000366  
Vendor: IBM  
Date of manufacture: December 1, 2001  
Host mini-hub canister  
Status: Optimal  
Location: Controller B - Port 2  
Serial number: SN 1T14252759  
Part number: PN 19K1270  
Vendor: VN IBM  
Date of manufacture: November 1, 2001  
Host mini-hub canister  
Status: Optimal  
Location: Controller A - Port 1  
Serial number: SN 1T14556632  
Part number: PN 19K1270  
Vendor: VN IBM  
Date of manufacture: November 1, 2001  
SFP  
Status: Optimal  
Location: In connection

Supported data rate(s): 1 Gbps, 2 Gbps  
Link length: Intermediate  
Connector: LC  
Transmitter type: Shortwave Laser w/o OFC  
Transmission media: TM Multi-mode 50m(M5) TM Multi-mode  
62.5m(M6)

IEEE company ID: 08 00 5a  
Revision: AA10  
Part number: IBM42P21SNY  
Serial number: 53P14760002P8  
Vendor: IBM  
Date of manufacture: December 2, 2001

Host mini-hub canister

Status: Optimal  
Location: Controller A - Port 2  
Serial number: SN 1T14252885  
Part number: PN 19K1270  
Vendor: VN IBM  
Date of manufacture: November 1, 2001

Drive mini-hub canister

Status: Optimal  
Location: Channel 1  
Serial number: SN 1T14556446  
Part number: PN 19K1270  
Vendor: VN IBM  
Date of manufacture: November 1, 2001

SFP

Status: Optimal  
Location: In connection  
Supported data rate(s): 1 Gbps, 2 Gbps  
Link length: Intermediate  
Connector: LC  
Transmitter type: Shortwave Laser w/o OFC  
Transmission media: TM Multi-mode 50m(M5) TM Multi-mode

62.5m(M6)

IEEE company ID: 08 00 5a  
Revision: AA10  
Part number: IBM42P21SNY  
Serial number: 53P14760003BL  
Vendor: IBM  
Date of manufacture: December 2, 2001

Drive mini-hub canister

Status: Optimal  
Location: Channel 2  
Serial number: SN 1T14556592  
Part number: PN 19K1270  
Vendor: VN IBM  
Date of manufacture: November 1, 2001

SFP

Status: Optimal  
Location: Out connection  
Supported data rate(s): 1 Gbps, 2 Gbps  
Link length: Intermediate  
Connector: LC  
Transmitter type: Shortwave Laser w/o OFC  
Transmission media: TM Multi-mode 50m(M5) TM Multi-mode

62.5m(M6)

IEEE company ID: 08 00 5a  
Revision: AA10  
Part number: IBM42P21SNY  
Serial number: 53P147600037F  
Vendor: IBM  
Date of manufacture: December 1, 2001

Drive mini-hub canister

Status: Optimal  
Location: Channel 3  
Serial number: SN 1T14253240  
Part number: PN 19K1270

Vendor: VN IBM  
Date of manufacture: November 1, 2001  
SFP

Status: Optimal  
Location: In connection  
Supported data rate(s): 1 Gbps, 2 Gbps  
Link length: Intermediate  
Connector: LC  
Transmitter type: Shortwave Laser w/o OFC  
Transmission media: TM Multi-mode 50m(M5) TM Multi-mode

62.5m(M6)

IEEE company ID: 08 00 5a  
Revision: AA10  
Part number: IBM42P21SNY  
Serial number: 53P147600037X  
Vendor: IBM  
Date of manufacture: December 2, 2001

Drive mini-hub canister

Status: Optimal  
Location: Channel 4  
Serial number: SN 1T14252810  
Part number: PN 19K1270  
Vendor: VN IBM  
Date of manufacture: November 1, 2001  
SFP

Status: Optimal  
Location: Out connection  
Supported data rate(s): 1 Gbps, 2 Gbps  
Link length: Intermediate  
Connector: LC  
Transmitter type: Shortwave Laser w/o OFC  
Transmission media: TM Multi-mode 50m(M5) TM Multi-mode

62.5m(M6)

IEEE company ID: 08 00 5a  
Revision: AA10  
Part number: IBM42P21SNY  
Serial number: 53P14760003HM  
Vendor: IBM  
Date of manufacture: December 2, 2001

Drive Enclosure 12 Overall Component Information

Part number: PN 19K1288  
Serial number: SN 23c2350  
Vendor: VN IBM  
Date of manufacture: May 1, 2003  
Enclosure path redundancy: OK  
Fan canister: Optimal  
Fan canister: Optimal  
Power supply canister  
Status: Optimal  
Part number: PN 19K1289  
Serial number: SN A6844D009Y0E  
Vendor: VN IBM  
Date of manufacture: October 1, 2002

Power supply canister  
Status: Optimal  
Part number: PN 19K1289  
Serial number: SN A6844D009M0E  
Vendor: VN IBM  
Date of manufacture: October 1, 2002

Temperature: Optimal  
Temperature: Optimal

ESM card

Status: Optimal  
Firmware version: 9325  
Maximum data rate: 2 Gbps  
Current data rate: 2 Gbps  
Location: A (left canister)

Card communication: OK  
Product ID: EXP700  
Part number: PN 19K1287  
Serial number: SN 1T31463138  
Vendor: IBM  
Date of manufacture: April 1, 2003  
SFP

Status: Optimal  
Location: In connection  
Supported data rate(s): 1 Gbps, 2 Gbps  
Link length: Intermediate  
Connector: LC  
Transmitter type: Shortwave Laser w/o OFC  
Transmission media: TM Multi-mode 50m(M5) TM Multi-mode

62.5m(M6)

IEEE company ID: 08 00 5a  
Revision: AA10  
Part number: IBM42P21SNY  
Serial number: 53P147600FMSJ  
Vendor: IBM  
Date of manufacture: October 16, 2002

SFP

Status: Optimal  
Location: Out connection  
Supported data rate(s): 1 Gbps, 2 Gbps  
Link length: Intermediate  
Connector: LC  
Transmitter type: Shortwave Laser w/o OFC  
Transmission media: TM Multi-mode 50m(M5) TM Multi-mode

62.5m(M6)

IEEE company ID: 08 00 5a  
Revision: AA10  
Part number: IBM42P21SNY  
Serial number: 53P147600FS6N  
Vendor: IBM  
Date of manufacture: October 17, 2002

ESM card

Status: Optimal  
Firmware version: 9325  
Maximum data rate: 2 Gbps  
Current data rate: 2 Gbps  
Location: B (right canister)  
Card communication: OK  
Product ID: EXP700  
Part number: PN 19K1287  
Serial number: SN 1T31463144  
Vendor: IBM  
Date of manufacture: April 1, 2003  
SFP  
Status: Optimal  
Location: Out connection  
Supported data rate(s): 1 Gbps, 2 Gbps  
Link length: Intermediate  
Connector: LC  
Transmitter type: Shortwave Laser w/o OFC  
Transmission media: TM Multi-mode 50m(M5) TM Multi-mode

62.5m(M6)

IEEE company ID: 08 00 5a  
Revision: AA10  
Part number: IBM42P21SNY  
Serial number: 53P147600FNSJ  
Vendor: IBM  
Date of manufacture: October 16, 2002

Drive Enclosure 20 Overall Component Information

Part number: PN 19K1288  
Serial number: SN 23A1713  
Vendor: VN IBM

Date of manufacture: September 1, 2002  
Enclosure path redundancy: OK  
Fan canister: Optimal  
Fan canister: Optimal  
Power supply canister  
Status: Optimal  
Part number: PN 19K1289  
Serial number: SN A6844400MH0E  
Vendor: VN IBM  
Date of manufacture: Not available  
Power supply canister  
Status: Optimal  
Part number: PN 19K1289  
Serial number: SN A6844400MF0E  
Vendor: VN IBM  
Date of manufacture: Not available  
Temperature: Optimal  
Temperature: Optimal  
ESM card  
Status: Optimal  
Firmware version: 9325  
Maximum data rate: 2 Gbps  
Current data rate: 2 Gbps  
Location: A (left canister)  
Card communication: OK  
Product ID: EXP700  
Part number: PN 19K1287  
Serial number: SN 1T23251686  
Vendor: IBM  
Date of manufacture: August 1, 2002  
SFP  
Status: Optimal  
Location: In connection  
Supported data rate(s): 1 Gbps, 2 Gbps  
Link length: Intermediate  
Connector: LC  
Transmitter type: Shortwave Laser w/o OFC  
Transmission media: TM Multi-mode 50m(M5) TM Multi-mode  
62.5m(M6)  
IEEE company ID: 08 00 5a  
Revision: AA10  
Part number: IBM42P21SNY  
Serial number: 53P1476009T2P  
Vendor: IBM  
Date of manufacture: June 29, 2002  
SFP  
Status: Optimal  
Location: Out connection  
Supported data rate(s): 1 Gbps, 2 Gbps  
Link length: Intermediate  
Connector: LC  
Transmitter type: Shortwave Laser w/o OFC  
Transmission media: TM Multi-mode 50m(M5) TM Multi-mode  
62.5m(M6)  
IEEE company ID: 08 00 5a  
Revision: AA10  
Part number: IBM42P21SNY  
Serial number: 53P1476006A89  
Vendor: IBM  
Date of manufacture: April 13, 2002  
ESM card  
Status: Optimal  
Firmware version: 9325  
Maximum data rate: 2 Gbps  
Current data rate: 2 Gbps  
Location: B (right canister)  
Card communication: OK  
Product ID: EXP700

Part number: PN 19K1287  
Serial number: SN 1T23772127  
Vendor: IBM  
Date of manufacture: September 1, 2002  
SFP  
Status: Optimal  
Location: In connection  
Supported data rate(s): 1 Gbps, 2 Gbps  
Link length: Intermediate  
Connector: LC  
Transmitter type: Shortwave Laser w/o OFC  
Transmission media: TM Multi-mode 50m(M5) TM Multi-mode  
62.5m(M6)  
IEEE company ID: 08 00 5a  
Revision: AA10  
Part number: IBM42P21SNY  
Serial number: 53P147600FMW4  
Vendor: IBM  
Date of manufacture: October 16, 2002  
SFP  
Status: Optimal  
Location: Out connection  
Supported data rate(s): 1 Gbps, 2 Gbps  
Link length: Intermediate  
Connector: LC  
Transmitter type: Shortwave Laser w/o OFC  
Transmission media: TM Multi-mode 50m(M5) TM Multi-mode  
62.5m(M6)  
IEEE company ID: 08 00 5a  
Revision: AA10  
Part number: IBM42P21SNY  
Serial number: 53P1476009TPT  
Vendor: IBM  
Date of manufacture: June 29, 2002  
Drive Enclosure 21 Overall Component Information  
Part number: PN 19K1288  
Serial number: SN 23A1714  
Vendor: VN IBM  
Date of manufacture: September 1, 2002  
Enclosure path redundancy: OK  
Fan canister: Optimal  
Fan canister: Optimal  
Power supply canister  
Status: Optimal  
Part number: PN 19K1289  
Serial number: SN A6844400PR0E  
Vendor: VN IBM  
Date of manufacture: Not available  
Power supply canister  
Status: Optimal  
Part number: PN 19K1289  
Serial number: SN A6844400PA0E  
Vendor: VN IBM  
Date of manufacture: Not available  
Temperature: Optimal  
Temperature: Optimal  
ESM card  
Status: Optimal  
Firmware version: 9325  
Maximum data rate: 2 Gbps  
Current data rate: 2 Gbps  
Location: A (left canister)  
Card communication: OK  
Product ID: EXP700  
Part number: PN 19K1287  
Serial number: SN 1T23251624  
Vendor: IBM

Date of manufacture: August 1, 2002  
SFP  
Status: Optimal  
Location: In connection  
Supported data rate(s): 1 Gbps, 2 Gbps  
Link length: Intermediate  
Connector: LC  
Transmitter type: Shortwave Laser w/o OFC  
Transmission media: TM Multi-mode 50m(M5) TM Multi-mode  
62.5m(M6)  
IEEE company ID: 08 00 5a  
Revision: AA10  
Part number: IBM42P21SNY  
Serial number: 53P14760069ET  
Vendor: IBM  
Date of manufacture: April 13, 2002  
SFP  
Status: Optimal  
Location: Out connection  
Supported data rate(s): 1 Gbps, 2 Gbps  
Link length: Intermediate  
Connector: LC  
Transmitter type: Shortwave Laser w/o OFC  
Transmission media: TM Multi-mode 50m(M5) TM Multi-mode  
62.5m(M6)  
IEEE company ID: 08 00 5a  
Revision: AA10  
Part number: IBM42P21SNY  
Serial number: 53P147600037H  
Vendor: IBM  
Date of manufacture: December 1, 2001  
ESM card  
Status: Optimal  
Firmware version: 9325  
Maximum data rate: 2 Gbps  
Current data rate: 2 Gbps  
Location: B (right canister)  
Card communication: OK  
Product ID: EXP700  
Part number: PN 19K1287  
Serial number: SN 1T23251689  
Vendor: IBM  
Date of manufacture: August 1, 2002  
SFP  
Status: Optimal  
Location: In connection  
Supported data rate(s): 1 Gbps, 2 Gbps  
Link length: Intermediate  
Connector: LC  
Transmitter type: Shortwave Laser w/o OFC  
Transmission media: TM Multi-mode 50m(M5) TM Multi-mode  
62.5m(M6)  
IEEE company ID: 08 00 5a  
Revision: AA10  
Part number: IBM42P21SNY  
Serial number: 53P1476006A2W  
Vendor: IBM  
Date of manufacture: April 13, 2002  
SFP  
Status: Optimal  
Location: Out connection  
Supported data rate(s): 1 Gbps, 2 Gbps  
Link length: Intermediate  
Connector: LC  
Transmitter type: Shortwave Laser w/o OFC  
Transmission media: TM Multi-mode 50m(M5) TM Multi-mode  
62.5m(M6)  
IEEE company ID: 08 00 5a

Revision: AA10  
Part number: IBM42P21SNY  
Serial number: 53P14760069JF  
Vendor: IBM  
Date of manufacture: April 13, 2002

Drive Enclosure 22 Overall Component Information

Part number: PN 19K1288  
Serial number: SN 23A1722  
Vendor: VN IBM  
Date of manufacture: September 1, 2002  
Enclosure path redundancy: OK  
Fan canister: Optimal  
Fan canister: Optimal  
Power supply canister  
Status: Optimal  
Part number: PN 19K1289  
Serial number: SN A6844400JS0E  
Vendor: VN IBM  
Date of manufacture: Not available  
Power supply canister  
Status: Optimal  
Part number: PN 19K1289  
Serial number: SN A6844400KZ0E  
Vendor: VN IBM  
Date of manufacture: Not available  
Temperature: Optimal  
Temperature: Optimal  
ESM card  
Status: Optimal  
Firmware version: 9325  
Maximum data rate: 2 Gbps  
Current data rate: 2 Gbps  
Location: A (left canister)  
Card communication: OK  
Product ID: EXP700  
Part number: PN 19K1287  
Serial number: SN 1T23251634  
Vendor: IBM  
Date of manufacture: August 1, 2002  
SFP  
Status: Optimal  
Location: In connection  
Supported data rate(s): 1 Gbps, 2 Gbps  
Link length: Intermediate  
Connector: LC  
Transmitter type: Shortwave Laser w/o OFC  
Transmission media: TM Multi-mode 50m(M5) TM Multi-mode  
62.5m(M6)  
IEEE company ID: 08 00 5a  
Revision: AA10  
Part number: IBM42P21SNY  
Serial number: 53P14760002RT  
Vendor: IBM  
Date of manufacture: December 2, 2001  
SFP  
Status: Optimal  
Location: Out connection  
Supported data rate(s): 1 Gbps, 2 Gbps  
Link length: Intermediate  
Connector: LC  
Transmitter type: Shortwave Laser w/o OFC  
Transmission media: TM Multi-mode 50m(M5) TM Multi-mode  
62.5m(M6)  
IEEE company ID: 08 00 5a  
Revision: AA10  
Part number: IBM42P21SNY  
Serial number: 53P14760003P4

Vendor: IBM  
Date of manufacture: December 2, 2001  
ESM card  
Status: Optimal  
Firmware version: 9325  
Maximum data rate: 2 Gbps  
Current data rate: 2 Gbps  
Location: B (right canister)  
Card communication: OK  
Product ID: EXP700  
Part number: PN 19K1287  
Serial number: SN 1T23252023  
Vendor: IBM  
Date of manufacture: August 1, 2002  
SFP  
Status: Optimal  
Location: In connection  
Supported data rate(s): 1 Gbps, 2 Gbps  
Link length: Intermediate  
Connector: LC  
Transmitter type: Shortwave Laser w/o OFC  
Transmission media: TM Multi-mode 50m(M5) TM Multi-mode  
62.5m(M6)  
IEEE company ID: 08 00 5a  
Revision: AA10  
Part number: IBM42P21SNY  
Serial number: 53P14760069XP  
Vendor: IBM  
Date of manufacture: April 13, 2002  
SFP  
Status: Optimal  
Location: Out connection  
Supported data rate(s): 1 Gbps, 2 Gbps  
Link length: Intermediate  
Connector: LC  
Transmitter type: Shortwave Laser w/o OFC  
Transmission media: TM Multi-mode 50m(M5) TM Multi-mode  
62.5m(M6)  
IEEE company ID: 08 00 5a  
Revision: AA10  
Part number: IBM42P21SNY  
Serial number: 53P1476006A3S  
Vendor: IBM  
Date of manufacture: April 13, 2002  
Drive Enclosure 23 Overall Component Information  
Part number: PN 19K1288  
Serial number: SN 1T1321417490  
Vendor: VN IBM  
Date of manufacture: September 1, 2001  
Enclosure path redundancy: OK  
Fan canister: Optimal  
Fan canister: Optimal  
Power supply canister  
Status: Optimal  
Part number: PN 19K1289  
Serial number: SN A6842G00WJ0B  
Vendor: VN IBM  
Date of manufacture: August 1, 2001  
Power supply canister  
Status: Optimal  
Part number: PN 19K1289  
Serial number: SN A6842G00EK0B  
Vendor: VN IBM  
Date of manufacture: August 1, 2001  
Temperature: Optimal  
Temperature: Optimal  
ESM card

Status: Optimal  
Firmware version: 9325  
Maximum data rate: 2 Gbps  
Current data rate: 2 Gbps  
Location: A (left canister)  
Card communication: OK  
Product ID: EXP700  
Part number: PN 19K1287  
Serial number: SN 1T20789074  
Vendor: IBM  
Date of manufacture: March 1, 2002  
SFP  
Status: Optimal  
Location: In connection  
Supported data rate(s): 1 Gbps, 2 Gbps  
Link length: Intermediate  
Connector: LC  
Transmitter type: Shortwave Laser w/o OFC  
Transmission media: TM Multi-mode 50m(M5) TM Multi-mode  
62.5m(M6)  
IEEE company ID: 08 00 5a  
Revision: AA10  
Part number: IBM42P21SNY  
Serial number: 53P147600033C  
Vendor: IBM  
Date of manufacture: December 1, 2001  
ESM card  
Status: Optimal  
Firmware version: 9325  
Maximum data rate: 2 Gbps  
Current data rate: 2 Gbps  
Location: B (right canister)  
Card communication: OK  
Product ID: EXP700  
Part number: PN 19K1287  
Serial number: SN 1T20789634  
Vendor: IBM  
Date of manufacture: March 1, 2002  
SFP  
Status: Optimal  
Location: In connection  
Supported data rate(s): 1 Gbps, 2 Gbps  
Link length: Intermediate  
Connector: LC  
Transmitter type: Shortwave Laser w/o OFC  
Transmission media: TM Multi-mode 50m(M5) TM Multi-mode  
62.5m(M6)  
IEEE company ID: 08 00 5a  
Revision: AA10  
Part number: IBM42P21SNY  
Serial number: 53P14760069PE  
Vendor: IBM  
Date of manufacture: April 13, 2002  
SFP  
Status: Optimal  
Location: Out connection  
Supported data rate(s): 1 Gbps, 2 Gbps  
Link length: Intermediate  
Connector: LC  
Transmitter type: Shortwave Laser w/o OFC  
Transmission media: TM Multi-mode 50m(M5) TM Multi-mode  
62.5m(M6)  
IEEE company ID: 08 00 5a  
Revision: AA10  
Part number: IBM42P21SNY  
Serial number: 53P1476000397  
Vendor: IBM  
Date of manufacture: December 2, 2001

Drive Enclosure 24 Overall Component Information

Part number: PN 19K1288  
Serial number: SN 1T1321417472  
Vendor: VN IBM  
Date of manufacture: September 1, 2001  
Enclosure path redundancy: OK  
Fan canister: Optimal  
Fan canister: Optimal  
Power supply canister  
Status: Optimal  
Part number: PN 19K1289  
Serial number: SN A6842G00EC0B  
Vendor: VN IBM  
Date of manufacture: August 1, 2001  
Power supply canister  
Status: Optimal  
Part number: PN 19K1289  
Serial number: SN A6842G00UN0B  
Vendor: VN IBM  
Date of manufacture: August 1, 2001  
Temperature: Optimal  
Temperature: Optimal  
ESM card

Status: Optimal  
Firmware version: 9325  
Maximum data rate: 2 Gbps  
Current data rate: 2 Gbps  
Location: A (left canister)  
Card communication: OK  
Product ID: EXP700  
Part number: PN 19K1287  
Serial number: SN 1T20789597  
Vendor: IBM  
Date of manufacture: March 1, 2002  
SFP  
Status: Optimal  
Location: In connection  
Supported data rate(s): 1 Gbps, 2 Gbps  
Link length: Intermediate  
Connector: LC  
Transmitter type: Shortwave Laser w/o OFC  
Transmission media: TM Multi-mode 50m(M5) TM Multi-mode

62.5m(M6)

IEEE company ID: 08 00 5a  
Revision: AA10  
Part number: IBM42P21SNY  
Serial number: 53P1476006A2Q  
Vendor: IBM  
Date of manufacture: April 13, 2002

SFP

Status: Optimal  
Location: Out connection  
Supported data rate(s): 1 Gbps, 2 Gbps  
Link length: Intermediate  
Connector: LC  
Transmitter type: Shortwave Laser w/o OFC  
Transmission media: TM Multi-mode 50m(M5) TM Multi-mode

62.5m(M6)

IEEE company ID: 08 00 5a  
Revision: AA10  
Part number: IBM42P21SNY  
Serial number: 53P14760069VN  
Vendor: IBM  
Date of manufacture: April 13, 2002

ESM card

Status: Optimal  
Firmware version: 9325

Maximum data rate: 2 Gbps  
Current data rate: 2 Gbps  
Location: B (right canister)  
Card communication: OK  
Product ID: EXP700  
Part number: PN 19K1287  
Serial number: SN 1T20789286  
Vendor: IBM  
Date of manufacture: March 1, 2002  
SFP  
Status: Optimal  
Location: Out connection  
Supported data rate(s): 1 Gbps, 2 Gbps  
Link length: Intermediate  
Connector: LC  
Transmitter type: Shortwave Laser w/o OFC  
Transmission media: TM Multi-mode 50m(M5) TM Multi-mode  
62.5m(M6)  
IEEE company ID: 08 00 5a  
Revision: AA10  
Part number: IBM42P21SNY  
Serial number: 53P14760069WG  
Vendor: IBM  
Date of manufacture: April 13, 2002

Drive Enclosure 25 Overall Component Information

Part number: PN 19K1288  
Serial number: SN 1T1281412332  
Vendor: VN IBM  
Date of manufacture: September 1, 2001  
Enclosure path redundancy: OK  
Fan canister: Optimal  
Fan canister: Optimal  
Power supply canister  
Status: Optimal  
Part number: PN 19K1289  
Serial number: SN A6842C004X0A  
Vendor: VN IBM  
Date of manufacture: July 1, 2001  
Power supply canister  
Status: Optimal  
Part number: PN 19K1289  
Serial number: SN A6842C004W0A  
Vendor: VN IBM  
Date of manufacture: July 1, 2001  
Temperature: Optimal  
Temperature: Optimal  
ESM card

Status: Optimal

Firmware version: 9325  
Maximum data rate: 2 Gbps  
Current data rate: 2 Gbps  
Location: A (left canister)  
Card communication: OK  
Product ID: EXP700  
Part number: PN 19K1287  
Serial number: SN 1T20789143  
Vendor: IBM  
Date of manufacture: March 1, 2002  
SFP

Status: Optimal  
Location: In connection  
Supported data rate(s): 1 Gbps, 2 Gbps  
Link length: Intermediate  
Connector: LC

Transmitter type: Shortwave Laser w/o OFC  
Transmission media: TM Multi-mode 50m(M5) TM Multi-mode  
62.5m(M6)



IEEE company ID: 08 00 5a  
Revision: AA10  
Part number: IBM42P21SNY  
Serial number: 53P14760069K9  
Vendor: IBM  
Date of manufacture: April 13, 2002

SFP

Status: Optimal  
Location: Out connection  
Supported data rate(s): 1 Gbps, 2 Gbps  
Link length: Intermediate  
Connector: LC  
Transmitter type: Shortwave Laser w/o OFC  
Transmission media: TM Multi-mode 50m(M5) TM Multi-mode

62.5m(M6)

IEEE company ID: 08 00 5a  
Revision: AA10  
Part number: IBM42P21SNY  
Serial number: 53P14760069S9  
Vendor: IBM  
Date of manufacture: April 13, 2002

ESM card

Status: Optimal  
Firmware version: 9325  
Maximum data rate: 2 Gbps  
Current data rate: 2 Gbps  
Location: B (right canister)  
Card communication: OK  
Product ID: EXP700  
Part number: PN 19K1287  
Serial number: SN 1T20789379  
Vendor: IBM  
Date of manufacture: March 1, 2002

SFP

Status: Optimal  
Location: In connection  
Supported data rate(s): 1 Gbps, 2 Gbps  
Link length: Intermediate  
Connector: LC  
Transmitter type: Shortwave Laser w/o OFC  
Transmission media: TM Multi-mode 50m(M5) TM Multi-mode

62.5m(M6)

IEEE company ID: 08 00 5a  
Revision: AA10  
Part number: IBM42P21SNY  
Serial number: 53P1476006A19  
Vendor: IBM  
Date of manufacture: April 13, 2002

SFP

Status: Optimal  
Location: Out connection  
Supported data rate(s): 1 Gbps, 2 Gbps  
Link length: Intermediate  
Connector: LC  
Transmitter type: Shortwave Laser w/o OFC  
Transmission media: TM Multi-mode 50m(M5) TM Multi-mode

62.5m(M6)

IEEE company ID: 08 00 5a  
Revision: AA10  
Part number: IBM42P21SNY  
Serial number: 53P14760068J1  
Vendor: IBM  
Date of manufacture: April 13, 2002

Drive Enclosure 26 Overall Component Information

Part number: PN 19K1288  
Serial number: SN 1T1321417558  
Vendor: VN IBM

Date of manufacture: September 1, 2001  
Enclosure path redundancy: OK  
Fan canister: Optimal  
Fan canister: Optimal  
Power supply canister

Status: Optimal  
Part number: PN 19K1289  
Serial number: SN A6842G00XC0B  
Vendor: VN IBM  
Date of manufacture: August 1, 2001

Power supply canister

Status: Optimal  
Part number: PN 19K1289  
Serial number: SN A6842G00WX0B  
Vendor: VN IBM  
Date of manufacture: August 1, 2001

Temperature: Optimal

Temperature: Optimal

ESM card

Status: Optimal  
Firmware version: 9325  
Maximum data rate: 2 Gbps  
Current data rate: 2 Gbps  
Location: A (left canister)  
Card communication: OK  
Product ID: EXP700  
Part number: PN 19K1287  
Serial number: SN 1T20789445  
Vendor: IBM  
Date of manufacture: March 1, 2002

SFP

Status: Optimal  
Location: In connection  
Supported data rate(s): 1 Gbps, 2 Gbps  
Link length: Intermediate  
Connector: LC  
Transmitter type: Shortwave Laser w/o OFC  
Transmission media: TM Multi-mode 50m(M5) TM Multi-mode

62.5m(M6)

IEEE company ID: 08 00 5a  
Revision: AA10  
Part number: IBM42P21SNY  
Serial number: 53P14760069PR  
Vendor: IBM  
Date of manufacture: April 13, 2002

SFP

Status: Optimal  
Location: Out connection  
Supported data rate(s): 1 Gbps, 2 Gbps  
Link length: Intermediate  
Connector: LC  
Transmitter type: Shortwave Laser w/o OFC  
Transmission media: TM Multi-mode 50m(M5) TM Multi-mode

62.5m(M6)

IEEE company ID: 08 00 5a  
Revision: AA10  
Part number: IBM42P21SNY  
Serial number: 53P14760069EW  
Vendor: IBM  
Date of manufacture: April 13, 2002

ESM card

Status: Optimal  
Firmware version: 9325  
Maximum data rate: 2 Gbps  
Current data rate: 2 Gbps  
Location: B (right canister)  
Card communication: OK  
Product ID: EXP700

Part number: PN 19K1287  
Serial number: SN 1T20789339  
Vendor: IBM  
Date of manufacture: March 1, 2002  
SFP  
Status: Optimal  
Location: In connection  
Supported data rate(s): 1 Gbps, 2 Gbps  
Link length: Intermediate  
Connector: LC  
Transmitter type: Shortwave Laser w/o OFC  
Transmission media: TM Multi-mode 50m(M5) TM Multi-mode

62.5m(M6)

IEEE company ID: 08 00 5a  
Revision: AA10  
Part number: IBM42P21SNY  
Serial number: 53P14760003M4  
Vendor: IBM  
Date of manufacture: December 2, 2001

SFP

Status: Optimal  
Location: Out connection  
Supported data rate(s): 1 Gbps, 2 Gbps  
Link length: Intermediate  
Connector: LC  
Transmitter type: Shortwave Laser w/o OFC  
Transmission media: TM Multi-mode 50m(M5) TM Multi-mode

62.5m(M6)

IEEE company ID: 08 00 5a  
Revision: AA10  
Part number: IBM42P21SNY  
Serial number: 53P1476006A4H  
Vendor: IBM  
Date of manufacture: April 13, 2002

#### Drive Enclosure 27 Overall Component Information

Part number: PN 19K1288  
Serial number: SN 1T1321417618  
Vendor: VN IBM  
Date of manufacture: September 1, 2001  
Enclosure path redundancy: OK  
Fan canister: Optimal  
Fan canister: Optimal  
Power supply canister  
Status: Optimal  
Part number: PN 19K1289  
Serial number: SN A6842G00WL0B  
Vendor: VN IBM  
Date of manufacture: August 1, 2001

Power supply canister  
Status: Optimal  
Part number: PN 19K1289  
Serial number: SN A6842G00US0B  
Vendor: VN IBM  
Date of manufacture: August 1, 2001

Temperature: Optimal  
Temperature: Optimal

ESM card

Status: Optimal  
Firmware version: 9325  
Maximum data rate: 2 Gbps  
Current data rate: 2 Gbps  
Location: A (left canister)  
Card communication: OK  
Product ID: EXP700  
Part number: PN 19K1287  
Serial number: SN 1T20582420  
Vendor: IBM

Date of manufacture: March 1, 2002

SFP

Status: Optimal  
Location: In connection  
Supported data rate(s): 1 Gbps, 2 Gbps  
Link length: Intermediate  
Connector: LC  
Transmitter type: Shortwave Laser w/o OFC  
Transmission media: TM Multi-mode 50m(M5) TM Multi-mode

62.5m(M6)

IEEE company ID: 08 00 5a  
Revision: AA10  
Part number: IBM42P21SNY  
Serial number: 53P14760069KJ  
Vendor: IBM  
Date of manufacture: April 13, 2002

ESM card

Status: Optimal  
Firmware version: 9325  
Maximum data rate: 2 Gbps  
Current data rate: 2 Gbps  
Location: B (right canister)  
Card communication: OK  
Product ID: EXP700  
Part number: PN 19K1287  
Serial number: SN 1T20789266  
Vendor: IBM  
Date of manufacture: March 1, 2002

SFP

Status: Optimal  
Location: In connection  
Supported data rate(s): 1 Gbps, 2 Gbps  
Link length: Intermediate  
Connector: LC  
Transmitter type: Shortwave Laser w/o OFC  
Transmission media: TM Multi-mode 50m(M5) TM Multi-mode

62.5m(M6)

IEEE company ID: 08 00 5a  
Revision: AA10  
Part number: IBM42P21SNY  
Serial number: 53P14760069Y4  
Vendor: IBM  
Date of manufacture: April 13, 2002

SFP

Status: Optimal  
Location: Out connection  
Supported data rate(s): 1 Gbps, 2 Gbps  
Link length: Intermediate  
Connector: LC  
Transmitter type: Shortwave Laser w/o OFC  
Transmission media: TM Multi-mode 50m(M5) TM Multi-mode

62.5m(M6)

IEEE company ID: 08 00 5a  
Revision: AA10  
Part number: IBM42P21SNY  
Serial number: 53P14760069KN  
Vendor: IBM  
Date of manufacture: April 13, 2002

MAPPINGS STORAGE PARTITIONING - ENABLED (0 of 64 used))-----

Logical Drive-To-LUN Mappings

Logical Drive Flute2\_lun1, LUN 0, Default Group  
Logical Drive Flute2\_lun2, LUN 1, Default Group  
Logical Drive Flute2\_lun4, LUN 3, Default Group  
Logical Drive flute2\_extra, LUN 4, Default Group  
Logical Drive flute2\_lun3, LUN 2, Default Group

Topology  
[Undefined Host Ports]  
21:00:00:e0:8b:08:a3:c8

[Default Group]

#### NVSRAM Host Type Internal Definitions

Index 0  
Name: Windows NT Non-Clustered (SP5 or higher)  
ADT status: Disabled

Index 1  
Name: Windows NT Clustered (SP5 or higher)  
ADT status: Disabled

Index 2 (DEFAULT)  
Name: Windows 2000/Server 2003 Non-Clustered  
ADT status: Disabled

Index 3  
Name: Windows 2000/Server 2003 Clustered  
ADT status: Disabled

Index 4  
Name: NetWare-IBMSAN  
ADT status: Disabled

Index 5  
Name: Linux  
ADT status: Disabled

Index 6  
Name: AIX  
ADT status: Disabled

Index 7  
Name: HP-UX  
ADT status: Disabled

Index 8  
Name: Solaris  
ADT status: Disabled

Index 9  
Name: PTX  
ADT status: Disabled

Index 10  
Name: Irix  
ADT status: Disabled

Index 11  
Name: Netware Failover  
ADT status: Disabled

Index 12  
Name: IBM TS SAN VCE  
ADT status: Disabled

Index 13  
Name: LNXCL  
ADT status: Disabled

### **TotalStorage FC2-133 Host Bus Adapter 3**

PROFILE FOR STORAGE SUBSYSTEM: flute3 (3/18/04 2:11:58 PM)

#### SUMMARY-----

Number of controllers: 2  
Number of arrays: 5  
Total number of logical drives (includes an access logical drive): 6 of 2048 used  
Number of standard logical drives: 5  
Number of access logical drives: 1  
Number of drives: 126  
Access logical drive: None mapped  
Default host type: Windows 2000/Server 2003 Non-Clustered (Host type index 2)  
Firmware version: 05.40.06.00  
NVSRAM version: N1742F700R830V03

NVSRAM configured for batteries?: Yes  
Start cache flushing at (in percentage): 80  
Stop cache flushing at (in percentage): 80  
Cache block size (in KB): 4  
Media scan duration (in days): 30  
Failover alert delay (in minutes): 5  
Feature enable identifier: 3630363736003630343537003F5CB976

#### CONTROLLERS-----

Number of controllers: 2

##### Controller in Slot A

Appware version: 05.40.06.00  
Bootware version: 05.40.02.00  
Status: Optimal  
Mode: Active  
Board ID: 4884  
Product ID: 1742  
Product revision: 0520  
Serial number: 1T23562956  
Vendor: IBM  
Date of manufacture: September 6, 2002  
Cache/processor size (MB): 1024/128  
Date/Time: Thu Mar 18 14:11:40 EST 2004  
Associated Logical Drives (\* = Preferred Owner):  
flute3\_lun1\*, flute3\_lun2\*

Drive interface: Fibre

Channel: 1  
Current ID: 125/0x1  
Maximum data rate: 2 Gbps  
Current data rate: 2 Gbps  
Data rate control: Switch  
Link status: Up

Drive interface: Fibre

Channel: 2  
Current ID: 125/0x1  
Maximum data rate: 2 Gbps  
Current data rate: 2 Gbps  
Data rate control: Switch  
Link status: Up

Drive interface: Fibre

Channel: 3  
Current ID: 125/0x1  
Maximum data rate: 2 Gbps  
Current data rate: 2 Gbps  
Data rate control: Switch  
Link status: Up

Drive interface: Fibre

Channel: 4  
Current ID: 125/0x1  
Maximum data rate: 2 Gbps  
Current data rate: 2 Gbps  
Data rate control: Switch  
Link status: Up

Host interface: Fibre

Port: 1  
Current ID: Not applicable/0xFFFFFFFF  
Preferred ID: 126/0x0  
NL-Port ID: 0x011100  
Maximum data rate: 2 Gbps  
Current data rate: 2 Gbps  
Data rate control: Switch  
Link status: Up  
Topology: Fabric Attach  
World-wide port name: 20:02:00:a0:b8:0f:46:e1  
World-wide node name: 20:02:00:a0:b8:0f:46:e0  
Part type: HPFC-5200 revision 11  
Host interface: Fibre

Port: 2  
Current ID: Not applicable/0xFFFFFFFF  
Preferred ID: 1/0xE8  
NL-Port ID: 0x000000  
Maximum data rate: 2 Gbps  
Current data rate: 1 Gbps  
Data rate control: Switch  
Link status: Down  
Topology: Not available  
World-wide port name: 20:02:00:a0:b8:0f:46:e2  
World-wide node name: 20:02:00:a0:b8:0f:46:e0  
Part type: HPFC-5200 revision 11  
Ethernet port: 0  
MAC address: 00:a0:b8:0f:46:e0  
Host name: target  
Network configuration: Static  
IP address: 192.168.128.107  
Subnet mask: 255.255.255.0  
Gateway: 0.0.0.0  
Remote login: Disabled

Controller in Slot B

Appware version: 05.40.06.00  
Bootware version: 05.40.02.00  
Status: Optimal  
Mode: Active  
Board ID: 4884  
Product ID: 1742  
Product revision: 0520  
Serial number: 1T23563009  
Vendor: IBM  
Date of manufacture: September 6, 2002  
Cache/processor size (MB): 1024/128  
Date/Time: Thu Mar 18 14:11:44 EST 2004  
Associated Logical Drives (\* = Preferred Owner):  
flute3\_extralun\*, flute3\_lun3\*, flute3\_lun4\*  
Drive interface: Fibre  
Channel: 1  
Current ID: 124/0x2  
Maximum data rate: 2 Gbps  
Current data rate: 2 Gbps  
Data rate control: Switch  
Link status: Up  
Drive interface: Fibre  
Channel: 2  
Current ID: 124/0x2  
Maximum data rate: 2 Gbps  
Current data rate: 2 Gbps  
Data rate control: Switch  
Link status: Up  
Drive interface: Fibre  
Channel: 3  
Current ID: 124/0x2  
Maximum data rate: 2 Gbps  
Current data rate: 2 Gbps  
Data rate control: Switch  
Link status: Up  
Drive interface: Fibre  
Channel: 4  
Current ID: 124/0x2  
Maximum data rate: 2 Gbps  
Current data rate: 2 Gbps  
Data rate control: Switch  
Link status: Up  
Host interface: Fibre  
Port: 1  
Current ID: Not applicable/0xFFFFFFFF  
Preferred ID: 126/0x0

NL-Port ID: 0x011200  
Maximum data rate: 2 Gbps  
Current data rate: 2 Gbps  
Data rate control: Switch  
Link status: Up  
Topology: Fabric Attach  
World-wide port name: 20:03:00:a0:b8:0f:46:e1  
World-wide node name: 20:03:00:a0:b8:0f:46:e0  
Part type: HPFC-5200 revision 11  
Host interface: Fibre  
Port: 2  
Current ID: Not applicable/0xFFFFFFFF  
Preferred ID: 3/0xE2  
NL-Port ID: 0x000000  
Maximum data rate: 2 Gbps  
Current data rate: 1 Gbps  
Data rate control: Switch  
Link status: Down  
Topology: Not available  
World-wide port name: 20:03:00:a0:b8:0f:46:e2  
World-wide node name: 20:03:00:a0:b8:0f:46:e0  
Part type: HPFC-5200 revision 11  
Ethernet port: 0  
MAC address: 00:a0:b8:0f:46:9e  
Host name: target  
Network configuration: Static  
IP address: 192.168.128.108  
Subnet mask: 255.255.255.0  
Gateway: 0.0.0.0  
Remote login: Disabled

ARRAYS-----

Number of arrays: 5

Array 1 (RAID 0)

Status: Online  
Current owner: Controller in slot A  
Logical Drive flute3\_lun1 (948.145 GB)  
Associated drives (in piece order):  
Drive at Enclosure 30, Slot 1  
Drive at Enclosure 30, Slot 2  
Drive at Enclosure 30, Slot 3  
Drive at Enclosure 30, Slot 4  
Drive at Enclosure 30, Slot 5  
Drive at Enclosure 30, Slot 6  
Drive at Enclosure 30, Slot 7  
Drive at Enclosure 30, Slot 8  
Drive at Enclosure 30, Slot 9  
Drive at Enclosure 30, Slot 10  
Drive at Enclosure 30, Slot 11  
Drive at Enclosure 30, Slot 12  
Drive at Enclosure 30, Slot 13  
Drive at Enclosure 30, Slot 14  
Drive at Enclosure 31, Slot 1  
Drive at Enclosure 31, Slot 2  
Drive at Enclosure 31, Slot 3  
Drive at Enclosure 31, Slot 4  
Drive at Enclosure 31, Slot 5  
Drive at Enclosure 31, Slot 6  
Drive at Enclosure 31, Slot 7  
Drive at Enclosure 31, Slot 8  
Drive at Enclosure 31, Slot 9  
Drive at Enclosure 31, Slot 10  
Drive at Enclosure 31, Slot 11  
Drive at Enclosure 31, Slot 12  
Drive at Enclosure 31, Slot 13  
Drive at Enclosure 31, Slot 14

Array 2 (RAID 0)

Status: Online

Current owner: Controller in slot A

Logical Drive flute3\_lun2 (948.145 GB)

Associated drives (in piece order):

- Drive at Enclosure 32, Slot 1
- Drive at Enclosure 32, Slot 2
- Drive at Enclosure 32, Slot 3
- Drive at Enclosure 32, Slot 4
- Drive at Enclosure 32, Slot 5
- Drive at Enclosure 32, Slot 6
- Drive at Enclosure 32, Slot 7
- Drive at Enclosure 32, Slot 8
- Drive at Enclosure 32, Slot 9
- Drive at Enclosure 32, Slot 10
- Drive at Enclosure 32, Slot 11
- Drive at Enclosure 32, Slot 12
- Drive at Enclosure 32, Slot 13
- Drive at Enclosure 32, Slot 14
- Drive at Enclosure 33, Slot 1
- Drive at Enclosure 33, Slot 2
- Drive at Enclosure 33, Slot 3
- Drive at Enclosure 33, Slot 4
- Drive at Enclosure 33, Slot 5
- Drive at Enclosure 33, Slot 6
- Drive at Enclosure 33, Slot 7
- Drive at Enclosure 33, Slot 8
- Drive at Enclosure 33, Slot 9
- Drive at Enclosure 33, Slot 10
- Drive at Enclosure 33, Slot 11
- Drive at Enclosure 33, Slot 12
- Drive at Enclosure 33, Slot 13
- Drive at Enclosure 33, Slot 14

Array 3 (RAID 0)

Status: Online

Current owner: Controller in slot B

Logical Drive flute3\_lun3 (948.145 GB)

Associated drives (in piece order):

- Drive at Enclosure 34, Slot 1
- Drive at Enclosure 34, Slot 2
- Drive at Enclosure 34, Slot 3
- Drive at Enclosure 34, Slot 4
- Drive at Enclosure 34, Slot 5
- Drive at Enclosure 34, Slot 6
- Drive at Enclosure 34, Slot 7
- Drive at Enclosure 34, Slot 8
- Drive at Enclosure 34, Slot 9
- Drive at Enclosure 34, Slot 10
- Drive at Enclosure 34, Slot 11
- Drive at Enclosure 34, Slot 12
- Drive at Enclosure 34, Slot 13
- Drive at Enclosure 34, Slot 14
- Drive at Enclosure 35, Slot 1
- Drive at Enclosure 35, Slot 2
- Drive at Enclosure 35, Slot 3
- Drive at Enclosure 35, Slot 4
- Drive at Enclosure 35, Slot 5
- Drive at Enclosure 35, Slot 6
- Drive at Enclosure 35, Slot 7
- Drive at Enclosure 35, Slot 8
- Drive at Enclosure 35, Slot 9
- Drive at Enclosure 35, Slot 10
- Drive at Enclosure 35, Slot 11
- Drive at Enclosure 35, Slot 12
- Drive at Enclosure 35, Slot 13
- Drive at Enclosure 35, Slot 14

Array 4 (RAID 0)

Status: Online

Current owner: Controller in slot B

Logical Drive flute3\_lun4 (948.145 GB)

Associated drives (in piece order):

- Drive at Enclosure 36, Slot 1
- Drive at Enclosure 36, Slot 2
- Drive at Enclosure 36, Slot 3
- Drive at Enclosure 36, Slot 4
- Drive at Enclosure 36, Slot 5
- Drive at Enclosure 36, Slot 6
- Drive at Enclosure 36, Slot 7
- Drive at Enclosure 36, Slot 8
- Drive at Enclosure 36, Slot 9
- Drive at Enclosure 36, Slot 10
- Drive at Enclosure 36, Slot 11
- Drive at Enclosure 36, Slot 12
- Drive at Enclosure 36, Slot 13
- Drive at Enclosure 36, Slot 14
- Drive at Enclosure 37, Slot 1
- Drive at Enclosure 37, Slot 2
- Drive at Enclosure 37, Slot 3
- Drive at Enclosure 37, Slot 4
- Drive at Enclosure 37, Slot 5
- Drive at Enclosure 37, Slot 6
- Drive at Enclosure 37, Slot 7
- Drive at Enclosure 37, Slot 8
- Drive at Enclosure 37, Slot 9
- Drive at Enclosure 37, Slot 10
- Drive at Enclosure 37, Slot 11
- Drive at Enclosure 37, Slot 12
- Drive at Enclosure 37, Slot 13
- Drive at Enclosure 37, Slot 14

Array 5 (RAID 0)

Status: Online

Current owner: Controller in slot B

Logical Drive flute3\_extralun (474.072 GB)

Associated drives (in piece order):

- Drive at Enclosure 13, Slot 1
- Drive at Enclosure 13, Slot 2
- Drive at Enclosure 13, Slot 3
- Drive at Enclosure 13, Slot 4
- Drive at Enclosure 13, Slot 5
- Drive at Enclosure 13, Slot 6
- Drive at Enclosure 13, Slot 7
- Drive at Enclosure 13, Slot 8
- Drive at Enclosure 13, Slot 9
- Drive at Enclosure 13, Slot 10
- Drive at Enclosure 13, Slot 11
- Drive at Enclosure 13, Slot 12
- Drive at Enclosure 13, Slot 13
- Drive at Enclosure 13, Slot 14

STANDARD LOGICAL DRIVES-----

SUMMARY

Number of standard logical drives: 5

See other Logical Drives sub-tabs for premium feature information.

NAME	STATUS	CAPACITY	RAID LEVEL	ARRAY
flute3_extralun	Optimal	474.072 GB	0	5
flute3_lun1	Optimal	948.145 GB	0	1
flute3_lun2	Optimal	948.145 GB	0	2
flute3_lun3	Optimal	948.145 GB	0	3
flute3_lun4	Optimal	948.145 GB	0	4

DETAILS

Logical Drive name: flute3\_extralun

Logical Drive ID: 60:0a:0b:80:00:0f:46:9e:00:00:00:01:40:11:33:77

Subsystem ID (SSID): 4

Status: Optimal

Preferred owner: Controller in slot B  
 Current owner: Controller in slot B  
 Capacity: 474.072 GB  
 RAID level: 0  
 Segment size: 64 KB  
 Modification priority: High  
 Associated array: 5  
 Read cache: Enabled  
 Write cache: Disabled  
 Write cache without batteries: Disabled  
 Write cache with mirroring: Disabled  
 Flush write cache after (in seconds): 10.00  
 Cache read ahead multiplier: 1  
 Enable background media scan: Enabled  
 Media scan with redundancy check: Disabled

Logical Drive name: flute3\_lun1  
 Logical Drive ID: 60:0a:0b:80:00:0c:be:16:00:00:00:01:40:0f:ed:5a  
 Subsystem ID (SSID): 0  
 Status: Optimal  
 Preferred owner: Controller in slot A  
 Current owner: Controller in slot A  
 Capacity: 948.145 GB  
 RAID level: 0  
 Segment size: 64 KB  
 Modification priority: High  
 Associated array: 1  
 Read cache: Enabled  
 Write cache: Disabled  
 Write cache without batteries: Disabled  
 Write cache with mirroring: Disabled  
 Flush write cache after (in seconds): 10.00  
 Cache read ahead multiplier: 1  
 Enable background media scan: Enabled  
 Media scan with redundancy check: Disabled

Logical Drive name: flute3\_lun2  
 Logical Drive ID: 60:0a:0b:80:00:0c:be:16:00:00:00:03:40:0f:ed:cc  
 Subsystem ID (SSID): 1  
 Status: Optimal  
 Preferred owner: Controller in slot A  
 Current owner: Controller in slot A  
 Capacity: 948.145 GB  
 RAID level: 0  
 Segment size: 64 KB  
 Modification priority: High  
 Associated array: 2  
 Read cache: Enabled  
 Write cache: Disabled  
 Write cache without batteries: Disabled  
 Write cache with mirroring: Disabled  
 Flush write cache after (in seconds): 10.00  
 Cache read ahead multiplier: 1  
 Enable background media scan: Enabled  
 Media scan with redundancy check: Disabled

Logical Drive name: flute3\_lun3  
 Logical Drive ID: 60:0a:0b:80:00:0c:bc:6f:00:00:00:01:40:0f:ef:25  
 Subsystem ID (SSID): 2  
 Status: Optimal  
 Preferred owner: Controller in slot B  
 Current owner: Controller in slot B  
 Capacity: 948.145 GB  
 RAID level: 0  
 Segment size: 64 KB  
 Modification priority: High  
 Associated array: 3  
 Read cache: Enabled

Write cache: Disabled  
 Write cache without batteries: Disabled  
 Write cache with mirroring: Disabled  
 Flush write cache after (in seconds): 10.00  
 Cache read ahead multiplier: 1  
 Enable background media scan: Enabled  
 Media scan with redundancy check: Disabled

Logical Drive name: flute3\_lun4  
 Logical Drive ID: 60:0a:0b:80:00:0c:bc:6f:00:00:00:03:40:0f:ef:3f  
 Subsystem ID (SSID): 3  
 Status: Optimal  
 Preferred owner: Controller in slot B  
 Current owner: Controller in slot B  
 Capacity: 948.145 GB  
 RAID level: 0  
 Segment size: 64 KB  
 Modification priority: High  
 Associated array: 4  
 Read cache: Enabled  
 Write cache: Disabled  
 Write cache without batteries: Disabled  
 Write cache with mirroring: Disabled  
 Flush write cache after (in seconds): 10.00  
 Cache read ahead multiplier: 1  
 Enable background media scan: Enabled  
 Media scan with redundancy check: Disabled

MISSING LOGICAL DRIVES-----  
 Number of missing logical drives: 0  
 See other Logical Drives sub-tabs for premium feature information

DRIVES-----

SUMMARY  
 Number of drives: 126

BASIC:

TRAY	SLOT	STATUS	CAPACITY	CURRENT DATA RATE	PRODUCT ID	FIRMWARE VERSION
13, 1	Optimal	33.902 GB	2 Gbps	ST336753FC	F	B953
13, 2	Optimal	33.902 GB	2 Gbps	ST336753FC	F	B953
13, 3	Optimal	33.902 GB	2 Gbps	ST336753FC	F	B953
13, 4	Optimal	33.902 GB	2 Gbps	ST336753FC	F	B953
13, 5	Optimal	33.902 GB	2 Gbps	ST336753FC	F	B953
13, 6	Optimal	33.902 GB	2 Gbps	ST336753FC	F	B953
13, 7	Optimal	33.902 GB	2 Gbps	ST336753FC	F	B953
13, 8	Optimal	33.902 GB	2 Gbps	ST336753FC	F	B953
13, 9	Optimal	33.902 GB	2 Gbps	ST336753FC	F	B953
13, 10	Optimal	33.902 GB	2 Gbps	ST336753FC	F	B953
13, 11	Optimal	33.902 GB	2 Gbps	ST336753FC	F	B953
13, 12	Optimal	33.902 GB	2 Gbps	ST336753FC	F	B953
13, 13	Optimal	33.902 GB	2 Gbps	ST336753FC	F	B953



34, 12	Optimal	33.902 GB	2 Gbps	ST336753FC	F	B953
34, 13	Optimal	33.902 GB	2 Gbps	ST336753FC	F	B953
34, 14	Optimal	33.902 GB	2 Gbps	ST336753FC	F	B953
35, 1	Optimal	33.902 GB	2 Gbps	ST336753FC	F	B953
35, 2	Optimal	33.902 GB	2 Gbps	ST336753FC	F	B953
35, 3	Optimal	33.902 GB	2 Gbps	ST336753FC	F	B953
35, 4	Optimal	33.902 GB	2 Gbps	ST336753FC	F	B953
35, 5	Optimal	33.902 GB	2 Gbps	ST336753FC	F	B953
35, 6	Optimal	33.902 GB	2 Gbps	ST336753FC	F	B953
35, 7	Optimal	33.902 GB	2 Gbps	ST336753FC	F	B953
35, 8	Optimal	33.902 GB	2 Gbps	ST336753FC	F	B953
35, 9	Optimal	33.902 GB	2 Gbps	ST336753FC	F	B953
35, 10	Optimal	33.902 GB	2 Gbps	ST336753FC	F	B953
35, 11	Optimal	33.902 GB	2 Gbps	ST336753FC	F	B953
35, 12	Optimal	33.902 GB	2 Gbps	ST336753FC	F	B953
35, 13	Optimal	33.902 GB	2 Gbps	ST336753FC	F	B953
35, 14	Optimal	33.902 GB	2 Gbps	ST336753FC	F	B953
36, 1	Optimal	33.902 GB	2 Gbps	ST336753FC	F	B953
36, 2	Optimal	33.902 GB	2 Gbps	ST336753FC	F	B953
36, 3	Optimal	33.902 GB	2 Gbps	ST336753FC	F	B953
36, 4	Optimal	33.902 GB	2 Gbps	ST336753FC	F	B953
36, 5	Optimal	33.902 GB	2 Gbps	ST336753FC	F	B953
36, 6	Optimal	33.902 GB	2 Gbps	ST336753FC	F	B953
36, 7	Optimal	33.902 GB	2 Gbps	ST336753FC	F	B953
36, 8	Optimal	33.902 GB	2 Gbps	ST336753FC	F	B953
36, 9	Optimal	33.902 GB	2 Gbps	ST336753FC	F	B953
36, 10	Optimal	33.902 GB	2 Gbps	ST336753FC	F	B953
36, 11	Optimal	33.902 GB	2 Gbps	ST336753FC	F	B953
36, 12	Optimal	33.902 GB	2 Gbps	ST336753FC	F	B953
36, 13	Optimal	33.902 GB	2 Gbps	ST336753FC	F	B953
36, 14	Optimal	33.902 GB	2 Gbps	ST336753FC	F	B953
37, 1	Optimal	33.902 GB	2 Gbps	ST336753FC	F	B953
37, 2	Optimal	33.902 GB	2 Gbps	ST336753FC	F	B953
37, 3	Optimal	33.902 GB	2 Gbps	ST336753FC	F	B953

37, 4	Optimal	33.902 GB	2 Gbps	ST336753FC	F	B953
37, 5	Optimal	33.902 GB	2 Gbps	ST336753FC	F	B953
37, 6	Optimal	33.902 GB	2 Gbps	ST336753FC	F	B953
37, 7	Optimal	33.902 GB	2 Gbps	ST336753FC	F	B953
37, 8	Optimal	33.902 GB	2 Gbps	ST336753FC	F	B953
37, 9	Optimal	33.902 GB	2 Gbps	ST336753FC	F	B953
37, 10	Optimal	33.902 GB	2 Gbps	ST336753FC	F	B953
37, 11	Optimal	33.902 GB	2 Gbps	ST336753FC	F	B953
37, 12	Optimal	33.902 GB	2 Gbps	ST336753FC	F	B953
37, 13	Optimal	33.902 GB	2 Gbps	ST336753FC	F	B953
37, 14	Optimal	33.902 GB	2 Gbps	ST336753FC	F	B953

DRIVE CHANNELS:

TRAY, SLOT	CURRENT CHANNEL	ALTERNATE CHANNEL
13, 1	1	2
13, 2	2	1
13, 3	1	2
13, 4	2	1
13, 5	1	2
13, 6	2	1
13, 7	1	2
13, 8	2	1
13, 9	1	2
13, 10	2	1
13, 11	1	2
13, 12	2	1
13, 13	1	2
13, 14	2	1
30, 1	3	4
30, 2	4	3
30, 3	3	4
30, 4	4	3
30, 5	3	4
30, 6	4	3
30, 7	3	4
30, 8	4	3
30, 9	3	4
30, 10	4	3
30, 11	3	4
30, 12	4	3
30, 13	3	4
30, 14	4	3
31, 1	3	4
31, 2	4	3
31, 3	3	4
31, 4	4	3
31, 5	3	4
31, 6	4	3
31, 7	3	4
31, 8	4	3
31, 9	3	4
31, 10	4	3
31, 11	3	4
31, 12	4	3
31, 13	3	4
31, 14	4	3



32, 1	3	4
32, 2	4	3
32, 3	3	4
32, 4	4	3
32, 5	3	4
32, 6	4	3
32, 7	3	4
32, 8	4	3
32, 9	3	4
32, 10	4	3
32, 11	3	4
32, 12	4	3
32, 13	3	4
32, 14	4	3
33, 1	3	4
33, 2	4	3
33, 3	3	4
33, 4	4	3
33, 5	3	4
33, 6	4	3
33, 7	3	4
33, 8	4	3
33, 9	3	4
33, 10	4	3
33, 11	3	4
33, 12	4	3
33, 13	3	4
33, 14	4	3
34, 1	1	2
34, 2	2	1
34, 3	1	2
34, 4	2	1
34, 5	1	2
34, 6	2	1
34, 7	1	2
34, 8	2	1
34, 9	1	2
34, 10	2	1
34, 11	1	2
34, 12	2	1
34, 13	1	2
34, 14	2	1
35, 1	1	2
35, 2	2	1
35, 3	1	2
35, 4	2	1
35, 5	1	2
35, 6	2	1
35, 7	1	2
35, 8	2	1
35, 9	1	2
35, 10	2	1
35, 11	1	2
35, 12	2	1
35, 13	1	2
35, 14	2	1
36, 1	1	2
36, 2	2	1
36, 3	1	2
36, 4	2	1
36, 5	1	2
36, 6	2	1
36, 7	1	2
36, 8	2	1
36, 9	1	2
36, 10	2	1
36, 11	1	2
36, 12	2	1

36, 13	1	2
36, 14	2	1
37, 1	1	2
37, 2	2	1
37, 3	1	2
37, 4	2	1
37, 5	1	2
37, 6	2	1
37, 7	1	2
37, 8	2	1
37, 9	1	2
37, 10	2	1
37, 11	1	2
37, 12	2	1
37, 13	1	2
37, 14	2	1

DETAILS

Drive at Enclosure 13, Slot 1

Drive port: 1, Channel: 1, ID: 24/0xC3  
 Drive port: 2, Channel: 2, ID: 24/0xC3  
 Drive path redundancy: OK  
 Status: Optimal  
 Raw capacity: 33.902 GB  
 Usable capacity: 33.862 GB  
 Current data rate: 2 Gbps  
 Product ID: ST336753FC F  
 Firmware version: B953  
 Serial number: 3HX0HSZ2000073405G6R  
 Vendor: IBM-ESXS  
 Date of manufacture: April 5, 2003  
 World-wide name: 20:00:00:04:cf:f9:e4:ff  
 Mode: Assigned  
 Associated array: Array 5

Drive at Enclosure 13, Slot 2

Drive port: 1, Channel: 2, ID: 25/0xBC  
 Drive port: 2, Channel: 1, ID: 25/0xBC  
 Drive path redundancy: OK  
 Status: Optimal  
 Raw capacity: 33.902 GB  
 Usable capacity: 33.862 GB  
 Current data rate: 2 Gbps  
 Product ID: ST336753FC F  
 Firmware version: B953  
 Serial number: 3HX0JR21000073405G8S  
 Vendor: IBM-ESXS  
 Date of manufacture: April 5, 2003  
 World-wide name: 20:00:00:04:cf:f9:e5:24  
 Mode: Assigned  
 Associated array: Array 5

Drive at Enclosure 13, Slot 3

Drive port: 1, Channel: 1, ID: 26/0xBA  
 Drive port: 2, Channel: 2, ID: 26/0xBA  
 Drive path redundancy: OK  
 Status: Optimal  
 Raw capacity: 33.902 GB  
 Usable capacity: 33.862 GB  
 Current data rate: 2 Gbps  
 Product ID: ST336753FC F  
 Firmware version: B953  
 Serial number: 3HX0K0AK00007339TYUB  
 Vendor: IBM-ESXS  
 Date of manufacture: April 6, 2003  
 World-wide name: 20:00:00:04:cf:ff:02:44  
 Mode: Assigned  
 Associated array: Array 5

Drive at Enclosure 13, Slot 4  
Drive port: 1, Channel: 2, ID: 27/0xB9  
Drive port: 2, Channel: 1, ID: 27/0xB9  
Drive path redundancy: OK  
Status: Optimal  
Raw capacity: 33.902 GB  
Usable capacity: 33.862 GB  
Current data rate: 2 Gbps  
Product ID: ST336753FC F  
Firmware version: B953  
Serial number: 3HX0K21200007339TYTL  
Vendor: IBM-ESXS  
Date of manufacture: April 6, 2003  
World-wide name: 20:00:00:04:cf:ff:02:42  
Mode: Assigned  
Associated array: Array 5

Drive at Enclosure 13, Slot 5  
Drive port: 1, Channel: 1, ID: 28/0xB6  
Drive port: 2, Channel: 2, ID: 28/0xB6  
Drive path redundancy: OK  
Status: Optimal  
Raw capacity: 33.902 GB  
Usable capacity: 33.862 GB  
Current data rate: 2 Gbps  
Product ID: ST336753FC F  
Firmware version: B953  
Serial number: 3HX0JFVE000073393FUU  
Vendor: IBM-ESXS  
Date of manufacture: April 6, 2003  
World-wide name: 20:00:00:04:cf:f9:fc:0d  
Mode: Assigned  
Associated array: Array 5

Drive at Enclosure 13, Slot 6  
Drive port: 1, Channel: 2, ID: 29/0xB5  
Drive port: 2, Channel: 1, ID: 29/0xB5  
Drive path redundancy: OK  
Status: Optimal  
Raw capacity: 33.902 GB  
Usable capacity: 33.862 GB  
Current data rate: 2 Gbps  
Product ID: ST336753FC F  
Firmware version: B953  
Serial number: 3HX0HMC23000073409KSE  
Vendor: IBM-ESXS  
Date of manufacture: April 5, 2003  
World-wide name: 20:00:00:04:cf:f9:dd:33  
Mode: Assigned  
Associated array: Array 5

Drive at Enclosure 13, Slot 7  
Drive port: 1, Channel: 1, ID: 30/0xB4  
Drive port: 2, Channel: 2, ID: 30/0xB4  
Drive path redundancy: OK  
Status: Optimal  
Raw capacity: 33.902 GB  
Usable capacity: 33.862 GB  
Current data rate: 2 Gbps  
Product ID: ST336753FC F  
Firmware version: B953  
Serial number: 3HX0HRQ800007340WVNO  
Vendor: IBM-ESXS  
Date of manufacture: April 5, 2003  
World-wide name: 20:00:00:04:cf:f9:eb:f5  
Mode: Assigned  
Associated array: Array 5

Drive at Enclosure 13, Slot 8  
Drive port: 1, Channel: 2, ID: 31/0xB3  
Drive port: 2, Channel: 1, ID: 31/0xB3  
Drive path redundancy: OK  
Status: Optimal  
Raw capacity: 33.902 GB  
Usable capacity: 33.862 GB  
Current data rate: 2 Gbps  
Product ID: ST336753FC F  
Firmware version: B953  
Serial number: 3HX0JAB300007340YETX  
Vendor: IBM-ESXS  
Date of manufacture: April 5, 2003  
World-wide name: 20:00:00:04:cf:f9:fa:d6  
Mode: Assigned  
Associated array: Array 5

Drive at Enclosure 13, Slot 9  
Drive port: 1, Channel: 1, ID: 83/0x52  
Drive port: 2, Channel: 2, ID: 83/0x52  
Drive path redundancy: OK  
Status: Optimal  
Raw capacity: 33.902 GB  
Usable capacity: 33.862 GB  
Current data rate: 2 Gbps  
Product ID: ST336753FC F  
Firmware version: B953  
Serial number: 3HX0HT16000073392DYB  
Vendor: IBM-ESXS  
Date of manufacture: April 5, 2003  
World-wide name: 20:00:00:04:cf:f9:e3:4f  
Mode: Assigned  
Associated array: Array 5

Drive at Enclosure 13, Slot 10  
Drive port: 1, Channel: 2, ID: 99/0x35  
Drive port: 2, Channel: 1, ID: 99/0x35  
Drive path redundancy: OK  
Status: Optimal  
Raw capacity: 33.902 GB  
Usable capacity: 33.862 GB  
Current data rate: 2 Gbps  
Product ID: ST336753FC F  
Firmware version: B953  
Serial number: 3HX0HT780000734059NK  
Vendor: IBM-ESXS  
Date of manufacture: April 5, 2003  
World-wide name: 20:00:00:04:cf:f9:e7:09  
Mode: Assigned  
Associated array: Array 5

Drive at Enclosure 13, Slot 11  
Drive port: 1, Channel: 1, ID: 67/0x6D  
Drive port: 2, Channel: 2, ID: 67/0x6D  
Drive path redundancy: OK  
Status: Optimal  
Raw capacity: 33.902 GB  
Usable capacity: 33.862 GB  
Current data rate: 2 Gbps  
Product ID: ST336753FC F  
Firmware version: B953  
Serial number: 3HX0K2ES00007339TYUR  
Vendor: IBM-ESXS  
Date of manufacture: April 6, 2003  
World-wide name: 20:00:00:04:cf:ff:03:32  
Mode: Assigned  
Associated array: Array 5

Drive at Enclosure 13, Slot 12  
Drive port: 1, Channel: 2, ID: 75/0x63  
Drive port: 2, Channel: 1, ID: 75/0x63  
Drive path redundancy: OK  
Status: Optimal  
Raw capacity: 33.902 GB  
Usable capacity: 33.862 GB  
Current data rate: 2 Gbps  
Product ID: ST336753FC F  
Firmware version: B953  
Serial number: 3HX0HWYS000073392DSH  
Vendor: IBM-ESXS  
Date of manufacture: April 5, 2003  
World-wide name: 20:00:00:04:cf:f9:e3:39  
Mode: Assigned  
Associated array: Array 5

Drive at Enclosure 13, Slot 13  
Drive port: 1, Channel: 1, ID: 91/0x47  
Drive port: 2, Channel: 2, ID: 91/0x47  
Drive path redundancy: OK  
Status: Optimal  
Raw capacity: 33.902 GB  
Usable capacity: 33.862 GB  
Current data rate: 2 Gbps  
Product ID: ST336753FC F  
Firmware version: B953  
Serial number: 3HX0HRHV000073405G14  
Vendor: IBM-ESXS  
Date of manufacture: April 5, 2003  
World-wide name: 20:00:00:04:cf:f9:ed:57  
Mode: Assigned  
Associated array: Array 5

Drive at Enclosure 13, Slot 14  
Drive port: 1, Channel: 2, ID: 107/0x2B  
Drive port: 2, Channel: 1, ID: 107/0x2B  
Drive path redundancy: OK  
Status: Optimal  
Raw capacity: 33.902 GB  
Usable capacity: 33.862 GB  
Current data rate: 2 Gbps  
Product ID: ST336753FC F  
Firmware version: B953  
Serial number: 3HX0HT840000734059NW  
Vendor: IBM-ESXS  
Date of manufacture: April 5, 2003  
World-wide name: 20:00:00:04:cf:f9:e7:1c  
Mode: Assigned  
Associated array: Array 5

Drive at Enclosure 30, Slot 1  
Drive port: 1, Channel: 3, ID: 0/0xEF  
Drive port: 2, Channel: 4, ID: 0/0xEF  
Drive path redundancy: OK  
Status: Optimal  
Raw capacity: 33.902 GB  
Usable capacity: 33.862 GB  
Current data rate: 2 Gbps  
Product ID: ST336753FC F  
Firmware version: B953  
Serial number: 3HX0JZCM000073405AAF  
Vendor: IBM-ESXS  
Date of manufacture: April 6, 2003  
World-wide name: 20:00:00:04:cf:ff:0a:39  
Mode: Assigned  
Associated array: Array 1

Drive at Enclosure 30, Slot 2  
Drive port: 1, Channel: 4, ID: 1/0xE8  
Drive port: 2, Channel: 3, ID: 1/0xE8  
Drive path redundancy: OK  
Status: Optimal  
Raw capacity: 33.902 GB  
Usable capacity: 33.862 GB  
Current data rate: 2 Gbps  
Product ID: ST336753FC F  
Firmware version: B953  
Serial number: 3HX0HMF300007340X4RC  
Vendor: IBM-ESXS  
Date of manufacture: April 5, 2003  
World-wide name: 20:00:00:04:cf:f9:e5:ac  
Mode: Assigned  
Associated array: Array 1

Drive at Enclosure 30, Slot 3  
Drive port: 1, Channel: 3, ID: 2/0xE4  
Drive port: 2, Channel: 4, ID: 2/0xE4  
Drive path redundancy: OK  
Status: Optimal  
Raw capacity: 33.902 GB  
Usable capacity: 33.862 GB  
Current data rate: 2 Gbps  
Product ID: ST336753FC F  
Firmware version: B953  
Serial number: 3HX0GZEC000073409KWF  
Vendor: IBM-ESXS  
Date of manufacture: April 4, 2003  
World-wide name: 20:00:00:04:cf:f9:e5:60  
Mode: Assigned  
Associated array: Array 1

Drive at Enclosure 30, Slot 4  
Drive port: 1, Channel: 4, ID: 3/0xE2  
Drive port: 2, Channel: 3, ID: 3/0xE2  
Drive path redundancy: OK  
Status: Optimal  
Raw capacity: 33.902 GB  
Usable capacity: 33.862 GB  
Current data rate: 2 Gbps  
Product ID: ST336753FC F  
Firmware version: B953  
Serial number: 3HX0HCNK000073393FVE  
Vendor: IBM-ESXS  
Date of manufacture: April 4, 2003  
World-wide name: 20:00:00:04:cf:f9:d1:44  
Mode: Assigned  
Associated array: Array 1

Drive at Enclosure 30, Slot 5  
Drive port: 1, Channel: 3, ID: 4/0xE1  
Drive port: 2, Channel: 4, ID: 4/0xE1  
Drive path redundancy: OK  
Status: Optimal  
Raw capacity: 33.902 GB  
Usable capacity: 33.862 GB  
Current data rate: 2 Gbps  
Product ID: ST336753FC F  
Firmware version: B953  
Serial number: 3HX0HJ1G000073393FTB  
Vendor: IBM-ESXS  
Date of manufacture: April 4, 2003  
World-wide name: 20:00:00:04:cf:f9:e4:8e  
Mode: Assigned  
Associated array: Array 1

Drive at Enclosure 30, Slot 6  
Drive port: 1, Channel: 4, ID: 5/0xE0  
Drive port: 2, Channel: 3, ID: 5/0xE0  
Drive path redundancy: OK  
Status: Optimal  
Raw capacity: 33.902 GB  
Usable capacity: 33.862 GB  
Current data rate: 2 Gbps  
Product ID: ST336753FC F  
Firmware version: B953  
Serial number: 3HX0GZJWJ00007339RG49  
Vendor: IBM-ESXS  
Date of manufacture: April 5, 2003  
World-wide name: 20:00:00:04:cf:f9:e4:e5  
Mode: Assigned  
Associated array: Array 1

Drive at Enclosure 30, Slot 7  
Drive port: 1, Channel: 3, ID: 6/0xDC  
Drive port: 2, Channel: 4, ID: 6/0xDC  
Drive path redundancy: OK  
Status: Optimal  
Raw capacity: 33.902 GB  
Usable capacity: 33.862 GB  
Current data rate: 2 Gbps  
Product ID: ST336753FC F  
Firmware version: B953  
Serial number: 3HX0HT820000734058KN  
Vendor: IBM-ESXS  
Date of manufacture: April 5, 2003  
World-wide name: 20:00:00:04:cf:f9:e7:58  
Mode: Assigned  
Associated array: Array 1

Drive at Enclosure 30, Slot 8  
Drive port: 1, Channel: 4, ID: 7/0xDA  
Drive port: 2, Channel: 3, ID: 7/0xDA  
Drive path redundancy: OK  
Status: Optimal  
Raw capacity: 33.902 GB  
Usable capacity: 33.862 GB  
Current data rate: 2 Gbps  
Product ID: ST336753FC F  
Firmware version: B953  
Serial number: 3HX0HSWB00007339RGJ  
Vendor: IBM-ESXS  
Date of manufacture: April 5, 2003  
World-wide name: 20:00:00:04:cf:f9:e1:fa  
Mode: Assigned  
Associated array: Array 1

Drive at Enclosure 30, Slot 9  
Drive port: 1, Channel: 3, ID: 80/0x55  
Drive port: 2, Channel: 4, ID: 80/0x55  
Drive path redundancy: OK  
Status: Optimal  
Raw capacity: 33.902 GB  
Usable capacity: 33.862 GB  
Current data rate: 2 Gbps  
Product ID: ST336753FC F  
Firmware version: B953  
Serial number: 3HX0HMXR000073409K9E  
Vendor: IBM-ESXS  
Date of manufacture: April 5, 2003  
World-wide name: 20:00:00:04:cf:f9:db:1a  
Mode: Assigned  
Associated array: Array 1

Drive at Enclosure 30, Slot 10  
Drive port: 1, Channel: 4, ID: 96/0x3A  
Drive port: 2, Channel: 3, ID: 96/0x3A  
Drive path redundancy: OK  
Status: Optimal  
Raw capacity: 33.902 GB  
Usable capacity: 33.862 GB  
Current data rate: 2 Gbps  
Product ID: ST336753FC F  
Firmware version: B953  
Serial number: 3HX0HLZY000073409K31  
Vendor: IBM-ESXS  
Date of manufacture: April 5, 2003  
World-wide name: 20:00:00:04:cf:f9:dd:6f  
Mode: Assigned  
Associated array: Array 1

Drive at Enclosure 30, Slot 11  
Drive port: 1, Channel: 3, ID: 64/0x72  
Drive port: 2, Channel: 4, ID: 64/0x72  
Drive path redundancy: OK  
Status: Optimal  
Raw capacity: 33.902 GB  
Usable capacity: 33.862 GB  
Current data rate: 2 Gbps  
Product ID: ST336753FC F  
Firmware version: B953  
Serial number: 3HX0K1FN00007339TYD8  
Vendor: IBM-ESXS  
Date of manufacture: April 5, 2003  
World-wide name: 20:00:00:04:cf:ff:02:ae  
Mode: Assigned  
Associated array: Array 1

Drive at Enclosure 30, Slot 12  
Drive port: 1, Channel: 4, ID: 72/0x67  
Drive port: 2, Channel: 3, ID: 72/0x67  
Drive path redundancy: OK  
Status: Optimal  
Raw capacity: 33.902 GB  
Usable capacity: 33.862 GB  
Current data rate: 2 Gbps  
Product ID: ST336753FC F  
Firmware version: B953  
Serial number: 3HX0K1PX00007339TYTS  
Vendor: IBM-ESXS  
Date of manufacture: April 6, 2003  
World-wide name: 20:00:00:04:cf:ff:02:47  
Mode: Assigned  
Associated array: Array 1

Drive at Enclosure 30, Slot 13  
Drive port: 1, Channel: 3, ID: 88/0x4B  
Drive port: 2, Channel: 4, ID: 88/0x4B  
Drive path redundancy: OK  
Status: Optimal  
Raw capacity: 33.902 GB  
Usable capacity: 33.862 GB  
Current data rate: 2 Gbps  
Product ID: ST336753FC F  
Firmware version: B953  
Serial number: 3HX0K5TL00007340GTZ0  
Vendor: IBM-ESXS  
Date of manufacture: April 5, 2003  
World-wide name: 20:00:00:04:cf:f9:fa:67  
Mode: Assigned  
Associated array: Array 1

Drive at Enclosure 30, Slot 14  
Drive port: 1, Channel: 4, ID: 104/0x2E  
Drive port: 2, Channel: 3, ID: 104/0x2E  
Drive path redundancy: OK  
Status: Optimal  
Raw capacity: 33.902 GB  
Usable capacity: 33.862 GB  
Current data rate: 2 Gbps  
Product ID: ST336753FC F  
Firmware version: B953  
Serial number: 3HX0HNWV00007340X54J  
Vendor: IBM-ESXS  
Date of manufacture: April 5, 2003  
World-wide name: 20:00:00:04:cf:f9:fa:ac  
Mode: Assigned  
Associated array: Array 1

Drive at Enclosure 31, Slot 1  
Drive port: 1, Channel: 3, ID: 8/0xD9  
Drive port: 2, Channel: 4, ID: 8/0xD9  
Drive path redundancy: OK  
Status: Optimal  
Raw capacity: 33.902 GB  
Usable capacity: 33.862 GB  
Current data rate: 2 Gbps  
Product ID: ST336753FC F  
Firmware version: B953  
Serial number: 3HX0HND9000073409K39  
Vendor: IBM-ESXS  
Date of manufacture: April 5, 2003  
World-wide name: 20:00:00:04:cf:f9:dc:c5  
Mode: Assigned  
Associated array: Array 1

Drive at Enclosure 31, Slot 2  
Drive port: 1, Channel: 4, ID: 9/0xD6  
Drive port: 2, Channel: 3, ID: 9/0xD6  
Drive path redundancy: OK  
Status: Optimal  
Raw capacity: 33.902 GB  
Usable capacity: 33.862 GB  
Current data rate: 2 Gbps  
Product ID: ST336753FC F  
Firmware version: B953  
Serial number: 3HX0HRT800007339TYCP  
Vendor: IBM-ESXS  
Date of manufacture: April 5, 2003  
World-wide name: 20:00:00:04:cf:f9:ea:ba  
Mode: Assigned  
Associated array: Array 1

Drive at Enclosure 31, Slot 3  
Drive port: 1, Channel: 3, ID: 10/0xD5  
Drive port: 2, Channel: 4, ID: 10/0xD5  
Drive path redundancy: OK  
Status: Optimal  
Raw capacity: 33.902 GB  
Usable capacity: 33.862 GB  
Current data rate: 2 Gbps  
Product ID: ST336753FC F  
Firmware version: B953  
Serial number: 3HX0HTXF00007339SP0M  
Vendor: IBM-ESXS  
Date of manufacture: April 5, 2003  
World-wide name: 20:00:00:04:cf:ff:02:87  
Mode: Assigned  
Associated array: Array 1

Drive at Enclosure 31, Slot 4  
Drive port: 1, Channel: 4, ID: 11/0xD4  
Drive port: 2, Channel: 3, ID: 11/0xD4  
Drive path redundancy: OK  
Status: Optimal  
Raw capacity: 33.902 GB  
Usable capacity: 33.862 GB  
Current data rate: 2 Gbps  
Product ID: ST336753FC F  
Firmware version: B953  
Serial number: 3HX0JZK7000073405A8L  
Vendor: IBM-ESXS  
Date of manufacture: April 6, 2003  
World-wide name: 20:00:00:04:cf:ff:0e:72  
Mode: Assigned  
Associated array: Array 1

Drive at Enclosure 31, Slot 5  
Drive port: 1, Channel: 3, ID: 12/0xD3  
Drive port: 2, Channel: 4, ID: 12/0xD3  
Drive path redundancy: OK  
Status: Optimal  
Raw capacity: 33.902 GB  
Usable capacity: 33.862 GB  
Current data rate: 2 Gbps  
Product ID: ST336753FC F  
Firmware version: B953  
Serial number: 3HX0KBRT00007339TZ24  
Vendor: IBM-ESXS  
Date of manufacture: April 6, 2003  
World-wide name: 20:00:00:04:cf:ff:11:aa  
Mode: Assigned  
Associated array: Array 1

Drive at Enclosure 31, Slot 6  
Drive port: 1, Channel: 4, ID: 13/0xD2  
Drive port: 2, Channel: 3, ID: 13/0xD2  
Drive path redundancy: OK  
Status: Optimal  
Raw capacity: 33.902 GB  
Usable capacity: 33.862 GB  
Current data rate: 2 Gbps  
Product ID: ST336753FC F  
Firmware version: B953  
Serial number: 3HX0HRJ400007340X577  
Vendor: IBM-ESXS  
Date of manufacture: April 5, 2003  
World-wide name: 20:00:00:04:cf:f9:e7:45  
Mode: Assigned  
Associated array: Array 1

Drive at Enclosure 31, Slot 7  
Drive port: 1, Channel: 3, ID: 14/0xD1  
Drive port: 2, Channel: 4, ID: 14/0xD1  
Drive path redundancy: OK  
Status: Optimal  
Raw capacity: 33.902 GB  
Usable capacity: 33.862 GB  
Current data rate: 2 Gbps  
Product ID: ST336753FC F  
Firmware version: B953  
Serial number: 3HX0JR53000073409KHU  
Vendor: IBM-ESXS  
Date of manufacture: April 5, 2003  
World-wide name: 20:00:00:04:cf:f9:dc:7d  
Mode: Assigned  
Associated array: Array 1

Drive at Enclosure 31, Slot 8  
Drive port: 1, Channel: 4, ID: 15/0xCE  
Drive port: 2, Channel: 3, ID: 15/0xCE  
Drive path redundancy: OK  
Status: Optimal  
Raw capacity: 33.902 GB  
Usable capacity: 33.862 GB  
Current data rate: 2 Gbps  
Product ID: ST336753FC F  
Firmware version: B953  
Serial number: 3HX0JLBR00007338W92U  
Vendor: IBM-ESXS  
Date of manufacture: April 5, 2003  
World-wide name: 20:00:00:04:cf:f9:fb:5a  
Mode: Assigned  
Associated array: Array 1

Drive at Enclosure 31, Slot 9  
Drive port: 1, Channel: 3, ID: 81/0x54  
Drive port: 2, Channel: 4, ID: 81/0x54  
Drive path redundancy: OK  
Status: Optimal  
Raw capacity: 33.902 GB  
Usable capacity: 33.862 GB  
Current data rate: 2 Gbps  
Product ID: ST336753FC F  
Firmware version: B953  
Serial number: 3HX0HT3K000073405G9F  
Vendor: IBM-ESXS  
Date of manufacture: April 5, 2003  
World-wide name: 20:00:00:04:cf:f9:e5:a0  
Mode: Assigned  
Associated array: Array 1

Drive at Enclosure 31, Slot 10  
Drive port: 1, Channel: 4, ID: 97/0x39  
Drive port: 2, Channel: 3, ID: 97/0x39  
Drive path redundancy: OK  
Status: Optimal  
Raw capacity: 33.902 GB  
Usable capacity: 33.862 GB  
Current data rate: 2 Gbps  
Product ID: ST336753FC F  
Firmware version: B953  
Serial number: 3HX0K43N00007340GTWD  
Vendor: IBM-ESXS  
Date of manufacture: April 5, 2003  
World-wide name: 20:00:00:04:cf:f9:f5:d3  
Mode: Assigned  
Associated array: Array 1

Drive at Enclosure 31, Slot 11  
Drive port: 1, Channel: 3, ID: 65/0x71  
Drive port: 2, Channel: 4, ID: 65/0x71  
Drive path redundancy: OK  
Status: Optimal  
Raw capacity: 33.902 GB  
Usable capacity: 33.862 GB  
Current data rate: 2 Gbps  
Product ID: ST336753FC F  
Firmware version: B953  
Serial number: 3HX0HM1B000073409K94  
Vendor: IBM-ESXS  
Date of manufacture: April 5, 2003  
World-wide name: 20:00:00:04:cf:f9:dc:ad  
Mode: Assigned  
Associated array: Array 1

Drive at Enclosure 31, Slot 12  
Drive port: 1, Channel: 4, ID: 73/0x66  
Drive port: 2, Channel: 3, ID: 73/0x66  
Drive path redundancy: OK  
Status: Optimal  
Raw capacity: 33.902 GB  
Usable capacity: 33.862 GB  
Current data rate: 2 Gbps  
Product ID: ST336753FC F  
Firmware version: B953  
Serial number: 3HX0HRPC00007339TYA7  
Vendor: IBM-ESXS  
Date of manufacture: April 5, 2003  
World-wide name: 20:00:00:04:cf:f9:eb:16  
Mode: Assigned  
Associated array: Array 1

Drive at Enclosure 31, Slot 13  
Drive port: 1, Channel: 3, ID: 89/0x4A  
Drive port: 2, Channel: 4, ID: 89/0x4A  
Drive path redundancy: OK  
Status: Optimal  
Raw capacity: 33.902 GB  
Usable capacity: 33.862 GB  
Current data rate: 2 Gbps  
Product ID: ST336753FC F  
Firmware version: B953  
Serial number: 3HX0SZGN00007346NN5X  
Vendor: IBM-ESXS  
Date of manufacture: May 17, 2003  
World-wide name: 20:00:00:0c:50:20:a1:9a  
Mode: Assigned  
Associated array: Array 1

Drive at Enclosure 31, Slot 14  
Drive port: 1, Channel: 4, ID: 105/0x2D  
Drive port: 2, Channel: 3, ID: 105/0x2D  
Drive path redundancy: OK  
Status: Optimal  
Raw capacity: 33.902 GB  
Usable capacity: 33.862 GB  
Current data rate: 2 Gbps  
Product ID: ST336753FC F  
Firmware version: B953  
Serial number: 3HX0HNM0000073387GE1  
Vendor: IBM-ESXS  
Date of manufacture: April 5, 2003  
World-wide name: 20:00:00:04:cf:f9:e4:0f  
Mode: Assigned  
Associated array: Array 1

Drive at Enclosure 32, Slot 1  
Drive port: 1, Channel: 3, ID: 16/0xCD  
Drive port: 2, Channel: 4, ID: 16/0xCD  
Drive path redundancy: OK  
Status: Optimal  
Raw capacity: 33.902 GB  
Usable capacity: 33.862 GB  
Current data rate: 2 Gbps  
Product ID: ST336753FC F  
Firmware version: B953  
Serial number: 3HX0HX0R00007339RGMG  
Vendor: IBM-ESXS  
Date of manufacture: April 6, 2003  
World-wide name: 20:00:00:04:cf:ff:08:30  
Mode: Assigned  
Associated array: Array 2

Drive at Enclosure 32, Slot 2  
Drive port: 1, Channel: 4, ID: 17/0xCC  
Drive port: 2, Channel: 3, ID: 17/0xCC  
Drive path redundancy: OK  
Status: Optimal  
Raw capacity: 33.902 GB  
Usable capacity: 33.862 GB  
Current data rate: 2 Gbps  
Product ID: ST336753FC F  
Firmware version: B953  
Serial number: 3HX0HMP100007340WVK5  
Vendor: IBM-ESXS  
Date of manufacture: April 5, 2003  
World-wide name: 20:00:00:04:cf:f9:ed:62  
Mode: Assigned  
Associated array: Array 2

Drive at Enclosure 32, Slot 3  
Drive port: 1, Channel: 3, ID: 18/0xCB  
Drive port: 2, Channel: 4, ID: 18/0xCB  
Drive path redundancy: OK  
Status: Optimal  
Raw capacity: 33.902 GB  
Usable capacity: 33.862 GB  
Current data rate: 2 Gbps  
Product ID: ST336753FC F  
Firmware version: B953  
Serial number: 3HX0K7NX000073405G2Z  
Vendor: IBM-ESXS  
Date of manufacture: April 5, 2003  
World-wide name: 20:00:00:04:cf:f9:ed:5b  
Mode: Assigned  
Associated array: Array 2

Drive at Enclosure 32, Slot 4  
Drive port: 1, Channel: 4, ID: 19/0xCA  
Drive port: 2, Channel: 3, ID: 19/0xCA  
Drive path redundancy: OK  
Status: Optimal  
Raw capacity: 33.902 GB  
Usable capacity: 33.862 GB  
Current data rate: 2 Gbps  
Product ID: ST336753FC F  
Firmware version: B953  
Serial number: 3HX0HT6G0000734059NP  
Vendor: IBM-ESXS  
Date of manufacture: April 5, 2003  
World-wide name: 20:00:00:04:cf:f9:e6:ee  
Mode: Assigned  
Associated array: Array 2

Drive at Enclosure 32, Slot 5  
Drive port: 1, Channel: 3, ID: 20/0xC9  
Drive port: 2, Channel: 4, ID: 20/0xC9  
Drive path redundancy: OK  
Status: Optimal  
Raw capacity: 33.902 GB  
Usable capacity: 33.862 GB  
Current data rate: 2 Gbps  
Product ID: ST336753FC F  
Firmware version: B953  
Serial number: 3HX0JZBL000073405A5E  
Vendor: IBM-ESXS  
Date of manufacture: April 6, 2003  
World-wide name: 20:00:00:04:cf:ff:0d:7d  
Mode: Assigned  
Associated array: Array 2

Drive at Enclosure 32, Slot 6  
Drive port: 1, Channel: 4, ID: 21/0xC7  
Drive port: 2, Channel: 3, ID: 21/0xC7  
Drive path redundancy: OK  
Status: Optimal  
Raw capacity: 33.902 GB  
Usable capacity: 33.862 GB  
Current data rate: 2 Gbps  
Product ID: ST336753FC F  
Firmware version: B953  
Serial number: 3HX0K63300007339N0KC  
Vendor: IBM-ESXS  
Date of manufacture: April 6, 2003  
World-wide name: 20:00:00:04:cf:f9:fb:50  
Mode: Assigned  
Associated array: Array 2

Drive at Enclosure 32, Slot 7  
Drive port: 1, Channel: 3, ID: 22/0xC6  
Drive port: 2, Channel: 4, ID: 22/0xC6  
Drive path redundancy: OK  
Status: Optimal  
Raw capacity: 33.902 GB  
Usable capacity: 33.862 GB  
Current data rate: 2 Gbps  
Product ID: ST336753FC F  
Firmware version: B953  
Serial number: 3HX0K6FK000073392DV2  
Vendor: IBM-ESXS  
Date of manufacture: April 5, 2003  
World-wide name: 20:00:00:04:cf:f9:ea:78  
Mode: Assigned  
Associated array: Array 2

Drive at Enclosure 32, Slot 8  
Drive port: 1, Channel: 4, ID: 23/0xC5  
Drive port: 2, Channel: 3, ID: 23/0xC5  
Drive path redundancy: OK  
Status: Optimal  
Raw capacity: 33.902 GB  
Usable capacity: 33.862 GB  
Current data rate: 2 Gbps  
Product ID: ST336753FC F  
Firmware version: B953  
Serial number: 3HX0J6HR000023125CG1  
Vendor: IBM-ESXS  
Date of manufacture: April 5, 2003  
World-wide name: 20:00:00:04:cf:f9:fb  
Mode: Assigned  
Associated array: Array 2

Drive at Enclosure 32, Slot 9  
Drive port: 1, Channel: 3, ID: 82/0x53  
Drive port: 2, Channel: 4, ID: 82/0x53  
Drive path redundancy: OK  
Status: Optimal  
Raw capacity: 33.902 GB  
Usable capacity: 33.862 GB  
Current data rate: 2 Gbps  
Product ID: ST336753FC F  
Firmware version: B953  
Serial number: 3HX0HRLR00007340X5HZ  
Vendor: IBM-ESXS  
Date of manufacture: April 5, 2003  
World-wide name: 20:00:00:04:cf:f9:e9:73  
Mode: Assigned  
Associated array: Array 2

Drive at Enclosure 32, Slot 10  
Drive port: 1, Channel: 4, ID: 98/0x36  
Drive port: 2, Channel: 3, ID: 98/0x36  
Drive path redundancy: OK  
Status: Optimal  
Raw capacity: 33.902 GB  
Usable capacity: 33.862 GB  
Current data rate: 2 Gbps  
Product ID: ST336753FC F  
Firmware version: B953  
Serial number: 3HX0HRMS00007340X5J8  
Vendor: IBM-ESXS  
Date of manufacture: April 5, 2003  
World-wide name: 20:00:00:04:cf:f9:e8:aa  
Mode: Assigned  
Associated array: Array 2

Drive at Enclosure 32, Slot 11  
Drive port: 1, Channel: 3, ID: 66/0x6E  
Drive port: 2, Channel: 4, ID: 66/0x6E  
Drive path redundancy: OK  
Status: Optimal  
Raw capacity: 33.902 GB  
Usable capacity: 33.862 GB  
Current data rate: 2 Gbps  
Product ID: ST336753FC F  
Firmware version: B953  
Serial number: 3HX0D47S000073368NX0  
Vendor: IBM-ESXS  
Date of manufacture: March 4, 2003  
World-wide name: 20:00:00:04:cf:42:5b:53  
Mode: Assigned  
Associated array: Array 2

Drive at Enclosure 32, Slot 12  
Drive port: 1, Channel: 4, ID: 74/0x65  
Drive port: 2, Channel: 3, ID: 74/0x65  
Drive path redundancy: OK  
Status: Optimal  
Raw capacity: 33.902 GB  
Usable capacity: 33.862 GB  
Current data rate: 2 Gbps  
Product ID: ST336753FC F  
Firmware version: B953  
Serial number: 3HX0K786000073392DXP  
Vendor: IBM-ESXS  
Date of manufacture: April 5, 2003  
World-wide name: 20:00:00:04:cf:f9:e3:b2  
Mode: Assigned  
Associated array: Array 2

Drive at Enclosure 32, Slot 13  
Drive port: 1, Channel: 3, ID: 90/0x49  
Drive port: 2, Channel: 4, ID: 90/0x49  
Drive path redundancy: OK  
Status: Optimal  
Raw capacity: 33.902 GB  
Usable capacity: 33.862 GB  
Current data rate: 2 Gbps  
Product ID: ST336753FC F  
Firmware version: B953  
Serial number: 3HX0HRE400007335MBA1  
Vendor: IBM-ESXS  
Date of manufacture: April 5, 2003  
World-wide name: 20:00:00:04:cf:f9:f9:df  
Mode: Assigned  
Associated array: Array 2

Drive at Enclosure 32, Slot 14  
Drive port: 1, Channel: 4, ID: 106/0x2C  
Drive port: 2, Channel: 3, ID: 106/0x2C  
Drive path redundancy: OK  
Status: Optimal  
Raw capacity: 33.902 GB  
Usable capacity: 33.862 GB  
Current data rate: 2 Gbps  
Product ID: ST336753FC F  
Firmware version: B953  
Serial number: 3HX0HLXJ00007340WVN1  
Vendor: IBM-ESXS  
Date of manufacture: April 5, 2003  
World-wide name: 20:00:00:04:cf:f9:ec:08  
Mode: Assigned  
Associated array: Array 2

Drive at Enclosure 33, Slot 1  
Drive port: 1, Channel: 3, ID: 24/0xC3  
Drive port: 2, Channel: 4, ID: 24/0xC3  
Drive path redundancy: OK  
Status: Optimal  
Raw capacity: 33.902 GB  
Usable capacity: 33.862 GB  
Current data rate: 2 Gbps  
Product ID: ST336753FC F  
Firmware version: B953  
Serial number: 3HX0JLLQ00007340WVLB  
Vendor: IBM-ESXS  
Date of manufacture: April 5, 2003  
World-wide name: 20:00:00:04:cf:f9:ed:11  
Mode: Assigned  
Associated array: Array 2

Drive at Enclosure 33, Slot 2  
Drive port: 1, Channel: 4, ID: 25/0xBC  
Drive port: 2, Channel: 3, ID: 25/0xBC  
Drive path redundancy: OK  
Status: Optimal  
Raw capacity: 33.902 GB  
Usable capacity: 33.862 GB  
Current data rate: 2 Gbps  
Product ID: ST336753FC F  
Firmware version: B953  
Serial number: 3HX0K7EG00007340X5BR  
Vendor: IBM-ESXS  
Date of manufacture: April 5, 2003  
World-wide name: 20:00:00:04:cf:f9:e6:79  
Mode: Assigned  
Associated array: Array 2

Drive at Enclosure 33, Slot 3  
Drive port: 1, Channel: 3, ID: 26/0xBA  
Drive port: 2, Channel: 4, ID: 26/0xBA  
Drive path redundancy: OK  
Status: Optimal  
Raw capacity: 33.902 GB  
Usable capacity: 33.862 GB  
Current data rate: 2 Gbps  
Product ID: ST336753FC F  
Firmware version: B953  
Serial number: 3HX0J36P000073405FTB  
Vendor: IBM-ESXS  
Date of manufacture: April 5, 2003  
World-wide name: 20:00:00:04:cf:f9:e5:68  
Mode: Assigned  
Associated array: Array 2



Drive at Enclosure 33, Slot 4  
Drive port: 1, Channel: 4, ID: 27/0xB9  
Drive port: 2, Channel: 3, ID: 27/0xB9  
Drive path redundancy: OK  
Status: Optimal  
Raw capacity: 33.902 GB  
Usable capacity: 33.862 GB  
Current data rate: 2 Gbps  
Product ID: ST336753FC F  
Firmware version: B953  
Serial number: 3HX0JT7H000073392DTL  
Vendor: IBM-ESXS  
Date of manufacture: April 5, 2003  
World-wide name: 20:00:00:04:cf:f9:e3:a9  
Mode: Assigned  
Associated array: Array 2

Drive at Enclosure 33, Slot 5  
Drive port: 1, Channel: 3, ID: 28/0xB6  
Drive port: 2, Channel: 4, ID: 28/0xB6  
Drive path redundancy: OK  
Status: Optimal  
Raw capacity: 33.902 GB  
Usable capacity: 33.862 GB  
Current data rate: 2 Gbps  
Product ID: ST336753FC F  
Firmware version: B953  
Serial number: 3HX0J8ZD00007322EUHS  
Vendor: IBM-ESXS  
Date of manufacture: April 5, 2003  
World-wide name: 20:00:00:04:cf:f9:fb:22  
Mode: Assigned  
Associated array: Array 2

Drive at Enclosure 33, Slot 6  
Drive port: 1, Channel: 4, ID: 29/0xB5  
Drive port: 2, Channel: 3, ID: 29/0xB5  
Drive path redundancy: OK  
Status: Optimal  
Raw capacity: 33.902 GB  
Usable capacity: 33.862 GB  
Current data rate: 2 Gbps  
Product ID: ST336753FC F  
Firmware version: B953  
Serial number: 3HX0K08C00007340WEUA  
Vendor: IBM-ESXS  
Date of manufacture: April 6, 2003  
World-wide name: 20:00:00:04:cf:ff:02:2c  
Mode: Assigned  
Associated array: Array 2

Drive at Enclosure 33, Slot 7  
Drive port: 1, Channel: 3, ID: 30/0xB4  
Drive port: 2, Channel: 4, ID: 30/0xB4  
Drive path redundancy: OK  
Status: Optimal  
Raw capacity: 33.902 GB  
Usable capacity: 33.862 GB  
Current data rate: 2 Gbps  
Product ID: ST336753FC F  
Firmware version: B953  
Serial number: 3HX0HMF000083011TDD  
Vendor: IBM-ESXS  
Date of manufacture: April 6, 2003  
World-wide name: 20:00:00:04:cf:ff:02:2d  
Mode: Assigned  
Associated array: Array 2

Drive at Enclosure 33, Slot 8  
Drive port: 1, Channel: 4, ID: 31/0xB3  
Drive port: 2, Channel: 3, ID: 31/0xB3  
Drive path redundancy: OK  
Status: Optimal  
Raw capacity: 33.902 GB  
Usable capacity: 33.862 GB  
Current data rate: 2 Gbps  
Product ID: ST336753FC F  
Firmware version: B953  
Serial number: 3HX0HMQ700007340WVMS  
Vendor: IBM-ESXS  
Date of manufacture: April 5, 2003  
World-wide name: 20:00:00:04:cf:f9:ec:18  
Mode: Assigned  
Associated array: Array 2

Drive at Enclosure 33, Slot 9  
Drive port: 1, Channel: 3, ID: 83/0x52  
Drive port: 2, Channel: 4, ID: 83/0x52  
Drive path redundancy: OK  
Status: Optimal  
Raw capacity: 33.902 GB  
Usable capacity: 33.862 GB  
Current data rate: 2 Gbps  
Product ID: ST336753FC F  
Firmware version: B953  
Serial number: 3HX0K0V8000073405A89  
Vendor: IBM-ESXS  
Date of manufacture: April 6, 2003  
World-wide name: 20:00:00:04:cf:ff:0a:38  
Mode: Assigned  
Associated array: Array 2

Drive at Enclosure 33, Slot 10  
Drive port: 1, Channel: 4, ID: 99/0x35  
Drive port: 2, Channel: 3, ID: 99/0x35  
Drive path redundancy: OK  
Status: Optimal  
Raw capacity: 33.902 GB  
Usable capacity: 33.862 GB  
Current data rate: 2 Gbps  
Product ID: ST336753FC F  
Firmware version: B953  
Serial number: 3HX0K76Q000073405AA3  
Vendor: IBM-ESXS  
Date of manufacture: April 6, 2003  
World-wide name: 20:00:00:04:cf:ff:07:be  
Mode: Assigned  
Associated array: Array 2

Drive at Enclosure 33, Slot 11  
Drive port: 1, Channel: 3, ID: 67/0x6D  
Drive port: 2, Channel: 4, ID: 67/0x6D  
Drive path redundancy: OK  
Status: Optimal  
Raw capacity: 33.902 GB  
Usable capacity: 33.862 GB  
Current data rate: 2 Gbps  
Product ID: ST336753FC F  
Firmware version: B953  
Serial number: 3HX0JSFZ00007339SNN7  
Vendor: IBM-ESXS  
Date of manufacture: April 5, 2003  
World-wide name: 20:00:00:04:cf:f9:fb:f4  
Mode: Assigned  
Associated array: Array 2

Drive at Enclosure 33, Slot 12  
Drive port: 1, Channel: 4, ID: 75/0x63  
Drive port: 2, Channel: 3, ID: 75/0x63  
Drive path redundancy: OK  
Status: Optimal  
Raw capacity: 33.902 GB  
Usable capacity: 33.862 GB  
Current data rate: 2 Gbps  
Product ID: ST336753FC F  
Firmware version: B953  
Serial number: 3HX0HRS1000073392DQP  
Vendor: IBM-ESXS  
Date of manufacture: April 5, 2003  
World-wide name: 20:00:00:04:cf:f9:ea:7b  
Mode: Assigned  
Associated array: Array 2

Drive at Enclosure 33, Slot 13  
Drive port: 1, Channel: 3, ID: 91/0x47  
Drive port: 2, Channel: 4, ID: 91/0x47  
Drive path redundancy: OK  
Status: Optimal  
Raw capacity: 33.902 GB  
Usable capacity: 33.862 GB  
Current data rate: 2 Gbps  
Product ID: ST336753FC F  
Firmware version: B953  
Serial number: 3HX0HRN600007340X5A5  
Vendor: IBM-ESXS  
Date of manufacture: April 5, 2003  
World-wide name: 20:00:00:04:cf:f9:e7:57  
Mode: Assigned  
Associated array: Array 2

Drive at Enclosure 33, Slot 14  
Drive port: 1, Channel: 4, ID: 107/0x2B  
Drive port: 2, Channel: 3, ID: 107/0x2B  
Drive path redundancy: OK  
Status: Optimal  
Raw capacity: 33.902 GB  
Usable capacity: 33.862 GB  
Current data rate: 2 Gbps  
Product ID: ST336753FC F  
Firmware version: B953  
Serial number: 3HX0HM3D000073409KNQ  
Vendor: IBM-ESXS  
Date of manufacture: April 5, 2003  
World-wide name: 20:00:00:04:cf:f9:dc:8b  
Mode: Assigned  
Associated array: Array 2

Drive at Enclosure 34, Slot 1  
Drive port: 1, Channel: 1, ID: 32/0xB2  
Drive port: 2, Channel: 2, ID: 32/0xB2  
Drive path redundancy: OK  
Status: Optimal  
Raw capacity: 33.902 GB  
Usable capacity: 33.862 GB  
Current data rate: 2 Gbps  
Product ID: ST336753FC F  
Firmware version: B953  
Serial number: 3HX0HT1B00007336AH06  
Vendor: IBM-ESXS  
Date of manufacture: April 5, 2003  
World-wide name: 20:00:00:04:cf:f9:e3:bf  
Mode: Assigned  
Associated array: Array 3

Drive at Enclosure 34, Slot 2  
Drive port: 1, Channel: 2, ID: 33/0xB1  
Drive port: 2, Channel: 1, ID: 33/0xB1  
Drive path redundancy: OK  
Status: Optimal  
Raw capacity: 33.902 GB  
Usable capacity: 33.862 GB  
Current data rate: 2 Gbps  
Product ID: ST336753FC F  
Firmware version: B953  
Serial number: 3HX0HMGZ00007339TYL4  
Vendor: IBM-ESXS  
Date of manufacture: April 5, 2003  
World-wide name: 20:00:00:04:cf:f9:e2:c2  
Mode: Assigned  
Associated array: Array 3

Drive at Enclosure 34, Slot 3  
Drive port: 1, Channel: 1, ID: 34/0xAE  
Drive port: 2, Channel: 2, ID: 34/0xAE  
Drive path redundancy: OK  
Status: Optimal  
Raw capacity: 33.902 GB  
Usable capacity: 33.862 GB  
Current data rate: 2 Gbps  
Product ID: ST336753FC F  
Firmware version: B953  
Serial number: 3HX0GFXW00007339GN1Z  
Vendor: IBM-ESXS  
Date of manufacture: April 5, 2003  
World-wide name: 20:00:00:04:cf:f9:fc:49  
Mode: Assigned  
Associated array: Array 3

Drive at Enclosure 34, Slot 4  
Drive port: 1, Channel: 2, ID: 35/0xAD  
Drive port: 2, Channel: 1, ID: 35/0xAD  
Drive path redundancy: OK  
Status: Optimal  
Raw capacity: 33.902 GB  
Usable capacity: 33.862 GB  
Current data rate: 2 Gbps  
Product ID: ST336753FC F  
Firmware version: B953  
Serial number: 3HX0HN5Q00007339SP77  
Vendor: IBM-ESXS  
Date of manufacture: April 6, 2003  
World-wide name: 20:00:00:04:cf:f9:fb:1d  
Mode: Assigned  
Associated array: Array 3

Drive at Enclosure 34, Slot 5  
Drive port: 1, Channel: 1, ID: 36/0xAC  
Drive port: 2, Channel: 2, ID: 36/0xAC  
Drive path redundancy: OK  
Status: Optimal  
Raw capacity: 33.902 GB  
Usable capacity: 33.862 GB  
Current data rate: 2 Gbps  
Product ID: ST336753FC F  
Firmware version: B953  
Serial number: 3HX0HL5G00007339SP4X  
Vendor: IBM-ESXS  
Date of manufacture: April 5, 2003  
World-wide name: 20:00:00:04:cf:f9:fc:41  
Mode: Assigned  
Associated array: Array 3

Drive at Enclosure 34, Slot 6  
Drive port: 1, Channel: 2, ID: 37/0xAB  
Drive port: 2, Channel: 1, ID: 37/0xAB  
Drive path redundancy: OK  
Status: Optimal  
Raw capacity: 33.902 GB  
Usable capacity: 33.862 GB  
Current data rate: 2 Gbps  
Product ID: ST336753FC F  
Firmware version: B953  
Serial number: 3HX0HM5E000073409KQK  
Vendor: IBM-ESXS  
Date of manufacture: April 5, 2003  
World-wide name: 20:00:00:04:cf:f9:dc:83  
Mode: Assigned  
Associated array: Array 3

Drive at Enclosure 34, Slot 7  
Drive port: 1, Channel: 1, ID: 38/0xAA  
Drive port: 2, Channel: 2, ID: 38/0xAA  
Drive path redundancy: OK  
Status: Optimal  
Raw capacity: 33.902 GB  
Usable capacity: 33.862 GB  
Current data rate: 2 Gbps  
Product ID: ST336753FC F  
Firmware version: B953  
Serial number: 3HX0HNNM00007340X50W  
Vendor: IBM-ESXS  
Date of manufacture: April 5, 2003  
World-wide name: 20:00:00:04:cf:f9:db:f4  
Mode: Assigned  
Associated array: Array 3

Drive at Enclosure 34, Slot 8  
Drive port: 1, Channel: 2, ID: 39/0xA9  
Drive port: 2, Channel: 1, ID: 39/0xA9  
Drive path redundancy: OK  
Status: Optimal  
Raw capacity: 33.902 GB  
Usable capacity: 33.862 GB  
Current data rate: 2 Gbps  
Product ID: ST336753FC F  
Firmware version: B953  
Serial number: 3HX0HT9L0000734059N4  
Vendor: IBM-ESXS  
Date of manufacture: April 5, 2003  
World-wide name: 20:00:00:04:cf:f9:e7:e0  
Mode: Assigned  
Associated array: Array 3

Drive at Enclosure 34, Slot 9  
Drive port: 1, Channel: 1, ID: 84/0x51  
Drive port: 2, Channel: 2, ID: 84/0x51  
Drive path redundancy: OK  
Status: Optimal  
Raw capacity: 33.902 GB  
Usable capacity: 33.862 GB  
Current data rate: 2 Gbps  
Product ID: ST336753FC F  
Firmware version: B953  
Serial number: 3HX0JA65000073405FZS  
Vendor: IBM-ESXS  
Date of manufacture: April 6, 2003  
World-wide name: 20:00:00:04:cf:f9:fb:c5  
Mode: Assigned  
Associated array: Array 3

Drive at Enclosure 34, Slot 10  
Drive port: 1, Channel: 2, ID: 100/0x34  
Drive port: 2, Channel: 1, ID: 100/0x34  
Drive path redundancy: OK  
Status: Optimal  
Raw capacity: 33.902 GB  
Usable capacity: 33.862 GB  
Current data rate: 2 Gbps  
Product ID: ST336753FC F  
Firmware version: B953  
Serial number: 3HX0HH7G00007339GMU6  
Vendor: IBM-ESXS  
Date of manufacture: April 4, 2003  
World-wide name: 20:00:00:04:cf:f9:d1:63  
Mode: Assigned  
Associated array: Array 3

Drive at Enclosure 34, Slot 11  
Drive port: 1, Channel: 1, ID: 68/0x6C  
Drive port: 2, Channel: 2, ID: 68/0x6C  
Drive path redundancy: OK  
Status: Optimal  
Raw capacity: 33.902 GB  
Usable capacity: 33.862 GB  
Current data rate: 2 Gbps  
Product ID: ST336753FC F  
Firmware version: B953  
Serial number: 3HX0HT6F00007340WVGB  
Vendor: IBM-ESXS  
Date of manufacture: April 5, 2003  
World-wide name: 20:00:00:04:cf:f9:e6:bc  
Mode: Assigned  
Associated array: Array 3

Drive at Enclosure 34, Slot 12  
Drive port: 1, Channel: 2, ID: 76/0x5C  
Drive port: 2, Channel: 1, ID: 76/0x5C  
Drive path redundancy: OK  
Status: Optimal  
Raw capacity: 33.902 GB  
Usable capacity: 33.862 GB  
Current data rate: 2 Gbps  
Product ID: ST336753FC F  
Firmware version: B953  
Serial number: 3HX0J1CW00007339TYG5  
Vendor: IBM-ESXS  
Date of manufacture: April 4, 2003  
World-wide name: 20:00:00:04:cf:f9:d1:01  
Mode: Assigned  
Associated array: Array 3

Drive at Enclosure 34, Slot 13  
Drive port: 1, Channel: 1, ID: 92/0x46  
Drive port: 2, Channel: 2, ID: 92/0x46  
Drive path redundancy: OK  
Status: Optimal  
Raw capacity: 33.902 GB  
Usable capacity: 33.862 GB  
Current data rate: 2 Gbps  
Product ID: ST336753FC F  
Firmware version: B953  
Serial number: 3HX0HM7X00007339RG53  
Vendor: IBM-ESXS  
Date of manufacture: April 5, 2003  
World-wide name: 20:00:00:04:cf:f9:e1:8d  
Mode: Assigned  
Associated array: Array 3

Drive at Enclosure 34, Slot 14  
Drive port: 1, Channel: 2, ID: 108/0x2A  
Drive port: 2, Channel: 1, ID: 108/0x2A  
Drive path redundancy: OK  
Status: Optimal  
Raw capacity: 33.902 GB  
Usable capacity: 33.862 GB  
Current data rate: 2 Gbps  
Product ID: ST336753FC F  
Firmware version: B953  
Serial number: 3HX0K56900007339N10R  
Vendor: IBM-ESXS  
Date of manufacture: April 5, 2003  
World-wide name: 20:00:00:04:cf:f9:fc:4d  
Mode: Assigned  
Associated array: Array 3

Drive at Enclosure 35, Slot 1  
Drive port: 1, Channel: 1, ID: 40/0xA7  
Drive port: 2, Channel: 2, ID: 40/0xA7  
Drive path redundancy: OK  
Status: Optimal  
Raw capacity: 33.902 GB  
Usable capacity: 33.862 GB  
Current data rate: 2 Gbps  
Product ID: ST336753FC F  
Firmware version: B953  
Serial number: 3HX0HRK900007340X5K0  
Vendor: IBM-ESXS  
Date of manufacture: April 5, 2003  
World-wide name: 20:00:00:04:cf:f9:e7:53  
Mode: Assigned  
Associated array: Array 3

Drive at Enclosure 35, Slot 2  
Drive port: 1, Channel: 2, ID: 41/0xA6  
Drive port: 2, Channel: 1, ID: 41/0xA6  
Drive path redundancy: OK  
Status: Optimal  
Raw capacity: 33.902 GB  
Usable capacity: 33.862 GB  
Current data rate: 2 Gbps  
Product ID: ST336753FC F  
Firmware version: B953  
Serial number: 3HX0K78M00007340X5JC  
Vendor: IBM-ESXS  
Date of manufacture: April 5, 2003  
World-wide name: 20:00:00:04:cf:f9:e6:80  
Mode: Assigned  
Associated array: Array 3

Drive at Enclosure 35, Slot 3  
Drive port: 1, Channel: 1, ID: 42/0xA5  
Drive port: 2, Channel: 2, ID: 42/0xA5  
Drive path redundancy: OK  
Status: Optimal  
Raw capacity: 33.902 GB  
Usable capacity: 33.862 GB  
Current data rate: 2 Gbps  
Product ID: ST336753FC F  
Firmware version: B953  
Serial number: 3HX0HH3S00007340YESY  
Vendor: IBM-ESXS  
Date of manufacture: April 5, 2003  
World-wide name: 20:00:00:04:cf:f9:db:e3  
Mode: Assigned  
Associated array: Array 3

Drive at Enclosure 35, Slot 4  
Drive port: 1, Channel: 2, ID: 43/0xA3  
Drive port: 2, Channel: 1, ID: 43/0xA3  
Drive path redundancy: OK  
Status: Optimal  
Raw capacity: 33.902 GB  
Usable capacity: 33.862 GB  
Current data rate: 2 Gbps  
Product ID: ST336753FC F  
Firmware version: B953  
Serial number: 3HX0JCKX000073409KCK  
Vendor: IBM-ESXS  
Date of manufacture: April 6, 2003  
World-wide name: 20:00:00:04:cf:f9:fb:d0  
Mode: Assigned  
Associated array: Array 3

Drive at Enclosure 35, Slot 5  
Drive port: 1, Channel: 1, ID: 44/0x9F  
Drive port: 2, Channel: 2, ID: 44/0x9F  
Drive path redundancy: OK  
Status: Optimal  
Raw capacity: 33.902 GB  
Usable capacity: 33.862 GB  
Current data rate: 2 Gbps  
Product ID: ST336753FC F  
Firmware version: B953  
Serial number: 3HX0K77500007339TYPM  
Vendor: IBM-ESXS  
Date of manufacture: April 5, 2003  
World-wide name: 20:00:00:04:cf:f9:e6:5d  
Mode: Assigned  
Associated array: Array 3

Drive at Enclosure 35, Slot 6  
Drive port: 1, Channel: 2, ID: 45/0x9E  
Drive port: 2, Channel: 1, ID: 45/0x9E  
Drive path redundancy: OK  
Status: Optimal  
Raw capacity: 33.902 GB  
Usable capacity: 33.862 GB  
Current data rate: 2 Gbps  
Product ID: ST336753FC F  
Firmware version: B953  
Serial number: 3HX0K2AS00007339TYXR  
Vendor: IBM-ESXS  
Date of manufacture: April 5, 2003  
World-wide name: 20:00:00:04:cf:f9:fa:ab  
Mode: Assigned  
Associated array: Array 3

Drive at Enclosure 35, Slot 7  
Drive port: 1, Channel: 1, ID: 46/0x9D  
Drive port: 2, Channel: 2, ID: 46/0x9D  
Drive path redundancy: OK  
Status: Optimal  
Raw capacity: 33.902 GB  
Usable capacity: 33.862 GB  
Current data rate: 2 Gbps  
Product ID: ST336753FC F  
Firmware version: B953  
Serial number: 3HX0HLY7000073392E29  
Vendor: IBM-ESXS  
Date of manufacture: April 5, 2003  
World-wide name: 20:00:00:04:cf:f9:eb:a7  
Mode: Assigned  
Associated array: Array 3

Drive at Enclosure 35, Slot 8  
Drive port: 1, Channel: 2, ID: 47/0x9B  
Drive port: 2, Channel: 1, ID: 47/0x9B  
Drive path redundancy: OK  
Status: Optimal  
Raw capacity: 33.902 GB  
Usable capacity: 33.862 GB  
Current data rate: 2 Gbps  
Product ID: ST336753FC F  
Firmware version: B953  
Serial number: 3HX0HT5S0000734058EC  
Vendor: IBM-ESXS  
Date of manufacture: April 5, 2003  
World-wide name: 20:00:00:04:cf:f9:e7:84  
Mode: Assigned  
Associated array: Array 3

Drive at Enclosure 35, Slot 9  
Drive port: 1, Channel: 1, ID: 85/0x4F  
Drive port: 2, Channel: 2, ID: 85/0x4F  
Drive path redundancy: OK  
Status: Optimal  
Raw capacity: 33.902 GB  
Usable capacity: 33.862 GB  
Current data rate: 2 Gbps  
Product ID: ST336753FC F  
Firmware version: B953  
Serial number: 3HX0HNN4000073409K9K  
Vendor: IBM-ESXS  
Date of manufacture: April 5, 2003  
World-wide name: 20:00:00:04:cf:f9:dc:1f  
Mode: Assigned  
Associated array: Array 3

Drive at Enclosure 35, Slot 10  
Drive port: 1, Channel: 2, ID: 101/0x33  
Drive port: 2, Channel: 1, ID: 101/0x33  
Drive path redundancy: OK  
Status: Optimal  
Raw capacity: 33.902 GB  
Usable capacity: 33.862 GB  
Current data rate: 2 Gbps  
Product ID: ST336753FC F  
Firmware version: B953  
Serial number: 3HX0K7DL0000734058BV  
Vendor: IBM-ESXS  
Date of manufacture: April 5, 2003  
World-wide name: 20:00:00:04:cf:f9:e7:70  
Mode: Assigned  
Associated array: Array 3

Drive at Enclosure 35, Slot 11  
Drive port: 1, Channel: 1, ID: 69/0x6B  
Drive port: 2, Channel: 2, ID: 69/0x6B  
Drive path redundancy: OK  
Status: Optimal  
Raw capacity: 33.902 GB  
Usable capacity: 33.862 GB  
Current data rate: 2 Gbps  
Product ID: ST336753FC F  
Firmware version: B953  
Serial number: 3HX0K87M0000734058DR  
Vendor: IBM-ESXS  
Date of manufacture: April 5, 2003  
World-wide name: 20:00:00:04:cf:f9:e8:12  
Mode: Assigned  
Associated array: Array 3

Drive at Enclosure 35, Slot 12  
Drive port: 1, Channel: 2, ID: 77/0x5A  
Drive port: 2, Channel: 1, ID: 77/0x5A  
Drive path redundancy: OK  
Status: Optimal  
Raw capacity: 33.902 GB  
Usable capacity: 33.862 GB  
Current data rate: 2 Gbps  
Product ID: ST336753FC F  
Firmware version: B953  
Serial number: 3HX0HMG10000734058D8  
Vendor: IBM-ESXS  
Date of manufacture: April 5, 2003  
World-wide name: 20:00:00:04:cf:f9:e7:78  
Mode: Assigned  
Associated array: Array 3

Drive at Enclosure 35, Slot 13  
Drive port: 1, Channel: 1, ID: 93/0x45  
Drive port: 2, Channel: 2, ID: 93/0x45  
Drive path redundancy: OK  
Status: Optimal  
Raw capacity: 33.902 GB  
Usable capacity: 33.862 GB  
Current data rate: 2 Gbps  
Product ID: ST336753FC F  
Firmware version: B953  
Serial number: 3HX0D4WQ00007335JBBH  
Vendor: IBM-ESXS  
Date of manufacture: March 4, 2003  
World-wide name: 20:00:00:04:cf:42:59:bb  
Mode: Assigned  
Associated array: Array 3

Drive at Enclosure 35, Slot 14  
Drive port: 1, Channel: 2, ID: 109/0x29  
Drive port: 2, Channel: 1, ID: 109/0x29  
Drive path redundancy: OK  
Status: Optimal  
Raw capacity: 33.902 GB  
Usable capacity: 33.862 GB  
Current data rate: 2 Gbps  
Product ID: ST336753FC F  
Firmware version: B953  
Serial number: 3HX0JKNP00007339SNUY  
Vendor: IBM-ESXS  
Date of manufacture: April 6, 2003  
World-wide name: 20:00:00:04:cf:ff:03:3b  
Mode: Assigned  
Associated array: Array 3

Drive at Enclosure 36, Slot 1  
Drive port: 1, Channel: 1, ID: 48/0x98  
Drive port: 2, Channel: 2, ID: 48/0x98  
Drive path redundancy: OK  
Status: Optimal  
Raw capacity: 33.902 GB  
Usable capacity: 33.862 GB  
Current data rate: 2 Gbps  
Product ID: ST336753FC F  
Firmware version: B953  
Serial number: 3HX0HT7J000073405G69  
Vendor: IBM-ESXS  
Date of manufacture: April 5, 2003  
World-wide name: 20:00:00:04:cf:f9:e7:92  
Mode: Assigned  
Associated array: Array 4

Drive at Enclosure 36, Slot 2  
Drive port: 1, Channel: 2, ID: 49/0x97  
Drive port: 2, Channel: 1, ID: 49/0x97  
Drive path redundancy: OK  
Status: Optimal  
Raw capacity: 33.902 GB  
Usable capacity: 33.862 GB  
Current data rate: 2 Gbps  
Product ID: ST336753FC F  
Firmware version: B953  
Serial number: 3HX0K78W00007339TYG2  
Vendor: IBM-ESXS  
Date of manufacture: April 5, 2003  
World-wide name: 20:00:00:04:cf:f9:e8:74  
Mode: Assigned  
Associated array: Array 4

Drive at Enclosure 36, Slot 3  
Drive port: 1, Channel: 1, ID: 50/0x90  
Drive port: 2, Channel: 2, ID: 50/0x90  
Drive path redundancy: OK  
Status: Optimal  
Raw capacity: 33.902 GB  
Usable capacity: 33.862 GB  
Current data rate: 2 Gbps  
Product ID: ST336753FC F  
Firmware version: B953  
Serial number: 3HX0K7JD00007339TYNF  
Vendor: IBM-ESXS  
Date of manufacture: April 5, 2003  
World-wide name: 20:00:00:04:cf:f9:e8:35  
Mode: Assigned  
Associated array: Array 4

Drive at Enclosure 36, Slot 4  
Drive port: 1, Channel: 2, ID: 51/0x8F  
Drive port: 2, Channel: 1, ID: 51/0x8F  
Drive path redundancy: OK  
Status: Optimal  
Raw capacity: 33.902 GB  
Usable capacity: 33.862 GB  
Current data rate: 2 Gbps  
Product ID: ST336753FC F  
Firmware version: B953  
Serial number: 3HX0HSYP00007340X5EQ  
Vendor: IBM-ESXS  
Date of manufacture: April 5, 2003  
World-wide name: 20:00:00:04:cf:f9:e7:34  
Mode: Assigned  
Associated array: Array 4

Drive at Enclosure 36, Slot 5  
Drive port: 1, Channel: 1, ID: 52/0x88  
Drive port: 2, Channel: 2, ID: 52/0x88  
Drive path redundancy: OK  
Status: Optimal  
Raw capacity: 33.902 GB  
Usable capacity: 33.862 GB  
Current data rate: 2 Gbps  
Product ID: ST336753FC F  
Firmware version: B953  
Serial number: 3HX0K7CK0000734058GR  
Vendor: IBM-ESXS  
Date of manufacture: April 5, 2003  
World-wide name: 20:00:00:04:cf:f9:e7:c9  
Mode: Assigned  
Associated array: Array 4

Drive at Enclosure 36, Slot 6  
Drive port: 1, Channel: 2, ID: 53/0x84  
Drive port: 2, Channel: 1, ID: 53/0x84  
Drive path redundancy: OK  
Status: Optimal  
Raw capacity: 33.902 GB  
Usable capacity: 33.862 GB  
Current data rate: 2 Gbps  
Product ID: ST336753FC F  
Firmware version: B953  
Serial number: 3HX0HN79000073305024  
Vendor: IBM-ESXS  
Date of manufacture: April 4, 2003  
World-wide name: 20:00:00:04:cf:f9:da:8c  
Mode: Assigned  
Associated array: Array 4

Drive at Enclosure 36, Slot 7  
Drive port: 1, Channel: 1, ID: 54/0x82  
Drive port: 2, Channel: 2, ID: 54/0x82  
Drive path redundancy: OK  
Status: Optimal  
Raw capacity: 33.902 GB  
Usable capacity: 33.862 GB  
Current data rate: 2 Gbps  
Product ID: ST336753FC F  
Firmware version: B953  
Serial number: 3HX0JDSY00007339TY9Y  
Vendor: IBM-ESXS  
Date of manufacture: April 5, 2003  
World-wide name: 20:00:00:04:cf:f9:eb:50  
Mode: Assigned  
Associated array: Array 4

Drive at Enclosure 36, Slot 8  
Drive port: 1, Channel: 2, ID: 55/0x81  
Drive port: 2, Channel: 1, ID: 55/0x81  
Drive path redundancy: OK  
Status: Optimal  
Raw capacity: 33.902 GB  
Usable capacity: 33.862 GB  
Current data rate: 2 Gbps  
Product ID: ST336753FC F  
Firmware version: B953  
Serial number: 3HX0HRHJ0000734058GB  
Vendor: IBM-ESXS  
Date of manufacture: April 5, 2003  
World-wide name: 20:00:00:04:cf:f9:e7:c6  
Mode: Assigned  
Associated array: Array 4

Drive at Enclosure 36, Slot 9  
Drive port: 1, Channel: 1, ID: 86/0x4D  
Drive port: 2, Channel: 2, ID: 86/0x4D  
Drive path redundancy: OK  
Status: Optimal  
Raw capacity: 33.902 GB  
Usable capacity: 33.862 GB  
Current data rate: 2 Gbps  
Product ID: ST336753FC F  
Firmware version: B953  
Serial number: 3HX0HT2N000073392DZ3  
Vendor: IBM-ESXS  
Date of manufacture: April 5, 2003  
World-wide name: 20:00:00:04:cf:f9:e8:6a  
Mode: Assigned  
Associated array: Array 4

Drive at Enclosure 36, Slot 10  
Drive port: 1, Channel: 2, ID: 102/0x32  
Drive port: 2, Channel: 1, ID: 102/0x32  
Drive path redundancy: OK  
Status: Optimal  
Raw capacity: 33.902 GB  
Usable capacity: 33.862 GB  
Current data rate: 2 Gbps  
Product ID: ST336753FC F  
Firmware version: B953  
Serial number: 3HX0K7J600007339TYP3  
Vendor: IBM-ESXS  
Date of manufacture: April 5, 2003  
World-wide name: 20:00:00:04:cf:f9:e8:78  
Mode: Assigned  
Associated array: Array 4

Drive at Enclosure 36, Slot 11  
Drive port: 1, Channel: 1, ID: 70/0x6A  
Drive port: 2, Channel: 2, ID: 70/0x6A  
Drive path redundancy: OK  
Status: Optimal  
Raw capacity: 33.902 GB  
Usable capacity: 33.862 GB  
Current data rate: 2 Gbps  
Product ID: ST336753FC F  
Firmware version: B953  
Serial number: 3HX0GDEY00007339RGDS  
Vendor: IBM-ESXS  
Date of manufacture: April 4, 2003  
World-wide name: 20:00:00:04:cf:f9:e4:e7  
Mode: Assigned  
Associated array: Array 4

Drive at Enclosure 36, Slot 12  
Drive port: 1, Channel: 2, ID: 78/0x59  
Drive port: 2, Channel: 1, ID: 78/0x59  
Drive path redundancy: OK  
Status: Optimal  
Raw capacity: 33.902 GB  
Usable capacity: 33.862 GB  
Current data rate: 2 Gbps  
Product ID: ST336753FC F  
Firmware version: B953  
Serial number: 3HX0HMYD00007339N1M4  
Vendor: IBM-ESXS  
Date of manufacture: April 5, 2003  
World-wide name: 20:00:00:04:cf:f9:da:39  
Mode: Assigned  
Associated array: Array 4

Drive at Enclosure 36, Slot 13  
Drive port: 1, Channel: 1, ID: 94/0x43  
Drive port: 2, Channel: 2, ID: 94/0x43  
Drive path redundancy: OK  
Status: Optimal  
Raw capacity: 33.902 GB  
Usable capacity: 33.862 GB  
Current data rate: 2 Gbps  
Product ID: ST336753FC F  
Firmware version: B953  
Serial number: 3HX0HMFA00007340WVFF  
Vendor: IBM-ESXS  
Date of manufacture: April 5, 2003  
World-wide name: 20:00:00:04:cf:f9:e6:97  
Mode: Assigned  
Associated array: Array 4

Drive at Enclosure 36, Slot 14  
Drive port: 1, Channel: 2, ID: 110/0x27  
Drive port: 2, Channel: 1, ID: 110/0x27  
Drive path redundancy: OK  
Status: Optimal  
Raw capacity: 33.902 GB  
Usable capacity: 33.862 GB  
Current data rate: 2 Gbps  
Product ID: ST336753FC F  
Firmware version: B953  
Serial number: 3HX0JE9300007340WVGL  
Vendor: IBM-ESXS  
Date of manufacture: April 5, 2003  
World-wide name: 20:00:00:04:cf:f9:e6:b4  
Mode: Assigned  
Associated array: Array 4

Drive at Enclosure 37, Slot 1  
Drive port: 1, Channel: 1, ID: 56/0x80  
Drive port: 2, Channel: 2, ID: 56/0x80  
Drive path redundancy: OK  
Status: Optimal  
Raw capacity: 33.902 GB  
Usable capacity: 33.862 GB  
Current data rate: 2 Gbps  
Product ID: ST336753FC F  
Firmware version: B953  
Serial number: 3HX0HJHF00007339TYNB  
Vendor: IBM-ESXS  
Date of manufacture: April 5, 2003  
World-wide name: 20:00:00:04:cf:f9:e8:2a  
Mode: Assigned  
Associated array: Array 4

Drive at Enclosure 37, Slot 2  
Drive port: 1, Channel: 2, ID: 57/0x7C  
Drive port: 2, Channel: 1, ID: 57/0x7C  
Drive path redundancy: OK  
Status: Optimal  
Raw capacity: 33.902 GB  
Usable capacity: 33.862 GB  
Current data rate: 2 Gbps  
Product ID: ST336753FC F  
Firmware version: B953  
Serial number: 3HX0JD8F000073393FVD  
Vendor: IBM-ESXS  
Date of manufacture: April 4, 2003  
World-wide name: 20:00:00:04:cf:f9:d1:48  
Mode: Assigned  
Associated array: Array 4

Drive at Enclosure 37, Slot 3  
Drive port: 1, Channel: 1, ID: 58/0x7A  
Drive port: 2, Channel: 2, ID: 58/0x7A  
Drive path redundancy: OK  
Status: Optimal  
Raw capacity: 33.902 GB  
Usable capacity: 33.862 GB  
Current data rate: 2 Gbps  
Product ID: ST336753FC F  
Firmware version: B953  
Serial number: 3HX0HJAD00007339SNTD  
Vendor: IBM-ESXS  
Date of manufacture: April 5, 2003  
World-wide name: 20:00:00:04:cf:f9:f5:1c  
Mode: Assigned  
Associated array: Array 4

Drive at Enclosure 37, Slot 4  
Drive port: 1, Channel: 2, ID: 59/0x79  
Drive port: 2, Channel: 1, ID: 59/0x79  
Drive path redundancy: OK  
Status: Optimal  
Raw capacity: 33.902 GB  
Usable capacity: 33.862 GB  
Current data rate: 2 Gbps  
Product ID: ST336753FC F  
Firmware version: B953  
Serial number: 3HX0HMK4000073392E1G  
Vendor: IBM-ESXS  
Date of manufacture: April 5, 2003  
World-wide name: 20:00:00:04:cf:f9:eb:a9  
Mode: Assigned  
Associated array: Array 4

Drive at Enclosure 37, Slot 5  
Drive port: 1, Channel: 1, ID: 60/0x76  
Drive port: 2, Channel: 2, ID: 60/0x76  
Drive path redundancy: OK  
Status: Optimal  
Raw capacity: 33.902 GB  
Usable capacity: 33.862 GB  
Current data rate: 2 Gbps  
Product ID: ST336753FC F  
Firmware version: B953  
Serial number: 3HX0K88T00007339TYD9  
Vendor: IBM-ESXS  
Date of manufacture: April 5, 2003  
World-wide name: 20:00:00:04:cf:f9:e5:dd  
Mode: Assigned  
Associated array: Array 4

Drive at Enclosure 37, Slot 6  
Drive port: 1, Channel: 2, ID: 61/0x75  
Drive port: 2, Channel: 1, ID: 61/0x75  
Drive path redundancy: OK  
Status: Optimal  
Raw capacity: 33.902 GB  
Usable capacity: 33.862 GB  
Current data rate: 2 Gbps  
Product ID: ST336753FC F  
Firmware version: B953  
Serial number: 3HX0JSTQ00007339TYCT  
Vendor: IBM-ESXS  
Date of manufacture: April 5, 2003  
World-wide name: 20:00:00:04:cf:f9:e6:12  
Mode: Assigned  
Associated array: Array 4

Drive at Enclosure 37, Slot 7  
Drive port: 1, Channel: 1, ID: 62/0x74  
Drive port: 2, Channel: 2, ID: 62/0x74  
Drive path redundancy: OK  
Status: Optimal  
Raw capacity: 33.902 GB  
Usable capacity: 33.862 GB  
Current data rate: 2 Gbps  
Product ID: ST336753FC F  
Firmware version: B953  
Serial number: 3HX0J6VY0000734058DK  
Vendor: IBM-ESXS  
Date of manufacture: April 5, 2003  
World-wide name: 20:00:00:04:cf:f9:e7:d3  
Mode: Assigned  
Associated array: Array 4

Drive at Enclosure 37, Slot 8  
Drive port: 1, Channel: 2, ID: 63/0x73  
Drive port: 2, Channel: 1, ID: 63/0x73  
Drive path redundancy: OK  
Status: Optimal  
Raw capacity: 33.902 GB  
Usable capacity: 33.862 GB  
Current data rate: 2 Gbps  
Product ID: ST336753FC F  
Firmware version: B953  
Serial number: 3HX0K7JZ000073392DXE  
Vendor: IBM-ESXS  
Date of manufacture: April 5, 2003  
World-wide name: 20:00:00:04:cf:f9:e8:71  
Mode: Assigned  
Associated array: Array 4

Drive at Enclosure 37, Slot 9  
Drive port: 1, Channel: 1, ID: 87/0x4C  
Drive port: 2, Channel: 2, ID: 87/0x4C  
Drive path redundancy: OK  
Status: Optimal  
Raw capacity: 33.902 GB  
Usable capacity: 33.862 GB  
Current data rate: 2 Gbps  
Product ID: ST336753FC F  
Firmware version: B953  
Serial number: 3HX0HT210000734058DL  
Vendor: IBM-ESXS  
Date of manufacture: April 5, 2003  
World-wide name: 20:00:00:04:cf:f9:e7:bc  
Mode: Assigned  
Associated array: Array 4

Drive at Enclosure 37, Slot 10  
Drive port: 1, Channel: 2, ID: 103/0x31  
Drive port: 2, Channel: 1, ID: 103/0x31  
Drive path redundancy: OK  
Status: Optimal  
Raw capacity: 33.902 GB  
Usable capacity: 33.862 GB  
Current data rate: 2 Gbps  
Product ID: ST336753FC F  
Firmware version: B953  
Serial number: 3HX0HM0L00007340YESD  
Vendor: IBM-ESXS  
Date of manufacture: April 5, 2003  
World-wide name: 20:00:00:04:cf:f9:dd:91  
Mode: Assigned  
Associated array: Array 4

Drive at Enclosure 37, Slot 11  
Drive port: 1, Channel: 1, ID: 71/0x69  
Drive port: 2, Channel: 2, ID: 71/0x69  
Drive path redundancy: OK  
Status: Optimal  
Raw capacity: 33.902 GB  
Usable capacity: 33.862 GB  
Current data rate: 2 Gbps  
Product ID: ST336753FC F  
Firmware version: B953  
Serial number: 3HX0J5RJ00007339RG5W  
Vendor: IBM-ESXS  
Date of manufacture: April 5, 2003  
World-wide name: 20:00:00:04:cf:f9:e1:8e  
Mode: Assigned  
Associated array: Array 4



Drive at Enclosure 37, Slot 12  
Drive port: 1, Channel: 2, ID: 79/0x56  
Drive port: 2, Channel: 1, ID: 79/0x56  
Drive path redundancy: OK  
Status: Optimal  
Raw capacity: 33.902 GB  
Usable capacity: 33.862 GB  
Current data rate: 2 Gbps  
Product ID: ST336753FC F  
Firmware version: B953  
Serial number: 3HX0K7HQ00007339TYMV  
Vendor: IBM-ESXS  
Date of manufacture: April 4, 2003  
World-wide name: 20:00:00:04:cf:f9:e8:85  
Mode: Assigned  
Associated array: Array 4

Drive at Enclosure 37, Slot 13  
Drive port: 1, Channel: 1, ID: 95/0x3C  
Drive port: 2, Channel: 2, ID: 95/0x3C  
Drive path redundancy: OK  
Status: Optimal  
Raw capacity: 33.902 GB  
Usable capacity: 33.862 GB  
Current data rate: 2 Gbps  
Product ID: ST336753FC F  
Firmware version: B953  
Serial number: 3HX0HT9T00007339TYP0  
Vendor: IBM-ESXS  
Date of manufacture: April 5, 2003  
World-wide name: 20:00:00:04:cf:f9:e8:37  
Mode: Assigned  
Associated array: Array 4

Drive at Enclosure 37, Slot 14  
Drive port: 1, Channel: 2, ID: 111/0x26  
Drive port: 2, Channel: 1, ID: 111/0x26  
Drive path redundancy: OK  
Status: Optimal  
Raw capacity: 33.902 GB  
Usable capacity: 33.862 GB  
Current data rate: 2 Gbps  
Product ID: ST336753FC F  
Firmware version: B953  
Serial number: 3HX0JR8Z000073409KD8  
Vendor: IBM-ESXS  
Date of manufacture: April 5, 2003  
World-wide name: 20:00:00:04:cf:f9:db:33  
Mode: Assigned  
Associated array: Array 4

ENCLOSURES-----

Controller Enclosure Overall Component Information

Minihub data rate mismatch: No  
Fan canister: Optimal  
Fan canister: Optimal  
Battery status: Optimal  
Age: 316 day(s)  
Days until replacement: 853 day(s)  
Power supply canister  
Status: Optimal  
Power supply canister  
Status: Optimal  
Temperature: Optimal  
Host mini-hub canister  
Status: Optimal  
Location: Controller B - Port 1

Serial number: SN 1T14556793  
Part number: PN 19K1270  
Vendor: VN IBM  
Date of manufacture: November 1, 2001  
SFP  
Status: Optimal  
Location: In connection  
Supported data rate(s): 1 Gbps, 2 Gbps  
Link length: Intermediate  
Connector: LC  
Transmitter type: Shortwave Laser w/o OFC  
Transmission media: TM Multi-mode 50m(M5) TM Multi-mode  
62.5m(M6)  
IEEE company ID: 08 00 5a  
Revision: AA10  
Part number: IBM42P21SNY  
Serial number: 53P1476006A1C  
Vendor: IBM  
Date of manufacture: April 13, 2002  
Host mini-hub canister  
Status: Optimal  
Location: Controller A - Port 1  
Serial number: SN 1T14252967  
Part number: PN 19K1270  
Vendor: VN IBM  
Date of manufacture: November 1, 2001  
SFP  
Status: Optimal  
Location: In connection  
Supported data rate(s): 1 Gbps, 2 Gbps  
Link length: Intermediate  
Connector: LC  
Transmitter type: Shortwave Laser w/o OFC  
Transmission media: TM Multi-mode 50m(M5) TM Multi-mode  
62.5m(M6)  
IEEE company ID: 08 00 5a  
Revision: AA10  
Part number: IBM42P21SNY  
Serial number: 53P1476000347  
Vendor: IBM  
Date of manufacture: December 1, 2001  
Drive mini-hub canister  
Status: Optimal  
Location: Channel 1  
Serial number: SN 1T24601126  
Part number: PN 19K1270  
Vendor: VN IBM  
Date of manufacture: December 1, 2002  
SFP  
Status: Optimal  
Location: In connection  
Supported data rate(s): 1 Gbps, 2 Gbps  
Link length: Intermediate  
Connector: LC  
Transmitter type: Shortwave Laser w/o OFC  
Transmission media: TM Multi-mode 50m(M5) TM Multi-mode  
62.5m(M6)  
IEEE company ID: 08 00 5a  
Revision: AA10  
Part number: IBM42P21SNY  
Serial number: 53P147600FRCM  
Vendor: IBM  
Date of manufacture: October 17, 2002  
Drive mini-hub canister  
Status: Optimal  
Location: Channel 2  
Serial number: SN 1T14252975  
Part number: PN 19K1270

Vendor: VN IBM  
Date of manufacture: November 1, 2001  
SFP  
Status: Optimal  
Location: Out connection  
Supported data rate(s): 1 Gbps, 2 Gbps  
Link length: Intermediate  
Connector: LC  
Transmitter type: Shortwave Laser w/o OFC  
Transmission media: TM Multi-mode 50m(M5) TM Multi-mode  
62.5m(M6)  
IEEE company ID: 08 00 5a  
Revision: AA10  
Part number: IBM42P21SNY  
Serial number: 53P14760069RE  
Vendor: IBM  
Date of manufacture: April 13, 2002

Drive mini-hub canister  
Status: Optimal  
Location: Channel 3  
Serial number: SN 1T23664344  
Part number: PN 19K1270  
Vendor: VN IBM  
Date of manufacture: September 1, 2002  
SFP  
Status: Optimal  
Location: In connection  
Supported data rate(s): 1 Gbps, 2 Gbps  
Link length: Intermediate  
Connector: LC  
Transmitter type: Shortwave Laser w/o OFC  
Transmission media: TM Multi-mode 50m(M5) TM Multi-mode  
62.5m(M6)

IEEE company ID: 08 00 5a  
Revision: AA10  
Part number: IBM42P21SNY  
Serial number: 53P147600FNRY  
Vendor: IBM  
Date of manufacture: October 16, 2002

Drive mini-hub canister  
Status: Optimal  
Location: Channel 4  
Serial number: SN 1T14252971  
Part number: PN 19K1270  
Vendor: VN IBM  
Date of manufacture: November 1, 2001  
SFP  
Status: Optimal  
Location: Out connection  
Supported data rate(s): 1 Gbps, 2 Gbps  
Link length: Intermediate  
Connector: LC  
Transmitter type: Shortwave Laser w/o OFC  
Transmission media: TM Multi-mode 50m(M5) TM Multi-mode  
62.5m(M6)

IEEE company ID: 08 00 5a  
Revision: AA10  
Part number: IBM42P21SNY  
Serial number: 53P14760002PT  
Vendor: IBM  
Date of manufacture: December 2, 2001

Drive Enclosure 13 Overall Component Information  
Part number: PN 19K1288  
Serial number: SN 23C2358  
Vendor: VN IBM  
Date of manufacture: May 1, 2003  
Enclosure path redundancy: OK

Fan canister: Optimal  
Fan canister: Optimal  
Power supply canister  
Status: Optimal  
Part number: PN 19K1289  
Serial number: SN A6844J01KA0E  
Vendor: VN IBM  
Date of manufacture: November 1, 2002  
Power supply canister  
Status: Optimal  
Part number: PN 19K1289  
Serial number: SN A6844J01MX0E  
Vendor: VN IBM  
Date of manufacture: November 1, 2002

Temperature: Optimal  
Temperature: Optimal  
ESM card  
Status: Optimal  
Firmware version: 9325  
Maximum data rate: 2 Gbps  
Current data rate: 2 Gbps  
Location: A (left canister)  
Card communication: OK  
Product ID: EXP700  
Part number: PN 19K1287  
Serial number: SN 1T31048150  
Vendor: IBM  
Date of manufacture: March 1, 2003  
SFP

Status: Optimal  
Location: In connection  
Supported data rate(s): 1 Gbps, 2 Gbps  
Link length: Intermediate  
Connector: LC  
Transmitter type: Shortwave Laser w/o OFC  
Transmission media: TM Multi-mode 50m(M5) TM Multi-mode  
62.5m(M6)

IEEE company ID: 08 00 5a  
Revision: AA10  
Part number: IBM42P21SNY  
Serial number: 53P147600FPQL  
Vendor: IBM  
Date of manufacture: October 16, 2002

ESM card  
Status: Optimal  
Firmware version: 9325  
Maximum data rate: 2 Gbps  
Current data rate: 2 Gbps  
Location: B (right canister)  
Card communication: OK  
Product ID: EXP700  
Part number: PN 19K1287  
Serial number: SN 1T31048618  
Vendor: IBM  
Date of manufacture: March 1, 2003  
SFP

Status: Optimal  
Location: In connection  
Supported data rate(s): 1 Gbps, 2 Gbps  
Link length: Intermediate  
Connector: LC  
Transmitter type: Shortwave Laser w/o OFC  
Transmission media: TM Multi-mode 50m(M5) TM Multi-mode  
62.5m(M6)

IEEE company ID: 08 00 5a  
Revision: AA10  
Part number: IBM42P21SNY  
Serial number: 53P147600FRSF

Vendor: IBM  
Date of manufacture: October 17, 2002  
SFP  
Status: Optimal  
Location: Out connection  
Supported data rate(s): 1 Gbps, 2 Gbps, 4 Gbps  
Link length: Unknown  
Connector: Unknown  
Transmitter type: Unknown  
Transmission media: Single Mode TM Multi-mode 50m(M5) TM Video  
Coax TM Miniature Coax Twin Axial Pair  
IEEE company ID: b7 b7 b7  
Revision: ???  
Part number: ??????????????  
Serial number: ??????????????  
Vendor: ??????????????  
Date of manufacture: Not available

Drive Enclosure 30 Overall Component Information

Part number: PN 19K1288  
Serial number: SN 23C2368  
Vendor: VN IBM  
Date of manufacture: May 1, 2003  
Enclosure path redundancy: OK  
Fan canister: Optimal  
Fan canister: Optimal  
Power supply canister  
Status: Optimal  
Part number: PN 19K1289  
Serial number: SN A6844J01L40E  
Vendor: VN IBM  
Date of manufacture: November 1, 2002

Power supply canister

Status: Optimal  
Part number: PN 348-0049091  
Serial number: SN A6845J019P0F  
Vendor: VN LSILOGIC  
Date of manufacture: July 1, 2003

Temperature: Optimal

Temperature: Optimal

ESM card

Status: Optimal  
Firmware version: 9325  
Maximum data rate: 2 Gbps  
Current data rate: 2 Gbps  
Location: A (left canister)  
Card communication: OK  
Product ID: EXP700  
Part number: PN 19K1287  
Serial number: SN 1T31463318  
Vendor: IBM  
Date of manufacture: April 1, 2003

SFP

Status: Optimal  
Location: In connection  
Supported data rate(s): 1 Gbps, 2 Gbps  
Link length: Intermediate  
Connector: LC  
Transmitter type: Shortwave Laser w/o OFC  
Transmission media: TM Multi-mode 50m(M5) TM Multi-mode

62.5m(M6)

IEEE company ID: 08 00 5a  
Revision: AA10  
Part number: IBM42P21SNY  
Serial number: 53P147600036S  
Vendor: IBM  
Date of manufacture: December 1, 2001

SFP

Status: Optimal  
Location: Out connection  
Supported data rate(s): 1 Gbps, 2 Gbps  
Link length: Intermediate  
Connector: LC  
Transmitter type: Shortwave Laser w/o OFC  
Transmission media: TM Multi-mode 50m(M5) TM Multi-mode

62.5m(M6)

IEEE company ID: 08 00 5a  
Revision: AA10  
Part number: IBM42P21SNY  
Serial number: 53P1476000363  
Vendor: IBM  
Date of manufacture: December 1, 2001

ESM card

Status: Optimal  
Firmware version: 9325  
Maximum data rate: 2 Gbps  
Current data rate: 2 Gbps  
Location: B (right canister)  
Card communication: OK  
Product ID: EXP700  
Part number: PN 19K1287  
Serial number: SN 1T31463182  
Vendor: IBM  
Date of manufacture: April 1, 2003

SFP

Status: Optimal  
Location: Out connection  
Supported data rate(s): 1 Gbps, 2 Gbps  
Link length: Intermediate  
Connector: LC  
Transmitter type: Shortwave Laser w/o OFC  
Transmission media: TM Multi-mode 50m(M5) TM Multi-mode

62.5m(M6)

IEEE company ID: 08 00 5a  
Revision: AA10  
Part number: IBM42P21SNY  
Serial number: 53P147600035M  
Vendor: IBM  
Date of manufacture: December 1, 2001

Drive Enclosure 31 Overall Component Information

Part number: PN 19K1288  
Serial number: SN 1T1321417442  
Vendor: VN IBM  
Date of manufacture: September 1, 2001  
Enclosure path redundancy: OK  
Fan canister: Optimal  
Fan canister: Optimal  
Power supply canister  
Status: Optimal  
Part number: PN 19K1289  
Serial number: SN A6842C005H0A  
Vendor: VN IBM  
Date of manufacture: July 1, 2001

Power supply canister

Status: Optimal  
Part number: PN 19K1289  
Serial number: SN A6842C00410A  
Vendor: VN IBM  
Date of manufacture: July 1, 2001

Temperature: Optimal

Temperature: Optimal

ESM card

Status: Optimal  
Firmware version: 9325  
Maximum data rate: 2 Gbps

Current data rate: 2 Gbps  
Location: A (left canister)  
Card communication: OK  
Product ID: EXP700  
Part number: PN 19K1287  
Serial number: SN 1T20789501  
Vendor: IBM  
Date of manufacture: March 1, 2002  
SFP  
Status: Optimal  
Location: In connection  
Supported data rate(s): 1 Gbps, 2 Gbps  
Link length: Intermediate  
Connector: LC  
Transmitter type: Shortwave Laser w/o OFC  
Transmission media: TM Multi-mode 50m(M5) TM Multi-mode

62.5m(M6)

IEEE company ID: 08 00 5a  
Revision: AA10  
Part number: IBM42P21SNY  
Serial number: 53P147600036Z  
Vendor: IBM  
Date of manufacture: December 1, 2001

SFP

Status: Optimal  
Location: Out connection  
Supported data rate(s): 1 Gbps, 2 Gbps  
Link length: Intermediate  
Connector: LC  
Transmitter type: Shortwave Laser w/o OFC  
Transmission media: TM Multi-mode 50m(M5) TM Multi-mode

62.5m(M6)

IEEE company ID: 08 00 5a  
Revision: AA10  
Part number: IBM42P21SNY  
Serial number: 53P147600030K  
Vendor: IBM  
Date of manufacture: December 1, 2001

ESM card

Status: Optimal  
Firmware version: 9325  
Maximum data rate: 2 Gbps  
Current data rate: 2 Gbps  
Location: B (right canister)  
Card communication: OK  
Product ID: EXP700  
Part number: PN 19K1287  
Serial number: SN 1T20789606  
Vendor: IBM  
Date of manufacture: March 1, 2002

SFP

Status: Optimal  
Location: In connection  
Supported data rate(s): 1 Gbps, 2 Gbps  
Link length: Intermediate  
Connector: LC  
Transmitter type: Shortwave Laser w/o OFC  
Transmission media: TM Multi-mode 50m(M5) TM Multi-mode

62.5m(M6)

IEEE company ID: 08 00 5a  
Revision: AA10  
Part number: IBM42P21SNY  
Serial number: 53P147600035Z  
Vendor: IBM  
Date of manufacture: December 1, 2001

SFP

Status: Optimal  
Location: Out connection

Supported data rate(s): 1 Gbps, 2 Gbps  
Link length: Intermediate  
Connector: LC  
Transmitter type: Shortwave Laser w/o OFC  
Transmission media: TM Multi-mode 50m(M5) TM Multi-mode

62.5m(M6)

IEEE company ID: 08 00 5a  
Revision: AA10  
Part number: IBM42P21SNY  
Serial number: 53P147600036C  
Vendor: IBM  
Date of manufacture: December 1, 2001

Drive Enclosure 32 Overall Component Information

Part number: PN 19K1288  
Serial number: SN 1T1321417576  
Vendor: VN IBM  
Date of manufacture: September 1, 2001  
Enclosure path redundancy: OK  
Fan canister: Optimal  
Fan canister: Optimal  
Power supply canister  
Status: Optimal  
Part number: PN 19K1289  
Serial number: SN A6842G00UP0B  
Vendor: VN IBM  
Date of manufacture: August 1, 2001

Power supply canister

Status: Optimal  
Part number: PN 19K1289  
Serial number: SN A6842G00UC0B  
Vendor: VN IBM  
Date of manufacture: August 1, 2001

Temperature: Optimal

Temperature: Optimal

ESM card

Status: Optimal  
Firmware version: 9325  
Maximum data rate: 2 Gbps  
Current data rate: 2 Gbps  
Location: A (left canister)  
Card communication: OK  
Product ID: EXP700  
Part number: PN 19K1287  
Serial number: SN 1T20582829  
Vendor: IBM  
Date of manufacture: March 1, 2002

SFP

Status: Optimal  
Location: In connection  
Supported data rate(s): 1 Gbps, 2 Gbps  
Link length: Intermediate  
Connector: LC  
Transmitter type: Shortwave Laser w/o OFC  
Transmission media: TM Multi-mode 50m(M5) TM Multi-mode

62.5m(M6)

IEEE company ID: 08 00 5a  
Revision: AA10  
Part number: IBM42P21SNY  
Serial number: 53P14760003AJ  
Vendor: IBM  
Date of manufacture: December 2, 2001

SFP

Status: Optimal  
Location: Out connection  
Supported data rate(s): 1 Gbps, 2 Gbps  
Link length: Intermediate  
Connector: LC

Transmitter type: Shortwave Laser w/o OFC  
Transmission media: TM Multi-mode 50m(M5) TM Multi-mode  
62.5m(M6)

IEEE company ID: 08 00 5a  
Revision: AA10  
Part number: IBM42P21SNY  
Serial number: 53P147600033M  
Vendor: IBM  
Date of manufacture: December 1, 2001

ESM card

Status: Optimal  
Firmware version: 9325  
Maximum data rate: 2 Gbps  
Current data rate: 2 Gbps  
Location: B (right canister)  
Card communication: OK  
Product ID: EXP700  
Part number: PN 19K1287  
Serial number: SN 1T20582842  
Vendor: IBM  
Date of manufacture: March 1, 2002

SFP

Status: Optimal  
Location: In connection  
Supported data rate(s): 1 Gbps, 2 Gbps  
Link length: Intermediate  
Connector: LC

Transmitter type: Shortwave Laser w/o OFC  
Transmission media: TM Multi-mode 50m(M5) TM Multi-mode

62.5m(M6)

IEEE company ID: 08 00 5a  
Revision: AA10  
Part number: IBM42P21SNY  
Serial number: 53P14760003EB  
Vendor: IBM  
Date of manufacture: December 2, 2001

SFP

Status: Optimal  
Location: Out connection  
Supported data rate(s): 1 Gbps, 2 Gbps  
Link length: Intermediate  
Connector: LC

Transmitter type: Shortwave Laser w/o OFC  
Transmission media: TM Multi-mode 50m(M5) TM Multi-mode

62.5m(M6)

IEEE company ID: 08 00 5a  
Revision: AA10  
Part number: IBM42P21SNY  
Serial number: 53P14760003N0  
Vendor: IBM  
Date of manufacture: December 2, 2001

Drive Enclosure 33 Overall Component Information

Part number: PN 19K1288  
Serial number: SN 1T1321417477  
Vendor: VN IBM  
Date of manufacture: September 1, 2001  
Enclosure path redundancy: OK  
Fan canister: Optimal  
Fan canister: Optimal  
Power supply canister  
Status: Optimal  
Part number: PN 19K1289  
Serial number: SN A6842G00ED0B  
Vendor: VN IBM  
Date of manufacture: August 1, 2001  
Power supply canister  
Status: Optimal

Part number: PN 19K1289  
Serial number: SN A6842G00FW0B  
Vendor: VN IBM  
Date of manufacture: August 1, 2001

Temperature: Optimal

Temperature: Optimal

ESM card

Status: Optimal  
Firmware version: 9325  
Maximum data rate: 2 Gbps  
Current data rate: 2 Gbps  
Location: A (left canister)  
Card communication: OK  
Product ID: EXP700

Part number: PN 19K1287  
Serial number: SN 1T20789567  
Vendor: IBM

Date of manufacture: March 1, 2002

SFP

Status: Optimal  
Location: In connection  
Supported data rate(s): 1 Gbps, 2 Gbps  
Link length: Intermediate  
Connector: LC

Transmitter type: Shortwave Laser w/o OFC

Transmission media: TM Multi-mode 50m(M5) TM Multi-mode

62.5m(M6)

IEEE company ID: 08 00 5a  
Revision: AA10  
Part number: IBM42P21SNY  
Serial number: 53P147600031N  
Vendor: IBM  
Date of manufacture: December 1, 2001

ESM card

Status: Optimal  
Firmware version: 9325  
Maximum data rate: 2 Gbps  
Current data rate: 2 Gbps  
Location: B (right canister)  
Card communication: OK  
Product ID: EXP700

Part number: PN 19K1287  
Serial number: SN 1T20789479  
Vendor: IBM

Date of manufacture: March 1, 2002

SFP

Status: Optimal  
Location: In connection  
Supported data rate(s): 1 Gbps, 2 Gbps  
Link length: Intermediate  
Connector: LC

Transmitter type: Shortwave Laser w/o OFC

Transmission media: TM Multi-mode 50m(M5) TM Multi-mode

62.5m(M6)

IEEE company ID: 08 00 5a  
Revision: AA10  
Part number: IBM42P21SNY  
Serial number: 53P147600034K  
Vendor: IBM  
Date of manufacture: December 1, 2001

SFP

Status: Optimal  
Location: Out connection  
Supported data rate(s): 1 Gbps, 2 Gbps  
Link length: Intermediate  
Connector: LC

Transmitter type: Shortwave Laser w/o OFC

Transmission media: TM Multi-mode 50m(M5) TM Multi-mode  
62.5m(M6)  
IEEE company ID: 08 00 5a  
Revision: AA10  
Part number: IBM42P21SNY  
Serial number: 53P1476000362  
Vendor: IBM  
Date of manufacture: December 1, 2001

Drive Enclosure 34 Overall Component Information

Part number: PN 19K1288  
Serial number: SN 1T1321417435  
Vendor: VN IBM  
Date of manufacture: September 1, 2001  
Enclosure path redundancy: OK  
Fan canister: Optimal  
Fan canister: Optimal  
Power supply canister  
Status: Optimal  
Part number: PN 19K1289  
Serial number: SN A6842G00VB0B  
Vendor: VN IBM  
Date of manufacture: August 1, 2001

Power supply canister

Status: Optimal  
Part number: PN 19K1289  
Serial number: SN A6842G00X90B  
Vendor: VN IBM  
Date of manufacture: August 1, 2001

Temperature: Optimal

Temperature: Optimal

ESM card

Status: Optimal  
Firmware version: 9325  
Maximum data rate: 2 Gbps  
Current data rate: 2 Gbps  
Location: A (left canister)  
Card communication: OK  
Product ID: EXP700  
Part number: PN 19K1287  
Serial number: SN 1T20789435  
Vendor: IBM  
Date of manufacture: March 1, 2002  
SFP  
Status: Optimal  
Location: In connection  
Supported data rate(s): 1 Gbps, 2 Gbps  
Link length: Intermediate  
Connector: LC  
Transmitter type: Shortwave Laser w/o OFC  
Transmission media: TM Multi-mode 50m(M5) TM Multi-mode

62.5m(M6)

IEEE company ID: 08 00 5a  
Revision: AA10  
Part number: IBM42P21SNY  
Serial number: 53P1476006AAG  
Vendor: IBM  
Date of manufacture: April 14, 2002

SFP

Status: Optimal  
Location: Out connection  
Supported data rate(s): 1 Gbps, 2 Gbps  
Link length: Intermediate  
Connector: LC  
Transmitter type: Shortwave Laser w/o OFC  
Transmission media: TM Multi-mode 50m(M5) TM Multi-mode

62.5m(M6)

IEEE company ID: 08 00 5a

Revision: AA10  
Part number: IBM42P21SNY  
Serial number: 53P14760002S7  
Vendor: IBM  
Date of manufacture: December 1, 2001

ESM card

Status: Optimal  
Firmware version: 9325  
Maximum data rate: 2 Gbps  
Current data rate: 2 Gbps  
Location: B (right canister)  
Card communication: OK  
Product ID: EXP700  
Part number: PN 19K1287  
Serial number: SN 1T20789403  
Vendor: IBM  
Date of manufacture: March 1, 2002  
SFP  
Status: Optimal  
Location: Out connection  
Supported data rate(s): 1 Gbps, 2 Gbps  
Link length: Intermediate  
Connector: LC  
Transmitter type: Shortwave Laser w/o OFC  
Transmission media: TM Multi-mode 50m(M5) TM Multi-mode

62.5m(M6)

IEEE company ID: 08 00 5a  
Revision: AA10  
Part number: IBM42P21SNY  
Serial number: 53P14760003GD  
Vendor: IBM  
Date of manufacture: December 2, 2001

Drive Enclosure 35 Overall Component Information

Part number: PN 19K1288  
Serial number: SN 1T1321417493  
Vendor: VN IBM  
Date of manufacture: September 1, 2001  
Enclosure path redundancy: OK  
Fan canister: Optimal  
Fan canister: Optimal  
Power supply canister  
Status: Optimal  
Part number: PN 19K1289  
Serial number: SN A6842C005N0A  
Vendor: VN IBM  
Date of manufacture: July 1, 2001

Power supply canister

Status: Optimal  
Part number: PN 19K1289  
Serial number: SN A6842C00520A  
Vendor: VN IBM  
Date of manufacture: July 1, 2001

Temperature: Optimal

Temperature: Optimal

ESM card

Status: Optimal  
Firmware version: 9325  
Maximum data rate: 2 Gbps  
Current data rate: 2 Gbps  
Location: A (left canister)  
Card communication: OK  
Product ID: EXP700  
Part number: PN 19K1287  
Serial number: SN 1T20789724  
Vendor: IBM  
Date of manufacture: March 1, 2002  
SFP

Status: Optimal  
 Location: In connection  
 Supported data rate(s): 1 Gbps, 2 Gbps  
 Link length: Intermediate  
 Connector: LC  
 Transmitter type: Shortwave Laser w/o OFC  
 Transmission media: TM Multi-mode 50m(M5) TM Multi-mode

62.5m(M6)  
 IEEE company ID: 08 00 5a  
 Revision: AA10  
 Part number: IBM42P21SNY  
 Serial number: 53P1476006A2C  
 Vendor: IBM  
 Date of manufacture: April 13, 2002

SFP  
 Status: Optimal  
 Location: Out connection  
 Supported data rate(s): 1 Gbps, 2 Gbps  
 Link length: Intermediate  
 Connector: LC  
 Transmitter type: Shortwave Laser w/o OFC  
 Transmission media: TM Multi-mode 50m(M5) TM Multi-mode

62.5m(M6)  
 IEEE company ID: 08 00 5a  
 Revision: AA10  
 Part number: IBM42P21SNY  
 Serial number: 53P1476006A5Y  
 Vendor: IBM  
 Date of manufacture: April 14, 2002

ESM card  
 Status: Optimal  
 Firmware version: 9325  
 Maximum data rate: 2 Gbps  
 Current data rate: 2 Gbps  
 Location: B (right canister)  
 Card communication: OK  
 Product ID: EXP700  
 Part number: PN 19K1287  
 Serial number: SN 1T20789730  
 Vendor: IBM  
 Date of manufacture: March 1, 2002

SFP  
 Status: Optimal  
 Location: In connection  
 Supported data rate(s): 1 Gbps, 2 Gbps  
 Link length: Intermediate  
 Connector: LC  
 Transmitter type: Shortwave Laser w/o OFC  
 Transmission media: TM Multi-mode 50m(M5) TM Multi-mode

62.5m(M6)  
 IEEE company ID: 08 00 5a  
 Revision: AA10  
 Part number: IBM42P21SNY  
 Serial number: 53P147600666R  
 Vendor: IBM  
 Date of manufacture: April 13, 2002

SFP  
 Status: Optimal  
 Location: Out connection  
 Supported data rate(s): 1 Gbps, 2 Gbps  
 Link length: Intermediate  
 Connector: LC  
 Transmitter type: Shortwave Laser w/o OFC  
 Transmission media: TM Multi-mode 50m(M5) TM Multi-mode

62.5m(M6)  
 IEEE company ID: 08 00 5a  
 Revision: AA10  
 Part number: IBM42P21SNY

Serial number: 53P1476006A03  
 Vendor: IBM  
 Date of manufacture: April 13, 2002

Drive Enclosure 36 Overall Component Information  
 Part number: PN 19K1288  
 Serial number: SN 1T1321417653  
 Vendor: VN IBM  
 Date of manufacture: September 1, 2001  
 Enclosure path redundancy: OK  
 Fan canister: Optimal  
 Fan canister: Optimal  
 Power supply canister  
 Status: Optimal  
 Part number: PN 19K1289  
 Serial number: SN A6842C00720A  
 Vendor: VN IBM  
 Date of manufacture: July 1, 2001

Power supply canister  
 Status: Optimal  
 Part number: PN 19K1289  
 Serial number: SN A6842C006Z0A  
 Vendor: VN IBM  
 Date of manufacture: July 1, 2001

Temperature: Optimal  
 Temperature: Optimal

ESM card  
 Status: Optimal  
 Firmware version: 9325  
 Maximum data rate: 2 Gbps  
 Current data rate: 2 Gbps  
 Location: A (left canister)  
 Card communication: OK  
 Product ID: EXP700  
 Part number: PN 19K1287  
 Serial number: SN 1T23251610  
 Vendor: IBM  
 Date of manufacture: August 1, 2002

SFP  
 Status: Optimal  
 Location: In connection  
 Supported data rate(s): 1 Gbps, 2 Gbps  
 Link length: Intermediate  
 Connector: LC  
 Transmitter type: Shortwave Laser w/o OFC  
 Transmission media: TM Multi-mode 50m(M5) TM Multi-mode

62.5m(M6)  
 IEEE company ID: 08 00 5a  
 Revision: AA10  
 Part number: IBM42P21SNY  
 Serial number: 53P1476006AA5  
 Vendor: IBM  
 Date of manufacture: April 14, 2002

SFP  
 Status: Optimal  
 Location: Out connection  
 Supported data rate(s): 1 Gbps, 2 Gbps  
 Link length: Intermediate  
 Connector: LC  
 Transmitter type: Shortwave Laser w/o OFC  
 Transmission media: TM Multi-mode 50m(M5) TM Multi-mode

62.5m(M6)  
 IEEE company ID: 08 00 5a  
 Revision: AA10  
 Part number: IBM42P21SNY  
 Serial number: 53P147600FMWB  
 Vendor: IBM  
 Date of manufacture: October 16, 2002

ESM card  
Status: Optimal  
Firmware version: 9325  
Maximum data rate: 2 Gbps  
Current data rate: 2 Gbps  
Location: B (right canister)  
Card communication: OK  
Product ID: EXP700  
Part number: PN 19K1287  
Serial number: SN 1T20789276  
Vendor: IBM  
Date of manufacture: March 1, 2002

SFP  
Status: Optimal  
Location: In connection  
Supported data rate(s): 1 Gbps, 2 Gbps  
Link length: Intermediate  
Connector: LC  
Transmitter type: Shortwave Laser w/o OFC  
Transmission media: TM Multi-mode 50m(M5) TM Multi-mode

62.5m(M6)  
IEEE company ID: 08 00 5a  
Revision: AA10  
Part number: IBM42P21SNY  
Serial number: 53P14760069YJ  
Vendor: IBM  
Date of manufacture: April 14, 2002

SFP  
Status: Optimal  
Location: Out connection  
Supported data rate(s): 1 Gbps, 2 Gbps  
Link length: Intermediate  
Connector: LC  
Transmitter type: Shortwave Laser w/o OFC  
Transmission media: TM Multi-mode 50m(M5) TM Multi-mode

62.5m(M6)  
IEEE company ID: 08 00 5a  
Revision: AA10  
Part number: IBM42P21SNY  
Serial number: 53P1476006ACC  
Vendor: IBM  
Date of manufacture: April 14, 2002

#### Drive Enclosure 37 Overall Component Information

Part number: PN 19K1288  
Serial number: SN 23A1725  
Vendor: VN IBM  
Date of manufacture: September 1, 2002

Enclosure path redundancy: OK

Fan canister: Optimal

Fan canister: Optimal

Power supply canister

Status: Optimal  
Part number: PN 19K1289  
Serial number: SN A6844400JP0E  
Vendor: VN IBM  
Date of manufacture: Not available

Power supply canister

Status: Optimal  
Part number: PN 19K1289  
Serial number: SN A6844400KB0E  
Vendor: VN IBM  
Date of manufacture: Not available

Temperature: Optimal

Temperature: Optimal

ESM card

Status: Optimal  
Firmware version: 9325

Maximum data rate: 2 Gbps  
Current data rate: 2 Gbps  
Location: A (left canister)  
Card communication: OK  
Product ID: EXP700  
Part number: PN 19K1287  
Serial number: SN 1T33222663  
Vendor: IBM  
Date of manufacture: August 1, 2003

SFP  
Status: Optimal  
Location: In connection  
Supported data rate(s): 1 Gbps, 2 Gbps  
Link length: Intermediate  
Connector: LC  
Transmitter type: Shortwave Laser w/o OFC  
Transmission media: TM Multi-mode 50m(M5) TM Multi-mode

62.5m(M6)  
IEEE company ID: 08 00 5a  
Revision: AA10  
Part number: IBM42P21SNY  
Serial number: 53P14760069NU  
Vendor: IBM  
Date of manufacture: April 13, 2002

SFP  
Status: Optimal  
Location: Out connection  
Supported data rate(s): 1 Gbps, 2 Gbps  
Link length: Intermediate  
Connector: LC  
Transmitter type: Shortwave Laser w/o OFC  
Transmission media: TM Multi-mode 50m(M5) TM Multi-mode

62.5m(M6)  
IEEE company ID: 08 00 5a  
Revision: AA10  
Part number: IBM42P21SNY  
Serial number: 53P14760069Z3  
Vendor: IBM  
Date of manufacture: April 13, 2002

ESM card

Status: Optimal  
Firmware version: 9325  
Maximum data rate: 2 Gbps  
Current data rate: 2 Gbps  
Location: B (right canister)  
Card communication: OK  
Product ID: EXP700  
Part number: PN 19K1287  
Serial number: SN 1T23251656  
Vendor: IBM  
Date of manufacture: August 1, 2002

SFP  
Status: Optimal  
Location: In connection  
Supported data rate(s): 1 Gbps, 2 Gbps  
Link length: Intermediate  
Connector: LC  
Transmitter type: Shortwave Laser w/o OFC  
Transmission media: TM Multi-mode 50m(M5) TM Multi-mode

62.5m(M6)  
IEEE company ID: 08 00 5a  
Revision: AA10  
Part number: IBM42P21SNY  
Serial number: 53P147600033P  
Vendor: IBM  
Date of manufacture: December 1, 2001

SFP  
Status: Optimal



Location: Out connection  
Supported data rate(s): 1 Gbps, 2 Gbps  
Link length: Intermediate  
Connector: LC  
Transmitter type: Shortwave Laser w/o OFC  
Transmission media: TM Multi-mode 50m(M5) TM Multi-mode

62.5m(M6)

IEEE company ID: 08 00 5a  
Revision: AA10  
Part number: IBM42P21SNY  
Serial number: 53P1476009T1R  
Vendor: IBM  
Date of manufacture: June 29, 2002

MAPPINGS STORAGE PARTITIONING - ENABLED (0 of 64 used)-----

Logical Drive-To-LUN Mappings

Logical Drive flute3\_extralun, LUN 4, Default Group  
Logical Drive flute3\_lun1, LUN 0, Default Group  
Logical Drive flute3\_lun2, LUN 1, Default Group  
Logical Drive flute3\_lun3, LUN 2, Default Group  
Logical Drive flute3\_lun4, LUN 3, Default Group

Topology

[Undefined Host Ports]  
21:00:00:e0:8b:0a:5b:29

[Default Group]

NVSRAM Host Type Internal Definitions

Index 0

Name: Windows NT Non-Clustered (SP5 or higher)  
ADT status: Disabled

Index 1

Name: Windows NT Clustered (SP5 or higher)  
ADT status: Disabled

Index 2 (DEFAULT)

Name: Windows 2000/Server 2003 Non-Clustered  
ADT status: Disabled

Index 3

Name: Windows 2000/Server 2003 Clustered  
ADT status: Disabled

Index 4

Name: NetWare-IBMSAN  
ADT status: Disabled

Index 5

Name: Linux  
ADT status: Disabled

Index 6

Name: AIX  
ADT status: Disabled

Index 7

Name: HP-UX  
ADT status: Disabled

Index 8

Name: Solaris  
ADT status: Disabled

Index 9

Name: PTX  
ADT status: Disabled

Index 10

Name: Irix  
ADT status: Disabled

Index 11

Name: Netware Failover  
ADT status: Disabled

Index 12

Name: IBM TS SAN VCE

ADT status: Disabled  
Index 13  
Name: LNXCL  
ADT status: Disabled

## TotalStorage FC2-133 Host Bus Adapter 4

PROFILE FOR STORAGE SUBSYSTEM: flute4 (3/18/04 2:12:34 PM)

SUMMARY-----

Number of controllers: 2  
Number of arrays: 4  
Total number of logical drives (includes an access logical drive): 5 of 2048 used

Number of standard logical drives: 4  
Number of access logical drives: 1  
Number of drives: 112  
Access logical drive: None mapped  
Default host type: Windows 2000/Server 2003 Non-Clustered (Host type index 2)

Firmware version: 05.40.06.00  
NVSRAM version: N1742F700R830V03  
NVSRAM configured for batteries?: Yes  
Start cache flushing at (in percentage): 80  
Stop cache flushing at (in percentage): 80  
Cache block size (in KB): 4  
Media scan duration (in days): 30  
Failover alert delay (in minutes): 5  
Feature enable identifier: 353536363100000000000003DDB84AF

CONTROLLERS-----

Number of controllers: 2

Controller in Slot A

Appware version: 05.40.06.00  
Bootware version: 05.40.02.00  
Status: Optimal  
Mode: Active  
Board ID: 4884  
Product ID: 1742  
Product revision: 0520  
Serial number: 1T21196270  
Vendor: IBM  
Date of manufacture: April 4, 2002  
Cache/processor size (MB): 1024/128  
Date/Time: Thu Mar 18 14:08:10 EST 2004  
Associated Logical Drives (\* = Preferred Owner):  
flute4\_lun1\*, flute4\_lun2\*  
Drive interface: Fibre  
Channel: 1  
Current ID: 125/0x1  
Maximum data rate: 2 Gbps  
Current data rate: 2 Gbps  
Data rate control: Switch  
Link status: Up  
Drive interface: Fibre  
Channel: 2  
Current ID: 125/0x1  
Maximum data rate: 2 Gbps  
Current data rate: 2 Gbps  
Data rate control: Switch  
Link status: Up  
Drive interface: Fibre  
Channel: 3  
Current ID: 125/0x1  
Maximum data rate: 2 Gbps  
Current data rate: 2 Gbps  
Data rate control: Switch

Link status: Up  
Drive interface: Fibre  
Channel: 4  
Current ID: 125/0x1  
Maximum data rate: 2 Gbps  
Current data rate: 2 Gbps  
Data rate control: Switch  
Link status: Up  
Host interface: Fibre  
Port: 1  
Current ID: Not applicable/0xFFFFFFFF  
Preferred ID: 126/0x0  
NL-Port ID: 0x011400  
Maximum data rate: 2 Gbps  
Current data rate: 2 Gbps  
Data rate control: Switch  
Link status: Up  
Topology: Fabric Attach  
World-wide port name: 20:02:00:a0:b8:0c:cf:e1  
World-wide node name: 20:02:00:a0:b8:0c:cf:e0  
Part type: HPFC-5200 revision 11  
Host interface: Fibre  
Port: 2  
Current ID: 1/0xE8  
Preferred ID: 1/0xE8  
NL-Port ID: 0x0000E8  
Maximum data rate: 2 Gbps  
Current data rate: 2 Gbps  
Data rate control: Switch  
Link status: Up  
Topology: Arbitrated Loop - Private  
World-wide port name: 20:02:00:a0:b8:0c:cf:e2  
World-wide node name: 20:02:00:a0:b8:0c:cf:e0  
Part type: HPFC-5200 revision 11  
Ethernet port: 0  
MAC address: 00:a0:b8:0c:cf:e0  
Host name: target  
Network configuration: Static  
IP address: 192.168.128.109  
Subnet mask: 255.255.255.0  
Gateway: 0.0.0.0  
Remote login: Disabled

#### Controller in Slot B

Appware version: 05.40.06.00  
Bootware version: 05.40.02.00  
Status: Optimal  
Mode: Active  
Board ID: 4884  
Product ID: 1742  
Product revision: 0520  
Serial number: 1T21196283  
Vendor: IBM  
Date of manufacture: March 30, 2002  
Cache/processor size (MB): 1024/128  
Date/Time: Thu Mar 18 14:08:13 EST 2004  
Associated Logical Drives (\* = Preferred Owner):  
flute4\_lun3\*, flute4\_lun4\*  
Drive interface: Fibre  
Channel: 1  
Current ID: 124/0x2  
Maximum data rate: 2 Gbps  
Current data rate: 2 Gbps  
Data rate control: Switch  
Link status: Up  
Drive interface: Fibre  
Channel: 2  
Current ID: 124/0x2

Maximum data rate: 2 Gbps  
Current data rate: 2 Gbps  
Data rate control: Switch  
Link status: Up  
Drive interface: Fibre  
Channel: 3  
Current ID: 124/0x2  
Maximum data rate: 2 Gbps  
Current data rate: 2 Gbps  
Data rate control: Switch  
Link status: Up  
Drive interface: Fibre  
Channel: 4  
Current ID: 124/0x2  
Maximum data rate: 2 Gbps  
Current data rate: 2 Gbps  
Data rate control: Switch  
Link status: Up  
Host interface: Fibre  
Port: 1  
Current ID: Not applicable/0xFFFFFFFF  
Preferred ID: 126/0x0  
NL-Port ID: 0x011500  
Maximum data rate: 2 Gbps  
Current data rate: 2 Gbps  
Data rate control: Switch  
Link status: Up  
Topology: Fabric Attach  
World-wide port name: 20:03:00:a0:b8:0c:cf:e1  
World-wide node name: 20:03:00:a0:b8:0c:cf:e0  
Part type: HPFC-5200 revision 11  
Host interface: Fibre  
Port: 2  
Current ID: 3/0xE2  
Preferred ID: 3/0xE2  
NL-Port ID: 0x0000E2  
Maximum data rate: 2 Gbps  
Current data rate: 1 Gbps  
Data rate control: Switch  
Link status: Up  
Topology: Arbitrated Loop - Private  
World-wide port name: 20:03:00:a0:b8:0c:cf:e2  
World-wide node name: 20:03:00:a0:b8:0c:cf:e0  
Part type: HPFC-5200 revision 11  
Ethernet port: 0  
MAC address: 00:a0:b8:0c:d0:04  
Host name: target  
Network configuration: Static  
IP address: 192.168.128.110  
Subnet mask: 255.255.255.0  
Gateway: 0.0.0.0  
Remote login: Disabled

#### ARRAYS-----

Number of arrays: 4

#### Array 1 (RAID 0)

Status: Online  
Current owner: Controller in slot A  
Logical Drive flute4\_lun1 (948.145 GB)  
Associated drives (in piece order):  
Drive at Enclosure 40, Slot 1  
Drive at Enclosure 40, Slot 2  
Drive at Enclosure 40, Slot 3  
Drive at Enclosure 40, Slot 4  
Drive at Enclosure 40, Slot 5  
Drive at Enclosure 40, Slot 6  
Drive at Enclosure 40, Slot 7

Drive at Enclosure 40, Slot 8  
Drive at Enclosure 40, Slot 9  
Drive at Enclosure 40, Slot 10  
Drive at Enclosure 40, Slot 11  
Drive at Enclosure 40, Slot 12  
Drive at Enclosure 40, Slot 13  
Drive at Enclosure 40, Slot 14  
Drive at Enclosure 41, Slot 1  
Drive at Enclosure 41, Slot 2  
Drive at Enclosure 41, Slot 3  
Drive at Enclosure 41, Slot 4  
Drive at Enclosure 41, Slot 5  
Drive at Enclosure 41, Slot 6  
Drive at Enclosure 41, Slot 7  
Drive at Enclosure 41, Slot 8  
Drive at Enclosure 41, Slot 9  
Drive at Enclosure 41, Slot 10  
Drive at Enclosure 41, Slot 11  
Drive at Enclosure 41, Slot 12  
Drive at Enclosure 41, Slot 13  
Drive at Enclosure 41, Slot 14

Array 2 (RAID 0)

Status: Online

Current owner: Controller in slot A

Logical Drive flute4\_lun2 (948.145 GB)

Associated drives (in piece order):

Drive at Enclosure 42, Slot 1  
Drive at Enclosure 42, Slot 2  
Drive at Enclosure 42, Slot 3  
Drive at Enclosure 42, Slot 4  
Drive at Enclosure 42, Slot 5  
Drive at Enclosure 42, Slot 6  
Drive at Enclosure 42, Slot 7  
Drive at Enclosure 42, Slot 8  
Drive at Enclosure 42, Slot 9  
Drive at Enclosure 42, Slot 10  
Drive at Enclosure 42, Slot 11  
Drive at Enclosure 42, Slot 12  
Drive at Enclosure 42, Slot 13  
Drive at Enclosure 42, Slot 14  
Drive at Enclosure 43, Slot 1  
Drive at Enclosure 43, Slot 2  
Drive at Enclosure 43, Slot 3  
Drive at Enclosure 43, Slot 4  
Drive at Enclosure 43, Slot 5  
Drive at Enclosure 43, Slot 6  
Drive at Enclosure 43, Slot 7  
Drive at Enclosure 43, Slot 8  
Drive at Enclosure 43, Slot 9  
Drive at Enclosure 43, Slot 10  
Drive at Enclosure 43, Slot 11  
Drive at Enclosure 43, Slot 12  
Drive at Enclosure 43, Slot 13  
Drive at Enclosure 43, Slot 14

Array 3 (RAID 0)

Status: Online

Current owner: Controller in slot B

Logical Drive flute4\_lun3 (948.145 GB)

Associated drives (in piece order):

Drive at Enclosure 44, Slot 1  
Drive at Enclosure 44, Slot 2  
Drive at Enclosure 44, Slot 3  
Drive at Enclosure 44, Slot 4  
Drive at Enclosure 44, Slot 5  
Drive at Enclosure 44, Slot 6  
Drive at Enclosure 44, Slot 7  
Drive at Enclosure 44, Slot 8  
Drive at Enclosure 44, Slot 9

Drive at Enclosure 44, Slot 10  
Drive at Enclosure 44, Slot 11  
Drive at Enclosure 44, Slot 12  
Drive at Enclosure 44, Slot 13  
Drive at Enclosure 44, Slot 14  
Drive at Enclosure 45, Slot 1  
Drive at Enclosure 45, Slot 2  
Drive at Enclosure 45, Slot 3  
Drive at Enclosure 45, Slot 4  
Drive at Enclosure 45, Slot 5  
Drive at Enclosure 45, Slot 6  
Drive at Enclosure 45, Slot 7  
Drive at Enclosure 45, Slot 8  
Drive at Enclosure 45, Slot 9  
Drive at Enclosure 45, Slot 10  
Drive at Enclosure 45, Slot 11  
Drive at Enclosure 45, Slot 12  
Drive at Enclosure 45, Slot 13  
Drive at Enclosure 45, Slot 14

Array 4 (RAID 0)

Status: Online

Current owner: Controller in slot B

Logical Drive flute4\_lun4 (948.145 GB)

Associated drives (in piece order):

Drive at Enclosure 46, Slot 1  
Drive at Enclosure 46, Slot 2  
Drive at Enclosure 46, Slot 3  
Drive at Enclosure 46, Slot 4  
Drive at Enclosure 46, Slot 5  
Drive at Enclosure 46, Slot 6  
Drive at Enclosure 46, Slot 7  
Drive at Enclosure 46, Slot 8  
Drive at Enclosure 46, Slot 9  
Drive at Enclosure 46, Slot 10  
Drive at Enclosure 46, Slot 11  
Drive at Enclosure 46, Slot 12  
Drive at Enclosure 46, Slot 13  
Drive at Enclosure 46, Slot 14  
Drive at Enclosure 47, Slot 1  
Drive at Enclosure 47, Slot 2  
Drive at Enclosure 47, Slot 3  
Drive at Enclosure 47, Slot 4  
Drive at Enclosure 47, Slot 5  
Drive at Enclosure 47, Slot 6  
Drive at Enclosure 47, Slot 7  
Drive at Enclosure 47, Slot 8  
Drive at Enclosure 47, Slot 9  
Drive at Enclosure 47, Slot 10  
Drive at Enclosure 47, Slot 11  
Drive at Enclosure 47, Slot 12  
Drive at Enclosure 47, Slot 13  
Drive at Enclosure 47, Slot 14

STANDARD LOGICAL DRIVES-----

SUMMARY

Number of standard logical drives: 4

See other Logical Drives sub-tabs for premium feature information.

NAME	STATUS	CAPACITY	RAID LEVEL	ARRAY
flute4_lun1	Optimal	948.145 GB	0	1
flute4_lun2	Optimal	948.145 GB	0	2
flute4_lun3	Optimal	948.145 GB	0	3
flute4_lun4	Optimal	948.145 GB	0	4

DETAILS

Logical Drive name: flute4\_lun1

Logical Drive ID: 60:0a:0b:80:00:0c:cf:e0:00:00:00:09:40:0c:10:e4

Subsystem ID (SSID): 0  
 Status: Optimal  
 Preferred owner: Controller in slot A  
 Current owner: Controller in slot A  
 Capacity: 948.145 GB  
 RAID level: 0  
 Segment size: 64 KB  
 Modification priority: High  
 Associated array: 1  
 Read cache: Enabled  
 Write cache: Disabled  
 Write cache without batteries: Disabled  
 Write cache with mirroring: Disabled  
 Flush write cache after (in seconds): 10.00  
 Cache read ahead multiplier: 1  
 Enable background media scan: Enabled  
 Media scan with redundancy check: Disabled

Logical Drive name: flute4\_lun2  
 Logical Drive ID: 60:0a:0b:80:00:0c:cf:e0:00:00:00:0b:40:0c:11:0e  
 Subsystem ID (SSID): 1  
 Status: Optimal  
 Preferred owner: Controller in slot A  
 Current owner: Controller in slot A  
 Capacity: 948.145 GB  
 RAID level: 0  
 Segment size: 64 KB  
 Modification priority: High  
 Associated array: 2  
 Read cache: Enabled  
 Write cache: Disabled  
 Write cache without batteries: Disabled  
 Write cache with mirroring: Disabled  
 Flush write cache after (in seconds): 10.00  
 Cache read ahead multiplier: 1  
 Enable background media scan: Enabled  
 Media scan with redundancy check: Disabled

Logical Drive name: flute4\_lun3  
 Logical Drive ID: 60:0a:0b:80:00:0c:d0:04:00:00:00:11:40:0c:12:ff  
 Subsystem ID (SSID): 2  
 Status: Optimal  
 Preferred owner: Controller in slot B  
 Current owner: Controller in slot B  
 Capacity: 948.145 GB  
 RAID level: 0  
 Segment size: 64 KB  
 Modification priority: High  
 Associated array: 3  
 Read cache: Enabled  
 Write cache: Disabled  
 Write cache without batteries: Disabled  
 Write cache with mirroring: Disabled  
 Flush write cache after (in seconds): 10.00  
 Cache read ahead multiplier: 1  
 Enable background media scan: Enabled  
 Media scan with redundancy check: Disabled

Logical Drive name: flute4\_lun4  
 Logical Drive ID: 60:0a:0b:80:00:0c:d0:04:00:00:00:13:40:0c:13:27  
 Subsystem ID (SSID): 3  
 Status: Optimal  
 Preferred owner: Controller in slot B  
 Current owner: Controller in slot B  
 Capacity: 948.145 GB  
 RAID level: 0  
 Segment size: 64 KB  
 Modification priority: High

Associated array: 4  
 Read cache: Enabled  
 Write cache: Disabled  
 Write cache without batteries: Disabled  
 Write cache with mirroring: Disabled  
 Flush write cache after (in seconds): 10.00  
 Cache read ahead multiplier: 1  
 Enable background media scan: Enabled  
 Media scan with redundancy check: Disabled

MISSING LOGICAL DRIVES-----  
 Number of missing logical drives: 0  
 See other Logical Drives sub-tabs for premium feature information

DRIVES-----

SUMMARY  
 Number of drives: 112

BASIC:

TRAY, SLOT	STATUS	CAPACITY	CURRENT DATA RATE
PRODUCT ID	FIRMWARE VERSION		
40, 1	Optimal	33.902 GB 2 Gbps	ST336753FC F B953
40, 2	Optimal	33.902 GB 2 Gbps	ST336753FC F B953
40, 3	Optimal	33.902 GB 2 Gbps	ST336753FC F B953
40, 4	Optimal	33.902 GB 2 Gbps	ST336753FC F B953
40, 5	Optimal	33.902 GB 2 Gbps	ST336753FC F B953
40, 6	Optimal	33.902 GB 2 Gbps	ST336753FC F B953
40, 7	Optimal	33.902 GB 2 Gbps	ST336753FC F B953
40, 8	Optimal	33.902 GB 2 Gbps	ST336753FC F B953
40, 9	Optimal	33.902 GB 2 Gbps	ST336753FC F B953
40, 10	Optimal	33.902 GB 2 Gbps	ST336753FC F B953
40, 11	Optimal	33.902 GB 2 Gbps	ST336753FC F B953
40, 12	Optimal	33.902 GB 2 Gbps	ST336753FC F B953
40, 13	Optimal	33.902 GB 2 Gbps	ST336753FC F B953
40, 14	Optimal	33.902 GB 2 Gbps	ST336753FC F B953
41, 1	Optimal	33.902 GB 2 Gbps	ST336753FC F B953
41, 2	Optimal	33.902 GB 2 Gbps	ST336753FC F B953
41, 3	Optimal	33.902 GB 2 Gbps	ST336753FC F B953
41, 4	Optimal	33.902 GB 2 Gbps	ST336753FC F B953
41, 5	Optimal	33.902 GB 2 Gbps	ST336753FC F B953
41, 6	Optimal	33.902 GB 2 Gbps	ST336753FC F B953
41, 7	Optimal	33.902 GB 2 Gbps	ST336753FC F B953
41, 8	Optimal	33.902 GB 2 Gbps	ST336753FC F B953



46, 7	Optimal	33.902 GB	2 Gbps	ST336753FC	F	B953	41, 7	3	4
46, 8	Optimal	33.902 GB	2 Gbps	ST336753FC	F	B953	41, 8	4	3
46, 9	Optimal	33.902 GB	2 Gbps	ST336753FC	F	B953	41, 9	3	4
46, 10	Optimal	33.902 GB	2 Gbps	ST336753FC	F	B953	41, 10	4	3
46, 11	Optimal	33.902 GB	2 Gbps	ST336753FC	F	B953	41, 11	3	4
46, 12	Optimal	33.902 GB	2 Gbps	ST336753FC	F	B953	41, 12	4	3
46, 13	Optimal	33.902 GB	2 Gbps	ST336753FC	F	B953	41, 13	3	4
46, 14	Optimal	33.902 GB	2 Gbps	ST336753FC	F	B953	41, 14	4	3
47, 1	Optimal	33.902 GB	2 Gbps	ST336753FC	F	B953	42, 1	3	4
47, 2	Optimal	33.902 GB	2 Gbps	ST336753FC	F	B953	42, 2	4	3
47, 3	Optimal	33.902 GB	2 Gbps	ST336753FC	F	B953	42, 3	3	4
47, 4	Optimal	33.902 GB	2 Gbps	ST336753FC	F	B953	42, 4	4	3
47, 5	Optimal	33.902 GB	2 Gbps	ST336753FC	F	B953	42, 5	3	4
47, 6	Optimal	33.902 GB	2 Gbps	ST336753FC	F	B953	42, 6	4	3
47, 7	Optimal	33.902 GB	2 Gbps	ST336753FC	F	B953	42, 7	3	4
47, 8	Optimal	33.902 GB	2 Gbps	ST336753FC	F	B953	42, 8	4	3
47, 9	Optimal	33.902 GB	2 Gbps	ST336753FC	F	B953	42, 9	3	4
47, 10	Optimal	33.902 GB	2 Gbps	ST336753FC	F	B953	42, 10	4	3
47, 11	Optimal	33.902 GB	2 Gbps	ST336753FC	F	B953	42, 11	3	4
47, 12	Optimal	33.902 GB	2 Gbps	ST336753FC	F	B953	42, 12	4	3
47, 13	Optimal	33.902 GB	2 Gbps	ST336753FC	F	B953	42, 13	3	4
47, 14	Optimal	33.902 GB	2 Gbps	ST336753FC	F	B953	42, 14	4	3
47, 1	Optimal	33.902 GB	2 Gbps	ST336732FC	F	B947	43, 1	3	4
47, 5	Optimal	33.902 GB	2 Gbps	ST336753FC	F	B953	43, 2	4	3
47, 6	Optimal	33.902 GB	2 Gbps	ST336753FC	F	B953	43, 3	3	4
47, 7	Optimal	33.902 GB	2 Gbps	ST336753FC	F	B953	43, 4	4	3
47, 8	Optimal	33.902 GB	2 Gbps	ST336753FC	F	B953	43, 5	3	4
47, 9	Optimal	33.902 GB	2 Gbps	ST336753FC	F	B953	43, 6	4	3
47, 10	Optimal	33.902 GB	2 Gbps	ST336753FC	F	B953	43, 7	3	4
47, 11	Optimal	33.902 GB	2 Gbps	ST336753FC	F	B953	43, 8	4	3
47, 12	Optimal	33.902 GB	2 Gbps	ST336753FC	F	B953	43, 9	3	4
47, 13	Optimal	33.902 GB	2 Gbps	ST336753FC	F	B953	43, 10	4	3
47, 14	Optimal	33.902 GB	2 Gbps	ST336753FC	F	B953	43, 11	3	4
47, 1	Optimal	33.902 GB	2 Gbps	ST336753FC	F	B953	43, 12	4	3
47, 2	Optimal	33.902 GB	2 Gbps	ST336753FC	F	B953	43, 13	3	4
47, 3	Optimal	33.902 GB	2 Gbps	ST336753FC	F	B953	43, 14	4	3
47, 4	Optimal	33.902 GB	2 Gbps	ST336753FC	F	B953	44, 1	1	2
47, 5	Optimal	33.902 GB	2 Gbps	ST336753FC	F	B953	44, 2	2	1
47, 6	Optimal	33.902 GB	2 Gbps	ST336753FC	F	B953	44, 3	1	2
47, 7	Optimal	33.902 GB	2 Gbps	ST336753FC	F	B953	44, 4	2	1
47, 8	Optimal	33.902 GB	2 Gbps	ST336753FC	F	B953	44, 5	1	2
47, 9	Optimal	33.902 GB	2 Gbps	ST336753FC	F	B953	44, 6	2	1
47, 10	Optimal	33.902 GB	2 Gbps	ST336753FC	F	B953	44, 7	1	2
47, 11	Optimal	33.902 GB	2 Gbps	ST336753FC	F	B953	44, 8	2	1
47, 12	Optimal	33.902 GB	2 Gbps	ST336753FC	F	B953	44, 9	1	2
47, 13	Optimal	33.902 GB	2 Gbps	ST336753FC	F	B953	44, 10	2	1
47, 14	Optimal	33.902 GB	2 Gbps	ST336753FC	F	B953	44, 11	1	2
							44, 12	2	1
							44, 13	1	2
							44, 14	2	1
							45, 1	1	2
							45, 2	2	1
							45, 3	1	2
							45, 4	2	1
							45, 5	1	2
							45, 6	2	1
							45, 7	1	2
							45, 8	2	1
							45, 9	1	2
							45, 10	2	1
							45, 11	1	2
							45, 12	2	1
							45, 13	1	2
							45, 14	2	1
							46, 1	1	2
							46, 2	2	1
							46, 3	1	2
							46, 4	2	1

DRIVE CHANNELS:

TRAY, SLOT CURRENT CHANNEL ALTERNATE CHANNEL

40, 1	3	4
40, 2	4	3
40, 3	3	4
40, 4	4	3
40, 5	3	4
40, 6	4	3
40, 7	3	4
40, 8	4	3
40, 9	3	4
40, 10	4	3
40, 11	3	4
40, 12	4	3
40, 13	3	4
40, 14	4	3
41, 1	3	4
41, 2	4	3
41, 3	3	4
41, 4	4	3
41, 5	3	4
41, 6	4	3

46, 5 1 2  
 46, 6 2 1  
 46, 7 1 2  
 46, 8 2 1  
 46, 9 1 2  
 46, 10 2 1  
 46, 11 1 2  
 46, 12 2 1  
 46, 13 1 2  
 46, 14 2 1  
 47, 1 1 2  
 47, 2 2 1  
 47, 3 1 2  
 47, 4 2 1  
 47, 5 1 2  
 47, 6 2 1  
 47, 7 1 2  
 47, 8 2 1  
 47, 9 1 2  
 47, 10 2 1  
 47, 11 1 2  
 47, 12 2 1  
 47, 13 1 2  
 47, 14 2 1

DETAILS

Drive at Enclosure 40, Slot 1  
 Drive port: 1, Channel: 3, ID: 0/0xEF  
 Drive port: 2, Channel: 4, ID: 0/0xEF  
 Drive path redundancy: OK  
 Status: Optimal  
 Raw capacity: 33.902 GB  
 Usable capacity: 33.862 GB  
 Current data rate: 2 Gbps  
 Product ID: ST336753FC F  
 Firmware version: B953  
 Serial number: 3HX0KD7F00007340WVXJ  
 Vendor: IBM-ESXS  
 Date of manufacture: April 6, 2003  
 World-wide name: 20:00:00:04:cf:ff:12:e4  
 Mode: Assigned  
 Associated array: Array 1

Drive at Enclosure 40, Slot 2  
 Drive port: 1, Channel: 4, ID: 1/0xE8  
 Drive port: 2, Channel: 3, ID: 1/0xE8  
 Drive path redundancy: OK  
 Status: Optimal  
 Raw capacity: 33.902 GB  
 Usable capacity: 33.862 GB  
 Current data rate: 2 Gbps  
 Product ID: ST336753FC F  
 Firmware version: B953  
 Serial number: 3HX0K40R00007339SP25  
 Vendor: IBM-ESXS  
 Date of manufacture: April 5, 2003  
 World-wide name: 20:00:00:04:cf:f9:f5:7b  
 Mode: Assigned  
 Associated array: Array 1

Drive at Enclosure 40, Slot 3  
 Drive port: 1, Channel: 3, ID: 2/0xE4  
 Drive port: 2, Channel: 4, ID: 2/0xE4  
 Drive path redundancy: OK  
 Status: Optimal  
 Raw capacity: 33.902 GB  
 Usable capacity: 33.862 GB  
 Current data rate: 2 Gbps

Product ID: ST336753FC F  
 Firmware version: B953  
 Serial number: 3HX0HSJX000073405FSJ  
 Vendor: IBM-ESXS  
 Date of manufacture: April 6, 2003  
 World-wide name: 20:00:00:04:cf:ff:12:88  
 Mode: Assigned  
 Associated array: Array 1

Drive at Enclosure 40, Slot 4  
 Drive port: 1, Channel: 4, ID: 3/0xE2  
 Drive port: 2, Channel: 3, ID: 3/0xE2  
 Drive path redundancy: OK  
 Status: Optimal  
 Raw capacity: 33.902 GB  
 Usable capacity: 33.862 GB  
 Current data rate: 2 Gbps  
 Product ID: ST336753FC F  
 Firmware version: B953  
 Serial number: 3HX0KBSV00007340GUZK  
 Vendor: IBM-ESXS  
 Date of manufacture: April 6, 2003  
 World-wide name: 20:00:00:04:cf:ff:13:3b  
 Mode: Assigned  
 Associated array: Array 1

Drive at Enclosure 40, Slot 5  
 Drive port: 1, Channel: 3, ID: 4/0xE1  
 Drive port: 2, Channel: 4, ID: 4/0xE1  
 Drive path redundancy: OK  
 Status: Optimal  
 Raw capacity: 33.902 GB  
 Usable capacity: 33.862 GB  
 Current data rate: 2 Gbps  
 Product ID: ST336753FC F  
 Firmware version: B953  
 Serial number: 3HX0K6H500007340GTVD  
 Vendor: IBM-ESXS  
 Date of manufacture: April 5, 2003  
 World-wide name: 20:00:00:04:cf:f9:f6:00  
 Mode: Assigned  
 Associated array: Array 1

Drive at Enclosure 40, Slot 6  
 Drive port: 1, Channel: 4, ID: 5/0xE0  
 Drive port: 2, Channel: 3, ID: 5/0xE0  
 Drive path redundancy: OK  
 Status: Optimal  
 Raw capacity: 33.902 GB  
 Usable capacity: 33.862 GB  
 Current data rate: 2 Gbps  
 Product ID: ST336753FC F  
 Firmware version: B953  
 Serial number: 3HX0K2RZ00007339LJ8H  
 Vendor: IBM-ESXS  
 Date of manufacture: April 5, 2003  
 World-wide name: 20:00:00:04:cf:ff:02:90  
 Mode: Assigned  
 Associated array: Array 1

Drive at Enclosure 40, Slot 7  
 Drive port: 1, Channel: 3, ID: 6/0xDC  
 Drive port: 2, Channel: 4, ID: 6/0xDC  
 Drive path redundancy: OK  
 Status: Optimal  
 Raw capacity: 33.902 GB  
 Usable capacity: 33.862 GB  
 Current data rate: 2 Gbps

Product ID: ST336753FC F  
Firmware version: B953  
Serial number: 3HX0KBFX000073410J7B  
Vendor: IBM-ESXS  
Date of manufacture: April 6, 2003  
World-wide name: 20:00:00:04:cf:ff:14:69  
Mode: Assigned  
Associated array: Array 1

Drive at Enclosure 40, Slot 8  
Drive port: 1, Channel: 4, ID: 7/0xDA  
Drive port: 2, Channel: 3, ID: 7/0xDA  
Drive path redundancy: OK  
Status: Optimal  
Raw capacity: 33.902 GB  
Usable capacity: 33.862 GB  
Current data rate: 2 Gbps  
Product ID: ST336753FC F  
Firmware version: B953  
Serial number: 3HX0JAA200007340WEWF  
Vendor: IBM-ESXS  
Date of manufacture: April 6, 2003  
World-wide name: 20:00:00:04:cf:ff:0e:28  
Mode: Assigned  
Associated array: Array 1

Drive at Enclosure 40, Slot 9  
Drive port: 1, Channel: 3, ID: 80/0x55  
Drive port: 2, Channel: 4, ID: 80/0x55  
Drive path redundancy: OK  
Status: Optimal  
Raw capacity: 33.902 GB  
Usable capacity: 33.862 GB  
Current data rate: 2 Gbps  
Product ID: ST336753FC F  
Firmware version: B953  
Serial number: 3HX0HLY600007340X50U  
Vendor: IBM-ESXS  
Date of manufacture: April 5, 2003  
World-wide name: 20:00:00:04:cf:f9:db:d1  
Mode: Assigned  
Associated array: Array 1

Drive at Enclosure 40, Slot 10  
Drive port: 1, Channel: 4, ID: 96/0x3A  
Drive port: 2, Channel: 3, ID: 96/0x3A  
Drive path redundancy: OK  
Status: Optimal  
Raw capacity: 33.902 GB  
Usable capacity: 33.862 GB  
Current data rate: 2 Gbps  
Product ID: ST336753FC F  
Firmware version: B953  
Serial number: 3HX0JPGL00007339GMK8  
Vendor: IBM-ESXS  
Date of manufacture: April 5, 2003  
World-wide name: 20:00:00:04:cf:ff:02:cb  
Mode: Assigned  
Associated array: Array 1

Drive at Enclosure 40, Slot 11  
Drive port: 1, Channel: 3, ID: 64/0x72  
Drive port: 2, Channel: 4, ID: 64/0x72  
Drive path redundancy: OK  
Status: Optimal  
Raw capacity: 33.902 GB  
Usable capacity: 33.862 GB  
Current data rate: 2 Gbps

Product ID: ST336753FC F  
Firmware version: B953  
Serial number: 3HX0JYX3000073405A44  
Vendor: IBM-ESXS  
Date of manufacture: April 6, 2003  
World-wide name: 20:00:00:04:cf:ff:0d:70  
Mode: Assigned  
Associated array: Array 1

Drive at Enclosure 40, Slot 12  
Drive port: 1, Channel: 4, ID: 72/0x67  
Drive port: 2, Channel: 3, ID: 72/0x67  
Drive path redundancy: OK  
Status: Optimal  
Raw capacity: 33.902 GB  
Usable capacity: 33.862 GB  
Current data rate: 2 Gbps  
Product ID: ST336753FC F  
Firmware version: B953  
Serial number: 3HX0HRHX000073405G54  
Vendor: IBM-ESXS  
Date of manufacture: April 5, 2003  
World-wide name: 20:00:00:04:cf:f9:e7:f5  
Mode: Assigned  
Associated array: Array 1

Drive at Enclosure 40, Slot 13  
Drive port: 1, Channel: 3, ID: 88/0x4B  
Drive port: 2, Channel: 4, ID: 88/0x4B  
Drive path redundancy: OK  
Status: Optimal  
Raw capacity: 33.902 GB  
Usable capacity: 33.862 GB  
Current data rate: 2 Gbps  
Product ID: ST336753FC F  
Firmware version: B953  
Serial number: 3HX0JSWG00007338W96D  
Vendor: IBM-ESXS  
Date of manufacture: April 5, 2003  
World-wide name: 20:00:00:04:cf:f9:ca  
Mode: Assigned  
Associated array: Array 1

Drive at Enclosure 40, Slot 14  
Drive port: 1, Channel: 4, ID: 104/0x2E  
Drive port: 2, Channel: 3, ID: 104/0x2E  
Drive path redundancy: OK  
Status: Optimal  
Raw capacity: 33.902 GB  
Usable capacity: 33.862 GB  
Current data rate: 2 Gbps  
Product ID: ST336753FC F  
Firmware version: B953  
Serial number: 3HX0JLV6000073405A9D  
Vendor: IBM-ESXS  
Date of manufacture: April 6, 2003  
World-wide name: 20:00:00:04:cf:ff:07:e2  
Mode: Assigned  
Associated array: Array 1

Drive at Enclosure 41, Slot 1  
Drive port: 1, Channel: 3, ID: 8/0xD9  
Drive port: 2, Channel: 4, ID: 8/0xD9  
Drive path redundancy: OK  
Status: Optimal  
Raw capacity: 33.902 GB  
Usable capacity: 33.862 GB  
Current data rate: 2 Gbps



Product ID: ST336753FC F  
Firmware version: B953  
Serial number: 3HX0K6NF000073393FD6  
Vendor: IBM-ESXS  
Date of manufacture: April 5, 2003  
World-wide name: 20:00:00:04:cf:ff:02:8c  
Mode: Assigned  
Associated array: Array 1

Drive at Enclosure 41, Slot 2  
Drive port: 1, Channel: 4, ID: 9/0xD6  
Drive port: 2, Channel: 3, ID: 9/0xD6  
Drive path redundancy: OK  
Status: Optimal  
Raw capacity: 33.902 GB  
Usable capacity: 33.862 GB  
Current data rate: 2 Gbps  
Product ID: ST336753FC F  
Firmware version: B953  
Serial number: 3HX0K5BR00007340WVK7  
Vendor: IBM-ESXS  
Date of manufacture: April 5, 2003  
World-wide name: 20:00:00:04:cf:f9:ed:52  
Mode: Assigned  
Associated array: Array 1

Drive at Enclosure 41, Slot 3  
Drive port: 1, Channel: 3, ID: 10/0xD5  
Drive port: 2, Channel: 4, ID: 10/0xD5  
Drive path redundancy: OK  
Status: Optimal  
Raw capacity: 33.902 GB  
Usable capacity: 33.862 GB  
Current data rate: 2 Gbps  
Product ID: ST336753FC F  
Firmware version: B953  
Serial number: 3HX0K0V300007339SNTZ  
Vendor: IBM-ESXS  
Date of manufacture: April 6, 2003  
World-wide name: 20:00:00:04:cf:ff:02:3b  
Mode: Assigned  
Associated array: Array 1

Drive at Enclosure 41, Slot 4  
Drive port: 1, Channel: 4, ID: 11/0xD4  
Drive port: 2, Channel: 3, ID: 11/0xD4  
Drive path redundancy: OK  
Status: Optimal  
Raw capacity: 33.902 GB  
Usable capacity: 33.862 GB  
Current data rate: 2 Gbps  
Product ID: ST336753FC F  
Firmware version: B953  
Serial number: 3HX0KBPL000073405FUU  
Vendor: IBM-ESXS  
Date of manufacture: April 6, 2003  
World-wide name: 20:00:00:04:cf:ff:12:8b  
Mode: Assigned  
Associated array: Array 1

Drive at Enclosure 41, Slot 5  
Drive port: 1, Channel: 3, ID: 12/0xD3  
Drive port: 2, Channel: 4, ID: 12/0xD3  
Drive path redundancy: OK  
Status: Optimal  
Raw capacity: 33.902 GB  
Usable capacity: 33.862 GB  
Current data rate: 2 Gbps

Product ID: ST336753FC F  
Firmware version: B953  
Serial number: 3HX0HT0H000073392DUC  
Vendor: IBM-ESXS  
Date of manufacture: April 5, 2003  
World-wide name: 20:00:00:04:cf:f9:e3:46  
Mode: Assigned  
Associated array: Array 1

Drive at Enclosure 41, Slot 6  
Drive port: 1, Channel: 4, ID: 13/0xD2  
Drive port: 2, Channel: 3, ID: 13/0xD2  
Drive path redundancy: OK  
Status: Optimal  
Raw capacity: 33.902 GB  
Usable capacity: 33.862 GB  
Current data rate: 2 Gbps  
Product ID: ST336753FC F  
Firmware version: B953  
Serial number: 3HX0HPLN00007339GN40  
Vendor: IBM-ESXS  
Date of manufacture: April 5, 2003  
World-wide name: 20:00:00:04:cf:ff:02:b8  
Mode: Assigned  
Associated array: Array 1

Drive at Enclosure 41, Slot 7  
Drive port: 1, Channel: 3, ID: 14/0xD1  
Drive port: 2, Channel: 4, ID: 14/0xD1  
Drive path redundancy: OK  
Status: Optimal  
Raw capacity: 33.902 GB  
Usable capacity: 33.862 GB  
Current data rate: 2 Gbps  
Product ID: ST336753FC F  
Firmware version: B953  
Serial number: 3HX0HRV300007340WVQ3  
Vendor: IBM-ESXS  
Date of manufacture: April 5, 2003  
World-wide name: 20:00:00:04:cf:f9:ec:a4  
Mode: Assigned  
Associated array: Array 1

Drive at Enclosure 41, Slot 8  
Drive port: 1, Channel: 4, ID: 15/0xCE  
Drive port: 2, Channel: 3, ID: 15/0xCE  
Drive path redundancy: OK  
Status: Optimal  
Raw capacity: 33.902 GB  
Usable capacity: 33.862 GB  
Current data rate: 2 Gbps  
Product ID: ST336753FC F  
Firmware version: B953  
Serial number: 3HX0KBLJ000073405FYL  
Vendor: IBM-ESXS  
Date of manufacture: April 6, 2003  
World-wide name: 20:00:00:04:cf:ff:12:86  
Mode: Assigned  
Associated array: Array 1

Drive at Enclosure 41, Slot 9  
Drive port: 1, Channel: 3, ID: 81/0x54  
Drive port: 2, Channel: 4, ID: 81/0x54  
Drive path redundancy: OK  
Status: Optimal  
Raw capacity: 33.902 GB  
Usable capacity: 33.862 GB  
Current data rate: 2 Gbps

Product ID: ST336753FC F  
Firmware version: B953  
Serial number: 3HX0HRQF00007339TYAC  
Vendor: IBM-ESXS  
Date of manufacture: April 5, 2003  
World-wide name: 20:00:00:04:cf:f9:ea:5f  
Mode: Assigned  
Associated array: Array 1

Drive at Enclosure 41, Slot 10  
Drive port: 1, Channel: 4, ID: 97/0x39  
Drive port: 2, Channel: 3, ID: 97/0x39  
Drive path redundancy: OK  
Status: Optimal  
Raw capacity: 33.902 GB  
Usable capacity: 33.862 GB  
Current data rate: 2 Gbps  
Product ID: ST336753FC F  
Firmware version: B953  
Serial number: 3HX0JQYY000073405G81  
Vendor: IBM-ESXS  
Date of manufacture: April 5, 2003  
World-wide name: 20:00:00:04:cf:f9:e5:db  
Mode: Assigned  
Associated array: Array 1

Drive at Enclosure 41, Slot 11  
Drive port: 1, Channel: 3, ID: 65/0x71  
Drive port: 2, Channel: 4, ID: 65/0x71  
Drive path redundancy: OK  
Status: Optimal  
Raw capacity: 33.902 GB  
Usable capacity: 33.862 GB  
Current data rate: 2 Gbps  
Product ID: ST336753FC F  
Firmware version: B953  
Serial number: 3HX0HRFS00007340X54H  
Vendor: IBM-ESXS  
Date of manufacture: April 5, 2003  
World-wide name: 20:00:00:04:cf:f9:e8:97  
Mode: Assigned  
Associated array: Array 1

Drive at Enclosure 41, Slot 12  
Drive port: 1, Channel: 4, ID: 73/0x66  
Drive port: 2, Channel: 3, ID: 73/0x66  
Drive path redundancy: OK  
Status: Optimal  
Raw capacity: 33.902 GB  
Usable capacity: 33.862 GB  
Current data rate: 2 Gbps  
Product ID: ST336753FC F  
Firmware version: B953  
Serial number: 3HX0H41N00007339SNQW  
Vendor: IBM-ESXS  
Date of manufacture: April 5, 2003  
World-wide name: 20:00:00:04:cf:f9:e3:72  
Mode: Assigned  
Associated array: Array 1

Drive at Enclosure 41, Slot 13  
Drive port: 1, Channel: 3, ID: 89/0x4A  
Drive port: 2, Channel: 4, ID: 89/0x4A  
Drive path redundancy: OK  
Status: Optimal  
Raw capacity: 33.902 GB  
Usable capacity: 33.862 GB  
Current data rate: 2 Gbps

Product ID: ST336753FC F  
Firmware version: B953  
Serial number: 3HX0K7S3000073405G3R  
Vendor: IBM-ESXS  
Date of manufacture: April 5, 2003  
World-wide name: 20:00:00:04:cf:f9:ed:2d  
Mode: Assigned  
Associated array: Array 1

Drive at Enclosure 41, Slot 14  
Drive port: 1, Channel: 4, ID: 105/0x2D  
Drive port: 2, Channel: 3, ID: 105/0x2D  
Drive path redundancy: OK  
Status: Optimal  
Raw capacity: 33.902 GB  
Usable capacity: 33.862 GB  
Current data rate: 2 Gbps  
Product ID: ST336753FC F  
Firmware version: B953  
Serial number: 3HX0K70P000073405G36  
Vendor: IBM-ESXS  
Date of manufacture: April 5, 2003  
World-wide name: 20:00:00:04:cf:f9:ed:2b  
Mode: Assigned  
Associated array: Array 1

Drive at Enclosure 42, Slot 1  
Drive port: 1, Channel: 3, ID: 16/0xCD  
Drive port: 2, Channel: 4, ID: 16/0xCD  
Drive path redundancy: OK  
Status: Optimal  
Raw capacity: 33.902 GB  
Usable capacity: 33.862 GB  
Current data rate: 2 Gbps  
Product ID: ST336753FC F  
Firmware version: B953  
Serial number: 3HX0HSZ9000073392E2L  
Vendor: IBM-ESXS  
Date of manufacture: April 5, 2003  
World-wide name: 20:00:00:04:cf:f9:e2:ca  
Mode: Assigned  
Associated array: Array 2

Drive at Enclosure 42, Slot 2  
Drive port: 1, Channel: 4, ID: 17/0xCC  
Drive port: 2, Channel: 3, ID: 17/0xCC  
Drive path redundancy: OK  
Status: Optimal  
Raw capacity: 33.902 GB  
Usable capacity: 33.862 GB  
Current data rate: 2 Gbps  
Product ID: ST336753FC F  
Firmware version: B953  
Serial number: 3HX0HM8W00007340X4YM  
Vendor: IBM-ESXS  
Date of manufacture: April 5, 2003  
World-wide name: 20:00:00:04:cf:f9:fb:99  
Mode: Assigned  
Associated array: Array 2

Drive at Enclosure 42, Slot 3  
Drive port: 1, Channel: 3, ID: 18/0xCB  
Drive port: 2, Channel: 4, ID: 18/0xCB  
Drive path redundancy: OK  
Status: Optimal  
Raw capacity: 33.902 GB  
Usable capacity: 33.862 GB  
Current data rate: 2 Gbps

Product ID: ST336753FC F  
Firmware version: B953  
Serial number: 3HX0KD3E000073409KX4  
Vendor: IBM-ESXS  
Date of manufacture: April 6, 2003  
World-wide name: 20:00:00:04:cf:ff:11:89  
Mode: Assigned  
Associated array: Array 2

Drive at Enclosure 42, Slot 4  
Drive port: 1, Channel: 4, ID: 19/0xCA  
Drive port: 2, Channel: 3, ID: 19/0xCA  
Drive path redundancy: OK  
Status: Optimal  
Raw capacity: 33.902 GB  
Usable capacity: 33.862 GB  
Current data rate: 2 Gbps  
Product ID: ST336753FC F  
Firmware version: B953  
Serial number: 3HX0HSZF000073392DU9  
Vendor: IBM-ESXS  
Date of manufacture: April 5, 2003  
World-wide name: 20:00:00:04:cf:f9:e3:78  
Mode: Assigned  
Associated array: Array 2

Drive at Enclosure 42, Slot 5  
Drive port: 1, Channel: 3, ID: 20/0xC9  
Drive port: 2, Channel: 4, ID: 20/0xC9  
Drive path redundancy: OK  
Status: Optimal  
Raw capacity: 33.902 GB  
Usable capacity: 33.862 GB  
Current data rate: 2 Gbps  
Product ID: ST336753FC F  
Firmware version: B953  
Serial number: 3HX0K03N00007340X59K  
Vendor: IBM-ESXS  
Date of manufacture: April 6, 2003  
World-wide name: 20:00:00:04:cf:ff:0d:2d  
Mode: Assigned  
Associated array: Array 2

Drive at Enclosure 42, Slot 6  
Drive port: 1, Channel: 4, ID: 21/0xC7  
Drive port: 2, Channel: 3, ID: 21/0xC7  
Drive path redundancy: OK  
Status: Optimal  
Raw capacity: 33.902 GB  
Usable capacity: 33.862 GB  
Current data rate: 2 Gbps  
Product ID: ST336753FC F  
Firmware version: B953  
Serial number: 3HX0KD5X000073405FVJ  
Vendor: IBM-ESXS  
Date of manufacture: April 6, 2003  
World-wide name: 20:00:00:04:cf:ff:12:5d  
Mode: Assigned  
Associated array: Array 2

Drive at Enclosure 42, Slot 7  
Drive port: 1, Channel: 3, ID: 22/0xC6  
Drive port: 2, Channel: 4, ID: 22/0xC6  
Drive path redundancy: OK  
Status: Optimal  
Raw capacity: 33.902 GB  
Usable capacity: 33.862 GB  
Current data rate: 2 Gbps

Product ID: ST336753FC F  
Firmware version: B953  
Serial number: 3HX0HMX4000073409KF1  
Vendor: IBM-ESXS  
Date of manufacture: April 5, 2003  
World-wide name: 20:00:00:04:cf:f9:db:2f  
Mode: Assigned  
Associated array: Array 2

Drive at Enclosure 42, Slot 8  
Drive port: 1, Channel: 4, ID: 23/0xC5  
Drive port: 2, Channel: 3, ID: 23/0xC5  
Drive path redundancy: OK  
Status: Optimal  
Raw capacity: 33.902 GB  
Usable capacity: 33.862 GB  
Current data rate: 2 Gbps  
Product ID: ST336753FC F  
Firmware version: B953  
Serial number: 3HX0HLYW00007340YESX  
Vendor: IBM-ESXS  
Date of manufacture: April 5, 2003  
World-wide name: 20:00:00:04:cf:f9:dd:8a  
Mode: Assigned  
Associated array: Array 2

Drive at Enclosure 42, Slot 9  
Drive port: 1, Channel: 3, ID: 82/0x53  
Drive port: 2, Channel: 4, ID: 82/0x53  
Drive path redundancy: OK  
Status: Optimal  
Raw capacity: 33.902 GB  
Usable capacity: 33.862 GB  
Current data rate: 2 Gbps  
Product ID: ST336753FC F  
Firmware version: B953  
Serial number: 3HX0K0V100007339SP68  
Vendor: IBM-ESXS  
Date of manufacture: April 6, 2003  
World-wide name: 20:00:00:04:cf:ff:08:41  
Mode: Assigned  
Associated array: Array 2

Drive at Enclosure 42, Slot 10  
Drive port: 1, Channel: 4, ID: 98/0x36  
Drive port: 2, Channel: 3, ID: 98/0x36  
Drive path redundancy: OK  
Status: Optimal  
Raw capacity: 33.902 GB  
Usable capacity: 33.862 GB  
Current data rate: 2 Gbps  
Product ID: ST336753FC F  
Firmware version: B953  
Serial number: 3HX0HNCH00007339SNP5  
Vendor: IBM-ESXS  
Date of manufacture: April 6, 2003  
World-wide name: 20:00:00:04:cf:ff:02:45  
Mode: Assigned  
Associated array: Array 2

Drive at Enclosure 42, Slot 11  
Drive port: 1, Channel: 3, ID: 66/0x6E  
Drive port: 2, Channel: 4, ID: 66/0x6E  
Drive path redundancy: OK  
Status: Optimal  
Raw capacity: 33.902 GB  
Usable capacity: 33.862 GB  
Current data rate: 2 Gbps

Product ID: ST336753FC F  
Firmware version: B953  
Serial number: 3HX0JT8L00007339GMT3  
Vendor: IBM-ESXS  
Date of manufacture: April 6, 2003  
World-wide name: 20:00:00:04:cf:f9:fc:22  
Mode: Assigned  
Associated array: Array 2

Drive at Enclosure 42, Slot 12

Drive port: 1, Channel: 4, ID: 74/0x65  
Drive port: 2, Channel: 3, ID: 74/0x65  
Drive path redundancy: OK  
Status: Optimal  
Raw capacity: 33.902 GB  
Usable capacity: 33.862 GB  
Current data rate: 2 Gbps  
Product ID: ST336753FC F  
Firmware version: B953  
Serial number: 3HX0K5YK00007339RGCS  
Vendor: IBM-ESXS  
Date of manufacture: April 5, 2003  
World-wide name: 20:00:00:04:cf:f9:fa:e1  
Mode: Assigned  
Associated array: Array 2

Drive at Enclosure 42, Slot 13

Drive port: 1, Channel: 3, ID: 90/0x49  
Drive port: 2, Channel: 4, ID: 90/0x49  
Drive path redundancy: OK  
Status: Optimal  
Raw capacity: 33.902 GB  
Usable capacity: 33.862 GB  
Current data rate: 2 Gbps  
Product ID: ST336753FC F  
Firmware version: B953  
Serial number: 3HX0GXFS00007339LX4P  
Vendor: IBM-ESXS  
Date of manufacture: April 5, 2003  
World-wide name: 20:00:00:04:cf:ff:04:e5  
Mode: Assigned  
Associated array: Array 2

Drive at Enclosure 42, Slot 14

Drive port: 1, Channel: 4, ID: 106/0x2C  
Drive port: 2, Channel: 3, ID: 106/0x2C  
Drive path redundancy: OK  
Status: Optimal  
Raw capacity: 33.902 GB  
Usable capacity: 33.862 GB  
Current data rate: 2 Gbps  
Product ID: ST336753FC F  
Firmware version: B953  
Serial number: 3HX0K5W9000073405FWF  
Vendor: IBM-ESXS  
Date of manufacture: April 6, 2003  
World-wide name: 20:00:00:04:cf:ff:12:c9  
Mode: Assigned  
Associated array: Array 2

Drive at Enclosure 43, Slot 1

Drive port: 1, Channel: 3, ID: 24/0xC3  
Drive port: 2, Channel: 4, ID: 24/0xC3  
Drive path redundancy: OK  
Status: Optimal  
Raw capacity: 33.902 GB  
Usable capacity: 33.862 GB  
Current data rate: 2 Gbps

Product ID: ST336753FC F  
Firmware version: B953  
Serial number: 3HX0K4EJ00007339SNWV  
Vendor: IBM-ESXS  
Date of manufacture: April 5, 2003  
World-wide name: 20:00:00:04:cf:f9:f5:5f  
Mode: Assigned  
Associated array: Array 2

Drive at Enclosure 43, Slot 2

Drive port: 1, Channel: 4, ID: 25/0xBC  
Drive port: 2, Channel: 3, ID: 25/0xBC  
Drive path redundancy: OK  
Status: Optimal  
Raw capacity: 33.902 GB  
Usable capacity: 33.862 GB  
Current data rate: 2 Gbps  
Product ID: ST336753FC F  
Firmware version: B953  
Serial number: 3HX0K57Q000073410HSY  
Vendor: IBM-ESXS  
Date of manufacture: April 6, 2003  
World-wide name: 20:00:00:04:cf:ff:12:9a  
Mode: Assigned  
Associated array: Array 2

Drive at Enclosure 43, Slot 3

Drive port: 1, Channel: 3, ID: 26/0xBA  
Drive port: 2, Channel: 4, ID: 26/0xBA  
Drive path redundancy: OK  
Status: Optimal  
Raw capacity: 33.902 GB  
Usable capacity: 33.862 GB  
Current data rate: 2 Gbps  
Product ID: ST336753FC F  
Firmware version: B953  
Serial number: 3HX0GTWN000073392DYK  
Vendor: IBM-ESXS  
Date of manufacture: April 5, 2003  
World-wide name: 20:00:00:04:cf:f9:e2:e4  
Mode: Assigned  
Associated array: Array 2

Drive at Enclosure 43, Slot 4

Drive port: 1, Channel: 4, ID: 27/0xB9  
Drive port: 2, Channel: 3, ID: 27/0xB9  
Drive path redundancy: OK  
Status: Optimal  
Raw capacity: 33.902 GB  
Usable capacity: 33.862 GB  
Current data rate: 2 Gbps  
Product ID: ST336753FC F  
Firmware version: B953  
Serial number: 3HX0K86A000073392DZ9  
Vendor: IBM-ESXS  
Date of manufacture: April 5, 2003  
World-wide name: 20:00:00:04:cf:f9:e2:58  
Mode: Assigned  
Associated array: Array 2

Drive at Enclosure 43, Slot 5

Drive port: 1, Channel: 3, ID: 28/0xB6  
Drive port: 2, Channel: 4, ID: 28/0xB6  
Drive path redundancy: OK  
Status: Optimal  
Raw capacity: 33.902 GB  
Usable capacity: 33.862 GB  
Current data rate: 2 Gbps

Product ID: ST336753FC F  
Firmware version: B953  
Serial number: 3HX0HSW8000073392E3H  
Vendor: IBM-ESXS  
Date of manufacture: April 5, 2003  
World-wide name: 20:00:00:04:cf:f9:e2:55  
Mode: Assigned  
Associated array: Array 2

Drive at Enclosure 43, Slot 6  
Drive port: 1, Channel: 4, ID: 29/0xB5  
Drive port: 2, Channel: 3, ID: 29/0xB5  
Drive path redundancy: OK  
Status: Optimal  
Raw capacity: 33.902 GB  
Usable capacity: 33.862 GB  
Current data rate: 2 Gbps  
Product ID: ST336753FC F  
Firmware version: B953  
Serial number: 3HX0HLYY000073409KGF  
Vendor: IBM-ESXS  
Date of manufacture: April 5, 2003  
World-wide name: 20:00:00:04:cf:f9:dd:bf  
Mode: Assigned  
Associated array: Array 2

Drive at Enclosure 43, Slot 7  
Drive port: 1, Channel: 3, ID: 30/0xB4  
Drive port: 2, Channel: 4, ID: 30/0xB4  
Drive path redundancy: OK  
Status: Optimal  
Raw capacity: 33.902 GB  
Usable capacity: 33.862 GB  
Current data rate: 2 Gbps  
Product ID: ST336753FC F  
Firmware version: B953  
Serial number: 3HX0HN8F00007339GMGU  
Vendor: IBM-ESXS  
Date of manufacture: April 5, 2003  
World-wide name: 20:00:00:04:cf:f9:da:46  
Mode: Assigned  
Associated array: Array 2

Drive at Enclosure 43, Slot 8  
Drive port: 1, Channel: 4, ID: 31/0xB3  
Drive port: 2, Channel: 3, ID: 31/0xB3  
Drive path redundancy: OK  
Status: Optimal  
Raw capacity: 33.902 GB  
Usable capacity: 33.862 GB  
Current data rate: 2 Gbps  
Product ID: ST336753FC F  
Firmware version: B953  
Serial number: 3HX0HT1W00007339SNMS  
Vendor: IBM-ESXS  
Date of manufacture: April 5, 2003  
World-wide name: 20:00:00:04:cf:f9:e2:b8  
Mode: Assigned  
Associated array: Array 2

Drive at Enclosure 43, Slot 9  
Drive port: 1, Channel: 3, ID: 83/0x52  
Drive port: 2, Channel: 4, ID: 83/0x52  
Drive path redundancy: OK  
Status: Optimal  
Raw capacity: 33.902 GB  
Usable capacity: 33.862 GB  
Current data rate: 2 Gbps

Product ID: ST336753FC F  
Firmware version: B953  
Serial number: 3HX0HLYD000073409K2D  
Vendor: IBM-ESXS  
Date of manufacture: April 5, 2003  
World-wide name: 20:00:00:04:cf:f9:dd:bc  
Mode: Assigned  
Associated array: Array 2

Drive at Enclosure 43, Slot 10  
Drive port: 1, Channel: 4, ID: 99/0x35  
Drive port: 2, Channel: 3, ID: 99/0x35  
Drive path redundancy: OK  
Status: Optimal  
Raw capacity: 33.902 GB  
Usable capacity: 33.862 GB  
Current data rate: 2 Gbps  
Product ID: ST336753FC F  
Firmware version: B953  
Serial number: 3HX0HSWK000073392E28  
Vendor: IBM-ESXS  
Date of manufacture: April 5, 2003  
World-wide name: 20:00:00:04:cf:f9:e2:45  
Mode: Assigned  
Associated array: Array 2

Drive at Enclosure 43, Slot 11  
Drive port: 1, Channel: 3, ID: 67/0x6D  
Drive port: 2, Channel: 4, ID: 67/0x6D  
Drive path redundancy: OK  
Status: Optimal  
Raw capacity: 33.902 GB  
Usable capacity: 33.862 GB  
Current data rate: 2 Gbps  
Product ID: ST336753FC F  
Firmware version: B953  
Serial number: 3HX0HM4E000073409KKZ  
Vendor: IBM-ESXS  
Date of manufacture: April 5, 2003  
World-wide name: 20:00:00:04:cf:f9:dc:2f  
Mode: Assigned  
Associated array: Array 2

Drive at Enclosure 43, Slot 12  
Drive port: 1, Channel: 4, ID: 75/0x63  
Drive port: 2, Channel: 3, ID: 75/0x63  
Drive path redundancy: OK  
Status: Optimal  
Raw capacity: 33.902 GB  
Usable capacity: 33.862 GB  
Current data rate: 2 Gbps  
Product ID: ST336753FC F  
Firmware version: B953  
Serial number: 3HX0JPE700007340GTYD  
Vendor: IBM-ESXS  
Date of manufacture: April 5, 2003  
World-wide name: 20:00:00:04:cf:f9:f4:ec  
Mode: Assigned  
Associated array: Array 2

Drive at Enclosure 43, Slot 13  
Drive port: 1, Channel: 3, ID: 91/0x47  
Drive port: 2, Channel: 4, ID: 91/0x47  
Drive path redundancy: OK  
Status: Optimal  
Raw capacity: 33.902 GB  
Usable capacity: 33.862 GB  
Current data rate: 2 Gbps

Product ID: ST336753FC F  
Firmware version: B953  
Serial number: 3HX0K67H00007339SP3G  
Vendor: IBM-ESXS  
Date of manufacture: April 5, 2003  
World-wide name: 20:00:00:04:cf:f9:f5:40  
Mode: Assigned  
Associated array: Array 2

Drive at Enclosure 43, Slot 14

Drive port: 1, Channel: 4, ID: 107/0x2B  
Drive port: 2, Channel: 3, ID: 107/0x2B  
Drive path redundancy: OK  
Status: Optimal  
Raw capacity: 33.902 GB  
Usable capacity: 33.862 GB  
Current data rate: 2 Gbps  
Product ID: ST336753FC F  
Firmware version: B953  
Serial number: 3HX0HT48000073392DQT  
Vendor: IBM-ESXS  
Date of manufacture: April 5, 2003  
World-wide name: 20:00:00:04:cf:f9:ea:28  
Mode: Assigned  
Associated array: Array 2

Drive at Enclosure 44, Slot 1

Drive port: 1, Channel: 1, ID: 32/0xB2  
Drive port: 2, Channel: 2, ID: 32/0xB2  
Drive path redundancy: OK  
Status: Optimal  
Raw capacity: 33.902 GB  
Usable capacity: 33.862 GB  
Current data rate: 2 Gbps  
Product ID: ST336753FC F  
Firmware version: B953  
Serial number: 3HX0HK8Q00007339SNNC  
Vendor: IBM-ESXS  
Date of manufacture: April 5, 2003  
World-wide name: 20:00:00:04:cf:f9:f5:1b  
Mode: Assigned  
Associated array: Array 3

Drive at Enclosure 44, Slot 2

Drive port: 1, Channel: 2, ID: 33/0xB1  
Drive port: 2, Channel: 1, ID: 33/0xB1  
Drive path redundancy: OK  
Status: Optimal  
Raw capacity: 33.902 GB  
Usable capacity: 33.862 GB  
Current data rate: 2 Gbps  
Product ID: ST336753FC F  
Firmware version: B953  
Serial number: 3HX0K4EQ00007339SNXX  
Vendor: IBM-ESXS  
Date of manufacture: April 5, 2003  
World-wide name: 20:00:00:04:cf:f9:f5:28  
Mode: Assigned  
Associated array: Array 3

Drive at Enclosure 44, Slot 3

Drive port: 1, Channel: 1, ID: 34/0xAE  
Drive port: 2, Channel: 2, ID: 34/0xAE  
Drive path redundancy: OK  
Status: Optimal  
Raw capacity: 33.902 GB  
Usable capacity: 33.862 GB  
Current data rate: 2 Gbps

Product ID: ST336753FC F  
Firmware version: B953  
Serial number: 3HX0K6CP00007340GU24  
Vendor: IBM-ESXS  
Date of manufacture: April 5, 2003  
World-wide name: 20:00:00:04:cf:f9:f4:e8  
Mode: Assigned  
Associated array: Array 3

Drive at Enclosure 44, Slot 4

Drive port: 1, Channel: 2, ID: 35/0xAD  
Drive port: 2, Channel: 1, ID: 35/0xAD  
Drive path redundancy: OK  
Status: Optimal  
Raw capacity: 33.902 GB  
Usable capacity: 33.862 GB  
Current data rate: 2 Gbps  
Product ID: ST336753FC F  
Firmware version: B953  
Serial number: 3HX0K4SF00007339SNNK  
Vendor: IBM-ESXS  
Date of manufacture: April 5, 2003  
World-wide name: 20:00:00:04:cf:f9:f5:25  
Mode: Assigned  
Associated array: Array 3

Drive at Enclosure 44, Slot 5

Drive port: 1, Channel: 1, ID: 36/0xAC  
Drive port: 2, Channel: 2, ID: 36/0xAC  
Drive path redundancy: OK  
Status: Optimal  
Raw capacity: 33.902 GB  
Usable capacity: 33.862 GB  
Current data rate: 2 Gbps  
Product ID: ST336753FC F  
Firmware version: B953  
Serial number: 3HX0V56000007346PCAS  
Vendor: IBM-ESXS  
Date of manufacture: May 17, 2003  
World-wide name: 20:00:00:0c:50:20:a2:1f  
Mode: Assigned  
Associated array: Array 3

Drive at Enclosure 44, Slot 6

Drive port: 1, Channel: 2, ID: 37/0xAB  
Drive port: 2, Channel: 1, ID: 37/0xAB  
Drive path redundancy: OK  
Status: Optimal  
Raw capacity: 33.902 GB  
Usable capacity: 33.862 GB  
Current data rate: 2 Gbps  
Product ID: ST336753FC F  
Firmware version: B953  
Serial number: 3HX0K40A00007340GU4Z  
Vendor: IBM-ESXS  
Date of manufacture: April 5, 2003  
World-wide name: 20:00:00:04:cf:f9:f4:ea  
Mode: Assigned  
Associated array: Array 3

Drive at Enclosure 44, Slot 7

Drive port: 1, Channel: 1, ID: 38/0xAA  
Drive port: 2, Channel: 2, ID: 38/0xAA  
Drive path redundancy: OK  
Status: Optimal  
Raw capacity: 33.902 GB  
Usable capacity: 33.862 GB  
Current data rate: 2 Gbps

Product ID: ST336753FC F  
Firmware version: B953  
Serial number: 3HX0HT66000073405G6G  
Vendor: IBM-ESXS  
Date of manufacture: April 5, 2003  
World-wide name: 20:00:00:04:cf:f9:e6:17  
Mode: Assigned  
Associated array: Array 3

Drive at Enclosure 44, Slot 8  
Drive port: 1, Channel: 2, ID: 39/0xA9  
Drive port: 2, Channel: 1, ID: 39/0xA9  
Drive path redundancy: OK  
Status: Optimal  
Raw capacity: 33.902 GB  
Usable capacity: 33.862 GB  
Current data rate: 2 Gbps  
Product ID: ST336753FC F  
Firmware version: B953  
Serial number: 3HX0HM52000073409KEZ  
Vendor: IBM-ESXS  
Date of manufacture: April 5, 2003  
World-wide name: 20:00:00:04:cf:f9:dd:45  
Mode: Assigned  
Associated array: Array 3

Drive at Enclosure 44, Slot 9  
Drive port: 1, Channel: 1, ID: 84/0x51  
Drive port: 2, Channel: 2, ID: 84/0x51  
Drive path redundancy: OK  
Status: Optimal  
Raw capacity: 33.902 GB  
Usable capacity: 33.862 GB  
Current data rate: 2 Gbps  
Product ID: ST336753FC F  
Firmware version: B953  
Serial number: 3HX0HSQF00007339RGRW  
Vendor: IBM-ESXS  
Date of manufacture: April 5, 2003  
World-wide name: 20:00:00:04:cf:f9:e1:97  
Mode: Assigned  
Associated array: Array 3

Drive at Enclosure 44, Slot 10  
Drive port: 1, Channel: 2, ID: 100/0x34  
Drive port: 2, Channel: 1, ID: 100/0x34  
Drive path redundancy: OK  
Status: Optimal  
Raw capacity: 33.902 GB  
Usable capacity: 33.862 GB  
Current data rate: 2 Gbps  
Product ID: ST336753FC F  
Firmware version: B953  
Serial number: 3HX0HMR1000073405A8P  
Vendor: IBM-ESXS  
Date of manufacture: April 6, 2003  
World-wide name: 20:00:00:04:cf:ff:07:b6  
Mode: Assigned  
Associated array: Array 3

Drive at Enclosure 44, Slot 11  
Drive port: 1, Channel: 1, ID: 68/0x6C  
Drive port: 2, Channel: 2, ID: 68/0x6C  
Drive path redundancy: OK  
Status: Optimal  
Raw capacity: 33.902 GB  
Usable capacity: 33.862 GB  
Current data rate: 2 Gbps

Product ID: ST336753FC F  
Firmware version: B953  
Serial number: 3HX0HT4B0000734059N5  
Vendor: IBM-ESXS  
Date of manufacture: April 5, 2003  
World-wide name: 20:00:00:04:cf:f9:e7:e6  
Mode: Assigned  
Associated array: Array 3

Drive at Enclosure 44, Slot 12  
Drive port: 1, Channel: 2, ID: 76/0x5C  
Drive port: 2, Channel: 1, ID: 76/0x5C  
Drive path redundancy: OK  
Status: Optimal  
Raw capacity: 33.902 GB  
Usable capacity: 33.862 GB  
Current data rate: 2 Gbps  
Product ID: ST336753FC F  
Firmware version: B953  
Serial number: 3HX0JAAA000073386VFN  
Vendor: IBM-ESXS  
Date of manufacture: April 6, 2003  
World-wide name: 20:00:00:04:cf:f9:fc:34  
Mode: Assigned  
Associated array: Array 3

Drive at Enclosure 44, Slot 13  
Drive port: 1, Channel: 1, ID: 92/0x46  
Drive port: 2, Channel: 2, ID: 92/0x46  
Drive path redundancy: OK  
Status: Optimal  
Raw capacity: 33.902 GB  
Usable capacity: 33.862 GB  
Current data rate: 2 Gbps  
Product ID: ST336753FC F  
Firmware version: B953  
Serial number: 3HX0HRFY0000734058KA  
Vendor: IBM-ESXS  
Date of manufacture: April 5, 2003  
World-wide name: 20:00:00:04:cf:f9:e7:20  
Mode: Assigned  
Associated array: Array 3

Drive at Enclosure 44, Slot 14  
Drive port: 1, Channel: 2, ID: 108/0x2A  
Drive port: 2, Channel: 1, ID: 108/0x2A  
Drive path redundancy: OK  
Status: Optimal  
Raw capacity: 33.902 GB  
Usable capacity: 33.862 GB  
Current data rate: 2 Gbps  
Product ID: ST336753FC F  
Firmware version: B953  
Serial number: 3HX0K2T300007340WEWD  
Vendor: IBM-ESXS  
Date of manufacture: April 5, 2003  
World-wide name: 20:00:00:04:cf:ff:03:14  
Mode: Assigned  
Associated array: Array 3

Drive at Enclosure 45, Slot 1  
Drive port: 1, Channel: 1, ID: 40/0xA7  
Drive port: 2, Channel: 2, ID: 40/0xA7  
Drive path redundancy: OK  
Status: Optimal  
Raw capacity: 33.902 GB  
Usable capacity: 33.862 GB  
Current data rate: 2 Gbps

Product ID: ST336753FC F  
Firmware version: B953  
Serial number: 3HX0JT9300007339TYNU  
Vendor: IBM-ESXS  
Date of manufacture: April 5, 2003  
World-wide name: 20:00:00:04:cf:ff:02:a2  
Mode: Assigned  
Associated array: Array 3

Drive at Enclosure 45, Slot 2  
Drive port: 1, Channel: 2, ID: 41/0xA6  
Drive port: 2, Channel: 1, ID: 41/0xA6  
Drive path redundancy: OK  
Status: Optimal  
Raw capacity: 33.902 GB  
Usable capacity: 33.862 GB  
Current data rate: 2 Gbps  
Product ID: ST336753FC F  
Firmware version: B953  
Serial number: 3HX0HHA4?????????  
Vendor: IBM-ESXS  
Date of manufacture: April 6, 2003  
World-wide name: 20:00:00:04:cf:ff:1b:40  
Mode: Assigned  
Associated array: Array 3

Drive at Enclosure 45, Slot 3  
Drive port: 1, Channel: 1, ID: 42/0xA5  
Drive port: 2, Channel: 2, ID: 42/0xA5  
Drive path redundancy: OK  
Status: Optimal  
Raw capacity: 33.902 GB  
Usable capacity: 33.862 GB  
Current data rate: 2 Gbps  
Product ID: ST336753FC F  
Firmware version: B953  
Serial number: 3HX0JXQ2000073410J5C  
Vendor: IBM-ESXS  
Date of manufacture: April 6, 2003  
World-wide name: 20:00:00:04:cf:ff:14:39  
Mode: Assigned  
Associated array: Array 3

Drive at Enclosure 45, Slot 4  
Drive port: 1, Channel: 2, ID: 43/0xA3  
Drive port: 2, Channel: 1, ID: 43/0xA3  
Drive path redundancy: OK  
Status: Optimal  
Raw capacity: 33.902 GB  
Usable capacity: 33.862 GB  
Current data rate: 2 Gbps  
Product ID: ST336753FC F  
Firmware version: B953  
Serial number: 3HX0HLFR00007340WVEV  
Vendor: IBM-ESXS  
Date of manufacture: April 6, 2003  
World-wide name: 20:00:00:04:cf:ff:1a:62  
Mode: Assigned  
Associated array: Array 3

Drive at Enclosure 45, Slot 5  
Drive port: 1, Channel: 1, ID: 44/0x9F  
Drive port: 2, Channel: 2, ID: 44/0x9F  
Drive path redundancy: OK  
Status: Optimal  
Raw capacity: 33.902 GB  
Usable capacity: 33.862 GB  
Current data rate: 2 Gbps

Product ID: ST336753FC F  
Firmware version: B953  
Serial number: 3HX0KBZ8000073392DKG  
Vendor: IBM-ESXS  
Date of manufacture: April 6, 2003  
World-wide name: 20:00:00:04:cf:ff:18:c9  
Mode: Assigned  
Associated array: Array 3

Drive at Enclosure 45, Slot 6  
Drive port: 1, Channel: 2, ID: 45/0x9E  
Drive port: 2, Channel: 1, ID: 45/0x9E  
Drive path redundancy: OK  
Status: Optimal  
Raw capacity: 33.902 GB  
Usable capacity: 33.862 GB  
Current data rate: 2 Gbps  
Product ID: ST336753FC F  
Firmware version: B953  
Serial number: 3HX0H0C500007339SPC1  
Vendor: IBM-ESXS  
Date of manufacture: April 5, 2003  
World-wide name: 20:00:00:04:cf:ff:02:aa  
Mode: Assigned  
Associated array: Array 3

Drive at Enclosure 45, Slot 7  
Drive port: 1, Channel: 1, ID: 46/0x9D  
Drive port: 2, Channel: 2, ID: 46/0x9D  
Drive path redundancy: OK  
Status: Optimal  
Raw capacity: 33.902 GB  
Usable capacity: 33.862 GB  
Current data rate: 2 Gbps  
Product ID: ST336753FC F  
Firmware version: B953  
Serial number: 3HX0K6DF000073405A8E  
Vendor: IBM-ESXS  
Date of manufacture: April 6, 2003  
World-wide name: 20:00:00:04:cf:ff:0a:16  
Mode: Assigned  
Associated array: Array 3

Drive at Enclosure 45, Slot 8  
Drive port: 1, Channel: 2, ID: 47/0x9B  
Drive port: 2, Channel: 1, ID: 47/0x9B  
Drive path redundancy: OK  
Status: Optimal  
Raw capacity: 33.902 GB  
Usable capacity: 33.862 GB  
Current data rate: 2 Gbps  
Product ID: ST336753FC F  
Firmware version: B953  
Serial number: 3HX0JY5600007340YESS  
Vendor: IBM-ESXS  
Date of manufacture: April 6, 2003  
World-wide name: 20:00:00:04:cf:ff:0d:2c  
Mode: Assigned  
Associated array: Array 3

Drive at Enclosure 45, Slot 9  
Drive port: 1, Channel: 1, ID: 85/0x4F  
Drive port: 2, Channel: 2, ID: 85/0x4F  
Drive path redundancy: OK  
Status: Optimal  
Raw capacity: 33.902 GB  
Usable capacity: 33.862 GB  
Current data rate: 2 Gbps



Product ID: ST336753FC F  
Firmware version: B953  
Serial number: 3HX0K21G00007339SP58  
Vendor: IBM-ESXS  
Date of manufacture: April 5, 2003  
World-wide name: 20:00:00:04:cf:ff:02:b2  
Mode: Assigned  
Associated array: Array 3

Drive at Enclosure 45, Slot 10

Drive port: 1, Channel: 2, ID: 101/0x33  
Drive port: 2, Channel: 1, ID: 101/0x33  
Drive path redundancy: OK  
Status: Optimal  
Raw capacity: 33.902 GB  
Usable capacity: 33.862 GB  
Current data rate: 2 Gbps  
Product ID: ST336753FC F  
Firmware version: B953  
Serial number: 3HX0HMP400007340WVLC  
Vendor: IBM-ESXS  
Date of manufacture: April 5, 2003  
World-wide name: 20:00:00:04:cf:ff:ec:b4  
Mode: Assigned  
Associated array: Array 3

Drive at Enclosure 45, Slot 11

Drive port: 1, Channel: 1, ID: 69/0x6B  
Drive port: 2, Channel: 2, ID: 69/0x6B  
Drive path redundancy: OK  
Status: Optimal  
Raw capacity: 33.902 GB  
Usable capacity: 33.862 GB  
Current data rate: 2 Gbps  
Product ID: ST336753FC F  
Firmware version: B953  
Serial number: 3HX0K7KM0000734059MJ  
Vendor: IBM-ESXS  
Date of manufacture: April 5, 2003  
World-wide name: 20:00:00:04:cf:f9:e7:1e  
Mode: Assigned  
Associated array: Array 3

Drive at Enclosure 45, Slot 12

Drive port: 1, Channel: 2, ID: 77/0x5A  
Drive port: 2, Channel: 1, ID: 77/0x5A  
Drive path redundancy: OK  
Status: Optimal  
Raw capacity: 33.902 GB  
Usable capacity: 33.862 GB  
Current data rate: 2 Gbps  
Product ID: ST336753FC F  
Firmware version: B953  
Serial number: 3HX0KCP6000073409KB4  
Vendor: IBM-ESXS  
Date of manufacture: April 6, 2003  
World-wide name: 20:00:00:04:cf:ff:0d:3e  
Mode: Assigned  
Associated array: Array 3

Drive at Enclosure 45, Slot 13

Drive port: 1, Channel: 1, ID: 93/0x45  
Drive port: 2, Channel: 2, ID: 93/0x45  
Drive path redundancy: OK  
Status: Optimal  
Raw capacity: 33.902 GB  
Usable capacity: 33.862 GB  
Current data rate: 2 Gbps

Product ID: ST336753FC F  
Firmware version: B953  
Serial number: 3HX0JN4H000073405A8B  
Vendor: IBM-ESXS  
Date of manufacture: April 6, 2003  
World-wide name: 20:00:00:04:cf:ff:07:c6  
Mode: Assigned  
Associated array: Array 3

Drive at Enclosure 45, Slot 14

Drive port: 1, Channel: 2, ID: 109/0x29  
Drive port: 2, Channel: 1, ID: 109/0x29  
Drive path redundancy: OK  
Status: Optimal  
Raw capacity: 33.902 GB  
Usable capacity: 33.862 GB  
Current data rate: 2 Gbps  
Product ID: ST336753FC F  
Firmware version: B953  
Serial number: 3HX0JAE000007339GMPM  
Vendor: IBM-ESXS  
Date of manufacture: April 5, 2003  
World-wide name: 20:00:00:04:cf:f9:fc:61  
Mode: Assigned  
Associated array: Array 3

Drive at Enclosure 46, Slot 1

Drive port: 1, Channel: 1, ID: 48/0x98  
Drive port: 2, Channel: 2, ID: 48/0x98  
Drive path redundancy: OK  
Status: Optimal  
Raw capacity: 33.902 GB  
Usable capacity: 33.862 GB  
Current data rate: 2 Gbps  
Product ID: ST336753FC F  
Firmware version: B953  
Serial number: 3HX0HWYB000073393FVR  
Vendor: IBM-ESXS  
Date of manufacture: April 6, 2003  
World-wide name: 20:00:00:04:cf:f9:fc:1c  
Mode: Assigned  
Associated array: Array 4

Drive at Enclosure 46, Slot 2

Drive port: 1, Channel: 2, ID: 49/0x97  
Drive port: 2, Channel: 1, ID: 49/0x97  
Drive path redundancy: OK  
Status: Optimal  
Raw capacity: 33.902 GB  
Usable capacity: 33.862 GB  
Current data rate: 2 Gbps  
Product ID: ST336753FC F  
Firmware version: B953  
Serial number: 3HX0HQ4D00007339SP4Z  
Vendor: IBM-ESXS  
Date of manufacture: April 6, 2003  
World-wide name: 20:00:00:04:cf:f9:f5:c5  
Mode: Assigned  
Associated array: Array 4

Drive at Enclosure 46, Slot 3

Drive port: 1, Channel: 1, ID: 50/0x90  
Drive port: 2, Channel: 2, ID: 50/0x90  
Drive path redundancy: OK  
Status: Optimal  
Raw capacity: 33.902 GB  
Usable capacity: 33.862 GB  
Current data rate: 2 Gbps

Product ID: ST336753FC F  
Firmware version: B953  
Serial number: 3HX0KBS6000073405FXS  
Vendor: IBM-ESXS  
Date of manufacture: April 6, 2003  
World-wide name: 20:00:00:04:cf:ff:12:9c  
Mode: Assigned  
Associated array: Array 4

Drive at Enclosure 46, Slot 4  
Drive port: 1, Channel: 2, ID: 51/0x8F  
Drive port: 2, Channel: 1, ID: 51/0x8F  
Drive path redundancy: OK  
Status: Optimal  
Raw capacity: 33.902 GB  
Usable capacity: 33.862 GB  
Current data rate: 2 Gbps  
Product ID: ST336753FC F  
Firmware version: B953  
Serial number: 3HX0JQP7000073392DXG  
Vendor: IBM-ESXS  
Date of manufacture: April 6, 2003  
World-wide name: 20:00:00:04:cf:ff:18:c7  
Mode: Assigned  
Associated array: Array 4

Drive at Enclosure 46, Slot 5  
Drive port: 1, Channel: 1, ID: 52/0x88  
Drive port: 2, Channel: 2, ID: 52/0x88  
Drive path redundancy: OK  
Status: Optimal  
Raw capacity: 33.902 GB  
Usable capacity: 33.862 GB  
Current data rate: 2 Gbps  
Product ID: ST336753FC F  
Firmware version: B953  
Serial number: 3HX0HV61000073410J3L  
Vendor: IBM-ESXS  
Date of manufacture: April 6, 2003  
World-wide name: 20:00:00:04:cf:ff:14:5b  
Mode: Assigned  
Associated array: Array 4

Drive at Enclosure 46, Slot 6  
Drive port: 1, Channel: 2, ID: 53/0x84  
Drive port: 2, Channel: 1, ID: 53/0x84  
Drive path redundancy: OK  
Status: Optimal  
Raw capacity: 33.902 GB  
Usable capacity: 33.862 GB  
Current data rate: 2 Gbps  
Product ID: ST336753FC F  
Firmware version: B953  
Serial number: 3HX0K872000073388BME  
Vendor: IBM-ESXS  
Date of manufacture: April 5, 2003  
World-wide name: 20:00:00:04:cf:ff:02:b7  
Mode: Assigned  
Associated array: Array 4

Drive at Enclosure 46, Slot 7  
Drive port: 1, Channel: 1, ID: 54/0x82  
Drive port: 2, Channel: 2, ID: 54/0x82  
Drive path redundancy: OK  
Status: Optimal  
Raw capacity: 33.902 GB  
Usable capacity: 33.862 GB  
Current data rate: 2 Gbps

Product ID: ST336753FC F  
Firmware version: B953  
Serial number: 3HX0H7EB00007339N0TD  
Vendor: IBM-ESXS  
Date of manufacture: April 5, 2003  
World-wide name: 20:00:00:04:cf:ff:02:82  
Mode: Assigned  
Associated array: Array 4

Drive at Enclosure 46, Slot 8  
Drive port: 1, Channel: 2, ID: 55/0x81  
Drive port: 2, Channel: 1, ID: 55/0x81  
Drive path redundancy: OK  
Status: Optimal  
Raw capacity: 33.902 GB  
Usable capacity: 33.862 GB  
Current data rate: 2 Gbps  
Product ID: ST336753FC F  
Firmware version: B953  
Serial number: 3HX0HT5P00007340X567  
Vendor: IBM-ESXS  
Date of manufacture: April 5, 2003  
World-wide name: 20:00:00:04:cf:f9:e8:9c  
Mode: Assigned  
Associated array: Array 4

Drive at Enclosure 46, Slot 9  
Drive port: 1, Channel: 1, ID: 86/0x4D  
Drive port: 2, Channel: 2, ID: 86/0x4D  
Drive path redundancy: OK  
Status: Optimal  
Raw capacity: 33.902 GB  
Usable capacity: 33.862 GB  
Current data rate: 2 Gbps  
Product ID: ST336753FC F  
Firmware version: B953  
Serial number: 3HX0KD1R000073405FHZ  
Vendor: IBM-ESXS  
Date of manufacture: April 6, 2003  
World-wide name: 20:00:00:04:cf:ff:11:c9  
Mode: Assigned  
Associated array: Array 4

Drive at Enclosure 46, Slot 10  
Drive port: 1, Channel: 2, ID: 102/0x32  
Drive port: 2, Channel: 1, ID: 102/0x32  
Drive path redundancy: OK  
Status: Optimal  
Raw capacity: 33.902 GB  
Usable capacity: 33.862 GB  
Current data rate: 2 Gbps  
Product ID: ST336753FC F  
Firmware version: B953  
Serial number: 3HX0K09M000073405A81  
Vendor: IBM-ESXS  
Date of manufacture: April 6, 2003  
World-wide name: 20:00:00:04:cf:ff:07:e1  
Mode: Assigned  
Associated array: Array 4

Drive at Enclosure 46, Slot 11  
Drive port: 1, Channel: 1, ID: 70/0x6A  
Drive port: 2, Channel: 2, ID: 70/0x6A  
Drive path redundancy: OK  
Status: Optimal  
Raw capacity: 33.902 GB  
Usable capacity: 33.862 GB  
Current data rate: 2 Gbps

Product ID: ST336753FC F  
Firmware version: B953  
Serial number: 3HX0HT0A000073392DUW  
Vendor: IBM-ESXS  
Date of manufacture: April 5, 2003  
World-wide name: 20:00:00:04:cf:f9:e3:b4  
Mode: Assigned  
Associated array: Array 4

Drive at Enclosure 46, Slot 12

Drive port: 1, Channel: 2, ID: 78/0x59  
Drive port: 2, Channel: 1, ID: 78/0x59  
Drive path redundancy: OK  
Status: Optimal  
Raw capacity: 33.902 GB  
Usable capacity: 33.862 GB  
Current data rate: 2 Gbps  
Product ID: ST336753FC F  
Firmware version: B953  
Serial number: 3HX0HT8B0000734059NU  
Vendor: IBM-ESXS  
Date of manufacture: April 5, 2003  
World-wide name: 20:00:00:04:cf:f9:e7:43  
Mode: Assigned  
Associated array: Array 4

Drive at Enclosure 46, Slot 13

Drive port: 1, Channel: 1, ID: 94/0x43  
Drive port: 2, Channel: 2, ID: 94/0x43  
Drive path redundancy: OK  
Status: Optimal  
Raw capacity: 33.902 GB  
Usable capacity: 33.862 GB  
Current data rate: 2 Gbps  
Product ID: ST336753FC F  
Firmware version: B953  
Serial number: 3HX0HRG00000734059NM  
Vendor: IBM-ESXS  
Date of manufacture: April 5, 2003  
World-wide name: 20:00:00:04:cf:f9:e7:0e  
Mode: Assigned  
Associated array: Array 4

Drive at Enclosure 46, Slot 14

Drive port: 1, Channel: 2, ID: 110/0x27  
Drive port: 2, Channel: 1, ID: 110/0x27  
Drive path redundancy: OK  
Status: Optimal  
Raw capacity: 33.902 GB  
Usable capacity: 33.862 GB  
Current data rate: 2 Gbps  
Product ID: ST336753FC F  
Firmware version: B953  
Serial number: 3HX0HRNN00007340X5JM  
Vendor: IBM-ESXS  
Date of manufacture: April 5, 2003  
World-wide name: 20:00:00:04:cf:f9:e8:ac  
Mode: Assigned  
Associated array: Array 4

Drive at Enclosure 47, Slot 1

Drive port: 1, Channel: 1, ID: 56/0x80  
Drive port: 2, Channel: 2, ID: 56/0x80  
Drive path redundancy: OK  
Status: Optimal  
Raw capacity: 33.902 GB  
Usable capacity: 33.862 GB  
Current data rate: 2 Gbps

Product ID: ST336753FC F  
Firmware version: B953  
Serial number: 3HX0K6NK000073405A8D  
Vendor: IBM-ESXS  
Date of manufacture: April 6, 2003  
World-wide name: 20:00:00:04:cf:ff:07:d2  
Mode: Assigned  
Associated array: Array 4

Drive at Enclosure 47, Slot 2

Drive port: 1, Channel: 2, ID: 57/0x7C  
Drive port: 2, Channel: 1, ID: 57/0x7C  
Drive path redundancy: OK  
Status: Optimal  
Raw capacity: 33.902 GB  
Usable capacity: 33.862 GB  
Current data rate: 2 Gbps  
Product ID: ST336753FC F  
Firmware version: B953  
Serial number: 3HX0JLGC0000734059ND  
Vendor: IBM-ESXS  
Date of manufacture: April 5, 2003  
World-wide name: 20:00:00:04:cf:f9:e6:ea  
Mode: Assigned  
Associated array: Array 4

Drive at Enclosure 47, Slot 3

Drive port: 1, Channel: 1, ID: 58/0x7A  
Drive port: 2, Channel: 2, ID: 58/0x7A  
Drive path redundancy: OK  
Status: Optimal  
Raw capacity: 33.902 GB  
Usable capacity: 33.862 GB  
Current data rate: 2 Gbps  
Product ID: ST336753FC F  
Firmware version: B953  
Serial number: 3HX0HQGM000073409K32  
Vendor: IBM-ESXS  
Date of manufacture: April 5, 2003  
World-wide name: 20:00:00:04:cf:f9:fc:03  
Mode: Assigned  
Associated array: Array 4

Drive at Enclosure 47, Slot 4

Drive port: 1, Channel: 2, ID: 59/0x79  
Drive port: 2, Channel: 1, ID: 59/0x79  
Drive path redundancy: OK  
Status: Optimal  
Raw capacity: 33.902 GB  
Usable capacity: 33.862 GB  
Current data rate: 2 Gbps  
Product ID: ST336732FC F  
Firmware version: B947  
Serial number: 3ET0YGRW000072443UZZ  
Vendor: IBM-ESXS  
Date of manufacture: May 15, 2002  
World-wide name: 20:00:00:04:cf:5f:53:14  
Mode: Assigned  
Associated array: Array 4

Drive at Enclosure 47, Slot 5

Drive port: 1, Channel: 1, ID: 60/0x76  
Drive port: 2, Channel: 2, ID: 60/0x76  
Drive path redundancy: OK  
Status: Optimal  
Raw capacity: 33.902 GB  
Usable capacity: 33.862 GB  
Current data rate: 2 Gbps

Product ID: ST336753FC F  
Firmware version: B953  
Serial number: 3HX0K78C00007339RGJL  
Vendor: IBM-ESXS  
Date of manufacture: April 5, 2003  
World-wide name: 20:00:00:04:cf:f9:e5:1e  
Mode: Assigned  
Associated array: Array 4

Drive at Enclosure 47, Slot 6  
Drive port: 1, Channel: 2, ID: 61/0x75  
Drive port: 2, Channel: 1, ID: 61/0x75  
Drive path redundancy: OK  
Status: Optimal  
Raw capacity: 33.902 GB  
Usable capacity: 33.862 GB  
Current data rate: 2 Gbps  
Product ID: ST336753FC F  
Firmware version: B953  
Serial number: 3HX0HT4J000073405FRV  
Vendor: IBM-ESXS  
Date of manufacture: April 5, 2003  
World-wide name: 20:00:00:04:cf:f9:e6:09  
Mode: Assigned  
Associated array: Array 4

Drive at Enclosure 47, Slot 7  
Drive port: 1, Channel: 1, ID: 62/0x74  
Drive port: 2, Channel: 2, ID: 62/0x74  
Drive path redundancy: OK  
Status: Optimal  
Raw capacity: 33.902 GB  
Usable capacity: 33.862 GB  
Current data rate: 2 Gbps  
Product ID: ST336753FC F  
Firmware version: B953  
Serial number: 3HX0J900000073392DWT  
Vendor: IBM-ESXS  
Date of manufacture: April 5, 2003  
World-wide name: 20:00:00:04:cf:f9:e3:b0  
Mode: Assigned  
Associated array: Array 4

Drive at Enclosure 47, Slot 8  
Drive port: 1, Channel: 2, ID: 63/0x73  
Drive port: 2, Channel: 1, ID: 63/0x73  
Drive path redundancy: OK  
Status: Optimal  
Raw capacity: 33.902 GB  
Usable capacity: 33.862 GB  
Current data rate: 2 Gbps  
Product ID: ST336753FC F  
Firmware version: B953  
Serial number: 3HX0HKB9000073393FPW  
Vendor: IBM-ESXS  
Date of manufacture: April 6, 2003  
World-wide name: 20:00:00:04:cf:f9:fb:18  
Mode: Assigned  
Associated array: Array 4

Drive at Enclosure 47, Slot 9  
Drive port: 1, Channel: 1, ID: 87/0x4C  
Drive port: 2, Channel: 2, ID: 87/0x4C  
Drive path redundancy: OK  
Status: Optimal  
Raw capacity: 33.902 GB  
Usable capacity: 33.862 GB  
Current data rate: 2 Gbps

Product ID: ST336753FC F  
Firmware version: B953  
Serial number: 3HX0HM3A000073409KM6  
Vendor: IBM-ESXS  
Date of manufacture: April 5, 2003  
World-wide name: 20:00:00:04:cf:f9:dc:87  
Mode: Assigned  
Associated array: Array 4

Drive at Enclosure 47, Slot 10  
Drive port: 1, Channel: 2, ID: 103/0x31  
Drive port: 2, Channel: 1, ID: 103/0x31  
Drive path redundancy: OK  
Status: Optimal  
Raw capacity: 33.902 GB  
Usable capacity: 33.862 GB  
Current data rate: 2 Gbps  
Product ID: ST336753FC F  
Firmware version: B953  
Serial number: 3HX0HT05000073405FS1  
Vendor: IBM-ESXS  
Date of manufacture: April 5, 2003  
World-wide name: 20:00:00:04:cf:f9:e6:2d  
Mode: Assigned  
Associated array: Array 4

Drive at Enclosure 47, Slot 11  
Drive port: 1, Channel: 1, ID: 71/0x69  
Drive port: 2, Channel: 2, ID: 71/0x69  
Drive path redundancy: OK  
Status: Optimal  
Raw capacity: 33.902 GB  
Usable capacity: 33.862 GB  
Current data rate: 2 Gbps  
Product ID: ST336753FC F  
Firmware version: B953  
Serial number: 3HX0K0TW000073393FXQ  
Vendor: IBM-ESXS  
Date of manufacture: April 6, 2003  
World-wide name: 20:00:00:04:cf:ff:0e:7b  
Mode: Assigned  
Associated array: Array 4

Drive at Enclosure 47, Slot 12  
Drive port: 1, Channel: 2, ID: 79/0x56  
Drive port: 2, Channel: 1, ID: 79/0x56  
Drive path redundancy: OK  
Status: Optimal  
Raw capacity: 33.902 GB  
Usable capacity: 33.862 GB  
Current data rate: 2 Gbps  
Product ID: ST336753FC F  
Firmware version: B953  
Serial number: 3HX0HRJP00007339TYNP  
Vendor: IBM-ESXS  
Date of manufacture: April 5, 2003  
World-wide name: 20:00:00:04:cf:ff:02:a7  
Mode: Assigned  
Associated array: Array 4

Drive at Enclosure 47, Slot 13  
Drive port: 1, Channel: 1, ID: 95/0x3C  
Drive port: 2, Channel: 2, ID: 95/0x3C  
Drive path redundancy: OK  
Status: Optimal  
Raw capacity: 33.902 GB  
Usable capacity: 33.862 GB  
Current data rate: 2 Gbps

Product ID: ST336753FC F  
Firmware version: B953  
Serial number: 3HX0K7F100007339TYU  
Vendor: IBM-ESXS  
Date of manufacture: April 4, 2003  
World-wide name: 20:00:00:04:cf:f9:e6:33  
Mode: Assigned  
Associated array: Array 4

Drive at Enclosure 47, Slot 14  
Drive port: 1, Channel: 2, ID: 111/0x26  
Drive port: 2, Channel: 1, ID: 111/0x26  
Drive path redundancy: OK  
Status: Optimal  
Raw capacity: 33.902 GB  
Usable capacity: 33.862 GB  
Current data rate: 2 Gbps  
Product ID: ST336753FC F  
Firmware version: B953  
Serial number: 3HX0HLLP00007340GUVB  
Vendor: IBM-ESXS  
Date of manufacture: April 6, 2003  
World-wide name: 20:00:00:04:cf:ff:13:49  
Mode: Assigned  
Associated array: Array 4

ENCLOSURES-----

Controller Enclosure Overall Component Information

Minihub data rate mismatch: No  
Fan canister: Optimal  
Fan canister: Optimal  
Battery status: Optimal  
Age: 265 day(s)  
Days until replacement: 904 day(s)

Power supply canister

Status: Optimal

Power supply canister

Status: Optimal

Temperature: Optimal

Host mini-hub canister

Status: Optimal

Location: Controller A - Port 1

Serial number: SN 1T20992772

Part number: PN 19K1270

Vendor: VN IBM

Date of manufacture: March 1, 2002

SFP

Status: Optimal

Location: In connection

Supported data rate(s): 1 Gbps, 2 Gbps

Link length: Intermediate

Connector: LC

Transmitter type: Shortwave Laser w/o OFC

Transmission media: TM Multi-mode 50m(M5) TM Multi-mode

62.5m(M6)

IEEE company ID: 08 00 5a

Revision: AA10

Part number: IBM42P21SNY

Serial number: 53P14760069V0

Vendor: IBM

Date of manufacture: April 13, 2002

Host mini-hub canister

Status: Optimal

Location: Controller A - Port 2

Serial number: SN 1T14556647

Part number: PN 19K1270

Vendor: VN IBM

Date of manufacture: November 1, 2001

Host mini-hub canister

Status: Optimal

Location: Controller B - Port 1

Serial number: SN 1T20992843

Part number: PN 19K1270

Vendor: VN IBM

Date of manufacture: March 1, 2002

SFP

Status: Optimal

Location: In connection

Supported data rate(s): 1 Gbps, 2 Gbps

Link length: Intermediate

Connector: LC

Transmitter type: Shortwave Laser w/o OFC

Transmission media: TM Multi-mode 50m(M5) TM Multi-mode

62.5m(M6)

IEEE company ID: 08 00 5a

Revision: AA10

Part number: IBM42P21SNY

Serial number: 53P14760069K7

Vendor: IBM

Date of manufacture: April 13, 2002

Host mini-hub canister

Status: Optimal

Location: Controller B - Port 2

Serial number: SN 1T14859497

Part number: PN 19K1270

Vendor: VN IBM

Date of manufacture: December 1, 2001

Drive mini-hub canister

Status: Optimal

Location: Channel 1

Serial number: SN 1T15065975

Part number: PN 19K1270

Vendor: VN IBM

Date of manufacture: March 1, 2002

SFP

Status: Optimal

Location: In connection

Supported data rate(s): 1 Gbps, 2 Gbps

Link length: Intermediate

Connector: LC

Transmitter type: Shortwave Laser w/o OFC

Transmission media: TM Multi-mode 50m(M5) TM Multi-mode

62.5m(M6)

IEEE company ID: 08 00 5a

Revision: AA10

Part number: IBM42P21SNY

Serial number: 53P1476006A6X

Vendor: IBM

Date of manufacture: April 14, 2002

Drive mini-hub canister

Status: Optimal

Location: Channel 2

Serial number: SN 1T20992804

Part number: PN 19K1270

Vendor: VN IBM

Date of manufacture: March 1, 2002

SFP

Status: Optimal

Location: Out connection

Supported data rate(s): 1 Gbps, 2 Gbps

Link length: Intermediate

Connector: LC

Transmitter type: Shortwave Laser w/o OFC

Transmission media: TM Multi-mode 50m(M5) TM Multi-mode

62.5m(M6)

IEEE company ID: 08 00 5a

Revision: AA10  
Part number: IBM42P21SNY  
Serial number: 53P14760035Y  
Vendor: IBM  
Date of manufacture: December 1, 2001  
Drive mini-hub canister  
Status: Optimal  
Location: Channel 3  
Serial number: SN 1T14859903  
Part number: PN 19K1270  
Vendor: VN IBM  
Date of manufacture: December 1, 2001  
SFP  
Status: Optimal  
Location: In connection  
Supported data rate(s): 1 Gbps, 2 Gbps  
Link length: Intermediate  
Connector: LC  
Transmitter type: Shortwave Laser w/o OFC  
Transmission media: TM Multi-mode 50m(M5) TM Multi-mode  
62.5m(M6)  
IEEE company ID: 08 00 5a  
Revision: AA10  
Part number: IBM42P21SNY  
Serial number: 53P1476006A1G  
Vendor: IBM  
Date of manufacture: April 13, 2002  
Drive mini-hub canister  
Status: Optimal  
Location: Channel 4  
Serial number: SN 1T14556475  
Part number: PN 19K1270  
Vendor: VN IBM  
Date of manufacture: November 1, 2001  
SFP  
Status: Optimal  
Location: Out connection  
Supported data rate(s): 1 Gbps, 2 Gbps  
Link length: Intermediate  
Connector: LC  
Transmitter type: Shortwave Laser w/o OFC  
Transmission media: TM Multi-mode 50m(M5) TM Multi-mode  
62.5m(M6)  
IEEE company ID: 08 00 5a  
Revision: AA10  
Part number: IBM42P21SNY  
Serial number: 53P14760069GJ  
Vendor: IBM  
Date of manufacture: April 13, 2002  
Drive Enclosure 40 Overall Component Information  
Part number: PN 19K1288  
Serial number: SN 23A1719  
Vendor: VN IBM  
Date of manufacture: September 1, 2002  
Enclosure path redundancy: OK  
Fan canister: Optimal  
Fan canister: Optimal  
Power supply canister  
Status: Optimal  
Part number: PN 19K1289  
Serial number: SN A6844400Q40E  
Vendor: VN IBM  
Date of manufacture: Not available  
Power supply canister  
Status: Optimal  
Part number: PN 19K1289  
Serial number: SN A6844400PU0E

Vendor: VN IBM  
Date of manufacture: Not available  
Temperature: Optimal  
Temperature: Optimal  
ESM card  
Status: Optimal  
Firmware version: 9325  
Maximum data rate: 2 Gbps  
Current data rate: 2 Gbps  
Location: A (left canister)  
Card communication: OK  
Product ID: EXP700  
Part number: PN 19K1287  
Serial number: SN 1T23252726  
Vendor: IBM  
Date of manufacture: August 1, 2002  
SFP  
Status: Optimal  
Location: In connection  
Supported data rate(s): 1 Gbps, 2 Gbps  
Link length: Intermediate  
Connector: LC  
Transmitter type: Shortwave Laser w/o OFC  
Transmission media: TM Multi-mode 50m(M5) TM Multi-mode  
62.5m(M6)  
IEEE company ID: 08 00 5a  
Revision: AA10  
Part number: IBM42P21SNY  
Serial number: 53P14760069UY  
Vendor: IBM  
Date of manufacture: April 13, 2002  
SFP  
Status: Optimal  
Location: Out connection  
Supported data rate(s): 1 Gbps, 2 Gbps  
Link length: Intermediate  
Connector: LC  
Transmitter type: Shortwave Laser w/o OFC  
Transmission media: TM Multi-mode 50m(M5) TM Multi-mode  
62.5m(M6)  
IEEE company ID: 08 00 5a  
Revision: AA10  
Part number: IBM42P21SNY  
Serial number: 53P1476000355  
Vendor: IBM  
Date of manufacture: December 1, 2001  
ESM card  
Status: Optimal  
Firmware version: 9325  
Maximum data rate: 2 Gbps  
Current data rate: 2 Gbps  
Location: B (right canister)  
Card communication: OK  
Product ID: EXP700  
Part number: PN 19K1287  
Serial number: SN 1T23252633  
Vendor: IBM  
Date of manufacture: August 1, 2002  
SFP  
Status: Optimal  
Location: Out connection  
Supported data rate(s): 1 Gbps, 2 Gbps  
Link length: Intermediate  
Connector: LC  
Transmitter type: Shortwave Laser w/o OFC  
Transmission media: TM Multi-mode 50m(M5) TM Multi-mode  
62.5m(M6)  
IEEE company ID: 08 00 5a

Revision: AA10  
Part number: IBM42P21SNY  
Serial number: 53P14760069SX  
Vendor: IBM  
Date of manufacture: April 13, 2002

Drive Enclosure 41 Overall Component Information

Part number: PN 19K1288  
Serial number: SN 23A1727  
Vendor: VN IBM  
Date of manufacture: September 1, 2002  
Enclosure path redundancy: OK  
Fan canister: Optimal  
Fan canister: Optimal  
Power supply canister  
Status: Optimal  
Part number: PN 19K1289  
Serial number: SN A6844400PW0E  
Vendor: VN IBM  
Date of manufacture: Not available  
Power supply canister  
Status: Optimal  
Part number: PN 19K1289  
Serial number: SN A6844400PM0E  
Vendor: VN IBM  
Date of manufacture: Not available  
Temperature: Optimal  
Temperature: Optimal  
ESM card

Status: Optimal  
Firmware version: 9325  
Maximum data rate: 2 Gbps  
Current data rate: 2 Gbps  
Location: A (left canister)  
Card communication: OK  
Product ID: EXP700  
Part number: PN 19K1287  
Serial number: SN 1T23251630  
Vendor: IBM  
Date of manufacture: August 1, 2002  
SFP  
Status: Optimal  
Location: In connection  
Supported data rate(s): 1 Gbps, 2 Gbps  
Link length: Intermediate  
Connector: LC  
Transmitter type: Shortwave Laser w/o OFC  
Transmission media: TM Multi-mode 50m(M5) TM Multi-mode

62.5m(M6)

IEEE company ID: 08 00 5a  
Revision: AA10  
Part number: IBM42P21SNY  
Serial number: 53P14760069WU  
Vendor: IBM  
Date of manufacture: April 13, 2002

SFP

Status: Optimal  
Location: Out connection  
Supported data rate(s): 1 Gbps, 2 Gbps  
Link length: Intermediate  
Connector: LC  
Transmitter type: Shortwave Laser w/o OFC  
Transmission media: TM Multi-mode 50m(M5) TM Multi-mode

62.5m(M6)

IEEE company ID: 08 00 5a  
Revision: AA10  
Part number: IBM42P21SNY  
Serial number: 53P14760069TH

Vendor: IBM  
Date of manufacture: April 13, 2002

ESM card

Status: Optimal  
Firmware version: 9325  
Maximum data rate: 2 Gbps  
Current data rate: 2 Gbps  
Location: B (right canister)  
Card communication: OK  
Product ID: EXP700  
Part number: PN 19K1287  
Serial number: SN 1T23772179  
Vendor: IBM  
Date of manufacture: September 1, 2002  
SFP  
Status: Optimal  
Location: In connection  
Supported data rate(s): 1 Gbps, 2 Gbps  
Link length: Intermediate  
Connector: LC  
Transmitter type: Shortwave Laser w/o OFC  
Transmission media: TM Multi-mode 50m(M5) TM Multi-mode

62.5m(M6)

IEEE company ID: 08 00 5a  
Revision: AA10  
Part number: IBM42P21SNY  
Serial number: 53P14760069F7  
Vendor: IBM  
Date of manufacture: April 13, 2002

SFP

Status: Optimal  
Location: Out connection  
Supported data rate(s): 1 Gbps, 2 Gbps  
Link length: Intermediate  
Connector: LC  
Transmitter type: Shortwave Laser w/o OFC  
Transmission media: TM Multi-mode 50m(M5) TM Multi-mode

62.5m(M6)

IEEE company ID: 08 00 5a  
Revision: AA10  
Part number: IBM42P21SNY  
Serial number: 53P1476006AFB  
Vendor: IBM  
Date of manufacture: April 14, 2002

Drive Enclosure 42 Overall Component Information

Part number: PN 19K1288  
Serial number: SN 23A1717  
Vendor: VN IBM  
Date of manufacture: September 1, 2002  
Enclosure path redundancy: OK  
Fan canister: Optimal  
Fan canister: Optimal  
Power supply canister  
Status: Optimal  
Part number: PN 19K1289  
Serial number: SN A6844400ND0E  
Vendor: VN IBM  
Date of manufacture: Not available  
Power supply canister  
Status: Optimal  
Part number: PN 19K1289  
Serial number: SN A6844400QJ0E  
Vendor: VN IBM  
Date of manufacture: Not available  
Temperature: Optimal  
Temperature: Optimal  
ESM card

Status: Optimal  
Firmware version: 9325  
Maximum data rate: 2 Gbps  
Current data rate: 2 Gbps  
Location: A (left canister)  
Card communication: OK  
Product ID: EXP700  
Part number: PN 19K1287  
Serial number: SN 1T23772017  
Vendor: IBM  
Date of manufacture: September 1, 2002  
SFP  
Status: Optimal  
Location: In connection  
Supported data rate(s): 1 Gbps, 2 Gbps  
Link length: Intermediate  
Connector: LC  
Transmitter type: Shortwave Laser w/o OFC  
Transmission media: TM Multi-mode 50m(M5) TM Multi-mode

62.5m(M6)

IEEE company ID: 08 00 5a  
Revision: AA10  
Part number: IBM42P21SNY  
Serial number: 53P1476006A0Z  
Vendor: IBM  
Date of manufacture: April 13, 2002

SFP

Status: Optimal  
Location: Out connection  
Supported data rate(s): 1 Gbps, 2 Gbps  
Link length: Intermediate  
Connector: LC  
Transmitter type: Shortwave Laser w/o OFC  
Transmission media: TM Multi-mode 50m(M5) TM Multi-mode

62.5m(M6)

IEEE company ID: 08 00 5a  
Revision: AA10  
Part number: IBM42P21SNY  
Serial number: 53P1476009T54  
Vendor: IBM  
Date of manufacture: June 29, 2002

ESM card

Status: Optimal  
Firmware version: 9325  
Maximum data rate: 2 Gbps  
Current data rate: 2 Gbps  
Location: B (right canister)  
Card communication: OK  
Product ID: EXP700  
Part number: PN 19K1287  
Serial number: SN 1T23772062  
Vendor: IBM  
Date of manufacture: September 1, 2002

SFP

Status: Optimal  
Location: In connection  
Supported data rate(s): 1 Gbps, 2 Gbps  
Link length: Intermediate  
Connector: LC  
Transmitter type: Shortwave Laser w/o OFC  
Transmission media: TM Multi-mode 50m(M5) TM Multi-mode

62.5m(M6)

IEEE company ID: 08 00 5a  
Revision: AA10  
Part number: IBM42P21SNY  
Serial number: 53P1476006A8F  
Vendor: IBM  
Date of manufacture: April 13, 2002

SFP

Status: Optimal  
Location: Out connection  
Supported data rate(s): 1 Gbps, 2 Gbps  
Link length: Intermediate  
Connector: LC  
Transmitter type: Shortwave Laser w/o OFC  
Transmission media: TM Multi-mode 50m(M5) TM Multi-mode

62.5m(M6)

IEEE company ID: 08 00 5a  
Revision: AA10  
Part number: IBM42P21SNY  
Serial number: 53P14760069T4  
Vendor: IBM  
Date of manufacture: April 13, 2002

Drive Enclosure 43 Overall Component Information

Part number: PN 19K1288  
Serial number: SN 23A1715  
Vendor: VN IBM  
Date of manufacture: September 1, 2002  
Enclosure path redundancy: OK

Fan canister: Optimal

Fan canister: Optimal

Power supply canister

Status: Optimal  
Part number: PN 19K1289  
Serial number: SN A6844400P20E  
Vendor: VN IBM  
Date of manufacture: Not available

Power supply canister

Status: Optimal  
Part number: PN 19K1289  
Serial number: SN A6844400NC0E  
Vendor: VN IBM  
Date of manufacture: Not available

Temperature: Optimal

Temperature: Optimal

ESM card

Status: Optimal  
Firmware version: 9325  
Maximum data rate: 2 Gbps  
Current data rate: 2 Gbps  
Location: A (left canister)  
Card communication: OK  
Product ID: EXP700  
Part number: PN 19K1287  
Serial number: SN 1T22529757  
Vendor: IBM  
Date of manufacture: September 1, 2002

SFP

Status: Optimal  
Location: In connection  
Supported data rate(s): 1 Gbps, 2 Gbps  
Link length: Intermediate  
Connector: LC  
Transmitter type: Shortwave Laser w/o OFC  
Transmission media: TM Multi-mode 50m(M5) TM Multi-mode

62.5m(M6)

IEEE company ID: 08 00 5a  
Revision: AA10  
Part number: IBM42P21SNY  
Serial number: 53P14760069TN  
Vendor: IBM  
Date of manufacture: April 13, 2002

ESM card

Status: Optimal  
Firmware version: 9325



Maximum data rate: 2 Gbps  
Current data rate: 2 Gbps  
Location: B (right canister)  
Card communication: OK  
Product ID: EXP700  
Part number: PN 19K1287  
Serial number: SN 1T23251497  
Vendor: IBM  
Date of manufacture: August 1, 2002  
SFP  
Status: Optimal  
Location: In connection  
Supported data rate(s): 1 Gbps, 2 Gbps  
Link length: Intermediate  
Connector: LC  
Transmitter type: Shortwave Laser w/o OFC  
Transmission media: TM Multi-mode 50m(M5) TM Multi-mode

62.5m(M6)

IEEE company ID: 08 00 5a  
Revision: AA10  
Part number: IBM42P21SNY  
Serial number: 53P1476006A5B  
Vendor: IBM  
Date of manufacture: April 14, 2002  
SFP  
Status: Optimal  
Location: Out connection  
Supported data rate(s): 1 Gbps, 2 Gbps  
Link length: Intermediate  
Connector: LC  
Transmitter type: Shortwave Laser w/o OFC  
Transmission media: TM Multi-mode 50m(M5) TM Multi-mode

62.5m(M6)

IEEE company ID: 08 00 5a  
Revision: AA10  
Part number: IBM42P21SNY  
Serial number: 53P14760003ZM  
Vendor: IBM  
Date of manufacture: December 2, 2001

#### Drive Enclosure 44 Overall Component Information

Part number: PN 19K1288  
Serial number: SN 23A1734  
Vendor: VN IBM  
Date of manufacture: September 1, 2002  
Enclosure path redundancy: OK  
Fan canister: Optimal  
Fan canister: Optimal  
Power supply canister  
Status: Optimal  
Part number: PN 19K1289  
Serial number: SN A6844400JH0E  
Vendor: VN IBM  
Date of manufacture: Not available  
Power supply canister  
Status: Optimal  
Part number: PN 19K1289  
Serial number: SN A6844400J60E  
Vendor: VN IBM  
Date of manufacture: Not available  
Temperature: Optimal  
Temperature: Optimal

#### ESM card

Status: Optimal  
Firmware version: 9325  
Maximum data rate: 2 Gbps  
Current data rate: 2 Gbps  
Location: A (left canister)

Card communication: OK  
Product ID: EXP700  
Part number: PN 19K1287  
Serial number: SN 1T23252177  
Vendor: IBM  
Date of manufacture: August 1, 2002  
SFP  
Status: Optimal  
Location: In connection  
Supported data rate(s): 1 Gbps, 2 Gbps  
Link length: Intermediate  
Connector: LC  
Transmitter type: Shortwave Laser w/o OFC  
Transmission media: TM Multi-mode 50m(M5) TM Multi-mode

62.5m(M6)

IEEE company ID: 08 00 5a  
Revision: AA10  
Part number: IBM42P21SNY  
Serial number: 53P1476006A6F  
Vendor: IBM  
Date of manufacture: April 14, 2002

#### SFP

Status: Optimal  
Location: Out connection  
Supported data rate(s): 1 Gbps, 2 Gbps  
Link length: Intermediate  
Connector: LC  
Transmitter type: Shortwave Laser w/o OFC  
Transmission media: TM Multi-mode 50m(M5) TM Multi-mode

62.5m(M6)

IEEE company ID: 08 00 5a  
Revision: AA10  
Part number: IBM42P21SNY  
Serial number: 53P147600037K  
Vendor: IBM  
Date of manufacture: December 1, 2001

#### ESM card

Status: Optimal  
Firmware version: 9325  
Maximum data rate: 2 Gbps  
Current data rate: 2 Gbps  
Location: B (right canister)  
Card communication: OK  
Product ID: EXP700  
Part number: PN 19K1287  
Serial number: SN 1T23252593  
Vendor: IBM  
Date of manufacture: August 1, 2002  
SFP  
Status: Optimal  
Location: Out connection  
Supported data rate(s): 1 Gbps, 2 Gbps  
Link length: Intermediate  
Connector: LC  
Transmitter type: Shortwave Laser w/o OFC  
Transmission media: TM Multi-mode 50m(M5) TM Multi-mode

62.5m(M6)

IEEE company ID: 08 00 5a  
Revision: AA10  
Part number: IBM42P21SNY  
Serial number: 53P14760002EC  
Vendor: IBM  
Date of manufacture: December 1, 2001

#### Drive Enclosure 45 Overall Component Information

Part number: PN 19K1288  
Serial number: SN 23A1736  
Vendor: VN IBM

Date of manufacture: September 1, 2002  
Enclosure path redundancy: OK  
Fan canister: Optimal  
Fan canister: Optimal  
Power supply canister  
Status: Optimal  
Part number: PN 19K1289  
Serial number: SN A6844400NE0E  
Vendor: VN IBM  
Date of manufacture: Not available  
Power supply canister  
Status: Optimal  
Part number: PN 19K1289  
Serial number: SN A6844400JL0E  
Vendor: VN IBM  
Date of manufacture: Not available  
Temperature: Optimal  
Temperature: Optimal  
ESM card  
Status: Optimal  
Firmware version: 9325  
Maximum data rate: 2 Gbps  
Current data rate: 2 Gbps  
Location: A (left canister)  
Card communication: OK  
Product ID: EXP700  
Part number: PN 19K1287  
Serial number: SN 1T23251701  
Vendor: IBM  
Date of manufacture: August 1, 2002  
SFP  
Status: Optimal  
Location: In connection  
Supported data rate(s): 1 Gbps, 2 Gbps  
Link length: Intermediate  
Connector: LC  
Transmitter type: Shortwave Laser w/o OFC  
Transmission media: TM Multi-mode 50m(M5) TM Multi-mode  
62.5m(M6)  
IEEE company ID: 08 00 5a  
Revision: AA10  
Part number: IBM42P21SNY  
Serial number: 53P14760002ML  
Vendor: IBM  
Date of manufacture: December 1, 2001  
SFP  
Status: Optimal  
Location: Out connection  
Supported data rate(s): 1 Gbps, 2 Gbps  
Link length: Intermediate  
Connector: LC  
Transmitter type: Shortwave Laser w/o OFC  
Transmission media: TM Multi-mode 50m(M5) TM Multi-mode  
62.5m(M6)  
IEEE company ID: 08 00 5a  
Revision: AA10  
Part number: IBM42P21SNY  
Serial number: 53P14760002ND  
Vendor: IBM  
Date of manufacture: December 1, 2001  
ESM card  
Status: Optimal  
Firmware version: 9325  
Maximum data rate: 2 Gbps  
Current data rate: 2 Gbps  
Location: B (right canister)  
Card communication: OK  
Product ID: EXP700

Part number: PN 19K1287  
Serial number: SN 1T23252439  
Vendor: IBM  
Date of manufacture: August 1, 2002  
SFP  
Status: Optimal  
Location: In connection  
Supported data rate(s): 1 Gbps, 2 Gbps  
Link length: Intermediate  
Connector: LC  
Transmitter type: Shortwave Laser w/o OFC  
Transmission media: TM Multi-mode 50m(M5) TM Multi-mode  
62.5m(M6)  
IEEE company ID: 08 00 5a  
Revision: AA10  
Part number: IBM42P21SNY  
Serial number: 53P1476006A3V  
Vendor: IBM  
Date of manufacture: April 14, 2002  
SFP  
Status: Optimal  
Location: Out connection  
Supported data rate(s): 1 Gbps, 2 Gbps  
Link length: Intermediate  
Connector: LC  
Transmitter type: Shortwave Laser w/o OFC  
Transmission media: TM Multi-mode 50m(M5) TM Multi-mode  
62.5m(M6)  
IEEE company ID: 08 00 5a  
Revision: AA10  
Part number: IBM42P21SNY  
Serial number: 53P14760069EY  
Vendor: IBM  
Date of manufacture: April 13, 2002  
Drive Enclosure 46 Overall Component Information  
Part number: PN 19K1288  
Serial number: SN 23A1733  
Vendor: VN IBM  
Date of manufacture: September 1, 2002  
Enclosure path redundancy: OK  
Fan canister: Optimal  
Fan canister: Optimal  
Power supply canister  
Status: Optimal  
Part number: PN 19K1289  
Serial number: SN A6844400KR0E  
Vendor: VN IBM  
Date of manufacture: Not available  
Power supply canister  
Status: Optimal  
Part number: PN 19K1289  
Serial number: SN A6844400JU0E  
Vendor: VN IBM  
Date of manufacture: Not available  
Temperature: Optimal  
Temperature: Optimal  
ESM card  
Status: Optimal  
Firmware version: 9325  
Maximum data rate: 2 Gbps  
Current data rate: 2 Gbps  
Location: A (left canister)  
Card communication: OK  
Product ID: EXP700  
Part number: PN 19K1287  
Serial number: SN 1T23251674  
Vendor: IBM

Date of manufacture: August 1, 2002  
SFP  
Status: Optimal  
Location: In connection  
Supported data rate(s): 1 Gbps, 2 Gbps  
Link length: Intermediate  
Connector: LC  
Transmitter type: Shortwave Laser w/o OFC  
Transmission media: TM Multi-mode 50m(M5) TM Multi-mode  
62.5m(M6)  
IEEE company ID: 08 00 5a  
Revision: AA10  
Part number: IBM42P21SNY  
Serial number: 53P1476006A1U  
Vendor: IBM  
Date of manufacture: April 13, 2002  
SFP  
Status: Optimal  
Location: Out connection  
Supported data rate(s): 1 Gbps, 2 Gbps  
Link length: Intermediate  
Connector: LC  
Transmitter type: Shortwave Laser w/o OFC  
Transmission media: TM Multi-mode 50m(M5) TM Multi-mode  
62.5m(M6)  
IEEE company ID: 08 00 5a  
Revision: AA10  
Part number: IBM42P21SNY  
Serial number: 53P1476000A0Q  
Vendor: IBM  
Date of manufacture: December 14, 2001  
ESM card  
Status: Optimal  
Firmware version: 9325  
Maximum data rate: 2 Gbps  
Current data rate: 2 Gbps  
Location: B (right canister)  
Card communication: OK  
Product ID: EXP700  
Part number: PN 19K1287  
Serial number: SN 1T23252702  
Vendor: IBM  
Date of manufacture: August 1, 2002  
SFP  
Status: Optimal  
Location: In connection  
Supported data rate(s): 1 Gbps, 2 Gbps  
Link length: Intermediate  
Connector: LC  
Transmitter type: Shortwave Laser w/o OFC  
Transmission media: TM Multi-mode 50m(M5) TM Multi-mode  
62.5m(M6)  
IEEE company ID: 08 00 5a  
Revision: AA10  
Part number: IBM42P21SNY  
Serial number: 53P14760009K2  
Vendor: IBM  
Date of manufacture: December 14, 2001  
SFP  
Status: Optimal  
Location: Out connection  
Supported data rate(s): 1 Gbps, 2 Gbps  
Link length: Intermediate  
Connector: LC  
Transmitter type: Shortwave Laser w/o OFC  
Transmission media: TM Multi-mode 50m(M5) TM Multi-mode  
62.5m(M6)  
IEEE company ID: 08 00 5a

Revision: AA10  
Part number: IBM42P21SNY  
Serial number: 53P14760069U7  
Vendor: IBM  
Date of manufacture: April 13, 2002

#### Drive Enclosure 47 Overall Component Information

Part number: PN 19K1288  
Serial number: SN 23A1740  
Vendor: VN IBM  
Date of manufacture: September 1, 2002  
Enclosure path redundancy: OK  
Fan canister: Optimal  
Fan canister: Optimal  
Power supply canister  
Status: Optimal  
Part number: PN 19K1289  
Serial number: SN A6844400JE0E  
Vendor: VN IBM  
Date of manufacture: Not available  
Power supply canister  
Status: Optimal  
Part number: PN 19K1289  
Serial number: SN A6844400Q90E  
Vendor: VN IBM  
Date of manufacture: Not available  
Temperature: Optimal  
Temperature: Optimal  
ESM card  
Status: Optimal  
Firmware version: 9325  
Maximum data rate: 2 Gbps  
Current data rate: 2 Gbps  
Location: A (left canister)  
Card communication: OK  
Product ID: EXP700  
Part number: PN 19K1287  
Serial number: SN 1T23251575  
Vendor: IBM  
Date of manufacture: August 1, 2002  
SFP  
Status: Optimal  
Location: In connection  
Supported data rate(s): 1 Gbps, 2 Gbps  
Link length: Intermediate  
Connector: LC  
Transmitter type: Shortwave Laser w/o OFC  
Transmission media: TM Multi-mode 50m(M5) TM Multi-mode  
62.5m(M6)  
IEEE company ID: 08 00 5a  
Revision: AA10  
Part number: IBM42P21SNY  
Serial number: 53P1476006A9A  
Vendor: IBM  
Date of manufacture: April 13, 2002  
ESM card  
Status: Optimal  
Firmware version: 9325  
Maximum data rate: 2 Gbps  
Current data rate: 2 Gbps  
Location: B (right canister)  
Card communication: OK  
Product ID: EXP700  
Part number: PN 19K1287  
Serial number: SN 1T23251563  
Vendor: IBM  
Date of manufacture: August 1, 2002  
SFP

Status: Optimal  
Location: In connection  
Supported data rate(s): 1 Gbps, 2 Gbps  
Link length: Intermediate  
Connector: LC  
Transmitter type: Shortwave Laser w/o OFC  
Transmission media: TM Multi-mode 50m(M5) TM Multi-mode

62.5m(M6)

IEEE company ID: 08 00 5a  
Revision: AA10  
Part number: IBM42P21SNY  
Serial number: 53P14760009J2  
Vendor: IBM  
Date of manufacture: December 14, 2001

SFP

Status: Optimal  
Location: Out connection  
Supported data rate(s): 1 Gbps, 2 Gbps  
Link length: Intermediate  
Connector: LC  
Transmitter type: Shortwave Laser w/o OFC  
Transmission media: TM Multi-mode 50m(M5) TM Multi-mode

62.5m(M6)

IEEE company ID: 08 00 5a  
Revision: AA10  
Part number: IBM42P21SNY  
Serial number: 53P14760069RX  
Vendor: IBM  
Date of manufacture: April 13, 2002

MAPPINGS STORAGE PARTITIONING - ENABLED (0 of 64 used)-----

Logical Drive-To-LUN Mappings

Logical Drive flute4\_lun1, LUN 0, Default Group  
Logical Drive flute4\_lun2, LUN 1, Default Group  
Logical Drive flute4\_lun3, LUN 2, Default Group  
Logical Drive flute4\_lun4, LUN 3, Default Group

Topology

[Undefined Host Ports]  
21:00:00:e0:8b:09:9c:6d

[Default Group]

NVSRAM Host Type Internal Definitions

Index 0  
Name: Windows NT Non-Clustered (SP5 or higher)  
ADT status: Disabled

Index 1  
Name: Windows NT Clustered (SP5 or higher)  
ADT status: Disabled

Index 2 (DEFAULT)  
Name: Windows 2000/Server 2003 Non-Clustered  
ADT status: Disabled

Index 3  
Name: Windows 2000/Server 2003 Clustered  
ADT status: Disabled

Index 4  
Name: NetWare-IBMSAN  
ADT status: Disabled

Index 5  
Name: Linux  
ADT status: Disabled

Index 6  
Name: AIX  
ADT status: Disabled

Index 7  
Name: HP-UX

ADT status: Disabled  
Index 8

Name: Solaris  
ADT status: Disabled  
Index 9

Name: PTX  
ADT status: Disabled  
Index 10

Name: Irix  
ADT status: Disabled  
Index 11

Name: Netware Failover  
ADT status: Disabled  
Index 12

Name: IBM TS SAN VCE  
ADT status: Disabled  
Index 13

Name: LNXCL  
ADT status: Disabled

## TotalStorage FC2-133 Host Bus Adapter 5

PROFILE FOR STORAGE SUBSYSTEM: flute5 (3/18/04 2:12:51 PM)

SUMMARY-----

Number of controllers: 2  
Number of arrays: 4  
Total number of logical drives (includes an access logical drive): 5 of 2048 used

Number of standard logical drives: 4  
Number of access logical drives: 1  
Number of drives: 112  
Access logical drive: None mapped  
Default host type: Windows 2000/Server 2003 Non-Clustered (Host type index 2)

Firmware version: 05.40.06.00  
NVSRAM version: N1742F700R830V04  
NVSRAM configured for batteries?: Yes  
Start cache flushing at (in percentage): 80  
Stop cache flushing at (in percentage): 80  
Cache block size (in KB): 4  
Media scan duration (in days): 30  
Failover alert delay (in minutes): 5  
Feature enable identifier: 3533363035003630363834003F33C840

CONTROLLERS-----

Number of controllers: 2

Controller in Slot A

Appware version: 05.40.06.00  
Bootware version: 05.40.02.00  
Status: Optimal  
Mode: Active  
Board ID: 4884  
Product ID: 1742  
Product revision: 0520  
Serial number: 1T14251471  
Vendor: IBM  
Date of manufacture: December 4, 2001  
Cache/processor size (MB): 1024/128  
Date/Time: Thu Mar 18 14:12:34 EST 2004  
Associated Logical Drives (\* = Preferred Owner):  
flute5\_lun1\*, flute5\_lun2\*  
Drive interface: Fibre  
Channel: 1  
Current ID: 125/0x1  
Maximum data rate: 2 Gbps  
Current data rate: 2 Gbps

Data rate control: Switch  
Link status: Up  
Drive interface: Fibre  
Channel: 2  
Current ID: 125/0x1  
Maximum data rate: 2 Gbps  
Current data rate: 2 Gbps  
Data rate control: Switch  
Link status: Up  
Drive interface: Fibre  
Channel: 3  
Current ID: 125/0x1  
Maximum data rate: 2 Gbps  
Current data rate: 2 Gbps  
Data rate control: Switch  
Link status: Up  
Drive interface: Fibre  
Channel: 4  
Current ID: 125/0x1  
Maximum data rate: 2 Gbps  
Current data rate: 2 Gbps  
Data rate control: Switch  
Link status: Up  
Host interface: Fibre  
Port: 1  
Current ID: Not applicable/0xFFFFFFFF  
Preferred ID: 126/0x0  
NL-Port ID: 0x011700  
Maximum data rate: 2 Gbps  
Current data rate: 2 Gbps  
Data rate control: Switch  
Link status: Up  
Topology: Fabric Attach  
World-wide port name: 20:02:00:a0:b8:0c:c0:8d  
World-wide node name: 20:02:00:a0:b8:0c:c0:8c  
Part type: HPFC-5200 revision 10  
Host interface: Fibre  
Port: 2  
Current ID: 1/0xE8  
Preferred ID: 1/0xE8  
NL-Port ID: 0x0000E8  
Maximum data rate: 2 Gbps  
Current data rate: 2 Gbps  
Data rate control: Switch  
Link status: Up  
Topology: Arbitrated Loop - Private  
World-wide port name: 20:02:00:a0:b8:0c:c0:8e  
World-wide node name: 20:02:00:a0:b8:0c:c0:8c  
Part type: HPFC-5200 revision 10  
Ethernet port: 0  
MAC address: 00:a0:b8:0c:c0:8c  
Host name: target  
Network configuration: Static  
IP address: 192.168.128.111  
Subnet mask: 255.255.255.0  
Gateway: 0.0.0.0  
Remote login: Disabled  
Controller in Slot B  
Appware version: 05.40.06.00  
Bootware version: 05.40.02.00  
Status: Optimal  
Mode: Active  
Board ID: 4884  
Product ID: 1742  
Product revision: 0520  
Serial number: 1T14859697  
Vendor: IBM

Date of manufacture: December 9, 2001  
Cache/processor size (MB): 1024/128  
Date/Time: Thu Mar 18 14:12:35 EST 2004  
Associated Logical Drives (\* = Preferred Owner):  
flute5\_lun3\*, flute5\_lun4\*  
Drive interface: Fibre  
Channel: 1  
Current ID: 124/0x2  
Maximum data rate: 2 Gbps  
Current data rate: 2 Gbps  
Data rate control: Switch  
Link status: Up  
Drive interface: Fibre  
Channel: 2  
Current ID: 124/0x2  
Maximum data rate: 2 Gbps  
Current data rate: 2 Gbps  
Data rate control: Switch  
Link status: Up  
Drive interface: Fibre  
Channel: 3  
Current ID: 124/0x2  
Maximum data rate: 2 Gbps  
Current data rate: 2 Gbps  
Data rate control: Switch  
Link status: Up  
Drive interface: Fibre  
Channel: 4  
Current ID: 124/0x2  
Maximum data rate: 2 Gbps  
Current data rate: 2 Gbps  
Data rate control: Switch  
Link status: Up  
Host interface: Fibre  
Port: 1  
Current ID: Not applicable/0xFFFFFFFF  
Preferred ID: 126/0x0  
NL-Port ID: 0x011800  
Maximum data rate: 2 Gbps  
Current data rate: 2 Gbps  
Data rate control: Switch  
Link status: Up  
Topology: Fabric Attach  
World-wide port name: 20:03:00:a0:b8:0c:c0:8d  
World-wide node name: 20:03:00:a0:b8:0c:c0:8c  
Part type: HPFC-5200 revision 10  
Host interface: Fibre  
Port: 2  
Current ID: 3/0xE2  
Preferred ID: 3/0xE2  
NL-Port ID: 0x0000E2  
Maximum data rate: 2 Gbps  
Current data rate: 2 Gbps  
Data rate control: Switch  
Link status: Up  
Topology: Arbitrated Loop - Private  
World-wide port name: 20:03:00:a0:b8:0c:c0:8e  
World-wide node name: 20:03:00:a0:b8:0c:c0:8c  
Part type: HPFC-5200 revision 10  
Ethernet port: 0  
MAC address: 00:a0:b8:0c:bd:f5  
Host name: target  
Network configuration: Static  
IP address: 192.168.128.112  
Subnet mask: 255.255.255.0  
Gateway: 0.0.0.0  
Remote login: Disabled

ARRAYS-----

Number of arrays: 4

Array 1 (RAID 0)

Status: Online

Current owner: Controller in slot A

Logical Drive flute5\_lun1 (948.145 GB)

Associated drives (in piece order):

- Drive at Enclosure 50, Slot 1
- Drive at Enclosure 50, Slot 2
- Drive at Enclosure 50, Slot 3
- Drive at Enclosure 50, Slot 4
- Drive at Enclosure 50, Slot 5
- Drive at Enclosure 50, Slot 6
- Drive at Enclosure 50, Slot 7
- Drive at Enclosure 50, Slot 8
- Drive at Enclosure 50, Slot 9
- Drive at Enclosure 50, Slot 10
- Drive at Enclosure 50, Slot 11
- Drive at Enclosure 50, Slot 12
- Drive at Enclosure 50, Slot 13
- Drive at Enclosure 50, Slot 14
- Drive at Enclosure 51, Slot 1
- Drive at Enclosure 51, Slot 2
- Drive at Enclosure 51, Slot 3
- Drive at Enclosure 51, Slot 4
- Drive at Enclosure 51, Slot 5
- Drive at Enclosure 51, Slot 6
- Drive at Enclosure 51, Slot 7
- Drive at Enclosure 51, Slot 8
- Drive at Enclosure 51, Slot 9
- Drive at Enclosure 51, Slot 10
- Drive at Enclosure 51, Slot 11
- Drive at Enclosure 51, Slot 12
- Drive at Enclosure 51, Slot 13
- Drive at Enclosure 51, Slot 14

Array 2 (RAID 0)

Status: Online

Current owner: Controller in slot A

Logical Drive flute5\_lun2 (948.145 GB)

Associated drives (in piece order):

- Drive at Enclosure 52, Slot 1
- Drive at Enclosure 52, Slot 2
- Drive at Enclosure 52, Slot 3
- Drive at Enclosure 52, Slot 4
- Drive at Enclosure 52, Slot 5
- Drive at Enclosure 52, Slot 6
- Drive at Enclosure 52, Slot 7
- Drive at Enclosure 52, Slot 8
- Drive at Enclosure 52, Slot 9
- Drive at Enclosure 52, Slot 10
- Drive at Enclosure 52, Slot 11
- Drive at Enclosure 52, Slot 12
- Drive at Enclosure 52, Slot 13
- Drive at Enclosure 52, Slot 14
- Drive at Enclosure 53, Slot 1
- Drive at Enclosure 53, Slot 2
- Drive at Enclosure 53, Slot 3
- Drive at Enclosure 53, Slot 4
- Drive at Enclosure 53, Slot 5
- Drive at Enclosure 53, Slot 6
- Drive at Enclosure 53, Slot 7
- Drive at Enclosure 53, Slot 8
- Drive at Enclosure 53, Slot 9
- Drive at Enclosure 53, Slot 10
- Drive at Enclosure 53, Slot 11
- Drive at Enclosure 53, Slot 12
- Drive at Enclosure 53, Slot 13

Drive at Enclosure 53, Slot 14

Array 3 (RAID 0)

Status: Online

Current owner: Controller in slot B

Logical Drive flute5\_lun3 (948.145 GB)

Associated drives (in piece order):

- Drive at Enclosure 54, Slot 1
- Drive at Enclosure 54, Slot 2
- Drive at Enclosure 54, Slot 3
- Drive at Enclosure 54, Slot 4
- Drive at Enclosure 54, Slot 5
- Drive at Enclosure 54, Slot 6
- Drive at Enclosure 54, Slot 7
- Drive at Enclosure 54, Slot 8
- Drive at Enclosure 54, Slot 9
- Drive at Enclosure 54, Slot 10
- Drive at Enclosure 54, Slot 11
- Drive at Enclosure 54, Slot 12
- Drive at Enclosure 54, Slot 13
- Drive at Enclosure 54, Slot 14
- Drive at Enclosure 55, Slot 1
- Drive at Enclosure 55, Slot 2
- Drive at Enclosure 55, Slot 3
- Drive at Enclosure 55, Slot 4
- Drive at Enclosure 55, Slot 5
- Drive at Enclosure 55, Slot 6
- Drive at Enclosure 55, Slot 7
- Drive at Enclosure 55, Slot 8
- Drive at Enclosure 55, Slot 9
- Drive at Enclosure 55, Slot 10
- Drive at Enclosure 55, Slot 11
- Drive at Enclosure 55, Slot 12
- Drive at Enclosure 55, Slot 13
- Drive at Enclosure 55, Slot 14

Array 4 (RAID 0)

Status: Online

Current owner: Controller in slot B

Logical Drive flute5\_lun4 (948.145 GB)

Associated drives (in piece order):

- Drive at Enclosure 56, Slot 1
- Drive at Enclosure 56, Slot 2
- Drive at Enclosure 56, Slot 3
- Drive at Enclosure 56, Slot 4
- Drive at Enclosure 56, Slot 5
- Drive at Enclosure 56, Slot 6
- Drive at Enclosure 56, Slot 7
- Drive at Enclosure 56, Slot 8
- Drive at Enclosure 56, Slot 9
- Drive at Enclosure 56, Slot 10
- Drive at Enclosure 56, Slot 11
- Drive at Enclosure 56, Slot 12
- Drive at Enclosure 56, Slot 13
- Drive at Enclosure 56, Slot 14
- Drive at Enclosure 57, Slot 1
- Drive at Enclosure 57, Slot 2
- Drive at Enclosure 57, Slot 3
- Drive at Enclosure 57, Slot 4
- Drive at Enclosure 57, Slot 5
- Drive at Enclosure 57, Slot 6
- Drive at Enclosure 57, Slot 7
- Drive at Enclosure 57, Slot 8
- Drive at Enclosure 57, Slot 9
- Drive at Enclosure 57, Slot 10
- Drive at Enclosure 57, Slot 11
- Drive at Enclosure 57, Slot 12
- Drive at Enclosure 57, Slot 13
- Drive at Enclosure 57, Slot 14

STANDARD LOGICAL DRIVES-----

SUMMARY

Number of standard logical drives: 4  
 See other Logical Drives sub-tabs for premium feature information.

NAME	STATUS	CAPACITY	RAID LEVEL	ARRAY
flute5_lun1	Optimal	948.145 GB	0	1
flute5_lun2	Optimal	948.145 GB	0	2
flute5_lun3	Optimal	948.145 GB	0	3
flute5_lun4	Optimal	948.145 GB	0	4

DETAILS

Logical Drive name: flute5\_lun1  
 Logical Drive ID: 60:0a:0b:80:00:0c:c0:8c:00:00:00:0b:40:0c:01:f8  
 Subsystem ID (SSID): 0  
 Status: Optimal  
 Preferred owner: Controller in slot A  
 Current owner: Controller in slot A  
 Capacity: 948.145 GB  
 RAID level: 0  
 Segment size: 64 KB  
 Modification priority: High  
 Associated array: 1  
 Read cache: Enabled  
 Write cache: Disabled  
 Write cache without batteries: Disabled  
 Write cache with mirroring: Disabled  
 Flush write cache after (in seconds): 10.00  
 Cache read ahead multiplier: 1  
 Enable background media scan: Enabled  
 Media scan with redundancy check: Disabled

Logical Drive name: flute5\_lun2  
 Logical Drive ID: 60:0a:0b:80:00:0c:c0:8c:00:00:00:0f:40:0c:02:8c  
 Subsystem ID (SSID): 1  
 Status: Optimal  
 Preferred owner: Controller in slot A  
 Current owner: Controller in slot A  
 Capacity: 948.145 GB  
 RAID level: 0  
 Segment size: 64 KB  
 Modification priority: High  
 Associated array: 2  
 Read cache: Enabled  
 Write cache: Disabled  
 Write cache without batteries: Disabled  
 Write cache with mirroring: Disabled  
 Flush write cache after (in seconds): 10.00  
 Cache read ahead multiplier: 1  
 Enable background media scan: Enabled  
 Media scan with redundancy check: Disabled

Logical Drive name: flute5\_lun3  
 Logical Drive ID: 60:0a:0b:80:00:0c:bd:f5:00:00:00:15:40:0c:03:65  
 Subsystem ID (SSID): 2  
 Status: Optimal  
 Preferred owner: Controller in slot B  
 Current owner: Controller in slot B  
 Capacity: 948.145 GB  
 RAID level: 0  
 Segment size: 64 KB  
 Modification priority: High  
 Associated array: 3  
 Read cache: Enabled  
 Write cache: Disabled  
 Write cache without batteries: Disabled  
 Write cache with mirroring: Disabled

Flush write cache after (in seconds): 10.00  
 Cache read ahead multiplier: 1  
 Enable background media scan: Enabled  
 Media scan with redundancy check: Disabled

Logical Drive name: flute5\_lun4  
 Logical Drive ID: 60:0a:0b:80:00:0c:bd:f5:00:00:00:17:40:0c:03:95  
 Subsystem ID (SSID): 3  
 Status: Optimal  
 Preferred owner: Controller in slot B  
 Current owner: Controller in slot B  
 Capacity: 948.145 GB  
 RAID level: 0  
 Segment size: 64 KB  
 Modification priority: High  
 Associated array: 4  
 Read cache: Enabled  
 Write cache: Disabled  
 Write cache without batteries: Disabled  
 Write cache with mirroring: Disabled  
 Flush write cache after (in seconds): 10.00  
 Cache read ahead multiplier: 1  
 Enable background media scan: Enabled  
 Media scan with redundancy check: Disabled

MISSING LOGICAL DRIVES-----

Number of missing logical drives: 0  
 See other Logical Drives sub-tabs for premium feature information

DRIVES-----

SUMMARY

Number of drives: 112

BASIC:

TRAY, SLOT	STATUS	CAPACITY	CURRENT DATA RATE
PRODUCT ID	FIRMWARE	VERSION	
50, 1	Optimal	33.902 GB 2 Gbps	ST336753FC F B953
50, 2	Optimal	33.902 GB 2 Gbps	ST336753FC F B953
50, 3	Optimal	33.902 GB 2 Gbps	ST336753FC F B953
50, 4	Optimal	33.902 GB 2 Gbps	ST336753FC F B953
50, 5	Optimal	33.902 GB 2 Gbps	ST336753FC F B953
50, 6	Optimal	33.902 GB 2 Gbps	ST336753FC F B953
50, 7	Optimal	33.902 GB 2 Gbps	ST336753FC F B953
50, 8	Optimal	33.902 GB 2 Gbps	ST336753FC F B953
50, 9	Optimal	33.902 GB 2 Gbps	ST336753FC F B953
50, 10	Optimal	33.902 GB 2 Gbps	ST336753FC F B953
50, 11	Optimal	33.902 GB 2 Gbps	ST336753FC F B953
50, 12	Optimal	33.902 GB 2 Gbps	ST336753FC F B953
50, 13	Optimal	33.902 GB 2 Gbps	ST336753FC F B953
50, 14	Optimal	33.902 GB 2 Gbps	ST336753FC F B953





55, 13	Optimal	33.902 GB	2 Gbps	ST336753FC	F	B953
55, 14	Optimal	33.902 GB	2 Gbps	ST336753FC	F	B953
56, 1	Optimal	33.902 GB	2 Gbps	ST336753FC	F	B953
56, 2	Optimal	33.902 GB	2 Gbps	ST336753FC	F	B953
56, 3	Optimal	33.902 GB	2 Gbps	ST336753FC	F	B953
56, 4	Optimal	33.902 GB	2 Gbps	ST336753FC	F	B953
56, 5	Optimal	33.902 GB	2 Gbps	ST336753FC	F	B953
56, 6	Optimal	33.902 GB	2 Gbps	ST336753FC	F	B953
56, 7	Optimal	33.902 GB	2 Gbps	ST336753FC	F	B953
56, 8	Optimal	33.902 GB	2 Gbps	ST336753FC	F	B953
56, 9	Optimal	33.902 GB	2 Gbps	ST336753FC	F	B953
56, 10	Optimal	33.902 GB	2 Gbps	ST336753FC	F	B953
56, 11	Optimal	33.902 GB	2 Gbps	ST336753FC	F	B953
56, 12	Optimal	33.902 GB	2 Gbps	ST336753FC	F	B953
56, 13	Optimal	33.902 GB	2 Gbps	ST336753FC	F	B953
56, 14	Optimal	33.902 GB	2 Gbps	ST336753FC	F	B953
57, 1	Optimal	33.902 GB	2 Gbps	ST336753FC	F	B953
57, 2	Optimal	33.902 GB	2 Gbps	ST336753FC	F	B953
57, 3	Optimal	33.902 GB	2 Gbps	ST336753FC	F	B953
57, 4	Optimal	33.902 GB	2 Gbps	ST336753FC	F	B953
57, 5	Optimal	33.902 GB	2 Gbps	ST336753FC	F	B953
57, 6	Optimal	33.902 GB	2 Gbps	ST336753FC	F	B953
57, 7	Optimal	33.902 GB	2 Gbps	ST336753FC	F	B953
57, 8	Optimal	33.902 GB	2 Gbps	ST336753FC	F	B953
57, 9	Optimal	33.902 GB	2 Gbps	ST336753FC	F	B953
57, 10	Optimal	33.902 GB	2 Gbps	ST336753FC	F	B953
57, 11	Optimal	33.902 GB	2 Gbps	ST336753FC	F	B953
57, 12	Optimal	33.902 GB	2 Gbps	ST336753FC	F	B953
57, 13	Optimal	33.902 GB	2 Gbps	ST336753FC	F	B953
57, 14	Optimal	33.902 GB	2 Gbps	ST336753FC	F	B953

50, 5	3	4
50, 6	4	3
50, 7	3	4
50, 8	4	3
50, 9	3	4
50, 10	4	3
50, 11	3	4
50, 12	4	3
50, 13	3	4
50, 14	4	3
51, 1	3	4
51, 2	4	3
51, 3	3	4
51, 4	4	3
51, 5	3	4
51, 6	4	3
51, 7	3	4
51, 8	4	3
51, 9	3	4
51, 10	4	3
51, 11	3	4
51, 12	4	3
51, 13	3	4
51, 14	4	3
52, 1	3	4
52, 2	4	3
52, 3	3	4
52, 4	4	3
52, 5	3	4
52, 6	4	3
52, 7	3	4
52, 8	4	3
52, 9	3	4
52, 10	4	3
52, 11	3	4
52, 12	4	3
52, 13	3	4
52, 14	4	3
53, 1	3	4
53, 2	4	3
53, 3	3	4
53, 4	4	3
53, 5	3	4
53, 6	4	3
53, 7	3	4
53, 8	4	3
53, 9	3	4
53, 10	4	3
53, 11	3	4
53, 12	4	3
53, 13	3	4
53, 14	4	3
54, 1	1	2
54, 2	2	1
54, 3	1	2
54, 4	2	1
54, 5	1	2
54, 6	2	1
54, 7	1	2
54, 8	2	1
54, 9	1	2
54, 10	2	1
54, 11	1	2
54, 12	2	1
54, 13	1	2
54, 14	2	1
55, 1	1	2
55, 2	2	1

DRIVE CHANNELS:

TRAY, SLOT	CURRENT CHANNEL	ALTERNATE CHANNEL
50, 1	3	4
50, 2	4	3
50, 3	3	4
50, 4	4	3

55,3 1 2  
 55,4 2 1  
 55,5 1 2  
 55,6 2 1  
 55,7 1 2  
 55,8 2 1  
 55,9 1 2  
 55,10 2 1  
 55,11 1 2  
 55,12 2 1  
 55,13 1 2  
 55,14 2 1  
 56,1 1 2  
 56,2 2 1  
 56,3 1 2  
 56,4 2 1  
 56,5 1 2  
 56,6 2 1  
 56,7 1 2  
 56,8 2 1  
 56,9 1 2  
 56,10 2 1  
 56,11 1 2  
 56,12 2 1  
 56,13 1 2  
 56,14 2 1  
 57,1 1 2  
 57,2 2 1  
 57,3 1 2  
 57,4 2 1  
 57,5 1 2  
 57,6 2 1  
 57,7 1 2  
 57,8 2 1  
 57,9 1 2  
 57,10 2 1  
 57,11 1 2  
 57,12 2 1  
 57,13 1 2  
 57,14 2 1

DETAILS

Drive at Enclosure 50, Slot 1  
 Drive port: 1, Channel: 3, ID: 0/0xE4  
 Drive port: 2, Channel: 4, ID: 0/0xE4  
 Drive path redundancy: OK  
 Status: Optimal  
 Raw capacity: 33.902 GB  
 Usable capacity: 33.862 GB  
 Current data rate: 2 Gbps  
 Product ID: ST336753FC F  
 Firmware version: B953  
 Serial number: 3HX0JYB200007340GV2E  
 Vendor: IBM-ESXS  
 Date of manufacture: April 6, 2003  
 World-wide name: 20:00:00:04:cf:ff:14:3c  
 Mode: Assigned  
 Associated array: Array 1

Drive at Enclosure 50, Slot 2  
 Drive port: 1, Channel: 4, ID: 1/0xE8  
 Drive port: 2, Channel: 3, ID: 1/0xE8  
 Drive path redundancy: OK  
 Status: Optimal  
 Raw capacity: 33.902 GB  
 Usable capacity: 33.862 GB  
 Current data rate: 2 Gbps  
 Product ID: ST336753FC F

Firmware version: B953  
 Serial number: 3HX0K1Z7000073405FSX  
 Vendor: IBM-ESXS  
 Date of manufacture: April 6, 2003  
 World-wide name: 20:00:00:04:cf:ff:12:8f  
 Mode: Assigned  
 Associated array: Array 1

Drive at Enclosure 50, Slot 3  
 Drive port: 1, Channel: 3, ID: 2/0xE4  
 Drive port: 2, Channel: 4, ID: 2/0xE4  
 Drive path redundancy: OK  
 Status: Optimal  
 Raw capacity: 33.902 GB  
 Usable capacity: 33.862 GB  
 Current data rate: 2 Gbps  
 Product ID: ST336753FC F  
 Firmware version: B953  
 Serial number: 3HX0KBS5000073405FVX  
 Vendor: IBM-ESXS  
 Date of manufacture: April 6, 2003  
 World-wide name: 20:00:00:04:cf:ff:12:5c  
 Mode: Assigned  
 Associated array: Array 1

Drive at Enclosure 50, Slot 4  
 Drive port: 1, Channel: 4, ID: 3/0xE2  
 Drive port: 2, Channel: 3, ID: 3/0xE2  
 Drive path redundancy: OK  
 Status: Optimal  
 Raw capacity: 33.902 GB  
 Usable capacity: 33.862 GB  
 Current data rate: 2 Gbps  
 Product ID: ST336753FC F  
 Firmware version: B953  
 Serial number: 3HX0HPEF00007340GUEX  
 Vendor: IBM-ESXS  
 Date of manufacture: April 6, 2003  
 World-wide name: 20:00:00:04:cf:ff:14:66  
 Mode: Assigned  
 Associated array: Array 1

Drive at Enclosure 50, Slot 5  
 Drive port: 1, Channel: 3, ID: 4/0xE1  
 Drive port: 2, Channel: 4, ID: 4/0xE1  
 Drive path redundancy: OK  
 Status: Optimal  
 Raw capacity: 33.902 GB  
 Usable capacity: 33.862 GB  
 Current data rate: 2 Gbps  
 Product ID: ST336753FC F  
 Firmware version: B953  
 Serial number: 3HX0KAN300007339RGLQ  
 Vendor: IBM-ESXS  
 Date of manufacture: April 6, 2003  
 World-wide name: 20:00:00:04:cf:ff:1b:b3  
 Mode: Assigned  
 Associated array: Array 1

Drive at Enclosure 50, Slot 6  
 Drive port: 1, Channel: 4, ID: 5/0xE0  
 Drive port: 2, Channel: 3, ID: 5/0xE0  
 Drive path redundancy: OK  
 Status: Optimal  
 Raw capacity: 33.902 GB  
 Usable capacity: 33.862 GB  
 Current data rate: 2 Gbps  
 Product ID: ST336753FC F

Firmware version: B953  
Serial number: 3HX0KD38000073410HM6  
Vendor: IBM-ESXS  
Date of manufacture: April 6, 2003  
World-wide name: 20:00:00:04:cf:ff:12:9e  
Mode: Assigned  
Associated array: Array 1

Drive at Enclosure 50, Slot 7

Drive port: 1, Channel: 3, ID: 6/0xDC  
Drive port: 2, Channel: 4, ID: 6/0xDC  
Drive path redundancy: OK  
Status: Optimal  
Raw capacity: 33.902 GB  
Usable capacity: 33.862 GB  
Current data rate: 2 Gbps  
Product ID: ST336753FC F  
Firmware version: B953  
Serial number: 3HX0KBTJ000073405FR6  
Vendor: IBM-ESXS  
Date of manufacture: April 6, 2003  
World-wide name: 20:00:00:04:cf:ff:12:ef  
Mode: Assigned  
Associated array: Array 1

Drive at Enclosure 50, Slot 8

Drive port: 1, Channel: 4, ID: 7/0xDA  
Drive port: 2, Channel: 3, ID: 7/0xDA  
Drive path redundancy: OK  
Status: Optimal  
Raw capacity: 33.902 GB  
Usable capacity: 33.862 GB  
Current data rate: 2 Gbps  
Product ID: ST336753FC F  
Firmware version: B953  
Serial number: 3HX0K18500007339TY7A  
Vendor: IBM-ESXS  
Date of manufacture: April 5, 2003  
World-wide name: 20:00:00:04:cf:ff:02:a9  
Mode: Assigned  
Associated array: Array 1

Drive at Enclosure 50, Slot 9

Drive port: 1, Channel: 3, ID: 80/0x55  
Drive port: 2, Channel: 4, ID: 80/0x55  
Drive path redundancy: OK  
Status: Optimal  
Raw capacity: 33.902 GB  
Usable capacity: 33.862 GB  
Current data rate: 2 Gbps  
Product ID: ST336753FC F  
Firmware version: B953  
Serial number: 3HX0K21Z00007339TYTX  
Vendor: IBM-ESXS  
Date of manufacture: April 6, 2003  
World-wide name: 20:00:00:04:cf:ff:02:4f  
Mode: Assigned  
Associated array: Array 1

Drive at Enclosure 50, Slot 10

Drive port: 1, Channel: 4, ID: 96/0x3A  
Drive port: 2, Channel: 3, ID: 96/0x3A  
Drive path redundancy: OK  
Status: Optimal  
Raw capacity: 33.902 GB  
Usable capacity: 33.862 GB  
Current data rate: 2 Gbps  
Product ID: ST336753FC F

Firmware version: B953  
Serial number: 3HX0KBS700007339TYWD  
Vendor: IBM-ESXS  
Date of manufacture: April 6, 2003  
World-wide name: 20:00:00:04:cf:ff:12:49  
Mode: Assigned  
Associated array: Array 1

Drive at Enclosure 50, Slot 11

Drive port: 1, Channel: 3, ID: 64/0x72  
Drive port: 2, Channel: 4, ID: 64/0x72  
Drive path redundancy: OK  
Status: Optimal  
Raw capacity: 33.902 GB  
Usable capacity: 33.862 GB  
Current data rate: 2 Gbps  
Product ID: ST336753FC F  
Firmware version: B953  
Serial number: 3HX0KCSP00007340GTS1  
Vendor: IBM-ESXS  
Date of manufacture: April 6, 2003  
World-wide name: 20:00:00:04:cf:ff:0d:4f  
Mode: Assigned  
Associated array: Array 1

Drive at Enclosure 50, Slot 12

Drive port: 1, Channel: 4, ID: 72/0x67  
Drive port: 2, Channel: 3, ID: 72/0x67  
Drive path redundancy: OK  
Status: Optimal  
Raw capacity: 33.902 GB  
Usable capacity: 33.862 GB  
Current data rate: 2 Gbps  
Product ID: ST336753FC F  
Firmware version: B953  
Serial number: 3HX0K78J000073405G8V  
Vendor: IBM-ESXS  
Date of manufacture: April 5, 2003  
World-wide name: 20:00:00:04:cf:ff:e6:20  
Mode: Assigned  
Associated array: Array 1

Drive at Enclosure 50, Slot 13

Drive port: 1, Channel: 3, ID: 88/0x4B  
Drive port: 2, Channel: 4, ID: 88/0x4B  
Drive path redundancy: OK  
Status: Optimal  
Raw capacity: 33.902 GB  
Usable capacity: 33.862 GB  
Current data rate: 2 Gbps  
Product ID: ST336753FC F  
Firmware version: B953  
Serial number: 3HX0JYAV000073405FTQ  
Vendor: IBM-ESXS  
Date of manufacture: April 6, 2003  
World-wide name: 20:00:00:04:cf:ff:12:d9  
Mode: Assigned  
Associated array: Array 1

Drive at Enclosure 50, Slot 14

Drive port: 1, Channel: 4, ID: 104/0x2E  
Drive port: 2, Channel: 3, ID: 104/0x2E  
Drive path redundancy: OK  
Status: Optimal  
Raw capacity: 33.902 GB  
Usable capacity: 33.862 GB  
Current data rate: 2 Gbps  
Product ID: ST336753FC F

Firmware version: B953  
Serial number: 3HX0KBK6000073410J1W  
Vendor: IBM-ESXS  
Date of manufacture: April 6, 2003  
World-wide name: 20:00:00:04:cf:ff:14:31  
Mode: Assigned  
Associated array: Array 1

Drive at Enclosure 51, Slot 1

Drive port: 1, Channel: 3, ID: 8/0xD9  
Drive port: 2, Channel: 4, ID: 8/0xD9  
Drive path redundancy: OK  
Status: Optimal  
Raw capacity: 33.902 GB  
Usable capacity: 33.862 GB  
Current data rate: 2 Gbps  
Product ID: ST336753FC F  
Firmware version: B953  
Serial number: 3HX0KD0Q00007340GV0S  
Vendor: IBM-ESXS  
Date of manufacture: April 6, 2003  
World-wide name: 20:00:00:04:cf:ff:13:60  
Mode: Assigned  
Associated array: Array 1

Drive at Enclosure 51, Slot 2

Drive port: 1, Channel: 4, ID: 9/0xD6  
Drive port: 2, Channel: 3, ID: 9/0xD6  
Drive path redundancy: OK  
Status: Optimal  
Raw capacity: 33.902 GB  
Usable capacity: 33.862 GB  
Current data rate: 2 Gbps  
Product ID: ST336753FC F  
Firmware version: B953  
Serial number: 3HX0K21600007340WERT  
Vendor: IBM-ESXS  
Date of manufacture: April 6, 2003  
World-wide name: 20:00:00:04:cf:ff:1a:6a  
Mode: Assigned  
Associated array: Array 1

Drive at Enclosure 51, Slot 3

Drive port: 1, Channel: 3, ID: 10/0xD5  
Drive port: 2, Channel: 4, ID: 10/0xD5  
Drive path redundancy: OK  
Status: Optimal  
Raw capacity: 33.902 GB  
Usable capacity: 33.862 GB  
Current data rate: 2 Gbps  
Product ID: ST336753FC F  
Firmware version: B953  
Serial number: 3HX0K4ZS00007339TYCQ  
Vendor: IBM-ESXS  
Date of manufacture: April 5, 2003  
World-wide name: 20:00:00:04:cf:f9:f5:98  
Mode: Assigned  
Associated array: Array 1

Drive at Enclosure 51, Slot 4

Drive port: 1, Channel: 4, ID: 11/0xD4  
Drive port: 2, Channel: 3, ID: 11/0xD4  
Drive path redundancy: OK  
Status: Optimal  
Raw capacity: 33.902 GB  
Usable capacity: 33.862 GB  
Current data rate: 2 Gbps  
Product ID: ST336753FC F

Firmware version: B953  
Serial number: 3HX0JXVT000073410J67  
Vendor: IBM-ESXS  
Date of manufacture: April 6, 2003  
World-wide name: 20:00:00:04:cf:ff:14:24  
Mode: Assigned  
Associated array: Array 1

Drive at Enclosure 51, Slot 5

Drive port: 1, Channel: 3, ID: 12/0xD3  
Drive port: 2, Channel: 4, ID: 12/0xD3  
Drive path redundancy: OK  
Status: Optimal  
Raw capacity: 33.902 GB  
Usable capacity: 33.862 GB  
Current data rate: 2 Gbps  
Product ID: ST336753FC F  
Firmware version: B953  
Serial number: 3HX0HRFR000073392DU2  
Vendor: IBM-ESXS  
Date of manufacture: April 6, 2003  
World-wide name: 20:00:00:04:cf:ff:1b:33  
Mode: Assigned  
Associated array: Array 1

Drive at Enclosure 51, Slot 6

Drive port: 1, Channel: 4, ID: 13/0xD2  
Drive port: 2, Channel: 3, ID: 13/0xD2  
Drive path redundancy: OK  
Status: Optimal  
Raw capacity: 33.902 GB  
Usable capacity: 33.862 GB  
Current data rate: 2 Gbps  
Product ID: ST336753FC F  
Firmware version: B953  
Serial number: 3HX0HT9E0000734059QJ  
Vendor: IBM-ESXS  
Date of manufacture: April 5, 2003  
World-wide name: 20:00:00:04:cf:f9:e7:d9  
Mode: Assigned  
Associated array: Array 1

Drive at Enclosure 51, Slot 7

Drive port: 1, Channel: 3, ID: 14/0xD1  
Drive port: 2, Channel: 4, ID: 14/0xD1  
Drive path redundancy: OK  
Status: Optimal  
Raw capacity: 33.902 GB  
Usable capacity: 33.862 GB  
Current data rate: 2 Gbps  
Product ID: ST336753FC F  
Firmware version: B953  
Serial number: 3HX0K6AP00007340GUEQ  
Vendor: IBM-ESXS  
Date of manufacture: April 6, 2003  
World-wide name: 20:00:00:04:cf:ff:12:b9  
Mode: Assigned  
Associated array: Array 1

Drive at Enclosure 51, Slot 8

Drive port: 1, Channel: 4, ID: 15/0xCE  
Drive port: 2, Channel: 3, ID: 15/0xCE  
Drive path redundancy: OK  
Status: Optimal  
Raw capacity: 33.902 GB  
Usable capacity: 33.862 GB  
Current data rate: 2 Gbps  
Product ID: ST336753FC F

Firmware version: B953  
Serial number: 3HX0V4WM00007346PYN8  
Vendor: IBM-ESXS  
Date of manufacture: May 17, 2003  
World-wide name: 20:00:00:0c:50:20:a1:34  
Mode: Assigned  
Associated array: Array 1

Drive at Enclosure 51, Slot 9

Drive port: 1, Channel: 3, ID: 81/0x54  
Drive port: 2, Channel: 4, ID: 81/0x54  
Drive path redundancy: OK  
Status: Optimal  
Raw capacity: 33.902 GB  
Usable capacity: 33.862 GB  
Current data rate: 2 Gbps  
Product ID: ST336753FC F  
Firmware version: B953  
Serial number: 3HX0KD5Q000073410J5M  
Vendor: IBM-ESXS  
Date of manufacture: April 6, 2003  
World-wide name: 20:00:00:04:cf:ff:14:64  
Mode: Assigned  
Associated array: Array 1

Drive at Enclosure 51, Slot 10

Drive port: 1, Channel: 4, ID: 97/0x39  
Drive port: 2, Channel: 3, ID: 97/0x39  
Drive path redundancy: OK  
Status: Optimal  
Raw capacity: 33.902 GB  
Usable capacity: 33.862 GB  
Current data rate: 2 Gbps  
Product ID: ST336753FC F  
Firmware version: B953  
Serial number: 3HX0KBHK000073410HP4  
Vendor: IBM-ESXS  
Date of manufacture: April 6, 2003  
World-wide name: 20:00:00:04:cf:ff:12:c0  
Mode: Assigned  
Associated array: Array 1

Drive at Enclosure 51, Slot 11

Drive port: 1, Channel: 3, ID: 65/0x71  
Drive port: 2, Channel: 4, ID: 65/0x71  
Drive path redundancy: OK  
Status: Optimal  
Raw capacity: 33.902 GB  
Usable capacity: 33.862 GB  
Current data rate: 2 Gbps  
Product ID: ST336753FC F  
Firmware version: B953  
Serial number: 3HX0KBH900007340GUVL  
Vendor: IBM-ESXS  
Date of manufacture: April 6, 2003  
World-wide name: 20:00:00:04:cf:ff:12:fd  
Mode: Assigned  
Associated array: Array 1

Drive at Enclosure 51, Slot 12

Drive port: 1, Channel: 4, ID: 73/0x66  
Drive port: 2, Channel: 3, ID: 73/0x66  
Drive path redundancy: OK  
Status: Optimal  
Raw capacity: 33.902 GB  
Usable capacity: 33.862 GB  
Current data rate: 2 Gbps  
Product ID: ST336753FC F

Firmware version: B953  
Serial number: 3HX0JYXQ000073409KX0  
Vendor: IBM-ESXS  
Date of manufacture: April 6, 2003  
World-wide name: 20:00:00:04:cf:ff:0d:2b  
Mode: Assigned  
Associated array: Array 1

Drive at Enclosure 51, Slot 13

Drive port: 1, Channel: 3, ID: 89/0x4A  
Drive port: 2, Channel: 4, ID: 89/0x4A  
Drive path redundancy: OK  
Status: Optimal  
Raw capacity: 33.902 GB  
Usable capacity: 33.862 GB  
Current data rate: 2 Gbps  
Product ID: ST336753FC F  
Firmware version: B953  
Serial number: 3HX0KD3J00007340GUUA  
Vendor: IBM-ESXS  
Date of manufacture: April 6, 2003  
World-wide name: 20:00:00:04:cf:ff:13:01  
Mode: Assigned  
Associated array: Array 1

Drive at Enclosure 51, Slot 14

Drive port: 1, Channel: 4, ID: 105/0x2D  
Drive port: 2, Channel: 3, ID: 105/0x2D  
Drive path redundancy: OK  
Status: Optimal  
Raw capacity: 33.902 GB  
Usable capacity: 33.862 GB  
Current data rate: 2 Gbps  
Product ID: ST336753FC F  
Firmware version: B953  
Serial number: 3HX0KCCN00007340GTR1  
Vendor: IBM-ESXS  
Date of manufacture: April 6, 2003  
World-wide name: 20:00:00:04:cf:ff:13:45  
Mode: Assigned  
Associated array: Array 1

Drive at Enclosure 52, Slot 1

Drive port: 1, Channel: 3, ID: 16/0xCD  
Drive port: 2, Channel: 4, ID: 16/0xCD  
Drive path redundancy: OK  
Status: Optimal  
Raw capacity: 33.902 GB  
Usable capacity: 33.862 GB  
Current data rate: 2 Gbps  
Product ID: ST336753FC F  
Firmware version: B953  
Serial number: 3HX0HT370000734058DA  
Vendor: IBM-ESXS  
Date of manufacture: April 5, 2003  
World-wide name: 20:00:00:04:cf:f9:e7:e8  
Mode: Assigned  
Associated array: Array 2

Drive at Enclosure 52, Slot 2

Drive port: 1, Channel: 4, ID: 17/0xCC  
Drive port: 2, Channel: 3, ID: 17/0xCC  
Drive path redundancy: OK  
Status: Optimal  
Raw capacity: 33.902 GB  
Usable capacity: 33.862 GB  
Current data rate: 2 Gbps  
Product ID: ST336753FC F

Firmware version: B953  
Serial number: 3HX0K7DX00007340X57T  
Vendor: IBM-ESXS  
Date of manufacture: April 4, 2003  
World-wide name: 20:00:00:04:cf:f9:e6:fd  
Mode: Assigned  
Associated array: Array 2

Drive at Enclosure 52, Slot 3

Drive port: 1, Channel: 3, ID: 18/0xCB  
Drive port: 2, Channel: 4, ID: 18/0xCB  
Drive path redundancy: OK  
Status: Optimal  
Raw capacity: 33.902 GB  
Usable capacity: 33.862 GB  
Current data rate: 2 Gbps  
Product ID: ST336753FC F  
Firmware version: B953  
Serial number: 3HX0KD1S00007340GUEP  
Vendor: IBM-ESXS  
Date of manufacture: April 6, 2003  
World-wide name: 20:00:00:04:cf:ff:14:77  
Mode: Assigned  
Associated array: Array 2

Drive at Enclosure 52, Slot 4

Drive port: 1, Channel: 4, ID: 19/0xCA  
Drive port: 2, Channel: 3, ID: 19/0xCA  
Drive path redundancy: OK  
Status: Optimal  
Raw capacity: 33.902 GB  
Usable capacity: 33.862 GB  
Current data rate: 2 Gbps  
Product ID: ST336753FC F  
Firmware version: B953  
Serial number: 3HX0KCCQ000073410J7R  
Vendor: IBM-ESXS  
Date of manufacture: April 6, 2003  
World-wide name: 20:00:00:04:cf:ff:12:e2  
Mode: Assigned  
Associated array: Array 2

Drive at Enclosure 52, Slot 5

Drive port: 1, Channel: 3, ID: 20/0xC9  
Drive port: 2, Channel: 4, ID: 20/0xC9  
Drive path redundancy: OK  
Status: Optimal  
Raw capacity: 33.902 GB  
Usable capacity: 33.862 GB  
Current data rate: 2 Gbps  
Product ID: ST336753FC F  
Firmware version: B953  
Serial number: 3HX0HM3Z000073409K3J  
Vendor: IBM-ESXS  
Date of manufacture: April 5, 2003  
World-wide name: 20:00:00:04:cf:f9:de:3c  
Mode: Assigned  
Associated array: Array 2

Drive at Enclosure 52, Slot 6

Drive port: 1, Channel: 4, ID: 21/0xC7  
Drive port: 2, Channel: 3, ID: 21/0xC7  
Drive path redundancy: OK  
Status: Optimal  
Raw capacity: 33.902 GB  
Usable capacity: 33.862 GB  
Current data rate: 2 Gbps  
Product ID: ST336753FC F

Firmware version: B953  
Serial number: 3HX0KBKM000073410HTB  
Vendor: IBM-ESXS  
Date of manufacture: April 6, 2003  
World-wide name: 20:00:00:04:cf:ff:14:1e  
Mode: Assigned  
Associated array: Array 2

Drive at Enclosure 52, Slot 7

Drive port: 1, Channel: 3, ID: 22/0xC6  
Drive port: 2, Channel: 4, ID: 22/0xC6  
Drive path redundancy: OK  
Status: Optimal  
Raw capacity: 33.902 GB  
Usable capacity: 33.862 GB  
Current data rate: 2 Gbps  
Product ID: ST336753FC F  
Firmware version: B953  
Serial number: 3HX0HRLM0000734058G9  
Vendor: IBM-ESXS  
Date of manufacture: April 5, 2003  
World-wide name: 20:00:00:04:cf:f9:e8:10  
Mode: Assigned  
Associated array: Array 2

Drive at Enclosure 52, Slot 8

Drive port: 1, Channel: 4, ID: 23/0xC5  
Drive port: 2, Channel: 3, ID: 23/0xC5  
Drive path redundancy: OK  
Status: Optimal  
Raw capacity: 33.902 GB  
Usable capacity: 33.862 GB  
Current data rate: 2 Gbps  
Product ID: ST336753FC F  
Firmware version: B953  
Serial number: 3HX0KD4H000073410J6Q  
Vendor: IBM-ESXS  
Date of manufacture: April 6, 2003  
World-wide name: 20:00:00:04:cf:ff:13:e5  
Mode: Assigned  
Associated array: Array 2

Drive at Enclosure 52, Slot 9

Drive port: 1, Channel: 3, ID: 82/0x53  
Drive port: 2, Channel: 4, ID: 82/0x53  
Drive path redundancy: OK  
Status: Optimal  
Raw capacity: 33.902 GB  
Usable capacity: 33.862 GB  
Current data rate: 2 Gbps  
Product ID: ST336753FC F  
Firmware version: B953  
Serial number: 3HX0HKJE00007339RG55  
Vendor: IBM-ESXS  
Date of manufacture: April 5, 2003  
World-wide name: 20:00:00:04:cf:f9:e1:92  
Mode: Assigned  
Associated array: Array 2

Drive at Enclosure 52, Slot 10

Drive port: 1, Channel: 4, ID: 98/0x36  
Drive port: 2, Channel: 3, ID: 98/0x36  
Drive path redundancy: OK  
Status: Optimal  
Raw capacity: 33.902 GB  
Usable capacity: 33.862 GB  
Current data rate: 2 Gbps  
Product ID: ST336753FC F

Firmware version: B953  
Serial number: 3HX0HTJJ00007340GTT3  
Vendor: IBM-ESXS  
Date of manufacture: April 5, 2003  
World-wide name: 20:00:00:04:cf:f9:f4:f0  
Mode: Assigned  
Associated array: Array 2

Drive at Enclosure 52, Slot 11

Drive port: 1, Channel: 3, ID: 66/0x6E  
Drive port: 2, Channel: 4, ID: 66/0x6E  
Drive path redundancy: OK  
Status: Optimal  
Raw capacity: 33.902 GB  
Usable capacity: 33.862 GB  
Current data rate: 2 Gbps  
Product ID: ST336753FC F  
Firmware version: B953  
Serial number: 3HX0JPXN00007340GUFJ  
Vendor: IBM-ESXS  
Date of manufacture: April 6, 2003  
World-wide name: 20:00:00:04:cf:ff:14:7c  
Mode: Assigned  
Associated array: Array 2

Drive at Enclosure 52, Slot 12

Drive port: 1, Channel: 4, ID: 74/0x65  
Drive port: 2, Channel: 3, ID: 74/0x65  
Drive path redundancy: OK  
Status: Optimal  
Raw capacity: 33.902 GB  
Usable capacity: 33.862 GB  
Current data rate: 2 Gbps  
Product ID: ST336753FC F  
Firmware version: B953  
Serial number: 3HX0K2CM00007340X549  
Vendor: IBM-ESXS  
Date of manufacture: April 5, 2003  
World-wide name: 20:00:00:04:cf:f9:fa:f1  
Mode: Assigned  
Associated array: Array 2

Drive at Enclosure 52, Slot 13

Drive port: 1, Channel: 3, ID: 90/0x49  
Drive port: 2, Channel: 4, ID: 90/0x49  
Drive path redundancy: OK  
Status: Optimal  
Raw capacity: 33.902 GB  
Usable capacity: 33.862 GB  
Current data rate: 2 Gbps  
Product ID: ST336753FC F  
Firmware version: B953  
Serial number: 3HX0JK7K00007340X4R2  
Vendor: IBM-ESXS  
Date of manufacture: April 5, 2003  
World-wide name: 20:00:00:04:cf:f9:e5:c3  
Mode: Assigned  
Associated array: Array 2

Drive at Enclosure 52, Slot 14

Drive port: 1, Channel: 4, ID: 106/0x2C  
Drive port: 2, Channel: 3, ID: 106/0x2C  
Drive path redundancy: OK  
Status: Optimal  
Raw capacity: 33.902 GB  
Usable capacity: 33.862 GB  
Current data rate: 2 Gbps  
Product ID: ST336753FC F

Firmware version: B953  
Serial number: 3HX0KD2B000073410HPT  
Vendor: IBM-ESXS  
Date of manufacture: April 6, 2003  
World-wide name: 20:00:00:04:cf:ff:12:9f  
Mode: Assigned  
Associated array: Array 2

Drive at Enclosure 53, Slot 1

Drive port: 1, Channel: 3, ID: 24/0xC3  
Drive port: 2, Channel: 4, ID: 24/0xC3  
Drive path redundancy: OK  
Status: Optimal  
Raw capacity: 33.902 GB  
Usable capacity: 33.862 GB  
Current data rate: 2 Gbps  
Product ID: ST336753FC F  
Firmware version: B953  
Serial number: 3HX0HT2A000073392DVD  
Vendor: IBM-ESXS  
Date of manufacture: April 5, 2003  
World-wide name: 20:00:00:04:cf:f9:e3:83  
Mode: Assigned  
Associated array: Array 2

Drive at Enclosure 53, Slot 2

Drive port: 1, Channel: 4, ID: 25/0xBC  
Drive port: 2, Channel: 3, ID: 25/0xBC  
Drive path redundancy: OK  
Status: Optimal  
Raw capacity: 33.902 GB  
Usable capacity: 33.862 GB  
Current data rate: 2 Gbps  
Product ID: ST336753FC F  
Firmware version: B953  
Serial number: 3HX0KD3200007340GUEE  
Vendor: IBM-ESXS  
Date of manufacture: April 6, 2003  
World-wide name: 20:00:00:04:cf:ff:12:d3  
Mode: Assigned  
Associated array: Array 2

Drive at Enclosure 53, Slot 3

Drive port: 1, Channel: 3, ID: 26/0xBA  
Drive port: 2, Channel: 4, ID: 26/0xBA  
Drive path redundancy: OK  
Status: Optimal  
Raw capacity: 33.902 GB  
Usable capacity: 33.862 GB  
Current data rate: 2 Gbps  
Product ID: ST336753FC F  
Firmware version: B953  
Serial number: 3HX0HT6Q0000734058KL  
Vendor: IBM-ESXS  
Date of manufacture: April 5, 2003  
World-wide name: 20:00:00:04:cf:f9:e6:cb  
Mode: Assigned  
Associated array: Array 2

Drive at Enclosure 53, Slot 4

Drive port: 1, Channel: 4, ID: 27/0xB9  
Drive port: 2, Channel: 3, ID: 27/0xB9  
Drive path redundancy: OK  
Status: Optimal  
Raw capacity: 33.902 GB  
Usable capacity: 33.862 GB  
Current data rate: 2 Gbps  
Product ID: ST336753FC F

Firmware version: B953  
Serial number: 3HX0HRGE0000734059NF  
Vendor: IBM-ESXS  
Date of manufacture: April 5, 2003  
World-wide name: 20:00:00:04:cf:f9:e7:30  
Mode: Assigned  
Associated array: Array 2

Drive at Enclosure 53, Slot 5

Drive port: 1, Channel: 3, ID: 28/0xB6  
Drive port: 2, Channel: 4, ID: 28/0xB6  
Drive path redundancy: OK  
Status: Optimal  
Raw capacity: 33.902 GB  
Usable capacity: 33.862 GB  
Current data rate: 2 Gbps  
Product ID: ST336753FC F  
Firmware version: B953  
Serial number: 3HX0HSZZ00007339TYPS  
Vendor: IBM-ESXS  
Date of manufacture: April 5, 2003  
World-wide name: 20:00:00:04:cf:f9:e6:11  
Mode: Assigned  
Associated array: Array 2

Drive at Enclosure 53, Slot 6

Drive port: 1, Channel: 4, ID: 29/0xB5  
Drive port: 2, Channel: 3, ID: 29/0xB5  
Drive path redundancy: OK  
Status: Optimal  
Raw capacity: 33.902 GB  
Usable capacity: 33.862 GB  
Current data rate: 2 Gbps  
Product ID: ST336753FC F  
Firmware version: B953  
Serial number: 3HX0HT4K00007340GV61  
Vendor: IBM-ESXS  
Date of manufacture: April 6, 2003  
World-wide name: 20:00:00:04:cf:ff:14:70  
Mode: Assigned  
Associated array: Array 2

Drive at Enclosure 53, Slot 7

Drive port: 1, Channel: 3, ID: 30/0xB4  
Drive port: 2, Channel: 4, ID: 30/0xB4  
Drive path redundancy: OK  
Status: Optimal  
Raw capacity: 33.902 GB  
Usable capacity: 33.862 GB  
Current data rate: 2 Gbps  
Product ID: ST336753FC F  
Firmware version: B953  
Serial number: 3HX0HRGA00007339TYUE  
Vendor: IBM-ESXS  
Date of manufacture: April 5, 2003  
World-wide name: 20:00:00:04:cf:f9:e6:6f  
Mode: Assigned  
Associated array: Array 2

Drive at Enclosure 53, Slot 8

Drive port: 1, Channel: 4, ID: 31/0xB3  
Drive port: 2, Channel: 3, ID: 31/0xB3  
Drive path redundancy: OK  
Status: Optimal  
Raw capacity: 33.902 GB  
Usable capacity: 33.862 GB  
Current data rate: 2 Gbps  
Product ID: ST336753FC F

Firmware version: B953  
Serial number: 3HX0K4KH00007339TYA5  
Vendor: IBM-ESXS  
Date of manufacture: April 5, 2003  
World-wide name: 20:00:00:04:cf:ff:02:9c  
Mode: Assigned  
Associated array: Array 2

Drive at Enclosure 53, Slot 9

Drive port: 1, Channel: 3, ID: 83/0x52  
Drive port: 2, Channel: 4, ID: 83/0x52  
Drive path redundancy: OK  
Status: Optimal  
Raw capacity: 33.902 GB  
Usable capacity: 33.862 GB  
Current data rate: 2 Gbps  
Product ID: ST336753FC F  
Firmware version: B953  
Serial number: 3HX0KD0600007340GUUY  
Vendor: IBM-ESXS  
Date of manufacture: April 6, 2003  
World-wide name: 20:00:00:04:cf:ff:13:4f  
Mode: Assigned  
Associated array: Array 2

Drive at Enclosure 53, Slot 10

Drive port: 1, Channel: 4, ID: 99/0x35  
Drive port: 2, Channel: 3, ID: 99/0x35  
Drive path redundancy: OK  
Status: Optimal  
Raw capacity: 33.902 GB  
Usable capacity: 33.862 GB  
Current data rate: 2 Gbps  
Product ID: ST336753FC F  
Firmware version: B953  
Serial number: 3HX0KBMC000073410HRB  
Vendor: IBM-ESXS  
Date of manufacture: April 6, 2003  
World-wide name: 20:00:00:04:cf:ff:13:e1  
Mode: Assigned  
Associated array: Array 2

Drive at Enclosure 53, Slot 11

Drive port: 1, Channel: 3, ID: 67/0x6D  
Drive port: 2, Channel: 4, ID: 67/0x6D  
Drive path redundancy: OK  
Status: Optimal  
Raw capacity: 33.902 GB  
Usable capacity: 33.862 GB  
Current data rate: 2 Gbps  
Product ID: ST336753FC F  
Firmware version: B953  
Serial number: 3HX0KCSQ000073410HPG  
Vendor: IBM-ESXS  
Date of manufacture: April 6, 2003  
World-wide name: 20:00:00:04:cf:ff:12:a8  
Mode: Assigned  
Associated array: Array 2

Drive at Enclosure 53, Slot 12

Drive port: 1, Channel: 4, ID: 75/0x63  
Drive port: 2, Channel: 3, ID: 75/0x63  
Drive path redundancy: OK  
Status: Optimal  
Raw capacity: 33.902 GB  
Usable capacity: 33.862 GB  
Current data rate: 2 Gbps  
Product ID: ST336753FC F



Firmware version: B953  
Serial number: 3HX0HLW7000073409KFA  
Vendor: IBM-ESXS  
Date of manufacture: April 5, 2003  
World-wide name: 20:00:00:04:cf:f9:da:ed  
Mode: Assigned  
Associated array: Array 2

Drive at Enclosure 53, Slot 13

Drive port: 1, Channel: 3, ID: 91/0x47  
Drive port: 2, Channel: 4, ID: 91/0x47  
Drive path redundancy: OK  
Status: Optimal  
Raw capacity: 33.902 GB  
Usable capacity: 33.862 GB  
Current data rate: 2 Gbps  
Product ID: ST336753FC F  
Firmware version: B953  
Serial number: 3HX0JXQ700007340GU3Z  
Vendor: IBM-ESXS  
Date of manufacture: April 6, 2003  
World-wide name: 20:00:00:04:cf:ff:12:8c  
Mode: Assigned  
Associated array: Array 2

Drive at Enclosure 53, Slot 14

Drive port: 1, Channel: 4, ID: 107/0x2B  
Drive port: 2, Channel: 3, ID: 107/0x2B  
Drive path redundancy: OK  
Status: Optimal  
Raw capacity: 33.902 GB  
Usable capacity: 33.862 GB  
Current data rate: 2 Gbps  
Product ID: ST336753FC F  
Firmware version: B953  
Serial number: 3HX0HPNG0000734058CL  
Vendor: IBM-ESXS  
Date of manufacture: April 5, 2003  
World-wide name: 20:00:00:04:cf:f9:e7:6f  
Mode: Assigned  
Associated array: Array 2

Drive at Enclosure 54, Slot 1

Drive port: 1, Channel: 1, ID: 32/0xB2  
Drive port: 2, Channel: 2, ID: 32/0xB2  
Drive path redundancy: OK  
Status: Optimal  
Raw capacity: 33.902 GB  
Usable capacity: 33.862 GB  
Current data rate: 2 Gbps  
Product ID: ST336753FC F  
Firmware version: B953  
Serial number: 3HX0KCFB0000734058FK  
Vendor: IBM-ESXS  
Date of manufacture: April 6, 2003  
World-wide name: 20:00:00:04:cf:ff:0d:72  
Mode: Assigned  
Associated array: Array 3

Drive at Enclosure 54, Slot 2

Drive port: 1, Channel: 2, ID: 33/0xB1  
Drive port: 2, Channel: 1, ID: 33/0xB1  
Drive path redundancy: OK  
Status: Optimal  
Raw capacity: 33.902 GB  
Usable capacity: 33.862 GB  
Current data rate: 2 Gbps  
Product ID: ST336753FC F

Firmware version: B953  
Serial number: 3HX0JZ8S0000734059RD  
Vendor: IBM-ESXS  
Date of manufacture: April 6, 2003  
World-wide name: 20:00:00:04:cf:ff:0d:10  
Mode: Assigned  
Associated array: Array 3

Drive at Enclosure 54, Slot 3

Drive port: 1, Channel: 1, ID: 34/0xAE  
Drive port: 2, Channel: 2, ID: 34/0xAE  
Drive path redundancy: OK  
Status: Optimal  
Raw capacity: 33.902 GB  
Usable capacity: 33.862 GB  
Current data rate: 2 Gbps  
Product ID: ST336753FC F  
Firmware version: B953  
Serial number: 3HX0KBS100007340GUEM  
Vendor: IBM-ESXS  
Date of manufacture: April 6, 2003  
World-wide name: 20:00:00:04:cf:ff:12:be  
Mode: Assigned  
Associated array: Array 3

Drive at Enclosure 54, Slot 4

Drive port: 1, Channel: 2, ID: 35/0xAD  
Drive port: 2, Channel: 1, ID: 35/0xAD  
Drive path redundancy: OK  
Status: Optimal  
Raw capacity: 33.902 GB  
Usable capacity: 33.862 GB  
Current data rate: 2 Gbps  
Product ID: ST336753FC F  
Firmware version: B953  
Serial number: 3HX0HTJN000073393G76  
Vendor: IBM-ESXS  
Date of manufacture: April 5, 2003  
World-wide name: 20:00:00:04:cf:f9:fa:e8  
Mode: Assigned  
Associated array: Array 3

Drive at Enclosure 54, Slot 5

Drive port: 1, Channel: 1, ID: 36/0xAC  
Drive port: 2, Channel: 2, ID: 36/0xAC  
Drive path redundancy: OK  
Status: Optimal  
Raw capacity: 33.902 GB  
Usable capacity: 33.862 GB  
Current data rate: 2 Gbps  
Product ID: ST336753FC F  
Firmware version: B953  
Serial number: 3HX0J0FC000073405A6H  
Vendor: IBM-ESXS  
Date of manufacture: April 6, 2003  
World-wide name: 20:00:00:04:cf:ff:07:dc  
Mode: Assigned  
Associated array: Array 3

Drive at Enclosure 54, Slot 6

Drive port: 1, Channel: 2, ID: 37/0xAB  
Drive port: 2, Channel: 1, ID: 37/0xAB  
Drive path redundancy: OK  
Status: Optimal  
Raw capacity: 33.902 GB  
Usable capacity: 33.862 GB  
Current data rate: 2 Gbps  
Product ID: ST336753FC F

Firmware version: B953  
Serial number: 3HX0JZKX00007339GME1  
Vendor: IBM-ESXS  
Date of manufacture: April 6, 2003  
World-wide name: 20:00:00:04:cf:ff:0e:81  
Mode: Assigned  
Associated array: Array 3

Drive at Enclosure 54, Slot 7

Drive port: 1, Channel: 1, ID: 38/0xAA  
Drive port: 2, Channel: 2, ID: 38/0xAA  
Drive path redundancy: OK  
Status: Optimal  
Raw capacity: 33.902 GB  
Usable capacity: 33.862 GB  
Current data rate: 2 Gbps  
Product ID: ST336753FC F  
Firmware version: B953  
Serial number: 3HX0HWVL0000734059MX  
Vendor: IBM-ESXS  
Date of manufacture: April 5, 2003  
World-wide name: 20:00:00:04:cf:f9:fc:93  
Mode: Assigned  
Associated array: Array 3

Drive at Enclosure 54, Slot 8

Drive port: 1, Channel: 2, ID: 39/0xA9  
Drive port: 2, Channel: 1, ID: 39/0xA9  
Drive path redundancy: OK  
Status: Optimal  
Raw capacity: 33.902 GB  
Usable capacity: 33.862 GB  
Current data rate: 2 Gbps  
Product ID: ST336753FC F  
Firmware version: B953  
Serial number: 3HX0K2ST000073392D93  
Vendor: IBM-ESXS  
Date of manufacture: April 5, 2003  
World-wide name: 20:00:00:04:cf:ff:03:1b  
Mode: Assigned  
Associated array: Array 3

Drive at Enclosure 54, Slot 9

Drive port: 1, Channel: 1, ID: 84/0x51  
Drive port: 2, Channel: 2, ID: 84/0x51  
Drive path redundancy: OK  
Status: Optimal  
Raw capacity: 33.902 GB  
Usable capacity: 33.862 GB  
Current data rate: 2 Gbps  
Product ID: ST336753FC F  
Firmware version: B953  
Serial number: 3HX0JKQD000073405FRX  
Vendor: IBM-ESXS  
Date of manufacture: April 5, 2003  
World-wide name: 20:00:00:04:cf:f9:e5:e9  
Mode: Assigned  
Associated array: Array 3

Drive at Enclosure 54, Slot 10

Drive port: 1, Channel: 2, ID: 100/0x34  
Drive port: 2, Channel: 1, ID: 100/0x34  
Drive path redundancy: OK  
Status: Optimal  
Raw capacity: 33.902 GB  
Usable capacity: 33.862 GB  
Current data rate: 2 Gbps  
Product ID: ST336753FC F

Firmware version: B953  
Serial number: 3HX0J59Q000073392DXD  
Vendor: IBM-ESXS  
Date of manufacture: April 5, 2003  
World-wide name: 20:00:00:04:cf:f9:e2:ed  
Mode: Assigned  
Associated array: Array 3

Drive at Enclosure 54, Slot 11

Drive port: 1, Channel: 1, ID: 68/0x6C  
Drive port: 2, Channel: 2, ID: 68/0x6C  
Drive path redundancy: OK  
Status: Optimal  
Raw capacity: 33.902 GB  
Usable capacity: 33.862 GB  
Current data rate: 2 Gbps  
Product ID: ST336753FC F  
Firmware version: B953  
Serial number: 3HX0JJTV000073405G5Q  
Vendor: IBM-ESXS  
Date of manufacture: April 5, 2003  
World-wide name: 20:00:00:04:cf:f9:e5:03  
Mode: Assigned  
Associated array: Array 3

Drive at Enclosure 54, Slot 12

Drive port: 1, Channel: 2, ID: 76/0x5C  
Drive port: 2, Channel: 1, ID: 76/0x5C  
Drive path redundancy: OK  
Status: Optimal  
Raw capacity: 33.902 GB  
Usable capacity: 33.862 GB  
Current data rate: 2 Gbps  
Product ID: ST336753FC F  
Firmware version: B953  
Serial number: 3HX0HMS000073405G5Y  
Vendor: IBM-ESXS  
Date of manufacture: April 6, 2003  
World-wide name: 20:00:00:04:cf:ff:0d:00  
Mode: Assigned  
Associated array: Array 3

Drive at Enclosure 54, Slot 13

Drive port: 1, Channel: 1, ID: 92/0x46  
Drive port: 2, Channel: 2, ID: 92/0x46  
Drive path redundancy: OK  
Status: Optimal  
Raw capacity: 33.902 GB  
Usable capacity: 33.862 GB  
Current data rate: 2 Gbps  
Product ID: ST336753FC F  
Firmware version: B953  
Serial number: 3HX0HT440000734058HH  
Vendor: IBM-ESXS  
Date of manufacture: April 5, 2003  
World-wide name: 20:00:00:04:cf:f9:e6:99  
Mode: Assigned  
Associated array: Array 3

Drive at Enclosure 54, Slot 14

Drive port: 1, Channel: 2, ID: 108/0x2A  
Drive port: 2, Channel: 1, ID: 108/0x2A  
Drive path redundancy: OK  
Status: Optimal  
Raw capacity: 33.902 GB  
Usable capacity: 33.862 GB  
Current data rate: 2 Gbps  
Product ID: ST336753FC F

Firmware version: B953  
Serial number: 3HX0HM3E000073393FH6  
Vendor: IBM-ESXS  
Date of manufacture: April 6, 2003  
World-wide name: 20:00:00:04:cf:f9:fb:f7  
Mode: Assigned  
Associated array: Array 3

Drive at Enclosure 55, Slot 1

Drive port: 1, Channel: 1, ID: 40/0xA7  
Drive port: 2, Channel: 2, ID: 40/0xA7  
Drive path redundancy: OK  
Status: Optimal  
Raw capacity: 33.902 GB  
Usable capacity: 33.862 GB  
Current data rate: 2 Gbps  
Product ID: ST336753FC F  
Firmware version: B953  
Serial number: 3HX0K0AT000073410HT3  
Vendor: IBM-ESXS  
Date of manufacture: April 6, 2003  
World-wide name: 20:00:00:04:cf:ff:12:a2  
Mode: Assigned  
Associated array: Array 3

Drive at Enclosure 55, Slot 2

Drive port: 1, Channel: 2, ID: 41/0xA6  
Drive port: 2, Channel: 1, ID: 41/0xA6  
Drive path redundancy: OK  
Status: Optimal  
Raw capacity: 33.902 GB  
Usable capacity: 33.862 GB  
Current data rate: 2 Gbps  
Product ID: ST336753FC F  
Firmware version: B953  
Serial number: 3HX0K66J00007339SNYY  
Vendor: IBM-ESXS  
Date of manufacture: April 5, 2003  
World-wide name: 20:00:00:04:cf:f9:fa:c3  
Mode: Assigned  
Associated array: Array 3

Drive at Enclosure 55, Slot 3

Drive port: 1, Channel: 1, ID: 42/0xA5  
Drive port: 2, Channel: 2, ID: 42/0xA5  
Drive path redundancy: OK  
Status: Optimal  
Raw capacity: 33.902 GB  
Usable capacity: 33.862 GB  
Current data rate: 2 Gbps  
Product ID: ST336753FC F  
Firmware version: B953  
Serial number: 3HX0HT7V0000734059QP  
Vendor: IBM-ESXS  
Date of manufacture: April 5, 2003  
World-wide name: 20:00:00:04:cf:f9:e7:05  
Mode: Assigned  
Associated array: Array 3

Drive at Enclosure 55, Slot 4

Drive port: 1, Channel: 2, ID: 43/0xA3  
Drive port: 2, Channel: 1, ID: 43/0xA3  
Drive path redundancy: OK  
Status: Optimal  
Raw capacity: 33.902 GB  
Usable capacity: 33.862 GB  
Current data rate: 2 Gbps  
Product ID: ST336753FC F

Firmware version: B953  
Serial number: 3HX0HT1S000073405FTC  
Vendor: IBM-ESXS  
Date of manufacture: April 5, 2003  
World-wide name: 20:00:00:04:cf:f9:e4:b2  
Mode: Assigned  
Associated array: Array 3

Drive at Enclosure 55, Slot 5

Drive port: 1, Channel: 1, ID: 44/0x9F  
Drive port: 2, Channel: 2, ID: 44/0x9F  
Drive path redundancy: OK  
Status: Optimal  
Raw capacity: 33.902 GB  
Usable capacity: 33.862 GB  
Current data rate: 2 Gbps  
Product ID: ST336753FC F  
Firmware version: B953  
Serial number: 3HX0HSQJ00007340X5DG  
Vendor: IBM-ESXS  
Date of manufacture: April 5, 2003  
World-wide name: 20:00:00:04:cf:f9:e8:a2  
Mode: Assigned  
Associated array: Array 3

Drive at Enclosure 55, Slot 6

Drive port: 1, Channel: 2, ID: 45/0x9E  
Drive port: 2, Channel: 1, ID: 45/0x9E  
Drive path redundancy: OK  
Status: Optimal  
Raw capacity: 33.902 GB  
Usable capacity: 33.862 GB  
Current data rate: 2 Gbps  
Product ID: ST336753FC F  
Firmware version: B953  
Serial number: 3HX0JRFC00007340WEV6  
Vendor: IBM-ESXS  
Date of manufacture: April 5, 2003  
World-wide name: 20:00:00:04:cf:f9:fb:f0  
Mode: Assigned  
Associated array: Array 3

Drive at Enclosure 55, Slot 7

Drive port: 1, Channel: 1, ID: 46/0x9D  
Drive port: 2, Channel: 2, ID: 46/0x9D  
Drive path redundancy: OK  
Status: Optimal  
Raw capacity: 33.902 GB  
Usable capacity: 33.862 GB  
Current data rate: 2 Gbps  
Product ID: ST336753FC F  
Firmware version: B953  
Serial number: 3HX0K8GL00007340GTX4  
Vendor: IBM-ESXS  
Date of manufacture: April 6, 2003  
World-wide name: 20:00:00:04:cf:f9:fc:8e  
Mode: Assigned  
Associated array: Array 3

Drive at Enclosure 55, Slot 8

Drive port: 1, Channel: 2, ID: 47/0x9B  
Drive port: 2, Channel: 1, ID: 47/0x9B  
Drive path redundancy: OK  
Status: Optimal  
Raw capacity: 33.902 GB  
Usable capacity: 33.862 GB  
Current data rate: 2 Gbps  
Product ID: ST336753FC F

Firmware version: B953  
Serial number: 3HX0J1YZ000073405G8X  
Vendor: IBM-ESXS  
Date of manufacture: April 5, 2003  
World-wide name: 20:00:00:04:cf:f9:e5:27  
Mode: Assigned  
Associated array: Array 3

Drive at Enclosure 55, Slot 9

Drive port: 1, Channel: 1, ID: 85/0x4F  
Drive port: 2, Channel: 2, ID: 85/0x4F  
Drive path redundancy: OK  
Status: Optimal  
Raw capacity: 33.902 GB  
Usable capacity: 33.862 GB  
Current data rate: 2 Gbps  
Product ID: ST336753FC F  
Firmware version: B953  
Serial number: 3HX0HQ9H00007340WW0X  
Vendor: IBM-ESXS  
Date of manufacture: April 5, 2003  
World-wide name: 20:00:00:04:cf:ff:03:f2  
Mode: Assigned  
Associated array: Array 3

Drive at Enclosure 55, Slot 10

Drive port: 1, Channel: 2, ID: 101/0x33  
Drive port: 2, Channel: 1, ID: 101/0x33  
Drive path redundancy: OK  
Status: Optimal  
Raw capacity: 33.902 GB  
Usable capacity: 33.862 GB  
Current data rate: 2 Gbps  
Product ID: ST336753FC F  
Firmware version: B953  
Serial number: 3HX0JEC9000073392DAD  
Vendor: IBM-ESXS  
Date of manufacture: April 6, 2003  
World-wide name: 20:00:00:04:cf:f9:fb:f3  
Mode: Assigned  
Associated array: Array 3

Drive at Enclosure 55, Slot 11

Drive port: 1, Channel: 1, ID: 69/0x6B  
Drive port: 2, Channel: 2, ID: 69/0x6B  
Drive path redundancy: OK  
Status: Optimal  
Raw capacity: 33.902 GB  
Usable capacity: 33.862 GB  
Current data rate: 2 Gbps  
Product ID: ST336753FC F  
Firmware version: B953  
Serial number: 3HX0K60500007340GUV5  
Vendor: IBM-ESXS  
Date of manufacture: April 6, 2003  
World-wide name: 20:00:00:04:cf:ff:13:63  
Mode: Assigned  
Associated array: Array 3

Drive at Enclosure 55, Slot 12

Drive port: 1, Channel: 2, ID: 77/0x5A  
Drive port: 2, Channel: 1, ID: 77/0x5A  
Drive path redundancy: OK  
Status: Optimal  
Raw capacity: 33.902 GB  
Usable capacity: 33.862 GB  
Current data rate: 2 Gbps  
Product ID: ST336753FC F

Firmware version: B953  
Serial number: 3HX0G7QC000073405AAD  
Vendor: IBM-ESXS  
Date of manufacture: April 6, 2003  
World-wide name: 20:00:00:04:cf:ff:07:f6  
Mode: Assigned  
Associated array: Array 3

Drive at Enclosure 55, Slot 13

Drive port: 1, Channel: 1, ID: 93/0x45  
Drive port: 2, Channel: 2, ID: 93/0x45  
Drive path redundancy: OK  
Status: Optimal  
Raw capacity: 33.902 GB  
Usable capacity: 33.862 GB  
Current data rate: 2 Gbps  
Product ID: ST336753FC F  
Firmware version: B953  
Serial number: 3HX0KCSS000073409K71  
Vendor: IBM-ESXS  
Date of manufacture: April 6, 2003  
World-wide name: 20:00:00:04:cf:ff:0d:3a  
Mode: Assigned  
Associated array: Array 3

Drive at Enclosure 55, Slot 14

Drive port: 1, Channel: 2, ID: 109/0x29  
Drive port: 2, Channel: 1, ID: 109/0x29  
Drive path redundancy: OK  
Status: Optimal  
Raw capacity: 33.902 GB  
Usable capacity: 33.862 GB  
Current data rate: 2 Gbps  
Product ID: ST336753FC F  
Firmware version: B953  
Serial number: 3HX0K7K30000734059R0  
Vendor: IBM-ESXS  
Date of manufacture: April 5, 2003  
World-wide name: 20:00:00:04:cf:f9:e6:b7  
Mode: Assigned  
Associated array: Array 3

Drive at Enclosure 56, Slot 1

Drive port: 1, Channel: 1, ID: 48/0x98  
Drive port: 2, Channel: 2, ID: 48/0x98  
Drive path redundancy: OK  
Status: Optimal  
Raw capacity: 33.902 GB  
Usable capacity: 33.862 GB  
Current data rate: 2 Gbps  
Product ID: ST336753FC F  
Firmware version: B953  
Serial number: 3HX0KCRZ000073409KPT  
Vendor: IBM-ESXS  
Date of manufacture: April 6, 2003  
World-wide name: 20:00:00:04:cf:ff:0d:6a  
Mode: Assigned  
Associated array: Array 4

Drive at Enclosure 56, Slot 2

Drive port: 1, Channel: 2, ID: 49/0x97  
Drive port: 2, Channel: 1, ID: 49/0x97  
Drive path redundancy: OK  
Status: Optimal  
Raw capacity: 33.902 GB  
Usable capacity: 33.862 GB  
Current data rate: 2 Gbps  
Product ID: ST336753FC F

Firmware version: B953  
Serial number: 3HX0HRKH0000734058BU  
Vendor: IBM-ESXS  
Date of manufacture: April 5, 2003  
World-wide name: 20:00:00:04:cf:f9:e7:8f  
Mode: Assigned  
Associated array: Array 4

Drive at Enclosure 56, Slot 3

Drive port: 1, Channel: 1, ID: 50/0x90  
Drive port: 2, Channel: 2, ID: 50/0x90  
Drive path redundancy: OK  
Status: Optimal  
Raw capacity: 33.902 GB  
Usable capacity: 33.862 GB  
Current data rate: 2 Gbps  
Product ID: ST336753FC F  
Firmware version: B953  
Serial number: 3HX0JZFA00007339TY8F  
Vendor: IBM-ESXS  
Date of manufacture: April 6, 2003  
World-wide name: 20:00:00:04:cf:ff:0a:11  
Mode: Assigned  
Associated array: Array 4

Drive at Enclosure 56, Slot 4

Drive port: 1, Channel: 2, ID: 51/0x8F  
Drive port: 2, Channel: 1, ID: 51/0x8F  
Drive path redundancy: OK  
Status: Optimal  
Raw capacity: 33.902 GB  
Usable capacity: 33.862 GB  
Current data rate: 2 Gbps  
Product ID: ST336753FC F  
Firmware version: B953  
Serial number: 3HX0KCSN000073409KE8  
Vendor: IBM-ESXS  
Date of manufacture: April 6, 2003  
World-wide name: 20:00:00:04:cf:ff:0d:29  
Mode: Assigned  
Associated array: Array 4

Drive at Enclosure 56, Slot 5

Drive port: 1, Channel: 1, ID: 52/0x88  
Drive port: 2, Channel: 2, ID: 52/0x88  
Drive path redundancy: OK  
Status: Optimal  
Raw capacity: 33.902 GB  
Usable capacity: 33.862 GB  
Current data rate: 2 Gbps  
Product ID: ST336753FC F  
Firmware version: B953  
Serial number: 3HX0K61A00007339SNWQ  
Vendor: IBM-ESXS  
Date of manufacture: April 5, 2003  
World-wide name: 20:00:00:04:cf:ff:02:a0  
Mode: Assigned  
Associated array: Array 4

Drive at Enclosure 56, Slot 6

Drive port: 1, Channel: 2, ID: 53/0x84  
Drive port: 2, Channel: 1, ID: 53/0x84  
Drive path redundancy: OK  
Status: Optimal  
Raw capacity: 33.902 GB  
Usable capacity: 33.862 GB  
Current data rate: 2 Gbps  
Product ID: ST336753FC F

Firmware version: B953  
Serial number: 3HX0K12E00007340X555  
Vendor: IBM-ESXS  
Date of manufacture: April 6, 2003  
World-wide name: 20:00:00:04:cf:ff:0d:56  
Mode: Assigned  
Associated array: Array 4

Drive at Enclosure 56, Slot 7

Drive port: 1, Channel: 1, ID: 54/0x82  
Drive port: 2, Channel: 2, ID: 54/0x82  
Drive path redundancy: OK  
Status: Optimal  
Raw capacity: 33.902 GB  
Usable capacity: 33.862 GB  
Current data rate: 2 Gbps  
Product ID: ST336753FC F  
Firmware version: B953  
Serial number: 3HX0KCQ200007340GTV4  
Vendor: IBM-ESXS  
Date of manufacture: April 6, 2003  
World-wide name: 20:00:00:04:cf:ff:13:59  
Mode: Assigned  
Associated array: Array 4

Drive at Enclosure 56, Slot 8

Drive port: 1, Channel: 2, ID: 55/0x81  
Drive port: 2, Channel: 1, ID: 55/0x81  
Drive path redundancy: OK  
Status: Optimal  
Raw capacity: 33.902 GB  
Usable capacity: 33.862 GB  
Current data rate: 2 Gbps  
Product ID: ST336753FC F  
Firmware version: B953  
Serial number: 3HX0HMCR00007340WVVW  
Vendor: IBM-ESXS  
Date of manufacture: April 5, 2003  
World-wide name: 20:00:00:04:cf:f9:ec:04  
Mode: Assigned  
Associated array: Array 4

Drive at Enclosure 56, Slot 9

Drive port: 1, Channel: 1, ID: 86/0x4D  
Drive port: 2, Channel: 2, ID: 86/0x4D  
Drive path redundancy: OK  
Status: Optimal  
Raw capacity: 33.902 GB  
Usable capacity: 33.862 GB  
Current data rate: 2 Gbps  
Product ID: ST336753FC F  
Firmware version: B953  
Serial number: 3HX0HRPZ00007339TYME  
Vendor: IBM-ESXS  
Date of manufacture: April 5, 2003  
World-wide name: 20:00:00:04:cf:f9:e8:31  
Mode: Assigned  
Associated array: Array 4

Drive at Enclosure 56, Slot 10

Drive port: 1, Channel: 2, ID: 102/0x32  
Drive port: 2, Channel: 1, ID: 102/0x32  
Drive path redundancy: OK  
Status: Optimal  
Raw capacity: 33.902 GB  
Usable capacity: 33.862 GB  
Current data rate: 2 Gbps  
Product ID: ST336753FC F

Firmware version: B953  
Serial number: 3HX0JLZ00007339TYSA  
Vendor: IBM-ESXS  
Date of manufacture: April 4, 2003  
World-wide name: 20:00:00:04:cf:f9:e6:62  
Mode: Assigned  
Associated array: Array 4

Drive at Enclosure 56, Slot 11

Drive port: 1, Channel: 1, ID: 70/0x6A  
Drive port: 2, Channel: 2, ID: 70/0x6A  
Drive path redundancy: OK  
Status: Optimal  
Raw capacity: 33.902 GB  
Usable capacity: 33.862 GB  
Current data rate: 2 Gbps  
Product ID: ST336753FC F  
Firmware version: B953  
Serial number: 3HX0K7HC000073392DY3  
Vendor: IBM-ESXS  
Date of manufacture: April 5, 2003  
World-wide name: 20:00:00:04:cf:f9:e8:70  
Mode: Assigned  
Associated array: Array 4

Drive at Enclosure 56, Slot 12

Drive port: 1, Channel: 2, ID: 78/0x59  
Drive port: 2, Channel: 1, ID: 78/0x59  
Drive path redundancy: OK  
Status: Optimal  
Raw capacity: 33.902 GB  
Usable capacity: 33.862 GB  
Current data rate: 2 Gbps  
Product ID: ST336753FC F  
Firmware version: B953  
Serial number: 3HX0K89D000073405AAR  
Vendor: IBM-ESXS  
Date of manufacture: April 5, 2003  
World-wide name: 20:00:00:04:cf:f9:e7:ca  
Mode: Assigned  
Associated array: Array 4

Drive at Enclosure 56, Slot 13

Drive port: 1, Channel: 1, ID: 94/0x43  
Drive port: 2, Channel: 2, ID: 94/0x43  
Drive path redundancy: OK  
Status: Optimal  
Raw capacity: 33.902 GB  
Usable capacity: 33.862 GB  
Current data rate: 2 Gbps  
Product ID: ST336753FC F  
Firmware version: B953  
Serial number: 3HX0KCDG00007340GUES  
Vendor: IBM-ESXS  
Date of manufacture: April 6, 2003  
World-wide name: 20:00:00:04:cf:ff:14:7a  
Mode: Assigned  
Associated array: Array 4

Drive at Enclosure 56, Slot 14

Drive port: 1, Channel: 2, ID: 110/0x27  
Drive port: 2, Channel: 1, ID: 110/0x27  
Drive path redundancy: OK  
Status: Optimal  
Raw capacity: 33.902 GB  
Usable capacity: 33.862 GB  
Current data rate: 2 Gbps  
Product ID: ST336753FC F

Firmware version: B953  
Serial number: 3HX0HPVH000073405G9X  
Vendor: IBM-ESXS  
Date of manufacture: April 5, 2003  
World-wide name: 20:00:00:04:cf:f9:e7:6d  
Mode: Assigned  
Associated array: Array 4

Drive at Enclosure 57, Slot 1

Drive port: 1, Channel: 1, ID: 56/0x80  
Drive port: 2, Channel: 2, ID: 56/0x80  
Drive path redundancy: OK  
Status: Optimal  
Raw capacity: 33.902 GB  
Usable capacity: 33.862 GB  
Current data rate: 2 Gbps  
Product ID: ST336753FC F  
Firmware version: B953  
Serial number: 3HX0HRFJ0000734059PK  
Vendor: IBM-ESXS  
Date of manufacture: April 5, 2003  
World-wide name: 20:00:00:04:cf:f9:e7:f4  
Mode: Assigned  
Associated array: Array 4

Drive at Enclosure 57, Slot 2

Drive port: 1, Channel: 2, ID: 57/0x7C  
Drive port: 2, Channel: 1, ID: 57/0x7C  
Drive path redundancy: OK  
Status: Optimal  
Raw capacity: 33.902 GB  
Usable capacity: 33.862 GB  
Current data rate: 2 Gbps  
Product ID: ST336753FC F  
Firmware version: B953  
Serial number: 3HX0K6M20000734058HY  
Vendor: IBM-ESXS  
Date of manufacture: April 6, 2003  
World-wide name: 20:00:00:04:cf:ff:0d:0c  
Mode: Assigned  
Associated array: Array 4

Drive at Enclosure 57, Slot 3

Drive port: 1, Channel: 1, ID: 58/0x7A  
Drive port: 2, Channel: 2, ID: 58/0x7A  
Drive path redundancy: OK  
Status: Optimal  
Raw capacity: 33.902 GB  
Usable capacity: 33.862 GB  
Current data rate: 2 Gbps  
Product ID: ST336753FC F  
Firmware version: B953  
Serial number: 3HX0HSTQ00007339TYNE  
Vendor: IBM-ESXS  
Date of manufacture: April 5, 2003  
World-wide name: 20:00:00:04:cf:f9:e8:23  
Mode: Assigned  
Associated array: Array 4

Drive at Enclosure 57, Slot 4

Drive port: 1, Channel: 2, ID: 59/0x79  
Drive port: 2, Channel: 1, ID: 59/0x79  
Drive path redundancy: OK  
Status: Optimal  
Raw capacity: 33.902 GB  
Usable capacity: 33.862 GB  
Current data rate: 2 Gbps  
Product ID: ST336753FC F

Firmware version: B953  
Serial number: 3HX0HN4X00007340WVGE  
Vendor: IBM-ESXS  
Date of manufacture: April 4, 2003  
World-wide name: 20:00:00:04:cf:f9:e6:cc  
Mode: Assigned  
Associated array: Array 4

Drive at Enclosure 57, Slot 5

Drive port: 1, Channel: 1, ID: 60/0x76  
Drive port: 2, Channel: 2, ID: 60/0x76  
Drive path redundancy: OK  
Status: Optimal  
Raw capacity: 33.902 GB  
Usable capacity: 33.862 GB  
Current data rate: 2 Gbps  
Product ID: ST336753FC F  
Firmware version: B953  
Serial number: 3HX0HRLZ0000734058DQ  
Vendor: IBM-ESXS  
Date of manufacture: April 5, 2003  
World-wide name: 20:00:00:04:cf:f9:e8:16  
Mode: Assigned  
Associated array: Array 4

Drive at Enclosure 57, Slot 6

Drive port: 1, Channel: 2, ID: 61/0x75  
Drive port: 2, Channel: 1, ID: 61/0x75  
Drive path redundancy: OK  
Status: Optimal  
Raw capacity: 33.902 GB  
Usable capacity: 33.862 GB  
Current data rate: 2 Gbps  
Product ID: ST336753FC F  
Firmware version: B953  
Serial number: 3HX0HRMR0000734058F7  
Vendor: IBM-ESXS  
Date of manufacture: April 5, 2003  
World-wide name: 20:00:00:04:cf:f9:e7:c2  
Mode: Assigned  
Associated array: Array 4

Drive at Enclosure 57, Slot 7

Drive port: 1, Channel: 1, ID: 62/0x74  
Drive port: 2, Channel: 2, ID: 62/0x74  
Drive path redundancy: OK  
Status: Optimal  
Raw capacity: 33.902 GB  
Usable capacity: 33.862 GB  
Current data rate: 2 Gbps  
Product ID: ST336753FC F  
Firmware version: B953  
Serial number: 3HX0JYT0000073409KL1  
Vendor: IBM-ESXS  
Date of manufacture: April 6, 2003  
World-wide name: 20:00:00:04:cf:ff:0d:76  
Mode: Assigned  
Associated array: Array 4

Drive at Enclosure 57, Slot 8

Drive port: 1, Channel: 2, ID: 63/0x73  
Drive port: 2, Channel: 1, ID: 63/0x73  
Drive path redundancy: OK  
Status: Optimal  
Raw capacity: 33.902 GB  
Usable capacity: 33.862 GB  
Current data rate: 2 Gbps  
Product ID: ST336753FC F

Firmware version: B953  
Serial number: 3HX0HT3800007340X4XW  
Vendor: IBM-ESXS  
Date of manufacture: April 4, 2003  
World-wide name: 20:00:00:04:cf:f9:e5:70  
Mode: Assigned  
Associated array: Array 4

Drive at Enclosure 57, Slot 9

Drive port: 1, Channel: 1, ID: 87/0x4C  
Drive port: 2, Channel: 2, ID: 87/0x4C  
Drive path redundancy: OK  
Status: Optimal  
Raw capacity: 33.902 GB  
Usable capacity: 33.862 GB  
Current data rate: 2 Gbps  
Product ID: ST336753FC F  
Firmware version: B953  
Serial number: 3HX0HT4D000073405G9W  
Vendor: IBM-ESXS  
Date of manufacture: April 5, 2003  
World-wide name: 20:00:00:04:cf:f9:e7:99  
Mode: Assigned  
Associated array: Array 4

Drive at Enclosure 57, Slot 10

Drive port: 1, Channel: 2, ID: 103/0x31  
Drive port: 2, Channel: 1, ID: 103/0x31  
Drive path redundancy: OK  
Status: Optimal  
Raw capacity: 33.902 GB  
Usable capacity: 33.862 GB  
Current data rate: 2 Gbps  
Product ID: ST336753FC F  
Firmware version: B953  
Serial number: 3HX0K0H9000073405AAA  
Vendor: IBM-ESXS  
Date of manufacture: April 6, 2003  
World-wide name: 20:00:00:04:cf:ff:0d:af  
Mode: Assigned  
Associated array: Array 4

Drive at Enclosure 57, Slot 11

Drive port: 1, Channel: 1, ID: 71/0x69  
Drive port: 2, Channel: 2, ID: 71/0x69  
Drive path redundancy: OK  
Status: Optimal  
Raw capacity: 33.902 GB  
Usable capacity: 33.862 GB  
Current data rate: 2 Gbps  
Product ID: ST336753FC F  
Firmware version: B953  
Serial number: 3HX0JYAQ00007340GTXC  
Vendor: IBM-ESXS  
Date of manufacture: April 6, 2003  
World-wide name: 20:00:00:04:cf:ff:0d:73  
Mode: Assigned  
Associated array: Array 4

Drive at Enclosure 57, Slot 12

Drive port: 1, Channel: 2, ID: 79/0x56  
Drive port: 2, Channel: 1, ID: 79/0x56  
Drive path redundancy: OK  
Status: Optimal  
Raw capacity: 33.902 GB  
Usable capacity: 33.862 GB  
Current data rate: 2 Gbps  
Product ID: ST336753FC F

Firmware version: B953  
Serial number: 3HX0HF0G00007340X4RL  
Vendor: IBM-ESXS  
Date of manufacture: April 6, 2003  
World-wide name: 20:00:00:04:cf:ff:0d:22  
Mode: Assigned  
Associated array: Array 4

Drive at Enclosure 57, Slot 13

Drive port: 1, Channel: 1, ID: 95/0x3C  
Drive port: 2, Channel: 2, ID: 95/0x3C  
Drive path redundancy: OK  
Status: Optimal  
Raw capacity: 33.902 GB  
Usable capacity: 33.862 GB  
Current data rate: 2 Gbps  
Product ID: ST336753FC F  
Firmware version: B953  
Serial number: 3HX0KD4A00007340X4WA  
Vendor: IBM-ESXS  
Date of manufacture: April 6, 2003  
World-wide name: 20:00:00:04:cf:ff:18:c6  
Mode: Assigned  
Associated array: Array 4

Drive at Enclosure 57, Slot 14

Drive port: 1, Channel: 2, ID: 111/0x26  
Drive port: 2, Channel: 1, ID: 111/0x26  
Drive path redundancy: OK  
Status: Optimal  
Raw capacity: 33.902 GB  
Usable capacity: 33.862 GB  
Current data rate: 2 Gbps  
Product ID: ST336753FC F  
Firmware version: B953  
Serial number: 3HX0SQ8Q00007346NMGX  
Vendor: IBM-ESXS  
Date of manufacture: May 15, 2003  
World-wide name: 20:00:00:0c:50:20:95:2e  
Mode: Assigned  
Associated array: Array 4

ENCLOSURES-----

Controller Enclosure Overall Component Information

Minihub data rate mismatch: No  
Fan canister: Optimal  
Fan canister: Optimal  
Battery status: Optimal  
Age: 316 day(s)  
Days until replacement: 853 day(s)  
Power supply canister  
Status: Optimal  
Power supply canister  
Status: Optimal  
Temperature: Optimal  
Host mini-hub canister  
Status: Optimal  
Location: Controller B - Port 1  
Serial number: SN 1T14253141  
Part number: PN 19K1270  
Vendor: VN IBM  
Date of manufacture: November 1, 2001  
SFP  
Status: Optimal  
Location: In connection  
Supported data rate(s): 1 Gbps, 2 Gbps  
Link length: Intermediate  
Connector: LC

Transmitter type: Shortwave Laser w/o OFC  
Transmission media: TM Multi-mode 50m(M5) TM Multi-mode  
62.5m(M6)

IEEE company ID: 08 00 5a  
Revision: AA10  
Part number: IBM42P21SNY  
Serial number: 53P1476000381  
Vendor: IBM  
Date of manufacture: December 1, 2001

Host mini-hub canister

Status: Optimal  
Location: Controller B - Port 2  
Serial number: SN 1T14556660  
Part number: PN 19K1270  
Vendor: VN IBM  
Date of manufacture: November 1, 2001

Host mini-hub canister

Status: Optimal  
Location: Controller A - Port 1  
Serial number: SN 1T23664932  
Part number: PN 19K1270  
Vendor: VN IBM  
Date of manufacture: September 1, 2002  
SFP

Status: Optimal  
Location: In connection  
Supported data rate(s): 1 Gbps, 2 Gbps  
Link length: Intermediate  
Connector: LC  
Transmitter type: Shortwave Laser w/o OFC

Transmission media: TM Multi-mode 50m(M5) TM Multi-mode  
62.5m(M6)

IEEE company ID: 08 00 5a  
Revision: AA10  
Part number: IBM42P21SNY  
Serial number: 53P1476006A7X  
Vendor: IBM  
Date of manufacture: April 13, 2002

Host mini-hub canister

Status: Optimal  
Location: Controller A - Port 2  
Serial number: SN 1T14556719  
Part number: PN 19K1270  
Vendor: VN IBM  
Date of manufacture: November 1, 2001

Drive mini-hub canister

Status: Optimal  
Location: Channel 1  
Serial number: SN 1T31256926  
Part number: PN 19K1270  
Vendor: VN IBM  
Date of manufacture: April 1, 2003  
SFP

Status: Optimal  
Location: In connection  
Supported data rate(s): 1 Gbps, 2 Gbps  
Link length: Intermediate  
Connector: LC  
Transmitter type: Shortwave Laser w/o OFC

Transmission media: TM Multi-mode 50m(M5) TM Multi-mode  
62.5m(M6)

IEEE company ID: 08 00 5a  
Revision: AA10  
Part number: IBM42P21SNY  
Serial number: 53P147600PA1S  
Vendor: IBM  
Date of manufacture: January 14, 2003

Drive mini-hub canister



Status: Optimal  
Location: Channel 2  
Serial number: SN 1T14253208  
Part number: PN 19K1270  
Vendor: VN IBM  
Date of manufacture: November 1, 2001  
SFP  
Status: Optimal  
Location: Out connection  
Supported data rate(s): 1 Gbps, 2 Gbps  
Link length: Intermediate  
Connector: LC  
Transmitter type: Shortwave Laser w/o OFC  
Transmission media: TM Multi-mode 50m(M5) TM Multi-mode

62.5m(M6)

IEEE company ID: 08 00 5a  
Revision: AA10  
Part number: IBM42P21SNY  
Serial number: 53P14760002S2  
Vendor: IBM  
Date of manufacture: December 2, 2001

Drive mini-hub canister

Status: Optimal  
Location: Channel 3  
Serial number: SN 1T14252961  
Part number: PN 19K1270  
Vendor: VN IBM  
Date of manufacture: November 1, 2001  
SFP

Status: Optimal  
Location: In connection  
Supported data rate(s): 1 Gbps, 2 Gbps  
Link length: Intermediate  
Connector: LC  
Transmitter type: Shortwave Laser w/o OFC  
Transmission media: TM Multi-mode 50m(M5) TM Multi-mode

62.5m(M6)

IEEE company ID: 08 00 5a  
Revision: AA10  
Part number: IBM42P21SNY  
Serial number: 53P147600038H  
Vendor: IBM  
Date of manufacture: December 2, 2001

Drive mini-hub canister

Status: Optimal  
Location: Channel 4  
Serial number: SN 1T14556642  
Part number: PN 19K1270  
Vendor: VN IBM  
Date of manufacture: November 1, 2001  
SFP

Status: Optimal  
Location: Out connection  
Supported data rate(s): 1 Gbps, 2 Gbps  
Link length: Intermediate  
Connector: LC  
Transmitter type: Shortwave Laser w/o OFC  
Transmission media: TM Multi-mode 50m(M5) TM Multi-mode

62.5m(M6)

IEEE company ID: 08 00 5a  
Revision: AA10  
Part number: IBM42P21SNY  
Serial number: 53P147600037M  
Vendor: IBM  
Date of manufacture: December 1, 2001

Drive Enclosure 50 Overall Component Information  
Part number: PN 19K1288

Serial number: SN 1T1321417605  
Vendor: VN IBM  
Date of manufacture: September 1, 2001  
Enclosure path redundancy: OK  
Fan canister: Optimal  
Fan canister: Optimal  
Power supply canister  
Status: Optimal  
Part number: PN 19K1289  
Serial number: SN A6842C00290A  
Vendor: VN IBM  
Date of manufacture: July 1, 2001

Power supply canister

Status: Optimal  
Part number: PN 19K1289  
Serial number: SN A6842C003K0A  
Vendor: VN IBM  
Date of manufacture: July 1, 2001

Temperature: Optimal

Temperature: Optimal

ESM card

Status: Optimal  
Firmware version: 9325  
Maximum data rate: 2 Gbps  
Current data rate: 2 Gbps  
Location: A (left canister)  
Card communication: OK  
Product ID: EXP700  
Part number: PN 19K1287  
Serial number: SN 1T20789341  
Vendor: IBM  
Date of manufacture: March 1, 2002  
SFP

Status: Optimal  
Location: In connection  
Supported data rate(s): 1 Gbps, 2 Gbps  
Link length: Intermediate  
Connector: LC  
Transmitter type: Shortwave Laser w/o OFC  
Transmission media: TM Multi-mode 50m(M5) TM Multi-mode

62.5m(M6)

IEEE company ID: 08 00 5a  
Revision: AA10  
Part number: IBM42P21SNY  
Serial number: 53P14760002P9  
Vendor: IBM  
Date of manufacture: December 2, 2001

SFP

Status: Optimal  
Location: Out connection  
Supported data rate(s): 1 Gbps, 2 Gbps  
Link length: Intermediate  
Connector: LC  
Transmitter type: Shortwave Laser w/o OFC  
Transmission media: TM Multi-mode 50m(M5) TM Multi-mode

62.5m(M6)

IEEE company ID: 08 00 5a  
Revision: AA10  
Part number: IBM42P21SNY  
Serial number: 53P14760003HU  
Vendor: IBM  
Date of manufacture: December 2, 2001

ESM card

Status: Optimal  
Firmware version: 9325  
Maximum data rate: 2 Gbps  
Current data rate: 2 Gbps  
Location: B (right canister)

Card communication: OK  
Product ID: EXP700  
Part number: PN 19K1287  
Serial number: SN 1T20789312  
Vendor: IBM  
Date of manufacture: March 1, 2002  
SFP  
Status: Optimal  
Location: Out connection  
Supported data rate(s): 1 Gbps, 2 Gbps  
Link length: Intermediate  
Connector: LC  
Transmitter type: Shortwave Laser w/o OFC  
Transmission media: TM Multi-mode 50m(M5) TM Multi-mode

62.5m(M6)

IEEE company ID: 08 00 5a  
Revision: AA10  
Part number: IBM42P21SNY  
Serial number: 53P1476000352  
Vendor: IBM  
Date of manufacture: December 1, 2001

Drive Enclosure 51 Overall Component Information

Part number: PN 19K1288  
Serial number: SN 1T1321417499  
Vendor: VN IBM  
Date of manufacture: September 1, 2001  
Enclosure path redundancy: OK  
Fan canister: Optimal  
Fan canister: Optimal  
Power supply canister  
Status: Optimal  
Part number: PN 19K1289  
Serial number: SN A6842G00W60B  
Vendor: VN IBM  
Date of manufacture: August 1, 2001

Power supply canister

Status: Optimal  
Part number: PN 19K1289  
Serial number: SN A6842G00WM0B  
Vendor: VN IBM  
Date of manufacture: August 1, 2001

Temperature: Optimal

Temperature: Optimal

ESM card

Status: Optimal  
Firmware version: 9325  
Maximum data rate: 2 Gbps  
Current data rate: 2 Gbps  
Location: A (left canister)  
Card communication: OK  
Product ID: EXP700  
Part number: PN 19K1287  
Serial number: SN 1T20789676  
Vendor: IBM  
Date of manufacture: March 1, 2002  
SFP  
Status: Optimal  
Location: In connection  
Supported data rate(s): 1 Gbps, 2 Gbps  
Link length: Intermediate  
Connector: LC  
Transmitter type: Shortwave Laser w/o OFC  
Transmission media: TM Multi-mode 50m(M5) TM Multi-mode

62.5m(M6)

IEEE company ID: 08 00 5a  
Revision: AA10  
Part number: IBM42P21SNY

Serial number: 53P14760000E5  
Vendor: IBM  
Date of manufacture: December 30, 2001  
SFP  
Status: Optimal  
Location: Out connection  
Supported data rate(s): 1 Gbps, 2 Gbps  
Link length: Intermediate  
Connector: LC  
Transmitter type: Shortwave Laser w/o OFC  
Transmission media: TM Multi-mode 50m(M5) TM Multi-mode

62.5m(M6)

IEEE company ID: 08 00 5a  
Revision: AA10  
Part number: IBM42P21SNY  
Serial number: 53P14760000C5  
Vendor: IBM  
Date of manufacture: December 30, 2001

ESM card

Status: Optimal  
Firmware version: 9325  
Maximum data rate: 2 Gbps  
Current data rate: 2 Gbps  
Location: B (right canister)  
Card communication: OK  
Product ID: EXP700  
Part number: PN 19K1287  
Serial number: SN 1T20789079  
Vendor: IBM  
Date of manufacture: March 1, 2002  
SFP  
Status: Optimal  
Location: In connection  
Supported data rate(s): 1 Gbps, 2 Gbps  
Link length: Intermediate  
Connector: LC  
Transmitter type: Shortwave Laser w/o OFC  
Transmission media: TM Multi-mode 50m(M5) TM Multi-mode

62.5m(M6)

IEEE company ID: 08 00 5a  
Revision: AA10  
Part number: IBM42P21SNY  
Serial number: 53P147600003L  
Vendor: IBM  
Date of manufacture: December 30, 2001

SFP

Status: Optimal  
Location: Out connection  
Supported data rate(s): 1 Gbps, 2 Gbps  
Link length: Intermediate  
Connector: LC  
Transmitter type: Shortwave Laser w/o OFC  
Transmission media: TM Multi-mode 50m(M5) TM Multi-mode

62.5m(M6)

IEEE company ID: 08 00 5a  
Revision: AA10  
Part number: IBM42P21SNY  
Serial number: 53P14760000E0  
Vendor: IBM  
Date of manufacture: December 30, 2001

Drive Enclosure 52 Overall Component Information

Part number: PN 19K1288  
Serial number: SN 1T1321417608  
Vendor: VN IBM  
Date of manufacture: September 1, 2001  
Enclosure path redundancy: OK  
Fan canister: Optimal

Fan canister: Optimal  
 Power supply canister  
 Status: Optimal  
 Part number: PN 19K1289  
 Serial number: SN A6842C000K0A  
 Vendor: VN IBM  
 Date of manufacture: July 1, 2001  
 Power supply canister  
 Status: Optimal  
 Part number: PN 19K1289  
 Serial number: SN A6842C000J0A  
 Vendor: VN IBM  
 Date of manufacture: July 1, 2001  
 Temperature: Optimal  
 Temperature: Optimal  
 ESM card  
 Status: Optimal  
 Firmware version: 9325  
 Maximum data rate: 2 Gbps  
 Current data rate: 2 Gbps  
 Location: A (left canister)  
 Card communication: OK  
 Product ID: EXP700  
 Part number: PN 19K1287  
 Serial number: SN 1T20789344  
 Vendor: IBM  
 Date of manufacture: March 1, 2002  
 SFP  
 Status: Optimal  
 Location: In connection  
 Supported data rate(s): 1 Gbps, 2 Gbps  
 Link length: Intermediate  
 Connector: LC  
 Transmitter type: Shortwave Laser w/o OFC  
 Transmission media: TM Multi-mode 50m(M5) TM Multi-mode  
 62.5m(M6)  
 IEEE company ID: 08 00 5a  
 Revision: AA10  
 Part number: IBM42P21SNY  
 Serial number: 53P14760000AY  
 Vendor: IBM  
 Date of manufacture: December 30, 2001  
 SFP  
 Status: Optimal  
 Location: Out connection  
 Supported data rate(s): 1 Gbps, 2 Gbps  
 Link length: Intermediate  
 Connector: LC  
 Transmitter type: Shortwave Laser w/o OFC  
 Transmission media: TM Multi-mode 50m(M5) TM Multi-mode  
 62.5m(M6)  
 IEEE company ID: 08 00 5a  
 Revision: AA10  
 Part number: IBM42P21SNY  
 Serial number: 21P7053002SP1  
 Vendor: IBM  
 Date of manufacture: December 30, 2001  
 ESM card  
 Status: Optimal  
 Firmware version: 9325  
 Maximum data rate: 2 Gbps  
 Current data rate: 2 Gbps  
 Location: B (right canister)  
 Card communication: OK  
 Product ID: EXP700  
 Part number: PN 19K1287  
 Serial number: SN 1T20582423  
 Vendor: IBM

Date of manufacture: February 1, 2002  
 SFP  
 Status: Optimal  
 Location: In connection  
 Supported data rate(s): 1 Gbps, 2 Gbps  
 Link length: Intermediate  
 Connector: LC  
 Transmitter type: Shortwave Laser w/o OFC  
 Transmission media: TM Multi-mode 50m(M5) TM Multi-mode  
 62.5m(M6)  
 IEEE company ID: 08 00 5a  
 Revision: AA10  
 Part number: IBM42P21SNY  
 Serial number: 53P14760000DB  
 Vendor: IBM  
 Date of manufacture: December 30, 2001  
 SFP  
 Status: Optimal  
 Location: Out connection  
 Supported data rate(s): 1 Gbps, 2 Gbps  
 Link length: Intermediate  
 Connector: LC  
 Transmitter type: Shortwave Laser w/o OFC  
 Transmission media: TM Multi-mode 50m(M5) TM Multi-mode  
 62.5m(M6)  
 IEEE company ID: 08 00 5a  
 Revision: AA10  
 Part number: IBM42P21SNY  
 Serial number: 53P14760000CN  
 Vendor: IBM  
 Date of manufacture: December 30, 2001  
 Drive Enclosure 53 Overall Component Information  
 Part number: PN 19K1288  
 Serial number: SN 1T1321417461  
 Vendor: VN IBM  
 Date of manufacture: September 1, 2001  
 Enclosure path redundancy: OK  
 Fan canister: Optimal  
 Fan canister: Optimal  
 Power supply canister  
 Status: Optimal  
 Part number: PN 19K1289  
 Serial number: SN A6842G00F00B  
 Vendor: VN IBM  
 Date of manufacture: August 1, 2001  
 Power supply canister  
 Status: Optimal  
 Part number: PN 19K1289  
 Serial number: SN A6842G00V20B  
 Vendor: VN IBM  
 Date of manufacture: August 1, 2001  
 Temperature: Optimal  
 Temperature: Optimal  
 ESM card  
 Status: Optimal  
 Firmware version: 9325  
 Maximum data rate: 2 Gbps  
 Current data rate: 2 Gbps  
 Location: A (left canister)  
 Card communication: OK  
 Product ID: EXP700  
 Part number: PN 19K1287  
 Serial number: SN 1T20789388  
 Vendor: IBM  
 Date of manufacture: March 1, 2002  
 SFP  
 Status: Optimal

Location: In connection  
Supported data rate(s): 1 Gbps, 2 Gbps, 4 Gbps  
Link length: Unknown  
Connector: Unknown  
Transmitter type: Unknown  
Transmission media: Single Mode TM Multi-mode 50m(M5) TM Multi-mode 62.5m(M6) TM Video Coax TM Miniature Coax TM Shielded Twisted Pair Twin Axial Pair  
IEEE company ID: ff ff ff  
Revision:  
Part number:  
Serial number:  
Vendor:  
Date of manufacture: Not available

ESM card

Status: Optimal  
Firmware version: 9325  
Maximum data rate: 2 Gbps  
Current data rate: 2 Gbps  
Location: B (right canister)  
Card communication: OK  
Product ID: EXP700  
Part number: PN 19K1287  
Serial number: SN 1T20789175  
Vendor: IBM  
Date of manufacture: March 1, 2002

SFP

Status: Optimal  
Location: In connection  
Supported data rate(s): 1 Gbps, 2 Gbps, 4 Gbps  
Link length: Unknown  
Connector: Unknown  
Transmitter type: Unknown  
Transmission media: Single Mode TM Multi-mode 50m(M5) TM Multi-mode 62.5m(M6) TM Video Coax TM Miniature Coax TM Shielded Twisted Pair Twin Axial Pair

IEEE company ID: ff ff ff  
Revision:  
Part number:  
Serial number:  
Vendor:  
Date of manufacture: Not available

SFP

Status: Optimal  
Location: Out connection  
Supported data rate(s): 1 Gbps, 2 Gbps  
Link length: Intermediate  
Connector: LC  
Transmitter type: Shortwave Laser w/o OFC  
Transmission media: TM Multi-mode 50m(M5) TM Multi-mode 62.5m(M6)

IEEE company ID: 08 00 5a  
Revision: AA10  
Part number: IBM42P21SNY  
Serial number: 21P7053002STW  
Vendor: IBM  
Date of manufacture: December 30, 2001

Drive Enclosure 54 Overall Component Information

Part number: PN 19K1288  
Serial number: SN 1T1321417430  
Vendor: VN IBM  
Date of manufacture: September 1, 2001  
Enclosure path redundancy: OK  
Fan canister: Optimal  
Fan canister: Optimal  
Power supply canister  
Status: Optimal

Part number: PN 19K1289  
Serial number: SN A6842C003X0A  
Vendor: VN IBM  
Date of manufacture: July 1, 2001

Power supply canister

Status: Optimal  
Part number: PN 19K1289  
Serial number: SN A6842C00700A  
Vendor: VN IBM  
Date of manufacture: July 1, 2001

Temperature: Optimal

Temperature: Optimal

ESM card

Status: Optimal  
Firmware version: 9325  
Maximum data rate: 2 Gbps  
Current data rate: 2 Gbps  
Location: A (left canister)  
Card communication: OK  
Product ID: EXP700  
Part number: PN 19K1287  
Serial number: SN 1T20789345  
Vendor: IBM  
Date of manufacture: March 1, 2002

SFP

Status: Optimal  
Location: In connection  
Supported data rate(s): 1 Gbps, 2 Gbps  
Link length: Intermediate  
Connector: LC  
Transmitter type: Shortwave Laser w/o OFC  
Transmission media: TM Multi-mode 50m(M5) TM Multi-mode 62.5m(M6)

62.5m(M6)

IEEE company ID: 08 00 5a  
Revision: AA10  
Part number: IBM42P21SNY  
Serial number: 53P147600009F  
Vendor: IBM  
Date of manufacture: December 30, 2001

SFP

Status: Optimal  
Location: Out connection  
Supported data rate(s): 1 Gbps, 2 Gbps  
Link length: Intermediate  
Connector: LC  
Transmitter type: Shortwave Laser w/o OFC  
Transmission media: TM Multi-mode 50m(M5) TM Multi-mode 62.5m(M6)

62.5m(M6)

IEEE company ID: 08 00 5a  
Revision: AA10  
Part number: IBM42P21SNY  
Serial number: 53P14760000D3  
Vendor: IBM  
Date of manufacture: December 30, 2001

ESM card

Status: Optimal  
Firmware version: 9325  
Maximum data rate: 2 Gbps  
Current data rate: 2 Gbps  
Location: B (right canister)  
Card communication: OK  
Product ID: EXP700

Part number: PN 19K1287  
Serial number: SN 1T20789549  
Vendor: IBM  
Date of manufacture: March 1, 2002

SFP

Status: Optimal

Location: Out connection  
Supported data rate(s): 1 Gbps, 2 Gbps  
Link length: Intermediate  
Connector: LC  
Transmitter type: Shortwave Laser w/o OFC  
Transmission media: TM Multi-mode 50m(M5) TM Multi-mode

62.5m(M6)

IEEE company ID: 08 00 5a  
Revision: AA10  
Part number: IBM42P21SNY  
Serial number: 53P1476000082  
Vendor: IBM  
Date of manufacture: December 30, 2001

#### Drive Enclosure 55 Overall Component Information

Part number: PN 19K1288  
Serial number: SN 1T1321417616  
Vendor: VN IBM  
Date of manufacture: September 1, 2001  
Enclosure path redundancy: OK  
Fan canister: Optimal  
Fan canister: Optimal  
Power supply canister  
Status: Optimal  
Part number: PN 19K1289  
Serial number: SN A6842G00VM0B  
Vendor: VN IBM  
Date of manufacture: August 1, 2001

#### Power supply canister

Status: Optimal  
Part number: PN 19K1289  
Serial number: SN A6842G00VN0B  
Vendor: VN IBM  
Date of manufacture: August 1, 2001

Temperature: Optimal

Temperature: Optimal

#### ESM card

Status: Optimal  
Firmware version: 9325  
Maximum data rate: 2 Gbps  
Current data rate: 2 Gbps  
Location: A (left canister)  
Card communication: OK  
Product ID: EXP700  
Part number: PN 19K1287  
Serial number: SN 1T20789535  
Vendor: IBM  
Date of manufacture: March 1, 2002

#### SFP

Status: Optimal  
Location: In connection  
Supported data rate(s): 1 Gbps, 2 Gbps  
Link length: Intermediate  
Connector: LC

Transmitter type: Shortwave Laser w/o OFC  
Transmission media: TM Multi-mode 50m(M5) TM Multi-mode

62.5m(M6)

IEEE company ID: 08 00 5a  
Revision: AA10  
Part number: IBM42P21SNY  
Serial number: 53P1476000361  
Vendor: IBM  
Date of manufacture: December 1, 2001

#### SFP

Status: Optimal  
Location: Out connection  
Supported data rate(s): 1 Gbps, 2 Gbps  
Link length: Intermediate

Connector: LC

Transmitter type: Shortwave Laser w/o OFC

Transmission media: TM Multi-mode 50m(M5) TM Multi-mode  
62.5m(M6)

IEEE company ID: 08 00 5a  
Revision: AA10  
Part number: IBM42P21SNY  
Serial number: 21P7053002SEN  
Vendor: IBM  
Date of manufacture: December 29, 2001

#### ESM card

Status: Optimal  
Firmware version: 9325  
Maximum data rate: 2 Gbps  
Current data rate: 2 Gbps  
Location: B (right canister)  
Card communication: OK  
Product ID: EXP700  
Part number: PN 19K1287  
Serial number: SN 1T20789275  
Vendor: IBM  
Date of manufacture: March 1, 2002

#### SFP

Status: Optimal  
Location: In connection  
Supported data rate(s): 1 Gbps, 2 Gbps  
Link length: Intermediate  
Connector: LC  
Transmitter type: Shortwave Laser w/o OFC  
Transmission media: TM Multi-mode 50m(M5) TM Multi-mode

62.5m(M6)

IEEE company ID: 08 00 5a  
Revision: AA10  
Part number: IBM42P21SNY  
Serial number: 53P14760002PR  
Vendor: IBM  
Date of manufacture: December 2, 2001

#### SFP

Status: Optimal  
Location: Out connection  
Supported data rate(s): 1 Gbps, 2 Gbps  
Link length: Intermediate  
Connector: LC  
Transmitter type: Shortwave Laser w/o OFC  
Transmission media: TM Multi-mode 50m(M5) TM Multi-mode

62.5m(M6)

IEEE company ID: 08 00 5a  
Revision: AA10  
Part number: IBM42P21SNY  
Serial number: 53P14760003LS  
Vendor: IBM  
Date of manufacture: December 2, 2001

#### Drive Enclosure 56 Overall Component Information

Part number: PN 19K1288  
Serial number: SN 1T1321417422  
Vendor: VN IBM  
Date of manufacture: September 1, 2001  
Enclosure path redundancy: OK  
Fan canister: Optimal  
Fan canister: Optimal  
Power supply canister  
Status: Optimal  
Part number: PN 19K1289  
Serial number: SN A6842G00ES0B  
Vendor: VN IBM  
Date of manufacture: August 1, 2001  
Power supply canister

Status: Optimal  
Part number: PN 19K1289  
Serial number: SN A6842G00UF0B  
Vendor: VN IBM  
Date of manufacture: August 1, 2001  
Temperature: Optimal  
Temperature: Optimal

ESM card

Status: Optimal  
Firmware version: 9325  
Maximum data rate: 2 Gbps  
Current data rate: 2 Gbps  
Location: A (left canister)  
Card communication: OK  
Product ID: EXP700  
Part number: PN 19K1287  
Serial number: SN 1T20789587  
Vendor: IBM

Date of manufacture: March 1, 2002  
SFP

Status: Optimal  
Location: In connection  
Supported data rate(s): 1 Gbps, 2 Gbps  
Link length: Intermediate  
Connector: LC

Transmitter type: Shortwave Laser w/o OFC  
Transmission media: TM Multi-mode 50m(M5) TM Multi-mode

62.5m(M6)

IEEE company ID: 08 00 5a  
Revision: AA10  
Part number: IBM42P21SNY  
Serial number: 53P1476000350  
Vendor: IBM  
Date of manufacture: December 1, 2001

SFP

Status: Optimal  
Location: Out connection  
Supported data rate(s): 1 Gbps, 2 Gbps  
Link length: Intermediate  
Connector: LC  
Transmitter type: Shortwave Laser w/o OFC  
Transmission media: TM Multi-mode 50m(M5) TM Multi-mode

62.5m(M6)

IEEE company ID: 08 00 5a  
Revision: AA10  
Part number: IBM42P21SNY  
Serial number: 53P147600033U  
Vendor: IBM  
Date of manufacture: December 1, 2001

ESM card

Status: Optimal  
Firmware version: 9325  
Maximum data rate: 2 Gbps  
Current data rate: 2 Gbps  
Location: B (right canister)  
Card communication: OK  
Product ID: EXP700  
Part number: PN 19K1287  
Serial number: SN 1T20789385  
Vendor: IBM

Date of manufacture: March 1, 2002  
SFP

Status: Optimal  
Location: In connection  
Supported data rate(s): 1 Gbps, 2 Gbps  
Link length: Intermediate  
Connector: LC

Transmitter type: Shortwave Laser w/o OFC

Transmission media: TM Multi-mode 50m(M5) TM Multi-mode  
62.5m(M6)

IEEE company ID: 08 00 5a  
Revision: AA10  
Part number: IBM42P21SNY  
Serial number: 53P147600039Q  
Vendor: IBM  
Date of manufacture: December 2, 2001

SFP

Status: Optimal  
Location: Out connection  
Supported data rate(s): 1 Gbps, 2 Gbps  
Link length: Intermediate  
Connector: LC

Transmitter type: Shortwave Laser w/o OFC  
Transmission media: TM Multi-mode 50m(M5) TM Multi-mode

62.5m(M6)

IEEE company ID: 08 00 5a  
Revision: AA10  
Part number: IBM42P21SNY  
Serial number: 53P14760002S4  
Vendor: IBM  
Date of manufacture: December 2, 2001

Drive Enclosure 57 Overall Component Information

Part number: PN 19K1288  
Serial number: SN 23A1739  
Vendor: VN IBM  
Date of manufacture: September 1, 2002  
Enclosure path redundancy: OK  
Fan canister: Optimal  
Fan canister: Optimal  
Power supply canister

Status: Optimal

Part number: PN 19K1289  
Serial number: SN A6844400JK0E  
Vendor: VN IBM  
Date of manufacture: Not available

Power supply canister

Status: Optimal

Part number: PN 19K1289  
Serial number: SN A6844400K60E  
Vendor: VN IBM  
Date of manufacture: Not available

Temperature: Optimal

Temperature: Optimal

ESM card

Status: Optimal  
Firmware version: 9325  
Maximum data rate: 2 Gbps  
Current data rate: 2 Gbps  
Location: A (left canister)  
Card communication: OK  
Product ID: EXP700  
Part number: PN 19K1287  
Serial number: SN 1T23251987  
Vendor: IBM  
Date of manufacture: August 1, 2002

SFP

Status: Optimal  
Location: In connection  
Supported data rate(s): 1 Gbps, 2 Gbps  
Link length: Intermediate  
Connector: LC

Transmitter type: Shortwave Laser w/o OFC

Transmission media: TM Multi-mode 50m(M5) TM Multi-mode

62.5m(M6)

IEEE company ID: 08 00 5a

Revision: AA10  
Part number: IBM42P21SNY  
Serial number: 53P14760069TF  
Vendor: IBM  
Date of manufacture: April 13, 2002

ESM card

Status: Optimal  
Firmware version: 9325  
Maximum data rate: 2 Gbps  
Current data rate: 2 Gbps  
Location: B (right canister)  
Card communication: OK  
Product ID: EXP700  
Part number: PN 19K1287  
Serial number: SN 1T23251616  
Vendor: IBM  
Date of manufacture: August 1, 2002

SFP

Status: Optimal  
Location: In connection  
Supported data rate(s): 1 Gbps, 2 Gbps  
Link length: Intermediate  
Connector: LC  
Transmitter type: Shortwave Laser w/o OFC  
Transmission media: TM Multi-mode 50m(M5) TM Multi-mode

62.5m(M6)

IEEE company ID: 08 00 5a  
Revision: AA10  
Part number: IBM42P21SNY  
Serial number: 53P1476009TRE  
Vendor: IBM  
Date of manufacture: June 29, 2002

SFP

Status: Optimal  
Location: Out connection  
Supported data rate(s): 1 Gbps, 2 Gbps  
Link length: Intermediate  
Connector: LC  
Transmitter type: Shortwave Laser w/o OFC  
Transmission media: TM Multi-mode 50m(M5) TM Multi-mode

62.5m(M6)

IEEE company ID: 08 00 5a  
Revision: AA10  
Part number: IBM42P21SNY  
Serial number: 53P14760069VB  
Vendor: IBM  
Date of manufacture: April 13, 2002

MAPPINGS STORAGE PARTITIONING - ENABLED (0 of 64 used)-----

Logical Drive-To-LUN Mappings

Logical Drive flute5\_lun1, LUN 0, Default Group  
Logical Drive flute5\_lun2, LUN 1, Default Group  
Logical Drive flute5\_lun3, LUN 2, Default Group  
Logical Drive flute5\_lun4, LUN 3, Default Group

Topology

[Undefined Host Ports]  
21:00:00:e0:8b:08:a3:c8  
21:00:00:e0:8b:09:9f:6d

[Default Group]

NVSRAM Host Type Internal Definitions

Index 0  
Name: Windows NT Non-Clustered (SP5 or higher)  
ADT status: Disabled  
Index 1

Name: Windows NT Clustered (SP5 or higher)  
ADT status: Disabled  
Index 2 (DEFAULT)  
Name: Windows 2000/Server 2003 Non-Clustered  
ADT status: Disabled  
Index 3  
Name: Windows 2000/Server 2003 Clustered  
ADT status: Disabled  
Index 4  
Name: NetWare-IBMSAN  
ADT status: Disabled  
Index 5  
Name: Linux  
ADT status: Disabled  
Index 6  
Name: AIX  
ADT status: Disabled  
Index 7  
Name: HP-UX  
ADT status: Disabled  
Index 8  
Name: Solaris  
ADT status: Disabled  
Index 9  
Name: PTX  
ADT status: Disabled  
Index 10  
Name: Irix  
ADT status: Disabled  
Index 11  
Name: Netware Failover  
ADT status: Disabled  
Index 12  
Name: IBM TS SAN VCE  
ADT status: Disabled  
Index 13  
Name: LNXCL  
ADT status: Disabled

**TotalStorage FC2-133 Host Bus Adapter 6**

PROFILE FOR STORAGE SUBSYSTEM: flute6 (3/18/04 2:13:11 PM)

SUMMARY-----

Number of controllers: 2  
Number of arrays: 4  
Total number of logical drives (includes an access logical drive): 5 of 2048 used  
Number of standard logical drives: 4  
Number of access logical drives: 1  
Number of drives: 112  
Access logical drive: None mapped  
Default host type: Windows 2000/Server 2003 Non-Clustered (Host type index 2)  
Firmware version: 05.40.06.00  
NVSRAM version: N1742F700R830V03  
NVSRAM configured for batteries?: Yes  
Start cache flushing at (in percentage): 80  
Stop cache flushing at (in percentage): 80  
Cache block size (in KB): 4  
Media scan duration (in days): 30  
Failover alert delay (in minutes): 5  
Feature enable identifier: 38333930340035353735390040082413

CONTROLLERS-----

Number of controllers: 2  
Controller in Slot A

Appware version: 05.40.06.00  
Bootware version: 05.40.02.00  
Status: Optimal  
Mode: Active  
Board ID: 4884  
Product ID: 1742  
Product revision: 0520  
Serial number: 1T23355661  
Vendor: IBM  
Date of manufacture: August 29, 2002  
Cache/processor size (MB): 1024/128  
Date/Time: Thu Mar 18 14:13:22 EST 2004  
Associated Logical Drives (\* = Preferred Owner):  
    flute6\_lun2\*, flute6\_lun1\*  
Drive interface: Fibre  
    Channel: 1  
    Current ID: 125/0x1  
    Maximum data rate: 2 Gbps  
    Current data rate: 2 Gbps  
    Data rate control: Switch  
    Link status: Up  
Drive interface: Fibre  
    Channel: 2  
    Current ID: 125/0x1  
    Maximum data rate: 2 Gbps  
    Current data rate: 2 Gbps  
    Data rate control: Switch  
    Link status: Up  
Drive interface: Fibre  
    Channel: 3  
    Current ID: 125/0x1  
    Maximum data rate: 2 Gbps  
    Current data rate: 2 Gbps  
    Data rate control: Switch  
    Link status: Up  
Drive interface: Fibre  
    Channel: 4  
    Current ID: 125/0x1  
    Maximum data rate: 2 Gbps  
    Current data rate: 2 Gbps  
    Data rate control: Switch  
    Link status: Up  
Host interface: Fibre  
    Port: 1  
    Current ID: Not applicable/0xFFFFFFFF  
    Preferred ID: 126/0x0  
    NL-Port ID: 0x011A00  
    Maximum data rate: 2 Gbps  
    Current data rate: 2 Gbps  
    Data rate control: Switch  
    Link status: Up  
    Topology: Fabric Attach  
    World-wide port name: 20:02:00:a0:b8:0f:0b:59  
    World-wide node name: 20:02:00:a0:b8:0f:0b:58  
    Part type: HPFC-5200 revision 11  
Host interface: Fibre  
    Port: 2  
    Current ID: Not applicable/0xFFFFFFFF  
    Preferred ID: 1/0xE8  
    NL-Port ID: 0x000000  
    Maximum data rate: 2 Gbps  
    Current data rate: 1 Gbps  
    Data rate control: Switch  
    Link status: Down  
    Topology: Not available  
    World-wide port name: 20:02:00:a0:b8:0f:0b:5a  
    World-wide node name: 20:02:00:a0:b8:0f:0b:58  
    Part type: HPFC-5200 revision 11

Ethernet port: 0  
    MAC address: 00:a0:b8:0f:0b:58  
    Host name: target  
    Network configuration: Static  
    IP address: 192.168.128.113  
    Subnet mask: 255.255.255.0  
    Gateway: 0.0.0.0  
    Remote login: Disabled  
Controller in Slot B  
    Appware version: 05.40.06.00  
    Bootware version: 05.40.02.00  
    Status: Optimal  
    Mode: Active  
    Board ID: 4884  
    Product ID: 1742  
    Product revision: 0520  
    Serial number: 1T23355759  
    Vendor: IBM  
    Date of manufacture: August 29, 2002  
    Cache/processor size (MB): 1024/128  
    Date/Time: Thu Mar 18 14:13:23 EST 2004  
    Associated Logical Drives (\* = Preferred Owner):  
        flute6\_lun3\*, flute6\_lun4\*  
    Drive interface: Fibre  
        Channel: 1  
        Current ID: 124/0x2  
        Maximum data rate: 2 Gbps  
        Current data rate: 2 Gbps  
        Data rate control: Switch  
        Link status: Up  
    Drive interface: Fibre  
        Channel: 2  
        Current ID: 124/0x2  
        Maximum data rate: 2 Gbps  
        Current data rate: 2 Gbps  
        Data rate control: Switch  
        Link status: Up  
    Drive interface: Fibre  
        Channel: 3  
        Current ID: 124/0x2  
        Maximum data rate: 2 Gbps  
        Current data rate: 2 Gbps  
        Data rate control: Switch  
        Link status: Up  
    Drive interface: Fibre  
        Channel: 4  
        Current ID: 124/0x2  
        Maximum data rate: 2 Gbps  
        Current data rate: 2 Gbps  
        Data rate control: Switch  
        Link status: Up  
    Host interface: Fibre  
        Port: 1  
        Current ID: Not applicable/0xFFFFFFFF  
        Preferred ID: 126/0x0  
        NL-Port ID: 0x011B00  
        Maximum data rate: 2 Gbps  
        Current data rate: 2 Gbps  
        Data rate control: Switch  
        Link status: Up  
        Topology: Fabric Attach  
        World-wide port name: 20:03:00:a0:b8:0f:0b:59  
        World-wide node name: 20:03:00:a0:b8:0f:0b:58  
        Part type: HPFC-5200 revision 11  
    Host interface: Fibre  
        Port: 2  
        Current ID: Not applicable/0xFFFFFFFF



Preferred ID: 3/0xE2  
NL-Port ID: 0x000000  
Maximum data rate: 2 Gbps  
Current data rate: 1 Gbps  
Data rate control: Switch  
Link status: Down  
Topology: Not available  
World-wide port name: 20:03:00:a0:b8:0f:0b:5a  
World-wide node name: 20:03:00:a0:b8:0f:0b:58  
Part type: HPFC-5200 revision 11  
Ethernet port: 0  
MAC address: 00:a0:b8:0f:3d:68  
Host name: target  
Network configuration: Static  
IP address: 192.168.128.114  
Subnet mask: 255.255.255.0  
Gateway: 0.0.0.0  
Remote login: Disabled

ARRAYS-----

Number of arrays: 4

Array 1 (RAID 0)

Status: Online  
Current owner: Controller in slot A  
Logical Drive flute6\_lun1 (948.145 GB)  
Associated drives (in piece order):  
Drive at Enclosure 60, Slot 1  
Drive at Enclosure 60, Slot 2  
Drive at Enclosure 60, Slot 3  
Drive at Enclosure 60, Slot 4  
Drive at Enclosure 60, Slot 5  
Drive at Enclosure 60, Slot 6  
Drive at Enclosure 60, Slot 7  
Drive at Enclosure 60, Slot 8  
Drive at Enclosure 60, Slot 9  
Drive at Enclosure 60, Slot 10  
Drive at Enclosure 60, Slot 11  
Drive at Enclosure 60, Slot 12  
Drive at Enclosure 60, Slot 13  
Drive at Enclosure 60, Slot 14  
Drive at Enclosure 61, Slot 1  
Drive at Enclosure 61, Slot 2  
Drive at Enclosure 61, Slot 3  
Drive at Enclosure 61, Slot 4  
Drive at Enclosure 61, Slot 5  
Drive at Enclosure 61, Slot 6  
Drive at Enclosure 61, Slot 7  
Drive at Enclosure 61, Slot 8  
Drive at Enclosure 61, Slot 9  
Drive at Enclosure 61, Slot 10  
Drive at Enclosure 61, Slot 11  
Drive at Enclosure 61, Slot 12  
Drive at Enclosure 61, Slot 13  
Drive at Enclosure 61, Slot 14

Array 2 (RAID 0)

Status: Online  
Current owner: Controller in slot A  
Logical Drive flute6\_lun2 (948.145 GB)  
Associated drives (in piece order):  
Drive at Enclosure 62, Slot 1  
Drive at Enclosure 62, Slot 2  
Drive at Enclosure 62, Slot 3  
Drive at Enclosure 62, Slot 4  
Drive at Enclosure 62, Slot 5  
Drive at Enclosure 62, Slot 6  
Drive at Enclosure 62, Slot 7  
Drive at Enclosure 62, Slot 8

Drive at Enclosure 62, Slot 9  
Drive at Enclosure 62, Slot 10  
Drive at Enclosure 62, Slot 11  
Drive at Enclosure 62, Slot 12  
Drive at Enclosure 62, Slot 13  
Drive at Enclosure 62, Slot 14  
Drive at Enclosure 63, Slot 1  
Drive at Enclosure 63, Slot 2  
Drive at Enclosure 63, Slot 3  
Drive at Enclosure 63, Slot 4  
Drive at Enclosure 63, Slot 5  
Drive at Enclosure 63, Slot 6  
Drive at Enclosure 63, Slot 7  
Drive at Enclosure 63, Slot 8  
Drive at Enclosure 63, Slot 9  
Drive at Enclosure 63, Slot 10  
Drive at Enclosure 63, Slot 11  
Drive at Enclosure 63, Slot 12  
Drive at Enclosure 63, Slot 13  
Drive at Enclosure 63, Slot 14

Array 3 (RAID 0)

Status: Online  
Current owner: Controller in slot B  
Logical Drive flute6\_lun3 (948.145 GB)  
Associated drives (in piece order):  
Drive at Enclosure 64, Slot 1  
Drive at Enclosure 64, Slot 2  
Drive at Enclosure 64, Slot 3  
Drive at Enclosure 64, Slot 4  
Drive at Enclosure 64, Slot 5  
Drive at Enclosure 64, Slot 6  
Drive at Enclosure 64, Slot 7  
Drive at Enclosure 64, Slot 8  
Drive at Enclosure 64, Slot 9  
Drive at Enclosure 64, Slot 10  
Drive at Enclosure 64, Slot 11  
Drive at Enclosure 64, Slot 12  
Drive at Enclosure 64, Slot 13  
Drive at Enclosure 64, Slot 14  
Drive at Enclosure 65, Slot 1  
Drive at Enclosure 65, Slot 2  
Drive at Enclosure 65, Slot 3  
Drive at Enclosure 65, Slot 4  
Drive at Enclosure 65, Slot 5  
Drive at Enclosure 65, Slot 6  
Drive at Enclosure 65, Slot 7  
Drive at Enclosure 65, Slot 8  
Drive at Enclosure 65, Slot 9  
Drive at Enclosure 65, Slot 10  
Drive at Enclosure 65, Slot 11  
Drive at Enclosure 65, Slot 12  
Drive at Enclosure 65, Slot 13  
Drive at Enclosure 65, Slot 14

Array 4 (RAID 0)

Status: Online  
Current owner: Controller in slot B  
Logical Drive flute6\_lun4 (948.145 GB)  
Associated drives (in piece order):  
Drive at Enclosure 66, Slot 1  
Drive at Enclosure 66, Slot 2  
Drive at Enclosure 66, Slot 3  
Drive at Enclosure 66, Slot 4  
Drive at Enclosure 66, Slot 5  
Drive at Enclosure 66, Slot 6  
Drive at Enclosure 66, Slot 7  
Drive at Enclosure 66, Slot 8  
Drive at Enclosure 66, Slot 9  
Drive at Enclosure 66, Slot 10

Drive at Enclosure 66, Slot 11  
 Drive at Enclosure 66, Slot 12  
 Drive at Enclosure 66, Slot 13  
 Drive at Enclosure 66, Slot 14  
 Drive at Enclosure 67, Slot 1  
 Drive at Enclosure 67, Slot 2  
 Drive at Enclosure 67, Slot 3  
 Drive at Enclosure 67, Slot 4  
 Drive at Enclosure 67, Slot 5  
 Drive at Enclosure 67, Slot 6  
 Drive at Enclosure 67, Slot 7  
 Drive at Enclosure 67, Slot 8  
 Drive at Enclosure 67, Slot 9  
 Drive at Enclosure 67, Slot 10  
 Drive at Enclosure 67, Slot 11  
 Drive at Enclosure 67, Slot 12  
 Drive at Enclosure 67, Slot 13  
 Drive at Enclosure 67, Slot 14

STANDARD LOGICAL DRIVES-----

SUMMARY

Number of standard logical drives: 4  
 See other Logical Drives sub-tabs for premium feature information.

NAME	STATUS	CAPACITY	RAID LEVEL	ARRAY
flute6_lun2	Optimal	948.145 GB	0	2
flute6_lun3	Optimal	948.145 GB	0	3
flute6_lun4	Optimal	948.145 GB	0	4
flute6lun1	Optimal	948.145 GB	0	1

DETAILS

Logical Drive name: flute6\_lun2  
 Logical Drive ID: 60:0a:0b:80:00:0f:0b:58:00:00:00:25:40:0f:fe:62  
 Subsystem ID (SSID): 1  
 Status: Optimal  
 Preferred owner: Controller in slot A  
 Current owner: Controller in slot A  
 Capacity: 948.145 GB  
 RAID level: 0  
 Segment size: 64 KB  
 Modification priority: High  
 Associated array: 2  
 Read cache: Enabled  
 Write cache: Disabled  
 Write cache without batteries: Disabled  
 Write cache with mirroring: Disabled  
 Flush write cache after (in seconds): 10.00  
 Cache read ahead multiplier: 1  
 Enable background media scan: Enabled  
 Media scan with redundancy check: Disabled

Logical Drive name: flute6\_lun3  
 Logical Drive ID: 60:0a:0b:80:00:0f:3d:68:00:00:00:21:40:0f:fe:a1  
 Subsystem ID (SSID): 2  
 Status: Optimal  
 Preferred owner: Controller in slot B  
 Current owner: Controller in slot B  
 Capacity: 948.145 GB  
 RAID level: 0  
 Segment size: 64 KB  
 Modification priority: High  
 Associated array: 3  
 Read cache: Enabled  
 Write cache: Disabled  
 Write cache without batteries: Disabled  
 Write cache with mirroring: Disabled  
 Flush write cache after (in seconds): 10.00

Cache read ahead multiplier: 1  
 Enable background media scan: Enabled  
 Media scan with redundancy check: Disabled

Logical Drive name: flute6\_lun4  
 Logical Drive ID: 60:0a:0b:80:00:0f:3d:68:00:00:00:23:40:0f:fe:bf  
 Subsystem ID (SSID): 3  
 Status: Optimal  
 Preferred owner: Controller in slot B  
 Current owner: Controller in slot B  
 Capacity: 948.145 GB  
 RAID level: 0  
 Segment size: 64 KB  
 Modification priority: High  
 Associated array: 4  
 Read cache: Enabled  
 Write cache: Disabled  
 Write cache without batteries: Disabled  
 Write cache with mirroring: Disabled  
 Flush write cache after (in seconds): 10.00  
 Cache read ahead multiplier: 1  
 Enable background media scan: Enabled  
 Media scan with redundancy check: Disabled

Logical Drive name: flute6lun1  
 Logical Drive ID: 60:0a:0b:80:00:0f:0b:58:00:00:00:23:40:0f:fe:30  
 Subsystem ID (SSID): 0  
 Status: Optimal  
 Preferred owner: Controller in slot A  
 Current owner: Controller in slot A  
 Capacity: 948.145 GB  
 RAID level: 0  
 Segment size: 64 KB  
 Modification priority: High  
 Associated array: 1  
 Read cache: Enabled  
 Write cache: Disabled  
 Write cache without batteries: Disabled  
 Write cache with mirroring: Disabled  
 Flush write cache after (in seconds): 10.00  
 Cache read ahead multiplier: 1  
 Enable background media scan: Enabled  
 Media scan with redundancy check: Disabled

MISSING LOGICAL DRIVES-----

Number of missing logical drives: 0  
 See other Logical Drives sub-tabs for premium feature information

DRIVES-----

SUMMARY

Number of drives: 112

BASIC:

TRAY, SLOT	STATUS	CAPACITY	CURRENT DATA RATE
PRODUCT ID	FIRMWARE VERSION		
60, 1	Optimal 33.902 GB 2 Gbps	ST336753FC	F B953
60, 2	Optimal 33.902 GB 2 Gbps	ST336753FC	F B953
60, 3	Optimal 33.902 GB 2 Gbps	ST336753FC	F B953
60, 4	Optimal 33.902 GB 2 Gbps	ST336753FC	F B953
60, 5	Optimal 33.902 GB 2 Gbps	ST336753FC	F B953



65, 4	Optimal	33.902 GB	2 Gbps	ST336753FC	F	B953
65, 5	Optimal	33.902 GB	2 Gbps	ST336753FC	F	B953
65, 6	Optimal	33.902 GB	2 Gbps	ST336753FC	F	B953
65, 7	Optimal	33.902 GB	2 Gbps	ST336753FC	F	B953
65, 8	Optimal	33.902 GB	2 Gbps	ST336753FC	F	B953
65, 9	Optimal	33.902 GB	2 Gbps	ST336753FC	F	B953
65, 10	Optimal	33.902 GB	2 Gbps	ST336753FC	F	B953
65, 11	Optimal	33.902 GB	2 Gbps	ST336753FC	F	B953
65, 12	Optimal	33.902 GB	2 Gbps	ST336753FC	F	B953
65, 13	Optimal	33.902 GB	2 Gbps	ST336753FC	F	B953
65, 14	Optimal	33.902 GB	2 Gbps	ST336753FC	F	B953
66, 1	Optimal	33.902 GB	2 Gbps	ST336753FC	F	B953
66, 2	Optimal	33.902 GB	2 Gbps	ST336753FC	F	B953
66, 3	Optimal	33.902 GB	2 Gbps	ST336753FC	F	B953
66, 4	Optimal	33.902 GB	2 Gbps	ST336753FC	F	B953
66, 5	Optimal	33.902 GB	2 Gbps	ST336753FC	F	B953
66, 6	Optimal	33.902 GB	2 Gbps	ST336753FC	F	B953
66, 7	Optimal	33.902 GB	2 Gbps	ST336753FC	F	B953
66, 8	Optimal	33.902 GB	2 Gbps	ST336753FC	F	B953
66, 9	Optimal	33.902 GB	2 Gbps	ST336753FC	F	B953
66, 10	Optimal	33.902 GB	2 Gbps	ST336753FC	F	B953
66, 11	Optimal	33.902 GB	2 Gbps	ST336753FC	F	B953
66, 12	Optimal	33.902 GB	2 Gbps	ST336753FC	F	B953
66, 13	Optimal	33.902 GB	2 Gbps	ST336753FC	F	B953
66, 14	Optimal	33.902 GB	2 Gbps	ST336753FC	F	B953
67, 1	Optimal	33.902 GB	2 Gbps	ST336753FC	F	B953
67, 2	Optimal	33.902 GB	2 Gbps	ST336753FC	F	B953
67, 3	Optimal	33.902 GB	2 Gbps	ST336753FC	F	B953
67, 4	Optimal	33.902 GB	2 Gbps	ST336753FC	F	B953
67, 5	Optimal	33.902 GB	2 Gbps	ST336753FC	F	B953
67, 6	Optimal	33.902 GB	2 Gbps	ST336753FC	F	B953
67, 7	Optimal	33.902 GB	2 Gbps	ST336753FC	F	B953
67, 8	Optimal	33.902 GB	2 Gbps	ST336753FC	F	B953
67, 9	Optimal	33.902 GB	2 Gbps	ST336753FC	F	B953

67, 10	Optimal	33.902 GB	2 Gbps	ST336753FC	F	B953
67, 11	Optimal	33.902 GB	2 Gbps	ST336753FC	F	B953
67, 12	Optimal	33.902 GB	2 Gbps	ST336753FC	F	B953
67, 13	Optimal	33.902 GB	2 Gbps	ST336753FC	F	B953
67, 14	Optimal	33.902 GB	2 Gbps	ST336753FC	F	B953

DRIVE CHANNELS:

TRAY, SLOT CURRENT CHANNEL ALTERNATE CHANNEL

60, 1	3	4
60, 2	4	3
60, 3	3	4
60, 4	4	3
60, 5	3	4
60, 6	4	3
60, 7	3	4
60, 8	4	3
60, 9	3	4
60, 10	4	3
60, 11	3	4
60, 12	4	3
60, 13	3	4
60, 14	4	3
61, 1	3	4
61, 2	4	3
61, 3	3	4
61, 4	4	3
61, 5	3	4
61, 6	4	3
61, 7	3	4
61, 8	4	3
61, 9	3	4
61, 10	4	3
61, 11	3	4
61, 12	4	3
61, 13	3	4
61, 14	4	3
62, 1	3	4
62, 2	4	3
62, 3	3	4
62, 4	4	3
62, 5	3	4
62, 6	4	3
62, 7	3	4
62, 8	4	3
62, 9	3	4
62, 10	4	3
62, 11	3	4
62, 12	4	3
62, 13	3	4
62, 14	4	3
63, 1	3	4
63, 2	4	3
63, 3	3	4
63, 4	4	3
63, 5	3	4
63, 6	4	3
63, 7	3	4
63, 8	4	3
63, 9	3	4
63, 10	4	3
63, 11	3	4
63, 12	4	3

63, 13	3	4
63, 14	4	3
64, 1	1	2
64, 2	2	1
64, 3	1	2
64, 4	2	1
64, 5	1	2
64, 6	2	1
64, 7	1	2
64, 8	2	1
64, 9	1	2
64, 10	2	1
64, 11	1	2
64, 12	2	1
64, 13	1	2
64, 14	2	1
65, 1	1	2
65, 2	2	1
65, 3	1	2
65, 4	2	1
65, 5	1	2
65, 6	2	1
65, 7	1	2
65, 8	2	1
65, 9	1	2
65, 10	2	1
65, 11	1	2
65, 12	2	1
65, 13	1	2
65, 14	2	1
66, 1	1	2
66, 2	2	1
66, 3	1	2
66, 4	2	1
66, 5	1	2
66, 6	2	1
66, 7	1	2
66, 8	2	1
66, 9	1	2
66, 10	2	1
66, 11	1	2
66, 12	2	1
66, 13	1	2
66, 14	2	1
67, 1	1	2
67, 2	2	1
67, 3	1	2
67, 4	2	1
67, 5	1	2
67, 6	2	1
67, 7	1	2
67, 8	2	1
67, 9	1	2
67, 10	2	1
67, 11	1	2
67, 12	2	1
67, 13	1	2
67, 14	2	1

DETAILS

Drive at Enclosure 60, Slot 1  
 Drive port: 1, Channel: 3, ID: 0/0xEF  
 Drive port: 2, Channel: 4, ID: 0/0xEF  
 Drive path redundancy: OK  
 Status: Optimal  
 Raw capacity: 33.902 GB  
 Usable capacity: 33.862 GB  
 Current data rate: 2 Gbps

Product ID: ST336753FC F  
 Firmware version: B953  
 Serial number: 3HX0K8AL000073392DSE  
 Vendor: IBM-ESXS  
 Date of manufacture: April 5, 2003  
 World-wide name: 20:00:00:04:cf:f9:e3:3e  
 Mode: Assigned  
 Associated array: Array 1

Drive at Enclosure 60, Slot 2  
 Drive port: 1, Channel: 4, ID: 1/0xE8  
 Drive port: 2, Channel: 3, ID: 1/0xE8  
 Drive path redundancy: OK  
 Status: Optimal  
 Raw capacity: 33.902 GB  
 Usable capacity: 33.862 GB  
 Current data rate: 2 Gbps  
 Product ID: ST336753FC F  
 Firmware version: B953  
 Serial number: 3HX0K8AM000073405G6H  
 Vendor: IBM-ESXS  
 Date of manufacture: April 5, 2003  
 World-wide name: 20:00:00:04:cf:f9:e5:31  
 Mode: Assigned  
 Associated array: Array 1

Drive at Enclosure 60, Slot 3  
 Drive port: 1, Channel: 3, ID: 2/0xE4  
 Drive port: 2, Channel: 4, ID: 2/0xE4  
 Drive path redundancy: OK  
 Status: Optimal  
 Raw capacity: 33.902 GB  
 Usable capacity: 33.862 GB  
 Current data rate: 2 Gbps  
 Product ID: ST336753FC F  
 Firmware version: B953  
 Serial number: 3HX0HKZ900007339TYG7  
 Vendor: IBM-ESXS  
 Date of manufacture: April 6, 2003  
 World-wide name: 20:00:00:04:cf:f9:fc:31  
 Mode: Assigned  
 Associated array: Array 1

Drive at Enclosure 60, Slot 4  
 Drive port: 1, Channel: 4, ID: 3/0xE2  
 Drive port: 2, Channel: 3, ID: 3/0xE2  
 Drive path redundancy: OK  
 Status: Optimal  
 Raw capacity: 33.902 GB  
 Usable capacity: 33.862 GB  
 Current data rate: 2 Gbps  
 Product ID: ST336753FC F  
 Firmware version: B953  
 Serial number: 3HX0JZY400007340GTTL  
 Vendor: IBM-ESXS  
 Date of manufacture: April 6, 2003  
 World-wide name: 20:00:00:04:cf:ff:0d:59  
 Mode: Assigned  
 Associated array: Array 1

Drive at Enclosure 60, Slot 5  
 Drive port: 1, Channel: 3, ID: 4/0xE1  
 Drive port: 2, Channel: 4, ID: 4/0xE1  
 Drive path redundancy: OK  
 Status: Optimal  
 Raw capacity: 33.902 GB  
 Usable capacity: 33.862 GB  
 Current data rate: 2 Gbps

Product ID: ST336753FC F  
Firmware version: B953  
Serial number: 3HX0K79S0000734059ZR  
Vendor: IBM-ESXS  
Date of manufacture: April 6, 2003  
World-wide name: 20:00:00:04:cf:ff:0d:68  
Mode: Assigned  
Associated array: Array 1

Drive at Enclosure 60, Slot 6  
Drive port: 1, Channel: 4, ID: 5/0xE0  
Drive port: 2, Channel: 3, ID: 5/0xE0  
Drive path redundancy: OK  
Status: Optimal  
Raw capacity: 33.902 GB  
Usable capacity: 33.862 GB  
Current data rate: 2 Gbps  
Product ID: ST336753FC F  
Firmware version: B953  
Serial number: 3HX0HT350000734058JA  
Vendor: IBM-ESXS  
Date of manufacture: April 5, 2003  
World-wide name: 20:00:00:04:cf:f9:e6:b1  
Mode: Assigned  
Associated array: Array 1

Drive at Enclosure 60, Slot 7  
Drive port: 1, Channel: 3, ID: 6/0xDC  
Drive port: 2, Channel: 4, ID: 6/0xDC  
Drive path redundancy: OK  
Status: Optimal  
Raw capacity: 33.902 GB  
Usable capacity: 33.862 GB  
Current data rate: 2 Gbps  
Product ID: ST336753FC F  
Firmware version: B953  
Serial number: 3HX0HMQ500007340WVLR  
Vendor: IBM-ESXS  
Date of manufacture: April 5, 2003  
World-wide name: 20:00:00:04:cf:f9:ec:75  
Mode: Assigned  
Associated array: Array 1

Drive at Enclosure 60, Slot 8  
Drive port: 1, Channel: 4, ID: 7/0xDA  
Drive port: 2, Channel: 3, ID: 7/0xDA  
Drive path redundancy: OK  
Status: Optimal  
Raw capacity: 33.902 GB  
Usable capacity: 33.862 GB  
Current data rate: 2 Gbps  
Product ID: ST336753FC F  
Firmware version: B953  
Serial number: 3HX0KBGW000073405FVN  
Vendor: IBM-ESXS  
Date of manufacture: April 6, 2003  
World-wide name: 20:00:00:04:cf:ff:12:69  
Mode: Assigned  
Associated array: Array 1

Drive at Enclosure 60, Slot 9  
Drive port: 1, Channel: 3, ID: 80/0x55  
Drive port: 2, Channel: 4, ID: 80/0x55  
Drive path redundancy: OK  
Status: Optimal  
Raw capacity: 33.902 GB  
Usable capacity: 33.862 GB  
Current data rate: 2 Gbps

Product ID: ST336753FC F  
Firmware version: B953  
Serial number: 3HX0JKTE000073405G6W  
Vendor: IBM-ESXS  
Date of manufacture: April 5, 2003  
World-wide name: 20:00:00:04:cf:f9:e5:73  
Mode: Assigned  
Associated array: Array 1

Drive at Enclosure 60, Slot 10  
Drive port: 1, Channel: 4, ID: 96/0x3A  
Drive port: 2, Channel: 3, ID: 96/0x3A  
Drive path redundancy: OK  
Status: Optimal  
Raw capacity: 33.902 GB  
Usable capacity: 33.862 GB  
Current data rate: 2 Gbps  
Product ID: ST336753FC F  
Firmware version: B953  
Serial number: 3HX0K1BT00007339TYSS  
Vendor: IBM-ESXS  
Date of manufacture: April 6, 2003  
World-wide name: 20:00:00:04:cf:ff:02:6e  
Mode: Assigned  
Associated array: Array 1

Drive at Enclosure 60, Slot 11  
Drive port: 1, Channel: 3, ID: 64/0x72  
Drive port: 2, Channel: 4, ID: 64/0x72  
Drive path redundancy: OK  
Status: Optimal  
Raw capacity: 33.902 GB  
Usable capacity: 33.862 GB  
Current data rate: 2 Gbps  
Product ID: ST336753FC F  
Firmware version: B953  
Serial number: 3HX0KD0C00007340WW1S  
Vendor: IBM-ESXS  
Date of manufacture: April 6, 2003  
World-wide name: 20:00:00:04:cf:ff:11:cd  
Mode: Assigned  
Associated array: Array 1

Drive at Enclosure 60, Slot 12  
Drive port: 1, Channel: 4, ID: 72/0x67  
Drive port: 2, Channel: 3, ID: 72/0x67  
Drive path redundancy: OK  
Status: Optimal  
Raw capacity: 33.902 GB  
Usable capacity: 33.862 GB  
Current data rate: 2 Gbps  
Product ID: ST336753FC F  
Firmware version: B953  
Serial number: 3HX0HT630000734058FQ  
Vendor: IBM-ESXS  
Date of manufacture: April 5, 2003  
World-wide name: 20:00:00:04:cf:f9:e5:ff  
Mode: Assigned  
Associated array: Array 1

Drive at Enclosure 60, Slot 13  
Drive port: 1, Channel: 3, ID: 88/0x4B  
Drive port: 2, Channel: 4, ID: 88/0x4B  
Drive path redundancy: OK  
Status: Optimal  
Raw capacity: 33.902 GB  
Usable capacity: 33.862 GB  
Current data rate: 2 Gbps

Product ID: ST336753FC F  
Firmware version: B953  
Serial number: 3HX0HZPE000073411NJR  
Vendor: IBM-ESXS  
Date of manufacture: April 6, 2003  
World-wide name: 20:00:00:04:cf:ff:13:b5  
Mode: Assigned  
Associated array: Array 1

Drive at Enclosure 60, Slot 14

Drive port: 1, Channel: 4, ID: 104/0x2E  
Drive port: 2, Channel: 3, ID: 104/0x2E  
Drive path redundancy: OK  
Status: Optimal  
Raw capacity: 33.902 GB  
Usable capacity: 33.862 GB  
Current data rate: 2 Gbps  
Product ID: ST336753FC F  
Firmware version: B953  
Serial number: 3HX0HNDN00008305DEPR  
Vendor: IBM-ESXS  
Date of manufacture: April 5, 2003  
World-wide name: 20:00:00:04:cf:f9:da:ce  
Mode: Assigned  
Associated array: Array 1

Drive at Enclosure 61, Slot 1

Drive port: 1, Channel: 3, ID: 8/0xD9  
Drive port: 2, Channel: 4, ID: 8/0xD9  
Drive path redundancy: OK  
Status: Optimal  
Raw capacity: 33.902 GB  
Usable capacity: 33.862 GB  
Current data rate: 2 Gbps  
Product ID: ST336753FC F  
Firmware version: B953  
Serial number: 3HX0JYBF00007340WVJW  
Vendor: IBM-ESXS  
Date of manufacture: April 6, 2003  
World-wide name: 20:00:00:04:cf:ff:0d:5e  
Mode: Assigned  
Associated array: Array 1

Drive at Enclosure 61, Slot 2

Drive port: 1, Channel: 4, ID: 9/0xD6  
Drive port: 2, Channel: 3, ID: 9/0xD6  
Drive path redundancy: OK  
Status: Optimal  
Raw capacity: 33.902 GB  
Usable capacity: 33.862 GB  
Current data rate: 2 Gbps  
Product ID: ST336753FC F  
Firmware version: B953  
Serial number: 3HX0HT3Y0000734059QN  
Vendor: IBM-ESXS  
Date of manufacture: April 5, 2003  
World-wide name: 20:00:00:04:cf:f9:e7:67  
Mode: Assigned  
Associated array: Array 1

Drive at Enclosure 61, Slot 3

Drive port: 1, Channel: 3, ID: 10/0xD5  
Drive port: 2, Channel: 4, ID: 10/0xD5  
Drive path redundancy: OK  
Status: Optimal  
Raw capacity: 33.902 GB  
Usable capacity: 33.862 GB  
Current data rate: 2 Gbps

Product ID: ST336753FC F  
Firmware version: B953  
Serial number: 3HX0HT6N0000734059XT  
Vendor: IBM-ESXS  
Date of manufacture: April 5, 2003  
World-wide name: 20:00:00:04:cf:f9:e6:8f  
Mode: Assigned  
Associated array: Array 1

Drive at Enclosure 61, Slot 4

Drive port: 1, Channel: 4, ID: 11/0xD4  
Drive port: 2, Channel: 3, ID: 11/0xD4  
Drive path redundancy: OK  
Status: Optimal  
Raw capacity: 33.902 GB  
Usable capacity: 33.862 GB  
Current data rate: 2 Gbps  
Product ID: ST336753FC F  
Firmware version: B953  
Serial number: 3HX0K24J00007339N0Q8  
Vendor: IBM-ESXS  
Date of manufacture: April 6, 2003  
World-wide name: 20:00:00:04:cf:f9:fb:17  
Mode: Assigned  
Associated array: Array 1

Drive at Enclosure 61, Slot 5

Drive port: 1, Channel: 3, ID: 12/0xD3  
Drive port: 2, Channel: 4, ID: 12/0xD3  
Drive path redundancy: OK  
Status: Optimal  
Raw capacity: 33.902 GB  
Usable capacity: 33.862 GB  
Current data rate: 2 Gbps  
Product ID: ST336753FC F  
Firmware version: B953  
Serial number: 3HX0JE4K000073392D9J  
Vendor: IBM-ESXS  
Date of manufacture: April 6, 2003  
World-wide name: 20:00:00:04:cf:f9:fc:19  
Mode: Assigned  
Associated array: Array 1

Drive at Enclosure 61, Slot 6

Drive port: 1, Channel: 4, ID: 13/0xD2  
Drive port: 2, Channel: 3, ID: 13/0xD2  
Drive path redundancy: OK  
Status: Optimal  
Raw capacity: 33.902 GB  
Usable capacity: 33.862 GB  
Current data rate: 2 Gbps  
Product ID: ST336753FC F  
Firmware version: B953  
Serial number: 3HX0K0SH00007339TY53  
Vendor: IBM-ESXS  
Date of manufacture: April 6, 2003  
World-wide name: 20:00:00:04:cf:ff:08:42  
Mode: Assigned  
Associated array: Array 1

Drive at Enclosure 61, Slot 7

Drive port: 1, Channel: 3, ID: 14/0xD1  
Drive port: 2, Channel: 4, ID: 14/0xD1  
Drive path redundancy: OK  
Status: Optimal  
Raw capacity: 33.902 GB  
Usable capacity: 33.862 GB  
Current data rate: 2 Gbps

Product ID: ST336753FC F  
Firmware version: B953  
Serial number: 3HX0JZJV00007339GMRQ  
Vendor: IBM-ESXS  
Date of manufacture: April 6, 2003  
World-wide name: 20:00:00:04:cf:ff:08:40  
Mode: Assigned  
Associated array: Array 1

Drive at Enclosure 61, Slot 8  
Drive port: 1, Channel: 4, ID: 15/0xCE  
Drive port: 2, Channel: 3, ID: 15/0xCE  
Drive path redundancy: OK  
Status: Optimal  
Raw capacity: 33.902 GB  
Usable capacity: 33.862 GB  
Current data rate: 2 Gbps  
Product ID: ST336753FC F  
Firmware version: B953  
Serial number: 3HX0K5TY00007339TYUV  
Vendor: IBM-ESXS  
Date of manufacture: April 6, 2003  
World-wide name: 20:00:00:04:cf:ff:02:72  
Mode: Assigned  
Associated array: Array 1

Drive at Enclosure 61, Slot 9  
Drive port: 1, Channel: 3, ID: 81/0x54  
Drive port: 2, Channel: 4, ID: 81/0x54  
Drive path redundancy: OK  
Status: Optimal  
Raw capacity: 33.902 GB  
Usable capacity: 33.862 GB  
Current data rate: 2 Gbps  
Product ID: ST336753FC F  
Firmware version: B953  
Serial number: 3HX0HRN3000073392E0B  
Vendor: IBM-ESXS  
Date of manufacture: April 5, 2003  
World-wide name: 20:00:00:04:cf:f9:ea:6f  
Mode: Assigned  
Associated array: Array 1

Drive at Enclosure 61, Slot 10  
Drive port: 1, Channel: 4, ID: 97/0x39  
Drive port: 2, Channel: 3, ID: 97/0x39  
Drive path redundancy: OK  
Status: Optimal  
Raw capacity: 33.902 GB  
Usable capacity: 33.862 GB  
Current data rate: 2 Gbps  
Product ID: ST336753FC F  
Firmware version: B953  
Serial number: 3HX0HT4F0000734058KQ  
Vendor: IBM-ESXS  
Date of manufacture: April 5, 2003  
World-wide name: 20:00:00:04:cf:f9:e6:fc  
Mode: Assigned  
Associated array: Array 1

Drive at Enclosure 61, Slot 11  
Drive port: 1, Channel: 3, ID: 65/0x71  
Drive port: 2, Channel: 4, ID: 65/0x71  
Drive path redundancy: OK  
Status: Optimal  
Raw capacity: 33.902 GB  
Usable capacity: 33.862 GB  
Current data rate: 2 Gbps

Product ID: ST336753FC F  
Firmware version: B953  
Serial number: 3HX0H3RG00007339TYTY  
Vendor: IBM-ESXS  
Date of manufacture: April 6, 2003  
World-wide name: 20:00:00:04:cf:ff:02:74  
Mode: Assigned  
Associated array: Array 1

Drive at Enclosure 61, Slot 12  
Drive port: 1, Channel: 4, ID: 73/0x66  
Drive port: 2, Channel: 3, ID: 73/0x66  
Drive path redundancy: OK  
Status: Optimal  
Raw capacity: 33.902 GB  
Usable capacity: 33.862 GB  
Current data rate: 2 Gbps  
Product ID: ST336753FC F  
Firmware version: B953  
Serial number: 3HX0KBTQ000073405FUP  
Vendor: IBM-ESXS  
Date of manufacture: April 6, 2003  
World-wide name: 20:00:00:04:cf:ff:12:ce  
Mode: Assigned  
Associated array: Array 1

Drive at Enclosure 61, Slot 13  
Drive port: 1, Channel: 3, ID: 89/0x4A  
Drive port: 2, Channel: 4, ID: 89/0x4A  
Drive path redundancy: OK  
Status: Optimal  
Raw capacity: 33.902 GB  
Usable capacity: 33.862 GB  
Current data rate: 2 Gbps  
Product ID: ST336753FC F  
Firmware version: B953  
Serial number: 3HX0K45900007339TYRV  
Vendor: IBM-ESXS  
Date of manufacture: April 6, 2003  
World-wide name: 20:00:00:04:cf:ff:02:55  
Mode: Assigned  
Associated array: Array 1

Drive at Enclosure 61, Slot 14  
Drive port: 1, Channel: 4, ID: 105/0x2D  
Drive port: 2, Channel: 3, ID: 105/0x2D  
Drive path redundancy: OK  
Status: Optimal  
Raw capacity: 33.902 GB  
Usable capacity: 33.862 GB  
Current data rate: 2 Gbps  
Product ID: ST336753FC F  
Firmware version: B953  
Serial number: 3HX0KBLV00007340GUF4  
Vendor: IBM-ESXS  
Date of manufacture: April 6, 2003  
World-wide name: 20:00:00:04:cf:ff:12:db  
Mode: Assigned  
Associated array: Array 1

Drive at Enclosure 62, Slot 1  
Drive port: 1, Channel: 3, ID: 16/0xCD  
Drive port: 2, Channel: 4, ID: 16/0xCD  
Drive path redundancy: OK  
Status: Optimal  
Raw capacity: 33.902 GB  
Usable capacity: 33.862 GB  
Current data rate: 2 Gbps



Product ID: ST336753FC F  
Firmware version: B953  
Serial number: 3HX0HT2M0000734058JX  
Vendor: IBM-ESXS  
Date of manufacture: April 5, 2003  
World-wide name: 20:00:00:04:cf:f9:e6:c3  
Mode: Assigned  
Associated array: Array 2

Drive at Enclosure 62, Slot 2

Drive port: 1, Channel: 4, ID: 17/0xCC  
Drive port: 2, Channel: 3, ID: 17/0xCC  
Drive path redundancy: OK  
Status: Optimal  
Raw capacity: 33.902 GB  
Usable capacity: 33.862 GB  
Current data rate: 2 Gbps  
Product ID: ST336753FC F  
Firmware version: B953  
Serial number: 3HX0K2HR00007340X4ZP  
Vendor: IBM-ESXS  
Date of manufacture: April 6, 2003  
World-wide name: 20:00:00:04:cf:ff:03:62  
Mode: Assigned  
Associated array: Array 2

Drive at Enclosure 62, Slot 3

Drive port: 1, Channel: 3, ID: 18/0xCB  
Drive port: 2, Channel: 4, ID: 18/0xCB  
Drive path redundancy: OK  
Status: Optimal  
Raw capacity: 33.902 GB  
Usable capacity: 33.862 GB  
Current data rate: 2 Gbps  
Product ID: ST336753FC F  
Firmware version: B953  
Serial number: 3HX0HRLK00007340X5AX  
Vendor: IBM-ESXS  
Date of manufacture: April 5, 2003  
World-wide name: 20:00:00:04:cf:f9:e8:77  
Mode: Assigned  
Associated array: Array 2

Drive at Enclosure 62, Slot 4

Drive port: 1, Channel: 4, ID: 19/0xCA  
Drive port: 2, Channel: 3, ID: 19/0xCA  
Drive path redundancy: OK  
Status: Optimal  
Raw capacity: 33.902 GB  
Usable capacity: 33.862 GB  
Current data rate: 2 Gbps  
Product ID: ST336753FC F  
Firmware version: B953  
Serial number: 3HX0K1BN00007339TYUN  
Vendor: IBM-ESXS  
Date of manufacture: April 6, 2003  
World-wide name: 20:00:00:04:cf:ff:02:5b  
Mode: Assigned  
Associated array: Array 2

Drive at Enclosure 62, Slot 5

Drive port: 1, Channel: 3, ID: 20/0xC9  
Drive port: 2, Channel: 4, ID: 20/0xC9  
Drive path redundancy: OK  
Status: Optimal  
Raw capacity: 33.902 GB  
Usable capacity: 33.862 GB  
Current data rate: 2 Gbps

Product ID: ST336753FC F  
Firmware version: B953  
Serial number: 3HX0KBSW000073405FS4  
Vendor: IBM-ESXS  
Date of manufacture: April 6, 2003  
World-wide name: 20:00:00:04:cf:ff:12:7d  
Mode: Assigned  
Associated array: Array 2

Drive at Enclosure 62, Slot 6

Drive port: 1, Channel: 4, ID: 21/0xC7  
Drive port: 2, Channel: 3, ID: 21/0xC7  
Drive path redundancy: OK  
Status: Optimal  
Raw capacity: 33.902 GB  
Usable capacity: 33.862 GB  
Current data rate: 2 Gbps  
Product ID: ST336753FC F  
Firmware version: B953  
Serial number: 3HX0K07Q00007339TYZU  
Vendor: IBM-ESXS  
Date of manufacture: April 6, 2003  
World-wide name: 20:00:00:04:cf:ff:02:3f  
Mode: Assigned  
Associated array: Array 2

Drive at Enclosure 62, Slot 7

Drive port: 1, Channel: 3, ID: 22/0xC6  
Drive port: 2, Channel: 4, ID: 22/0xC6  
Drive path redundancy: OK  
Status: Optimal  
Raw capacity: 33.902 GB  
Usable capacity: 33.862 GB  
Current data rate: 2 Gbps  
Product ID: ST336753FC F  
Firmware version: B953  
Serial number: 3HX0KBJS000073405FVE  
Vendor: IBM-ESXS  
Date of manufacture: April 6, 2003  
World-wide name: 20:00:00:04:cf:ff:12:66  
Mode: Assigned  
Associated array: Array 2

Drive at Enclosure 62, Slot 8

Drive port: 1, Channel: 4, ID: 23/0xC5  
Drive port: 2, Channel: 3, ID: 23/0xC5  
Drive path redundancy: OK  
Status: Optimal  
Raw capacity: 33.902 GB  
Usable capacity: 33.862 GB  
Current data rate: 2 Gbps  
Product ID: ST336753FC F  
Firmware version: B953  
Serial number: 3HX0HM0Z00007339TY8W  
Vendor: IBM-ESXS  
Date of manufacture: April 5, 2003  
World-wide name: 20:00:00:04:cf:f9:eb:b1  
Mode: Assigned  
Associated array: Array 2

Drive at Enclosure 62, Slot 9

Drive port: 1, Channel: 3, ID: 82/0x53  
Drive port: 2, Channel: 4, ID: 82/0x53  
Drive path redundancy: OK  
Status: Optimal  
Raw capacity: 33.902 GB  
Usable capacity: 33.862 GB  
Current data rate: 2 Gbps

Product ID: ST336753FC F  
Firmware version: B953  
Serial number: 3HX0HRFP00007340X5BG  
Vendor: IBM-ESXS  
Date of manufacture: April 5, 2003  
World-wide name: 20:00:00:04:cf:f9:e8:ab  
Mode: Assigned  
Associated array: Array 2

Drive at Enclosure 62, Slot 10  
Drive port: 1, Channel: 4, ID: 98/0x36  
Drive port: 2, Channel: 3, ID: 98/0x36  
Drive path redundancy: OK  
Status: Optimal  
Raw capacity: 33.902 GB  
Usable capacity: 33.862 GB  
Current data rate: 2 Gbps  
Product ID: ST336753FC F  
Firmware version: B953  
Serial number: 3HX0J1G300007339GMRV  
Vendor: IBM-ESXS  
Date of manufacture: April 6, 2003  
World-wide name: 20:00:00:04:cf:f9:fb:29  
Mode: Assigned  
Associated array: Array 2

Drive at Enclosure 62, Slot 11  
Drive port: 1, Channel: 3, ID: 66/0x6E  
Drive port: 2, Channel: 4, ID: 66/0x6E  
Drive path redundancy: OK  
Status: Optimal  
Raw capacity: 33.902 GB  
Usable capacity: 33.862 GB  
Current data rate: 2 Gbps  
Product ID: ST336753FC F  
Firmware version: B953  
Serial number: 3HX0TQBD00007346FB5T  
Vendor: IBM-ESXS  
Date of manufacture: May 17, 2003  
World-wide name: 20:00:00:0c:50:20:a1:b4  
Mode: Assigned  
Associated array: Array 2

Drive at Enclosure 62, Slot 12  
Drive port: 1, Channel: 4, ID: 74/0x65  
Drive port: 2, Channel: 3, ID: 74/0x65  
Drive path redundancy: OK  
Status: Optimal  
Raw capacity: 33.902 GB  
Usable capacity: 33.862 GB  
Current data rate: 2 Gbps  
Product ID: ST336753FC F  
Firmware version: B953  
Serial number: 3HX0K8F5000073405FS5  
Vendor: IBM-ESXS  
Date of manufacture: April 6, 2003  
World-wide name: 20:00:00:04:cf:ff:12:a5  
Mode: Assigned  
Associated array: Array 2

Drive at Enclosure 62, Slot 13  
Drive port: 1, Channel: 3, ID: 90/0x49  
Drive port: 2, Channel: 4, ID: 90/0x49  
Drive path redundancy: OK  
Status: Optimal  
Raw capacity: 33.902 GB  
Usable capacity: 33.862 GB  
Current data rate: 2 Gbps

Product ID: ST336753FC F  
Firmware version: B953  
Serial number: 3HX0HRTV000073405FRL  
Vendor: IBM-ESXS  
Date of manufacture: April 6, 2003  
World-wide name: 20:00:00:04:cf:ff:13:09  
Mode: Assigned  
Associated array: Array 2

Drive at Enclosure 62, Slot 14  
Drive port: 1, Channel: 4, ID: 106/0x2C  
Drive port: 2, Channel: 3, ID: 106/0x2C  
Drive path redundancy: OK  
Status: Optimal  
Raw capacity: 33.902 GB  
Usable capacity: 33.862 GB  
Current data rate: 2 Gbps  
Product ID: ST336753FC F  
Firmware version: B953  
Serial number: 3HX0JSNW000073409K7M  
Vendor: IBM-ESXS  
Date of manufacture: April 6, 2003  
World-wide name: 20:00:00:04:cf:ff:11:6f  
Mode: Assigned  
Associated array: Array 2

Drive at Enclosure 63, Slot 1  
Drive port: 1, Channel: 3, ID: 24/0xC3  
Drive port: 2, Channel: 4, ID: 24/0xC3  
Drive path redundancy: OK  
Status: Optimal  
Raw capacity: 33.902 GB  
Usable capacity: 33.862 GB  
Current data rate: 2 Gbps  
Product ID: ST336753FC F  
Firmware version: B953  
Serial number: 3HX0HT1E000073392E0T  
Vendor: IBM-ESXS  
Date of manufacture: April 5, 2003  
World-wide name: 20:00:00:04:cf:f9:e2:ed  
Mode: Assigned  
Associated array: Array 2

Drive at Enclosure 63, Slot 2  
Drive port: 1, Channel: 4, ID: 25/0xBC  
Drive port: 2, Channel: 3, ID: 25/0xBC  
Drive path redundancy: OK  
Status: Optimal  
Raw capacity: 33.902 GB  
Usable capacity: 33.862 GB  
Current data rate: 2 Gbps  
Product ID: ST336753FC F  
Firmware version: B953  
Serial number: 3HX0JYAL00007340X57P  
Vendor: IBM-ESXS  
Date of manufacture: April 6, 2003  
World-wide name: 20:00:00:04:cf:ff:0d:4d  
Mode: Assigned  
Associated array: Array 2

Drive at Enclosure 63, Slot 3  
Drive port: 1, Channel: 3, ID: 26/0xBA  
Drive port: 2, Channel: 4, ID: 26/0xBA  
Drive path redundancy: OK  
Status: Optimal  
Raw capacity: 33.902 GB  
Usable capacity: 33.862 GB  
Current data rate: 2 Gbps

Product ID: ST336753FC F  
Firmware version: B953  
Serial number: 3HX0KCSR000073409K3X  
Vendor: IBM-ESXS  
Date of manufacture: April 6, 2003  
World-wide name: 20:00:00:04:cf:ff:0d:09  
Mode: Assigned  
Associated array: Array 2

Drive at Enclosure 63, Slot 4  
Drive port: 1, Channel: 4, ID: 27/0xB9  
Drive port: 2, Channel: 3, ID: 27/0xB9  
Drive path redundancy: OK  
Status: Optimal  
Raw capacity: 33.902 GB  
Usable capacity: 33.862 GB  
Current data rate: 2 Gbps  
Product ID: ST336753FC F  
Firmware version: B953  
Serial number: 3HX0JZK900007339TYQE  
Vendor: IBM-ESXS  
Date of manufacture: April 6, 2003  
World-wide name: 20:00:00:04:cf:ff:0a:15  
Mode: Assigned  
Associated array: Array 2

Drive at Enclosure 63, Slot 5  
Drive port: 1, Channel: 3, ID: 28/0xB6  
Drive port: 2, Channel: 4, ID: 28/0xB6  
Drive path redundancy: OK  
Status: Optimal  
Raw capacity: 33.902 GB  
Usable capacity: 33.862 GB  
Current data rate: 2 Gbps  
Product ID: ST336753FC F  
Firmware version: B953  
Serial number: 3HX0K7SK000073405G3V  
Vendor: IBM-ESXS  
Date of manufacture: April 5, 2003  
World-wide name: 20:00:00:04:cf:f9:ed:4a  
Mode: Assigned  
Associated array: Array 2

Drive at Enclosure 63, Slot 6  
Drive port: 1, Channel: 4, ID: 29/0xB5  
Drive port: 2, Channel: 3, ID: 29/0xB5  
Drive path redundancy: OK  
Status: Optimal  
Raw capacity: 33.902 GB  
Usable capacity: 33.862 GB  
Current data rate: 2 Gbps  
Product ID: ST336753FC F  
Firmware version: B953  
Serial number: 3HX0KCPW0000734058CG  
Vendor: IBM-ESXS  
Date of manufacture: April 6, 2003  
World-wide name: 20:00:00:04:cf:ff:0d:25  
Mode: Assigned  
Associated array: Array 2

Drive at Enclosure 63, Slot 7  
Drive port: 1, Channel: 3, ID: 30/0xB4  
Drive port: 2, Channel: 4, ID: 30/0xB4  
Drive path redundancy: OK  
Status: Optimal  
Raw capacity: 33.902 GB  
Usable capacity: 33.862 GB  
Current data rate: 2 Gbps

Product ID: ST336753FC F  
Firmware version: B953  
Serial number: 3HX0JZDG000073405A9Z  
Vendor: IBM-ESXS  
Date of manufacture: April 6, 2003  
World-wide name: 20:00:00:04:cf:ff:0a:32  
Mode: Assigned  
Associated array: Array 2

Drive at Enclosure 63, Slot 8  
Drive port: 1, Channel: 4, ID: 31/0xB3  
Drive port: 2, Channel: 3, ID: 31/0xB3  
Drive path redundancy: OK  
Status: Optimal  
Raw capacity: 33.902 GB  
Usable capacity: 33.862 GB  
Current data rate: 2 Gbps  
Product ID: ST336753FC F  
Firmware version: B953  
Serial number: 3HX0HT6100007339SNTB  
Vendor: IBM-ESXS  
Date of manufacture: April 6, 2003  
World-wide name: 20:00:00:04:cf:ff:02:46  
Mode: Assigned  
Associated array: Array 2

Drive at Enclosure 63, Slot 9  
Drive port: 1, Channel: 3, ID: 83/0x52  
Drive port: 2, Channel: 4, ID: 83/0x52  
Drive path redundancy: OK  
Status: Optimal  
Raw capacity: 33.902 GB  
Usable capacity: 33.862 GB  
Current data rate: 2 Gbps  
Product ID: ST336753FC F  
Firmware version: B953  
Serial number: 3HX0K6VS00007340WVLE  
Vendor: IBM-ESXS  
Date of manufacture: April 5, 2003  
World-wide name: 20:00:00:04:cf:f9:ed:3a  
Mode: Assigned  
Associated array: Array 2

Drive at Enclosure 63, Slot 10  
Drive port: 1, Channel: 4, ID: 99/0x35  
Drive port: 2, Channel: 3, ID: 99/0x35  
Drive path redundancy: OK  
Status: Optimal  
Raw capacity: 33.902 GB  
Usable capacity: 33.862 GB  
Current data rate: 2 Gbps  
Product ID: ST336753FC F  
Firmware version: B953  
Serial number: 3HX0K79G00007340X4RD  
Vendor: IBM-ESXS  
Date of manufacture: April 5, 2003  
World-wide name: 20:00:00:04:cf:f9:e5:c6  
Mode: Assigned  
Associated array: Array 2

Drive at Enclosure 63, Slot 11  
Drive port: 1, Channel: 3, ID: 67/0x6D  
Drive port: 2, Channel: 4, ID: 67/0x6D  
Drive path redundancy: OK  
Status: Optimal  
Raw capacity: 33.902 GB  
Usable capacity: 33.862 GB  
Current data rate: 2 Gbps

Product ID: ST336753FC F  
Firmware version: B953  
Serial number: 3HX0K88C000073392DZ6  
Vendor: IBM-ESXS  
Date of manufacture: April 5, 2003  
World-wide name: 20:00:00:04:cf:f9:e3:4a  
Mode: Assigned  
Associated array: Array 2

Drive at Enclosure 63, Slot 12  
Drive port: 1, Channel: 4, ID: 75/0x63  
Drive port: 2, Channel: 3, ID: 75/0x63  
Drive path redundancy: OK  
Status: Optimal  
Raw capacity: 33.902 GB  
Usable capacity: 33.862 GB  
Current data rate: 2 Gbps  
Product ID: ST336753FC F  
Firmware version: B953  
Serial number: 3HX0HRG80000734058JG  
Vendor: IBM-ESXS  
Date of manufacture: April 5, 2003  
World-wide name: 20:00:00:04:cf:f9:e7:6a  
Mode: Assigned  
Associated array: Array 2

Drive at Enclosure 63, Slot 13  
Drive port: 1, Channel: 3, ID: 91/0x47  
Drive port: 2, Channel: 4, ID: 91/0x47  
Drive path redundancy: OK  
Status: Optimal  
Raw capacity: 33.902 GB  
Usable capacity: 33.862 GB  
Current data rate: 2 Gbps  
Product ID: ST336753FC F  
Firmware version: B953  
Serial number: 3HX0TATJ00007345LF5P  
Vendor: IBM-ESXS  
Date of manufacture: May 14, 2003  
World-wide name: 20:00:00:0c:50:20:4d:b5  
Mode: Assigned  
Associated array: Array 2

Drive at Enclosure 63, Slot 14  
Drive port: 1, Channel: 4, ID: 107/0x2B  
Drive port: 2, Channel: 3, ID: 107/0x2B  
Drive path redundancy: OK  
Status: Optimal  
Raw capacity: 33.902 GB  
Usable capacity: 33.862 GB  
Current data rate: 2 Gbps  
Product ID: ST336753FC F  
Firmware version: B953  
Serial number: 3HX0JRTS00007339TYCA  
Vendor: IBM-ESXS  
Date of manufacture: April 5, 2003  
World-wide name: 20:00:00:04:cf:f9:e5:d9  
Mode: Assigned  
Associated array: Array 2

Drive at Enclosure 64, Slot 1  
Drive port: 1, Channel: 1, ID: 32/0xB2  
Drive port: 2, Channel: 2, ID: 32/0xB2  
Drive path redundancy: OK  
Status: Optimal  
Raw capacity: 33.902 GB  
Usable capacity: 33.862 GB  
Current data rate: 2 Gbps

Product ID: ST336753FC F  
Firmware version: B953  
Serial number: 3HX0JY300000734058C3  
Vendor: IBM-ESXS  
Date of manufacture: April 6, 2003  
World-wide name: 20:00:00:04:cf:ff:0d:87  
Mode: Assigned  
Associated array: Array 3

Drive at Enclosure 64, Slot 2  
Drive port: 1, Channel: 2, ID: 33/0xB1  
Drive port: 2, Channel: 1, ID: 33/0xB1  
Drive path redundancy: OK  
Status: Optimal  
Raw capacity: 33.902 GB  
Usable capacity: 33.862 GB  
Current data rate: 2 Gbps  
Product ID: ST336753FC F  
Firmware version: B953  
Serial number: 3HX0K5QP00007340X5FR  
Vendor: IBM-ESXS  
Date of manufacture: April 6, 2003  
World-wide name: 20:00:00:04:cf:ff:0d:30  
Mode: Assigned  
Associated array: Array 3

Drive at Enclosure 64, Slot 3  
Drive port: 1, Channel: 1, ID: 34/0xAE  
Drive port: 2, Channel: 2, ID: 34/0xAE  
Drive path redundancy: OK  
Status: Optimal  
Raw capacity: 33.902 GB  
Usable capacity: 33.862 GB  
Current data rate: 2 Gbps  
Product ID: ST336753FC F  
Firmware version: B953  
Serial number: 3HX0K7V4000073405G32  
Vendor: IBM-ESXS  
Date of manufacture: April 5, 2003  
World-wide name: 20:00:00:04:cf:f9:ed:00  
Mode: Assigned  
Associated array: Array 3

Drive at Enclosure 64, Slot 4  
Drive port: 1, Channel: 2, ID: 35/0xAD  
Drive port: 2, Channel: 1, ID: 35/0xAD  
Drive path redundancy: OK  
Status: Optimal  
Raw capacity: 33.902 GB  
Usable capacity: 33.862 GB  
Current data rate: 2 Gbps  
Product ID: ST336753FC F  
Firmware version: B953  
Serial number: 3HX0JPFQ00007340X4Z5  
Vendor: IBM-ESXS  
Date of manufacture: April 5, 2003  
World-wide name: 20:00:00:04:cf:f9:fb:a9  
Mode: Assigned  
Associated array: Array 3

Drive at Enclosure 64, Slot 5  
Drive port: 1, Channel: 1, ID: 36/0xAC  
Drive port: 2, Channel: 2, ID: 36/0xAC  
Drive path redundancy: OK  
Status: Optimal  
Raw capacity: 33.902 GB  
Usable capacity: 33.862 GB  
Current data rate: 2 Gbps

Product ID: ST336753FC F  
Firmware version: B953  
Serial number: 3HX0K16800007339SP6X  
Vendor: IBM-ESXS  
Date of manufacture: April 5, 2003  
World-wide name: 20:00:00:04:cf:ff:03:a9  
Mode: Assigned  
Associated array: Array 3

Drive at Enclosure 64, Slot 6  
Drive port: 1, Channel: 2, ID: 37/0xAB  
Drive port: 2, Channel: 1, ID: 37/0xAB  
Drive path redundancy: OK  
Status: Optimal  
Raw capacity: 33.902 GB  
Usable capacity: 33.862 GB  
Current data rate: 2 Gbps  
Product ID: ST336753FC F  
Firmware version: B953  
Serial number: 3HX0K88H000073405G7B  
Vendor: IBM-ESXS  
Date of manufacture: April 5, 2003  
World-wide name: 20:00:00:04:cf:f9:e5:2d  
Mode: Assigned  
Associated array: Array 3

Drive at Enclosure 64, Slot 7  
Drive port: 1, Channel: 1, ID: 38/0xAA  
Drive port: 2, Channel: 2, ID: 38/0xAA  
Drive path redundancy: OK  
Status: Optimal  
Raw capacity: 33.902 GB  
Usable capacity: 33.862 GB  
Current data rate: 2 Gbps  
Product ID: ST336753FC F  
Firmware version: B953  
Serial number: 3HX0JT7N000073405G4K  
Vendor: IBM-ESXS  
Date of manufacture: April 6, 2003  
World-wide name: 20:00:00:04:cf:ff:07:e3  
Mode: Assigned  
Associated array: Array 3

Drive at Enclosure 64, Slot 8  
Drive port: 1, Channel: 2, ID: 39/0xA9  
Drive port: 2, Channel: 1, ID: 39/0xA9  
Drive path redundancy: OK  
Status: Optimal  
Raw capacity: 33.902 GB  
Usable capacity: 33.862 GB  
Current data rate: 2 Gbps  
Product ID: ST336753FC F  
Firmware version: B953  
Serial number: 3HX0JRQ4000073409KFX  
Vendor: IBM-ESXS  
Date of manufacture: April 6, 2003  
World-wide name: 20:00:00:04:cf:ff:04:e3  
Mode: Assigned  
Associated array: Array 3

Drive at Enclosure 64, Slot 9  
Drive port: 1, Channel: 1, ID: 84/0x51  
Drive port: 2, Channel: 2, ID: 84/0x51  
Drive path redundancy: OK  
Status: Optimal  
Raw capacity: 33.902 GB  
Usable capacity: 33.862 GB  
Current data rate: 2 Gbps

Product ID: ST336753FC F  
Firmware version: B953  
Serial number: 3HX0JQV000007339EGAZ  
Vendor: IBM-ESXS  
Date of manufacture: April 5, 2003  
World-wide name: 20:00:00:04:cf:ff:03:af  
Mode: Assigned  
Associated array: Array 3

Drive at Enclosure 64, Slot 10  
Drive port: 1, Channel: 2, ID: 100/0x34  
Drive port: 2, Channel: 1, ID: 100/0x34  
Drive path redundancy: OK  
Status: Optimal  
Raw capacity: 33.902 GB  
Usable capacity: 33.862 GB  
Current data rate: 2 Gbps  
Product ID: ST336753FC F  
Firmware version: B953  
Serial number: 3HX0K2JQ00007339TYUG  
Vendor: IBM-ESXS  
Date of manufacture: April 6, 2003  
World-wide name: 20:00:00:04:cf:ff:02:6b  
Mode: Assigned  
Associated array: Array 3

Drive at Enclosure 64, Slot 11  
Drive port: 1, Channel: 1, ID: 68/0x6C  
Drive port: 2, Channel: 2, ID: 68/0x6C  
Drive path redundancy: OK  
Status: Optimal  
Raw capacity: 33.902 GB  
Usable capacity: 33.862 GB  
Current data rate: 2 Gbps  
Product ID: ST336753FC F  
Firmware version: B953  
Serial number: 3HX0K20V00007339LXKL  
Vendor: IBM-ESXS  
Date of manufacture: April 5, 2003  
World-wide name: 20:00:00:04:cf:ff:02:ce  
Mode: Assigned  
Associated array: Array 3

Drive at Enclosure 64, Slot 12  
Drive port: 1, Channel: 2, ID: 76/0x5C  
Drive port: 2, Channel: 1, ID: 76/0x5C  
Drive path redundancy: OK  
Status: Optimal  
Raw capacity: 33.902 GB  
Usable capacity: 33.862 GB  
Current data rate: 2 Gbps  
Product ID: ST336753FC F  
Firmware version: B953  
Serial number: 3HX0KCL5000073405FGJ  
Vendor: IBM-ESXS  
Date of manufacture: April 6, 2003  
World-wide name: 20:00:00:04:cf:ff:0d:5d  
Mode: Assigned  
Associated array: Array 3

Drive at Enclosure 64, Slot 13  
Drive port: 1, Channel: 1, ID: 92/0x46  
Drive port: 2, Channel: 2, ID: 92/0x46  
Drive path redundancy: OK  
Status: Optimal  
Raw capacity: 33.902 GB  
Usable capacity: 33.862 GB  
Current data rate: 2 Gbps

Product ID: ST336753FC F  
Firmware version: B953  
Serial number: 3HX0HQ5P000073393FLA  
Vendor: IBM-ESXS  
Date of manufacture: April 5, 2003  
World-wide name: 20:00:00:04:cf:ff:04:e2  
Mode: Assigned  
Associated array: Array 3

Drive at Enclosure 64, Slot 14

Drive port: 1, Channel: 2, ID: 108/0x2A  
Drive port: 2, Channel: 1, ID: 108/0x2A  
Drive path redundancy: OK  
Status: Optimal  
Raw capacity: 33.902 GB  
Usable capacity: 33.862 GB  
Current data rate: 2 Gbps  
Product ID: ST336753FC F  
Firmware version: B953  
Serial number: 3HX0KD5T000073410HMB  
Vendor: IBM-ESXS  
Date of manufacture: April 6, 2003  
World-wide name: 20:00:00:04:cf:ff:12:90  
Mode: Assigned  
Associated array: Array 3

Drive at Enclosure 65, Slot 1

Drive port: 1, Channel: 1, ID: 40/0xA7  
Drive port: 2, Channel: 2, ID: 40/0xA7  
Drive path redundancy: OK  
Status: Optimal  
Raw capacity: 33.902 GB  
Usable capacity: 33.862 GB  
Current data rate: 2 Gbps  
Product ID: ST336753FC F  
Firmware version: B953  
Serial number: 3HX0KBLY000073410HMK  
Vendor: IBM-ESXS  
Date of manufacture: April 6, 2003  
World-wide name: 20:00:00:04:cf:ff:12:93  
Mode: Assigned  
Associated array: Array 3

Drive at Enclosure 65, Slot 2

Drive port: 1, Channel: 2, ID: 41/0xA6  
Drive port: 2, Channel: 1, ID: 41/0xA6  
Drive path redundancy: OK  
Status: Optimal  
Raw capacity: 33.902 GB  
Usable capacity: 33.862 GB  
Current data rate: 2 Gbps  
Product ID: ST336753FC F  
Firmware version: B953  
Serial number: 3HX0JZSB0000734058CF  
Vendor: IBM-ESXS  
Date of manufacture: April 6, 2003  
World-wide name: 20:00:00:04:cf:ff:0d:7e  
Mode: Assigned  
Associated array: Array 3

Drive at Enclosure 65, Slot 3

Drive port: 1, Channel: 1, ID: 42/0xA5  
Drive port: 2, Channel: 2, ID: 42/0xA5  
Drive path redundancy: OK  
Status: Optimal  
Raw capacity: 33.902 GB  
Usable capacity: 33.862 GB  
Current data rate: 2 Gbps

Product ID: ST336753FC F  
Firmware version: B953  
Serial number: 3HX0JYAP0000734058K6  
Vendor: IBM-ESXS  
Date of manufacture: April 6, 2003  
World-wide name: 20:00:00:04:cf:ff:0d:57  
Mode: Assigned  
Associated array: Array 3

Drive at Enclosure 65, Slot 4

Drive port: 1, Channel: 2, ID: 43/0xA3  
Drive port: 2, Channel: 1, ID: 43/0xA3  
Drive path redundancy: OK  
Status: Optimal  
Raw capacity: 33.902 GB  
Usable capacity: 33.862 GB  
Current data rate: 2 Gbps  
Product ID: ST336753FC F  
Firmware version: B953  
Serial number: 3HX0JXRJ000073409KRS  
Vendor: IBM-ESXS  
Date of manufacture: April 6, 2003  
World-wide name: 20:00:00:04:cf:ff:0d:11  
Mode: Assigned  
Associated array: Array 3

Drive at Enclosure 65, Slot 5

Drive port: 1, Channel: 1, ID: 44/0x9F  
Drive port: 2, Channel: 2, ID: 44/0x9F  
Drive path redundancy: OK  
Status: Optimal  
Raw capacity: 33.902 GB  
Usable capacity: 33.862 GB  
Current data rate: 2 Gbps  
Product ID: ST336753FC F  
Firmware version: B953  
Serial number: 3HX0KCLQ00007340WVPE  
Vendor: IBM-ESXS  
Date of manufacture: April 6, 2003  
World-wide name: 20:00:00:04:cf:ff:0d:53  
Mode: Assigned  
Associated array: Array 3

Drive at Enclosure 65, Slot 6

Drive port: 1, Channel: 2, ID: 45/0x9E  
Drive port: 2, Channel: 1, ID: 45/0x9E  
Drive path redundancy: OK  
Status: Optimal  
Raw capacity: 33.902 GB  
Usable capacity: 33.862 GB  
Current data rate: 2 Gbps  
Product ID: ST336753FC F  
Firmware version: B953  
Serial number: 3HX0K0S100007339RGS4  
Vendor: IBM-ESXS  
Date of manufacture: April 6, 2003  
World-wide name: 20:00:00:04:cf:ff:08:1f  
Mode: Assigned  
Associated array: Array 3

Drive at Enclosure 65, Slot 7

Drive port: 1, Channel: 1, ID: 46/0x9D  
Drive port: 2, Channel: 2, ID: 46/0x9D  
Drive path redundancy: OK  
Status: Optimal  
Raw capacity: 33.902 GB  
Usable capacity: 33.862 GB  
Current data rate: 2 Gbps

Product ID: ST336753FC F  
Firmware version: B953  
Serial number: 3HX0KCTZ000073405G1W  
Vendor: IBM-ESXS  
Date of manufacture: April 6, 2003  
World-wide name: 20:00:00:04:cf:ff:0c:fb  
Mode: Assigned  
Associated array: Array 3

Drive at Enclosure 65, Slot 8  
Drive port: 1, Channel: 2, ID: 47/0x9B  
Drive port: 2, Channel: 1, ID: 47/0x9B  
Drive path redundancy: OK  
Status: Optimal  
Raw capacity: 33.902 GB  
Usable capacity: 33.862 GB  
Current data rate: 2 Gbps  
Product ID: ST336753FC F  
Firmware version: B953  
Serial number: 3HX0JPPJ000073392E3P  
Vendor: IBM-ESXS  
Date of manufacture: April 5, 2003  
World-wide name: 20:00:00:04:cf:ff:02:a8  
Mode: Assigned  
Associated array: Array 3

Drive at Enclosure 65, Slot 9  
Drive port: 1, Channel: 1, ID: 85/0x4F  
Drive port: 2, Channel: 2, ID: 85/0x4F  
Drive path redundancy: OK  
Status: Optimal  
Raw capacity: 33.902 GB  
Usable capacity: 33.862 GB  
Current data rate: 2 Gbps  
Product ID: ST336753FC F  
Firmware version: B953  
Serial number: 3HX0K2T100007339SNY4  
Vendor: IBM-ESXS  
Date of manufacture: April 5, 2003  
World-wide name: 20:00:00:04:cf:ff:02:b5  
Mode: Assigned  
Associated array: Array 3

Drive at Enclosure 65, Slot 10  
Drive port: 1, Channel: 2, ID: 101/0x33  
Drive port: 2, Channel: 1, ID: 101/0x33  
Drive path redundancy: OK  
Status: Optimal  
Raw capacity: 33.902 GB  
Usable capacity: 33.862 GB  
Current data rate: 2 Gbps  
Product ID: ST336753FC F  
Firmware version: B953  
Serial number: 3HX0K785000073405FTK  
Vendor: IBM-ESXS  
Date of manufacture: April 5, 2003  
World-wide name: 20:00:00:04:cf:f9:e4:c0  
Mode: Assigned  
Associated array: Array 3

Drive at Enclosure 65, Slot 11  
Drive port: 1, Channel: 1, ID: 69/0x6B  
Drive port: 2, Channel: 2, ID: 69/0x6B  
Drive path redundancy: OK  
Status: Optimal  
Raw capacity: 33.902 GB  
Usable capacity: 33.862 GB  
Current data rate: 2 Gbps

Product ID: ST336753FC F  
Firmware version: B953  
Serial number: 3HX0HMT500007339TYYYJ  
Vendor: IBM-ESXS  
Date of manufacture: April 6, 2003  
World-wide name: 20:00:00:04:cf:ff:03:36  
Mode: Assigned  
Associated array: Array 3

Drive at Enclosure 65, Slot 12  
Drive port: 1, Channel: 2, ID: 77/0x5A  
Drive port: 2, Channel: 1, ID: 77/0x5A  
Drive path redundancy: OK  
Status: Optimal  
Raw capacity: 33.902 GB  
Usable capacity: 33.862 GB  
Current data rate: 2 Gbps  
Product ID: ST336753FC F  
Firmware version: B953  
Serial number: 3HX0HRQQ00007340X5HR  
Vendor: IBM-ESXS  
Date of manufacture: April 5, 2003  
World-wide name: 20:00:00:04:cf:f9:e8:f8  
Mode: Assigned  
Associated array: Array 3

Drive at Enclosure 65, Slot 13  
Drive port: 1, Channel: 1, ID: 93/0x45  
Drive port: 2, Channel: 2, ID: 93/0x45  
Drive path redundancy: OK  
Status: Optimal  
Raw capacity: 33.902 GB  
Usable capacity: 33.862 GB  
Current data rate: 2 Gbps  
Product ID: ST336753FC F  
Firmware version: B953  
Serial number: 3HX0J3SH00007339SNRT  
Vendor: IBM-ESXS  
Date of manufacture: April 5, 2003  
World-wide name: 20:00:00:04:cf:ff:02:a4  
Mode: Assigned  
Associated array: Array 3

Drive at Enclosure 65, Slot 14  
Drive port: 1, Channel: 2, ID: 109/0x29  
Drive port: 2, Channel: 1, ID: 109/0x29  
Drive path redundancy: OK  
Status: Optimal  
Raw capacity: 33.902 GB  
Usable capacity: 33.862 GB  
Current data rate: 2 Gbps  
Product ID: ST336753FC F  
Firmware version: B953  
Serial number: 3HX0HPHH0000734058JE  
Vendor: IBM-ESXS  
Date of manufacture: April 5, 2003  
World-wide name: 20:00:00:04:cf:f9:fb:79  
Mode: Assigned  
Associated array: Array 3

Drive at Enclosure 66, Slot 1  
Drive port: 1, Channel: 1, ID: 48/0x98  
Drive port: 2, Channel: 2, ID: 48/0x98  
Drive path redundancy: OK  
Status: Optimal  
Raw capacity: 33.902 GB  
Usable capacity: 33.862 GB  
Current data rate: 2 Gbps

Product ID: ST336753FC F  
Firmware version: B953  
Serial number: 3HX0HHJQ000073409K23  
Vendor: IBM-ESXS  
Date of manufacture: April 5, 2003  
World-wide name: 20:00:00:04:cf:f9:fb:5d  
Mode: Assigned  
Associated array: Array 4

Drive at Enclosure 66, Slot 2  
Drive port: 1, Channel: 2, ID: 49/0x97  
Drive port: 2, Channel: 1, ID: 49/0x97  
Drive path redundancy: OK  
Status: Optimal  
Raw capacity: 33.902 GB  
Usable capacity: 33.862 GB  
Current data rate: 2 Gbps  
Product ID: ST336753FC F  
Firmware version: B953  
Serial number: 3HX0K7JV00007340WVFD  
Vendor: IBM-ESXS  
Date of manufacture: April 5, 2003  
World-wide name: 20:00:00:04:cf:f9:e9:70  
Mode: Assigned  
Associated array: Array 4

Drive at Enclosure 66, Slot 3  
Drive port: 1, Channel: 1, ID: 50/0x90  
Drive port: 2, Channel: 2, ID: 50/0x90  
Drive path redundancy: OK  
Status: Optimal  
Raw capacity: 33.902 GB  
Usable capacity: 33.862 GB  
Current data rate: 2 Gbps  
Product ID: ST336753FC F  
Firmware version: B953  
Serial number: 3HX0K02L000073405A7M  
Vendor: IBM-ESXS  
Date of manufacture: April 6, 2003  
World-wide name: 20:00:00:04:cf:ff:07:db  
Mode: Assigned  
Associated array: Array 4

Drive at Enclosure 66, Slot 4  
Drive port: 1, Channel: 2, ID: 51/0x8F  
Drive port: 2, Channel: 1, ID: 51/0x8F  
Drive path redundancy: OK  
Status: Optimal  
Raw capacity: 33.902 GB  
Usable capacity: 33.862 GB  
Current data rate: 2 Gbps  
Product ID: ST336753FC F  
Firmware version: B953  
Serial number: 3HX0K661000073405A9G  
Vendor: IBM-ESXS  
Date of manufacture: April 6, 2003  
World-wide name: 20:00:00:04:cf:ff:08:0f  
Mode: Assigned  
Associated array: Array 4

Drive at Enclosure 66, Slot 5  
Drive port: 1, Channel: 1, ID: 52/0x88  
Drive port: 2, Channel: 2, ID: 52/0x88  
Drive path redundancy: OK  
Status: Optimal  
Raw capacity: 33.902 GB  
Usable capacity: 33.862 GB  
Current data rate: 2 Gbps

Product ID: ST336753FC F  
Firmware version: B953  
Serial number: 3HX0JZC1000073405A9N  
Vendor: IBM-ESXS  
Date of manufacture: April 6, 2003  
World-wide name: 20:00:00:04:cf:ff:0a:23  
Mode: Assigned  
Associated array: Array 4

Drive at Enclosure 66, Slot 6  
Drive port: 1, Channel: 2, ID: 53/0x84  
Drive port: 2, Channel: 1, ID: 53/0x84  
Drive path redundancy: OK  
Status: Optimal  
Raw capacity: 33.902 GB  
Usable capacity: 33.862 GB  
Current data rate: 2 Gbps  
Product ID: ST336753FC F  
Firmware version: B953  
Serial number: 3HX0JXM6000073405FXZ  
Vendor: IBM-ESXS  
Date of manufacture: April 6, 2003  
World-wide name: 20:00:00:04:cf:ff:0d:21  
Mode: Assigned  
Associated array: Array 4

Drive at Enclosure 66, Slot 7  
Drive port: 1, Channel: 1, ID: 54/0x82  
Drive port: 2, Channel: 2, ID: 54/0x82  
Drive path redundancy: OK  
Status: Optimal  
Raw capacity: 33.902 GB  
Usable capacity: 33.862 GB  
Current data rate: 2 Gbps  
Product ID: ST336753FC F  
Firmware version: B953  
Serial number: 3HX0K2B2000073405A6W  
Vendor: IBM-ESXS  
Date of manufacture: April 6, 2003  
World-wide name: 20:00:00:04:cf:ff:0e:37  
Mode: Assigned  
Associated array: Array 4

Drive at Enclosure 66, Slot 8  
Drive port: 1, Channel: 2, ID: 55/0x81  
Drive port: 2, Channel: 1, ID: 55/0x81  
Drive path redundancy: OK  
Status: Optimal  
Raw capacity: 33.902 GB  
Usable capacity: 33.862 GB  
Current data rate: 2 Gbps  
Product ID: ST336753FC F  
Firmware version: B953  
Serial number: 3HX0JZM1000073405A8Q  
Vendor: IBM-ESXS  
Date of manufacture: April 6, 2003  
World-wide name: 20:00:00:04:cf:ff:0a:25  
Mode: Assigned  
Associated array: Array 4

Drive at Enclosure 66, Slot 9  
Drive port: 1, Channel: 1, ID: 86/0x4D  
Drive port: 2, Channel: 2, ID: 86/0x4D  
Drive path redundancy: OK  
Status: Optimal  
Raw capacity: 33.902 GB  
Usable capacity: 33.862 GB  
Current data rate: 2 Gbps



Product ID: ST336753FC F  
Firmware version: B953  
Serial number: 3HX0HLY500007340WVKB  
Vendor: IBM-ESXS  
Date of manufacture: April 5, 2003  
World-wide name: 20:00:00:04:cf:f9:ed:74  
Mode: Assigned  
Associated array: Array 4

Drive at Enclosure 66, Slot 10  
Drive port: 1, Channel: 2, ID: 102/0x32  
Drive port: 2, Channel: 1, ID: 102/0x32  
Drive path redundancy: OK  
Status: Optimal  
Raw capacity: 33.902 GB  
Usable capacity: 33.862 GB  
Current data rate: 2 Gbps  
Product ID: ST336753FC F  
Firmware version: B953  
Serial number: 3HX0K7Q9000073405G31  
Vendor: IBM-ESXS  
Date of manufacture: April 5, 2003  
World-wide name: 20:00:00:04:cf:f9:ed:3f  
Mode: Assigned  
Associated array: Array 4

Drive at Enclosure 66, Slot 11  
Drive port: 1, Channel: 1, ID: 70/0x6A  
Drive port: 2, Channel: 2, ID: 70/0x6A  
Drive path redundancy: OK  
Status: Optimal  
Raw capacity: 33.902 GB  
Usable capacity: 33.862 GB  
Current data rate: 2 Gbps  
Product ID: ST336753FC F  
Firmware version: B953  
Serial number: 3HX0JZD300007339PQPY  
Vendor: IBM-ESXS  
Date of manufacture: April 6, 2003  
World-wide name: 20:00:00:04:cf:ff:0a:13  
Mode: Assigned  
Associated array: Array 4

Drive at Enclosure 66, Slot 12  
Drive port: 1, Channel: 2, ID: 78/0x59  
Drive port: 2, Channel: 1, ID: 78/0x59  
Drive path redundancy: OK  
Status: Optimal  
Raw capacity: 33.902 GB  
Usable capacity: 33.862 GB  
Current data rate: 2 Gbps  
Product ID: ST336753FC F  
Firmware version: B953  
Serial number: 3HX0KCG6000073410J6T  
Vendor: IBM-ESXS  
Date of manufacture: April 6, 2003  
World-wide name: 20:00:00:04:cf:ff:12:7b  
Mode: Assigned  
Associated array: Array 4

Drive at Enclosure 66, Slot 13  
Drive port: 1, Channel: 1, ID: 94/0x43  
Drive port: 2, Channel: 2, ID: 94/0x43  
Drive path redundancy: OK  
Status: Optimal  
Raw capacity: 33.902 GB  
Usable capacity: 33.862 GB  
Current data rate: 2 Gbps

Product ID: ST336753FC F  
Firmware version: B953  
Serial number: 3HX0HSZN000073405G6Z  
Vendor: IBM-ESXS  
Date of manufacture: April 6, 2003  
World-wide name: 20:00:00:04:cf:f9:e5:c4  
Mode: Assigned  
Associated array: Array 4

Drive at Enclosure 66, Slot 14  
Drive port: 1, Channel: 2, ID: 110/0x27  
Drive port: 2, Channel: 1, ID: 110/0x27  
Drive path redundancy: OK  
Status: Optimal  
Raw capacity: 33.902 GB  
Usable capacity: 33.862 GB  
Current data rate: 2 Gbps  
Product ID: ST336753FC F  
Firmware version: B953  
Serial number: 3HX0HPEX000073392DT8  
Vendor: IBM-ESXS  
Date of manufacture: April 6, 2003  
World-wide name: 20:00:00:04:cf:f9:fb:1f  
Mode: Assigned  
Associated array: Array 4

Drive at Enclosure 67, Slot 1  
Drive port: 1, Channel: 1, ID: 56/0x80  
Drive port: 2, Channel: 2, ID: 56/0x80  
Drive path redundancy: OK  
Status: Optimal  
Raw capacity: 33.902 GB  
Usable capacity: 33.862 GB  
Current data rate: 2 Gbps  
Product ID: ST336753FC F  
Firmware version: B953  
Serial number: 3HX0HJ78000073386V20  
Vendor: IBM-ESXS  
Date of manufacture: April 5, 2003  
World-wide name: 20:00:00:04:cf:ff:03:05  
Mode: Assigned  
Associated array: Array 4

Drive at Enclosure 67, Slot 2  
Drive port: 1, Channel: 2, ID: 57/0x7C  
Drive port: 2, Channel: 1, ID: 57/0x7C  
Drive path redundancy: OK  
Status: Optimal  
Raw capacity: 33.902 GB  
Usable capacity: 33.862 GB  
Current data rate: 2 Gbps  
Product ID: ST336753FC F  
Firmware version: B953  
Serial number: 3HX0K4RE00007339RGR  
Vendor: IBM-ESXS  
Date of manufacture: April 5, 2003  
World-wide name: 20:00:00:04:cf:ff:03:45  
Mode: Assigned  
Associated array: Array 4

Drive at Enclosure 67, Slot 3  
Drive port: 1, Channel: 1, ID: 58/0x7A  
Drive port: 2, Channel: 2, ID: 58/0x7A  
Drive path redundancy: OK  
Status: Optimal  
Raw capacity: 33.902 GB  
Usable capacity: 33.862 GB  
Current data rate: 2 Gbps

Product ID: ST336753FC F  
Firmware version: B953  
Serial number: 3HX0GVBZ00007340X51P  
Vendor: IBM-ESXS  
Date of manufacture: April 5, 2003  
World-wide name: 20:00:00:04:cf:f9:fb:68  
Mode: Assigned  
Associated array: Array 4

Drive at Enclosure 67, Slot 4  
Drive port: 1, Channel: 2, ID: 59/0x79  
Drive port: 2, Channel: 1, ID: 59/0x79  
Drive path redundancy: OK  
Status: Optimal  
Raw capacity: 33.902 GB  
Usable capacity: 33.862 GB  
Current data rate: 2 Gbps  
Product ID: ST336753FC F  
Firmware version: B953  
Serial number: 3HX0JS4W00007340X5HL  
Vendor: IBM-ESXS  
Date of manufacture: April 5, 2003  
World-wide name: 20:00:00:04:cf:f9:e9:67  
Mode: Assigned  
Associated array: Array 4

Drive at Enclosure 67, Slot 5  
Drive port: 1, Channel: 1, ID: 60/0x76  
Drive port: 2, Channel: 2, ID: 60/0x76  
Drive path redundancy: OK  
Status: Optimal  
Raw capacity: 33.902 GB  
Usable capacity: 33.862 GB  
Current data rate: 2 Gbps  
Product ID: ST336753FC F  
Firmware version: B953  
Serial number: 3HX0JBX300007339GMTD  
Vendor: IBM-ESXS  
Date of manufacture: April 6, 2003  
World-wide name: 20:00:00:04:cf:ff:07:af  
Mode: Assigned  
Associated array: Array 4

Drive at Enclosure 67, Slot 6  
Drive port: 1, Channel: 2, ID: 61/0x75  
Drive port: 2, Channel: 1, ID: 61/0x75  
Drive path redundancy: OK  
Status: Optimal  
Raw capacity: 33.902 GB  
Usable capacity: 33.862 GB  
Current data rate: 2 Gbps  
Product ID: ST336753FC F  
Firmware version: B953  
Serial number: 3HX0JZT9000073410J41  
Vendor: IBM-ESXS  
Date of manufacture: April 6, 2003  
World-wide name: 20:00:00:04:cf:ff:12:cf  
Mode: Assigned  
Associated array: Array 4

Drive at Enclosure 67, Slot 7  
Drive port: 1, Channel: 1, ID: 62/0x74  
Drive port: 2, Channel: 2, ID: 62/0x74  
Drive path redundancy: OK  
Status: Optimal  
Raw capacity: 33.902 GB  
Usable capacity: 33.862 GB  
Current data rate: 2 Gbps

Product ID: ST336753FC F  
Firmware version: B953  
Serial number: 3HX0K0NS000073405A65  
Vendor: IBM-ESXS  
Date of manufacture: April 6, 2003  
World-wide name: 20:00:00:04:cf:ff:0e:78  
Mode: Assigned  
Associated array: Array 4

Drive at Enclosure 67, Slot 8  
Drive port: 1, Channel: 2, ID: 63/0x73  
Drive port: 2, Channel: 1, ID: 63/0x73  
Drive path redundancy: OK  
Status: Optimal  
Raw capacity: 33.902 GB  
Usable capacity: 33.862 GB  
Current data rate: 2 Gbps  
Product ID: ST336753FC F  
Firmware version: B953  
Serial number: 3HX0KCV900007340GTVR  
Vendor: IBM-ESXS  
Date of manufacture: April 6, 2003  
World-wide name: 20:00:00:04:cf:ff:0d:48  
Mode: Assigned  
Associated array: Array 4

Drive at Enclosure 67, Slot 9  
Drive port: 1, Channel: 1, ID: 87/0x4C  
Drive port: 2, Channel: 2, ID: 87/0x4C  
Drive path redundancy: OK  
Status: Optimal  
Raw capacity: 33.902 GB  
Usable capacity: 33.862 GB  
Current data rate: 2 Gbps  
Product ID: ST336753FC F  
Firmware version: B953  
Serial number: 3HX0KCMN00007340WW9D  
Vendor: IBM-ESXS  
Date of manufacture: April 6, 2003  
World-wide name: 20:00:00:04:cf:ff:0d:66  
Mode: Assigned  
Associated array: Array 4

Drive at Enclosure 67, Slot 10  
Drive port: 1, Channel: 2, ID: 103/0x31  
Drive port: 2, Channel: 1, ID: 103/0x31  
Drive path redundancy: OK  
Status: Optimal  
Raw capacity: 33.902 GB  
Usable capacity: 33.862 GB  
Current data rate: 2 Gbps  
Product ID: ST336753FC F  
Firmware version: B953  
Serial number: 3HX0HRGT00007340WVFG  
Vendor: IBM-ESXS  
Date of manufacture: April 5, 2003  
World-wide name: 20:00:00:04:cf:f9:e8:eb  
Mode: Assigned  
Associated array: Array 4

Drive at Enclosure 67, Slot 11  
Drive port: 1, Channel: 1, ID: 71/0x69  
Drive port: 2, Channel: 2, ID: 71/0x69  
Drive path redundancy: OK  
Status: Optimal  
Raw capacity: 33.902 GB  
Usable capacity: 33.862 GB  
Current data rate: 2 Gbps

Product ID: ST336753FC F  
Firmware version: B953  
Serial number: 3HX0KBPA000073410HSR  
Vendor: IBM-ESXS  
Date of manufacture: April 6, 2003  
World-wide name: 20:00:00:04:cf:ff:12:d7  
Mode: Assigned  
Associated array: Array 4

Drive at Enclosure 67, Slot 12

Drive port: 1, Channel: 2, ID: 79/0x56  
Drive port: 2, Channel: 1, ID: 79/0x56  
Drive path redundancy: OK  
Status: Optimal  
Raw capacity: 33.902 GB  
Usable capacity: 33.862 GB  
Current data rate: 2 Gbps  
Product ID: ST336753FC F  
Firmware version: B953  
Serial number: 3HX0H56400007339TYB1  
Vendor: IBM-ESXS  
Date of manufacture: April 5, 2003  
World-wide name: 20:00:00:04:cf:ff:02:d6  
Mode: Assigned  
Associated array: Array 4

Drive at Enclosure 67, Slot 13

Drive port: 1, Channel: 1, ID: 95/0x3C  
Drive port: 2, Channel: 2, ID: 95/0x3C  
Drive path redundancy: OK  
Status: Optimal  
Raw capacity: 33.902 GB  
Usable capacity: 33.862 GB  
Current data rate: 2 Gbps  
Product ID: ST336753FC F  
Firmware version: B953  
Serial number: 3HX0JY1V00007340WVNB  
Vendor: IBM-ESXS  
Date of manufacture: April 6, 2003  
World-wide name: 20:00:00:04:cf:ff:0d:49  
Mode: Assigned  
Associated array: Array 4

Drive at Enclosure 67, Slot 14

Drive port: 1, Channel: 2, ID: 111/0x26  
Drive port: 2, Channel: 1, ID: 111/0x26  
Drive path redundancy: OK  
Status: Optimal  
Raw capacity: 33.902 GB  
Usable capacity: 33.862 GB  
Current data rate: 2 Gbps  
Product ID: ST336753FC F  
Firmware version: B953  
Serial number: 3HX0JY2D000073405A24  
Vendor: IBM-ESXS  
Date of manufacture: April 6, 2003  
World-wide name: 20:00:00:04:cf:ff:0d:67  
Mode: Assigned  
Associated array: Array 4

ENCLOSURES-----

Controller Enclosure Overall Component Information

Minihub data rate mismatch: No  
Fan canister: Optimal  
Fan canister: Optimal  
Battery status: Optimal  
Age: 13 day(s)  
Days until replacement: 1,156 day(s)

Power supply canister  
Status: Optimal  
Power supply canister  
Status: Optimal  
Temperature: Optimal  
Host mini-hub canister  
Status: Optimal  
Location: Controller B - Port 1  
Serial number: SN 1T23665182  
Part number: PN 19K1270  
Vendor: VN IBM  
Date of manufacture: September 1, 2002  
SFP  
Status: Optimal  
Location: In connection  
Supported data rate(s): 1 Gbps, 2 Gbps  
Link length: Intermediate  
Connector: LC  
Transmitter type: Shortwave Laser w/o OFC  
Transmission media: TM Multi-mode 50m(M5) TM Multi-mode

62.5m(M6)

IEEE company ID: 08 00 5a  
Revision: AA10  
Part number: IBM42P21SNY  
Serial number: 53P14760069VC  
Vendor: IBM  
Date of manufacture: April 13, 2002

Host mini-hub canister

Status: Optimal  
Location: Controller A - Port 1  
Serial number: SN 1T23663938  
Part number: PN 19K1270  
Vendor: VN IBM  
Date of manufacture: September 1, 2002  
SFP  
Status: Optimal  
Location: In connection  
Supported data rate(s): 1 Gbps, 2 Gbps  
Link length: Intermediate  
Connector: LC  
Transmitter type: Shortwave Laser w/o OFC  
Transmission media: TM Multi-mode 50m(M5) TM Multi-mode

62.5m(M6)

IEEE company ID: 08 00 5a  
Revision: AA10  
Part number: IBM42P21SNY  
Serial number: 53P14760068PD  
Vendor: IBM  
Date of manufacture: April 13, 2002

Drive mini-hub canister

Status: Optimal  
Location: Channel 1  
Serial number: SN 1T23665184  
Part number: PN 19K1270  
Vendor: VN IBM  
Date of manufacture: September 1, 2002  
SFP  
Status: Optimal  
Location: In connection  
Supported data rate(s): 1 Gbps, 2 Gbps  
Link length: Intermediate  
Connector: LC  
Transmitter type: Shortwave Laser w/o OFC  
Transmission media: TM Multi-mode 50m(M5) TM Multi-mode

62.5m(M6)

IEEE company ID: 08 00 5a  
Revision: AA10  
Part number: IBM42P21SNY

Serial number: 53P14760069Y3  
Vendor: IBM  
Date of manufacture: April 13, 2002  
Drive mini-hub canister  
Status: Optimal  
Location: Channel 2  
Serial number: SN 1T23665109  
Part number: PN 19K1270  
Vendor: VN IBM  
Date of manufacture: September 1, 2002  
SFP  
Status: Optimal  
Location: Out connection  
Supported data rate(s): 1 Gbps, 2 Gbps  
Link length: Intermediate  
Connector: LC  
Transmitter type: Shortwave Laser w/o OFC  
Transmission media: TM Multi-mode 50m(M5) TM Multi-mode  
62.5m(M6)  
IEEE company ID: 08 00 5a  
Revision: AA10  
Part number: IBM42P21SNY  
Serial number: 53P14760069VF  
Vendor: IBM  
Date of manufacture: April 13, 2002  
Drive mini-hub canister  
Status: Optimal  
Location: Channel 3  
Serial number: SN 1T22015777  
Part number: PN 19K1270  
Vendor: VN IBM  
Date of manufacture: June 1, 2002  
SFP  
Status: Optimal  
Location: In connection  
Supported data rate(s): 1 Gbps, 2 Gbps  
Link length: Intermediate  
Connector: LC  
Transmitter type: Shortwave Laser w/o OFC  
Transmission media: TM Multi-mode 50m(M5) TM Multi-mode  
62.5m(M6)  
IEEE company ID: 08 00 5a  
Revision: AA10  
Part number: IBM42P21SNY  
Serial number: 53P14760069Z6  
Vendor: IBM  
Date of manufacture: April 13, 2002  
Drive mini-hub canister  
Status: Optimal  
Location: Channel 4  
Serial number: SN 1T22017085  
Part number: PN 19K1270  
Vendor: VN IBM  
Date of manufacture: May 1, 2002  
SFP  
Status: Optimal  
Location: Out connection  
Supported data rate(s): 1 Gbps, 2 Gbps  
Link length: Intermediate  
Connector: LC  
Transmitter type: Shortwave Laser w/o OFC  
Transmission media: TM Multi-mode 50m(M5) TM Multi-mode  
62.5m(M6)  
IEEE company ID: 08 00 5a  
Revision: AA10  
Part number: IBM42P21SNY  
Serial number: 53P14760069QV  
Vendor: IBM

Date of manufacture: April 13, 2002  
Drive Enclosure 60 Overall Component Information  
Part number: PN 19K1288  
Serial number: SN 23A1741  
Vendor: VN IBM  
Date of manufacture: September 1, 2002  
Enclosure path redundancy: OK  
Fan canister: Optimal  
Fan canister: Optimal  
Power supply canister  
Status: Optimal  
Part number: PN 19K1289  
Serial number: SN A6844400HY0E  
Vendor: VN IBM  
Date of manufacture: Not available  
Power supply canister  
Status: Optimal  
Part number: PN 19K1289  
Serial number: SN A6844400HQ0E  
Vendor: VN IBM  
Date of manufacture: Not available  
Temperature: Optimal  
Temperature: Optimal  
ESM card  
Status: Optimal  
Firmware version: 9325  
Maximum data rate: 2 Gbps  
Current data rate: 2 Gbps  
Location: A (left canister)  
Card communication: OK  
Product ID: EXP700  
Part number: PN 19K1287  
Serial number: SN 1T23252174  
Vendor: IBM  
Date of manufacture: August 1, 2002  
SFP  
Status: Optimal  
Location: In connection  
Supported data rate(s): 1 Gbps, 2 Gbps  
Link length: Intermediate  
Connector: LC  
Transmitter type: Shortwave Laser w/o OFC  
Transmission media: TM Multi-mode 50m(M5) TM Multi-mode  
62.5m(M6)  
IEEE company ID: 08 00 5a  
Revision: AA10  
Part number: IBM42P21SNY  
Serial number: 53P14760069T2  
Vendor: IBM  
Date of manufacture: April 13, 2002  
SFP  
Status: Optimal  
Location: Out connection  
Supported data rate(s): 1 Gbps, 2 Gbps  
Link length: Intermediate  
Connector: LC  
Transmitter type: Shortwave Laser w/o OFC  
Transmission media: TM Multi-mode 50m(M5) TM Multi-mode  
62.5m(M6)  
IEEE company ID: 08 00 5a  
Revision: AA10  
Part number: IBM42P21SNY  
Serial number: 53P14760065Q1  
Vendor: IBM  
Date of manufacture: April 13, 2002  
ESM card  
Status: Optimal

Firmware version: 9325  
Maximum data rate: 2 Gbps  
Current data rate: 2 Gbps  
Location: B (right canister)  
Card communication: OK  
Product ID: EXP700  
Part number: PN 19K1287  
Serial number: SN 1T23252286  
Vendor: IBM  
Date of manufacture: August 1, 2002  
SFP  
Status: Optimal  
Location: Out connection  
Supported data rate(s): 1 Gbps, 2 Gbps  
Link length: Intermediate  
Connector: LC  
Transmitter type: Shortwave Laser w/o OFC  
Transmission media: TM Multi-mode 50m(M5) TM Multi-mode

62.5m(M6)

IEEE company ID: 08 00 5a  
Revision: AA10  
Part number: IBM42P21SNY  
Serial number: 53P14760069VE  
Vendor: IBM  
Date of manufacture: April 13, 2002

Drive Enclosure 61 Overall Component Information

Part number: PN 19K1288  
Serial number: SN 23A1726  
Vendor: VN IBM  
Date of manufacture: September 1, 2002  
Enclosure path redundancy: OK  
Fan canister: Optimal  
Fan canister: Optimal  
Power supply canister  
Status: Optimal  
Part number: PN 19K1289  
Serial number: SN A6844400QM0E  
Vendor: VN IBM  
Date of manufacture: Not available  
Power supply canister  
Status: Optimal  
Part number: PN 19K1289  
Serial number: SN A6844400QN0E  
Vendor: VN IBM  
Date of manufacture: Not available  
Temperature: Optimal  
Temperature: Optimal

ESM card

Status: Optimal  
Firmware version: 9325  
Maximum data rate: 2 Gbps  
Current data rate: 2 Gbps  
Location: A (left canister)  
Card communication: OK  
Product ID: EXP700  
Part number: PN 19K1287  
Serial number: SN 1T23251498  
Vendor: IBM  
Date of manufacture: August 1, 2002  
SFP  
Status: Optimal  
Location: In connection  
Supported data rate(s): 1 Gbps, 2 Gbps  
Link length: Intermediate  
Connector: LC  
Transmitter type: Shortwave Laser w/o OFC

Transmission media: TM Multi-mode 50m(M5) TM Multi-mode  
62.5m(M6)

IEEE company ID: 08 00 5a  
Revision: AA10  
Part number: IBM42P21SNY  
Serial number: 53P14760068K4  
Vendor: IBM  
Date of manufacture: April 13, 2002

SFP

Status: Optimal  
Location: Out connection  
Supported data rate(s): 1 Gbps, 2 Gbps  
Link length: Intermediate  
Connector: LC  
Transmitter type: Shortwave Laser w/o OFC  
Transmission media: TM Multi-mode 50m(M5) TM Multi-mode

62.5m(M6)

IEEE company ID: 08 00 5a  
Revision: AA10  
Part number: IBM42P21SNY  
Serial number: 53P14760069UV  
Vendor: IBM  
Date of manufacture: April 13, 2002

ESM card

Status: Optimal  
Firmware version: 9325  
Maximum data rate: 2 Gbps  
Current data rate: 2 Gbps  
Location: B (right canister)  
Card communication: OK  
Product ID: EXP700  
Part number: PN 19K1287  
Serial number: SN 1T23252709  
Vendor: IBM  
Date of manufacture: August 1, 2002

SFP

Status: Optimal  
Location: In connection  
Supported data rate(s): 1 Gbps, 2 Gbps  
Link length: Intermediate  
Connector: LC  
Transmitter type: Shortwave Laser w/o OFC  
Transmission media: TM Multi-mode 50m(M5) TM Multi-mode

62.5m(M6)

IEEE company ID: 08 00 5a  
Revision: AA10  
Part number: IBM42P21SNY  
Serial number: 53P1476006A1W  
Vendor: IBM  
Date of manufacture: April 13, 2002

SFP

Status: Optimal  
Location: Out connection  
Supported data rate(s): 1 Gbps, 2 Gbps  
Link length: Intermediate  
Connector: LC  
Transmitter type: Shortwave Laser w/o OFC  
Transmission media: TM Multi-mode 50m(M5) TM Multi-mode

62.5m(M6)

IEEE company ID: 08 00 5a  
Revision: AA10  
Part number: IBM42P21SNY  
Serial number: 53P14760069UR  
Vendor: IBM  
Date of manufacture: April 13, 2002

Drive Enclosure 62 Overall Component Information

Part number: PN 19K1288

Serial number: SN 23A1728  
Vendor: VN IBM  
Date of manufacture: September 1, 2002  
Enclosure path redundancy: OK  
Fan canister: Optimal  
Fan canister: Optimal  
Power supply canister  
Status: Optimal  
Part number: PN 19K1289  
Serial number: SN A6844400Q20E  
Vendor: VN IBM  
Date of manufacture: Not available  
Power supply canister  
Status: Optimal  
Part number: PN 19K1289  
Serial number: SN A6844400MB0E  
Vendor: VN IBM  
Date of manufacture: Not available  
Temperature: Optimal  
Temperature: Optimal  
ESM card  
Status: Optimal  
Firmware version: 9325  
Maximum data rate: 2 Gbps  
Current data rate: 2 Gbps  
Location: A (left canister)  
Card communication: OK  
Product ID: EXP700  
Part number: PN 19K1287  
Serial number: SN 1T23251695  
Vendor: IBM  
Date of manufacture: August 1, 2002  
SFP  
Status: Optimal  
Location: In connection  
Supported data rate(s): 1 Gbps, 2 Gbps  
Link length: Intermediate  
Connector: LC  
Transmitter type: Shortwave Laser w/o OFC  
Transmission media: TM Multi-mode 50m(M5) TM Multi-mode  
62.5m(M6)  
IEEE company ID: 08 00 5a  
Revision: AA10  
Part number: IBM42P21SNY  
Serial number: 53P14760069UU  
Vendor: IBM  
Date of manufacture: April 13, 2002  
SFP  
Status: Optimal  
Location: Out connection  
Supported data rate(s): 1 Gbps, 2 Gbps  
Link length: Intermediate  
Connector: LC  
Transmitter type: Shortwave Laser w/o OFC  
Transmission media: TM Multi-mode 50m(M5) TM Multi-mode  
62.5m(M6)  
IEEE company ID: 08 00 5a  
Revision: AA10  
Part number: IBM42P21SNY  
Serial number: 53P14760069W4  
Vendor: IBM  
Date of manufacture: April 13, 2002  
ESM card  
Status: Optimal  
Firmware version: 9325  
Maximum data rate: 2 Gbps  
Current data rate: 2 Gbps  
Location: B (right canister)

Card communication: OK  
Product ID: EXP700  
Part number: PN 19K1287  
Serial number: SN 1T23251494  
Vendor: IBM  
Date of manufacture: August 1, 2002  
SFP  
Status: Optimal  
Location: In connection  
Supported data rate(s): 1 Gbps, 2 Gbps  
Link length: Intermediate  
Connector: LC  
Transmitter type: Shortwave Laser w/o OFC  
Transmission media: TM Multi-mode 50m(M5) TM Multi-mode  
62.5m(M6)  
IEEE company ID: 08 00 5a  
Revision: AA10  
Part number: IBM42P21SNY  
Serial number: 53P1476006A81  
Vendor: IBM  
Date of manufacture: April 13, 2002  
SFP  
Status: Optimal  
Location: Out connection  
Supported data rate(s): 1 Gbps, 2 Gbps  
Link length: Intermediate  
Connector: LC  
Transmitter type: Shortwave Laser w/o OFC  
Transmission media: TM Multi-mode 50m(M5) TM Multi-mode  
62.5m(M6)  
IEEE company ID: 08 00 5a  
Revision: AA10  
Part number: IBM42P21SNY  
Serial number: 53P1476006A13  
Vendor: IBM  
Date of manufacture: April 13, 2002  
Drive Enclosure 63 Overall Component Information  
Part number: PN 19K1288  
Serial number: SN 23A1730  
Vendor: VN IBM  
Date of manufacture: September 1, 2002  
Enclosure path redundancy: OK  
Fan canister: Optimal  
Fan canister: Optimal  
Power supply canister  
Status: Optimal  
Part number: PN 19K1289  
Serial number: SN A6844400KS0E  
Vendor: VN IBM  
Date of manufacture: Not available  
Power supply canister  
Status: Optimal  
Part number: PN 19K1289  
Serial number: SN A6844400JN0E  
Vendor: VN IBM  
Date of manufacture: Not available  
Temperature: Optimal  
Temperature: Optimal  
ESM card  
Status: Optimal  
Firmware version: 9325  
Maximum data rate: 2 Gbps  
Current data rate: 2 Gbps  
Location: A (left canister)  
Card communication: OK  
Product ID: EXP700  
Part number: PN 19K1287

Serial number: SN 1T23251700  
Vendor: IBM  
Date of manufacture: August 1, 2002  
SFP  
Status: Optimal  
Location: In connection  
Supported data rate(s): 1 Gbps, 2 Gbps  
Link length: Intermediate  
Connector: LC  
Transmitter type: Shortwave Laser w/o OFC  
Transmission media: TM Multi-mode 50m(M5) TM Multi-mode

62.5m(M6)

IEEE company ID: 08 00 5a  
Revision: AA10  
Part number: IBM42P21SNY  
Serial number: 53P14760069MR  
Vendor: IBM  
Date of manufacture: April 13, 2002

ESM card

Status: Optimal  
Firmware version: 9325  
Maximum data rate: 2 Gbps  
Current data rate: 2 Gbps  
Location: B (right canister)  
Card communication: OK  
Product ID: EXP700  
Part number: PN 19K1287  
Serial number: SN 1T23251499  
Vendor: IBM  
Date of manufacture: August 1, 2002  
SFP

Status: Optimal  
Location: In connection  
Supported data rate(s): 1 Gbps, 2 Gbps  
Link length: Intermediate  
Connector: LC  
Transmitter type: Shortwave Laser w/o OFC  
Transmission media: TM Multi-mode 50m(M5) TM Multi-mode

62.5m(M6)

IEEE company ID: 08 00 5a  
Revision: AA10  
Part number: IBM42P21SNY  
Serial number: 53P14760069RW  
Vendor: IBM  
Date of manufacture: April 13, 2002

SFP

Status: Optimal  
Location: Out connection  
Supported data rate(s): 1 Gbps, 2 Gbps  
Link length: Intermediate  
Connector: LC  
Transmitter type: Shortwave Laser w/o OFC  
Transmission media: TM Multi-mode 50m(M5) TM Multi-mode

62.5m(M6)

IEEE company ID: 08 00 5a  
Revision: AA10  
Part number: IBM42P21SNY  
Serial number: 53P14760069V8  
Vendor: IBM  
Date of manufacture: April 13, 2002

Drive Enclosure 64 Overall Component Information

Part number: PN 19K1288  
Serial number: SN 23A1718  
Vendor: VN IBM  
Date of manufacture: September 1, 2002  
Enclosure path redundancy: OK  
Fan canister: Optimal

Fan canister: Optimal  
Power supply canister  
Status: Optimal  
Part number: PN 19K1289  
Serial number: SN A6844400KP0E  
Vendor: VN IBM  
Date of manufacture: Not available  
Power supply canister  
Status: Optimal  
Part number: PN 19K1289  
Serial number: SN A6844400KE0E  
Vendor: VN IBM  
Date of manufacture: Not available

Temperature: Optimal

Temperature: Optimal

ESM card

Status: Optimal  
Firmware version: 9325  
Maximum data rate: 2 Gbps  
Current data rate: 2 Gbps  
Location: A (left canister)  
Card communication: OK  
Product ID: EXP700  
Part number: PN 19K1287  
Serial number: SN 1T23251991  
Vendor: IBM  
Date of manufacture: August 1, 2002

SFP

Status: Optimal  
Location: In connection  
Supported data rate(s): 1 Gbps, 2 Gbps  
Link length: Intermediate  
Connector: LC  
Transmitter type: Shortwave Laser w/o OFC  
Transmission media: TM Multi-mode 50m(M5) TM Multi-mode

62.5m(M6)

IEEE company ID: 08 00 5a  
Revision: AA10  
Part number: IBM42P21SNY  
Serial number: 53P14760069W6  
Vendor: IBM  
Date of manufacture: April 13, 2002

SFP

Status: Optimal  
Location: Out connection  
Supported data rate(s): 1 Gbps, 2 Gbps  
Link length: Intermediate  
Connector: LC  
Transmitter type: Shortwave Laser w/o OFC  
Transmission media: TM Multi-mode 50m(M5) TM Multi-mode

62.5m(M6)

IEEE company ID: 08 00 5a  
Revision: AA10  
Part number: IBM42P21SNY  
Serial number: 53P1476009URA  
Vendor: IBM  
Date of manufacture: June 29, 2002

ESM card

Status: Optimal  
Firmware version: 9325  
Maximum data rate: 2 Gbps  
Current data rate: 2 Gbps  
Location: B (right canister)  
Card communication: OK  
Product ID: EXP700  
Part number: PN 19K1287  
Serial number: SN 1T23251979  
Vendor: IBM

Date of manufacture: August 1, 2002

SFP

Status: Optimal

Location: Out connection

Supported data rate(s): 1 Gbps, 2 Gbps

Link length: Intermediate

Connector: LC

Transmitter type: Shortwave Laser w/o OFC

Transmission media: TM Multi-mode 50m(M5) TM Multi-mode

62.5m(M6)

IEEE company ID: 08 00 5a

Revision: AA10

Part number: IBM42P21SNY

Serial number: 53P14760069W1

Vendor: IBM

Date of manufacture: April 13, 2002

#### Drive Enclosure 65 Overall Component Information

Part number: PN 19K1288

Serial number: SN 23A1737

Vendor: VN IBM

Date of manufacture: September 1, 2002

Enclosure path redundancy: OK

Fan canister: Optimal

Fan canister: Optimal

Power supply canister

Status: Optimal

Part number: PN 19K1289

Serial number: SN A6844400HS0E

Vendor: VN IBM

Date of manufacture: Not available

Power supply canister

Status: Optimal

Part number: PN 19K1289

Serial number: SN A6844400JF0E

Vendor: VN IBM

Date of manufacture: Not available

Temperature: Optimal

Temperature: Optimal

ESM card

Status: Optimal

Firmware version: 9325

Maximum data rate: 2 Gbps

Current data rate: 2 Gbps

Location: A (left canister)

Card communication: OK

Product ID: EXP700

Part number: PN 19K1287

Serial number: SN 1T23251680

Vendor: IBM

Date of manufacture: August 1, 2002

SFP

Status: Optimal

Location: In connection

Supported data rate(s): 1 Gbps, 2 Gbps

Link length: Intermediate

Connector: LC

Transmitter type: Shortwave Laser w/o OFC

Transmission media: TM Multi-mode 50m(M5) TM Multi-mode

62.5m(M6)

IEEE company ID: 08 00 5a

Revision: AA10

Part number: IBM42P21SNY

Serial number: 53P14760000A4

Vendor: IBM

Date of manufacture: December 30, 2001

SFP

Status: Optimal

Location: Out connection

Supported data rate(s): 1 Gbps, 2 Gbps

Link length: Intermediate

Connector: LC

Transmitter type: Shortwave Laser w/o OFC

Transmission media: TM Multi-mode 50m(M5) TM Multi-mode

62.5m(M6)

IEEE company ID: 08 00 5a

Revision: AA10

Part number: IBM42P21SNY

Serial number: 53P14760069WR

Vendor: IBM

Date of manufacture: April 13, 2002

ESM card

Status: Optimal

Firmware version: 9325

Maximum data rate: 2 Gbps

Current data rate: 2 Gbps

Location: B (right canister)

Card communication: OK

Product ID: EXP700

Part number: PN 19K1287

Serial number: SN 1T23252166

Vendor: IBM

Date of manufacture: August 1, 2002

SFP

Status: Optimal

Location: In connection

Supported data rate(s): 1 Gbps, 2 Gbps

Link length: Intermediate

Connector: LC

Transmitter type: Shortwave Laser w/o OFC

Transmission media: TM Multi-mode 50m(M5) TM Multi-mode

62.5m(M6)

IEEE company ID: 08 00 5a

Revision: AA10

Part number: IBM42P21SNY

Serial number: 53P1476006A94

Vendor: IBM

Date of manufacture: April 13, 2002

SFP

Status: Optimal

Location: Out connection

Supported data rate(s): 1 Gbps, 2 Gbps

Link length: Intermediate

Connector: LC

Transmitter type: Shortwave Laser w/o OFC

Transmission media: TM Multi-mode 50m(M5) TM Multi-mode

62.5m(M6)

IEEE company ID: 08 00 5a

Revision: AA10

Part number: IBM42P21SNY

Serial number: 53P147600035F

Vendor: IBM

Date of manufacture: December 1, 2001

#### Drive Enclosure 66 Overall Component Information

Part number: PN 19K1288

Serial number: SN 23A1710

Vendor: VN IBM

Date of manufacture: September 1, 2002

Enclosure path redundancy: OK

Fan canister: Optimal

Fan canister: Optimal

Power supply canister

Status: Optimal

Part number: PN 19K1289

Serial number: SN A6844400MW0E



Vendor: VN IBM  
Date of manufacture: Not available  
Power supply canister  
Status: Optimal  
Part number: PN 19K1289  
Serial number: SN A6844400NV0E  
Vendor: VN IBM  
Date of manufacture: Not available  
Temperature: Optimal  
Temperature: Optimal  
ESM card  
Status: Optimal  
Firmware version: 9325  
Maximum data rate: 2 Gbps  
Current data rate: 2 Gbps  
Location: A (left canister)  
Card communication: OK  
Product ID: EXP700  
Part number: PN 19K1287  
Serial number: SN 1T23772116  
Vendor: IBM  
Date of manufacture: September 1, 2002  
SFP  
Status: Optimal  
Location: In connection  
Supported data rate(s): 1 Gbps, 2 Gbps  
Link length: Intermediate  
Connector: LC  
Transmitter type: Shortwave Laser w/o OFC  
Transmission media: TM Multi-mode 50m(M5) TM Multi-mode  
62.5m(M6)  
IEEE company ID: 08 00 5a  
Revision: AA10  
Part number: IBM42P21SNY  
Serial number: 53P14760069E5  
Vendor: IBM  
Date of manufacture: April 13, 2002  
SFP  
Status: Optimal  
Location: Out connection  
Supported data rate(s): 1 Gbps, 2 Gbps  
Link length: Intermediate  
Connector: LC  
Transmitter type: Shortwave Laser w/o OFC  
Transmission media: TM Multi-mode 50m(M5) TM Multi-mode  
62.5m(M6)  
IEEE company ID: 08 00 5a  
Revision: AA10  
Part number: IBM42P21SNY  
Serial number: 53P14760069PF  
Vendor: IBM  
Date of manufacture: April 13, 2002  
ESM card  
Status: Optimal  
Firmware version: 9325  
Maximum data rate: 2 Gbps  
Current data rate: 2 Gbps  
Location: B (right canister)  
Card communication: OK  
Product ID: EXP700  
Part number: PN 19K1287  
Serial number: SN 1T23772144  
Vendor: IBM  
Date of manufacture: September 1, 2002  
SFP  
Status: Optimal  
Location: In connection  
Supported data rate(s): 1 Gbps, 2 Gbps

Link length: Intermediate  
Connector: LC  
Transmitter type: Shortwave Laser w/o OFC  
Transmission media: TM Multi-mode 50m(M5) TM Multi-mode  
62.5m(M6)  
IEEE company ID: 08 00 5a  
Revision: AA10  
Part number: IBM42P21SNY  
Serial number: 53P1476000376  
Vendor: IBM  
Date of manufacture: December 1, 2001  
SFP  
Status: Optimal  
Location: Out connection  
Supported data rate(s): 1 Gbps, 2 Gbps  
Link length: Intermediate  
Connector: LC  
Transmitter type: Shortwave Laser w/o OFC  
Transmission media: TM Multi-mode 50m(M5) TM Multi-mode  
62.5m(M6)  
IEEE company ID: 08 00 5a  
Revision: AA10  
Part number: IBM42P21SNY  
Serial number: 53P14760069PU  
Vendor: IBM  
Date of manufacture: April 13, 2002  
Drive Enclosure 67 Overall Component Information  
Part number: PN 19K1288  
Serial number: SN 1T1321417481  
Vendor: VN IBM  
Date of manufacture: September 1, 2001  
Enclosure path redundancy: OK  
Fan canister: Optimal  
Fan canister: Optimal  
Power supply canister  
Status: Optimal  
Part number: PN 19K1289  
Serial number: SN A6842G00W00B  
Vendor: VN IBM  
Date of manufacture: August 1, 2001  
Power supply canister  
Status: Optimal  
Part number: PN 19K1289  
Serial number: SN A6842G00WQ0B  
Vendor: VN IBM  
Date of manufacture: August 1, 2001  
Temperature: Optimal  
Temperature: Optimal  
ESM card  
Status: Optimal  
Firmware version: 9325  
Maximum data rate: 2 Gbps  
Current data rate: 2 Gbps  
Location: A (left canister)  
Card communication: OK  
Product ID: EXP700  
Part number: PN 19K1287  
Serial number: SN 1T20789134  
Vendor: IBM  
Date of manufacture: March 1, 2002  
SFP  
Status: Optimal  
Location: In connection  
Supported data rate(s): 1 Gbps, 2 Gbps  
Link length: Intermediate  
Connector: LC  
Transmitter type: Shortwave Laser w/o OFC

Transmission media: TM Multi-mode 50m(M5) TM Multi-mode 62.5m(M6)

IEEE company ID: 08 00 5a  
Revision: AA10  
Part number: IBM42P21SNY  
Serial number: 53P14760069S4  
Vendor: IBM  
Date of manufacture: April 13, 2002

ESM card

Status: Optimal  
Firmware version: 9325  
Maximum data rate: 2 Gbps  
Current data rate: 2 Gbps  
Location: B (right canister)  
Card communication: OK  
Product ID: EXP700  
Part number: PN 19K1287  
Serial number: SN 1T20789264  
Vendor: IBM  
Date of manufacture: March 1, 2002  
SFP  
Status: Optimal  
Location: In connection  
Supported data rate(s): 1 Gbps, 2 Gbps  
Link length: Intermediate  
Connector: LC  
Transmitter type: Shortwave Laser w/o OFC  
Transmission media: TM Multi-mode 50m(M5) TM Multi-mode

62.5m(M6)

IEEE company ID: 08 00 5a  
Revision: AA10  
Part number: IBM42P21SNY  
Serial number: 53P14760069JW  
Vendor: IBM  
Date of manufacture: April 13, 2002

SFP

Status: Optimal  
Location: Out connection  
Supported data rate(s): 1 Gbps, 2 Gbps  
Link length: Intermediate  
Connector: LC  
Transmitter type: Shortwave Laser w/o OFC  
Transmission media: TM Multi-mode 50m(M5) TM Multi-mode

62.5m(M6)

IEEE company ID: 08 00 5a  
Revision: AA10  
Part number: IBM42P21SNY  
Serial number: 53P14760069TD  
Vendor: IBM  
Date of manufacture: April 13, 2002

MAPPINGS STORAGE PARTITIONING - ENABLED (0 of 64 used)-----

Logical Drive-To-LUN Mappings

Logical Drive flute6\_lun2, LUN 1, Default Group  
Logical Drive flute6\_lun3, LUN 2, Default Group  
Logical Drive flute6\_lun4, LUN 3, Default Group  
Logical Drive flute6lun1, LUN 0, Default Group

Topology

[Undefined Host Ports]  
21:00:00:e0:8b:09:9b:2d

[Default Group]

NVSRAM Host Type Internal Definitions

Index 0  
Name: Windows NT Non-Clustered (SP5 or higher)

ADT status: Disabled

Index 1

Name: Windows NT Clustered (SP5 or higher)  
ADT status: Disabled

Index 2 (DEFAULT)

Name: Windows 2000/Server 2003 Non-Clustered  
ADT status: Disabled

Index 3

Name: Windows 2000/Server 2003 Clustered  
ADT status: Disabled

Index 4

Name: NetWare-IBMSAN  
ADT status: Disabled

Index 5

Name: Linux  
ADT status: Disabled

Index 6

Name: AIX  
ADT status: Disabled

Index 7

Name: HP-UX  
ADT status: Disabled

Index 8

Name: Solaris  
ADT status: Disabled

Index 9

Name: PTX  
ADT status: Disabled

Index 10

Name: Irix  
ADT status: Disabled

Index 11

Name: Netware Failover  
ADT status: Disabled

Index 12

Name: IBM TS SAN VCE  
ADT status: Disabled

Index 13

Name: LNXCL  
ADT status: Disabled

## Microsoft Windows 2000 Server

### Client System Information Report

This report is for client 1; clients 2-8 were configured the same way as client 1.

System Information report written at: 03/18/2004 02:48:04 PM  
[System Information]

[ Following are sub-categories of this main category ]

[System Summary]

Item	Value
OS Name	Microsoft Windows 2000 Server
Version	5.0.2195 Service Pack 3 Build 2195
OS Manufacturer	Microsoft Corporation
System Name	FCLIENT10
System Manufacturer	IBM
System Model	-[8647xxx]-
System Type	X86-based PC
Processor	x86 Family 15 Model 2 Stepping 7 GenuineIntel ~3066 Mhz
Processor	x86 Family 15 Model 2 Stepping 7 GenuineIntel ~3066 Mhz
Processor	x86 Family 15 Model 2 Stepping 7 GenuineIntel ~3066 Mhz
Processor	x86 Family 15 Model 2 Stepping 7 GenuineIntel ~3066 Mhz
BIOS Version	)Phoenix - Award WorkstationBIOS v6.00PG

Windows Directory C:\WINNT  
 System Directory C:\WINNT\System32  
 Boot Device \Device\Harddisk0\Partition1  
 Locale United States  
 User Name FCLIENT10\Administrator  
 Time Zone Eastern Standard Time  
 Total Physical Memory 1,572,316 KB  
 Available Physical Memory 1,342,128 KB  
 Total Virtual Memory 4,562,952 KB  
 Available Virtual Memory 4,251,104 KB  
 Page File Space 2,990,636 KB  
 Page File C:\pagefile.sys

[Hardware Resources]

[ Following are sub-categories of this main category ]

[Conflicts/Sharing]

Resource Device  
 No conflicted/shared resources

[DMA]

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

[Forced Hardware]

Device PNP Device ID  
 No Forced Hardware

[I/O]

Address Range	Device	Status
0x0000-0x0CF7	PCI bus	OK
0x0000-0x0CF7	Direct memory access controller	OK
0x0D00-0x40B7	PCI bus	OK
0x40B9-0xFFFF	PCI bus	OK
0x7000-0xBFFF - 2553	Intel(R) E7000 Series Hub Interface B PCI-to-PCI Bridge	OK
0x7000-0xBFFF	Intel(R) P64H2 PCI to PCI Bridge - 1460	OK
0x7000-0xBFFF	PCI standard PCI-to-PCI bridge	OK
0x7000-0xBFFF	Intel(R) PRO/100 S Dual Port Server Adapter	OK
0xA000-0xBFFF	Intel(R) P64H2 PCI to PCI Bridge - 1460	OK
0xA000-0xBFFF	DEC 21154 PCI to PCI bridge	OK
0xA000-0xBFFF	Adaptec ANA62044 64-bit 4 port PCI Fast Ethernet Adapter	OK
0xB000-0xB0FF	QLogic QLA23xx PCI Fibre Channel Adapter	OK
0xA400-0xA4FF	Adaptec ANA62044 64-bit 4 port PCI Fast Ethernet Adapter #2	OK
0xA800-0xA8FF	Adaptec ANA62044 64-bit 4 port PCI Fast Ethernet Adapter #3	OK
0xAC00-0xACFF	Adaptec ANA62044 64-bit 4 port PCI Fast Ethernet Adapter #4	OK
0x7400-0x743F	Intel(R) PRO/100 S Dual Port Server Adapter #2	OK
0x8000-0x8FFF	PCI standard PCI-to-PCI bridge	OK
0x8000-0x8FFF	Intel(R) PRO/100 S Dual Port Server Adapter #3	OK
0x8400-0x843F	Intel(R) PRO/100 S Dual Port Server Adapter #4	OK
0x9000-0x90FF	LSI Logic 1020/1030 Ultra320 SCSI Adapter	OK

0x9400-0x94FF	LSI Logic 1020/1030 Ultra320 SCSI Adapter	
0xD400-0xD41F	Intel(R) 82801DB/DBM USB Universal Host Controller - 24C2	OK
0xD000-0xD01F	Intel(R) 82801DB/DBM USB Universal Host Controller - 24C4	OK
0xC000-0xC0FF	RAGE XL PCI	OK
0x03B0-0x03BB	RAGE XL PCI	OK
0x03C0-0x03DF	RAGE XL PCI	OK
0x0A79-0x0A79	ISAPNP Read Data Port	OK
0x0279-0x0279	ISAPNP Read Data Port	OK
0x0274-0x0277	ISAPNP Read Data Port	OK
0x0010-0x001F	Motherboard resources	OK
0x0022-0x003F	Motherboard resources	OK
0x0044-0x005F	Motherboard resources	OK
0x0062-0x0063	Motherboard resources	OK
0x0065-0x006F	Motherboard resources	OK
0x0074-0x007F	Motherboard resources	OK
0x0091-0x0093	Motherboard resources	OK
0x00A2-0x00BF	Motherboard resources	OK
0x00E0-0x00EF	Motherboard resources	OK
0x04D0-0x04D1	Motherboard resources	OK
0x0800-0x087F	Motherboard resources	OK
0x0020-0x0021	Programmable interrupt controller	OK
0x00A0-0x00A1	Programmable interrupt controller	OK
0x0080-0x0090	Direct memory access controller	OK
0x0094-0x009F	Direct memory access controller	OK
0x00C0-0x00DF	Direct memory access controller	OK
0x0040-0x0043	System timer	OK
0x0070-0x0073	System CMOS/real time clock	OK
0x0061-0x0061	System speaker	OK
0x00F0-0x00FF	Numeric data processor	OK
0x03F2-0x03F5	Standard floppy disk controller	OK
0x03F7-0x03F7	Standard floppy disk controller	OK
0x03F8-0x03FF	Communications Port (COM1)	OK
0x02F8-0x02FF	Communications Port (COM2)	OK
0x0378-0x037F	Printer Port (LPT1)	OK
0x0060-0x0060	Standard 101/102-Key or Microsoft Natural PS/2 Keyboard	OK
0x0064-0x0064	Standard 101/102-Key or Microsoft Natural PS/2 Keyboard	OK
0xF000-0xF00F	Intel(R) 82801DB Ultra ATA Storage Controller - 24CB	OK
0x01F0-0x01F7	Primary IDE Channel	OK
0x03F6-0x03F6	Primary IDE Channel	OK
0x0170-0x0177	Secondary IDE Channel	OK
0x0376-0x0376	Secondary IDE Channel	OK
0x5000-0x501F	Intel(R) 82801DB/DBM SMBus Controller - 24C3	OK
0xDC00-0xDCFF	SoundMAX Integrated Digital Audio	OK
0xE000-0xE03F	SoundMAX Integrated Digital Audio	OK
0x4000-0x40BF	Motherboard resources	OK
0x40B8-0x40B8	Not Available	OK

[IRQs]

IRQ Number	Device
9	Microsoft ACPI-Compliant System
48	Broadcom NetXtreme Gigabit Ethernet
52	QLogic QLA23xx PCI Fibre Channel Adapter
56	Adaptec ANA62044 64-bit 4 port PCI Fast Ethernet Adapter
57	Adaptec ANA62044 64-bit 4 port PCI Fast Ethernet Adapter #2
58	Adaptec ANA62044 64-bit 4 port PCI Fast Ethernet Adapter #3
59	Adaptec ANA62044 64-bit 4 port PCI Fast Ethernet Adapter #4
24	Intel(R) PRO/100 S Dual Port Server Adapter
25	Intel(R) PRO/100 S Dual Port Server Adapter #2
28	Intel(R) PRO/100 S Dual Port Server Adapter #3
29	Intel(R) PRO/100 S Dual Port Server Adapter #4

32 LSI Logic 1020/1030 Ultra320 SCSI Adapter  
 33 LSI Logic 1020/1030 Ultra320 SCSI Adapter  
 16 Intel(R) 82801DB/DBM USB Universal Host Controller - 24C2  
 19 Intel(R) 82801DB/DBM USB Universal Host Controller - 24C4  
 23 Intel PCI to USB Enhanced Host Controller  
 22 RAGE XL PCI  
 8 System CMOS/real time clock  
 13 Numeric data processor  
 6 Standard floppy disk controller  
 4 Communications Port (COM1)  
 3 Communications Port (COM2)  
 12 PS/2 Compatible Mouse  
 1 Standard 101/102-Key or Microsoft Natural PS/2 Keyboard  
 14 Primary IDE Channel  
 15 Secondary IDE Channel  
 5 Intel(R) 82801DB/DBM SMBus Controller - 24C3  
 17 SoundMAX Integrated Digital Audio

[Memory]

Range	Device	Status
0xCA000-0xCDDFF	System board	OK
0xCE000-0xCFFFF	System board	OK
0xF0000-0xFBFFF	System board	OK
0xFC000-0xFFFFF	System board	OK
0x5FFF0000-0x5FFFFFFF	System board	OK
0x0000-0x9FFFF	System board	OK
0x10000-0x5FFEFF	System board	OK
0xFEC00000-0xFECFFFFF	System board	OK
0xFEE00000-0xFEEFFFFF	System board	OK
0xFFB00000-0xFFB7FFFF	System board	OK
0xFFF00000-0xFFFFFFF	System board	OK
0xE0000-0xEFFFF	System board	OK
0xFFB80000-0xFFBFFFFF	Intel(r) 82802 Firmware Hub Device	OK
0xA0000-0xBFFFF	PCI bus	OK
0xA0000-0xBFFFF	RAGE XL PCI	OK
0xC0000-0xDFFFF	PCI bus	OK
0x60000000-0xFEBFFFFF	PCI bus	OK
0xEC000000-0xEFFFFFFF	Intel(R) E7000 Series Processor to AGP Controller - 2552	OK
0xE8000000-0xEBFFFFF	Intel(R) E7000 Series Processor to AGP Controller - 2552	OK
0xF0000000-0xF6FFFFF	Intel(R) E7000 Series Hub Interface B PCI-to-PCI Bridge - 2553	OK
0xF0000000-0xF6FFFFF	Intel(R) P64H2 PCI to PCI Bridge - 1460	OK
0xF6001000-0xF6001FFF	Intel(R) P64H2 I/O Advanced Programmable Interrupt Controller - 1461	OK
0xF3000000-0xF300FFFF	Broadcom NetXtreme Gigabit Ethernet	OK
0xF3010000-0xF3010FFF	QLogic QLA23xx PCI Fibre Channel Adapter	OK
0xF1000000-0xF2FFFFFFF	DEC 21154 PCI to PCI bridge	OK
0xF2000000-0xF207FFFF	Adaptec ANA62044 64-bit 4 port PCI Fast Ethernet Adapter	OK
0xF2080000-0xF20FFFFF	Adaptec ANA62044 64-bit 4 port PCI Fast Ethernet Adapter #2	OK
0xF2100000-0xF217FFFF	Adaptec ANA62044 64-bit 4 port PCI Fast Ethernet Adapter #3	OK
0xF2180000-0xF21FFFFF	Adaptec ANA62044 64-bit 4 port PCI Fast Ethernet Adapter #4	OK
0xF6000000-0xF6000FFF	Intel(R) P64H2 I/O Advanced Programmable Interrupt Controller - 1461	OK
0xF4000000-0xF5FFFFFFF	Intel(R) P64H2 PCI to PCI Bridge - 1460	OK
0xF5100000-0xF51FFFFFFF	PCI standard PCI-to-PCI bridge	OK

0xF5100000-0xF51FFFFFFF	Intel(R) PRO/100 S Dual Port Server Adapter	OK
0xF5141000-0xF5141FFF	Intel(R) PRO/100 S Dual Port Server Adapter	OK
0xF5140000-0xF5140FFF	Intel(R) PRO/100 S Dual Port Server Adapter #2	OK
0xF5120000-0xF513FFFF	Intel(R) PRO/100 S Dual Port Server Adapter #2	OK
0xF5000000-0xF50FFFFF	PCI standard PCI-to-PCI bridge	OK
0xF5000000-0xF50FFFFF	Intel(R) PRO/100 S Dual Port Server Adapter #3	OK
0xF5041000-0xF5041FFF	Intel(R) PRO/100 S Dual Port Server Adapter #3	OK
0xF5040000-0xF5040FFF	Intel(R) PRO/100 S Dual Port Server Adapter #4	OK
0xF5020000-0xF503FFFF	Intel(R) PRO/100 S Dual Port Server Adapter #4	OK
0xF5210000-0xF521FFFF	LSI Logic 1020/1030 Ultra320 SCSI Adapter	OK
0xF5200000-0xF520FFFF	LSI Logic 1020/1030 Ultra320 SCSI Adapter	OK
0xF5220000-0xF522FFFF	LSI Logic 1020/1030 Ultra320 SCSI Adapter	OK
0xF5230000-0xF523FFFF	LSI Logic 1020/1030 Ultra320 SCSI Adapter	OK
0xFA000000-0xFA0003FF	Intel PCI to USB Enhanced Host Controller	OK
0xF7000000-0xF7FFFFFFF	RAGE XL PCI	OK
0xF9000000-0xF9000FFF	RAGE XL PCI	OK
0xFEBFFC00-0xFEBFFFFFFF	Intel(R) 82801DB Ultra ATA Storage Controller - 24CB	OK
0xFA001000-0xFA0011FF	SoundMAX Integrated Digital Audio	OK
0xFA002000-0xFA0020FF	SoundMAX Integrated Digital Audio	OK

[Components]

[ Following are sub-categories of this main category ]

[Multimedia]

[ Following are sub-categories of this main category ]

[Audio Codecs]

Codec	Manufacturer	Description	Status	File
Version	Size	Creation Date		
c:\winnt\system32\lhacm.acm	Microsoft Corporation			
OK	C:\WINNT\System32\LHACM.ACM	4.4.3385	33.27 KB	
(34,064 bytes)	2/12/2003 12:55:58 PM			
c:\winnt\system32\msg723.acm	Microsoft Corporation			
OK	C:\WINNT\System32\MSG723.ACM	4.4.3385	106.77 KB	
(109,328 bytes)	2/12/2003 12:55:58 PM			
c:\winnt\system32\iac25_32.ax	Intel Corporation			
OK	C:\WINNT\System32\IAC25_32.AX	2.05.53	195.00 KB	
(199,680 bytes)	12/7/1999 7:00:00 AM			
c:\winnt\system32\tssoft32.acm	DSP GROUP, INC.			
OK	C:\WINNT\System32\TSOFT32.ACM	1.01	9.27 KB (9,488 bytes)	
12/7/1999 7:00:00 AM				
c:\winnt\system32\msgsm32.acm	Microsoft Corporation			
OK	C:\WINNT\System32\MSGSM32.ACM	5.00.2134.1		
22.27 KB (22,800 bytes)	12/7/1999 7:00:00 AM			
c:\winnt\system32\msg711.acm	Microsoft Corporation			
OK	C:\WINNT\System32\MSG711.ACM	5.00.2134.1		
10.27 KB (10,512 bytes)	12/7/1999 7:00:00 AM			

```

c:\winnt\system32\msadp32.acm Microsoft Corporation
OK      C:\WINNT\System32\MSADP32.ACM  5.00.2134.1
14.77 KB (15,120 bytes)      12/7/1999 7:00:00 AM
c:\winnt\system32\imaadp32.acm Microsoft Corporation
OK      C:\WINNT\System32\IMAADP32.ACM  5.00.2134.1
16.27 KB (16,656 bytes)      12/7/1999 7:00:00 AM

```

[Video Codecs]

Codec	Manufacturer	Description	Status	File
Version	Size	Creation Date		
c:\winnt\system32\msyuv.dll Microsoft Corporation				
OK	C:\WINNT\System32\MSYUV.DLL		5.00.2134.1	
14.77 KB (15,120 bytes)		2/12/2003 2:09:29 PM		
c:\winnt\system32\ir50_32.dll Intel Corporation				
OK	C:\WINNT\System32\IR50_32.DLL	Indeo® video 5.10		
737.50 KB (755,200 bytes)		12/7/1999 7:00:00 AM		
c:\winnt\system32\msh261.drv Microsoft Corporation				
OK	C:\WINNT\System32\MSH261.DRV		4.4.3385	163.77 KB
(167,696 bytes)		2/12/2003 12:55:58 PM		
c:\winnt\system32\msh263.drv Microsoft Corporation				
OK	C:\WINNT\System32\MSH263.DRV		4.4.3385	252.27 KB
(258,320 bytes)		2/12/2003 12:55:39 PM		
c:\winnt\system32\msvidc32.dll Microsoft Corporation				
OK	C:\WINNT\System32\MSVIDC32.DLL		5.00.2134.1	
27.27 KB (27,920 bytes)		12/7/1999 7:00:00 AM		
c:\winnt\system32\iccvid.dll Microsoft Corporation				
OK	C:\WINNT\System32\ICCVID.DLL	Radius Inc.		OK
(199,168 bytes)		1.10.0.6	108.00 KB (110,592 bytes)	
		12/7/1999 7:00:00 AM		
c:\winnt\system32\msrle32.dll Microsoft Corporation				
OK	C:\WINNT\System32\MSRLE32.DLL		5.00.2134.1	
10.77 KB (11,024 bytes)		12/7/1999 7:00:00 AM		
c:\winnt\system32\ir32_32.dll Intel(R) Corporation				
OK	C:\WINNT\System32\IR32_32.DLL	Not Available		194.50 KB
(199,168 bytes)		12/7/1999 7:00:00 AM		

[CD-ROM]

Item	Value
Drive	Z:
Description	CD-ROM Drive
Media Loaded	False
Media Type	CD-ROM
Name	HL-DT-ST CD-ROM GCR-8480B
Manufacturer	(Standard CD-ROM drives)
Status	OK
Transfer Rate	Not Available
SCSI Target ID	0
PNP Device ID	
IDE\CDROMHL-DT-ST_CD-ROM_GCR-8480B_____1.02____\5&74A80B&0&0.0.0	

[Sound Device]

Item	Value
Name	SoundMAX Integrated Digital Audio
Status	OK
PNP Device ID	
PCI\VEN_8086&DEV_24C5&SUBSYS_027A1014&REV_02\3&13C0B0C5&0&FD	
IRQ Number	17
I/O Port	0xDC00-0xDCFF
I/O Port	0xE000-0xE03F
Memory Range	0xFA001000-0xFA0011FF
Memory Range	0xFA002000-0xFA0020FF
Driver	c:\winnt\system32\drivers\smwdm.sys (552932, PRE-RELEASE)

[Display]

Item	Value
Name	RAGE XL PCI
PNP Device ID	
PCI\VEN_1002&DEV_4752&SUBSYS_02401014&REV_27\4&1A671D0C&0&08F0	
Adapter Type	ATI RAGE XL PCI (B41), ATI Technologies Inc. compatible
Adapter Description	RAGE XL PCI
Adapter RAM	8.00 MB (8,388,608 bytes)
Installed Drivers	ati2drad.dll
Driver Version	5.00.2195.5005
INF File	oem1.inf (ati2mpad section)
Color Planes	1
Color Table Entries	65536
Resolution	1024 x 768 x 85 hertz
Bits/Pixel	16

[Infrared]

Item	Value
No infrared devices	

[Input]

[ Following are sub-categories of this main category ]

[Keyboard]

Item	Value
Description	Standard 101/102-Key or Microsoft Natural PS/2 Keyboard
Name	Enhanced (101- or 102-key)
Layout	00000409
PNP Device ID	ACPI\PNP0303\4&323CF337&0
NumberOfFunctionKeys	12

[Pointing Device]

Item	Value
Hardware Type	PS/2 Compatible Mouse
Number of Buttons	2
Status	OK
PNP Device ID	ACPI\PNP0F13\4&323CF337&0
Power Management Supported	False
Double Click Threshold	6
Handedness	Right Handed Operation

[Modem]

Item	Value
No modems	

[Network]

[ Following are sub-categories of this main category ]

[Adapter]

Item	Value
Name	[00000000] RAS Async Adapter
Adapter Type	Not Available
Product Name	RAS Async Adapter

Installed True  
 PNP Device ID Not Available  
 Last Reset 3/18/2004 4:52:23 AM  
 Index 0  
 Service Name AsyncMac  
 IP Address Not Available  
 IP Subnet Not Available  
 Default IP Gateway Not Available  
 DHCP Enabled False  
 DHCP Server Not Available  
 DHCP Lease Expires Not Available  
 DHCP Lease Obtained Not Available  
 MAC Address Not Available  
 Service Name Not Available

Name [00000001] WAN Miniport (L2TP)  
 Adapter Type Not Available  
 Product Name WAN Miniport (L2TP)  
 Installed True  
 PNP Device ID ROOT\MS\_L2TPMINIPOINT\0000  
 Last Reset 3/18/2004 4:52:23 AM  
 Index 1  
 Service Name Rasl2tp  
 IP Address Not Available  
 IP Subnet Not Available  
 Default IP Gateway Not Available  
 DHCP Enabled False  
 DHCP Server Not Available  
 DHCP Lease Expires Not Available  
 DHCP Lease Obtained Not Available  
 MAC Address Not Available  
 Service Name Rasl2tp  
 Driver c:\winnt\system32\drivers\rasl2tp.sys (52112, 5.00.2195.4052)

Name [00000002] WAN Miniport (PPTP)  
 Adapter Type Wide Area Network (WAN)  
 Product Name WAN Miniport (PPTP)  
 Installed True  
 PNP Device ID ROOT\MS\_PPTPMINIPOINT\0000  
 Last Reset 3/18/2004 4:52:23 AM  
 Index 2  
 Service Name PptpMiniport  
 IP Address Not Available  
 IP Subnet Not Available  
 Default IP Gateway Not Available  
 DHCP Enabled False  
 DHCP Server Not Available  
 DHCP Lease Expires Not Available  
 DHCP Lease Obtained Not Available  
 MAC Address 50:50:54:50:30:30  
 Service Name PptpMiniport  
 Driver c:\winnt\system32\drivers\rasptp.sys (47888, 5.00.2195.4080)

Name [00000003] Direct Parallel  
 Adapter Type Not Available  
 Product Name Direct Parallel  
 Installed True  
 PNP Device ID ROOT\MS\_PTIMINIPOINT\0000  
 Last Reset 3/18/2004 4:52:23 AM  
 Index 3  
 Service Name Raspti  
 IP Address Not Available  
 IP Subnet Not Available  
 Default IP Gateway Not Available  
 DHCP Enabled False  
 DHCP Server Not Available  
 DHCP Lease Expires Not Available  
 DHCP Lease Obtained Not Available

MAC Address Not Available  
 Service Name Raspti  
 Driver c:\winnt\system32\drivers\raspti.sys (16880, 5.00.2146.1)

Name [00000004] WAN Miniport (IP)  
 Adapter Type Not Available  
 Product Name WAN Miniport (IP)  
 Installed True  
 PNP Device ID ROOT\MS\_NDISWANIP\0000  
 Last Reset 3/18/2004 4:52:23 AM  
 Index 4  
 Service Name NdisWan  
 IP Address Not Available  
 IP Subnet Not Available  
 Default IP Gateway Not Available  
 DHCP Enabled False  
 DHCP Server Not Available  
 DHCP Lease Expires Not Available  
 DHCP Lease Obtained Not Available  
 MAC Address Not Available  
 Service Name NdisWan  
 Driver c:\winnt\system32\drivers\ndiswan.sys (93104, 5.00.2195.5241)

Name [00000005] Broadcom NetXtreme Gigabit Ethernet  
 Adapter Type Ethernet 802.3  
 Product Name Broadcom NetXtreme Gigabit Ethernet  
 Installed True  
 PNP Device ID PCI\VEN\_14E4&DEV\_16A7&SUBSYS\_026F1014&REV\_02\5&121CC7C2&0&08E810  
 Last Reset 3/18/2004 4:52:23 AM  
 Index 5  
 Service Name b57w2k  
 IP Address 192.168.125.10  
 IP Subnet 255.255.255.0  
 Default IP Gateway Not Available  
 DHCP Enabled False  
 DHCP Server Not Available  
 DHCP Lease Expires Not Available  
 DHCP Lease Obtained Not Available  
 MAC Address 00:10:DC:76:E2:A7  
 Service Name b57w2k  
 IRQ Number 48  
 Driver c:\winnt\system32\drivers\b57w2k.sys (79336, 2.90.0.0)

Name [00000006] Intel(R) PRO/100 S Dual Port Server Adapter  
 Adapter Type Ethernet 802.3  
 Product Name Intel(R) PRO/100 S Dual Port Server Adapter  
 Installed True  
 PNP Device ID PCI\VEN\_8086&DEV\_1229&SUBSYS\_10158086&REV\_0D\6&11588895&0&2008F810  
 Last Reset 3/18/2004 4:52:23 AM  
 Index 6  
 Service Name E100B  
 IP Address 192.168.115.99  
 IP Subnet 255.255.255.0  
 Default IP Gateway Not Available  
 DHCP Enabled False  
 DHCP Server Not Available  
 DHCP Lease Expires Not Available  
 DHCP Lease Obtained Not Available  
 MAC Address 00:02:B3:AC:6A:5C  
 Service Name E100B  
 IRQ Number 24  
 I/O Port 0x7000-0xBFFF  
 Driver c:\winnt\system32\drivers\e100bnt5.sys (141584, 6.04.14.0000)

Name [00000007] Intel(R) PRO/100 S Dual Port Server Adapter  
Adapter Type Ethernet 802.3  
Product Name Intel(R) PRO/100 S Dual Port Server Adapter  
Installed True  
PNP Device ID  
PCI\VEN\_8086&DEV\_1229&SUBSYS\_10158086&REV\_0D\6&11588895&0  
&2808F810  
Last Reset 3/18/2004 4:52:23 AM  
Index 7  
Service Name E100B  
IP Address 192.168.114.99  
IP Subnet 255.255.255.0  
Default IP Gateway Not Available  
DHCP Enabled False  
DHCP Server Not Available  
DHCP Lease Expires Not Available  
DHCP Lease Obtained Not Available  
MAC Address 00:02:B3:AC:6A:5D  
Service Name E100B  
IRQ Number 25  
I/O Port 0x7400-0x743F  
Driver c:\winnt\system32\drivers\le100bnt5.sys (141584, 6.04.14.0000)

Name [00000008] Intel(R) PRO/100 S Dual Port Server Adapter  
Adapter Type Ethernet 802.3  
Product Name Intel(R) PRO/100 S Dual Port Server Adapter  
Installed True  
PNP Device ID  
PCI\VEN\_8086&DEV\_1229&SUBSYS\_10158086&REV\_0D\6&34E7E7F4&  
0&2010F810  
Last Reset 3/18/2004 4:52:23 AM  
Index 8  
Service Name E100B  
IP Address 192.168.117.99  
IP Subnet 255.255.255.0  
Default IP Gateway Not Available  
DHCP Enabled False  
DHCP Server Not Available  
DHCP Lease Expires Not Available  
DHCP Lease Obtained Not Available  
MAC Address 00:02:B3:AC:67:F2  
Service Name E100B  
IRQ Number 28  
I/O Port 0x8000-0x8FFF  
Driver c:\winnt\system32\drivers\le100bnt5.sys (141584, 6.04.14.0000)

Name [00000009] Intel(R) PRO/100 S Dual Port Server Adapter  
Adapter Type Ethernet 802.3  
Product Name Intel(R) PRO/100 S Dual Port Server Adapter  
Installed True  
PNP Device ID  
PCI\VEN\_8086&DEV\_1229&SUBSYS\_10158086&REV\_0D\6&34E7E7F4&  
0&2810F810  
Last Reset 3/18/2004 4:52:23 AM  
Index 9  
Service Name E100B  
IP Address 192.168.116.99  
IP Subnet 255.255.255.0  
Default IP Gateway Not Available  
DHCP Enabled False  
DHCP Server Not Available  
DHCP Lease Expires Not Available  
DHCP Lease Obtained Not Available  
MAC Address 00:02:B3:AC:67:F3  
Service Name E100B  
IRQ Number 29  
I/O Port 0x8400-0x843F  
Driver c:\winnt\system32\drivers\le100bnt5.sys (141584, 6.04.14.0000)

Name [00000014] Adaptec ANA62044 64-bit 4 port PCI Fast Ethernet  
Adapter  
Adapter Type Ethernet 802.3  
Product Name Adaptec ANA62044 64-bit 4 port PCI Fast Ethernet  
Adapter  
Installed True  
PNP Device ID  
PCI\VEN\_9004&DEV\_6915&SUBSYS\_00199004&REV\_03\6&1CD10E71&  
0&2018E810  
Last Reset 3/18/2004 4:52:23 AM  
Index 14  
Service Name ADPTSF  
IP Address 192.168.113.99  
IP Subnet 255.255.255.0  
Default IP Gateway Not Available  
DHCP Enabled False  
DHCP Server Not Available  
DHCP Lease Expires Not Available  
DHCP Lease Obtained Not Available  
MAC Address 00:00:D1:EF:69:61  
Service Name ADPTSF  
IRQ Number 56  
I/O Port 0xA000-0xBFFF  
Driver c:\winnt\system32\drivers\adptsf50.sys (48384, 5.20.0.24)

Name [00000015] Adaptec ANA62044 64-bit 4 port PCI Fast Ethernet  
Adapter  
Adapter Type Ethernet 802.3  
Product Name Adaptec ANA62044 64-bit 4 port PCI Fast Ethernet  
Adapter  
Installed True  
PNP Device ID  
PCI\VEN\_9004&DEV\_6915&SUBSYS\_00199004&REV\_03\6&1CD10E71&  
0&2818E810  
Last Reset 3/18/2004 4:52:23 AM  
Index 15  
Service Name ADPTSF  
IP Address 192.168.112.99  
IP Subnet 255.255.255.0  
Default IP Gateway Not Available  
DHCP Enabled False  
DHCP Server Not Available  
DHCP Lease Expires Not Available  
DHCP Lease Obtained Not Available  
MAC Address 00:00:D1:EF:69:62  
Service Name ADPTSF  
IRQ Number 57  
I/O Port 0xA400-0xA4FF  
Driver c:\winnt\system32\drivers\adptsf50.sys (48384, 5.20.0.24)

Name [00000016] Adaptec ANA62044 64-bit 4 port PCI Fast Ethernet  
Adapter  
Adapter Type Ethernet 802.3  
Product Name Adaptec ANA62044 64-bit 4 port PCI Fast Ethernet  
Adapter  
Installed True  
PNP Device ID  
PCI\VEN\_9004&DEV\_6915&SUBSYS\_00199004&REV\_03\6&1CD10E71&  
0&3018E810  
Last Reset 3/18/2004 4:52:23 AM  
Index 16  
Service Name ADPTSF  
IP Address 192.168.111.99  
IP Subnet 255.255.255.0  
Default IP Gateway Not Available  
DHCP Enabled False  
DHCP Server Not Available

DHCP Lease Expires Not Available  
 DHCP Lease Obtained Not Available  
 MAC Address 00:00:D1:EF:69:63  
 Service Name ADPTSF  
 IRQ Number 58  
 I/O Port 0xA800-0xA8FF  
 Driver c:\winnt\system32\drivers\adptsf50.sys (48384, 5.20.0.24)

Name [00000017] Adaptec ANA62044 64-bit 4 port PCI Fast Ethernet Adapter  
 Adapter Type Ethernet 802.3  
 Product Name Adaptec ANA62044 64-bit 4 port PCI Fast Ethernet Adapter  
 Installed True  
 PNP Device ID PCI\VEN\_9004&DEV\_6915&SUBSYS\_00199004&REV\_03\6&1CD10E71&0&3818E810  
 Last Reset 3/18/2004 4:52:23 AM  
 Index 17  
 Service Name ADPTSF  
 IP Address 192.168.110.99  
 IP Subnet 255.255.255.0  
 Default IP Gateway Not Available  
 DHCP Enabled False  
 DHCP Server Not Available  
 DHCP Lease Expires Not Available  
 DHCP Lease Obtained Not Available  
 MAC Address 00:00:D1:EF:69:64  
 Service Name ADPTSF  
 IRQ Number 59  
 I/O Port 0xAC00-0xACFF  
 Driver c:\winnt\system32\drivers\adptsf50.sys (48384, 5.20.0.24)

[Protocol]

Item	Value
Name	MSAFD Tcip [TCP/IP]
ConnectionlessService	False
GuaranteesDelivery	True
GuaranteesSequencing	True
MaximumAddressSize	16 bytes
MaximumMessageSize	0 bytes
MessageOriented	False
MinimumAddressSize	16 bytes
PseudoStreamOriented	False
SupportsBroadcasting	False
SupportsConnectData	False
SupportsDisconnectData	False
SupportsEncryption	False
SupportsExpeditedData	True
SupportsGracefulClosing	True
SupportsGuaranteedBandwidth	False
SupportsMulticasting	False

Name	MSAFD Tcip [UDP/IP]
ConnectionlessService	True
GuaranteesDelivery	False
GuaranteesSequencing	False
MaximumAddressSize	16 bytes
MaximumMessageSize	65467 bytes
MessageOriented	True
MinimumAddressSize	16 bytes
PseudoStreamOriented	False
SupportsBroadcasting	True
SupportsConnectData	False
SupportsDisconnectData	False
SupportsEncryption	False

SupportsExpeditedData	False
SupportsGracefulClosing	False
SupportsGuaranteedBandwidth	False
SupportsMulticasting	True

Name	RSVP UDP Service Provider
ConnectionlessService	True
GuaranteesDelivery	False
GuaranteesSequencing	False
MaximumAddressSize	16 bytes
MaximumMessageSize	65467 bytes
MessageOriented	True
MinimumAddressSize	16 bytes
PseudoStreamOriented	False
SupportsBroadcasting	True
SupportsConnectData	False
SupportsDisconnectData	False
SupportsEncryption	True
SupportsExpeditedData	False
SupportsGracefulClosing	False
SupportsGuaranteedBandwidth	False
SupportsMulticasting	True

Name	RSVP TCP Service Provider
ConnectionlessService	False
GuaranteesDelivery	True
GuaranteesSequencing	True
MaximumAddressSize	16 bytes
MaximumMessageSize	0 bytes
MessageOriented	False
MinimumAddressSize	16 bytes
PseudoStreamOriented	False
SupportsBroadcasting	False
SupportsConnectData	False
SupportsDisconnectData	False
SupportsEncryption	True
SupportsExpeditedData	True
SupportsGracefulClosing	True
SupportsGuaranteedBandwidth	False
SupportsMulticasting	False

Name	MSAFD NetBIOS
[\Device\NetBT_Tcpip_{0BCE0365-C341-4AD3-8978-DD0996C8BA12}]	
SEQPACKET	14
ConnectionlessService	False
GuaranteesDelivery	True
GuaranteesSequencing	True
MaximumAddressSize	20 bytes
MaximumMessageSize	64000 bytes
MessageOriented	True
MinimumAddressSize	20 bytes
PseudoStreamOriented	False
SupportsBroadcasting	False
SupportsConnectData	False
SupportsDisconnectData	False
SupportsEncryption	False
SupportsExpeditedData	False
SupportsGracefulClosing	False
SupportsGuaranteedBandwidth	False
SupportsMulticasting	False

Name	MSAFD NetBIOS
[\Device\NetBT_Tcpip_{0BCE0365-C341-4AD3-8978-DD0996C8BA12}]	
DATAGRAM	14
ConnectionlessService	True
GuaranteesDelivery	False
GuaranteesSequencing	False
MaximumAddressSize	20 bytes



MaximumMessageSize 64000 bytes  
 MessageOriented True  
 MinimumAddressSize20 bytes  
 PseudoStreamOriented False  
 SupportsBroadcasting True  
 SupportsConnectData False  
 SupportsDisconnectData False  
 SupportsEncryption False  
 SupportsExpeditedData False  
 SupportsGracefulClosing False  
 SupportsGuaranteedBandwidth False  
 SupportsMulticasting False

Name MSAFD NetBIOS  
 [\Device\NetBT\_Tcpip\_{DC5C9BD6-34CB-4009-B5E2-6141DC7599A4}]  
 SEQPACKET 11  
 ConnectionlessService False  
 GuaranteesDelivery True  
 GuaranteesSequencing True  
 MaximumAddressSize 20 bytes  
 MaximumMessageSize 64000 bytes  
 MessageOriented True  
 MinimumAddressSize20 bytes  
 PseudoStreamOriented False  
 SupportsBroadcasting False  
 SupportsConnectData False  
 SupportsDisconnectData False  
 SupportsEncryption False  
 SupportsExpeditedData False  
 SupportsGracefulClosing False  
 SupportsGuaranteedBandwidth False  
 SupportsMulticasting False

Name MSAFD NetBIOS  
 [\Device\NetBT\_Tcpip\_{DC5C9BD6-34CB-4009-B5E2-6141DC7599A4}]  
 DATAGRAM 11  
 ConnectionlessService True  
 GuaranteesDelivery False  
 GuaranteesSequencing False  
 MaximumAddressSize 20 bytes  
 MaximumMessageSize 64000 bytes  
 MessageOriented True  
 MinimumAddressSize20 bytes  
 PseudoStreamOriented False  
 SupportsBroadcasting True  
 SupportsConnectData False  
 SupportsDisconnectData False  
 SupportsEncryption False  
 SupportsExpeditedData False  
 SupportsGracefulClosing False  
 SupportsGuaranteedBandwidth False  
 SupportsMulticasting False

Name MSAFD NetBIOS  
 [\Device\NetBT\_Tcpip\_{4A2A9C9A-DDD8-4FED-BF81-B957B71EB0BE}]  
 SEQPACKET 4  
 ConnectionlessService False  
 GuaranteesDelivery True  
 GuaranteesSequencing True  
 MaximumAddressSize 20 bytes  
 MaximumMessageSize 64000 bytes  
 MessageOriented True  
 MinimumAddressSize20 bytes  
 PseudoStreamOriented False  
 SupportsBroadcasting False  
 SupportsConnectData False  
 SupportsDisconnectData False  
 SupportsEncryption False

SupportsExpeditedData False  
 SupportsGracefulClosing False  
 SupportsGuaranteedBandwidth False  
 SupportsMulticasting False

Name MSAFD NetBIOS  
 [\Device\NetBT\_Tcpip\_{4A2A9C9A-DDD8-4FED-BF81-B957B71EB0BE}]  
 DATAGRAM 4  
 ConnectionlessService True  
 GuaranteesDelivery False  
 GuaranteesSequencing False  
 MaximumAddressSize 20 bytes  
 MaximumMessageSize 64000 bytes  
 MessageOriented True  
 MinimumAddressSize20 bytes  
 PseudoStreamOriented False  
 SupportsBroadcasting True  
 SupportsConnectData False  
 SupportsDisconnectData False  
 SupportsEncryption False  
 SupportsExpeditedData False  
 SupportsGracefulClosing False  
 SupportsGuaranteedBandwidth False  
 SupportsMulticasting False

Name MSAFD NetBIOS  
 [\Device\NetBT\_Tcpip\_{04626D60-9758-487A-8A9E-33BA956B6C94}]  
 SEQPACKET 3  
 ConnectionlessService False  
 GuaranteesDelivery True  
 GuaranteesSequencing True  
 MaximumAddressSize 20 bytes  
 MaximumMessageSize 64000 bytes  
 MessageOriented True  
 MinimumAddressSize20 bytes  
 PseudoStreamOriented False  
 SupportsBroadcasting False  
 SupportsConnectData False  
 SupportsDisconnectData False  
 SupportsEncryption False  
 SupportsExpeditedData False  
 SupportsGracefulClosing False  
 SupportsGuaranteedBandwidth False  
 SupportsMulticasting False

Name MSAFD NetBIOS  
 [\Device\NetBT\_Tcpip\_{04626D60-9758-487A-8A9E-33BA956B6C94}]  
 DATAGRAM 3  
 ConnectionlessService True  
 GuaranteesDelivery False  
 GuaranteesSequencing False  
 MaximumAddressSize 20 bytes  
 MaximumMessageSize 64000 bytes  
 MessageOriented True  
 MinimumAddressSize20 bytes  
 PseudoStreamOriented False  
 SupportsBroadcasting True  
 SupportsConnectData False  
 SupportsDisconnectData False  
 SupportsEncryption False  
 SupportsExpeditedData False  
 SupportsGracefulClosing False  
 SupportsGuaranteedBandwidth False  
 SupportsMulticasting False

Name MSAFD NetBIOS  
 [\Device\NetBT\_Tcpip\_{A330D6A6-3682-45AA-A21E-C98C4527F207}]  
 SEQPACKET 13

ConnectionlessService False  
 GuaranteesDelivery True  
 GuaranteesSequencing True  
 MaximumAddressSize 20 bytes  
 MaximumMessageSize 64000 bytes  
 MessageOriented True  
 MinimumAddressSize20 bytes  
 PseudoStreamOriented False  
 SupportsBroadcasting False  
 SupportsConnectData False  
 SupportsDisconnectData False  
 SupportsEncryption False  
 SupportsExpeditedData False  
 SupportsGracefulClosing False  
 SupportsGuaranteedBandwidth False  
 SupportsMulticasting False

Name MSAFD NetBIOS  
 [\Device\NetBT\_Tcpip\_{A330D6A6-3682-45AA-A21E-C98C4527F207}]  
 DATAGRAM 13  
 ConnectionlessService True  
 GuaranteesDelivery False  
 GuaranteesSequencing False  
 MaximumAddressSize 20 bytes  
 MaximumMessageSize 64000 bytes  
 MessageOriented True  
 MinimumAddressSize20 bytes  
 PseudoStreamOriented False  
 SupportsBroadcasting True  
 SupportsConnectData False  
 SupportsDisconnectData False  
 SupportsEncryption False  
 SupportsExpeditedData False  
 SupportsGracefulClosing False  
 SupportsGuaranteedBandwidth False  
 SupportsMulticasting False

Name MSAFD NetBIOS  
 [\Device\NetBT\_Tcpip\_{F37FFD50-F485-4FB7-A01E-55B193228DED}]  
 SEQPACKET 6  
 ConnectionlessService False  
 GuaranteesDelivery True  
 GuaranteesSequencing True  
 MaximumAddressSize 20 bytes  
 MaximumMessageSize 64000 bytes  
 MessageOriented True  
 MinimumAddressSize20 bytes  
 PseudoStreamOriented False  
 SupportsBroadcasting False  
 SupportsConnectData False  
 SupportsDisconnectData False  
 SupportsEncryption False  
 SupportsExpeditedData False  
 SupportsGracefulClosing False  
 SupportsGuaranteedBandwidth False  
 SupportsMulticasting False

Name MSAFD NetBIOS  
 [\Device\NetBT\_Tcpip\_{F37FFD50-F485-4FB7-A01E-55B193228DED}]  
 DATAGRAM 6  
 ConnectionlessService True  
 GuaranteesDelivery False  
 GuaranteesSequencing False  
 MaximumAddressSize 20 bytes  
 MaximumMessageSize 64000 bytes  
 MessageOriented True  
 MinimumAddressSize20 bytes  
 PseudoStreamOriented False

SupportsBroadcasting True  
 SupportsConnectData False  
 SupportsDisconnectData False  
 SupportsEncryption False  
 SupportsExpeditedData False  
 SupportsGracefulClosing False  
 SupportsGuaranteedBandwidth False  
 SupportsMulticasting False

Name MSAFD NetBIOS  
 [\Device\NetBT\_Tcpip\_{A3F279E1-7BCC-4CA2-B33C-18E41C7FF498}]  
 SEQPACKET 12  
 ConnectionlessService False  
 GuaranteesDelivery True  
 GuaranteesSequencing True  
 MaximumAddressSize 20 bytes  
 MaximumMessageSize 64000 bytes  
 MessageOriented True  
 MinimumAddressSize20 bytes  
 PseudoStreamOriented False  
 SupportsBroadcasting False  
 SupportsConnectData False  
 SupportsDisconnectData False  
 SupportsEncryption False  
 SupportsExpeditedData False  
 SupportsGracefulClosing False  
 SupportsGuaranteedBandwidth False  
 SupportsMulticasting False

Name MSAFD NetBIOS  
 [\Device\NetBT\_Tcpip\_{A3F279E1-7BCC-4CA2-B33C-18E41C7FF498}]  
 DATAGRAM 12  
 ConnectionlessService True  
 GuaranteesDelivery False  
 GuaranteesSequencing False  
 MaximumAddressSize 20 bytes  
 MaximumMessageSize 64000 bytes  
 MessageOriented True  
 MinimumAddressSize20 bytes  
 PseudoStreamOriented False  
 SupportsBroadcasting True  
 SupportsConnectData False  
 SupportsDisconnectData False  
 SupportsEncryption False  
 SupportsExpeditedData False  
 SupportsGracefulClosing False  
 SupportsGuaranteedBandwidth False  
 SupportsMulticasting False

Name MSAFD NetBIOS  
 [\Device\NetBT\_Tcpip\_{70347C08-B8F8-4918-93D1-FFF1CE9DB212}]  
 SEQPACKET 5  
 ConnectionlessService False  
 GuaranteesDelivery True  
 GuaranteesSequencing True  
 MaximumAddressSize 20 bytes  
 MaximumMessageSize 64000 bytes  
 MessageOriented True  
 MinimumAddressSize20 bytes  
 PseudoStreamOriented False  
 SupportsBroadcasting False  
 SupportsConnectData False  
 SupportsDisconnectData False  
 SupportsEncryption False  
 SupportsExpeditedData False  
 SupportsGracefulClosing False  
 SupportsGuaranteedBandwidth False  
 SupportsMulticasting False

Name MSAFD NetBIOS  
 [\Device\NetBT\_Tcpip\_{70347C08-B8F8-4918-93D1-FFF1CE9DB212}]  
 DATAGRAM 5

ConnectionlessService	True
GuaranteesDelivery	False
GuaranteesSequencing	False
MaximumAddressSize	20 bytes
MaximumMessageSize	64000 bytes
MessageOriented	True
MinimumAddressSize20 bytes	
PseudoStreamOriented	False
SupportsBroadcasting	True
SupportsConnectData	False
SupportsDisconnectData	False
SupportsEncryption	False
SupportsExpeditedData	False
SupportsGracefulClosing	False
SupportsGuaranteedBandwidth	False
SupportsMulticasting	False

Name MSAFD NetBIOS  
 [\Device\NetBT\_Tcpip\_{4DA8936B-544A-43FE-B2F7-D71CAF394BCD}]  
 SEQPACKET 0

ConnectionlessService	False
GuaranteesDelivery	True
GuaranteesSequencing	True
MaximumAddressSize	20 bytes
MaximumMessageSize	64000 bytes
MessageOriented	True
MinimumAddressSize20 bytes	
PseudoStreamOriented	False
SupportsBroadcasting	False
SupportsConnectData	False
SupportsDisconnectData	False
SupportsEncryption	False
SupportsExpeditedData	False
SupportsGracefulClosing	False
SupportsGuaranteedBandwidth	False
SupportsMulticasting	False

Name MSAFD NetBIOS  
 [\Device\NetBT\_Tcpip\_{4DA8936B-544A-43FE-B2F7-D71CAF394BCD}]  
 DATAGRAM 0

ConnectionlessService	True
GuaranteesDelivery	False
GuaranteesSequencing	False
MaximumAddressSize	20 bytes
MaximumMessageSize	64000 bytes
MessageOriented	True
MinimumAddressSize20 bytes	
PseudoStreamOriented	False
SupportsBroadcasting	True
SupportsConnectData	False
SupportsDisconnectData	False
SupportsEncryption	False
SupportsExpeditedData	False
SupportsGracefulClosing	False
SupportsGuaranteedBandwidth	False
SupportsMulticasting	False

Name MSAFD NetBIOS  
 [\Device\NetBT\_Tcpip\_{E4642D43-676A-4938-B902-1D94A9E14871}]  
 SEQPACKET 1

ConnectionlessService	False
GuaranteesDelivery	True
GuaranteesSequencing	True
MaximumAddressSize	20 bytes

MaximumMessageSize	64000 bytes
MessageOriented	True
MinimumAddressSize20 bytes	
PseudoStreamOriented	False
SupportsBroadcasting	False
SupportsConnectData	False
SupportsDisconnectData	False
SupportsEncryption	False
SupportsExpeditedData	False
SupportsGracefulClosing	False
SupportsGuaranteedBandwidth	False
SupportsMulticasting	False

Name MSAFD NetBIOS  
 [\Device\NetBT\_Tcpip\_{E4642D43-676A-4938-B902-1D94A9E14871}]  
 DATAGRAM 1

ConnectionlessService	True
GuaranteesDelivery	False
GuaranteesSequencing	False
MaximumAddressSize	20 bytes
MaximumMessageSize	64000 bytes
MessageOriented	True
MinimumAddressSize20 bytes	
PseudoStreamOriented	False
SupportsBroadcasting	True
SupportsConnectData	False
SupportsDisconnectData	False
SupportsEncryption	False
SupportsExpeditedData	False
SupportsGracefulClosing	False
SupportsGuaranteedBandwidth	False
SupportsMulticasting	False

Name MSAFD NetBIOS  
 [\Device\NetBT\_Tcpip\_{7A1A1C49-720E-4C27-ADCC-2C8703574F7C}]  
 SEQPACKET 2

ConnectionlessService	False
GuaranteesDelivery	True
GuaranteesSequencing	True
MaximumAddressSize	20 bytes
MaximumMessageSize	64000 bytes
MessageOriented	True
MinimumAddressSize20 bytes	
PseudoStreamOriented	False
SupportsBroadcasting	False
SupportsConnectData	False
SupportsDisconnectData	False
SupportsEncryption	False
SupportsExpeditedData	False
SupportsGracefulClosing	False
SupportsGuaranteedBandwidth	False
SupportsMulticasting	False

Name MSAFD NetBIOS  
 [\Device\NetBT\_Tcpip\_{7A1A1C49-720E-4C27-ADCC-2C8703574F7C}]  
 DATAGRAM 2

ConnectionlessService	True
GuaranteesDelivery	False
GuaranteesSequencing	False
MaximumAddressSize	20 bytes
MaximumMessageSize	64000 bytes
MessageOriented	True
MinimumAddressSize20 bytes	
PseudoStreamOriented	False
SupportsBroadcasting	True
SupportsConnectData	False
SupportsDisconnectData	False
SupportsEncryption	False

SupportsExpeditedData False  
 SupportsGracefulClosing False  
 SupportsGuaranteedBandwidth False  
 SupportsMulticasting False

[WinSock]

Item	Value
File	c:\winnt\system32\winsock.dll
Version	3.10
Size	2.80 KB (2,864 bytes)
File	c:\winnt\system32\wsock32.dll
Version	5.00.2195.4874
Size	21.27 KB (21,776 bytes)

[Ports]

[ Following are sub-categories of this main category ]

[Serial]

Item	Value
Name	COM1
Status	OK
PNP Device ID	ACPI\PNP0501\1
Maximum Input Buffer Size	0
Maximum Output Buffer Size	False
Settable Baud Rate	True
Settable Data Bits	True
Settable Flow Control	True
Settable Parity	True
Settable Parity Check	True
Settable Stop Bits	True
Settable RLSD	True
Supports RLSD	True
Supports 16 Bit Mode	False
Supports Special Characters	False
Baud Rate	9600
Bits/Byte	8
Stop Bits	1
Parity	None
Busy	0
Abort Read/Write on Error	0
Binary Mode Enabled -1	0
Continue XMit on XOff	0
CTS Outflow Control	0
Discard NULL Bytes	0
DSR Outflow Control	0
DSR Sensitivity	0
DTR Flow Control Type	Enable
EOF Character	0
Error Replace Character	0
Error Replacement Enabled	0
Event Character	0
Parity Check Enabled	0
RTS Flow Control Type	Enable
XOff Character	19
XOffXMit Threshold	512
XOn Character	17
XOnXMit Threshold	2048
XOnXOff InFlow Control	0
XOnXOff OutFlow Control	0
IRQ Number	4
I/O Port	0x03F8-0x03FF
Driver	c:\winnt\system32\drivers\serial.sys (62512, 5.00.2195.5080)

Name	COM2
Status	OK
PNP Device ID	ACPI\PNP0501\2
Maximum Input Buffer Size	0
Maximum Output Buffer Size	False
Settable Baud Rate	True
Settable Data Bits	True
Settable Flow Control	True
Settable Parity	True
Settable Parity Check	True
Settable Stop Bits	True
Settable RLSD	True
Supports RLSD	True
Supports 16 Bit Mode	False
Supports Special Characters	False
Baud Rate	9600
Bits/Byte	8
Stop Bits	1
Parity	None
Busy	0
Abort Read/Write on Error	0
Binary Mode Enabled -1	0
Continue XMit on XOff	0
CTS Outflow Control	0
Discard NULL Bytes	0
DSR Outflow Control	0
DSR Sensitivity	0
DTR Flow Control Type	Enable
EOF Character	0
Error Replace Character	0
Error Replacement Enabled	0
Event Character	0
Parity Check Enabled	0
RTS Flow Control Type	Enable
XOff Character	19
XOffXMit Threshold	512
XOn Character	17
XOnXMit Threshold	2048
XOnXOff InFlow Control	0
XOnXOff OutFlow Control	0
IRQ Number	3
I/O Port	0x02F8-0x02FF
Driver	c:\winnt\system32\drivers\serial.sys (62512, 5.00.2195.5080)

[Parallel]

Item	Value
Name	LPT1
PNP Device ID	ACPI\PNP0400\4&323CF337&0

[Storage]

[ Following are sub-categories of this main category ]

[Drives]

Item	Value
Drive	A:
Description	3 1/2 Inch Floppy Drive
Drive	C:
Description	Local Fixed Disk
Compressed	False
File System	NTFS
Size	16.94 GB (18,194,284,544 bytes)

Free Space 12.31 GB (13,216,145,408 bytes)  
 Volume Name C\_Drive  
 Volume Serial Number 5C29133F  
 Partition Disk #1, Partition #0  
 Partition Size 16.94 GB (18,194,287,104 bytes)  
 Starting Offset 32256 bytes  
 Drive Description Disk drive  
 Drive Manufacturer (Standard disk drives)  
 Drive Model IBM-ESXS ST318432LC FN SCSI Disk Device  
 Drive BytesPerSector 512  
 Drive MediaLoaded True  
 Drive MediaType Fixed hard disk media  
 Drive Partitions 1  
 Drive SCSI Bus 0  
 Drive SCSI Logical Unit 0  
 Drive SCSI Port 2  
 Drive SCSI Target ID 4  
 Drive SectorsPerTrack 63  
 Drive Size 18194319360 bytes  
 Drive TotalCylinders 2212  
 Drive TotalSectors 35535780  
 Drive TotalTracks 564060  
 Drive TracksPerCylinder 255

Drive D:  
 Description Local Fixed Disk  
 Compressed False  
 File System FAT32  
 Size 16.93 GB (18,177,163,264 bytes)  
 Free Space 10.63 GB (11,410,128,896 bytes)  
 Volume Name BACKUP  
 Volume Serial Number 54FAAB2B  
 Partition Disk #0, Partition #0  
 Partition Size 16.94 GB (18,186,094,080 bytes)  
 Starting Offset 8225280 bytes  
 Drive Description Disk drive  
 Drive Manufacturer (Standard disk drives)  
 Drive Model IBM-ESXS ST318432LC FN SCSI Disk Device  
 Drive BytesPerSector 512  
 Drive MediaLoaded True  
 Drive MediaType Fixed hard disk media  
 Drive Partitions 1  
 Drive SCSI Bus 0  
 Drive SCSI Logical Unit 0  
 Drive SCSI Port 2  
 Drive SCSI Target ID 1  
 Drive SectorsPerTrack 63  
 Drive Size 18194319360 bytes  
 Drive TotalCylinders 2212  
 Drive TotalSectors 35535780  
 Drive TotalTracks 564060  
 Drive TracksPerCylinder 255

[SCSI]

Item	Value
Name	QLogic QLA23xx PCI Fibre Channel Adapter
Caption	QLogic QLA23xx PCI Fibre Channel Adapter
Driver	ql2300
Status	OK
PNP Device ID	PCI\VEN_1077&DEV_2312&SUBSYS_010C1077&REV_02\5&121CC7C2&0&10E810
Device ID	PCI\VEN_1077&DEV_2312&SUBSYS_010C1077&REV_02\5&121CC7C2&0&10E810
Device Map	Not Available

Index	Not Available
Max Number Controlled	Not Available
IRQ Number	52
I/O Port	0xB000-0xB0FF
Driver	c:\winnt\system32\drivers\ql2300.sys (467890, 8.2.3.61 (w32 VI))
Name	LSI Logic 1020/1030 Ultra320 SCSI Adapter
Caption	LSI Logic 1020/1030 Ultra320 SCSI Adapter
Driver	SYMMPI
Status	OK
PNP Device ID	PCI\VEN_1000&DEV_0030&SUBSYS_10001014&REV_07\5&21593F33&0&18F810
Device ID	PCI\VEN_1000&DEV_0030&SUBSYS_10001014&REV_07\5&21593F33&0&18F810
Device Map	Not Available
Index	Not Available
Max Number Controlled	Not Available
IRQ Number	32
I/O Port	0x9000-0x90FF
Driver	c:\winnt\system32\drivers\symmpi.sys (38512, 1.08.22.00)

Name	LSI Logic 1020/1030 Ultra320 SCSI Adapter
Caption	LSI Logic 1020/1030 Ultra320 SCSI Adapter
Driver	SYMMPI
Status	OK
PNP Device ID	PCI\VEN_1000&DEV_0030&SUBSYS_10001014&REV_07\5&21593F33&0&19F810
Device ID	PCI\VEN_1000&DEV_0030&SUBSYS_10001014&REV_07\5&21593F33&0&19F810
Device Map	Not Available
Index	Not Available
Max Number Controlled	Not Available
IRQ Number	33
I/O Port	0x9400-0x94FF
Driver	c:\winnt\system32\drivers\symmpi.sys (38512, 1.08.22.00)

[Printing]

Name	Port Name	Server Name
No printing information		

[Problem Devices]

Device	PNP Device ID	Error Code
Not Available	ACPI\IBM37D6\2&DABA3FF&0	28
Not Available	ACPI\ASF0001\2&DABA3FF&0	28

[USB]

Device	PNP Device ID
Intel(R) 82801DB/DBM USB Universal Host Controller - 24C2	PCI\VEN_8086&DEV_24C2&SUBSYS_027A1014&REV_02\3&13C0B0C5&0&E8
USB Root Hub	USB\ROOT_HUB\4&BF47197&0
Intel(R) 82801DB/DBM USB Universal Host Controller - 24C4	PCI\VEN_8086&DEV_24C4&SUBSYS_027A1014&REV_02\3&13C0B0C5&0&E9
USB Root Hub	USB\ROOT_HUB\4&31A3CFF4&0
Intel PCI to USB Enhanced Host Controller	PCI\VEN_8086&DEV_24CD&SUBSYS_027A1014&REV_02\3&13C0B0C5&0&EF
USB 2.0 Root Hub	USB\ROOT_HUB2\4&E58626F&0

[Software Environment]

[ Following are sub-categories of this main category ]

[Drivers]

Name	Description	File	Type	Started	Start Mode
abiosdsk	Abiosdsk	Not Available	Kernel Driver	False	False
abp480n5	abp480n5	Not Available	Kernel Driver	False	False
acpi	Microsoft ACPI Driver	c:\winnt\system32\drivers\acpi.sys	Kernel Driver	True	Boot
acpiec	ACPIEC	c:\winnt\system32\drivers\acpiec.sys	Kernel Driver	False	True
adptsf	Adaptec DuraLAN PCI Ethernet/Fast Ethernet driver for Windows 2000	c:\winnt\system32\drivers\adptsf50.sys	Kernel Driver	True	Manual
adpu160m	adpu160m	Not Available	Kernel Driver	False	False
aeaudio	aeaudio	c:\winnt\system32\drivers\aeaudio.sys	Kernel Driver	True	Manual
afd	AFD Networking Support Environment	c:\winnt\system32\drivers\afd.sys	Kernel Driver	Running	OK
agp440	Intel AGP Bus Filter	c:\winnt\system32\drivers\agp440.sys	Kernel Driver	False	True
aha154x	Aha154x	Not Available	Kernel Driver	Disabled	Stopped
aic116x	aic116x	Not Available	Kernel Driver	Disabled	Stopped
aic78u2	aic78u2	Not Available	Kernel Driver	Disabled	Stopped
aic78xx	aic78xx	Not Available	Kernel Driver	Disabled	Stopped
ami0nt	ami0nt	Not Available	Kernel Driver	Disabled	Stopped
amsint	amsint	Not Available	Kernel Driver	Disabled	Stopped
asc	asc	Not Available	Kernel Driver	Disabled	Stopped
asc3350p	asc3350p	Not Available	Kernel Driver	Disabled	Stopped
asc3550	asc3550	Not Available	Kernel Driver	Disabled	Stopped
asynmac	RAS Asynchronous Media Driver	c:\winnt\system32\drivers\asynmac.sys	Kernel Driver	Manual	Stopped
atapi	Standard IDE/ESDI Hard Disk Controller	c:\winnt\system32\drivers\atapi.sys	Kernel Driver	Boot	Running
atdisk	Atdisk	Not Available	Kernel Driver	Disabled	Stopped
ati2mpad	ati2mpad	c:\winnt\system32\drivers\ati2mpad.sys	Kernel Driver	True	Manual
atirage3	atirage3	c:\winnt\system32\drivers\atimpab.sys	Kernel Driver	Driver	False
atmarpc	ATM ARP Client Protocol	c:\winnt\system32\drivers\atmarpc.sys	Kernel Driver	Manual	Stopped
audstub	Audio Stub Driver	c:\winnt\system32\drivers\audstub.sys	Kernel Driver	True	Manual
b57w2k	Broadcom NetXtreme Gigabit Ethernet	c:\winnt\system32\drivers\b57w2k.sys	Kernel Driver	Manual	Running
beep	Beep	c:\winnt\system32\drivers\beep.sys	Kernel Driver	Driver	True
buslogic	BusLogic	Not Available	Kernel Driver	Disabled	Stopped
cd20xrnt	cd20xrnt	Not Available	Kernel Driver	Disabled	Stopped
cdaudio	Cdaudio	c:\winnt\system32\drivers\cdaudio.sys	Kernel Driver	Driver	False
cdrom	CD-ROM Driver	c:\winnt\system32\drivers\cdrom.sys	Kernel Driver	True	System
changer	Changer	Not Available	Kernel Driver	System	Stopped
cpqarray	Cpqarray	Not Available	Kernel Driver	Disabled	Stopped
cpqarray2	cpqarray2	Not Available	Kernel Driver	Disabled	Stopped
cpqcalm	cpqcalm	Not Available	Kernel Driver	Disabled	Stopped
cpqfws2e	cpqfws2e	Not Available	Kernel Driver	Disabled	Stopped
dac960nt	dac960nt	Not Available	Kernel Driver	Disabled	Stopped
deckzpsx	deckzpsx	Not Available	Kernel Driver	Disabled	Stopped
dfsdriver	DfsDriver	c:\winnt\system32\drivers\dfs.sys	File System Driver	True	Boot
disk	Disk Driver	c:\winnt\system32\drivers\disk.sys	Kernel Driver	True	Boot
diskperf	Diskperf	c:\winnt\system32\drivers\diskperf.sys	Kernel Driver	Driver	True
dmboot	dmboot	c:\winnt\system32\drivers\dmboot.sys	Kernel Driver	Driver	False
dmio	Logical Disk Manager Driver	c:\winnt\system32\drivers\dmio.sys	Kernel Driver	Boot	Running
dmload	dmload	c:\winnt\system32\drivers\dmload.sys	Kernel Driver	Driver	True
dmusic	Microsoft DirectMusic SW Synth (WDM)	c:\winnt\system32\drivers\dmusic.sys	Kernel Driver	Manual	Stopped
e100b	Intel(R) PRO Adapter Driver	c:\winnt\system32\drivers\e100bnt5.sys	Kernel Driver	Manual	Running
efs	EFS	c:\winnt\system32\drivers\efs.sys	File System Driver	True	Disabled
fastfat	Fastfat	c:\winnt\system32\drivers\fastfat.sys	File System Driver	Driver	True
fd16_700	Fd16_700	Not Available	Kernel Driver	Disabled	Stopped

fdc	Floppy Disk Controller Driver	c:\winnt\system32\drivers\fdc.sys	Kernel Driver	True	Manual	Running	OK	Normal	mountmgr	MountMgr	c:\winnt\system32\drivers\mountmgr.sys	Kernel Driver	True	Boot	Running	OK	Normal	False
False	True								True									
fips	Fips	c:\winnt\system32\drivers\fips.sys	Kernel Driver	True	Auto	Running	OK	Normal	mraid35x	mraid35x	Not Available	Kernel Driver	True	Not Available	Not Available	Normal	False	False
Driver	True								Disabled	Stopped	OK	Normal	False	False	False	False	False	False
True									mrx smb	MRXSMB	c:\winnt\system32\drivers\mrx smb.sys	File System Driver	True	System	Running	OK	Normal	False
fireport	fireport	Not Available	Kernel Driver	False					True									
Disabled	Stopped	OK	Normal	False	False				msfs	Msfs	c:\winnt\system32\drivers\msfs.sys	File System Driver	True	System	Running	OK	Normal	False
flashpnt	flashpnt	Not Available	Kernel Driver	False					True									
Disabled	Stopped	OK	Normal	False	False				mksrv	Microsoft Streaming Service Proxy	c:\winnt\system32\drivers\mksrv.sys	Kernel Driver	Manual	Stopped	OK	Normal	False	False
flpydisk	Floppy Disk Driver	c:\winnt\system32\drivers\flpydisk.sys	Kernel Driver	True	Manual	Running	OK	Normal	mspclock	Microsoft Streaming Clock Proxy	c:\winnt\system32\drivers\mspclock.sys	Kernel Driver	Manual	Stopped	OK	Normal	False	False
Kernel Driver	True								mspqm	Microsoft Streaming Quality Manager Proxy	c:\winnt\system32\drivers\mspqm.sys	Kernel Driver	Manual	Stopped	OK	Normal	False	False
False	True								True									
ftdisk	Volume Manager Driver	c:\winnt\system32\drivers\ftdisk.sys	Kernel Driver	True					mup	Mup	c:\winnt\system32\drivers\mup.sys	File System Driver	True	Boot	Running	OK	Normal	False
Boot	Running	OK	Normal	False	True				True									
gpc	Generic Packet Classifier	c:\winnt\system32\drivers\msgpc.sys	Kernel Driver	True					ncrc710	Nrc710	Not Available	Kernel Driver	False					
Manual	Running	OK	Normal	False	True				Disabled	Stopped	OK	Normal	False	False				
i8042prt	i8042 Keyboard and PS/2 Mouse Port Driver	c:\winnt\system32\drivers\i8042prt.sys	Kernel Driver	True					ndis	NDIS System Driver	c:\winnt\system32\drivers\ndis.sys	Kernel Driver	True	Boot	Running	OK	Normal	False
System	Running	OK	Normal	False	True				False	True								
ini910u	ini910u	Not Available	Kernel Driver	False					ndistapi	Remote Access NDIS TAPI Driver	c:\winnt\system32\drivers\ndistapi.sys	Kernel Driver	Manual	Running	OK	Normal	False	True
Disabled	Stopped	OK	Normal	False	False				ndiswan	Remote Access NDIS WAN Driver	c:\winnt\system32\drivers\ndiswan.sys	Kernel Driver	Manual	Running	OK	Normal	False	True
intellide	Intellide	Not Available	Kernel Driver	False					True									
Disabled	Stopped	OK	Normal	False	False				ndproxy	NDIS Proxy	c:\winnt\system32\drivers\ndproxy.sys	Kernel Driver	False	True				
ipfilterdriver	IP Traffic Filter Driver	c:\winnt\system32\drivers\ipfltdrv.sys	Kernel Driver	False					False	True								
Manual	Stopped	OK	Normal	False	False				netbios	NetBIOS Interface	c:\winnt\system32\drivers\netbios.sys	File System Driver	True	System	Running	OK	Normal	False
ipinip	IP in IP Tunnel Driver	c:\winnt\system32\drivers\ipinip.sys	Kernel Driver	False	Manual	Stopped	OK	Normal	False	True								
False	False								netbt	NetBios over Tcpip	c:\winnt\system32\drivers\netbt.sys	Kernel Driver	True	System	Running	OK	Normal	False
ipnat	IP Network Address Translator	c:\winnt\system32\drivers\ipnat.sys	Kernel Driver	False	Manual	Stopped	OK	Normal	netdetect	NetDetect	c:\winnt\system32\drivers\netdetect.sys	Kernel Driver	False	Manual	Stopped	OK	Normal	False
Kernel Driver	False								npfs	Npfs	c:\winnt\system32\drivers\npfs.sys	File System Driver	True	System	Running	OK	Normal	False
False	False								True									
ipsec	IPSEC driver	c:\winnt\system32\drivers\ipsec.sys	Kernel Driver	True	Manual	Running	OK	Normal	ntfs	Ntfs	c:\winnt\system32\drivers\ntfs.sys	File System Driver	True	Disabled	Running	OK	Normal	False
False	True								True									
ipsraidn	ipsraidn	Not Available	Kernel Driver	False					null	Null	c:\winnt\system32\drivers\null.sys	Kernel Driver	True	System	Running	OK	Normal	False
Disabled	Stopped	OK	Normal	False	False				True									
irenum	IR Enumerator Service	c:\winnt\system32\drivers\irenum.sys	Kernel Driver	False					nwlnkflt	IPX Traffic Filter Driver	c:\winnt\system32\drivers\nwlnkflt.sys	Kernel Driver	Manual	Stopped	OK	Normal	False	False
Manual	Stopped	OK	Normal	False	False				Manual	Stopped	OK	Normal	False	False				
isapnp	PnP ISA/EISA Bus Driver	c:\winnt\system32\drivers\isapnp.sys	Kernel Driver	True					nwlnkfwd	IPX Traffic Forwarder Driver	c:\winnt\system32\drivers\nwlnkfwd.sys	Kernel Driver	Manual	Stopped	OK	Normal	False	False
Boot	Running	OK	Critical	False	True				parallel	Parallel class driver	c:\winnt\system32\drivers\parallel.sys	Kernel Driver	False	True				
kbdclass	Keyboard Class Driver	c:\winnt\system32\drivers\kbdclass.sys	Kernel Driver	True					False	True								
System	Running	OK	Normal	False	True				parport	Parallel port driver	c:\winnt\system32\drivers\parport.sys	Kernel Driver	True	System	Running	OK	Ignore	False
kmixer	Microsoft Kernel Wave Audio Mixer	c:\winnt\system32\drivers\kmixer.sys	Kernel Driver	False					False	True								
Manual	Stopped	OK	Normal	False	False				True									
ksecdd	KSecDD	c:\winnt\system32\drivers\ksecdd.sys	Kernel Driver	True	Boot	Running	OK	Normal	nwlnkflt	IPX Traffic Filter Driver	c:\winnt\system32\drivers\nwlnkflt.sys	Kernel Driver	Manual	Stopped	OK	Normal	False	False
Driver	True								True									
True									ntfs	Ntfs	c:\winnt\system32\drivers\ntfs.sys	File System Driver	True	Disabled	Running	OK	Normal	False
lbrtfdc	lbrtfdc	Not Available	Kernel Driver	False					null	Null	c:\winnt\system32\drivers\null.sys	Kernel Driver	True	System	Running	OK	Normal	False
System	Stopped	OK	Ignore	False	False				True									
lp6nds35	lp6nds35	Not Available	Kernel Driver	False					nwlnkfwd	IPX Traffic Forwarder Driver	c:\winnt\system32\drivers\nwlnkfwd.sys	Kernel Driver	Manual	Stopped	OK	Normal	False	False
Disabled	Stopped	OK	Normal	False	False				parallel	Parallel class driver	c:\winnt\system32\drivers\parallel.sys	Kernel Driver	False	True				
mnmdd	mnmdd	c:\winnt\system32\drivers\mnmdd.sys	Kernel Driver	True	System	Running	OK	Ignore	False	True								
Driver	True								True									
True									parport	Parallel port driver	c:\winnt\system32\drivers\parport.sys	Kernel Driver	True	System	Running	OK	Ignore	False
modem	Modem	c:\winnt\system32\drivers\modem.sys	Kernel Driver	False	Manual	Stopped	OK	Ignore	False	True								
Driver	False								True									
False									True									
mouclass	Mouse Class Driver	c:\winnt\system32\drivers\mouclass.sys	Kernel Driver	True	System	Running	OK	Normal	False	True								
Kernel Driver	True								True									
False	True								True									

partmgr Driver True	PartMgr True	c:\winnt\system32\drivers\partmgr.sys Boot Running OK Normal	Kernel False	rdpwd Driver False	RDPWD False	c:\winnt\system32\drivers\rdpwd.sys Manual Stopped OK Ignore	Kernel False
parvdm Driver True	ParVdm True	c:\winnt\system32\drivers\parvdm.sys Auto Running OK Ignore	Kernel False	redbook System	Digital CD Audio Playback Filter Driver Stopped OK Normal False False	c:\winnt\system32\drivers\redbook.sys Kernel Driver	False
pci Driver True	PCI Bus Driver True	c:\winnt\system32\drivers\pci.sys Boot Running OK Critical	Kernel False	serenum Kernel Driver	Serenum Filter Driver True Manual Running OK Normal	c:\winnt\system32\drivers\serenum.sys	False
pcidump System	PCIDump Stopped	Not Available OK Ignore False False	Kernel Driver False	serial Kernel Driver	Serial port driver True System Running OK Ignore	c:\winnt\system32\drivers\serial.sys	False
pciide Driver True	PCIIde True	c:\winnt\system32\drivers\pciide.sys Boot Running OK Normal	Kernel False	sfloppy Driver	Sfloppy False System Stopped OK Ignore	c:\winnt\system32\drivers\sfloppy.sys	Kernel False
pcmcia Driver False	Pcmcia False	c:\winnt\system32\drivers\pcmcia.sys Disabled Stopped OK Normal	Kernel False	sglfb System	sglfb Stopped OK Normal False False	Not Available Kernel Driver	False
pdcomp Manual	PDCOMP Stopped	Not Available OK Ignore False False	Kernel Driver False	simbad Disabled	Simbad Stopped OK Normal False False	Not Available Kernel Driver	False
pdframe False	PDFRAME Manual	Not Available Stopped OK Ignore False False	Kernel Driver False	smwdm Driver	smwdm True Manual Running OK Normal	c:\winnt\system32\drivers\smwdm.sys	Kernel False
pdreli Manual	PDRELI Stopped	Not Available OK Ignore False False	Kernel Driver False	sparrow Disabled	Sparrow Stopped OK Normal False False	Not Available Kernel Driver	False
pdrframe False	PDRFRAME Manual	Not Available Stopped OK Ignore False False	Kernel Driver False	spud Kernel Driver	Special Purpose Utility Driver True Manual Running OK Normal	c:\winnt\system32\drivers\spud.sys	Kernel False
pptpminiport Manual	WAN Miniport (PPTP) Running	c:\winnt\system32\drivers\raspttp.sys OK Normal False True	Kernel Driver True	srv True	Srv Manual Running OK Normal False True	c:\winnt\system32\drivers\srv.sys File System Driver	Kernel True
ptilink Manual	Direct Parallel Link Driver Running	c:\winnt\system32\drivers\ptilink.sys OK Normal False True	Kernel Driver True	swenum Kernel Driver	Software Bus Driver True Manual Running OK Normal	c:\winnt\system32\drivers\swenum.sys	Kernel Normal
ql1080 Disabled	ql1080 Stopped	Not Available OK Normal False False	Kernel Driver False	swmidi Manual	Microsoft Kernel GS Wavetable Synthesizer Stopped OK Normal False False	c:\winnt\system32\drivers\swmidi.sys Kernel Driver	False
ql110wnt Disabled	QL110wnt Stopped	Not Available OK Normal False False	Kernel Driver False	symc810 Disabled	symc810 Stopped OK Normal False False	Not Available Kernel Driver	False
ql1240 Disabled	ql1240 Stopped	Not Available OK Normal False False	Kernel Driver False	symc8xx Disabled	symc8xx Stopped OK Normal False False	Not Available Kernel Driver	False
ql2100 Disabled	ql2100 Stopped	Not Available OK Normal False False	Kernel Driver False	symmpi Driver	symmpi True Boot Running OK Normal	c:\winnt\system32\drivers\symmpi.sys	Kernel False
ql2300 Driver True	ql2300 True	c:\winnt\system32\drivers\ql2300.sys Boot Running OK Normal	Kernel False	sym_hi Disabled	sym_hi Stopped OK Normal False False	Not Available Kernel Driver	False
ql2300vi Driver True	ql2300vi True	c:\winnt\system32\drivers\ql2300vi.sys Boot Running OK Normal	Kernel False	sysaudio Manual	Microsoft System Audio Device Running OK Normal False True	c:\winnt\system32\drivers\sysaudio.sys Kernel Driver	True
qlvika Driver True	qlvika True	c:\winnt\system32\drivers\qlvika.sys Auto Running OK Normal	Kernel False	tcpip Kernel Driver	TCP/IP Protocol Driver True System Running OK Normal	c:\winnt\system32\drivers\tcpip.sys	Kernel Normal
rasacd System	Remote Access Auto Connection Driver Running	c:\winnt\system32\drivers\rasacd.sys OK Normal False True	Kernel Driver True	tdasync Kernel Driver	TDASYNC False Manual Stopped OK Ignore	c:\winnt\system32\drivers\tdasync.sys	Kernel False
rasl2tp Manual	WAN Miniport (L2TP) Running	c:\winnt\system32\drivers\rasl2tp.sys OK Normal False True	Kernel Driver True	tdipx Driver	TDIPX False Manual Stopped OK Ignore	c:\winnt\system32\drivers\tdipx.sys	Kernel False
raspti Kernel Driver False	Direct Parallel True	c:\winnt\system32\drivers\raspti.sys Manual Running OK Normal	Kernel Driver Normal	tdnetb Driver	TDNETB False Manual Stopped OK Ignore	c:\winnt\system32\drivers\tdnetb.sys	Kernel False
rca Stopped	Microsoft Streaming Network Raw Channel Access OK Normal False False	c:\winnt\system32\drivers\rca.sys Kernel Driver False	Manual	tdpipe Driver	TDPIPE False Manual Stopped OK Ignore	c:\winnt\system32\drivers\tdpipe.sys	Kernel False
rdbs Driver True	Rdbss True	c:\winnt\system32\drivers\rdbs.sys System Running OK Normal	File System False	tdspx Driver	TDSPX False Manual Stopped OK Ignore	c:\winnt\system32\drivers\tdspx.sys	Kernel False
rdpdr Manual	Terminal Server Device Redirector Driver Running	c:\winnt\system32\drivers\rdpdr.sys OK Normal False True	Kernel Driver True	tdtcp Driver	TDTCP False Manual Stopped OK Ignore	c:\winnt\system32\drivers\tdtcp.sys	Kernel False



```

termdd Terminal Device Driver
c:\winnt\system32\drivers\termdd.sys Kernel Driver True
Auto Running OK Normal False True
tga tga Not Available Kernel Driver False
System Stopped OK Ignore False False
udfs Udfs c:\winnt\system32\drivers\udfs.sys File System
Driver False Disabled Stopped OK Normal False
uhcd Microsoft USB Universal Host Controller Driver
c:\winnt\system32\drivers\uhcd.sys Kernel Driver True
Manual Running OK Normal False True
ultra66 ultra66 Not Available Kernel Driver False
Disabled Stopped OK Normal False False
update Microcode Update Driver
c:\winnt\system32\drivers\update.sys Kernel Driver True
Manual Running OK Normal False True
usbehci Microsoft USB 2.0 Enhanced Host Controller Miniport Driver
c:\winnt\system32\drivers\usbehci.sys Kernel Driver True
Manual Running OK Normal False True
usbhub Microsoft USB Standard Hub Driver
c:\winnt\system32\drivers\usbhub.sys Kernel Driver True
Manual Running OK Normal False True
usbhub20 USB 2.0 Root Hub Support
c:\winnt\system32\drivers\usbhub20.sys Kernel Driver True
Manual Running OK Normal False True
vgasave VgaSave c:\winnt\system32\drivers\vga.sys Kernel
Driver True System Running OK Ignore False
wanarp Remote Access IP ARP Driver
c:\winnt\system32\drivers\wanarp.sys Kernel Driver True
Manual Running OK Normal False True
wdica WDICA Not Available Kernel Driver False
Manual Stopped OK Ignore False False
wdmaud Microsoft WINMM WDM Audio Compatibility Driver
c:\winnt\system32\drivers\wdmaud.sys Kernel Driver True
Manual Running OK Normal False True

```

[Environment Variables]

```

Variable Value User Name
ComSpec %SystemRoot%\system32\cmd.exe <SYSTEM>
NUMBER_OF_PROCESSORS 4 <SYSTEM>
OS Windows_NT <SYSTEM>
Os2LibPath %SystemRoot%\system32\os2\dll; <SYSTEM>
Path
%SystemRoot%\system32;%SystemRoot%;%SystemRoot%\System32\Wbem;
C:\Program Files\Microsoft SQL Server\80\Tools\BINN;c:\batfiles;c:\tools
<SYSTEM>
PATHEXT
.COM;.EXE;.BAT;.CMD;.VBS;.VBE;.JS;.JSE;.WSF;.WSH <SYSTEM>
PROCESSOR_ARCHITECTURE x86 <SYSTEM>
PROCESSOR_IDENTIFIER x86 Family 15 Model 2 Stepping 7,
GenuineIntel <SYSTEM>
PROCESSOR_LEVEL 15 <SYSTEM>
PROCESSOR_REVISION 0207 <SYSTEM>
TEMP %SystemRoot%\TEMP <SYSTEM>
TMP %SystemRoot%\TEMP <SYSTEM>
windir %SystemRoot% <SYSTEM>
TEMP %USERPROFILE%\Local Settings\Temp
FCLIENT10\Administrator
TMP %USERPROFILE%\Local Settings\Temp
FCLIENT10\Administrator

```

[Jobs]

[ Following are sub-categories of this main category ]

[Print]

```

Document Size Owner Notify Status Time Submitted
Start Time Until Time Elapsed Time Pages Printed Job ID
Priority Parameters Driver Name Print Processor Host Print
Queue Data Type Name
No print jobs

```

[Network Connections]

```

Local Name Remote Name Type Status User Name
No network connections information

```

[Running Tasks]

```

Name Path Process ID Priority Min Working Set Max
Working Set Start Time Version Size File Date
system idle process Not Available 0 0 Not
Available Not Available Not Available Unknown Unknown
Unknown
system Not Available 8 8 0 1413120
Not Available Unknown Unknown Unknown
smss.exe c:\winnt\system32\smss.exe 192 11 204800
1413120 3/18/2004 9:52:58 AM 5.00.2195.5382 44.77 KB
(45,840 bytes) 12/7/1999 7:00:00 AM
csrss.exe Not Available 216 13 Not Available
Not Available 3/18/2004 9:53:00 AM Unknown Unknown
Unknown
winlogon.exe c:\winnt\system32\winlogon.exe 212 13
204800 1413120 3/18/2004 9:53:01 AM 5.00.2195.5386
174.77 KB (178,960 bytes) 2/28/2003 2:03:49 PM
services.exe c:\winnt\system32\services.exe 268 9
204800 1413120 3/18/2004 9:53:02 AM 5.00.2195.3940
86.77 KB (88,848 bytes) 12/7/1999 7:00:00 AM
lsass.exe c:\winnt\system32\lsass.exe 280 9 204800
1413120 3/18/2004 9:53:02 AM 5.00.2195.5430 32.77 KB
(33,552 bytes) 12/7/1999 7:00:00 AM
svchost.exe c:\winnt\system32\svchost.exe 456 8
204800 1413120 3/18/2004 9:53:03 AM 5.00.2134.1
7.77 KB (7,952 bytes) 12/7/1999 7:00:00 AM
spoolsv.exe c:\winnt\system32\spoolsv.exe 488 8
204800 1413120 3/18/2004 9:53:04 AM 5.00.2195.4299
44.27 KB (45,328 bytes) 2/12/2003 7:39:06 AM
msdtc.exe c:\winnt\system32\msdtc.exe 516 8 204800
1413120 3/18/2004 9:53:04 AM 1999.9.3421.3 6.77 KB
(6,928 bytes) 2/12/2003 7:52:40 AM
svchost.exe c:\winnt\system32\svchost.exe 676 8
204800 1413120 3/18/2004 9:53:04 AM 5.00.2134.1
7.77 KB (7,952 bytes) 12/7/1999 7:00:00 AM
llssrv.exe c:\winnt\system32\llssrv.exe 700 9 204800
1413120 3/18/2004 9:53:04 AM 5.00.2195.4907 81.27 KB
(83,216 bytes) 7/22/2002 1:05:04 PM
regsvc.exe c:\winnt\system32\regsvc.exe 784 8 204800
1413120 3/18/2004 9:53:05 AM 5.00.2195.3649 65.27 KB
(66,832 bytes) 2/28/2003 2:03:45 PM
rsys.exe Not Available 872 8 Not Available
Not Available 3/18/2004 9:53:06 AM Unknown Unknown
Unknown
explorer.exe c:\winnt\explorer.exe 1000 8 204800
1413120 3/18/2004 9:53:14 AM 5.00.3502.5321 237.27 KB
(242,960 bytes) 2/28/2003 2:03:49 PM
mstask.exe c:\winnt\system32\mstask.exe 752 8 204800
1413120 3/18/2004 9:53:30 AM 4.71.2195.1 115.77 KB
(118,544 bytes) 2/28/2003 2:03:40 PM
tcpvcs.exe c:\winnt\system32\tcpvcs.exe 1112 8
204800 1413120 3/18/2004 9:53:30 AM 5.00.2134.1
24.77 KB (25,360 bytes) 12/7/1999 7:00:00 AM

```

winmgmt.exe	c:\winnt\system32\wbem\winmgmt.exe	1156	8	204800	1413120	3/18/2004 9:53:31 AM	1.50.1085.0070	192.08 KB (196,685 bytes)	2/28/2003 2:03:52 PM	compfilt.dll	5.00.0984	22.77 KB (23,312 bytes)	2/28/2003 2:04:01 PM	Microsoft Corporation
svchost.exe	c:\winnt\system32\svchost.exe	1172	8	204800	1413120	3/18/2004 9:53:31 AM	5.00.2134.1	7.77 KB (7,952 bytes)	12/7/1999 7:00:00 AM	sspifilt.dll	5.00.0984	42.77 KB (43,792 bytes)	2/28/2003 2:04:02 PM	Microsoft Corporation
dfssvc.exe	c:\winnt\system32\dfssvc.exe	1160	8	204800	1413120	3/18/2004 9:53:35 AM	5.00.2195.3649	(90,384 bytes)	2/28/2003 2:03:31 PM	iscomlog.dll	5.00.0984	24.27 KB (24,848 bytes)	2/28/2003 2:04:01 PM	Microsoft Corporation
svchost.exe	c:\winnt\system32\svchost.exe	980	8	204800	1413120	3/18/2004 9:54:45 AM	5.00.2134.1	7.77 KB (7,952 bytes)	12/7/1999 7:00:00 AM	lonsint.dll	5.00.0984	11.77 KB (12,048 bytes)	2/28/2003 2:04:01 PM	Microsoft Corporation
dllhost.exe	Not Available	1360	8	Not Available	Not Available	3/18/2004 10:40:46 AM	Unknown	Unknown	Unknown	inetsloc.dll	5.00.0984	20.27 KB (20,752 bytes)	2/28/2003 2:03:35 PM	Microsoft Corporation
inetinfo.exe	c:\winnt\system32\inetinfo.exe	1296	8	204800	1413120	3/18/2004 1:37:24 PM	5.00.0984	(14,608 bytes)	2/28/2003 2:04:01 PM	iiisfecnv.dll	5.00.0984	7.27 KB (7,440 bytes)	2/12/2003 7:53:06 AM	Microsoft Corporation
mmc.exe	c:\winnt\system32\mmc.exe	1032	8	204800	1413120	3/18/2004 2:46:59 PM	5.00.2195.4933	(603,408 bytes)	2/28/2003 2:03:37 PM	isatq.dll	5.00.0984	61.27 KB (62,736 bytes)	9/17/2002 11:40:50 AM	Microsoft Corporation
rsvp.exe	c:\winnt\system32\rsvp.exe	3768	8	204800	1413120	3/18/2004 2:47:50 PM	5.00.2167.1	(176,912 bytes)	12/7/1999 7:00:00 AM	infocomm.dll	5.00.0984	240.77 KB (246,544 bytes)	9/17/2002 11:40:50 AM	Microsoft Corporation
[Loaded Modules]										w3svc.dll	5.00.0984	341.27 KB (349,456 bytes)	9/17/2002 11:40:52 AM	Microsoft Corporation
Name	Version	Size	File Date	Manufacturer	Path					security.dll	5.00.2154.1	5.77 KB (5,904 bytes)	12/7/1999 7:00:00 AM	Microsoft Corporation
traffic.dll	5.00.2139.1	30.77 KB (31,504 bytes)	12/7/1999 7:00:00 AM	Microsoft Corporation	c:\winnt\system32\traffic.dll					svceext.dll	5.00.0984	39.77 KB (40,720 bytes)	2/28/2003 2:04:02 PM	Microsoft Corporation
rsvp.exe	5.00.2167.1	172.77 KB (176,912 bytes)	12/7/1999 7:00:00 AM	Microsoft Corporation	c:\winnt\system32\rsvp.exe					admexs.dll	5.00.0984	27.77 KB (28,432 bytes)	2/28/2003 2:04:00 PM	Microsoft Corporation
wbemprox.dll	1.50.1085.0045	40.08 KB (41,040 bytes)	2/28/2003 2:03:52 PM	Microsoft Corporation	c:\winnt\system32\wbemprox.dll					wamreg.dll	5.00.0984	45.77 KB (46,864 bytes)	2/28/2003 2:04:02 PM	Microsoft Corporation
mlang.dll	6.00.2800.1106	561.50 KB (574,976 bytes)	8/29/2002 8:14:40 AM	Microsoft Corporation	c:\winnt\system32\mlang.dll					metadata.dll	5.00.0984	68.77 KB (70,416 bytes)	2/28/2003 2:04:01 PM	Microsoft Corporation
cabinet.dll	5.00.2147.1	54.77 KB (56,080 bytes)	12/7/1999 7:00:00 AM	Microsoft Corporation	c:\winnt\system32\cabinet.dll					iiimap.dll	5.00.0984	55.77 KB (57,104 bytes)	2/28/2003 2:03:35 PM	Microsoft Corporation
msinfo32.dll	5.00.2195.4601	312.27 KB (319,760 bytes)	2/28/2003 2:03:53 PM	Microsoft Corporation	files\common files\microsoft shared\msinfo32.dll					nsepm.dll	5.00.0984	43.27 KB (44,304 bytes)	2/28/2003 2:04:02 PM	Microsoft Corporation
mmcmdmgr.dll	5.00.2195.5352	816.27 KB (835,856 bytes)	2/28/2003 2:03:37 PM	Microsoft Corporation	c:\winnt\system32\mmcmdmgr.dll					admwprox.dll	5.00.0984	31.77 KB (32,528 bytes)	2/12/2003 7:53:06 AM	Microsoft Corporation
mmc.exe	5.00.2195.4933	589.27 KB (603,408 bytes)	2/28/2003 2:03:37 PM	Microsoft Corporation	c:\winnt\system32\mmc.exe					coadmin.dll	5.00.0984	39.77 KB (40,720 bytes)	2/28/2003 2:04:01 PM	Microsoft Corporation
iislog.dll	5.00.0984	76.77 KB (78,608 bytes)	9/17/2002 11:40:50 AM	Microsoft Corporation	c:\winnt\system32\iislog.dll					iisadmin.dll	5.00.0984	15.27 KB (15,632 bytes)	2/28/2003 2:04:01 PM	Microsoft Corporation
httpext.dll	5.00.0984	240.27 KB (246,032 bytes)	9/17/2002 11:40:50 AM	Microsoft Corporation	c:\winnt\system32\httpext.dll					rpref.dll	5.00.0984	4.27 KB (4,368 bytes)	2/28/2003 2:04:02 PM	Microsoft Corporation
rproxy.dll	5.00.2195.5419	16.27 KB (16,656 bytes)	2/28/2003 2:03:56 PM	Microsoft Corporation	c:\winnt\system32\rproxy.dll					iiisrtl.dll	5.00.0984	119.77 KB (122,640 bytes)	9/17/2002 11:40:50 AM	Microsoft Corporation
fpexedll.dll	4.0.2.5526	20.06 KB (20,541 bytes)	2/28/2003 2:03:55 PM	Microsoft Corporation	files\common files\microsoft shared\web server extensions\40\bin\fpexedll.dll					inetinfo.exe	5.00.0984	14.27 KB (14,608 bytes)	2/28/2003 2:04:01 PM	Microsoft Corporation
md5filt.dll	5.00.0984	32.77 KB (33,552 bytes)	2/28/2003 2:04:01 PM	Microsoft Corporation	c:\winnt\system32\md5filt.dll					tapisrv.dll	5.00.2195.5227	169.27 KB (173,328 bytes)	2/28/2003 2:03:47 PM	Microsoft Corporation
gzip.dll	5.00.0984	30.27 KB (30,992 bytes)	2/28/2003 2:04:01 PM	Microsoft Corporation	c:\winnt\system32\gzip.dll					dfssvc.exe	5.00.2195.3649	88.27 KB (90,384 bytes)	2/28/2003 2:03:31 PM	Microsoft Corporation
										winhttp.dll	5.1.2600.1039 (xpsp1.020511-1800)	303.00 KB (310,272 bytes)	2/28/2003 2:04:00 PM	Microsoft Corporation
										regapi.dll	5.00.2195.5201	35.27 KB (36,112 bytes)	2/28/2003 2:03:45 PM	Microsoft Corporation
										util.dll	5.00.2153.1	25.77 KB (26,384 bytes)	12/7/1999 7:00:00 AM	Microsoft Corporation
										util.dll				

wtsapi32.dll	5.00.2134.1	14.27 KB (14,608 bytes)	
12/7/1999 7:00:00 AM Microsoft Corporation			
c:\winnt\system32\wtsapi32.dll			
advpack.dll	6.00.2800.1106	89.00 KB (91,136 bytes)	
8/29/2002 8:14:40 AM Microsoft Corporation			
c:\winnt\system32\advpack.dll			
wuaueng.dll	5.4.3628.1 built by: lab04_n	182.50 KB (186,880 bytes)	
2/28/2003 2:04:00 PM Microsoft Corporation			
c:\winnt\system32\wuaueng.dll			
wuauerv.dll	5.4.3628.1 built by: lab04_n	8.50 KB (8,704 bytes)	
2/28/2003 2:04:00 PM Microsoft Corporation			
c:\winnt\system32\wuauerv.dll			
wshnetbs.dll	5.00.2134.1	7.77 KB (7,952 bytes)	12/7/1999
7:00:00 AM Microsoft Corporation			
c:\winnt\system32\wshnetbs.dll			
ntmarta.dll	5.00.2195.4836	99.77 KB (102,160 bytes)	2/28/2003
2:03:42 PM Microsoft Corporation			
c:\winnt\system32\ntmarta.dll			
perfos.dll	5.00.2155.1	21.27 KB (21,776 bytes)	12/7/1999
7:00:00 AM Microsoft Corporation			
c:\winnt\system32\perfos.dll			
provthrd.dll	1.50.1085.0000	68.07 KB (69,708 bytes)	
2/12/2003 12:55:49 PM Microsoft Corporation			
c:\winnt\system32\wbem\provthrd.dll			
ntevt.dll	1.50.1085.0072	192.06 KB (196,671 bytes)	2/28/2003
2:03:51 PM Microsoft Corporation			
c:\winnt\system32\wbem\ntevt.dll			
psapi.dll	5.00.2134.1	28.27 KB (28,944 bytes)	12/7/1999
7:00:00 AM Microsoft Corporation			
c:\winnt\system32\psapi.dll			
framedyn.dll	1.50.1085.0076	164.07 KB (168,009 bytes)	
2/28/2003 2:03:51 PM Microsoft Corporation			
c:\winnt\system32\wbem\framedyn.dll			
cimwin32.dll	1.50.1085.0073	1.04 MB (1,085,520 bytes)	
2/28/2003 2:03:51 PM Microsoft Corporation			
c:\winnt\system32\wbem\cimwin32.dll			
wbemsvcs.dll	1.50.1085.0007	40.07 KB (41,036 bytes)	
2/28/2003 2:03:52 PM Microsoft Corporation			
c:\winnt\system32\wbem\wbemsvcs.dll			
wbemess.dll	1.50.1085.0074	364.07 KB (372,804 bytes)	
2/28/2003 2:03:52 PM Microsoft Corporation			
c:\winnt\system32\wbem\wbemess.dll			
fastprox.dll	1.50.1085.0056	144.08 KB (147,536 bytes)	
2/28/2003 2:03:51 PM Microsoft Corporation			
c:\winnt\system32\wbem\fastprox.dll			
wbemcore.dll	1.50.1085.0085	628.07 KB (643,146 bytes)	
2/28/2003 2:03:52 PM Microsoft Corporation			
c:\winnt\system32\wbem\wbemcore.dll			
wbemcomn.dll	1.50.1085.0077	692.07 KB (708,675 bytes)	
2/28/2003 2:03:52 PM Microsoft Corporation			
c:\winnt\system32\wbem\wbemcomn.dll			
winmgmt.exe	1.50.1085.0070	192.08 KB (196,685 bytes)	
2/28/2003 2:03:52 PM Microsoft Corporation			
c:\winnt\system32\wbem\winmgmt.exe			
simpltcp.dll	5.00.2134.1	19.27 KB (19,728 bytes)	2/12/2003
7:52:36 AM Microsoft Corporation			
c:\winnt\system32\simpltcp.dll			
tcpsvcs.exe	5.00.2134.1	24.77 KB (25,360 bytes)	
12/7/1999 7:00:00 AM Microsoft Corporation			
c:\winnt\system32\tcpsvcs.exe			
msidle.dll	5.00.2920.0000	6.27 KB (6,416 bytes)	12/7/1999 7:00:00 AM
Microsoft Corporation			
c:\winnt\system32\msidle.dll			
mstask.exe	4.71.2195.1	115.77 KB (118,544 bytes)	2/28/2003
2:03:40 PM Microsoft Corporation			
c:\winnt\system32\mstask.exe			
netplwiz.dll	5.00.2195.3727	169.77 KB (173,840 bytes)	
2/28/2003 2:03:42 PM Microsoft Corporation			
c:\winnt\system32\netplwiz.dll			
netmsg.dll	5.00.2137.1	152.50 KB (156,160 bytes)	12/7/1999
7:00:00 AM Microsoft Corporation			
c:\winnt\system32\netmsg.dll			
netui2.dll	5.00.2134.1	280.27 KB (286,992 bytes)	12/7/1999
7:00:00 AM Microsoft Corporation			
c:\winnt\system32\netui2.dll			
mprui.dll	5.00.2195.4874	54.77 KB (56,080 bytes)	2/28/2003
2:03:38 PM Microsoft Corporation			
c:\winnt\system32\mprui.dll			
linkinfo.dll	5.00.2134.1	15.77 KB (16,144 bytes)	12/7/1999
7:00:00 AM Microsoft Corporation			
c:\winnt\system32\linkinfo.dll			
urlmon.dll	6.00.2800.1106	471.50 KB (482,816 bytes)	8/29/2002
8:14:40 AM Microsoft Corporation			
c:\winnt\system32\urlmon.dll			
browsecl.dll	6.00.2800.1106	61.50 KB (62,976 bytes)	
8/29/2002 8:14:40 AM Microsoft Corporation			
c:\winnt\system32\browsecl.dll			
faxshell.dll	5.00.2134.1	8.27 KB (8,464 bytes)	12/7/1999 7:00:00 AM
Microsoft Corporation			
c:\winnt\system32\faxshell.dll			
avifil32.dll	5.00.2134.1	76.27 KB (78,096 bytes)	12/7/1999
7:00:00 AM Microsoft Corporation			
c:\winnt\system32\avifil32.dll			
msvfw32.dll	5.00.2134.1	113.77 KB (116,496 bytes)	
12/7/1999 7:00:00 AM Microsoft Corporation			
c:\winnt\system32\msvfw32.dll			
docprop2.dll	5.00.2178.1	297.77 KB (304,912 bytes)	
12/7/1999 7:00:00 AM Microsoft Corporation			
c:\winnt\system32\docprop2.dll			
wininet.dll	6.00.2800.1106	572.00 KB (585,728 bytes)	8/29/2002
8:14:40 AM Microsoft Corporation			
c:\winnt\system32\wininet.dll			
shdoclc.dll	6.00.2800.1106	521.00 KB (533,504 bytes)	8/29/2002
8:14:40 AM Microsoft Corporation			
c:\winnt\system32\shdoclc.dll			
msacm32.dll	5.00.2134.1	65.27 KB (66,832 bytes)	
12/7/1999 7:00:00 AM Microsoft Corporation			
c:\winnt\system32\msacm32.dll			
msacm32.drv	5.00.2134.1	20.77 KB (21,264 bytes)	
12/7/1999 7:00:00 AM Microsoft Corporation			
c:\winnt\system32\msacm32.drv			
msi.dll	2.0.2600.1.1.90	1.991 MB (1,991,168 bytes)	2/28/2003 2:03:39 PM
Microsoft Corporation			
c:\winnt\system32\msi.dll			
powrprof.dll	5.00.3502.5305	13.27 KB (13,584 bytes)	
2/28/2003 2:03:44 PM Microsoft Corporation			
c:\winnt\system32\powrprof.dll			
batmeter.dll	5.00.3502.5305	20.27 KB (20,752 bytes)	
2/28/2003 2:03:28 PM Microsoft Corporation			
c:\winnt\system32\batmeter.dll			
stobject.dll	5.00.2195.4455	79.27 KB (81,168 bytes)	2/28/2003
2:03:47 PM Microsoft Corporation			
c:\winnt\system32\stobject.dll			
webcheck.dll	6.00.2800.1106	252.00 KB (258,048 bytes)	
8/29/2002 8:14:40 AM Microsoft Corporation			
c:\winnt\system32\webcheck.dll			
netui1.dll	5.00.2134.1	210.27 KB (215,312 bytes)	12/7/1999
7:00:00 AM Microsoft Corporation			
c:\winnt\system32\netui1.dll			
netui0.dll	5.00.2195.4874	70.77 KB (72,464 bytes)	2/28/2003
2:03:42 PM Microsoft Corporation			
c:\winnt\system32\netui0.dll			
ntlanman.dll	5.00.2195.5428	35.27 KB (36,112 bytes)	
12/7/1999 7:00:00 AM Microsoft Corporation			
c:\winnt\system32\ntlanman.dll			
ntshrui.dll	5.00.2134.1	46.77 KB (47,888 bytes)	12/7/1999
7:00:00 AM Microsoft Corporation			
c:\winnt\system32\ntshrui.dll			

mydocs.dll	5.00.3315.4065	55.27 KB (56,592 bytes)	2/28/2003 2:03:41 PM	Microsoft Corporation	expsrv.dll	6.72.9414	371.77 KB (380,688 bytes)	2/28/2003 2:03:33 PM	Microsoft Corporation
c:\winnt\system32\mydocs.dll					c:\winnt\system32\expsrv.dll				
hhsetup.dll	4.74.8702	66.27 KB (67,856 bytes)	12/7/1999 7:00:00 AM	Microsoft Corporation	vbajet32.dll	6.1.8268	30.27 KB (30,992 bytes)	2/28/2003 2:03:48 PM	Microsoft Corporation
c:\winnt\system32\hhsetup.dll					c:\winnt\system32\vbajet32.dll				
mmshext.dll	5.00.2153.1	24.27 KB (24,848 bytes)	12/7/1999 7:00:00 AM	Microsoft Corporation	msjtes40.dll	4.00.5914.0	236.27 KB (241,936 bytes)	2/28/2003 2:03:40 PM	Microsoft Corporation
c:\winnt\system32\mmshext.dll					c:\winnt\system32\msjtes40.dll				
browseui.dll	6.00.2800.1106	1002.00 KB (1,026,048 bytes)	8/29/2002 8:14:40 AM	Microsoft Corporation	oledb32r.dll	2.70.9001.0	built by: Lab06_N(dagbuild) 64.00 KB (65,536 bytes)	5/29/2003 1:59:43 PM	Microsoft Corporation
c:\winnt\system32\browseui.dll					c:\program files\common files\system\ole db\oledb32r.dll				
shdocvw.dll	6.00.2800.1106	1.28 MB (1,338,368 bytes)	8/29/2002 8:14:40 AM	Microsoft Corporation	comdlg32.dll	5.00.3315.3727	221.27 KB (226,576 bytes)	12/7/1999 7:00:00 AM	Microsoft Corporation
c:\winnt\system32\shdocvw.dll					c:\winnt\system32\comdlg32.dll				
explorer.exe	5.00.3502.5321	237.27 KB (242,960 bytes)	2/28/2003 2:03:49 PM	Microsoft Corporation	msdart.dll	2.71.9031.4	built by: Lab06_N(dagbuild) 124.00 KB (126,976 bytes)	5/29/2003 1:59:43 PM	Microsoft Corporation
c:\winnt\explorer.exe					c:\winnt\system32\msdart.dll				
regsvc.exe	5.00.2195.3649	65.27 KB (66,832 bytes)	2/28/2003 2:03:45 PM	Microsoft Corporation	oledb32.dll	2.71.9031.4	built by: Lab06_N(dagbuild) 408.00 KB (417,792 bytes)	5/29/2003 1:59:43 PM	Microsoft Corporation
c:\winnt\system32\regsvc.exe					c:\program files\common files\system\ole db\oledb32.dll				
llsrpc.dll	5.00.2195.4907	47.77 KB (48,912 bytes)	7/00:00 AM	Microsoft Corporation	msjint40.dll	4.00.2927.2	148.27 KB (151,824 bytes)	2/28/2003 2:03:40 PM	Microsoft Corporation
c:\winnt\system32\llsrpc.dll					c:\winnt\system32\msjint40.dll				
llssrv.exe	5.00.2195.4907	81.27 KB (83,216 bytes)	7/22/2002 1:05:04 PM	Microsoft Corporation	msjter40.dll	4.00.2927.2	52.27 KB (53,520 bytes)	2/28/2003 2:03:40 PM	Microsoft Corporation
c:\winnt\system32\llssrv.exe					c:\winnt\system32\msjter40.dll				
rasdlg.dll	5.00.2195.5438	515.77 KB (528,144 bytes)	7:00:00 AM	Microsoft Corporation	mswstr10.dll	4.00.3829.2	600.27 KB (614,672 bytes)	2/28/2003 2:03:41 PM	Microsoft Corporation
c:\winnt\system32\rasdlg.dll					c:\winnt\system32\mswstr10.dll				
netcfgx.dll	5.00.2195.4874	534.77 KB (547,600 bytes)	2:03:41 PM	Microsoft Corporation	msjset40.dll	4.00.6218.0	1.43 MB (1,503,504 bytes)	2/28/2003 2:03:39 PM	Microsoft Corporation
c:\winnt\system32\netcfgx.dll					c:\winnt\system32\msjset40.dll				
rasmans.dll	5.00.2195.5436	149.27 KB (152,848 bytes)	2/28/2003 2:03:44 PM	Microsoft Corporation	msjtoledb40.dll	4.00.5919.0	340.27 KB (348,432 bytes)	2/28/2003 2:03:40 PM	Microsoft Corporation
c:\winnt\system32\rasmans.dll					c:\winnt\system32\msjtoledb40.dll				
wmi.dll	5.00.2191.1	6.27 KB (6,416 bytes)	12/7/1999 7:00:00 AM	Microsoft Corporation	iasrad.dll	5.00.2195.4841	94.77 KB (97,040 bytes)	2/28/2003 2:03:34 PM	Microsoft Corporation
c:\winnt\system32\wmi.dll					c:\winnt\system32\iasrad.dll				
netshell.dll	5.00.2195.5431	457.77 KB (468,752 bytes)	2:03:42 PM	Microsoft Corporation	iassam.dll	5.00.2195.5427	98.27 KB (100,624 bytes)	2/28/2003 2:03:34 PM	Microsoft Corporation
c:\winnt\system32\netshell.dll					c:\winnt\system32\iassam.dll				
netman.dll	5.00.2195.5282	89.27 KB (91,408 bytes)	2:03:42 PM	Microsoft Corporation	iasads.dll	5.00.2195.5080	73.77 KB (75,536 bytes)	2/28/2003 2:03:34 PM	Microsoft Corporation
c:\winnt\system32\netman.dll					c:\winnt\system32\iasads.dll				
comsvcs.dll	2000.2.3497.0	1.37 MB (1,439,504 bytes)	2/28/2003 2:03:30 PM	Microsoft Corporation	iaspolcy.dll	5.00.2134.1	25.27 KB (25,872 bytes)	12/7/1999 7:00:00 AM	Microsoft Corporation
c:\winnt\system32\comsvcs.dll					c:\winnt\system32\iaspolcy.dll				
ntmsdba.dll	5.00.2195.5279	169.27 KB (173,328 bytes)	2/28/2003 2:03:42 PM	Microsoft Corporation	iassvcs.dll	5.00.2195.4916	58.77 KB (60,176 bytes)	2/28/2003 2:03:34 PM	Microsoft Corporation
c:\winnt\system32\ntmsdba.dll					c:\winnt\system32\iassvcs.dll				
sens.dll	5.00.2163.1	36.77 KB (37,648 bytes)	7:00:00 AM	Microsoft Corporation	iasdo.dll	5.00.2195.4115	263.27 KB (269,584 bytes)	2/28/2003 2:03:34 PM	Microsoft Corporation
c:\winnt\system32\sens.dll					c:\winnt\system32\iasdo.dll				
iashlpr.dll	5.00.2184.1	33.27 KB (34,064 bytes)	7:00:00 AM	Microsoft Corporation	ntmssvc.dll	5.00.2195.5254	391.77 KB (401,168 bytes)	2/28/2003 2:03:42 PM	Microsoft Corporation
c:\winnt\system32\iaslpr.dll					c:\winnt\system32\ntmssvc.dll				
iasacct.dll	5.00.2195.4115	28.27 KB (28,944 bytes)	2:03:34 PM	Microsoft Corporation	ias.dll	5.00.2134.1	7.27 KB (7,440 bytes)	12/7/1999 7:00:00 AM	Microsoft Corporation
c:\winnt\system32\iasacct.dll					c:\winnt\system32\ias.dll				
iasuser.dll	5.00.2195.4609	19.77 KB (20,240 bytes)	7:00:00 AM	Microsoft Corporation	es.dll	2000.2.3497.0	225.27 KB (230,672 bytes)	2/28/2003 2:03:33 PM	Microsoft Corporation
c:\winnt\system32\iasuser.dll					c:\winnt\system32\es.dll				
iasnap.dll	5.00.2195.4115	58.77 KB (60,176 bytes)	2:03:34 PM	Microsoft Corporation	mtxoci.dll	2000.2.3497.0	103.77 KB (106,256 bytes)	2/28/2003 2:03:41 PM	Microsoft Corporation
c:\winnt\system32\iasnap.dll					c:\winnt\system32\mtxoci.dll				
iaspipe.dll	5.00.2134.1	41.77 KB (42,768 bytes)	7:00:00 AM	Microsoft Corporation	resutils.dll	5.00.2195.5339	39.77 KB (40,720 bytes)	2/28/2003 2:03:45 PM	Microsoft Corporation
c:\winnt\system32\iaspipe.dll					c:\winnt\system32\resutils.dll				

clusapi.dll 5.00.2195.4678 54.27 KB (55,568 bytes) 2/28/2003 2:03:29 PM Microsoft Corporation	mfc42u.dll 6.00.8665.0 972.05 KB (995,384 bytes) 12/7/1999 7:00:00 AM Microsoft Corporation
c:\winnt\system32\clusapi.dll	c:\winnt\system32\mfc42u.dll
msvcpx50.dll 5.00.7051 552.50 KB (565,760 bytes) 12/7/1999 7:00:00 AM Microsoft Corporation	polagent.dll 5.00.2195.5428 94.77 KB (97,040 bytes) 2/28/2003 2:03:44 PM Microsoft Corporation
c:\winnt\system32\msvcpx50.dll	c:\winnt\system32\polagent.dll
xolehlp.dll 1999.9.3421.3 17.27 KB (17,680 bytes) 2/12/2003 7:52:40 AM Microsoft Corporation	scecli.dll 5.00.2195.4874 109.27 KB (111,888 bytes) 2/28/2003 2:03:45 PM Microsoft Corporation
c:\winnt\system32\xolehlp.dll	c:\winnt\system32\scecli.dll
msdtclog.dll 2000.2.3497.0 86.77 KB (88,848 bytes) 2/28/2003 2:03:38 PM Microsoft Corporation	atl.dll 3.00.9435 73.06 KB (74,810 bytes) 2/28/2003 2:03:28 PM Microsoft Corporation
c:\winnt\system32\msdtclog.dll	c:\winnt\system32\atl.dll
mtxclu.dll 2000.2.3497.0 51.27 KB (52,496 bytes) 2/28/2003 2:03:41 PM Microsoft Corporation	certcli.dll 5.00.2195.3649 130.27 KB (133,392 bytes) 2/28/2003 2:03:29 PM Microsoft Corporation
c:\winnt\system32\mtxclu.dll	c:\winnt\system32\certcli.dll
msdtcprx.dll 2000.2.3497.0 683.77 KB (700,176 bytes) 2/28/2003 2:03:38 PM Microsoft Corporation	esent.dll 6.0.3940.25 1.09 MB (1,137,936 bytes) 2/28/2003 2:03:33 PM Microsoft Corporation
c:\winnt\system32\msdtcprx.dll	c:\winnt\system32\esent.dll
txfaux.dll 2000.2.3497.0 383.27 KB (392,464 bytes) 2/28/2003 2:03:48 PM Microsoft Corporation	ntdsatq.dll 5.00.2195.5246 31.27 KB (32,016 bytes) 2/28/2003 2:03:42 PM Microsoft Corporation
c:\winnt\system32\txfaux.dll	c:\winnt\system32\ntdsatq.dll
msdtctm.dll 2000.2.3497.0 1.08 MB (1,128,208 bytes) 2/28/2003 2:03:38 PM Microsoft Corporation	ntdsa.dll 5.00.2195.5438 1002.27 KB (1,026,320 bytes) 2/28/2003 2:03:42 PM Microsoft Corporation
c:\winnt\system32\msdtctm.dll	c:\winnt\system32\ntdsa.dll
msdtc.exe 1999.9.3421.3 6.77 KB (6,928 bytes) 2/12/2003 7:52:40 AM Microsoft Corporation	kdcsvc.dll 5.00.2195.5246 141.77 KB (145,168 bytes) 2/28/2003 2:03:36 PM Microsoft Corporation
c:\winnt\system32\msdtc.exe	c:\winnt\system32\kdcsvc.dll
inetpp.dll 5.00.2195.4299 64.27 KB (65,808 bytes) 2/28/2003 2:03:35 PM Microsoft Corporation	sfmapi.dll 5.00.2134.1 38.77 KB (39,696 bytes) 12/7/1999 7:00:00 AM Microsoft Corporation
c:\winnt\system32\inetpp.dll	c:\winnt\system32\sfmapi.dll
win32spl.dll 5.00.2195.5201 92.27 KB (94,480 bytes) 12/7/1999 7:00:00 AM Microsoft Corporation	rassfm.dll 5.00.2195.4874 21.27 KB (21,776 bytes) 2/28/2003 2:03:45 PM Microsoft Corporation
c:\winnt\system32\win32spl.dll	c:\winnt\system32\rassfm.dll
usbmon.dll 5.00.2195.4299 11.27 KB (11,536 bytes) 2/28/2003 2:03:48 PM Microsoft Corporation	rsabase.dll 5.00.2195.3839 128.27 KB (131,344 bytes) 7/22/2002 1:05:04 PM Microsoft Corporation
c:\winnt\system32\usbmon.dll	c:\winnt\system32\rsabase.dll
tcpmon.dll 5.00.2195.4299 40.77 KB (41,744 bytes) 2/28/2003 2:03:47 PM Microsoft Corporation	schannel.dll 5.00.2195.5284 139.27 KB (142,608 bytes) 5/4/2001 1:05:02 PM Microsoft Corporation
c:\winnt\system32\tcpmon.dll	c:\winnt\system32\schannel.dll
pjlmon.dll 5.00.2165.1 12.77 KB (13,072 bytes) 11/30/1999 6:39:36 PM Microsoft Corporation	netlogon.dll 5.00.2195.5400 362.77 KB (371,472 bytes) 2/28/2003 2:03:42 PM Microsoft Corporation
c:\winnt\system32\pjlmon.dll	c:\winnt\system32\netlogon.dll
cnbjmon.dll 5.00.2134.1 43.77 KB (44,816 bytes) 11/30/1999 6:38:48 PM Microsoft Corporation	kerberos.dll 5.00.2195.5246 202.77 KB (207,632 bytes) 2/28/2003 2:03:36 PM Microsoft Corporation
c:\winnt\system32\cnbjmon.dll	c:\winnt\system32\kerberos.dll
localspl.dll 5.00.2195.5423 250.27 KB (256,272 bytes) 12/7/1999 7:00:00 AM Microsoft Corporation	msprivs.dll 5.00.2154.1 41.50 KB (42,496 bytes) 12/7/1999 7:00:00 AM Microsoft Corporation
c:\winnt\system32\localspl.dll	c:\winnt\system32\msprivs.dll
spoolss.dll 5.00.2195.5400 61.77 KB (63,248 bytes) 2/12/2003 7:39:06 AM Microsoft Corporation	samsrv.dll 5.00.2195.5201 374.27 KB (383,248 bytes) 12/7/1999 7:00:00 AM Microsoft Corporation
c:\winnt\system32\spoolss.dll	c:\winnt\system32\samsrv.dll
spoolsv.exe 5.00.2195.4299 44.27 KB (45,328 bytes) 2/12/2003 7:39:06 AM Microsoft Corporation	lsasrv.dll 5.00.2195.5430 500.27 KB (512,272 bytes) 12/7/1999 7:00:00 AM Microsoft Corporation
c:\winnt\system32\spoolsv.exe	c:\winnt\system32\lsasrv.dll
rpss.dll 5.00.2195.5429 231.27 KB (236,816 bytes) 2/28/2003 2:03:45 PM Microsoft Corporation	lsass.exe 5.00.2195.5430 32.77 KB (33,552 bytes) 12/7/1999 7:00:00 AM Microsoft Corporation
c:\winnt\system32\rpss.dll	c:\winnt\system32\lsass.exe
svchost.exe 5.00.2134.1 7.77 KB (7,952 bytes) 12/7/1999 7:00:00 AM Microsoft Corporation	ntlsapi.dll 5.00.2195.4907 6.77 KB (6,928 bytes) 12/7/1999 7:00:00 AM Microsoft Corporation
c:\winnt\system32\svchost.exe	c:\winnt\system32\ntlsapi.dll
iissuba.dll 5.00.0984 9.77 KB (10,000 bytes) 12/7/1999 7:00:00 AM Microsoft Corporation	wmicore.dll 5.00.2195.3649 72.27 KB (74,000 bytes) 2/28/2003 2:03:49 PM Microsoft Corporation
c:\winnt\system32\iissuba.dll	c:\winnt\system32\wmicore.dll
dssenh.dll 5.00.2195.3665 142.77 KB (146,192 bytes) 2/28/2003 2:03:57 PM Microsoft Corporation	rasadhlp.dll 5.00.2168.1 7.27 KB (7,440 bytes) 12/7/1999 7:00:00 AM Microsoft Corporation
c:\winnt\system32\dssenh.dll	c:\winnt\system32\rasadhlp.dll
oakley.dll 5.00.2195.5326 382.27 KB (391,440 bytes) 2/28/2003 2:03:43 PM Microsoft Corporation	winmr.dll 5.00.2160.1 18.77 KB (19,216 bytes) 12/7/1999 7:00:00 AM Microsoft Corporation
c:\winnt\system32\oakley.dll	c:\winnt\system32\winmr.dll

rrr20.dll	5.00.2195.4874	35.77 KB (36,624 bytes)	2/28/2003	2:03:45 PM	Microsoft Corporation	c:\winnt\system32\rrr20.dll
wshtcpip.dll	5.00.2195.4874	17.27 KB (17,680 bytes)	2/28/2003	2:03:49 PM	Microsoft Corporation	c:\winnt\system32\wshtcpip.dll
msafd.dll	5.00.2195.4874	103.27 KB (105,744 bytes)	2/28/2003	2:03:38 PM	Microsoft Corporation	c:\winnt\system32\msafd.dll
msocket.dll	5.00.2195.4874	62.77 KB (64,272 bytes)	2/28/2003	2:03:41 PM	Microsoft Corporation	c:\winnt\system32\msocket.dll
msgsvc.dll	5.00.2195.4874	34.77 KB (35,600 bytes)	12/7/1999	7:00:00 AM	Microsoft Corporation	c:\winnt\system32\msgsvc.dll
alrsvc.dll	5.00.2134.1	17.77 KB (18,192 bytes)	12/7/1999	7:00:00 AM	Microsoft Corporation	c:\winnt\system32\alrsvc.dll
trkwks.dll	5.00.2195.4874	88.77 KB (90,896 bytes)	2/28/2003	2:03:48 PM	Microsoft Corporation	c:\winnt\system32\trkwks.dll
seclogon.dll	5.00.2195.5201	17.27 KB (17,680 bytes)	2/28/2003	2:03:45 PM	Microsoft Corporation	c:\winnt\system32\seclogon.dll
psbase.dll	5.00.2195.4822	111.77 KB (114,448 bytes)	2/28/2003	2:03:44 PM	Microsoft Corporation	c:\winnt\system32\psbase.dll
cryptsvc.dll	5.00.2195.4368	73.27 KB (75,024 bytes)	2/28/2003	2:03:31 PM	Microsoft Corporation	c:\winnt\system32\cryptsvc.dll
cryptdll.dll	5.00.2135.1	41.27 KB (42,256 bytes)	12/7/1999	7:00:00 AM	Microsoft Corporation	c:\winnt\system32\cryptdll.dll
wkssvc.dll	5.00.2195.4874	95.27 KB (97,552 bytes)	12/7/1999	7:00:00 AM	Microsoft Corporation	c:\winnt\system32\wkssvc.dll
srvsvc.dll	5.00.2195.5400	81.77 KB (83,728 bytes)	12/7/1999	7:00:00 AM	Microsoft Corporation	c:\winnt\system32\srvsvc.dll
cfgmgr32.dll	5.00.2134.1	16.77 KB (17,168 bytes)	12/7/1999	7:00:00 AM	Microsoft Corporation	c:\winnt\system32\cfgmgr32.dll
dmserver.dll	2195.3649.297.3	12.27 KB (12,560 bytes)	2/28/2003	2:03:32 PM	VERITAS Software Corp.	c:\winnt\system32\dmserver.dll
lmhsvc.dll	5.00.2195.4874	9.77 KB (10,000 bytes)	12/7/1999	7:00:00 AM	Microsoft Corporation	c:\winnt\system32\lmhsvc.dll
dnssrslvr.dll	5.00.2195.5354	89.77 KB (91,920 bytes)	2/28/2003	2:03:32 PM	Microsoft Corporation	c:\winnt\system32\dnssrslvr.dll
tapi32.dll	5.00.2182.1	123.27 KB (126,224 bytes)	12/7/1999	7:00:00 AM	Microsoft Corporation	c:\winnt\system32\tapi32.dll
rasman.dll	5.00.2195.5292	54.77 KB (56,080 bytes)	12/7/1999	7:00:00 AM	Microsoft Corporation	c:\winnt\system32\rasman.dll
rasapi32.dll	5.00.2195.5438	191.77 KB (196,368 bytes)	12/7/1999	7:00:00 AM	Microsoft Corporation	c:\winnt\system32\rasapi32.dll
rtutils.dll	5.00.2168.1	43.77 KB (44,816 bytes)	12/7/1999	7:00:00 AM	Microsoft Corporation	c:\winnt\system32\rtutils.dll
adslidpc.dll	5.00.2195.5400	127.77 KB (130,832 bytes)	2/28/2003	2:03:27 PM	Microsoft Corporation	c:\winnt\system32\adslidpc.dll
activeds.dll	5.00.2195.5312	175.27 KB (179,472 bytes)	2/28/2003	2:03:25 PM	Microsoft Corporation	c:\winnt\system32\activeds.dll
mprapi.dll	5.00.2181.1	79.27 KB (81,168 bytes)	12/7/1999	7:00:00 AM	Microsoft Corporation	c:\winnt\system32\mprapi.dll
iphlpapi.dll	5.00.2195.2	68.27 KB (69,904 bytes)	2/28/2003	2:03:35 PM	Microsoft Corporation	c:\winnt\system32\iphlpapi.dll
icmp.dll	5.00.2134.1	7.27 KB (7,440 bytes)	12/7/1999	7:00:00 AM	Microsoft Corporation	c:\winnt\system32\icmp.dll
dhcpcsvc.dll	5.00.2195.4874	87.77 KB (89,872 bytes)	12/7/1999	7:00:00 AM	Microsoft Corporation	c:\winnt\system32\dhcpcsvc.dll
eventlog.dll	5.00.2195.5336	44.27 KB (45,328 bytes)	2/28/2003	2:03:33 PM	Microsoft Corporation	c:\winnt\system32\eventlog.dll
ntdsapi.dll	5.00.2195.4827	56.27 KB (57,616 bytes)	2/28/2003	2:03:42 PM	Microsoft Corporation	c:\winnt\system32\ntdsapi.dll
scesrv.dll	5.00.2195.5316	242.77 KB (248,592 bytes)	2/28/2003	2:03:45 PM	Microsoft Corporation	c:\winnt\system32\scesrv.dll
umpnpgm.dll	5.00.2182.1	86.27 KB (88,336 bytes)	12/7/1999	7:00:00 AM	Microsoft Corporation	c:\winnt\system32\umpnpgm.dll
services.exe	5.00.2195.3940	86.77 KB (88,848 bytes)	12/7/1999	7:00:00 AM	Microsoft Corporation	c:\winnt\system32\services.exe
msv1_0.dll	5.00.2195.4745	112.27 KB (114,960 bytes)	12/7/1999	7:00:00 AM	Microsoft Corporation	c:\winnt\system32\msv1_0.dll
clbcatq.dll	2000.2.3497.0	497.77 KB (509,712 bytes)	2/28/2003	2:03:29 PM	Microsoft Corporation	c:\winnt\system32\clbcatq.dll
oleaut32.dll	2.40.4518	612.27 KB (626,960 bytes)	12/7/1999	7:00:00 AM	Microsoft Corporation	c:\winnt\system32\oleaut32.dll
cscui.dll	5.00.2195.4104	233.77 KB (239,376 bytes)	2/28/2003	2:03:31 PM	Microsoft Corporation	c:\winnt\system32\cscui.dll
winspool.drv	5.00.2195.5225	111.27 KB (113,936 bytes)	12/7/1999	7:00:00 AM	Microsoft Corporation	c:\winnt\system32\winspool.drv
winscard.dll	5.00.2134.1	77.27 KB (79,120 bytes)	12/7/1999	7:00:00 AM	Microsoft Corporation	c:\winnt\system32\wincard.dll
wlnotify.dll	5.00.2195.5377	54.27 KB (55,568 bytes)	2/28/2003	2:03:49 PM	Microsoft Corporation	c:\winnt\system32\wlnotify.dll
csddl.dll	5.00.2195.5434	98.77 KB (101,136 bytes)	2/28/2003	2:03:31 PM	Microsoft Corporation	c:\winnt\system32\csddl.dll
wdmaud.drv	5.00.2195.3649	21.27 KB (21,776 bytes)	2/28/2003	2:03:49 PM	Microsoft Corporation	c:\winnt\system32\wdmaud.drv
lz32.dll	5.00.2134.1	9.77 KB (10,000 bytes)	12/7/1999	7:00:00 AM	Microsoft Corporation	c:\winnt\system32\lz32.dll
version.dll	5.00.2134.1	15.77 KB (16,144 bytes)	12/7/1999	7:00:00 AM	Microsoft Corporation	c:\winnt\system32\version.dll
rsaenh.dll	5.00.2195.3839	130.77 KB (133,904 bytes)	2/28/2003	2:03:57 PM	Microsoft Corporation	c:\winnt\system32\rsaenh.dll
mecat32.dll	5.131.2134.1	7.77 KB (7,952 bytes)	12/7/1999	7:00:00 AM	Microsoft Corporation	c:\winnt\system32\mecat32.dll

ole32.dll	5.00.2195.5400	968.27 KB (991,504 bytes)	2/28/2003	2:03:43 PM	Microsoft Corporation	c:\winnt\system32\ole32.dll
imagehlp.dll	5.00.2195.5242	125.77 KB (128,784 bytes)	5/4/2001	1:05:02 PM	Microsoft Corporation	c:\winnt\system32\imagehlp.dll
msasn1.dll	5.00.2195.4067	51.27 KB (52,496 bytes)	12/7/1999	7:00:00 AM	Microsoft Corporation	c:\winnt\system32\msasn1.dll
crypt32.dll	5.131.2195.4558	464.27 KB (475,408 bytes)	2/28/2003	2:03:30 PM	Microsoft Corporation	c:\winnt\system32\crypt32.dll
wintrust.dll	5.131.2195.3775	162.27 KB (166,160 bytes)	2/28/2003	2:03:49 PM	Microsoft Corporation	c:\winnt\system32\wintrust.dll
mpr.dll	5.00.2195.3649	53.77 KB (55,056 bytes)	2/28/2003	2:03:37 PM	Microsoft Corporation	c:\winnt\system32\mpr.dll
shlwapi.dll	6.00.2800.1106	386.00 KB (395,264 bytes)	8/29/2002	8:14:40 AM	Microsoft Corporation	c:\winnt\system32\shlwapi.dll
shell32.dll	5.00.3502.5436	2.26 MB (2,374,416 bytes)	2/28/2003	2:03:46 PM	Microsoft Corporation	c:\winnt\system32\shell32.dll
msgina.dll	5.00.2195.4733	324.77 KB (332,560 bytes)	12/7/1999	7:00:00 AM	Microsoft Corporation	c:\winnt\system32\msgina.dll
comctl32.dll	5.81	517.27 KB (529,680 bytes)	8/29/2002	8:14:40 AM	Microsoft Corporation	c:\winnt\system32\comctl32.dll
setupapi.dll	5.00.2195.5400	553.77 KB (567,056 bytes)	12/7/1999	7:00:00 AM	Microsoft Corporation	c:\winnt\system32\setupapi.dll
winmm.dll	5.00.2161.1	184.77 KB (189,200 bytes)	12/7/1999	7:00:00 AM	Microsoft Corporation	c:\winnt\system32\winmm.dll
winsta.dll	5.00.2195.4655	36.77 KB (37,648 bytes)	2/28/2003	2:03:49 PM	Microsoft Corporation	c:\winnt\system32\winsta.dll
wsock32.dll	5.00.2195.4874	21.27 KB (21,776 bytes)	2/28/2003	2:03:49 PM	Microsoft Corporation	c:\winnt\system32\wsock32.dll
dnsapi.dll	5.00.2195.5354	131.27 KB (134,416 bytes)	2/28/2003	2:03:32 PM	Microsoft Corporation	c:\winnt\system32\dnsapi.dll
wldap32.dll	5.00.2195.5400	158.77 KB (162,576 bytes)	2/28/2003	2:03:49 PM	Microsoft Corporation	c:\winnt\system32\wldap32.dll
ws2help.dll	5.00.2134.1	17.77 KB (18,192 bytes)	12/7/1999	7:00:00 AM	Microsoft Corporation	c:\winnt\system32\ws2help.dll
ws2_32.dll	5.00.2195.4874	66.77 KB (68,368 bytes)	2/28/2003	2:03:49 PM	Microsoft Corporation	c:\winnt\system32\ws2_32.dll
samlib.dll	5.00.2195.4827	49.77 KB (50,960 bytes)	12/7/1999	7:00:00 AM	Microsoft Corporation	c:\winnt\system32\samlib.dll
netrap.dll	5.00.2134.1	11.27 KB (11,536 bytes)	12/7/1999	7:00:00 AM	Microsoft Corporation	c:\winnt\system32\netrap.dll
netapi32.dll	5.00.2195.5427	305.27 KB (312,592 bytes)	2/28/2003	2:03:41 PM	Microsoft Corporation	c:\winnt\system32\netapi32.dll
profmap.dll	5.00.2181.1	29.27 KB (29,968 bytes)	12/7/1999	7:00:00 AM	Microsoft Corporation	c:\winnt\system32\profmap.dll
secur32.dll	5.00.2195.4587	47.27 KB (48,400 bytes)	2/28/2003	2:03:45 PM	Microsoft Corporation	c:\winnt\system32\secur32.dll
sfc.dll	5.00.2195.3649	92.11 KB (94,320 bytes)	2/28/2003	2:03:45 PM	Microsoft Corporation	c:\winnt\system32\sfc.dll
nddeapi.dll	5.00.2195.4509	15.77 KB (16,144 bytes)	2/28/2003	2:03:41 PM	Microsoft Corporation	c:\winnt\system32\nddeapi.dll
userenv.dll	5.00.2195.5425	363.77 KB (372,496 bytes)	12/7/1999	7:00:00 AM	Microsoft Corporation	c:\winnt\system32\userenv.dll
user32.dll	5.00.2195.4314	395.77 KB (405,264 bytes)	12/7/1999	7:00:00 AM	Microsoft Corporation	c:\winnt\system32\user32.dll
gdi32.dll	5.00.2195.5252	228.77 KB (234,256 bytes)	12/7/1999	7:00:00 AM	Microsoft Corporation	c:\winnt\system32\gdi32.dll
rpert4.dll	5.00.2195.5419	440.27 KB (450,832 bytes)	2/28/2003	2:03:45 PM	Microsoft Corporation	c:\winnt\system32\rpert4.dll
advapi32.dll	5.00.2195.5385	358.77 KB (367,376 bytes)	12/7/1999	7:00:00 AM	Microsoft Corporation	c:\winnt\system32\advapi32.dll
kernel32.dll	5.00.2195.5400	716.77 KB (733,968 bytes)	12/7/1999	7:00:00 AM	Microsoft Corporation	c:\winnt\system32\kernel32.dll
msvcrt.dll	6.10.9359.0	284.05 KB (290,869 bytes)	7/22/2002	1:05:04 PM	Microsoft Corporation	c:\winnt\system32\msvcrt.dll
winlogon.exe	5.00.2195.5386	174.77 KB (178,960 bytes)	2/28/2003	2:03:49 PM	Microsoft Corporation	c:\winnt\system32\winlogon.exe
sfcfiles.dll	5.00.2195.5426	951.27 KB (974,096 bytes)	2/28/2003	2:03:46 PM	Microsoft Corporation	c:\winnt\system32\sfcfiles.dll
ntdll.dll	5.00.2195.5400	479.27 KB (490,768 bytes)	5/4/2001	1:05:02 PM	Microsoft Corporation	c:\winnt\system32\ntdll.dll
smss.exe	5.00.2195.5382	44.77 KB (45,840 bytes)	12/7/1999	7:00:00 AM	Microsoft Corporation	c:\winnt\system32\smss.exe
[Services]						
Display Name	Name	State	Start Mode	Service Type		
Path	Error Control	Start Name	Tag ID			
Alerter	Alerter	Running	Auto	Share Process		
c:\winnt\system32\services.exe		Normal	LocalSystem	0		
Application Management	AppMgmt	Stopped	Manual	Share		
Process	c:\winnt\system32\services.exe	Normal	LocalSystem	0		
Background Intelligent Transfer Service	BITS	Stopped	Manual			
Share Process	c:\winnt\system32\svchost.exe -k bitsgroup	Normal	LocalSystem	0		
Computer Browser	Browser	Stopped	Manual	Share Process		
c:\winnt\system32\services.exe		Normal	LocalSystem	0		
Indexing Service	cisvc	Stopped	Manual	Share Process		
c:\winnt\system32\cisvc.exe		Normal	LocalSystem	0		
ClipBook	ClipSrv	Stopped	Manual	Own Process		
c:\winnt\system32\clipsrv.exe		Normal	LocalSystem	0		
Distributed File System	Dfs	Running	Auto	Own		
Process	c:\winnt\system32\dfsrv.exe	Normal	LocalSystem	0		
DHCP Client	Dhcp	Running	Auto	Share Process		
c:\winnt\system32\services.exe		Normal	LocalSystem	0		
Logical Disk Manager Administrative Service	dmadmin	Stopped				
Manual	Share Process	c:\winnt\system32\dmadmin.exe /com				
Normal	LocalSystem	0				

Logical Disk Manager	dmserver	Running	Auto	Share Process						Routing and Remote Access	RemoteAccess	Stopped	Disabled		
c:\winnt\system32\services.exe		Normal	LocalSystem	0						Share Process	c:\winnt\system32\svchost.exe -k netsvcs		Normal		
DNS Client	Dnscache	Running	Auto	Share Process						LocalSystem	0				
c:\winnt\system32\services.exe		Normal	LocalSystem	0						Remote Registry Service	RemoteRegistry	Running	Auto		
Event Log	Eventlog	Running	Auto	Share Process						Own Process	c:\winnt\system32\regsvc.exe		Normal		
c:\winnt\system32\services.exe		Normal	LocalSystem	0						LocalSystem	0				
COM+ Event System	EventSystem	Running	Manual	Share						Remote Command Service	RMSYS	Running	Auto	Own	
Process	c:\winnt\system32\svchost.exe -k netsvcs		Normal							Process	c:\program files\benchcraft\rsys.exe		Normal		
LocalSystem	0									.\Administrator	0				
Fax Service	Fax	Stopped	Manual	Own Process						Remote Procedure Call (RPC) Locator	RpcLocator		Stopped		
c:\winnt\system32\faxsvc.exe		Normal	LocalSystem	0						Manual	Own Process	c:\winnt\system32\locator.exe		Normal	
Internet Authentication Service	IAS	Running	Auto	Share						LocalSystem	0				
Process	c:\winnt\system32\svchost.exe -k netsvcs		Normal							Remote Procedure Call (RPC)	RpcSs	Running	Auto	Share	
LocalSystem	0									Process	c:\winnt\system32\svchost -k rpsvc		Normal		
IIS Admin Service	IISADMIN	Running	Auto	Share						LocalSystem	0				
Process	c:\winnt\system32\inetrv\inetinfo.exe		Normal							QoS RSVP	RSVP	Running	Manual	Own Process	
LocalSystem	0									c:\winnt\system32\rsvp.exe -s		Normal	LocalSystem	0	
Intersite Messaging	IsmServ	Stopped	Disabled	Own Process						Security Accounts Manager	SamSs	Running	Auto	Share	
c:\winnt\system32\ismserv.exe		Normal	LocalSystem	0						Process	c:\winnt\system32\lsass.exe		Normal	LocalSystem	0
Kerberos Key Distribution Center			kdc	Stopped	Disabled					Smart Card Helper	SCardDrv	Stopped	Manual	Share Process	
Share Process	c:\winnt\system32\lsass.exe		Normal							c:\winnt\system32\scardsvr.exe		Ignore	LocalSystem	0	
LocalSystem	0									Smart Card	SCardSvr	Stopped	Manual	Share Process	
Server	lanmanserver	Running	Auto	Share Process						c:\winnt\system32\scardsvr.exe		Ignore	LocalSystem	0	
c:\winnt\system32\services.exe		Normal	LocalSystem	0						Task Scheduler	Schedule	Running	Auto	Share Process	
Workstation	lanmanworkstation	Running	Auto	Share						c:\winnt\system32\mtask.exe		Normal	LocalSystem	0	
Process	c:\winnt\system32\services.exe		Normal	LocalSystem	0					RunAs Service	seclogon	Running	Auto	Share Process	
License Logging Service	LicenseService	Running	Auto	0						c:\winnt\system32\services.exe		Ignore	LocalSystem	0	
Own Process	c:\winnt\system32\llssrv.exe		Normal							System Event Notification	SENS	Running	Auto	Share	
LocalSystem	0									Process	c:\winnt\system32\svchost.exe -k netsvcs		Normal		
TCP/IP NetBIOS Helper Service	LmHosts	Running	Auto	Share						LocalSystem	0				
Process	c:\winnt\system32\services.exe		Normal	LocalSystem	0					Internet Connection Sharing	SharedAccess	Stopped	Manual		
Messenger Messenger	Running	Auto	Share Process							Share Process	c:\winnt\system32\svchost.exe -k netsvcs		Normal		
c:\winnt\system32\services.exe		Normal	LocalSystem	0						LocalSystem	0				
NetMeeting Remote Desktop Sharing			mnmsrvc	Stopped	Manual					Simple TCP/IP Services	SimpTcp	Running	Auto	Share	
Own Process	c:\winnt\system32\mnmsrvc.exe		Normal							Process	c:\winnt\system32\tcpvpsvc.exe		Normal	LocalSystem	0
LocalSystem	0									Print Spooler	Spooler	Running	Auto	Own Process	
Distributed Transaction Coordinator			MSDTC	Running	Auto					c:\winnt\system32\spoolsv.exe		Normal	LocalSystem	0	
Own Process	c:\winnt\system32\msdtc.exe		Normal							Performance Logs and Alerts	SysmonLog	Stopped	Auto		
LocalSystem	0									Own Process	c:\winnt\system32\smlogsvc.exe		Normal		
Windows Installer	MSIServer	Stopped	Manual	Share Process						LocalSystem	0				
c:\winnt\system32\msiexec.exe /v			Normal	LocalSystem	0					Telephony TapiSrv	Running	Manual	Share Process		
Network DDE	NetDDE	Stopped	Manual	Share Process						c:\winnt\system32\svchost.exe -k tapisrv		Normal	LocalSystem	0	
c:\winnt\system32\netdde.exe		Normal	LocalSystem	0						Terminal Services	TermService	Stopped	Disabled	Own	
Network DDE DSDM	NetDDEdsdm	Stopped	Manual	Share						Process	c:\winnt\system32\termsrv.exe		Normal	LocalSystem	0
Process	c:\winnt\system32\netdde.exe		Normal	LocalSystem	0					Telnet TlntSvr	Stopped	Manual	Own Process		
Net Logon	Netlogon	Stopped	Manual	Share Process						c:\winnt\system32\tlntsvr.exe		Normal	LocalSystem	0	
c:\winnt\system32\lsass.exe		Normal	LocalSystem	0						Distributed Link Tracking Server	TrkSvr	Stopped	Manual	Share	
Network Connections	Netman	Running	Manual	Share Process						Process	c:\winnt\system32\services.exe		Normal	LocalSystem	0
c:\winnt\system32\svchost.exe -k netsvcs			Normal	LocalSystem	0					Distributed Link Tracking Client	TrkWks	Running	Auto	Share	
File Replication	NtFrs	Stopped	Manual	Own Process						Process	c:\winnt\system32\services.exe		Normal	LocalSystem	0
c:\winnt\system32\ntfrs.exe		Ignore	LocalSystem	0						Uninterruptible Power Supply	UPS	Stopped	Manual	Own	
NT LM Security Support Provider			NtLmSsp	Stopped	Manual					Process	c:\winnt\system32\ups.exe		Normal	LocalSystem	0
Share Process	c:\winnt\system32\lsass.exe		Normal							Utility Manager	UtilMan	Stopped	Manual	Own Process	
LocalSystem	0									c:\winnt\system32\utilman.exe		Normal	LocalSystem	0	
Removable Storage	NtmsSvc	Running	Auto	Share Process						Windows Time	W32Time	Stopped	Manual	Share Process	
c:\winnt\system32\svchost.exe -k netsvcs			Normal	LocalSystem	0					c:\winnt\system32\services.exe		Normal	LocalSystem	0	
Plug and Play	PlugPlay	Running	Auto	Share Process						World Wide Web Publishing Service	W3SVC	Running	Auto		
c:\winnt\system32\services.exe		Normal	LocalSystem	0						Share Process	c:\winnt\system32\inetrv\inetinfo.exe		Normal		
IPSEC Policy Agent	PolicyAgent	Running	Auto	Share						LocalSystem	0				
Process	c:\winnt\system32\lsass.exe		Normal	LocalSystem	0					Windows Management Instrumentation	WinMgmt	Running	Auto		
Protected Storage	ProtectedStorage	Running	Auto	Share						Own Process	c:\winnt\system32\wbem\winmgmt.exe		Ignore		
Process	c:\winnt\system32\services.exe		Normal	LocalSystem	0					LocalSystem	0				
Remote Access	Auto Connection Manager	RasAuto	Stopped	Manual						Windows Management Instrumentation Driver Extensions			Wmi		
Share Process	c:\winnt\system32\svchost.exe -k netsvcs		Normal							Running	Manual	Share Process	c:\winnt\system32\services.exe		
LocalSystem	0									Normal	LocalSystem	0			
Remote Access Connection Manager		RasMan	Stopped	Manual						Automatic Updates	wuauerv	Running	Auto	Share Process	
Share Process	c:\winnt\system32\svchost.exe -k netsvcs		Normal							c:\winnt\system32\svchost.exe -k wugroup		Normal	LocalSystem	0	
LocalSystem	0														



[Program Groups]

Group Name	Name	User Name
Accessories	Default User:Accessories	Default User
Accessories\Accessibility	Default User:Accessories\Accessibility	Default User
Accessories\Entertainment	Default User:Accessories\Entertainment	Default User
Accessories\System Tools	Default User:Accessories\System Tools	Default User
Startup	Default User:Startup	Default User
Accessories	All Users:Accessories	All Users
Accessories\Accessibility	All Users:Accessories\Accessibility	All Users
Accessories\Communications	All Users:Accessories\Communications	All Users
Accessories\Entertainment	All Users:Accessories\Entertainment	All Users
Accessories\Games	All Users:Accessories\Games	All Users
Accessories\System Tools	All Users:Accessories\System Tools	All Users
Administrative Tools	All Users:Administrative Tools	All Users
Microsoft SQL Server	All Users:Microsoft SQL Server	All Users
Startup	All Users:Startup	All Users
Accessories	FCLIENT10\Administrator:Accessories	
Accessories\Accessibility	FCLIENT10\Administrator:Accessories\Accessibility	
Accessories\Entertainment	FCLIENT10\Administrator:Accessories\Entertainment	
Accessories\System Tools	FCLIENT10\Administrator:Accessories\System Tools	
Administrative Tools	FCLIENT10\Administrator:Administrative Tools	
Benchcraft	FCLIENT10\Administrator:Benchcraft	
QLogic Corporation	FCLIENT10\Administrator:QLogic Corporation	
QLogic Corporation\SANblade Control VIX	FCLIENT10\Administrator:QLogic Corporation\SANblade Control VIX	
Startup	FCLIENT10\Administrator:Startup	

[Startup Programs]

Program	Command	User Name	Location
Shortcut to synctime	c:\batfiles\synctime.cmd	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
Image Document	"C:\Program Files\Windows NT\Accessories\ImageVue\KodakImg.exe"
WordPad Document	"%ProgramFiles%\Windows NT\Accessories\WORDPAD.EXE"
Windows Media Services DRM Storage object	Not Available
Bitmap Image	C:\WINNT\System32\mspaint.exe

[Internet Explorer]

[ Following are sub-categories of this main category ]

[Summary]

Item	Value
Version	6.0.2800.1106
Build	62800.1106
Product ID	55736-276-6004927-04967
Application Path	C:\Program Files\Internet Explorer
Language	English (United States)
Active Printer	Not Available
Cipher Strength	128-bit
Content Advisor	Disabled
Update Versions	;SP1;
Java VM Version	5.0.3805.0
IEAK Install	No

[File Versions]

File	Version	Size	Date	Path	Company
advapi32.dll	5.0.2195.5385	359 KB	7/22/2002 12:05:04 PM	C:\WINNT\system32	Microsoft Corporation
advpack.dll	6.0.2800.1106	89 KB	8/29/2002 7:14:40 AM	C:\WINNT\system32	Microsoft Corporation
browsecl.dll	6.0.2800.1106	62 KB	8/29/2002 7:14:40 AM	C:\WINNT\system32	Microsoft Corporation
browseui.dll	6.0.2800.1106	1002 KB	8/29/2002 7:14:40 AM	C:\WINNT\system32	Microsoft Corporation
ckcnv.exe	5.0.2189.1	9 KB	12/7/1999 7:00:00 AM	C:\WINNT\system32	Microsoft Corporation
comctl32.dll	5.81.4916.400	517 KB	8/29/2002 7:14:40 AM	C:\WINNT\system32	Microsoft Corporation
crypt32.dll	5.131.2195.4558	464 KB	7/22/2002 12:05:04 PM	C:\WINNT\system32	Microsoft Corporation
enhshg.dll	File not present	Not Available	Not Available	Not Available	Not Available
iemigrat.dll	File not present	Not Available	Not Available	Not Available	Not Available
iesetup.dll	6.0.2800.1106	57 KB	8/29/2002 7:14:40 AM	C:\WINNT\system32	Microsoft Corporation
ieexplore.exe	6.0.2800.1106	89 KB	8/29/2002 7:14:40 AM	C:\Program Files\Internet Explorer	Microsoft Corporation
imagehlp.dll	5.0.2195.5242	126 KB	7/22/2002 12:05:04 PM	C:\WINNT\system32	Microsoft Corporation
inseng.dll	6.0.2800.1106	68 KB	8/29/2002 7:14:40 AM	C:\WINNT\system32	Microsoft Corporation
jobexec.dll	5.0.0.1	47 KB	12/7/1999 7:00:00 AM	C:\WINNT\system32	Microsoft Corporation
jscrip.dll	5.6.0.6626	576 KB	6/26/2001 4:36:02 PM	C:\WINNT\system32	Microsoft Corporation
jsproxy.dll	6.0.2800.1106	12 KB	8/29/2002 7:14:40 AM	C:\WINNT\system32	Microsoft Corporation
mshtml.dll	6.0.2800.1106	2722 KB	8/29/2002 7:14:40 AM	C:\WINNT\system32	Microsoft Corporation
msjava.dll	5.0.3805.0	924 KB	7/22/2002 12:05:04 PM	C:\WINNT\system32	Microsoft Corporation
msoss.dll	File not present	Not Available	Not Available	Not Available	Not Available
msxml.dll	8.0.6730.0	494 KB	7/22/2002 12:05:04 PM	C:\WINNT\system32	Microsoft Corporation
occache.dll	6.0.2800.1106	86 KB	8/29/2002 7:14:40 AM	C:\WINNT\system32	Microsoft Corporation
ole32.dll	5.0.2195.5400	968 KB	7/22/2002 12:05:04 PM	C:\WINNT\system32	Microsoft Corporation

oleaut32.dll	2.40.4518.0	612 KB	7/22/2002 12:05:04 PM
C:\WINNT\system32	Microsoft Corporation		
olepro32.dll	5.0.4518.0	160 KB	7/22/2002 12:05:04 PM
C:\WINNT\system32	Microsoft Corporation		
rsabase.dll	5.0.2195.3839	128 KB	7/22/2002 12:05:04 PM
C:\WINNT\system32	Microsoft Corporation		
rsaenh.dll	5.0.2195.3839	131 KB	7/22/2002 12:05:04 PM
C:\WINNT\system32	Microsoft Corporation		
rasapi32.dll	5.0.2195.5438	192 KB	7/22/2002 12:05:04 PM
C:\WINNT\system32	Microsoft Corporation		
rsasig.dll	File not present	Not Available	Not Available
Not Available			
schannel.dll	5.1.2195.0	139 KB	7/22/2002 12:05:04 PM
C:\WINNT\system32	Microsoft Corporation		
shdoc401.dll	File not present	Not Available	Not Available
Available	Not Available		
shdocvw.dll	6.0.2800.1106	1307 KB	8/29/2002 7:14:40 AM
C:\WINNT\system32	Microsoft Corporation		
shell32.dll	5.0.3502.5436	2319 KB	7/22/2002 12:05:04 PM
C:\WINNT\system32	Microsoft Corporation		
shlwapi.dll	6.0.2800.1106	386 KB	8/29/2002 7:14:40 AM
C:\WINNT\system32	Microsoft Corporation		
url.dll	6.0.2800.1106	104 KB	8/29/2002 7:14:40 AM
C:\WINNT\system32	Microsoft Corporation		
urlmon.dll	6.0.2800.1106	472 KB	8/29/2002 7:14:40 AM
C:\WINNT\system32	Microsoft Corporation		
vbscript.dll	5.6.0.7426	452 KB	2/26/2002 3:58:06 PM
C:\WINNT\system32	Microsoft Corporation		
webcheck.dll	6.0.2800.1106	252 KB	8/29/2002 7:14:40 AM
C:\WINNT\system32	Microsoft Corporation		
win.com	5.0.2134.1	24 KB	12/7/1999 7:00:00 AM
C:\WINNT\system32	Microsoft Corporation		
wininet.dll	6.0.2800.1106	572 KB	8/29/2002 7:14:40 AM
C:\WINNT\system32	Microsoft Corporation		
winsock.dll	3.10.0.103	3 KB	12/7/1999 7:00:00 AM
C:\WINNT\system32	Microsoft Corporation		
wintrust.dll	5.131.2195.3775	162 KB	7/22/2002 12:05:04 PM
C:\WINNT\system32	Microsoft Corporation		
wsock.vxd	File not present	Not Available	Not Available
Not Available			
wsock32.dll	5.0.2195.4874	21 KB	7/22/2002 12:05:04 PM
C:\WINNT\system32	Microsoft Corporation		
wsock32n.dll	File not present	Not Available	Not Available
Available	Not Available		

[Connectivity]

Item	Value	
Connection Preference		Never dial
EnableHttp1.1	1	
ProxyHttp1.1	0	

LAN Settings

AutoConfigProxy	wininet.dll	
AutoProxyDetectMode		Enabled
AutoConfigURL		
Proxy		Disabled
ProxyServer		
ProxyOverride		

[Cache]

[ Following are sub-categories of this main category ]

[Summary]

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

Page Refresh Type Always  
Temporary Internet Files Folder C:\Documents and Settings\Administrator\Local Settings\Temporary Internet Files  
Total Disk Space 17351 MB  
Available Disk Space 12603 MB  
Maximum Cache Size 541 MB  
Available Cache Size 541 MB

[List of Objects]

Program File	Status	Version	CodeBase
No cached object information available			

[Content]

[ Following are sub-categories of this main category ]

[Summary]

Item	Value
Content Advisor	Disabled

[Personal Certificates]

Issued To	Issued By	Validity	Signature	Algorithm
Administrator	Administrator	2/12/2003 to 1/19/2103	sha1	RSA

[Other People Certificates]

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

[Publishers]

Name	
No publisher information available	

[Security]

Zone	Security Level
Local intranet	Custom
Trusted sites	Custom
Internet	Custom
Restricted sites	Custom

## Client Configuration Parameters

### Client Configuration Parameters

#### COM+ Settings

TPCC.AllTxns:  
Activation:  
Enable Object Pooling selected  
Minimum Pool Size: 83  
Maximum Pool Size: 83  
Creating Timeout: 500,000  
Enable Object Construction  
Enable Just in Time Activation  
Concurrency:  
Concurrency Required

#### Client Registry Settings:

TPCC Application Registry Parameters  
Windows Registry Editor Version 5.00

```
[HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\TPCC]
"Path"="C:\\Inetpub\\wwwroot\\"
"NumberOfDeliveryThreads"=dword:0000000c
"MaxConnections"=dword:00006d60
"MaxPendingDeliveries"=dword:00000af0
"DB_Protocol"="ODBC"
"TxnMonitor"="COM"
"DbServer"="ibmserv4"
"DbName"="tpcc"
"DbUser"="sa"
"DbPassword"=""
"COM_SinglePool"="YES"
"SPPrefix"="n1"
```

Windows Registry Editor Version 5.00

```
[HKEY_LOCAL_MACHINE\SYSTEM\CurrentControlSet\Services\InetInfo]
```

```
[HKEY_LOCAL_MACHINE\SYSTEM\CurrentControlSet\Services\InetInfo\Parameters]
"ListenBackLog"=dword:000000aa
"DispatchEntries"=hex(7):4c,00,44,00,41,00,50,00,53,00,56,00,43,00,00,00,00,00
"PoolThreadLimit"=dword:00000400
"ThreadTimeout"=dword:00015180
```

```
[HKEY_LOCAL_MACHINE\SYSTEM\CurrentControlSet\Services\InetInfo\Performance]
```

```
"Library"="infoctrs.dll"
"Open"="OpenINFOPerformanceData"
"Close"="CloseINFOPerformanceData"
"Collect"="CollectINFOPerformanceData"
"WbemAdapFileTime"=hex:00,a0,13,ec,a1,31,c2,01
"WbemAdapFileSize"=dword:00002510
"WbemAdapStatus"=dword:00000000
"Last Counter"=dword:00000bfe
"Last Help"=dword:00000bfb
"First Counter"=dword:00000bbe
"First Help"=dword:00000bbf
"Library Validation
Code"=hex:7c,c8,2a,18,5c,df,c2,01,10,25,00,00,00,00,00,00
```

World Wide Web Service Registry Parameters

Windows Registry Editor Version 5.00

```
[HKEY_LOCAL_MACHINE\SYSTEM\CurrentControlSet\Services\W3SVC]
"Type"=dword:00000020
"Start"=dword:00000002
"ErrorControl"=dword:00000001
"ImagePath"=hex(2):43,00,3a,00,5c,00,57,00,49,00,4e,00,4e,00,54,00,5c,00,53,00,79,00,73,00,74,00,65,00,6d,00,33,00,32,00,5c,00,69,00,6e,00,65,00,74,00,73,00,72,00,76,00,5c,00,69,00,6e,00,65,00,74,00,69,00,6e,00,66,00,6f,00,2e,00,65,00,78,00,65,00,00,00
"DisplayName"="World Wide Web Publishing Service"
"DependOnService"=hex(7):49,00,49,00,53,00,41,00,44,00,4d,00,49,00,4e,00,00,00,00
"DependOnGroup"=hex(7):00,00
"ObjectName"="LocalSystem"
"Description"="Provides Web connectivity and administration through the Internet Information Services snap-in."
"FailureActions"=hex:ff,ff,ff,ff,00,00,00,00,00,00,00,00,03,00,00,98,66,0d,00,00,00,00,00,00,00,00,00,00,00,00,00,00,00,00,00,00,00,00,00,00,00,00,00,00,00
```

```
[HKEY_LOCAL_MACHINE\SYSTEM\CurrentControlSet\Services\W3SVC\ASP]
"NOTE"="This is for backward compatibility only."
```

```
[HKEY_LOCAL_MACHINE\SYSTEM\CurrentControlSet\Services\W3SVC\ASP\Parameters]
```

```
[HKEY_LOCAL_MACHINE\SYSTEM\CurrentControlSet\Services\W3SVC\Parameters]
"MajorVersion"=dword:00000005
"MinorVersion"=dword:00000000
"InstallPath"="C:\\WINNT\System32\\inetsrv"
"CertMapList"="C:\\WINNT\System32\\inetsrv\\iisrcmap.dll"
"AccessDeniedMessage"="Error: Access is Denied."
"Filter DLLs"=""
"LogFileDirectory"="C:\\WINNT\System32\\LogFiles"
"AcceptExOutstanding"=dword:00000050
```

```
[HKEY_LOCAL_MACHINE\SYSTEM\CurrentControlSet\Services\W3SVC\Parameters\ADCLaunch]
```

```
[HKEY_LOCAL_MACHINE\SYSTEM\CurrentControlSet\Services\W3SVC\Parameters\ADCLaunch\AdvancedDataFactory]
```

```
[HKEY_LOCAL_MACHINE\SYSTEM\CurrentControlSet\Services\W3SVC\Parameters\ADCLaunch\RDSServer.DataFactory]
```

```
[HKEY_LOCAL_MACHINE\SYSTEM\CurrentControlSet\Services\W3SVC\Parameters\Script Map]
```

```
[HKEY_LOCAL_MACHINE\SYSTEM\CurrentControlSet\Services\W3SVC\Parameters\Virtual Roots]
```

```
"/"="c:\\inetpub\\wwwroot,,205"
"/Scripts"="c:\\inetpub\\scripts,,1"
"/IISHelp"="c:\\winnt\\help\\iishelp,,1"
"/IISAdmin"="C:\\WINNT\System32\\inetsrv\\iisadmin,,1"
"/IISSamples"="c:\\inetpub\\iissamples,,1"
"/MSADC"="c:\\program files\\common files\\system\\msadc,,1"
"/_vti_bin"="C:\\Program Files\\Common Files\\Microsoft Shared\\Web Server Extensions\\40\\isapi,,1"
"/Rpc"="C:\\WINNT\\System32\\RpcProxy,,1"
"/Printers"="C:\\WINNT\\web\\printers,,201"
```

```
[HKEY_LOCAL_MACHINE\SYSTEM\CurrentControlSet\Services\W3SVC\Performance]
```

```
"Library"="w3ctrts.dll"
"Open"="OpenW3PerformanceData"
"Close"="CloseW3PerformanceData"
"Collect"="CollectW3PerformanceData"
"WbemAdapFileTime"=hex:00,5a,65,9a,60,5e,c2,01
"WbemAdapFileSize"=dword:00001d10
"WbemAdapStatus"=dword:00000000
"Last Counter"=dword:00000b76
"Last Help"=dword:00000b77
"First Counter"=dword:00000ad4
"First Help"=dword:00000ad5
"Library Validation
Code"=hex:00,5a,65,9a,60,5e,c2,01,10,1d,00,00,00,00,00,00
```

```
[HKEY_LOCAL_MACHINE\SYSTEM\CurrentControlSet\Services\W3SVC\Security]
```

```
"Security"=hex:01,00,14,80,a0,00,00,00,ac,00,00,00,14,00,00,00,30,00,00,00,2,00,1c,00,01,00,00,00,02,80,14,00,ff,01,0f,00,01,01,00,00,00,00,01,00,00,00,00,02,00,04,00,00,00,00,18,00,fd,01,02,00,01,01,00,00,00,00,05,12,00,00,00,74,00,6f,00,00,00,1c,00,ff,01,0f,00,01,02,00,00,00,00,05,20,00,00,00,20,02,00,00,72,00,73,00,00,00,18,00,8d,01,02,00,01,01,00,00,00,00,05,0b,00,00,00,20,02,00,00,00,00,1c,00,fd,01,02,00,01,02,00,00,00,00,\
```

00,05,20,00,00,00,23,02,00,00,72,00,73,00,01,01,00,00,00,00,00,05,12,00,00,\  
00,01,01,00,00,00,00,00,05,12,00,00,00

[HKEY\_LOCAL\_MACHINE\SYSTEM\CurrentControlSet\Services\W3SVC\enum]

"0"="Root\LEGACY\_W3SVC\0000"

"Count"=dword:00000001

"NextInstance"=dword:00000001

## RTE Input Parameters

Profile: m1profile  
File Path: C:\Program Files\BenchCraft\m1profile.xml  
Version: 5

Number of Engines: 63

Name: frte10a  
Description: frte10a  
Directory: c:\rtelogs\frte10a.log  
Machine: frte10  
Parameter Set: PARAM2  
Index: 0  
Seed: 4678  
Configured Users: 2770  
Pipe Name: DRIVER14723953  
Connect Rate: 1000  
Start Rate: 193  
Max. Concurrency: -1  
Concurrency Rate: 25  
CLIENT\_NURAND: 233  
CPU: 0  
Additional Options:

Name: frte10b  
Description: frte10b  
Directory: c:\rtelogs\frte10b.log  
Machine: frte10  
Parameter Set: PARAM2  
Index: 32812500  
Seed: 4678  
Configured Users: 2770  
Pipe Name: DRIVER24872015  
Connect Rate: 1000  
Start Rate: 193  
Max. Concurrency: -1  
Concurrency Rate: 25  
CLIENT\_NURAND: 233  
CPU: 1  
Additional Options:

Name: frte10c  
Description: frte10c  
Directory: c:\rtelogs\frte10c.log  
Machine: frte10  
Parameter Set: PARAM2  
Index: 65625000  
Seed: 4678  
Configured Users: 2770  
Pipe Name: DRIVER34966171  
Connect Rate: 1000  
Start Rate: 193  
Max. Concurrency: -1  
Concurrency Rate: 25  
CLIENT\_NURAND: 233  
CPU: 0  
Additional Options:

Name: frte10d  
Description: frte10d  
Directory: c:\rtelogs\frte10d.log  
Machine: frte10  
Parameter Set: PARAM2  
Index: 98437500  
Seed: 4678  
Configured Users: 2770  
Pipe Name: DRIVER45012500  
Connect Rate: 1000  
Start Rate: 193  
Max. Concurrency: -1  
Concurrency Rate: 25  
CLIENT\_NURAND: 233  
CPU: 1  
Additional Options:

Name: frte10e  
Description: frte10e  
Directory: c:\rtelogs\frte10e.log  
Machine: frte10  
Parameter Set: PARAM2  
Index: 131250000  
Seed: 4678  
Configured Users: 2770  
Pipe Name: DRIVER55066765  
Connect Rate: 1000  
Start Rate: 193  
Max. Concurrency: -1  
Concurrency Rate: 25  
CLIENT\_NURAND: 233  
CPU: 0  
Additional Options:

Name: frte10f  
Description: frte10f  
Directory: c:\rtelogs\frte10f.log  
Machine: frte10  
Parameter Set: PARAM2  
Index: 164062500  
Seed: 4678  
Configured Users: 2780  
Pipe Name: DRIVER65126187  
Connect Rate: 1000  
Start Rate: 193  
Max. Concurrency: -1  
Concurrency Rate: 25  
CLIENT\_NURAND: 233  
CPU: 1  
Additional Options:

Name: frte10g  
Description: frte10g  
Directory: c:\rtelogs\frte10g.log  
Machine: frte10  
Parameter Set: PARAM2  
Index: 196875000  
Seed: 4678  
Configured Users: 2780  
Pipe Name: DRIVER75175640  
Connect Rate: 1000  
Start Rate: 193  
Max. Concurrency: -1  
Concurrency Rate: 25  
CLIENT\_NURAND: 233  
CPU: 0  
Additional Options:

Name: frte10h  
Description: frte10h  
Directory: c:\rtelogs\frte10h.log  
Machine: frte10  
Parameter Set: PARAM2  
Index: 229687500  
Seed: 4678  
Configured Users: 2780  
Pipe Name: DRIVER85211109  
Connect Rate: 1000  
Start Rate: 193  
Max. Concurrency: -1  
Concurrency Rate: 25  
CLIENT\_NURAND: 233  
CPU: 1  
Additional Options:

Name: frte20a  
Description: frte20a  
Directory: c:\rtelogs\frte20a.log  
Machine: frte20  
Parameter Set: PARAM2  
Index: 262500000  
Seed: 4678  
Configured Users: 2620  
Pipe Name: DRIVER155552765  
Connect Rate: 1000  
Start Rate: 193  
Max. Concurrency: -1  
Concurrency Rate: 25  
CLIENT\_NURAND: 233  
CPU: 0  
Additional Options:

Name: frte20b  
Description: frte20b  
Directory: c:\rtelogs\frte20b.log  
Machine: frte20  
Parameter Set: PARAM2  
Index: 295312500  
Seed: 4678  
Configured Users: 2620  
Pipe Name: DRIVER165598015  
Connect Rate: 1000  
Start Rate: 193  
Max. Concurrency: -1  
Concurrency Rate: 25  
CLIENT\_NURAND: 233  
CPU: 1  
Additional Options:

Name: frte20c  
Description: frte20c  
Directory: c:\rtelogs\frte20c.log  
Machine: frte20  
Parameter Set: PARAM2  
Index: 328125000  
Seed: 4678  
Configured Users: 2620  
Pipe Name: DRIVER175634359  
Connect Rate: 1000  
Start Rate: 193  
Max. Concurrency: -1  
Concurrency Rate: 25  
CLIENT\_NURAND: 233  
CPU: 0  
Additional Options:

Name: frte20d  
Description: frte20d  
Directory: c:\rtelogs\frte20d.log  
Machine: frte20  
Parameter Set: PARAM2  
Index: 360937500  
Seed: 4678  
Configured Users: 2620  
Pipe Name: DRIVER185679015  
Connect Rate: 1000  
Start Rate: 193  
Max. Concurrency: -1  
Concurrency Rate: 25  
CLIENT\_NURAND: 233  
CPU: 1  
Additional Options:

Name: frte20e  
Description: frte20e  
Directory: c:\rtelogs\frte20e.log  
Machine: frte20  
Parameter Set: PARAM2  
Index: 393750000  
Seed: 4678  
Configured Users: 2620  
Pipe Name: DRIVER195713546  
Connect Rate: 1000  
Start Rate: 193  
Max. Concurrency: -1  
Concurrency Rate: 25  
CLIENT\_NURAND: 233  
CPU: 0  
Additional Options:

Name: frte20f  
Description: frte20f  
Directory: c:\rtelogs\frte20f.log  
Machine: frte20  
Parameter Set: PARAM2  
Index: 426562500  
Seed: 4678  
Configured Users: 2620  
Pipe Name: DRIVER205755140  
Connect Rate: 1000  
Start Rate: 193  
Max. Concurrency: -1  
Concurrency Rate: 25  
CLIENT\_NURAND: 233  
CPU: 1  
Additional Options:

Name: frte20g  
Description: frte20g  
Directory: c:\rtelogs\frte20g.log  
Machine: frte20  
Parameter Set: PARAM2  
Index: 459375000  
Seed: 4678  
Configured Users: 2620  
Pipe Name: DRIVER215788046  
Connect Rate: 1000  
Start Rate: 193  
Max. Concurrency: -1  
Concurrency Rate: 25  
CLIENT\_NURAND: 233  
CPU: 0  
Additional Options:

Name: frte20h  
Description: frte20h  
Directory: c:\rtelogs\frte20h.log  
Machine: frte20  
Parameter Set: PARAM2  
Index: 492187500  
Seed: 4678  
Configured Users: 2620  
Pipe Name: DRIVER225826796  
Connect Rate: 1000  
Start Rate: 193  
Max. Concurrency: -1  
Concurrency Rate: 25  
CLIENT\_NURAND: 233  
CPU: 1  
Additional Options:

Name: frte30a  
Description: frte30a  
Directory: c:\rtelogs\frte30a.log  
Machine: frte30  
Parameter Set: PARAM2  
Index: 525000000  
Seed: 4678  
Configured Users: 2890  
Pipe Name: DRIVER2966335687  
Connect Rate: 1000  
Start Rate: 193  
Max. Concurrency: -1  
Concurrency Rate: 25  
CLIENT\_NURAND: 233  
CPU: 0  
Additional Options:

Name: frte30b  
Description: frte30b  
Directory: c:\rtelogs\frte30b.log  
Machine: frte30  
Parameter Set: PARAM2  
Index: 557812500  
Seed: 4678  
Configured Users: 2890  
Pipe Name: DRIVER3066392812  
Connect Rate: 1000  
Start Rate: 193  
Max. Concurrency: -1  
Concurrency Rate: 25  
CLIENT\_NURAND: 233  
CPU: 1  
Additional Options:

Name: frte30c  
Description: frte30c  
Directory: c:\rtelogs\frte30c.log  
Machine: frte30  
Parameter Set: PARAM2  
Index: 590625000  
Seed: 4678  
Configured Users: 2890  
Pipe Name: DRIVER3166432171  
Connect Rate: 1000  
Start Rate: 193  
Max. Concurrency: -1  
Concurrency Rate: 25  
CLIENT\_NURAND: 233  
CPU: 0  
Additional Options:

Name: frte30d  
Description: frte30d  
Directory: c:\rtelogs\frte30d.log  
Machine: frte30  
Parameter Set: PARAM2  
Index: 623437500  
Seed: 4678  
Configured Users: 2890  
Pipe Name: DRIVER3266504046  
Connect Rate: 1000  
Start Rate: 193  
Max. Concurrency: -1  
Concurrency Rate: 25  
CLIENT\_NURAND: 233  
CPU: 1  
Additional Options:

Name: frte30e  
Description: frte30e  
Directory: c:\rtelogs\frte30e.log  
Machine: frte30  
Parameter Set: PARAM2  
Index: 656250000  
Seed: 4678  
Configured Users: 2900  
Pipe Name: DRIVER3366550687  
Connect Rate: 1000  
Start Rate: 193  
Max. Concurrency: -1  
Concurrency Rate: 25  
CLIENT\_NURAND: 233  
CPU: 0  
Additional Options:

Name: frte30g  
Description: frte30g  
Directory: c:\rtelogs\frte30g.log  
Machine: frte30  
Parameter Set: PARAM2  
Index: 721875000  
Seed: 4678  
Configured Users: 2900  
Pipe Name: DRIVER3566700406  
Connect Rate: 1000  
Start Rate: 193  
Max. Concurrency: -1  
Concurrency Rate: 25  
CLIENT\_NURAND: 233  
CPU: 0  
Additional Options:

Name: frte30h  
Description: frte30h  
Directory: c:\rtelogs\frte30h.log  
Machine: frte30  
Parameter Set: PARAM2  
Index: 754687500  
Seed: 4678  
Configured Users: 2900  
Pipe Name: DRIVER3666766140  
Connect Rate: 1000  
Start Rate: 193  
Max. Concurrency: -1  
Concurrency Rate: 25  
CLIENT\_NURAND: 233  
CPU: 1  
Additional Options:

Name: frte40a  
Description: frte40a  
Directory: c:\rtelogs\frte40a.log  
Machine: frte40  
Parameter Set: PARAM2  
Index: 787500000  
Seed: 4678  
Configured Users: 2770  
Pipe Name: DRIVER4367196046  
Connect Rate: 1000  
Start Rate: 193  
Max. Concurrency: -1  
Concurrency Rate: 25  
CLIENT\_NURAND: 233  
CPU: 0  
Additional Options:

Name: frte40b  
Description: frte40b  
Directory: c:\rtelogs\frte40b.log  
Machine: frte40  
Parameter Set: PARAM2  
Index: 820312500  
Seed: 4678  
Configured Users: 2770  
Pipe Name: DRIVER4467244484  
Connect Rate: 1000  
Start Rate: 193  
Max. Concurrency: -1  
Concurrency Rate: 25  
CLIENT\_NURAND: 233  
CPU: 1  
Additional Options:

Name: frte40c  
Description: frte40c  
Directory: c:\rtelogs\frte40c.log  
Machine: frte40  
Parameter Set: PARAM2  
Index: 853125000  
Seed: 4678  
Configured Users: 2770  
Pipe Name: DRIVER4567282265  
Connect Rate: 1000  
Start Rate: 193  
Max. Concurrency: -1  
Concurrency Rate: 25  
CLIENT\_NURAND: 233  
CPU: 0  
Additional Options:

Name: frte40d  
Description: frte40d  
Directory: c:\rtelogs\frte40d.log  
Machine: frte40  
Parameter Set: PARAM2  
Index: 885937500  
Seed: 4678  
Configured Users: 2770  
Pipe Name: DRIVER4667357593  
Connect Rate: 1000  
Start Rate: 193  
Max. Concurrency: -1  
Concurrency Rate: 25  
CLIENT\_NURAND: 233  
CPU: 1  
Additional Options:

Name: frte40e  
Description: frte40e  
Directory: c:\rtelogs\frte40e.log  
Machine: frte40  
Parameter Set: PARAM2  
Index: 918750000  
Seed: 4678  
Configured Users: 2770  
Pipe Name: DRIVER4767405796  
Connect Rate: 1000  
Start Rate: 193  
Max. Concurrency: -1  
Concurrency Rate: 25  
CLIENT\_NURAND: 233  
CPU: 0  
Additional Options:

Name: frte40f  
Description: frte40f  
Directory: c:\rtelogs\frte40f.log  
Machine: frte40  
Parameter Set: PARAM2  
Index: 951562500  
Seed: 4678  
Configured Users: 2780  
Pipe Name: DRIVER4867450406  
Connect Rate: 1000  
Start Rate: 193  
Max. Concurrency: -1  
Concurrency Rate: 25  
CLIENT\_NURAND: 233  
CPU: 1  
Additional Options:

Name: frte40g  
Description: frte40g  
Directory: c:\rtelogs\frte40g.log  
Machine: frte40  
Parameter Set: PARAM2  
Index: 984375000  
Seed: 4678  
Configured Users: 2780  
Pipe Name: DRIVER4967505484  
Connect Rate: 1000  
Start Rate: 193  
Max. Concurrency: -1  
Concurrency Rate: 25  
CLIENT\_NURAND: 233  
CPU: 0  
Additional Options:

Name: frte40h  
Description: frte40h  
Directory: c:\rtelogs\frte40h.log  
Machine: frte40  
Parameter Set: PARAM2  
Index: 1017187500  
Seed: 4678  
Configured Users: 2780  
Pipe Name: DRIVER5067590062  
Connect Rate: 1000  
Start Rate: 193  
Max. Concurrency: -1  
Concurrency Rate: 25  
CLIENT\_NURAND: 233  
CPU: 1  
Additional Options:

Name: frte50a  
Description: frte50a  
Directory: c:\rtelogs\frte50a.log  
Machine: frte50  
Parameter Set: PARAM2  
Index: 1050000000  
Seed: 4678  
Configured Users: 2780  
Pipe Name: DRIVER5768066062  
Connect Rate: 1000  
Start Rate: 193  
Max. Concurrency: -1  
Concurrency Rate: 25  
CLIENT\_NURAND: 233  
CPU: 0  
Additional Options:

Name: frte50b  
Description: frte50b  
Directory: c:\rtelogs\frte50b.log  
Machine: frte50  
Parameter Set: PARAM2  
Index: 1082812500  
Seed: 4678  
Configured Users: 2780  
Pipe Name: DRIVER5868120031  
Connect Rate: 1000  
Start Rate: 193  
Max. Concurrency: -1  
Concurrency Rate: 25  
CLIENT\_NURAND: 233  
CPU: 1  
Additional Options:

Name: frte50c  
Description: frte50c  
Directory: c:\rtelogs\frte50c.log  
Machine: frte50  
Parameter Set: PARAM2  
Index: 1115625000  
Seed: 4678  
Configured Users: 2780  
Pipe Name: DRIVER5968167296  
Connect Rate: 1000  
Start Rate: 193  
Max. Concurrency: -1  
Concurrency Rate: 25  
CLIENT\_NURAND: 233  
CPU: 0  
Additional Options:

Name: frte50d  
Description: frte50d  
Directory: c:\rtelogs\frte50d.log  
Machine: frte50  
Parameter Set: PARAM2  
Index: 1148437500  
Seed: 4678  
Configured Users: 2780  
Pipe Name: DRIVER6068289875  
Connect Rate: 1000  
Start Rate: 193  
Max. Concurrency: -1  
Concurrency Rate: 25  
CLIENT\_NURAND: 233  
CPU: 1  
Additional Options:

Name: frte50e  
Description: frte50e  
Directory: c:\rtelogs\frte50e.log  
Machine: frte50  
Parameter Set: PARAM2  
Index: 1181250000  
Seed: 4678  
Configured Users: 2770  
Pipe Name: DRIVER6168341984  
Connect Rate: 1000  
Start Rate: 193  
Max. Concurrency: -1  
Concurrency Rate: 25  
CLIENT\_NURAND: 233  
CPU: 0  
Additional Options:

Name: frte50f  
Description: frte50f  
Directory: c:\rtelogs\frte50f.log  
Machine: frte50  
Parameter Set: PARAM2  
Index: 1214062500  
Seed: 4678  
Configured Users: 2770  
Pipe Name: DRIVER6268394203  
Connect Rate: 1000  
Start Rate: 193  
Max. Concurrency: -1  
Concurrency Rate: 25  
CLIENT\_NURAND: 233  
CPU: 1  
Additional Options:

Name: frte50g  
Description: frte50g  
Directory: c:\rtelogs\frte50g.log  
Machine: frte50  
Parameter Set: PARAM2  
Index: 1246875000  
Seed: 4678  
Configured Users: 2770  
Pipe Name: DRIVER6369221937  
Connect Rate: 1000  
Start Rate: 193  
Max. Concurrency: -1  
Concurrency Rate: 25  
CLIENT\_NURAND: 233  
CPU: 0  
Additional Options:

Name: frte50h  
Description: frte50h  
Directory: c:\rtelogs\frte50h.log  
Machine: frte50  
Parameter Set: PARAM2  
Index: 1279687500  
Seed: 4678  
Configured Users: 2770  
Pipe Name: DRIVER6469272609  
Connect Rate: 1000  
Start Rate: 193  
Max. Concurrency: -1  
Concurrency Rate: 25  
CLIENT\_NURAND: 233  
CPU: 1  
Additional Options:



Name: frte60a  
Description: frte60a  
Directory: c:\rtelogs\frte60a.log  
Machine: frte60  
Parameter Set: PARAM2  
Index: 1312500000  
Seed: 4678  
Configured Users: 2620  
Pipe Name: DRIVER7159034000  
Connect Rate: 1000  
Start Rate: 193  
Max. Concurrency: -1  
Concurrency Rate: 25  
CLIENT\_NURAND: 233  
CPU: 0  
Additional Options:

Name: frte60b  
Description: frte60b  
Directory: c:\rtelogs\frte60b.log  
Machine: frte60  
Parameter Set: PARAM2  
Index: 1345312500  
Seed: 4678  
Configured Users: 2620  
Pipe Name: DRIVER7259107640  
Connect Rate: 1000  
Start Rate: 193  
Max. Concurrency: -1  
Concurrency Rate: 25  
CLIENT\_NURAND: 233  
CPU: 1  
Additional Options:

Name: frte60c  
Description: frte60c  
Directory: c:\rtelogs\frte60c.log  
Machine: frte60  
Parameter Set: PARAM2  
Index: 1378125000  
Seed: 4678  
Configured Users: 2620  
Pipe Name: DRIVER7359143578  
Connect Rate: 1000  
Start Rate: 193  
Max. Concurrency: -1  
Concurrency Rate: 25  
CLIENT\_NURAND: 233  
CPU: 0  
Additional Options:

Name: frte60d  
Description: frte60d  
Directory: c:\rtelogs\frte60d.log  
Machine: frte60  
Parameter Set: PARAM2  
Index: 1410937500  
Seed: 4678  
Configured Users: 2620  
Pipe Name: DRIVER7459167015  
Connect Rate: 1000  
Start Rate: 193  
Max. Concurrency: -1  
Concurrency Rate: 25  
CLIENT\_NURAND: 233  
CPU: 1  
Additional Options:

Name: frte60e  
Description: frte60e  
Directory: c:\rtelogs\frte60e.log  
Machine: frte60  
Parameter Set: PARAM2  
Index: 1443750000  
Seed: 4678  
Configured Users: 2630  
Pipe Name: DRIVER7559188718  
Connect Rate: 1000  
Start Rate: 193  
Max. Concurrency: -1  
Concurrency Rate: 25  
CLIENT\_NURAND: 233  
CPU: 0  
Additional Options:

Name: frte60f  
Description: frte60f  
Directory: c:\rtelogs\frte60f.log  
Machine: frte60  
Parameter Set: PARAM2  
Index: 1476562500  
Seed: 4678  
Configured Users: 2630  
Pipe Name: DRIVER7659224156  
Connect Rate: 1000  
Start Rate: 193  
Max. Concurrency: -1  
Concurrency Rate: 25  
CLIENT\_NURAND: 233  
CPU: 1  
Additional Options:

Name: frte60g  
Description: frte60g  
Directory: c:\rtelogs\frte60g.log  
Machine: frte60  
Parameter Set: PARAM2  
Index: 1509375000  
Seed: 4678  
Configured Users: 2630  
Pipe Name: DRIVER7759246812  
Connect Rate: 1000  
Start Rate: 193  
Max. Concurrency: -1  
Concurrency Rate: 25  
CLIENT\_NURAND: 233  
CPU: 0  
Additional Options:

Name: frte60h  
Description: frte60h  
Directory: c:\rtelogs\frte60h.log  
Machine: frte60  
Parameter Set: PARAM2  
Index: 1542187500  
Seed: 4678  
Configured Users: 2630  
Pipe Name: DRIVER7859276281  
Connect Rate: 1000  
Start Rate: 193  
Max. Concurrency: -1  
Concurrency Rate: 25  
CLIENT\_NURAND: 233  
CPU: 1  
Additional Options:

Name: frte70a  
Description: frte70a  
Directory: c:\frtelogs\рте70a.log  
Machine: frte70  
Parameter Set: PARAM2  
Index: 1575000000  
Seed: 4678  
Configured Users: 2620  
Pipe Name: DRIVER853952421  
Connect Rate: 1000  
Start Rate: 193  
Max. Concurrency: -1  
Concurrency Rate: 25  
CLIENT\_NURAND: 233  
CPU: 0  
Additional Options:

Name: frte70b  
Description: frte70b  
Directory: c:\frtelogs\рте70b.log  
Machine: frte70  
Parameter Set: PARAM2  
Index: 1607812500  
Seed: 4678  
Configured Users: 2620  
Pipe Name: DRIVER8617658171  
Connect Rate: 1000  
Start Rate: 193  
Max. Concurrency: -1  
Concurrency Rate: 25  
CLIENT\_NURAND: 233  
CPU: 1  
Additional Options:

Name: frte70c  
Description: frte70c  
Directory: c:\frtelogs\рте70c.log  
Machine: frte70  
Parameter Set: PARAM2  
Index: 1640625000  
Seed: 4678  
Configured Users: 2630  
Pipe Name: DRIVER8717687234  
Connect Rate: 1000  
Start Rate: 193  
Max. Concurrency: -1  
Concurrency Rate: 25  
CLIENT\_NURAND: 233  
CPU: 0  
Additional Options:

Name: frte70d  
Description: frte70d  
Directory: c:\frtelogs\рте70d.log  
Machine: frte70  
Parameter Set: PARAM2  
Index: 1673437500  
Seed: 4678  
Configured Users: 2630  
Pipe Name: DRIVER8817717718  
Connect Rate: 1000  
Start Rate: 193  
Max. Concurrency: -1  
Concurrency Rate: 25  
CLIENT\_NURAND: 233  
CPU: 1  
Additional Options:

Name: frte70e  
Description: frte70e  
Directory: c:\frtelogs\рте70e.log  
Machine: frte70  
Parameter Set: PARAM2  
Index: 1706250000  
Seed: 4678  
Configured Users: 2630  
Pipe Name: DRIVER8917754812  
Connect Rate: 1000  
Start Rate: 193  
Max. Concurrency: -1  
Concurrency Rate: 25  
CLIENT\_NURAND: 233  
CPU: 0  
Additional Options:

Name: frte70f  
Description: frte70f  
Directory: c:\frtelogs\рте70f.log  
Machine: frte70  
Parameter Set: PARAM2  
Index: 1739062500  
Seed: 4678  
Configured Users: 2630  
Pipe Name: DRIVER9017811078  
Connect Rate: 1000  
Start Rate: 193  
Max. Concurrency: -1  
Concurrency Rate: 25  
CLIENT\_NURAND: 233  
CPU: 1  
Additional Options:

Name: frte70g  
Description: frte70g  
Directory: c:\frtelogs\рте70g.log  
Machine: frte70  
Parameter Set: PARAM2  
Index: 1771875000  
Seed: 4678  
Configured Users: 2620  
Pipe Name: DRIVER9117828906  
Connect Rate: 1000  
Start Rate: 193  
Max. Concurrency: -1  
Concurrency Rate: 25  
CLIENT\_NURAND: 233  
CPU: 0  
Additional Options:

Name: frte70h  
Description: frte70h  
Directory: c:\frtelogs\рте70h.log  
Machine: frte70  
Parameter Set: PARAM2  
Index: 1804687500  
Seed: 4678  
Configured Users: 2620  
Pipe Name: DRIVER9218168437  
Connect Rate: 1000  
Start Rate: 193  
Max. Concurrency: -1  
Concurrency Rate: 25  
CLIENT\_NURAND: 233  
CPU: 1  
Additional Options:

Name: frte80a  
Description: frte80a  
Directory: c:\frtelogs\рте80a.log  
Machine: frte80  
Parameter Set: PARAM2  
Index: 1837500000  
Seed: 4678  
Configured Users: 2770  
Pipe Name: DRIVER9919498796  
Connect Rate: 1000  
Start Rate: 193  
Max. Concurrency: -1  
Concurrency Rate: 25  
CLIENT\_NURAND: 233  
CPU: 0  
Additional Options:

Name: frte80b  
Description: frte80b  
Directory: c:\frtelogs\рте80b.log  
Machine: frte80  
Parameter Set: PARAM2  
Index: 1870312500  
Seed: 4678  
Configured Users: 2770  
Pipe Name: DRIVER10019683375  
Connect Rate: 1000  
Start Rate: 193  
Max. Concurrency: -1  
Concurrency Rate: 25  
CLIENT\_NURAND: 233  
CPU: 1  
Additional Options:

Name: frte80c  
Description: frte80c  
Directory: c:\frtelogs\рте80c.log  
Machine: frte80  
Parameter Set: PARAM2  
Index: 1903125000  
Seed: 4678  
Configured Users: 2770  
Pipe Name: DRIVER10119700734  
Connect Rate: 1000  
Start Rate: 193  
Max. Concurrency: -1  
Concurrency Rate: 25  
CLIENT\_NURAND: 233  
CPU: 0  
Additional Options:

Name: frte80d  
Description: frte80d  
Directory: c:\frtelogs\рте80d.log  
Machine: frte80  
Parameter Set: PARAM2  
Index: 1935937500  
Seed: 4678  
Configured Users: 2770  
Pipe Name: DRIVER10219721250  
Connect Rate: 1000  
Start Rate: 193  
Max. Concurrency: -1  
Concurrency Rate: 25  
CLIENT\_NURAND: 233  
CPU: 1  
Additional Options:

Name: frte80e  
Description: frte80e  
Directory: c:\frtelogs\рте80e.log  
Machine: frte80  
Parameter Set: PARAM2  
Index: 1968750000  
Seed: 4678  
Configured Users: 2780  
Pipe Name: DRIVER10319736046  
Connect Rate: 1000  
Start Rate: 193  
Max. Concurrency: -1  
Concurrency Rate: 25  
CLIENT\_NURAND: 233  
CPU: 0  
Additional Options:

Name: frte80f  
Description: frte80f  
Directory: c:\frtelogs\рте80f.log  
Machine: frte80  
Parameter Set: PARAM2  
Index: 2001562500  
Seed: 4678  
Configured Users: 2780  
Pipe Name: DRIVER10419752234  
Connect Rate: 1000  
Start Rate: 193  
Max. Concurrency: -1  
Concurrency Rate: 25  
CLIENT\_NURAND: 233  
CPU: 1  
Additional Options:

Name: frte80g  
Description: frte80g  
Directory: c:\frtelogs\рте80g.log  
Machine: frte80  
Parameter Set: PARAM2  
Index: 2034375000  
Seed: 4678  
Configured Users: 2780  
Pipe Name: DRIVER10519766734  
Connect Rate: 1000  
Start Rate: 193  
Max. Concurrency: -1  
Concurrency Rate: 25  
CLIENT\_NURAND: 233  
CPU: 0  
Additional Options:

Name: frte80h  
Description: frte80h  
Directory: c:\frtelogs\рте80h.log  
Machine: frte80  
Parameter Set: PARAM2  
Index: 2067187500  
Seed: 4678  
Configured Users: 2780  
Pipe Name: DRIVER10619779687  
Connect Rate: 1000  
Start Rate: 193  
Max. Concurrency: -1  
Concurrency Rate: 25  
CLIENT\_NURAND: 233  
CPU: 1  
Additional Options:

Number of User groups: 63

Driver Engine: frte10a  
IIS Server: fclient10a  
SQL Server: ibmserv4  
Database: tpcc  
User: sa  
Protocol: HTML  
w\_id Range: 1 - 277  
w\_id Min Warehouse: 1  
w\_id Max Warehouse: 17200  
Scale: Normal  
User Count: 2770  
District id: 1  
Scale Down: No

Driver Engine: frte10b  
IIS Server: fclient10b  
SQL Server: ibmserv4  
Database: tpcc  
User: sa  
Protocol: HTML  
w\_id Range: 278 - 554  
w\_id Min Warehouse: 1  
w\_id Max Warehouse: 17200  
Scale: Normal  
User Count: 2770  
District id: 1  
Scale Down: No

Driver Engine: frte10c  
IIS Server: fclient10c  
SQL Server: ibmserv4  
Database: tpcc  
User: sa  
Protocol: HTML  
w\_id Range: 555 - 831  
w\_id Min Warehouse: 1  
w\_id Max Warehouse: 17200  
Scale: Normal  
User Count: 2770  
District id: 1  
Scale Down: No

Driver Engine: frte10d  
IIS Server: fclient10d  
SQL Server: ibmserv4  
Database: tpcc  
User: sa  
Protocol: HTML  
w\_id Range: 832 - 1108  
w\_id Min Warehouse: 1  
w\_id Max Warehouse: 17200  
Scale: Normal  
User Count: 2770  
District id: 1  
Scale Down: No

Driver Engine: frte10e  
IIS Server: fclient10e  
SQL Server: ibmserv4  
Database: tpcc  
User: sa  
Protocol: HTML  
w\_id Range: 1109 - 1385  
w\_id Min Warehouse: 1  
w\_id Max Warehouse: 17200  
Scale: Normal

User Count: 2770  
District id: 1  
Scale Down: No

Driver Engine: frte10f  
IIS Server: fclient10f  
SQL Server: ibmserv4  
Database: tpcc  
User: sa  
Protocol: HTML  
w\_id Range: 1386 - 1663  
w\_id Min Warehouse: 1  
w\_id Max Warehouse: 17200  
Scale: Normal  
User Count: 2780  
District id: 1  
Scale Down: No

Driver Engine: frte10g  
IIS Server: fclient10g  
SQL Server: ibmserv4  
Database: tpcc  
User: sa  
Protocol: HTML  
w\_id Range: 1664 - 1941  
w\_id Min Warehouse: 1  
w\_id Max Warehouse: 17200  
Scale: Normal  
User Count: 2780  
District id: 1  
Scale Down: No

Driver Engine: frte10h  
IIS Server: fclient10h  
SQL Server: ibmserv4  
Database: tpcc  
User: sa  
Protocol: HTML  
w\_id Range: 1942 - 2219  
w\_id Min Warehouse: 1  
w\_id Max Warehouse: 17200  
Scale: Normal  
User Count: 2780  
District id: 1  
Scale Down: No

Driver Engine: frte20a  
IIS Server: fclient20a  
SQL Server: ibmserv4  
Database: tpcc  
User: sa  
Protocol: HTML  
w\_id Range: 2220 - 2481  
w\_id Min Warehouse: 1  
w\_id Max Warehouse: 17200  
Scale: Normal  
User Count: 2620  
District id: 1  
Scale Down: No

Driver Engine: frte20b  
IIS Server: fclient20b  
SQL Server: ibmserv4  
Database: tpcc  
User: sa  
Protocol: HTML  
w\_id Range: 2482 - 2743  
w\_id Min Warehouse: 1

w\_id Max Warehouse: 17200  
Scale: Normal  
User Count: 2620  
District id: 1  
Scale Down: No

Driver Engine: frte20c  
IIS Server: fclient20c  
SQL Server: ibmserv4  
Database: tpcc  
User: sa  
Protocol: HTML  
w\_id Range: 2744 - 3005  
w\_id Min Warehouse: 1  
w\_id Max Warehouse: 17200  
Scale: Normal  
User Count: 2620  
District id: 1  
Scale Down: No

Driver Engine: frte20d  
IIS Server: fclient20d  
SQL Server: ibmserv4  
Database: tpcc  
User: sa  
Protocol: HTML  
w\_id Range: 3006 - 3267  
w\_id Min Warehouse: 1  
w\_id Max Warehouse: 17200  
Scale: Normal  
User Count: 2620  
District id: 1  
Scale Down: No

Driver Engine: frte20e  
IIS Server: fclient20e  
SQL Server: ibmserv4  
Database: tpcc  
User: sa  
Protocol: HTML  
w\_id Range: 3268 - 3529  
w\_id Min Warehouse: 1  
w\_id Max Warehouse: 17200  
Scale: Normal  
User Count: 2620  
District id: 1  
Scale Down: No

Driver Engine: frte20f  
IIS Server: fclient20f  
SQL Server: ibmserv4  
Database: tpcc  
User: sa  
Protocol: HTML  
w\_id Range: 3530 - 3791  
w\_id Min Warehouse: 1  
w\_id Max Warehouse: 17200  
Scale: Normal  
User Count: 2620  
District id: 1  
Scale Down: No

Driver Engine: frte20g  
IIS Server: fclient20g  
SQL Server: ibmserv4  
Database: tpcc  
User: sa  
Protocol: HTML

w\_id Range: 3792 - 4053  
w\_id Min Warehouse: 1  
w\_id Max Warehouse: 17200  
Scale: Normal  
User Count: 2620  
District id: 1  
Scale Down: No

Driver Engine: frte20h  
IIS Server: fclient20h  
SQL Server: ibmserv4  
Database: tpcc  
User: sa  
Protocol: HTML  
w\_id Range: 4054 - 4315  
w\_id Min Warehouse: 1  
w\_id Max Warehouse: 17200  
Scale: Normal  
User Count: 2620  
District id: 1  
Scale Down: No

Driver Engine: frte30a  
IIS Server: fclient30a  
SQL Server: ibmserv4  
Database: tpcc  
User: sa  
Protocol: HTML  
w\_id Range: 4316 - 4604  
w\_id Min Warehouse: 1  
w\_id Max Warehouse: 17200  
Scale: Normal  
User Count: 2890  
District id: 1  
Scale Down: No

Driver Engine: frte30b  
IIS Server: fclient30b  
SQL Server: ibmserv4  
Database: tpcc  
User: sa  
Protocol: HTML  
w\_id Range: 4605 - 4893  
w\_id Min Warehouse: 1  
w\_id Max Warehouse: 17200  
Scale: Normal  
User Count: 2890  
District id: 1  
Scale Down: No

Driver Engine: frte30c  
IIS Server: fclient30c  
SQL Server: ibmserv4  
Database: tpcc  
User: sa  
Protocol: HTML  
w\_id Range: 4894 - 5182  
w\_id Min Warehouse: 1  
w\_id Max Warehouse: 17200  
Scale: Normal  
User Count: 2890  
District id: 1  
Scale Down: No

Driver Engine: frte30d  
IIS Server: fclient30d  
SQL Server: ibmserv4  
Database: tpcc

User: sa  
Protocol: HTML  
w\_id Range: 5183 - 5471  
w\_id Min Warehouse: 1  
w\_id Max Warehouse: 17200  
Scale: Normal  
User Count: 2890  
District id: 1  
Scale Down: No

Driver Engine: frt30e  
IIS Server: fclient30e  
SQL Server: ibmserv4  
Database: tpcc  
User: sa  
Protocol: HTML  
w\_id Range: 5472 - 5761  
w\_id Min Warehouse: 1  
w\_id Max Warehouse: 17200  
Scale: Normal  
User Count: 2900  
District id: 1  
Scale Down: No

Driver Engine: frt30g  
IIS Server: fclient30g  
SQL Server: ibmserv4  
Database: tpcc  
User: sa  
Protocol: HTML  
w\_id Range: 5762 - 6051  
w\_id Min Warehouse: 1  
w\_id Max Warehouse: 17200  
Scale: Normal  
User Count: 2900  
District id: 1  
Scale Down: No

Driver Engine: frt30h  
IIS Server: fclient30h  
SQL Server: ibmserv4  
Database: tpcc  
User: sa  
Protocol: HTML  
w\_id Range: 6052 - 6341  
w\_id Min Warehouse: 1  
w\_id Max Warehouse: 17200  
Scale: Normal  
User Count: 2900  
District id: 1  
Scale Down: No

Driver Engine: frt40a  
IIS Server: fclient40a  
SQL Server: ibmserv4  
Database: tpcc  
User: sa  
Protocol: HTML  
w\_id Range: 6342 - 6618  
w\_id Min Warehouse: 1  
w\_id Max Warehouse: 17200  
Scale: Normal  
User Count: 2770  
District id: 1  
Scale Down: No

Driver Engine: frt40b  
IIS Server: fclient40b

SQL Server: ibmserv4  
Database: tpcc  
User: sa  
Protocol: HTML  
w\_id Range: 6619 - 6895  
w\_id Min Warehouse: 1  
w\_id Max Warehouse: 17200  
Scale: Normal  
User Count: 2770  
District id: 1  
Scale Down: No

Driver Engine: frt40c  
IIS Server: fclient40c  
SQL Server: ibmserv4  
Database: tpcc  
User: sa  
Protocol: HTML  
w\_id Range: 6896 - 7172  
w\_id Min Warehouse: 1  
w\_id Max Warehouse: 17200  
Scale: Normal  
User Count: 2770  
District id: 1  
Scale Down: No

Driver Engine: frt40d  
IIS Server: fclient40d  
SQL Server: ibmserv4  
Database: tpcc  
User: sa  
Protocol: HTML  
w\_id Range: 7173 - 7449  
w\_id Min Warehouse: 1  
w\_id Max Warehouse: 17200  
Scale: Normal  
User Count: 2770  
District id: 1  
Scale Down: No

Driver Engine: frt40e  
IIS Server: fclient40e  
SQL Server: ibmserv4  
Database: tpcc  
User: sa  
Protocol: HTML  
w\_id Range: 7450 - 7726  
w\_id Min Warehouse: 1  
w\_id Max Warehouse: 17200  
Scale: Normal  
User Count: 2770  
District id: 1  
Scale Down: No

Driver Engine: frt40f  
IIS Server: fclient40f  
SQL Server: ibmserv4  
Database: tpcc  
User: sa  
Protocol: HTML  
w\_id Range: 7727 - 8004  
w\_id Min Warehouse: 1  
w\_id Max Warehouse: 17200  
Scale: Normal  
User Count: 2780  
District id: 1  
Scale Down: No

Driver Engine: frte40g  
IIS Server: fclient40g  
SQL Server: ibmserv4  
Database: tpcc  
User: sa  
Protocol: HTML  
w\_id Range: 8005 - 8282  
w\_id Min Warehouse: 1  
w\_id Max Warehouse: 17200  
Scale: Normal  
User Count: 2780  
District id: 1  
Scale Down: No

Driver Engine: frte40h  
IIS Server: fclient40h  
SQL Server: ibmserv4  
Database: tpcc  
User: sa  
Protocol: HTML  
w\_id Range: 8283 - 8560  
w\_id Min Warehouse: 1  
w\_id Max Warehouse: 17200  
Scale: Normal  
User Count: 2780  
District id: 1  
Scale Down: No

Driver Engine: frte50a  
IIS Server: fclient50a  
SQL Server: ibmserv4  
Database: tpcc  
User: sa  
Protocol: HTML  
w\_id Range: 8561 - 8838  
w\_id Min Warehouse: 1  
w\_id Max Warehouse: 17200  
Scale: Normal  
User Count: 2780  
District id: 1  
Scale Down: No

Driver Engine: frte50b  
IIS Server: fclient50b  
SQL Server: ibmserv4  
Database: tpcc  
User: sa  
Protocol: HTML  
w\_id Range: 8839 - 9116  
w\_id Min Warehouse: 1  
w\_id Max Warehouse: 17200  
Scale: Normal  
User Count: 2780  
District id: 1  
Scale Down: No

Driver Engine: frte50c  
IIS Server: fclient50c  
SQL Server: ibmserv4  
Database: tpcc  
User: sa  
Protocol: HTML  
w\_id Range: 9117 - 9394  
w\_id Min Warehouse: 1  
w\_id Max Warehouse: 17200  
Scale: Normal  
User Count: 2780  
District id: 1

Scale Down: No

Driver Engine: frte50d  
IIS Server: fclient50d  
SQL Server: ibmserv4  
Database: tpcc  
User: sa  
Protocol: HTML  
w\_id Range: 9395 - 9672  
w\_id Min Warehouse: 1  
w\_id Max Warehouse: 17200  
Scale: Normal  
User Count: 2780  
District id: 1  
Scale Down: No

Driver Engine: frte50e  
IIS Server: fclient50e  
SQL Server: ibmserv4  
Database: tpcc  
User: sa  
Protocol: HTML  
w\_id Range: 9673 - 9949  
w\_id Min Warehouse: 1  
w\_id Max Warehouse: 17200  
Scale: Normal  
User Count: 2770  
District id: 1  
Scale Down: No

Driver Engine: frte50f  
IIS Server: fclient50f  
SQL Server: ibmserv4  
Database: tpcc  
User: sa  
Protocol: HTML  
w\_id Range: 9950 - 10226  
w\_id Min Warehouse: 1  
w\_id Max Warehouse: 17200  
Scale: Normal  
User Count: 2770  
District id: 1  
Scale Down: No

Driver Engine: frte50g  
IIS Server: fclient50g  
SQL Server: ibmserv4  
Database: tpcc  
User: sa  
Protocol: HTML  
w\_id Range: 10227 - 10503  
w\_id Min Warehouse: 1  
w\_id Max Warehouse: 17200  
Scale: Normal  
User Count: 2770  
District id: 1  
Scale Down: No

Driver Engine: frte50h  
IIS Server: fclient50h  
SQL Server: ibmserv4  
Database: tpcc  
User: sa  
Protocol: HTML  
w\_id Range: 10504 - 10780  
w\_id Min Warehouse: 1  
w\_id Max Warehouse: 17200  
Scale: Normal

User Count: 2770  
District id: 1  
Scale Down: No  
  
Driver Engine: frte60a  
IIS Server: fclient60a  
SQL Server: ibmserv4  
Database: tpcc  
User: us  
Protocol: HTML  
w\_id Range: 10781 - 11042  
w\_id Min Warehouse: 1  
w\_id Max Warehouse: 17200  
Scale: Normal  
User Count: 2620  
District id: 1  
Scale Down: No

Driver Engine: frte60b  
IIS Server: fclient60b  
SQL Server: ibmserv4  
Database: tpcc  
User: sa  
Protocol: HTML  
w\_id Range: 11043 - 11304  
w\_id Min Warehouse: 1  
w\_id Max Warehouse: 17200  
Scale: Normal  
User Count: 2620  
District id: 1  
Scale Down: No

Driver Engine: frte60c  
IIS Server: fclient60c  
SQL Server: ibmserv4  
Database: tpcc  
User: sa  
Protocol: HTML  
w\_id Range: 11305 - 11566  
w\_id Min Warehouse: 1  
w\_id Max Warehouse: 17200  
Scale: Normal  
User Count: 2620  
District id: 1  
Scale Down: No

Driver Engine: frte60d  
IIS Server: fclient60d  
SQL Server: ibmserv4  
Database: tpcc  
User: sa  
Protocol: HTML  
w\_id Range: 11567 - 11828  
w\_id Min Warehouse: 1  
w\_id Max Warehouse: 17200  
Scale: Normal  
User Count: 2620  
District id: 1  
Scale Down: No

Driver Engine: frte60e  
IIS Server: fclient60e  
SQL Server: ibmserv4  
Database: tpcc  
User: sa  
Protocol: HTML  
w\_id Range: 11829 - 12091  
w\_id Min Warehouse: 1

w\_id Max Warehouse: 17200  
Scale: Normal  
User Count: 2630  
District id: 1  
Scale Down: No

Driver Engine: frte60f  
IIS Server: fclient60f  
SQL Server: ibmserv4  
Database: tpcc  
User: sa  
Protocol: HTML  
w\_id Range: 12092 - 12354  
w\_id Min Warehouse: 1  
w\_id Max Warehouse: 17200  
Scale: Normal  
User Count: 2630  
District id: 1  
Scale Down: No

Driver Engine: frte60g  
IIS Server: fclient60g  
SQL Server: ibmserv4  
Database: tpcc  
User: sa  
Protocol: HTML  
w\_id Range: 12355 - 12617  
w\_id Min Warehouse: 1  
w\_id Max Warehouse: 17200  
Scale: Normal  
User Count: 2630  
District id: 1  
Scale Down: No

Driver Engine: frte60h  
IIS Server: fclient60h  
SQL Server: ibmserv4  
Database: tpcc  
User: sa  
Protocol: HTML  
w\_id Range: 12618 - 12880  
w\_id Min Warehouse: 1  
w\_id Max Warehouse: 17200  
Scale: Normal  
User Count: 2630  
District id: 1  
Scale Down: No

Driver Engine: frte70a  
IIS Server: fclient70a  
SQL Server: ibmserv4  
Database: tpcc  
User: sa  
Protocol: HTML  
w\_id Range: 12881 - 13142  
w\_id Min Warehouse: 1  
w\_id Max Warehouse: 17200  
Scale: Normal  
User Count: 2620  
District id: 1  
Scale Down: No

Driver Engine: frte70b  
IIS Server: fclient70b  
SQL Server: ibmserv4  
Database: tpcc  
User: sa  
Protocol: HTML



w\_id Range: 13143 - 13404  
w\_id Min Warehouse: 1  
w\_id Max Warehouse: 17200  
Scale: Normal  
User Count: 2620  
District id: 1  
Scale Down: No

Driver Engine: frte70c  
IIS Server: fclient70c  
SQL Server: ibmserv4  
Database: tpcc  
User: sa  
Protocol: HTML  
w\_id Range: 13405 - 13667  
w\_id Min Warehouse: 1  
w\_id Max Warehouse: 17200  
Scale: Normal  
User Count: 2630  
District id: 1  
Scale Down: No

Driver Engine: frte70d  
IIS Server: fclient70d  
SQL Server: ibmserv4  
Database: tpcc  
User: sa  
Protocol: HTML  
w\_id Range: 13668 - 13930  
w\_id Min Warehouse: 1  
w\_id Max Warehouse: 17200  
Scale: Normal  
User Count: 2630  
District id: 1  
Scale Down: No

Driver Engine: frte70e  
IIS Server: fclient70e  
SQL Server: ibmserv4  
Database: tpcc  
User: sa  
Protocol: HTML  
w\_id Range: 13931 - 14193  
w\_id Min Warehouse: 1  
w\_id Max Warehouse: 17200  
Scale: Normal  
User Count: 2630  
District id: 1  
Scale Down: No

Driver Engine: frte70f  
IIS Server: fclient70f  
SQL Server: ibmserv4  
Database: tpcc  
User: sa  
Protocol: HTML  
w\_id Range: 14194 - 14456  
w\_id Min Warehouse: 1  
w\_id Max Warehouse: 17200  
Scale: Normal  
User Count: 2630  
District id: 1  
Scale Down: No

Driver Engine: frte70g  
IIS Server: fclient70g  
SQL Server: ibmserv4  
Database: tpcc

User: sa  
Protocol: HTML  
w\_id Range: 14457 - 14718  
w\_id Min Warehouse: 1  
w\_id Max Warehouse: 17200  
Scale: Normal  
User Count: 2620  
District id: 1  
Scale Down: No

Driver Engine: frte70h  
IIS Server: fclient70h  
SQL Server: ibmserv4  
Database: tpcc  
User: sa  
Protocol: HTML  
w\_id Range: 14719 - 14980  
w\_id Min Warehouse: 1  
w\_id Max Warehouse: 17200  
Scale: Normal  
User Count: 2620  
District id: 1  
Scale Down: No

Driver Engine: frte80a  
IIS Server: fclient80a  
SQL Server: ibmserv4  
Database: tpcc  
User: sa  
Protocol: HTML  
w\_id Range: 14981 - 15257  
w\_id Min Warehouse: 1  
w\_id Max Warehouse: 17200  
Scale: Normal  
User Count: 2770  
District id: 1  
Scale Down: No

Driver Engine: frte80b  
IIS Server: fclient80b  
SQL Server: ibmserv4  
Database: tpcc  
User: sa  
Protocol: HTML  
w\_id Range: 15258 - 15534  
w\_id Min Warehouse: 1  
w\_id Max Warehouse: 17200  
Scale: Normal  
User Count: 2770  
District id: 1  
Scale Down: No

Driver Engine: frte80c  
IIS Server: fclient80c  
SQL Server: ibmserv4  
Database: tpcc  
User: sa  
Protocol: HTML  
w\_id Range: 15535 - 15811  
w\_id Min Warehouse: 1  
w\_id Max Warehouse: 17200  
Scale: Normal  
User Count: 2770  
District id: 1  
Scale Down: No

Driver Engine: frte80d  
IIS Server: fclient80d

SQL Server: ibmserv4  
 Database: tpcc  
 User: sa  
 Protocol: HTML  
 w\_id Range: 15812 - 16088  
 w\_id Min Warehouse: 1  
 w\_id Max Warehouse: 17200  
 Scale: Normal  
 User Count: 2770  
 District id: 1  
 Scale Down: No

Driver Engine: frt80e  
 IIS Server: fclient80e  
 SQL Server: ibmserv4  
 Database: tpcc  
 User: sa  
 Protocol: HTML  
 w\_id Range: 16089 - 16366  
 w\_id Min Warehouse: 1  
 w\_id Max Warehouse: 17200  
 Scale: Normal  
 User Count: 2780  
 District id: 1  
 Scale Down: No

Driver Engine: frt80f  
 IIS Server: fclient80f  
 SQL Server: ibmserv4  
 Database: tpcc  
 User: sa  
 Protocol: HTML  
 w\_id Range: 16367 - 16644  
 w\_id Min Warehouse: 1  
 w\_id Max Warehouse: 17200  
 Scale: Normal  
 User Count: 2780  
 District id: 1  
 Scale Down: No

Driver Engine: frt80g  
 IIS Server: fclient80g  
 SQL Server: ibmserv4  
 Database: tpcc  
 User: sa  
 Protocol: HTML  
 w\_id Range: 16645 - 16922  
 w\_id Min Warehouse: 1  
 w\_id Max Warehouse: 17200  
 Scale: Normal  
 User Count: 2780  
 District id: 1  
 Scale Down: No

Driver Engine: frt80h  
 IIS Server: fclient80h  
 SQL Server: ibmserv4  
 Database: tpcc  
 User: sa  
 Protocol: HTML  
 w\_id Range: 16923 - 17200  
 w\_id Min Warehouse: 1  
 w\_id Max Warehouse: 17200  
 Scale: Normal  
 User Count: 2780  
 District id: 1  
 Scale Down: No

Number of Parameter Sets: 2

~Default

Default Parameter Set

	Txn Weight	Think Time	Key Time	RT Delay	RT Fence	Menu Delay
--	------------	------------	----------	----------	----------	------------

5.00 0.10

New Order	10.00	12.05		18.01		0.10
-----------	-------	-------	--	-------	--	------

5.00 0.10

Payment	10.00	12.05		3.01		0.10
---------	-------	-------	--	------	--	------

5.00 0.10

Delivery	1.00	5.05		2.01		0.10
----------	------	------	--	------	--	------

20.00 0.10

Stock Level	1.00	5.05		2.01		0.10
-------------	------	------	--	------	--	------

5.00 0.10

Order Status	1.00	10.05		2.01		0.10
--------------	------	-------	--	------	--	------

PARAM2

3 Tier

	Txn Weight	Think Time	Key Time	RT Delay	RT Fence	Menu Delay
--	------------	------------	----------	----------	----------	------------

5.00 0.10

New Order	10.09	12.05		18.01		0.10
-----------	-------	-------	--	-------	--	------

5.00 0.10

Payment	9.66	12.05		3.01		0.10
---------	------	-------	--	------	--	------

5.00 0.10

Delivery	0.90	5.05		2.01		0.10
----------	------	------	--	------	--	------

20.00 0.10

Stock Level	0.90	5.05		2.01		0.10
-------------	------	------	--	------	--	------

5.00 0.10

Order Status	0.90	10.05		2.01		0.10
--------------	------	-------	--	------	--	------

## Appendix D: 60-Day Space

TPC-C 60-Day Space Requirements						
Warehouses	17,200				tpmC	215,485.89
Table	Rows	Data KB	Index KB	Extra 5% KB	8HR Space	Total Space KB
Warehouse	17,200	1,864	184	102.40		2,150.40
District	172,000	19,384	224	980.40		20,588.40
Item	100,000	9,528	200	486.40		10,214.40
New-Order	154,800,000	2,758,136	7,048		1,376,000.00	4,141,184.00
History	516,000,000	30,805,976	119,752		6,199,106.48	37,124,834.48
Orders	516,000,000	16,848,984	38,640		3,385,148.42	20,272,772.42
Customer	516,000,000	375,272,728	23,418,360	19,934,554.40		418,625,642.40
Order-Line	5,159,987,284	343,999,160	814,096		69,118,311.13	413,931,567.13
Stock	1,720,000,000	550,400,000	1,164,992	27,578,249.60		579,143,241.60
Totals		1,320,115,760	25,563,496	47,514,373.20	80,078,566.03	1,473,272,195.23
Segment	LogDev Cnt.	Segment Size	Needed	Overhead		Not Needed
misc	20	580,608,000	475,503,311	4,755,033		(100,349,655.65)
big	20	1,032,192,000	997,768,884	9,977,689		(24,445,427.16)
master, msdb,model	1	13,312	13,312			-
tpcc_root	1	8,192	8,192			-
tempdb	1	8,704	8,704			-
Totals		1,612,830,208.00	1,473,302,403.23	14,732,721.95		(124,795,082.81)
Dynamic Space	391,654,120.00	Sum of Data for Order, Order-Line and History				
Static Space	1,016,272,231.15	Data + Index + 5% Space + Overhead - Dynamic Space				
Free Space	80,108,774.03	Total Segment Size - Dynamic Space - Static Space - Not needed				
Daily Growth	78,507,629.42	(Dynamic Space/W * 62.5) * tpmC				
Daily Spread	(37,652,670.10)	Free Space - 1.5 * Daily Growth (Zero If Negative)				
60-Day Space (KB)	5,726,729,996.43	Static Space + 60 (Daily Growth + Daily Spread)				
60-Day Space (GB)	5,461.44	60-Day Space in GB (Excludes OS,Paging and RDBMS Logs)				
Available (GB)	19,909.68	Total storage configured and available for database, minus logs, in RAID-0 configuration.				
Log File Storage Requirement						
Log Size (MB)	471,000.00	Total Size of Log File				
% Log Used	32.6816	% of Log File Used During Entire Run				
Total N-O Txn	34,651,461.00	Total Count of New-Order Transactions during Entire Run				
Log / N-O Txn	4.55	KB of Log per New-Order Transaction				
8 Hour Log (GB)	448.71	8 Hours of Log in GB (Excluding Space for Redundancy)				
Log Configured (GB)	474.04					
Disk Capacity	MB	GB				
18.2GB	17,736	16.93				
36.4GB	35,472	33.86				
Space Usage	GB Needed		Disks Priced	Disk Size	GB Priced	GB Usable
60-Day (RAID-0)	5,461.44		588	36.4GB	19,909.68	19,909.68
					Total DB	19,909.68
8hr Log (RAID-1)	448.71		28	36.4GB	948.08	474.04
					Total Log	474.04
OS, SQL Server	4.00		1	18.2GB	33.86	33.86
Total Space	5,914.14		617		20,891.62	20,417.58

---

## Appendix E: Third-Party Quotations



Protect Your Data - Grow Your Business

To:  
Attention:  
Phone:  
Fax:  
Email:

From: Alan Powers  
Phone: (248)223-1020 x344  
Fax: (248)223-1026  
Email: [apowers@compsat.com](mailto:apowers@compsat.com)

QUOTE # : 16W445\_032604  
DATE: 03/26/04

## IBM x445 Configuration

Part No.	Description	Qty	List Price		Compsat Discounted Price	
			(per unit) US Dollar	(quantity x unit price) US Dollar	(per unit) US Dollar	(quantity x unit price) US Dollar
<b>x445 SERVER</b>						
88704BX	x445, 2xXeon MP 3.0GHz/400MHz, 4MB, 0GB, O/Bay, 2x1050W p/s, Rack	2	\$26,599.00	\$53,198.00	\$22,343.16	\$44,686.32
96P2688	3 YR onsite repair 24x7x4 hour (x445)	2	\$3,390.00	\$6,780.00	\$2,983.20	\$5,966.40
13N0721	3.0GHz/4MB Xeon Processor Upgrade	12	\$6,599.00	\$79,188.00	\$5,939.10	\$71,269.20
02R1870	xSeries 445 SMP Expansion Module	2	\$4,849.00	\$9,698.00	\$4,364.10	\$8,728.20
02R2013	xSeries 445 Two-Chassis 16-Way Configuration Kit	1	\$4,999.00	\$4,999.00	\$4,499.10	\$4,499.10
33L5039	1GB PC2100 DDR ECC SDRAM RDIMM	64	\$619.00	\$39,616.00	\$557.10	\$35,654.40
32P0726	IBM 36.4GB 10K Ultra320 SCSI Hot-Swap SL HDD	1	\$275.00	\$275.00	\$247.50	\$247.50
24P0960	IBM TotalStorage FASTT FC2-133 Host Bus Adapter	4	\$1,485.00	\$5,940.00	\$1,336.50	\$5,346.00
31P6087	3.5M Interconnect Management Cable Kit	5	\$49.00	\$245.00	\$44.10	\$220.50
QLA2350BK	QLogic SANBlade QLA2350 FC-VI Adapter	6	\$2,026.70	\$12,160.20	\$1,824.03	\$10,944.18
633147N	E54 15" Colour Monitor (Stealth Grey)/MPRII	1	\$119.00	\$119.00	\$107.10	\$107.10
30L9183	3 YR onsite exch. 24x7x4 hour (E54 Monitor)	1	\$90.00	\$90.00	\$79.20	\$79.20
31P7415	IBM Preferred Pro Full-size Keyboard PS/2	1	\$29.00	\$29.00	\$26.10	\$26.10
28L3673	IBM Sleek 2-Button Mouse	1	\$14.95	\$14.95	\$13.46	\$13.46
<b>FAST700(s)</b>						
17401RU	IBM FAST700 Storage Expansion Enclosure	44	\$6,000.00	\$264,000.00	\$5,040.00	\$221,760.00
41L2768	3 YR onsite repair 24x7x4 hour (FAST700)	44	\$760.00	\$33,440.00	\$668.80	\$29,427.20
8684-1RX	IBM RXE-100 Remote Expansion Enclosure	1	\$4,569.00	\$4,569.00	\$4,112.10	\$4,112.10
96P2469	3 YR onsite repair 24x7x4 hour (RXE-100)	1	\$1,330.00	\$1,330.00	\$1,170.40	\$1,170.40
31P5998	IBM Remote I/O PCI-X 6-Slot Expansion Kit	1	\$1,699.00	\$1,699.00	\$1,529.10	\$1,529.10
24P0960	IBM TotalStorage FASTT FC2-133 Host Bus Adapter	2	\$1,485.00	\$2,970.00	\$1,336.50	\$2,673.00
17421RU	IBM TotalStorage FAST700 Storage Server	6	\$46,499.00	\$278,994.00	\$41,849.10	\$251,094.60
41L2768	3 YR onsite repair 24x7x4 hour (FAST700)	6	\$760.00	\$4,560.00	\$668.80	\$4,012.80
19K1269	IBM FAST700 Mini Hub	10	\$899.00	\$8,990.00	\$809.10	\$8,091.00
19K1271	IBM Short Wave SFP Module	186	\$499.00	\$92,814.00	\$449.10	\$83,532.60
19K1247	IBM 1m LC-LC Fibre Channel Cable	68	\$79.00	\$5,372.00	\$71.10	\$4,834.80
19K1248	IBM 5m LC-LC Fibre Channel Cable	38	\$129.00	\$4,902.00	\$116.10	\$4,411.80
06P5772	2Gbps FC 36.4GB 15K Hot-Swap HDD	616	\$1,115.00	\$686,840.00	\$1,003.50	\$618,156.00
<b>RACK and OPTIONS</b>						
9306421	NetBAY42 SX Standard Expansion Rack Cabinet - includes Perforated front door	5	\$1,439.00	\$7,195.00	\$1,295.10	\$6,475.50
41L2758	3 YR onsite repair 24x7x4 hour (NetBAY Rack)	5	\$168.00	\$840.00	\$147.84	\$739.20
33L3477	IBM UPS 500	1	\$99.00	\$99.00	\$89.10	\$89.10
00N7991	IBM 20/40GB DDS/4 4mm Internal Tape Drive -SCSI	1	\$699.00	\$699.00	\$629.10	\$629.10
0034BOX	IBM NetBAY Tape Enclosure	1	\$849.00	\$849.00	\$764.10	\$764.10
3534F08	SAN Fibre Channel 8-Port Switch	4	\$5,250.00	\$21,000.00	\$4,725.00	\$18,900.00
19K1271	IBM Short Wave SFP Module	8	\$499.00	\$3,992.00	\$449.10	\$3,592.80
19K1248	IBM 5M LC-LC Fibre Channel Cable	12	\$129.00	\$1,548.00	\$116.10	\$1,393.20
96P2047	3 YR onsite repair 24x7x4 hour (SAN Switch)	4	\$1,152.00	\$4,608.00	\$1,013.76	\$4,055.04
<b>x225 SERVER(s)</b>						
864762X	x225, Intel Xeon 3.06GHz/533MHz, 512KB, 512MB, 1x36.4GB, 1x425W p/s, Tow	8	\$1,775.00	\$14,200.00	\$1,491.00	\$11,928.00
96P2250	3 YR onsite repair 24x7x4 hour (x225)	8	\$1,000.00	\$8,000.00	\$880.00	\$7,040.00
24P8122	3.06GHz/533Mhz, 512KB Upgrade with Intel Xeon Processor	8	\$999.00	\$7,992.00	\$899.10	\$7,192.80
33L5038	512MB PC2100 CL2.5 ECC DDR SDRAM RDIMM	16	\$249.00	\$3,984.00	\$224.10	\$3,585.60
31P6401	NetXtreme 1000T Dual-Port Ethernet Adapter	16	\$269.00	\$4,304.00	\$242.10	\$3,873.60
ANA64044	Adaptec Quartet66 Network 4-port Interface Adapter (ANA64044)	8	\$550.00	\$4,400.00	\$495.00	\$3,960.00
QLA2350-BK	QLogic SANBlade 2350 FC-VI Adapter	8	\$2,026.70	\$16,213.60	\$1,824.03	\$14,592.24
633147N	E54 15" Colour Monitor (Stealth Grey)/MPRII	8	\$119.00	\$952.00	\$107.10	\$856.80
30L9183	3 YR onsite exch. 24x7x4 hour (E54 Monitor)	8	\$90.00	\$720.00	\$79.20	\$633.60
<b>SOFTWARE &amp; SERVICES</b>						
4816-6DU	IBM Preload Kit for Datacenter (1-16 Processors)	1	\$54,555.00	\$54,555.00	\$49,099.50	\$49,099.50
4816-DDX	IBM Maintenance Update for Datacenter (1-16 Processors) - 1 Year	3	\$5,119.00	\$15,357.00	\$4,607.10	\$13,821.30
23L9991	3 Years of Support for Datacenter - MAPS 10 incidents at \$9000/year	3	\$9,000.00	\$27,000.00	\$8,100.00	\$24,300.00
06P7514	xSeries Enterprise Rack Setup	5	\$400.00	\$2,000.00	\$360.00	\$1,800.00
06P7515	xSeries Enterprise Rack Config	5	\$160.00	\$800.00	\$144.00	\$720.00
58P8665	Option Integration Fee	5	\$110.00	\$550.00	\$99.00	\$495.00
06P7505	Load Non-Image Custom Ultra Image - Server	1	\$35.00	\$35.00	\$31.50	\$31.50
			<b>TOTAL =</b>	<b>\$1,804,724.75</b>	<b>TOTAL =</b>	<b>\$1,603,161.04</b>

25330 Telegraph Road / Suite 200 Raleigh Officecentre / Southfield, Michigan 48034  
Phone: 248-223-1020 / Fax: 248-223-1026 / [www.compsat.com](http://www.compsat.com)

NOTE:  
- This quote may include Compsat Technology consulting and configuration charges.  
- Mfg. pricing is out of our control and could change without notice.  
- Pricing good for 30 Days from date quoted.

16W445\_032604\_IBM.xls

Microsoft Corporation  
One Microsoft Way  
Redmond, WA 98052-6399

Tel 425 882 8080  
Fax 425 936 7329  
<http://www.microsoft.com/>

**Microsoft**

March 23, 2004

IBM Corporation  
Chris King  
3039 Cornwallis Road  
Research Triangle Park,  
NC 27709

Ms. King:

Here is the information you requested regarding pricing for several Microsoft products to be used in conjunction with your TPC-C benchmark testing.

All pricing shown is in US Dollars (\$).

Part Number	Description	Unit Price	Quantity	Price
810-00846	<b>SQL Server 2000 Enterprise Edition</b> <i>Per processor licensing</i> <i>Discount Schedule: Open Program Level C</i> <i>Unit Price reflects a 17% discount from the retail unit price of \$19,999.</i>	\$16,541	16	\$264,656
C11-00821	<b>Windows 2000 Server</b> <i>Server license only - No CALs</i> <i>Discount Schedule: Open Program - No Level</i> <i>Unit Price reflects a 8% discount from the retail unit price of \$799.</i>	\$738	8	\$5,904
254-00170	<b>Visual C++ Standard</b> <i>No discounts applied</i>	\$109	1	\$109
PRO-PRORS-16U-01	<b>Database Server Support Package</b> <i>1 Year Term</i>	\$1,950	3	\$5,850

All products are currently orderable through Microsoft's normal distribution channels.

This quote is valid for the next 90 days.

If we can be of any further assistance, please contact Jamie Reding at (425) 703-0510 or [jamiere@microsoft.com](mailto:jamiere@microsoft.com).

Reference ID: PCchki0423034988

Please include this Reference ID in any correspondence regarding this price quote.