



TPC Benchmark™ C Full Disclosure Report

Sun Microsystems

Sun SPARC Enterprise T5440 Servers

Using

Oracle Database 11g with

Oracle Real Application Clusters and Partitioning

First Edition

November 3, 2009

Revised

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4150 Network Circle, Santa Clara, CA 95054

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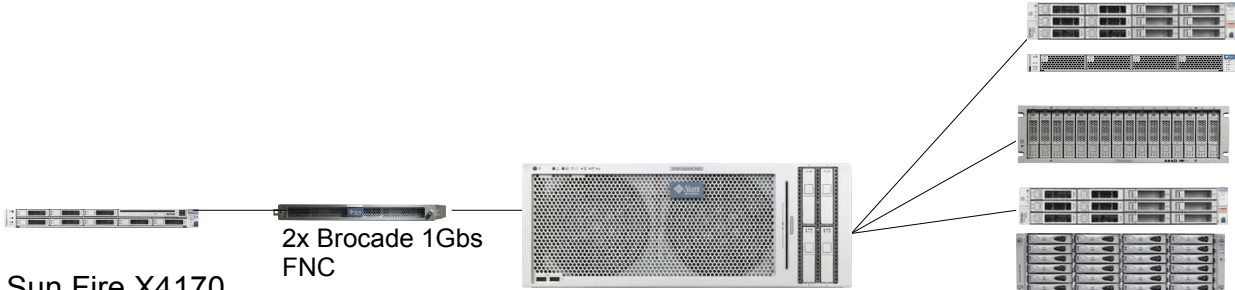
Abstract

This report documents the methodology and results of the TPC Benchmark TM C test conducted on the following environment as measured by Sun Microsystems. The benchmark configuration, environment and methodology used to produce and validate the test results, and the pricing model used to calculate the price/performance, were audited by Francois Raab of InfoSizing to verify compliance with the relevant TPC specifications.

<i>System</i>	<i>Processors</i>	<i>Database Environment</i>	<i>Operating System</i>
12 Sun SPARC Enterprise T5440 Servers	4 UltraSPARC T2 Plus 1.6GHz (per T5440)	Oracle 11g with Real Application Clusters and Partitioning	Solaris 10 10/09

TPC Benchmark TM C Metrics

<i>Total System Cost</i>	<i>TPC-C Throughput</i>	<i>Price / Performance</i>	<i>Availability Date</i>
Three year cost includes: • Hardware • Software • Maintenance	Maximum Qualified Throughput expressed as transactions per minute – C (tpmC)	Total System Cost / tpmC	Date for which all components, hardware and software are available for purchase
\$18,083,745	7,646,486.7	\$2.36 USD	March 19, 2010

	Sun SPARC Enterprise T5440 Cluster with Oracle Database 11g with Real Application Clusters and Partitioning			TPC-C 5.10.1 TPC-Pricing 1.5.0
				Report Date November 3, 2009 Revised December 23, 2009
Total System Cost	TPC-C Throughput	Price/Performance		Availability Date
\$18,083,745 USD	7,646,486.7 tpmC	\$2.36 USD/tpmC		3/19/2010
Database Server Processors/Cores/Threads	Database Manager	Operating System	Other Software	Number of Users
UltraSPARC T2 Plus 1.6GHz 48 / 384 / 3072	Oracle Database 11g Enterprise Ed. With Real Application Clusters and Part.	Solaris 10 10/09	Tuxedo CFS-R Tier 1 Sun One Java Web Server 7.1	6,048,000
 <u>24 Sun Fire X4170</u> 2 2.53GHz Intel Xeon E5540 QC 48GB Memory 300GB SAS disk <u>12 Sun SPARC Enterprise T5440</u> 4 1.6GHz UltraSPARC T2 Plus 512GB Memory 2 300GB 10K rpm SAS disks 3 8Gbs FC dual port 2 4Gbs FC dual port 4RU High <u>60 X4275 COMSTAR</u> 5 1TB SATA disks Sun F5100 Flash Array 1.92TB <u>X4275 COMSTAR</u> 6 J4400 Arrays w/ 24 1TB SATA disks ea. <u>24 ST6140</u> 16 300GB 15K rpm disks 4GB write cache				
System Component	Each Server Node		Each Client	
Processors/Cores/Threads and cache	4/32/256	UltraSPARC T2 Plus 1.6GHz 4 MB L2 Cache	2/8/16	Intel Xeon E5540 8MB LLC Cache
Memory		512GB (6TB Total all nodes)		48GB
Disk Controllers	3 2	8Gbs FC Dual Port 4Gbs FC Dual Port	1	8 port Internal SAS
OS Disks (each system)	2	300GB 10K rpm 2.5" SAS	1	300GB 10K rpm 2.5" SAS
Disk Drives (Equally visible to all T5440 nodes)	4800 384 449	24GB SSD Flash Modules 300GB 15K rpm 2.5" SAS 1TB 7.2K rpm 3.5" SATA		
Total Storage		686.6TB		

Description	Part Number	Price Source	Unit Price	Qty	Extended Price	Discounted Price	3 yr Maint. Price
Server Hardware							
T5440, XATO base chasis, 4 PSUs	SEVASY11Z		1 5,000	12	60,000	45,600	
Pwr Jumper Cables, 2.5mx1 RoHS	X9238-1-A		1 10	12	120	91	
4Gb FC dual port	SG-XPCIE2FC-QF4		1 1,995	24	47,880	33,995	
8Gb FC dual port	SG-XPCIE2FC-EM8-Z		1 2,399	36	86,364	61,318	
Sun PCI-E Dual 10 GigE Fibre	X1027A-Z		1 995	12	11,940	9,074	
SE 300GB 10K 2.5 SAS HDD	SEVY3G11Z		1 689	24	16,536	12,567	
T5440 8C 1.6Ghz, 32GB 667Mhz	SEVX1ED1Z		1 29,200	48	1,401,600	1,065,216	
SE 16GB FBDIMM (2*8GB) MEM	SESX2D1Z		1 3,900	288	1,123,200	853,632	
T5440 Disk Filler Panel	SEVY9MF1Z		1 0	24	0	0	
T5440 DVD Filler Panel	SEVY9DF1Z		1 0	12	0	0	
SE T5x20 EXPRESS RAIL KIT	SESX9RK2Z		1 150	12	1,800	1,476	
APC Smart-UPS XL 3000VA + 2 additional batteries (+2 entire spares)	SUA3000R3XLNETPKG + 2 SUA48RMXLBP3U		4 3,123	14	43,722	43,722	
3 year 7x24 Gold support for T5440	IWU-T5440-4P-24-3G		1 25,851	12			310,210
Sub-Total						2,082,970	310,210
Server Storage							
X4275 3.5-inch base 1 x PSU	X4275-S1-AA		1 2,895	61	176,595	134,212	
Open Solaris 2009.06 pre-install	5902A		1 0	61	0	0	
Jumper Cable Kit: 1 x 1m C13	XSR-JUMP-1MC13		1 23	61	1,403	1,066	
3.5inch 1TB STAT7.2K RPM HDD	RA-ST1CR-1T7K		1 659	305	200,995	152,756	
8Gb FC dual port	SG-XPCIE2FC-QF8-Z		1 2,399	20	47,980	34,066	
8Gb FC single port	SG-XPCIE1FC-QF8-Z		1 1,249	41	51,209	36,358	
8-port External SAS/SATA HBA	SG-XPCIE8SAS-E-Z		1 550	244	134,200	95,282	
8-port Internal SAS/SATA HBA	SG-PCIE8SAS-I-Z		1 249	61	15,189	10,784	
1 x Intel Xeon E5540 (2.53GHz)	5863A		1 1,199	61	73,139	55,586	
AC PSU 1050W	6328A		1 245	61	14,945	11,358	
X4270 CPU Filler Panel XATO	5896A		1 0	61	0	0	
2GB (1 x 2GB) DDR3-1066	5866A		1 105	183	19,215	14,603	
3.5-inch HDD Filler Panel XATO	5897A		1 0	427	0	0	
X4275 Slide Rail Kit XATO	5889A		1 150	61	9,150	7,503	
DIMM slot filler panel	5879A		1 0	915	0	0	
X4270 X4275 CPU Heatsink XATO	5899A		1 0	61	0	0	
SF X4275 3Yr Gold 7x24 Sys Svc	IWU-X4275-24-3G		1 2,447	61			149,241
0.5M, Mini, shielded, SAS cable	XTA25X0-0.5M-SAS-Z		1 95	244	23,180	19,008	
Sun Storage F5100 Flash Array	TA5100RASA4-80A		1 159,995	60	9,599,700	6,623,793	
3Yr Gold support for F5100	GOLD-STK-SVC		1 5,385	60			323,071
ST6140A-4-4800G-1x1x16x300J-RR	XTC6140R11A2J4800Z		1 63,615	24	1,526,760	946,591	
ST6140 7x24 3yr Gold support	IWU-ST6140-4-24-3G		1 3,672	24			88,136
APC Smart-UPS 2200VA RM 2U 120V 120V (+2 spares)	SUA2200RM2U		4 1,150	14	16,100	16,100	
15M LC-LC FC Optical Cable	X9734A-Z		1 105	258	27,090	14,087	
J4400 array, 24x3.5" 7.2K rpm 1TB SATA	XTA4400R00A2N24		1 28,295	6	169,770	139,211	
6m, Mini, shielded, SAS cable	XTA-6.0M-SAS		1 325	6	1,950	1,599	
STK J4400 7x24 UG 3Y GOLD	IWU-STJ4400-24-3G		1 2,131	6	12,788		12,788
Sun Rack II 42U	XSR-1242E		1 2,849	7	19,943	16,353	
PDU 15kVA, Single Phase, LV	XSR-15K-L630		1 1,200	14	16,800	13,776	
24x7 3 year Gold support for SR-II 42U	IWU-SR-1242-24-3H		1 818	7			5,726
Slide Rail Kit for Sun Rack II	XTA6000-RK2-RAIL		1 175	90	15,750	12,915	
Sub-Total						8,357,009	578,962
Server Software							
Solaris 10 10/09 for T5440	SEVY9SD1Z		1 0	12	0	0	
Oracle 11g Ent. Ed., Per Processor, Unlimited Users for 3 years			3 23,750	192	4,560,000	4,560,000	
Real Applications Clusters, Per Processor, Unlmt Users for 3 years			3 11,500	192	2,208,000	2,208,000	
Partitioning, Per Processor, Unlimited Users for 3 years			3 5,750	192	1,104,000	1,104,000	
Oracle Incident Server Support Package for 3 years			3 27,600	3			82,800
Sub-Total						7,872,000	82,800

Description	Part Number	Price Source	Unit Price	Qty	Extended Price	Discounted Price	3 yr Maint. Price
Server Hardware							
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SE 300GB 10K 2.5 SAS HDD	SEVY3G11Z	1	689	24	16,536	12,567	
T5440 8C 1.6Ghz, 32GB 667Mhz	SEVX1ED1Z	1	29,200	48	1,401,600	1,065,216	
SE 16GB FBDIMM (2*8GB) MEM	SESX2D1Z	1	3,900	288	1,123,200	853,632	
T5440 Disk Filler Panel	SEVY9MF1Z	1	0	24	0	0	
T5440 DVD Filler Panel	SEVY9DF1Z	1	0	12	0	0	
SE T5x20 EXPRESS RAIL KIT	SESX9RK2Z	1	150	12	1,800	1,476	
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1 x Intel Xeon E5540 (2.53GHz)	5863A	1	1,199	61	73,139	55,586	
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Partitioning, Per Processor, Unlimited Users for 3 years		3	5,750	192	1,104,000	1,104,000	
Oracle Incident Server Support Package for 3 years		3	27,600	3			82,800
Sub-Total						7,872,000	82,800

Numerical Quantity Summary

MQTh, computed Maximum Qualified Throughput

7,646,486.77 tpmC

Response Time in Seconds	<u>90th %</u>	<u>Avg.</u>	<u>Max.</u>
New-Order	0.170	0.168	5.885
Payment	0.160	0.156	5.758
Order-Status	0.150	0.150	5.433
Delivery (Interactive)	0.120	0.134	3.869
Delivery (Deferred)	0.040	0.021	2.839
Stock-Level	0.210	0.182	4.796
Menu	0.120	0.136	4.474

Response Time delay added for emulated components 0.1

Transaction Mix, in percent of total transactions

New-Order	44.87%
Payment	43.04%
Order-Status	4.02%
Delivery	4.03%
Stock-Level	4.04%

Keying / Think Times (in seconds)	<u>Min.</u>		<u>Avg.</u>		<u>Max.</u>	
New-Order	18.010	0.000	18.011	12.019	18.082	120.212
Payment	3.010	0.000	3.010	12.020	3.090	120.215
Order-Status	2.010	0.000	2.010	10.023	2.025	100.211
Delivery	2.010	0.000	2.010	5.020	2.025	50.210
Stock-Level	2.010	0.000	2.010	5.021	2.023	50.210

Test Duration

Ramp-up Time	3,360 seconds
Measurement Interval	7,320 seconds
Number of Checkpoints	Ongoing
Checkpoint Interval	Ongoing Incremental Checkpoints
Number of transactions (all types) completed in Measurement Interval	2,079,196,221

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Preface

This report documents the compliance of the Sun Microsystems TPC Benchmark TM C testing on the Sun SPARC Enterprise T5440 Server Cluster running Oracle 11g with Oracle Real Application Clusters and Partitioning, executing the TPC Benchmark TM C Standard, Revision 5.10.1.

The TPC Benchmark TM C Full Disclosure Report is organized as follows:

- The main body of the document lists each item in Clause 8 of the TPC Benchmark TM C Standard and explains how each specification is satisfied.
- Appendix A contains the application source code that implements the Tuxedo transaction server code and Java Web Server plug-ins.
- Appendix B contains the code used to create and load the database.
- Appendix C contains the configuration information for the Solaris 10 10/09, Open Solaris 2009.06, Java Web Server, Oracle Database 11g with Oracle Real Application Clusters and Oracle Partitioning and Tuxedo CFS-R.

Sun SPARC Enterprise T5440 Servers TPC Benchmark TMC Full Disclosure

Introduction

The TPC Benchmark TM C Standard Specification requires test sponsors to publish, and make available to the public, a full disclosure report for the results to be considered compliant with the Standard.

This report is intended to satisfy the Standard's requirement for full disclosure. It documents the compliance of the benchmark tests required in the *TPC Benchmark TM C* results for the Sun SPARC Enterprise T5440 Servers running Oracle Database 11g with Oracle Real Application Cluster and Partitioning.

In the *Standard Specification*, the main headings in Clause 8 are keyed to the other clauses. The headings in this report use the same sequence, so that they correspond to the titles or subjects referred to in Clause 8.

Each section in this report begins with the text of the corresponding item from Clause 8 of the *Standard Specification*, printed in italic type. The plain type text that follows explains how the tests comply with the TPC-C Benchmark

0 General Items

0.1 Application Code and Definition Statements

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

Appendix A contains the application source code that implements the transactions and forms modules.

0.2 Sponsor

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

This benchmark test was sponsored by Sun Microsystems, Inc.

0.3 Parameter Settings

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

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

Appendix C contains all the required parameter settings for the T5440 database nodes, the X4275 COMSTAR nodes, the Brocade 5300 SAN Switch, the X4170 clients, all Solaris 10 and Open Solaris tunables, along with parameters for Oracle Database 11g with Real Application Clusters and Partitioning and Tuxedo.

0.4 Configuration Diagrams

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

The SUT consists of 12 Sun SPARC Enterprise T5440 Servers in a cluster running Oracle Database 11g with Real Application Clusters and Partitioning. Each of the 12 T5440s are configured identically with the following equipment:

- 4 1.6GHz UltraSPARC T2 Plus Processors
- 512GB Memory
- 2 300GB SAS 2.5" disks
- 3 8Gbs Dual port PCI-E FC-AL
- 2 4Gbs Dual port PCI-E FC-AL
- 1 10Gbs Dual port PCI-E FC Ethernet
- 4 port 1Gbs integrated Ethernet
- 1 service processor and service network

Each T5440 is configured with 2 ST6140 disk arrays for the Oracle log files. Each ST6140 is configured with 16 300GB 15K rpm SAS disks. The log files are mirrored via Oracle Database 11g. Each ST6140 is connected to its T5440 via a 4Gbs fibre to the 4Gbs dual port PCI-E FC-AL. An additional 4Gbs fibre is routed from the ST6140s to a port on the Brocade 5300 SAN switches. Each T5440 has 2 additional 4Gbs fibres connected from the 4Gbs FC-AL cards to the Brocade 5300. This enables access of each node to every log device configured in the environment.

The T5440s are clustered via two networks. The data is communicated over a 10Gbs fibre ethernet through a Brocade TurboIron 24 port switch. The RAC "heartbeat" is across a 1Gbs ethernet via copper through a Brocade FastIron 48 port switch.

The T5440s are all running Solaris 10 10/09, Oracle Database 11g with Oracle Real Application Clusters and Partitioning software.

The storage environment for the SUT consists of 61 Sun Fire X4275 Servers running OpenSolaris 2009.06 as a Common Multiprotocol SCSI Target (COMSTAR) host for the disk environment. Each SF X4275 server is configured with:

- 1 Intel Xeon E5540 2.53GHz QC processor
- 6GB Memory

- 5 1TB SATA 3.5" disks
- 1 8Gbs Dual port PCI-E FC-AL (in 20 COMSTAR units)
- 1 8Gbs Single port PCI-E FC-AL (in 41 COMSTAR units)
- 4 8 port External SAS/SATA PCI-E cards
- 1 8 port Internal SAS/SATA PCI-E card
- 4 port 1Gbs integrated Ethernet
- 1 service processor and service network

For 60 of the COMSTAR hosts, each is configured with 1 Sun Storage F5100 Flash Array. Each F5100 array is configured with 80 24GB FMODES (Flash Modules), for a total of 1.92TB. The F5100s are connected via 0.5m SAS cables, 1 to each 8 port External SAS/SATA PCI-E card. Multiple logical units (LUNs) are striped across all 80 FMODES for a F5100. Additional LUNs are created using the 1TB SATA disks which also contain mirrored backups of the DBMS used for durability testing. All of the LUNs from the F5100 COMSTAR nodes are exported and visible to all of the T5440 Database nodes via the Brocade SAN switches using an 8Gbs fibre connection. (Note: For the 20 COMSTAR nodes that are configured with dual port 8Gbs cards, only one 8Gbs port is used.)

The remaining COMSTAR host is configured with 6 J4400 disk arrays to satisfy the remaining 60 day space requirements. Each J4400 array is configured with 24 1TB 7.2K rpm SATA disks and connected to the COMSTAR via 1 SAS cable. LUNs are created by striping across the J4400s and exported and visible to each of the T5440 Database nodes via the Brocade 5300 SAN switches.

The Brocade 5300 SAN switches have an 8Gbs connection from each of the COMSTAR nodes, and 6 8Gbs connections from each of the T5440s and 6 8Gbs connections between each SAN switch. The ST6140s are connected to the T5440s and the SAN switches for full node log access via 4Gbs connections.

The transactions are entered via a Remote Terminal Emulator which communicates with Java Web Server running on 24 Sun Fire X4170 clients. Each client is configured with:

- 2 Intel Xeon E5540 2.53GHz QC processors
- 48GB memory
- 1 300GB SAS disk
- 1 8 port Internal SAS/SATA PCI-E card
- 4 port 1Gbs integrated Ethernet
- 1 service processor and service network

The client systems receive transactions via Java Web Server which communicates with Tuxedo CFS-R Tier 1 with connections into the Oracle Database 11g with Real Application Clusters and Partitioning.

There are two other networks configured on the system that do not participate in atomic transactions. The first is a service processor network which all systems and almost all disk devices are members of. This is used for powering on and off and system console access. The other is a 1Gbs ethernet between each of the T5440s, X4275s, X4170s, and ST6140s to administer software and other non-performance related activities.

Figure 1 shows the measured configuration and Figure 2 the full priced configuration. The priced system under test (SUT) was identical to the measured configuration, except for the addition of APC Smart-UPS for the logs and T5440s.

Measured Configuration

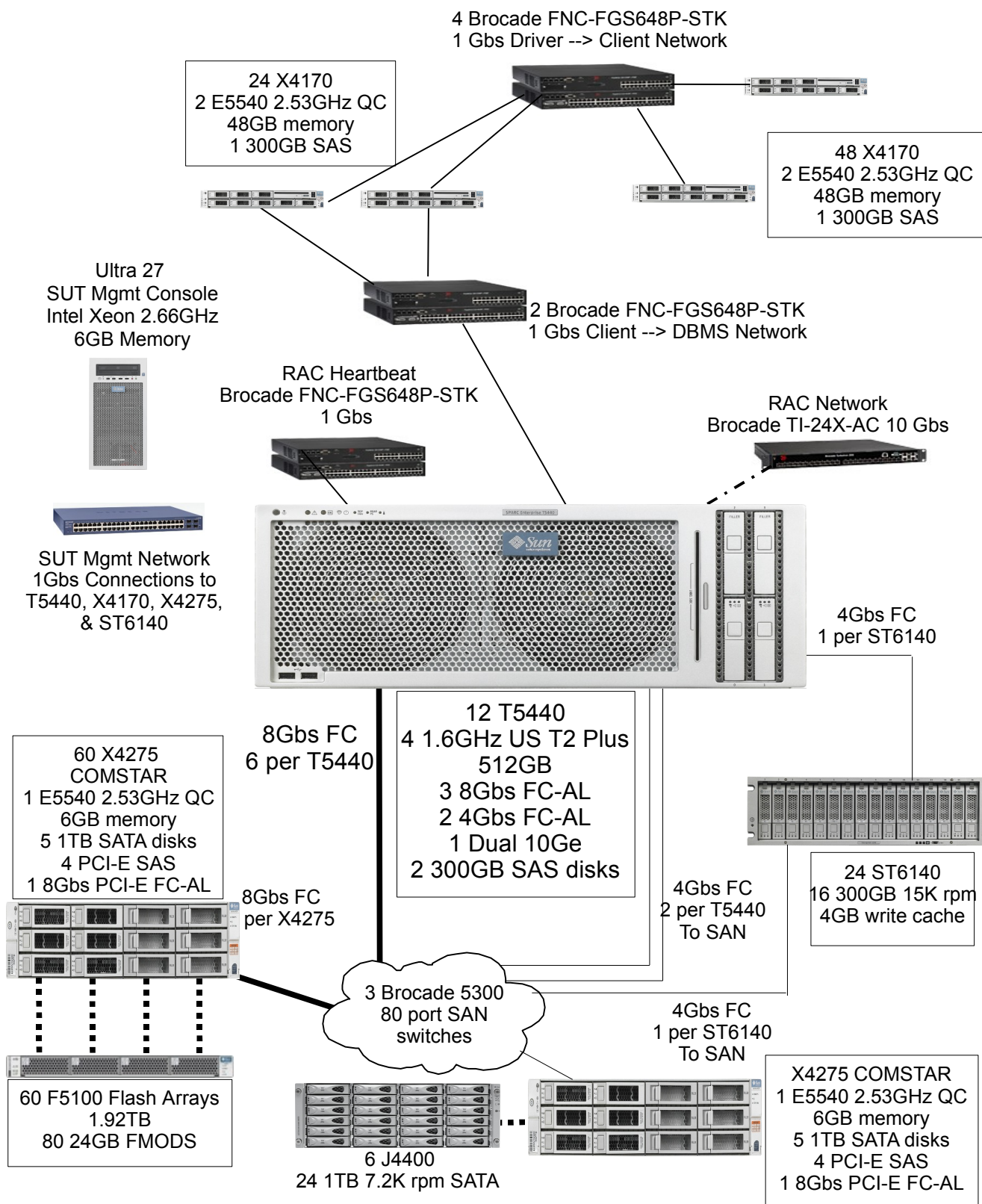


Figure 1 : Measured Configuration

Priced Configuration

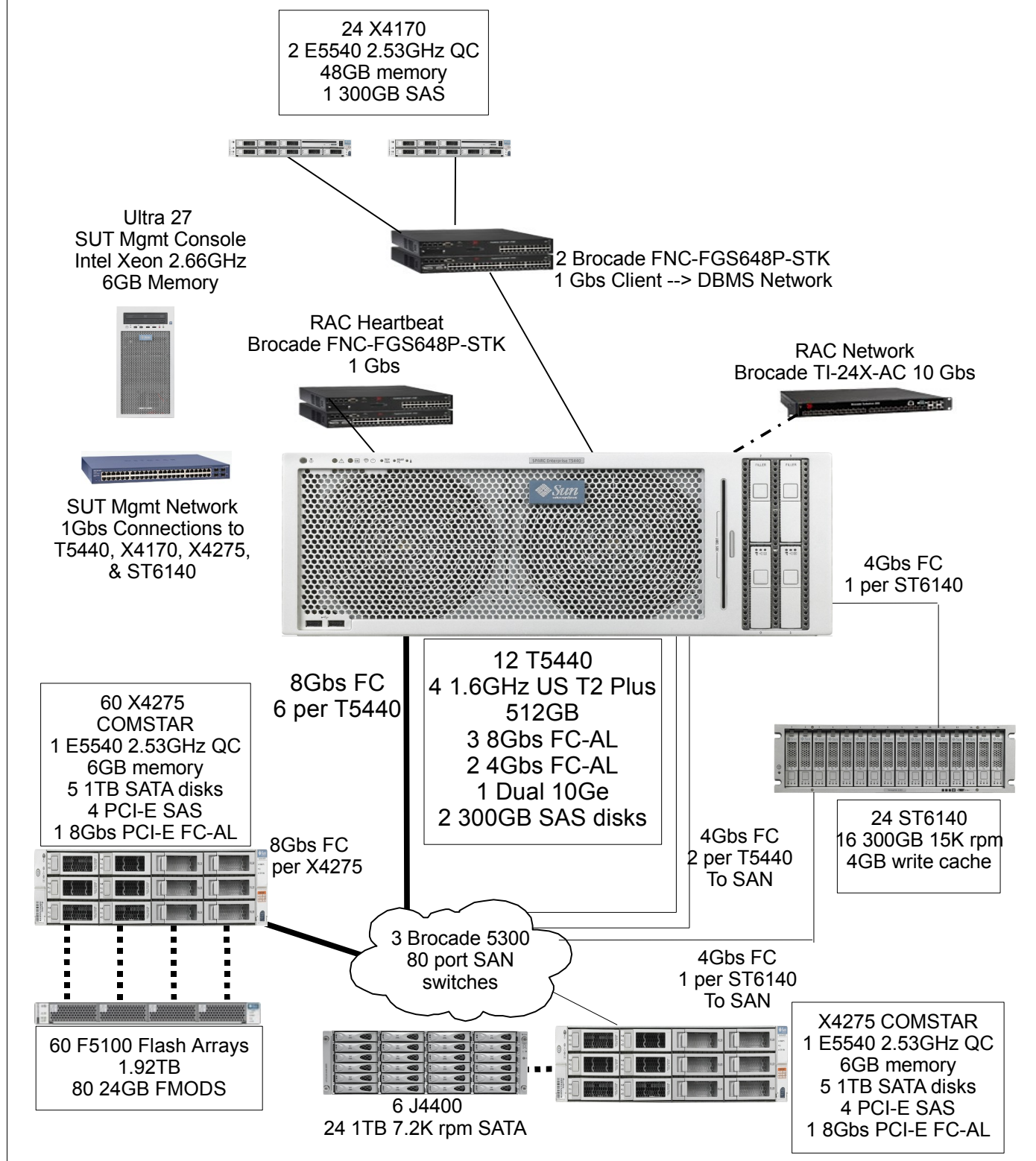


Figure 2 : Priced Configuration

1 Clause 1: Logical Database Design Related Items

1.1 Table Definitions

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

Appendix B describes the programs that define, create, and populate the Oracle database used for this testing.

1.2 Physical Organization of Database

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

The Oracle database tables were striped across all available Sun Storage F5100 Flash Arrays. Each F5100 is connected to a X4275 COMSTAR system. The X4275 COMSTAR systems provide a Common Multiprotocol SCSI Target for the F5100s and the T5440s. Each F5100 has 80 24GB Flash Modules (FMODS). Each FMOD was “sliced” into 4 partitions. Four Logical Units (LUNs) were created for each F5100 by striping across all 80 FMODS, 1 for each partition. Each of the LUNs is visible by every T5440 system and used for storage of the database tables.

The following table shows the distribution of the slices across the FMODs and the export LUN. This is for just one controller on a single F5100. This is repeated for the other 3 controllers and the remaining 59 F5100s.

<i>FMOD</i>	<i>Slice</i>	<i>LUN</i>	<i>Oracle Item</i>
1	1	1	Tables & Indices
1	2	2	Tables & Indices
1	3	3	Tables & Indices
1	4	4	Tables & Indices
2	1	1	Tables & Indices
2	2	2	Tables & Indices
2	3	3	Tables & Indices
2	4	4	Tables & Indices
3	1	1	Tables & Indices
3	2	2	Tables & Indices
3	3	3	Tables & Indices
3	4	4	Tables & Indices
4	1	1	Tables & Indices
4	2	2	Tables & Indices
4	3	3	Tables & Indices
4	4	4	Tables & Indices
5	1	1	Tables & Indices
5	2	2	Tables & Indices
5	3	3	Tables & Indices
5	4	4	Tables & Indices
6	1	1	Tables & Indices
6	2	2	Tables & Indices
6	3	3	Tables & Indices
6	4	4	Tables & Indices
7	1	1	Tables & Indices
7	2	2	Tables & Indices
7	3	3	Tables & Indices
7	4	4	Tables & Indices
8	1	1	Tables & Indices
8	2	2	Tables & Indices
8	3	3	Tables & Indices
8	4	4	Tables & Indices
9	1	1	Tables & Indices

<i>FMOD</i>	<i>Slice</i>	<i>LUN</i>	<i>Oracle Item</i>
9	2	2	Tables & Indices
9	3	3	Tables & Indices
9	4	4	Tables & Indices
10	1	1	Tables & Indices
10	2	2	Tables & Indices
10	3	3	Tables & Indices
10	4	4	Tables & Indices
11	1	1	Tables & Indices
11	2	2	Tables & Indices
11	3	3	Tables & Indices
11	4	4	Tables & Indices
12	1	1	Tables & Indices
12	2	2	Tables & Indices
12	3	3	Tables & Indices
12	4	4	Tables & Indices
13	1	1	Tables & Indices
13	2	2	Tables & Indices
13	3	3	Tables & Indices
13	4	4	Tables & Indices
14	1	1	Tables & Indices
14	2	2	Tables & Indices
14	3	3	Tables & Indices
14	4	4	Tables & Indices
15	1	1	Tables & Indices
15	2	2	Tables & Indices
15	3	3	Tables & Indices
15	4	4	Tables & Indices
16	1	1	Tables & Indices
16	2	2	Tables & Indices
16	3	3	Tables & Indices
16	4	4	Tables & Indices
17	1	1	Tables & Indices
17	2	2	Tables & Indices
17	3	3	Tables & Indices
17	4	4	Tables & Indices
18	1	1	Tables & Indices
18	2	2	Tables & Indices
18	3	3	Tables & Indices
18	4	4	Tables & Indices
19	1	1	Tables & Indices
19	2	2	Tables & Indices
19	3	3	Tables & Indices
19	4	4	Tables & Indices
20	1	1	Tables & Indices
20	2	2	Tables & Indices
20	3	3	Tables & Indices
20	4	4	Tables & Indices

Table 1 : Physical Organization of Tables

1.3 Insert and Delete Operations

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

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

1.4 Partitioning

While there are a 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.

The HISTORY table and one of the indexes for the ORDER table are horizontally partitioned. The details of the partitioning are disclosed in Appendix B for the database build environment.

2 Clause 2: Transaction And Terminal Profiles Related Items

2.1 Random Number Generation

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

The Random Number Generator used was SYS V lrand48() UNIX call.

2.2 Input/Output Screen Layouts

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

All screen layouts followed the specification exactly. The HTML source code used to generate the screens is available in Appendix A.

2.3 Terminal Feature Verification

The method used to verify that the emulated terminals provide all the features described in Clause 2.2.2.4 must be explained.

The terminal attributes were verified by the auditor manually exercising each specification during the onsite audit portion of this benchmark.

2.4 Presentation Manager or Intelligent Terminal

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

Application code running on the client machines implemented the TPC-C user interface. No presentation manager software or intelligent terminal features were used. The data is passed to the terminals using the HTML format, which can be displayed with any standard Web browser. The application code for the HTML display generation is listed in Appendix A.

2.5 Percentage of Home and Remote Order-lines

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

Table 2 (below) contains the percentage of home and remote order-lines for all of the New-Order transactions completed during the measurement interval.

2.6 Percentage of Rolled Back New-Orders

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

Table 2 (below) contains the percentage of New-Order transactions that were rolled back due to an illegal item being entered.

2.7 Items per New-Order

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

Table 2 (below) contains the average number of items ordered for each New-Order transaction.

2.8 Percentage of Home and Remote Payments

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

Table 2 (below) contains the percentage of home and remote warehouse transactions that occurred during the measurement interval for the Payment transactions.

2.9 Percentage of Access by Last Name

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

Table 2 (below) contains the percentage of Payment and Order-Status transactions that were accessed by C_LAST (non-primary key access) during the measurement interval.

2.10 Percentage of Skipped Deliveries

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

Table 2 (below) contains the percentage of Delivery transactions which were “skipped” due to insufficient number of rows in the NEW-ORDER table.

2.11 Transaction Mix

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

Table 2 (below) contains the mix of each transaction type executed by the SUT.

New-Order	Sun SPARC Enterprise T5440 Server Cluster
Percentage of Home order-lines	99.000%
Percentage of Remote order-lines	1.000%
Percentage of Rolled Back Transactions	1.001%
Avg. Number of Items per Transactions	9.999
Payment	
Percentage of Home Transactions	84.997%
Percentage of Remote Transactions	15.003%
Access by C_LAST (Non-primary key)	
Percentage of Payment Transactions	60.003%
Percentage of Order-Status Transactions	59.990%
Delivery	
Percentage of Deliveries skipped	0.000%
Transaction Mix	
New-Order	44.87%
Payment	43.04%
Order-Status	4.02%
Delivery	4.03%
Stock-Level	4.04%

Table 2 : Transaction Input Percentages and Mix

2.12 Queueing Mechanism

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

Delivery transactions were submitted to servers using the same mechanism that other transactions used, Tuxedo API. The only difference was that tpacall() was used instead of tpcall() to call the server process asynchronously, i.e., control would return to the client thread immediately and the deferred delivery part would complete asynchronously in the server process.

3 Clause 3 Transaction and System Properties Related Items

3.1 Transaction System Properties (ACID)

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

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

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

3.2 Atomicity

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

3.2.1 Completed Transaction

Perform the Payment transaction for a randomly selected warehouse, district, and customer (by customer number as specified in Clause 2.5.1.2) and verify that the records in the CUSTOMER, DISTRICT, and WAREHOUSE tables have been changed appropriately.

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

3.2.2 Aborted Transaction

Perform the Payment transaction for a randomly selected warehouse, district, and customer (by customer number as specified in Clause 2.5.1.2) and substitute a ROLLBACK of the transaction for the COMMIT of the transaction. Verify that the records in the CUSTOMER, DISTRICT, and WAREHOUSE tables have NOT been changed.

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

3.2.3 Consistency

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

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

1. The sum of the district year-to-date (d_ytd) balance for all districts within a warehouse is equal to the balance of the warehouse year-to-date (w_ytd) for the district's warehouse;
2. For each district, the next order id (d_next_o_id) minus one, is equal to the most recent order id (max(o_id)) from the ORDER table for the associated district and warehouse. Also, the (d_next_o_id) minus one is equal to the max(no_o_id) (most recent new-order) from the NEW-ORDER table;
3. For each district, the maximum order id minus minimum order id in the ORDER table plus one equals the number of rows in the NEW-ORDER table for that district;
4. For each district, the sum of the order line counts in the ORDER table equals the number of rows in the ORDER-LINE table for that district;

These consistency conditions were tested using a shell script to issue queries to the database. The results of the queries verified that the database was consistent for all four tests. The same four consistency tests were performed after the reported performance run during the audit.

3.3 Isolation Tests

The TPC Benchmark C Standard defines nine tests that are to be performed to demonstrate that required level of transaction isolation are met.

These tests are performed on the 12-node cluster configured for 604,800 warehouses. We ran each of the nine isolation tests twice. In the first case, we executed all the transactions of the same test on the same node of the 12-node cluster. In the second case, we executed different transactions of the same tests on separate nodes. In both cases, all tests have been verified to demonstrate the desired transaction isolation level.

3.3.1 Isolation Test 1.

This test demonstrates isolation for read-write conflicts of Order-Status and New-Order transactions when the New-Order transaction is committed.

The test proceeds as follows:

1. An Order-Status transaction T0 was executed and committed for a randomly selected customer, and the order returned was noted.
2. A New-Order transaction T1 was started for the same customer used in T0. T1 was stopped prior to COMMIT.
3. An Order-Status transaction T2 was started for the same customer used in T1. T2 completed and was committed without being blocked by T1. T2 returned the same order that T0 had returned.
4. T1 was allowed to complete and was committed.
5. An Order-Status transaction T3 was started for the same customer used in T1. T3 returned the order inserted by T1.

3.3.2 Isolation Test 2

This test demonstrates isolation for read-write conflicts of Order-Status and New-Order transactions when the New-Order transaction is rolled back.

The test proceeds as follows:

1. An Order-Status transaction T0 was executed and committed for a randomly selected customer and the order returned was noted.
2. A New-Order transaction T1 with an invalid item number was started for the same customer used in T0. T1 was stopped immediately prior to ROLLBACK.
3. An Order-Status transaction T2 was started for the same customer used in T1. T2 completed and was committed without being blocked by T1. T2 returned the same order that T0 had returned.
4. T1 was allowed to ROLLBACK.
5. An Order-Status transaction T3 was started for the same customer used in T1. T3 returned the same order that T0 had returned.

3.3.3 Isolation Test 3

This test demonstrates isolation for write-write conflicts of two New-Order transactions when both transactions are committed.

The test proceeds as follows:

1. The D_NEXT_O_ID of a randomly selected district was retrieved.
2. A New-Order transaction T1 was started for a randomly selected customer within the district used in step 1. T1 was stopped immediately prior to COMMIT.
3. Another New-Order transaction T2 was started for the same customer used in T1. T2 waited.
4. T1 was allowed to complete. T2 completed and was committed.
5. The order number returned by T1 was the same as the D_NEXT_O_ID retrieved in step 1. The order number returned by T2 was one greater than the order number returned by T1.
6. The D_NEXT_O_ID of the same district was retrieved again. It had been incremented by two (i.e. it was one greater than the order number returned by T2).

3.3.4 Isolation Test 4

This test demonstrates isolation for write-write conflicts of two New-Order transactions when one transaction is rolled back.

The test proceeds as follows:

1. The D_NEXT_O_ID of a randomly selected district was retrieved.
2. A New-Order transaction T1, with an invalid item number, was started for a randomly selected customer within the district used in step 1. T1 was stopped immediately prior to ROLLBACK.
3. Another New-Order transaction T2 was started for the same customer used in T1. T2 waited.

4. T1 was allowed to roll back, and T2 completed and was committed.
5. The order number returned by T2 was the same as the D_NEXT_O_ID retrieved in step 1.
6. The D_NEXT_O_ID of the same district was retrieved again. It had been incremented by one (i.e. one greater than the order number returned by T2).

3.3.5 Isolation Test 5

This test demonstrates isolation for write-write conflicts of Payment and Delivery transactions when Delivery transaction is committed.

The test proceeds as follows:

1. A query was executed to find out the customer who is to be updated by the next delivery transaction for a randomly selected warehouse and district.
2. The C_BALANCE of the customer found in step 1 was retrieved.
3. A Delivery transaction T1 was started for the same warehouse used in step 1. T1 was stopped immediately prior to COMMIT.
4. A Payment transaction T2 was started for the same customer found in step 1. T2 waited.
5. T1 was allowed to complete. T2 completed and was committed.
6. The C_BALANCE of the customer found in step 1 was retrieved again. The C_BALANCE reflected the results of both T1 and T2.

3.3.6 Isolation Test 6

This test demonstrates isolation for write-write conflicts of Payment and Delivery transactions when the Delivery transaction is rolled back.

The test proceeds as follows:

1. A query was executed to find out the customer who is to be updated by the next delivery transaction for a randomly selected warehouse and district.
2. The C_BALANCE of the customer found in step 1 was retrieved.
3. A Delivery transaction T1 was started for the same warehouse used in step 1. T1 was stopped immediately prior to ROLLBACK.
4. A Payment transaction T2 was started for the same customer found in step 1. T2 waited.
5. T1 was allowed to ROLLBACK. T2 completed and was committed. The C_BALANCE of the customer found in step 1 was retrieved again. The C_BALANCE reflected the results of only T2.

3.3.7 Isolation Test 7

This test demonstrates repeatable reads for the New-Order transaction while an interactive transaction updates the prices of some items.

The test proceeds as follows:

1. The I_PRICE of two randomly selected items X and Y were retrieved.
2. A New-Order transaction T1 with a group of items including items X and Y was started. T1 was stopped immediately after retrieving the prices of all items. The prices of items X and Y retrieved matched those retrieved in step 1.
3. A transaction T2 was started to increase the price of items X and Y by 10%.
4. T2 did not stall and was committed.
5. T1 was resumed, and the prices of all items were retrieved again within T1. The prices of items X and Y matched those retrieved in step 1.
6. T1 was committed.
7. The prices of items X and Y were retrieved again. The values matched the values set by T2.

Execution followed *Case D* of *Clause 3.4.2.7*.

3.3.8 Isolation Test 8

This test demonstrates isolation for phantom protection between New-Order and Order-Status transactions.

The test proceeds as follows:

1. An Order-Status transaction T1 was started for a randomly selected customer.

2. T1 was stopped immediately after reading the order table for the selected customer to find the most recent order for that customer.
3. A New-Order transaction T2 was started for the same customer. T2 completed and was committed without being blocked by T1.
4. T1 was resumed and the ORDER table was read again to determine the most recent order for the same customer. The order found was the same as the one found in step 2.
5. T1 completed and was committed.

3.3.9 Isolation Test 9.

This test demonstrates isolation for phantom protection between New-Order and Delivery transactions.

The test proceeds as follows:

1. The NO_D_ID of all NEW_ORDER rows for a randomly selected warehouse and district was changed to 11. The changes were committed.
2. A Delivery transaction T1 was started for the selected warehouse.
3. T1 was stopped immediately after reading the NEW_ORDER table for the selected warehouse and district. No qualifying row was found.
4. A New-Order transaction T2 was started for the same warehouse and district. T2 completed and was committed without being blocked by T1.
5. T1 was resumed and the NEW_ORDER table was read again. No qualifying row was found.
6. T1 completed and was committed.
7. The NO_D_ID of all NEW_ORDER rows for the selected warehouse and district was restored to the original value. The changes were committed.

3.4 Durability

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

3.4.1 Instantaneous Interruption

This test was executed by following these steps:

1. The total number of orders was determined by the sum of D_NEXT_O_ID from all rows in the district table; giving the beginning count.
2. The RTE was started with full user load.
3. The test was allowed to ramp up and ran in steady state for more than 5 minutes.
4. A manual checkpoint was initiated and completed.
5. The test was allowed to run for a least one more minute.
6. The following failures were induced simultaneously (within 3 seconds).
 - All database nodes (T5440s) were interrupted through the system console
 - Power to the RAC data switch (Brocade 10 Gbs) was disconnected
 - Power to the Heartbeat switch (Brocade 1 Gbs) was disconnected
7. The RTE is shutdown. The RTE report is generated.
8. Power was restored to the RAC switch and the Heartbeat switch. The nodes were booted; Oracle was restarted and an automatic recovery was performed.
9. Step 1 was repeated, giving the ending count.
10. Consistency Test 3 was verified.
11. A sample from the success file was compared against the database.
12. The RTE report was used to determine the number of successful New-Order transactions. The difference between the counts in Steps 1 and 9 was compared with the RTE count to verify that no committed transactions were lost.

3.4.2 Loss of Memory and Loss of Log

This test was executed by following these steps:

1. The total number of orders was determined by the sum of D_NEXT_O_ID from all rows in the district table; giving the beginning count.

2. The RTE was started with full user load.
3. The test was allowed to ramp up and ran in steady state for more than 5 minutes.
4. The incremental checkpoint activity was verified.
5. The test was allowed to run for a least one more minute.
6. The power was disconnected from one 6140 storage arrays. Since the 6140s were mirrored, the test continued to run and it was verified that the throughput was above 90% of the reported tpmC.
7. The run continued for at least 5 minutes.
8. Power to one database node (T5440) was disconnected
9. The test was allowed to continue for at least one more minute.
10. Transaction generation from the RTE was interrupted.
11. Step 1 was repeated, giving the ending count.
12. Consistency Test 3 was verified.
13. A sample from the success file was compared against the database.
14. The RTE report was used to determine the number of successful New-Order transactions. The difference between the counts in Steps 1 and 11 was compared with the RTE count to verify that no committed transactions were lost.

3.4.3 Loss of Durable Media

This test can be executed on a small scaled database (at least 10%) under a reduced user load (at least 10%). The throughput is reaching at least 10% of the reported tpmC. When a reduced configuration is used, a target of 12% is recommended to avoid falling under the 10% threshold.

This test was executed by following these steps:

1. The total number of orders was determined by the sum of D_NEXT_O_ID from all rows in the district table; giving the beginning count.
2. The RTE was started with a 16% user load (2 out of 12 nodes).
3. The test was allowed to ramp up and ran in steady state for more than 5 minutes.
4. The incremental checkpoint activity was verified.
5. The test was allowed to run for a least one more minute.
6. The cable between one COMSTAR (4275) and the Brocade SAN switch (5300) was disconnected.
7. The test was allowed to run until a fault was detected and transactions start reporting errors.
8. The RTE was shutdown. The RTE report was generated.
9. The SUT was recovered and restarted without starting Oracle.
10. The database backup was restored on the failed COMSTAR, overwriting the data on the storage devices.
11. The Oracle was started and the roll-forward recovery (Oracle instance recovery) was executed.
12. Step 1 was repeated, giving the ending count.
13. Consistency Test 3 was verified.
14. A sample from the success file was compared against the database.
15. The RTE report was used to determine the number of successful New-Order transactions. The difference between the counts in Steps 1 and 12 was compared with the RTE count to verify that no committed transactions were lost.

4 Clause 4: Scaling and Database Population Related Items

4.1 Initial Cardinality of Tables

The Cardinality (e.g. 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.

This database was built with 604,800 warehouses. The following tables shows the initial cardinality of the tables.

<i>Table</i>	<i>Row Count</i>
Warehouse	604,800
District	6,048,000
Customer	18,144,000,000
History	18,144,000,000
Orders	18,144,000,000
New order	5,443,200,000
Order line	181,450,000,000
Stock	60,480,000,000
Item	100,000

Table 3 : Table Cardinality

4.2 Database Layout

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

Sun married two new revolutionary technologies together for this measurement. The first is the Sun Storage F5100 Flash Arrays. The second is COMSTAR (Common Multiprotocol SCSI Target) found in OpenSolaris 2009.06. The F5100 drives are connected to the T5440 cluster via 3 Brocade 5300 SAN switches and a Sun Fire X4275 server running COMSTAR. Each COMSTAR has a separate 8Gbs fibre connection to the SAN and is visible to all 12 of the T5440s. The F5100 is mated with a COMSTAR node to form a storage platform. The 80 flash modules in the F5100 are partitioned into 4 “slices” using the format command in OpenSolaris. Each slice is then striped across all 80 FMODs (flash modules) using Solaris Volume Manager and SVM soft partitions are built upon the 4 LUNs. These soft partitions are exported to the SAN and used by Oracle. There are 61 COMSTAR nodes configured, 60 of which control the F5100s and one connected via SAS cables to 6 J4400 JBOD storage arrays. Each J4400 is configured with 24 1TB 7.2K rpm SATA disks. These disks along with 5 1TB 7.2K rpm SATA disks located internally to each COMSTAR node make up the storage necessary for the backup of the database plus the remaining 59 days of storage.

Two ST6140 disk arrays are connected to each T5440 database node. The ST6140s are configured with 300GB 15K rpm SAS disks. These ST6140s are the database logs and are mirrored via Oracle 11g Enterprise Edition. Each ST6140 has a 4Gbs fibre direct connection to a T5440 and also to the Brocade SAN switch environment. Each T5440 has two 4Gbs fibres going to the Brocade SAN switch so that every T5440 can “see” the log environment of every other T5440. This is to enable other database nodes to access the logs and recover in the event of loss of a node.

Because Oracle 11g is a “single image” database and using the Brocade SAN switches allows us to have a common disk environment, all database tables are striped across all COMSTAR nodes, where size permits. Each T5440 “sees” or has access to all of the COMSTAR nodes and disks and therefore there is no “local” storage of database tables or objects.

The following diagram depicts the storage environment as seen by Oracle 11g Enterprise Edition.

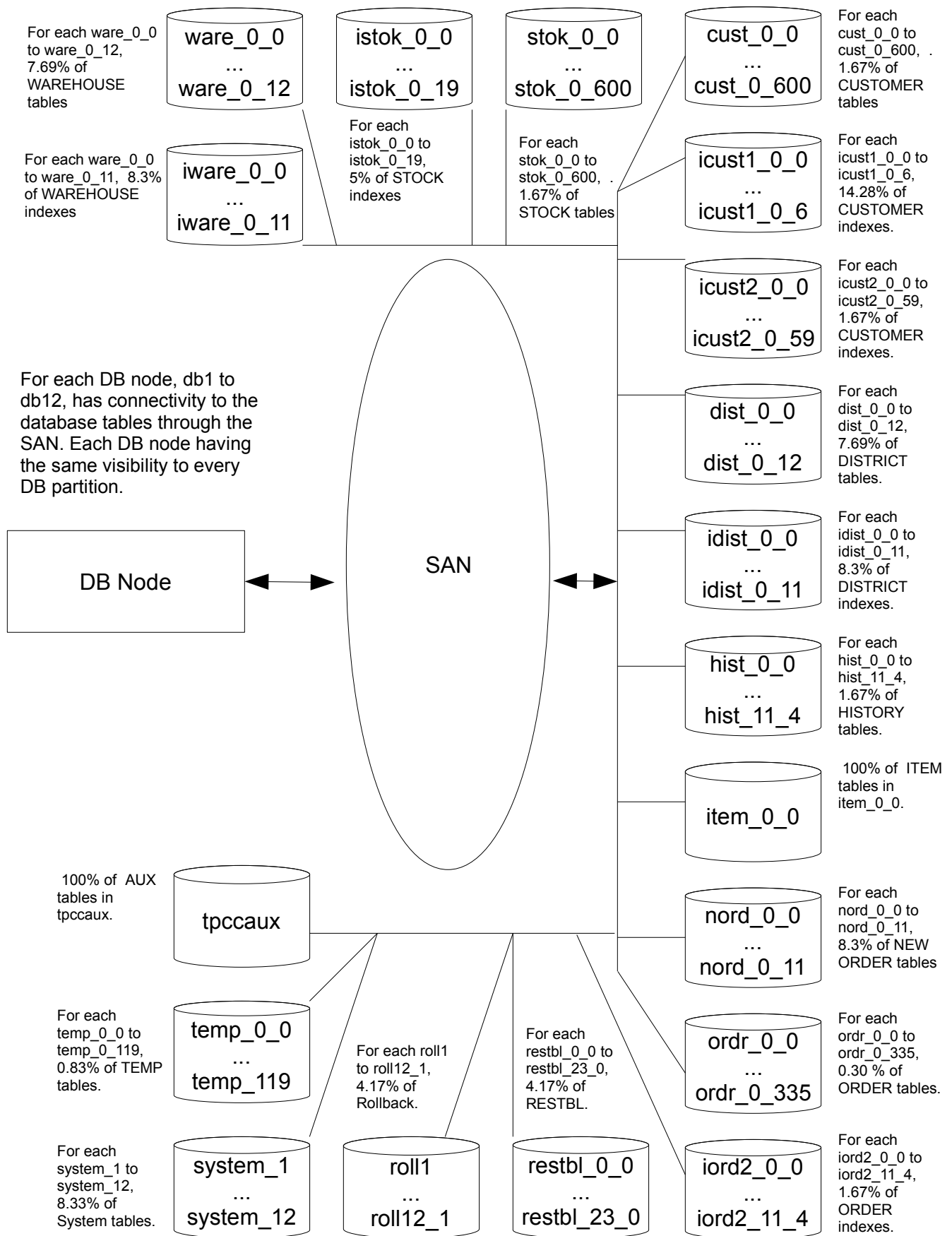


Figure 3 : Storage Environment

4.3 Type of Database

A statement must be provided that describes:

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

Oracle Database 11g Enterprise Edition is a relational database management system. SQL stored procedures were invoked via the Oracle Call Interface (OCI). The application code appears in Appendix A.

4.4 Mapping of Database

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

The database was not replicated. The HISTORY table and one index for the ORDERS table were partitioned. The details of which are in Appendix C.

4.5 60 Day Space Computation

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).

The calculations for the 60 Space requirements and growth are below.

tpmC	# Warehouses
7646486.77	604800

SEGMENT	TYPE	BLOCKS	BLOCK_SIZE	FIVE_PCT	DAILY_GROW	TOTAL
CUSTCLUSTER	CLUSTER	2016240005	8192	100812000	0	2117052005
DB_STAT	SYS	3334144	8192	0	0	3334144
DISTCLUSTER	CLUSTER	6300005	8192	315000	0	6615005
HIST	TABLE	131434704	8192	0	26497236	157931940
ICUST1	INDEX	25974156	16384	1298708	0	27272864
ICUST2	INDEX	111635580	8192	5581779	0	117217359
IDIST	INDEX	31628	8192	1581	0	33209
IITEM	INDEX	1408	8192	70	0	1478
IORDR2	INDEX	80120128	8192	4006006	0	84126134
ISTOK	INDEX	76239294	16384	3811965	0	80051259
ITEMCLUSTER	CLUSTER	2112	8192	106	0	2218
IWARE	INDEX	8003	8192	400	0	8403
NORDCLUSTER_QUEUE	CLUSTER	27154270	8192	1357714	0	28511984
ORDRCLUSTER_QUEUE	CLUSTER	934802976	16384	0	188456280	1123259256
STOKCLUSTER	CLUSTER	2240160005	8192	112008000	0	2352168005
SYS AUX	SYS	15360	8192	0	0	15360
SYSTEM	SYS	614400	8192	0	0	614400
SYS_IQ0000013169\$\$	INDEX	4112472	16384	205624	0	4318096
SYS_IQ0000013343\$\$	INDEX	246857	8192	12343	0	259200
WARECLUSTER	CLUSTER	655205	8192	32760	0	687965

SEGMENT	BLOCKS	BLOCK_SIZE	REQUIRED	STATIC	DYNAMIC	OVERSIZE
CUSTCLUSTER	2234758400	8192	2117052005	2117052005	0	117706395
DB_STAT	3334144	8192	3334144	3334144	0	0
DISTCLUSTER	8669440	8192	6615005	6615005	0	2054435
HIST	201369600	8192	157931940	0	131434704	43437660
ICUST1	27332480	16384	27272864	27272864	0	59616
ICUST2	120806400	8192	117217359	117217359	0	3589041
IDIST	384000	8192	33209	33209	0	350791
IITEM	2560	8192	1478	1478	0	1082
IORDR2	120345600	8192	84126134	84126134	0	36219466
ISTOK	80972800	16384	80051259	80051259	0	921541
ITEMCLUSTER	2560	8192	2218	2218	0	342
IWARE	107520	8192	8403	8403	0	99117
NORDCLUSTER_QUEUE	29629440	8192	28511984	28511984	0	1117456
ORDRCLUSTER_QUEUE	1375395840	16384	1123259256	0	934802976	252136584
STOKCLUSTER	2388614400	8192	2352168005	2352168005	0	36446395
SYS AUX	15360	8192	15360	15360	0	0
SYSTEM	614400	8192	614400	614400	0	0
SYS_IQ0000013169\$\$	1375395840	16384	4318096	4318096	0	0
SYS_IQ0000013343\$\$	29629440	8192	259200	259200	0	0
WARECLUSTER	1048320	8192	687965	687965	0	360355
Total						

SEGMENT	STATIC (MB)	Dynamic (MB)	Daily Growth (MO)	OverSize (MB)
CUSTCLUSTER	16,539,469			919,581
DB_STAT	26,048			0
DISTCLUSTER	51,680			16,050
HIST		1,026,834	207,010	339,357
ICUST1	426,139			932
ICUST2	915,761			28,039
IDIST	259			2,741
IITEM	12			8
IORDR2	657,235			282,965
ISTOK	1,250,801			14,399
ITEMCLUSTER	17			3
IWARE	66			774
NORDCLUSTER_QUEUE	222,750			8,730
ORDRCLUSTER_QUEUE		14,606,297	2,944,629	3,939,634
STOKCLUSTER	18,376,313			284,737
SYS_AUX	120			0
SYSTEM	4,800			0
SYS_IQ0000013169\$\$	67,470			0
SYS_IQ0000013343\$\$	2,025			0
WARECLUSTER	5,375			2,815
Total	38,546,338	15,633,130	3,151,639	5,840,766

STATIC (GB)	DYNAMIC (GB)	OVERSIZE (GB)	DAILY_GROW (GB)	DAILY_SPRE (GB)	SPACE60 (GB)	SPACE 8HR (GB)
37,643	15,267	5,704	3,088	1,071	287,227	55,998

8 hour growth (GB)	
Log Growth	71,441

Figure 4 : Sun SPARC T5440 Cluster 60 Day Space Calculations

5 Clause 5: Performance Metrics and Response Time Related

5.1 Measured tpmC

Measured tpmC must be reported.

The measured tpmC was 7,646,486.77

5.2 Response Times

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

Please refer the Numerical Quantities Section of the Executive Summary of this report for the Response Time values.

5.3 Keying and Think Times

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

Please refer the Numerical Quantities Section of the Executive Summary of this report for the Keying and Think Time values.

5.4 Response Time Frequency Distribution Curves

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

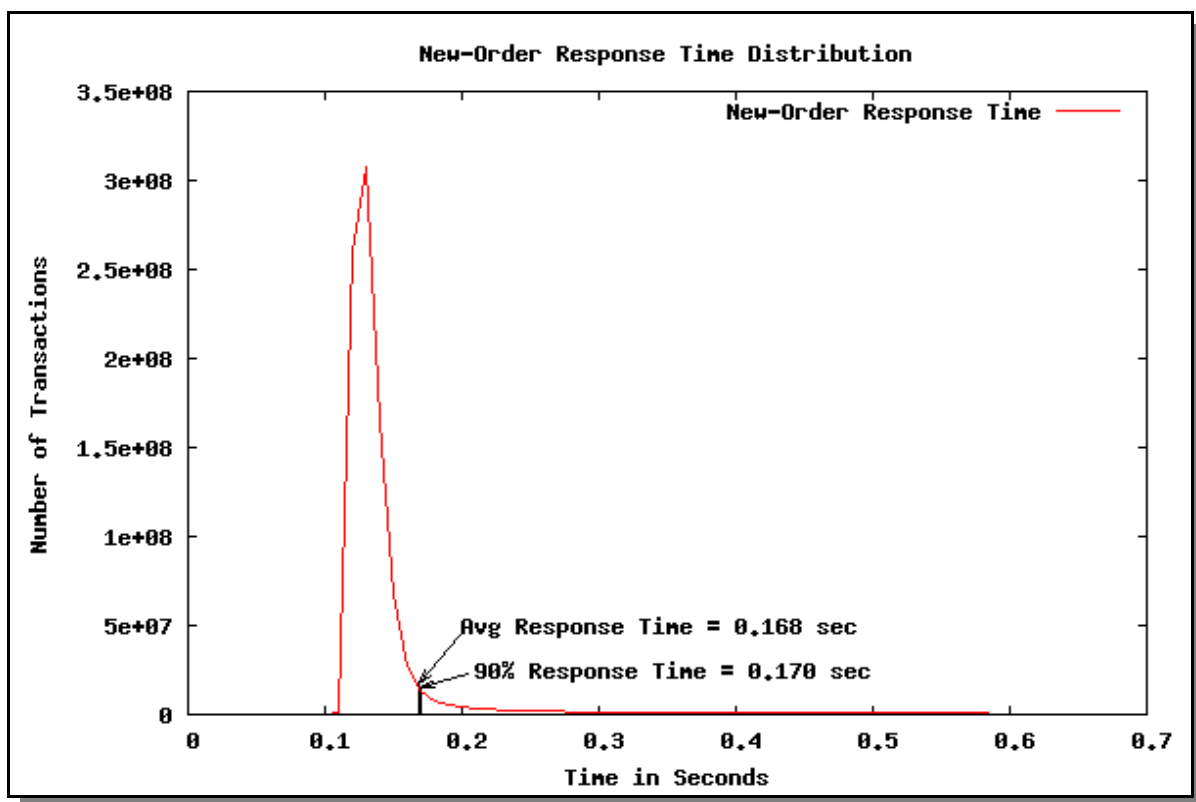


Figure 5 : New-Order Response Time Distribution

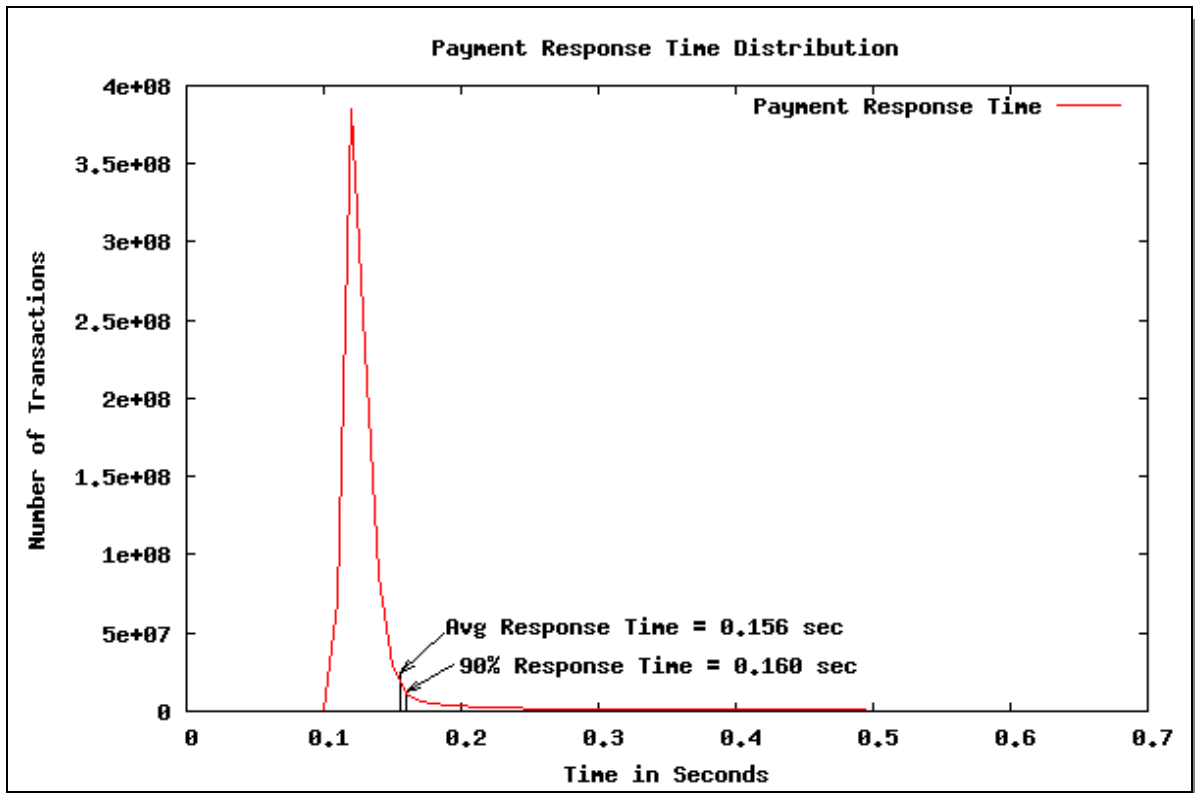


Figure 6 : Payment Response Time Distribution

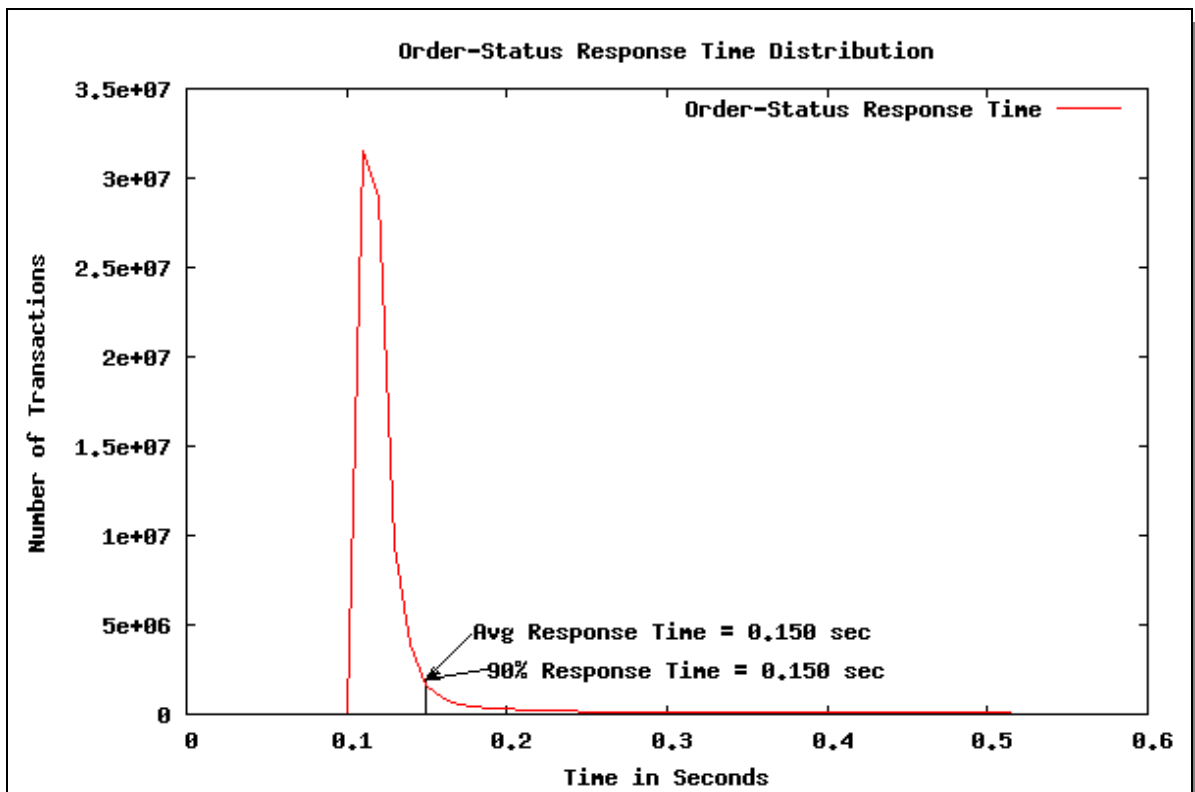


Figure 7 : Order-Status Response Time Distribution

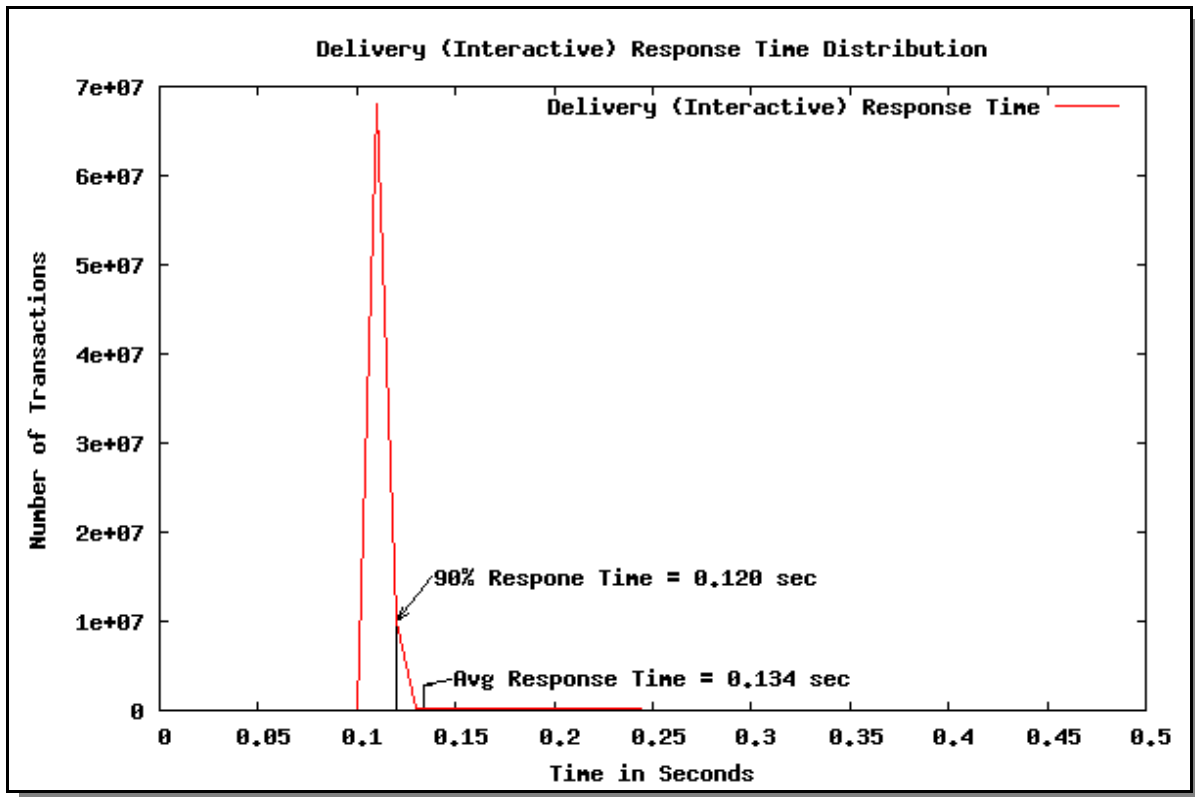


Figure 8 : Delivery (Interactive) Response Time Distribution

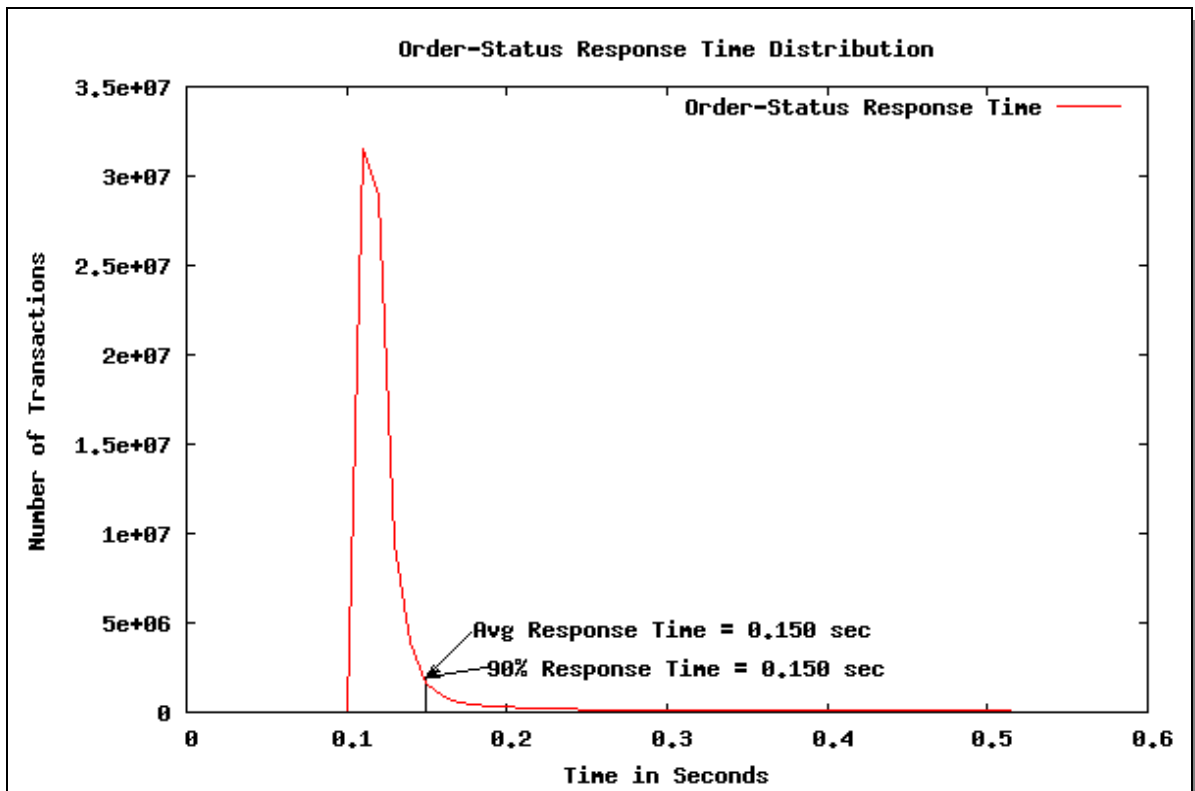


Figure 9 : Stock-Level Response Time Distribution

5.5 Think Time Frequency Distribution

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

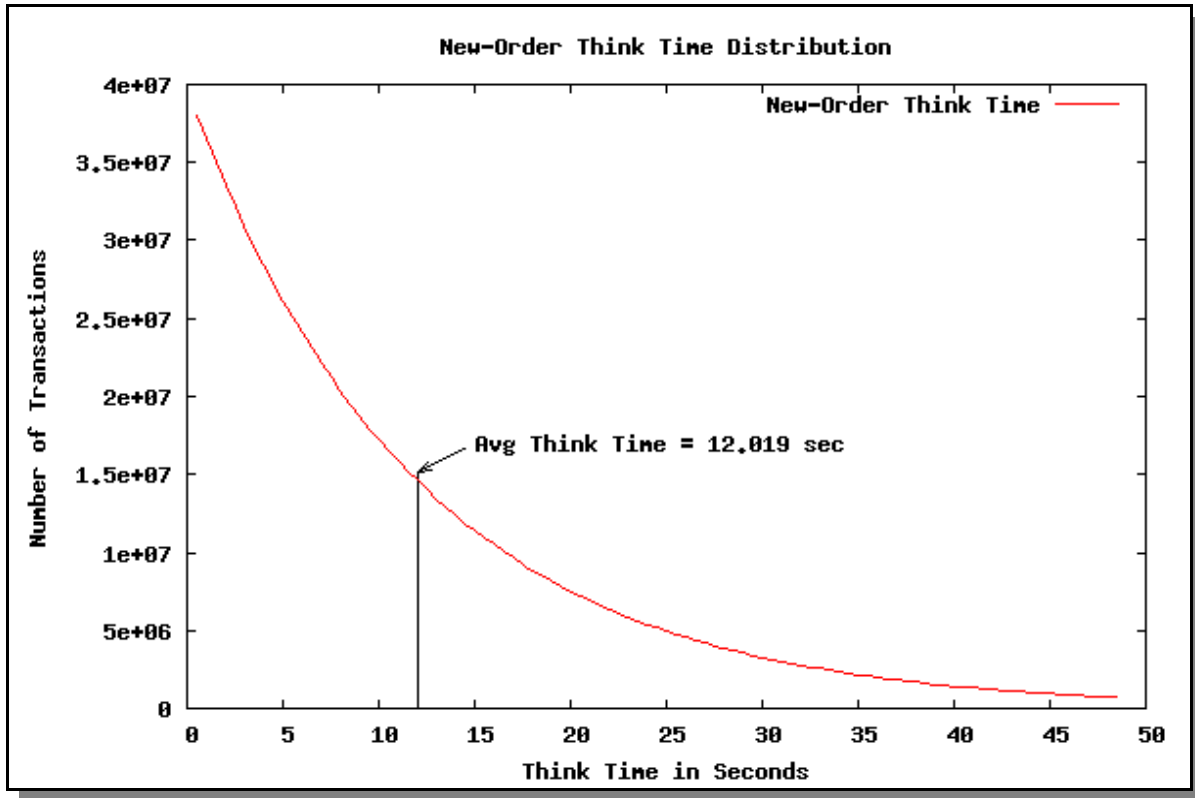


Figure 10 : New-Order Think Time Distribution

5.6 Response Times versus Throughput

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

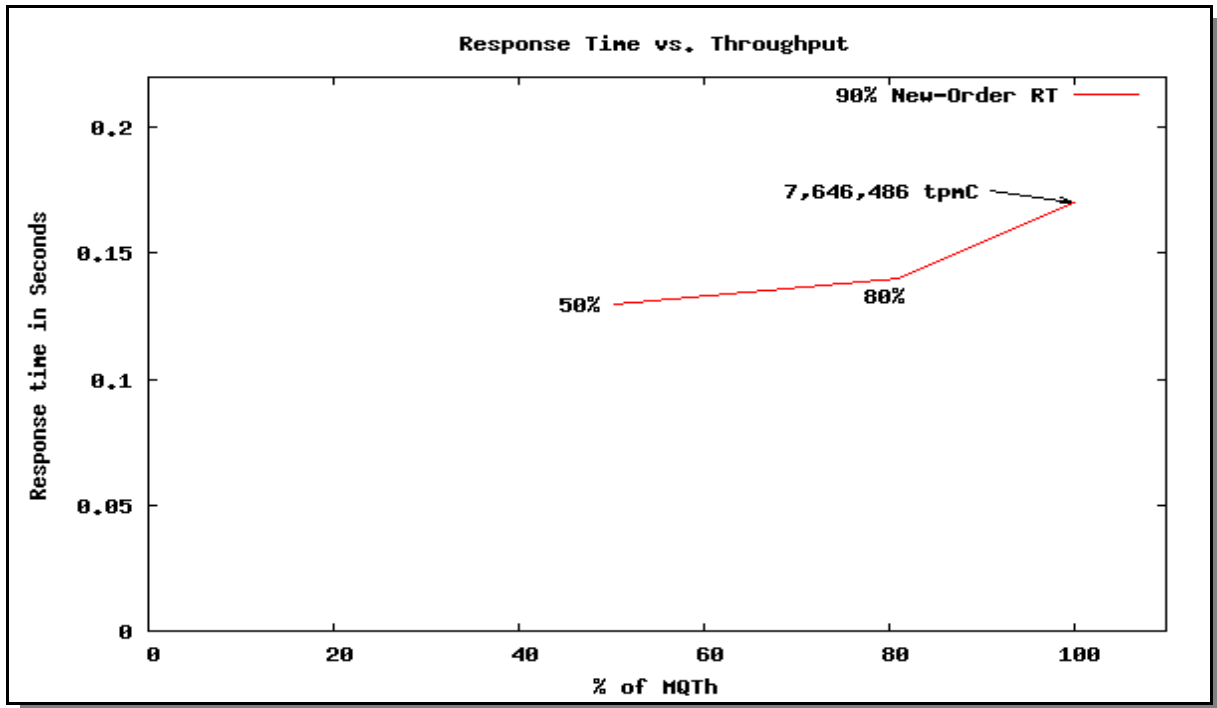


Figure 11 : New-Order Throughput versus Elapsed Time

5.7 Throughput versus Elapsed Time

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

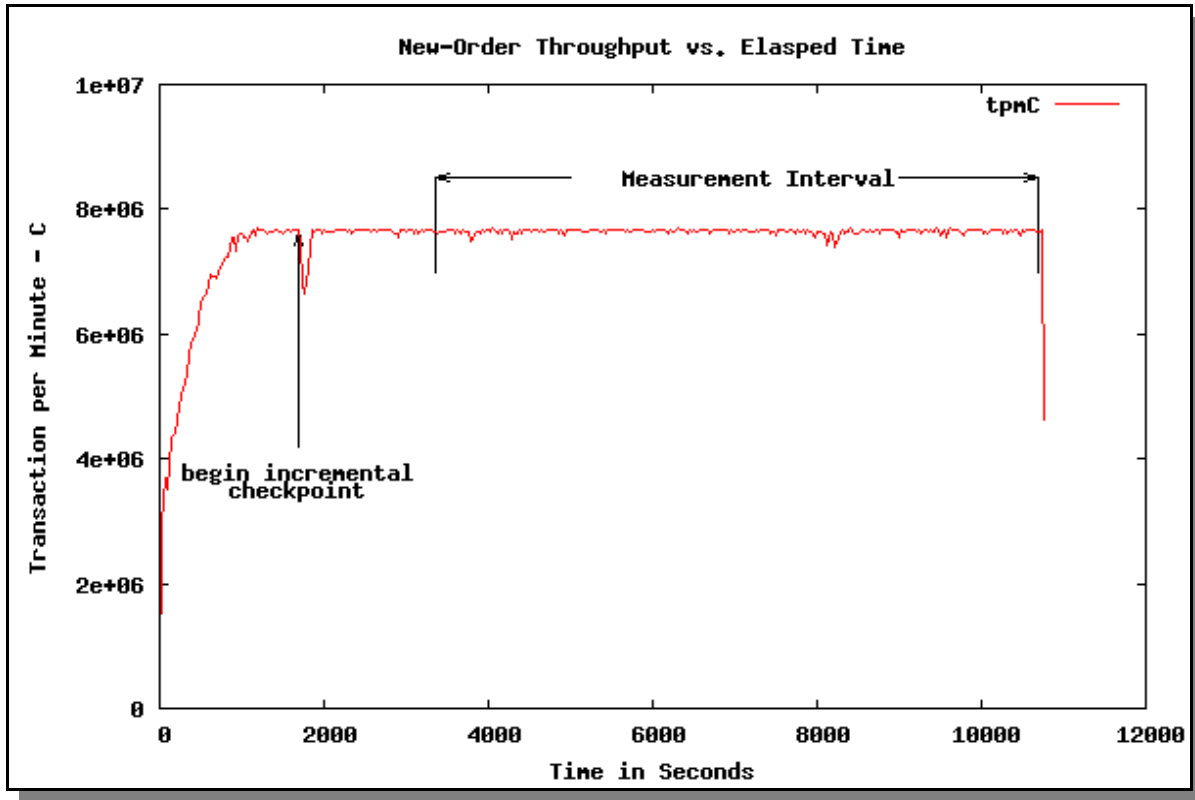


Figure 12 : New Order Throughput versus Time

5.8 Steady State Determination

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

The throughput was verified by examining the throughput (tpmC) graph reported at 30 second intervals for the duration of the benchmark.

5.9 Work Performed During Steady State

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

During the Test Run, emulated users submit TPC-C transactions according to the described mix, keying time and think times. The transactions are implemented in accordance with the requirements of the specification. An emulated user submits transaction input via HTTP and receives acknowledgment of the completed transaction. The response time is measured from the start of the transaction until the last byte is received by the RTE. Upon completion of a transaction, the RTE “thinks” for a randomly generated time period before selecting the next transaction. Upon selection of the next transaction to execute thru the Menu transaction, an emulated user keys in the input at a prescribed rate to simulate the rate of an individual inputting data. The transaction is submitted and the cycle continues until the Test Run completes.

During the execution of the transactions, Oracle maintains consistency of the database through the use of isolation properties that meet the requirements of the specification. Also, committed transactions are “logged” using Oracle's redo log functions. These logs ensure the system never loses any committed transactions. To ensure no modified data pages are left in memory too long, Oracle implements an ongoing incremental checkpoint to flush modified pages to their respective tablespaces on disk.

5.10 Measurement Period Duration

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

The reported measured interval was 7,320 seconds (2 hours and 2 minutes) long.

5.11 Transaction Mix Regulation

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.

A weighted distribution algorithm was used by the RTE to regulate the transaction mix. Weights for the various transactions were assigned before the measurement started and were not updated.

5.12 Transaction Mix

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

See Transaction Input Percentages and Mix table on page 28.

5.13 Percentage of New-Order Transactions

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

See Transaction Input Percentages and Mix table on page 28.

5.14 Number of Order-lines per New-Order

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

See Transaction Input Percentages and Mix table on page 28.

5.15 Percentage of Remote Order-lines per New-Order

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

See Transaction Input Percentages and Mix table on page 28.

5.16 Percentage of Remote Payments

The percentage of remote payment transactions must be disclosed.

See Transaction Input Percentages and Mix table on page 28.

5.17 Percentage of Non-Primary access by C_LAST for Payment and Order-Status

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

See Transaction Input Percentages and Mix table on page 28.

5.18 Percentage of Skipped Delivery Transactions

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

See Transaction Input Percentages and Mix table on page 28.

5.19 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.

Oracle checkpoints ensure that modified data blocks are written to durable media. Oracle performs checkpoints in an incremental and continuous fashion in such a way that modified data blocks do not stay "dirty" in the shared memory longer than a specified duration.

Oracle controls checkpoints using one or combination of the following mechanisms:

- the redo log is filled to a specified capacity, causing a log switch
- the amount of data written to redo log reaches a value specified by `log_checkpoint_interval`
- the amount of the time since the last checkpoint reaches a value specified by `log_checkpoint_timeout`
- an explicit command
- maximum time to recover a crashed database instance, specified by `fast_mttr_target`

The parameter `log_checkpoint_timeout` is used to control checkpoints. `log_checkpoint_timeout` is set to 1700 seconds to guarantee that no data blocks are "dirty" for more than 1700 seconds in shared memory.

6 Clause 6: SUT, Driver, And Communication Related Items

6.1 RTE Description

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

The RTE used was developed by Sun Microsystems and is proprietary. It consists of a master_rte program which creates a thread for each RTE session and controls the run. After the run completes, a separate report generator program collects all the log files and generates the final statistics of a run.

Inputs to the RTE include the names of the RTE machines to run on, client machines to attach to, the database scale, the ramp-up, measurement and ramp-down times. The main inputs to the RTE are as follows:

Input Type	Value
Ramp-up Duration	3,360 seconds
Ramp-Down Duration	90 seconds
Measurement Interval	7,320 seconds
Database Scale	604,800 whse
Total Users	6,048,000
Users/Driver	10,500
Number of RTEs	576
Client Ports	8080, 8081
Think Times (SL,D,OS,P,NO)	5020 5020 10020 12020 12020 (ms)
Txn Mix (SL,D,OS,P,NO)	404 807 1209 5514 10000
Terminal Delays	100 100 100 100 100 100 (ms)

Table 4 : RTE Parameter Input

6.2 Lost Connections

The number of terminal connections lost during the Measurement Interval must be disclosed (see Clause 6.6.2).

The number of connections were counted when the RTE was first started and a count of the number of errors that occurred during the benchmark run were kept. There were no errors reported during the Measurement Interval, therefore no lost connections.

6.3 Emulated Components

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

In the configuration, workstations are connected to the clients via HTTP in the same way as the emulated system. The driver system emulates the workstations by making a direct connection to the SUT for each terminal.

6.4 Configuration Diagrams

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

The Measured Configuration on page 22 details the configuration used during the measurement. The Priced Configuration on page 23 details the components that were priced. Only the emulated components for the end-user input and display differ between the two diagrams. The Priced Configuration includes pricing for the UPS systems to protect committed transactions in the ST6140s and the T5440 nodes.

6.5 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).

The measured configuration utilized 5 separate networks to administer, maintain, setup, and execute the TPC-C transactions. The first network is a 10Gbs fibre network utilizing the Brocade TurboIron TI-24X switch. This is the backbone network for communicating between the T5440 database nodes using Real Application Clusters. The RAC “heartbeat” is maintained via a separate 1Gbs ethernet through a Brocade FastIron 48 port switch. Another separate network provides administration and support services between all of the T5440 server machines, all of the X4275 COMSTAR nodes, the X4170 clients and the ST6140 log devices through a 1Gbs ethernet network using 5 Netgear GS748T 48 port switches. The fourth network provides system console and service processor control for all of the above machines over a 1Gb ether through the same Brocade switches as the administration network. The last network is a 1Gbs ethernet between the X4170 clients and the RTE. This RTE network provides the user and terminal emulation and therefore is not priced.

6.6 Operator Intervention

If the configuration requires operator intervention, the mechanism and the frequency of this intervention must be disclosed.

The Sun SPARC Enterprise T5440 configuration does not require any operator intervention to sustain the reported throughput for the 8 hour business day.

7 Clause 7: Pricing Related Items

7.1 Hardware and Software Component Pricing

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

A detailed price list is included as part of the Executive Summary included with this report. Pricing from Oracle, CDW and APC are available following the Auditor's Attestation Letter.

7.2 Total Three Year Cost

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.

Details of the pricing for all components used in this measurement are included in the Executive Summary at the beginning of this document. The following discounts apply. Sun provides the following generally available discounts for the hardware listed below:

- 24% for all Sun systems including the T5440s, X4275 and X4170 systems, Sun Rack II 42U and Sun price sourced equipment.
- 29% for all PCI-E disk adapters
- 48% for all SAS cables
- 38% for the ST6140 disk arrays
- 31% for the Sun Storage F5100 Flash Arrays

Oracle provides an Oracle Mandatory E-Business discount on list software licensing plus list support.

7.3 Availability

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

All products will be available by March 19, 2010.

7.4 Hardware and Software Support

The Gold Support level priced provides 7x24 coverage of all of the Sun hardware and Sun software including, Solaris 10 and OpenSolaris. This program provides complete service with both on-site and telephone assistance. Features of this program include 7x24 coverage with live telephone transfer of software fixes and 4 hour on-site response for urgent problems.

Oracle provides maintenance support per their usual channels for Oracle 11g Enterprise Edition, Real Application Clusters and Partitioning and Tuxedo CFS-R Tier 1.

7.5 Statement of tpmC, Price/Performance

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

<i>System</i>	<i>tpmC</i>	<i>3-year System Cost</i>	<i>\$/tpmC</i>	<i>Availability Date</i>
Sun SPARC Enterprise T5440 Server Cluster	7,646,486.7	\$18,083,745	\$2.36 USD	March 19, 2010

7.6 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 components for this configuration are priced using currency from the United States of America. All prices from Sun Microsystems are based upon US list prices.

7.7 Orderability Date

For each of the components that are not orderable on the report date of the FDR, the following information must be included in the FDR:

- *Name and part number of the item that is not orderable*
- *The date when the component can be ordered (on or before the Availability Date)*
- *The method to be used to order the component (at or below the quoted price) when that date arrives*
- *The method for verifying the price*

All components of this system under test are orderable as of the date of publishing, except for Sun Storage F5100 Flash Array firmware version D10R (or higher) available March 19, 2010. Prices not sourced by Sun Microsystems may be verified by reviewing the information for the source following the Auditor's Attestation Letter.

8 Clause 8: Audit Related Items

8.1 Auditor's Report

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

Benchmark Sponsor: Brad Carlile
 Dir. Strategic Applications Engineering (SAE)
 Sun Microsystems
 3295 NW 211th Terrace
 Hillsboro OR 97124
 October 29, 2009

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

Platform: Sun SPARC Enterprise T5440 Server, 12-node cluster
 Operating system: Solaris 10 10/09
 Database Manager: Oracle Database 11g Enterprise Edition
 with Real Application Cluster and Partitioning
 Transaction Manager: Tuxedo CFS-R Tier-1

The results were:

CPU's Speed	Memory	Disks	NewOrder 90% RT	tpmC
4 x UltraSPARC T2 Plus (1.6GHz)	512 GB (4 MB L2 per socket)	2 300 GB 10Krpm SAS <u>Visible to all nodes</u> 4800 x 24 GB SSD 449 x 1 TB 7.2Krpm SATA 384 300 GB 15Krpm SAS	0.17 Sec.	7,646,486.77
Twenty Four (24) Client: Sun Fire X4170 Server (each with)				
2 x Intel Xeon X5540 QC (2.53 GHz)	48.0 GB (8 MB LLC per socket)	1 x 300 GB 10Krpm SAS	n/a	n/a

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

The following verification items were given special attention:

- The transactions were correctly implemented
- The database records were the proper size
- The database was properly scaled and populated
- The ACID properties were met
- 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
- At least 90% of all delivery transactions met the 80 Second completion time limit
- All 90% response times were under the specified maximums
- The measurement interval was representative of steady state conditions
- The reported measurement interval was 122 minutes
- On-going Incremental Checkpoints were used during the measurement interval
- The 60 day storage requirement was correctly computed
- The system pricing was verified for major components and maintenance

Additional Audit Notes:

A change to the Oracle query optimizer was made after the first durability test (Instantaneous interruption of all nodes) was executed. All other tests, including the performance run, used the corrected Oracle binaries. Given that the durability tests demonstrate the ability of the system to prevent loss of committed transactions in spite of a single point of failure, and given that this property is largely independent of the operations of the query optimizer, it is my opinion that this change did not affect compliance of the result with the ACID requirements.

Respectfully Yours,

A handwritten signature in black ink, appearing to read "François Raab", with a stylized flourish at the end.

François Raab, President

9 Third Party Pricing Quotes

9.1 CDW

CDW shopping cart from an Associate

Subject: CDW shopping cart from an Associate
From: John.Fowler.Jr@Sun.COM
Date: Sat, 10 Oct 2009 19:00:56 -0500
To: John.Fowler.Jr@Sun.COM

Qty: 14
Product: NETGEAR GS748T 48-port Gigabit Smart Switch

CDW Part #: 698653
Price: \$599.99
Ext. Price: \$8,399.86

=====
Total Price: \$8,399.86

Follow this link to purchase the item(s) in this cart:
<http://www.cdw.com/r.asp?n=11811&cdwkey=E3D832C7C1AFF18C118B28DAE09E40D2&cdwqkey=>

Please be advised that if the above URL appears on two lines, simply copy the first line of the URL and paste it into your browser's URL field. Then copy and paste the second line onto the end of your browser's URL field.

The following message was sent from your associate:
CDW Corporation
The Right Technology. Right Away. (tm)

Corporate Headquarters:
200 North Milwaukee Avenue
Vernon Hills, Illinois 60061
800.838.4239

PHONE HOURS:
M-F: 7am-7:30pm CT
Sat: 9am-5pm CT
Sun: Closed

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9.2 CDW #2



CDW.com | 800.800.4239

OE400SPS

SALES QUOTATION

QUOTE NO.	ACCOUNT NO.	DATE
BKLP900	183355	10/21/2009

BILL TO:
SUN MICROSYSTEMS
PO BOX 6100

Accounts Payable
BROOMFIELD , CO 80021-0002

Customer Phone #650.960.1300

SHIP TO:
SUN MICROSYSTEMS
Attention To: ACCOUNTS PAYABLE
PO BOX 6100

BROOMFIELD , CO 80021-0002
Contact: IRA BALLIN 877.898.4466

Customer P.O. # 091021

ACCOUNT MANAGER	SHIPPING METHOD	TERMS	EXEMPTION CERTIFICATE
IRA BALLIN 877.898.4466	Drop Ship Ground	NET 30 Days	

QTY	ITEM NO.	DESCRIPTION	UNIT PRICE	EXTENDED PRICE
1	1761795	BROCADE TURBOIRON 24X W/24PT 1GBE Mfg#: FOU-TI-24X-AC	9,035.00	9,035.00
24	1792730	BROCADE 10GBASE-SR SFP+OPTIC LC Mfg#: FOU-10G-SFPP-SR	1,020.00	24,480.00
3	1618210	BROCADE FASTIRON GS 48PT 10/100/1000 Mfg#: FNC-FGS648P-STK	6,150.00	18,450.00
3	1819745	BROCADE TI-24X-GOLD Mfg#: FOU-TI-24X-GOLD	1,090.00	3,270.00
9	1039674	BROCADE TECHNET GOLD SUPT FASTIRON Mfg#: FOU-GOLD-FGS648P	810.00	7,290.00
SUBTOTAL				62,525.00
FREIGHT				166.57
TAX				2,130.57
				US Currency
TOTAL				64,822.14

THE RIGHT TECHNOLOGY. RIGHT AWAY.™

CDW Direct, LLC
200 North Milwaukee Ave.
Vernon Hills, IL 60061
Phone: 847.465.6000

Fax: 312-705-0688

Please remit payment to:
CDW Direct, LLC
P.O. Box 75723
Chicago, IL 60675-5723

9.3 Oracle Corp.

<i>Product</i>	<i>Price</i>	<i>Qty</i>	<i>Extended Price</i>
Oracle Database 11g Enterprise Edition, Per Processor, Unlimited Users for 3 years	\$23,750.00	192*	\$4,560,000.00
Real Application Clusters, Per Processor, Unlimited Users for 3 years	\$11,500.00	192*	\$2,208,000.00
Partitioning, Per Processor, Unlimited Users for 3 years	\$5,750.00	192*	\$1,104,000.00
Oracle Incident Server Support for 3 years	\$27,600.00	3	\$82,800.00
Tuxedo CFS-R Tier 1	\$1,800.00	24	\$43,200.00
Oracle Premium Support for 3 years	\$9,504.00	3	\$28,512.00
Oracle Mandatory E-Business Discount			<\$2,006,628.00>
Oracle Total			\$6,019,884.00

(*192 = 0.5 * 384) Explanation: The number of required licenses shall be determined by multiplying the total number of cores of the processor by a core processing licensing factor. The core processor licensing factor for Sun T5440 T2+ is 0.5

Contact: MaryBeth Pierantoni

Oracle Corporation

mary.beth.pierantoni@oracle.com

(916) 315-5081

9.4 APC

American Power Conversion Shopping Cart Items

Subject: American Power Conversion Shopping Cart Items
From: John <John.Fowler.Jr@Sun.COM>
Date: Sat, 10 Oct 2009 19:42:58 -0400
To: John.Fowler.Jr@Sun.COM

APC Email header graphic

John,

John has emailed the contents of a shopping cart for you to view.

SKU	Product	Qty	Price(USD)	Total(USD)
SUA3000R3XLNETPKGRM	APC Smart-UPS XL 3000VA 3U Network Package for Server Rooms	14	\$1,725.00	\$24,150.00
SUA48RMXLBP3U	APC Smart-UPS XL 48V RM 3U Battery Pack	28	\$699.00	\$19,572.00
SUA2200XL	APC Smart-UPS XL 2200VA 120V Tower/Rack Convertible	14	\$1,150.00	\$16,100.00

[Click here](#) to view the cart online.

Please Note: Pricing and Availability subject to change without notice.

APC Email footer graphic

Appendix A: Application Source Code

tpccClient.c

```
/**
 *** tpccClient.c
 *** (c) 2000, 2001 Sun Microsystems, Inc. All rights reserved.
 ***
 ***/

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

#include <sys/types.h>
#include <sys/stat.h>
#include <errno.h>
#include <fcntl.h>

#include "tpccBool.h"
#include "tpcc.h"

BOOL bInitServer(WORKER *,int,int,BOOL);
BOOL bTuxInit(WORKER *pWorker);

BOOL bInitServer(WORKER * pWorker,int iTerminalId,int iWorkerId,BOOL bProcess)
{
    pWorker->iWarehouseId = 0;
    pWorker->iDistrictId = 0;
    pWorker->iWorkerId = iWorkerId;
    pWorker->iTerminalId = iTerminalId;
    pWorker->uScreenId = 0;
    pWorker->iStatusId = 0;
    pWorker->bRequestForm = TRUE;
    pWorker->pTuxInData = NULL;
    pWorker->pTuxOutData = NULL;
    pWorker->lTuxDataLen = 0;

    pWorker->pTpInf = NULL;
    strcpy(pWorker->szErrorTxt,"");
    strcpy(pWorker->szWork,"");
    return(bTuxInit(pWorker));
}
```

tpccClient.h

```
#include <malloc.h>
#include <stdarg.h>
#include <stdio.h>
#include <stdlib.h>
#include <string.h>
#include <signal.h>
#include <time.h>
#include <poll.h>
#include <thread.h>
#include <pthread.h>
#include <sys/timeb.h>
#include <sys/types.h>
#include <sys/stat.h>
#include <errno.h>
```

```
#include <fcntl.h>

#include "tpccBool.h"
#include "tpcc.h"

#define BUFFER 0
#define PLUGIN_DIR "/usr/netscape/server4/plugins"
#define PLUGIN_URL "/tpcc"
#define PLUGIN_OBJ "tpccApp.so"

BOOL bInitServer(WORKER *,int,int,BOOL);

tpccTux.c
/**
 *** tpccTux.c
 *** (c) 2006 Sun Microsystems, Inc. All rights reserved.
 ***
 *** This file handles the entry points for calling BEA tuxedo
 *** As perf Mar 4, 2009 pre-audit: changes for interactive compliance
 ***
 ***
 ***/

#include <stdio.h>
#include <errno.h>
#include "tpccBool.h"
#include "tpccTux.h"
#include "tpcc.h"
#include "nsapi.h"
#define TXERRCODE -100
static const char *newo_service = NEWORDER;
static const char *paym_service = PAYMENT;
static const char *ords_service = ORDERSTATUS;
static const char *del_service = DELIVERY;
static const char *stock_service = STOCKLEVEL;

BOOL bTuxIOInit(WORKER *pWorker)
{
    BOOL eStatus = FALSE;
    int ret;

    if((pWorker->pTpInf = (TPINIT *)tpalloc("TPINIT", NULL,
                                           TPINITNEED(0))) == NULL)
        /* if((pWorker->pTpInf = (TPINIT *)tpalloc("TPINIT", NULL,
                                                  sizeof(TPINIT))) == NULL) */

        {
            if(tperrno == TPEOS)
            {
                sprintf(pWorker->szErrorTxt, "tpalloc failed in bTuxIOInit. TxErrno = %d Unix-
Error = %d", tperrno, Uunixerr);
            }
            else
            {
                sprintf(pWorker->szErrorTxt, "tpalloc failed in bTuxIOInit. TxErrno = %d",
tperrno);
            }
            ereport(LOG_FAILURE," %s Tperno = %d, %s\n",pWorker->szErrorTxt, tperrno,
tpstrerror(tperrno));
            ret = tperrordetail(0);
            if(ret == -1) {
                ereport(LOG_FAILURE, "tperrordetail() failed!\n");
            }
        }
    }
```

```

        ereport(LOG_FAILURE, "Tperrno = %d, %s\n", tperrno, tpstrerror(tperrno));
    }
    else if (ret != 0) {
        ereport(LOG_FAILURE, "errordetail:%s\n",
            tpstrerrordetail( ret, 0));
    }
    return(TRUE);
}

pWorker->pTpInf->flags = TPMULTICONTEXTS;
pWorker->pTpInf->datalen = 0;

if(tpinit(pWorker->pTpInf) == -1)
{
    ereport(LOG_FAILURE," bTuxIOInit: tpinit failed\n");
    ret = tperrordetail(0);
    if(ret == -1) {
        ereport(LOG_FAILURE, "tperrordetail() failed!\n");
        ereport(LOG_FAILURE, "Tperrno = %d, %s\n", tperrno, tpstrerror(tperrno));
    }
    else if (ret != 0) {
        ereport(LOG_FAILURE, "errordetail:%s\n",
            tpstrerrordetail( ret, 0));
    }

    if(tperrno == TPEOS)
    {
        sprintf(pWorker->szErrorTxt, "tpinit failed in bTuxIOInit. TxErrno = %d Unix-
Error = %d", tperrno, Uunixerr);
    }
    else
    {
        sprintf(pWorker->szErrorTxt, "tpinit failed in bTuxIOInit. TxErrno = %d", tperrno);
    }
    tpfree((char *)pWorker->pTpInf);
    pWorker->pTpInf = NULL;
    ereport(LOG_FAILURE," bTuxIOInit: tpinit failed returning - %s \n", pWorker->szErrorTxt);

    return(TRUE);
}

if(tpgetctxt(&pWorker->tpxContext, 0) == -1)
{
    sprintf(pWorker->szErrorTxt, "tpgetctxt failed in bTuxIOInit. TxErrno = %d", tperrno);
    eStatus = TRUE;
}

return(eStatus);
}

/* This currently is NOT used */
BOOL bTuxIOTerm(WORKER *pWorker)
{
    BOOL eStatus = FALSE;
    if(pWorker->pTpInf != NULL)
    {
        tpfree((char *)pWorker->pTpInf);
        pWorker->pTpInf = NULL;
    }
    tpterm();
    return(FALSE);
}

```

```

/* This function makes LIVE calls to the Tuxedo servers (Back end)
** inputs:
**  szService - String (i.e. NEWO) representing what will be exec'd.
**  pWorker -- the WORKER struct assigned to the current thread.
**  contains pointers to input/output data.
**
** outputs:
**  pbTPRslt - Result status DUPLICATE of RETURN
**  piTPRslt - pointer to tperrno value.
**  BOOL return value: 0/FALSE ok; !0 error
*/
BOOL bTuxTran(char *szService, WORKER *pWorker, BOOL *pbTPRslt, int *piTPRslt)
{
    long lOlen = pWorker->lTuxDataLen;
    char *tuxibuf = (char *) (pWorker->pTuxInData);
    BOOL eStatus = FALSE;

    if(strcmp(szService, DELIVERY) == 0)
    {
        if(tpsetctxt(pWorker->tpxContext, 0) == -1)
        {
            sprintf(pWorker->szErrorTxt, "tpsetctxt failed in bTuxIOInit. TxErrno = %d",
tperrno);

            eStatus = TRUE;
        }
        if(tpacall(del_service,
            tuxibuf,
            pWorker->lTuxDataLen,
            TPSIGRSTRT|TPNOREPLY) == -1)
        {
            if (tperrno == TPEOS)
            {
                sprintf(pWorker->szErrorTxt,
                    "del tpcall failed.tperrno=%d,Uunixerr = %d",
                    tperrno, Uunixerr);
                eStatus = TRUE;
            }
            else
            {
                sprintf(pWorker->szErrorTxt,
                    "del tpcall failed.tperrno=%d",tperrno);
                eStatus = TRUE;
            }
        }
    }
    else
    {
        if(tpsetctxt(pWorker->tpxContext, 0) == -1)
        {
            sprintf(pWorker->szErrorTxt, "tpsetctxt failed in bTuxIOInit. TxErrno = %d",
tperrno);

            eStatus = TRUE;
        }

        if(tpcall(szService,
            tuxibuf,
            pWorker->lTuxDataLen,
            (char **)&(pWorker->pTuxOutData),
            &lOlen, TPSIGRSTRT|TPNOTIME) == -1)
        {
            if (tperrno == TPEOS)

```

```

        {
            sprintf(pWorker->szErrorTxt,
                "%s tpcall failed.tperno=%d,Uunixerr = %d",
                szService, tperno, Uunixerr);
            eStatus = TRUE;
        }
        else
        {
            if(stremp(szService, NEWORDER) == 0) {
                NEWO_INF *pnew = (NEWO_INF *)pWorker->pTuxOutData;
                if(pnew->status[0] == 'I') {
/*This is Bad ItemId */
                    eStatus = FALSE;
                    *piTPRslt = SVC_BADITEMID;
                    *pbTPRslt = TRUE;
                    goto xIt;
                }
            }

            sprintf(pWorker->szErrorTxt,
                "%s tpcall failed.tperno=%d",
                szService, tperno);
            eStatus = TRUE;
        }
    }

    *piTPRslt = tperno;
    *pbTPRslt = eStatus;

xIt:
    return(eStatus);
}

BOOL bTuxInit(WORKER *pWorker)
{
    int iMaxLen = 0;
    if(sizeof(NEWO_INF) > iMaxLen)
    {
        iMaxLen = sizeof(NEWO_INF);
    }
    if(sizeof(PAY_INF) > iMaxLen)
    {
        iMaxLen = sizeof(PAY_INF);
    }
    if(sizeof(ORD_INF) > iMaxLen)
    {
        iMaxLen = sizeof(ORD_INF);
    }
    if(sizeof(DEL_INF) > iMaxLen)
    {
        iMaxLen = sizeof(DEL_INF);
    }
    if(sizeof(STOCK_INF) > iMaxLen)
    {
        iMaxLen = sizeof(STOCK_INF);
    }
    if(pWorker->pTuxInData == NULL)
    {
        if((pWorker->pTuxInData = (char *)tpalloc("CARRAY", NULL,
            iMaxLen * (sizeof(char)))) == NULL)
        {
            if(tperno == TPEOS)

```

```

        {
            sprintf(pWorker->szErrorTxt, "tpalloc failed in bTuxInit. TxErrno = %d
Unix-Error = %d", tperno, Uunixerr);
        }
        else
        {
            sprintf(pWorker->szErrorTxt, "tpalloc failed in bTuxInit. TxErrno =
%d", tperno);
        }
        return(TRUE);
    }
    if(pWorker->pTuxOutData == NULL)
    {
        if((pWorker->pTuxOutData = (char *)tpalloc("CARRAY", NULL,
            iMaxLen * (sizeof(char)))) == NULL)
        {
            if(tperno == TPEOS)
            {
                sprintf(pWorker->szErrorTxt, "tpalloc failed in bTuxInit. TxErrno = %d
Unix-Error = %d", tperno, Uunixerr);
            }
            else
            {
                sprintf(pWorker->szErrorTxt, "tpalloc failed in bTuxInit. TxErrno =
%d", tperno);
            }
            tpfree((char *)pWorker->pTuxInData);
            pWorker->pTuxInData = NULL;
            pWorker->pTuxOutData = NULL;
            return(TRUE);
        }
    }
    return(FALSE);
}

BOOL bTuxTerm(WORKER *pWorker)
{
    if(pWorker->pTuxInData != NULL)
    {
        tpfree((char *)pWorker->pTuxInData);
    }
    if(pWorker->pTuxOutData != NULL)
    {
        tpfree((char *)pWorker->pTuxOutData);
    }
    pWorker->pTuxInData = NULL;
    pWorker->pTuxOutData = NULL;
    return(FALSE);
}

tpccTux.h
#ifndef __TPCCTUXH__
#define __TPCCTUXH__
#include <atmi.h> /* TUXEDO */
#include <Unix.h> /* TUXEDO */
#include <userlog.h> /* TUXEDO */
#include "tpcc.h"
#include "tpccBool.h"
BOOL bTuxTerm(WORKER *);

```

```

BOOL bTuxInit(WORKER *);
BOOL bTuxIO(char *szService, WORKER *pTPCC, BOOL *pbTPRslt, int *piTPRslt);
BOOL bTuxIOInit(WORKER *);
BOOL bTuxIOTerm(WORKER *);
BOOL bTuxTran(char *szService, WORKER *pWorker, BOOL *pbTPRslt, int *piTPRslt);
#endif

```

tpccDiag.c

```

#include <stdio.h>
#include <string.h>
#include <stdlib.h>
#include "tpccDiag.h"
#include "tpccBool.h"
#include "tpccConst.h"
#include "nsapi.h"
uint uDiagLevel;
char *pDiagHdr;
char *pErrHdr = {"*** TPCC Application Encounterd An Error ***"};
void vDiagInit(char * pDiagId)
{
    char *pszEnvData;
    if(DIAGNOSTICS)
    {
        if((pszEnvData = getenv("DIAGLEVEL")) == NULL)
        {
            uDiagLevel = DEFAULTDIAGLEVEL;
        }
        else
            uDiagLevel = abs(atoi(pszEnvData));
        if(uDiagLevel == 0)
        {
            uDiagLevel = DIAG_ERROR;
        }
        pDiagHdr = (char *) malloc(strlen(pDiagId) + 1);
        strcpy(pDiagHdr,pDiagId);
    }
    /* if Diagnostics*/
}

void vDiagTerm(void)
{
    if(DIAGNOSTICS)
    {
        free(pDiagHdr);
    }
}

void vDiagWrite(char * pDiagBuffer, uint uSeverity)
{
    char *pDMsgs[3];
    uint uMsgCnt = 0;
    int iERslt = 0;
    if(DIAGNOSTICS)
    {
        if (uDiagLevel >= uSeverity)
        {
            if (uSeverity == DIAG_ERROR)
            {
                pDMsgs[0] = pDiagHdr;
                pDMsgs[1] = pErrHdr;
                pDMsgs[2] = pDiagBuffer;
                uMsgCnt = 3;
            }
        }
    }
}

```

```

    }
    else
    {
        pDMsgs[0] = pDiagHdr;
        pDMsgs[1] = pDiagBuffer;
        uMsgCnt = 2;
    }
    if(uMsgCnt == 3)
    {
        ereport(LOG_FAILURE,"\\n%s:%s\\n%s",
            pDMsgs[0],pDMsgs[1],pDMsgs[2]);
    }
    else
    {
        ereport(LOG_FAILURE,"\\n%s:%s",
            pDMsgs[0],pDMsgs[1]);
    }
}
/* if uDiagLevel >= uSeverity*/
}
/* if Diagnostics*/
}
/*vDiagWrite*/

```

tpccDiag.h

```

#ifndef __TPCCDIAGH__
#define __TPCCDIAGH__
#include <sys/types.h>
void vDiagInit(char * pDiagId);
void vDiagTerm(void);
void vDiagWrite(char * pDiagBuffer, uint uSeverity);
#endif

```

tpccNsapi.c

```

/**
*** tpccNsapi.c
*** (c) Sun Microsystems, Inc. All rights reserved.
***
*** This file handles the entry points for the initialization and service
*** routines of the TPC-C plugin for the iPlanet Web Server.
***
*** Modifications made from Review by Pallab Bhattachariya - March 29, 2001
*** DJC
*** Change to add NULL termination to the Request data read by the server.
*** - April 5 DJC
***
***/
#include <sys/types.h>
#include <sys/time.h>

#include "nsapi.h"
#include "tpccBool.h"
#include "tpcc.h"
#include "tpccClient.h"
#include "tpccTux.h"
#include "tpccDiag.h"
#include "tpccService.h"

/*
* string containers for the plugin paths
*/
char szPluginPath[128];

```

```

static int iMaxWorkers;
BOOL bMinTidSet = FALSE;

/* The following are to manage a protected index to the worker array */

static mutex_t    mtThrPvt;
static cond_t    ctIDCond;
static int iThrPvtCtr = 0;
static int *iFreeThrd;
static int iFreeCount;

static WORKER **ppWorker;

/*
 * Start time of thread
 */
static unsigned int uiStartSec;

/**
 ** GetMyHandle takes in the NSAPI Request struct, which contains the current
 ** (next) available thread ID in the iWS thread pool.
 **
 **/
#define THREAD_EXTRA 10
WORKER *GetMyHandle(Request *rq)
{
    int iThrdId = -1;
    int iIndex = -1;
    WORKER *pWorker = (WORKER *)NULL;
    char *pszReq = NULL;
    int found = 0;
    int attempts = 0;

    /* Get next free worker - Use a round robin - try to get equal use on all the connects */
    mutex_lock(&mtThrPvt);
    /* Get the data-struct index for this thread */
    /* iIndex = thr_self(); Not done anymore
    */

    while (iFreeCount == 0) {
        cond_wait(&ctIDCond, &mtThrPvt);
        if (iFreeThrd[iThrdId == iThrPvtCtr])
            goto done;
    }
    if (iThrPvtCtr == iMaxWorkers)
    {
        iThrPvtCtr = 0;
    }

    found = 0; attempts = 0;
    while (! found) {
        iThrdId = iThrPvtCtr++;
        if (!iFreeThrd[iThrdId])
        {
            if (iThrPvtCtr == iMaxWorkers)
            {
                attempts++;

                if (attempts == 2)

```

```

{
        ereport(LOG_FAILURE, "1 Thread %d from Pvt IndexId %d > %d\n", iThrdId, iFreeCount,
iMaxWorkers);
        ereport(LOG_FAILURE, "1 too many attempts -shouldn't happen - EXITING NOW\n");
        mutex_unlock(&mtThrPvt);
        return NULL;
    }
    iThrPvtCtr = 0;
    }
    continue;
}

    break;
}
done:
    iFreeThrd[iThrdId]=0; /* This worker is not free anymore */

    iFreeCount--;
    mutex_unlock(&mtThrPvt);

    pWorker = ppWorker[iThrdId];
    pWorker->uiThrdId = iThrdId;

    return(pWorker);
}

/*
 * GetTime() gets the duration passed since the uiStartSec. Called by
 * TpccService().
 */
static unsigned int GetTime(void)
{
    struct timeval tmNow;

    gettimeofday(&tmNow, (char *)NULL);
    return (((tmNow.tv_sec - uiStartSec) * 1000) + tmNow.tv_usec/1000);
}

/**
 ** TpccInit() is defined as the initialization routine in the server
 ** instance's obj.conf configuration file.
 **
 ** This function reads in the "max-workers" parameter from the TpccInit
 ** section of the obj.conf, which defines the total number of WORKER
 ** structures that the plugin will create and use for the duration of the
 ** server instance's existence.
 **
 ** The input and return variables are assigned according to the NSAPI
 ** specification.
 **
 **/

/* This is kind of a hack to buffer UP the number of worker threads in order
 * to work with the thread id's that get returned in get my handle.
 */

NSAPI_PUBLIC int TpccInit(pblock *pb, Session *sn, Request *rq)
{

```

```

struct timeval tmNow;

int iLoop;

mutex_init(&mtThrPvt, USYNC_THREAD, NULL);
cond_init(&ctlDCond, USYNC_THREAD, NULL);

/*
 * Get current time
 */
gettimeofday(&tmNow, (char *)NULL);
uiStartSec = (tmNow.tv_sec * 1000) + tmNow.tv_usec/1000;

/*
 * pblock_findval is an NSAPI call; this call determines max-workers
 * in obj.conf
 * NOTE: make this value HIGHER then rqThrottle for worker sizing.
 */
iMaxWorkers = atoi(pblock_findval("max-workers", pb));

ereport(LOG_INFORM, "Started initializing tpccApp.so. %d workers\n", iMaxWorkers);
iMaxWorkers+=THREAD_EXTRA;

/*
 * The following allocates and clears memory for the structure
 * containing the pointers to WORKER structures.
 */
if((ppWorker = (WORKER **)malloc(sizeof(WORKER *) * iMaxWorkers)) == NULL)
{
    ereport(LOG_FAILURE, "Malloc State Global");
    return REQ_ABORTED;
}
memset(ppWorker, 0, iMaxWorkers * sizeof(WORKER *));

iFreeThrd = (int*)malloc(iMaxWorkers * sizeof(int));
if (0 == iFreeThrd){
    ereport(LOG_FAILURE, "tpccInit: ERROR IN MALLOC for free thread array\n");
    return REQ_ABORTED;
}

/*
 * The following allocates and clears memory for the actual WORKER
 * structures themselves. It also initializes each WORKER.
 */
for(iLoop = 0; iLoop < iMaxWorkers; iLoop++)
{
    iFreeThrd[iLoop] = 1;
    if((ppWorker[iLoop] = (WORKER *)malloc(sizeof(WORKER))) == NULL)
    {
        ereport(LOG_FAILURE, "Malloc State");
        return REQ_ABORTED;
    }

    memset(ppWorker[iLoop], 0, sizeof(WORKER));
    ppWorker[iLoop]->pTuxInData = NULL;
    ppWorker[iLoop]->pTuxOutData = NULL;
    strcpy(ppWorker[iLoop]->szErrorTxt, "");
    ppWorker[iLoop]->iStatusId = STATUS_OK;
    ppWorker[iLoop]->uiThrdId = iLoop;
    /*
     * Initialize the worker data structure.

```

```

*/
if(bInitServer(ppWorker[iLoop], iLoop, iLoop, FALSE))
{
    vDiagWrite(ppWorker[iLoop]->szErrorTxt, DIAG_ERROR);
    return REQ_ABORTED;
}

/*
 * Initialize Tuxedo connection for this thread with tpinit()
 * call.
 */

/* workaround - have getMyHandle make the call for 1st time around */
if(bTuxIOInit(ppWorker[iLoop]))
{
    vDiagWrite(ppWorker[iLoop]->szErrorTxt, DIAG_ERROR);
    return REQ_ABORTED;
}

}
iFreeCount = iMaxWorkers;

ereport(LOG_INFORM, "TpccInit: Finished initializing %d workers [ tpccApp.so.] with LIVE TUXEDO/
DB backend\n", iMaxWorkers);

sprintf(szPluginPath, "%s", PLUGIN_URL);

return REQ_PROCEED;
}

static void freeWorker (int iThrdId)
{
    mutex_lock(&mtThrPvt);
    iFreeThrd[iThrdId]=1; /* free now */
    if(iFreeCount == 0)
    {
        iThrPvtCtr = iThrdId;
    }
    iFreeCount++;
    cond_signal(&ctlDCond);
    mutex_unlock(&mtThrPvt);
    return;
}

/**
 ** TpccService() is defined as the service routine in the server
 ** instance's obj.conf configuration file.
 **
 ** The input and return variables are assigned according to the NSAPI
 ** specification.
 **
 **/
NSAPI_PUBLIC int TpccService(pblock *pb, Session *sn, Request *rq)
{
    int iTid;
    int iReqContentLen=0;
    int iLen=0;

    int return_value;

```

```

    char szReturnLength[8];
/*following 2 moved to WORKER struct*/
    char *pszRequestData;
    char *pszReturnData;
    char *pszReqMethod;

    unsigned int uiStartReadTime;
    unsigned int uiEndReadTime;
    unsigned int uiStartWriteTime;
    unsigned int uiEndWriteTime;

    int iHtmlLen = 0;
    unsigned int uiStatus;
    WORKER *pWorker;

/*
 * Gets the worker assigned to this iWS thread (defined in rq).
 */
if(!(pWorker = GetMyHandle(rq)))
{
    ereport(LOG_FAILURE, "Cannot Get My Handle %d\n", thr_self());
    return (REQ_ABORTED);
}
pszRequestData = pWorker->szRequestData;
pszReturnData = pWorker->szReturnData;

/*
 * Set the default protocol status to 200 (okay). May get changed later
 * on error. (There is a second setting for this at the end of this
 * function -- this one is likely premature and redundant.
 * -- grog/20010507)
 */

protocol_status(sn, rq, PROTOCOL_OK, NULL);

/*
 * Force the return content's MIME type to text/html.
 */
param_free(pblock_remove("content-type", rq->srvhdrs));
pblock_nvinset("content-type", "text/html", rq->srvhdrs);

/*
 * Determine the HTTP method used in the transaction. For our
 * purposes, it should be either GET or POST.
 */
pszReqMethod = pblock_findval("method", rq->reqpb);
/*
 * If the method was GET, then there is no content data expected, as
 * defined by the HTTP RFCs. Force the szRequestData to be empty,
 * which will signal to uiServiceRequest that this is a login
 * transaction.
 */
if (!strcmp(pszReqMethod, "GET", 3))
{
    strcpy(pszRequestData, "");
}

/*
 * If the method was POST, then we need to capture the query string
 * send in the content field of the POST transaction.
 */

```

```

else if (!strcmp(pszReqMethod, "POST", 4))
{
    int iReadLength;
    int iLen;
    netbuf *nbuf;

/*
 * Determine the length of the POST query. This is defined
 * by the HTTP "Content-type" header value.
 */
iLen = iReqContentLen = atoi(pblock_findval("content-length",
    rq->headers));

/*
 * nbuf is a locally defined structure of the NSAPI netbuf
 * type. The structure contains position, size, and other
 * parameters relevant to the incoming data.
 */
nbuf = sn->inbuf;

/*
 * iReadLength is set to the length of the buffer (so far).
 */
iReadLength = nbuf->cursize - nbuf->pos;

/*
 * Get any data sitting in the buffer.
 */
if (iReadLength)
{
    /*
     * If iReadLength is longer than the actual POST
     * query's defined length, we force it to be that
     * size to avoid reading more than we should.
     */
    if (iReadLength > iReqContentLen)
    {
        iReadLength = iReqContentLen;
    }

    /*
     * Copy in the buffer data and advance the buffer
     * pointer.
     */
    (void) memcpy(pszRequestData, nbuf->inbuf + nbuf->pos,
        iReadLength);
    nbuf->pos += iReadLength;
}

/*
 * If we haven't read in all of the data, we will need to read
 * more data from the socket.
 */
if (iReadLength < iLen)
{
    /*
     * We need to redefine the length to be read, iLen,
     * to be the remainder. Hence we subtract iReadLength,
     * the amount read so far, from iLen, which was
     * initially set to the full length of the query
     * string.
     */
}

```

```

        *
        * Then read the remainder, starting from the pointer
        * position offset by iReadLength.
        */
        iLen -= iReadLength;
        iReadLength = net_read(sn->csd,
                                pszRequestData + iReadLength, iLen, 10);

        /*uiEndReadTime = GetTime();*/

        /*
        * If the query was not completely read, abort
        * servicing the HTTP request.
        */
        if (iReadLength != iLen)
        {
                ereport(LOG_INFORM, "POST read failed\n");
                freeWorker(pWorker->uiThrId);
                return (REQ_ABORTED);
        }
    }
}
/*
* end POST
*/

/*
* The request data is not terminated by a NULL always - do it just
* in case: DJC.
*/
pszRequestData[iReqContentLen] = '\0';

/*
* Call uiServiceRequest(), which processes the HTTP request.
*
* This function takes the data in szRequestData (the query string,
* which is empty if it's GET-based login) and returns szReturnData,
* of length iHtmlLen. szReturnData contains the HTML source to be
* returned to the requestor.
*/
uiStatus = uiServiceRequest(pWorker, pszRequestData, pszReturnData, &iHtmlLen);
/*
* Force the Content-length: header value to be the length of the
* HTML generated from uiServiceRequest()
*/
param_free(pblock_remove("content-length", rq->srvhdrs));
pblock_nninsert("content-length", iHtmlLen, rq->srvhdrs);

/*
* NSAPI call to set the return status to successful (200).
*/
protocol_status(sn, rq, PROTOCOL_OK, NULL);

/*
* Set the return value which will signal iWS to send the request.
*/
return_value = protocol_start_response(sn, rq);

if (return_value == REQ_NOACTION)
{
        ereport(LOG_INFORM, "TpccService: NOACTION - start response saw request method

```

```

HEAD?\n");

        freeWorker(pWorker->uiThrId);
        return REQ_PROCEED;
    }
    /* uiStartWriteTime = GetTime(); */
    return_value = net_write(sn->csd, pszReturnData, iHtmlLen);
    /* uiEndWriteTime = GetTime(); */

    if (return_value == IO_ERROR)
    {
        ereport(LOG_INFORM, "TpccService: REQ_EXIT - start response returned IO_ERROR?\n");
        freeWorker(pWorker->uiThrId);
        return REQ_EXIT;
    }
    freeWorker(pWorker->uiThrId);
    return REQ_PROCEED;
}

tpccService.c
/**
*** tpccService.c
*** (c) 2000, 2001 Sun Microsystems, Inc. All rights reserved.
***
*** This file handles the entry points for the initialization and service
*** routines of the TPC-C plugin for the iPlanet Web Server.
***
*** For best readability, set tab size to 8 spaces.
*** As per Mar 4, 2009 pre-audit: changes for interactive compliance
*** Mar 2009 DJC - upgrade Short-->Int
***/

#include <stdio.h>
#include <stdlib.h>
#include <string.h>
#include <ctype.h>
#include "tpccDiag.h"
#include "tpccService.h"
#include "tpccTux.h"
#include "nsapi.h"

/*
* Each "screen" (or page) has a unique screen ID.
* Value is stored in pWorker->iScreenId.
*/
#define SCREEN_NULL    0
#define SCREEN_LOGON   1
#define SCREEN_MENU    2
#define SCREEN_NEWORDER 3
#define SCREEN_PAYMENT 4
#define SCREEN_DELIVERY 5
#define SCREEN_ORDERSTATUS 6
#define SCREEN_STOCKLEVEL 7
#define SCREEN_EXIT    8
#define SCREEN_MAX     9

/*
* These values are set based on the value for the CMD= name tag.
* Returned from uiExtractCmd()
*/

```



```
#define CMD_EXECUTE      1
#define CMD_NEWORDER_SCREEN  2
#define CMD_PAYMENT_SCREEN  3
#define CMD_DELIVERY_SCREEN  4
#define CMD_ORDERSTATUS_SCREEN  5
#define CMD_STOCKLEVEL_SCREEN  6
#define CMD_EXIT          7
#define CMD_SUBMIT        8
#define CMD_MENU_SCREEN   9
#define CMD_MAX           10

/*
 * The following ALT_ constants are used to calculate empty values in name/
 * value pairs in a New Order POST submission.
 */
#define ALT_SIZEF 18 /* size of a valueless triplet Sxx*=&Ixx*&Qxx*& */
#define ALT_SIZEEC 12 /* size of CMD=Execute */
#define ALT_SIZEEA 4 /* size of [S|I|Q]xx* */

/*
 * Maximum name tag size
 */
#define ALT_SIZEW 100

/*
 * name tags for name/value pairs used in POST queries
 */
static const char *szItemList[] = {
    "I00*=", "I01*=", "I02*=", "I03*=", "I04*=",
    "I05*=", "I06*=", "I07*=", "I08*=", "I09*=",
    "I10*=", "I11*=", "I12*=", "I13*=", "I14*=", ""};
static const char *szSupplyList[] = {
    "S00*=", "S01*=", "S02*=", "S03*=", "S04*=",
    "S05*=", "S06*=", "S07*=", "S08*=", "S09*=",
    "S10*=", "S11*=", "S12*=", "S13*=", "S14*=", ""};
static const char *szQuantityList[] = {
    "Q00*=", "Q01*=", "Q02*=", "Q03*=", "Q04*=",
    "Q05*=", "Q06*=", "Q07*=", "Q08*=", "Q09*=",
    "Q10*=", "Q11*=", "Q12*=", "Q13*=", "Q14*=", ""};

extern char szPluginPath[];

/*
 * Valid values for the CMD name tag.
 */
static const char *szCmds[] =
{
    "Unknown",
    "Execute",
    "..NewOrder..",
    "..Payment..",
    "..Delivery..",
    "..Order-Status..",
    "..Stock-Level..",
    ".Exit.",
    "Submit",
    "Menu"
};

/*
 * Static HTML for the initial login screen.
 */
```

```
static const char *szLoginScreen =
    "<HTML>"
    "<HEAD><TITLE>Welcome To TPC-C</TITLE></HEAD><BODY>"
    "Please Identify your Warehouse and District for this session.<BR>"
    "<FORM ACTION=\"%s\" METHOD=\"POST\">"
    "<INPUT TYPE=\"hidden\" NAME=\"STID\" VALUE=\"%d\">"
    "<INPUT TYPE=\"hidden\" NAME=\"SCID\" VALUE=\"%1\">"
    "<INPUT TYPE=\"hidden\" NAME=\"TRID\" VALUE=\"%2\">"
    "<INPUT TYPE=\"hidden\" NAME=\"WKID\" VALUE=\"%0\">"
    "Warehouse ID <INPUT NAME=\"w_id\" SIZE=4><BR>"
    "District ID <INPUT NAME=\"d_id\" SIZE=2><BR>"
    "<HR>"
    "<INPUT TYPE=\"submit\" NAME=\"CMD\" VALUE=\"Submit\">"
    "</FORM>";

/*
 * Static HTML segment for the option list on the menu screen.
 */
static const char *szMenuList =
    "<INPUT TYPE=\"submit\" NAME=\"CMD\" VALUE=\"..NewOrder..\">"
    "<INPUT TYPE=\"submit\" NAME=\"CMD\" VALUE=\"..Payment..\">"
    "<INPUT TYPE=\"submit\" NAME=\"CMD\" VALUE=\"..Delivery..\">"
    "<INPUT TYPE=\"submit\" NAME=\"CMD\" VALUE=\"..Order-Status..\">"
    "<INPUT TYPE=\"submit\" NAME=\"CMD\" VALUE=\"..Stock-Level..\">"
    "<INPUT TYPE=\"submit\" NAME=\"CMD\" VALUE=\"..Exit..\">";

/*
 * HTML footer.
 */
static const char *szEndHtmlTag = "</BODY></HTML>\r\n\r\n";

/*
 * Name tags used for RBE (terminal) status and context identification.
 */
static const char *TRID = "TRID=";
static const char *WKID = "WKID=";
static const char *SCID = "SCID=";
static const char *STID = "STID=";

static const char *CMD = "CMD=";
static const char *ZIPPIC = "XXXXXX-XXXXX";

/*
 * Eternal counter for terminal context identifier.
 */
static volatile int iTermCnt = 1;

/*
 * Function prototypes.
 */
BOOL bExecuteLogin(char *, char *, WORKER *, int *);
BOOL bExecuteForm(char *, char *, WORKER *, int *);
BOOL bExecuteNewOrder(char *, char *, WORKER *, int *);
BOOL bExecutePayment(char *, char *, WORKER *, int *);
BOOL bExecuteDelivery(char *, char *, WORKER *, int *);
BOOL bExecuteOrderStatus(char *, char *, WORKER *, int *);
BOOL bExecuteStockLevel(char *, char *, WORKER *, int *);
BOOL bExtractHidden(char *, unsigned int *, int *, int *);

unsigned int uiExtractCmd(char *, char *, unsigned int);
```

```

char * pszExtractLongKey(long *, char *, const char *, WORKER *);
char * pszExtractIntKey(int *, char *, const char *, WORKER *);
/* Don't use this anymore:
 * char * pszExtractShortKey(short *, char *, char *, WORKER *);
 */
char * pszExtractStringKey(char *, char *, const char *, WORKER *, unsigned int);
char * pszExtractAmountKey(double *, char *, const char *, WORKER *);
char * pszExtractKeyValue(char *, const char *, char **, unsigned int);
char * pszExtractWDIDKey(int *, char *, char *, WORKER *);

```

```

int iLayoutLogin(char *, WORKER *);
int iLayoutMenu(char *, WORKER *);
int iLayoutNewOrder(char *, WORKER *);
int iLayoutPayment(char *, WORKER *);
int iLayoutDelivery(char *, WORKER *);
int iLayoutOrderStatus(char *, WORKER *);
int iLayoutStockLevel(char *, WORKER *);
int iLayoutFormHdr(char *, char *, WORKER *);
int iLayoutRespHdr(char *, char *, WORKER *);
int iLayoutHTMLString(char *, char *, unsigned int);
int iLayoutString(char *, const char *, char *);

```

```

void vStringCopy(char *, char *, int);
void vToUpper(char *);

```

```

BOOL bIsNumeric(char *);

```

```

/**
 ** uiServiceRequest() is the entry point for transaction processing. It is
 ** called from the TpccService() routine in tpccNsapi.c.
 **
 ** inputs:
 **   pWorker -- the WORKER struct assigned to the current thread.
 **   pszRecvMsg -- the POST query from the RBE
 **
 ** outputs:
 **   pszSendMsg -- HTML content to be returned to the RBE
 **   piSendLen -- length of HTML content
 **   uiStatus --
 **/
unsigned int
uiServiceRequest(WORKER * pWorker, char *pszRecvMsg, char *pszSendMsg,
                 int *piSendLen)
{
    int iWorkerId;
    int iTerminalId;
    unsigned int uiCmdId;
    unsigned int uiStatus = SENDCLOSE;
    pWorker->szErrorTxt[0] = 0;
    pWorker->iStatusId = STATUS_OK;
    pWorker->iWarehouseId = 0;
    pWorker->iDistrictId = 0;

    /*
     * Check to make sure the Tuxedo interface is established and
     * functional.
     */
    if(pWorker->pTuxInData == NULL)
    {
        if(bTuxInit(pWorker))
        {

```

```

        pWorker->iStatusId = ERR_TUX_INTERFACE;
        *piSendLen = iLayoutLogin(pszSendMsg, pWorker);
        goto ServiceXit;
    }
}

/*
 * Extract the hidden tags, and if successful (return value of 0),
 * assign the relevant value to uiCmdId for the CMD tag
 */
if(bExtractHidden(pszRecvMsg, &pWorker->uScreenId, &iWorkerId,
                  &iTerminalId))
{
    if(pWorker->iWarehouseId != 0)
    {
        strcpy(pWorker->szErrorTxt,
               "Decode hidden fields error");
    }
    else
    {
        uiStatus = SEND;
    }
    *piSendLen = iLayoutLogin(pszSendMsg, pWorker);
    goto ServiceXit;
}
uiCmdId = uiExtractCmd(pszRecvMsg, pWorker->szWork,
                      sizeof(pWorker->szWork));

/*
 * Check for multiple log in attempts.
 */
if(pWorker->iWarehouseId != 0 && uiCmdId == CMD_SUBMIT)
{
    strcpy(pWorker->szErrorTxt, ERRTEXT_ALREADY_LOGGEDIN);
    pWorker->iStatusId = ERR_ALREADY_LOGGEDIN;
    *piSendLen = iLayoutMenu(pszSendMsg, pWorker);
    uiStatus = SEND;
    goto ServiceXit;
}

/*
 * CMD_SUBMIT is only used for logins.
 * If we've already logged in, determine this terminal's district and
 * warehouse ID and make certain they are valid.
 */
if(uiCmdId != CMD_SUBMIT)
{
    if(pszExtractWDIDKey(&(pWorker->iWarehouseId),
                        pszRecvMsg, "w_id=", pWorker) == NULL)
    {
        *piSendLen = iLayoutLogin(pszSendMsg, pWorker);
        goto ServiceXit;
    }
    if(pszExtractWDIDKey(&(pWorker->iDistrictId),
                        pszRecvMsg, "d_id=", pWorker) == NULL)
    {
        *piSendLen = iLayoutLogin(pszSendMsg, pWorker);
        goto ServiceXit;
    }
}
if(pWorker->iWarehouseId == 0 || pWorker->iDistrictId == 0) && uiCmdId != CMD_SUBMIT)
{

```

```

        strcpy(pWorker->szErrorTxt, "Must log in first!");
        pWorker->iStatusId = ERR_WID_INVALID;
        *piSendLen = iLayoutLogin(pszSendMsg, pWorker);
        goto ServiceXit;
    }

/*
 * If the CMD value was something other than submit, we will be expecting
 * status, screen, and terminal ID name/value pairs
 */
if(uiCmdId != CMD_SUBMIT)
{
    if(iTerminalId == iWorkerId)
    {
        pWorker->iTerminalId = iTerminalId;
        pWorker->iWorkerId = iWorkerId;
    }
    if(iTerminalId != pWorker->iTerminalId
    || iTerminalId != iWorkerId)
    {
        sprintf(pWorker->szErrorTxt,
            "%s: Received %ld, %ld (%ld)",
            ERRTXT_TRID, iTerminalId, iWorkerId,
            pWorker->iTerminalId);
        pWorker->iStatusId = ERR_TRID;
        *piSendLen = iLayoutLogin(pszSendMsg, pWorker);
        goto ServiceXit;
    }
}

/*
 * Now execute the command based on the uiCmdId.
 */
/* CMD_*_SCREEN cases return the data entry screen for the respective
 * transactions.
 * CMD_EXECUTE case processes data from executed transactions.
 * CMD_SUBMIT case logs in the user.
 * CMD_EXIT case logs out the user.
 */
switch (uiCmdId)
{
case CMD_MENU_SCREEN:
    pWorker->iTerminalId = iTerminalId;
    pWorker->iWorkerId = iWorkerId;
    *piSendLen = iLayoutMenu(pszSendMsg, pWorker);
    break;
case CMD_NEWORDER_SCREEN:
    pWorker->iTerminalId = iTerminalId;
    pWorker->iWorkerId = iWorkerId;
    *piSendLen = iLayoutNewOrder(pszSendMsg, pWorker);
    break;
case CMD_PAYMENT_SCREEN:
    pWorker->iTerminalId = iTerminalId;
    pWorker->iWorkerId = iWorkerId;
    *piSendLen = iLayoutPayment(pszSendMsg, pWorker);
    break;
case CMD_DELIVERY_SCREEN:
    pWorker->iTerminalId = iTerminalId;
    pWorker->iWorkerId = iWorkerId;
    *piSendLen = iLayoutDelivery(pszSendMsg, pWorker);
    break;
case CMD_ORDERSTATUS_SCREEN:

```

```

        pWorker->iTerminalId = iTerminalId;
        pWorker->iWorkerId = iWorkerId;
        *piSendLen = iLayoutOrderStatus(pszSendMsg, pWorker);
        break;
case CMD_STOCKLEVEL_SCREEN:
    pWorker->iTerminalId = iTerminalId;
    pWorker->iWorkerId = iWorkerId;
    *piSendLen = iLayoutStockLevel(pszSendMsg, pWorker);
    break;
case CMD_EXECUTE:
    pWorker->iTerminalId = iTerminalId;
    pWorker->iWorkerId = iWorkerId;
    bExecuteForm(pszRecvMsg, pszSendMsg, pWorker, piSendLen);
    break;
case CMD_SUBMIT:
    bExecuteLogin(pszRecvMsg, pszSendMsg, pWorker, piSendLen);
    break;
case CMD_EXIT:
    pWorker->iWarehouseId = 0;
    pWorker->iDistrictId = 0;
    pWorker->iTerminalId = -2;
    pWorker->iWorkerId = 0;
    strcpy(pWorker->szErrorTxt, "Logged Off");
    *piSendLen = iLayoutLogin(pszSendMsg, pWorker);
    goto ServiceXit;
default:
    strcpy(pWorker->szErrorTxt, ERRTXT_CMD_UNKNOWN);
    pWorker->iStatusId = ERR_CMD_UNKNOWN;
    if(pWorker->iWarehouseId == 0)
    {
        *piSendLen = iLayoutLogin(pszSendMsg, pWorker);
        goto ServiceXit;
    }
    else
    {
        pWorker->iTerminalId = iTerminalId;
        pWorker->iWorkerId = iWorkerId;
        *piSendLen = iLayoutMenu(pszSendMsg, pWorker);
    }
    break;
}
uiStatus = SEND;

return(uiStatus);

```

ServiceXit: /* Goto label for unsuccessful transactions */

```

    return(uiStatus);
}

```

/**

** bExecuteLogin() processes POST submissions for user logins. It is called
 ** from uiServiceRequest().

*/

BOOL

```

bExecuteLogin(char *pszInData, char *pszOutData, WORKER * pWorker,
    int *piSendLen)
{

```

```

    int iWarehouseId;
    int iDistrictId;
    char *pszPtr;

```

/*

```

        * Extract the warehouse ID and make sure it is not less than 1.
        */
        if((pszPtr = pszExtractIntKey(&iWarehouseId, pszInData,
"w_id=", pWorker)) == NULL)
        {
            *piSendLen = iLayoutLogin(pszOutData, pWorker);
            return(TRUE);
        }
        if(iWarehouseId < 1)
        {
            sprintf(pWorker->szErrorTxt, "Warehouse Id (%d) Invalid",
iWarehouseId);

            pWorker->iStatusId = ERR_WID_INVALID;
            *piSendLen = iLayoutLogin(pszOutData, pWorker);
            return(TRUE);
        }

        /*
        * Extract the district ID and make sure it is within the minimum and
        * maximum bounds.
        */
        if((pszPtr = pszExtractIntKey(&iDistrictId, pszPtr, "d_id=", pWorker))
== NULL)
        {
            *piSendLen = iLayoutLogin(pszOutData, pWorker);
            return(TRUE);
        }
        if(iDistrictId < 1)
        {
            sprintf(pWorker->szErrorTxt, "District Id (%d) Invalid",
iDistrictId);

            pWorker->iStatusId = ERR_DID_INVALID;
            *piSendLen = iLayoutLogin(pszOutData, pWorker);
            return(TRUE);
        }

        pWorker->iWarehouseId = abs(iWarehouseId);
        pWorker->iDistrictId = abs(iDistrictId);

        /*
        * Assign a new terminal and worker (the latter of which is unnecessary)
        * if we see a value less than 1, indicating a terminal context has not
        * yet been defined or that the slave has defaulted back to the login
        * screen. This value is set by a global increment counter, iTermCnt.
        */
        pWorker->iTerminalId = iTermCnt++;
        pWorker->iWorkerId = pWorker->iTerminalId;
        *piSendLen = iLayoutMenu(pszOutData, pWorker);

        return(FALSE);
    }

    /**
    ** bExecuteForm() processes the form data from POST submissions for the
    ** five TPC-C transaction types. It is called from uiServiceRequest().
    **/
    BOOL
bExecuteForm(char *pszInData, char *pszOutData, WORKER * pWorker,
int *piSendLen)
    {
        /*
        * SCREEN_ * is extracted from the SCID= name tag in the POST query from

```

```

        * the RBE, and determines which form processing function should be
        * executed.
        *
        * If the screen ID is unrecognized, return an error.
        */
        switch (pWorker->uScreenId)
        {
        case SCREEN_NEWORDER:
            return(bExecuteNewOrder(pszInData, pszOutData, pWorker,
piSendLen));
        case SCREEN_PAYMENT:
            return(bExecutePayment(pszInData, pszOutData, pWorker,
piSendLen));
        case SCREEN_DELIVERY:
            return(bExecuteDelivery(pszInData, pszOutData, pWorker,
piSendLen));
        case SCREEN_ORDERSTATUS:
            return(bExecuteOrderStatus(pszInData, pszOutData, pWorker,
piSendLen));
        case SCREEN_STOCKLEVEL:
            return(bExecuteStockLevel(pszInData, pszOutData, pWorker,
piSendLen));
        default:
            sprintf(pWorker->szErrorTxt, "%s (%ld)",
ERRTXT_SCREEN_UNKNOWN, pWorker->uScreenId);
            pWorker->iStatusId = ERR_SCREEN_UNKNOWN;
            *piSendLen = iLayoutMenu(pszOutData, pWorker);
            break;
        }
        return(TRUE);
    }

    /**
    ** bExecuteNewOrder() processes the form data from POST submissions specific
    ** to the NewOrder transaction. It is called from bExecuteForm().
    **/
    BOOL
bExecuteNewOrder(char *pszInData, char *pszOutData, WORKER * pWorker,
int *piSendLen)
    {
        NEWO_INF *pNewInf;
        int iLen = 0;
        char szKey[20];
        char szCredit[14];
        char *pszPtr;
        char *pszPtr1;
        unsigned int uiLoop;
        BOOL bDone = FALSE;
        BOOL bTxReturn;
        BOOL bTxResult;
        int iTxResult;
        BOOL supply_is_null, item_is_null, quantity_is_null;
        int empty_slot;

        /*
        * Set pTuxInData such that it conforms to the New Order (NEWO_INF)
        * data structure.
        */
        pWorker->ITuxDataLen = sizeof(NEWO_INF);
        pNewInf = (NEWO_INF *)pWorker->pTuxInData;
        pNewInf->w_id = pWorker->iWarehouseId;
        pNewInf->status[0] = 0;

```

```

/*
 * Extract the district ID and check that it is within bounds.
 */
if((pszPtr = pszExtractIntKey(&pNewInf->d_id, pszInData, "DID*=",
pWorker)) == NULL)
{
    *piSendLen = iLayoutMenu(pszOutData, pWorker);
    return(TRUE);
}

/* don't allow less than 1 */
if(pNewInf->d_id <= 0)
{
    sprintf(pWorker->szErrorTxt, "Did Invalid - (%d)",
        pNewInf->d_id);
    pWorker->iStatusId = ERR_DID_INVALID;
    *piSendLen = iLayoutMenu(pszOutData, pWorker);
    return(TRUE);
}

/*
 * Extract customer ID and check its validity.
 */
if((pszPtr = pszExtractIntKey(&pNewInf->c_id, pszPtr, "CID*=",
pWorker)) == NULL)
{
    *piSendLen = iLayoutMenu(pszOutData, pWorker);
    return(TRUE);
}

if(pNewInf->c_id <= 0)
{
    sprintf(pWorker->szErrorTxt,
        "CId Invalid - %ld", pNewInf->c_id);
    pWorker->iStatusId = ERR_CID_INVALID;
    *piSendLen = iLayoutMenu(pszOutData, pWorker);
    return(TRUE);
}

/*
 * Find first value-less name/value pair. As all name tags used by the
 * RBE / plugin environment end with *, "*=&" is a string that will
 * indicate the end of the name tag, the separating equal sign, and
 * the ampersand leading to the next name/value pair. All subsequent
 * name tags should have empty values.
 */
pNewInf->o_ol_cnt = 0;

#if 0
pszPtr1 = strstr(pszPtr, "*=&");
if(pszPtr1)
{
    /*
     * Back up ALT_SIZEA (4) characters to beginning of valueless
     * name tag strings.
     */
    pszPtr1 -= ALT_SIZEA;

    /* Takes the chunk of the POST data starting from the first
     * blank field to the very end of the data; then backs up to
     * right before CMD=Execute a name/value pair; then checks to
     * make sure it is divisible by 3 times the length of the

```

```

     * triplet of valueless named variables,
     * e.g., S10*=&I10*=&Q10*=&
     */
     *
     * If the resulting remainder is non-zero (i.e., there are
     * extra characters where there should be none), an error
     * occurs.
     */
    /* allow this */

    if((strlen(pszPtr1) - ALT_SIZEEC) % ALT_SIZEEF)
    {
        sprintf(pWorker->szErrorTxt,
            "Embedded Empty Order Lines Or Mandatory Fields Blank");
        pWorker->iStatusId = ERR_MANDATORY_FIELD;
        *piSendLen = iLayoutMenu(pszOutData, pWorker);
        return(TRUE);
    }
}

#endif

/*
 * Now loop through the name/value pairs for the order lines, and
 * retrieve the entered warehouse, item, and quantity values.
 *
 * This will also check for blank fields and invalid values in the
 * form.
 */

empty_slot=-1;
for(uiLoop = 0; uiLoop < MAX_OL; uiLoop++)
{
    supply_is_null = item_is_null = quantity_is_null = FALSE;
    if((pszPtr =
        pszExtractIntKey(&pNewInf->o_ol[uiLoop].ol_supply_w_id,
        pszPtr, szSupplyList[uiLoop], pWorker)) == NULL)
    {
        supply_is_null=TRUE;
    }
    if((pszPtr = pszExtractIntKey(&pNewInf->o_ol[uiLoop].ol_i_id,
        pszPtr, szItemList[uiLoop], pWorker)) == NULL)
    {
        item_is_null=TRUE;
    }
    if((pszPtr = pszExtractIntKey(
        &pNewInf->o_ol[uiLoop].ol_quantity,
        pszPtr, szQuantityList[uiLoop], pWorker)) == NULL)
    {
        quantity_is_null=TRUE;
    }
    /* Ok to have a completely blank line */
    if ( pNewInf->o_ol[uiLoop].ol_supply_w_id == 0 && pNewInf->o_ol[uiLoop].ol_i_id == 0 &&
        pNewInf->o_ol[uiLoop].ol_quantity ==0)
    {
        if (empty_slot == -1){
            empty_slot = uiLoop;
        }
        continue;
    }
}

```

```

        /* check for partially filled in line */
        if(pNewInf->o_ol[uiLoop].ol_i_id == 0)
        {
            if(pNewInf->o_ol[uiLoop].ol_supply_w_id != 0)
            {
                sprintf(pWorker->szErrorTxt,
                    "Order Line %ld WId Supplied with No Item",
                    uiLoop);
                pWorker->iStatusId = ERR_OL_INVALID;
                *piSendLen = iLayoutMenu(pszOutData, pWorker);
                return(TRUE);
            }
            if(pNewInf->o_ol[uiLoop].ol_quantity != 0)
            {
                sprintf(pWorker->szErrorTxt,
                    "Order Line %ld Qty Supplied with No Item",
                    uiLoop);
                pWorker->iStatusId = ERR_OL_INVALID;
                *piSendLen = iLayoutMenu(pszOutData, pWorker);
                return(TRUE);
            }
        }
        if(pNewInf->o_ol[uiLoop].ol_i_id != 0)
        {
            if(pNewInf->o_ol[uiLoop].ol_supply_w_id == 0)
            {
                sprintf(pWorker->szErrorTxt,
                    "Order Line %ld No S-WID",
                    uiLoop);
                pWorker->iStatusId = ERR_OL_INVALID;
                *piSendLen = iLayoutMenu(pszOutData, pWorker);
                return(TRUE);
            }
            if(pNewInf->o_ol[uiLoop].ol_quantity == 0)
            {
                sprintf(pWorker->szErrorTxt,
                    "Order Line %ld No Qunatity",
                    uiLoop);
                pWorker->iStatusId = ERR_OL_INVALID;
                *piSendLen = iLayoutMenu(pszOutData, pWorker);
                return(TRUE);
            }
        }
        if (empty_slot != -1) {
            pNewInf->o_ol[empty_slot] = pNewInf->o_ol[uiLoop];
            /*after copy over data - zero out source area, just in case */
            pNewInf->o_ol[uiLoop].ol_supply_w_id=0;
            pNewInf->o_ol[uiLoop].ol_i_id=0;
            pNewInf->o_ol[uiLoop].ol_quantity=0;
            empty_slot++;
        }
        pNewInf->o_ol_cnt++;
    } /* end for() */
    /*
    * Checks for minimum order line requirement (TPC-C v3.5 is five).
    */
    /* PASS THRU -
    if(pNewInf->o_ol_cnt < MIN_OL)
    {
        sprintf(pWorker->szErrorTxt, "Too Few Order Lines %d",
            pNewInf->o_ol_cnt);
    }

```

```

        pWorker->iStatusId = ERR_OL_COUNT;
        *piSendLen = iLayoutMenu(pszOutData, pWorker);
        return(TRUE);
    }
    /*
    * Perform the Tuxedo transaction.
    */
    bTxReturn = bTuxTran(NEWORDER, pWorker, &bTxResult, &iTxResult);
    pNewInf = (NEWO_INF *)pWorker->pTuxOutData; /* Redundant? OutData */
    if(bTxReturn)
    {
        ereport(LOG_WARN,"%d] bExecuteNewOrder: Service Returned Error(%ld) : %s \n",
            pWorker->uiThrId, iTxResult, pNewInf->status );
        pWorker->iStatusId = ERR_TUX_INTERFACE;
        *piSendLen = iLayoutMenu(pszOutData, pWorker);
        return(TRUE);
    }

    /*
    * Check to make sure Tuxedo call was successful.
    */
    if(bTxResult && (iTxResult < SVC_NOERROR))
    {
        ereport(LOG_WARN,"%d] bExecuteNewOrder: Service Returned Error(%ld) : %s \n",
            pWorker->uiThrId, iTxResult, pNewInf->status );

        sprintf(pWorker->szErrorTxt,
            "New Order Service Returned Error(%ld) : %s",
            iTxResult, pNewInf->status);
        pWorker->iStatusId = ERR_SERVICE_RSLT;
        *piSendLen = iLayoutMenu(pszOutData, pWorker);
        return(TRUE);
    }

    if(iTxResult == SVC_BADITEMID) {
        ereport(LOG_WARN,"%d] bExecuteNewOrder: Tuxedo Service : %s \n", pNewInf->status);
        pWorker->iStatusId = INVALID_ITEM_ID;
    }
    /*
    * Now package up the return data from the query (new order line
    * items, customer information, item prices) from the database into
    * an HTML page.
    */

    /*
    * HTTP header and HTML title
    */
    iLen = iLayoutRespHdr(pszOutData, "TPC-C New Order", pWorker);

    /*
    * district and warehouse IDs
    */
    iLen+=sprintf(pszOutData + iLen,
        "<PRE>                New Order<BR>"
        "Warehouse: %4.4d  District: %2.2d          ",
        pNewInf->w_id, pNewInf->d_id);

    /*
    * transaction date/time stamp
    */

```

```

if(!bTxResult)
{
    iLen+=sprintf(pszOutData + iLen,
        "Date: %s <BR>", pNewInf->o_entry_d);
}
else
{
    iLen+=sprintf(pszOutData + iLen, "Date:<BR>");
}

/*
*customer name, customer's credit
*/
iLayoutHTMLString(pWorker->szWork, pNewInf->c_last, NAME_LEN);
iLayoutHTMLString(szCredit, pNewInf->c_credit, 2);
iLen+=sprintf(pszOutData + iLen,
    "Customer: %4.4d Name: %s Credit: %s ",
    pNewInf->c_id, pWorker->szWork, szCredit);

if(!bTxResult)
{
    /*
    * discount, and tax information for this transaction
    */
    iLen+=sprintf(pszOutData + iLen,
        "%%%Disc: %5.2f <BR>", pNewInf->c_discount);
    iLen+=sprintf(pszOutData + iLen,
        "Order Number: %8.8d Number of Lines: %2.2d"
        " W_tax: %5.2f D_tax: %5.2f <BR><BR>",
        pNewInf->o_id, pNewInf->o_ol_cnt, pNewInf->w_tax,
        pNewInf->d_tax);
    iLen+=sprintf(pszOutData + iLen, " Supp_W Item_Id Item Name"
        " Qty Stock B/G Price Amount<BR>");

    /*
    * individual order lines (price/quantity/warehouse/item)
    */
    for(uiLoop = 0; uiLoop < (unsigned int)pNewInf->o_ol_cnt; uiLoop++)
    {
        iLayoutHTMLString(pWorker->szWork,
            pNewInf->o_ol[uiLoop].ol_i_name, 24);
        iLen+=sprintf(pszOutData + iLen,
            " %4.4d %6.6d %s %2.2d %3.3d"
            " %1.1s $%6.2f $%7.2f <BR>",
            pNewInf->o_ol[uiLoop].ol_supply_w_id,
            pNewInf->o_ol[uiLoop].ol_i_id, pWorker->szWork,
            pNewInf->o_ol[uiLoop].ol_quantity,
            pNewInf->o_ol[uiLoop].ol_stock,
            pNewInf->o_ol[uiLoop].ol_brand_generic,
            pNewInf->o_ol[uiLoop].ol_i_price,
            pNewInf->o_ol[uiLoop].ol_amount);
    }
}

/*
* if there's no return data from the database,
* fill the values with blanks
*/
else
{
    iLen+=sprintf(pszOutData + iLen, "%%Disc:<BR>");
}

```

```

iLen+=sprintf(pszOutData + iLen,
    "Order Number: %8.8d Number of Lines:"
    " W_tax: D_tax:<BR><BR>",
    pNewInf->o_id);
if(pWorker->iStatusId == INVALID_ITEM_ID)
iLen+=sprintf(pszOutData + iLen, " Supp_W Item_Id Item Name"
    " Qty Stock B/G Price Amount<BR>");
uiLoop = 0;
for(; uiLoop < MAX_OL; uiLoop++)
    iLen+=sprintf(pszOutData + iLen, "<BR>");

/*
* total price
*/
if(!bTxResult)
{
    iLen+=sprintf(pszOutData + iLen,
        "Execution Status: %24.24s"
        " Total: $%8.2f ",
        pNewInf->status, pNewInf->total_amount);
}
/*
* if there's no return data from the database,
* fill the values with blanks
*/
else
{
    iLen+=sprintf(pszOutData + iLen,
        "Execution Status: %24.24s"
        " Total:",
        pNewInf->status);
}
iLen+=sprintf(pszOutData + iLen,
    "</PRE><HR><BR>%s</FORM>%s", szMenuList, szEndHtmlTag);

/*
* End of HTML generation for New Order.
*/

*piSendLen = iLen;
return(FALSE);
}

/**
** bExecutePayment() processes the form data from POST submissions specific
** to the Payment transaction. It is called from bExecuteForm().
**/
BOOL
bExecutePayment(char *pszInData, char *pszOutData, WORKER * pWorker, int *piSendLen)
{
    PAY_INF *pPayInf;
    int iLen = 0;
    BOOL bTxReturn;
    BOOL bTxResult;
    int iTxResult;
    char *pCredit;
    char *pszPtr;
    int iCDLines;
    char szWork2[60];
    char szWork3[60];
    char szWork4[60];
    char szZip1[20];

```

```

char      szZip2[20];
char      c_data[210];
int       iLoop;

/*
 * Set pTuxInData such that it conforms to the Payment (PAY_INF)
 * data structure.
 */
pWorker->ITuxDataLen = sizeof(PAY_INF);
pPayInf = (PAY_INF *)pWorker->pTuxInData;
pPayInf->c_id = 0;
pPayInf->c_last[0] = 0;
pPayInf->w_id = pWorker->iWarehouseId;

/*
 * Extract the district ID and check that it is within bounds.
 */
if((pszPtr = pszExtractIntKey(&pPayInf->d_id, pszInData, "DID*=",
pWorker)) == NULL)
{
    *piSendLen = iLayoutMenu(pszOutData, pWorker);
    return(TRUE);
}
/* pass thru to DB
if(pPayInf->d_id < MIN_DID || pPayInf->d_id > MAX_DID)
{
    */
if(pPayInf->d_id < 1 )
{
    sprintf(pWorker->szErrorTxt, "DID <=0 - %ld",
pPayInf->d_id);
    pWorker->iStatusId = ERR_DID_INVALID;
    *piSendLen = iLayoutMenu(pszOutData, pWorker);
    return(TRUE);
}

/*
 * Extract customer ID and check its validity.
 */
if((pszPtr = pszExtractIntKey(&pPayInf->c_id, pszPtr, "CID*=",
pWorker)) == NULL)
{
    *piSendLen = iLayoutMenu(pszOutData, pWorker);
    return(TRUE);
}

/*
 * Extract and validate customer's warehouse ID and check its
 * validity
 */
if((pszPtr = pszExtractIntKey(&pPayInf->c_w_id, pszPtr, "CWI*=",
pWorker)) == NULL)
{
    *piSendLen = iLayoutMenu(pszOutData, pWorker);
    return(TRUE);
}
if(pPayInf->c_w_id < 1)
{
    sprintf(pWorker->szErrorTxt,
        "Payment Contains Invalid Customer WId %d",
        pPayInf->c_w_id);

```

```

pWorker->iStatusId = ERR_WID_INVALID;
*piSendLen = iLayoutMenu(pszOutData, pWorker);
return(TRUE);
}

/*
 * Extract and validate customer's district ID and check its validity.
 */
if((pszPtr = pszExtractIntKey(&pPayInf->c_d_id, pszPtr, "CDI*=",
pWorker)) == NULL)
{
    *piSendLen = iLayoutMenu(pszOutData, pWorker);
    return(TRUE);
}
/* Pass thru
if(pPayInf->c_d_id < MIN_DID || pPayInf->c_d_id > MAX_DID)
{
    sprintf(pWorker->szErrorTxt,
        "Cust DID Out of Range(%ld,%ld) - %ld",
        MIN_DID, MAX_DID, pPayInf->d_id);
    pWorker->iStatusId = ERR_DID_INVALID;
    *piSendLen = iLayoutMenu(pszOutData, pWorker);
    return(TRUE);
}
*/
if(pPayInf->c_d_id < 1 )
{
    sprintf(pWorker->szErrorTxt, "Cust DID is Empty");
    pWorker->iStatusId = ERR_DID_INVALID;
    *piSendLen = iLayoutMenu(pszOutData, pWorker);
    return(TRUE);
}
if((pszPtr = pszExtractStringKey(pPayInf->c_last, pszPtr, "CLT*=",
pWorker, NAME_LEN)) == NULL)
{
    *piSendLen = iLayoutMenu(pszOutData, pWorker);
    return(TRUE);
}
if(pPayInf->c_id <= 0 && pPayInf->c_last[0] == 0)
{
    strcpy(pWorker->szErrorTxt,
        "Error - Customer Id and Name Empty");
    pWorker->iStatusId = ERR_IDANDNAME_EMPTY;
    *piSendLen = iLayoutMenu(pszOutData, pWorker);
    return(TRUE);
}
if(pPayInf->c_id != 0 && pPayInf->c_last[0] != 0)
{
    strcpy(pWorker->szErrorTxt,
        "Error - Specify Customer Id or Name, not Both");
    pWorker->iStatusId = ERR_IDANDNAME_ENTERED;
    *piSendLen = iLayoutMenu(pszOutData, pWorker);
    return(TRUE);
}

/*
 * Extract mount of payment and check its validity.
 */
if((pszPtr = pszExtractAmountKey(&pPayInf->h_amount, pszPtr, "HAM*=",
pWorker)) == NULL)
{
    *piSendLen = iLayoutMenu(pszOutData, pWorker);

```



```

        return(TRUE);
    }
    if(pPayInf->h_amount <= 0)
    {
        sprintf(pWorker->szErrorTxt,
            "Payment Amount Negative or Missing");
        pWorker->iStatusId = ERR_AMOUNT_INVALID;
        *piSendLen = iLayoutMenu(pszOutData, pWorker);
        return(TRUE);
    }

    /*
    * Perform the Tuxedo transaction.
    */
    bTxReturn = bTuxTran(PAYMENT, pWorker, &bTxResult, &iTxResult);
    pPayInf = (PAY_INF *)pWorker->pTuxOutData;
    /*pPayInf = (PAY_INF *)pWorker->pTuxInData; */

    /*
    * Check to make sure Tuxedo call was successful.
    */
    if(bTxReturn)
    {
        ereport(LOG_WARN, " %d]bExecutePayment: bTuxTran returned ERROR error Worker: 0x
        %lx\n", pWorker->uiThrId, pWorker);
        pWorker->iStatusId = ERR_TUX_INTERFACE;
        *piSendLen = iLayoutMenu(pszOutData, pWorker);
        return(TRUE);
    }
    if(bTxResult)
    {
        ereport(LOG_WARN, " %d]bExecutePayment: bTuxTran result ERROR error Worker: 0x
        %lx\n", pWorker->uiThrId, pWorker);
        sprintf(pWorker->szErrorTxt,
            "Payment Service Returned Error(%ld) :",
            iTxResult);
        pWorker->iStatusId = ERR_SERVICE_RSLT;
        *piSendLen = iLayoutMenu(pszOutData, pWorker);
        return(TRUE);
    }

    /*
    * Now package up the return data from the database in HTML format.
    */
    iLen = iLayoutRespHdr(pszOutData, "TPC-C Payment", pWorker);
    iLen+=sprintf(pszOutData + iLen,
        "<PRE>                Payment<BR>"
        "Date: %s <BR><BR>"
        "Warehouse: %4.4d"
        "        District: %2.2d<BR>",
        pPayInf->h_date,
        pPayInf->w_id, pPayInf->d_id);
    iLayoutHTMLString(szWork2, pPayInf->w_street_1, ADDR_LEN);
    iLayoutHTMLString(szWork3, pPayInf->d_street_1, ADDR_LEN);
    iLen+=sprintf(pszOutData + iLen,
        "%s                %s<BR>", szWork2, szWork3);
    iLayoutHTMLString(szWork2, pPayInf->w_street_2, ADDR_LEN);
    iLayoutHTMLString(szWork3, pPayInf->d_street_2, ADDR_LEN);
    iLen+=sprintf(pszOutData + iLen,
        "%s                %s<BR>", szWork2, szWork3);
    iLayoutHTMLString(pWorker->szWork, pPayInf->w_city, ADDR_LEN);
    iLayoutHTMLString(szWork2, pPayInf->d_city, ADDR_LEN);

```

```

iLayoutHTMLString(szWork3, pPayInf->w_state, STATE_LEN);
iLayoutHTMLString(szWork4, pPayInf->d_state, STATE_LEN);
iLayoutString(szZip1, ZIPPIC, pPayInf->w_zip);
iLayoutString(szZip2, ZIPPIC, pPayInf->d_zip);
iLen+=sprintf(pszOutData + iLen,
    "%s %s %10.10s    %s %s %10.10s<BR><BR>",
    pWorker->szWork, szWork3, szZip1, szWork2, szWork4, szZip2);
iLayoutHTMLString(szWork2, pPayInf->c_first, NAME_LEN);
iLayoutHTMLString(szWork3, pPayInf->c_middle, 2);
iLayoutHTMLString(szWork4, pPayInf->c_last, NAME_LEN);
iLen+=sprintf(pszOutData + iLen,
    "Customer: %4.4d Cust-Warehouse: %4.4d Cust-District: %2.2d<BR>"
    "Name: %s %s %s Since: %s<BR>",
    pPayInf->c_id, pPayInf->c_w_id, pPayInf->c_d_id,
    szWork2, szWork3, szWork4,
    pPayInf->c_since);
iLayoutHTMLString(pWorker->szWork, pPayInf->c_street_1, ADDR_LEN);
iLayoutHTMLString(szWork2, pPayInf->c_credit, 2);
iLayoutHTMLString(szWork3, pPayInf->d_street_2, ADDR_LEN);
iLen+=sprintf(pszOutData + iLen,
    "        %s                Credit: %s<BR>"
    "        %s                %%Disc: %5.2f<BR>",
    pWorker->szWork, szWork2, szWork3, pPayInf->c_discount);
iLayoutHTMLString(szWork2, pPayInf->c_city, ADDR_LEN);
iLayoutHTMLString(szWork3, pPayInf->c_state, STATE_LEN);
iLayoutString(szZip1, ZIPPIC, pPayInf->c_zip);
iLayoutString(szWork4, "XXXXXX-XXX-XXX-XXXX", pPayInf->c_phone);
iLen+=sprintf(pszOutData + iLen,
    "        %s %s %10.10s    Phone: %-19.19s<BR><BR>"
    "Amount Paid:      $%7.2f    New Cust Balance: $%14.2f<BR>"
    "Credit Limit:    $%13.2f<BR><BR>",
    szWork2, szWork3, szZip1, szWork4,
    pPayInf->h_amount, pPayInf->c_balance, pPayInf->c_credit_lim);
sprintf(c_data, "%s", pPayInf->c_data);
/*
* customer payment information
*/
if(pPayInf->c_credit[0] == 'B' && pPayInf->c_credit[1] == 'C')
{
    pCredit = c_data;
    iCDLines = strlen(pCredit)/ 50;
    for(iLoop = 0; iLoop < 4; iLoop++, pCredit += 50)
    {
        if(iLoop <= iCDLines)
            vStringCopy(szWork2, pCredit, 50);
        else
            szWork2[0] = 0;
        iLayoutHTMLString(szWork3, szWork2, 50);
        if(!iLoop)
            iLen+=sprintf(pszOutData + iLen,
                "Cust-Data: %s<BR>", szWork3);
        else
            iLen+=sprintf(pszOutData + iLen,
                "        %s<BR>", szWork3);
    }
}
else
    iLen+=sprintf(pszOutData + iLen,
        "Cust-Data: <BR> <BR> <BR> <BR>");
iLen+=sprintf(pszOutData + iLen,
    "</PRE><HR><BR>%s</FORM>%s", szMenuList, szEndHtmlTag);
/*

```

```

        * End of HTML generation for Payment.
        */

        *piSendLen = iLen;
        return(FALSE);
    }

/**
** bExecuteDelivery() processes the form data from POST submissions specific
** to the Delivery transaction. It is called from bExecuteForm().
**/
BOOL
bExecuteDelivery(char *pszInData, char *pszOutData, WORKER * pWorker, int *piSendLen)
{
    REQ_DEL      *pReqDel;
    DEL_INF      *pDelInf;
    DEL_INF      DelInf;
    int           iLen = 0;
    BOOL         bTxReturn;
    BOOL         bTxResult;
    int          iTxResult;
    struct timeval tv;

    pDelInf = &DelInf;

    /*
    * Set pTuxInData such that it conforms to the Delivery (DEL_INF)
    * data structure.
    */
    pWorker->ITuxDataLen = sizeof(REQ_DEL);
    pReqDel = (REQ_DEL *)pWorker->pTuxInData;
    pReqDel->w_id = pWorker->iWarehouseId;

    /*
    * Extract the carrier ID and check that it is within bounds.
    */
    if(pszExtractIntKey(&pReqDel->o_carrier_id, pszInData, "OCD*=",
        pWorker) == NULL)
    {
        *piSendLen = iLayoutMenu(pszOutData, pWorker);
        return(TRUE);
    }

    /* Pass thru
    if(pReqDel->o_carrier_id < MIN_CARRIER
    || pReqDel->o_carrier_id > MAX_CARRIER)
    {
        sprintf(pWorker->szErrorTxt,
            "Carrier Id Out of Range(%ld,%ld) - %ld",
            MIN_CARRIER, MAX_CARRIER, pReqDel->o_carrier_id);
        pWorker->iStatusId = ERR_CARRIER_INVALID;
        *piSendLen = iLayoutMenu(pszOutData, pWorker);
        return(TRUE);
    }

    */
    if(pReqDel->o_carrier_id < 1)
    {
        sprintf(pWorker->szErrorTxt, "Carrier Id Invalid");
        pWorker->iStatusId = ERR_CARRIER_INVALID;
        *piSendLen = iLayoutMenu(pszOutData, pWorker);
        return(TRUE);
    }
}

```

```

/*
* Make a note of the time the delivery request was received. This
* is necessary as the Delivery transaction is asynchronous, and
* its time of execution is needed at the time the report is created.
*/
(void)gettimeofday(&tv, NULL); /* convert to msec */
pReqDel->qtime = (tv.tv_sec * 1000) + (tv.tv_usec / 1000);

/*
* Perform the Tuxedo transaction.
*/
bTxReturn = bTuxTran(DELIVERY, pWorker, &bTxResult, &iTxResult);
if(bTxReturn)
{
    pWorker->iStatusId = ERR_TUX_INTERFACE;
    *piSendLen = iLayoutMenu(pszOutData, pWorker);
    return(TRUE);
}
pDelInf->o_carrier_id = pReqDel->o_carrier_id;
pDelInf->w_id = pReqDel->w_id;

/*
* Now package up the return data from the database in HTML format.
*/
strcpy(pDelInf->status, "Delivery has been queued.");
iLen = iLayoutRespHdr(pszOutData, "TPC-C Delivery", pWorker);
iLen+=sprintf(pszOutData + iLen,
    "<PRE>                Delivery<BR>"
    "Warehouse: %4.4d<BR><BR>"
    "Carrier Number: %2.2d<BR><BR>"
    "Execution Status: %25.25s<BR>",
    pDelInf->w_id, pDelInf->o_carrier_id, pDelInf->status);
iLen+=sprintf(pszOutData + iLen,
    "</PRE><HR><BR>%s</FORM>%s", szMenuList, szEndHtmlTag);

/*
* End of HTML generation for Delivery.
*/

*piSendLen = iLen;
return(FALSE);
}

```

```

/**
** bExecuteOrderStatus() processes the form data from POST submissions
** specific to the OrderStatus transaction. It is called from bExecuteForm().
**/
BOOL
bExecuteOrderStatus(char *pszInData, char *pszOutData, WORKER * pWorker, int *piSendLen)
{
    ORD_INF      *pOrdInf;
    int           iLen = 0;
    int          iLoop;
    char          *pszPtr;
    char          szWork2[50];
    char          szWork3[50];
    BOOL         bTxReturn;
    BOOL         bTxResult;
    int          iTxResult;

    /*
    * Set pTuxInData such that it conforms to the Order Status (ORD_INF)
    * data structure.
    */
}

```

```

*/
pWorker->ITuxDataLen = sizeof(ORD_INF);
pOrdInf = (ORD_INF *)pWorker->pTuxInData;
pOrdInf->c_id = 0;
pOrdInf->c_last[0] = 0;
pOrdInf->w_id = pWorker->iWarehouseId;

/*
 * Extract the district ID and check that it is within bounds.
 */
if((pszPtr = pszExtractIntKey(&pOrdInf->d_id, pszInData, "DID*=",
    pWorker)) == NULL)
{
    *piSendLen = iLayoutMenu(pszOutData, pWorker);
    return(TRUE);
}

if(pOrdInf->d_id < 1)
{
    sprintf(pWorker->szErrorTxt,
        "DId Invalid - (%d)",
        pOrdInf->d_id);
    pWorker->iStatusId = ERR_DID_INVALID;
    *piSendLen = iLayoutMenu(pszOutData, pWorker);
    return(TRUE);
}

/*
 * Extract the customer ID and check its validity.
 */
if((pszPtr = pszExtractIntKey(&pOrdInf->c_id, pszPtr, "CID*=",
    pWorker)) == NULL)
{
    *piSendLen = iLayoutMenu(pszOutData, pWorker);
    return(TRUE);
}
if((pszPtr = pszExtractStringKey(pOrdInf->c_last, pszPtr, "CLT*=",
    pWorker, NAME_LEN)) == NULL)
{
    *piSendLen = iLayoutMenu(pszOutData, pWorker);
    return(TRUE);
}
if(pOrdInf->c_id == 0 && pOrdInf->c_last[0] == 0)
{
    strcpy(pWorker->szErrorTxt,
        "Error - Customer Id and Name Empty");
    pWorker->iStatusId = ERR_IDANDNAME_EMPTY;
    *piSendLen = iLayoutMenu(pszOutData, pWorker);
    return(TRUE);
}
if(pOrdInf->c_id != 0 && pOrdInf->c_last[0] != 0)
{
    strcpy(pWorker->szErrorTxt,
        "Error - Specify Customer Id or Name, not Both");
    pWorker->iStatusId = ERR_IDANDNAME_ENTERED;
    *piSendLen = iLayoutMenu(pszOutData, pWorker);
    return(TRUE);
}

/*
 * Perform the Tuxedo transaction.
 */

```

```

bTxReturn = bTuxTran(ORDERSTATUS, pWorker, &bTxResult, &iTxResult);

/*
 * Check to make sure Tuxedo call was successful.
 */
pOrdInf = (ORD_INF *)pWorker->pTuxOutData; /* ??redundant OutData */
if(bTxReturn)
{
    pWorker->iStatusId = ERR_TUX_INTERFACE;
    *piSendLen = iLayoutMenu(pszOutData, pWorker);
    return(TRUE);
}
if(bTxResult)
{
    sprintf(pWorker->szErrorTxt,
        "Order Status Service Returned Error(%ld) :",
        iTxResult);
    pWorker->iStatusId = ERR_SERVICE_RSLT;
    *piSendLen = iLayoutMenu(pszOutData, pWorker);
    return(TRUE);
}

/*
 * Now package up the return data from the database in HTML format.
 */
iLen = iLayoutRespHdr(pszOutData, "TPC-C Order-Status", pWorker);
iLen+=sprintf(pszOutData + iLen,
    "<PRE>                Order-Status<BR>"
    "Warehouse: %4.4d  District: %2.2d<BR>",
    pOrdInf->w_id, pOrdInf->d_id);
iLayoutHTMLString(pWorker->szWork, pOrdInf->c_first, NAME_LEN);
iLayoutHTMLString(szWork2, pOrdInf->c_middle, 2);
iLayoutHTMLString(szWork3, pOrdInf->c_last, NAME_LEN);
iLen+=sprintf(pszOutData + iLen,
    "Customer: %4.4d  Name: %s %s %s<BR>"
    "Cust-Balance: %9.2f<BR><BR>",
    pOrdInf->c_id, pWorker->szWork, szWork2, szWork3,
    pOrdInf->c_balance);
iLen+=sprintf(pszOutData + iLen,
    "Order-Number: %8.8d  Entry-Date: %s  Carrier-Number: %2.2d<BR>"
    "Supply-W  Item-Id  Qty  Amount  Delivery-Date<BR>",
    pOrdInf->o_id, pOrdInf->o_entry_d,
    pOrdInf->o_carrier_id);

/*
 * generate the order line information for this order status
 * transaction
 */
for(iLoop = 0; iLoop < pOrdInf->o_ol_cnt; iLoop++)
{
    iLen+=sprintf(pszOutData + iLen,
        " %4.4d  %6.6d  %2.2d  $%7.2f  %s<BR>",
        pOrdInf->s_ol[iLoop].ol_supply_w_id,
        pOrdInf->s_ol[iLoop].ol_i_id,
        pOrdInf->s_ol[iLoop].ol_quantity,
        pOrdInf->s_ol[iLoop].ol_amount,
        pOrdInf->s_ol[iLoop].ol_delivery_d);
}
iLen+=sprintf(pszOutData + iLen,
    "<BR></PRE><HR><BR>%s</FORM>%s", szMenuList, szEndHtmlTag);

/*
 * End of HTML generation for Order Status.
 */

```

```

*/

*piSendLen = iLen;
return(FALSE);
}

/**
** bExecuteStockLevel() processes the form data from POST submissions specific
** to the Stock Level transaction. It is called from bExecuteForm().
**/
BOOL
bExecuteStockLevel(char *pszInData, char *pszOutData, WORKER * pWorker, int *piSendLen)
{
    STOCK_INF    *pStockInf;
    int          iLen = 0;
    BOOL         bTxReturn;
    BOOL         bTxResult;
    int          iTxResult;

    /*
    * Set pTuxInData such that it conforms to the Stock Level (STOCK_INF)
    * data structure.
    */
    pWorker->ITuxDataLen = sizeof(STOCK_INF);
    pStockInf = (STOCK_INF *)pWorker->pTuxInData;
    pStockInf->w_id = pWorker->iWarehouseId;
    pStockInf->d_id = pWorker->iDistrictId;
    pStockInf->low_stock = 0;

    /*
    * Extract the threshold level and make sure it is valid.
    */
    if(pszExtractIntKey(&pStockInf->thresh_hold, pszInData, "THR*=",
        pWorker) == NULL)
    {
        *piSendLen = iLayoutMenu(pszOutData, pWorker);
        return(TRUE);
    }

    /*
    if(pStockInf->thresh_hold < MIN_THRESHOLD
    || pStockInf->thresh_hold > MAX_THRESHOLD)
    {
        sprintf(pWorker->szErrorTxt,
            "Threshold Out of Range(%ld,%ld) - %ld",
            MIN_THRESHOLD, MAX_THRESHOLD, pStockInf->thresh_hold);
        pWorker->iStatusId = ERR_THRESHOLD_RANGE;
        *piSendLen = iLayoutMenu(pszOutData, pWorker);
        return(TRUE);
    }

    */
    if(pStockInf->thresh_hold < 1)
    {
        sprintf(pWorker->szErrorTxt, "Threshold Out of Range");
        pWorker->iStatusId = ERR_THRESHOLD_RANGE;
        *piSendLen = iLayoutMenu(pszOutData, pWorker);
        return(TRUE);
    }

    /*
    * Perform the Tuxedo transaction.
    */
    bTxReturn = bTuxTran(STOCKLEVEL, pWorker, &bTxResult, &iTxResult);
    pStockInf = (STOCK_INF *)pWorker->pTuxOutData; /* ??redundant OutData */

```

```

if(bTxReturn)
{
    pWorker->iStatusId = ERR_TUX_INTERFACE;
    *piSendLen = iLayoutMenu(pszOutData, pWorker);
    return(TRUE);
}

if(bTxResult)
{
    sprintf(pWorker->szErrorTxt,
        "Stock Level Service Returned Error(%ld) :",
        iTxResult);
    pWorker->iStatusId = ERR_SERVICE_RSLT;
    *piSendLen = iLayoutMenu(pszOutData, pWorker);
    return(TRUE);
}

/*
* Now package up the return data from the database in HTML format.
*/
iLen = iLayoutRespHdr(pszOutData, "TPC-C Stock Level", pWorker);
iLen+=sprintf(pszOutData + iLen,
    "<PRE>                Stock-Level<BR>"
    "Warehouse: %4.4d  District: %2.2d<BR><BR>"
    "Stock Level Threshold: %2.2d<BR><BR>"
    "Low Stock: %3.3d</PRE><BR><HR>"
    "%s</FORM>%s",
    pWorker->iWarehouseId, pWorker->iDistrictId,
    pStockInf->thresh_hold, pStockInf->low_stock,
    szMenuList, szEndHtmlTag);

*piSendLen = iLen;
/*
* End of HTML generation for Stock Level.
*/
return(FALSE);
}

/**
** bExtractHidden() finds and extracts the hidden values for TRID (terminal
** ID), WKID (worker ID), and SCID (screen ID). These are submitted as
** name/value pairs via an emulated user's POST command. These tags are
** referred to as "hidden" because they use the <INPUT TYPE="HIDDEN"> HTML
** markup, which is used to send fixed values automatically with POST
** commands.
**
** Called by uiServiceRequest().
**/
BOOL
bExtractHidden(char *pszMessage, unsigned int *uScreenId, int *iWorkerId,
    int *iTerminalId)
{
    char        *pszPtr;
    BOOL        bStatus = TRUE;

    /*
    * Extract TRID.
    */
    pszPtr = strstr(pszMessage, TRID);
    if(pszPtr == NULL)
        goto xit;
    pszPtr += 5;
    *iTerminalId = atoi(pszPtr);

```

```

/*
 * Extract WKID.
 */
pszPtr = strstr(pszMessage, WKID);
if(pszPtr == NULL)
    goto xit;
pszPtr += 5;
*iWorkerId = atoi(pszPtr);

/*
 * Extract SCID.
 */
pszPtr = strstr(pszMessage, SCID);
if(pszPtr == NULL)
    goto xit;
pszPtr += 5;
*uScreenId = abs(atoi(pszPtr));
bStatus = FALSE;

xit:
    return(bStatus);
}

/**
 ** uiExtractCmd() finds and extracts the value associated with the CMD tag.
 **
 ** Called by uiServiceRequest().
 **/
unsigned int
uiExtractCmd(char *pszMessage, char *pWork, unsigned int uiLen)
{
    unsigned int  u;
    char          *pszPtr;
    char          *pUpd;

    /*
     * Check for CMD key.
     */
    if(!(pszPtr = strstr(pszMessage, CMD)))
        return(0);
    pszPtr += 4;
    pUpd = pWork;
    while(*pszPtr && *pszPtr != '&' && *pszPtr != '\r' && *pszPtr != '\n')
        *pUpd++ = *pszPtr++;
    *pUpd = 0;

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

    /*
     * Command string not found.
     */
    return(0);
}

/**
 ** pszExtractLongKey() finds and extracts the value associated with the

```

```

 ** variable pszKeyVal and stores it in a long variable.
 **/
char *
pszExtractLongKey(long *lpResult, char *pszHTML, const char *pszKeyVal, WORKER * pWorker)
{
    char          *pszRet;
    char          *pszWork;
    if((pszRet = pszExtractKeyValue(pszHTML, pszKeyVal, &pszWork,
        ALT_SIZEW)) == NULL)
    {
        sprintf(pWorker->szErrorTxt,
            "Error - Missing %s Key", pszKeyVal);
        pWorker->iStatusId = ERR_MISSING_KEY;
        return(NULL);
    }
    if(*pszWork != 0)
    {
        if(bIsNumeric(pszWork))
        {
            sprintf(pWorker->szErrorTxt,
                "Error - %s Value Not Numeric", pszKeyVal);
            pWorker->iStatusId = ERR_NOT_NUMERIC;
            return(NULL);
        }
    }
    *lpResult = atol(pszWork);
    return(pszRet);
}

/**
 ** pszExtractIntKey() finds and extracts the value associated with the
 ** variable pszKeyVal and stores it in a int variable.
 **
 ** This function is called from various bExtract<transaction>() functions.
 **/
char *
pszExtractIntKey(int *ipResult, char *pszHTML, const char *pszKeyVal, WORKER * pWorker)
{
    char          *pszRet;
    char          *pszWork;
    if((pszRet = pszExtractKeyValue(pszHTML, pszKeyVal, &pszWork,
        ALT_SIZEW)) == NULL)
    {
        sprintf(pWorker->szErrorTxt,
            "Error - Missing %s Key", pszKeyVal);
        pWorker->iStatusId = ERR_MISSING_KEY;
        return(NULL);
    }
    if(*pszWork != 0)
    {
        if(bIsNumeric(pszWork))
        {
            sprintf(pWorker->szErrorTxt,
                "Error - %s Value Not Numeric", pszKeyVal);
            pWorker->iStatusId = ERR_NOT_NUMERIC;
            return(NULL);
        }
    }
    *ipResult = atoi(pszWork);
    return(pszRet);
}

```

```

/**
** pszExtractShortKey() finds and extracts the value associated with the
** variable pszKeyVal and stores it in a short variable.
**
** This function is called from various bExtract<transaction>() functions.
**/
char *
pszExtractShortKey(short *spResult, char *pszHTML, const char *pszKeyVal, WORKER *pWorker)
{
    char    *pszRet;
    char    *pszWork;
    if((pszRet = pszExtractKeyValue(pszHTML, pszKeyVal, &pszWork,
        ALT_SIZEW)) == NULL)
    {
        sprintf(pWorker->szErrorTxt,
            "Error - Missing %s Key", pszKeyVal);
        pWorker->iStatusId = ERR_MISSING_KEY;
        return(NULL);
    }
    if(*pszWork != 0)
    {
        if(bIsNumeric(pszWork))
        {
            sprintf(pWorker->szErrorTxt,
                "Error - %s Value Not Numeric", pszKeyVal);
            pWorker->iStatusId = ERR_NOT_NUMERIC;
            return(NULL);
        }
    }
    *spResult = (short)atoi(pszWork);
    return(pszRet);
}

/**
** pszExtractWDIDKey() finds and extracts the value of the emulated user's
** Warehouse ID.
**
** This function is called from uiServiceRequest().
**/
char *
pszExtractWDIDKey(int *spResult, char *pszHTML, char *pszKeyVal, WORKER *pWorker)
{
    char    *pszRet;
    char    *pszWork;
    char    *pszPtr;
    int      uiMax = ALT_SIZEW;
    pszRet = pszHTML;
    if(!(pszWork = strstr(pszHTML, pszKeyVal)))
        return(NULL);
    pszWork+=(ALT_SIZEA + 1);
    uiMax--;
    pszPtr = pWorker->szWork;
    while(*pszWork && *pszWork != '&' && uiMax)
    {
        *pszPtr++ = *pszWork++;
        uiMax--;
    }
    *pszPtr = 0;
    if(pWorker->szWork[0] != 0)
    {
        if(bIsNumeric(pWorker->szWork))

```

```

        {
            sprintf(pWorker->szErrorTxt,
                "Error - %s Value Not Numeric", pszKeyVal);
            pWorker->iStatusId = ERR_NOT_NUMERIC;
            return(NULL);
        }
    }
    *spResult = atoi(pWorker->szWork);
    return(pszRet);
}

/**
** pszExtractStringKey() finds and extracts the value associated with the
** variable pszKeyVal and stores it in a string.
**
** This function is called from various bExtract<transaction>() functions.
**/
char *
pszExtractStringKey(char *szResult, char *pszHTML, const char *pszKeyVal,
    WORKER *pWorker, unsigned int uiMax)
{
    unsigned int  uiLen;
    char    *pszRet;
    char    *pszWork;
    if((pszRet = pszExtractKeyValue(pszHTML, pszKeyVal, &pszWork,
        ALT_SIZEW)) == NULL)
    {
        sprintf(pWorker->szErrorTxt,
            "Error - Missing %s Key", pszKeyVal);
        pWorker->iStatusId = ERR_MISSING_KEY;
        return(NULL);
    }
    uiLen = strlen(pszWork);
    if(uiLen > uiMax)
    {
        sprintf(pWorker->szErrorTxt,
            "Error - %s Key Input (%ld) Too Long (%ld)"
            ,pszKeyVal, uiLen, uiMax);
        pWorker->iStatusId = ERR_INPUT_TOO_LONG;
        return(NULL);
    }
    vToUpper(pszWork);
    strcpy(szResult, pszWork);
    return(pszRet);
}

/**
** pszExtractAmountKey() finds and extracts a dollar amount value associated
** with the tag defined in variable pszKeyVal and stores it in a double.
**
** This function is called from various bExtract<transaction>() functions.
**/
char *
pszExtractAmountKey(double *dpResult, char *pszHTML, const char *pszKeyVal,
    WORKER *pWorker)
{
    char    *pszPtr;
    char    *pszRet;
    char    *pszWork;
    BOOL      bInvalid = FALSE;
    if((pszRet = pszExtractKeyValue(pszHTML, pszKeyVal, &pszWork,
        ALT_SIZEW)) == NULL)

```

```

{
    sprintf(pWorker->szErrorTxt,
        "Error - Missing %s Key", pszKeyVal);
    pWorker->iStatusId = ERR_MISSING_KEY;
    return(pszRet);
}
pszPtr = pszWork;
while(*pszPtr)
{
    if(*pszPtr == '.')
    {
        pszPtr++;
        if(!*pszPtr)
            break;
        if(*pszPtr < '0' || *pszPtr > '9')
        {
            bInvalid = TRUE;
            break;
        }
        pszPtr++;
        if(!*pszPtr)
            break;
        if(*pszPtr < '0' || *pszPtr > '9')
        {
            bInvalid = TRUE;
            break;
        }
        pszPtr++;
        if(*pszPtr)
        {
            bInvalid = TRUE;
            break;
        }
        break;
    } else if(*pszPtr < '0' || *pszPtr > '9')
    {
        bInvalid = TRUE;
        break;
    }
    pszPtr++;
}
if(!bInvalid)
    *dpResult = atof(pszWork);
else
{
    sprintf(pWorker->szErrorTxt,
        "Error - Invalid Amount iLayout (%s)", pszWork);
    pWorker->iStatusId = ERR_AMOUNT_BADFORM;
    pszRet = NULL;
}
return(pszRet);
}

/**
** pszExtractKeyValue() finds and extracts the raw value associated with the
** variable pszKeyVal and stores it in a string.
**
** This function is called from pszExtract<type>Key() functions which take
** the return values and convert them to their respective types.
**/
char *
pszExtractKeyValue(char *pszHTML, const char *pszKeyVal, char **pszValue,

```

```

    unsigned int uiMax)
{
    char *pszPtr;
    char *pszValue1;
    if(!(pszValue1 = strstr(pszHTML, pszKeyVal)))
    {
        *pszValue = NULL;
        return(NULL);
    }
    pszValue1+=(ALT_SIZE_A + 1);
    *pszValue = pszValue1;
    uiMax--;
    if(!(pszPtr = strchr(pszValue1, '&')))
    {
        pszPtr = pszValue1;
        while(*pszPtr && *pszPtr != '&' && uiMax)
        {
            pszPtr++;
            uiMax--;
        }
    }
    *pszPtr = 0;
    pszPtr++;
    return(pszPtr);
}

/**
** iLayoutLogin() produces the HTML code segment for the TPC-C Login Screen.
**
** It is called by uiServiceRequest().
**/
int
iLayoutLogin(char *pszOutData, WORKER *pWorker)
{
    int iLen = 0;
    char szTemp[512];
    sprintf(szTemp, szLoginScreen, szPluginPath, pWorker->iStatusId);
    iLen = sprintf(pszOutData, "%s<BR>%s<BR>%s", szTemp,
        pWorker->szErrorTxt, szEndHtmlTag);

    return(iLen);
}

/**
** iLayoutMenu() produces the HTML code segment for the TPC-C Main Menu.
**
** It is called by uiServiceRequest().
**/
int
iLayoutMenu(char *pszOutData, WORKER *pWorker)
{
    int iLen = 0;
    iLen = sprintf(pszOutData,
        "<HTML><HEAD><TITLE>TPC-C MainMenu</TITLE></HEAD><BODY>"
        "Select Desired Transaction.<BR><HR>"
        "<FORM ACTION=\"%s\" METHOD=\"POST\">", szPluginPath);
    iLen+=sprintf(pszOutData + iLen,
        "<INPUT TYPE=\"hidden\" NAME=\"STID\" VALUE=\"%d\">"
        "<INPUT TYPE=\"hidden\" NAME=\"SCID\" VALUE=\"%d\">"
        "<INPUT TYPE=\"hidden\" NAME=\"TRID\" VALUE=\"%d\">"
        "<INPUT TYPE=\"hidden\" NAME=\"WKID\" VALUE=\"%d\">"
        "<INPUT TYPE=\"hidden\" NAME=\"w_id\" VALUE=\"%d\">"
        "<INPUT TYPE=\"hidden\" NAME=\"d_id\" VALUE=\"%d\">",

```

```

        pWorker->iStatusId, SCREEN_MENU,
        pWorker->iTerminalId, pWorker->iWorkerId,
        pWorker->iWarehouseId, pWorker->iDistrictId);
iLen+=sprintf(pszOutData + iLen, "%s</FORM><BR>%s<BR>%s",
        szMenuList, pWorker->szErrorTxt, szEndHtmlTag);
return(iLen);
}

/**
** iLayoutNewOrder() produces the HTML code for the New Order entry screen
**
** It is called by uiServiceRequest().
**/
int
iLayoutNewOrder(char *pszOutData, WORKER * pWorker)
{
    int iLen = 0;
    pWorker->uScreenId = SCREEN_NEWORDER;
    iLen = iLayoutFormHdr(pszOutData, "TPC-C New Order", pWorker);
    iLen+=sprintf(pszOutData + iLen,
        "<PRE>                New Order<BR>"
        "Warehouse: %4.4d%s%s",
        pWorker->iWarehouseId,
        " District: <INPUT NAME=\"DID*\" SIZE=2>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=\"S00*\" SIZE=4> <INPUT NAME=\"I00*\" SIZE=6>"
        "          <INPUT NAME=\"Q00*\" SIZE=2><BR>"
        "<INPUT NAME=\"S01*\" SIZE=4> <INPUT NAME=\"I01*\" SIZE=6>"
        "          <INPUT NAME=\"Q01*\" SIZE=2><BR>"
        "<INPUT NAME=\"S02*\" SIZE=4> <INPUT NAME=\"I02*\" SIZE=6>"
        "          <INPUT NAME=\"Q02*\" SIZE=2><BR>"
        "<INPUT NAME=\"S03*\" SIZE=4> <INPUT NAME=\"I03*\" SIZE=6>"
        "          <INPUT NAME=\"Q03*\" SIZE=2><BR>"
        "<INPUT NAME=\"S04*\" SIZE=4> <INPUT NAME=\"I04*\" SIZE=6>"
        "          <INPUT NAME=\"Q04*\" SIZE=2><BR>"
        "<INPUT NAME=\"S05*\" SIZE=4> <INPUT NAME=\"I05*\" SIZE=6>"
        "          <INPUT NAME=\"Q05*\" SIZE=2><BR>"
        "<INPUT NAME=\"S06*\" SIZE=4> <INPUT NAME=\"I06*\" SIZE=6>"
        "          <INPUT NAME=\"Q06*\" SIZE=2><BR>"
        "<INPUT NAME=\"S07*\" SIZE=4> <INPUT NAME=\"I07*\" SIZE=6>"
        "          <INPUT NAME=\"Q07*\" SIZE=2><BR>"
        "<INPUT NAME=\"S08*\" SIZE=4> <INPUT NAME=\"I08*\" SIZE=6>"
        "          <INPUT NAME=\"Q08*\" SIZE=2><BR>"
        "<INPUT NAME=\"S09*\" SIZE=4> <INPUT NAME=\"I09*\" SIZE=6>"
        "          <INPUT NAME=\"Q09*\" SIZE=2><BR>"
        "<INPUT NAME=\"S10*\" SIZE=4> <INPUT NAME=\"I10*\" SIZE=6>"
        "          <INPUT NAME=\"Q10*\" SIZE=2><BR>"
        "<INPUT NAME=\"S11*\" SIZE=4> <INPUT NAME=\"I11*\" SIZE=6>"
        "          <INPUT NAME=\"Q11*\" SIZE=2><BR>"
        "<INPUT NAME=\"S12*\" SIZE=4> <INPUT NAME=\"I12*\" SIZE=6>"
        "          <INPUT NAME=\"Q12*\" SIZE=2><BR>"
        "<INPUT NAME=\"S13*\" SIZE=4> <INPUT NAME=\"I13*\" SIZE=6>"
        "          <INPUT NAME=\"Q13*\" SIZE=2><BR>"
        "<INPUT NAME=\"S14*\" SIZE=4> <INPUT NAME=\"I14*\" SIZE=6>"
        "          <INPUT NAME=\"Q14*\" SIZE=2><BR>"
        "Execution Status:
        "Total:<BR><HR>"

```

```

"<INPUT TYPE=\"submit\" NAME=\"CMD\" VALUE=\"Execute\">"
"<INPUT TYPE=\"submit\" NAME=\"CMD\" VALUE=\"Menu\">"
"</FORM>", szEndHtmlTag);
return(iLen);
}

/**
** iLayoutPayment() produces the HTML code for the Payment entry screen
**
** It is called by uiServiceRequest().
**/
int
iLayoutPayment(char *pszOutData, WORKER * pWorker)
{
    int iLen = 0;
    pWorker->uScreenId = SCREEN_PAYMENT;
    iLen = iLayoutFormHdr(pszOutData, "TPC-C Payment", pWorker);
    iLen+=sprintf(pszOutData + iLen,
        "<PRE>                Payment<BR>"
        "Date:<BR><BR>"
        "Warehouse: %4.4d%s%s",
        pWorker->iWarehouseId,
        "          District: <INPUT NAME=\"DID*\" "
        "SIZE=2><BR><BR><BR><BR><BR>"
        "Customer: <INPUT NAME=\"CID*\" SIZE=4>"
        "Cust-Warehouse: <INPUT NAME=\"CWI*\" SIZE=4> "
        "Cust-District: <INPUT NAME=\"CDI*\" SIZE=1><BR>"
        "Name:          <INPUT NAME=\"CLT*\" SIZE=16> "
        "Since:<BR>"
        "          Credit:<BR>"
        "          Disc:<BR>"
        "          Phone:<BR>"
        "<BR>"
        "Amount Paid:    $<INPUT NAME=\"HAM*\" SIZE=7>    "
        "New Cust Balance:<BR>"
        "Credit Limit:<BR><BR>Cust-Data: <BR><BR><BR><BR></PRE><HR>"
        "<INPUT TYPE=\"submit\" NAME=\"CMD\" VALUE=\"Execute\">"
        "<INPUT TYPE=\"submit\" NAME=\"CMD\" VALUE=\"Menu\">"
        "</FORM>", szEndHtmlTag);
return(iLen);
}

/**
** iLayoutDelivery() produces the HTML code for the Delivery entry screen
**
** It is called by uiServiceRequest().
**/
int
iLayoutDelivery(char *pszOutData, WORKER * pWorker)
{
    int iLen = 0;
    pWorker->uScreenId = SCREEN_DELIVERY;
    iLen = iLayoutFormHdr(pszOutData, "TPC-C Delivery", pWorker);
    iLen+=sprintf(pszOutData + iLen,
        "<PRE>                Delivery<BR>"
        "Warehouse: %4.4d%s%s",
        pWorker->iWarehouseId,
        "<BR><BR>"
        "Carrier Number: <INPUT NAME=\"OCD*\" SIZE=2><BR><BR>"
        "Execution Status:<BR></PRE><HR>"
        "<INPUT TYPE=\"submit\" NAME=\"CMD\" VALUE=\"Execute\">"
        "<INPUT TYPE=\"submit\" NAME=\"CMD\" VALUE=\"Menu\">"

```



```

        "</FORM>", szEndHtmlTag);
    return(iLen);
}

/**
** iLayoutOrderStatus() produces the HTML code for the Order Status entry
** screen
**
** It is called by uiServiceRequest().
**/
int
iLayoutOrderStatus(char *pszOutData, WORKER * pWorker)
{
    int iLen = 0;
    pWorker->uScreenId = SCREEN_ORDERSTATUS;
    iLen = iLayoutFormHdr(pszOutData, "TPC-C Order-Status", pWorker);
    iLen+=sprintf(pszOutData + iLen,
        "<PRE>                Order-Status<BR>"
        "Warehouse: %4.4d  %s%s",
        pWorker->iWarehouseId,
        "District: <INPUT NAME=\"DID*\" SIZE=2><BR>"
        "Customer: <INPUT NAME=\"CID*\" SIZE=4>  Name: "
        "<INPUT NAME=\"CLT*\" SIZE=23><BR>"
        "Cust-Balance:<BR><BR>"
        "Order-Number:      Entry-Date:"
        "                Carrier-Number:<BR>"
        "Supply-W  Item-Id Qty  Amount  "
        "Delivery-Date<BR></PRE><HR>"
        "<INPUT TYPE=\"submit\" NAME=\"CMD\" VALUE=\"Execute\">"
        "<INPUT TYPE=\"submit\" NAME=\"CMD\" VALUE=\"Menu\">"
        "</FORM>", szEndHtmlTag);
    return(iLen);
}

/**
** iLayoutStockLevel() produces the HTML code for the Stock Level entry
** screen
**
** It is called by uiServiceRequest().
**/
int
iLayoutStockLevel(char *pszOutData, WORKER * pWorker)
{
    int iLen = 0;
    pWorker->uScreenId = SCREEN_STOCKLEVEL;
    iLen = iLayoutFormHdr(pszOutData, "TPC-C Stock Level", pWorker);
    iLen+=sprintf(pszOutData + iLen,
        "<PRE>                Stock-Level<BR>"
        "Warehouse: %4.4d  District: %2.2d%s%s",
        pWorker->iWarehouseId, pWorker->iDistrictId,
        "<BR><BR>"
        "Stock Level Threshold: <INPUT NAME=\"THR*\" SIZE=2><BR><BR>"
        "low stock:  <BR><HR>"
        "<INPUT TYPE=\"submit\" NAME=\"CMD\" VALUE=\"Execute\">"
        "<INPUT TYPE=\"submit\" NAME=\"CMD\" VALUE=\"Menu\">"
        "</FORM>", szEndHtmlTag);
    return(iLen);
}

/**
** iLayoutFormHdr() generates a string of pre-formatted HTML including hidden
** tags containing warehouse, district, screen, and terminal information

```

```

** for a new form to be filled in by an emulated user.
**
** This function is called by the iLayout<transaction>() functions, i.e.,
** it is used to create entry forms for all of the transaction screens.
**/
int
iLayoutFormHdr(char *pszOutData, char *pszHeader, WORKER * pWorker)
{
    int iLen = 0;
    iLen = sprintf(pszOutData,
        "<HTML><HEAD><TITLE>%s</TITLE></HEAD>"
        "<FORM ACTION=\"%s\" METHOD=\"POST\">"
        "<INPUT TYPE=\"hidden\" NAME=\"PI*\" VALUE=\"\">"
        "<INPUT TYPE=\"hidden\" NAME=\"STID\" VALUE=\"0\">"
        "<INPUT TYPE=\"hidden\" NAME=\"SCID\" VALUE=\"%d\">"
        "<INPUT TYPE=\"hidden\" NAME=\"TRID\" VALUE=\"%d\">"
        "<INPUT TYPE=\"hidden\" NAME=\"WKID\" VALUE=\"%d\">"
        "<INPUT TYPE=\"hidden\" NAME=\"w_id\" VALUE=\"%d\">"
        "<INPUT TYPE=\"hidden\" NAME=\"d_id\" VALUE=\"%d\">",
        pszHeader, szPluginPath, pWorker->uScreenId,
        pWorker->iTerminalId, pWorker->iWorkerId,
        pWorker->iWarehouseId, pWorker->iDistrictId);
    return(iLen);
}

/**
** iLayoutRespHdr() generates a string of pre-formatted HTML including hidden
** tags containing warehouse, district, screen, and terminal information
** for a response to a submitted form from an emulated user.
**
** This function is called by the bExecute<transaction>() functions.
**/
int
iLayoutRespHdr(char *pszOutData, char *pszHeader, WORKER * pWorker)
{
    int iLen = 0;
    iLen = sprintf(pszOutData,
        "<HTML><HEAD><TITLE>%s</TITLE></HEAD>"
        "<FORM ACTION=\"%s\" METHOD=\"POST\">"
        "<INPUT TYPE=\"hidden\" NAME=\"w_id\" VALUE=\"%d\">"
        "<INPUT TYPE=\"hidden\" NAME=\"d_id\" VALUE=\"%d\">"
        "<INPUT TYPE=\"hidden\" NAME=\"STID\" VALUE=\"%d\">"
        "<INPUT TYPE=\"hidden\" NAME=\"SCID\" VALUE=\"%d\">"
        "<INPUT TYPE=\"hidden\" NAME=\"TRID\" VALUE=\"%d\">"
        "<INPUT TYPE=\"hidden\" NAME=\"WKID\" VALUE=\"%d\">",
        pszHeader, szPluginPath, pWorker->iWarehouseId,
        pWorker->iDistrictId,
        pWorker->iStatusId, pWorker->uScreenId,
        pWorker->iTerminalId, pWorker->iWorkerId);
    return(iLen);
}

/**
** iLayoutHTMLString() converts the native string data into HTML-compliant
** data. This is mainly to change special punctuation to HTML &xxx;
** sequences so browsers can parse the HTML correctly.
**/
int
iLayoutHTMLString(char *pszOutData, char *pszInData, unsigned int uiLen)
{
    int iLen = 0;
    while(uiLen && *pszInData)

```

```

{
    switch (*pszInData)
    {
        case '>':
            *pszOutData++ = '&';
            *pszOutData++ = 'g';
            *pszOutData++ = 't';
            *pszOutData++ = ',';
            pszInData++;
            iLen+=4;
            break;

        case '<':
            *pszOutData++ = '&';
            *pszOutData++ = 'l';
            *pszOutData++ = 't';
            *pszOutData++ = ',';
            pszInData++;
            iLen+=4;
            break;

        case '&':
            *pszOutData++ = '&';
            *pszOutData++ = 'a';
            *pszOutData++ = 'm';
            *pszOutData++ = 'p';
            *pszOutData++ = ',';
            pszInData++;
            iLen+=5;
            break;

        case '\\':
            *pszOutData++ = '&';
            *pszOutData++ = 'q';
            *pszOutData++ = 'u';
            *pszOutData++ = 'o';
            *pszOutData++ = 't';
            *pszOutData++ = ',';
            pszInData++;
            iLen+=6;
            break;

        default:
            *pszOutData++ = *pszInData++;
            iLen++;
            break;
    }
    uiLen--;
}
while(uiLen--)
{
    *pszOutData++ = ' ';
    iLen++;
}
*pszOutData = 0;
return(iLen);
}

int iLayoutString(char *pszOutData, const char *pszPicture, char *pszInData)
{
    int iLen = 0;
    while(*pszPicture)
    {
        if(*pszPicture == 'X')
        {
            if(*pszInData)

```

```

                *pszOutData++ = *pszInData++;
            else
                *pszOutData++ = ' ';
        } else
            *pszOutData++ = *pszPicture;
        pszPicture++;
        iLen++;
    }
    *pszOutData = 0;
    return(iLen);
}

void vStringCopy(char *pszDest, char *pszSrc, int iBytes)
{
    strncpy(pszDest, pszSrc, iBytes);
    pszDest[iBytes] = '\0';
    return;
}
/**
** bIsNumeric checks to make sure a string contains a numeric value.
**
** Called from pszExtractLongKey(), et al.
**/
BOOL bIsNumeric(char *pszNum)
{
    if(*pszNum == 0)
        return(TRUE);
    if (pszNum[0] == '-') {
        pszNum++;
    }
    while(*pszNum && isdigit(*pszNum))
        pszNum++;
    return(*pszNum);
}

/**
** vToUpper -- simple function to convert string to all upper-case letters.
**
** Called from pszExtractStringKey() to make all key parsing consistent.
**/
void vToUpper(char *szArg)
{
    char *szPtr = szArg;
    for(; *szPtr; szPtr++)
    {
        *szPtr = toupper(*szPtr);
    }
}

tpcc.Service.h
#ifndef __TPCCSERVICEH__
#define __TPCCSERVICEH__
#include "tpcc.h"
uint uiServiceRequest(WORKER *, char *, char *, int *);
#endif

tpcc.Bool.h
#ifndef __TPCCBOOLH__
#define __TPCCBOOLH__

```

```
#ifndef TRUE
#define TURE
#endif
#ifndef FALSE
#define FALSE
#endif
typedef enum
{
    FALSE = 0,
    TRUE = 1
} BOOL;

#endif

tpccConst.h

#ifndef __TPCCCONSTH__
#define __TPCCCONSTH__
/* ServiceRequest return codes*/
#define SEND 1
#define SENDCLOSE 2

#define NEWORDER "NEWO"
#define PAYMENT "PAYM"
#define ORDERSTATUS "ORDS"
#define STOCKLEVEL "STOCK"
#define DELIVERY "DEL"

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

/* Min/Max/Len Data Definitions*/
#define MIN_DID 1
#define MAX_DID 10
#define MIN_OL 5
#define MAX_OL 15
#define MIN_QUANTITY 1
#define MAX_QUANTITY 10
#define MIN_ITEM_ID 1
#define MAX_ITEM_ID 100000
#define MIN_CUST_ID 1
#define MAX_CUST_ID 3000
#define MIN_CARRIER 1
#define MAX_CARRIER 10
#define MIN_THRESHOLD 10
#define MAX_THRESHOLD 20
#define MAX_MSG_SZ 4096 /*Should Be Equal To Net Buf Size*/
#define MAX_DIAG_SZ 2000
#define STATUS_LEN 200
#define NAME_LEN 16
#define ADDR_LEN 20
#define ZIP_LEN 10
#define STATE_LEN 2

/* pTPCC->iStatusId codes*/
#define INVALID_ITEM_ID 1
#define STATUS_OK 0
#define ERR_CMD_UNKNOWN -10
```

```
#define ERRTXT_CMD_UNKNOWN "Unrecognized Command"
#define ERR_ALREADY_LOGGEDIN -11
#define ERRTXT_ALREADY_LOGGEDIN "Already Logged In"
#define ERR_TRID -12
#define ERRTXT_TRID "Terminal Id or Worker Id Error"
#define ERR_SCREEN_UNKNOWN -13
#define ERRTXT_SCREEN_UNKNOWN "Unrecognized Screen Id"
#define ERR_WID_INVALID -14
#define ERR_DID_INVALID -15
#define ERR_MISSING_KEY -16
#define ERR_NOT_NUMERIC -17
#define ERR_THRESHOLD_RANGE -18
#define ERR_EMBEDDED_EMPTY_OL -19
#define ERR_QUANTITY_INVALID -20
#define ERR_OL_INVALID -21
#define ERR_OL_COUNT -22
#define ERR_TUX_INTERFACE -23
#define ERR_SERVICE_RSLT -24
#define ERR_INPUT_TOO_LONG -25
#define ERR_IDANDNAME_EMPTY -26
#define ERR_IDANDNAME_ENTERED -27
#define ERR_AMOUNT_BADFORM -28
#define ERR_AMOUNT_INVALID -29
#define ERR_CARRIER_INVALID -30
#define ERR_CID_INVALID -31
#define ERR_MANDATORY_FIELD -32

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

/* Environment variable defaults */
#define DEFAULTDIAGLEVEL DIAG_INFO
#define DEFAULTEVENTLOG 0
#define DIAGNOSTICS TRUE
#endif

tpccData.h

#ifndef __TPCCH__
#define __TPCCH__
#include <atmi.h> /* TUXEDO */
#include <Uunix.h> /* TUXEDO */
#include <userlog.h> /* TUXEDO */

typedef struct
{
    int iWarehouseId; /* TPCC WareHouse Id*/
    int iDistrictId; /* TPCC District Id*/
    int iWorkerId; /* TPCC Worker Thread Id*/
    int iTerminalId; /* TPCC Terminal Id*/
    uint uScreenId; /* TPCC Screen Id*/
    int iStatusId; /* TPCC Status Id*/
    BOOL bRequestForm; /* TPCC Form Requested*/
    char szErrorTxt[200]; /* Error Text*/
    char szWork[100]; /* Thread Work Area*/
    char *pTuxInData; /* Tux Buffer Area*/
    char *pTuxOutData; /* Tux Buffer Area*/
    long lTuxDataLen; /* Tux Buffer Len*/
    TPINIT *pTpInf; /* TUXEDO MULTICONTEXT*/
```

} WORKER;

#endif

MULTI_SVR

ora_errrpt.c

```
/*
 * Copyright (c) 1995 by Sun Microsystems, Inc.
 */

#pragma ident "@(#)ora_errrpt.c 1.1      95/09/14  SMI"

/*
 * these functions actually belong in ~dbbench/generic/c/msgsh_log.c.  We put them
 * here because they have database specific statements.
 */
```

```
#include "ora_err.h"
#include "ora_oci.h"
```

```
errrpt(lda, cur, sqlvar)
ldadef *lda;
csrdef *cur;
text      *sqlvar;
{
    text msg[2048];
/*      if (cur->rc) { */
        oerhms(lda, (sb2) cur->rc, msg, 2048);
        userlog("%s sql_variable %s\n", msg, sqlvar);

    if (cur->rc == DEADLOCK || (cur->rc == SNAPSHOT_TOO_OLD))
        return(RECOVERR);
    else
        return(IRRECERR);

/*      } */
}
```

```
/* vmm313 void ocierror(fname, lineno, errhp, status) */
int ocierror(fname, lineno, errhp, status)
char *fname;
int lineno;
OCIError *errhp;
sword status;
{
    text errbuf[512];
    ub4 buflen;
    sb4 errcode;
    sb4 lstat ;
    ub4 recno=2 ;

    switch (status) {
    case OCI_SUCCESS:
        break;
    case OCI_SUCCESS_WITH_INFO:
        (void) userlog("Module %s Line %d\n", fname, lineno);
        (void) userlog("Error - OCI_SUCCESS_WITH_INFO\n");
        break;
    case OCI_NEED_DATA:
```

```
(void) userlog("Module %s Line %d\n", fname, lineno);
(void) userlog("Error - OCI_NEED_DATA\n");
    return (IRRECERR);
case OCI_NO_DATA:
/*
    (void) userlog("Module %s Line %d\n", fname, lineno);
    (void) userlog("Error - OCI_NO_DATA\n");
    */
    return IRRECERR;      /* for 8.1.4 */
break;
case OCI_ERROR:
    lstat = OCIErrorGet (errhp, (ub4) 1,
        (text *) NULL, &errcode, errbuf,
        (ub4) sizeof(errbuf), OCI_HTYPE_ERR);
    if (errcode == NOT_SERIALIZABLE) return (errcode);
    while (lstat != OCI_NO_DATA)
    {
        (void) userlog("Module %s Line %d\n", fname, lineno);
        (void) userlog("Error - %s\n", errbuf);
        lstat = OCIErrorGet (errhp, recno++, (text *) NULL, &errcode, errbuf,
            (ub4) sizeof(errbuf), OCI_HTYPE_ERROR);
    }
    return (errcode);
break;
case OCI_INVALID_HANDLE:
    (void) userlog("Module %s Line %d\n", fname, lineno);
    (void) userlog("Error - OCI_INVALID_HANDLE\n");
break;
case OCI_STILL_EXECUTING:
    (void) userlog("Module %s Line %d\n", fname, lineno);
    (void) userlog("Error - OCI_STILL_EXECUTE\n");
    return (IRRECERR);
case OCI_CONTINUE:
    (void) userlog("Module %s Line %d\n", fname, lineno);
    (void) userlog("Error - OCI_CONTINUE\n");
    return (IRRECERR);
default:
    (void) userlog("Module %s Line %d\n", fname, lineno);
    (void) userlog("Error - \n");
    return (IRRECERR);
}
return RECOVERR;
}
```

ora_err.h

```
/*
 * Copyright (c) 1994 by Sun Microsystems, Inc.
 */

#ifndef ORA_ERR_H
#define ORA_ERR_H

#pragma ident "@(#)ora_err.h  1.4      95/09/14  SMI"
/*
 * this kludge is required because Oracle does not provide
 * symbolic constants in a header file
 */

#define  EDEADLOK      60
#define  SQLNOTFOUND  1403
#define  COLUMN_NULL  -1405
```

```
#define EDUPLICATE      -1
#define RECOVERR        -10
#define IRRECERR        -20
#define NOERR           111
#define DEL_ERROR       -666
#define DEL_DATE_LEN    7
#define SQL_BUF_SIZE    8192
```

```
#endif ORA_ERR_H
```

```
tpcc_srv_del.c
```

```
/*
 * Copyright (c) 1994 by Sun Microsystems, Inc.
 */
```

```
#pragma ident "@(#)tpcso_srv_del.pc      1.5      94/12/07  SMI"
```

```
/*=====+
|      Copyright (c) 1996 Oracle Corp, Redwood Shores, CA      |
|      OPEN SYSTEMS PERFORMANCE GROUP                          |
|      All Rights Reserved                                       |
+=====+
| FILENAME
|   pldel.c
| DESCRIPTION
|   OCI version of DELIVERY transaction in TPC-C benchmark.
+=====*/
```

```
#ifndef ORA_TPCC
# define ORA_TPCC
# include "tpcc.h"
#endif
```

```
#include <stdlib.h>
#include <unistd.h>
#include <sys/signal.h>
#include <sys/types.h>
#include <sys/ipc.h>
#include <sys/msg.h>
#include <sys/utsname.h>
#include <errno.h>
#include <stdio.h>
/* #include "ora_err.h" */
```

```
/* Tuxedo */
#include "atmi.h"
#include "userlog.h"
```

```
#define MOVETO(element, struct_name) element = struct_name -> element
#define MOVEBACK(element, struct_name) struct_name -> element = element
```

```
#include "tpccflags.h"
```

```
#if defined(ISO) || defined(ISO5) || defined(ISO6) || defined(ISO8)
#define SQLTXT0 "SELECT substr(value,1,5) FROM v$parameter \
    WHERE name = 'instance_number'"
#endif
```

```
#define SQLTXT "BEGIN inittpc.init_del ; END;"
```

```
#define SQLTXT1 "DELETE FROM nord WHERE no_d_id = :d_id \
```

```
AND no_w_id = :w_id and rownum <= 1 \
RETURNING no_o_id into :o_id "
```

```
#define SQLTXT3 "UPDATE odr SET o_carrier_id = :carrier_id \
    WHERE o_id = :o_id and o_d_id = :d_id and o_w_id = :w_id \
    returning o_c_id into :o_c_id"
```

```
#define SQLTXT4 "UPDATE ordl \
    SET ol_delivery_d = :cr_date \
    WHERE ol_w_id = :w_id AND ol_d_id = :d_id AND ol_o_id = :o_id \
    RETURNING sum(ol_amount) into :ol_amount "
```

```
#define SQLTXT6 "UPDATE cust SET c_balance = c_balance + :amt, \
    c_delivery_cnt = c_delivery_cnt + 1 WHERE c_w_id = :w_id AND \
    c_d_id = :d_id AND c_id = :c_id"
```

```
#define NDISTS 10
#define ROWIDLEN 20
```

```
struct delctx {
    sb2 del_o_id_ind[NDISTS];
    sb2 d_id_ind[NDISTS];
    sb2 c_id_ind[NDISTS];
    sb2 del_date_ind[NDISTS];
    sb2 carrier_id_ind[NDISTS];
    sb2 amt_ind[NDISTS];
#if defined(ISO) || defined(ISO5) || defined(ISO6) || defined(ISO8)
    sb2 inum_ind;
#endif
```

```
    ub4 del_o_id_len[NDISTS];
    ub4 c_id_len[NDISTS];
    int oid_ctx;
    int cid_ctx;
    OCIBind *olamt_bp;
```

```
    ub2 w_id_len[NDISTS];
    ub2 d_id_len[NDISTS];
    ub2 del_date_len[NDISTS];
    ub2 carrier_id_len[NDISTS];
    ub2 amt_len[NDISTS];
#if defined(ISO) || defined(ISO5) || defined(ISO6) || defined(ISO8)
    ub2 inum_len;
#endif
```

```
    ub2 del_o_id_rcode[NDISTS];
    ub2 cons_rcode[NDISTS];
    ub2 w_id_rcode[NDISTS];
    ub2 d_id_rcode[NDISTS];
    ub2 c_id_rcode[NDISTS];
    ub2 del_date_rcode[NDISTS];
    ub2 carrier_id_rcode[NDISTS];
    ub2 amt_rcode[NDISTS];
#if defined(ISO) || defined(ISO5) || defined(ISO6) || defined(ISO8)
    ub2 inum_rcode;
#endif
```

```
    int del_o_id[NDISTS];
    int del_d_id[NDISTS];
    int cons[NDISTS];
    int w_id[NDISTS];
```

```

int d_id[NDISTS];
int c_id[NDISTS];
int carrier_id[NDISTS];
int amt[NDISTS];
ub4 del_o_id_rcnt;
int retry;
int retry_serial;
int retry_snapshot;
OCIRowid *no_rowid_ptr[NDISTS];
OCIRowid *o_rowid_ptr[NDISTS];
OCIDate del_date[NDISTS];
#if defined(ISO) || defined(ISO5) || defined(ISO6) || defined(ISO8)
char inum[10];
#endif
OCISmt *curd0;
OCISmt *curd1;
OCISmt *curd2;
OCISmt *curd3;
OCISmt *curd4;
OCISmt *curd5;
OCISmt *curd6;
OCISmt *curdtest;

OCIBind *w_id_bp;
OCIBind *w_id_bp3;
OCIBind *w_id_bp4;
OCIBind *w_id_bp5;
OCIBind *w_id_bp6;
OCIBind *d_id_bp;
OCIBind *d_id_bp3;
OCIBind *d_id_bp4;
OCIBind *d_id_bp6;
OCIBind *o_id_bp;
OCIBind *cr_date_bp;
OCIBind *c_id_bp;
OCIBind *c_id_bp3;
OCIBind *no_rowid_bp;
OCIBind *carrier_id_bp;
OCIBind *o_rowid_bp;
OCIBind *del_o_id_bp;
OCIBind *del_o_id_bp3;
OCIBind *amt_bp;
OCIBind *bstr1_bp[10];
OCIBind *bstr2_bp[10];
OCIBind *retry_bp;
OCIBind *retry_serial_bp;
OCIBind *retry_snapshot_bp;
OCIDefine *inum_dp;
OCIDefine *d_id_dp;
OCIDefine *del_o_id_dp;
OCIDefine *no_rowid_dp;
OCIDefine *c_id_dp;
OCIDefine *o_rowid_dp;
OCIDefine *cons_dp;
OCIDefine *amt_dp;

int norow;
};

typedef struct delctx delctx;
struct pldelctx {

```

```

ub2 del_d_id_len[NDISTS];
ub2 del_o_id_len[NDISTS];

ub2 w_id_len;
ub2 d_id_len[NDISTS];
ub2 o_c_id_len[NDISTS];
ub2 sums_len[NDISTS];
ub2 carrier_id_len;
ub2 ordcnt_len;
ub2 del_date_len;
#if defined(ISO) || defined(ISO5) || defined(ISO6) || defined(ISO8)
ub2 inum_len;
#endif

int del_o_id[NDISTS];
int del_d_id[NDISTS];
int o_c_id[NDISTS];
int sums[NDISTS];
OCIDate del_date;
int carrier_id;
int ordcnt;

ub4 del_o_id_rcnt;
ub4 del_d_id_rcnt;
ub4 o_c_id_rcnt;
ub4 sums_rcnt;

int retry;
int retry_serial;
int retry_snapshot;
#if defined(ISO) || defined(ISO5) || defined(ISO6) || defined(ISO8)
char inum[10];
#endif
OCISmt *curp1;
OCISmt *curp2;
OCIBind *w_id_bp;
OCIBind *d_id_bp;
OCIBind *o_id_bp;
OCIBind *o_c_id_bp;
OCIBind *ordcnt_bp;
OCIBind *sums_bp;
OCIBind *del_date_bp;
OCIBind *carrier_id_bp;
OCIBind *retry_bp;
OCIBind *retry_serial_bp;
OCIBind *retry_snapshot_bp;

int norow;

};
typedef struct pldelctx pldelctx;

static pldelctx *pldctx;

static delctx *dctx;

#ifdef DMLRETDEL
struct amtctx {
int ol_amt[NITEMS];
sb2 ol_amt_ind[NITEMS];

```

```

    ub4 ol_amt_len[NITEMS];
    ub2 ol_amt_rcode[NITEMS];
    int ol_cnt;
};
typedef struct amtctx amtctx;
amtctx *actx;

#endif

/* Global variables for delivery transaction */

static int w_id;
static int o_carrier_id;

/*static struct msggh_req message;*/      /* Transaction message */
int my_qid, my_id;
char my_name[] = "Del";

static int tx_count = 0;      /* Transaction counter */
static FILE *delfile;
OCIDate cr_date;
int del_o_id[10];
int retries;
int retries_serial;
int retries_recoverr;
int retries_snapshot;

struct msggh_req message;

static char outbuf[2048];      /* Buffer for results file */

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

sb4 TPC_oid_data(dvoid *ctxp, OCIBind *bp, ub4 iter, ub4 index,
                dvoid **bufpp, ub4 **alenp, ub1 *piecep,
                dvoid **indpp, ub2 **rcodepp)
{
    *bufpp = &dctx->del_o_id[iter];
    *indpp = &dctx->del_o_id_ind[iter];
    dctx->del_o_id_len[iter] = sizeof(dctx->del_o_id[0]);
    *alenp = &dctx->del_o_id_len[iter];
    *rcodepp = &dctx->del_o_id_rcode[iter];
    *piecep = OCI_ONE_PIECE;
    return (OCI_CONTINUE);
}

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

```

```

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

sb4 amt_data(dvoid *ctxp, OCIBind *bp, ub4 iter, ub4 index,
            dvoid **bufpp, ub4 **alenp, ub1 *piecep,
            dvoid **indpp, ub2 **rcodepp)
{
    amtctx *actx;
    actx = (amtctx *)ctxp;
    *bufpp = &actx->ol_amt[index];
    *indpp = &actx->ol_amt_ind[index];
    actx->ol_amt_len[index] = sizeof(actx->ol_amt[0]);
    *alenp = &actx->ol_amt_len[index];
    *rcodepp = &actx->ol_amt_rcode[index];
    *piecep = OCI_ONE_PIECE;
    return (OCI_CONTINUE);
}

#endif

int get_del_tx_cnt()
{
    return tx_count;
}

static int proc_no ;

int plsqliflag = 1;

int init_del_tx()
{
    /******
    * BEGIN BLOCK OF COMMON CODE
    *****/

    text stmbuf[SQL_BUF_SIZE];

    /* For all servers - common routine to open/init session etc. */
    TPCinit();

    if (plsqliflag)
    {
        pldctx = (pldctx *) malloc (sizeof(pldctx));
        DISCARD memset(pldctx, (char)0, (ub4)sizeof(pldctx));
        /* Initialize */
        DISCARD OCIHandleAlloc(tpcenv, (dvoid**)&pldctx->curp1, OCI_HTYPE_STMT, 0,
                                (dvoid**)0);
        DISCARD sprintf ((char *) stmbuf, SQLTXT);
        DISCARD OCISstmtPrepare(pldctx->curp1, errhp, stmbuf,
                                (ub4) strlen((char *)stmbuf),
                                OCI_NTV_SYNTAX, OCI_DEFAULT);
        DISCARD OCIERROR(errhp,

```

```

OCIStmtExecute(tpcsvc,pldctx->curp1,errhp,1,0,NULLP(OCI_Snapshot),
    NULLP(OCI_Snapshot), OCI_DEFAULT));

DISCARD OCIHandleAlloc(tpcenv,(dvoid**) &pldctx->curp2, OCI_HTYPE_STMT,
    0, (dvoid**)0);
sqlfile("tkvcpdel.sql",stmbuf);
DISCARD OCIStmtPrepare(pldctx->curp2, errhp, stmbuf,
    (ub4)strlen((char *)stmbuf), OCI_NTV_SYNTAX, OCI_DEFAULT);
OCIBNDPL(pldctx->curp2, pldctx->w_id_bp , errhp,":w_id",
    ADR(w_id), SIZ(int), SQLT_INT,&pldctx->w_id_len);
OCIBNDPL(pldctx->curp2, pldctx->ordcnt_bp , errhp,":ordcnt",
    ADR(pldctx->ordcnt), SIZ(int), SQLT_INT,&pldctx->ordcnt_len);
OCIBNDPL(pldctx->curp2, pldctx->del_date_bp,errhp,":now",
    ADR(pldctx->del_date), SIZ(OCIDate), SQLT_ODT,&pldctx->del_date_len);
OCIBNDPL(pldctx->curp2, pldctx->carrier_id_bp , errhp,
    ":carrier_id", ADR(o_carrier_id), SIZ(int),
    SQLT_INT, &pldctx->carrier_id_len);

OCIBNDPLA(pldctx->curp2, pldctx->d_id_bp, errhp,":d_id",
    pldctx->del_d_id, SIZ(int),SQLT_INT, pldctx->del_d_id_len,
    NDISTS, &pldctx->del_d_id_rcnt);
OCIBNDPLA(pldctx->curp2, pldctx->o_id_bp, errhp,":order_id",
    pldctx->del_o_id,SIZ(int),SQLT_INT, pldctx->del_o_id_len,NDISTS,
    &pldctx->del_o_id_rcnt);
OCIBNDPLA(pldctx->curp2, pldctx->sums_bp, errhp,"sums",
    pldctx->sums,SIZ(int),SQLT_INT, pldctx->sums_len,NDISTS,
    &pldctx->sums_rcnt);
OCIBNDPLA(pldctx->curp2, pldctx->o_c_id_bp, errhp,":o_c_id",
    pldctx->o_c_id,SIZ(int),SQLT_INT, pldctx->o_c_id_len,NDISTS,
    &pldctx->o_c_id_rcnt);
OCIBND(pldctx->curp2, pldctx->retry_bp , errhp,":retry",
    ADR(pldctx->retry), SIZ(int),SQLT_INT);

}
else
{

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

#ifdef ISO || defined(ISO5) || defined(ISO6) || defined(ISO8)
    OCIHandleAlloc(tpcenv, (dvoid **>(&dctx->curd0), OCI_HTYPE_STMT, 0,
        (dvoid**)0);
    sprintf ((char *) stmbuf, SQLTXT0);
    OCIStmtPrepare(dctx->curd0, errhp, stmbuf, strlen((char *)stmbuf),
        OCI_NTV_SYNTAX, OCI_DEFAULT);

    OCIDFNRA(dctx->curd0, dctx->inum_dp,errhp,1,dctx->inum,SIZ(dctx->inum),
        SQLT_STR,&(dctx->inum_ind),&(dctx->inum_len),&(dctx->inum_rcode));
#endif

    OCIHandleAlloc(tpcenv, (dvoid **>(&dctx->curd1), OCI_HTYPE_STMT, 0,
        (dvoid**)0);
    DISCARD sprintf ((char *) stmbuf, "%s",   SQLTXT1);
    DISCARD OCIStmtPrepare(dctx->curd1, errhp, stmbuf,
        strlen((char *)stmbuf),OCI_NTV_SYNTAX, OCI_DEFAULT);

```

```

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

```

```

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

```

/* open third cursor */

```

DISCARD OCIHandleAlloc(tpcenv, (dvoid **>(&dctx->curd3), OCI_HTYPE_STMT,
    0, (dvoid**)0);
DISCARD sprintf ((char *) stmbuf, SQLTXT3);
DISCARD OCIStmtPrepare(dctx->curd3, errhp, stmbuf, strlen((char *)stmbuf),
    OCI_NTV_SYNTAX, OCI_DEFAULT);

```

/* bind variables */

```

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

```

```

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

```

/* open fourth cursor */

```

DISCARD OCIHandleAlloc(tpcenv, (dvoid **>(&dctx->curd4), OCI_HTYPE_STMT, 0,
    (dvoid**)0);
DISCARD sprintf ((char *) stmbuf, SQLTXT4);
DISCARD OCIStmtPrepare(dctx->curd4, errhp, stmbuf, strlen((char *)stmbuf),
    OCI_NTV_SYNTAX, OCI_DEFAULT);

```

/* bind variables */

```

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

```

/* open sixth cursor */

```

DISCARD OCIHandleAlloc(tpcenv, (dvoid **>(&dctx->curd6), OCI_HTYPE_STMT,
    0, (dvoid**)0);
DISCARD sprintf ((char *) stmbuf, SQLTXT6);
DISCARD OCIStmtPrepare(dctx->curd6, errhp, stmbuf, strlen((char *)stmbuf),

```



```
OCI_NTV_SYNTAX, OCI_DEFAULT);
```

```
/* bind variables */
```

```
OCIBND(dctx->curd6,dctx->amt_bp,errhp,":amt",dctx->amt,SIZ(int),
      SQLT_INT);
OCIBND(dctx->curd6,dctx->w_id_bp6,errhp,":w_id",dctx->w_id,SIZ(int),
      SQLT_INT);
OCIBND(dctx->curd6,dctx->d_id_bp6,errhp,":d_id",dctx->d_id,SIZ(int),
      SQLT_INT);
OCIBND(dctx->curd6,dctx->c_id_bp,errhp,":c_id",dctx->c_id,SIZ(int),
      SQLT_INT);
}
/*****
* END BLOCK OF COMMON CODE
*****/
```

```
/*proc_stat_msg("init_del_tx()\n");
proc_stat(); */
```

```
return(0);
}
```

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

```
/* Structure used to queue delivery transaction */
struct req_struct {
    int w_id;
    int o_carrier_id;
    time_t qtime;      /* Time transaction was queued */
};
```

```
int delivery_tx(TPSVCINFO *rqst)
{ /*dt */
    int i,j,v;
    int invalid;
    int tmp_id;
    int rpc, rcount, errcode, execstatus;
    int count ;
    time_t etime;
    struct timeval tv;
```

```
/* float tmp_amt; changed form float to int */
int tmp_amt;
int del_o_id[10];
ub4 attr_size;
```

```
int      len;
```

```
int      retries=0, err = 0;
```

```
struct req_struct *delp;
delp = (struct req_struct *) (rqst->data);
```

```
/******
* BEGIN BLOCK OF COMMON CODE
*****/
```

```
/*int rpc, rcount, errcode, execstatus;*/
MOVETO(w_id, delp);
MOVETO(o_carrier_id, delp);
/*
    vgetdate(cr_date); */
```

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

```
tx_count++;
```

```
sprintf(outbuf, "Starting transaction %d queued at %ld\n",
        tx_count, delp->qtime);
```

```
#if defined(ISO) || defined(ISO5) || defined(ISO6) || defined(ISO8)
int hasno;
int reread;
char sdate[30];
```

```
OCIStmtExecute(tpcsvc,dctx->curd0,errhp,1,0,0,0,OCI_DEFAULT);
sysdate (sdate);
printf ("Delivery started at %s on node %s\n", sdate, dctx->inum);
#endif
if (plsqliflag)
{
```

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

```
    pldctx->retry=0;
    pldctx->retry_serial=0;
    pldctx->retry_snapshot=0;
```

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

```

{

retry:

#ifdef ISO || defined(ISO5) || defined(ISO6) || defined(ISO8)
    reread = 1;
#endif

#ifdef ISO || defined(ISO5) || defined(ISO6) || defined(ISO8)
iso:
#endif

    invalid = 0;

/* initialization for array operations */

for (i = 0; i < NDISTS; i++)
{ /* F */
    dctx->del_o_id_ind[i] = TRUE;
    dctx->d_id_ind[i] = TRUE;
    dctx->c_id_ind[i] = TRUE;
    dctx->del_date_ind[i] = TRUE;
    dctx->carrier_id_ind[i] = TRUE;
    dctx->amt_ind[i] = TRUE;

    dctx->del_o_id_len[i] = SIZ(dctx->del_o_id[0]);
    dctx->w_id_len[i] = SIZ(dctx->w_id[0]);
    dctx->d_id_len[i] = SIZ(dctx->d_id[0]);
    dctx->c_id_len[i] = SIZ(dctx->c_id[0]);
    dctx->del_date_len[i] = DEL_DATE_LEN;
    dctx->carrier_id_len[i] = SIZ(dctx->carrier_id[0]);
    dctx->amt_len[i] = SIZ(dctx->amt[0]);

    dctx->w_id[i] = w_id;
    dctx->d_id[i] = i+1;
    dctx->carrier_id[i] = o_carrier_id;
    memcpy(&dctx->del_date[i], &cr_date, sizeof(OCIDate));
}

memset(actx, (char)0, sizeof(amtctx));

/* array select from new_order and orders tables */

execstatus=OCISstmtExecute(tpcsvc, dctx->curd1, errhp, NDISTS, 0,
    NULLP(CONST OCISnapshot), NULLP(OCISnapshot), OCI_DEFAULT);
if((execstatus != OCI_SUCCESS) && (execstatus != OCI_NO_DATA))
{
    DISCARD OCITransRollback(tpcsvc, errhp, OCI_DEFAULT);
    errcode = OCIERROR(errhp, execstatus);
    if(errcode == NOT_SERIALIZABLE)
    {
        retries++;
        retries_serial++;
        goto retry;
    }
    else if (errcode == RECOVERR)
    {
        retries++;
        retries_recoverr++;
        goto retry;
    }
    else if (errcode == SNAPSHOT_TOO_OLD)
    {
        retries++;
        retries_snapshot++;
        goto retry;
    }
    else
    {
        return -1;
    }
}
else if (errcode == SNAPSHOT_TOO_OLD)

```

```

{
    retries++;
    retries_snapshot++;
    goto retry;
}
else
{
    return -1;
}
}

/* mark districts with no new order */
DISCARD OCISAttrGet(dctx->curd1, OCI_HTYPE_STMT, &rcount, NULLP(ub4),
    OCI_ATTR_ROW_COUNT, errhp);
rpc = rcount;
if (rcount != NDISTS)
{
    int j = 0;
    for (i=0; i < NDISTS; i++)
    {
        if (dctx->del_o_id_ind[j] == 0) /* there is data here */
            j++;
        else
            shiftdata(j);
    }
}

execstatus=OCISstmtExecute(tpcsvc, dctx->curd3, errhp, rpc, 0,
    NULLP(CONST OCISnapshot), NULLP(OCISnapshot), OCI_DEFAULT);
if(execstatus != OCI_SUCCESS)
{
    DISCARD OCITransRollback(tpcsvc, errhp, OCI_DEFAULT);
    errcode = OCIERROR(errhp, execstatus);
    if(errcode == NOT_SERIALIZABLE)
    {
        retries++;
        retries_serial++;
        goto retry;
    }
    else if (errcode == RECOVERR)
    {
        retries++;
        retries_recoverr++;
        goto retry;
    }
    else if (errcode == SNAPSHOT_TOO_OLD)
    {
        retries++;
        retries_snapshot++;
        goto retry;
    }
    else
    {
        return -1;
    }
}

DISCARD OCISAttrGet(dctx->curd3, OCI_HTYPE_STMT, &rcount, NULLP(ub4),
    OCI_ATTR_ROW_COUNT, errhp);

if (rcount != rpc)
{
    #ifdef TUX

```

```

        userlog ("Error in TPC-C server %d: %d rows selected, %d ords updated\n",
                proc_no, rpc, rcount);
#else
        DISCARD fprintf (stderr,
                "Error in TPC-C server %d: %d rows selected, %d ords updated\n",
                proc_no, rpc, rcount);
#endif

        DISCARD OCITransRollback(tpcsvc, errhp, OCI_DEFAULT);
        return (-1);
    }

    /* array update of order_line table */
    execstatus=OCIStmtExecute(tpcsvc, dctx->curd4, errhp, rpc, 0,
        NULLP(CONST OCISnapshot), NULLP(OCISnapshot), OCI_DEFAULT);
    if(execstatus != OCI_SUCCESS)
    {
        DISCARD OCITransRollback(tpcsvc, errhp, OCI_DEFAULT);
        errcode = OCIERROR(errhp, execstatus);
        if(errcode == NOT_SERIALIZABLE)
        {
            retries++;
            retries_serial++;
            goto retry;
        }
        else if (errcode == RECOVERR)
        {
            retries++;
            retries_recoverr++;
            goto retry;
        }
        else if (errcode == SNAPSHOT_TOO_OLD)
        {
            retries++;
            retries_snapshot++;
            goto retry;
        }
        else
        {
            return -1;
        }
    }
    DISCARD OCIAAttrGet(dctx->curd4, OCI_HTYPE_STMT, &rcount, NULLP(ub4),
        OCI_ATTR_ROW_COUNT, errhp);

    /* transfer amounts */
    for (i=0; i<rpc; i++)
    {
        dctx->amt[i]=0;
        if ( actx->ol_amt_rcode[i] == 0)
        {
            dctx->amt[i] = actx->ol_amt[i];
        }
    }
#endif

#ifdef ISO5 || defined(ISO6)
    printf ("d_id:amount\n");
    for (i = 0; i < rpc; i++)
        printf ("%d:%.2f ", dctx->d_id[i], (float)dctx->amt[i]/100);
    printf ("\n");
#endif

    /* array update of customer table */
#ifdef ISO5 || defined(ISO6)
    execstatus=OCIStmtExecute(tpcsvc, dctx->curd6, errhp, rpc, 0, 0, 0,

```

```

        OCI_DEFAULT);
#else
    execstatus=OCIStmtExecute(tpcsvc, dctx->curd6, errhp, rpc, 0,
        NULLP(CONST OCISnapshot), NULLP(OCISnapshot),
        OCI_COMMIT_ON_SUCCESS | OCI_DEFAULT);
#endif

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

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

    if (rcount != rpc) {
#ifdef TUX
        userlog ("Error in TPC-C server %d: %d rows selected, %d cust updated\n",
                proc_no, rpc, rcount);
#else
        DISCARD fprintf (stderr,
                "Error in TPC-C server %d: %d rows selected, %d cust updated\n",
                proc_no, rpc, rcount);
#endif
    }

    DISCARD OCITransRollback(tpcsvc, errhp, OCI_DEFAULT);
    return (-1);
}

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

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

}

for (i = 0; i < 10; i++) {
    if (del_o_id[i] == 0) {

```

```

        /* No order found for this district */
        sprintf(outbuf+strlen(outbuf),
            "Delivery for District %d skipped\n", i+1);
    }
    else {
        sprintf(outbuf+strlen(outbuf),
            "Delivered order %d for district %d, warehouse %d, carrier %d\n",
                del_o_id[i], i+1, w_id, o_carrier_id);
    }
}
(void)gettimeofday(&tv, NULL); /* convert to msec */
etime = (tv.tv_sec * 1000) + (tv.tv_usec / 1000);
sprintf(outbuf+strlen(outbuf), "Transaction completed at %ld Retries %d %d %d %d\n",
    etime, retries, retries_serial, retries_recover, retries_snapshot);
fwrite(outbuf, strlen(outbuf), 1, delfile);
fflush(delfile);

/*****
 * END BLOCK OF COMMON CODE
 *****/

return(0);
}

void cleanup(int code)
{
    if (dctx)
        free (dctx);

#ifdef ISO || defined(ISO5) || defined(ISO6) || defined(ISO8)
    OCIFree((dvoid *)dctx->curd0, OCI_HTYPE_STMT);
#endif
    OCIFree((dvoid *)dctx->curd1, OCI_HTYPE_STMT);
    OCIFree((dvoid *)dctx->curd2, OCI_HTYPE_STMT);
    OCIFree((dvoid *)dctx->curd3, OCI_HTYPE_STMT);
    OCIFree((dvoid *)dctx->curd4, OCI_HTYPE_STMT);
    OCIFree((dvoid *)dctx->curd5, OCI_HTYPE_STMT);
    OCIFree((dvoid *)dctx->curd6, OCI_HTYPE_STMT);

    /* log off */

    OCIFree((dvoid *)tpcusr, OCI_HTYPE_SESSION);
    OCIFree((dvoid *)tpcsvc, OCI_HTYPE_SVCCTX);
    OCIFree((dvoid *)errhp, OCI_HTYPE_ERROR);
    OCIFree((dvoid *)tpcsrv, OCI_HTYPE_SERVER);
    OCIFree((dvoid *)tpcenv, OCI_HTYPE_ENV);
    exit(code);
}

/* Tuxedo */
int tpsvrinit(int argc, char **argv)
{
    char *p;
    char filename[200];
    int proc_no, count;
    struct utsname name;
    if ((p = getenv("CLNT_HOST")) == (char *)NULL) {
        userlog("CLNT_HOST environment variable not set - use same name as for an rsh i.e. X64_0\n");
        exit(1);
    }

    proc_no = atoi(argv[optind]); /* Needs argument which is the proc_no */

```

```

    /* Get hostname of our machine and create results file */
    /* uname( &name); */
    /* strcpy(filename, p); */

    /* sprintf(filename, "/tmp/%s.del%d", name.nodename, proc_no); */
    sprintf(filename, "/tmp/%s.del%d", p, proc_no);

    delfile = fopen(filename, "w");
    if (delfile == NULL) {
        userlog("Cannot create file %s\n", filename);
    }
    return(init_del_tx()); /* Prepare transaction */
}

void tpsvrdone()
{
    fclose(delfile); /* Close results file */
}

int DEL(TPSVCINFO *rqst)
{
    if (delivery_tx(rqst))
        tpreturn(TPFAIL, 0, rqst->data, sizeof(struct req_struct), 0);
    else
        tpreturn(TPSUCCESS, 0, rqst->data, sizeof(struct req_struct), 0);
}

tpcc_srv_init.c
/*
 * Copyright (c) 1994 by Sun Microsystems, Inc.
 */

#pragma ident "@(#)tpcsrv_stock.c 1.6 95/04/12 SMI"

/*=====+
| Copyright (c) 1994 Oracle Corp, Redwood Shores, CA |
| OPEN SYSTEMS PERFORMANCE GROUP |
| All Rights Reserved |
|=====+
| FILENAME
| renamed to tpcc_srv_init.c
| DESCRIPTION
| OCI for opening connect/session in TPC-C benchmark.
|=====+*/

/* #include "ora_oci.h" */
#ifdef ORA_TPCC
#define ORA_TPCC
#include "tpcc.h"
#endif

#include <stdlib.h>
#include <unistd.h>
#include <signal.h>
#include <stdio.h>
#include <sys/types.h>
#include <sys/ipc.h>
#include <sys/msg.h>
/* #include ".ora_err.h" */
/* Tuxedo */

```

```

#include "atmi.h"
#include "userlog.h"

OCIEnv *tpcenv;
OCIServer *tpcsrv;
OCLError *errhp;
OCISvcCtx *tpcsvc;
OCISession *tpcusr;
OCIStmt *curi;

char *uid = "tpcc";
char *pwd = "tpcc";

#define SQLTXT "alter session set isolation_level = serializable"

/*
 * Initialize the environment, err-handle, attach, open session,
 * alter session to serializable. Common for all 5 TX.
 */

int status, execstatus, errcode;

int TPCinit()
{

    int i;
    text stmbuf[16*1024];

    /* common to all 5 */
    OCIInitialize(OCI_DEFAULT|OCI_OBJECT,(dvoid *)0,0,0,0);
    OCIEnvInit(&tpcenv, OCI_DEFAULT, 0, (dvoid **)0);
    OCIHandleAlloc((dvoid *)tpcenv, (dvoid **)&tpcsrv, OCI_HTYPE_SERVER, 0, (dvoid **)0);
    OCIHandleAlloc((dvoid *)tpcenv, (dvoid **)&errhp, OCI_HTYPE_ERROR, 0, (dvoid **)0);
    OCIHandleAlloc((dvoid *)tpcenv, (dvoid **)&tpcsvc, OCI_HTYPE_SVCCTX, 0, (dvoid **)0);
    OCIServerAttach(tpcsrv, errhp, (text *)0,0,OCI_DEFAULT);
    OCIAttrSet((dvoid *)tpcsvc, OCI_HTYPE_SVCCTX, (dvoid *)tpcsrv, (ub4)0,OCI_ATTR_SERVER, errhp);
    OCIHandleAlloc((dvoid *)tpcenv, (dvoid **)&tpcusr, OCI_HTYPE_SESSION, 0, (dvoid **)0);
    OCIAttrSet((dvoid *)tpcusr, OCI_HTYPE_SESSION, (dvoid *)uid, (ub4)strlen(uid),OCI_ATTR_USERNAME,
errhp);
    OCIAttrSet((dvoid *)tpcusr, OCI_HTYPE_SESSION, (dvoid *)pwd, (ub4)strlen(pwd),
OCI_ATTR_PASSWORD, errhp);
    fprintf(stderr, "%d] Now call SessionBegin UID=%s PWD=%s\n", getpid(), uid, pwd);

    OCIERROR(errhp, OCISessionBegin(tpcsvc, errhp, tpcusr, OCI_CRED_RDBMS, OCI_DEFAULT));

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

    /* run all transaction in serializable mode */

    OCIHandleAlloc(tpcenv, (dvoid **)&curi, OCI_HTYPE_STMT, 0, (dvoid **)0);
    sprintf((char *) stmbuf, SQLTXT);
    OCIStmtPrepare(curi, errhp, stmbuf, strlen((char *)stmbuf), OCI_NTV_SYNTAX, OCI_DEFAULT);
    OCIERROR(errhp,OCIStmtExecute(tpcsvc, curi, errhp,1,0,0,0,OCI_DEFAULT));
    OCIHandleFree(curi, OCI_HTYPE_STMT);
    /* end common ---- */

    return(0);
}

```

tpcc_srv_util.c

```

/*
 * Copyright (c) 1995 by Sun Microsystems, Inc.
 */

#pragma ident "@(#)tpcso_srv_util.c      1.17      97/01/02   SMI"

/*=====+
|      Copyright (c) 1995 Oracle Corp, Redwood Shores, CA      |
|      OPEN SYSTEMS PERFORMANCE GROUP                          |
|      All Rights Reserved                                      |
+=====*/

/* Common utility functions used by all tpcso_srv* programs */

#include <stdio.h>
#include <stdlib.h>
#include <sys/types.h>
#include <sys/file.h>

#include "ora_oci.h"
#include "ora_err.h"

FILE *vopen(fnam,mode)
char *fnam;
char *mode;
{
    FILE *fd;

#ifdef DEBUG
    fprintf(stderr, "tkvopen() fnam: %s, mode: %s\n", fnam, mode);
#endif

    fd = fopen((char *)fnam,(char *)mode);
    if (!fd){
        fprintf(stderr, "fopen on %s failed %d\n",fnam,fd);
        exit(-1);
    }
    return(fd);
}

/*
int sqlfile(fnam,linebuf)
char *fnam;
text *linebuf;
*/
int sqlfile (char *fnam, text *linebuf)
{
    FILE *fd;
    int nulpt = 0;

#ifdef DEBUG
    fprintf(stderr, "sqlfile() fnam: %s, linebuf: %#x\n", fnam, linebuf);
#endif

    fd = vopen(fnam,"r");
    while (fgets((char *)linebuf+nulpt, SQL_BUF_SIZE,fd))
    {
        nulpt = strlen((char *)linebuf);
    }
    return(nulpt);
}

```

```
void vgetdate (unsigned char *oradt)
{
    struct tm *loctime;
    time_t int_time;

    struct ORADATE {
        unsigned char    century;
        unsigned char    year;
        unsigned char    month;
        unsigned char    day;
        unsigned char    hour;
        unsigned char    minute;
        unsigned char    second;
    } Date;
    int century;
    int cnvrtOK;

    /* assume convert is successful */
    cnvrtOK = 1;

    /* get the current date and time as an integer */
    time( &int_time);

    /* Convert the current date and time into local time */
    loctime = localtime( &int_time);

    century = (1900+loctime->tm_year) / 100;

    Date.century = (unsigned char)(century + 100);
    if (Date.century < 119 || Date.century > 120) cnvrtOK = 0;
    Date.year = (unsigned char)(loctime->tm_year+100);
    if (Date.year < 100 || Date.year > 199) cnvrtOK = 0;
    Date.month = (unsigned char)(loctime->tm_mon + 1);
    if (Date.month < 1 || Date.month > 12) cnvrtOK = 0;
    Date.day = (unsigned char)loctime->tm_mday;
    if (Date.day < 1 || Date.day > 31) cnvrtOK = 0;
    Date.hour = (unsigned char)(loctime->tm_hour + 1);
    if (Date.hour < 1 || Date.hour > 24) cnvrtOK = 0;
    Date.minute= (unsigned char)(loctime->tm_min + 1);
    if (Date.minute < 1 || Date.minute > 60) cnvrtOK = 0;
    Date.second= (unsigned char)(loctime->tm_sec + 1);
    if (Date.second < 1 || Date.second > 60) cnvrtOK = 0;

    if (cnvrtOK)
        memcpy(oradt,&Date,7);
    else
        *oradt = '\0';

    return;
}

void cvtdmy (unsigned char *oradt, char *outdate)
{
    struct ORADATE {
        unsigned char    century;
        unsigned char    year;
        unsigned char    month;
        unsigned char    day;
        unsigned char    hour;
        unsigned char    minute;
        unsigned char    second;
    } Date;

    int day,month,year;

    memcpy(&Date,oradt,7);

    year = (Date.century-100)*100 + Date.year-100;
    month = Date.month;
    day = Date.day;
    sprintf(outdate,"%02d-%02d-%04d",day,month,year);

    return;
}

void cvtdmyhms (unsigned char *oradt, char *outdate)
{
    struct ORADATE {
        unsigned char    century;
        unsigned char    year;
        unsigned char    month;
        unsigned char    day;
        unsigned char    hour;
        unsigned char    minute;
        unsigned char    second;
    } Date;

    int day,month,year;
    int hour,min,sec;

    memcpy(&Date,oradt,7);

    year = (Date.century-100)*100 + Date.year-100;
    month = Date.month;
    day = Date.day;
    hour = Date.hour - 1;
    min = Date.minute - 1;
    sec = Date.second - 1;

    sprintf(outdate,"%02d-%02d-%04d %02d:%02d:%02d",
        day,month,year,hour,min,sec);

    return;
}

ora_oci.h
#pragma ident "@(#)oci.h      1.1      95/09/14  SMI"

/*=====+
|      Copyright (c) 1994  Oracle Corp, Redwood Shores, CA      |
|      OPEN SYSTEMS PERFORMANCE GROUP                          |
|      All Rights Reserved      |
+=====+
| FILENAME
| tpcopl.h
| DESCRIPTION
```

```

|   Header file for TPC-C transactions in PL/SQL.
+=====*/

#ifndef TPCCPL_H
#define TPCCPL_H

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

#include <oratypes.h>
#include <oci.h>
/****
#if __STDC__
#include <ociapr.h>
#else
#include <ocikpr.h>
#endif
****/

typedef struct cda_def csrdef;
typedef struct cda_def ldadef;

#ifndef DISCARD
# define DISCARD (void)
#endif

#ifndef sword
# define sword int
#endif

#define VER7      2

#define NA      -1   /* ANSI SQL NULL */
#define NLT     1    /* length for string null terminator */
#define DEADLOCK 60   /* ORA-00060: deadlock */
#define NO_DATA_FOUND 1403 /* ORA-01403: no data found */
#define NOT_SERIALIZABLE 8177 /* ORA-08177: transaction not serializable */
#define SNAPSHOT_TOO_OLD 1555

#ifndef NULLP
# define NULLP (void *)NULL
#endif /* NULLP */

#define ADR(object) ((ub1 *)&(object))
#define SIZ(object) ((sword)sizeof(object))

typedef char date[24+NLT];
typedef char varchar2;

#define OCIERROR(errp,function)\
    ocierror(__FILE__,__LINE__,(errp),(function));

#define OCIBND(stmp, bndp, errp, sqlvar, progvl, progvl, ftype)\
    ocierror(__FILE__,__LINE__,(errp),\
        OCIHandleAlloc((stmp),(dvoid*)&(bndp),OCI_HTYPE_BIND,0,(dvoid**)0));\
    ocierror(__FILE__,__LINE__,(errp),\
        OCIBindByName((stmp), &(bndp), (errp), \
            (text *)(sqlvar), strlen((sqlvar)),\
            (progvl), (progvl), (ftype),0,0,0,0,OCI_DEFAULT));

#endif

```

```

#define OCIBNDRAD(stmp,bndp,errp,sqlvar,progvl,ftype,indp,ctxp,cbf_nodata,cbf_data)\
    ocierror(__FILE__,__LINE__,(errp),\
        OCIBindByName((stmp),&(bndp),(errp),(text *)(sqlvar),\
            strlen((sqlvar)),0,(progvl),(ftype),\
            indp,0,0,0,0,OCI_DATA_AT_EXEC));\
    ocierror("yufei",__LINE__,(errp),\
        OCIBindDynamic((bndp),(errp),(ctxp),(cbf_nodata),(ctxp),(cbf_data)));

#define OCIBNDRA(stmp,bndp,errp,sqlvar,progvl,ftype,indp,alen,arcode)\
    ocierror(__FILE__,__LINE__,(errp),\
        OCIHandleAlloc((stmp),(dvoid*)&(bndp),OCI_HTYPE_BIND,0,(dvoid**)0));\
    ocierror(__FILE__,__LINE__,(errp),\
        OCIBindByName((stmp),&(bndp),(errp),(text *)(sqlvar),strlen((sqlvar)),\
            (progvl),(progvl),(ftype),(indp),(alen),(arcode),0,0,OCI_DEFAULT));\
    /*
        ocierror(__FILE__,__LINE__,(errp),\
            OCIBindArrayOfStruct((bndp),(errp),(progvl),sizeof((indp)[0]),\
                sizeof((alen)[0]),sizeof((arcode)[0]))); */

#define OCIBNDR(stmp,bndp,errp,sqlvar,progvl,ftype,indp,alen,arcode)\
    ocierror(__FILE__,__LINE__,(errp),\
        OCIHandleAlloc((stmp),(dvoid*)&(bndp),OCI_HTYPE_BIND,0,(dvoid**)0));\
    ocierror(__FILE__,__LINE__,(errp),\
        OCIBindByName((stmp),&(bndp),(errp),(text *)(sqlvar),strlen((sqlvar)),\
            (progvl),(progvl),(ftype),(indp),(alen),(arcode),0,0,OCI_DEFAULT));

#define OCIBNDRAA(stmp,bndp,errp,sqlvar,progvl,ftype,indp,alen,arcode,ms,cu)\
    ocierror(__FILE__,__LINE__,(errp),\
        OCIHandleAlloc((stmp),(dvoid*)&(bndp),OCI_HTYPE_BIND,0,(dvoid**)0));\
    ocierror(__FILE__,__LINE__,(errp),\
        OCIBindByName((stmp),&(bndp),(errp),(text *)(sqlvar),strlen((sqlvar)),\
            (progvl),(progvl),(ftype),(indp),(alen),(arcode),(ms),(cu),OCI_DEFAULT));\
    /*
        ocierror(__FILE__,__LINE__,(errp),\
            OCIBindArrayOfStruct((bndp),(errp),(progvl),sizeof((indp)[0]),\
                sizeof((alen)[0]),sizeof((arcode)[0]))); */

#define OCIDEFINE(stmp,dfnp,errp,pos,progvl,ftype)\
    OCIDefineByPos((stmp),&(dfnp),(errp),(pos),(progvl),(progvl),(ftype),\
        0,0,0,OCI_DEFAULT)

#define OCIDEF(stmp,dfnp,errp,pos,progvl,ftype)\
    OCIHandleAlloc((stmp),(dvoid*)&(dfnp),OCI_HTYPE_DEFINE,0,\
        (dvoid**)0);\
    OCIDefineByPos((stmp),&(dfnp),(errp),(pos),(progvl),(progvl),\
        (ftype),NULL,NULL,NULL,OCI_DEFAULT);\

#define OCIDFNRA(stmp,dfnp,errp,pos,progvl,ftype,indp,alen,arcode)\
    OCIHandleAlloc(tpcenv,(dvoid*)&(dfnp),OCI_HTYPE_DEFINE,0,\
        (dvoid**)0);\
    OCIDefineByPos((stmp),&(dfnp),(errp),(pos),(progvl),\
        (progvl),(ftype),(indp),(alen),\
        (arcode),OCI_DEFAULT);\

#define OBNDRV(lda,cursor,sqlvar,progvl,ftype)\
    if (obndrv((cursor),(text*)(sqlvar),NA,(ub1*)(progvl),(progvl),(ftype),NA,\
        (sb2 *)0, (text *)0, NA, NA))\
    {errrpt(lda,cursor,sqlvar);return(-1);} \
    else\
        DISCARD 0

#define OBNDRA(lda,cursor,sqlvar,progvl,ftype,indp,alen,arcode)\

```

```

if (obndra((cursor),(text*)(sqlvar),NA,(ub1*)(progv),(progv1),(ftype),NA,\
(indp),(alen),(arcode),(ub4)0,(ub4*)0,(text*)0,NA,NA))\
{errrpt(lda,cursor,sqlvar);return(-1);}\
else\
DISCARD 0

#define OBNDRAA(lda,cursor,sqlvar,progv,progv1,ftype,indp,alen,arcode,ms,cs)\
if (obndra((cursor),(text*)(sqlvar),NA,(ub1*)(progv),(progv1),(ftype),NA,\
(indp),(alen),(arcode),(ub4)(ms),(ub4*)(cs),(text*)0,NA,NA))\
{errrpt(lda,cursor,sqlvar);return(-1);}\
else\
DISCARD 0

#define ODEFIN(lda,cursor,pos,buf,buf1,ftype,scale,indp,fmt,fmt1,fmtt,rlen,rcode)\
if (odefin((cursor),(pos),(ub1*)(buf),(buf1),(ftype),(scale),(indp),\
(text*)(fmt),(fmt1),(fmtt),(rlen),(rcode)))\
{errrpt(lda,cursor,(text *)ftype);return(-1);}\
else\
DISCARD 0

#define OEXFET(lda,cursor,nrows,cancel,exact)\
if (oexfet((cursor),(nrows),(cancel),(exact))\
{if ((cursor)->rc == 1403) DISCARD 0; \
else if (errrpt(lda,cursor,(text *)"OEXFET")==RECOVERR) \
{orol(lda);return(RECOVERR);} \
else{orol(lda);return(-1);}}\
else\
DISCARD 0

#define OOPEN(lda,cursor)\
if (oopen((cursor),(lda),(text*)0,NA,NA,(text*)0,NA))\
{errrpt(lda,cursor,(text *)"OOPEN");return(-1);}\
else\
DISCARD 0

#define OPARSE(lda,cursor,sqlstm,sql1,defflg,lngflg)\
if (oparse((cursor),(sqlstm),(sb4)(sql1),(defflg),(ub4)(lngflg)))\
{errrpt(lda,cursor,sqlstm);return(-1);}\
else\
DISCARD 0

#define OFEN(lda,cursor,nrows)\
if (ofen((cursor),(nrows)))\
{if (errrpt(lda,cursor,(text *)"OFEN")==RECOVERR) \
{orol(lda);return(RECOVERR);} \
else{orol(lda);return(-1);}}\
else\
DISCARD 0

#define OEXEC(lda,cursor)\
if (oexec((cursor)))\
{if (errrpt(lda,cursor,(text *)"OEXEC")==RECOVERR) \
{orol(lda);return(RECOVERR);} \
else{orol(lda);return(-1);}}\
else\
DISCARD 0

#define OCOM(lda,cursor)\
if (ocom((lda))) \
{errrpt(lda,cursor,(text *)"OCOM");orol(lda);return(-1);}\
else\

```

DISCARD 0

```

#define OEXN(lda,cursor,itors,rowoff)\
if (oexn((cursor),(itors),(rowoff)) \
{if (errrpt(lda,cursor,(text *)"OEXN")==RECOVERR) \
{orol(lda);return(RECOVERR);} \
else{orol(lda);return(-1);}}\
else\
DISCARD 0

```

#endif

```

/* additions done for 814 -shishir */
#define OCI_ATTR_SRVRCTXT          OCI_ATTR_SERVER
#define OCI_ATTR_USERCTXT          OCI_ATTR_SESSION
#define OCI_ATTR_ROWCNT OCI_ATTR_ROW_COUNT
#define OCI_HTYPE_ERR              OCI_HTYPE_ERROR
#define OCI_HTYPE_STM              OCI_HTYPE_STMT

```

tpcc.h

```

/*
 * $Header: tpcc.h 7030100.1 95/07/19 15:10:55 plai Generic<base> $ Copyr (c) 1993 Oracle
 */
/*=====+
|      Copyright (c) 1995  Oracle Corp, Redwood Shores, CA      |
|      OPEN SYSTEMS PERFORMANCE GROUP                          |
|      All Rights Reserved                                     |
+=====+
| FILENAME
| tpcc.h
| DESCRIPTION
| Include file for TPC-C benchmark programs.
+=====*/

```

```

#ifndef TPCC_H
#define TPCC_H

```

```

#ifndef FALSE
# define FALSE 0
#endif

```

```

#ifndef TRUE
# define TRUE 1
#endif

```

```

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

```

```

#ifndef boolean
#define boolean int
#endif

```

```

#include <oratypes.h>
#include <oci.h>
#include <ocidfn.h>
/*
#ifdef __STDC__
#include "ociapr.h"

```



```

#else
#include "ocikpr.h"
#endif
*/

typedef struct cda_def csrdef;
typedef struct cda_def ldadef;

/* TPC-C transaction functions */
#ifdef TUXEDO
extern int TPCinit ();
extern int TPCnew ();
extern int TPCpay ();
extern int TPCord ();
extern int TPCdel ();
extern int TPCsto ();
extern void TPCexit ();
extern int TPCdumpinit ();
extern void TPCdumpnew ();
extern void TPCdumppay ();
extern void TPCdumpord ();
extern void TPCdumpdel ();
extern void TPCdumpsto ();
extern void TPCdumpexit ();
/* extern void userlog(char* fntp, ...); */
#endif

/* Error codes */

#define RECOVERR -10
#define IRRECERR -20
#define NOERR 111
#define DEL_ERROR -666
#define DEL_DATE_LEN 77
#define NDISTS 10
#define NITEMS 15
#define SQL_BUF_SIZE 8192

#define FULLDATE "dd-mon-yy.hh24:mi:ss"
#define SHORTDATE "dd-mm-yyyy"

#define DELRT 80.0

#ifdef TUX
extern int tkvcninit ();
extern int tkvcpinit ();
extern int tkvcoint ();
extern int tkvcdinit ();
extern int tkvcsinit ();

extern int tkvcn ();
extern int tkvcp ();
extern int tkvco ();
extern int tkvcd ();
extern int tkvcs ();

```

```

extern void tkvcndone ();
extern void tkvcpdone ();
extern void tkvcodone ();
extern void tkvcddone ();
extern void tkvcsdone ();

extern int tkvcss (); /* for alter session to get memory size and trace */
extern boolean multitransx;
extern int ord_init;
#endif

extern void errrpt ();
extern int ocierror(char *fname, int lineno, OCIError *errhp, sword status);
extern int sqlfile(char *fname, text *linebuf);

extern FILE *Ifp;
extern FILE *fopen ();
extern int proc_no;
extern int doid[];

extern int execstatus;
extern int errcode;

#ifdef TUX
extern OCIEnv *tpcenv;
extern OCIServer *tpcsrv;
extern OCIError *errhp;
extern OCISvcCtx *tpcsvc;
extern OCISession *tpcusr;
extern OCISmt *curntest;
#endif
/* The bind and define handles for each transaction are
   included in their respective header files. */

extern OCIEnv *tpcenv;
extern OCIServer *tpcsrv;
extern OCIError *errhp;
extern OCISvcCtx *tpcsvc;
extern OCISession *tpcusr;
extern OCISmt *curi;

extern char *uid;
extern char *pwd;

/* for stock-level transaction */

extern int w_id;
extern int d_id;
extern int c_id;
extern int threshold;
extern int low_stock;

/* for delivery transaction */

extern int del_o_id[10];
extern int carrier_id;
extern double qtime;
extern int retries;
extern int retries_serial;
extern int retries_recoverr;
extern int retries_snapshot;

```

```
/* for order-status transaction */
```

```
extern int bylastname;
extern char c_last[17];
extern char c_first[17];
extern char c_middle[3];
extern double c_balance;
extern int o_id;
extern text o_entry_d[20];
extern int o_carrier_id;
extern int o_ol_cnt;
extern int ol_supply_w_id[15];
extern int ol_i_id[15];
extern int ol_quantity[15];
extern int ol_amount[15];
ub4 ol_del_len[15];
extern text ol_delivery_d[15][11];
/* xnie - begin */
extern OCIRowid *o_rowid;
/* xnie - end */
```

```
/* for payment transaction */
```

```
extern int c_w_id;
extern int c_d_id;
extern int h_amount;
extern char w_street_1[21];
extern char w_street_2[21];
extern char w_city[21];
extern char w_state[3];
extern char w_zip[10];
extern char d_street_1[21];
extern char d_street_2[21];
extern char d_city[21];
extern char d_state[3];
extern char d_zip[10];
extern char c_street_1[21];
extern char c_street_2[21];
extern char c_city[21];
extern char c_state[3];
extern char c_zip[10];
extern char c_phone[17];
extern text c_since_d[11];
extern char c_credit[3];
extern int c_credit_lim;
extern float c_discount;
extern char c_data[201];
extern text h_date[20];
```

```
/* for new order transaction */
```

```
#ifndef TUX
extern int nol_i_id[15];
extern int nol_supply_w_id[15];
extern int nol_quantity[15];
extern int nol_quant10[15];
extern int nol_quant19[15];
extern int nol_ytdqty[15];
extern int nol_amount[15];
extern int o_all_local;
extern float w_tax;
```

```
extern float d_tax;
extern float total_amount;
extern char i_name[15][25];
extern int i_name_strlen[15];
extern ub2 i_name_strlen_len[15];
extern ub2 i_name_strlen_rcode[15];
extern ub4 i_name_strlen_csize;
extern int s_quantity[15];
#if 0
extern char brand_gen[15];
#endif
extern ub2 brand_gen_len[15];
extern ub2 brand_gen_rcode[15];
extern ub4 brand_gen_csize;
extern int i_price[15];
extern char brand_generic[15][1];
extern int status;
extern int tracelevel;
```

```
/* Miscellaneous */
```

```
extern OCIDate cr_date;
extern OCIDate c_since;
extern OCIDate o_entry_d_base;
extern OCIDate ol_d_base[15];
```

```
#endif
```

```
#ifndef DISCARD
# define DISCARD (void)
#endif
```

```
#ifndef sword
# define sword int
#endif
```

```
#define VER7      2
```

```
#define NA      -1    /* ANSI SQL NULL */
#define NLT      1    /* length for string null terminator */
#define DEADLOCK    60 /* ORA-00060: deadlock */
#define NO_DATA_FOUND 1403 /* ORA-01403: no data found */
#define NOT_SERIALIZABLE 8177 /* ORA-08177: transaction not serializable */
#define SNAPSHOT_TOO_OLD 1555 /* ORA-01555: snapshot too old */
```

```
#ifndef NULLP
# define NULLP(x) (x *)NULL
#endif /* NULLP */
```

```
#define ADR(object) ((ub1 *)&(object))
#define SIZ(object) ((sword)sizeof(object))
```

```
typedef char date[24+NLT];
typedef char varchar2;
```

```
#define min(x,y) (((x) < (y)) ? (x) : (y))
```

```
#define OCIERROR(errp,function)\
    ocierror(__FILE__,__LINE__,(errp),(function));
```

```
#define OCIBND(stmp, bndp, errp, sqlvar, progvl, progv1, ftype)\
    ocierror(__FILE__,__LINE__,(errp),\
        OCIHandleAlloc((stmp),(dvoid***)&(bndp),OCI_HTYPE_BIND,0,(dvoid**)0)); \
```

```

ocierror(__FILE__, __LINE__, (errp), \
    OCIBindByName((stmp), &(bndp), (errp), \
        (text *)(sqlvar), strlen((sqlvar)), \
        (progv), (progv1), (ftype), 0, 0, 0, 0, OCI_DEFAULT));

/* bind arrays for sql */
#define OCIBNDRA(stmp, bndp, errp, sqlvar, progv, progv1, ftype, indp, alen, arcde) \
    DISCARD ocierror(__FILE__, __LINE__, (errp), \
        OCIHandleAlloc((stmp), (dvoid **)&(bndp), OCI_HTYPE_BIND, 0, (dvoid **)0)); \
    DISCARD ocierror(__FILE__, __LINE__, (errp), \
        OCIBindByName((stmp), &(bndp), (errp), (text *)(sqlvar), strlen((sqlvar)), \
            (progv), (progv1), (ftype), (indp), (alen), (arcde), 0, 0, OCI_DEFAULT));

/* use with callback data */
#define OCIBNDRAD(stmp, bndp, errp, sqlvar, progv1, ftype, indp, ctxp, \
    cbf_nodata, cbf_data) \
    DISCARD ocierror(__FILE__, __LINE__, (errp), \
        OCIHandleAlloc((stmp), (dvoid **)&(bndp), OCI_HTYPE_BIND, 0, (dvoid **)0)); \
    DISCARD ocierror(__FILE__, __LINE__, (errp), \
        OCIBindByName((stmp), &(bndp), (errp), (text *)(sqlvar), \
            strlen((sqlvar)), 0, (progv1), (ftype), \
            indp, 0, 0, 0, 0, OCI_DATA_AT_EXEC)); \
    DISCARD ocierror(__FILE__, __LINE__, (errp), \
        OCIBindDynamic((bndp), (errp), (ctxp), (cbf_nodata), (ctxp), (cbf_data)));

/* bind in/out for plsql without indicator and rcode */
#define OCIBNDPL(stmp, bndp, errp, sqlvar, progv, progv1, ftype, alen) \
    DISCARD ocierror(__FILE__, __LINE__, (errp), \
        OCIHandleAlloc((stmp), (dvoid **)&(bndp), OCI_HTYPE_BIND, 0, (dvoid **)0)); \
    DISCARD ocierror(__FILE__, __LINE__, (errp), \
        OCIBindByName((stmp), &(bndp), (errp), (CONST text *)(sqlvar), \
            (sb4)strlen((CONST char *)(sqlvar)), (dvoid*)(progv), (progv1), (ftype), \
            NULLP(dvoid), (alen), NULLP(ub2), 0, NULLP(ub4), OCI_DEFAULT));

/* bind in values for plsql with indicator and rcode */
#define OCIBNDR(stmp, bndp, errp, sqlvar, progv, progv1, ftype, indp, alen, arcde) \
    DISCARD ocierror(__FILE__, __LINE__, (errp), \
        OCIHandleAlloc((stmp), (dvoid **)&(bndp), OCI_HTYPE_BIND, 0, (dvoid **)0)); \
    DISCARD ocierror(__FILE__, __LINE__, (errp), \
        OCIBindByName((stmp), &(bndp), (errp), (text *)(sqlvar), strlen((sqlvar)), \
            (progv), (progv1), (ftype), (indp), (alen), (arcde), 0, 0, \
            OCI_DEFAULT));

/* bind in/out for plsql arrays witout indicator and rcode */
#define OCIBNDPLA(stmp, bndp, errp, sqlvar, progv, progv1, ftype, alen, ms, cu) \
    DISCARD ocierror(__FILE__, __LINE__, (errp), \
        OCIHandleAlloc((stmp), (dvoid **)&(bndp), OCI_HTYPE_BIND, 0, (dvoid **)0)); \
    DISCARD ocierror(__FILE__, __LINE__, (errp), \
        OCIBindByName((stmp), &(bndp), (errp), (CONST text *)(sqlvar), \
            (sb4)strlen((CONST char *) (sqlvar)), (void*)(progv), \
            (progv1), (ftype), NULL, (alen), NULL, (ms), (cu), OCI_DEFAULT));

/* bind in/out values for plsql with indicator and rcode */
#define OCIBNDRAA(stmp, bndp, errp, sqlvar, progv, progv1, ftype, indp, alen, arcde, \
    ms, cu) \
    ocierror(__FILE__, __LINE__, (errp), \
        OCIHandleAlloc((stmp), (dvoid **)&(bndp), OCI_HTYPE_BIND, 0, (dvoid **)0)); \

```

```

ocierror(__FILE__, __LINE__, (errp), \
    OCIBindByName((stmp), &(bndp), (errp), (text *)(sqlvar), strlen((sqlvar)), \
        (progv), (progv1), (ftype), (indp), (alen), (arcde), (ms), (cu), OCI_DEFAULT));

#define OCIDEFINE(stmp, dfnp, errp, pos, progv, progv1, ftype) \
    OCIDefineByPos((stmp), &(dfnp), (errp), (pos), (progv), (progv1), (ftype), \
        0, 0, 0, OCI_DEFAULT);

#define OCIDEF(stmp, dfnp, errp, pos, progv, progv1, ftype) \
    OCIHandleAlloc((stmp), (dvoid **)&(dfnp), OCI_HTYPE_DEFINE, 0, \
        (dvoid **)0); \
    OCIDefineByPos((stmp), &(dfnp), (errp), (pos), (progv), (progv1), \
        (ftype), NULL, NULL, NULL, OCI_DEFAULT); \

#define OCIDFNRA(stmp, dfnp, errp, pos, progv, progv1, ftype, indp, alen, arcde) \
    OCIHandleAlloc((stmp), (dvoid **)&(dfnp), OCI_HTYPE_DEFINE, 0, \
        (dvoid **)0); \
    OCIDefineByPos((stmp), &(dfnp), (errp), (pos), (progv), \
        (progv1), (ftype), (indp), (alen), \
        (arcde), OCI_DEFAULT);

#define OCIDFNDYN(stmp, dfnp, errp, pos, progv, progv1, ftype, indp, ctxp, cbf_data) \
    ocierror(__FILE__, __LINE__, (errp), \
        OCIHandleAlloc((stmp), (dvoid **)&(dfnp), OCI_HTYPE_DEFINE, 0, \
            (dvoid **)0)); \
    ocierror(__FILE__, __LINE__, (errp), \
        OCIDefineByPos((stmp), &(dfnp), (errp), (pos), (progv), (progv1), (ftype), \
            (indp), NULL, NULL, OCI_DYNAMIC_FETCH)); \
    ocierror(__FILE__, __LINE__, (errp), \
        OCIDefineDynamic((dfnp), (errp), (ctxp), (cbf_data)));

```

/* New order */

```

struct newinstruct {
    int w_id;
    int d_id;
    int c_id;
    int ol_i_id[15];
    int ol_supply_w_id[15];
    int ol_quantity[15];
};

```

```

struct newoutstruct {
    int terror;
    int o_id;
    int o_ol_cnt;
    char c_last[17];
    char c_credit[3];
    float c_discount;
    float w_tax;
    float d_tax;
    char o_entry_d[20];
    float total_amount;
    char i_name[15][25];
    int s_quantity[15];
    char brand_generic[15];
    float i_price[15];
};

```

```

float ol_amount[15];
char status[26];
int retry;
};

struct newstruct {
    struct newinstruct newin;
    struct newoutstruct newout;
};

```

```

/* Payment */

```

```

struct payinstruct {
    int w_id;
    int d_id;
    int c_w_id;
    int c_d_id;
    int c_id;
    int bylastname;
    int h_amount;
    char c_last[17];
};

```

```

struct payoutstruct {
    int terror;
    char w_street_1[21];
    char w_street_2[21];
    char w_city[21];
    char w_state[3];
    char w_zip[10];
    char d_street_1[21];
    char d_street_2[21];
    char d_city[21];
    char d_state[3];
    char d_zip[10];
    int c_id;
    char c_first[17];
    char c_middle[3];
    char c_last[17];
    char c_street_1[21];
    char c_street_2[21];
    char c_city[21];
    char c_state[3];
    char c_zip[10];
    char c_phone[17];
    char c_since[11];
    char c_credit[3];
    double c_credit_lim;
    float c_discount;
    double c_balance;
    char c_data[201];
    char h_date[20];
    int retry;
};

```

```

struct paystruct {
    struct payinstruct payin;
    struct payoutstruct payout;
};

```

```

/* Order status */

```

```

struct ordinstruct {
    int w_id;
    int d_id;
    int c_id;
    int bylastname;
    char c_last[17];
};

```

```

struct ordoutstruct {
    int terror;
    int c_id;
    char c_last[17];
    char c_first[17];
    char c_middle[3];
    double c_balance;
    int o_id;
    char o_entry_d[20];
    int o_carrier_id;
    int o_ol_cnt;
    int ol_supply_w_id[15];
    int ol_i_id[15];
    int ol_quantity[15];
    float ol_amount[15];
    char ol_delivery_d[15][11];
    int retry;
};

```

```

struct ordstruct {
    struct ordinstruct ordin;
    struct ordoutstruct ordout;
};

```

```

/* Delivery */

```

```

struct delinstruct {
    int w_id;
    int o_carrier_id;
    double qtime;
    int in_timing_int;
    int plsqliflag;
};

```

```

struct deloutstruct {
    int terror;
    int retry;
};

```

```

struct delstruct {
    struct delinstruct delin;
    struct deloutstruct delout;
};

```

```

/* Stock level */

```

```

struct stoinstruct {
    int w_id;
    int d_id;
    int threshold;
};

```

```
};

struct stooutstruct {
    int terror;
    int low_stock;
    int retry;
};

struct stostruct {
    struct stoinstruct stoin;
    struct stooutstruct stoout;
};

/* Structure of a message request passed on the msgh-queue */
struct msggh_req {
    long type;          /* Type of message */
    struct {
        int len;        /* Length of message */
        int client_id;   /* Id of client sending this msg */
        int result_qid;  /* Result of xact goes on this queue */
        union {
            struct newstruct msggh_newo;
            struct paystruct msggh_paym;
            struct ordstruct msggh_ords;
            struct delstruct msggh_del;
            struct stostruct msggh_stock;
        } msggh_un;
    } msggh_msg;
};

extern struct msggh_req message;
#define header      message.msggh_msg
#define neworder    message.msggh_msg.msggh_un.msggh_newo
#define payment     message.msggh_msg.msggh_un.msggh_paym
#define ordstat     message.msggh_msg.msggh_un.msggh_ords
#define delivery    message.msggh_msg.msggh_un.msggh_del
#define stocklevel  message.msggh_msg.msggh_un.msggh_stock

extern char blank_mesg[];

/* Message keys for servers */
#define NEWO_MSGKEY      10000
#define PAYM_MSGKEY     20000
#define ORDS_MSGKEY     30000
#define STOCK_MSGKEY    40000
#define DEL_MSGKEY      50000

#define MAX_USERS      200      /* Max. number of drivers */

#endif

tpccflags.h
#define PLSQLNO
#define DMLRETDEL
```

UNI-SVR

```
ora_errrpt.c
/*
```

```
* Copyright (c) 1995 by Sun Microsystems, Inc.
*/

#pragma ident "@(#)ora_errrpt.c 1.1      95/09/14  SMI"

/*
 * these functions actually belong in ~dbbench/generic/c/msggh_log.c.  We put them
 * here because they have database specific statements.
 */

#include "ora_err.h"
#include "ora_oci.h"

errrpt(lda, cur, sqlvar)
ldadef *lda;
csrdef *cur;
text      *sqlvar;
{
    text msg[2048];
    /*      if (cur->rc) { */
        oerhms(lda, (sb2) cur->rc, msg, 2048);
        userlog("%s sql_variable %s\n", msg, sqlvar);

    if (cur->rc == DEADLOCK || (cur->rc == SNAPSHOT_TOO_OLD))
        return(RECOVERERR);
    else
        return(IRRECERR);

/*      } */
}

/* vmm313 void ocierror(fname, lineno, errhp, status) */
int ocierror(fname, lineno, errhp, status)
char *fname;
int lineno;
OCLError *errhp;
sword status;
{
    text errbuf[512];
    ub4 buflen;
    sb4 errcode;
    sb4 lstat ;
    ub4 recno=2 ;

    switch (status) {
    case OCI_SUCCESS:
        break;
    case OCI_SUCCESS_WITH_INFO:
        (void) userlog("Module %s Line %d\n", fname, lineno);
        (void) userlog("Error - OCI_SUCCESS_WITH_INFO\n");
        break;
    case OCI_NEED_DATA:
        (void) userlog("Module %s Line %d\n", fname, lineno);
        (void) userlog("Error - OCI_NEED_DATA\n");
        return (IRRECERR);
    case OCI_NO_DATA:
        /*
         (void) userlog("Module %s Line %d\n", fname, lineno);
         (void) userlog("Error - OCI_NO_DATA\n");
        */
        return IRRECERR;      /* for 8.1.4 */
    break;
}
```

```

case OCI_ERROR:
    lstat = OCIErrGet (errhp, (ub4) 1,
        (text *) NULL, &errcode, errbuf,
        (ub4) sizeof(errbuf), OCI_HTYPE_ERR);
    if (errcode == NOT_SERIALIZABLE) return (errcode);
while (lstat != OCI_NO_DATA)
{
    (void) userlog("Module %s Line %d\n", fname, lineno);
    (void) userlog("Error - %s\n", errbuf);
    lstat = OCIErrGet (errhp, recno++, (text *) NULL, &errcode, errbuf,
        (ub4) sizeof(errbuf), OCI_HTYPE_ERROR);
}
return (errcode);
break;
case OCI_INVALID_HANDLE:
    (void) userlog("Module %s Line %d\n", fname, lineno);
    (void) userlog("Error - OCI_INVALID_HANDLE\n");
break;
case OCI_STILL_EXECUTING:
    (void) userlog("Module %s Line %d\n", fname, lineno);
    (void) userlog("Error - OCI_STILL_EXECUTE\n");
return (IRRECERR);
case OCI_CONTINUE:
    (void) userlog("Module %s Line %d\n", fname, lineno);
    (void) userlog("Error - OCI_CONTINUE\n");
return (IRRECERR);
default:
    (void) userlog("Module %s Line %d\n", fname, lineno);
    (void) userlog("Error - \n");
return (IRRECERR);
}
return RECOVER;
}

```

tpcc_srv_init.c

```

/*
 * Copyright (c) 1994 by Sun Microsystems, Inc.
 */

#pragma ident "@(#)tpcso_srv_stock.c      1.6      95/04/12   SMI"

```

```

/*=====+
|      Copyright (c) 1994 Oracle Corp, Redwood Shores, CA      |
|      OPEN SYSTEMS PERFORMANCE GROUP                          |
|      All Rights Reserved                                      |
|=====+
| FILENAME
|   renamed to tpcc_srv_init.c
| DESCRIPTION
|   OCI for opening connect/session in TPC-C benchmark.
|=====+*/

```

```

/* #include "ora_oci.h" */
#ifdef ORA_TPCC
# define ORA_TPCC
# include "tpcc.h"
#endif

```

```

#include <stdlib.h>
#include <unistd.h>
#include <signal.h>

```

```

#include <stdio.h>
#include <sys/types.h>
#include <sys/ipc.h>
#include <sys/msg.h>
/* #include ".ora_err.h" *
/* Tuxedo */
#include "atmi.h"
#include "userlog.h"

```

```

OCIEnv *tpcenv;
OCIServer *tpcsrv;
OCIErr *errhp;
OCISvcCtx *tpcsvc;
OCISession *tpcusr;
OCISmt *curi;

```

```

char *uid = "tpcc";
char *pwd = "tpcc";

```

```

#define SQLTXT "alter session set isolation_level = serializable"

```

```

/*
 * Initialize the environment, err-handle, attach, open session,
 * alter session to serializable. Common for all 5 TX.
 */

```

```

int status, execstatus, errcode;

```

```

/* external routines */
int init_stock_tx();
int init_ords_tx();
int init_paym_tx();
int init_newo_tx();

```

```

int stocklevel_tx( TPSVCINFO *rqst );
int ordstat_tx(TPSVCINFO *rqst);
int payment_tx(TPSVCINFO *rqst);
int neworder_tx(TPSVCINFO *rqst);

```

```

int TPCinit()
{

```

```

    int i;
    text stmbuf[16*1024];

```

```

/* common to all 5 */
OCIInitialize(OCI_DEFAULT|OCI_OBJECT,(dvoid *)0,0,0,0);
OCIEnvInit(&tpcenv, OCI_DEFAULT, 0, (dvoid **)0);
OCIHandleAlloc((dvoid *)tpcenv, (dvoid **)&tpcsrv, OCI_HTYPE_SERVER, 0, (dvoid **)0);
OCIHandleAlloc((dvoid *)tpcenv, (dvoid **)&errhp, OCI_HTYPE_ERROR, 0, (dvoid **)0);
OCIHandleAlloc((dvoid *)tpcenv, (dvoid **)&tpcsvc, OCI_HTYPE_SVCCTX, 0, (dvoid **)0);
OCIServerAttach(tpcsrv, errhp, (text *)0,0,OCI_DEFAULT);
OCIAttrSet((dvoid *)tpcsvc, OCI_HTYPE_SVCCTX, (dvoid *)tpcsrv, (ub4)0,OCI_ATTR_SERVER, errhp);
OCIHandleAlloc((dvoid *)tpcenv, (dvoid **)&tpcusr, OCI_HTYPE_SESSION, 0, (dvoid **)0);
OCIAttrSet((dvoid *)tpcusr, OCI_HTYPE_SESSION, (dvoid *)uid, (ub4)strlen(uid),OCI_ATTR_USERNAME,
errhp);
OCIAttrSet((dvoid *)tpcusr, OCI_HTYPE_SESSION, (dvoid *)pwd, (ub4)strlen(pwd),
OCI_ATTR_PASSWORD, errhp);

```

```

fprintf(stderr, "%d] Now call SessionBegin UID=%s PWD=%s\n", getpid(), uid, pwd);

```

```

OCIERROR(errhp, OCISessionBegin(tpcsvc, errhp, tpcusr, OCI_CRED_RDBMS, OCI_DEFAULT));

```

```

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

/* run all transaction in serializable mode */

OCIHandleAlloc(tpcenv, (dvoid **)&curi, OCI_HTYPE_STMT, 0, (dvoid**)0);
sprintf((char *) stmbuf, SQLTXT);
OCIStmtPrepare(curi, errhp, stmbuf, strlen((char *)stmbuf), OCI_NTV_SYNTAX, OCI_DEFAULT);
OCIERROR(errhp,OCIStmtExecute(tpcsvc, curi, errhp,1,0,0,0,OCI_DEFAULT));
OCIHandleFree(curi, OCI_HTYPE_STMT);
/* end common ---- */

return(0);
}

/* Start of Tuxedo code */
int tpsvrinit(int argc, char **argv)
{
int retcode;

/* For all servers - common routine to open/init session etc. */
TPCinit();
/* Successful return is 0 */
if (retcode=init_newo_tx())
return (retcode);
if (retcode=init_paym_tx())
return (retcode);
if (retcode=init_ords_tx())
return (retcode);
if (retcode=init_stock_tx())
return (retcode);

return(0);
}

tpcc_srv_newo.c
/*
 * Copyright (c) 1995 by Sun Microsystems, Inc.
 */

#pragma ident "@(#)tpcso_srv_newo.c 1.14 97/01/02 SMI"

/*=====+
| Copyright (c) 1996 Oracle Corp, Redwood Shores, CA |
| OPEN SYSTEMS PERFORMANCE GROUP |
| All Rights Reserved |
+=====+
| FILENAME
| plnew.c
| DESCRIPTION
| OCI version (using PL/SQL stored procedure) of
| NEW ORDER transaction in TPC-C benchmark.
| *** As perf Mar 4, 2009 pre-audit: changes for interactive compliance
+=====+*/

#ifdef ORA_TPCC
# define ORA_TPCC
# include "tpcc.h"
#endif

```

```

#include <signal.h>
#include <stdio.h>
#include <stdlib.h>
#include <unistd.h>
#include <sys/types.h>
#include <sys/ipc.h>
#include <sys/msg.h>

/* TAKE THESE OUT IF NOT DEBUGGING */
#include "ora_oci.h"
#include "../ora_err.h"

/* Tuxedo includes */
#include "atmi.h"
#include "userlog.h"

static int tx_count = 0;

void vgetdate (unsigned char *oradt);
int sqlfile (char *fnam, text *linebuf);
void cvtdmyhms (unsigned char *oradt, char *outdate);

#define MOVETO(element, struct_name) element = struct_name->element
#define MOVEBACK(element, struct_name) struct_name->element = element
#define MOVECBACK(element, cnt, struct_name) strncpy(struct_name->element, element, cnt)

/* Lists of items on an order */
/* These structures should match the struct definitions for no_struct
 * defined in tpcc_client.h exactly.
 * Any change to those, should be reflected here
 */

struct items_inf {
int ol_supply_w_id;
int ol_i_id;
char i_name[25];
int ol_quantity;
int s_quantity;
char brand[2];
double i_price;
double ol_amount;
};

/* List of fields in neworder */

struct newo_inf {
int w_id;
int d_id;
int c_id;
int o_id;
int o_ol_cnt;
double c_discount;
double w_tax;
double d_tax;
char o_entry_d[20];
char c_credit[3];
char c_last[17];
struct items_inf n_items[15];
char status_mesg[25];
double total;

```

```

} ;

int indx[15];
void swap(struct newo_inf *str, int i, int j);
void q_sort(int *arr, struct newo_inf *str, int left, int right);

/*struct msgh_req message; */
char blank_mesg[25] = "          ";

int my_qid, my_id;
char my_name[] = "Newo";

/*****
 * BEGIN BLOCK OF COMMON CODE
 *****/

/* struct newo_inf */
/* for new order transaction */
static int w_id;
static int d_id;
static int c_id;
static int o_id;
static int o_ol_cnt;
static float c_discount;
static text o_entry_d[20];
/*      char o_entry_d[20]; */
static char c_credit[3];
static char c_last[17];
static char status_mesg[25];

static double total;

static int nol_i_id[15];
static int nol_supply_w_id[15];
static int nol_quantity[15];
static int nol_quanti10[15];
static int nol_quanti91[15];
static int nol_ytdqty[15];
static int nol_amount[15];
static int o_all_local;
static float w_tax;
static float d_tax;
static float total_amount;
static char i_name[15][25];
static int s_quantity[15];
/* char brand_gen[15]; */
static int i_price[15];
static char brand_gen[15];
static char brand_generic[15][1];
static int tracelevel = 0;

static OCIDate cr_date;
static OCIDate c_since;
static OCIDate o_entry_d_base;
static OCIDate ol_d_base[15];
static dvoid *xmem;
static int retries;

#define SQLTXT2 "BEGIN inittpcc.init_no(:idx1arr); END;"

```

```

#define NITEMS 15
#define ROWIDLEN 20
#define OCIROWLEN 20

struct newctx {

    ub2 nol_i_id_len[NITEMS];
    ub2 nol_supply_w_id_len[NITEMS];
    ub2 nol_quantity_len[NITEMS];
    ub2 nol_amount_len[NITEMS];
    ub2 s_quantity_len[NITEMS];
    ub2 i_name_len[NITEMS];
    ub2 i_price_len[NITEMS];
    ub2 s_dist_info_len[NITEMS];
    ub2 ol_o_id_len[NITEMS];
    ub2 ol_number_len[NITEMS];
    ub2 s_remote_len[NITEMS];
    ub2 s_quant_len[NITEMS];
    ub2 ol_dist_info_len[NITEMS];
    ub2 s_bg_len[NITEMS];

    int ol_o_id[NITEMS];
    int ol_number[NITEMS];

    int s_remote[NITEMS];
    char s_dist_info[NITEMS][25];
    OCIStmt *curn1;
    OCIBind *ol_i_id_bp;
    OCIBind *ol_supply_w_id_bp;
    OCIBind *i_price_bp;
    OCIBind *i_name_bp;
    OCIBind *s_bg_bp;
    ub4 nol_i_count;
    ub4 nol_s_count;
    ub4 nol_q_count;
    ub4 nol_item_count;
    ub4 nol_name_count;
    ub4 nol_qty_count;
    ub4 nol_bg_count;
    ub4 nol_am_count;
    ub4 s_remote_count;
    OCIStmt *curn2;
    OCIBind *ol_quantity_bp;
    OCIBind *s_remote_bp;
    OCIBind *s_quantity_bp;
    OCIBind *w_id_bp;
    OCIBind *d_id_bp;
    OCIBind *c_id_bp;
    OCIBind *o_all_local_bp;
    OCIBind *o_all_cnt_bp;
    OCIBind *w_tax_bp;
    OCIBind *d_tax_bp;
    OCIBind *o_id_bp;
    OCIBind *c_discount_bp;
    OCIBind *c_credit_bp;
    OCIBind *c_last_bp;
    OCIBind *retries_bp;
    OCIBind *cr_date_bp;
    OCIBind *ol_o_id_bp;
    OCIBind *ol_amount_bp;

    sb2 w_id_len;

```



```

ub2 d_id_len;
ub2 c_id_len;
ub2 o_all_local_len;
ub2 o_ol_cnt_len;
ub2 w_tax_len;
ub2 d_tax_len;
ub2 o_id_len;
ub2 c_discount_len;
ub2 c_credit_len;
ub2 c_last_len;
ub2 retries_len;
ub2 cr_date_len;
};

```

```

typedef struct newctx newctx;

```

```

static newctx *nctx;

```

```

/*
 * Initialize the neworder transaction
 */

```

```

int
init_newo_tx()
{

```

```

    int execstatus, errcode;
    char filename[200];
    int proc_no;
    int i;
    text stmbuf[16*1024];
    nctx = (newctx *) malloc (sizeof(newctx));
    DISCARD memset(nctx,(char)0,sizeof(newctx));
    nctx->w_id_len = sizeof(w_id);
    nctx->d_id_len = sizeof(d_id);
    nctx->c_id_len = sizeof(c_id);
    nctx->o_all_local_len = sizeof(o_all_local);
    nctx->o_ol_cnt_len = sizeof(o_ol_cnt);
    nctx->w_tax_len = 0;
    nctx->d_tax_len = 0;
    nctx->o_id_len = sizeof(o_id);
    nctx->c_discount_len = 0;
    nctx->c_credit_len = 0;
    nctx->c_last_len = 0;
    nctx->retries_len = sizeof(retries);
    nctx->cr_date_len = sizeof(cr_date);

```

```

/* open first cursor */
DISCARD OCIERROR(errhp,OCIHandleAlloc(tpcenv,(dvoid **>(&nctx->cur1),
    OCI_HTYPE_STMT, 0, (dvoid**)0));
sqlfile("tkvcnew.sql",stmbuf);
DISCARD OCIERROR(errhp,OCIStmtPrepare(nctx->cur1, errhp, stmbuf,
    strlen((char *)stmbuf), OCI_NTV_SYNTAX, OCI_DEFAULT));

```

```

/* bind variables */

```

```

OCIBNDPL(nctx->cur1, nctx->w_id_bp, errhp, ":w_id",ADR(w_id),SIZ(w_id),
    SQLT_INT, &nctx->w_id_len);
OCIBNDPL(nctx->cur1, nctx->d_id_bp, errhp, ":d_id",ADR(d_id),SIZ(d_id),
    SQLT_INT, &nctx->d_id_len);
OCIBNDPL(nctx->cur1, nctx->c_id_bp, errhp, ":c_id",ADR(c_id),SIZ(c_id),
    SQLT_INT, &nctx->c_id_len);

```

```

OCIBNDPL(nctx->cur1, nctx->o_all_local_bp, errhp, ":o_all_local",
    ADR(o_all_local), SIZ(o_all_local),SQLT_INT, &nctx->o_all_local_len);
OCIBNDPL(nctx->cur1, nctx->o_all_cnt_bp, errhp, ":o_ol_cnt",ADR(o_ol_cnt),
    SIZ(o_ol_cnt),SQLT_INT, &nctx->o_ol_cnt_len);
OCIBNDPL(nctx->cur1, nctx->w_tax_bp, errhp, ":w_tax",ADR(w_tax),SIZ(w_tax),
    SQLT_FLT, &nctx->w_tax_len);
OCIBNDPL(nctx->cur1, nctx->d_tax_bp, errhp, ":d_tax",ADR(d_tax),SIZ(d_tax),
    SQLT_FLT, &nctx->d_tax_len);
OCIBNDPL(nctx->cur1, nctx->o_id_bp, errhp, ":o_id",ADR(o_id),SIZ(o_id),
    SQLT_INT, &nctx->o_id_len);
OCIBNDPL(nctx->cur1, nctx->c_discount_bp, errhp, ":c_discount",
    ADR(c_discount), SIZ(c_discount),SQLT_FLT, &nctx->c_discount_len);
OCIBNDPL(nctx->cur1, nctx->c_credit_bp, errhp, ":c_credit",c_credit,
    SIZ(c_credit),SQLT_CHR, &nctx->c_credit_len);
OCIBNDPL(nctx->cur1, nctx->c_last_bp, errhp, ":c_last",c_last,SIZ(c_last),
    SQLT_STR, &nctx->c_last_len);
OCIBNDPL(nctx->cur1, nctx->retries_bp, errhp, ":retry",ADR(retries),
    SIZ(retries),SQLT_INT, &nctx->retries_len);
OCIBNDPL(nctx->cur1, nctx->cr_date_bp, errhp, ":cr_date",&cr_date,
    SIZ(OCIDate), SQLT_ODT, &nctx->cr_date_len);

```

```

OCIBNDPLA(nctx->cur1, nctx->ol_i_id_bp,errhp,":ol_i_id",nol_i_id,
    SIZ(int), SQLT_INT, nctx->nol_i_id_len,NITEMS,&nctx->nol_i_count);
OCIBNDPLA(nctx->cur1, nctx->ol_supply_w_id_bp, errhp, ":ol_supply_w_id",
    nol_supply_w_id,SIZ(int),SQLT_INT, nctx->nol_supply_w_id_len,
    NITEMS, &nctx->nol_s_count);
OCIBNDPLA(nctx->cur1, nctx->ol_quantity_bp,errhp,":ol_quantity",
    nol_quantity, SIZ(int),SQLT_INT,nctx->nol_quantity_len,
    NITEMS,&nctx->nol_q_count);
OCIBNDPLA(nctx->cur1, nctx->i_price_bp,errhp,":i_price",i_price,SIZ(int),
    SQLT_INT, nctx->i_price_len, NITEMS, &nctx->nol_item_count);
OCIBNDPLA(nctx->cur1, nctx->i_name_bp,errhp,":i_name",i_name,
    SIZ(i_name[0]),SQLT_STR, nctx->i_name_len,NITEMS,
    &nctx->nol_name_count);
OCIBNDPLA(nctx->cur1, nctx->s_quantity_bp,errhp,":s_quantity",s_quantity,
    SIZ(int), SQLT_INT,nctx->s_quant_len,NITEMS,&nctx->nol_qty_count);
OCIBNDPLA(nctx->cur1, nctx->s_bg_bp,errhp,":brand_generic",brand_generic,
    SIZ(char), SQLT_CHR,nctx->s_bg_len,NITEMS,&nctx->nol_bg_count);
OCIBNDPLA(nctx->cur1, nctx->ol_amount_bp,errhp,":ol_amount",nol_amount,
    SIZ(int),SQLT_INT, nctx->nol_amount_len,NITEMS,&nctx->nol_am_count);
OCIBNDPLA(nctx->cur1, nctx->s_remote_bp,errhp,":s_remote",nctx->s_remote,
    SIZ(int),SQLT_INT, nctx->s_remote_len,NITEMS,&nctx->s_remote_count);

```

```

/* open second cursor */
DISCARD OCIERROR(errhp,OCIHandleAlloc(tpcenv, (dvoid **>(&nctx->cur2),
    OCI_HTYPE_STMT, 0, (dvoid**)0));
DISCARD sprintf ((char *) stmbuf, SQLTX2);
DISCARD OCIERROR(errhp,OCIStmtPrepare(nctx->cur2, errhp, stmbuf,
    strlen((char *)stmbuf), OCI_NTV_SYNTAX, OCI_DEFAULT));

```

```

/* execute second cursor to init newinit package */

```

```

{
    int idx1arr[NITEMS];
    OCIBind *idx1arr_bp;
    ub2 idx1arr_len[NITEMS];
    ub2 idx1arr_rcode[NITEMS];
    sb2 idx1arr_ind[NITEMS];
    ub4 idx1arr_count;
    ub2 idx;

```

```

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

```

```

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

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

execstatus = OCISmtExecute(tpcsvc, nctx->curn2, errhp, 1, 0,
    NULLP(CONST OCISnapshot), NULLP(OCISnapshot), OCI_DEFAULT);
if(execstatus != OCI_SUCCESS) {
    OCITransRollback(tpcsvc, errhp, OCI_DEFAULT);
    errcode = OCIERROR(errhp, execstatus);
    return -1;
}
}
return(0);
}

/*****
* END BLOCK OF COMMON CODE
*****/

```

```

int get_newo_tx_cnt()
{
    return tx_count;
}

```

```

/*
* This function executes the neworder transaction
*/

```

```

#if ACID
#include <sys/types.h>
#include <time.h>
time_t curtime, *timep = &curtime;
#endif

```

```

int neworder_tx(TPSVCINFO *rqst)
{
    int i;
    int status, execstatus, errcode;
    int rcount;
    ub4 datelen;
    struct newo_inf *neworder_p;

```

```

#if ACID
    int reread;
    char sdate[30];
    time(timep);
    userlog("ACID NEWORDER started at %s\n", ctime(timep));
#endif

```

```

neworder_p = (struct newo_inf*)(rqst->data);

```

```

/* initialize the bind variables */
MOVETO(w_id, neworder_p);
MOVETO(d_id, neworder_p);
MOVETO(c_id, neworder_p);
MOVETO(o_ol_cnt, neworder_p);

```

```

for (i = 0; i < 15; i++) {
    nol_i_id[i] = neworder_p->n_items[i].ol_i_id;
    nol_supply_w_id[i] = neworder_p->n_items[i].ol_supply_w_id;
    nol_quantity[i] = neworder_p->n_items[i].ol_quantity;
}

```

```

retries = 0;

```

```

    for (i = 0; i < NITEMS; i++) indx[i] = i;
    q_sort(nol_i_id, neworder_p, 0, o_ol_cnt-1);

```

```

    tx_count++;

```

```

    strcpy(neworder_p->status_mesg, blank_mesg);
    /*          vgetdate((unsigned char *)cr_date); */
    OCIERROR(errhp, OCIDateSysDate(errhp, &cr_date));
    datelen = sizeof(o_entry_d);
    OCIERROR(errhp,
        OCIDateToText(errhp, &cr_date, (text*)FULLDATE, SIZ(FULLDATE), (text*)0, 0,
            &datelen, o_entry_d));

```

```

retry:

```

```

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

```

```

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

```

```

    o_ol_cnt = NITEMS;
    o_all_local = 1;
    for (i = 0; i < NITEMS; i++) {
        if (nol_i_id[i] == 0) {
            o_ol_cnt = i;
            break;
        }
        if (nol_supply_w_id[i] != w_id) {
            nctx->s_remote[i] = 1;
            o_all_local = 0;
        }
        else
            nctx->s_remote[i] = 0;
    }

```

```

    nctx->w_id_len = sizeof(w_id);
    nctx->d_id_len = sizeof(d_id);
    nctx->c_id_len = sizeof(c_id);
    nctx->o_all_local_len = sizeof(o_all_local);
    nctx->o_ol_cnt_len = sizeof(o_ol_cnt);
    nctx->w_tax_len = 0;
    nctx->d_tax_len = 0;
    nctx->o_id_len = sizeof(o_id);
    nctx->c_discount_len = 0;
    nctx->c_credit_len = 0;
    nctx->c_last_len = 0;

```

```

nctx->retries_len = sizeof(retries);
nctx->cr_date_len = sizeof(cr_date);
/* this is the row count */
rcount = o_ol_cnt;
nctx->nol_i_count = o_ol_cnt;
nctx->nol_q_count = o_ol_cnt;
nctx->nol_s_count = o_ol_cnt;
nctx->s_remote_count = o_ol_cnt;

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

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

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

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

if(execstatus != OCI_SUCCESS) {

    OCITransRollback(tpscvc,errhp,OCI_DEFAULT);
    errcode = OCIERROR(errhp,execstatus);

    if(errcode == NOT_SERIALIZABLE) {
        retries++;
        fprintf(stderr, "%d] newo_tx ERROR - NOT SERIALIZE doing retry\n", getpid());
        goto retry;
    } else if (errcode == RECOVER) {
        fprintf(stderr, "%d] newo_tx ERROR - RECOVER doing retry\n", getpid());
        retries++;
    }
}

```

```

        goto retry;
    } else if (errcode == SNAPSHOT_TOO_OLD) {
        fprintf(stderr, "%d] newo_tx ERROR - SNAPSHOT_TOO_OLD doing retry\n", getpid());
        retries++;
        goto retry;
    } else {
        fprintf(stderr, "%d] newo_tx ERROR - EXITING -1\n", getpid());
        printf(neworder_p->status_mesg, "Unknown Error");
        return -1;
    }
}

/* did the txn succeed ? */

if (rcount != o_ol_cnt) {
    MOVEBACK(c_credit, 2, neworder_p);
    MOVEBACK(c_last, 16, neworder_p);
    MOVEBACK(o_id, neworder_p);
    sprintf(neworder_p->status_mesg, "Item number is not valid");
}

/*
    sprintf(neworder_p->status_mesg, "Rbk In=%d Ou=%d", rcount, o_ol_cnt);
*/

return -1;
}

total = 0.0;
for (i = 0; i < o_ol_cnt; i++) {
    strcpy(neworder_p->n_items[i].i_name, i_name[i]);
    neworder_p->n_items[i].s_quantity = s_quantity[i];
    brand_gen[i] = brand_generic[i][0];
    neworder_p->n_items[i].brand[0] = brand_gen[i];
    neworder_p->n_items[i].brand[1] = '\0';
    neworder_p->n_items[i].i_price = ((double)i_price[i]) / 100;
    neworder_p->n_items[i].ol_amount = (double)(nol_amount[i]) / 100;
    total = total + nol_amount[i];
}
total *= (((double)(10000 - c_discount)/10000) *
          (1.0 + ((double)(d_tax)/10000) + ((double)(w_tax)/10000)));
total = total/100;

/* fill in date for o_entry_d from time in beginning of txn
cvtdmyhms((unsigned char *)cr_date, o_entry_d);
*/

MOVEBACK(o_id, neworder_p);
neworder_p->c_discount = ((double)c_discount) / 100;
neworder_p->w_tax = ((double)w_tax) / 100;
neworder_p->d_tax = ((double)d_tax) / 100;
strncpy (neworder_p->o_entry_d, (char*)o_entry_d, 20);
/* MOVEBACK(o_entry_d, 20, neworder_p); */
MOVEBACK(c_credit, 2, neworder_p);
MOVEBACK(c_last, 16, neworder_p);
MOVEBACK(total, neworder_p);

q_sort(indx, neworder_p, 0,o_ol_cnt-1);

/*****
* END BLOCK OF COMMON CODE
*****/

```

```
#if ACID
    time(timep);
    userlog("ACID NEWORDER w_id=%d, d_id=%d, c_id=%d, o_id=%d, total=%f\n",
        w_id, d_id, c_id, o_id, total);
    userlog("ACID NEWORDER completed at %s\n", ctime(timep));
#endif

    return(0);
}
```

```
/* the arrays are initialized based on a successful select from */
/* stock/item. We need to shift the values in the orderline array */
/* one position up to compensate when we have an invalid item */
```

```
void
cleanup_newo(code)
int code;
{
    int i;

    if (nctx)
        free (nctx);

    OCIFreeHandle((dvoid *)nctx->cum1,OCI_HTYPE_STMT);
    OCIFreeHandle((dvoid *)nctx->cum2,OCI_HTYPE_STMT);
    exit(code);
}
```

```
void q_sort(int *arr,struct newo_inf *str,int left, int right)
{
    int i;

    if(left >= right)
        return;
    for(i=left+1;i<=right;i++)
        if(arr[i] < arr[left])
            swap(str,left,i);
    q_sort(arr,str,left+1,right);
}
```

```
void swap(struct newo_inf *str, int i, int j)
{
    int temp;
    double dtemp;
    char tmpstr[25];
    char tmpch[2];

    temp = indx[i];
    indx[i] = indx[j];
    indx[j] = temp;
```

```
temp = nol_i_id[i];
nol_i_id[i] = nol_i_id[j];
nol_i_id[j] = temp;
temp = nol_supply_w_id[i];
nol_supply_w_id[i] = nol_supply_w_id[j];
nol_supply_w_id[j] = temp;
```

```
temp = nol_quantity[i];
nol_quantity[i] = nol_quantity[j];
```

```
nol_quantity[j] = temp;

strncpy(tmpstr,str->n_items[i].i_name, 25);
strncpy(str->n_items[i].i_name,str->n_items[j].i_name, 25);
strncpy(str->n_items[j].i_name,tmpstr, 25);
```

```
temp = str->n_items[i].s_quantity;
str->n_items[i].s_quantity = str->n_items[j].s_quantity;
str->n_items[j].s_quantity = temp;
```

```
/*
    tmpch = str->n_items[i].brand;
    str->n_items[i].brand= str->n_items[j].brand;
    str->n_items[j].brand= tmpch;
*/
    strncpy( tmpch ,str->n_items[i].brand, 2);
    strncpy(str->n_items[i].brand ,str->n_items[j].brand, 2);
    strncpy(str->n_items[j].brand ,tmpch, 2);
```

```
dtemp = str->n_items[i].i_price;
str->n_items[i].i_price = str->n_items[j].i_price;
str->n_items[j].i_price = dtemp;
```

```
dtemp = str->n_items[i].ol_amount;
str->n_items[i].ol_amount = str->n_items[j].ol_amount;
str->n_items[j].ol_amount = dtemp;
```

```
}

int NEWO( TPSVCINFO *rqst)
{
    if (neworder_tx(rqst)) {
        tpreturn(TPFAIL, 0, rqst->data, sizeof(struct newo_inf), 0);
    }
    else {
        tpreturn(TPSUCCESS, 0, rqst->data, sizeof(struct newo_inf), 0);
    }
}
```

tpcc_srv_ords.c

```
/*
 * Copyright (c) 1995 by Sun Microsystems, Inc.
 */
```

```
#pragma ident "(#)tpcso_srv_ords.c 1.17 97/01/02 SMI"
```

```
/*=====+
|      Copyright (c) 1995  Oracle Corp, Redwood Shores, CA      |
|      OPEN SYSTEMS PERFORMANCE GROUP                          |
|      All Rights Reserved                                       |
+=====+
| FILENAME
|   plord.c
| DESCRIPTION
|   OCI version (using PL/SQL stored procedure) of
|   ORDER STATUS transaction in TPC-C benchmark.
/* Copyright (c) 2002, Oracle Corporation. All rights reserved. */
/*
NAME
```

tkvcordq.c - OCI version using queues of ORDER STATUS
transaction in TPC-C benchmark.

DESCRIPTION

<short description of facility this file declares/defines>

EXPORT FUNCTION(S)

INTERNAL FUNCTION(S)

<other external functions defined - one-line descriptions>

STATIC FUNCTION(S)

<static functions defined - one-line descriptions>

NOTES

<other useful comments, qualifications, etc.>

MODIFIED (MM/DD/YY)

xnie 06/25/02 - queue open cluster join.
heri 05/07/02 - Fix error in cursor.
heri 02/01/02 - Cleanup, remove indicator values and return codes.
lwang 07/25/01 - Merged lwang_tpccitrc
lwang 07/23/01 - fix include
lwang 07/23/01 - Creation

*** As perf Mar 4, 2009 pre-audit: changes for interactive compliance; added 'static'

+=====*/

```
#ifndef ORA_TPCC
# define ORA_TPCC
# include "tpcc.h"
#endif
```

```
#include <stdlib.h>
#include <unistd.h>
#include <signal.h>
#include <stdio.h>
#include <sys/types.h>
#include <sys/ipc.h>
#include <sys/msg.h>
```

```
/* Tuxedo */
#include "atmi.h"
#include "userlog.h"
```

```
struct ord_itm_inf {
    int ol_supply_w_id;
    int ol_i_id;
    int ol_quantity;
    double ol_amount;
    char ol_delivery_d[11];
};
```

```
struct ord_inf {
    int o_ol_cnt;
    int w_id;
    int d_id;
    int c_id;
    int o_id;
    int o_carrier_id;
    double c_balance;
    char c_first[17];
```

```
    char c_middle[3];
    char c_last[17];
    text o_entry_d[20];
    struct ord_itm_inf o_items[15];
```

```
};
```

```
#define SQLTXT1 "alter session set isolation_level = serializable"
```

```
#define MOVETO(element, struct_name) element = struct_name->element
#define MOVEBACK(element, struct_name) struct_name->element = element
#define MOVECBACK(element, cnt, struct_name) strncpy(struct_name->element, element, cnt)
```

```
/* List of fields in ordstat */
/* This structure should be EXACTLY identical to the one declared in client.h */
/* Lists of items on an order */
```

```
static int tx_count = 0; /* Transaction counter */
```

```
#if ACID
#include <sys/types.h>
#include <time.h>
time_t curtime;
time_t *timep = &curtime;
#endif
```

```
/******
 * BEGIN BLOCK OF COMMON CODE
*****/
```

```
/*-----
          STATIC FUNCTION DECLARATIONS
-----*/
```

```
#define SQLCUR0 "SELECT rowid FROM cust \
    WHERE c_d_id = :d_id AND c_w_id = :w_id AND c_last = :c_last \
    ORDER BY c_last, c_d_id, c_w_id, c_first"
```

```
#define SQLCUR1 "SELECT /*+ USE_NL(cust) INDEX_DESC(ordr iordr2) */ \
    c_id, c_balance, c_first, c_middle, c_last, \
    o_id, o_entry_d, o_carrier_id, o_ol_cnt, ordr.rowid \
    FROM cust, ordr \
    WHERE cust.rowid = :cust_rowid \
    AND o_d_id = c_d_id AND o_w_id = c_w_id AND o_c_id = c_id \
    ORDER BY o_c_id DESC, o_d_id DESC, o_w_id DESC, o_id DESC"
```

```
#define SQLCUR2 "SELECT /*+ USE_NL(cust) INDEX_DESC (ordr iordr2) */ \
    c_balance, c_first, c_middle, c_last, \
    o_id, o_entry_d, o_carrier_id, o_ol_cnt, ordr.rowid \
    FROM cust, ordr \
    WHERE c_id = :c_id AND c_d_id = :d_id AND c_w_id = :w_id \
    AND o_d_id = c_d_id AND o_w_id = c_w_id AND o_c_id = c_id \
    ORDER BY o_c_id DESC, o_d_id DESC, o_w_id DESC, o_id DESC"
```

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

```
#ifndef OLDER_VERSION
```

```
#define SQLCUR3 "SELECT /*+ ORDERED USE_NL(ordl) CLUSTER(ordl) */\
    ol_i_id, ol_supply_w_id, ol_quantity, ol_amount, ol_delivery_d\
FROM ordr, ordl\
WHERE ordr.rowid = :ordr_rowid\
    AND o_id = ol_o_id AND ol_d_id = o_d_id AND ol_w_id = o_w_id"

#endif

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

```
struct ordctx {
```

```
    ub2 c_rowid_len[100];
    ub2 ol_supply_w_id_len[NITEMS];
    ub2 ol_i_id_len[NITEMS];
    ub2 ol_quantity_len[NITEMS];
    ub2 ol_amount_len[NITEMS];
    ub2 ol_delivery_d_len[NITEMS];
    ub2 ol_w_id_len;
    ub2 ol_d_id_len;
    ub2 ol_o_id_len;
```

```
    ub4 ol_supply_w_id_csize;
    ub4 ol_i_id_csize;
    ub4 ol_quantity_csize;
    ub4 ol_amount_csize;
    ub4 ol_delivery_d_csize;
    ub4 ol_w_id_csize;
    ub4 ol_d_id_csize;
    ub4 ol_o_id_csize;
```

```
    OCISmt *curo0;
    OCISmt *curo1;
    OCISmt *curo2;
    OCISmt *curo3;
    OCISmt *curo4;
    OCIBind *c_id_bp;
    OCIBind *w_id_bp[4];
    OCIBind *d_id_bp[4];
    OCIBind *c_last_bp[2];
    OCIBind *o_id_bp;
    OCIBind *c_rowid_bp;
/* OCIBind *o_rowid_bp; */
    OCIDefine *c_rowid_dp;
    OCIDefine *c_last_dp[2];
    OCIDefine *c_id_dp;
    OCIDefine *c_first_dp[2];
    OCIDefine *c_middle_dp[2];
    OCIDefine *c_balance_dp[2];
    OCIDefine *o_rowid_dp[2];
    OCIDefine *o_id_dp[2];
    OCIDefine *o_entry_d_dp[2];
    OCIDefine *o_cr_id_dp[2];
    OCIDefine *o_ol_cnt_dp[2];
    OCIDefine *ol_d_d_dp;
    OCIDefine *ol_i_id_dp;
    OCIDefine *ol_supply_w_id_dp;
    OCIDefine *ol_quantity_dp;
    OCIDefine *ol_amount_dp;
    OCIDefine *ol_d_base_dp;
```

```
    OCIDefine *c_count_dp;
    OCIRowid *c_rowid_ptr[100];
    OCIRowid *c_rowid_cust;
    OCIRowid *o_rowid;
    int cs;
    int cust_idx;
    int norow;
    int rcount;
    int somerows;
};
```

```
typedef struct ordctx ordctx;
```

```
struct defctx
{
    boolean reexec;
    ub4 count;
};
typedef struct defctx defctx;
```

```
static ordctx *octx;
```

```
static defctx cbctx;
```

```
static OCIDate o_entry_d_base;
static OCIDate ol_d_base[15];
/*
unsigned char o_entry_d_base[7];
unsigned char ol_d_base[15][7];
*/
/* struct ord_inf elements */
static int w_id;
static int d_id;
static int c_id, bylastname;
static int o_id;
static int o_carrier_id;
static int o_ol_cnt;
static double c_balance;
static char c_first[17];
static char c_middle[3];
static char c_last[17];
/* char o_entry_d[20]; */
static text o_entry_d[20];
static ub4 datelen;
```

```
static int ol_supply_w_id[15];
static int ol_i_id[15];
static int ol_quantity[15];
static int ol_amount[15];
static ub4 ol_del_len[15];
static text ol_delivery_d[15][11];
```

```
static int retries;
static int retries_serial;
static int retries_recoverr;
static int retries_snapshot;
```

```
/******
* END BLOCK OF COMMON CODE
*****/
```

```

int get_ords_tx_cnt()
{
    return tx_count;
}

/*
 * Function: init ordstat transaction
 * Prepare the ordstat transaction
 */

int init_ords_tx()
{
    /*****
    * BEGIN BLOCK OF COMMON CODE
    *****/

    int i;
    text stmbuf[SQL_BUF_SIZE];

    OCISmt *curi;

    octx = (ordctx *) malloc (sizeof(ordctx));
    memset(octx,(char)0,sizeof(ordctx));
    octx->cs = 1;
    octx->norow = 0;
    octx->somerows = 10;
    /* get the rowid handles */
    OCIERROR(errhp, OCIDescriptorAlloc((dvoid *)tpcenv,(dvoid **)&octx->o_rowid,
        (ub4)OCI_DTYPE_ROWID, (size_t) 0, (dvoid **)0));
    for(i=0;i<100;i++) {
        DISCARD OCIERROR(errhp, OCIDescriptorAlloc(tpcenv,
            (dvoid **)&octx->c_rowid_ptr[i], OCI_DTYPE_ROWID,0,(dvoid **)0));
    }

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

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

```

```

        OCI_NTV_SYNTAX,OCI_DEFAULT));
    DISCARD OCIERROR(errhp,
        OCIAttrSet(octx->curo1,OCI_HTYPE_STMT,&octx->norow,0,
            OCI_ATTR_PREFETCH_ROWS,errhp));

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

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

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

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

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

    /* bind variables */

    /* c_id (customer id) is not known */
    OCIBND(octx->curo0,octx->w_id_bp[0],errhp,":w_id",ADR(w_id),
        SZ(int),SQLT_INT);
    OCIBND(octx->curo0,octx->d_id_bp[0],errhp,":d_id",ADR(d_id),
        SZ(int),SQLT_INT);
    OCIBND(octx->curo0,octx->c_last_bp[0],errhp,":c_last",c_last,
        SZ(c_last), SQLT_STR);
    OCIDFNRA(octx->curo0,octx->c_rowid_dp,errhp,1,octx->c_rowid_ptr,
        SZ(OCIRowid*), SQLT_RDD, NULL, octx->c_rowid_len, NULL);

```

```

OCIBND(octx->curo1,octx->c_rowid_bp,errhp,":cust_rowid", &octx->c_rowid_cust,
sizeof( octx->c_rowid_ptr[0]),SQLT_RDD);
OCIDEF(octx->curo1,octx->c_id_dp,errhp,1,ADR(c_id),SIZ(int),SQLT_INT);
OCIDEF(octx->curo1,octx->c_balance_dp[0],errhp,2,ADR(c_balance),
SIZ(double),SQLT_FLT);
OCIDEF(octx->curo1,octx->c_first_dp[0],errhp,3,c_first,SIZ(c_first)-1,
SQLT_CHR);
OCIDEF(octx->curo1,octx->c_middle_dp[0],errhp,4,c_middle,
SIZ(c_middle)-1,SQLT_AFC);
OCIDEF(octx->curo1,octx->c_last_dp[0],errhp,5,c_last,SIZ(c_last)-1,
SQLT_CHR);
OCIDEF(octx->curo1,octx->o_id_dp[0],errhp,6,ADR(o_id),SIZ(int),SQLT_INT);
OCIDEF(octx->curo1,octx->o_entry_d_dp[0],errhp,7,
&o_entry_d_base,SIZ(OCIDate),SQLT_ODT);
OCIDEF(octx->curo1,octx->o_cr_id_dp[0],errhp,8,ADR(o_carrier_id),
SIZ(int),SQLT_INT);
OCIDEF(octx->curo1,octx->o_ol_cnt_dp[0],errhp,9,ADR(o_ol_cnt),
SIZ(int),SQLT_INT);
OCIDEF(octx->curo1,octx->o_rowid_dp[0],errhp,10,ADR(octx->o_rowid),
SIZ(OCIRowid*),SQLT_RDD);

```

```

/* Bind for third cursor , no-zero customer id */

```

```

OCIBND(octx->curo2,octx->w_id_bp[1],errhp,":w_id",ADR(w_id),
SIZ(int),SQLT_INT);
OCIBND(octx->curo2,octx->d_id_bp[1],errhp,":d_id",ADR(d_id),
SIZ(int),SQLT_INT);
OCIBND(octx->curo2,octx->c_id_bp,errhp,":c_id",ADR(c_id),
SIZ(int),SQLT_INT);
OCIDEF(octx->curo2,octx->c_balance_dp[1],errhp,1,ADR(c_balance),
SIZ(double),SQLT_FLT);
OCIDEF(octx->curo2,octx->c_first_dp[1],errhp,2,c_first,SIZ(c_first)-1,
SQLT_CHR);
OCIDEF(octx->curo2,octx->c_middle_dp[1],errhp,3,c_middle,
SIZ(c_middle)-1,SQLT_AFC);
OCIDEF(octx->curo2,octx->c_last_dp[1],errhp,4,c_last,SIZ(c_last)-1,
SQLT_CHR);
OCIDEF(octx->curo2,octx->o_id_dp[1],errhp,5,ADR(o_id),SIZ(int),SQLT_INT);
OCIDEF(octx->curo2,octx->o_entry_d_dp[1],errhp,6, &o_entry_d_base,
SIZ(OCIDate),SQLT_ODT);
OCIDEF(octx->curo2, octx->o_cr_id_dp[1],errhp,7,ADR(o_carrier_id),
SIZ(int), SQLT_INT);
OCIDEF(octx->curo2,octx->o_ol_cnt_dp[1],errhp,8,ADR(o_ol_cnt),
SIZ(int),SQLT_INT);
OCIDEF(octx->curo2,octx->o_rowid_dp[1],errhp,9,ADR(octx->o_rowid),
SIZ(OCIRowid*),SQLT_RDD);

```

```

/* Bind for last cursor */

```

```

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

```

```

/*
OCIBND(octx->curo3,octx->c_id_bp,errhp,":c_id",ADR(c_id), SIZ(int),SQLT_INT);
*/

```

```

/*
OCIBND(octx->curo3,octx->o_rowid_bp,errhp,":ordr_rowid",
&octx->o_rowid, SIZ(OCIRowid*),SQLT_RDD);
*/

```

```

OCIDFNRA(octx->curo3, octx->ol_i_id_dp, errhp, 1, ol_i_id,SIZ(int),SQLT_INT,
NULL,octx->ol_i_id_len, NULL);

```

```

OCIDFNRA(octx->curo3,octx->ol_supply_w_id_dp,errhp,2, ol_supply_w_id,
SIZ(int),SQLT_INT, NULL,
octx->ol_supply_w_id_len, NULL);
OCIDFNRA(octx->curo3, octx->ol_quantity_dp,errhp,3, ol_quantity,SIZ(int),
SQLT_INT, NULL,octx->ol_quantity_len, NULL);
OCIDFNRA(octx->curo3,octx->ol_amount_dp,errhp,4,ol_amount, SIZ(int),
SQLT_INT,NULL, octx->ol_amount_len, NULL);
OCIDFNRA(octx->curo3,octx->ol_d_base_dp,errhp,5,ol_d_base,SIZ(OCIDate),
SQLT_ODT, NULL,octx->ol_delivery_d_len,NULL);

```

```

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

```

```

return (0);

```

```

}

```

```

/*****
* END BLOCK OF COMMON CODE
*****/

```

```

int ordstat_tx(TPSVCINFO *rqst)

```

```

{
    int i;
    int execstatus, rcount,errcode;
    struct ord_inf *ordstat_p;
    ordstat_p = (struct ord_inf*)(rqst->data);

```

```

    MOVETO(w_id, ordstat_p);
    MOVETO(d_id, ordstat_p);
    MOVETO(c_id, ordstat_p);

```

```

    tx_count++;

```

```

#if ACID

```

```

    time(timep);
    userlog("ACID ORDSTAT Transaction begun at %s\n", ctime(timep));

```

```

#endif

```

```

/*****
* BEGIN BLOCK OF COMMON CODE
*****/

```

```

    retries = 0;
    retries_serial = 0;
    retries_recoverr = 0;
    retries_snapshot = 0;
    if (c_id == 0) {
        bylastname = 1;
        strcpy(c_last, ordstat_p->c_last);
    }
    else {
        bylastname = 0;
        c_last[1] = '\0';
    }

```

```

    for (i = 0; i < NITEMS; i++) {
        octx->ol_supply_w_id_len[i] = sizeof(int);
    }

```



```

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

        /* count the number of rows */
        execstatus=OCIStmtExecute(tpcsvc,octx->curo4,errhp,1,0,
            NULLP(CONST OCISnapshot),NULLP(OCISnapshot),OCI_DEFAULT);
        if ((execstatus != OCI_NO_DATA) && (execstatus != OCI_SUCCESS))
        {
            errcode=OCIERROR(errhp, execstatus);
            if ((errcode == NOT_SERIALIZABLE) || (errcode == RECOVER))
            {
                DISCARD OCITransCommit(tpcsvc,errhp,OCI_DEFAULT);
                retries++;
                goto retry;
            } else {
                return -1;
            }
        }
        if (octx->rcount+1 < 2*10 )
            octx->cust_idx=(octx->rcount+1)/2 ;
        else
            /* */

```

```

{

    cbctx.reexec = TRUE;
    cbctx.count = (octx->rcount+1)/2 ;
    execstatus=OCIStmtExecute(tpcsvc,octx->curo0,errhp,cbctx.count,
        0,NULLP(CONST OCISnapshot),
        NULLP(OCISnapshot),OCI_DEFAULT);
    /* will get OCI_NO_DATA if <100 found */
    if (cbctx.count > 0)
    {
        userlog ("did not get all rows ");
        return (-1);
    }

    if ((execstatus != OCI_NO_DATA) && (execstatus != OCI_SUCCESS))
    {
        errcode=OCIERROR(errhp, execstatus);
        if((errcode == NOT_SERIALIZABLE) || (errcode == RECOVER))
        {
            DISCARD OCITransCommit(tpcsvc,errhp,OCI_DEFAULT);
            retries++;
            goto retry;
        } else {
            return -1;
        }
    }
    octx->cust_idx=0 ;
}

octx->c_rowid_cust = octx->c_rowid_ptr[octx->cust_idx];
execstatus=OCIStmtExecute(tpcsvc,octx->curo1,errhp,1,0,
    NULLP(CONST OCISnapshot),NULLP(OCISnapshot),OCI_DEFAULT);
if (execstatus != OCI_SUCCESS)
{
    errcode=OCIERROR(errhp,execstatus);
    DISCARD OCITransCommit(tpcsvc,errhp,OCI_DEFAULT);
    if((errcode == NOT_SERIALIZABLE) || (errcode == RECOVER)
        || (errcode == SNAPSHOT_TOO_OLD))
    {
        retries++;
        goto retry;
    } else {
        return -1;
    }
}
else
{
    execstatus=OCIStmtExecute(tpcsvc,octx->curo2,errhp,1,0,
        NULLP(CONST OCISnapshot),NULLP(OCISnapshot),
        OCI_DEFAULT);
    if (execstatus != OCI_SUCCESS)
    {
        errcode=OCIERROR(errhp,execstatus);
        DISCARD OCITransCommit(tpcsvc,errhp,OCI_DEFAULT);
        if((errcode == NOT_SERIALIZABLE) || (errcode == RECOVER)
            || (errcode == SNAPSHOT_TOO_OLD))
        {
            retries++;
            goto retry;
        }
    }
}

```

```

    else
    {
        return -1;
    }
}
}
octx->ol_w_id_len = sizeof(int);
octx->ol_d_id_len = sizeof(int);
octx->ol_o_id_len = sizeof(int);

execstatus = OCISmtExecute(tpcsvc,octx->curo3,errhp,o_ol_cnt,0,
        NULLP(CONST OCISnapshot),NULLP(OCISnapshot),
        OCI_DEFAULT | OCI_COMMIT_ON_SUCCESS);
if (execstatus != OCI_SUCCESS )
{
    errcode=OCIERROR(errhp,execstatus);
    DISCARD OCITransCommit(tpcsvc,errhp,OCI_DEFAULT);
    if((errcode == NOT_SERIALIZABLE) || (errcode == RECOVERR)
        || (errcode == SNAPSHOT_TOO_OLD))
    {
        retries++;
        goto retry;
    }
    else
    {
        return -1;
    }
}

/* clean up and convert the delivery dates put out debug return data*/
for (i = 0; i < o_ol_cnt; i++)
{
    ol_del_len[i]=sizeof(ol_delivery_d[i]);
    DISCARD OCIERROR(errhp,OCIDateToText(errhp,&ol_d_base[i],
        (const text*)SHORTDATE,(ub1)strlen(SHORTDATE),(text*)0,0,
        &ol_del_len[i], ordstat_p->o_items[i].ol_delivery_d));
/*
    cvtdmy(ol_d_base[i],ol_delivery_d[i]);
    cvtdmyhms(o_entry_d_base, ordstat_p->o_entry_d);
*/
    ordstat_p->o_items[i].ol_supply_w_id = ol_supply_w_id[i];
    ordstat_p->o_items[i].ol_i_id = ol_i_id[i];
    ordstat_p->o_items[i].ol_quantity = ol_quantity[i];
    ordstat_p->o_items[i].ol_amount = (double)(ol_amount[i])/ 100;

}

datelen = sizeof(ordstat_p->o_entry_d);
OCIERROR(errhp,
    OCIDateToText(errhp,&o_entry_d_base,(text*)FULLDATE,SIZ(FULLDATE),(text*)0,0,
        &datelen, ordstat_p->o_entry_d));

/*****
* END BLOCK OF COMMON CODE
*****/

#if ACID
    time(timep);
    userlog("ACID ORDDSTAT for w_id = %d, d_id = %d, c_id = %d, o_id = %d\n",

```

```

        w_id, d_id, c_id, o_id);
    userlog("ACID ORDDSTAT Transaction completed at %s\n", ctime(timep));
#endif

    MOVEBACK(o_id, ordstat_p);
    MOVEBACK(o_carrier_id, ordstat_p);
    MOVEBACK(o_ol_cnt, ordstat_p);
    /* MOVEBACK(c_balance, ordstat_p); */
    ordstat_p->c_balance = c_balance / 100; /* convert to dollars & cents */
    MOVECBACK(c_first, 16, ordstat_p);
    MOVECBACK(c_middle, 2, ordstat_p);
    MOVECBACK(c_last, 16, ordstat_p);
    /* MOVECBACK(o_entry_d, 19, ordstat_p); already done */

/* for search by clastname
*/

    MOVEBACK(c_id, ordstat_p);
    return(0);
}

void cleanup_ords(int code)
{
    if (octx)
        free(octx);

    /* log off */
    exit(code);
}

int ORDS(TPSVCINFO *rqst)
{
    if (ordstat_tx(rqst) )
        tpreturn(TPFAIL, 0, rqst->data, sizeof(struct ord_inf), 0);
    else
        tpreturn(TPSUCCESS, 0, rqst->data, sizeof(struct ord_inf), 0);
}

tpcc_srv_paym.c
/*
* Copyright (c) 1995 by Sun Microsystems, Inc.
*/

#pragma ident "@(#)tpcso_srv_paym.c 1.17 97/01/02 SMI"

/*=====+
| Copyright (c) 1995 Oracle Corp, Redwood Shores, CA |
| OPEN SYSTEMS PERFORMANCE GROUP |
| All Rights Reserved |
+=====+
| FILENAME
| plpay.c
| DESCRIPTION
| OCI version (using PL/SQL stored procedure) of
| PAYMENT transaction in TPC-C benchmark.
| *** As perf Mar 4, 2009 pre-audit: changes for interactive compliance
+=====+*/

#ifndef ORA_TPCC
# define ORA_TPCC
# include "tpcc.h"

```

```
#endif
```

```
#include <stdlib.h>
#include <unistd.h>
#include <signal.h>
#include <stdio.h>
#include <sys/types.h>
#include <sys/ipc.h>
#include <sys/msg.h>
```

```
/* Tuxedo */
#include "atmi.h"
#include "userlog.h"
```

```
static int tx_count = 0;
```

```
/*#include "proc_stat.h" */
```

```
#define MOVETO(element, struct_name) \
    element = struct_name -> element
#define MOVEBACK(element, struct_name) \
    struct_name -> element = element
#define MOVECTO(element, cnt, struct_name) { \
    int i; \
    strncpy(element, struct_name -> element, cnt); \
    element[cnt] = '\0'; \
    for(i=0; i<=cnt; i++) \
    { \
        if(isspace(element[i])) \
        { \
            element[i] = '\0'; \
            break; \
        } \
    } \
}
```

```
#define MOVECBACK(element, cnt, struct_name) \
    strncpy(struct_name -> element, element, cnt)
```

```
struct pay_inf {
    int w_id;
    int d_id;
    int c_id;
    int c_w_id;
    int c_d_id;
    double h_amount;
    double c_credit_lim;
    double c_balance;
    double c_discount;
    char h_date[20];
    char w_street_1[21];
    char w_street_2[21];
    char w_city[21];
    char w_state[3];
    char w_zip[11];
    char d_street_1[21];
    char d_street_2[21];
    char d_city[21];
    char d_state[3];
    char d_zip[11];
```

```
char c_first[17];
char c_middle[3];
char c_last[17];
char c_street_1[21];
char c_street_2[21];
char c_city[21];
char c_state[3];
char c_zip[11];
char c_phone[17];
char c_since[11];
char c_credit[3];
char c_data[201];
};
```

```
#if ACID
#include <sys/types.h>
#include <time.h>
static time_t curtime;
static time_t *timep = &curtime;
#endif
```

```
/******
 * BEGIN BLOCK OF COMMON CODE
 *****/
```

```
static OCIDate cr_date;
static OCIDate c_since;
```

```
/* List of fields in payment */
```

```
static int retry;
static char c_data[201];
```

```
static int w_id;
static int d_id;
static int c_id, bylastname;
static int c_w_id;
static int c_d_id;
static int h_amount;
static int c_credit_lim;
static double c_balance;
static float c_discount;
/*char h_date[20]; */
static text h_date[20];
static char w_street_1[21];
static char w_street_2[21];
static char w_city[21];
static char w_state[3];
static char w_zip[10];
static char d_street_1[21];
static char d_street_2[21];
static char d_city[21];
static char d_state[3];
static char d_zip[10];
static char c_first[17];
static char c_middle[3];
static char c_last[17];
static char c_street_1[21];
static char c_street_2[21];
static char c_city[21];
static char c_state[3];
```

```
static char c_zip[10];
static char c_phone[17];
static text c_since_d[11];
static char c_credit[3];
static int    retries;

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

struct payctx {
    OCISmt *curpi;
    OCISmt *curp0;
    OCISmt *curp1;
    OCIBind *w_id_bp[2];
    ub2 w_id_len;

    OCIBind *d_id_bp[2];
    ub2 d_id_len;

    OCIBind *c_w_id_bp[2];
    ub2 c_w_id_len;

    OCIBind *c_d_id_bp[2];
    ub2 c_d_id_len;

    OCIBind *c_id_bp[2];
    ub2 c_id_len;

    OCIBind *h_amount_bp[2];
    ub2 h_amount_len;

    OCIBind *c_last_bp[2];
    ub2 c_last_len;

    OCIBind *w_street_1_bp[2];
    ub2 w_street_1_len;

    OCIBind *w_street_2_bp[2];
    ub2 w_street_2_len;

    OCIBind *w_city_bp[2];
    ub2 w_city_len;

    OCIBind *w_state_bp[2];
    ub2 w_state_len;

    OCIBind *w_zip_bp[2];
    ub2 w_zip_len;

    OCIBind *d_street_1_bp[2];
    ub2 d_street_1_len;

    OCIBind *d_street_2_bp[2];
    ub2 d_street_2_len;

    OCIBind *d_city_bp[2];
    ub2 d_city_len;

    OCIBind *d_state_bp[2];
    ub2 d_state_len;

    OCIBind *d_zip_bp[2];
    ub2 d_zip_len;

    OCIBind *c_first_bp[2];
    ub2 c_first_len;

    OCIBind *c_middle_bp[2];
    ub2 c_middle_len;

    OCIBind *c_street_1_bp[2];
    ub2 c_street_1_len;

    OCIBind *c_street_2_bp[2];
    ub2 c_street_2_len;

    OCIBind *c_city_bp[2];
    ub2 c_city_len;

    OCIBind *c_state_bp[2];
    ub2 c_state_len;

    OCIBind *c_zip_bp[2];
    ub2 c_zip_len;

    OCIBind *c_phone_bp[2];
    ub2 c_phone_len;

    OCIBind *c_since_bp[2];
    ub2 c_since_len;

    OCIBind *c_credit_bp[2];
    ub2 c_credit_len;

    OCIBind *c_credit_lim_bp[2];
    ub2 c_credit_lim_len;

    OCIBind *c_discount_bp[2];
    ub2 c_discount_len;

    OCIBind *c_balance_bp[2];
    ub2 c_balance_len;

    OCIBind *c_data_bp[2];
    ub2 c_data_len;

    OCIBind *h_date_bp[2];
    ub2 h_date_len;

    OCIBind *retries_bp[2];
    ub2 retries_len;

    OCIBind *cr_date_bp[2];
    ub2 cr_date_len;

    OCIBind *byln_bp[2];
    ub2 byln_len;
};

typedef struct payctx payctx;

static payctx *pctx;
```

```

/*****
 * END BLOCK OF COMMON CODE
 *****/

int get_paym_tx_cnt()
{
    return tx_count;
}

/*
 * Function: init payment transaction
 * Prepare the payment transaction
 */

/*****
 * BEGIN BLOCK OF COMMON CODE
 *****/

int init_paym_tx()
{

    text stmbuf[SQL_BUF_SIZE];
    pctx = (payctx *)malloc(sizeof(payctx));
    memset(pctx,(char)0,sizeof(payctx));

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

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

    /* build the init statement and execute it */

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

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

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

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

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

    pctx->w_id_len = SIZ(w_id);
    pctx->d_id_len = SIZ(d_id);

```

```

    pctx->c_w_id_len = SIZ(c_w_id);
    pctx->c_d_id_len = SIZ(c_d_id);
    pctx->c_id_len = 0;
    pctx->h_amount_len = SIZ(h_amount);
    pctx->c_last_len = 0;
    pctx->w_street_1_len = 0;
    pctx->w_street_2_len = 0;
    pctx->w_city_len = 0;
    pctx->w_state_len = 0;
    pctx->w_zip_len = 0;
    pctx->d_street_1_len = 0;
    pctx->d_street_2_len = 0;
    pctx->d_city_len = 0;
    pctx->d_state_len = 0;
    pctx->d_zip_len = 0;
    pctx->c_first_len = 0;
    pctx->c_middle_len = 0;
    pctx->c_street_1_len = 0;
    pctx->c_street_2_len = 0;
    pctx->c_city_len = 0;
    pctx->c_state_len = 0;
    pctx->c_zip_len = 0;
    pctx->c_phone_len = 0;
    pctx->c_since_len = 0;
    pctx->c_credit_len = 0;
    pctx->c_credit_lim_len = 0;
    pctx->c_discount_len = 0;
    pctx->c_balance_len = sizeof(double);
    pctx->c_data_len = 0;
    pctx->h_date_len = 0;
    pctx->retries_len = SIZ(retries) ;
    pctx->cr_date_len = 7;

```

```

/* bind variables */

```

```

OCIBNDPL(pctx->curp0, pctx->w_id_bp[0], errhp,":w_id",ADR(w_id),SIZ(int),
    SQLT_INT, NULL);
OCIBNDPL(pctx->curp0, pctx->d_id_bp[0], errhp,":d_id",ADR(d_id),SIZ(int),
    SQLT_INT, NULL);
OCIBND(pctx->curp0, pctx->c_w_id_bp[0], errhp,":c_w_id",ADR(c_w_id),SIZ(int),
    SQLT_INT);
OCIBND(pctx->curp0, pctx->c_d_id_bp[0], errhp,":c_d_id",ADR(c_d_id),SIZ(int),
    SQLT_INT);
OCIBND(pctx->curp0, pctx->c_id_bp[0], errhp,":c_id",ADR(c_id),SIZ(int),
    SQLT_INT);
OCIBNDPL(pctx->curp0, pctx->h_amount_bp[0], errhp,":h_amount",ADR(h_amount),
    SIZ(int),SQLT_INT, &pctx->h_amount_len);
OCIBNDPL(pctx->curp0, pctx->c_last_bp[0], errhp,":c_last",c_last,SIZ(c_last),
    SQLT_STR, &pctx->c_last_len);
OCIBNDPL(pctx->curp0, pctx->w_street_1_bp[0], errhp,":w_street_1",w_street_1,
    SIZ(w_street_1),SQLT_STR, &pctx->w_street_1_len);
OCIBNDPL(pctx->curp0, pctx->w_street_2_bp[0], errhp,":w_street_2",w_street_2,
    SIZ(w_street_2),SQLT_STR, &pctx->w_street_2_len);
OCIBNDPL(pctx->curp0, pctx->w_city_bp[0], errhp,":w_city",w_city,SIZ(w_city),
    SQLT_STR, &pctx->w_city_len);
OCIBNDPL(pctx->curp0, pctx->w_state_bp[0], errhp,":w_state",w_state,
    SIZ(w_state),SQLT_STR, &pctx->w_state_len);
OCIBNDPL(pctx->curp0, pctx->w_zip_bp[0], errhp,":w_zip",w_zip,SIZ(w_zip),
    SQLT_STR, &pctx->w_zip_len);

```

```

OCIBNDPL(pctx->curp0, pctx->d_street_1_bp[0], errhp,":d_street_1",d_street_1,
    SIZ(d_street_1),SQLT_STR, &pctx->d_street_1_len);
OCIBNDPL(pctx->curp0, pctx->d_street_2_bp[0], errhp,":d_street_2",d_street_2,
    SIZ(d_street_2),SQLT_STR, &pctx->d_street_2_len);
OCIBNDPL(pctx->curp0, pctx->d_city_bp[0], errhp,":d_city",d_city,SIZ(d_city),
    SQLT_STR, &pctx->d_city_len);
OCIBNDPL(pctx->curp0, pctx->d_state_bp[0], errhp,":d_state",d_state,
    SIZ(d_state), SQLT_STR, &pctx->d_state_len);
OCIBNDPL(pctx->curp0, pctx->d_zip_bp[0], errhp,":d_zip",d_zip,SIZ(d_zip),
    SQLT_STR, &pctx->d_zip_len);
OCIBNDPL(pctx->curp0, pctx->c_first_bp[0], errhp,":c_first",c_first,
    SIZ(c_first), SQLT_STR, &pctx->c_first_len);
OCIBNDPL(pctx->curp0, pctx->c_middle_bp[0], errhp,":c_middle",c_middle,2,
    SQLT_AFC, &pctx->c_middle_len);
OCIBNDPL(pctx->curp0, pctx->c_street_1_bp[0], errhp,":c_street_1",c_street_1,
    SIZ(c_street_1),SQLT_STR, &pctx->c_street_1_len);
OCIBNDPL(pctx->curp0, pctx->c_street_2_bp[0], errhp,":c_street_2",c_street_2,
    SIZ(c_street_2),SQLT_STR, &pctx->c_street_2_len);
OCIBNDPL(pctx->curp0, pctx->c_city_bp[0], errhp,":c_city",c_city,SIZ(c_city),
    SQLT_STR, &pctx->c_city_len);
OCIBNDPL(pctx->curp0, pctx->c_state_bp[0], errhp,":c_state",c_state,
    SIZ(c_state), SQLT_STR, &pctx->c_state_len);
OCIBNDPL(pctx->curp0, pctx->c_zip_bp[0], errhp,":c_zip",c_zip,SIZ(c_zip),
    SQLT_STR,&pctx->c_zip_len);
OCIBNDPL(pctx->curp0, pctx->c_phone_bp[0], errhp,":c_phone",c_phone,
    SIZ(c_phone), SQLT_STR, &pctx->c_phone_len);
OCIBNDPL(pctx->curp0, pctx->c_since_bp[0], errhp,":c_since",&c_since,
    SIZ(OCIDate), SQLT_ODT, &pctx->c_since_len);
OCIBNDPL(pctx->curp0, pctx->c_credit_bp[0], errhp,":c_credit",c_credit,
    SIZ(c_credit),SQLT_CHR, &pctx->c_credit_len);
OCIBNDPL(pctx->curp0, pctx->c_credit_lim_bp[0], errhp,":c_credit_lim",
    ADR(c_credit_lim),SIZ(int), SQLT_INT, &pctx->c_credit_lim_len);
OCIBNDPL(pctx->curp0, pctx->c_discount_bp[0], errhp,":c_discount",
    ADR(c_discount),SIZ(c_discount), SQLT_FLT, &pctx->c_discount_len);
OCIBNDPL(pctx->curp0, pctx->c_balance_bp[0], errhp,":c_balance",
    ADR(c_balance), SIZ(double),SQLT_FLT, &pctx->c_balance_len);
OCIBNDPL(pctx->curp0, pctx->c_data_bp[0], errhp,":c_data",c_data,SIZ(c_data),
    SQLT_STR, &pctx->c_data_len);

/*
OCIBNDR(pctx->curp0, pctx->h_date_bp, errhp,":h_date",h_date,SIZ(h_date),
    SQLT_STR, &pctx->h_date_ind, &pctx->h_date_len, &pctx->h_date_rc);
*/

OCIBNDPL(pctx->curp0, pctx->retries_bp[0], errhp,":retry",ADR(retries),
    SIZ(int), SQLT_INT, &pctx->retries_len);
OCIBNDPL(pctx->curp0, pctx->cr_date_bp[0], errhp,":cr_date",ADR(cr_date),
    SIZ(OCIDate),SQLT_ODT, &pctx->cr_date_len);

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

OCIBNDPL(pctx->curp1, pctx->w_id_bp[1], errhp,":w_id",ADR(w_id),SIZ(int),
    SQLT_INT, &pctx->w_id_len);
OCIBNDPL(pctx->curp1, pctx->d_id_bp[1], errhp,":d_id",ADR(d_id),SIZ(int),
    SQLT_INT, &pctx->d_id_len);
OCIBND(pctx->curp1, pctx->c_w_id_bp[1], errhp,":c_w_id",ADR(c_w_id),SIZ(int),
    SQLT_INT);
OCIBND(pctx->curp1, pctx->c_d_id_bp[1], errhp,":c_d_id",ADR(c_d_id),SIZ(int),
    SQLT_INT);
OCIBNDPL(pctx->curp1, pctx->c_id_bp[1], errhp,":c_id",ADR(c_id),SIZ(int),
    SQLT_INT, &pctx->c_id_len);
OCIBNDPL(pctx->curp1, pctx->h_amount_bp[1], errhp,":h_amount",ADR(h_amount),
    SIZ(int),SQLT_INT, &pctx->h_amount_len);

```

```

OCIBND(pctx->curp1, pctx->c_last_bp[1], errhp,":c_last",c_last,SIZ(c_last),
    SQLT_STR);
OCIBNDPL(pctx->curp1, pctx->w_street_1_bp[1], errhp,":w_street_1",w_street_1,
    SIZ(w_street_1),SQLT_STR, &pctx->w_street_1_len);
OCIBNDPL(pctx->curp1, pctx->w_street_2_bp[1], errhp,":w_street_2",w_street_2,
    SIZ(w_street_2),SQLT_STR, &pctx->w_street_2_len);
OCIBNDPL(pctx->curp1, pctx->w_city_bp[1], errhp,":w_city",w_city,SIZ(w_city),
    SQLT_STR, &pctx->w_city_len);
OCIBNDPL(pctx->curp1, pctx->w_state_bp[1], errhp,":w_state",w_state,
    SIZ(w_state), SQLT_STR, &pctx->w_state_len);
OCIBNDPL(pctx->curp1, pctx->w_zip_bp[1], errhp,":w_zip",w_zip,SIZ(w_zip),
    SQLT_STR, &pctx->w_zip_len);
OCIBNDPL(pctx->curp1, pctx->d_street_1_bp[1], errhp,":d_street_1",d_street_1,
    SIZ(d_street_1),SQLT_STR, &pctx->d_street_1_len);
OCIBNDPL(pctx->curp1, pctx->d_street_2_bp[1], errhp,":d_street_2",d_street_2,
    SIZ(d_street_2),SQLT_STR, &pctx->d_street_2_len);
OCIBNDPL(pctx->curp1, pctx->d_city_bp[1], errhp,":d_city",d_city,SIZ(d_city),
    SQLT_STR, &pctx->d_city_len);
OCIBNDPL(pctx->curp1, pctx->d_state_bp[1], errhp,":d_state",d_state,
    SIZ(d_state), SQLT_STR, &pctx->d_state_len);
OCIBNDPL(pctx->curp1, pctx->d_zip_bp[1], errhp,":d_zip",d_zip,SIZ(d_zip),
    SQLT_STR, &pctx->d_zip_len);
OCIBNDPL(pctx->curp1, pctx->c_first_bp[1], errhp,":c_first",c_first,
    SIZ(c_first), SQLT_STR, &pctx->c_first_len);
OCIBNDPL(pctx->curp1, pctx->c_middle_bp[1], errhp,":c_middle",c_middle,2,
    SQLT_AFC, &pctx->c_middle_len);

OCIBNDPL(pctx->curp1, pctx->c_street_1_bp[1], errhp,":c_street_1",c_street_1,
    SIZ(c_street_1),SQLT_STR, &pctx->c_street_1_len);
OCIBNDPL(pctx->curp1, pctx->c_street_2_bp[1], errhp,":c_street_2",c_street_2,
    SIZ(c_street_2),SQLT_STR, &pctx->c_street_2_len);
OCIBNDPL(pctx->curp1, pctx->c_city_bp[1], errhp,":c_city",c_city,
    SIZ(c_city),SQLT_STR, &pctx->c_city_len);
OCIBNDPL(pctx->curp1, pctx->c_state_bp[1], errhp,":c_state",c_state,
    SIZ(c_state), SQLT_STR, &pctx->c_state_len);
OCIBNDPL(pctx->curp1, pctx->c_zip_bp[1], errhp,":c_zip",c_zip,SIZ(c_zip),
    SQLT_STR, &pctx->c_zip_len);
OCIBNDPL(pctx->curp1, pctx->c_phone_bp[1], errhp,":c_phone",c_phone,
    SIZ(c_phone), SQLT_STR, &pctx->c_phone_len);
OCIBNDPL(pctx->curp1, pctx->c_since_bp[1], errhp,":c_since",&c_since,
    SIZ(OCIDate), SQLT_ODT, &pctx->c_since_len);
OCIBNDPL(pctx->curp1, pctx->c_credit_bp[1], errhp,":c_credit",c_credit,
    SIZ(c_credit),SQLT_CHR, &pctx->c_credit_len);
OCIBNDPL(pctx->curp1, pctx->c_credit_lim_bp[1], errhp,":c_credit_lim",
    ADR(c_credit_lim),SIZ(int), SQLT_INT, &pctx->c_credit_lim_len);
OCIBNDPL(pctx->curp1, pctx->c_discount_bp[1], errhp,":c_discount",
    ADR(c_discount),SIZ(c_discount), SQLT_FLT, &pctx->c_discount_len);
OCIBNDPL(pctx->curp1, pctx->c_balance_bp[1], errhp,":c_balance",
    ADR(c_balance), SIZ(double),SQLT_FLT, &pctx->c_balance_len);
OCIBNDPL(pctx->curp1, pctx->c_data_bp[1], errhp,":c_data",c_data,SIZ(c_data),
    SQLT_STR, &pctx->c_data_len);

/*
OCIBNDR(pctx->curp1, pctx->h_date_bp1, errhp,":h_date",h_date,SIZ(h_date),
    SQLT_STR, &pctx->h_date_ind, &pctx->h_date_len, &pctx->h_date_rc);
*/

OCIBNDPL(pctx->curp1, pctx->retries_bp[1], errhp,":retry",ADR(retries),
    SIZ(int), SQLT_INT, &pctx->retries_len);
OCIBNDPL(pctx->curp1, pctx->cr_date_bp[1], errhp,":cr_date",ADR(cr_date),
    SIZ(OCIDate),SQLT_ODT, &pctx->cr_date_len);

return (0);

```

```

}

int execstatus,errcode;

/*****
 * END BLOCK OF COMMON CODE
 *****/

int payment_tx(TPSVCINFO *rqst)
{
ub4 hlen;
ub4 sincelen;

    struct pay_inf *payment_p;
    payment_p = (struct pay_inf *) (rqst->data);
    MOVETO(w_id, payment_p);
    MOVETO(d_id, payment_p);
    MOVETO(c_id, payment_p);
    MOVETO(c_w_id, payment_p);
    MOVETO(c_d_id, payment_p);

    h_amount = (int)(payment_p->h_amount * 100);
    strcpy(c_last, payment_p->c_last);
    tx_count++;

#ifdef ACID
    time(timep);
    userlog("ACID PAYMENT Transaction Begun at %s\n", ctime(timep));
#endif

/*****
 * BEGIN BLOCK OF COMMON CODE
 *****/

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

    pctx->w_id_len = SIZ(w_id);
    pctx->d_id_len = SIZ(d_id);
    pctx->c_w_id_len = 0;
    pctx->c_d_id_len = 0;
    pctx->c_id_len = 0;
    pctx->h_amount_len = SIZ(h_amount);
    pctx->c_last_len = SIZ(c_last);
    pctx->w_street_1_len = 0;
    pctx->w_street_2_len = 0;
    pctx->w_city_len = 0;
    pctx->w_state_len = 0;
    pctx->w_zip_len = 0;
    pctx->d_street_1_len = 0;
    pctx->d_street_2_len = 0;
    pctx->d_city_len = 0;
    pctx->d_state_len = 0;
    pctx->d_zip_len = 0;
    pctx->c_first_len = 0;
    pctx->c_middle_len = 0;
    pctx->c_street_1_len = 0;
    pctx->c_street_2_len = 0;
    pctx->c_city_len = 0;
    pctx->c_state_len = 0;
    pctx->c_zip_len = 0;
    pctx->c_phone_len = 0;
    pctx->c_since_len = 0;

```

```

    pctx->c_credit_len = 0;
    pctx->c_credit_lim_len = 0;
    pctx->c_discount_len = 0;
    pctx->c_balance_len = sizeof(double);
    pctx->c_data_len = 0;
    pctx->h_date_len = 0;
    pctx->retries_len = SIZ(retries);
    pctx->cr_date_len = 7;

    if (c_id == 0) {
        bylastname = 1;
        execstatus=OCIStmtExecute(tpcsvc,pctx->curp1,errhp,1,0,
            NULLP(CONST OCISnapshot),NULLP(OCISnapshot),
            OCI_DEFAULT|OCI_COMMIT_ON_SUCCESS);
    } else {
        bylastname = 0;
        execstatus=OCIStmtExecute(tpcsvc,pctx->curp0,errhp,1,0,
            NULLP(CONST OCISnapshot),NULLP(OCISnapshot),
            OCI_DEFAULT|OCI_COMMIT_ON_SUCCESS);
    }

    if(execstatus != OCI_SUCCESS) {
        OCITransRollback(tpcsvc,errhp,OCI_DEFAULT);
        errcode = OCIERROR(errhp,execstatus);
        if(errcode == NOT_SERIALIZABLE) {
            retries++;
            goto retry;
        } else if (errcode == RECOVERR) {
            retries++;
            goto retry;
        } else if (errcode == SNAPSHOT_TOO_OLD) {
            retries++;
            goto retry;
        } else {
            fprintf(stderr,"%d] payment_tx: OCIERROR UNRECOVERABLE %d w_id:%d d_id:%d c_id:%d \n",
getpid(), errcode, w_id, d_id, c_id );
            return -1;
        }
    }

/*
    cvtdmyhms(cr_date,h_date);
*/
    hlen=SIZ(h_date);
    OCIERROR(errhp,OCIDateToText(errhp,&cr_date,
        (text*)FULLDATE,strlen(FULLDATE),(text*)0,0,&hlen,h_date));

/*
    cvtdmy(c_since,c_since_d);
*/
    sincelen=SIZ(c_since_d);
    OCIERROR(errhp,OCIDateToText(errhp,&c_since,
        (text*)SHORTDATE,strlen(SHORTDATE),(text*)0,0,&sincelen,c_since_d));

/*****
 * END BLOCK OF COMMON CODE
 *****/

    MOVEBACK(c_id, payment_p);
    payment_p->c_credit_lim = ((double)c_credit_lim) / 100;
    payment_p->c_discount = ((double)c_discount) / 100;
    payment_p->c_balance = c_balance / 100; /* convert to dollars & cents */

```

```
#if ACID
    time(timep);
    userlog("w_id %d, d_id %d, c_id %d, h_amount = %d, c_balance = %f\n",
           w_id, d_id, c_id, h_amount, c_balance);
    userlog("ACID PAYMENT Transaction completed at %s\n", ctime(timep));
#endif
```

```
    strcpy(payment_p->c_since, (char *)c_since_d);
    MOVECBACK(h_date, 20, payment_p);
    MOVECBACK(w_street_1, 21, payment_p);
    MOVECBACK(w_street_2, 21, payment_p);
    MOVECBACK(w_city, 21, payment_p);
    MOVECBACK(w_state, 3, payment_p);
    MOVECBACK(w_zip, 11, payment_p);
    MOVECBACK(d_street_1, 21, payment_p);
    MOVECBACK(d_street_2, 21, payment_p);
    MOVECBACK(d_city, 21, payment_p);
    MOVECBACK(d_state, 3, payment_p);
    MOVECBACK(d_zip, 11, payment_p);
    MOVECBACK(c_first, 17, payment_p);
    MOVECBACK(c_middle, 3, payment_p);
    MOVECBACK(c_last, 17, payment_p);
    MOVECBACK(c_street_1, 21, payment_p);
    MOVECBACK(c_street_2, 21, payment_p);
    MOVECBACK(c_city, 21, payment_p);
    MOVECBACK(c_state, 3, payment_p);
    MOVECBACK(c_zip, 11, payment_p);
    MOVECBACK(c_phone, 17, payment_p);
    MOVECBACK(c_credit, 3, payment_p);
    strncpy(payment_p->c_data, c_data, 201);
```

```
    return(0);
}
```

```
int PAYM(TPSVCINFO *rqst)
{
    if (payment_tx(rqst) )
        tpreturn(TPFAIL, 0, rqst->data, sizeof(struct pay_inf), 0);
    else
        tpreturn(TPSUCCESS, 0, rqst->data, sizeof(struct pay_inf), 0);
}
```

tpcc_srv_stock.c

```
/*
 * Copyright (c) 1994 by Sun Microsystems, Inc.
 */
```

```
#pragma ident "@(#)tpcso_srv_stock.c      1.6      95/04/12  SMI"
```

```
/*=====+
|      Copyright (c) 1994  Oracle Corp, Redwood Shores, CA      |
|      OPEN SYSTEMS PERFORMANCE GROUP                          |
|      All Rights Reserved                                     |
+=====+
| FILENAME
|   plsto.c
| DESCRIPTION
|   OCI version of STOCK LEVEL transaction in TPC-C benchmark.
+=====+*/
```

```
/* #include "ora_oci.h" */
#endifdef ORA_TPCC
```

```
# define ORA_TPCC
# include "tpcc.h"
#endif
```

```
#include <stdlib.h>
#include <signal.h>
#include <stdio.h>
#include <sys/types.h>
#include <sys/ipc.h>
#include <sys/msg.h>
```

```
/* Tuxedo */
#include "atmi.h"
#include "userlog.h"
```

```
static int tx_count = 0;
```

```
#define MOVETO(element, struct_name) element = struct_name -> element
#define MOVEBACK(element, struct_name) struct_name -> element = element
```

```
/* List of fields in stock */
/* This structure should be EXACTLY identical to the one declared in client.h */
/* List of fields in stock-level */
```

```
struct stock_inf {
    int w_id;
    int d_id;
    int threshold;
    int low_stock;
};
```

```
#ifndef PLSQLSTO
#define SQLTXT "BEGIN stocklevel.getstocklevel (:w_id, :d_id, :threshold, \
:low_stock); END;"
#else
#define SQLTXT "SELECT /*+ nocache (stok) */ count (DISTINCT s_i_id) \
FROM ordl, stok, dist \
WHERE d_id = :d_id AND d_w_id = :w_id AND \
d_id = ol_d_id AND d_w_id = ol_w_id AND \
ol_i_id = s_i_id AND ol_w_id = s_w_id AND \
s_quantity < :threshold AND \
ol_o_id BETWEEN (d_next_o_id - 20) AND (d_next_o_id - 1) \
order by ol_o_id desc"
```

```
/* query using functional index */
/*
```

```
#define SQLTXT "SELECT count (DISTINCT s_i_id) \
FROM ordl, stok, dist \
WHERE d_id = :d_id AND d_w_id = :w_id AND \
d_id = ol_d_id AND d_w_id = ol_w_id AND \
ol_o_id BETWEEN (d_next_o_id - 20) AND (d_next_o_id - 1) AND \
decode(SIGN(s_quantity - 21) , -1, s_w_id*100000 + s_i_id, NULL) \
= ol_w_id*100000 + ol_i_id AND \
s_quantity < :threshold;"
```

```
*/
```

```
#endif
```

```
struct stoctx {
    OCISmt *curs;
    OCIBind *w_id_bp;
```



```

    OCIBind *d_id_bp;
    OCIBind *threshold_bp;
#ifdef PLSQLSTO
    OCIBind *low_stock_bp;
#else
    OCIDefine *low_stock_bp;
#endif
    int norow;
};

typedef struct stoctx stoctx;
static stoctx *sctx;

static int w_id;
static int d_id;
static int threshold;
static int low_stock;
static int retries;
static int retries_serial;
static int retries_recoverr;
static int retries_snapshot;
/*
 * Initialize transaction
 */
int get_stock_tx_cnt()
{
    return tx_count;
}

int init_stock_tx()
{
    /******
     * BEGIN BLOCK OF COMMON CODE
     *****/

    text stmbuff[SQL_BUF_SIZE];
#ifdef MULTI_SVR
    /* For all servers - common routine to open/init session etc. */
    TPCinit();
#endif
    sctx = (stoctx *)malloc(sizeof(stoctx));
    memset(sctx,(char)0,sizeof(stoctx));
    sctx->norow = 0;

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

    /* bind variables */

    OCIBND(sctx->curs,sctx->w_id_bp,errhp, ":w_id", ADR(w_id),sizeof(int),
        SQLT_INT);
    OCIBND(sctx->curs,sctx->d_id_bp,errhp, ":d_id", ADR(d_id),sizeof(int),

```

```

        SQLT_INT);
    OCIBND(sctx->curs,sctx->threshold_bp,errhp, ":threshold", ADR(threshold),
        sizeof(int),SQLT_INT);
#ifdef PLSQLSTO
    OCIBND(sctx->curs,sctx->low_stock_bp,errhp,":low_stock" , ADR(low_stock),
        sizeof(int), SQLT_INT);
#else
    OCIDEFINE(sctx->curs,sctx->low_stock_bp,errhp, 1, ADR(low_stock),
        sizeof(int), SQLT_INT);
#endif

        return(0);

    /******
     * END BLOCK OF COMMON CODE
     *****/
}

/*
 * Function: do stocklevel transaction
 * Input is the stocklevel structure. Output is low_stock field
 */
int stocklevel_tx( TPSVCINFO *rqst )
{
    int err, execstatus,errcode;
    struct stock_inf *stocklevel_p;
    stocklevel_p = (struct stock_inf *) (rqst->data);

    MOVETO(w_id, stocklevel_p);
    MOVETO(d_id, stocklevel_p);
    MOVETO(threshold, stocklevel_p);
    /******
     * BEGIN BLOCK OF COMMON CODE
     *****/

    tx_count++;
retry:
    execstatus= OCIStmtExecute(tpcsvc,sctx->curs,errhp,1,0,0,0,
        OCI_COMMIT_ON_SUCCESS | OCI_DEFAULT);
    if (execstatus != OCI_SUCCESS)
    {
        errcode=OCIERROR(errhp,execstatus);
        OCITransCommit(tpcsvc,errhp,OCI_DEFAULT);
        if((errcode == NOT_SERIALIZABLE) || (errcode == RECOVERR)
            || (errcode == SNAPSHOT_TOO_OLD))
        {
            retries++;
            if (errcode == NOT_SERIALIZABLE)
                retries_serial++;
            else if (errcode == RECOVERR)
                retries_recoverr++;
            else retries_snapshot++;
            goto retry;
        } else {
            return -1;
        }
    }

    /******
     * END BLOCK OF COMMON CODE
     *****/

```

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

```
        MOVEBACK(low_stock, stocklevel_p);
        return(0);
    }
```

```
void cleanup_stock( int code)
{
    /* log off */
    if (sctx) free (sctx);

    exit(code);
}
```

```
int STOCK( TPSVCINFO *rqst)
{
    if(stocklevel_tx(rqst)) {
        tpreturn(TPFAIL, 0, rqst->data, sizeof(struct stock_inf), 0);
    } else {
        tpreturn(TPSUCCESS, 0, rqst->data, sizeof(struct stock_inf), 0);
    }
}
```

tpcc_srv_util.c

```
/*
 * Copyright (c) 1995 by Sun Microsystems, Inc.
 */
```

```
#pragma ident "@(#)tpcso_srv_util.c      1.17      97/01/02  SMI"
```

```
/*=====+
|      Copyright (c) 1995 Oracle Corp, Redwood Shores, CA      |
|      OPEN SYSTEMS PERFORMANCE GROUP                          |
|      All Rights Reserved                                     |
+=====*/
```

```
/* Common utility functions used by all tpcso_srv* programs */
```

```
#include <stdio.h>
#include <stdlib.h>
#include <sys/types.h>
#include <sys/file.h>
```

```
#include "ora_oci.h"
#include "ora_err.h"
```

```
FILE *vopen(fnam,mode)
char *fnam;
char *mode;
{
    FILE *fd;
```

```
#ifdef DEBUG
    fprintf(stderr, "tkvopen() fnam: %s, mode: %s\n", fnam, mode);
#endif
```

```
    fd = fopen((char *)fnam,(char *)mode);
    if (!fd){
        fprintf(stderr," fopen on %s failed %d\n",fnam,fd);
        exit(-1);
    }
}
```

```
    return(fd);
}
```

```
/*
int sqlfile(fnam,linebuf)
char *fnam;
text *linebuf;
*/
int sqlfile (char *fnam, text *linebuf)
{
    FILE *fd;
    int nulpt = 0;
```

```
#ifdef DEBUG
    fprintf(stderr, "sqlfile() fnam: %s, linebuf: %#x\n", fnam, linebuf);
#endif
```

```
    fd = vopen(fnam,"r");
    while (fgets((char *)linebuf+nulpt, SQL_BUF_SIZE,fd))
    {
        nulpt = strlen((char *)linebuf);
    }
    return(nulpt);
}
```

```
void vgetdate (unsigned char *oradt)
{
    struct tm *loctime;
    time_t int_time;
```

```
    struct ORADATE {
        unsigned char    century;
        unsigned char    year;
        unsigned char    month;
        unsigned char    day;
        unsigned char    hour;
        unsigned char    minute;
        unsigned char    second;
    } Date;
    int century;
    int cnvrtOK;
```

```
/* assume convert is successful */
cnvrtOK = 1;
```

```
/* get the current date and time as an integer */
time( &int_time);
```

```
/* Convert the current date and time into local time */
loctime = localtime( &int_time);
```

```
century = (1900+loctime->tm_year) / 100;
```

```
Date.century = (unsigned char)(century + 100);
if (Date.century < 119 || Date.century > 120) cnvrtOK = 0;
Date.year = (unsigned char)(loctime->tm_year+100);
if (Date.year < 100 || Date.year > 199) cnvrtOK = 0;
Date.month = (unsigned char)(loctime->tm_mon + 1);
if (Date.month < 1 || Date.month > 12) cnvrtOK = 0;
Date.day = (unsigned char)loctime->tm_mday;
if (Date.day < 1 || Date.day > 31) cnvrtOK = 0;
```

```
Date.hour = (unsigned char)(loctime->tm_hour + 1);
if (Date.hour < 1 || Date.hour > 24) cnvrtOK = 0;
Date.minute= (unsigned char)(loctime->tm_min + 1);
if (Date.minute < 1 || Date.minute > 60) cnvrtOK = 0;
Date.second= (unsigned char)(loctime->tm_sec + 1);
if (Date.second < 1 || Date.second > 60) cnvrtOK = 0;

if (cnvrtOK)
    memcpy(oradt,&Date,7);
else
    *oradt = '\0';

return;

}
```

```
void cvtdmy (unsigned char *oradt, char *outdate)
{
    struct ORADATE {
        unsigned char  century;
        unsigned char  year;
        unsigned char  month;
        unsigned char  day;
        unsigned char  hour;
        unsigned char  minute;
        unsigned char  second;
    } Date;

    int day,month,year;

    memcpy(&Date,oradt,7);

    year = (Date.century-100)*100 + Date.year-100;
    month = Date.month;
    day = Date.day;
    sprintf(outdate,"%02d-%02d-%4d",day,month,year);

    return;
}
```

```
void cvtdmyhms (unsigned char *oradt, char *outdate)
{
    struct ORADATE {
        unsigned char  century;
        unsigned char  year;
        unsigned char  month;
        unsigned char  day;
        unsigned char  hour;
        unsigned char  minute;
        unsigned char  second;
    } Date;

    int day,month,year;
    int hour,min,sec;

    memcpy(&Date,oradt,7);
```

```
    year = (Date.century-100)*100 + Date.year-100;
    month = Date.month;
    day = Date.day;
    hour = Date.hour - 1;
    min = Date.minute - 1;
    sec = Date.second - 1;

    sprintf(outdate,"%02d-%02d-%4d %02d:%02d:%02d",
        day,month,year,hour,min,sec);

    return;
}
```

```
ora_err.h
/*
 * Copyright (c) 1994 by Sun Microsystems, Inc.
 */

#ifndef ORA_ERR_H
#define ORA_ERR_H

#pragma ident "(#)ora_err.h 1.4      95/09/14  SMI"
/*
 * this kludge is required because Oracle does not provide
 * symbolic constants in a header file
 */

#define EDEADLOK      60
#define SQLNOTFOUND   1403
#define COLUMN_NULL   -1405
#define EDUPLICATE    -1
#define RECOVERR      -10
#define IRRRECERR     -20
#define NOERR         111
#define DEL_ERROR     -666
#define DEL_DATE_LEN  7
#define SQL_BUF_SIZE  8192

#endif ORA_ERR_H
```

```
ora_oci.h
#pragma ident "(#)oci.h 1.1      95/09/14  SMI"

/*=====+
|      Copyright (c) 1994 Oracle Corp, Redwood Shores, CA      |
|      OPEN SYSTEMS PERFORMANCE GROUP                          |
|      All Rights Reserved                                      |
|=====+
| FILENAME
| tpcopl.h
| DESCRIPTION
| Header file for TPC-C transactions in PL/SQL.
|=====+*/

#ifndef TPCCPL_H
#define TPCCPL_H

#include <stdio.h>
#include <ctype.h>
```

```
#include <string.h>

#include <oratypes.h>
#include <oci.h>
/****
#ifdef __STDC__
#include <ociapr.h>
#else
#include <ocikpr.h>
#endif
****/

typedef struct cda_def csrdef;
typedef struct cda_def ldadef;

#ifdef DISCARD
# define DISCARD (void)
#endif

#ifdef sword
# define sword int
#endif

#define VER7      2

#define NA      -1  /* ANSI SQL NULL */
#define NLT      1  /* length for string null terminator */
#define DEADLOCK 60  /* ORA-00060: deadlock */
#define NO_DATA_FOUND 1403 /* ORA-01403: no data found */
#define NOT_SERIALIZABLE 8177 /* ORA-08177: transaction not serializable */
#define SNAPSHOT_TOO_OLD 1555

#ifdef NULLP
# define NULLP (void *)NULL
#endif /* NULLP */

#define ADR(object) ((ub1 *)&(object))
#define SIZ(object) ((sword)sizeof(object))

typedef char date[24+NLT];
typedef char varchar2;

#define OCIEERROR(errp,function)\
    ocierror(__FILE__,__LINE__,(errp),(function));

#define OCIBND(stmp, bndp, errp, sqlvar, progv, progvl, ftype)\
    ocierror(__FILE__,__LINE__,(errp),\
        OCIHandleAlloc((stmp),(dvoid*)&(bndp),OCI_HTYPE_BIND,0,(dvoid**)0));\
    ocierror(__FILE__,__LINE__,(errp),\
        OCIBindByName((stmp),&(bndp),(errp),(text*)(sqlvar),strlen((sqlvar)),\
            (progv),(progvl),(ftype),(indp),(alen),(arcodes),0,0,OCI_DEFAULT));

#define OCIBNDRAD(stmp,bndp,errp,sqlvar,progvl,ftype,indp,ctxp,cbf_nodata,cbf_data)\
    ocierror(__FILE__,__LINE__,(errp),\
        OCIBindByName((stmp),&(bndp),(errp),(text*)(sqlvar),\
            strlen((sqlvar)),0,(progvl),(ftype),\
            indp,0,0,0,OCI_DATA_AT_EXEC));\
    ocierror("yufei",__LINE__,(errp),\
        OCIBindDynamic((bndp),(errp),(ctxp),(cbf_nodata),(ctxp),(cbf_data)));
```

```
#define OCIBNDRA(stmp,bndp,errp,sqlvar,progvl,ftype,indp,alen,arcodes)\
    ocierror(__FILE__,__LINE__,(errp),\
        OCIHandleAlloc((stmp),(dvoid*)&(bndp),OCI_HTYPE_BIND,0,(dvoid**)0));\
    ocierror(__FILE__,__LINE__,(errp),\
        OCIBindByName((stmp),&(bndp),(errp),(text*)(sqlvar),strlen((sqlvar)),\
            (progv),(progvl),(ftype),(indp),(alen),(arcodes),0,0,OCI_DEFAULT));

/*
    ocierror(__FILE__,__LINE__,(errp),\
        OCIBindArrayOfStruct((bndp),(errp),(progvl),sizeof((indp)[0]),\
            sizeof((alen)[0]),sizeof((arcodes)[0]))); */

#define OCIBNDR(stmp,bndp,errp,sqlvar,progvl,ftype,indp,alen,arcodes)\
    ocierror(__FILE__,__LINE__,(errp),\
        OCIHandleAlloc((stmp),(dvoid*)&(bndp),OCI_HTYPE_BIND,0,(dvoid**)0));\
    ocierror(__FILE__,__LINE__,(errp),\
        OCIBindByName((stmp),&(bndp),(errp),(text*)(sqlvar),strlen((sqlvar)),\
            (progv),(progvl),(ftype),(indp),(alen),(arcodes),0,0,OCI_DEFAULT));

#define OCIBNDRAA(stmp,bndp,errp,sqlvar,progvl,ftype,indp,alen,arcodes,ms,cu)\
    ocierror(__FILE__,__LINE__,(errp),\
        OCIHandleAlloc((stmp),(dvoid*)&(bndp),OCI_HTYPE_BIND,0,(dvoid**)0));\
    ocierror(__FILE__,__LINE__,(errp),\
        OCIBindByName((stmp),&(bndp),(errp),(text*)(sqlvar),strlen((sqlvar)),\
            (progv),(progvl),(ftype),(indp),(alen),(arcodes),(ms),(cu),OCI_DEFAULT));
/*
    ocierror(__FILE__,__LINE__,(errp),\
        OCIBindArrayOfStruct((bndp),(errp),(progvl),sizeof((indp)[0]),\
            sizeof((alen)[0]),sizeof((arcodes)[0]))); */

#define OCIDEFINE(stmp,dfnp,errp,pos,progvl,ftype)\
    OCIDefineByPos((stmp),&(dfnp),(errp),(pos),(progv),(progvl),(ftype),\
        0,0,0,OCI_DEFAULT)

#define OCIDEF(stmp,dfnp,errp,pos,progvl,ftype)\
    OCIHandleAlloc((stmp),(dvoid*)&(dfnp),OCI_HTYPE_DEFINE,0,\
        (dvoid**)0);\
    OCIDefineByPos((stmp),&(dfnp),(errp),(pos),(progv),(progvl),\
        (ftype),NULL,NULL,NULL,OCI_DEFAULT);\

#define OCIDFNRA(stmp,dfnp,errp,pos,progvl,ftype,indp,alen,arcodes)\
    OCIHandleAlloc((tpcenv),(dvoid*)&(dfnp),OCI_HTYPE_DEFINE,0,\
        (dvoid**)0);\
    OCIDefineByPos((stmp),&(dfnp),(errp),(pos),(progv),\
        (progvl),(ftype),(indp),(alen),\
        (arcodes),OCI_DEFAULT);\

#define OBNDRV(lda,cursor,sqlvar,progvl,ftype)\
    if (obndrv((cursor),(text*)(sqlvar),NA,(ub1*)(progv),(progvl),(ftype),NA,\
        (sb2 *)0, (text *)0, NA, NA))\
        {errrpt(lda,cursor,sqlvar);return(-1);} \
    else\
        DISCARD 0

#define OBNDRA(lda,cursor,sqlvar,progvl,ftype,indp,alen,arcodes)\
    if (obndra((cursor),(text*)(sqlvar),NA,(ub1*)(progv),(progvl),(ftype),NA,\
        (indp),(alen),(arcodes),(ub4*)0,(ub4*)0,(text*)0,NA,NA))\
        {errrpt(lda,cursor,sqlvar);return(-1);} \
    else\
        DISCARD 0

#define OBNDRAA(lda,cursor,sqlvar,progvl,ftype,indp,alen,arcodes,ms,cs)\
    if (obndraa((cursor),(text*)(sqlvar),NA,(ub1*)(progv),(progvl),(ftype),NA,\
```

```

(indp),(alen),(arcode),(ub4)(ms),(ub4*)(cs),(text*)0,NA,NA))\
{errrpt(lda,cursor,sqlvar);return(-1);} \
else\
DISCARD 0

#define ODEFIN(lda,cursor,pos,buf,buf1,ftype,scale,indp,fmt,fmtl,fmtt,rlen,rcode)\
if (odef((cursor),(pos),(ub1*)(buf),(buf1),(ftype),(scale),(indp),\
(text*)(fmt),(fmtl),(fmtt),(rlen),(rcode)))\
{errrpt(lda,cursor,(text *)ftype);return(-1);} \
else\
DISCARD 0

#define OEXFET(lda,cursor,nrows,cancel,exact)\
if (oexfet((cursor),(nrows),(cancel),(exact)))\
{if ((cursor)->rc == 1403) DISCARD 0; \
else if (errrpt(lda,cursor,(text *)"OEXFET")==RECOVERR) \
{orol(lda);return(RECOVERR);} \
else {orol(lda);return(-1);} }\
else\
DISCARD 0

#define OOPEN(lda,cursor)\
if (oopen((cursor),(lda),(text *)0,NA,NA,(text *)0,NA))\
{errrpt(lda,cursor,(text *)"OOPEN");return(-1);} \
else\
DISCARD 0

#define OPARSE(lda,cursor,sqlstm,sql1,deflg,lngflg)\
if (oparse((cursor),(sqlstm),(sb4)(sql1),(deflg),(ub4)(lngflg)))\
{errrpt(lda,cursor,sqlstm);return(-1);} \
else\
DISCARD 0

#define OFEN(lda,cursor,nrows)\
if (ofen((cursor),(nrows)))\
{if (errrpt(lda,cursor,(text *)"OFEN")==RECOVERR) \
{orol(lda);return(RECOVERR);} \
else {orol(lda);return(-1);} }\
else\
DISCARD 0

#define OEXEC(lda,cursor)\
if (oexec((cursor)))\
{if (errrpt(lda,cursor,(text *)"OEXEC")==RECOVERR) \
{orol(lda);return(RECOVERR);} \
else {orol(lda);return(-1);} }\
else\
DISCARD 0

#define OCOM(lda,cursor)\
if (ocom((lda))) \
{errrpt(lda,cursor,(text *)"OCOM");orol(lda);return(-1);} \
else\
DISCARD 0

#define OEXN(lda,cursor,itors,rowoff)\
if (oexn((cursor),(itors),(rowoff)) \
{if (errrpt(lda,cursor,(text *)"OEXN")==RECOVERR) \
{orol(lda);return(RECOVERR);} \
else {orol(lda);return(-1);} }\

```

```

else\
DISCARD 0

#endif

/* additions done for 814 -shishir */
#define OCI_ATTR_SVRCTXT OCI_ATTR_SERVER
#define OCI_ATTR_USERCTXT OCI_ATTR_SESSION
#define OCI_ATTR_ROWCNT OCI_ATTR_ROW_COUNT
#define OCI_HTYPE_ERR OCI_HTYPE_ERROR
#define OCI_HTYPE_STM OCI_HTYPE_STMT

tpcc.h
/*
 * $Header: tpcc.h 7030100.1 95/07/19 15:10:55 plai Generic<base> $ Copyr (c) 1993 Oracle
 */
/*=====+
| Copyright (c) 1995 Oracle Corp, Redwood Shores, CA |
| OPEN SYSTEMS PERFORMANCE GROUP |
| All Rights Reserved |
+=====+
| FILENAME
| tpcc.h
| DESCRIPTION
| Include file for TPC-C benchmark programs.
+=====*/

#ifndef TPCC_H
#define TPCC_H

#ifndef FALSE
# define FALSE 0
#endif

#ifndef TRUE
# define TRUE 1
#endif

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

#ifndef boolean
#define boolean int
#endif

#include <oratypes.h>
#include <oci.h>
#include <ocidfn.h>
/*
#ifdef __STDC__
#include "ociapr.h"
#else
#include "ocikpr.h"
#endif
*/

typedef struct cda_def csrdef;
typedef struct cda_def ldadef;

```

```

/* TPC-C transaction functions */
#ifdef TUXEDO
extern int TPCinit ();
extern int TPCnew ();
extern int TPCpay ();
extern int TPCord ();
extern int TPCdel ();
extern int TPCsto ();
extern void TPCexit ();
extern int TPCdumpinit ();
extern void TPCdumpnew ();
extern void TPCdumppay ();
extern void TPCdumpord ();
extern void TPCdumpdel ();
extern void TPCdumpsto ();
extern void TPCdumpexit ();
/* extern void userlog(char* fntp, ...); */
#endif

```

```

/* Error codes */

```

```

#define RECOVERR -10
#define IRRECERR -20
#define NOERR 111
#define DEL_ERROR -666
#define DEL_DATE_LEN 77
#define NDISTS 10
#define NITEMS 15
#define SQL_BUF_SIZE 8192

```

```

#define FULLDATE "dd-mon-yy.hh24:mi:ss"
#define SHORTDATE "dd-mm-yyyy"

```

```

#define DELRT 80.0

```

```

#ifdef TUX
extern int tkvcninit ();
extern int tkvepinit ();
extern int tkvcoint ();
extern int tkvcdinit ();
extern int tkvesinit ();

```

```

extern int tkvcn ();
extern int tkvep ();
extern int tkvco ();
extern int tkvcd ();
extern int tkves ();

```

```

extern void tkvcndone ();
extern void tkvepdone ();
extern void tkvcodone ();
extern void tkvcdone ();
extern void tkvesdone ();

```

```

extern int tkvcss (); /* for alter session to get memory size and trace */

```

```

extern boolean multitranx;
extern int ord_init;
#endif

```

```

extern void errrpt ();
extern int ocierror(char *fname, int lineno, OCIError *errhp, sword status);
extern int sqlfile(char *fname, text *linebuf);

```

```

extern FILE *Ifp;
extern FILE *fopen ();
extern int proc_no;
extern int doid[];

```

```

extern int execstatus;
extern int errcode;

```

```

#ifdef TUX
extern OCIEnv *tpcenv;
extern OCIServer *tpcsrv;
extern OCIError *errhp;
extern OCISvcCtx *tpcsvc;
extern OCISession *tpcusr;
extern OCISmt *curntest;
#endif

```

```

/* The bind and define handles for each transaction are
   included in their respective header files. */

```

```

extern OCIEnv *tpcenv;
extern OCIServer *tpcsrv;
extern OCIError *errhp;
extern OCISvcCtx *tpcsvc;
extern OCISession *tpcusr;
extern OCISmt *curi;

```

```

extern char *uid;
extern char *pwd;

```

```

/* for stock-level transaction */

```

```

extern int w_id;
extern int d_id;
extern int c_id;
extern int threshold;
extern int low_stock;

```

```

/* for delivery transaction */

```

```

extern int del_o_id[10];
extern int carrier_id;
extern double qtime;
extern int retries;
extern int retries_serial;
extern int retries_recover;
extern int retries_snapshot;

```

```

/* for order-status transaction */

```

```

extern int bylastname;
extern char c_last[17];
extern char c_first[17];
extern char c_middle[3];

```

```

extern double c_balance;
extern int o_id;
extern text o_entry_d[20];
extern int o_carrier_id;
extern int o_ol_cnt;
extern int ol_supply_w_id[15];
extern int ol_i_id[15];
extern int ol_quantity[15];
extern int ol_amount[15];
ub4 ol_del_len[15];
extern text ol_delivery_d[15][11];
/* xnie - begin */
extern OCIRowid *o_rowid;
/* xnie - end */

/* for payment transaction */

extern int c_w_id;
extern int c_d_id;
extern int h_amount;
extern char w_street_1[21];
extern char w_street_2[21];
extern char w_city[21];
extern char w_state[3];
extern char w_zip[10];
extern char d_street_1[21];
extern char d_street_2[21];
extern char d_city[21];
extern char d_state[3];
extern char d_zip[10];
extern char c_street_1[21];
extern char c_street_2[21];
extern char c_city[21];
extern char c_state[3];
extern char c_zip[10];
extern char c_phone[17];
extern text c_since_d[11];
extern char c_credit[3];
extern int c_credit_lim;
extern float c_discount;
extern char c_data[201];
extern text h_date[20];

/* for new order transaction */

#ifdef TUX
extern int nol_i_id[15];
extern int nol_supply_w_id[15];
extern int nol_quantity[15];
extern int nol_quant10[15];
extern int nol_quant19[15];
extern int nol_ytdqty[15];
extern int nol_amount[15];
extern int o_all_local;
extern float w_tax;
extern float d_tax;
extern float total_amount;
extern char i_name[15][25];
extern int i_name_strlen[15];
extern ub2 i_name_strlen_len[15];
extern ub2 i_name_strlen_rcode[15];
extern ub4 i_name_strlen_csize;

```

```

extern int s_quantity[15];
#ifdef 0
extern char brand_gen[15];
#endif
extern ub2 brand_gen_len[15];
extern ub2 brand_gen_rcode[15];
extern ub4 brand_gen_csize;
extern int i_price[15];
extern char brand_generic[15][1];
extern int status;
extern int tracelevel;

/* Miscellaneous */
extern OCIDate cr_date;
extern OCIDate c_since;
extern OCIDate o_entry_d_base;
extern OCIDate ol_d_base[15];

#endif

#ifdef DISCARD
# define DISCARD (void)
#endif

#ifdef sword
# define sword int
#endif

#define VER7      2

#define NA      -1  /* ANSI SQL NULL */
#define NLT      1  /* length for string null terminator */
#define DEADLOCK 60 /* ORA-00060: deadlock */
#define NO_DATA_FOUND 1403 /* ORA-01403: no data found */
#define NOT_SERIALIZABLE 8177 /* ORA-08177: transaction not serializable */
#define SNAPSHOT_TOO_OLD 1555 /* ORA-01555: snapshot too old */

#ifdef NULLP
# define NULLP(x) (x *)NULL
#endif /* NULLP */

#define ADR(object) ((ub1 *)&(object))
#define SIZ(object) ((sword)sizeof(object))

typedef char date[24+NLT];
typedef char varchar2;

#define min(x,y) (((x) < (y)) ? (x) : (y))

#define OCIERROR(errp,function)\
    ocierror(__FILE__, __LINE__, (errp), (function));

#define OCIBND(stmp, bndp, errp, sqlvar, prog, progvl, ftype)\
    ocierror(__FILE__, __LINE__, (errp), \
        OCIHandleAlloc((stmp), (dvoid **)&(bndp), OCI_HTYPE_BIND, 0, (dvoid **)0)); \
    ocierror(__FILE__, __LINE__, (errp), \
        OCIBindByName((stmp), &(bndp), (errp), \
            (text *)&(sqlvar), strlen((sqlvar)), \
            (prog), (progvl), (ftype), 0, 0, 0, 0, OCI_DEFAULT));

```

```

/* bind arrays for sql */
#define OCIBNDRA(stmp,bndp,errp,sqlvar,progv,progv1,ftype,indp,alen,arcode) \
    DISCARD ocierror(__FILE__, __LINE__, (errp), \
        OCIHandleAlloc((stmp),(dvoid**)&(bndp),OCI_HTYPE_BIND,0,(dvoid**)0)); \
    DISCARD ocierror(__FILE__, __LINE__, (errp), \
        OCIBindByName((stmp),&(bndp),(errp),(text *)(sqlvar),strlen((sqlvar)),\
            (progv),(progv1),(ftype),(indp),(alen),(arcode),0,0,OCI_DEFAULT));

/* use with callback data */
#define OCIBNDRAD(stmp,bndp,errp,sqlvar,progv1,ftype,indp,ctxp,\
    cbf_nodata,cbf_data) \
    DISCARD ocierror(__FILE__, __LINE__, (errp), \
        OCIHandleAlloc((stmp),(dvoid**)&(bndp),OCI_HTYPE_BIND,0,(dvoid**)0)); \
    DISCARD ocierror(__FILE__, __LINE__, (errp), \
        OCIBindByName((stmp),&(bndp),(errp),(text *)(sqlvar), \
            strlen((sqlvar)),0,(progv1),(ftype), \
            indp,0,0,0,OCI_DATA_AT_EXEC)); \
    DISCARD ocierror(__FILE__, __LINE__, (errp), \
        OCIBindDynamic((bndp),(errp),(ctxp),(cbf_nodata),(ctxp),(cbf_data)));

/* bind in/out for plsql without indicator and rcode */
#define OCIBNDPL(stmp,bndp,errp,sqlvar,progv,progv1,ftype,alen) \
    DISCARD ocierror(__FILE__, __LINE__, (errp), \
        OCIHandleAlloc((stmp),(dvoid**)&(bndp),OCI_HTYPE_BIND,0,(dvoid**)0)); \
    DISCARD ocierror(__FILE__, __LINE__, (errp), \
        OCIBindByName((stmp),&(bndp),(errp),(CONST text *)(sqlvar), \
            (sb4)strlen((CONST char *)(sqlvar)), (dvoid*)(progv),(progv1),(ftype),\
            NULLP(dvoid),(alen), NULLP(ub2), 0,NULLP(ub4),OCI_DEFAULT));

/* bind in values for plsql with indicator and rcode */
#define OCIBNDR(stmp,bndp,errp,sqlvar,progv,progv1,ftype,indp,alen,arcode) \
    DISCARD ocierror(__FILE__, __LINE__, (errp), \
        OCIHandleAlloc((stmp),(dvoid**)&(bndp),OCI_HTYPE_BIND,0,(dvoid**)0)); \
    DISCARD ocierror(__FILE__, __LINE__, (errp), \
        OCIBindByName((stmp),&(bndp),(errp),(text *)(sqlvar),strlen((sqlvar)),\
            (progv),(progv1),(ftype),(indp),(alen),(arcode),0,0, \
            OCI_DEFAULT));

/* bind in/out for plsql arrays witout indicator and rcode */
#define OCIBNDPLA(stmp,bndp,errp,sqlvar,progv,progv1,ftype,alen,ms,cu) \
    DISCARD ocierror(__FILE__, __LINE__, (errp), \
        OCIHandleAlloc((stmp),(dvoid**)&(bndp),OCI_HTYPE_BIND,0,(dvoid**)0)); \
    DISCARD ocierror(__FILE__, __LINE__, (errp), \
        OCIBindByName((stmp),&(bndp),(errp),(CONST text *)(sqlvar), \
            (sb4)strlen((CONST char *) (sqlvar)),(void *)(progv), \
            (progv1),(ftype),NULL,(alen),NULL,(ms),(cu),OCI_DEFAULT));

/* bind in/out values for plsql with indicator and rcode */
#define OCIBNDRAA(stmp,bndp,errp,sqlvar,progv,progv1,ftype,indp,alen,arcode,\
    ms,cu) \
    ocierror(__FILE__, __LINE__, (errp), \
        OCIHandleAlloc((stmp),(dvoid**)&(bndp),OCI_HTYPE_BIND,0,(dvoid**)0)); \
    ocierror(__FILE__, __LINE__, (errp), \
        OCIBindByName((stmp),&(bndp),(errp),(text *)(sqlvar),strlen((sqlvar)),\
            (progv),(progv1),(ftype),(indp),(alen),(arcode),(ms),(cu),OCI_DEFAULT));

#define OCIDEFINE(stmp,dfnp,errp,pos,progv,progv1,ftype)\
    OCIDefineByPos((stmp),&(dfnp),(errp),(pos),(progv),(progv1),(ftype),\
        0,0,0,OCI_DEFAULT);

```

```

#define OCIDEF(stmp,dfnp,errp,pos,progv,progv1,ftype) \
    OCIHandleAlloc((stmp),(dvoid**)&(dfnp),OCI_HTYPE_DEFINE,0,\
        (dvoid**)0);\
    OCIDefineByPos((stmp),&(dfnp),(errp),(pos),(progv),(progv1),\
        (ftype),NULL,NULL,NULL,OCI_DEFAULT);\

#define OCIDFNRA(stmp,dfnp,errp,pos,progv,progv1,ftype,indp,alen,arcode) \
    OCIHandleAlloc((stmp),(dvoid**)&(dfnp),OCI_HTYPE_DEFINE,0,\
        (dvoid**)0);\
    OCIDefineByPos((stmp),&(dfnp),(errp),(pos),(progv),\
        (progv1),(ftype),(indp),(alen),\
        (arcode),OCI_DEFAULT);

#define OCIDFNDYN(stmp,dfnp,errp,pos,progv,progv1,ftype,indp,ctxp,cbf_data) \
    ocierror(__FILE__, __LINE__, (errp), \
        OCIHandleAlloc((stmp),(dvoid**)&(dfnp),OCI_HTYPE_DEFINE,0,\
            (dvoid**)0)); \
    ocierror(__FILE__, __LINE__, (errp), \
        OCIDefineByPos((stmp),&(dfnp),(errp),(pos),(progv), (progv1),(ftype),\
            (indp),NULL,NULL, OCI_DYNAMIC_FETCH)); \
    ocierror(__FILE__, __LINE__, (errp), \
        OCIDefineDynamic((dfnp),(errp),(ctxp),(cbf_data)));

/* New order */

struct newinstruct {
    int w_id;
    int d_id;
    int c_id;
    int ol_i_id[15];
    int ol_supply_w_id[15];
    int ol_quantity[15];
};

struct newoutstruct {
    int terror;
    int o_id;
    int o_ol_cnt;
    char c_last[17];
    char c_credit[3];
    float c_discount;
    float w_tax;
    float d_tax;
    char o_entry_d[20];
    float total_amount;
    char i_name[15][25];
    int s_quantity[15];
    char brand_generic[15];
    float i_price[15];
    float ol_amount[15];
    char status[26];
    int retry;
};

struct newstruct {
    struct newinstruct newin;

```



```
    struct newoutstruct newout;
};
```

```
/* Payment */
```

```
struct payinstruct {
    int w_id;
    int d_id;
    int c_w_id;
    int c_d_id;
    int c_id;
    int bylastname;
    int h_amount;
    char c_last[17];
};
```

```
struct payoutstruct {
    int terror;
    char w_street_1[21];
    char w_street_2[21];
    char w_city[21];
    char w_state[3];
    char w_zip[10];
    char d_street_1[21];
    char d_street_2[21];
    char d_city[21];
    char d_state[3];
    char d_zip[10];
    int c_id;
    char c_first[17];
    char c_middle[3];
    char c_last[17];
    char c_street_1[21];
    char c_street_2[21];
    char c_city[21];
    char c_state[3];
    char c_zip[10];
    char c_phone[17];
    char c_since[11];
    char c_credit[3];
    double c_credit_lim;
    float c_discount;
    double c_balance;
    char c_data[201];
    char h_date[20];
    int retry;
};
```

```
struct paystruct {
    struct payinstruct payin;
    struct payoutstruct payout;
};
```

```
/* Order status */
```

```
struct ordinstrcut {
    int w_id;
    int d_id;
    int c_id;
    int bylastname;
```

```
    char c_last[17];
};
```

```
struct ordoutstruct {
    int terror;
    int c_id;
    char c_last[17];
    char c_first[17];
    char c_middle[3];
    double c_balance;
    int o_id;
    char o_entry_d[20];
    int o_carrier_id;
    int o_ol_cnt;
    int ol_supply_w_id[15];
    int ol_i_id[15];
    int ol_quantity[15];
    float ol_amount[15];
    char ol_delivery_d[15][11];
    int retry;
};
```

```
struct ordstruct {
    struct ordinstrcut ordin;
    struct ordoutstruct ordout;
};
```

```
/* Delivery */
```

```
struct delinstrcut {
    int w_id;
    int o_carrier_id;
    double qtime;
    int in_timing_int;
    int plsqflflag;
};
```

```
struct deloutstruct {
    int terror;
    int retry;
};
```

```
struct delstruct {
    struct delinstrcut delin;
    struct deloutstruct delout;
};
```

```
/* Stock level */
```

```
struct stoinstruct {
    int w_id;
    int d_id;
    int threshold;
};
```

```
struct stooutstruct {
    int terror;
    int low_stock;
    int retry;
};
```

```

struct stostruct {
    struct stoinstruct stoin;
    struct stooutstruct stoout;
};

/* Structure of a message request passed on the msg-queue */
struct msggh_req {
    long    type;          /* Type of message */
    struct {
        int    len;        /* Length of message */
        int    client_id;   /* Id of client sending this msg */
        int    result_qid;  /* Result of xact goes on this queue */
        union {
            struct newstruct msggh_newo;
            struct paystruct msggh_paym;
            struct ordstruct msggh_ords;
            struct delstruct msggh_del;
            struct stostruct msggh_stock;
        } msggh_un;
    } msggh_msg;
};

extern struct msggh_req message;

#define header      message.msggh_msg
#define neworder    message.msggh_msg.msggh_un.msggh_newo
#define payment     message.msggh_msg.msggh_un.msggh_paym
#define ordstat     message.msggh_msg.msggh_un.msggh_ords
#define delivery    message.msggh_msg.msggh_un.msggh_del
#define stocklevel  message.msggh_msg.msggh_un.msggh_stock

extern char blank_mesg[];

/* Message keys for servers */
#define NEWO_MSGKEY      10000
#define PAYM_MSGKEY     20000
#define ORDS_MSGKEY     30000
#define STOCK_MSGKEY    40000
#define DEL_MSGKEY      50000

#define MAX_USERS      200      /* Max. number of drivers */

#endif

```

APPENDIX B: DATABASE DESIGN

addfile.sh

```
#!/bin/sh
# $1 = tablespace name
# $2 = filename
# $3 = size
# $4 = temporary ts (1) or not (0)
# global variable $tpcc_listfiles, does not execute sql
```

```
if expr x$tpcc_listfiles = xt > /dev/null; then
    echo $2 $3 >> $tpcc_bench/files.dat
    exit 0
fi
```

```
if expr $4 = 1 > /dev/null; then
    altersql="alter tablespace $1 add tempfile '$2' size $3 reuse;"
else
    altersql="alter tablespace $1 add datafile '$2' size $3 reuse autoextend on;"
fi
```

```
$tpcc_sqlplus $tpcc_user_pass <<!
    spool addfile_$1.log
    set echo on
    $altersql
    set echo off
    spool off
    exit ;
!
```

addlog.sh

```
#!/bin/sh

sqlplus "/" as sysdba" << !
alter database add logfile member '/export/home/oracle/tpcc_disks_12node_dict/log_$1_$2_m' to group $3;
quit;
!
```

addts.sh

```
#!/bin/sh
# $1 = tablespace name
# $2 = filename
# $3 = size
# $4 = uniform size
# $5 = block size
# $6 = temporary ts (1) or not (0)
# $7 = bitmapped manage (t) or not (f) or (d) for dictionary
# global variable $tpcc_listfiles, does not execute sql
```

```
if expr x$tpcc_listfiles = xt > /dev/null; then
    echo $2 $3 >> $tpcc_bench/files.dat
    exit 0
fi
```

```
if expr $5 = auto > /dev/null; then
    bssql=
else
```

```
    bssql="blocksize $5"
```

```
fi
```

```
if expr $6 = 1 > /dev/null; then
    createsql="create temporary tablespace $1 tempfile '$2' size $3 reuse extent management local uniform size $4;"
else
    if expr x$7 = xt > /dev/null; then
        createsql="create tablespace $1 datafile '$2' size $3 reuse extent management local uniform size $4 segment space
management auto $bssql nologging ;"
    else
        if expr x$7 = xd > /dev/null; then
            createsql="create tablespace $1 datafile '$2' size $3 reuse extent management dictionary nologging $bssql;"
        else
            createsql="create tablespace $1 datafile '$2' size $3 reuse extent management local uniform size $4 segment
space management manual $bssql nologging ;"
        fi
    fi
fi
```

```
$tpcc_sqlplus $tpcc_user_pass <<!
    spool createts_$1.log
    set echo on
    drop tablespace $1 including contents;
    $createsql
    set echo off
    spool off
    exit ;
!
```

analyze.sql

```
spool analyze.log;
set echo on;
```

```
connect tpcc/tpcc
```

```
execute dbms_stats.GATHER_TABLE_STATS (OWNNAME=>'TPCC', -
    TABNAME=>'STOK', -
    PARTNAME=>NULL, -
    ESTIMATE_PERCENT=>1, -
    BLOCK_SAMPLE=>TRUE, -
    METHOD_OPT=>'FOR ALL COLUMNS SIZE 1', -
    DEGREE=>10, -
    GRANULARITY=>'DEFAULT', -
    CASCADE=>TRUE);
```

```
execute dbms_stats.GATHER_TABLE_STATS (OWNNAME=>'TPCC', -
    TABNAME=>'CUST', -
    PARTNAME=>NULL, -
    ESTIMATE_PERCENT=>1, -
    BLOCK_SAMPLE=>TRUE, -
    METHOD_OPT=>'FOR ALL COLUMNS SIZE 1', -
    DEGREE=>10, -
    GRANULARITY=>'DEFAULT', -
    CASCADE=>TRUE);
```

```
execute dbms_stats.GATHER_TABLE_STATS (OWNNAME=>'TPCC', -
    TABNAME=>'ORDR', -
    PARTNAME=>NULL, -
    ESTIMATE_PERCENT=>1, -
    BLOCK_SAMPLE=>TRUE, -
    METHOD_OPT=>'FOR ALL COLUMNS SIZE 1', -
```

```
DEGREE=>10, -
GRANULARITY=>'DEFAULT', -
CASCADE=>TRUE);
```

```
execute dbms_stats.GATHER_TABLE_STATS (OWNNAME=>'TPCC', -
    TABNAME=>'ORDL', -
    PARTNAME=>NULL, -
    ESTIMATE_PERCENT=>1, -
    BLOCK_SAMPLE=>TRUE, -
    METHOD_OPT=>'FOR ALL COLUMNS SIZE 1', -
    DEGREE=>10, -
    GRANULARITY=>'DEFAULT', -
    CASCADE=>TRUE);
```

```
execute dbms_stats.GATHER_TABLE_STATS (OWNNAME=>'TPCC', -
    TABNAME=>'NORD', -
    PARTNAME=>NULL, -
    ESTIMATE_PERCENT=>1, -
    BLOCK_SAMPLE=>TRUE, -
    METHOD_OPT=>'FOR ALL COLUMNS SIZE 1', -
    DEGREE=>10, -
    GRANULARITY=>'DEFAULT', -
    CASCADE=>TRUE);
```

```
execute dbms_stats.GATHER_TABLE_STATS(OWNNAME=>'TPCC', -
    TABNAME=>'HIST', -
    PARTNAME=>NULL, -
    ESTIMATE_PERCENT=>1, -
    BLOCK_SAMPLE=>TRUE, -
    METHOD_OPT=>'FOR ALL COLUMNS SIZE 1', -
    DEGREE=>10, -
    GRANULARITY=>'DEFAULT', -
    CASCADE=>TRUE);
```

```
execute dbms_stats.GATHER_TABLE_STATS(OWNNAME=>'TPCC', -
    TABNAME=>'DIST', -
    PARTNAME=>NULL, -
    ESTIMATE_PERCENT=>1, -
    BLOCK_SAMPLE=>TRUE, -
    METHOD_OPT=>'FOR ALL COLUMNS SIZE 1', -
    DEGREE=>10, -
    GRANULARITY=>'DEFAULT', -
    CASCADE=>TRUE);
```

```
execute dbms_stats.GATHER_TABLE_STATS(OWNNAME=>'TPCC', -
    TABNAME=>'ITEM', -
    PARTNAME=>NULL, -
    ESTIMATE_PERCENT=>10, -
    BLOCK_SAMPLE=>TRUE, -
    METHOD_OPT=>'FOR ALL COLUMNS SIZE 1', -
    DEGREE=>1, -
    GRANULARITY=>'DEFAULT', -
    CASCADE=>TRUE);
```

```
execute dbms_stats.GATHER_TABLE_STATS(OWNNAME=>'TPCC', -
    TABNAME=>'WARE', -
    PARTNAME=>NULL, -
    ESTIMATE_PERCENT=>10, -
    BLOCK_SAMPLE=>TRUE, -
    METHOD_OPT=>'FOR ALL COLUMNS SIZE 1', -
    DEGREE=>10, -
    GRANULARITY=>'DEFAULT', -
```

```
CASCADE=>TRUE);
```

```
set echo off;
spool off;
```

```
exit sql.sqlcode;
```

```
assigntemp.sh
```

```
#!/bin/sh
```

```
echo Assigning temporary tablespace to user tpcc...
$tpcc_sqlplus $tpcc_dba_user_pass @$tpcc_sql_dir/assigntemp > out 2>&1
if test $? -ne 0
then
    exit 1;
else
    exit 0;
fi
```

```
createts.sh
```

```
#!/bin/sh
```

```
# createts.sh [name] [no. of file] [no. of partition] [filesize] [ext_size]
#             [unix/nt] [1: temporary ts / 0: others] [filecount] [no of cpu]
#             [blocksize] [t: bitmapped / f: manual manage / d: dictionary ]
```

```
name=$1
fileno=$2
noofts=$3
filesize=$4
extsize=$5
ver=$6
isTemp=$7
filecount=$8
para=`expr $9 \* 2`
blocksize=`echo $@ | cut -d' ' -f10`
autospace=`echo $@ | cut -d' ' -f11`
```

```
addts=$tpcc_scripts/addts.sh
addfile=$tpcc_scripts/addfile.sh
```

```
if expr "x$tpcc_createts_print" = "xt" > /dev/null ; then
    createtsout=${tpcc_genscripts_dir}/createts_node${tpcc_rac_node}.sh
    fileavg=`expr $fileno / $tpcc_np`
```

```
if test $noofts -gt 1 ; then
    avg_ts_node=`expr $noofts / $tpcc_np`
    if test "x$tpcc_rac_createts_phase" = "x1" ; then
        fileavg=$avg_ts_node
    else
        if test "x$tpcc_rac_createts_phase" = "x2" ; then
            fileavg=`expr $fileavg - $avg_ts_node`
        fi
    fi
fi
```

```
fileend=`expr $fileavg \* $tpcc_rac_node`
```

```

filestart=`expr $fileend - $fileavg`
if expr $tpcc_rac_node = $tpcc_np > /dev/null; then
    fileend=$fileno
fi
fi

#if test $ver = unix;
#then
    fileaddr="$tpcc_disks_location/";
#elif test $ver = nt;
#then
#    fileaddr=\\.\.\\
#fi

filecounter=0
i=0
while test $i -lt $snoofts; do

    filecount=`expr $filecount + 1`;
    if expr "x$tpcc_createts_print" = "xt" > /dev/null ; then
        if test "x$tpcc_rac_createts_phase" = "x1" ; then
            if test "x$name" = "xitem" -o "x$name" = "xiitem" -o "x$name" = "xtemp" -o "x$name" = "xrestbl" ; then
                if test $tpcc_rac_node = 1 ; then
                    echo $addts $name\_ $i $fileaddr$name\_ $i\_0 $filesize $extsize $blocksize $isTemp $autospace \& >>
$createtsout
                    rac_count=`expr $rac_count + 1`
                    if test "$rac_count" = "$para" ; then
                        rac_count=0
                        echo wait >> $createtsout
                    fi
                fi
            else
                if test $filecounter -ge $filestart -a $filecounter -lt $fileend ; then
                    echo $addts $name\_ $i $fileaddr$name\_ $i\_0 $filesize $extsize $blocksize $isTemp $autospace \& >>
$createtsout
                    rac_count=`expr $rac_count + 1`
                    if test "$rac_count" = "$para" ; then
                        rac_count=0
                        echo wait >> $createtsout
                    fi
                fi
            fi
        else
            $addts $name\_ $i $fileaddr$name\_ $i\_0 $filesize $extsize $blocksize $isTemp $autospace \> junk$filecount 2\>
&1 \&;
            fi
        eval "proc$filecount=$i"
        filecounter=`expr $filecounter + 1`

        p=`expr $filecount % $para`;
        if test $p = 0;
        then
            k=`expr $filecount - $para + 1`;
            if test $k -le $8;
            then
                k=`expr $8 + 1`;
            fi
            while test $k -le $filecount ; do
                #    wait `eval echo '$proc'$k`
                wait
                eval "proc$k=$?"
            done
        fi
    fi
    i=`expr $i + 1`;
done

```

```

        k=`expr $k + 1`;
        done
    fi

    i=`expr $i + 1`;

done

p=`expr $filecount % $para`
if test $p != 0;
then
    k=`expr $filecount - $p + 1`;
    if test $k -le $8;
    then
        k=`expr $8 + 1`;
    fi
    while test $k -le $filecount; do
        #    wait `eval echo '$proc'$k`
        wait
        eval "proc$k=$?"
        k=`expr $k + 1`
    done
fi

if test "x$tpcc_createts_print" = "xt" -a "x$tpcc_rac_createts_phase" = "x1" ; then
    echo $rac_count
    exit 0
fi

if test "x$tpcc_createts_print" = "xt" -a $snoofts -gt 1 -a "x$tpcc_rac_createts_phase" = "x2" ; then
    filecounter=0
fi

filecount=0
fileperts=`expr $fileno / $snoofts - 1`
if test $fileperts -gt 0 ;
then
    i=0
    while test $i -lt $snoofts ; do
        j=0;
        while test $j -lt $fileperts ;do

            filecount=`expr $filecount + 1`;
            if expr "x$tpcc_createts_print" = "xt" > /dev/null ; then
                if test "x$tpcc_rac_createts_phase" = "x2" ; then
                    if test "x$name" = "xitem" -o "x$name" = "xtemp" -o "x$name" = "xrestbl" ; then
                        if test $tpcc_rac_node = 1 ; then
                            echo $addfile $name\_ $i $fileaddr$name\_ $i\_ `expr $j + 1` $filesize $isTemp \& >> $createtsout
                            rac_count=`expr $rac_count + 1`
                            if test "$rac_count" = "$para" ; then
                                rac_count=0
                                echo wait >> $createtsout
                            fi
                        fi
                    else
                        if test $filecounter -ge $filestart -a $filecounter -lt $fileend ; then
                            echo $addfile $name\_ $i $fileaddr$name\_ $i\_ `expr $j + 1` $filesize $isTemp \& >> $createtsout
                            rac_count=`expr $rac_count + 1`
                            if test "$rac_count" = "$para" ; then
                                rac_count=0
                                echo wait >> $createtsout
                            fi
                        fi
                    fi
                fi
            fi
        done
    done
    i=`expr $i + 1`;
done

```

```

        fi
    fi
fi
else
    Saddfile $name\_ $i $fileaddr$name\_ $i\_ `expr $j + 1` $filesize $isTemp >> junk$filecount 2>> \&1 &
fi
eval "proc$filecount=$!"

filecounter=`expr $filecounter + 1`

p=`expr $filecount % $para`;
if test $p = 0;
then
    wait
fi

j=`expr $j + 1`
done

i=`expr $i + 1`
done

p=`expr $filecount % $para`
if test $p != 0;
then
    k=`expr $filecount - $p + 1`;
    if test $k -le $8;
    then
        k=`expr $8 + 1`;
    fi
    while test $k -le $filecount; do
        wait
        eval "proc$k=$?"
        k=`expr $k + 1`
    done
fi
fi

if test "x$tpcc_createts_print" = "xt" ; then
    echo $rac_count
fi

exit 0

i=`expr $8 + 1`
proc=0
while test $i -le $filecount ;do
    eval 'process=$proc'"$i"
    proc=`expr $proc + $process`
    i=`expr $i + 1`
done

out=`expr $proc % 127`
wait
if expr x$tpcc_listfiles = xt > /dev/null; then
    exit 0
fi

if test $out -ne 0
then
    exit 1;
else

```

```

        exit 0;
    fi

ddview.sh
#!/bin/sh

$tpcc_sqlplus $tpcc_sqlplus_args << !
$tpcc_internal_connect

spool ddview.log

@$ORACLE_HOME/plsql/admin/standard
@$ORACLE_HOME/rdbms/admin/dbmsstdx
@$ORACLE_HOME/rdbms/admin/catalog
@$ORACLE_HOME/rdbms/admin/catproc

```

```

spool off
!

```

loadcust.sh

```

#created automatically by /export/home/oracle/tpcc_12node_dict/scripts/evenload.sh Tue Aug 18 22:02:27 PDT 2009
rm -f loadcust*.log
cd $tpcc_bench
allprocs=
$tpcc_load -M 604800 -C -l 1 -m 187 >> loadcust0.log 2>&1 &
allprocs="$allprocs ${!}"
$tpcc_load -M 604800 -C -l 188 -m 374 >> loadcust1.log 2>&1 &
allprocs="$allprocs ${!}"
$tpcc_load -M 604800 -C -l 375 -m 561 >> loadcust2.log 2>&1 &
allprocs="$allprocs ${!}"
$tpcc_load -M 604800 -C -l 562 -m 748 >> loadcust3.log 2>&1 &
allprocs="$allprocs ${!}"
$tpcc_load -M 604800 -C -l 749 -m 935 >> loadcust4.log 2>&1 &
allprocs="$allprocs ${!}"
$tpcc_load -M 604800 -C -l 936 -m 1122 >> loadcust5.log 2>&1 &
allprocs="$allprocs ${!}"
$tpcc_load -M 604800 -C -l 1123 -m 1309 >> loadcust6.log 2>&1 &
allprocs="$allprocs ${!}"
$tpcc_load -M 604800 -C -l 1310 -m 1496 >> loadcust7.log 2>&1 &
allprocs="$allprocs ${!}"
$tpcc_load -M 604800 -C -l 1497 -m 1684 >> loadcust8.log 2>&1 &
allprocs="$allprocs ${!}"
$tpcc_load -M 604800 -C -l 1685 -m 1872 >> loadcust9.log 2>&1 &
allprocs="$allprocs ${!}"
$tpcc_load -M 604800 -C -l 1873 -m 2060 >> loadcust10.log 2>&1 &
allprocs="$allprocs ${!}"
$tpcc_load -M 604800 -C -l 2061 -m 2248 >> loadcust11.log 2>&1 &
allprocs="$allprocs ${!}"
$tpcc_load -M 604800 -C -l 2249 -m 2436 >> loadcust12.log 2>&1 &
allprocs="$allprocs ${!}"
$tpcc_load -M 604800 -C -l 2437 -m 2624 >> loadcust13.log 2>&1 &
allprocs="$allprocs ${!}"
$tpcc_load -M 604800 -C -l 2625 -m 2812 >> loadcust14.log 2>&1 &
allprocs="$allprocs ${!}"
$tpcc_load -M 604800 -C -l 2813 -m 3000 >> loadcust15.log 2>&1 &
allprocs="$allprocs ${!}"
error=0
for curproc in $allprocs; do
    wait $curproc
    error=`expr $? + $error`

```

```
done
exit `expr $error != 0`
```

loaddist.sh

```
#created automatically by /export/home/oracle/tpcc_12node_dict/scripts/evenload.sh Tue Aug 18 22:02:27 PDT 2009
cd $tpcc_bench
$tpcc_load -M $tpcc_scale -d > loaddist.log 2>&1
```

loadhist.sh

```
#created automatically by /export/home/oracle/tpcc_12node_dict/scripts/evenload.sh Tue Aug 18 22:00:51 PDT 2009
rm -f loadhist*.log
cd $tpcc_bench
allprocs=
$tpcc_load -M 604800 -h -b 1 -e 37800 >> loadhist0.log 2>&1 &
allprocs="$allprocs ${!}"
$tpcc_load -M 604800 -h -b 37801 -e 75600 >> loadhist1.log 2>&1 &
allprocs="$allprocs ${!}"
$tpcc_load -M 604800 -h -b 75601 -e 113400 >> loadhist2.log 2>&1 &
allprocs="$allprocs ${!}"
$tpcc_load -M 604800 -h -b 113401 -e 151200 >> loadhist3.log 2>&1 &
allprocs="$allprocs ${!}"
$tpcc_load -M 604800 -h -b 151201 -e 189000 >> loadhist4.log 2>&1 &
allprocs="$allprocs ${!}"
$tpcc_load -M 604800 -h -b 189001 -e 226800 >> loadhist5.log 2>&1 &
allprocs="$allprocs ${!}"
$tpcc_load -M 604800 -h -b 226801 -e 264600 >> loadhist6.log 2>&1 &
allprocs="$allprocs ${!}"
$tpcc_load -M 604800 -h -b 264601 -e 302400 >> loadhist7.log 2>&1 &
allprocs="$allprocs ${!}"
$tpcc_load -M 604800 -h -b 302401 -e 340200 >> loadhist8.log 2>&1 &
allprocs="$allprocs ${!}"
$tpcc_load -M 604800 -h -b 340201 -e 378000 >> loadhist9.log 2>&1 &
allprocs="$allprocs ${!}"
$tpcc_load -M 604800 -h -b 378001 -e 415800 >> loadhist10.log 2>&1 &
allprocs="$allprocs ${!}"
$tpcc_load -M 604800 -h -b 415801 -e 453600 >> loadhist11.log 2>&1 &
allprocs="$allprocs ${!}"
$tpcc_load -M 604800 -h -b 453601 -e 491400 >> loadhist12.log 2>&1 &
allprocs="$allprocs ${!}"
$tpcc_load -M 604800 -h -b 491401 -e 529200 >> loadhist13.log 2>&1 &
allprocs="$allprocs ${!}"
$tpcc_load -M 604800 -h -b 529201 -e 567000 >> loadhist14.log 2>&1 &
allprocs="$allprocs ${!}"
$tpcc_load -M 604800 -h -b 567001 -e 604800 >> loadhist15.log 2>&1 &
allprocs="$allprocs ${!}"
error=0
for curproc in $allprocs; do
    wait $curproc
    error=`expr $? + $error`
done
exit `expr $error != 0`
```

loaditem.sh

```
#created automatically by /export/home/oracle/tpcc_12node_dict/scripts/evenload.sh Tue Aug 18 22:02:29 PDT 2009
cd $tpcc_bench
$tpcc_load -M $tpcc_scale -i > loaditem.log 2>&1
```

loadnord.sh

```
#created automatically by /export/home/oracle/tpcc_12node_dict/scripts/evenload.sh Tue Aug 18 22:01:04 PDT 2009
rm -f loadnord*.log
cd $tpcc_bench
allprocs=
$tpcc_load -M 604800 -n -b 1 -e 37800 >> loadnord0.log 2>&1 &
allprocs="$allprocs ${!}"
$tpcc_load -M 604800 -n -b 37801 -e 75600 >> loadnord1.log 2>&1 &
allprocs="$allprocs ${!}"
$tpcc_load -M 604800 -n -b 75601 -e 113400 >> loadnord2.log 2>&1 &
allprocs="$allprocs ${!}"
$tpcc_load -M 604800 -n -b 113401 -e 151200 >> loadnord3.log 2>&1 &
allprocs="$allprocs ${!}"
$tpcc_load -M 604800 -n -b 151201 -e 189000 >> loadnord4.log 2>&1 &
allprocs="$allprocs ${!}"
$tpcc_load -M 604800 -n -b 189001 -e 226800 >> loadnord5.log 2>&1 &
allprocs="$allprocs ${!}"
$tpcc_load -M 604800 -n -b 226801 -e 264600 >> loadnord6.log 2>&1 &
allprocs="$allprocs ${!}"
$tpcc_load -M 604800 -n -b 264601 -e 302400 >> loadnord7.log 2>&1 &
allprocs="$allprocs ${!}"
$tpcc_load -M 604800 -n -b 302401 -e 340200 >> loadnord8.log 2>&1 &
allprocs="$allprocs ${!}"
$tpcc_load -M 604800 -n -b 340201 -e 378000 >> loadnord9.log 2>&1 &
allprocs="$allprocs ${!}"
$tpcc_load -M 604800 -n -b 378001 -e 415800 >> loadnord10.log 2>&1 &
allprocs="$allprocs ${!}"
$tpcc_load -M 604800 -n -b 415801 -e 453600 >> loadnord11.log 2>&1 &
allprocs="$allprocs ${!}"
$tpcc_load -M 604800 -n -b 453601 -e 491400 >> loadnord12.log 2>&1 &
allprocs="$allprocs ${!}"
$tpcc_load -M 604800 -n -b 491401 -e 529200 >> loadnord13.log 2>&1 &
allprocs="$allprocs ${!}"
$tpcc_load -M 604800 -n -b 529201 -e 567000 >> loadnord14.log 2>&1 &
allprocs="$allprocs ${!}"
$tpcc_load -M 604800 -n -b 567001 -e 604800 >> loadnord15.log 2>&1 &
allprocs="$allprocs ${!}"
error=0
for curproc in $allprocs; do
    wait $curproc
    error=`expr $? + $error`
done
exit `expr $error != 0`
```

loadordrordl.sh

```
#created automatically by /export/home/oracle/tpcc_12node_dict/scripts/evenload.sh Tue Aug 18 22:02:15 PDT 2009
rm -f loadordrordl*.log
cd $tpcc_bench
allprocs=
$tpcc_load -M 604800 -o ${tpcc_disks_location}dummy0.dat -b 1 -e 37800 >> loadordrordl0.log 2>&1 &
allprocs="$allprocs ${!}"
$tpcc_load -M 604800 -o ${tpcc_disks_location}dummy1.dat -b 37801 -e 75600 >> loadordrordl1.log 2>&1 &
allprocs="$allprocs ${!}"
$tpcc_load -M 604800 -o ${tpcc_disks_location}dummy2.dat -b 75601 -e 113400 >> loadordrordl2.log 2>&1 &
allprocs="$allprocs ${!}"
$tpcc_load -M 604800 -o ${tpcc_disks_location}dummy3.dat -b 113401 -e 151200 >> loadordrordl3.log 2>&1 &
allprocs="$allprocs ${!}"
$tpcc_load -M 604800 -o ${tpcc_disks_location}dummy4.dat -b 151201 -e 189000 >> loadordrordl4.log 2>&1 &
allprocs="$allprocs ${!}"
$tpcc_load -M 604800 -o ${tpcc_disks_location}dummy5.dat -b 189001 -e 226800 >> loadordrordl5.log 2>&1 &
allprocs="$allprocs ${!}"
$tpcc_load -M 604800 -o ${tpcc_disks_location}dummy6.dat -b 226801 -e 264600 >> loadordrordl6.log 2>&1 &
```

```
allprocs="$Sallprocs ${!}"
$tpcc_load -M 604800 -o ${tpcc_disks_location}dummy7.dat -b 264601 -e 302400 >> loadordrordl7.log 2>&1 &
allprocs="$Sallprocs ${!}"
$tpcc_load -M 604800 -o ${tpcc_disks_location}dummy8.dat -b 302401 -e 340200 >> loadordrordl8.log 2>&1 &
allprocs="$Sallprocs ${!}"
$tpcc_load -M 604800 -o ${tpcc_disks_location}dummy9.dat -b 340201 -e 378000 >> loadordrordl9.log 2>&1 &
allprocs="$Sallprocs ${!}"
$tpcc_load -M 604800 -o ${tpcc_disks_location}dummy10.dat -b 378001 -e 415800 >> loadordrordl10.log 2>&1 &
allprocs="$Sallprocs ${!}"
$tpcc_load -M 604800 -o ${tpcc_disks_location}dummy11.dat -b 415801 -e 453600 >> loadordrordl11.log 2>&1 &
allprocs="$Sallprocs ${!}"
$tpcc_load -M 604800 -o ${tpcc_disks_location}dummy12.dat -b 453601 -e 491400 >> loadordrordl12.log 2>&1 &
allprocs="$Sallprocs ${!}"
$tpcc_load -M 604800 -o ${tpcc_disks_location}dummy13.dat -b 491401 -e 529200 >> loadordrordl13.log 2>&1 &
allprocs="$Sallprocs ${!}"
$tpcc_load -M 604800 -o ${tpcc_disks_location}dummy14.dat -b 529201 -e 567000 >> loadordrordl14.log 2>&1 &
allprocs="$Sallprocs ${!}"
$tpcc_load -M 604800 -o ${tpcc_disks_location}dummy15.dat -b 567001 -e 604800 >> loadordrordl15.log 2>&1 &
allprocs="$Sallprocs ${!}"
error=0
for curproc in $allprocs; do
    wait $curproc
    error=`expr $? + $error`
done
exit `expr $error != 0`
```

loadstok.sh

```
#created automatically by /export/home/oracle/tpcc_12node_dict/scripts/evenload.sh Tue Aug 18 22:02:39 PDT 2009
rm -f loadstok*.log
cd $tpcc_bench
allprocs=
$tpcc_load -M 604800 -S -j 1 -k 6250 >> loadstok0.log 2>&1 &
allprocs="$Sallprocs ${!}"
$tpcc_load -M 604800 -S -j 6251 -k 12500 >> loadstok1.log 2>&1 &
allprocs="$Sallprocs ${!}"
$tpcc_load -M 604800 -S -j 12501 -k 18750 >> loadstok2.log 2>&1 &
allprocs="$Sallprocs ${!}"
$tpcc_load -M 604800 -S -j 18751 -k 25000 >> loadstok3.log 2>&1 &
allprocs="$Sallprocs ${!}"
$tpcc_load -M 604800 -S -j 25001 -k 31250 >> loadstok4.log 2>&1 &
allprocs="$Sallprocs ${!}"
$tpcc_load -M 604800 -S -j 31251 -k 37500 >> loadstok5.log 2>&1 &
allprocs="$Sallprocs ${!}"
$tpcc_load -M 604800 -S -j 37501 -k 43750 >> loadstok6.log 2>&1 &
allprocs="$Sallprocs ${!}"
$tpcc_load -M 604800 -S -j 43751 -k 50000 >> loadstok7.log 2>&1 &
allprocs="$Sallprocs ${!}"
$tpcc_load -M 604800 -S -j 50001 -k 56250 >> loadstok8.log 2>&1 &
allprocs="$Sallprocs ${!}"
$tpcc_load -M 604800 -S -j 56251 -k 62500 >> loadstok9.log 2>&1 &
allprocs="$Sallprocs ${!}"
$tpcc_load -M 604800 -S -j 62501 -k 68750 >> loadstok10.log 2>&1 &
allprocs="$Sallprocs ${!}"
$tpcc_load -M 604800 -S -j 68751 -k 75000 >> loadstok11.log 2>&1 &
allprocs="$Sallprocs ${!}"
$tpcc_load -M 604800 -S -j 75001 -k 81250 >> loadstok12.log 2>&1 &
allprocs="$Sallprocs ${!}"
$tpcc_load -M 604800 -S -j 81251 -k 87500 >> loadstok13.log 2>&1 &
allprocs="$Sallprocs ${!}"
$tpcc_load -M 604800 -S -j 87501 -k 93750 >> loadstok14.log 2>&1 &
allprocs="$Sallprocs ${!}"
```

```
$tpcc_load -M 604800 -S -j 93751 -k 100000 >> loadstok15.log 2>&1 &
allprocs="$Sallprocs ${!}"
error=0
for curproc in $allprocs; do
    wait $curproc
    error=`expr $? + $error`
done
exit `expr $error != 0`
```

loadware.sh

```
#created automatically by /export/home/oracle/tpcc_12node_dict/scripts/evenload.sh Tue Aug 18 22:02:30 PDT 2009
cd $tpcc_bench
$tpcc_load -M $tpcc_scale -w > loadware.log 2>&1
```

log_mirror.sh

```
#!/bin/sh

./addlog.sh 1 1 1 &
./addlog.sh 1 2 2 &
./addlog.sh 2 1 3 &
./addlog.sh 2 2 4 &
./addlog.sh 3 1 5 &
./addlog.sh 3 2 6 &
./addlog.sh 4 1 7 &
./addlog.sh 4 2 8 &
./addlog.sh 5 1 9 &
./addlog.sh 5 2 10 &
./addlog.sh 6 1 11 &
./addlog.sh 6 2 12 &
./addlog.sh 7 1 13 &
./addlog.sh 7 2 14 &
./addlog.sh 8 1 15 &
./addlog.sh 8 2 16 &
./addlog.sh 9 1 17 &
./addlog.sh 9 2 18 &
./addlog.sh 10 1 19 &
./addlog.sh 10 2 20 &
./addlog.sh 11 1 21 &
./addlog.sh 11 2 22 &
./addlog.sh 12 1 23 &
./addlog.sh 12 2 24 &
wait
```

stepenv.sh

```
# forces any env variables we set to be exported
set -a
tpcc_bench=$PWD
tpcc_load=tpccload.exe
tpcc_sqlplus=cat
tpcc_sqlplus_args='/nolog'
tpcc_internal_connect='connect / as sysdba'
tpcc_user_pass='tpcc/tpcc'
tpcc_dba_user_pass='system/manager'
oracle_dba=system
oracle_dba_password=manager
tpcc_sqlplus=sqlplus
```

createdb.sql

<pre>/* created automatically by /export/home/oracle/tpcc_12node_dict/scripts/buildcreatedb.sh Mon Aug 17 16:40:12 PDT 2009 */ spool createdb.log set echo on shutdown abort startup pfile=p_create.ora nomount create database tpcc controlfile reuse maxinstances 12 datafile '/export/home/oracle/tpcc_disks_12node_dict/system_1' size 400M reuse, '/export/home/oracle/tpcc_disks_12node_dict/system_2' size 400M reuse, '/export/home/oracle/tpcc_disks_12node_dict/system_3' size 400M reuse, '/export/home/oracle/tpcc_disks_12node_dict/system_4' size 400M reuse, '/export/home/oracle/tpcc_disks_12node_dict/system_5' size 400M reuse, '/export/home/oracle/tpcc_disks_12node_dict/system_6' size 400M reuse, '/export/home/oracle/tpcc_disks_12node_dict/system_7' size 400M reuse, '/export/home/oracle/tpcc_disks_12node_dict/system_8' size 400M reuse, '/export/home/oracle/tpcc_disks_12node_dict/system_9' size 400M reuse, '/export/home/oracle/tpcc_disks_12node_dict/system_10' size 400M reuse, '/export/home/oracle/tpcc_disks_12node_dict/system_11' size 400M reuse, '/export/home/oracle/tpcc_disks_12node_dict/system_12' size 400M reuse logfile '/export/home/oracle/tpcc_disks_12node_dict/log_1_1' size 180G reuse, '/export/home/oracle/tpcc_disks_12node_dict/log_1_2' size 180G reuse sysaux datafile '/export/home/oracle/tpcc_disks_12node_dict/tpccaux' size 1024M reuse ; alter database add logfile thread 2 group 3 ('/export/home/oracle/tpcc_disks_12node_dict/log_2_1') size 180G reuse, group 4 ('/export/home/oracle/tpcc_disks_12node_dict/log_2_2') size 180G reuse; alter database enable public thread 2; alter database add logfile thread 3 group 5 ('/export/home/oracle/tpcc_disks_12node_dict/log_3_1') size 180G reuse, group 6 ('/export/home/oracle/tpcc_disks_12node_dict/log_3_2') size 180G reuse; alter database enable public thread 3; alter database add logfile thread 4 group 7 ('/export/home/oracle/tpcc_disks_12node_dict/log_4_1') size 180G reuse, group 8 ('/export/home/oracle/tpcc_disks_12node_dict/log_4_2') size 180G reuse; alter database enable public thread 4; alter database add logfile thread 5 group 9 ('/export/home/oracle/tpcc_disks_12node_dict/log_5_1') size 180G reuse, group 10 ('/export/home/oracle/tpcc_disks_12node_dict/log_5_2') size 180G reuse; alter database enable public thread 5; alter database add logfile thread 6 group 11 ('/export/home/oracle/tpcc_disks_12node_dict/log_6_1') size 180G reuse, group 12 ('/export/home/oracle/tpcc_disks_12node_dict/log_6_2') size 180G reuse; alter database enable public thread 6; alter database add logfile thread 7 group 13 ('/export/home/oracle/tpcc_disks_12node_dict/log_7_1') size 180G reuse, group 14 ('/export/home/oracle/tpcc_disks_12node_dict/log_7_2') size 180G reuse; alter database enable public thread 7; alter database add logfile thread 8 group 15 ('/export/home/oracle/tpcc_disks_12node_dict/log_8_1') size 180G reuse, group 16 ('/export/home/oracle/tpcc_disks_12node_dict/log_8_2') size 180G reuse; alter database enable public thread 8; alter database add logfile thread 9 group 17 ('/export/home/oracle/tpcc_disks_12node_dict/log_9_1') size 180G reuse, group 18 ('/export/home/oracle/tpcc_disks_12node_dict/log_9_2') size 180G reuse; alter database enable public thread 9; alter database add logfile thread 10 group 19 ('/export/home/oracle/tpcc_disks_12node_dict/log_10_1') size 180G reuse, group 20 ('/export/home/oracle/tpcc_disks_12node_dict/log_10_2') size 180G reuse; alter database enable public thread 10; alter database add logfile thread 11 group 21 ('/export/home/oracle/tpcc_disks_12node_dict/log_11_1') size 180G reuse, group 22 ('/export/home/oracle/tpcc_disks_12node_dict/log_11_2') size 180G reuse; alter database enable public thread 11;</pre>	<pre>alter database add logfile thread 12 group 23 ('/export/home/oracle/tpcc_disks_12node_dict/log_12_1') size 180G reuse, group 24 ('/export/home/oracle/tpcc_disks_12node_dict/log_12_2') size 180G reuse; alter database enable public thread 12; create undo tablespace undo_1 datafile '/export/home/oracle/tpcc_disks_12node_dict/roll1' size 8096M reuse blocksizes 4096; create undo tablespace undo_2 datafile '/export/home/oracle/tpcc_disks_12node_dict/roll2' size 8096M reuse blocksizes 4096; create undo tablespace undo_3 datafile '/export/home/oracle/tpcc_disks_12node_dict/roll3' size 8096M reuse blocksizes 4096; create undo tablespace undo_4 datafile '/export/home/oracle/tpcc_disks_12node_dict/roll4' size 8096M reuse blocksizes 4096; create undo tablespace undo_5 datafile '/export/home/oracle/tpcc_disks_12node_dict/roll5' size 8096M reuse blocksizes 4096; create undo tablespace undo_6 datafile '/export/home/oracle/tpcc_disks_12node_dict/roll6' size 8096M reuse blocksizes 4096; create undo tablespace undo_7 datafile '/export/home/oracle/tpcc_disks_12node_dict/roll7' size 8096M reuse blocksizes 4096; create undo tablespace undo_8 datafile '/export/home/oracle/tpcc_disks_12node_dict/roll8' size 8096M reuse blocksizes 4096; create undo tablespace undo_9 datafile '/export/home/oracle/tpcc_disks_12node_dict/roll9' size 8096M reuse blocksizes 4096; create undo tablespace undo_10 datafile '/export/home/oracle/tpcc_disks_12node_dict/roll10' size 8096M reuse blocksizes 4096; create undo tablespace undo_11 datafile '/export/home/oracle/tpcc_disks_12node_dict/roll11' size 8096M reuse blocksizes 4096; create undo tablespace undo_12 datafile '/export/home/oracle/tpcc_disks_12node_dict/roll12' size 8096M reuse blocksizes 4096; set echo off exit sql.sqlcode createindex_icust1.sql /* created automatically by /export/home/oracle/tpcc_12node_dict/scripts/buildcreateindex.sh Mon Aug 17 16:43:10 PDT 2009 */ set timing on set sqlblanklines on spool createindex_icust1.log ; set echo on ; drop index icust1 ; create unique index icust1 on cust (c_w_id , c_d_id , c_id) pctfree 1 initrans 3 storage (buffer_pool default) parallel 128 compute statistics tablespace icust1_0 ; set echo off spool off exit sql.sqlcode; createindex_icust2.sql /* created automatically by /export/home/oracle/tpcc_12node_dict/scripts/buildcreateindex.sh Mon Aug 17 16:43:11 PDT 2009 */ set timing on set sqlblanklines on spool createindex_icust2.log ;</pre>
---	--

```

set echo on ;
drop index icust2 ;
create unique index icust2 on cust ( c_last
, c_w_id
, c_d_id
, c_first
, c_id )
pctfree 1 initrans 3
storage ( buffer_pool default )
parallel 128
compute statistics
tablespace icust2_0 ;
set echo off
spool off
exit sql.sqlcode;

```

create_idist.sql

```

/* created automatically by /export/home/oracle/tpcc_12node_dict/scripts/buildcreateindex.sh Mon Aug 17 16:43:13
PDT 2009 */

```

```

set timing on
set sqlblanklines on
spool createindex_idist.log ;
set echo on ;
drop index idist ;
create unique index idist on dist ( d_w_id
, d_id )
pctfree 5 initrans 3
storage ( buffer_pool default )
parallel 1
compute statistics
tablespace idist_0 ;
set echo off
spool off
exit sql.sqlcode;

```

createindex_iitem.sql

```

/* created automatically by /export/home/oracle/tpcc_12node_dict/scripts/buildcreateindex.sh Mon Aug 17 16:43:15
PDT 2009 */

```

```

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

```

```

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

```

create_index_iordr2.sql

```

/* created automatically by /export/home/oracle/tpcc_12node_dict/scripts/buildcreateindex.sh Sun Sep 6 17:50:20
PDT 2009 */

```

```

set timing on
set sqlblanklines on
spool createindex_iordr2.log ;

```

```

set echo on ;
drop index iordr2 ;
create unique index iordr2 on ordr ( o_w_id
, o_d_id
, o_c_id
, o_id )
global partition by range (o_w_id) (
partition iordr2_0 values less than ( 5041 ) tablespace iordr2_0
, partition iordr2_1 values less than ( 10081 ) tablespace iordr2_0
, partition iordr2_2 values less than ( 15121 ) tablespace iordr2_0
, partition iordr2_3 values less than ( 20161 ) tablespace iordr2_0
, partition iordr2_4 values less than ( 25201 ) tablespace iordr2_0
, partition iordr2_5 values less than ( 30241 ) tablespace iordr2_0
, partition iordr2_6 values less than ( 35281 ) tablespace iordr2_0
, partition iordr2_7 values less than ( 40321 ) tablespace iordr2_0
, partition iordr2_8 values less than ( 45361 ) tablespace iordr2_0
, partition iordr2_9 values less than ( 50401 ) tablespace iordr2_0
, partition iordr2_10 values less than ( 55441 ) tablespace iordr2_1
, partition iordr2_11 values less than ( 60481 ) tablespace iordr2_1
, partition iordr2_12 values less than ( 65521 ) tablespace iordr2_1
, partition iordr2_13 values less than ( 70561 ) tablespace iordr2_1
, partition iordr2_14 values less than ( 75601 ) tablespace iordr2_1
, partition iordr2_15 values less than ( 80641 ) tablespace iordr2_1
, partition iordr2_16 values less than ( 85681 ) tablespace iordr2_1
, partition iordr2_17 values less than ( 90721 ) tablespace iordr2_1
, partition iordr2_18 values less than ( 95761 ) tablespace iordr2_1
, partition iordr2_19 values less than ( 100801 ) tablespace iordr2_1
, partition iordr2_20 values less than ( 105841 ) tablespace iordr2_2
, partition iordr2_21 values less than ( 110881 ) tablespace iordr2_2
, partition iordr2_22 values less than ( 115921 ) tablespace iordr2_2
, partition iordr2_23 values less than ( 120961 ) tablespace iordr2_2
, partition iordr2_24 values less than ( 126001 ) tablespace iordr2_2
, partition iordr2_25 values less than ( 131041 ) tablespace iordr2_2
, partition iordr2_26 values less than ( 136081 ) tablespace iordr2_2
, partition iordr2_27 values less than ( 141121 ) tablespace iordr2_2
, partition iordr2_28 values less than ( 146161 ) tablespace iordr2_2
, partition iordr2_29 values less than ( 151201 ) tablespace iordr2_2
, partition iordr2_30 values less than ( 156241 ) tablespace iordr2_3
, partition iordr2_31 values less than ( 161281 ) tablespace iordr2_3
, partition iordr2_32 values less than ( 166321 ) tablespace iordr2_3
, partition iordr2_33 values less than ( 171361 ) tablespace iordr2_3
, partition iordr2_34 values less than ( 176401 ) tablespace iordr2_3
, partition iordr2_35 values less than ( 181441 ) tablespace iordr2_3
, partition iordr2_36 values less than ( 186481 ) tablespace iordr2_3
, partition iordr2_37 values less than ( 191521 ) tablespace iordr2_3
, partition iordr2_38 values less than ( 196561 ) tablespace iordr2_3
, partition iordr2_39 values less than ( 201601 ) tablespace iordr2_3
, partition iordr2_40 values less than ( 206641 ) tablespace iordr2_4
, partition iordr2_41 values less than ( 211681 ) tablespace iordr2_4
, partition iordr2_42 values less than ( 216721 ) tablespace iordr2_4
, partition iordr2_43 values less than ( 221761 ) tablespace iordr2_4
, partition iordr2_44 values less than ( 226801 ) tablespace iordr2_4
, partition iordr2_45 values less than ( 231841 ) tablespace iordr2_4
, partition iordr2_46 values less than ( 236881 ) tablespace iordr2_4
, partition iordr2_47 values less than ( 241921 ) tablespace iordr2_4
, partition iordr2_48 values less than ( 246961 ) tablespace iordr2_4
, partition iordr2_49 values less than ( 252001 ) tablespace iordr2_4
, partition iordr2_50 values less than ( 257041 ) tablespace iordr2_5
, partition iordr2_51 values less than ( 262081 ) tablespace iordr2_5
, partition iordr2_52 values less than ( 267121 ) tablespace iordr2_5
, partition iordr2_53 values less than ( 272161 ) tablespace iordr2_5
, partition iordr2_54 values less than ( 277201 ) tablespace iordr2_5

```

```
, partition iordr2_55 values less than ( 282241 ) tablespace iordr2_5
, partition iordr2_56 values less than ( 287281 ) tablespace iordr2_5
, partition iordr2_57 values less than ( 292321 ) tablespace iordr2_5
, partition iordr2_58 values less than ( 297361 ) tablespace iordr2_5
, partition iordr2_59 values less than ( 302401 ) tablespace iordr2_5
, partition iordr2_60 values less than ( 307441 ) tablespace iordr2_6
, partition iordr2_61 values less than ( 312481 ) tablespace iordr2_6
, partition iordr2_62 values less than ( 317521 ) tablespace iordr2_6
, partition iordr2_63 values less than ( 322561 ) tablespace iordr2_6
, partition iordr2_64 values less than ( 327601 ) tablespace iordr2_6
, partition iordr2_65 values less than ( 332641 ) tablespace iordr2_6
, partition iordr2_66 values less than ( 337681 ) tablespace iordr2_6
, partition iordr2_67 values less than ( 342721 ) tablespace iordr2_6
, partition iordr2_68 values less than ( 347761 ) tablespace iordr2_6
, partition iordr2_69 values less than ( 352801 ) tablespace iordr2_6
, partition iordr2_70 values less than ( 357841 ) tablespace iordr2_7
, partition iordr2_71 values less than ( 362881 ) tablespace iordr2_7
, partition iordr2_72 values less than ( 367921 ) tablespace iordr2_7
, partition iordr2_73 values less than ( 372961 ) tablespace iordr2_7
, partition iordr2_74 values less than ( 378001 ) tablespace iordr2_7
, partition iordr2_75 values less than ( 383041 ) tablespace iordr2_7
, partition iordr2_76 values less than ( 388081 ) tablespace iordr2_7
, partition iordr2_77 values less than ( 393121 ) tablespace iordr2_7
, partition iordr2_78 values less than ( 398161 ) tablespace iordr2_7
, partition iordr2_79 values less than ( 403201 ) tablespace iordr2_7
, partition iordr2_80 values less than ( 408241 ) tablespace iordr2_8
, partition iordr2_81 values less than ( 413281 ) tablespace iordr2_8
, partition iordr2_82 values less than ( 418321 ) tablespace iordr2_8
, partition iordr2_83 values less than ( 423361 ) tablespace iordr2_8
, partition iordr2_84 values less than ( 428401 ) tablespace iordr2_8
, partition iordr2_85 values less than ( 433441 ) tablespace iordr2_8
, partition iordr2_86 values less than ( 438481 ) tablespace iordr2_8
, partition iordr2_87 values less than ( 443521 ) tablespace iordr2_8
, partition iordr2_88 values less than ( 448561 ) tablespace iordr2_8
, partition iordr2_89 values less than ( 453601 ) tablespace iordr2_8
, partition iordr2_90 values less than ( 458641 ) tablespace iordr2_9
, partition iordr2_91 values less than ( 463681 ) tablespace iordr2_9
, partition iordr2_92 values less than ( 468721 ) tablespace iordr2_9
, partition iordr2_93 values less than ( 473761 ) tablespace iordr2_9
, partition iordr2_94 values less than ( 478801 ) tablespace iordr2_9
, partition iordr2_95 values less than ( 483841 ) tablespace iordr2_9
, partition iordr2_96 values less than ( 488881 ) tablespace iordr2_9
, partition iordr2_97 values less than ( 493921 ) tablespace iordr2_9
, partition iordr2_98 values less than ( 498961 ) tablespace iordr2_9
, partition iordr2_99 values less than ( 504001 ) tablespace iordr2_9
, partition iordr2_100 values less than ( 509041 ) tablespace iordr2_10
, partition iordr2_101 values less than ( 514081 ) tablespace iordr2_10
, partition iordr2_102 values less than ( 519121 ) tablespace iordr2_10
, partition iordr2_103 values less than ( 524161 ) tablespace iordr2_10
, partition iordr2_104 values less than ( 529201 ) tablespace iordr2_10
, partition iordr2_105 values less than ( 534241 ) tablespace iordr2_10
, partition iordr2_106 values less than ( 539281 ) tablespace iordr2_10
, partition iordr2_107 values less than ( 544321 ) tablespace iordr2_10
, partition iordr2_108 values less than ( 549361 ) tablespace iordr2_10
, partition iordr2_109 values less than ( 554401 ) tablespace iordr2_10
, partition iordr2_110 values less than ( 559441 ) tablespace iordr2_11
, partition iordr2_111 values less than ( 564481 ) tablespace iordr2_11
, partition iordr2_112 values less than ( 569521 ) tablespace iordr2_11
, partition iordr2_113 values less than ( 574561 ) tablespace iordr2_11
, partition iordr2_114 values less than ( 579601 ) tablespace iordr2_11
, partition iordr2_115 values less than ( 584641 ) tablespace iordr2_11
, partition iordr2_116 values less than ( 589681 ) tablespace iordr2_11
```

```
, partition iordr2_117 values less than ( 594721 ) tablespace iordr2_11
, partition iordr2_118 values less than ( 599761 ) tablespace iordr2_11
, partition iordr2_119 values less than ( MAXVALUE ) tablespace iordr2_11
)
parallel 128
pctfree 25 initrans 4
storage ( buffer_pool default )
compute statistics;
set echo off
spool off
exit sql.sqlcode;
```

createindex_istok.sql

```
/* created automatically by /export/home/oracle/tpcc_12node_dict/scripts/buildcreateindex.sh Mon Aug 17 16:43:14
PDT 2009 */
```

```
set timing on
set sqlblanklines on
spool createindex_istok.log ;
set echo on ;
drop index istok ;
create unique index istok on stok ( s_i_id
, s_w_id )
pctfree 1 initrans 3
storage ( buffer_pool default )
parallel 128
compute statistics
tablespace istok_0 ;
set echo off
spool off
exit sql.sqlcode;
```

createindex_iware

```
/* created automatically by /export/home/oracle/tpcc_12node_dict/scripts/buildcreateindex.sh Mon Aug 17 16:43:09
PDT 2009 */
```

```
set timing on
set sqlblanklines on
spool createindex_iware.log ;
set echo on ;
drop index iware ;
create unique index iware on ware ( w_id )
pctfree 1 initrans 3
storage ( buffer_pool default )
parallel 1
compute statistics
tablespace iware_0 ;
set echo off
spool off
exit sql.sqlcode;
```

createtoreprocs.sql

```
spool createtoreprocs.log
@tkvcinin.sql
spool off
exit sql.sqlcode;
```

createtable_cust.sql

```
/* created automatically by /export/home/oracle/tpcc_12node_dict/scripts/buildcreatetable.sh Mon Aug 17 16:40:18
PDT 2009 */
```

```
set timing on
set sqlblanklines on
spool createtable_cust.log
set echo on
drop cluster custcluster including tables ;
```

```
create cluster custcluster (
  c_id number
, c_d_id number
, c_w_id number
)
single table
hashkeys 18144000000
hash is ( (c_w_id * 30000 + c_id * 10 + c_d_id - 30011) )
size 850
pctfree 0 initrans 3
storage ( initial 1920008k next 1920000k maxextents unlimited pctincrease 0 freelist groups 4 buffer_pool recycle )
parallel ( degree 128 )
tablespace cust_0;
```

```
create table cust (
  c_id number
, c_d_id number
, c_w_id number
, c_discount number
, c_credit char(2)
, c_last varchar2(16)
, c_first varchar2(16)
, c_credit_lim number
, c_balance number
, c_ytd_payment number
, c_payment_cnt number
, c_delivery_cnt number
, c_street_1 varchar2(20)
, c_street_2 varchar2(20)
, c_city varchar2(20)
, c_state char(2)
, c_zip char(9)
, c_phone char(16)
, c_since date
, c_middle char(2)
, c_data varchar2(500)
)
cluster custcluster (
  c_id
, c_d_id
, c_w_id
);
set echo off
spool off
exit sql.sqlcode;
```

createtable_dist.sql

```
/* created automatically by /export/home/oracle/tpcc_12node_dict/scripts/buildcreatetable.sh Mon Aug 17 16:40:27
PDT 2009 */
set timing on
set sqlblanklines on
spool createtable_dist.log
set echo on
drop cluster distcluster including tables ;
```

```
create cluster distcluster (
  d_id number
, d_w_id number
)
single table
hashkeys 6048000
hash is ( (((d_w_id - 1) * 10) + d_id) )
size 7592
initrans 4
storage ( initial 2016008k next 2016000k pctincrease 0 freelist groups 4 buffer_pool default )
tablespace dist_0;
```

```
create table dist (
  d_id number
, d_w_id number
, d_ytd number
, d_next_o_id number
, d_tax number
, d_name varchar2(10)
, d_street_1 varchar2(20)
, d_street_2 varchar2(20)
, d_city varchar2(20)
, d_state char(2)
, d_zip char(9)
)
```

```
cluster distcluster (
  d_id
, d_w_id
);
set echo off
spool off
exit sql.sqlcode;
```

createtable_hist.sql

```
/* created automatically by /export/home/oracle/tpcc_12node_dict/scripts/buildcreatetable.sh Mon Aug 17 16:40:33
PDT 2009 */
set timing on
set sqlblanklines on
spool createtable_hist.log
set echo on
drop table hist ;
```

```
create table hist (
  h_c_id number
, h_c_d_id number
, h_c_w_id number
, h_d_id number
, h_w_id number
, h_date date
, h_amount number
, h_data varchar2(24)
)
partition by range( h_w_id ) (
partition hist_0 values less than ( 50401 ) tablespace hist_0
, partition hist_1 values less than ( 100801 ) tablespace hist_1
, partition hist_2 values less than ( 151201 ) tablespace hist_2
, partition hist_3 values less than ( 201601 ) tablespace hist_3
, partition hist_4 values less than ( 252001 ) tablespace hist_4
, partition hist_5 values less than ( 302401 ) tablespace hist_5
, partition hist_6 values less than ( 352801 ) tablespace hist_6
, partition hist_7 values less than ( 403201 ) tablespace hist_7
```

```
, partition hist_8 values less than ( 453601 ) tablespace hist_8
, partition hist_9 values less than ( 504001 ) tablespace hist_9
, partition hist_10 values less than ( 554401 ) tablespace hist_10
, partition hist_11 values less than ( maxvalue ) tablespace hist_11
)
pctfree 5 initrans 4
storage ( buffer_pool recycle )
;
set echo off
spool off
exit sql.sqlcode;
```

createtable_item.sql

```
/* created automatically by /export/home/oracle/tpcc_12node_dict/scripts/buildcreatetable.sh Mon Aug 17 16:40:43
PDT 2009 */
set timing on
set sqlblanklines on
spool createtable_item.log
set echo on
drop cluster itemcluster including tables ;
```

```
create cluster itemcluster (
i_id number(6,0)
)
single table
hashkeys 100000
hash is ( (i_id + 1) )
size 120
pctfree 0 initrans 3
storage ( buffer_pool keep )
tablespace item_0;
```

```
create table item (
i_id number(6,0)
, i_name varchar2(24)
, i_price number
, i_data varchar2(50)
, i_im_id number
)
cluster itemcluster (
i_id
);
set echo off
spool off
exit sql.sqlcode;
```

createtable_nord.sql

```
/* created automatically by /export/home/oracle/tpcc_12node_dict/scripts/buildcreatetable.sh Mon Aug 17 16:40:20
PDT 2009 */
set timing on
set sqlblanklines on
spool createtable_nord.log
set echo on
drop cluster nordcluster_queue including tables ;
```

```
create cluster nordcluster_queue (
no_w_id number
, no_d_id number
, no_o_id number SORT
)
```

```
hashkeys 6048000
hash_allocation 504000
hash is ( (no_w_id - 1) * 10 + no_d_id - 1 )
size 780
tablespace nord_0;
```

```
create table nord (
no_w_id number
, no_d_id number
, no_o_id number sort
, constraint nord_uk primary key ( no_w_id
, no_d_id
, no_o_id )
)
cluster nordcluster_queue (
no_w_id
, no_d_id
, no_o_id
);
set echo off
spool off
exit sql.sqlcode;
```

createtable_ordl.sql

```
/* created automatically by /export/home/oracle/tpcc_12node_dict/scripts/buildcreatetable.sh Mon Aug 17 16:40:24
PDT 2009 */
set timing on
set sqlblanklines on
spool createtable_ordl.log
set echo on
create table ordl (
ol_w_id number
, ol_d_id number
, ol_o_id number sort
, ol_number number sort
, ol_i_id number
, ol_delivery_d date
, ol_amount number
, ol_supply_w_id number
, ol_quantity number
, ol_dist_info char(24)
, constraint ordl_uk primary key (ol_w_id, ol_d_id, ol_o_id, ol_number )) CLUSTER ordcluster_queue(ol_w_id,
ol_d_id, ol_o_id, ol_number) ;
set echo off
spool off
exit sql.sqlcode;
```

createtable_ordr.sql

```
/* created automatically by /export/home/oracle/tpcc_12node_dict/scripts/buildcreatetable.sh Mon Aug 17 16:40:21
PDT 2009 */
set timing on
set sqlblanklines on
spool createtable_ordr.log
set echo on
drop cluster ordcluster_queue including tables ;
```

```
create cluster ordcluster_queue (
o_w_id number
, o_d_id number
```

```
, o_id number SORT
, o_number number SORT
)

hashkeys 6048000
hash_allocation 504000
hash is ( ( o_w_id - 1 ) * 10 + o_d_id - 1 )
size 1490
tablespace ord_0;

create table ord (
  o_id number sort
, o_w_id number
, o_d_id number
, o_c_id number
, o_carrier_id number
, o_ol_cnt number
, o_all_local number
, o_entry_d date
, constraint ord_uk primary key ( o_w_id
, o_d_id
, o_id )
)
cluster ordcluster_queue (
  o_w_id
, o_d_id
, o_id
);
set echo off
spool off
exit sql.sqlcode;
```

createtable_stok.sql

```
/* created automatically by /export/home/oracle/tpcc_12node_dict/scripts/buildcreatetable.sh Mon Aug 17 16:40:35
PDT 2009 */
set timing on
set sqlblanklines on
spool createtable_stok.log
set echo on
drop cluster stokcluster including tables ;

create cluster stokcluster (
  s_i_id number
, s_w_id number
)
single table
hashkeys 60480000000
hash is ( ( abs(s_i_id - 1) * 50400 + mod((s_w_id - 1), 50400) + trunc ((s_w_id - 1) / 50400) * 50400 * 100000) )
size 290
pctfree 0 initrans 2 maxtrans 2
storage ( initial 1920008k next 1920000k maxextents unlimited pctincrease 0 freelist groups 4 buffer_pool keep )
parallel ( degree 128 )
tablespace stok_0;

create table stok (
  s_i_id number
, s_w_id number
, s_quantity number
, s_ytd number
, s_order_cnt number
, s_remote_cnt number
```

```
, s_data varchar2(50)
, s_dist_01 char(24)
, s_dist_02 char(24)
, s_dist_03 char(24)
, s_dist_04 char(24)
, s_dist_05 char(24)
, s_dist_06 char(24)
, s_dist_07 char(24)
, s_dist_08 char(24)
, s_dist_09 char(24)
, s_dist_10 char(24)
)
cluster stokcluster (
  s_i_id
, s_w_id
);
set echo off
spool off
exit sql.sqlcode;

createtable_ware.sql
/* created automatically by /export/home/oracle/tpcc_12node_dict/scripts/buildcreatetable.sh Mon Aug 17 16:40:12
PDT 2009 */
set timing on
set sqlblanklines on
spool createtable_ware.log
set echo on
drop cluster warecluster including tables ;

create cluster warecluster (
  w_id number
)
single table
hashkeys 604800
hash is ( (w_id - 1) )
size 7592
initrans 2
storage ( initial 403208k next 403200k pctincrease 0 freelist groups 4 buffer_pool default )
tablespace ware_0;

create table ware (
  w_id number
, w_ytd number
, w_tax number
, w_name varchar2(10)
, w_street_1 varchar2(20)
, w_street_2 varchar2(20)
, w_city varchar2(20)
, w_state char(2)
, w_zip char(9)
)
cluster warecluster (
  w_id
);
set echo off
spool off
exit sql.sqlcode;

createuser.sql
spool createusertpcc.log;
```

```
set echo on;

create user tpcc identified by tpcc;

grant dba to tpcc;
```

```
set echo off;
spool off;
```

```
exit ;
```

tkvcinin.sql

```
-- The initnew package for storing variables used in the
-- New Order anonymous block
```

```
CREATE OR REPLACE PACKAGE inittpcc
AS
  TYPE intarray IS TABLE OF INTEGER INDEX BY BINARY_INTEGER;
  TYPE distarray IS TABLE OF VARCHAR(24) INDEX BY BINARY_INTEGER;
  nulldate      DATE;
  TYPE rowidarray IS TABLE OF ROWID INDEX BY PLS_INTEGER;
  s_dist                distarray;
  idx1arr               intarray;
  s_remote              intarray;
  dist                  intarray;
  row_id                rowidarray;
  cust_rowid            rowid;
  dist_name             VARCHAR2(11);
  ware_name             VARCHAR2(11);
  c_num                 PLS_INTEGER;
```

```
PROCEDURE init_no(idxarr intarray);
PROCEDURE init_del;
PROCEDURE init_pay;
END inittpcc;
/
show errors;
```

```
CREATE OR REPLACE PACKAGE BODY inittpcc AS
  PROCEDURE init_no (idxarr  intarray)
  IS
  BEGIN
    -- initialize null date
    nulldate := TO_DATE('01-01-1811', 'MM-DD-YYYY');
    idx1arr := idxarr;
  END init_no;
```

```
PROCEDURE init_del
IS
BEGIN
  FOR i IN 1 .. 10 LOOP
    dist(i) := i;
  END LOOP;
END init_del;
```

```
PROCEDURE init_pay IS
BEGIN
  NULL;
END init_pay;
```

```
END inittpcc;
/
show errors
exit
```

init_node1.ora

```
instance_number = 1
thread = 1
undo_tablespace = undo_1
cluster_interconnects="192.168.1.1"
ifile = p_run.ora
```

init_node2.ora

```
instance_number = 2
thread = 2
undo_tablespace = undo_2
cluster_interconnects="192.168.1.2"
ifile = p_run.ora
```

init_node3.ora

```
instance_number = 3
thread = 3
undo_tablespace = undo_3
cluster_interconnects="192.168.1.3"
ifile = p_run.ora
```

init_node4.ora

```
instance_number = 4
thread = 4
undo_tablespace = undo_4
cluster_interconnects="192.168.1.4"
ifile = p_run.ora
```

init_node5.ora

```
instance_number = 5
thread = 5
undo_tablespace = undo_5
cluster_interconnects="192.168.1.5"
ifile = p_run.ora
```

init_node6.ora

```
instance_number = 6
thread = 6
undo_tablespace = undo_6
cluster_interconnects="192.168.1.6"
ifile = p_run.ora
```

init_node7.ora

```
instance_number = 7
thread = 7
undo_tablespace = undo_7
cluster_interconnects="192.168.1.7"
ifile = p_run.ora
```

init_node8.ora

instance_number = 8
thread = 8
undo_tablespace = undo_8
cluster_interconnects="192.168.1.8"
ifile = p_run.ora

init_node9.ora

instance_number = 9
thread = 9
undo_tablespace = undo_9
cluster_interconnects="192.168.1.9"
ifile = p_run.ora

init_node10.ora

instance_number = 10
thread = 10
undo_tablespace = undo_10
cluster_interconnects="192.168.1.10"
ifile = p_run.ora

init_node11.ora

instance_number = 11
thread = 11
undo_tablespace = undo_11
cluster_interconnects="192.168.1.11"
ifile = p_run.ora

init_node12.ora

instance_number = 12
thread = 12
undo_tablespace = undo_12
cluster_interconnects="192.168.1.12"
ifile = p_run.ora

p_build.ora

compatible = 11.1.0.7.0
control_files = (/export/home/oracle/tpcc_disks_12node_dict/control_001,
/export/home/oracle/tpcc_disks_12node_dict/control_002)
db_16k_cache_size = 100G
db_4k_cache_size = 8192M
db_block_size = 8192
db_cache_size = 100G
db_files = 3000
db_name = tpcc
log_buffer = 268435456
plsql_optimize_level=2
shared_pool_size = 16384M
statistics_level = basic
dml_locks = 500
transactions = 3200
undo_management = auto
undo_retention = 2
processes = 3200
recovery_parallelism = 64
sessions = 3200
parallel_max_servers = 512
cluster_database = true

resource_manager_plan = "
transactions_per_rollback_segment=1

p_create.ora

compatible = 11.1.0.7.0
control_files = (/export/home/oracle/tpcc_disks_12node_dict/control_001,
/export/home/oracle/tpcc_disks_12node_dict/control_002)
db_16k_cache_size = 21845M
db_4k_cache_size = 8192M
db_block_size = 8192
db_cache_size = 21845M
db_files = 3000
db_name = tpcc
log_buffer = 1048576
plsql_optimize_level=2
shared_pool_size = 4096M
statistics_level = basic
undo_management = manual

p_run.ora

compatible = 11.1.0.7.0
aq_tm_processes =0
db_file_multiblock_read_count = 1
control_files = (/export/home/oracle/tpcc_disks_12node_dict/control_001,
/export/home/oracle/tpcc_disks_12node_dict/control_002)
db_16k_cache_size=95G
db_4k_cache_size=2G
db_block_size = 8192
db_cache_size=65G
db_keep_cache_size=210G
db_recycle_cache_size=40G
shared_pool_size=20G
db_files = 2500
db_name = tpcc
log_buffer = 268435456
plsql_optimize_level=2
statistics_level = typical
timed_statistics = true
fast_start_mttr_target = 0
java_pool_size = 0
job_queue_processes = 0
log_checkpoint_interval = 0
log_checkpoint_timeout = 1700
log_checkpoints_to_alert = TRUE
optimizer_mode = choose
query_rewrite_enabled = false
replication_dependency_tracking = false
dml_locks = 500
transactions = 3200
undo_management = auto
undo_retention = 2
processes = 3200
recovery_parallelism = 64
sessions = 3200
cluster_database = true
cluster_database_instances=12
parallel_max_servers = 0
resource_manager_plan = "
transactions_per_rollback_segment=1
db_writer_processes=16


```
db_block_checking=false
db_block_checksum=false
trace_enabled=false
gcs_server_processes=5
db_cache_advice=off
_gc_integrity_checks=0
_cgs_node_kill_escalation = FALSE
_diag_daemon=FALSE
_high_priority_processes="LMD0|LMS*"
_gc_element_percent=50
_lm_file_affinity=""
14-72,627-664,1304-1331,1641-1645,1701,1713-1717,1798,1826,1873=1:\
73-119,665-713,1332-1359,1646-1650,1702,1718-1722,1786,1825,1827,1874=2:\
120-166,714-762,1360-1387,1651-1655,1703,1723-1727,1787,1828,1839,1875=3:\
167-213,763-811,1388-1415,1656-1660,1704,1728-1732,1788,1829,1840,1876=4:\
214-260,812-860,1416-1443,1661-1665,1705,1733-1737,1789,1830,1841,1877=5:\
261-307,861-909,1444-1471,1666-1670,1706,1738-1742,1790,1831,1842,1878=6:\
308-354,910-958,1472-1499,1671-1675,1707,1743-1747,1791,1832,1843,1879=7:\
355-401,959-1007,1500-1527,1676-1680,1708,1748-1752,1792,1833,1844,1880=8:\
402-448,1008-1055,1528-1555,1681-1685,1709,1753-1757,1793,1835,1845,1881=9:\
449-494,1056-1103,1556-1583,1686-1690,1710,1758-1762,1794,1836,1849,1882=10:\
495-540,1104-1151,1584-1611,1691-1695,1711,1763-1767,1795,1837,1863,1883=11:\
541-586,1152-1199,1612-1639,1696-1700,1712,1768-1772,1796,1838,1872,1884=12"
ge_files_to_locks=""
1217-1276=42EACH"

tpccload.c
#ifdef RCSID
static char *RCSid =
    "$Header: tpccload.c 7030100.1 96/05/13 16:20:36 plai Generic<base> $ Copyr (c) 1993 Oracle";
#endif /* RCSID */

/*=====+
|      Copyright (c) 1994  Oracle Corp, Redwood Shores, CA      |
|      OPEN SYSTEMS PERFORMANCE GROUP                          |
|      All Rights Reserved                                     |
|=====+
| FILENAME
|   tpccload.c
| DESCRIPTION
|   Load or generate TPC-C database tables.
|   Usage: tpccload -M <# of wares> [options]
|           options: -A load all tables
|                   -w load ware table
|                   -d load dist table
|                   -c load cust table (cluster around c_w_id)
|                   -C load cust table (cluster around c_id)
|                   -i load item table
|                   -s load stok table (cluster around s_w_id)
|                   -S load stok table (cluster around s_i_id)
|                   -h load hist table
|                   -n load new-order table
|                   -o <oline file> load order and order-line table
|                   -b <ware#> beginning ware number
|                   -e <ware#> ending ware number
|                   -j <item#> beginning item number (with -S)
|                   -k <item#> ending item number (with -S)
|                   -l <cid#> beginning cid number (with -C)
|                   -m <cid#> ending cid number (with -C)
|                   -g generate rows to standard output
|=====+*/
```

```
#include <stdio.h>
#include <stdlib.h>
#include <string.h>
#include <time.h>
#include <sys/types.h>
#include "tpcc.h"

#ifdef ORA_NT
#undef boolean
#include <process.h>
#include "dpbcore.h"
# define gettime dpbtimef
# define getcpu dpbcpu
# define lrand48() ((long)rand() <<15 | rand())
#ifdef __STDC__
# define PROTO(args) args
#else
# define PROTO(args) ()
#endif
#endif

#define DISTARR 10 /* dist insert array size */
#define CUSTARR 100 /* cust insert array size */
#define STOCARR 100 /* stok insert array size */
#define ITEMARR 100 /* item insert array size */
#define HISTARR 100 /* hist insert array size */
#define ORDEARR 100 /* order insert array size */
#define NEWOARR 100 /* new order insert array size */

#define DISTFAC 10 /* max. dist id */
#define CUSTFAC 3000 /* max. cust id */
#define STOCFAC 100000 /* max. stok id */
#define ITEMFAC 100000 /* max. item id */
#define HISTFAC 30000 /* history / warehouse */
#define ORDEFAC 3000 /* order / district */
#define NEWOFAC 900 /* new order / district */

#define C 0 /* constant in non-uniform dist. eqt. */
#define CNUM1 1 /* first constant in non-uniform dist. eqt. */
#define CNUM2 2 /* second constant in non-uniform dist. eqt. */
#define CNUM3 3 /* third constant in non-uniform dist. eqt. */

#define SEED 2 /* seed for random functions */

#define NOT_SERIALIZABLE 8177 /* ORA-08177: transaction not serializable */
#define SNAPSHOT_TOO_OLD 1555 /* ORA-01555: snapshot too old */
#define RECOVERR -10
#define IRRECERR -20

#define SQLTXTW "INSERT INTO ware (w_id, w_ytd, w_tax, w_name, w_street_1, w_street_2, w_city, w_state, w_zip) VALUES (:w_id, 30000000, :w_tax, :w_name, :w_street_1, \
:w_street_2, :w_city, :w_state, :w_zip)"

#define SQLTXTD "INSERT INTO dist (d_id, d_w_id, d_ytd, d_tax, d_next_o_id, d_name, d_street_1, d_street_2, d_city, d_state, d_zip) VALUES (:d_id, :d_w_id, 3000000, :d_tax, \
3001, :d_name, :d_street_1, :d_street_2, :d_city, :d_state, :d_zip)"

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

#define SQLTXTC "INSERT INTO cust (C_ID, C_D_ID, C_W_ID, C_FIRST, C_MIDDLE, C_LAST,
```

```
C_STREET_1, C_STREET_2, C_CITY, C_STATE, C_ZIP, C_PHONE, C_SINCE, C_CREDIT, C_CREDIT_LIM,
C_DISCOUNT, C_BALANCE, C_YTD_PAYMENT, C_PAYMENT_CNT, C_DELIVERY_CNT, C_DATA)
VALUES (:c_id, :c_d_id, :c_w_id, \
:c_first, 'OE', :c_last, :c_street_1, :c_street_2, :c_city, :c_state, \
:c_zip, :c_phone, SYSDATE, :c_credit, 5000000, :c_discount, -1000, 1000, 1, \
0, :c_data)"
```

```
#define SQLTXTH "INSERT INTO hist (h_c_id, h_c_d_id, h_c_w_id, h_d_id, h_w_id, h_date, h_amount, h_data)
VALUES (:h_c_id, :h_c_d_id, :h_c_w_id, \
      :h_d_id, :h_w_id, SYSDATE, 1000, :h_data)"
```

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

```
#define SQLTXTS "INSERT INTO stok (:s_id, :s_w_id, :s_quantity, :s_dist_01, :s_dist_02, :s_dist_03, :s_dist_04, :s_dist_05, :s_dist_06, :s_dist_07, :s_dist_08, :s_dist_09, :s_dist_10, :s_ytd, :s_order_cnt, :s_remote_cnt, :s_data) \nVALUES (:s_id, :s_w_id, :s_quantity, \n:s_dist_01, :s_dist_02, :s_dist_03, :s_dist_04, :s_dist_05, :s_dist_06, \n:s_dist_07, :s_dist_08, :s_dist_09, :s_dist_10, 0, 0, 0, :s_data)" \n
```

```
#define SQLTXT1 "INSERT INTO item (I_ID,I_IM_ID,I_NAME,I_PRICE,I_DATA) VALUES (:i_id, :i_im_id, :i_name, :i_price, \n      :i_data)"
```

```
#define SQLTXTO1 "INSERT INTO odr (O_ID,  
O_D_ID,O_W_ID,O_C_ID,O_ENTRY_D,O_CARRIER_ID,O_OL_CNT,O_ALL_LOCAL)\nVALUES (:o_id,:o_d_id,:o_w_id,:o_c_id,\nSYSDATE,:o_carrier_id,:o_ol_cnt,1)"
```

```
#define SQLTXTO2 "INSERT INTO ordr (O_ID,  
O_D_ID,O_W_ID,O_C_ID,O_ENTRY_D,O_CARRIER_ID,O_OL_CNT,O_ALL_LOCAL)\  
VALUES (:o_id,:o_d_id,:o_w_id,:o_c_id,\  
SYSDATE,11,:o_ol_cnt,1)"
```

```
#define SQLTXTOL1 "INSERT INTO ordl (OL_O_ID,OL_D_ID,OL_W_ID,OL_NUMBER,OL_DELIVERY_D,OL_I_ID,OL_SUPPLY_W_ID,OL_QUANTITY,OL_AMOUNT,OL_DIST_INFO)\nVALUES (:ol_o_id,:ol_d_id,\n:ol_w_id,:ol_number,SYSDATE,:ol_i_id,:ol_supply_w_id,5,0,\n:ol_dist_info)"
```

```
#define SQLTXTOI2 "INSERT INTO ordl (OL_O_ID, OL_D_ID, OL_W_ID, OL_NUMBER, OL_DELIVERY_D, OL_I_ID, OL_SUPPLY_W_ID, OL_QUANTITY, OL_AMOUNT, OL_DIST_INFO) \nVALUES (:ol_o_id, :ol_d_id, \n:ol_w_id, :ol_number, to_date('01-Jan-1811'), :ol_i_id, :ol_supply_w_id, 5, :ol_amount, \n:ol_dist_info)"
```

```
#define SQLTXTNO "INSERT INTO nord (no_o_id, no_d_id, no_w_id) VALUES (:no_o_id, :no_d_id, :no_w_id)"
```

```
#define SQLXTENHA "alter session set \"_enable_hash_overflow\"=true"
#define SQLXTDIHA "alter session set \"_enable_hash_overflow\"=false"
```

```
static char *lastname[] = {
    "BAR",
    "OUGHT",
    "ABLE",
    "PRI",
    "PRES",
    "ESE",
    "ANTI",
    "CALLY",
    "ATION",
    "EING"
```

```
};  
char num9[10];  
char num16[17];  
char str2[3];  
char str24[15][25];  
int randperm3000[3000];
```

```
void initperm();
void randstr();
void randdatastr();
void randnum();
void randlastname (char*, int);
int NURand();
void sysdate();
```

```
OCIEnv *tpcenv;  
OCIServer *tpcsrv;  
OCIError *errhp;  
OCISvcCtx *tpcsvc;  
OCISession *tpcusr;
```

```

OCISmt *curw;
OCISmt *curd;
OCISmt *curc;
OCISmt *cures;
OCISmt *curh;
OCISmt *curs;
OCISmt *curss;
OCISmt *curi;
OCISmt *curo1;
OCISmt *curo2;
OCISmt *curol1;
OCISmt *curo22;
OCISmt *curno;

```

```
OCIBind *w_id_bp = (OCIBind *) 0;
OCIBind *w_name_bp = (OCIBind *) 0;
OCIBind *w_street1_bp = (OCIBind *) 0;
OCIBind *w_street2_bp = (OCIBind *) 0;
OCIBind *w_city_bp = (OCIBind *) 0;
OCIBind *w_state_bp = (OCIBind *) 0;
OCIBind *w_zip_bp = (OCIBind *) 0;
OCIBind *w_tax_bp = (OCIBind *) 0;
```

```
OCIBind *d_id_bp = (OCIBind *) 0;
OCIBind *d_w_id_bp = (OCIBind *) 0;
OCIBind *d_name_bp = (OCIBind *) 0;
OCIBind *d_street1_bp = (OCIBind *) 0;
OCIBind *d_street2_bp = (OCIBind *) 0;
OCIBind *d_city_bp = (OCIBind *) 0;
OCIBind *d_state_bp = (OCIBind *) 0;
OCIBind *d_zip_bp = (OCIBind *) 0;
OCIBind *d_tax_bp = (OCIBind *) 0;
```

```
OCIDefine *s_c_ret_bp = (OCIDefine *) 0;
OCIBind *s_c_id_bp = (OCIBind *) 0;
OCIBind *s_c_d_id_bp = (OCIBind *) 0;
OCIBind *s_c_w_id_bp = (OCIBind *) 0;
```

```
OCIBind *c_id_bp = (OCIBind *) 0;
OCIBind *c_d_id_bp = (OCIBind *) 0;
```

```
OCIBind *c_w_id_bp = (OCIBind *) 0;
OCIBind *c_first_bp = (OCIBind *) 0;
OCIBind *c_last_bp = (OCIBind *) 0;
OCIBind *c_street1_bp = (OCIBind *) 0;
OCIBind *c_street2_bp = (OCIBind *) 0;
OCIBind *c_city_bp = (OCIBind *) 0;
OCIBind *c_state_bp = (OCIBind *) 0;
OCIBind *c_zip_bp = (OCIBind *) 0;
OCIBind *c_phone_bp = (OCIBind *) 0;
OCIBind *c_discount_bp = (OCIBind *) 0;
OCIBind *c_credit_bp = (OCIBind *) 0;
OCIBind *c_data_bp = (OCIBind *) 0;
```

```
OCIBind *i_id_bp = (OCIBind *) 0;
OCIBind *i_im_id_bp = (OCIBind *) 0;
OCIBind *i_name_bp = (OCIBind *) 0;
OCIBind *i_price_bp = (OCIBind *) 0;
OCIBind *i_data_bp = (OCIBind *) 0;
```

```
OCIDefine *s_s_ret_bp = (OCIDefine *) 0;
OCIBind *s_s_i_id_bp = (OCIBind *) 0;
OCIBind *s_s_w_id_bp = (OCIBind *) 0;
```

```
OCIBind *s_i_id_bp = (OCIBind *) 0;
OCIBind *s_w_id_bp = (OCIBind *) 0;
OCIBind *s_quantity_bp = (OCIBind *) 0;
OCIBind *s_dist_01_bp = (OCIBind *) 0;
OCIBind *s_dist_02_bp = (OCIBind *) 0;
OCIBind *s_dist_03_bp = (OCIBind *) 0;
OCIBind *s_dist_04_bp = (OCIBind *) 0;
OCIBind *s_dist_05_bp = (OCIBind *) 0;
OCIBind *s_dist_06_bp = (OCIBind *) 0;
OCIBind *s_dist_07_bp = (OCIBind *) 0;
OCIBind *s_dist_08_bp = (OCIBind *) 0;
OCIBind *s_dist_09_bp = (OCIBind *) 0;
OCIBind *s_dist_10_bp = (OCIBind *) 0;
OCIBind *s_data_bp = (OCIBind *) 0;
```

```
OCIBind *h_c_id_bp = (OCIBind *) 0;
OCIBind *h_c_d_id_bp = (OCIBind *) 0;
OCIBind *h_c_w_id_bp = (OCIBind *) 0;
OCIBind *h_d_id_bp = (OCIBind *) 0;
OCIBind *h_w_id_bp = (OCIBind *) 0;
OCIBind *h_data_bp = (OCIBind *) 0;
```

```
OCIBind *ol_o_id_bp = (OCIBind *) 0;
OCIBind *ol_d_id_bp = (OCIBind *) 0;
OCIBind *ol_w_id_bp = (OCIBind *) 0;
OCIBind *ol_i_id_bp = (OCIBind *) 0;
OCIBind *ol_number_bp = (OCIBind *) 0;
OCIBind *ol_supply_w_id_bp = (OCIBind *) 0;
OCIBind *ol_dist_info_bp = (OCIBind *) 0;
OCIBind *ol_amount_bp = (OCIBind *) 0;
```

```
OCIBind *o_id_bp = (OCIBind *) 0;
OCIBind *o_d_id_bp = (OCIBind *) 0;
OCIBind *o_w_id_bp = (OCIBind *) 0;
OCIBind *o_c_id_bp = (OCIBind *) 0;
OCIBind *o_carrier_id_bp = (OCIBind *) 0;
OCIBind *o_ol_cnt_bp = (OCIBind *) 0;
OCIBind *o_ocnt_bp = (OCIBind *) 0;
OCIBind *o_olcnt_bp = (OCIBind *) 0;
```

```
OCIBind *no_o_id_bp = (OCIBind *) 0;
OCIBind *no_d_id_bp = (OCIBind *) 0;
OCIBind *no_w_id_bp = (OCIBind *) 0;
```

```
void myusage()
{
    fprintf(stderr, "\n");
    fprintf(stderr, "Usage:\tpccload -M <multiplier> [options]\n");
    fprintf(stderr, "options:\n");
    fprintf(stderr, "\t-A \tload all tables\n");
    fprintf(stderr, "\t-w \tload ware table\n");
    fprintf(stderr, "\t-d \tload dist table\n");
    fprintf(stderr, "\t-c \tload cust table (cluster around c_w_id\n");
    fprintf(stderr, "\t-C \tload cust table (cluster around c_id\n");
    fprintf(stderr, "\t-i \tload item table\n");
    fprintf(stderr, "\t-s \tload stok table (cluster around s_w_id\n");
    fprintf(stderr, "\t-S \tload stok table (cluster around s_i_id\n");
    fprintf(stderr, "\t-h \tload hist table\n");
    fprintf(stderr, "\t-n \tload new-order table\n");
    fprintf(stderr, "\t-o <oline file> \tload order and order-line table\n");
    fprintf(stderr, "\t-b <ware#> \tbeginning ware number\n");
    fprintf(stderr, "\t-e <ware#> \tending ware number\n");
    fprintf(stderr, "\t-j <item#> \tbeginning item number (with -S)\n");
    fprintf(stderr, "\t-k <item#> \tending item number (with -S)\n");
    fprintf(stderr, "\t-l <cid#> \tbeginning cid number (with -C)\n");
    fprintf(stderr, "\t-m <cid#> \tending cid number (with -C)\n");
    fprintf(stderr, "\t-g \tgenerate rows to standard output\n");
    fprintf(stderr, "\t\t$tpcc_bench must be set to the location of the kit\n");
    fprintf(stderr, "\n");
    exit(1);
}
```

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

    sprintf(realfile,"%s",fnam);
    fd = fopen(realfile,"r");
    if (!fd)
    {
        return (0);
    }
    while (fgets((char *)linebuf+nulpt, SQL_BUF_SIZE, fd))
    {
        nulpt = strlen((char *)linebuf);
    }
    return(nulpt);
}
```

```
void quit()
{
    OCIERROR(errhp,OCISessionEnd ( tpcsvc,errhp, tpcusr, OCI_DEFAULT));
    OCIERROR(errhp,OCIServerDetach ( tpcsrv, errhp, OCI_DEFAULT));
    OCIHandleFree((dvoid *)tpcusr, OCI_HTYPE_SESSION);
    OCIHandleFree((dvoid *)tpcsvc, OCI_HTYPE_SVCCTX);
    OCIHandleFree((dvoid *)errhp, OCI_HTYPE_ERROR);
}
```

```
OCIHandleFree((dvoid *)tpcsrv, OCI_HTYPE_SERVER);
OCIHandleFree((dvoid *)tpcenv, OCI_HTYPE_ENV);
}
```

```
void main (argc, argv)
int argc;
char *argv[];
```

```
{
    char *uid="tpcc";
    char *pwd="tpcc";
    int scale=0;
    int i, j;
    int loop;
    int loopcount;
    int cid;
    int dwid;
    int cdid;
    int cwid;
    int sid;
    int swid;
    int olcnt;
    int nrows;
    int row;
```

```
    int w_id;
    char w_name[11];
    char w_street_1[21];
    char w_street_2[21];
    char w_city[21];
    char w_state[2];
    char w_zip[9];
    float w_tax;
```

```
    int d_id[10];
    int d_w_id[10];
    char d_name[10][11];
    char d_street_1[10][21];
    char d_street_2[10][21];
    char d_city[10][21];
    char d_state[10][2];
    char d_zip[10][9];
    float d_tax[10];
```

```
    int s_c_id;
    int s_c_d_id;
    int s_c_w_id;
    int s_c_count;
```

```
    int c_id[100];
    int c_d_id[100];
    int c_w_id[100];
    char c_first[100][17];
    char c_last[100][17];
    char c_street_1[100][21];
    char c_street_2[100][21];
    char c_city[100][21];
    char c_state[100][2];
    char c_zip[100][9];
    char c_phone[100][16];
    char c_credit[100][2];
    float c_discount[100];
    char c_data[100][501];
```

```
    int i_id[100];
    int i_im_id[100];
    int i_price[100];
    char i_name[100][25];
    char i_data[100][51];
```

```
    int s_s_count;
    int s_s_i_id;
    int s_s_w_id;
```

```
    int s_i_id[100];
    int s_w_id[100];
    int s_quantity[100];
    char s_dist_01[100][25];
    char s_dist_02[100][25];
    char s_dist_03[100][25];
    char s_dist_04[100][25];
    char s_dist_05[100][25];
    char s_dist_06[100][25];
    char s_dist_07[100][25];
    char s_dist_08[100][25];
    char s_dist_09[100][25];
    char s_dist_10[100][25];
    char s_data[100][51];
```

```
    int h_w_id[100];
    int h_d_id[100];
    int h_c_id[100];
    char h_data[100][25];
```

```
    int o_id[100];
    int o_d_id[100];
    int o_w_id[100];
    int o_c_id[100];
    int o_carrier_id[100];
    int o_ol_cnt[100];
```

```
    int ol_o_id[1500];
    int ol_d_id[1500];
    int ol_w_id[1500];
    int ol_number[1500];
    int ol_i_id[1500];
    int ol_supply_w_id[1500];
    int ol_amount[1500];
    char ol_dist_info[1500][24];
    int o_cnt;
    int ol_cnt;
```

```
    ub2 ol_o_id_len[1500];
    ub2 ol_d_id_len[1500];
    ub2 ol_w_id_len[1500];
    ub2 ol_number_len[1500];
    ub2 ol_i_id_len[1500];
    ub2 ol_supply_w_id_len[1500];
    ub2 ol_dist_info_len[1500];
    ub2 ol_amount_len[1500];
```

```
    ub4 ol_o_id_clen;
    ub4 ol_d_id_clen;
    ub4 ol_w_id_clen;
    ub4 ol_number_clen;
```

```

ub4 ol_i_id_clen;
ub4 ol_supply_w_id_clen;
ub4 ol_dist_info_clen;
ub4 ol_amount_clen;

ub2 o_id_len[100];
ub2 o_d_id_len[100];
ub2 o_w_id_len[100];
ub2 o_c_id_len[100];
ub2 o_carrier_id_len[100];
ub2 o_ol_cnt_len[100];

ub4 o_id_clen;
ub4 o_d_id_clen;
ub4 o_w_id_clen;
ub4 o_c_id_clen;
ub4 o_carrier_id_clen;
ub4 o_ol_cnt_clen;

text stmbuff[16*1024];
text stmbuff2[16*1024];
text tempbuf[16*1024];
text tempbuf1[16*1024];
text tempbuf2[16*1024];
text tempbuf11[16*1024];
text tempbuf21[16*1024];
text tempbuf31[16*1024];
char *strptr;
char *strptr1;
char *strptr2;

int no_o_id[100];
int no_d_id[100];
int no_w_id[100];

char sdate[30];

#ifdef ORA_NT
clock_t begin_time, end_time;
clock_t begin_cpu, end_cpu;

char *arg_ptr, **end_args;
#else
double begin_time, end_time;
double begin_cpu, end_cpu;
double gettime(), getcpu();

extern int getopt();
extern char *optarg;
extern int optind, opterr;
int opt;
#endif

char *argstr="M:AwdcCisShno:b:e:j:k:l:m:g";
int do_A=0;
int do_w=0;
int do_d=0;
int do_i=0;
int do_c=0;
int do_C=0;
int do_s=0;
int do_S=0;

int do_h=0;
int do_o=0;
int do_n=0;
int gen=0;
int bware=1;
int eware=0;
int bitem=1;
int eitem=0;
int bcid=1;
int ecid=0;

FILE *olfp=NULL;
char olfname[100];
char* basename;
int status;
#ifdef ORA_NT
char fname[100];
FILE *logfile;
#endif /* ORA_NT */

/*-----+
| Parse command line -- look for scale factor. |
+-----*/

if (argc == 1) {
    myusage ();
}

#ifdef ORA_NT
end_args = argv + argc;
for (++argv; argv < end_args; )
{
    arg_ptr = *argv++;

    if (*arg_ptr != '-')
    {
        myusage ();
    }
    else
    {
        switch (arg_ptr[1]) {
        case '?': myusage ();
                    break;
        case 'M': scale = atoi (*argv++);
                    break;
        case 'A': do_A = 1;
                    break;
        case 'w': do_w = 1;
                    break;
        case 'd': do_d = 1;
                    break;
        case 'c': do_c = 1;
                    break;
        case 'C': do_C = 1;
                    break;
        case 'i': do_i = 1;
                    break;
        case 's': do_s = 1;
                    break;
        case 'S': do_S = 1;
                    break;
        case 'h': do_h = 1;
                    break;

```

```

case 'n': do_n = 1;
    break;
case 'o': do_o = 1;
    strcpy (olfname, *argv++);
    break;
case 'b': bware = atoi (*argv++);
    break;
case 'e': eware = atoi (*argv++);
    break;
case 'j': bitem = atoi (*argv++);
    break;
case 'k': eitem = atoi (*argv++);
    break;
case 'l': bcid = atoi (*argv++);
    break;
case 'm': ecid = atoi (*argv++);
    break;
case 'g': gen = 1;
    strcpy (fname, *argv++);
    break;
case 'l': logfile=fopen(*argv++,"w");
    break;
default: fprintf (stderr, "THIS SHOULD NEVER HAPPEN!!!\n");
    fprintf (stderr, "(reached default case in getopt ())\n");
    myusage ();
}
}
}

```

#else

```

while ((opt = getopt (argc, argv, argstr)) != -1) {
    switch (opt) {
        case '?': myusage ();
            break;
        case 'M': scale = atoi (optarg);
            break;
        case 'A': do_A = 1;
            break;
        case 'w': do_w = 1;
            break;
        case 'd': do_d = 1;
            break;
        case 'c': do_c = 1;
            break;
        case 'C': do_C = 1;
            break;
        case 'i': do_i = 1;
            break;
        case 's': do_s = 1;
            break;
        case 'S': do_S = 1;
            break;
        case 'h': do_h = 1;
            break;
        case 'n': do_n = 1;
            break;
        case 'o': do_o = 1;
            strcpy (olfname, optarg);
            break;
        case 'b': bware = atoi (optarg);

```

```

        break;
case 'e': eware = atoi (optarg);
    break;
case 'j': bitem = atoi (optarg);
    break;
case 'k': eitem = atoi (optarg);
    break;
case 'l': bcid = atoi (optarg);
    break;
case 'm': ecid = atoi (optarg);
    break;
case 'g': gen = 1;
    break;
default: fprintf (stderr, "THIS SHOULD NEVER HAPPEN!!!\n");
    fprintf (stderr, "(reached default case in getopt ())\n");
    myusage ();
    }
}

```

endif /* ORA_NT */

```

/*-----*|
|          Rudimentary error checking          |
/*-----*/

```

```

if (scale < 1) {
    fprintf (stderr, "Invalid scale factor: %d\n", scale);
    myusage ();
}

```

```

if (!(do_A || do_w || do_d || do_c || do_C || do_i || do_s || do_S || do_h || do_o ||
    do_n)) {
    fprintf (stderr, "What should I load???\n");
    myusage ();
}

```

```

if (gen && (do_A || (do_w + do_d + do_c + do_C + do_i + do_s + do_S + do_h + do_o +
    do_n > 1))) {
    fprintf (stderr, "Can only generate table one at a time\n");
    myusage ();
}

```

```

if (do_S && (do_A || do_s)) {
    fprintf (stderr, "Cluster stock table around s_w_id or s_i_id?\n");
    myusage ();
}

```

```

if (do_C && (do_A || do_c)) {
    fprintf (stderr, "Cluster cust table around c_w_id or c_id?\n");
    myusage ();
}

```

```

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

```

```

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

```

```

        myusage ();
    }

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

if (do_S) {
    if ((bitem < 1) || (bitem > STOCFAC)) {
        fprintf(stderr, "Invalid beginning item number: \"%d\\n\", bitem);
        myusage ();
    }

    if ((eitem < bitem) || (eitem > STOCFAC)) {
        fprintf(stderr, "Invalid ending item number: \"%d\\n\", eitem);
        myusage ();
    }
}

if (do_o) {
    if ((basename = getenv ("tpcc_bench")) == NULL)
    {
        fprintf(stderr, "$tpcc_bench is not set");
        myusage ();
    }
}

if ((bware < 1) || (bware > scale)) {
    fprintf(stderr, "Invalid beginning warehouse number: \"%d\\n\", bware);
    myusage ();
}

if ((eware < bware) || (eware > scale)) {
    fprintf(stderr, "Invalid ending warehouse number: \"%d\\n\", eware);
    myusage ();
}

if (gen && do_o) {
    if ((olfp = fopen (olfname, "w")) == NULL) {
        fprintf(stderr, "Can't open '%s' for writing order lines\\n", olfname);
        myusage ();
    }
}

/*-----+
| Prepare to insert into database.          |
+-----*/

sysdate (sdate);
if (!gen) {

    /* log on to Oracle */

    OCIInitialize(OCI_DEFAULT|OCI_OBJECT,(dvoid *)0,0,0,0);
    OCIEnvInit(&tpcenv, OCI_DEFAULT, 0, (dvoid **)0);
    OCIHandleAlloc((dvoid *)tpcenv, (dvoid **)&tpcsrv, OCI_HTYPE_SERVER, 0, (dvoid **)0);
    OCIHandleAlloc((dvoid *)tpcenv, (dvoid **)&errhp, OCI_HTYPE_ERROR, 0, (dvoid **)0);
    OCIHandleAlloc((dvoid *)tpcenv, (dvoid **)&tpcsvc, OCI_HTYPE_SVCCTX, 0, (dvoid **)0);
    OCIServerAttach(tpcsrv, errhp, (text *)0,0,OCI_DEFAULT);
    OCIAttrSet((dvoid *)tpcsvc, OCI_HTYPE_SVCCTX, (dvoid *)tpcsrv,

```

```

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

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

    fprintf(stderr, "\\nConnected to Oracle userid '%s/%s'.\\n", uid, pwd);

    /* open cursors and parse statement */
    if (do_A || do_w) {
        OCIERROR(errhp,OCIHandleAlloc(tpcenv,(dvoid **)&curw, OCI_HTYPE_STMT, 0, (dvoid**)0));
        OCIERROR(errhp,OCIStmtPrepare(curw, errhp, (text *)SQLTXTW,
            strlen((char *)SQLTXTW), (ub4) OCI_NTV_SYNTAX, (ub4) OCI_DEFAULT));
    }

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

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

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

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

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

    if (do_A || do_o) {
        int stat;
        char fname[160];
        OCIERROR(errhp,OCIHandleAlloc(tpcenv,(dvoid **)&curo1, OCI_HTYPE_STMT, 0, (dvoid**)0));
        DISCARD strcpy(fname,basename);
        DISCARD strcat(fname, "/");
        DISCARD strcat(fname, "benchmark/blocks/load_ordordl.sql");

```

```

stat = sqlfile(fname, stmbuf);
if (!stat)
{
    fprintf(stderr, "unable to open %s \n", fname);
    quit();
    exit(1);
}
int pid=getpid();
strptr = (char *)strchr(stmbuf, "INSERT");
int n=0;
n=strptr-stmbuf;
strncpy(tempbuf, stmbuf, n);
strptr = strptr + 6;

strptr1 = (char *)strchr(strptr, "INSERT");
n=strptr1-strptr;
strncpy(tempbuf1, strptr, n);
sprintf(tempbuf11, "INSERT /*+ %d */ %s", pid, tempbuf1);
strptr1 = strptr1 + 6;

strptr2 = (char *)strchr(strptr1, "INSERT");
n=strptr2-strptr1;
strncpy(tempbuf2, strptr1, n);
sprintf(tempbuf21, "INSERT /*+ %d */ %s", pid, tempbuf2);
strptr2 = strptr2 + 6;

sprintf(tempbuf31, "INSERT /*+ %d */ %s", pid, strptr2);

strcat(stmbuf2, " ");
strcat(stmbuf2, tempbuf);
strcat(stmbuf2, " ");
strcat(stmbuf2, tempbuf11);
strcat(stmbuf2, " ");
strcat(stmbuf2, tempbuf21);
strcat(stmbuf2, " ");
strcat(stmbuf2, tempbuf31);
strcat(stmbuf2, " ");
strcpy(stmbuf, stmbuf2);

OCIERROR(errhp, OCIStmtPrepare(curo1, errhp, stmbuf,
    strlen((char *)stmbuf), (ub4) OCI_NTV_SYNTAX, (ub4) OCI_DEFAULT));
}

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

/* bind variables */

/* warehouse */

if (do_A || do_w) {
    OCIERROR(errhp, OCIBindByName(curw, &w_id_bp, errhp, (text *)":w_id", strlen(":w_id"),
        (ub1 *)&w_id, sizeof(w_id), SQLT_INT, (dvoid *) 0, (ub2 *)0, (ub2 *)0,
        (ub4) 0, (ub4 *) 0, (ub4) OCI_DEFAULT));

    OCIERROR(errhp, OCIBindByName(curw, &w_name_bp, errhp, (text *)":w_name", strlen(":w_name"),
        (ub1 *)w_name, 11, SQLT_STR, (dvoid *) 0, (ub2 *)0, (ub2 *)0,

```

```

        (ub4) 0, (ub4 *) 0, (ub4) OCI_DEFAULT));

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

    OCIERROR(errhp, OCIBindByName(curw, &w_street2_bp, errhp, (text *)":w_street_2",
        strlen(":w_street_2"), (ub1 *)w_street_2, 21, SQLT_STR,
        (dvoid *) 0, (ub2 *)0, (ub2 *)0,
        (ub4) 0, (ub4 *) 0, (ub4) OCI_DEFAULT));

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

    OCIERROR(errhp, OCIBindByName(curw, &w_state_bp, errhp, (text *)":w_state",
        strlen(":w_state"), (ub1 *)w_state, 2, SQLT_CHR,
        (dvoid *) 0, (ub2 *)0, (ub2 *)0,
        (ub4) 0, (ub4 *) 0, (ub4) OCI_DEFAULT));

    OCIERROR(errhp, OCIBindByName(curw, &w_zip_bp, errhp, (text *)":w_zip",
        strlen(":w_zip"), (ub1 *)w_zip, 9, SQLT_CHR,
        (dvoid *) 0, (ub2 *)0, (ub2 *)0,
        (ub4) 0, (ub4 *) 0, (ub4) OCI_DEFAULT));

    OCIERROR(errhp, OCIBindByName(curw, &w_tax_bp, errhp, (text *)":w_tax",
        strlen(":w_tax"), (ub1 *) &w_tax, sizeof(w_tax), SQLT_FLT,
        (dvoid *) 0, (ub2 *)0, (ub2 *)0,
        (ub4) 0, (ub4 *) 0, (ub4) OCI_DEFAULT));
}

/* district */

if (do_A || do_d) {
    OCIERROR(errhp, OCIBindByName(curd, &d_id_bp, errhp, (text *)":d_id",
        strlen(":d_id"), (ub1 *)d_id, sizeof(int), SQLT_INT,
        (dvoid *) 0, (ub2 *)0, (ub2 *)0,
        (ub4) 0, (ub4 *) 0, (ub4) OCI_DEFAULT));

    OCIERROR(errhp, OCIBindByName(curd, &d_w_id_bp, errhp, (text *)":d_w_id",
        strlen(":d_w_id"), (ub1 *)d_w_id, sizeof(int), SQLT_INT,
        (dvoid *) 0, (ub2 *)0, (ub2 *)0,
        (ub4) 0, (ub4 *) 0, (ub4) OCI_DEFAULT));

    OCIERROR(errhp, OCIBindByName(curd, &d_name_bp, errhp, (text *)":d_name",
        strlen(":d_name"), (ub1 *)d_name, 11, SQLT_STR,
        (dvoid *) 0, (ub2 *)0, (ub2 *)0,
        (ub4) 0, (ub4 *) 0, (ub4) OCI_DEFAULT));

    OCIERROR(errhp, OCIBindByName(curd, &d_street1_bp, errhp, (text *)":d_street_1",
        strlen(":d_street_1"), (ub1 *)d_street_1, 21, SQLT_STR,
        (dvoid *) 0, (ub2 *)0, (ub2 *)0,
        (ub4) 0, (ub4 *) 0, (ub4) OCI_DEFAULT));

    OCIERROR(errhp, OCIBindByName(curd, &d_street2_bp, errhp, (text *)":d_street_2",
        strlen(":d_street_2"), (ub1 *)d_street_2, 21, SQLT_STR,
        (dvoid *) 0, (ub2 *)0, (ub2 *)0,
        (ub4) 0, (ub4 *) 0, (ub4) OCI_DEFAULT));

    OCIERROR(errhp, OCIBindByName(curd, &d_city_bp, errhp, (text *)":d_city",

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        strlen(":d_city"), (ub1 *)d_city, 21, SQLT_STR,
        (dvoid *) 0, (ub2 *)0, (ub2 *)0,
        (ub4) 0, (ub4 *) 0, (ub4) OCI_DEFAULT));

OCIERROR(errhp, OCIBindByName(curd, &d_state_bp, errhp, (text *)":d_state",
        strlen(":d_state"), (ub1 *)d_state, 2, SQLT_CHR,
        (dvoid *) 0, (ub2 *)0, (ub2 *)0,
        (ub4) 0, (ub4 *) 0, (ub4) OCI_DEFAULT));

OCIERROR(errhp, OCIBindByName(curd, &d_zip_bp, errhp, (text *)":d_zip",
        strlen(":d_zip"), (ub1 *)d_zip, 9, SQLT_CHR,
        (dvoid *) 0, (ub2 *)0, (ub2 *)0,
        (ub4) 0, (ub4 *) 0, (ub4) OCI_DEFAULT));

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

/* customer */

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

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

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

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

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

    OCIERROR(errhp, OCIBindByName(curc, &c_d_id_bp, errhp, (text *)":c_d_id",
        strlen(":c_d_id"), (ub1 *)c_d_id, sizeof(int), SQLT_INT,
        (dvoid *) 0, (ub2 *)0, (ub2 *)0,
        (ub4) 0, (ub4 *) 0, (ub4) OCI_DEFAULT));

    OCIERROR(errhp, OCIBindByName(curc, &c_w_id_bp, errhp, (text *)":c_w_id",
        strlen(":c_w_id"), (ub1 *)c_w_id, sizeof(int), SQLT_INT,
        (dvoid *) 0, (ub2 *)0, (ub2 *)0,
        (ub4) 0, (ub4 *) 0, (ub4) OCI_DEFAULT));

    OCIERROR(errhp, OCIBindByName(curc, &c_first_bp, errhp, (text *)":c_first",
        strlen(":c_first"), (ub1 *)c_first, 17, SQLT_STR,
        (dvoid *) 0, (ub2 *)0, (ub2 *)0,
        (ub4) 0, (ub4 *) 0, (ub4) OCI_DEFAULT));

    OCIERROR(errhp, OCIBindByName(curc, &c_last_bp, errhp, (text *)":c_last",

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        strlen(":c_last"), (ub1 *)c_last, 17, SQLT_STR,
        (dvoid *) 0, (ub2 *)0, (ub2 *)0,
        (ub4) 0, (ub4 *) 0, (ub4) OCI_DEFAULT));

OCIERROR(errhp, OCIBindByName(curc, &c_street1_bp, errhp, (text *)":c_street_1",
        strlen(":c_street_1"), (ub1 *)c_street_1, 21, SQLT_STR,
        (dvoid *) 0, (ub2 *)0, (ub2 *)0,
        (ub4) 0, (ub4 *) 0, (ub4) OCI_DEFAULT));

OCIERROR(errhp, OCIBindByName(curc, &c_street2_bp, errhp, (text *)":c_street_2",
        strlen(":c_street_2"), (ub1 *)c_street_2, 21, SQLT_STR,
        (dvoid *) 0, (ub2 *)0, (ub2 *)0,
        (ub4) 0, (ub4 *) 0, (ub4) OCI_DEFAULT));

OCIERROR(errhp, OCIBindByName(curc, &c_city_bp, errhp, (text *)":c_city",
        strlen(":c_city"), (ub1 *)c_city, 21, SQLT_STR,
        (dvoid *) 0, (ub2 *)0, (ub2 *)0,
        (ub4) 0, (ub4 *) 0, (ub4) OCI_DEFAULT));

OCIERROR(errhp, OCIBindByName(curc, &c_state_bp, errhp, (text *)":c_state",
        strlen(":c_state"), (ub1 *)c_state, 2, SQLT_CHR,
        (dvoid *) 0, (ub2 *)0, (ub2 *)0,
        (ub4) 0, (ub4 *) 0, (ub4) OCI_DEFAULT));

OCIERROR(errhp, OCIBindByName(curc, &c_zip_bp, errhp, (text *)":c_zip",
        strlen(":c_zip"), (ub1 *)c_zip, 9, SQLT_CHR,
        (dvoid *) 0, (ub2 *)0, (ub2 *)0,
        (ub4) 0, (ub4 *) 0, (ub4) OCI_DEFAULT));

OCIERROR(errhp, OCIBindByName(curc, &c_phone_bp, errhp, (text *)":c_phone",
        strlen(":c_phone"), (ub1 *)c_phone, 16, SQLT_CHR,
        (dvoid *) 0, (ub2 *)0, (ub2 *)0,
        (ub4) 0, (ub4 *) 0, (ub4) OCI_DEFAULT));

OCIERROR(errhp, OCIBindByName(curc, &c_credit_bp, errhp, (text *)":c_credit",
        strlen(":c_credit"), (ub1 *)c_credit, 2, SQLT_CHR,
        (dvoid *) 0, (ub2 *)0, (ub2 *)0,
        (ub4) 0, (ub4 *) 0, (ub4) OCI_DEFAULT));

OCIERROR(errhp, OCIBindByName(curc, &c_discount_bp, errhp, (text *)":c_discount",
        strlen(":c_discount"), (ub1 *)c_discount, sizeof(float), SQLT_FLT,
        (dvoid *) 0, (ub2 *)0, (ub2 *)0,
        (ub4) 0, (ub4 *) 0, (ub4) OCI_DEFAULT));

OCIERROR(errhp, OCIBindByName(curc, &c_data_bp, errhp, (text *)":c_data",
        strlen(":c_data"), (ub1 *)c_data, 501, SQLT_STR,
        (dvoid *) 0, (ub2 *)0, (ub2 *)0,
        (ub4) 0, (ub4 *) 0, (ub4) OCI_DEFAULT));
}

/* item */

if (do_A || do_i) {
    OCIERROR(errhp, OCIBindByName(curi, &i_id_bp, errhp, (text *)":i_id",
        strlen(":i_id"), (ub1 *)i_id, sizeof(int), SQLT_INT,
        (dvoid *) 0, (ub2 *)0, (ub2 *)0,
        (ub4) 0, (ub4 *) 0, (ub4) OCI_DEFAULT));

    OCIERROR(errhp, OCIBindByName(curi, &i_im_id_bp, errhp, (text *)":i_im_id",
        strlen(":i_im_id"), (ub1 *)i_im_id, sizeof(int), SQLT_INT,
        (dvoid *) 0, (ub2 *)0, (ub2 *)0,
        (ub4) 0, (ub4 *) 0, (ub4) OCI_DEFAULT));
}

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OCIERROR(errhp, OCIBindByName(curi, &i_name_bp, errhp, (text *)":i_name",
    strlen(":i_name"), (ub1 *)i_name, 25, SQLT_STR,
    (dvoid *) 0, (ub2 *)0, (ub2 *)0,
    (ub4) 0, (ub4 *) 0, (ub4) OCI_DEFAULT));

OCIERROR(errhp, OCIBindByName(curi, &i_price_bp, errhp, (text *)":i_price",
    strlen(":i_price"), (ub1 *)i_price, sizeof(int), SQLT_INT,
    (dvoid *) 0, (ub2 *)0, (ub2 *)0,
    (ub4) 0, (ub4 *) 0, (ub4) OCI_DEFAULT));

OCIERROR(errhp, OCIBindByName(curi, &i_data_bp, errhp, (text *)":i_data",
    strlen(":i_data"), (ub1 *)i_data, 51, SQLT_STR,
    (dvoid *) 0, (ub2 *)0, (ub2 *)0,
    (ub4) 0, (ub4 *) 0, (ub4) OCI_DEFAULT));
}

/* stock */

if (do_A || do_s || do_S) {
    OCIERROR(errhp, OCIBindByName(curss, &s_s_i_id_bp, errhp, (text *)":s_s_i_id",
        strlen(":s_s_i_id"), (ub1 *)&s_s_i_id, sizeof(int), SQLT_INT,
        (dvoid *) 0, (ub2 *)0, (ub2 *)0,
        (ub4) 0, (ub4 *) 0, (ub4) OCI_DEFAULT));

    OCIERROR(errhp, OCIBindByName(curss, &s_s_w_id_bp, errhp, (text *)":s_s_w_id",
        strlen(":s_s_w_id"), (ub1 *)&s_s_w_id, sizeof(int), SQLT_INT,
        (dvoid *) 0, (ub2 *)0, (ub2 *)0,
        (ub4) 0, (ub4 *) 0, (ub4) OCI_DEFAULT));

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

    OCIERROR(errhp, OCIBindByName(curs, &s_i_id_bp, errhp, (text *)":s_i_id",
        strlen(":s_i_id"), (ub1 *)s_i_id, sizeof(int), SQLT_INT,
        (dvoid *) 0, (ub2 *)0, (ub2 *)0,
        (ub4) 0, (ub4 *) 0, (ub4) OCI_DEFAULT));

    OCIERROR(errhp, OCIBindByName(curs, &s_w_id_bp, errhp, (text *)":s_w_id",
        strlen(":s_w_id"), (ub1 *)s_w_id, sizeof(int), SQLT_INT,
        (dvoid *) 0, (ub2 *)0, (ub2 *)0,
        (ub4) 0, (ub4 *) 0, (ub4) OCI_DEFAULT));

    OCIERROR(errhp, OCIBindByName(curs, &s_quantity_bp, errhp, (text *)":s_quantity",
        strlen(":s_quantity"), (ub1 *)s_quantity, sizeof(int), SQLT_INT,
        (dvoid *) 0, (ub2 *)0, (ub2 *)0,
        (ub4) 0, (ub4 *) 0, (ub4) OCI_DEFAULT));

    OCIERROR(errhp, OCIBindByName(curs, &s_dist_01_bp, errhp, (text *)":s_dist_01",
        strlen(":s_dist_01"), (ub1 *)s_dist_01, 25, SQLT_STR,
        (dvoid *) 0, (ub2 *)0, (ub2 *)0,
        (ub4) 0, (ub4 *) 0, (ub4) OCI_DEFAULT));

    OCIERROR(errhp, OCIBindByName(curs, &s_dist_02_bp, errhp, (text *)":s_dist_02",
        strlen(":s_dist_02"), (ub1 *)s_dist_02, 25, SQLT_STR,
        (dvoid *) 0, (ub2 *)0, (ub2 *)0,
        (ub4) 0, (ub4 *) 0, (ub4) OCI_DEFAULT));

    OCIERROR(errhp, OCIBindByName(curs, &s_dist_03_bp, errhp, (text *)":s_dist_03",
        strlen(":s_dist_03"), (ub1 *)s_dist_03, 25, SQLT_STR,
        (dvoid *) 0, (ub2 *)0, (ub2 *)0,

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        (ub4) 0, (ub4 *) 0, (ub4) OCI_DEFAULT));

    OCIERROR(errhp, OCIBindByName(curs, &s_dist_04_bp, errhp, (text *)":s_dist_04",
        strlen(":s_dist_04"), (ub1 *)s_dist_04, 25, SQLT_STR,
        (dvoid *) 0, (ub2 *)0, (ub2 *)0,
        (ub4) 0, (ub4 *) 0, (ub4) OCI_DEFAULT));

    OCIERROR(errhp, OCIBindByName(curs, &s_dist_05_bp, errhp, (text *)":s_dist_05",
        strlen(":s_dist_05"), (ub1 *)s_dist_05, 25, SQLT_STR,
        (dvoid *) 0, (ub2 *)0, (ub2 *)0,
        (ub4) 0, (ub4 *) 0, (ub4) OCI_DEFAULT));

    OCIERROR(errhp, OCIBindByName(curs, &s_dist_06_bp, errhp, (text *)":s_dist_06",
        strlen(":s_dist_06"), (ub1 *)s_dist_06, 25, SQLT_STR,
        (dvoid *) 0, (ub2 *)0, (ub2 *)0,
        (ub4) 0, (ub4 *) 0, (ub4) OCI_DEFAULT));

    OCIERROR(errhp, OCIBindByName(curs, &s_dist_07_bp, errhp, (text *)":s_dist_07",
        strlen(":s_dist_07"), (ub1 *)s_dist_07, 25, SQLT_STR,
        (dvoid *) 0, (ub2 *)0, (ub2 *)0,
        (ub4) 0, (ub4 *) 0, (ub4) OCI_DEFAULT));

    OCIERROR(errhp, OCIBindByName(curs, &s_dist_08_bp, errhp, (text *)":s_dist_08",
        strlen(":s_dist_08"), (ub1 *)s_dist_08, 25, SQLT_STR,
        (dvoid *) 0, (ub2 *)0, (ub2 *)0,
        (ub4) 0, (ub4 *) 0, (ub4) OCI_DEFAULT));

    OCIERROR(errhp, OCIBindByName(curs, &s_dist_09_bp, errhp, (text *)":s_dist_09",
        strlen(":s_dist_09"), (ub1 *)s_dist_09, 25, SQLT_STR,
        (dvoid *) 0, (ub2 *)0, (ub2 *)0,
        (ub4) 0, (ub4 *) 0, (ub4) OCI_DEFAULT));

    OCIERROR(errhp, OCIBindByName(curs, &s_dist_10_bp, errhp, (text *)":s_dist_10",
        strlen(":s_dist_10"), (ub1 *)s_dist_10, 25, SQLT_STR,
        (dvoid *) 0, (ub2 *)0, (ub2 *)0,
        (ub4) 0, (ub4 *) 0, (ub4) OCI_DEFAULT));

    OCIERROR(errhp, OCIBindByName(curs, &s_data_bp, errhp, (text *)":s_data",
        strlen(":s_data"), (ub1 *)s_data, 51, SQLT_STR,
        (dvoid *) 0, (ub2 *)0, (ub2 *)0,
        (ub4) 0, (ub4 *) 0, (ub4) OCI_DEFAULT));
}

/* history */

if (do_A || do_h) {
    OCIERROR(errhp, OCIBindByName(curh, &h_c_id_bp, errhp, (text *)":h_c_id",
        strlen(":h_c_id"), (ub1 *)h_c_id, sizeof(int), SQLT_INT,
        (dvoid *) 0, (ub2 *)0, (ub2 *)0,
        (ub4) 0, (ub4 *) 0, (ub4) OCI_DEFAULT));

    OCIERROR(errhp, OCIBindByName(curh, &h_c_d_id_bp, errhp, (text *)":h_c_d_id",
        strlen(":h_c_d_id"), (ub1 *)h_d_id, sizeof(int), SQLT_INT,
        (dvoid *) 0, (ub2 *)0, (ub2 *)0,
        (ub4) 0, (ub4 *) 0, (ub4) OCI_DEFAULT));
}

```

```

OCIERROR(errhp, OCIBindByName(curh, &h_c_w_id_bp, errhp, (text *)":h_c_w_id",
    strlen(":h_c_w_id"), (ub1 *)h_w_id, sizeof(int), SQLT_INT,
    (dvoid *) 0, (ub2 *)0, (ub2 *)0,
    (ub4) 0, (ub4 *) 0, (ub4) OCI_DEFAULT));

OCIERROR(errhp, OCIBindByName(curh, &h_d_id_bp, errhp, (text *)":h_d_id",
    strlen(":h_d_id"), (ub1 *)h_d_id, sizeof(int), SQLT_INT,
    (dvoid *) 0, (ub2 *)0, (ub2 *)0,
    (ub4) 0, (ub4 *) 0, (ub4) OCI_DEFAULT));

OCIERROR(errhp, OCIBindByName(curh, &h_w_id_bp, errhp, (text *)":h_w_id",
    strlen(":h_w_id"), (ub1 *)h_w_id, sizeof(int), SQLT_INT,
    (dvoid *) 0, (ub2 *)0, (ub2 *)0,
    (ub4) 0, (ub4 *) 0, (ub4) OCI_DEFAULT));

OCIERROR(errhp, OCIBindByName(curh, &h_data_bp, errhp, (text *)":h_data",
    strlen(":h_data"), (ub1 *)h_data, 25, SQLT_STR,
    (dvoid *) 0, (ub2 *)0, (ub2 *)0,
    (ub4) 0, (ub4 *) 0, (ub4) OCI_DEFAULT));

}

/* order and order_line (delivered) */

if (do_A || do_o) {

    for (i = 0; i < ORDEARR; i++) {
        o_id_len[i] = sizeof(int);
        o_d_id_len[i] = sizeof(int);
        o_w_id_len[i] = sizeof(int);
        o_c_id_len[i] = sizeof(int);
        o_carrier_id_len[i] = sizeof(int);
        o_ol_cnt_len[i] = sizeof(int);
    }

    OCIERROR(errhp, OCIBindByName(curo1, &o_o_id_bp, errhp, (text *)":o_o_id",
        strlen(":o_o_id"), (ub1 *)o_o_id, sizeof(int), SQLT_INT,
        (dvoid *) 0, (ub2 *)o_o_id_len, (ub2 *)0,
        (ub4) 15*ORDEARR, (ub4 *)&o_o_id_clen, (ub4) OCI_DEFAULT));

    OCIERROR(errhp, OCIBindByName(curo1, &o_d_id_bp, errhp, (text *)":o_d_id",
        strlen(":o_d_id"), (ub1 *)o_d_id, sizeof(int), SQLT_INT,
        (dvoid *) 0, (ub2 *)o_d_id_len, (ub2 *)0,
        (ub4) 15*ORDEARR, (ub4 *)&o_d_id_clen, (ub4) OCI_DEFAULT));

    OCIERROR(errhp, OCIBindByName(curo1, &o_w_id_bp, errhp, (text *)":o_w_id",
        strlen(":o_w_id"), (ub1 *)o_w_id, sizeof(int), SQLT_INT,
        (dvoid *) 0, (ub2 *)o_w_id_len, (ub2 *)0,
        (ub4) 15*ORDEARR, (ub4 *)&o_w_id_clen, (ub4) OCI_DEFAULT));

    OCIERROR(errhp, OCIBindByName(curo1, &o_c_id_bp, errhp, (text *)":o_c_id",
        strlen(":o_c_id"), (ub1 *)o_c_id, sizeof(int), SQLT_INT,
        (dvoid *) 0, (ub2 *)o_c_id_len, (ub2 *)0,
        (ub4) 15*ORDEARR, (ub4 *)&o_c_id_clen, (ub4) OCI_DEFAULT));

    OCIERROR(errhp, OCIBindByName(curo1, &o_carrier_id_bp, errhp, (text *)":o_carrier_id",
        strlen(":o_carrier_id"), (ub1 *)o_carrier_id, sizeof(int), SQLT_INT,
        (dvoid *) 0, (ub2 *)o_carrier_id_len, (ub2 *)0,
        (ub4) 15*ORDEARR, (ub4 *)&o_carrier_id_clen, (ub4) OCI_DEFAULT));

    OCIERROR(errhp, OCIBindByName(curo1, &o_ol_cnt_bp, errhp, (text *)":o_ol_cnt",
        strlen(":o_ol_cnt"), (ub1 *)o_ol_cnt, sizeof(int), SQLT_INT,
        (dvoid *) 0, (ub2 *)o_ol_cnt_len, (ub2 *)0,
        (ub4) 15*ORDEARR, (ub4 *)&o_ol_cnt_clen, (ub4) OCI_DEFAULT));

    OCIERROR(errhp, OCIBindByName(curo1, &o_olcnt_bp, errhp, (text *)":order_rows",
        strlen(":order_rows"), (ub1 *)&o_cnt, sizeof(int), SQLT_INT,
        (dvoid *) 0, (ub2 *)0, (ub2 *)0,
        (ub4) 0, (ub4 *) 0, (ub4) OCI_DEFAULT));

    OCIERROR(errhp, OCIBindByName(curo1, &o_olcnt_bp, errhp, (text *)":ordl_rows",
        strlen(":ordl_rows"), (ub1 *)&o_cnt, sizeof(int), SQLT_INT,
        (dvoid *) 0, (ub2 *)0, (ub2 *)0,
        (ub4) 0, (ub4 *) 0, (ub4) OCI_DEFAULT));

}

/* new order */

if (do_A || do_n) {
    OCIERROR(errhp, OCIBindByName(curno, &no_o_id_bp, errhp, (text *)":no_o_id",
        strlen(":no_o_id"), (ub1 *)no_o_id, sizeof(int), SQLT_INT,
        (dvoid *) 0, (ub2 *)0, (ub2 *)0,
        (ub4) 0, (ub4 *) 0, (ub4) OCI_DEFAULT));
}

```

```

    strlen(":ol_supply_w_id"), (ub1 *)ol_supply_w_id, sizeof(int), SQLT_INT,
    (dvoid *) 0, (ub2 *)ol_supply_w_id_len, (ub2 *)0,
    (ub4) 15*ORDEARR, (ub4 *)&ol_supply_w_id_clen, (ub4) OCI_DEFAULT));

OCIERROR(errhp, OCIBindByName(curo1, &ol_dist_info_bp, errhp, (text *)":ol_dist_info",
    strlen(":ol_dist_info"), (ub1 *)ol_dist_info, 24, SQLT_CHR,
    (dvoid *) 0, (ub2 *)ol_dist_info_len, (ub2 *)0,
    (ub4) 15*ORDEARR, (ub4 *)&ol_dist_info_clen, (ub4) OCI_DEFAULT));

OCIERROR(errhp, OCIBindByName(curo1, &ol_amount_bp, errhp, (text *)":ol_amount",
    strlen(":ol_amount"), (ub1 *)ol_amount, sizeof(int), SQLT_INT,
    (dvoid *) 0, (ub2 *)ol_amount_len, (ub2 *)0,
    (ub4) 15*ORDEARR, (ub4 *)&ol_amount_clen, (ub4) OCI_DEFAULT));

OCIERROR(errhp, OCIBindByName(curo1, &o_id_bp, errhp, (text *)":o_id",
    strlen(":o_id"), (ub1 *)o_id, sizeof(int), SQLT_INT,
    (dvoid *) 0, (ub2 *)o_id_len, (ub2 *)0,
    (ub4) ORDEARR, (ub4 *)&o_id_clen, (ub4) OCI_DEFAULT));

OCIERROR(errhp, OCIBindByName(curo1, &o_d_id_bp, errhp, (text *)":o_d_id",
    strlen(":o_d_id"), (ub1 *)o_d_id, sizeof(int), SQLT_INT,
    (dvoid *) 0, (ub2 *)o_d_id_len, (ub2 *)0,
    (ub4) ORDEARR, (ub4 *)&o_d_id_clen, (ub4) OCI_DEFAULT));

OCIERROR(errhp, OCIBindByName(curo1, &o_w_id_bp, errhp, (text *)":o_w_id",
    strlen(":o_w_id"), (ub1 *)o_w_id, sizeof(int), SQLT_INT,
    (dvoid *) 0, (ub2 *)o_w_id_len, (ub2 *)0,
    (ub4) ORDEARR, (ub4 *)&o_w_id_clen, (ub4) OCI_DEFAULT));

OCIERROR(errhp, OCIBindByName(curo1, &o_c_id_bp, errhp, (text *)":o_c_id",
    strlen(":o_c_id"), (ub1 *)o_c_id, sizeof(int), SQLT_INT,
    (dvoid *) 0, (ub2 *)o_c_id_len, (ub2 *)0,
    (ub4) ORDEARR, (ub4 *)&o_c_id_clen, (ub4) OCI_DEFAULT));

OCIERROR(errhp, OCIBindByName(curo1, &o_carrier_id_bp, errhp, (text *)":o_carrier_id",
    strlen(":o_carrier_id"), (ub1 *)o_carrier_id, sizeof(int), SQLT_INT,
    (dvoid *) 0, (ub2 *)o_carrier_id_len, (ub2 *)0,
    (ub4) ORDEARR, (ub4 *)&o_carrier_id_clen, (ub4) OCI_DEFAULT));

OCIERROR(errhp, OCIBindByName(curo1, &o_ol_cnt_bp, errhp, (text *)":o_ol_cnt",
    strlen(":o_ol_cnt"), (ub1 *)o_ol_cnt, sizeof(int), SQLT_INT,
    (dvoid *) 0, (ub2 *)o_ol_cnt_len, (ub2 *)0,
    (ub4) ORDEARR, (ub4 *)&o_ol_cnt_clen, (ub4) OCI_DEFAULT));

OCIERROR(errhp, OCIBindByName(curo1, &o_olcnt_bp, errhp, (text *)":order_rows",
    strlen(":order_rows"), (ub1 *)&o_cnt, sizeof(int), SQLT_INT,
    (dvoid *) 0, (ub2 *)0, (ub2 *)0,
    (ub4) 0, (ub4 *) 0, (ub4) OCI_DEFAULT));

OCIERROR(errhp, OCIBindByName(curo1, &o_olcnt_bp, errhp, (text *)":ordl_rows",
    strlen(":ordl_rows"), (ub1 *)&o_cnt, sizeof(int), SQLT_INT,
    (dvoid *) 0, (ub2 *)0, (ub2 *)0,
    (ub4) 0, (ub4 *) 0, (ub4) OCI_DEFAULT));

}

/* new order */

if (do_A || do_n) {
    OCIERROR(errhp, OCIBindByName(curno, &no_o_id_bp, errhp, (text *)":no_o_id",
        strlen(":no_o_id"), (ub1 *)no_o_id, sizeof(int), SQLT_INT,
        (dvoid *) 0, (ub2 *)0, (ub2 *)0,
        (ub4) 0, (ub4 *) 0, (ub4) OCI_DEFAULT));
}

```

```

OCIERROR(errhp, OCIBindByName(curno, &no_d_id_bp, errhp, (text *)"no_d_id",
    strlen("no_d_id"), (ub1 *)no_d_id, sizeof(int), SQLT_INT,
    (dvoid *) 0, (ub2 *)0, (ub2 *)0,
    (ub4) 0, (ub4 *) 0, (ub4) OCI_DEFAULT));

OCIERROR(errhp, OCIBindByName(curno, &no_w_id_bp, errhp, (text *)"no_w_id",
    strlen("no_w_id"), (ub1 *)no_w_id, sizeof(int), SQLT_INT,
    (dvoid *) 0, (ub2 *)0, (ub2 *)0,
    (ub4) 0, (ub4 *) 0, (ub4) OCI_DEFAULT));
}
}

/*-----+
| Initialize random number generator          |
+-----*/

    srand (SEED);
#ifdef ORA_NT
    srand48 (SEED);
#endif
    initperm ();

/*-----+
| Load the WAREHOUSE table.                  |
+-----*/

if (do_A || do_w) {
    nrows = eware - bware + 1;

    fprintf (stderr, "Loading/generating warehouse: w%d - w%d (%d rows)\n",
        bware, eware, nrows);

    begin_time = gettimeofday ();
    begin_cpu = getcpu ();

    for (loop = bware; loop <= eware; loop++) {

        w_tax = (float) ((lrand48 () % 2001) * 0.0001);
        randstr (w_name, 6, 10);
        randstr (w_street_1, 10, 20);
        randstr (w_street_2, 10, 20);
        randstr (w_city, 10, 20);
        randstr (str2, 2, 2);
        randnum (num9, 9);
        num9[4] = num9[5] = num9[6] = num9[7] = num9[8] = '1';

        if (gen) {
            printf ("%d 30000000 %6.4f %s %s %s %s %s %s\n", loop, w_tax,
                w_name, w_street_1, w_street_2, w_city, str2, num9);
            fflush (stdout);
        }
        else {
            w_id = loop;
            strncpy (w_state, str2, 2);
            strncpy (w_zip, num9, 9);

            status = OCISmtExecute(tpcsvc, curw, errhp, (ub4) 1, (ub4) 0,
                (CONST OCISnapshot*) 0, (OCISnapshot*) 0,
                (ub4) OCI_DEFAULT | OCI_COMMIT_ON_SUCCESS);
            if (status != OCI_SUCCESS) {

```

```

        fprintf (stderr, "Error at ware %d\n", loop);
        OCIERROR(errhp, status);
        quit ();
    }
    exit (1);
}
}

end_time = gettimeofday ();
end_cpu = getcpu ();
fprintf (stderr, "Done. %d rows loaded/generated in %10.2f sec. (%10.2f cpu)\n\n",
    nrows, end_time - begin_time, end_cpu - begin_cpu);
}

/*-----+
| Load the DISTRICT table.                   |
+-----*/

if (do_A || do_d) {
    nrows = (eware - bware + 1) * DISTFAC;

    fprintf (stderr, "Loading/generating district: w%d - w%d (%d rows)\n",
        bware, eware, nrows);

    begin_time = gettimeofday ();
    begin_cpu = getcpu ();

    dwid = bware - 1;

    for (row = 0; row < nrows; ) {
        dwid++;

        for (i = 0; i < DISTARR; i++, row++) {
            d_tax[i] = (float) ((lrand48 () % 2001) * 0.0001);
            randstr (d_name[i], 6, 10);
            randstr (d_street_1[i], 10, 20);
            randstr (d_street_2[i], 10, 20);
            randstr (d_city[i], 10, 20);
            randstr (str2, 2, 2);
            randnum (num9, 9);
            num9[4] = num9[5] = num9[6] = num9[7] = num9[8] = '1';

            if (gen) {
                printf ("%d %d 3000000 %6.4f 3001 %s %s %s %s %s %s\n",
                    i + 1, dwid, d_tax[i], d_name[i], d_street_1[i],
                        d_street_2[i], d_city[i], str2, num9 );
            }
            else {
                d_id[i] = i + 1;
                d_w_id[i] = dwid;
                strncpy (d_state[i], str2, 2);
                strncpy (d_zip[i], num9, 9);
            }
        }

        if (gen) {
            fflush (stdout);
        }
        else {
            status = OCISmtExecute(tpcsvc, curd, errhp, (ub4) DISTARR, (ub4) 0,
                (CONST OCISnapshot*) 0, (OCISnapshot*) 0,
                (ub4) OCI_DEFAULT | OCI_COMMIT_ON_SUCCESS);

```

```

        if (status != OCI_SUCCESS) {
            fprintf(stderr, "Aborted at ware %d, dist 1\n", dwid);
            OCIERROR(errhp, status);
            quit ();
            exit (1);
        }
    }
}

end_time = gettime ();
end_cpu = getcpu ();
fprintf(stderr, "Done.  %d rows loaded/generated in %10.2f sec. (%10.2f cpu)\n\n",
        nrows, end_time - begin_time, end_cpu - begin_cpu);
}

/*-----+
| Load the CUSTOMER table.                  |
+-----*/

if (do_A || do_c) {

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

    fprintf(stderr, "Loading/generating customer: w%d - w%d (%d rows)\n ",
            bware, eware, nrows);

    if (getenv("tpcc_hash_overflow")) {
        fprintf(stderr, "Hash overflow is enabled\n");
        OCIHandleAlloc(tpcenv, (dvoid **)&curi, OCI_HTYPE_STMT, 0, (dvoid**)0);
        sprintf((char *) stmbuf, SQLTXTENHA);
        OCIStmtPrepare(curi, errhp, stmbuf, strlen((char *)stmbuf),
            OCI_NTV_SYNTAX, OCI_DEFAULT);
        OCIERROR(errhp, OCIStmtExecute(tpcsvc, curi, errhp, 1, 0, 0, 0, OCI_DEFAULT));
        OCIHandleFree(curi, OCI_HTYPE_STMT);
        fprintf(stderr, "Customer loaded for horizontal partitioning\n");
    }
    else
    {
        fprintf(stderr, "Customer not loaded for horizontal partitioning\n");
    }
    begin_time = gettime ();
    begin_cpu = getcpu ();

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

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

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

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

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

```

```

    }

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

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

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

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

for (row = 0; row < nrows; ) {
    for (i = 0; i < CUSTARR && row < nrows; i++, row++) {
        cid++;
        if (cid > CUSTFAC) { /* cycle cust id */
            cid = 1; /* cheap mod */
            cdid++; /* shift dist cycle */
            if (cdid > DISTFAC) {
                cdid = 1;
            }
        }
    }
}

```



```

    if ((++loopcount) % 50)
        fprintf(stderr, ".");
    else
        fprintf(stderr, " %d rows committed\n", row);
}

end_time = gettimeofday ();
end_cpu = getcpu ();
fprintf(stderr, "Done. %d rows loaded/generated in %10.2f sec. (%10.2f cpu)\n\n",
        nrows < 0 ? 0 : nrows, end_time - begin_time, end_cpu - begin_cpu);
if (getenv("tpcc_hash_overflow")) {
    fprintf(stderr, "Hash overflow is disabled\n");
    OCIHandleAlloc(tpcenv, (dvoid **)&curi, OCI_HTYPE_STMT, 0, (dvoid**)0);
    sprintf((char *) stmbuf, SQLTXTDIHA);
    OCIStmtPrepare(curi, errhp, stmbuf, strlen((char *)stmbuf),
        OCI_NTV_SYNTAX, OCI_DEFAULT);
    OCIERROR(errhp, OCIStmtExecute(tpcsvc, curi, errhp, 1, 0, 0, OCI_DEFAULT));
    OCIHandleFree(curi, OCI_HTYPE_STMT);
}
}

/*-----+
| Load the ITEM table.                                |
+-----*/

if (do_A || do_i) {
    nrows = ITEMFAC;

    fprintf(stderr, "Loading/generating item: (%d rows)\n", nrows);

    begin_time = gettimeofday ();
    begin_cpu = getcpu ();

    loopcount = 0;

    for (row = 0; row < nrows; ) {
        for (i = 0; i < ITEMARR; i++, row++) {
            i_im_id[i] = (lrand48 () % 10000) + 1;
            i_price[i] = ((lrand48 () % 9901) + 100);
            randstr (i_name[i], 14, 24);
            randdatastr (i_data[i], 26, 50);

            if (gen) {
                printf ("%d %d %s %d %s\n", row + 1, i_im_id[i], i_name[i],
                    i_price[i], i_data[i]);
            }
            else {
                i_id[i] = row + 1;
            }
        }
    }

    if (gen) {
        fflush (stdout);
    }
    else {
        status = OCIStmtExecute(tpcsvc, curi, errhp, (ub4) ITEMARR, (ub4) 0,
            (CONST OCISnapshot*) 0, (OCISnapshot*) 0,
            (ub4) OCI_DEFAULT | OCI_COMMIT_ON_SUCCESS);
        if (status != OCI_SUCCESS) {
            fprintf(stderr, "Aborted at i_id %d\n", i_id[0]);

```

```

        OCIERROR(errhp, status);
        quit ();
        exit (1);
    }
}

if ((++loopcount) % 50)
    fprintf(stderr, ".");
else
    fprintf(stderr, " %d rows committed\n", row);
}

end_time = gettimeofday ();
end_cpu = getcpu ();
fprintf(stderr, "Done. %d rows loaded/generated in %10.2f sec. (%10.2f cpu)\n\n",
        nrows, end_time - begin_time, end_cpu - begin_cpu);
}

/*-----+
| Load the STOCK table.                                |
+-----*/

if (do_A || do_s) {

    nrows = (eware - bware + 1) * STOCFAC;

    fprintf(stderr, "Loading/generating stock: w%d - w%d (%d rows)\n",
        bware, eware, nrows);

    begin_time = gettimeofday ();
    begin_cpu = getcpu ();

    s_s_i_id = 1;
    s_s_w_id = bware;

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

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

```



```

        exit (1);
    }
    if (s_s_count == 0) {
        break;
    }
    else s_s_i_id++;
}
}
if (s_s_i_id > STOCFAC) {
    s_s_i_id = 1;
    s_s_w_id++;
}

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

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

for (row = 0; row < nrows; ) {
    /* added row < nrows condition on next line - alex.ni */
    for (i = 0; (i < STOCARR) && (row < nrows); i++, row++) {
        if (++sid > STOCFAC) { /* cheap mod */
            sid = 1;
            swid++;
        }
        s_quantity[i] = (lrand48 () % 91) + 10;
        randstr (s_dist_01[i], 24, 24);
        randstr (s_dist_02[i], 24, 24);
        randstr (s_dist_03[i], 24, 24);
        randstr (s_dist_04[i], 24, 24);
        randstr (s_dist_05[i], 24, 24);
        randstr (s_dist_06[i], 24, 24);
        randstr (s_dist_07[i], 24, 24);
        randstr (s_dist_08[i], 24, 24);
        randstr (s_dist_09[i], 24, 24);
        randstr (s_dist_10[i], 24, 24);
        randdatastr (s_data[i], 26, 50);

        if (gen) {
            printf ("%d %d %d %s %s %s %s %s %s %s %s %s 0 0 0 %s\n",
                sid, swid, s_quantity[i], s_dist_01[i], s_dist_02[i],
                s_dist_03[i], s_dist_04[i], s_dist_05[i], s_dist_06[i],
                s_dist_07[i], s_dist_08[i], s_dist_09[i], s_dist_10[i],
                s_data[i]);
        }
        else {
            s_i_id[i] = sid;
            s_w_id[i] = swid;
        }
    }

    if (gen) {
        fflush (stdout);
    }
    else {
        /* Changed to STOCKARR to i - alex.ni */
        status = OCISstmtExecute(tpcsvc, curs, errhp, (ub4) i, (ub4) 0,
            (CONST OCISnapshot*) 0, (OCISnapshot*) 0,
            (ub4) OCI_DEFAULT | OCI_COMMIT_ON_SUCCESS);
    }
}

```

```

    if (status != OCI_SUCCESS) {
        fprintf (stderr, "Aborted at w_id %d, s_i_id %d\n", s_w_id[0], s_i_id[0]);
        OCIERROR(errhp, status);
        quit ();
        exit (1);
    }
}

if ((++loopcount) % 50)
    fprintf (stderr, ".");
else
    fprintf (stderr, " %d rows committed\n ", row);
}

end_time = gettimeofday ();
end_cpu = getcpu ();
fprintf (stderr, "Done. %d rows loaded/generated in %10.2f sec. (%10.2f cpu)\n\n",
    nrows < 0 ? 0 : nrows, end_time - begin_time, end_cpu - begin_cpu);
}

/*-----+
| Load the STOCK table (cluster around s_i_id). |
+-----*/

if (do_S) {

    nrows = (eitem - bitem + 1) * (eware - bware + 1);

    fprintf (stderr, "Loading/generating stock: i%d - i%d, w%d - w%d (%d rows)\n ",
        bitem, eitem, bware, eware, nrows);

    begin_time = gettimeofday ();
    begin_cpu = getcpu ();

    s_s_i_id = bitem;
    s_s_w_id = bware;

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

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

```

```

        quit ();
        exit (1);
    }
    if (s_s_count == 0) {
        break;
    }
    else s_s_w_id++;
}
}
if (s_s_w_id > eware) {
    s_s_w_id = bware;
    s_s_i_id++;
}

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

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

for (row = 0; row < nrows; ) {
    for (i = 0; i < STOCARR && row < nrows; i++, row++) {
        if (++swid > eware) { /* cheap mod */
            swid = bware;
            sid++;
        }
        s_quantity[i] = (lrand48 () % 91) + 10;
        randstr (s_dist_01[i], 24, 24);
        randstr (s_dist_02[i], 24, 24);
        randstr (s_dist_03[i], 24, 24);
        randstr (s_dist_04[i], 24, 24);
        randstr (s_dist_05[i], 24, 24);
        randstr (s_dist_06[i], 24, 24);
        randstr (s_dist_07[i], 24, 24);
        randstr (s_dist_08[i], 24, 24);
        randstr (s_dist_09[i], 24, 24);
        randstr (s_dist_10[i], 24, 24);
        randdatastr (s_data[i], 26, 50);

        if (gen) {
            printf ("%d %d %d %s %s %s %s %s %s %s %s %s 0 0 0 %s\n",
                sid, swid, s_quantity[i], s_dist_01[i], s_dist_02[i],
                s_dist_03[i], s_dist_04[i], s_dist_05[i], s_dist_06[i],
                s_dist_07[i], s_dist_08[i], s_dist_09[i], s_dist_10[i],
                s_data[i]);
        }
        else {
            s_i_id[i] = sid;
            s_w_id[i] = swid;
        }
    }

    if (gen) {
        fflush (stdout);
    }
    else {
        status = OCISmttExecute(tpcsvc, curs, errhp, (ub4) i, (ub4) 0,
            (CONST OCISnapshot*) 0, (OCISnapshot*) 0,
            (ub4) OCI_DEFAULT | OCI_COMMIT_ON_SUCCESS);
        if (status != OCI_SUCCESS) {

```

```

            fprintf (stderr, "Aborted at w_id %d, s_i_id %d\n", s_w_id[0], s_i_id[0]);
            OCIERROR(errhp, status);
            quit ();
            exit (1);
        }
    }

    if ((++loopcount) % 50)
        fprintf (stderr, ".");
    else
        fprintf (stderr, " %d rows committed\n  ", row);
}

end_time = gettime ();
end_cpu = getcpu ();
fprintf (stderr, "Done.  %d rows loaded/generated in %10.2f sec. (%10.2f cpu)\n\n",
    nrows < 0 ? 0 : nrows, end_time - begin_time, end_cpu - begin_cpu);
}

/*-----+
| Load the HISTORY table.                               |
+-----*/

if (do_A || do_h) {
    nrows = (eware - bware + 1) * HISTFAC;

    fprintf (stderr, "Loading/generating history: w%d - w%d (%d rows)\n  ",
        bware, eware, nrows);

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

    cid = 0;
    cdid = 1;
    cwid = bware;
    loopcount = 0;

    for (row = 0; row < nrows; ) {
        for (i = 0; i < HISTARR; i++, row++) {
            cid++;
            if (cid > CUSTFAC) { /* cycle cust id */
                cid = 1; /* cheap mod */
                cdid++; /* shift district cycle */
                if (cdid > DISTFAC) {
                    cdid = 1;
                    cwid++; /* shift warehouse cycle */
                }
            }
            h_c_id[i] = cid;
            h_d_id[i] = cdid;
            h_w_id[i] = cwid;
            randstr (h_data[i], 12, 24);
            if (gen) {
                printf ("%d %d %d %d %d %s 1000 %s\n", cid, cdid, cwid, cdid,
                    cwid, sdate, h_data[i]);
            }
        }
    }

    if (gen) {
        fflush (stdout);
    }
    else {

```

```

status = OCISmtExecute(tpcsvc, curh, errhp, (ub4) HISTARR, (ub4) 0,
(CONST OCISnapshot*) 0, (OCISnapshot*) 0,
(ub4) OCI_DEFAULT | OCI_COMMIT_ON_SUCCESS);
if (status != OCI_SUCCESS) {
    fprintf(stderr, "Aborted at w_id %d, d_id %d, c_id %d\n",
        h_w_id[0], h_d_id[0], h_c_id[0]);
    OCIERROR(errhp, status);
    quit ();
    exit (1);
}

if ((++loopcount) % 50)
    fprintf(stderr, ".");
else
    fprintf(stderr, " %d rows committed\n ", row);
}

end_time = gettimeofday ();
end_cpu = getcpu ();
fprintf (stderr, "Done.  %d rows loaded/generated in %10.2f sec. (%10.2f cpu)\n\n",
    nrows, end_time - begin_time, end_cpu - begin_cpu);
}

/*-----+
| Load the ORDERS and ORDER-LINE table.          |
+-----*/

if (do_A || do_o) {

    int batch_olcnt;

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

    fprintf (stderr, "Loading/generating orders and order-line: w%d - w%d (%d ord, ~%d ord)\n ",
        bware, eware, nrows, nrows * 10);

    begin_time = gettimeofday ();
    begin_cpu = getcpu ();

    cid = 0;
    cdid = 1;
    cwid = bware;
    loopcount = 0;

    for (row = 0; row < nrows; ) {

        batch_olcnt = 0;

        for (i = 0; i < ORDEARR; i++, row++) {
            cid++;
            if (cid > ORDEFAC) { /* cycle cust id */
                cid = 1;
                /* cheap mod */
                cdid++;
                /* shift district cycle */
                if (cdid > DISTFAC) {
                    cdid = 1;
                    cwid++;
                    /* shift warehouse cycle */
                }
            }
            o_carrier_id[i] = lrand48 () % 10 + 1;
            o_ol_cnt[i] = olcnt = lrand48 () % 11 + 5;

```

```

if (gen) {
    if (cid < 2101) {
        printf ("%d %d %d %d %s %d %d 1\n", cid, cdid, cwid,
            randperm3000[cid - 1], sdate, o_carrier_id[i],
            o_ol_cnt[i]);
    }
    else {
        /* set carrierid to 11 instead of null */
        printf ("%d %d %d %d %s 11 %d 1\n", cid, cdid, cwid,
            randperm3000[cid - 1], sdate, o_ol_cnt[i]);
    }
}
else {
    o_id[i] = cid;
    o_d_id[i] = cdid;
    o_w_id[i] = cwid;
    o_c_id[i] = randperm3000[cid - 1];
    if (cid >= 2101 ) {
        o_carrier_id[i] = 11;
    }
}

for (j = 0; j < o_ol_cnt[i]; j++, batch_olcnt++) {
    ol_i_id[batch_olcnt] = sid = lrand48 () % 100000 + 1;
    if (cid < 2101)
        ol_amount[batch_olcnt] = 0;
    else
        ol_amount[batch_olcnt] = (lrand48 () % 999999 + 1) ;
    randstr (str24[j], 24, 24);

    if (gen) {
        if (cid < 2101) {
            fprintf (olfp, "%d %d %d %d %s %d %d 5 %ld %s\n", cid,
                cdid, cwid, j + 1, sdate, ol_i_id[batch_olcnt], cwid,
                ol_amount[batch_olcnt], str24[j]);
        }
        else {
            /* Insert a default date instead of null date */
            fprintf (olfp, "%d %d %d %d 01-Jan-1811 %d %d 5 %ld %s\n", cid,
                cdid, cwid, j + 1, ol_i_id[batch_olcnt], cwid,
                ol_amount[batch_olcnt], str24[j]);
        }
    }
    else {
        ol_o_id[batch_olcnt] = cid;
        ol_d_id[batch_olcnt] = cdid;
        ol_w_id[batch_olcnt] = cwid;
        ol_number[batch_olcnt] = j + 1;
        ol_supply_w_id[batch_olcnt] = cwid;
        strncpy (ol_dist_info[batch_olcnt], str24[j], 24);
    }
}
if (gen) {
    fflush (olfp);
}
}

o_cnt = ORDEARR;
ol_cnt = batch_olcnt;

for (j = 0; j < batch_olcnt; j++) {
    ol_o_id_len[j] = sizeof(int);

```

```

    ol_d_id_len[j] = sizeof(int);
    ol_w_id_len[j] = sizeof(int);
    ol_number_len[j] = sizeof(int);
    ol_i_id_len[j] = sizeof(int);
    ol_supply_w_id_len[j] = sizeof(int);
    ol_dist_info_len[j] = 24;
    ol_amount_len[j] = sizeof(int);
}
for (j = batch_olcnt; j < 15*ORDEARR; j++) {
    ol_o_id_len[j] = 0;
    ol_d_id_len[j] = 0;
    ol_w_id_len[j] = 0;
    ol_number_len[j] = 0;
    ol_i_id_len[j] = 0;
    ol_supply_w_id_len[j] = 0;
    ol_dist_info_len[j] = 0;
    ol_amount_len[j] = 0;
}

o_id_clen = ORDEARR;
o_d_id_clen = ORDEARR;
o_w_id_clen = ORDEARR;
o_c_id_clen = ORDEARR;
o_carrier_id_clen = ORDEARR;
o_ol_cnt_clen = ORDEARR;

ol_o_id_clen = batch_olcnt;
ol_d_id_clen = batch_olcnt;
ol_w_id_clen = batch_olcnt;
ol_number_clen = batch_olcnt;
ol_i_id_clen = batch_olcnt;
ol_supply_w_id_clen = batch_olcnt;
ol_dist_info_clen = batch_olcnt;
ol_amount_clen = batch_olcnt;

OCIERROR(errhp, OCISmtExecute(tpcsvc, cur1, errhp, (ub4) 1, (ub4) 0,
    (CONST OCISnapshot*) 0, (OCISnapshot*) 0,
    (ub4) OCI_DEFAULT | OCI_COMMIT_ON_SUCCESS ));

if ((++loopcount) % 50) {
    fprintf(stderr, ".");
} else {
    fprintf(stderr, " %d orders committed\n ", row);
}
}

end_time = gettimeofday ();
end_cpu = getcpu ();
fprintf(stderr, "Done. %d orders loaded/generated in %10.2f sec. (%10.2f cpu)\n\n",
    nrows, end_time - begin_time, end_cpu - begin_cpu);
}

/*-----+
| Load the NEW-ORDER table. |
+-----*/

if (do_A || do_n) {
    nrows = (eware - bware + 1) * NEWOFAC * DISTFAC;

    fprintf(stderr, "Loading/generating new-order: w%d - w%d (%d rows)\n ",
        bware, eware, nrows);

```

```

begin_time = gettimeofday ();
begin_cpu = getcpu ();

cid = 0;
cdid = 1;
cwid = bware;
loopcount = 0;

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

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

    if (gen) {
        fflush (stdout);
    }
    else {
        status = OCISmtExecute(tpcsvc, curno, errhp, (ub4) NEWOARR, (ub4) 0,
            (CONST OCISnapshot*) 0, (OCISnapshot*) 0,
            (ub4) OCI_DEFAULT | OCI_COMMIT_ON_SUCCESS);

        if (status != OCI_SUCCESS) {
            fprintf(stderr, "Aborted at w_id %d, d_id %d, o_id %d\n", cwid, cdid, cid + 2100);
            OCIERROR(errhp, status);
            quit ();
            exit (1);
        }
    }

    if ((++loopcount) % 45)
        fprintf(stderr, ".");
    else
        fprintf(stderr, " %d rows committed\n ", row);
}

end_time = gettimeofday ();
end_cpu = getcpu ();
fprintf(stderr, "Done. %d rows loaded/generated in %10.2f sec. (%10.2f cpu)\n\n",
    nrows, end_time - begin_time, end_cpu - begin_cpu);
}

/*-----+
| clean up and exit. |
+-----*/

if (olfp)

```

```

        fclose (olfp);
    if (!gen)
        quit ();
    exit (0);

}

void initperm ()
{
    int i;
    int pos;
    int temp;

    /* init randperm3000 */

    for (i = 0; i < 3000; i++)
        randperm3000[i] = i + 1;
    for (i = 3000; i > 0; i--) {
        pos = lrand48 () % i;
        temp = randperm3000[i - 1];
        randperm3000[i - 1] = randperm3000[pos];
        randperm3000[pos] = temp;
    }
}

void randstr (str, x, y)
char *str;
int x;
int y;
{
    int i, j;
    int len;

    len = (lrand48 () % (y - x + 1)) + x;
    for (i = 0; i < len; i++) {
        j = lrand48 () % 62;
        if (j < 26)
            str[i] = (char) (j + 'a');
        else if (j < 52)
            str[i] = (char) (j - 26 + 'A');
        else
            str[i] = (char) (j - 52 + '0');
    }
    str[len] = '\0';

}

void randdatastr (str, x, y)
char *str;
int x;
int y;
{
    int i, j;
    int len;
    int pos;

    len = (lrand48 () % (y - x + 1)) + x;
    for (i = 0; i < len; i++) {
        j = lrand48 () % 62;
        if (j < 26)
            str[i] = (char) (j + 'a');
        else if (j < 52)

```

```

            str[i] = (char) (j - 26 + 'A');
        else
            str[i] = (char) (j - 52 + '0');
    }
    str[len] = '\0';
    if ((lrand48 () % 10) == 0) {
        pos = (lrand48 () % (len - 8));
        str[pos] = 'O';
        str[pos + 1] = 'R';
        str[pos + 2] = 'I';
        str[pos + 3] = 'G';
        str[pos + 4] = 'I';
        str[pos + 5] = 'N';
        str[pos + 6] = 'A';
        str[pos + 7] = 'L';
    }
}

void randnum (str, len)
char *str;
int len;
{
    int i;

    for (i = 0; i < len; i++)
        str[i] = (char) (lrand48 () % 10 + '0');
    str[len] = '\0';

}

void randlastname (str, id)
char *str;
int id;
{
    id = id % 1000;
    strcpy (str, lastname[id / 100]);
    strcat (str, lastname[(id / 10) % 10]);
    strcat (str, lastname[id % 10]);
}

int NURand (A, x, y, cnum)
int A, x, y, cnum;
{
    int a, b;

    a = lrand48 () % (A + 1);
    b = (lrand48 () % (y - x + 1)) + x;
    return (((a | b) + cnum) % (y - x + 1)) + x;

}

void sysdate (sdate)
char *sdate;
{
    time_t tp;
    struct tm *tmptr;

    time (&tp);
    tmptr = localtime (&tp);
    strftime (sdate, 29, "%d-%b-%Y", tmptr);
}

```

```
int ocierror(fname, lineno, errhp, status)
char *fname;
int lineno;
OCIError *errhp;
sword status;
{
    text errbuf[512];
    sb4 errcode;
    sb4 lstat;
    ub4 recno=2;

    switch (status) {
    case OCI_SUCCESS:
        break;
    case OCI_SUCCESS_WITH_INFO:
        fprintf(stderr,"Module %s Line %d\n", fname, lineno);
        fprintf(stderr,"Error - OCI_SUCCESS_WITH_INFO\n");
        lstat = OCIErrorGet (errhp, recno++, (text *) NULL, &errcode, errbuf,
            (ub4) sizeof(errbuf), OCI_HTYPE_ERROR);
        fprintf(stderr,"Error - %s\n", errbuf);
        break;
    case OCI_NEED_DATA:
        fprintf(stderr,"Module %s Line %d\n", fname, lineno);
        fprintf(stderr,"Error - OCI_NEED_DATA\n");
        return (IRRECERR);
    case OCI_NO_DATA:
        fprintf(stderr,"Module %s Line %d\n", fname, lineno);
        fprintf(stderr,"Error - OCI_NO_DATA\n");
        return (IRRECERR);
    case OCI_ERROR:
        lstat = OCIErrorGet (errhp, (ub4) 1,
            (text *) NULL, &errcode, errbuf,
            (ub4) sizeof(errbuf), OCI_HTYPE_ERROR);

        if (errcode == NOT_SERIALIZABLE) return (errcode);
        if (errcode == SNAPSHOT_TOO_OLD) return (errcode);
        while (lstat != OCI_NO_DATA)
        {
            fprintf(stderr,"Module %s Line %d\n", fname, lineno);
            fprintf(stderr,"Error - %s\n", errbuf);
            lstat = OCIErrorGet (errhp, recno++, (text *) NULL, &errcode, errbuf,
                (ub4) sizeof(errbuf), OCI_HTYPE_ERROR);
        }
        return (errcode);
    case OCI_INVALID_HANDLE:
        fprintf(stderr,"Module %s Line %d\n", fname, lineno);
        fprintf(stderr,"Error - OCI_INVALID_HANDLE\n");
        exit(-1);
    case OCI_STILL_EXECUTING:
        fprintf(stderr,"Module %s Line %d\n", fname, lineno);
        fprintf(stderr,"Error - OCI_STILL_EXECUTE\n");
        return (IRRECERR);
    case OCI_CONTINUE:
        fprintf(stderr,"Module %s Line %d\n", fname, lineno);
        fprintf(stderr,"Error - OCI_CONTINUE\n");
        return (IRRECERR);
    default:
        fprintf(stderr,"Module %s Line %d\n", fname, lineno);
        fprintf(stderr,"Status - %s\n", status);
        return (IRRECERR);
    }
    return (RECOVERR);
}
```

```
tpcc.h

/*
 * $Header: tpcc.h 7030100.1 95/07/19 15:10:55 plai Generic<base> $ Copyr (c) 1993 Oracle
 */
/*=====+
|      Copyright (c) 1995  Oracle Corp, Redwood Shores, CA      |
|      OPEN SYSTEMS PERFORMANCE GROUP                          |
|      All Rights Reserved                                     |
+=====+
| FILENAME
|   tpcc.h
| DESCRIPTION
|   Include file for TPC-C benchmark programs.
+=====*/

#ifndef TPCC_H
#define TPCC_H

#ifndef FALSE
# define FALSE 0
#endif

#ifndef TRUE
# define TRUE 1
#endif

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

#ifndef boolean
#define boolean int
#endif

#include "tpccflags.h"

#include <oratypes.h>
#include <oci.h>
#include <ocidfn.h>
/*
#ifdef __STDC__
#include "ociapr.h"
#else
#include "ocikpr.h"
#endif
*/

typedef struct cda_def csrdef;
typedef struct cda_def ldadef;

/* TPC-C transaction functions */

extern int TPCinit ();
extern int TPCnew ();
extern int TPCpay ();
extern int TPCord ();
extern int TPCdel ();
```

```
extern int TPCsto ();
extern void TPCexit ();
extern int TPCdumpinit ();
extern void TPCdumpnew ();
extern void TPCdumppay ();
extern void TPCdumpord ();
extern void TPCdumpdel ();
extern void TPCdumpsto ();
extern void TPCdumpexit ();
extern void userlog(char* ftmp, ...);
```

```
/* Error codes */
```

```
#define RECOVERR -10
#define IRRECERR -20
#define NOERR 111
#define DEL_ERROR -666
#define DEL_DATE_LEN 7
#define NDISTS 10
#define NITEMS 15
#define SQL_BUF_SIZE 8192
```

```
#define FULLDATE "dd-mon-yy.hh24:mi:ss"
#define SHORTDATE "dd-mm-yyyy"
```

```
#define DELRT 80.0
```

```
extern int tkvcninit ();
extern int tkvcpinit ();
extern int tkvcoint ();
extern int tkvcdinit ();
extern int tkvcsinit ();
```

```
extern int tkvcn ();
extern int tkvcp ();
extern int tkvco ();
extern int tkvcd ();
extern int tkvcs ();
```

```
extern void tkvcndone ();
extern void tkvcpdone ();
extern void tkvcodone ();
extern void tkvcdone ();
extern void tkvcsdone ();
```

```
extern int tkvcss (); /* for alter session to get memory size and trace */
extern boolean multitransx;
extern int ord_init;
```

```
extern void errrpt ();
extern int ocierror(char *fname, int lineno, OCIError *errhp, sword status);
extern int sqlfile(char *fname, text *linebuf);
```

```
extern FILE *lfp;
extern FILE *fopen ();
extern int proc_no;
extern int doid[];
```

```
extern int execstatus;
extern int errcode;
```

```
extern OCISvcCtx *tpcsrv;
extern OCIError *errhp;
extern OCISvcCtx *tpcsvc;
extern OCISession *tpcusr;
extern OCISStmt *curtest;
/* The bind and define handles for each transaction are
   included in their respective header files. */
```

```
/* for stock-level transaction */
```

```
extern int w_id;
extern int d_id;
extern int c_id;
#ifdef USE_IEEE_NUMBER
extern float threshold;
#else
extern int threshold;
#endif /* USE_IEEE_NUMBER */
extern int low_stock;
```

```
/* for delivery transaction */
```

```
extern int del_o_id[10];
extern int carrier_id;
extern int retries;
```

```
/* for order-status transaction */
```

```
extern int bylastname;
extern char c_last[17];
extern char c_first[17];
extern char c_middle[3];
extern double c_balance;
extern int o_id;
extern text o_entry_d[20];
extern int o_carrier_id;
extern int o_ol_cnt;
extern int ol_supply_w_id[15];
extern int ol_i_id[15];
#ifdef USE_IEEE_NUMBER
extern float ol_quantity[15];
extern float ol_amount[15];
#else
extern int ol_quantity[15];
extern int ol_amount[15];
#endif /* USE_IEEE_NUMBER */
ub4 ol_del_len[15];
extern text ol_delivery_d[15][11];
/* xnie - begin */
extern OCIRowid *o_rowid;
/* xnie - end */
```

```
/* for payment transaction */
```

```
extern int c_w_id;
extern int c_d_id;
```

```

#ifdef USE_IEEE_NUMBER
extern float h_amount;
#else
extern int h_amount;
#endif /* USE_IEEE_NUMBER */
extern char w_street_1[21];
extern char w_street_2[21];
extern char w_city[21];
extern char w_state[3];
extern char w_zip[10];
extern char d_street_1[21];
extern char d_street_2[21];
extern char d_city[21];
extern char d_state[3];
extern char d_zip[10];
extern char c_street_1[21];
extern char c_street_2[21];
extern char c_city[21];
extern char c_state[3];
extern char c_zip[10];
extern char c_phone[17];
extern text c_since_d[11];
extern char c_credit[3];
extern int c_credit_lim;
extern float c_discount;
extern char c_data[201];
extern text h_date[20];

/* for new order transaction */

extern int nol_i_id[15];
extern int nol_supply_w_id[15];
#ifdef USE_IEEE_NUMBER
extern float nol_quantity[15];
extern float nol_amount[15];
extern float s_quantity[15];
extern float i_price[15];
#else
extern int nol_quantity[15];
extern int nol_amount[15];
extern int s_quantity[15];
extern int i_price[15];
#endif /* USE_IEEE_NUMBER */
extern int nol_quant10[15];
extern int nol_quant91[15];
extern int nol_ytdqty[15];
extern int o_all_local;
extern float w_tax;
extern float d_tax;
extern float total_amount;
extern char i_name[15][25];
extern int i_name_strlen[15];
extern ub2 i_name_strlen_len[15];
extern ub2 i_name_strlen_rcode[15];
extern ub4 i_name_strlen_csize;
extern char brand_gen[15];
extern ub2 brand_gen_len[15];
extern ub2 brand_gen_rcode[15];
extern ub4 brand_gen_csize;
extern char brand_generic[15][1];
extern int status;
extern int tracelevel;

```

```

/* Miscellaneous */
extern OCIDate cr_date;
extern OCIDate c_since;
extern OCIDate o_entry_d_base;
extern OCIDate ol_d_base[15];

#ifdef DISCARD
# define DISCARD (void)
#endif

#ifdef sword
# define sword int
#endif

#define VER7      2

#define NA      -1 /* ANSI SQL NULL */
#define NLT      1 /* length for string null terminator */
#define DEADLOCK  60 /* ORA-00060: deadlock */
#define NO_DATA_FOUND 1403 /* ORA-01403: no data found */
#define NOT_SERIALIZABLE 8177 /* ORA-08177: transaction not serializable */
#define SNAPSHOT_TOO_OLD 1555 /* ORA-01555: snapshot too old */

#ifdef NULLP
# define NULLP(x) (x *)NULL
#endif /* NULLP */

#define ADR(object) ((ub1 *)&(object))
#define SIZ(object) ((sword)sizeof(object))

typedef char date[24+NLT];
typedef char varchar2;

#define min(x,y) (((x) < (y)) ? (x) : (y))

#define OCIERROR(errp,function)\
    ocierror(__FILE__,__LINE__,(errp),(function));

#define OCIBND(stmp, bndp, errp, sqlvar, progvl, ftype)\
    ocierror(__FILE__,__LINE__,(errp), \
        OCIHandleAlloc((stmp),(dvoid*)&(bndp),OCI_HTYPE_BIND,0,(dvoid**)0)); \
    ocierror(__FILE__,__LINE__,(errp), \
        OCIBindByName((stmp), &(bndp), (errp), \
            (text *)(sqlvar), strlen((sqlvar)), \
            (progvl), (progvl), (ftype),0,0,0,0,OCI_DEFAULT));

/* bind arrays for sql */
#define OCIBNDRA(stmp,bndp,errp,sqlvar,progvl,ftype,indp,alen,arcode) \
    DISCARD ocierror(__FILE__,__LINE__,(errp), \
        OCIHandleAlloc((stmp),(dvoid*)&(bndp),OCI_HTYPE_BIND,0,(dvoid**)0)); \
    DISCARD ocierror(__FILE__,__LINE__,(errp), \
        OCIBindByName((stmp),&(bndp),(errp),(text *)(sqlvar),strlen((sqlvar)), \
            (progvl),(progvl),(ftype),(indp),(alen),(arcode),0,0,OCI_DEFAULT));

/* use with callback data */
#define OCIBNDRAD(stmp,bndp,errp,sqlvar,progvl,ftype,indp,ctxp,\
    cbf_nodata,cbf_data) \
    DISCARD ocierror(__FILE__,__LINE__,(errp), \

```



```

OCIHandleAlloc((stmp),(dvoid**)&(bndp),OCI_HTYPE_BIND,0,(dvoid**)0)); \
DISCARD ocierror(__FILE__, __LINE__, (errp), \
    OCIBindByName((stmp), &(bndp), (errp), (text *) (sqlvar), \
        strlen((sqlvar)), 0, (progv), (ftype), \
        indp, 0, 0, 0, OCI_DATA_AT_EXEC)); \
DISCARD ocierror(__FILE__, __LINE__, (errp), \
    OCIBindDynamic((bndp), (errp), (ctxp), (cbf_nodata), (ctxp), (cbf_data)));

```

/* bind in/out for plsql without indicator and rcode */

```

#define OCIBNDPL(stmp, bndp, errp, sqlvar, progv, progv1, ftype, alen) \
    DISCARD ocierror(__FILE__, __LINE__, (errp), \
        OCIHandleAlloc((stmp), (dvoid**)&(bndp), OCI_HTYPE_BIND, 0, (dvoid**)0)); \
DISCARD ocierror(__FILE__, __LINE__, (errp), \
    OCIBindByName((stmp), &(bndp), (errp), (CONST text *) (sqlvar), \
        (sb4)strlen((CONST char *) (sqlvar)), (dvoid*) (progv), (progv1), (ftype), \
        NULLP(dvoid), (alen), NULLP(ub2), 0, NULLP(ub4), OCI_DEFAULT));

```

/* bind in values for plsql with indicator and rcode */

```

#define OCIBNDR(stmp, bndp, errp, sqlvar, progv, progv1, ftype, indp, alen, arcode) \
    DISCARD ocierror(__FILE__, __LINE__, (errp), \
        OCIHandleAlloc((stmp), (dvoid**)&(bndp), OCI_HTYPE_BIND, 0, (dvoid**)0)); \
DISCARD ocierror(__FILE__, __LINE__, (errp), \
    OCIBindByName((stmp), &(bndp), (errp), (text *) (sqlvar), strlen((sqlvar)), \
        (progv), (progv1), (ftype), (indp), (alen), (rcode), 0, 0, \
        OCI_DEFAULT));

```

/* bind in/out for plsql arrays without indicator and rcode */

```

#define OCIBNDPLA(stmp, bndp, errp, sqlvar, progv, progv1, ftype, alen, ms, cu) \
    DISCARD ocierror(__FILE__, __LINE__, (errp), \
        OCIHandleAlloc((stmp), (dvoid**)&(bndp), OCI_HTYPE_BIND, 0, (dvoid**)0)); \
DISCARD ocierror(__FILE__, __LINE__, (errp), \
    OCIBindByName((stmp), &(bndp), (errp), (CONST text *) (sqlvar), \
        (sb4)strlen((CONST char *) (sqlvar)), (void *) (progv), \
        (progv1), (ftype), NULL, (alen), NULL, (ms), (cu), OCI_DEFAULT));

```

/* bind in/out values for plsql with indicator and rcode */

```

#define OCIBNDRAA(stmp, bndp, errp, sqlvar, progv, progv1, ftype, indp, alen, arcode, \
    ms, cu) \
    ocierror(__FILE__, __LINE__, (errp), \
        OCIHandleAlloc((stmp), (dvoid**)&(bndp), OCI_HTYPE_BIND, 0, (dvoid**)0)); \
ocierror(__FILE__, __LINE__, (errp), \
    OCIBindByName((stmp), &(bndp), (errp), (text *) (sqlvar), strlen((sqlvar)), \
        (progv), (progv1), (ftype), (indp), (alen), (rcode), (ms), (cu), OCI_DEFAULT));

```

```

#define OCIDEFINE(stmp, dfnp, errp, pos, progv, progv1, ftype) \
    OCIDefineByPos((stmp), &(dfnp), (errp), (pos), (progv), (progv1), (ftype), \
        0, 0, 0, OCI_DEFAULT);

```

```

#define OCIDEF(stmp, dfnp, errp, pos, progv, progv1, ftype) \
    OCIHandleAlloc((stmp), (dvoid**)&(dfnp), OCI_HTYPE_DEFINE, 0, \
        (dvoid**)0); \
    OCIDefineByPos((stmp), &(dfnp), (errp), (pos), (progv), (progv1), \
        (ftype), NULL, NULL, NULL, OCI_DEFAULT); \

```

```

#define OCIDFNRA(stmp, dfnp, errp, pos, progv, progv1, ftype, indp, alen, arcode) \
    OCIHandleAlloc((stmp), (dvoid**)&(dfnp), OCI_HTYPE_DEFINE, 0, \
        (dvoid**)0); \
    OCIDefineByPos((stmp), &(dfnp), (errp), (pos), (progv), \

```

```

(progv1), (ftype), (indp), (alen), \
(arcode), OCI_DEFAULT);

```

```

#define OCIDFNNDYN(stmp, dfnp, errp, pos, progv, progv1, ftype, indp, ctxp, cbf_data) \
    ocierror(__FILE__, __LINE__, (errp), \
        OCIHandleAlloc((stmp), (dvoid**)&(dfnp), OCI_HTYPE_DEFINE, 0, \
            (dvoid**)0); \
    ocierror(__FILE__, __LINE__, (errp), \
        OCIDefineByPos((stmp), &(dfnp), (errp), (pos), (progv), (progv1), (ftype), \
            (indp), NULL, NULL, OCI_DYNAMIC_FETCH)); \
    ocierror(__FILE__, __LINE__, (errp), \
        OCIDefineDynamic((dfnp), (errp), (ctxp), (cbf_data)));

```

/* New order */

```

struct newinstruct {
    int w_id;
    int d_id;
    int c_id;
    int ol_i_id[15];
    int ol_supply_w_id[15];
    int ol_quantity[15];
};

```

```

struct newoutstruct {
    int terror;
    int o_id;
    int o_ol_cnt;
    char c_last[17];
    char c_credit[3];
    float c_discount;
    float w_tax;
    float d_tax;
    char o_entry_d[20];
    float total_amount;
    char i_name[15][25];
    int s_quantity[15];
    char brand_generic[15];
    float i_price[15];
    float ol_amount[15];
    char status[26];
    int retry;
};

```

```

struct newstruct {
    struct newinstruct newin;
    struct newoutstruct newout;
};

```

/* Payment */

```

struct payinstruct {
    int w_id;
    int d_id;
    int c_w_id;
    int c_d_id;
    int c_id;
    int bylastname;

```

```
int h_amount;
char c_last[17];
};

struct payoutstruct {
    int terror;
    char w_street_1[21];
    char w_street_2[21];
    char w_city[21];
    char w_state[3];
    char w_zip[10];
    char d_street_1[21];
    char d_street_2[21];
    char d_city[21];
    char d_state[3];
    char d_zip[10];
    int c_id;
    char c_first[17];
    char c_middle[3];
    char c_last[17];
    char c_street_1[21];
    char c_street_2[21];
    char c_city[21];
    char c_state[3];
    char c_zip[10];
    char c_phone[17];
    char c_since[11];
    char c_credit[3];
    double c_credit_lim;
    float c_discount;
    double c_balance;
    char c_data[201];
    char h_date[20];
    int retry;
};

struct paystruct {
    struct payinstruct payin;
    struct payoutstruct payout;
};

/* Order status */

struct ordinstruct {
    int w_id;
    int d_id;
    int c_id;
    int bylastname;
    char c_last[17];
};

struct ordoutstruct {
    int terror;
    int c_id;
    char c_last[17];
    char c_first[17];
    char c_middle[3];
    double c_balance;
    int o_id;
    char o_entry_d[20];
    int o_carrier_id;
```

```
int o_ol_cnt;
int ol_supply_w_id[15];
int ol_i_id[15];
int ol_quantity[15];
float ol_amount[15];
char ol_delivery_d[15][11];
int retry;
};

struct ordstruct {
    struct ordinstruct ordin;
    struct ordoutstruct ordout;
};

/* Delivery */

struct delinstruct {
    int w_id;
    int o_carrier_id;
    double qtime;
    int in_timing_int;
    int plsqflag;
};

struct deloutstruct {
    int terror;
    int retry;
};

struct delstruct {
    struct delinstruct delin;
    struct deloutstruct delout;
};

/* Stock level */

struct stoinstruct {
    int w_id;
    int d_id;
    int threshold;
};

struct stooutstruct {
    int terror;
    int low_stock;
    int retry;
};

struct stostruct {
    struct stoinstruct stoin;
    struct stooutstruct stoout;
};

#endif



---



Tuxedo Configuration File



---



ubbbconfig.250
```

```
*RESOURCES
IPCKEY      40001
MASTER      tpcc_cli
PERM        0666
MAXACCESSERS 8192
MAXSERVERS  4096
MAXSERVICES  4096
MAXBUFSIZE  8192
MAXBUFSTYPE 8192
NOTIFY       IGNORE
MODEL        SHM
LDBAL        Y
SCANUNIT     30
SANITYSCAN   5
BLOCKTIME    10
BBLQUERY     60
OPTIONS      NO_XA,NO_AA

*MACHINES
"cl"  LMID="tpcc_cli"
      TUXCONFIG="/export/home/dbbench/tuxedo/tuxconfig"
      ROOTDIR="/opt/tuxedo"
      APPDIR="/export/home/dbbench/tuxedo"
      ULOGPFX="/export/home/dbbench/tuxedo/logs/ULOGHOST"
      TUXDIR="/opt/tuxedo"
      SPINCOUNT=100000

*GROUPS
"group1"  LMID="tpcc_cli"  GRPNO=1
"DEL1"    LMID="tpcc_cli"  GRPNO=2

*SERVERS
tpcc_srv_del SRVGRP="DEL1" SRVID=1 RQADDR=delq1 REPLYQ=N CLOPT="-A -- 1"
tpcc_srv_del SRVGRP="DEL1" SRVID=2 RQADDR=delq2 REPLYQ=N CLOPT="-A -- 2"
tpcc_srv_del SRVGRP="DEL1" SRVID=3 RQADDR=delq3 REPLYQ=N CLOPT="-A -- 3"
tpcc_srv_del SRVGRP="DEL1" SRVID=4 RQADDR=delq4 REPLYQ=N CLOPT="-A -- 4"
tpcc_srv_del SRVGRP="DEL1" SRVID=5 RQADDR=delq5 REPLYQ=N CLOPT="-A -- 5"
tpcc_srv_del SRVGRP="DEL1" SRVID=6 RQADDR=delq6 REPLYQ=N CLOPT="-A -- 6"
tpcc_srv_del SRVGRP="DEL1" SRVID=7 RQADDR=delq7 REPLYQ=N CLOPT="-A -- 7"
tpcc_srv_del SRVGRP="DEL1" SRVID=8 RQADDR=delq8 REPLYQ=N CLOPT="-A -- 8"
tpcc_srv_del SRVGRP="DEL1" SRVID=9 RQADDR=delq9 REPLYQ=N CLOPT="-A -- 9"
tpcc_srv_del SRVGRP="DEL1" SRVID=10 RQADDR=delq10 REPLYQ=N CLOPT="-A -- 10"
tpcc_srv_del SRVGRP="DEL1" SRVID=11 RQADDR=delq11 REPLYQ=N CLOPT="-A -- 11"
tpcc_srv_del SRVGRP="DEL1" SRVID=12 RQADDR=delq12 REPLYQ=N CLOPT="-A -- 12"
tpcc_srv_del SRVGRP="DEL1" SRVID=13 RQADDR=delq13 REPLYQ=N CLOPT="-A -- 13"
tpcc_srv_del SRVGRP="DEL1" SRVID=14 RQADDR=delq14 REPLYQ=N CLOPT="-A -- 14"
tpcc_srv_del SRVGRP="DEL1" SRVID=15 RQADDR=delq15 REPLYQ=N CLOPT="-A -- 15"
tpcc_srv_del SRVGRP="DEL1" SRVID=16 RQADDR=delq16 REPLYQ=N CLOPT="-A -- 16"
tpcc_srv_del SRVGRP="DEL1" SRVID=17 RQADDR=delq17 REPLYQ=N CLOPT="-A -- 17"
tpcc_srv_del SRVGRP="DEL1" SRVID=18 RQADDR=delq18 REPLYQ=N CLOPT="-A -- 18"
tpcc_srv_del SRVGRP="DEL1" SRVID=19 RQADDR=delq19 REPLYQ=N CLOPT="-A -- 19"
tpcc_srv_del SRVGRP="DEL1" SRVID=20 RQADDR=delq20 REPLYQ=N CLOPT="-A -- 20"
tpcc_srv_del SRVGRP="DEL1" SRVID=21 RQADDR=delq21 REPLYQ=N CLOPT="-A -- 21"
tpcc_srv_del SRVGRP="DEL1" SRVID=22 RQADDR=delq22 REPLYQ=N CLOPT="-A -- 22"
tpcc_srv_del SRVGRP="DEL1" SRVID=23 RQADDR=delq23 REPLYQ=N CLOPT="-A -- 23"
tpcc_srv_del SRVGRP="DEL1" SRVID=24 RQADDR=delq24 REPLYQ=N CLOPT="-A -- 24"

tpcc_srv_ora SRVGRP="group1" SRVID=101 RQADDR=svcq1 REPLYQ=Y MIN=1 MAX=1
tpcc_srv_ora SRVGRP="group1" SRVID=102 RQADDR=svcq2 REPLYQ=Y MIN=1 MAX=1
tpcc_srv_ora SRVGRP="group1" SRVID=103 RQADDR=svcq3 REPLYQ=Y MIN=1 MAX=1
tpcc_srv_ora SRVGRP="group1" SRVID=104 RQADDR=svcq4 REPLYQ=Y MIN=1 MAX=1
tpcc_srv_ora SRVGRP="group1" SRVID=105 RQADDR=svcq5 REPLYQ=Y MIN=1 MAX=1
```

```
tpcc_srv_ora SRVGRP="group1" SRVID=106 RQADDR=svcq6 REPLYQ=Y MIN=1 MAX=1
tpcc_srv_ora SRVGRP="group1" SRVID=107 RQADDR=svcq7 REPLYQ=Y MIN=1 MAX=1
tpcc_srv_ora SRVGRP="group1" SRVID=108 RQADDR=svcq8 REPLYQ=Y MIN=1 MAX=1
tpcc_srv_ora SRVGRP="group1" SRVID=109 RQADDR=svcq9 REPLYQ=Y MIN=1 MAX=1
tpcc_srv_ora SRVGRP="group1" SRVID=110 RQADDR=svcq10 REPLYQ=Y MIN=1 MAX=1
tpcc_srv_ora SRVGRP="group1" SRVID=111 RQADDR=svcq11 REPLYQ=Y MIN=1 MAX=1
tpcc_srv_ora SRVGRP="group1" SRVID=112 RQADDR=svcq12 REPLYQ=Y MIN=1 MAX=1
tpcc_srv_ora SRVGRP="group1" SRVID=113 RQADDR=svcq13 REPLYQ=Y MIN=1 MAX=1
tpcc_srv_ora SRVGRP="group1" SRVID=114 RQADDR=svcq14 REPLYQ=Y MIN=1 MAX=1
tpcc_srv_ora SRVGRP="group1" SRVID=115 RQADDR=svcq15 REPLYQ=Y MIN=1 MAX=1
tpcc_srv_ora SRVGRP="group1" SRVID=116 RQADDR=svcq16 REPLYQ=Y MIN=1 MAX=1
tpcc_srv_ora SRVGRP="group1" SRVID=117 RQADDR=svcq17 REPLYQ=Y MIN=1 MAX=1
tpcc_srv_ora SRVGRP="group1" SRVID=118 RQADDR=svcq18 REPLYQ=Y MIN=1 MAX=1
tpcc_srv_ora SRVGRP="group1" SRVID=119 RQADDR=svcq19 REPLYQ=Y MIN=1 MAX=1
tpcc_srv_ora SRVGRP="group1" SRVID=120 RQADDR=svcq20 REPLYQ=Y MIN=1 MAX=1
tpcc_srv_ora SRVGRP="group1" SRVID=121 RQADDR=svcq21 REPLYQ=Y MIN=1 MAX=1
tpcc_srv_ora SRVGRP="group1" SRVID=122 RQADDR=svcq22 REPLYQ=Y MIN=1 MAX=1
tpcc_srv_ora SRVGRP="group1" SRVID=123 RQADDR=svcq23 REPLYQ=Y MIN=1 MAX=1
tpcc_srv_ora SRVGRP="group1" SRVID=124 RQADDR=svcq24 REPLYQ=Y MIN=1 MAX=1
tpcc_srv_ora SRVGRP="group1" SRVID=125 RQADDR=svcq25 REPLYQ=Y MIN=1 MAX=1
tpcc_srv_ora SRVGRP="group1" SRVID=126 RQADDR=svcq26 REPLYQ=Y MIN=1 MAX=1
tpcc_srv_ora SRVGRP="group1" SRVID=127 RQADDR=svcq27 REPLYQ=Y MIN=1 MAX=1
tpcc_srv_ora SRVGRP="group1" SRVID=128 RQADDR=svcq28 REPLYQ=Y MIN=1 MAX=1
tpcc_srv_ora SRVGRP="group1" SRVID=129 RQADDR=svcq29 REPLYQ=Y MIN=1 MAX=1
tpcc_srv_ora SRVGRP="group1" SRVID=130 RQADDR=svcq30 REPLYQ=Y MIN=1 MAX=1
tpcc_srv_ora SRVGRP="group1" SRVID=131 RQADDR=svcq31 REPLYQ=Y MIN=1 MAX=1
tpcc_srv_ora SRVGRP="group1" SRVID=132 RQADDR=svcq32 REPLYQ=Y MIN=1 MAX=1
tpcc_srv_ora SRVGRP="group1" SRVID=133 RQADDR=svcq33 REPLYQ=Y MIN=1 MAX=1
tpcc_srv_ora SRVGRP="group1" SRVID=134 RQADDR=svcq34 REPLYQ=Y MIN=1 MAX=1
tpcc_srv_ora SRVGRP="group1" SRVID=135 RQADDR=svcq35 REPLYQ=Y MIN=1 MAX=1
tpcc_srv_ora SRVGRP="group1" SRVID=136 RQADDR=svcq36 REPLYQ=Y MIN=1 MAX=1
tpcc_srv_ora SRVGRP="group1" SRVID=137 RQADDR=svcq37 REPLYQ=Y MIN=1 MAX=1
tpcc_srv_ora SRVGRP="group1" SRVID=138 RQADDR=svcq38 REPLYQ=Y MIN=1 MAX=1
tpcc_srv_ora SRVGRP="group1" SRVID=139 RQADDR=svcq39 REPLYQ=Y MIN=1 MAX=1
tpcc_srv_ora SRVGRP="group1" SRVID=140 RQADDR=svcq40 REPLYQ=Y MIN=1 MAX=1
tpcc_srv_ora SRVGRP="group1" SRVID=141 RQADDR=svcq41 REPLYQ=Y MIN=1 MAX=1
tpcc_srv_ora SRVGRP="group1" SRVID=142 RQADDR=svcq42 REPLYQ=Y MIN=1 MAX=1
tpcc_srv_ora SRVGRP="group1" SRVID=143 RQADDR=svcq43 REPLYQ=Y MIN=1 MAX=1
tpcc_srv_ora SRVGRP="group1" SRVID=144 RQADDR=svcq44 REPLYQ=Y MIN=1 MAX=1
tpcc_srv_ora SRVGRP="group1" SRVID=145 RQADDR=svcq45 REPLYQ=Y MIN=1 MAX=1
tpcc_srv_ora SRVGRP="group1" SRVID=146 RQADDR=svcq46 REPLYQ=Y MIN=1 MAX=1
tpcc_srv_ora SRVGRP="group1" SRVID=147 RQADDR=svcq47 REPLYQ=Y MIN=1 MAX=1
tpcc_srv_ora SRVGRP="group1" SRVID=148 RQADDR=svcq48 REPLYQ=Y MIN=1 MAX=1
tpcc_srv_ora SRVGRP="group1" SRVID=149 RQADDR=svcq49 REPLYQ=Y MIN=1 MAX=1
tpcc_srv_ora SRVGRP="group1" SRVID=150 RQADDR=svcq50 REPLYQ=Y MIN=1 MAX=1
tpcc_srv_ora SRVGRP="group1" SRVID=151 RQADDR=svcq51 REPLYQ=Y MIN=1 MAX=1
tpcc_srv_ora SRVGRP="group1" SRVID=152 RQADDR=svcq52 REPLYQ=Y MIN=1 MAX=1
tpcc_srv_ora SRVGRP="group1" SRVID=153 RQADDR=svcq53 REPLYQ=Y MIN=1 MAX=1
tpcc_srv_ora SRVGRP="group1" SRVID=154 RQADDR=svcq54 REPLYQ=Y MIN=1 MAX=1
tpcc_srv_ora SRVGRP="group1" SRVID=155 RQADDR=svcq55 REPLYQ=Y MIN=1 MAX=1
tpcc_srv_ora SRVGRP="group1" SRVID=156 RQADDR=svcq56 REPLYQ=Y MIN=1 MAX=1
tpcc_srv_ora SRVGRP="group1" SRVID=157 RQADDR=svcq57 REPLYQ=Y MIN=1 MAX=1
tpcc_srv_ora SRVGRP="group1" SRVID=158 RQADDR=svcq58 REPLYQ=Y MIN=1 MAX=1
tpcc_srv_ora SRVGRP="group1" SRVID=159 RQADDR=svcq59 REPLYQ=Y MIN=1 MAX=1
tpcc_srv_ora SRVGRP="group1" SRVID=160 RQADDR=svcq60 REPLYQ=Y MIN=1 MAX=1
tpcc_srv_ora SRVGRP="group1" SRVID=161 RQADDR=svcq61 REPLYQ=Y MIN=1 MAX=1
tpcc_srv_ora SRVGRP="group1" SRVID=162 RQADDR=svcq62 REPLYQ=Y MIN=1 MAX=1
tpcc_srv_ora SRVGRP="group1" SRVID=163 RQADDR=svcq63 REPLYQ=Y MIN=1 MAX=1
tpcc_srv_ora SRVGRP="group1" SRVID=164 RQADDR=svcq64 REPLYQ=Y MIN=1 MAX=1
tpcc_srv_ora SRVGRP="group1" SRVID=165 RQADDR=svcq65 REPLYQ=Y MIN=1 MAX=1
tpcc_srv_ora SRVGRP="group1" SRVID=166 RQADDR=svcq66 REPLYQ=Y MIN=1 MAX=1
tpcc_srv_ora SRVGRP="group1" SRVID=167 RQADDR=svcq67 REPLYQ=Y MIN=1 MAX=1
```



```
tpcc_srv_ora SRVGRP="group1" SRVID=292 RQADDR=svcq192 REPLYQ=Y MIN=1 MAX=1
tpcc_srv_ora SRVGRP="group1" SRVID=293 RQADDR=svcq193 REPLYQ=Y MIN=1 MAX=1
tpcc_srv_ora SRVGRP="group1" SRVID=294 RQADDR=svcq194 REPLYQ=Y MIN=1 MAX=1
tpcc_srv_ora SRVGRP="group1" SRVID=295 RQADDR=svcq195 REPLYQ=Y MIN=1 MAX=1
tpcc_srv_ora SRVGRP="group1" SRVID=296 RQADDR=svcq196 REPLYQ=Y MIN=1 MAX=1
tpcc_srv_ora SRVGRP="group1" SRVID=297 RQADDR=svcq197 REPLYQ=Y MIN=1 MAX=1
tpcc_srv_ora SRVGRP="group1" SRVID=298 RQADDR=svcq198 REPLYQ=Y MIN=1 MAX=1
tpcc_srv_ora SRVGRP="group1" SRVID=299 RQADDR=svcq199 REPLYQ=Y MIN=1 MAX=1
tpcc_srv_ora SRVGRP="group1" SRVID=300 RQADDR=svcq200 REPLYQ=Y MIN=1 MAX=1
tpcc_srv_ora SRVGRP="group1" SRVID=301 RQADDR=svcq201 REPLYQ=Y MIN=1 MAX=1
tpcc_srv_ora SRVGRP="group1" SRVID=302 RQADDR=svcq202 REPLYQ=Y MIN=1 MAX=1
tpcc_srv_ora SRVGRP="group1" SRVID=303 RQADDR=svcq203 REPLYQ=Y MIN=1 MAX=1
tpcc_srv_ora SRVGRP="group1" SRVID=304 RQADDR=svcq204 REPLYQ=Y MIN=1 MAX=1
tpcc_srv_ora SRVGRP="group1" SRVID=305 RQADDR=svcq205 REPLYQ=Y MIN=1 MAX=1
tpcc_srv_ora SRVGRP="group1" SRVID=306 RQADDR=svcq206 REPLYQ=Y MIN=1 MAX=1
tpcc_srv_ora SRVGRP="group1" SRVID=307 RQADDR=svcq207 REPLYQ=Y MIN=1 MAX=1
tpcc_srv_ora SRVGRP="group1" SRVID=308 RQADDR=svcq208 REPLYQ=Y MIN=1 MAX=1
tpcc_srv_ora SRVGRP="group1" SRVID=309 RQADDR=svcq209 REPLYQ=Y MIN=1 MAX=1
tpcc_srv_ora SRVGRP="group1" SRVID=310 RQADDR=svcq210 REPLYQ=Y MIN=1 MAX=1
tpcc_srv_ora SRVGRP="group1" SRVID=311 RQADDR=svcq211 REPLYQ=Y MIN=1 MAX=1
tpcc_srv_ora SRVGRP="group1" SRVID=312 RQADDR=svcq212 REPLYQ=Y MIN=1 MAX=1
tpcc_srv_ora SRVGRP="group1" SRVID=313 RQADDR=svcq213 REPLYQ=Y MIN=1 MAX=1
tpcc_srv_ora SRVGRP="group1" SRVID=314 RQADDR=svcq214 REPLYQ=Y MIN=1 MAX=1
tpcc_srv_ora SRVGRP="group1" SRVID=315 RQADDR=svcq215 REPLYQ=Y MIN=1 MAX=1
tpcc_srv_ora SRVGRP="group1" SRVID=316 RQADDR=svcq216 REPLYQ=Y MIN=1 MAX=1
tpcc_srv_ora SRVGRP="group1" SRVID=317 RQADDR=svcq217 REPLYQ=Y MIN=1 MAX=1
tpcc_srv_ora SRVGRP="group1" SRVID=318 RQADDR=svcq218 REPLYQ=Y MIN=1 MAX=1
tpcc_srv_ora SRVGRP="group1" SRVID=319 RQADDR=svcq219 REPLYQ=Y MIN=1 MAX=1
tpcc_srv_ora SRVGRP="group1" SRVID=320 RQADDR=svcq220 REPLYQ=Y MIN=1 MAX=1
tpcc_srv_ora SRVGRP="group1" SRVID=322 RQADDR=svcq222 REPLYQ=Y MIN=1 MAX=1
tpcc_srv_ora SRVGRP="group1" SRVID=323 RQADDR=svcq223 REPLYQ=Y MIN=1 MAX=1
tpcc_srv_ora SRVGRP="group1" SRVID=324 RQADDR=svcq224 REPLYQ=Y MIN=1 MAX=1
tpcc_srv_ora SRVGRP="group1" SRVID=325 RQADDR=svcq225 REPLYQ=Y MIN=1 MAX=1
tpcc_srv_ora SRVGRP="group1" SRVID=326 RQADDR=svcq226 REPLYQ=Y MIN=1 MAX=1
```

```
*SERVICES
DEL
NEWO
ORDS
PAYM
STOCK
```

initnew.sql

-- The initnew package for storing variables used in the
-- New Order anonymous block

```
CREATE OR REPLACE PACKAGE initnew
AS
  TYPE intarray IS TABLE OF INTEGER index by binary_integer;
  TYPE distarray IS TABLE OF VARCHAR(24) index by binary_integer;
  nulldate      DATE;
  s_dist                distarray;
  idx1arr             intarray;
  s_remote             intarray;
  PROCEDURE new_init(idxarr intarray);
END initnew;
/
show errors;
```

CREATE OR REPLACE PACKAGE BODY initnew AS

```
PROCEDURE new_init(idxarr intarray)
IS
BEGIN
  -- initialize null date
  nulldate := TO_DATE('09-15-1811', 'MM-DD-YYYY');
  idx1arr := idxarr;
END new_init;
END initnew;
/
show errors
exit
```

load_ordordl.sql

-- anonymous block for loading order/orderline

```
DECLARE
  order_idx      PLS_INTEGER;
  order_rows     PLS_INTEGER;
  ordl_rows      PLS_INTEGER;
  ordl_idx       PLS_INTEGER;
  ordl_idx_hi    PLS_INTEGER;
  local_idx      PLS_INTEGER;
BEGIN
  order_rows := :order_rows;
  ordl_rows := :ordl_rows;
  order_idx := 1;
  ordl_idx := 1;

  WHILE (order_idx <= order_rows) LOOP

    INSERT INTO ordr (O_ID, O_D_ID, O_W_ID, O_C_ID, O_ENTRY_D,
                     O_CARRIER_ID, O_OL_CNT, O_ALL_LOCAL)
      VALUES (:o_id(order_idx), :o_d_id(order_idx), :o_w_id(order_idx),
              :o_c_id(order_idx), SYSDATE, :o_carrier_id(order_idx),
              :o_ol_cnt(order_idx), 1);

    ordl_idx_hi := ordl_idx + :o_ol_cnt(order_idx) - 1;

    IF ( :o_id(order_idx) < 2101 ) THEN
      FORALL local_idx IN ordl_idx .. ordl_idx_hi
        INSERT INTO ordl (OL_O_ID, OL_D_ID, OL_W_ID, OL_NUMBER,
                          OL_DELIVERY_D, OL_I_ID, OL_SUPPLY_W_ID, OL_QUANTITY,
                          OL_AMOUNT, OL_DIST_INFO)
          VALUES (:ol_o_id(local_idx), :ol_d_id(local_idx),
                  :ol_w_id(local_idx), :ol_number(local_idx),
                  SYSDATE, :ol_i_id(local_idx),
                  :ol_supply_w_id(local_idx), 5, 0, :ol_dist_info(local_idx));
    ELSE
      FORALL local_idx IN ordl_idx .. ordl_idx_hi
        INSERT INTO ordl (OL_O_ID, OL_D_ID, OL_W_ID, OL_NUMBER,
                          OL_DELIVERY_D, OL_I_ID, OL_SUPPLY_W_ID, OL_QUANTITY,
                          OL_AMOUNT, OL_DIST_INFO)
          VALUES (:ol_o_id(local_idx), :ol_d_id(local_idx),
                  :ol_w_id(local_idx), :ol_number(local_idx),
                  to_date('01-Jan-1811'), :ol_i_id(local_idx),
                  :ol_supply_w_id(local_idx), 5,
                  :ol_amount(local_idx), :ol_dist_info(local_idx));
    END IF;
    ordl_idx := ordl_idx_hi + 1;
    order_idx := order_idx + 1;
  END LOOP;
```

END;

pay.sql

```
CREATE OR REPLACE PACKAGE pay
AS
TYPE rowidarray IS TABLE OF ROWID INDEX BY BINARY_INTEGER;
row_id          rowidarray;
cust_rowid      ROWID;
dist_name       VARCHAR2(11);
ware_name       VARCHAR2(11);
c_num           BINARY_INTEGER;
PROCEDURE pay_init;
END pay;
/

CREATE OR REPLACE PACKAGE BODY pay AS
PROCEDURE pay_init IS
BEGIN
NULL;
END pay_init;
END pay;
/

exit
```

paynz.sql

```
DECLARE /* paynz */
not_serializable EXCEPTION;
PRAGMA EXCEPTION_INIT(not_serializable,-8177);
deadlock EXCEPTION;
PRAGMA EXCEPTION_INIT(deadlock,-60);
snapshot_too_old EXCEPTION;
PRAGMA EXCEPTION_INIT(snapshot_too_old,-1555);
BEGIN
LOOP BEGIN
UPDATE ware
SET w_ytd = w_ytd + :h_amount
WHERE w_id = :w_id
RETURNING w_name, w_street_1, w_street_2, w_city, w_state, w_zip
INTO initpcc.ware_name, :w_street_1, :w_street_2, :w_city,
:w_state, :w_zip;

UPDATE cust
SET c_balance = c_balance - :h_amount,
c_ytd_payment = c_ytd_payment + :h_amount,
c_payment_cnt = c_payment_cnt+1
WHERE c_id = :c_id AND c_d_id = :c_d_id AND
c_w_id = :c_w_id
RETURNING rowid, c_first, c_middle, c_last, c_street_1,
c_street_2, c_city, c_state, c_zip, c_phone,
c_since, c_credit, c_credit_lim,
c_discount, c_balance
INTO initpcc.cust_rowid, :c_first, :c_middle, :c_last, :c_street_1,
:c_street_2, :c_city, :c_state, :c_zip, :c_phone,
:c_since, :c_credit, :c_credit_lim,
:c_discount, :c_balance;
IF SQL%NOTFOUND THEN
raise NO_DATA_FOUND;
END IF;
```

```
IF :c_credit = 'BC' THEN
UPDATE cust
SET c_data = substr ((to_char (:c_id) || '' ||
to_char (:c_d_id) || '' ||
to_char (:c_w_id) || '' ||
to_char (:d_id) || '' ||
to_char (:w_id) || '' ||
to_char (:h_amount/100, '9999.99') || ' | ')
|| c_data, 1, 500)
WHERE rowid = initpcc.cust_rowid
RETURNING substr(c_data,1, 200)
INTO :c_data;
```

END IF;

```
UPDATE dist
SET d_ytd = d_ytd + :h_amount
WHERE d_id = :d_id
AND d_w_id = :w_id
RETURNING d_name, d_street_1, d_street_2, d_city, d_state, d_zip
INTO initpcc.dist_name, :d_street_1, :d_street_2, :d_city, :d_state,
:d_zip;
IF SQL%NOTFOUND THEN
raise NO_DATA_FOUND;
END IF;
```

```
INSERT INTO hist (h_c_id, h_c_d_id, h_c_w_id, h_d_id, h_w_id,
h_amount, h_date, h_data)
VALUES
(:c_id, :c_d_id, :c_w_id, :d_id, :w_id, :h_amount,
:cr_date, initpcc.ware_name || ' ' || initpcc.dist_name);
EXIT;
```

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

END LOOP;

END;

payz.sql

```
DECLARE /* payz */
not_serializable EXCEPTION;
PRAGMA EXCEPTION_INIT(not_serializable,-8177);
deadlock EXCEPTION;
PRAGMA EXCEPTION_INIT(deadlock,-60);
snapshot_too_old EXCEPTION;
PRAGMA EXCEPTION_INIT(snapshot_too_old,-1555);
BEGIN
LOOP BEGIN
UPDATE ware
SET w_ytd = w_ytd + :h_amount
WHERE w_id = :w_id
RETURNING w_name,
w_street_1, w_street_2, w_city, w_state, w_zip
INTO initpcc.ware_name,
:w_street_1, :w_street_2, :w_city, :w_state, :w_zip;
```

```

SELECT rowid
BULK COLLECT INTO inittpcc.row_id
FROM cust
WHERE c_d_id = :c_d_id AND c_w_id = :c_w_id AND c_last = :c_last
ORDER BY c_last, c_d_id, c_w_id, c_first;

```

```

inittpcc.c_num := sql%rowcount;
inittpcc.cust_rowid := inittpcc.row_id((inittpcc.c_num) / 2);

```

```

UPDATE cust
SET c_balance = c_balance - :h_amount,
    c_ytd_payment = c_ytd_payment+ :h_amount,
    c_payment_cnt = c_payment_cnt+1
WHERE rowid = inittpcc.cust_rowid
RETURNING
    c_id, c_first, c_middle, c_last, c_street_1, c_street_2,
    c_city, c_state, c_zip, c_phone,
    c_since, c_credit, c_credit_lim,
    c_discount, c_balance
INTO :c_id, :c_first, :c_middle, :c_last,
    :c_street_1, :c_street_2, :c_city, :c_state,
    :c_zip, :c_phone, :c_since, :c_credit,
    :c_credit_lim, :c_discount, :c_balance;

```

```

:c_data := '';
IF :c_credit = 'BC' THEN
    UPDATE cust
    SET c_data = substr ((to_char (:c_id) || ' ' ||
        to_char (:c_d_id) || ' ' ||
        to_char (:c_w_id) || ' ' ||
        to_char (:d_id) || ' ' ||
        to_char (:w_id) || ' ' ||
        to_char (:h_amount/100, '9999.99') || ' ')
        || c_data, 1, 500)
    WHERE rowid = inittpcc.cust_rowid
    RETURNING substr(c_data,1, 200)
    INTO :c_data;

```

```

END IF;

```

```

UPDATE dist
SET d_ytd = d_ytd+ :h_amount
WHERE d_id = :d_id
AND d_w_id = :w_id
RETURNING d_name, d_street_1, d_street_2, d_city,
    d_state, d_zip
INTO inittpcc.dist_name, :d_street_1, :d_street_2, :d_city,
    :d_state, :d_zip;

```

```

IF SQL%NOTFOUND
    THEN
        raise NO_DATA_FOUND;
    END IF;

```

```

INSERT INTO hist (h_c_id, h_c_d_id, h_c_w_id, h_d_id, h_w_id,
    h_amount, h_date, h_data)
VALUES (:c_id, :c_d_id, :c_w_id, :d_id, :w_id, :h_amount,
    :cr_date, inittpcc.ware_name || ' ' || inittpcc.dist_name);

```

```

EXIT;

```

```

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

    END LOOP;
END;

```

tkvcin.in.sql

```

-- The initnew package for storing variables used in the
-- New Order anonymous block

```

```

CREATE OR REPLACE PACKAGE inittpcc
AS
    TYPE intarray IS TABLE OF INTEGER INDEX BY BINARY_INTEGER;
    TYPE distarray IS TABLE OF VARCHAR(24) INDEX BY BINARY_INTEGER;
    nulldate    DATE;
    TYPE rowidarray IS TABLE OF ROWID INDEX BY PLS_INTEGER;
    s_dist              distarray;
    idx1arr             intarray;
    s_remote            intarray;
    dist               intarray;
    row_id             rowidarray;
    cust_rowid         rowid;
    dist_name          VARCHAR2(11);
    ware_name          VARCHAR2(11);
    c_num              PLS_INTEGER;

```

```

    PROCEDURE init_no(idxarr intarray);
    PROCEDURE init_del;
    PROCEDURE init_pay;
    END inittpcc;
/
show errors;

```

```

CREATE OR REPLACE PACKAGE BODY inittpcc AS
    PROCEDURE init_no (idxarr intarray)
    IS
    BEGIN
        -- initialize null date
        nulldate := TO_DATE('01-01-1811', 'MM-DD-YYYY');
        idx1arr := idxarr;
    END init_no;

```

```

    PROCEDURE init_del
    IS
    BEGIN
        FOR i IN 1 .. 10 LOOP
            dist(i) := i;
        END LOOP;
    END init_del;

```

```

    PROCEDURE init_pay IS
    BEGIN
        NULL;
    END init_pay;

```

```

END inittpcc;
/
show errors

```

exit

tkvcpdel.sql

```
declare
TYPE numarray IS TABLE OF NUMBER INDEX BY BINARY_INTEGER;
TYPE numlist is varray (10) of number;
dist numarray;
amt numarray ;
cnt pls_integer;
```

```
not_serializable EXCEPTION;
PRAGMA EXCEPTION_INIT(not_serializable, -8177);
deadlock      EXCEPTION;
PRAGMA EXCEPTION_INIT(deadlock, -60);
snapshot_too_old EXCEPTION;
PRAGMA EXCEPTION_INIT(snapshot_too_old, -1555);
```

```
BEGIN
LOOP BEGIN
FORALL d IN 1..10
DELETE FROM nord N
WHERE no_d_id = inittpc.c.dist(d)
AND no_w_id = :w_id
AND no_o_id = (select min (no_o_id)
from nord
where no_d_id = N.no_d_id
and no_w_id = N.no_w_id)
RETURNING no_d_id, no_o_id BULK COLLECT INTO :d_id, :order_id;
```

:ordcnt := SQL%ROWCOUNT;

```
FORALL o in 1.. :ordcnt
UPDATE ordr SET o_carrier_id = :carrier_id
WHERE o_id = :order_id (o)
AND o_d_id = :d_id(o)
AND o_w_id = :w_id
RETURNING o_c_id BULK COLLECT INTO :o_c_id;
```

```
FORALL o in 1.. :ordcnt
UPDATE ordl SET ol_delivery_d = :now
WHERE ol_w_id = :w_id
AND ol_d_id = :d_id(o)
AND ol_o_id = :order_id(o)
RETURNING sum(ol_amount) BULK COLLECT INTO :sums;
```

```
FORALL c IN 1.. :ordcnt
UPDATE cust
SET c_balance = c_balance + :sums(c),
c_delivery_cnt = c_delivery_cnt + 1
WHERE c_w_id = :w_id
AND c_d_id = :d_id(c)
AND c_id = :o_c_id(c);
COMMIT;
EXIT;
EXCEPTION
WHEN not_serializable OR deadlock OR snapshot_too_old
THEN
ROLLBACK;
:retry := :retry + 1;
END;
```

```
END LOOP; -- for retry
END;
```

tkvcpnew.sql

-- New Order Anonymous block

```
DECLARE
idx          PLS_INTEGER;
dummy_local  PLS_INTEGER;
cache_ol_cnt PLS_INTEGER;
not_serializable EXCEPTION;
PRAGMA EXCEPTION_INIT(not_serializable,-8177);
deadlock     EXCEPTION;
PRAGMA EXCEPTION_INIT(deadlock,-60);
snapshot_too_old EXCEPTION;
PRAGMA EXCEPTION_INIT(snapshot_too_old,-1555);
```

```
PROCEDURE u1 IS
BEGIN
FORALL idx IN 1 .. cache_ol_cnt
UPDATE stock_item
SET s_order_cnt = s_order_cnt + 1,
s_ytd = s_ytd + :ol_quantity(idx),
s_remote_cnt = s_remote_cnt + :s_remote(idx),
s_quantity = (CASE WHEN s_quantity < :ol_quantity (idx) + 10
THEN s_quantity +91
ELSE s_quantity
END) - :ol_quantity(idx)
WHERE i_id = :ol_i_id(idx)
AND s_w_id = :ol_supply_w_id(idx)
RETURNING i_price, i_name, s_quantity, s_dist_01,
i_price*:ol_quantity(idx),
CASE WHEN i_data NOT LIKE '%ORIGINAL%'
THEN 'G'
ELSE (CASE WHEN s_data NOT LIKE '%ORIGINAL%'
THEN 'G'
ELSE 'B'
END)
END
BULK COLLECT INTO :i_price, :i_name, :s_quantity, inittpc.s_dist,
:ol_amount,:brand_generic;
```

END u1;

```
PROCEDURE u2 IS
BEGIN
FORALL idx IN 1 .. cache_ol_cnt
UPDATE stock_item
SET s_order_cnt = s_order_cnt + 1,
s_ytd = s_ytd + :ol_quantity(idx),
s_remote_cnt = s_remote_cnt + :s_remote(idx),
s_quantity = (CASE WHEN s_quantity < :ol_quantity (idx) + 10
THEN s_quantity +91
ELSE s_quantity
END) - :ol_quantity(idx)
WHERE i_id = :ol_i_id(idx)
AND s_w_id = :ol_supply_w_id(idx)
RETURNING i_price, i_name, s_quantity, s_dist_02,
i_price*:ol_quantity(idx),
CASE WHEN i_data NOT LIKE '%ORIGINAL%'
THEN 'G'
ELSE (CASE WHEN s_data NOT LIKE '%ORIGINAL%'
```



```

        THEN 'G'
        ELSE 'B'
        END)
    END
    BULK COLLECT INTO :i_price, :i_name, :s_quantity, inittpcc.s_dist,
        :ol_amount,:brand_generic;
END u2;

PROCEDURE u3 IS
BEGIN
    FORALL idx IN 1 .. cache_ol_cnt
        UPDATE stock_item
        SET s_order_cnt = s_order_cnt + 1,
            s_ytd = s_ytd + :ol_quantity(idx),
            s_remote_cnt = s_remote_cnt + :s_remote(idx),
            s_quantity = (CASE WHEN s_quantity < :ol_quantity (idx) + 10
                THEN s_quantity +91
                ELSE s_quantity
            END) - :ol_quantity(idx)
        WHERE i_id = :ol_i_id(idx)
        AND s_w_id = :ol_supply_w_id(idx)
        RETURNING i_price, i_name, s_quantity, s_dist_03,
            i_price*:ol_quantity(idx),
            CASE WHEN i_data NOT LIKE '%ORIGINAL%'
                THEN 'G'
                ELSE (CASE WHEN s_data NOT LIKE '%ORIGINAL%'
                    THEN 'G'
                    ELSE 'B'
                END)
            END
        END
    BULK COLLECT INTO :i_price, :i_name, :s_quantity, inittpcc.s_dist,
        :ol_amount,:brand_generic;
END u3;

PROCEDURE u4 IS
BEGIN
    FORALL idx IN 1 .. cache_ol_cnt
        UPDATE stock_item
        SET s_order_cnt = s_order_cnt + 1,
            s_ytd = s_ytd + :ol_quantity(idx),
            s_remote_cnt = s_remote_cnt + :s_remote(idx),
            s_quantity = (CASE WHEN s_quantity < :ol_quantity (idx) + 10
                THEN s_quantity +91
                ELSE s_quantity
            END) - :ol_quantity(idx)
        WHERE i_id = :ol_i_id(idx)
        AND s_w_id = :ol_supply_w_id(idx)
        RETURNING i_price, i_name, s_quantity, s_dist_04,
            i_price*:ol_quantity(idx),
            CASE WHEN i_data NOT LIKE '%ORIGINAL%'
                THEN 'G'
                ELSE (CASE WHEN s_data NOT LIKE '%ORIGINAL%'
                    THEN 'G'
                    ELSE 'B'
                END)
            END
        END
    BULK COLLECT INTO :i_price, :i_name, :s_quantity, inittpcc.s_dist,
        :ol_amount,:brand_generic;
END u4;

PROCEDURE u5 IS
BEGIN

```

```

    FORALL idx IN 1 .. cache_ol_cnt
        UPDATE stock_item
        SET s_order_cnt = s_order_cnt + 1,
            s_ytd = s_ytd + :ol_quantity(idx),
            s_remote_cnt = s_remote_cnt + :s_remote(idx),
            s_quantity = (CASE WHEN s_quantity < :ol_quantity (idx) + 10
                THEN s_quantity +91
                ELSE s_quantity
            END) - :ol_quantity(idx)
        WHERE i_id = :ol_i_id(idx)
        AND s_w_id = :ol_supply_w_id(idx)
        RETURNING i_price, i_name, s_quantity, s_dist_05,
            i_price*:ol_quantity(idx),
            CASE WHEN i_data NOT LIKE '%ORIGINAL%'
                THEN 'G'
                ELSE (CASE WHEN s_data NOT LIKE '%ORIGINAL%'
                    THEN 'G'
                    ELSE 'B'
                END)
            END
        END
    BULK COLLECT INTO :i_price, :i_name, :s_quantity, inittpcc.s_dist,
        :ol_amount,:brand_generic;
END u5;

PROCEDURE u6 IS
BEGIN
    FORALL idx IN 1 .. cache_ol_cnt
        UPDATE stock_item
        SET s_order_cnt = s_order_cnt + 1,
            s_ytd = s_ytd + :ol_quantity(idx),
            s_remote_cnt = s_remote_cnt + :s_remote(idx),
            s_quantity = (CASE WHEN s_quantity < :ol_quantity (idx) + 10
                THEN s_quantity +91
                ELSE s_quantity
            END) - :ol_quantity(idx)
        WHERE i_id = :ol_i_id(idx)
        AND s_w_id = :ol_supply_w_id(idx)
        RETURNING i_price, i_name, s_quantity, s_dist_06,
            i_price*:ol_quantity(idx),
            CASE WHEN i_data NOT LIKE '%ORIGINAL%'
                THEN 'G'
                ELSE (CASE WHEN s_data NOT LIKE '%ORIGINAL%'
                    THEN 'G'
                    ELSE 'B'
                END)
            END
        END
    BULK COLLECT INTO :i_price, :i_name, :s_quantity, inittpcc.s_dist,
        :ol_amount,:brand_generic;
END u6;

PROCEDURE u7 IS
BEGIN
    FORALL idx IN 1 .. cache_ol_cnt
        UPDATE stock_item
        SET s_order_cnt = s_order_cnt + 1,
            s_ytd = s_ytd + :ol_quantity(idx),
            s_remote_cnt = s_remote_cnt + :s_remote(idx),
            s_quantity = (CASE WHEN s_quantity < :ol_quantity (idx) + 10
                THEN s_quantity +91
                ELSE s_quantity
            END) - :ol_quantity(idx)
        WHERE i_id = :ol_i_id(idx)

```

```

AND s_w_id = :ol_supply_w_id(idx)
RETURNING i_price, i_name, s_quantity, s_dist_07,
         i_price*:ol_quantity(idx),
CASE WHEN i_data NOT LIKE '%ORIGINAL%'
THEN 'G'
ELSE (CASE WHEN s_data NOT LIKE '%ORIGINAL%'
THEN 'G'
ELSE 'B'
END)
END
BULK COLLECT INTO :i_price, :i_name, :s_quantity, inittpcc.s_dist,
                  :ol_amount,:brand_generic;
END u7;

```

```

PROCEDURE u8 IS
BEGIN
FORALL idx IN 1 .. cache_ol_cnt
UPDATE stock_item
SET s_order_cnt = s_order_cnt + 1,
s_ytd = s_ytd + :ol_quantity(idx),
s_remote_cnt = s_remote_cnt + :s_remote(idx),
s_quantity = (CASE WHEN s_quantity < :ol_quantity (idx) + 10
THEN s_quantity +91
ELSE s_quantity
END) - :ol_quantity(idx)
WHERE i_id = :ol_i_id(idx)
AND s_w_id = :ol_supply_w_id(idx)
RETURNING i_price, i_name, s_quantity, s_dist_08,
         i_price*:ol_quantity(idx),
CASE WHEN i_data NOT LIKE '%ORIGINAL%'
THEN 'G'
ELSE (CASE WHEN s_data NOT LIKE '%ORIGINAL%'
THEN 'G'
ELSE 'B'
END)
END
BULK COLLECT INTO :i_price, :i_name, :s_quantity, inittpcc.s_dist,
                  :ol_amount,:brand_generic;
END u8;

```

```

PROCEDURE u9 IS
BEGIN
FORALL idx IN 1 .. cache_ol_cnt
UPDATE stock_item
SET s_order_cnt = s_order_cnt + 1,
s_ytd = s_ytd + :ol_quantity(idx),
s_remote_cnt = s_remote_cnt + :s_remote(idx),
s_quantity = (CASE WHEN s_quantity < :ol_quantity (idx) + 10
THEN s_quantity +91
ELSE s_quantity
END) - :ol_quantity(idx)
WHERE i_id = :ol_i_id(idx)
AND s_w_id = :ol_supply_w_id(idx)
RETURNING i_price, i_name, s_quantity, s_dist_09,
         i_price*:ol_quantity(idx),
CASE WHEN i_data NOT LIKE '%ORIGINAL%'
THEN 'G'
ELSE (CASE WHEN s_data NOT LIKE '%ORIGINAL%'
THEN 'G'
ELSE 'B'
END)
END
END

```

```

BULK COLLECT INTO :i_price, :i_name, :s_quantity, inittpcc.s_dist,
                  :ol_amount,:brand_generic;
END u9;

```

```

PROCEDURE u10 IS
BEGIN
FORALL idx IN 1 .. cache_ol_cnt
UPDATE stock_item
SET s_order_cnt = s_order_cnt + 1,
s_ytd = s_ytd + :ol_quantity(idx),
s_remote_cnt = s_remote_cnt + :s_remote(idx),
s_quantity = (CASE WHEN s_quantity < :ol_quantity (idx) + 10
THEN s_quantity +91
ELSE s_quantity
END) - :ol_quantity(idx)
WHERE i_id = :ol_i_id(idx)
AND s_w_id = :ol_supply_w_id(idx)
RETURNING i_price, i_name, s_quantity, s_dist_10,
         i_price*:ol_quantity(idx),
CASE WHEN i_data NOT LIKE '%ORIGINAL%'
THEN 'G'
ELSE (CASE WHEN s_data NOT LIKE '%ORIGINAL%'
THEN 'G'
ELSE 'B'
END)
END
BULK COLLECT INTO :i_price, :i_name, :s_quantity, inittpcc.s_dist,
                  :ol_amount,:brand_generic;
END u10;

```

```

PROCEDURE fix_items IS
rows_lost          PLS_INTEGER;
max_index          PLS_INTEGER;
temp_index         PLS_INTEGER;
BEGIN
idx := 1;
rows_lost := 0;
max_index := dummy_local;

```

WHILE (max_index != cache_ol_cnt) LOOP

```

WHILE (idx <= sql%rowcount AND
      sql%bulk_rowcount(idx + rows_lost) = 1)
LOOP
idx := idx + 1;
END LOOP;

```

```

temp_index := max_index;
WHILE (temp_index >= idx + rows_lost) LOOP
:ol_amount(temp_index + 1) := :ol_amount(temp_index);
:i_price(temp_index + 1) := :i_price(temp_index);
:i_name(temp_index + 1) := :i_name(temp_index);
:s_quantity(temp_index + 1) := :s_quantity(temp_index);
inittpcc.s_dist(temp_index + 1) := inittpcc.s_dist(temp_index);
:brand_generic(temp_index + 1) := :brand_generic(temp_index);
temp_index := temp_index - 1;
END LOOP;

```

```

IF (idx + rows_lost <= cache_ol_cnt) THEN
:i_price(idx + rows_lost) := 0;
:i_name(idx + rows_lost) := 'NO ITEM';
:s_quantity(idx + rows_lost) := 0;

```

```

inittpcc.s_dist(idx + rows_lost) := NULL;
:brand_generic(idx + rows_lost) := '';
:ol_amount(idx + rows_lost) := 0;
rows_lost := rows_lost + 1;
max_index := max_index + 1;
END IF;

END LOOP;
END fix_items;

BEGIN
LOOP BEGIN
    cache_ol_cnt := :o_ol_cnt;

    UPDATE dist SET d_next_o_id = d_next_o_id + 1
    WHERE d_id = :d_id AND d_w_id = :w_id
    RETURNING d_tax, d_next_o_id-1
    INTO :d_tax, :o_id;

    SELECT c_discount, c_last, c_credit, w_tax
    INTO :c_discount, :c_last, :c_credit, :w_tax
    FROM cust, ware
    WHERE c_id = :c_id AND c_d_id = :d_id AND c_w_id = w_id
    AND w_id = :w_id;

    INSERT INTO nord (no_o_id, no_d_id, no_w_id)
    VALUES (:o_id, :d_id, :w_id);

    INSERT INTO odr (o_id, o_d_id, o_w_id, o_c_id, o_entry_d,
                    o_carrier_id, o_ol_cnt, o_all_local)
    VALUES (:o_id, :d_id, :w_id, :c_id,
            :cr_date, 11, :o_ol_cnt, :o_all_local);

    dummy_local := :d_id;

    IF (dummy_local < 6) THEN
    IF (dummy_local < 3) THEN
        IF (dummy_local = 1) THEN
            u1;
        ELSE
            u2;
        END IF;
    ELSE
        IF (dummy_local = 3) THEN
            u3;
        ELSIF (dummy_local = 4) then
            u4;
        ELSE
            u5;
        END IF;
    END IF;
ELSE
    IF (dummy_local < 8) THEN
    IF (dummy_local = 6) THEN
        u6;
    ELSE
        u7;
    END IF;
ELSE
    IF (dummy_local = 8) THEN

```

```

        u8;
    ELSIF (dummy_local = 9) then
        u9;
    ELSE
        u10;
    END IF;
END IF;
END IF;

dummy_local := sql%rowcount;

IF (dummy_local != cache_ol_cnt ) THEN fix_items; END IF;

FORALL idx IN 1..dummy_local
INSERT INTO ordl
(ol_o_id, ol_d_id, ol_w_id, ol_number, ol_delivery_d, ol_i_id,
 ol_supply_w_id, ol_quantity, ol_amount, ol_dist_info)
VALUES (:o_id, :d_id, :w_id, inittpcc.idx1arr(idx), inittpcc.nulldate,
        :ol_i_id(idx), :ol_supply_w_id(idx),
        :ol_quantity(idx), :ol_amount(idx), inittpcc.s_dist(idx));

IF (dummy_local != :o_ol_cnt) THEN
    :o_ol_cnt := dummy_local;
    ROLLBACK;
END IF;

EXIT;

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

views.sql

create or replace view wh_dist
(w_id, d_id, d_tax, d_next_o_id, w_tax )
as select w.w_id, d.d_id, d.d_tax, d.d_next_o_id, w.w_tax
    from dist d, ware w
    where w.w_id = d.d_w_id
/

create or replace view stock_item
(i_id, s_w_id, i_price, i_name, i_data, s_data, s_quantity,
 s_order_cnt, s_ytd, s_remote_cnt,
 s_dist_01, s_dist_02, s_dist_03, s_dist_04, s_dist_05,
 s_dist_06, s_dist_07, s_dist_08, s_dist_09, s_dist_10)
as
select i.i_id, s_w_id, i.i_price, i.i_name, i.i_data, s_data, s_quantity,
 s_order_cnt, s_ytd, s_remote_cnt,
 s_dist_01, s_dist_02, s_dist_03, s_dist_04, s_dist_05,
 s_dist_06, s_dist_07, s_dist_08, s_dist_09, s_dist_10
    from stok s, item i
    where i.i_id = s.s_i_id
/

```

Appendix C: Tunable Parameters

Server Configuration

Each Database node was configured in the exact same way and saw the same devices as every other node. Any difference between nodes was how a device path was named, or hostname/IP address configuration of the node itself. Therefore single node's configuration will be referenced below.

DB Server Information

format output

Searching for disks...done

AVAILABLE DISK SELECTIONS:

- 0. c1t0d31 <SUN-UniversalXport-0750 cyl 8 alt 2 hd 64 sec 64>
/pci@500/pci@0/pci@d/SUNW,qlc@0,1/fp@0,0/ssd@w201200a0b8562cae,1f
- 1. c2t202200A0B848A6BCd31 <SUN-UniversalXport-0750 cyl 8 alt 2 hd 64 sec 64>
/pci@500/pci@0/pci@d/SUNW,qlc@0,1/fp@0,0/ssd@w202200a0b848a6bc,1f
- 2. c2t202200A0B8562CAEd31 <SUN-UniversalXport-0750 cyl 8 alt 2 hd 64 sec 64>
/pci@500/pci@0/pci@d/SUNW,qlc@0,1/fp@0,0/ssd@w202200a0b8562cae,1f
- 3. c2t202200A0B8563E02d31 <SUN-UniversalXport-0750 cyl 8 alt 2 hd 64 sec 64>
/pci@500/pci@0/pci@d/SUNW,qlc@0,1/fp@0,0/ssd@w202200a0b8563e02,1f
- 4. c2t202200A0B8565C20d31 <SUN-UniversalXport-0750 cyl 8 alt 2 hd 64 sec 64>
/pci@500/pci@0/pci@d/SUNW,qlc@0,1/fp@0,0/ssd@w202200a0b8565c20,1f
- 5. c2t202200A0B8565F9Ed31 <SUN-UniversalXport-0750 cyl 8 alt 2 hd 64 sec 64>
/pci@500/pci@0/pci@d/SUNW,qlc@0,1/fp@0,0/ssd@w202200a0b8565f9e,1f
- 6. c2t202200A0B8565F92d31 <SUN-UniversalXport-0750 cyl 8 alt 2 hd 64 sec 64>
/pci@500/pci@0/pci@d/SUNW,qlc@0,1/fp@0,0/ssd@w202200a0b8565f92,1f
- 7. c2t202200A0B8565F94d31 <SUN-UniversalXport-0750 cyl 8 alt 2 hd 64 sec 64>
/pci@500/pci@0/pci@d/SUNW,qlc@0,1/fp@0,0/ssd@w202200a0b8565f94,1f
- 8. c2t202200A0B8565FA0d31 <SUN-UniversalXport-0750 cyl 8 alt 2 hd 64 sec 64>
/pci@500/pci@0/pci@d/SUNW,qlc@0,1/fp@0,0/ssd@w202200a0b8565fa0,1f
- 9. c2t202200A0B8565FCCd31 <SUN-UniversalXport-0750 cyl 8 alt 2 hd 64 sec 64>
/pci@500/pci@0/pci@d/SUNW,qlc@0,1/fp@0,0/ssd@w202200a0b8565fcc,1f
- 10. c2t202200A0B85611F4d31 <SUN-UniversalXport-0750 cyl 8 alt 2 hd 64 sec 64>
/pci@500/pci@0/pci@d/SUNW,qlc@0,1/fp@0,0/ssd@w202200a0b85611f4,1f
- 11. c2t202200A0B85628FCd31 <SUN-UniversalXport-0750 cyl 8 alt 2 hd 64 sec 64>
/pci@500/pci@0/pci@d/SUNW,qlc@0,1/fp@0,0/ssd@w202200a0b85628fc,1f
- 12. c2t202200A0B85663AAAd31 <SUN-UniversalXport-0750 cyl 8 alt 2 hd 64 sec 64>
/pci@500/pci@0/pci@d/SUNW,qlc@0,1/fp@0,0/ssd@w202200a0b85663aa,1f
- 13. c2t202200A0B85663ACd31 <SUN-UniversalXport-0750 cyl 8 alt 2 hd 64 sec 64>
/pci@500/pci@0/pci@d/SUNW,qlc@0,1/fp@0,0/ssd@w202200a0b85663ac,1f
- 14. c2t202200A0B85663AEd31 <SUN-UniversalXport-0750 cyl 8 alt 2 hd 64 sec 64>
/pci@500/pci@0/pci@d/SUNW,qlc@0,1/fp@0,0/ssd@w202200a0b85663ae,1f
- 15. c2t202200A0B85663B0d31 <SUN-UniversalXport-0750 cyl 8 alt 2 hd 64 sec 64>
/pci@500/pci@0/pci@d/SUNW,qlc@0,1/fp@0,0/ssd@w202200a0b85663b0,1f
- 16. c2t202200A0B85663C6d31 <SUN-UniversalXport-0750 cyl 8 alt 2 hd 64 sec 64>
/pci@500/pci@0/pci@d/SUNW,qlc@0,1/fp@0,0/ssd@w202200a0b85663c6,1f
- 17. c2t202200A0B85663CAD31 <SUN-UniversalXport-0750 cyl 8 alt 2 hd 64 sec 64>
/pci@500/pci@0/pci@d/SUNW,qlc@0,1/fp@0,0/ssd@w202200a0b85663ca,1f
- 18. c2t202200A0B85663FAD31 <SUN-UniversalXport-0750 cyl 8 alt 2 hd 64 sec 64>
/pci@500/pci@0/pci@d/SUNW,qlc@0,1/fp@0,0/ssd@w202200a0b85663fa,1f
- 19. c2t202200A0B856640Cd31 <SUN-UniversalXport-0750 cyl 8 alt 2 hd 64 sec 64>
/pci@500/pci@0/pci@d/SUNW,qlc@0,1/fp@0,0/ssd@w202200a0b856640c,1f
- 20. c2t202200A0B856641Ad31 <SUN-UniversalXport-0750 cyl 8 alt 2 hd 64 sec 64>
/pci@500/pci@0/pci@d/SUNW,qlc@0,1/fp@0,0/ssd@w202200a0b856641a,1f
- 21. c2t202200A0B856645Cd31 <SUN-UniversalXport-0750 cyl 8 alt 2 hd 64 sec 64>

- /pci@500/pci@0/pci@d/SUNW,qlc@0,1/fp@0,0/ssd@w202200a0b856645c,1f
- 22. c2t202200A0B8561390d31 <SUN-UniversalXport-0750 cyl 8 alt 2 hd 64 sec 64>
/pci@500/pci@0/pci@d/SUNW,qlc@0,1/fp@0,0/ssd@w202200a0b8561390,1f
- 23. c2t202400A0B8565F98d31 <SUN-UniversalXport-0750 cyl 8 alt 2 hd 64 sec 64>
/pci@500/pci@0/pci@d/SUNW,qlc@0,1/fp@0,0/ssd@w202400a0b8565f98,1f
- 24. c2t202800A0B856641Ed31 <SUN-UniversalXport-0750 cyl 8 alt 2 hd 64 sec 64>
/pci@500/pci@0/pci@d/SUNW,qlc@0,1/fp@0,0/ssd@w202800a0b856641e,1f
- 25. c3t0d31 <SUN-UniversalXport-0750 cyl 8 alt 2 hd 64 sec 64>
/pci@600/pci@0/pci@c/SUNW,qlc@0,1/fp@0,0/ssd@w201200a0b856641a,1f
- 26. c4t202200A0B848A6BCd31 <SUN-UniversalXport-0750 cyl 8 alt 2 hd 64 sec 64>
/pci@600/pci@0/pci@c/SUNW,qlc@0,1/fp@0,0/ssd@w202200a0b848a6bc,1f
- 27. c4t202200A0B8562CAEd31 <SUN-UniversalXport-0750 cyl 8 alt 2 hd 64 sec 64>
/pci@600/pci@0/pci@c/SUNW,qlc@0,1/fp@0,0/ssd@w202200a0b8562cae,1f
- 28. c4t202200A0B8563E02d31 <SUN-UniversalXport-0750 cyl 8 alt 2 hd 64 sec 64>
/pci@600/pci@0/pci@c/SUNW,qlc@0,1/fp@0,0/ssd@w202200a0b8563e02,1f
- 29. c4t202200A0B8565C20d31 <SUN-UniversalXport-0750 cyl 8 alt 2 hd 64 sec 64>
/pci@600/pci@0/pci@c/SUNW,qlc@0,1/fp@0,0/ssd@w202200a0b8565c20,1f
- 30. c4t202200A0B8565F9Ed31 <SUN-UniversalXport-0750 cyl 8 alt 2 hd 64 sec 64>
/pci@600/pci@0/pci@c/SUNW,qlc@0,1/fp@0,0/ssd@w202200a0b8565f9e,1f
- 31. c4t202200A0B8565F92d31 <SUN-UniversalXport-0750 cyl 8 alt 2 hd 64 sec 64>
/pci@600/pci@0/pci@c/SUNW,qlc@0,1/fp@0,0/ssd@w202200a0b8565f92,1f
- 32. c4t202200A0B8565F94d31 <SUN-UniversalXport-0750 cyl 8 alt 2 hd 64 sec 64>
/pci@600/pci@0/pci@c/SUNW,qlc@0,1/fp@0,0/ssd@w202200a0b8565f94,1f
- 33. c4t202200A0B8565FA0d31 <SUN-UniversalXport-0750 cyl 8 alt 2 hd 64 sec 64>
/pci@600/pci@0/pci@c/SUNW,qlc@0,1/fp@0,0/ssd@w202200a0b8565fa0,1f
- 34. c4t202200A0B8565FCCd31 <SUN-UniversalXport-0750 cyl 8 alt 2 hd 64 sec 64>
/pci@600/pci@0/pci@c/SUNW,qlc@0,1/fp@0,0/ssd@w202200a0b8565fcc,1f
- 35. c4t202200A0B85611F4d31 <SUN-UniversalXport-0750 cyl 8 alt 2 hd 64 sec 64>
/pci@600/pci@0/pci@c/SUNW,qlc@0,1/fp@0,0/ssd@w202200a0b85611f4,1f
- 36. c4t202200A0B85628FCd31 <SUN-UniversalXport-0750 cyl 8 alt 2 hd 64 sec 64>
/pci@600/pci@0/pci@c/SUNW,qlc@0,1/fp@0,0/ssd@w202200a0b85628fc,1f
- 37. c4t202200A0B85663AAAd31 <SUN-UniversalXport-0750 cyl 8 alt 2 hd 64 sec 64>
/pci@600/pci@0/pci@c/SUNW,qlc@0,1/fp@0,0/ssd@w202200a0b85663aa,1f
- 38. c4t202200A0B85663ACd31 <SUN-UniversalXport-0750 cyl 8 alt 2 hd 64 sec 64>
/pci@600/pci@0/pci@c/SUNW,qlc@0,1/fp@0,0/ssd@w202200a0b85663ac,1f
- 39. c4t202200A0B85663AEd31 <SUN-UniversalXport-0750 cyl 8 alt 2 hd 64 sec 64>
/pci@600/pci@0/pci@c/SUNW,qlc@0,1/fp@0,0/ssd@w202200a0b85663ae,1f
- 40. c4t202200A0B85663B0d31 <SUN-UniversalXport-0750 cyl 8 alt 2 hd 64 sec 64>
/pci@600/pci@0/pci@c/SUNW,qlc@0,1/fp@0,0/ssd@w202200a0b85663b0,1f
- 41. c4t202200A0B85663C6d31 <SUN-UniversalXport-0750 cyl 8 alt 2 hd 64 sec 64>
/pci@600/pci@0/pci@c/SUNW,qlc@0,1/fp@0,0/ssd@w202200a0b85663c6,1f
- 42. c4t202200A0B85663CAD31 <SUN-UniversalXport-0750 cyl 8 alt 2 hd 64 sec 64>
/pci@600/pci@0/pci@c/SUNW,qlc@0,1/fp@0,0/ssd@w202200a0b85663ca,1f
- 43. c4t202200A0B85663FAD31 <SUN-UniversalXport-0750 cyl 8 alt 2 hd 64 sec 64>
/pci@600/pci@0/pci@c/SUNW,qlc@0,1/fp@0,0/ssd@w202200a0b85663fa,1f
- 44. c4t202200A0B856640Cd31 <SUN-UniversalXport-0750 cyl 8 alt 2 hd 64 sec 64>
/pci@600/pci@0/pci@c/SUNW,qlc@0,1/fp@0,0/ssd@w202200a0b856640c,1f
- 45. c4t202200A0B856641Ad31 <SUN-UniversalXport-0750 cyl 8 alt 2 hd 64 sec 64>
/pci@600/pci@0/pci@c/SUNW,qlc@0,1/fp@0,0/ssd@w202200a0b856641a,1f
- 46. c4t202200A0B856645Cd31 <SUN-UniversalXport-0750 cyl 8 alt 2 hd 64 sec 64>
/pci@600/pci@0/pci@c/SUNW,qlc@0,1/fp@0,0/ssd@w202200a0b856645c,1f
- 47. c4t202200A0B8561390d31 <SUN-UniversalXport-0750 cyl 8 alt 2 hd 64 sec 64>
/pci@600/pci@0/pci@c/SUNW,qlc@0,1/fp@0,0/ssd@w202200a0b8561390,1f
- 48. c4t202400A0B8565F98d31 <SUN-UniversalXport-0750 cyl 8 alt 2 hd 64 sec 64>
/pci@600/pci@0/pci@c/SUNW,qlc@0,1/fp@0,0/ssd@w202400a0b8565f98,1f
- 49. c4t202800A0B856641Ed31 <SUN-UniversalXport-0750 cyl 8 alt 2 hd 64 sec 64>
/pci@600/pci@0/pci@c/SUNW,qlc@0,1/fp@0,0/ssd@w202800a0b856641e,1f
- 50. c5t600A0B800048A6BC00000E2D4AB241B1d0 <SUN-CSM200_R-0750 cyl 510 alt 2 hd 64 sec 64>
/scsi_vhci/ssd@g600a0b800048a6bc00000e2d4ab241b1
- 51. c5t600A0B800048A6BC00000E2F4AB24205d0 <SUN-CSM200_R-0750 cyl 510 alt 2 hd 64 sec 64>
/scsi_vhci/ssd@g600a0b800048a6bc00000e2f4ab24205
- 52. c5t600A0B800048A6BC00000F454AB27C31d0 <SUN-CSM200_R-0750 cyl 46078 alt 2 hd 128 sec 64>

/scsi_vhcsi/ssd@g600a0b800048a6bc00000f454ab27c31
53. c5t600A0B800048A6BC00000F474AB27C86d0 <SUN-CSM200_R-0750 cyl 46078 alt 2 hd 128 sec 64>
/scsi_vhcsi/ssd@g600a0b800048a6bc00000f474ab27c86
54. c5t600A0B800048A6BC000004BB4A8EB585d0 <SUN-CSM200_R-0750 cyl 54142 alt 2 hd 512 sec 64>
/scsi_vhcsi/ssd@g600a0b800048a6bc000004bb4a8eb585
55. c5t600A0B800048A6BC000011454AB62E05d0 <SUN-CSM200_R-0750 cyl 46078 alt 2 hd 128 sec 64>
/scsi_vhcsi/ssd@g600a0b800048a6bc000011454ab62e05
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Log device/partitions

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c5t600A0B80005611F4000007F54AB68752d0
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c5t600A0B80005628FC00000C954AB24416d0
c5t600A0B80005628FC00000DAB4AB27DCA d0
c5t600A0B80005628FC00000DAD4AB27E20d0
c5t600A0B80005628FC00000FAD4AB63121d0
c5t600A0B80005628FC00000FAF4AB63176d0
c5t600A0B80005628FC00000FB14AB631CCd0
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c5t600A0B80005663A2000001F64AB6899Bd0
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c5t600A0B80005663AA00000CAD4AB27D1Bd0
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c5t600A0B80005663AA00000EA34AB62FECd0
c5t600A0B80005663AA00000EA54AB63042d0
c5t600A0B80005663AA00000EA74AB63097d0
c5t600A0B80005663AA0000019D4A8EB685d0
c5t600A0B80005663AC00000A144AB24484d0
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c5t600A0B80005663AC00000DB14AB632B5d0
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c5t600A0B80005663AC000007F44AB02E59d0
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c5t600A0B80005663B600000CD74AB62EBDd0
c5t600A0B80005663B600000CD94AB62F11d0
c5t600A0B80005663B20000019C4A8EB67Ad0
c5t600A0B80005663B2000007054AB24330d0
c5t600A0B80005663B2000007074AB24385d0
c5t600A0B80005663B6000003224A96E4EAAd0
c5t600A0B80005663B6000008294AB27C6Ad0
c5t600A0B80005663B6000007114AB24212d0
c5t600A0B80005663B6000007134AB24268d0
c5t600A0B80005663C600000AA84ABEA0A0d0
c5t600A0B80005663C600000B9E4AC27FCCd0
c5t600A0B80005663C600000BA04AC27FEBd0
c5t600A0B80005663C600000BA14AC2811Ad0
c5t600A0B80005663CA00000B5D4AB62EABd0
c5t600A0B80005663CA00000B5F4AB62F01d0
c5t600A0B80005663CA00000B614AB62F56d0
c5t600A0B80005663CA0000084F4AB24200d0
c5t600A0B80005663CA000003254A96E50Dd0
c5t600A0B80005663CA000008514AB24256d0
c5t600A0B80005663CA000009614AB27C58d0
c5t600A0B80005663CA000009634AB27CACd0
c5t600A0B80005663E20000050D4AB67EE1d0
c5t600A0B80005663E20000050F4AB67F43d0
c5t600A0B80005663E2000005114AB67FA7d0
c5t600A0B80005663E2000005134AC27E44d0
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c5t600A0B80005663F200000E884AB685DAAd0
c5t600A0B80005663F2000011D84AC27E7Fd0
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c5t600A0B80005663FA000008924AB682C9d0
c5t600A0B80005663FA000008944AB6831Dd0
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c5t600A0B800056247E0000035C4AB68766d0
c5t600A0B800056247E0000035E4AB687BCd0
c5t600A0B800056247E000003604AB68811d0
c5t600A0B800056247E000003624AC27EF2d0
c5t600A0B800056640C000006EA4AB68929d0
c5t600A0B800056640C000006EC4AB6897Dd0
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c5t600A0B800056641E00000BA04AB6861Dd0
c5t600A0B800056641E00000BA24AB68673d0
c5t600A0B800056641E00000BA44AB686C9d0
c5t600A0B800056643C0000045F4ABEA065d0
c5t600A0B800056643C000004604AC27EA6d0
c5t600A0B800056643C000004614AC27EBEd0
c5t600A0B800056643E000003CC4ABEA0BEd0
c5t600A0B800056643E000003CD4AC27FEAd0
c5t600A0B800056643E000003CE4AC27FFFd0
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c5t600A0B800056645C000005FF4AB68CC2d0
c5t600A0B800056645C000008DD4AC28084d0
c5t600A0B800056645C000006014AB68D17d0

c5t600A0B8000561390000010114AB6328Ad0
c5t600A0B800056352000000AFC4AB24404d0
c5t600A0B800056352000000AFE4AB2445Bd0
c5t600A0B80005635200000070B4A96E584d0
c5t600A0B8000563520000010BA4AB63110d0
c5t600A0B8000563520000010BC4AB63166d0
c5t600A0B8000563520000010BE4AB631BCd0
c5t600A0B8000566438000006C44AB02EA3d0
c5t600A0B800056352000000C144AB27E0Ed0
c5t600A0B800056139000000CDB4AB24427d0
c5t600A0B800056139000000CDD4AB2447Dd0
c5t600A0B80005613900000100D4AB631DEd0
c5t600A0B800056139000000DF34AB27E07d0
c5t600A0B800056139000000DF54AB27E5Cd0
c5t600A0B80005613900000036E4A8EB6ADd0
c5t600A0B8000566438000008E14AB244D5d0
c5t600A0B8000566438000008E24AB24509d0
c5t600A0B8000566450000002EE4AB68967d0
c5t600A0B8000566450000002F04AB689BCd0
c5t600A0B80005613900000100F4AB63233d0
c5t600A0B8000566450000002F24AB68A10d0
c5t600A0B8000566438000009F74AB27E90d0
c5t600A0B800056643800000FEC4AB632A1d0
c5t600A0B800056643800000FED4AB632D5d0
c5t600A0B800056643800000FEE4AB63309d0
c5t600A0B800056643800000FEF4AB6333Ed0

COMSTAR devices/partitions as seen on DB node

Mapping on comstar node db1-san1

SVM_DEV	DEVICE_ON_DBNODE	SIZE_IN_BYTES
d1201	c5t600144F0B8718E0000004AB12BC00035d0s6	32559267840
d1202	c5t600144F0B8718E0000004AB12BC00036d0s6	32559267840
d1203	c5t600144F0B8718E0000004AB12BC10037d0s6	32559267840
d1204	c5t600144F0B8718E0000004AB12BC20038d0s6	32559267840
d1205	c5t600144F0B8718E0000004AB12BC20039d0s6	32559267840
d1206	c5t600144F0B8718E0000004AB12BC2003Ad0s6	32559267840
d1207	c5t600144F0B8718E0000004AB12BC2003Bd0s6	32559267840
d1208	c5t600144F0B8718E0000004AB12BC2003Cd0s6	32559267840
d1209	c5t600144F0B8718E0000004AB12BC2003Dd0s6	32559267840
d1210	c5t600144F0B8718E0000004AB12BC2003Ed0s6	32559267840
d1211	c5t600144F0B8718E0000004AB12BC3003Fd0s6	32559267840
d1212	c5t600144F0B8718E0000004AB12BC30040d0s6	30462115840
d1213	c5t600144F0B8718E0000004AB12BC30041d0s6	30462115840
d1214	c5t600144F0B8718E0000004AB12BC30042d0s6	30462115840
d1215	c5t600144F0B8718E0000004AB12BC30043d0s6	30462115840
d1216	c5t600144F0B8718E0000004AB12BC30044d0s6	30462115840
d1217	c5t600144F0B8718E0000004AB12BC30045d0s6	30462115840
d1218	c5t600144F0B8718E0000004AB12BC30046d0s6	30462115840
d1219	c5t600144F0B8718E0000004AB12BC30047d0s6	30462115840
d1220	c5t600144F0B8718E0000004AB12BC30048d0s6	30462115840
d1221	c5t600144F0B8718E0000004AB12BC40049d0s6	30462115840
d1222	c5t600144F0B8718E0000004AB12BC4004Ad0s6	67067904000
d1223	c5t600144F0B8718E0000004AB12BC4004Bd0s6	67067904000
d1224	c5t600144F0B8718E0000004AB12BC4004Cd0s6	67067904000
d1225	c5t600144F0B8718E0000004AB12BC4004Dd0s6	67067904000
d1226	c5t600144F0B8718E0000004AB12BC4004Ed0s6	67067904000
d1227	c5t600144F0B8718E0000004AB12BC4004Fd0s6	16432168960
d1228	c5t600144F0B8718E0000004AB12BC40050d0s6	16757227520
d1229	c5t600144F0B8718E0000004AB12BC40051d0s6	27494645760

d1230 c5t600144F0B8718E0000004AB12BC50052d0s6 15729623040
d1231 c5t600144F0B8718E0000004AB12BC50053d0s6 27672903680
d1232 c5t600144F0B8718E0000004AB12BC50054d0s6 27672903680
d1233 c5t600144F0B8718E0000004AB12BC50055d0s6 5464064000
d1234 c5t600144F0B8718E0000004AB12BC50056d0s6 64247234560
d9990 c5t600144F0B8718E0000004AC27C1E0001d0s6 200457256960
d9991 c5t600144F0B8718E0000004AC27C1F0002d0s6 116833320960
d9992 c5t600144F0B8718E0000004AC27C1F0003d0s6 219773075456
d9993 c5t600144F0B8718E0000004AC27C1F0004d0s6 221545168896
d8999 c5t600144F0B8718E0000004AC27C1F0005d0s6 305238310912
c7t0d0s6 c5t600144F0B8718E0000004AC27C1F0006d0s6 892771825664

Mapping on comstar node db1-san2

SVM_DEV	DEVICE_ON_DBNODE	SIZE_IN_BYTES
d1201	c5t600144F03492050000004AB12BC00037d0s6	32559267840
d1202	c5t600144F03492050000004AB12BC00038d0s6	32559267840
d1203	c5t600144F03492050000004AB12BC10039d0s6	32559267840
d1204	c5t600144F03492050000004AB12BC2003Ad0s6	32559267840
d1205	c5t600144F03492050000004AB12BC2003Bd0s6	32559267840
d1206	c5t600144F03492050000004AB12BC2003Cd0s6	32559267840
d1207	c5t600144F03492050000004AB12BC2003Dd0s6	32559267840
d1208	c5t600144F03492050000004AB12BC2003Ed0s6	32559267840
d1209	c5t600144F03492050000004AB12BC2003Fd0s6	32559267840
d1210	c5t600144F03492050000004AB12BC20040d0s6	32559267840
d1211	c5t600144F03492050000004AB12BC20041d0s6	30462115840
d1212	c5t600144F03492050000004AB12BC30042d0s6	30462115840
d1213	c5t600144F03492050000004AB12BC30043d0s6	30462115840
d1214	c5t600144F03492050000004AB12BC30044d0s6	30462115840
d1215	c5t600144F03492050000004AB12BC30045d0s6	30462115840
d1216	c5t600144F03492050000004AB12BC30046d0s6	30462115840
d1217	c5t600144F03492050000004AB12BC30047d0s6	30462115840
d1218	c5t600144F03492050000004AB12BC30048d0s6	30462115840
d1219	c5t600144F03492050000004AB12BC30049d0s6	30462115840
d1220	c5t600144F03492050000004AB12BC3004Ad0s6	30462115840
d1221	c5t600144F03492050000004AB12BC3004Bd0s6	67067904000
d1222	c5t600144F03492050000004AB12BC3004Cd0s6	67067904000
d1223	c5t600144F03492050000004AB12BC3004Dd0s6	67067904000
d1224	c5t600144F03492050000004AB12BC3004Ed0s6	67067904000
d1225	c5t600144F03492050000004AB12BC3004Fd0s6	67067904000
d1226	c5t600144F03492050000004AB12BC30040d0s6	67067904000
d1227	c5t600144F03492050000004AB12BC40051d0s6	16432168960
d1228	c5t600144F03492050000004AB12BC40052d0s6	16757227520
d1229	c5t600144F03492050000004AB12BC40053d0s6	27494645760
d1230	c5t600144F03492050000004AB12BC40054d0s6	4195287040
d1231	c5t600144F03492050000004AB12BC50055d0s6	27672903680
d1232	c5t600144F03492050000004AB12BC50056d0s6	27672903680
d1233	c5t600144F03492050000004AB12BC50057d0s6	420413440
d1234	c5t600144F03492050000004AB12BC50058d0s6	27197440
d9990	c5t600144F03492050000004AC27C1E0001d0s6	168895119360
d9991	c5t600144F03492050000004AC27C1F0002d0s6	192587694080
d9992	c5t600144F03492050000004AC27C1F0003d0s6	221870227456
d9993	c5t600144F03492050000004AC27C1F0004d0s6	221545168896
d8999	c5t600144F03492050000004AC27C1F0005d0s6	356571348992
c7t0d0s6	c5t600144F03492050000004AC27C1F0006d0s6	892771825664

Mapping on comstar node db1-san3

SVM_DEV	DEVICE_ON_DBNODE	SIZE_IN_BYTES
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d1201	c5t600144F01438C20000004AB12BC00037d0s6	32559267840
d1202	c5t600144F01438C20000004AB12BC10038d0s6	32559267840
d1203	c5t600144F01438C20000004AB12BC10039d0s6	32559267840
d1204	c5t600144F01438C20000004AB12BC2003Ad0s6	32559267840
d1205	c5t600144F01438C20000004AB12BC2003Bd0s6	32559267840
d1206	c5t600144F01438C20000004AB12BC2003Cd0s6	32559267840
d1207	c5t600144F01438C20000004AB12BC2003Dd0s6	32559267840
d1208	c5t600144F01438C20000004AB12BC2003Ed0s6	32559267840
d1209	c5t600144F01438C20000004AB12BC3003Fd0s6	32559267840
d1210	c5t600144F01438C20000004AB12BC30040d0s6	32559267840
d1211	c5t600144F01438C20000004AB12BC30041d0s6	30462115840
d1212	c5t600144F01438C20000004AB12BC30042d0s6	30462115840
d1213	c5t600144F01438C20000004AB12BC30043d0s6	30462115840
d1214	c5t600144F01438C20000004AB12BC30044d0s6	30462115840
d1215	c5t600144F01438C20000004AB12BC30045d0s6	30462115840
d1216	c5t600144F01438C20000004AB12BC30046d0s6	30462115840
d1217	c5t600144F01438C20000004AB12BC30047d0s6	30462115840
d1218	c5t600144F01438C20000004AB12BC30048d0s6	30462115840
d1219	c5t600144F01438C20000004AB12BC40049d0s6	30462115840
d1220	c5t600144F01438C20000004AB12BC4004Ad0s6	30462115840
d1221	c5t600144F01438C20000004AB12BC4004Bd0s6	67067904000
d1222	c5t600144F01438C20000004AB12BC4004Cd0s6	67067904000
d1223	c5t600144F01438C20000004AB12BC4004Dd0s6	67067904000
d1224	c5t600144F01438C20000004AB12BC4004Ed0s6	67067904000
d1225	c5t600144F01438C20000004AB12BC4004Fd0s6	67067904000
d1226	c5t600144F01438C20000004AB12BC40050d0s6	67067904000
d1227	c5t600144F01438C20000004AB12BC40051d0s6	16432168960
d1228	c5t600144F01438C20000004AB12BC50052d0s6	16757227520
d1229	c5t600144F01438C20000004AB12BC50053d0s6	27494645760
d1230	c5t600144F01438C20000004AB12BC50054d0s6	4195287040
d1231	c5t600144F01438C20000004AB12BC50055d0s6	27672903680
d1232	c5t600144F01438C20000004AB12BC50056d0s6	27672903680
d1233	c5t600144F01438C20000004AB12BC50057d0s6	20228014080
d9990	c5t600144F01438C20000004AC27C1F0001d0s6	149087518720
d9991	c5t600144F01438C20000004AC27C1F0002d0s6	192614957056
d9992	c5t600144F01438C20000004AC27C1F0003d0s6	221870227456
d9993	c5t600144F01438C20000004AC27C1F0004d0s6	221545168896
d8999	c5t600144F01438C20000004AC27C1F0005d0s6	250376814592
c7t0d0s6	c5t600144F01438C20000004AC27C1F0006d0s6	892771825664

Mapping on comstar node db1-san4

SVM_DEV	DEVICE_ON_DBNODE	SIZE_IN_BYTES
d1201	c5t600144F0A847490000004AB12BC00036d0s6	32559267840
d1202	c5t600144F0A847490000004AB12BC10037d0s6	32559267840
d1203	c5t600144F0A847490000004AB12BC10038d0s6	32559267840
d1204	c5t600144F0A847490000004AB12BC20039d0s6	32559267840
d1205	c5t600144F0A847490000004AB12BC2003Ad0s6	32559267840
d1206	c5t600144F0A847490000004AB12BC2003Bd0s6	32559267840
d1207	c5t600144F0A847490000004AB12BC2003Cd0s6	32559267840
d1208	c5t600144F0A847490000004AB12BC3003Dd0s6	32559267840
d1209	c5t600144F0A847490000004AB12BC3003Ed0s6	32559267840
d1210	c5t600144F0A847490000004AB12BC3003Fd0s6	32559267840
d1211	c5t600144F0A847490000004AB12BC30040d0s6	30462115840
d1212	c5t600144F0A847490000004AB12BC30041d0s6	30462115840
d1213	c5t600144F0A847490000004AB12BC30042d0s6	30462115840
d1214	c5t600144F0A847490000004AB12BC30043d0s6	30462115840
d1215	c5t600144F0A847490000004AB12BC30044d0s6	30462115840
d1216	c5t600144F0A847490000004AB12BC30045d0s6	30462115840

d1217 c5t600144F0A847490000004AB12BC40046d0s6 30462115840
d1218 c5t600144F0A847490000004AB12BC40047d0s6 30462115840
d1219 c5t600144F0A847490000004AB12BC40048d0s6 30462115840
d1220 c5t600144F0A847490000004AB12BC40049d0s6 30462115840
d1221 c5t600144F0A847490000004AB12BC4004Ad0s6 67067904000
d1222 c5t600144F0A847490000004AB12BC4004Bd0s6 67067904000
d1223 c5t600144F0A847490000004AB12BC4004Cd0s6 67067904000
d1224 c5t600144F0A847490000004AB12BC4004Dd0s6 67067904000
d1225 c5t600144F0A847490000004AB12BC4004Ed0s6 67067904000
d1226 c5t600144F0A847490000004AB12BC4004Fd0s6 67067904000
d1227 c5t600144F0A847490000004AB12BC50050d0s6 16432168960
d1228 c5t600144F0A847490000004AB12BC50051d0s6 16757227520
d1229 c5t600144F0A847490000004AB12BC50052d0s6 27494645760
d1230 c5t600144F0A847490000004AB12BC50053d0s6 27672903680
d1231 c5t600144F0A847490000004AB12BC50054d0s6 27672903680
d1232 c5t600144F0A847490000004AB12BC50055d0s6 66606530560
d1233 c5t600144F0A847490000004AB12BC50056d0s6 74383360
d9990 c5t600144F0A847490000004AC27C1E0001d0s6 169241149440
d9991 c5t600144F0A847490000004AC27C1F0002d0s6 169173340416
d9992 c5t600144F0A847490000004AC27C1F0003d0s6 221870227456
d9993 c5t600144F0A847490000004AC27C1F0004d0s6 182611542016
d8999 c5t600144F0A847490000004AC27C1F0005d0s6 221931044864
c7t0d0s6 c5t600144F0A847490000004AC27C1F0006d0s6 892771825664

Mapping on comstar node db1-san5

SVM_DEV	DEVICE_ON_DBNODE	SIZE_IN_BYTES
d1201	c5t600144F0ACA9820000004AB12BC00035d0s6	32559267840
d1202	c5t600144F0ACA9820000004AB12BC10036d0s6	32559267840
d1203	c5t600144F0ACA9820000004AB12BC10037d0s6	32559267840
d1204	c5t600144F0ACA9820000004AB12BC20038d0s6	32559267840
d1205	c5t600144F0ACA9820000004AB12BC20039d0s6	32559267840
d1206	c5t600144F0ACA9820000004AB12BC2003Ad0s6	32559267840
d1207	c5t600144F0ACA9820000004AB12BC2003Bd0s6	32559267840
d1208	c5t600144F0ACA9820000004AB12BC2003Cd0s6	32559267840
d1209	c5t600144F0ACA9820000004AB12BC2003Dd0s6	32559267840
d1210	c5t600144F0ACA9820000004AB12BC2003Ed0s6	32559267840
d1211	c5t600144F0ACA9820000004AB12BC3003Fd0s6	30462115840
d1212	c5t600144F0ACA9820000004AB12BC30040d0s6	30462115840
d1213	c5t600144F0ACA9820000004AB12BC30041d0s6	30462115840
d1214	c5t600144F0ACA9820000004AB12BC30042d0s6	30462115840
d1215	c5t600144F0ACA9820000004AB12BC30043d0s6	30462115840
d1216	c5t600144F0ACA9820000004AB12BC30044d0s6	30462115840
d1217	c5t600144F0ACA9820000004AB12BC30045d0s6	30462115840
d1218	c5t600144F0ACA9820000004AB12BC30046d0s6	30462115840
d1219	c5t600144F0ACA9820000004AB12BC30047d0s6	30462115840
d1220	c5t600144F0ACA9820000004AB12BC30048d0s6	30462115840
d1221	c5t600144F0ACA9820000004AB12BC30049d0s6	30462115840
d1222	c5t600144F0ACA9820000004AB12BC4004Ad0s6	67067904000
d1223	c5t600144F0ACA9820000004AB12BC4004Bd0s6	67067904000
d1224	c5t600144F0ACA9820000004AB12BC4004Cd0s6	67067904000
d1225	c5t600144F0ACA9820000004AB12BC4004Dd0s6	67067904000
d1226	c5t600144F0ACA9820000004AB12BC4004Ed0s6	67067904000
d1227	c5t600144F0ACA9820000004AB12BC4004Fd0s6	16757227520
d1228	c5t600144F0ACA9820000004AB12BC40050d0s6	27494645760
d1229	c5t600144F0ACA9820000004AB12BC50051d0s6	8490254336
d1230	c5t600144F0ACA9820000004AB12BC50052d0s6	27672903680
d1231	c5t600144F0ACA9820000004AB12BC50053d0s6	27672903680
d1232	c5t600144F0ACA9820000004AB12BC50054d0s6	661585920
d1233	c5t600144F0ACA9820000004AB12BC50055d0s6	263127040

d9990 c5t600144F0ACA9820000004AC27C1E0001d0s6 188056797184
d9991 c5t600144F0ACA9820000004AC27C1F0002d0s6 219773075456
d9992 c5t600144F0ACA9820000004AC27C1F0003d0s6 221545168896
d9993 c5t600144F0ACA9820000004AC27C1F0004d0s6 237819068416
d8999 c5t600144F0ACA9820000004AC27C1F0005d0s6 471850745856
c7t0d0s6 c5t600144F0ACA9820000004AC27C1F0006d0s6 892771825664

Mapping on comstar node db2-san1

SVM_DEV	DEVICE_ON_DBNODE	SIZE_IN_BYTES
d1201	c5t600144F06049C40000004AB12BC00036d0s6	32559267840
d1202	c5t600144F06049C40000004AB12BC00037d0s6	32559267840
d1203	c5t600144F06049C40000004AB12BC10038d0s6	32559267840
d1204	c5t600144F06049C40000004AB12BC20039d0s6	32559267840
d1205	c5t600144F06049C40000004AB12BC2003Ad0s6	32559267840
d1206	c5t600144F06049C40000004AB12BC2003Bd0s6	32559267840
d1207	c5t600144F06049C40000004AB12BC2003Cd0s6	32559267840
d1208	c5t600144F06049C40000004AB12BC2003Dd0s6	32559267840
d1209	c5t600144F06049C40000004AB12BC2003Ed0s6	32559267840
d1210	c5t600144F06049C40000004AB12BC2003Fd0s6	32559267840
d1211	c5t600144F06049C40000004AB12BC30040d0s6	30462115840
d1212	c5t600144F06049C40000004AB12BC30041d0s6	30462115840
d1213	c5t600144F06049C40000004AB12BC30042d0s6	30462115840
d1214	c5t600144F06049C40000004AB12BC30043d0s6	30462115840
d1215	c5t600144F06049C40000004AB12BC30044d0s6	30462115840
d1216	c5t600144F06049C40000004AB12BC30045d0s6	30462115840
d1217	c5t600144F06049C40000004AB12BC30046d0s6	30462115840
d1218	c5t600144F06049C40000004AB12BC30047d0s6	30462115840
d1219	c5t600144F06049C40000004AB12BC30048d0s6	30462115840
d1220	c5t600144F06049C40000004AB12BC40049d0s6	30462115840
d1221	c5t600144F06049C40000004AB12BC4004Ad0s6	30462115840
d1222	c5t600144F06049C40000004AB12BC4004Bd0s6	67067904000
d1223	c5t600144F06049C40000004AB12BC4004Cd0s6	67067904000
d1224	c5t600144F06049C40000004AB12BC4004Dd0s6	67067904000
d1225	c5t600144F06049C40000004AB12BC4004Ed0s6	67067904000
d1226	c5t600144F06049C40000004AB12BC4004Fd0s6	67067904000
d1227	c5t600144F06049C40000004AB12BC40050d0s6	16432168960
d1228	c5t600144F06049C40000004AB12BC40051d0s6	16757227520
d1229	c5t600144F06049C40000004AB12BC50052d0s6	27494645760
d1230	c5t600144F06049C40000004AB12BC50053d0s6	15729623040
d1231	c5t600144F06049C40000004AB12BC50054d0s6	27672903680
d1232	c5t600144F06049C40000004AB12BC50055d0s6	27672903680
d1233	c5t600144F06049C40000004AB12BC50056d0s6	5464064000
d1234	c5t600144F06049C40000004AB12BC50057d0s6	64247234560
d9990	c5t600144F06049C40000004AC27C1E0001d0s6	200457256960
d9991	c5t600144F06049C40000004AC27C1F0002d0s6	116833320960
d9992	c5t600144F06049C40000004AC27C1F0003d0s6	221870227456
d9993	c5t600144F06049C40000004AC27C1F0004d0s6	221545168896
d8999	c5t600144F06049C40000004AC27C1F0005d0s6	309357117440
c7t0d0s6	c5t600144F06049C40000004AC27C200007d0s6	892771825664

Mapping on comstar node db2-san2

SVM_DEV	DEVICE_ON_DBNODE	SIZE_IN_BYTES
d1201	c5t600144F040BC050000004AB12BC00035d0s6	32559267840
d1202	c5t600144F040BC050000004AB12BC10036d0s6	32559267840
d1203	c5t600144F040BC050000004AB12BC10037d0s6	32559267840
d1204	c5t600144F040BC050000004AB12BC20038d0s6	32559267840

d1205 c5t600144F040BC050000004AB12BC20039d0s6 32559267840
d1206 c5t600144F040BC050000004AB12BC2003Ad0s6 32559267840
d1207 c5t600144F040BC050000004AB12BC2003Bd0s6 32559267840
d1208 c5t600144F040BC050000004AB12BC2003Cd0s6 32559267840
d1209 c5t600144F040BC050000004AB12BC3003Dd0s6 32559267840
d1210 c5t600144F040BC050000004AB12BC3003Ed0s6 32559267840
d1211 c5t600144F040BC050000004AB12BC3003Fd0s6 30462115840
d1212 c5t600144F040BC050000004AB12BC30040d0s6 30462115840
d1213 c5t600144F040BC050000004AB12BC30041d0s6 30462115840
d1214 c5t600144F040BC050000004AB12BC30042d0s6 30462115840
d1215 c5t600144F040BC050000004AB12BC30043d0s6 30462115840
d1216 c5t600144F040BC050000004AB12BC30044d0s6 30462115840
d1217 c5t600144F040BC050000004AB12BC30045d0s6 30462115840
d1218 c5t600144F040BC050000004AB12BC30046d0s6 30462115840
d1219 c5t600144F040BC050000004AB12BC40047d0s6 30462115840
d1220 c5t600144F040BC050000004AB12BC40048d0s6 30462115840
d1221 c5t600144F040BC050000004AB12BC40049d0s6 67067904000
d1222 c5t600144F040BC050000004AB12BC4004Ad0s6 67067904000
d1223 c5t600144F040BC050000004AB12BC4004Bd0s6 67067904000
d1224 c5t600144F040BC050000004AB12BC4004Cd0s6 67067904000
d1225 c5t600144F040BC050000004AB12BC4004Dd0s6 67067904000
d1226 c5t600144F040BC050000004AB12BC4004Ed0s6 67067904000
d1227 c5t600144F040BC050000004AB12BC4004Fd0s6 16432168960
d1228 c5t600144F040BC050000004AB12BC40050d0s6 16757227520
d1229 c5t600144F040BC050000004AB12BC40051d0s6 27494645760
d1230 c5t600144F040BC050000004AB12BC50052d0s6 4195287040
d1231 c5t600144F040BC050000004AB12BC50053d0s6 27672903680
d1232 c5t600144F040BC050000004AB12BC50054d0s6 27672903680
d1233 c5t600144F040BC050000004AB12BC50055d0s6 420413440
d1234 c5t600144F040BC050000004AB12BC50056d0s6 21797440
d9990 c5t600144F040BC050000004AC27C1E0001d0s6 168895119360
d9991 c5t600144F040BC050000004AC27C1F0002d0s6 192587694080
d9992 c5t600144F040BC050000004AC27C1F0003d0s6 221870227456
d9993 c5t600144F040BC050000004AC27C1F0004d0s6 221545168896
d8999 c5t600144F040BC050000004AC27C1F0005d0s6 358720929792
c7t0d0s6 c5t600144F040BC050000004AC27C200007d0s6 892771825664

Mapping on comstar node db2-san3

SVM_DEV	DEVICE_ON_DBNODE	SIZE_IN_BYTES
d1201	c5t600144F04C9B060000004AB12BC00035d0s6	32559267840
d1202	c5t600144F04C9B060000004AB12BC10036d0s6	32559267840
d1203	c5t600144F04C9B060000004AB12BC10037d0s6	32559267840
d1204	c5t600144F04C9B060000004AB12BC20038d0s6	32559267840
d1205	c5t600144F04C9B060000004AB12BC20039d0s6	32559267840
d1206	c5t600144F04C9B060000004AB12BC2003Ad0s6	32559267840
d1207	c5t600144F04C9B060000004AB12BC2003Bd0s6	32559267840
d1208	c5t600144F04C9B060000004AB12BC2003Cd0s6	32559267840
d1209	c5t600144F04C9B060000004AB12BC3003Dd0s6	32559267840
d1210	c5t600144F04C9B060000004AB12BC3003Ed0s6	32559267840
d1211	c5t600144F04C9B060000004AB12BC3003Fd0s6	30462115840
d1212	c5t600144F04C9B060000004AB12BC30040d0s6	30462115840
d1213	c5t600144F04C9B060000004AB12BC30041d0s6	30462115840
d1214	c5t600144F04C9B060000004AB12BC30042d0s6	30462115840
d1215	c5t600144F04C9B060000004AB12BC30043d0s6	30462115840
d1216	c5t600144F04C9B060000004AB12BC30044d0s6	30462115840
d1217	c5t600144F04C9B060000004AB12BC30045d0s6	30462115840
d1218	c5t600144F04C9B060000004AB12BC40046d0s6	30462115840
d1219	c5t600144F04C9B060000004AB12BC40047d0s6	30462115840
d1220	c5t600144F04C9B060000004AB12BC40048d0s6	30462115840

d1221 c5t600144F04C9B060000004AB12BC40049d0s6 67067904000
d1222 c5t600144F04C9B060000004AB12BC4004Ad0s6 67067904000
d1223 c5t600144F04C9B060000004AB12BC4004Bd0s6 67067904000
d1224 c5t600144F04C9B060000004AB12BC4004Cd0s6 67067904000
d1225 c5t600144F04C9B060000004AB12BC4004Dd0s6 67067904000
d1226 c5t600144F04C9B060000004AB12BC4004Ed0s6 67067904000
d1227 c5t600144F04C9B060000004AB12BC4004Fd0s6 16432168960
d1228 c5t600144F04C9B060000004AB12BC50050d0s6 16757227520
d1229 c5t600144F04C9B060000004AB12BC50051d0s6 27494645760
d1230 c5t600144F04C9B060000004AB12BC50052d0s6 4195287040
d1231 c5t600144F04C9B060000004AB12BC50053d0s6 27672903680
d1232 c5t600144F04C9B060000004AB12BC50054d0s6 27672903680
d1233 c5t600144F04C9B060000004AB12BC50055d0s6 20228014080
d9990 c5t600144F04C9B060000004AC27C1E0001d0s6 149087518720
d9991 c5t600144F04C9B060000004AC27C1F0002d0s6 192614957056
d9992 c5t600144F04C9B060000004AC27C1F0003d0s6 221870227456
d9993 c5t600144F04C9B060000004AC27C1F0004d0s6 221545168896
d8999 c5t600144F04C9B060000004AC27C1F0005d0s6 252526395392
c7t0d0s6 c5t600144F04C9B060000004AC27C200007d0s6 892771825664

Mapping on comstar node db2-san4

SVM_DEV	DEVICE_ON_DBNODE	SIZE_IN_BYTES
d1201	c5t600144F0B05B010000004AB12BC00036d0s6	32559267840
d1202	c5t600144F0B05B010000004AB12BC10037d0s6	32559267840
d1203	c5t600144F0B05B010000004AB12BC10038d0s6	32559267840
d1204	c5t600144F0B05B010000004AB12BC20039d0s6	32559267840
d1205	c5t600144F0B05B010000004AB12BC2003Ad0s6	32559267840
d1206	c5t600144F0B05B010000004AB12BC2003Bd0s6	32559267840
d1207	c5t600144F0B05B010000004AB12BC2003Cd0s6	32559267840
d1208	c5t600144F0B05B010000004AB12BC2003Dd0s6	32559267840
d1209	c5t600144F0B05B010000004AB12BC2003Ed0s6	32559267840
d1210	c5t600144F0B05B010000004AB12BC3003Fd0s6	32559267840
d1211	c5t600144F0B05B010000004AB12BC30040d0s6	30462115840
d1212	c5t600144F0B05B010000004AB12BC30041d0s6	30462115840
d1213	c5t600144F0B05B010000004AB12BC30042d0s6	30462115840
d1214	c5t600144F0B05B010000004AB12BC30043d0s6	30462115840
d1215	c5t600144F0B05B010000004AB12BC30044d0s6	30462115840
d1216	c5t600144F0B05B010000004AB12BC30045d0s6	30462115840
d1217	c5t600144F0B05B010000004AB12BC30046d0s6	30462115840
d1218	c5t600144F0B05B010000004AB12BC30047d0s6	30462115840
d1219	c5t600144F0B05B010000004AB12BC40048d0s6	30462115840
d1220	c5t600144F0B05B010000004AB12BC40049d0s6	30462115840
d1221	c5t600144F0B05B010000004AB12BC4004Ad0s6	67067904000
d1222	c5t600144F0B05B010000004AB12BC4004Bd0s6	67067904000
d1223	c5t600144F0B05B010000004AB12BC4004Cd0s6	67067904000
d1224	c5t600144F0B05B010000004AB12BC4004Dd0s6	67067904000
d1225	c5t600144F0B05B010000004AB12BC4004Ed0s6	67067904000
d1226	c5t600144F0B05B010000004AB12BC4004Fd0s6	67067904000
d1227	c5t600144F0B05B010000004AB12BC40050d0s6	16432168960
d1228	c5t600144F0B05B010000004AB12BC40051d0s6	16757227520
d1229	c5t600144F0B05B010000004AB12BC50052d0s6	27494645760
d1230	c5t600144F0B05B010000004AB12BC50053d0s6	27672903680
d1231	c5t600144F0B05B010000004AB12BC50054d0s6	27672903680
d1232	c5t600144F0B05B010000004AB12BC50055d0s6	66606530560
d1233	c5t600144F0B05B010000004AB12BC50056d0s6	74383360
d9990	c5t600144F0B05B010000004AC27C1E0001d0s6	169241149440
d9991	c5t600144F0B05B010000004AC27C1F0002d0s6	169137340416
d9992	c5t600144F0B05B010000004AC27C1F0003d0s6	221870227456
d9993	c5t600144F0B05B010000004AC27C1F0004d0s6	182611542016

d8999 c5t600144F0B05B010000004AC27C1F0005d0s6 221931044864
c7t0d0s6 c5t600144F0B05B010000004AC27C200007d0s6 892771825664

Mapping on comstar node db2-san5

SVM_DEV	DEVICE_ON_DBNODE	SIZE_IN_BYTES
d1201	c5t600144F0B04F8C0000004AB12BC00035d0s6	32559267840
d1202	c5t600144F0B04F8C0000004AB12BC10036d0s6	32559267840
d1203	c5t600144F0B04F8C0000004AB12BC20037d0s6	32559267840
d1204	c5t600144F0B04F8C0000004AB12BC30038d0s6	32559267840
d1205	c5t600144F0B04F8C0000004AB12BC30039d0s6	32559267840
d1206	c5t600144F0B04F8C0000004AB12BC3003Ad0s6	32559267840
d1207	c5t600144F0B04F8C0000004AB12BC3003Bd0s6	32559267840
d1208	c5t600144F0B04F8C0000004AB12BC3003Cd0s6	32559267840
d1209	c5t600144F0B04F8C0000004AB12BC4003Dd0s6	32559267840
d1210	c5t600144F0B04F8C0000004AB12BC4003Ed0s6	32559267840
d1211	c5t600144F0B04F8C0000004AB12BC4003Fd0s6	30462115840
d1212	c5t600144F0B04F8C0000004AB12BC4004d0s6	30462115840
d1213	c5t600144F0B04F8C0000004AB12BC40041d0s6	30462115840
d1214	c5t600144F0B04F8C0000004AB12BC40042d0s6	30462115840
d1215	c5t600144F0B04F8C0000004AB12BC40043d0s6	30462115840
d1216	c5t600144F0B04F8C0000004AB12BC40044d0s6	30462115840
d1217	c5t600144F0B04F8C0000004AB12BC40045d0s6	30462115840
d1218	c5t600144F0B04F8C0000004AB12BC50046d0s6	30462115840
d1219	c5t600144F0B04F8C0000004AB12BC50047d0s6	30462115840
d1220	c5t600144F0B04F8C0000004AB12BC50048d0s6	30462115840
d1221	c5t600144F0B04F8C0000004AB12BC50049d0s6	67067904000
d1222	c5t600144F0B04F8C0000004AB12BC5004Ad0s6	67067904000
d1223	c5t600144F0B04F8C0000004AB12BC5004Bd0s6	67067904000
d1224	c5t600144F0B04F8C0000004AB12BC5004Cd0s6	67067904000
d1225	c5t600144F0B04F8C0000004AB12BC5004Dd0s6	67067904000
d1226	c5t600144F0B04F8C0000004AB12BC5004Ed0s6	16432168960
d1227	c5t600144F0B04F8C0000004AB12BC6004Fd0s6	16757227520
d1228	c5t600144F0B04F8C0000004AB12BC6005d0s6	27494645760
d1229	c5t600144F0B04F8C0000004AB12BC60051d0s6	8490254336
d1230	c5t600144F0B04F8C0000004AB12BC60052d0s6	27672903680
d1231	c5t600144F0B04F8C0000004AB12BC60053d0s6	27672903680
d1232	c5t600144F0B04F8C0000004AB12BC60054d0s6	661585920
d1233	c5t600144F0B04F8C0000004AB12BC60055d0s6	263127040
d9990	c5t600144F0B04F8C0000004AC27C1E0001d0s6	188056797184
d9991	c5t600144F0B04F8C0000004AC27C1F0002d0s6	219773075456
d9992	c5t600144F0B04F8C0000004AC27C1F0003d0s6	221545168896
d9993	c5t600144F0B04F8C0000004AC27C1F0004d0s6	237819068416
d8999	c5t600144F0B04F8C0000004AC27C1F0005d0s6	471850745856
c7t0d0s6	c5t600144F0B04F8C0000004AC27C200007d0s6	892771825664

Mapping on comstar node db3-san1

SVM_DEV	DEVICE_ON_DBNODE	SIZE_IN_BYTES
d1201	c5t600144F08C3C490000004AB12BC00036d0s6	32559267840
d1202	c5t600144F08C3C490000004AB12BC10037d0s6	32559267840
d1203	c5t600144F08C3C490000004AB12BC10038d0s6	32559267840
d1204	c5t600144F08C3C490000004AB12BC20039d0s6	32559267840
d1205	c5t600144F08C3C490000004AB12BC2003Ad0s6	32559267840
d1206	c5t600144F08C3C490000004AB12BC2003Bd0s6	32559267840
d1207	c5t600144F08C3C490000004AB12BC2003Cd0s6	32559267840
d1208	c5t600144F08C3C490000004AB12BC2003Dd0s6	32559267840
d1209	c5t600144F08C3C490000004AB12BC2003Ed0s6	32559267840

d1210 c5t600144F08C3C490000004AB12BC3003Fd0s6 32559267840
d1211 c5t600144F08C3C490000004AB12BC3004d0s6 30462115840
d1212 c5t600144F08C3C490000004AB12BC30041d0s6 30462115840
d1213 c5t600144F08C3C490000004AB12BC30042d0s6 30462115840
d1214 c5t600144F08C3C490000004AB12BC30043d0s6 30462115840
d1215 c5t600144F08C3C490000004AB12BC30044d0s6 30462115840
d1216 c5t600144F08C3C490000004AB12BC30045d0s6 30462115840
d1217 c5t600144F08C3C490000004AB12BC30046d0s6 30462115840
d1218 c5t600144F08C3C490000004AB12BC30047d0s6 30462115840
d1219 c5t600144F08C3C490000004AB12BC40048d0s6 30462115840
d1220 c5t600144F08C3C490000004AB12BC40049d0s6 30462115840
d1221 c5t600144F08C3C490000004AB12BC4004Ad0s6 67067904000
d1222 c5t600144F08C3C490000004AB12BC4004Bd0s6 67067904000
d1223 c5t600144F08C3C490000004AB12BC4004Cd0s6 67067904000
d1224 c5t600144F08C3C490000004AB12BC4004Dd0s6 67067904000
d1225 c5t600144F08C3C490000004AB12BC4004Ed0s6 67067904000
d1226 c5t600144F08C3C490000004AB12BC4004Fd0s6 67067904000
d1227 c5t600144F08C3C490000004AB12BC4005d0s6 16432168960
d1228 c5t600144F08C3C490000004AB12BC50051d0s6 16757227520
d1229 c5t600144F08C3C490000004AB12BC50052d0s6 27494645760
d1230 c5t600144F08C3C490000004AB12BC50053d0s6 4195287040
d1231 c5t600144F08C3C490000004AB12BC50054d0s6 27672903680
d1232 c5t600144F08C3C490000004AB12BC50055d0s6 27672903680
d1233 c5t600144F08C3C490000004AB12BC50056d0s6 5464064000
d1234 c5t600144F08C3C490000004AB12BC50057d0s6 64247234560
d9990 c5t600144F08C3C490000004AC27C1E0001d0s6 163851468800
d9991 c5t600144F08C3C490000004AC27C1F0002d0s6 128367656960
d9992 c5t600144F08C3C490000004AC27C1F0003d0s6 221870227456
d9993 c5t600144F08C3C490000004AC27C1F0004d0s6 221545168896
d8999 c5t600144F08C3C490000004AC27C1F0005d0s6 284390522880
c7t0d0s6 c5t600144F08C3C490000004AC27C200007d0s6 892771825664

Mapping on comstar node db3-san2

SVM_DEV	DEVICE_ON_DBNODE	SIZE_IN_BYTES
d1201	c5t600144F0E841070000004AB12BC00034d0s6	32559267840
d1202	c5t600144F0E841070000004AB12BC10035d0s6	32559267840
d1203	c5t600144F0E841070000004AB12BC20036d0s6	32559267840
d1204	c5t600144F0E841070000004AB12BC20037d0s6	32559267840
d1205	c5t600144F0E841070000004AB12BC20038d0s6	32559267840
d1206	c5t600144F0E841070000004AB12BC30039d0s6	32559267840
d1207	c5t600144F0E841070000004AB12BC3003Ad0s6	32559267840
d1208	c5t600144F0E841070000004AB12BC3003Bd0s6	32559267840
d1209	c5t600144F0E841070000004AB12BC3003Cd0s6	32559267840
d1210	c5t600144F0E841070000004AB12BC3003Dd0s6	32559267840
d1211	c5t600144F0E841070000004AB12BC3003Ed0s6	30462115840
d1212	c5t600144F0E841070000004AB12BC3003Fd0s6	30462115840
d1213	c5t600144F0E841070000004AB12BC3004d0s6	30462115840
d1214	c5t600144F0E841070000004AB12BC30041d0s6	30462115840
d1215	c5t600144F0E841070000004AB12BC30042d0s6	30462115840
d1216	c5t600144F0E841070000004AB12BC40043d0s6	30462115840
d1217	c5t600144F0E841070000004AB12BC40044d0s6	30462115840
d1218	c5t600144F0E841070000004AB12BC40045d0s6	30462115840
d1219	c5t600144F0E841070000004AB12BC40046d0s6	30462115840
d1220	c5t600144F0E841070000004AB12BC40047d0s6	30462115840
d1221	c5t600144F0E841070000004AB12BC40048d0s6	67067904000
d1222	c5t600144F0E841070000004AB12BC40049d0s6	67067904000
d1223	c5t600144F0E841070000004AB12BC4004Ad0s6	67067904000
d1224	c5t600144F0E841070000004AB12BC4004Bd0s6	67067904000
d1225	c5t600144F0E841070000004AB12BC4004Cd0s6	67067904000

d1226 c5t600144F0E841070000004AB12BC5004Dd0s6 67067904000
d1227 c5t600144F0E841070000004AB12BC5004Ed0s6 16432168960
d1228 c5t600144F0E841070000004AB12BC5004Fd0s6 16757227520
d1229 c5t600144F0E841070000004AB12BC50050d0s6 27494645760
d1230 c5t600144F0E841070000004AB12BC50051d0s6 4195287040
d1231 c5t600144F0E841070000004AB12BC50052d0s6 27672903680
d1232 c5t600144F0E841070000004AB12BC50053d0s6 27672903680
d1233 c5t600144F0E841070000004AB12BC50054d0s6 420413440
d9990 c5t600144F0E841070000004AC27C1E0001d0s6 168895119360
d9991 c5t600144F0E841070000004AC27C1F0002d0s6 192614957056
d9992 c5t600144F0E841070000004AC27C1F0003d0s6 221870227456
d9993 c5t600144F0E841070000004AC27C1F0004d0s6 221545168896
d8999 c5t600144F0E841070000004AC27C1F0005d0s6 358749241344
c7t0d0s6 c5t600144F0E841070000004AC27C1F0006d0s6 892771825664

Mapping on comstar node db3-san3

SVM_DEV	DEVICE_ON_DBNODE	SIZE_IN_BYTES
d1201	c5t600144F0A80BC50000004AB12BC00035d0s6	32559267840
d1202	c5t600144F0A80BC50000004AB12BC00036d0s6	32559267840
d1203	c5t600144F0A80BC50000004AB12BC10037d0s6	32559267840
d1204	c5t600144F0A80BC50000004AB12BC20038d0s6	32559267840
d1205	c5t600144F0A80BC50000004AB12BC20039d0s6	32559267840
d1206	c5t600144F0A80BC50000004AB12BC2003Ad0s6	32559267840
d1207	c5t600144F0A80BC50000004AB12BC2003Bd0s6	32559267840
d1208	c5t600144F0A80BC50000004AB12BC2003Cd0s6	32559267840
d1209	c5t600144F0A80BC50000004AB12BC2003Dd0s6	32559267840
d1210	c5t600144F0A80BC50000004AB12BC2003Ed0s6	32559267840
d1211	c5t600144F0A80BC50000004AB12BC2003Fd0s6	30462115840
d1212	c5t600144F0A80BC50000004AB12BC20040d0s6	30462115840
d1213	c5t600144F0A80BC50000004AB12BC30041d0s6	30462115840
d1214	c5t600144F0A80BC50000004AB12BC30042d0s6	30462115840
d1215	c5t600144F0A80BC50000004AB12BC30043d0s6	30462115840
d1216	c5t600144F0A80BC50000004AB12BC30044d0s6	30462115840
d1217	c5t600144F0A80BC50000004AB12BC30045d0s6	30462115840
d1218	c5t600144F0A80BC50000004AB12BC30046d0s6	30462115840
d1219	c5t600144F0A80BC50000004AB12BC30047d0s6	30462115840
d1220	c5t600144F0A80BC50000004AB12BC30048d0s6	30462115840
d1221	c5t600144F0A80BC50000004AB12BC30049d0s6	67067904000
d1222	c5t600144F0A80BC50000004AB12BC4004Ad0s6	67067904000
d1223	c5t600144F0A80BC50000004AB12BC4004Bd0s6	67067904000
d1224	c5t600144F0A80BC50000004AB12BC4004Cd0s6	67067904000
d1225	c5t600144F0A80BC50000004AB12BC4004Dd0s6	67067904000
d1226	c5t600144F0A80BC50000004AB12BC4004Ed0s6	67067904000
d1227	c5t600144F0A80BC50000004AB12BC4004Fd0s6	16432168960
d1228	c5t600144F0A80BC50000004AB12BC40050d0s6	16757227520
d1229	c5t600144F0A80BC50000004AB12BC40051d0s6	27494645760
d1230	c5t600144F0A80BC50000004AB12BC40052d0s6	27672903680
d1231	c5t600144F0A80BC50000004AB12BC40053d0s6	27672903680
d1232	c5t600144F0A80BC50000004AB12BC50054d0s6	66606530560
d1233	c5t600144F0A80BC50000004AB12BC50055d0s6	20228014080
d9990	c5t600144F0A80BC50000004AC27C1E0001d0s6	149087518720
d9991	c5t600144F0A80BC50000004AC27C1F0002d0s6	169137340416
d9992	c5t600144F0A80BC50000004AC27C1F0003d0s6	221870227456
d9993	c5t600144F0A80BC50000004AC27C1F0004d0s6	182611542016
d8999	c5t600144F0A80BC50000004AC27C1F0005d0s6	190115151872
c7t0d0s6	c5t600144F0A80BC50000004AC27C1F0006d0s6	892771825664

Mapping on comstar node db3-san4

SVM_DEV	DEVICE_ON_DBNODE	SIZE_IN_BYTES
d1201	c5t600144F05020C80000004AB12BC00036d0s6	32559267840
d1202	c5t600144F05020C80000004AB12BC10037d0s6	32559267840
d1203	c5t600144F05020C80000004AB12BC10038d0s6	32559267840
d1204	c5t600144F05020C80000004AB12BC20039d0s6	32559267840
d1205	c5t600144F05020C80000004AB12BC2003Ad0s6	32559267840
d1206	c5t600144F05020C80000004AB12BC2003Bd0s6	32559267840
d1207	c5t600144F05020C80000004AB12BC2003Cd0s6	32559267840
d1208	c5t600144F05020C80000004AB12BC3003Dd0s6	32559267840
d1209	c5t600144F05020C80000004AB12BC3003Ed0s6	32559267840
d1210	c5t600144F05020C80000004AB12BC3003Fd0s6	32559267840
d1211	c5t600144F05020C80000004AB12BC30040d0s6	30462115840
d1212	c5t600144F05020C80000004AB12BC30041d0s6	30462115840
d1213	c5t600144F05020C80000004AB12BC30042d0s6	30462115840
d1214	c5t600144F05020C80000004AB12BC30043d0s6	30462115840
d1215	c5t600144F05020C80000004AB12BC30044d0s6	30462115840
d1216	c5t600144F05020C80000004AB12BC30045d0s6	30462115840
d1217	c5t600144F05020C80000004AB12BC30046d0s6	30462115840
d1218	c5t600144F05020C80000004AB12BC40047d0s6	30462115840
d1219	c5t600144F05020C80000004AB12BC40048d0s6	30462115840
d1220	c5t600144F05020C80000004AB12BC40049d0s6	30462115840
d1221	c5t600144F05020C80000004AB12BC4004Ad0s6	67067904000
d1222	c5t600144F05020C80000004AB12BC4004Bd0s6	67067904000
d1223	c5t600144F05020C80000004AB12BC4004Cd0s6	67067904000
d1224	c5t600144F05020C80000004AB12BC4004Dd0s6	67067904000
d1225	c5t600144F05020C80000004AB12BC4004Ed0s6	67067904000
d1226	c5t600144F05020C80000004AB12BC4004Fd0s6	16432168960
d1227	c5t600144F05020C80000004AB12BC50050d0s6	16757227520
d1228	c5t600144F05020C80000004AB12BC50051d0s6	27494645760
d1229	c5t600144F05020C80000004AB12BC50052d0s6	8490254336
d1230	c5t600144F05020C80000004AB12BC50053d0s6	27672903680
d1231	c5t600144F05020C80000004AB12BC50054d0s6	27672903680
d1232	c5t600144F05020C80000004AB12BC50055d0s6	66606530560
d1233	c5t600144F05020C80000004AB12BC50056d0s6	74383360
d9990	c5t600144F05020C80000004AC27C1E0001d0s6	188245540864
d9991	c5t600144F05020C80000004AC27C1F0002d0s6	219773075456
d9992	c5t600144F05020C80000004AC27C1F0003d0s6	221545168896
d9993	c5t600144F05020C80000004AC27C1F0004d0s6	171874123776
d8999	c5t600144F05020C80000004AC27C1F0005d0s6	346453639168
c7t0d0s6	c5t600144F05020C80000004AC27C1F0006d0s6	892771825664

Mapping on comstar node db3-san5

SVM_DEV	DEVICE_ON_DBNODE	SIZE_IN_BYTES
d1201	c5t600144F09897480000004AB12BC00035d0s6	32559267840
d1202	c5t600144F09897480000004AB12BC10036d0s6	32559267840
d1203	c5t600144F09897480000004AB12BC10037d0s6	32559267840
d1204	c5t600144F09897480000004AB12BC20038d0s6	32559267840
d1205	c5t600144F09897480000004AB12BC20039d0s6	32559267840
d1206	c5t600144F09897480000004AB12BC2003Ad0s6	32559267840
d1207	c5t600144F09897480000004AB12BC2003Bd0s6	32559267840
d1208	c5t600144F09897480000004AB12BC3003Cd0s6	32559267840
d1209	c5t600144F09897480000004AB12BC3003Dd0s6	32559267840
d1210	c5t600144F09897480000004AB12BC3003Ed0s6	32559267840
d1211	c5t600144F09897480000004AB12BC3003Fd0s6	30462115840
d1212	c5t600144F09897480000004AB12BC30040d0s6	30462115840
d1213	c5t600144F09897480000004AB12BC30041d0s6	30462115840
d1214	c5t600144F09897480000004AB12BC30042d0s6	30462115840

d1215 c5t600144F09897480000004AB12BC30043d0s6 30462115840
d1216 c5t600144F09897480000004AB12BC30044d0s6 30462115840
d1217 c5t600144F09897480000004AB12BC30045d0s6 30462115840
d1218 c5t600144F09897480000004AB12BC40046d0s6 30462115840
d1219 c5t600144F09897480000004AB12BC40047d0s6 30462115840
d1220 c5t600144F09897480000004AB12BC40048d0s6 30462115840
d1221 c5t600144F09897480000004AB12BC40049d0s6 67067904000
d1222 c5t600144F09897480000004AB12BC4004Ad0s6 67067904000
d1223 c5t600144F09897480000004AB12BC4004Bd0s6 67067904000
d1224 c5t600144F09897480000004AB12BC4004Cd0s6 67067904000
d1225 c5t600144F09897480000004AB12BC4004Dd0s6 67067904000
d1226 c5t600144F09897480000004AB12BC4004Ed0s6 16432168960
d1227 c5t600144F09897480000004AB12BC5004Fd0s6 16757227520
d1228 c5t600144F09897480000004AB12BC50050d0s6 27494645760
d1229 c5t600144F09897480000004AB12BC50051d0s6 15729623040
d1230 c5t600144F09897480000004AB12BC50052d0s6 27672903680
d1231 c5t600144F09897480000004AB12BC50053d0s6 27672903680
d1232 c5t600144F09897480000004AB12BC50054d0s6 661585920
d1233 c5t600144F09897480000004AB12BC50055d0s6 263127040
d9990 c5t600144F09897480000004AC27C1E0001d0s6 180817428480
d9991 c5t600144F09897480000004AC27C1F0002d0s6 219773075456
d9992 c5t600144F09897480000004AC27C1F0003d0s6 221545168896
d9993 c5t600144F09897480000004AC27C1F0004d0s6 237819068416
d8999 c5t600144F09897480000004AC27C1F0005d0s6 464611377152
c7t0d0s6 c5t600144F09897480000004AC27C1F0006d0s6 892771825664

Mapping on comstar node db4-san1

SVM_DEV	DEVICE_ON_DBNODE	SIZE_IN_BYTES
d1201	c5t600144F0B84BC40000004AB12BC00036d0s6	32559267840
d1202	c5t600144F0B84BC40000004AB12BC00037d0s6	32559267840
d1203	c5t600144F0B84BC40000004AB12BC10038d0s6	32559267840
d1204	c5t600144F0B84BC40000004AB12BC20039d0s6	32559267840
d1205	c5t600144F0B84BC40000004AB12BC2003Ad0s6	32559267840
d1206	c5t600144F0B84BC40000004AB12BC2003Bd0s6	32559267840
d1207	c5t600144F0B84BC40000004AB12BC2003Cd0s6	32559267840
d1208	c5t600144F0B84BC40000004AB12BC2003Dd0s6	32559267840
d1209	c5t600144F0B84BC40000004AB12BC2003Ed0s6	32559267840
d1210	c5t600144F0B84BC40000004AB12BC2003Fd0s6	32559267840
d1211	c5t600144F0B84BC40000004AB12BC20040d0s6	30462115840
d1212	c5t600144F0B84BC40000004AB12BC30041d0s6	30462115840
d1213	c5t600144F0B84BC40000004AB12BC30042d0s6	30462115840
d1214	c5t600144F0B84BC40000004AB12BC30043d0s6	30462115840
d1215	c5t600144F0B84BC40000004AB12BC30044d0s6	30462115840
d1216	c5t600144F0B84BC40000004AB12BC30045d0s6	30462115840
d1217	c5t600144F0B84BC40000004AB12BC30046d0s6	30462115840
d1218	c5t600144F0B84BC40000004AB12BC30047d0s6	30462115840
d1219	c5t600144F0B84BC40000004AB12BC30048d0s6	30462115840
d1220	c5t600144F0B84BC40000004AB12BC30049d0s6	30462115840
d1221	c5t600144F0B84BC40000004AB12BC4004Ad0s6	67067904000
d1222	c5t600144F0B84BC40000004AB12BC4004Bd0s6	67067904000
d1223	c5t600144F0B84BC40000004AB12BC4004Cd0s6	67067904000
d1224	c5t600144F0B84BC40000004AB12BC4004Dd0s6	67067904000
d1225	c5t600144F0B84BC40000004AB12BC4004Ed0s6	67067904000
d1226	c5t600144F0B84BC40000004AB12BC4004Fd0s6	67067904000
d1227	c5t600144F0B84BC40000004AB12BC40050d0s6	16432168960
d1228	c5t600144F0B84BC40000004AB12BC40051d0s6	16757227520
d1229	c5t600144F0B84BC40000004AB12BC40052d0s6	27494645760
d1230	c5t600144F0B84BC40000004AB12BC40053d0s6	4195287040
d1231	c5t600144F0B84BC40000004AB12BC50054d0s6	27672903680

d1232 c5t600144F0B84BC40000004AB12BC50055d0s6 27672903680
d1233 c5t600144F0B84BC40000004AB12BC50056d0s6 5464064000
d1234 c5t600144F0B84BC40000004AB12BC50057d0s6 64247234560
d9990 c5t600144F0B84BC40000004AC27C1E0001d0s6 163851468800
d9991 c5t600144F0B84BC40000004AC27C1F0002d0s6 128367656960
d9992 c5t600144F0B84BC40000004AC27C1F0003d0s6 221870227456
d9993 c5t600144F0B84BC40000004AC27C1F0004d0s6 221545168896
d8999 c5t600144F0B84BC40000004AC27C1F0005d0s6 284390522880
c7t0d0s6 c5t600144F0B84BC40000004AC27C1F0006d0s6 892771825664

Mapping on comstar node db4-san2

SVM_DEV	DEVICE_ON_DBNODE	SIZE_IN_BYTES
d1201	c5t600144F054A5C30000004AB12BC00034d0s6	32559267840
d1202	c5t600144F054A5C30000004AB12BC00035d0s6	32559267840
d1203	c5t600144F054A5C30000004AB12BC10036d0s6	32559267840
d1204	c5t600144F054A5C30000004AB12BC20037d0s6	32559267840
d1205	c5t600144F054A5C30000004AB12BC20038d0s6	32559267840
d1206	c5t600144F054A5C30000004AB12BC20039d0s6	32559267840
d1207	c5t600144F054A5C30000004AB12BC2003Ad0s6	32559267840
d1208	c5t600144F054A5C30000004AB12BC2003Bd0s6	32559267840
d1209	c5t600144F054A5C30000004AB12BC2003Cd0s6	32559267840
d1210	c5t600144F054A5C30000004AB12BC2003Dd0s6	32559267840
d1211	c5t600144F054A5C30000004AB12BC2003Ed0s6	30462115840
d1212	c5t600144F054A5C30000004AB12BC3003Fd0s6	30462115840
d1213	c5t600144F054A5C30000004AB12BC30040d0s6	30462115840
d1214	c5t600144F054A5C30000004AB12BC30041d0s6	30462115840
d1215	c5t600144F054A5C30000004AB12BC30042d0s6	30462115840
d1216	c5t600144F054A5C30000004AB12BC30043d0s6	30462115840
d1217	c5t600144F054A5C30000004AB12BC30044d0s6	30462115840
d1218	c5t600144F054A5C30000004AB12BC30045d0s6	30462115840
d1219	c5t600144F054A5C30000004AB12BC30046d0s6	30462115840
d1220	c5t600144F054A5C30000004AB12BC30047d0s6	30462115840
d1221	c5t600144F054A5C30000004AB12BC40048d0s6	67067904000
d1222	c5t600144F054A5C30000004AB12BC40049d0s6	67067904000
d1223	c5t600144F054A5C30000004AB12BC4004Ad0s6	67067904000
d1224	c5t600144F054A5C30000004AB12BC4004Bd0s6	67067904000
d1225	c5t600144F054A5C30000004AB12BC4004Cd0s6	67067904000
d1226	c5t600144F054A5C30000004AB12BC4004Dd0s6	67067904000
d1227	c5t600144F054A5C30000004AB12BC4004Ed0s6	16432168960
d1228	c5t600144F054A5C30000004AB12BC4004Fd0s6	16757227520
d1229	c5t600144F054A5C30000004AB12BC40050d0s6	27494645760
d1230	c5t600144F054A5C30000004AB12BC50051d0s6	4195287040
d1231	c5t600144F054A5C30000004AB12BC50052d0s6	27672903680
d1232	c5t600144F054A5C30000004AB12BC50053d0s6	27672903680
d1233	c5t600144F054A5C30000004AB12BC50054d0s6	420413440
d9990	c5t600144F054A5C30000004AC27C1E0001d0s6	168895119360
d9991	c5t600144F054A5C30000004AC27C1F0002d0s6	192614957056
d9992	c5t600144F054A5C30000004AC27C1F0003d0s6	221870227456
d9993	c5t600144F054A5C30000004AC27C1F0004d0s6	221545168896
d8999	c5t600144F054A5C30000004AC27C1F0005d0s6	358749241344
c7t0d0s6	c5t600144F054A5C30000004AC27C1F0006d0s6	892771825664

Mapping on comstar node db4-san3

SVM_DEV	DEVICE_ON_DBNODE	SIZE_IN_BYTES
d1201	c5t600144F0EC70890000004AB12BC00035d0s6	32559267840
d1202	c5t600144F0EC70890000004AB12BC10036d0s6	32559267840

d1203 c5t600144F0EC70890000004AB12BC20037d0s6 32559267840
d1204 c5t600144F0EC70890000004AB12BC20038d0s6 32559267840
d1205 c5t600144F0EC70890000004AB12BC20039d0s6 32559267840
d1206 c5t600144F0EC70890000004AB12BC2003Ad0s6 32559267840
d1207 c5t600144F0EC70890000004AB12BC3003Bd0s6 32559267840
d1208 c5t600144F0EC70890000004AB12BC3003Cd0s6 32559267840
d1209 c5t600144F0EC70890000004AB12BC3003Dd0s6 32559267840
d1210 c5t600144F0EC70890000004AB12BC3003Ed0s6 32559267840
d1211 c5t600144F0EC70890000004AB12BC3003Fd0s6 30462115840
d1212 c5t600144F0EC70890000004AB12BC3004d0s6 30462115840
d1213 c5t600144F0EC70890000004AB12BC30041d0s6 30462115840
d1214 c5t600144F0EC70890000004AB12BC30042d0s6 30462115840
d1215 c5t600144F0EC70890000004AB12BC30043d0s6 30462115840
d1216 c5t600144F0EC70890000004AB12BC30044d0s6 30462115840
d1217 c5t600144F0EC70890000004AB12BC40045d0s6 30462115840
d1218 c5t600144F0EC70890000004AB12BC40046d0s6 30462115840
d1219 c5t600144F0EC70890000004AB12BC40047d0s6 30462115840
d1220 c5t600144F0EC70890000004AB12BC40048d0s6 30462115840
d1221 c5t600144F0EC70890000004AB12BC40049d0s6 67067904000
d1222 c5t600144F0EC70890000004AB12BC4004Ad0s6 67067904000
d1223 c5t600144F0EC70890000004AB12BC4004Bd0s6 67067904000
d1224 c5t600144F0EC70890000004AB12BC4004Cd0s6 67067904000
d1225 c5t600144F0EC70890000004AB12BC4004Dd0s6 67067904000
d1226 c5t600144F0EC70890000004AB12BC5004Ed0s6 67067904000
d1227 c5t600144F0EC70890000004AB12BC5004Fd0s6 16432168960
d1228 c5t600144F0EC70890000004AB12BC50050d0s6 16757227520
d1229 c5t600144F0EC70890000004AB12BC50051d0s6 27494645760
d1230 c5t600144F0EC70890000004AB12BC50052d0s6 27672903680
d1231 c5t600144F0EC70890000004AB12BC50053d0s6 27672903680
d1232 c5t600144F0EC70890000004AB12BC50054d0s6 66606530560
d1233 c5t600144F0EC70890000004AB12BC50055d0s6 202628014080
d9990 c5t600144F0EC70890000004AC27C1E0001d0s6 149087518720
d9991 c5t600144F0EC70890000004AC27C1F0002d0s6 169137340416
d9992 c5t600144F0EC70890000004AC27C1F0003d0s6 221870227456
d9993 c5t600144F0EC70890000004AC27C1F0004d0s6 182611542016
d8999 c5t600144F0EC70890000004AC27C1F0005d0s6 190115151872
c7t0d0s6 c5t600144F0EC70890000004AC27C1F0006d0s6 892771825664

Mapping on comstar node db4-san4

SVM_DEV	DEVICE_ON_DBNODE	SIZE_IN_BYTES
d1201	c5t600144F028160F0000004AB12BC00036d0s6	32559267840
d1202	c5t600144F028160F0000004AB12BC10037d0s6	32559267840
d1203	c5t600144F028160F0000004AB12BC10038d0s6	32559267840
d1204	c5t600144F028160F0000004AB12BC20039d0s6	32559267840
d1205	c5t600144F028160F0000004AB12BC2003Ad0s6	32559267840
d1206	c5t600144F028160F0000004AB12BC2003Bd0s6	32559267840
d1207	c5t600144F028160F0000004AB12BC2003Cd0s6	32559267840
d1208	c5t600144F028160F0000004AB12BC2003Dd0s6	32559267840
d1209	c5t600144F028160F0000004AB12BC3003Ed0s6	32559267840
d1210	c5t600144F028160F0000004AB12BC3003Fd0s6	30462115840
d1211	c5t600144F028160F0000004AB12BC3004d0s6	30462115840
d1212	c5t600144F028160F0000004AB12BC30041d0s6	30462115840
d1213	c5t600144F028160F0000004AB12BC30042d0s6	30462115840
d1214	c5t600144F028160F0000004AB12BC30043d0s6	30462115840
d1215	c5t600144F028160F0000004AB12BC30044d0s6	30462115840
d1216	c5t600144F028160F0000004AB12BC30045d0s6	30462115840
d1217	c5t600144F028160F0000004AB12BC30046d0s6	30462115840
d1218	c5t600144F028160F0000004AB12BC30047d0s6	30462115840
d1219	c5t600144F028160F0000004AB12BC40048d0s6	30462115840

d1220 c5t600144F028160F0000004AB12BC40049d0s6 30462115840
d1221 c5t600144F028160F0000004AB12BC4004Ad0s6 67067904000
d1222 c5t600144F028160F0000004AB12BC4004Bd0s6 67067904000
d1223 c5t600144F028160F0000004AB12BC4004Cd0s6 67067904000
d1224 c5t600144F028160F0000004AB12BC4004Dd0s6 67067904000
d1225 c5t600144F028160F0000004AB12BC4004Ed0s6 67067904000
d1226 c5t600144F028160F0000004AB12BC4004Fd0s6 16432168960
d1227 c5t600144F028160F0000004AB12BC50050d0s6 16757227520
d1228 c5t600144F028160F0000004AB12BC50051d0s6 27494645760
d1229 c5t600144F028160F0000004AB12BC50052d0s6 8490254336
d1230 c5t600144F028160F0000004AB12BC50053d0s6 27672903680
d1231 c5t600144F028160F0000004AB12BC50054d0s6 27672903680
d1232 c5t600144F028160F0000004AB12BC50055d0s6 66606530560
d1233 c5t600144F028160F0000004AB12BC50056d0s6 74383360
d9990 c5t600144F028160F0000004AC27C1E0001d0s6 188245540864
d9991 c5t600144F028160F0000004AC27C1F0002d0s6 219773075456
d9992 c5t600144F028160F0000004AC27C1F0003d0s6 221545168896
d9993 c5t600144F028160F0000004AC27C1F0004d0s6 171874123776
d8999 c5t600144F028160F0000004AC27C1F0005d0s6 346453639168
c7t0d0s6 c5t600144F028160F0000004AC27C1F0006d0s6 892771825664

Mapping on comstar node db4-san5

SVM_DEV	DEVICE_ON_DBNODE	SIZE_IN_BYTES
d1201	c5t600144F0FC41C40000004AB12BC00035d0s6	32559267840
d1202	c5t600144F0FC41C40000004AB12BC00036d0s6	32559267840
d1203	c5t600144F0FC41C40000004AB12BC10037d0s6	32559267840
d1204	c5t600144F0FC41C40000004AB12BC20038d0s6	32559267840
d1205	c5t600144F0FC41C40000004AB12BC20039d0s6	32559267840
d1206	c5t600144F0FC41C40000004AB12BC2003Ad0s6	32559267840
d1207	c5t600144F0FC41C40000004AB12BC2003Bd0s6	32559267840
d1208	c5t600144F0FC41C40000004AB12BC2003Cd0s6	32559267840
d1209	c5t600144F0FC41C40000004AB12BC2003Dd0s6	32559267840
d1210	c5t600144F0FC41C40000004AB12BC2003Ed0s6	32559267840
d1211	c5t600144F0FC41C40000004AB12BC2003Fd0s6	30462115840
d1212	c5t600144F0FC41C40000004AB12BC3004d0s6	30462115840
d1213	c5t600144F0FC41C40000004AB12BC30041d0s6	30462115840
d1214	c5t600144F0FC41C40000004AB12BC30042d0s6	30462115840
d1215	c5t600144F0FC41C40000004AB12BC30043d0s6	30462115840
d1216	c5t600144F0FC41C40000004AB12BC30044d0s6	30462115840
d1217	c5t600144F0FC41C40000004AB12BC30045d0s6	30462115840
d1218	c5t600144F0FC41C40000004AB12BC30046d0s6	30462115840
d1219	c5t600144F0FC41C40000004AB12BC30047d0s6	30462115840
d1220	c5t600144F0FC41C40000004AB12BC30048d0s6	30462115840
d1221	c5t600144F0FC41C40000004AB12BC40049d0s6	67067904000
d1222	c5t600144F0FC41C40000004AB12BC4004Ad0s6	67067904000
d1223	c5t600144F0FC41C40000004AB12BC4004Bd0s6	67067904000
d1224	c5t600144F0FC41C40000004AB12BC4004Cd0s6	67067904000
d1225	c5t600144F0FC41C40000004AB12BC4004Dd0s6	67067904000
d1226	c5t600144F0FC41C40000004AB12BC4004Ed0s6	16432168960
d1227	c5t600144F0FC41C40000004AB12BC4004Fd0s6	16757227520
d1228	c5t600144F0FC41C40000004AB12BC40050d0s6	27494645760
d1229	c5t600144F0FC41C40000004AB12BC40051d0s6	15729623040
d1230	c5t600144F0FC41C40000004AB12BC40052d0s6	27672903680
d1231	c5t600144F0FC41C40000004AB12BC50053d0s6	27672903680
d1232	c5t600144F0FC41C40000004AB12BC50054d0s6	661585920
d1233	c5t600144F0FC41C40000004AB12BC50055d0s6	263127040
d9990	c5t600144F0FC41C40000004AC27C1E0001d0s6	180817428480
d9991	c5t600144F0FC41C40000004AC27C1F0002d0s6	219773075456
d9992	c5t600144F0FC41C40000004AC27C1F0003d0s6	221545168896

d9993 c5t600144F0FC41C40000004AC27C1F0004d0s6 237819068416
d8999 c5t600144F0FC41C40000004AC27C1F0005d0s6 459808899072
c7t0d0s6 c5t600144F0FC41C40000004AC27C1F0006d0s6 892771825664

Mapping on comstar node db5-san1

SVM_DEV	DEVICE_ON_DBNODE	SIZE_IN_BYTES
d1201	c5t600144F05424450000004AB12BB30036d0s6	32559267840
d1202	c5t600144F05424450000004AB12BB40037d0s6	32559267840
d1203	c5t600144F05424450000004AB12BB50038d0s6	32559267840
d1204	c5t600144F05424450000004AB12BB60039d0s6	32559267840
d1205	c5t600144F05424450000004AB12BB6003Ad0s6	32559267840
d1206	c5t600144F05424450000004AB12BB6003Bd0s6	32559267840
d1207	c5t600144F05424450000004AB12BB6003Cd0s6	32559267840
d1208	c5t600144F05424450000004AB12BB6003Dd0s6	32559267840
d1209	c5t600144F05424450000004AB12BB6003Ed0s6	32559267840
d1210	c5t600144F05424450000004AB12BB6003Fd0s6	32559267840
d1211	c5t600144F05424450000004AB12BB70040d0s6	30462115840
d1212	c5t600144F05424450000004AB12BB70041d0s6	30462115840
d1213	c5t600144F05424450000004AB12BB70042d0s6	30462115840
d1214	c5t600144F05424450000004AB12BB70043d0s6	30462115840
d1215	c5t600144F05424450000004AB12BB70044d0s6	30462115840
d1216	c5t600144F05424450000004AB12BB70045d0s6	30462115840
d1217	c5t600144F05424450000004AB12BB70046d0s6	30462115840
d1218	c5t600144F05424450000004AB12BB70047d0s6	30462115840
d1219	c5t600144F05424450000004AB12BB70048d0s6	30462115840
d1220	c5t600144F05424450000004AB12BB70049d0s6	30462115840
d1221	c5t600144F05424450000004AB12BB8004Ad0s6	67067904000
d1222	c5t600144F05424450000004AB12BB8004Bd0s6	67067904000
d1223	c5t600144F05424450000004AB12BB8004Cd0s6	67067904000
d1224	c5t600144F05424450000004AB12BB8004Dd0s6	67067904000
d1225	c5t600144F05424450000004AB12BB8004Ed0s6	67067904000
d1226	c5t600144F05424450000004AB12BB8004Fd0s6	67067904000
d1227	c5t600144F05424450000004AB12BB80050d0s6	16432168960
d1228	c5t600144F05424450000004AB12BB80051d0s6	16757227520
d1229	c5t600144F05424450000004AB12BB80052d0s6	27494645760
d1230	c5t600144F05424450000004AB12BB90053d0s6	4195287040
d1231	c5t600144F05424450000004AB171D40008d0s6	27672903680
d1232	c5t600144F05424450000004AB12BB90055d0s6	27672903680
d1233	c5t600144F05424450000004AB12BB90056d0s6	5464064000
d1234	c5t600144F05424450000004AB12BB90057d0s6	64247234560
d9990	c5t600144F05424450000004AC27C4C0001d0s6	163851468800
d9991	c5t600144F05424450000004AC27C4C0002d0s6	128367656960
d9992	c5t600144F05424450000004AC27C4C0003d0s6	221870227456
d9993	c5t600144F05424450000004AC27C4C0004d0s6	221545168896
d8999	c5t600144F05424450000004AC27C4D0005d0s6	271503523840
c7t0d0s6	c5t600144F05424450000004AC27C4D0006d0s6	892771825664

Mapping on comstar node db5-san2

SVM_DEV	DEVICE_ON_DBNODE	SIZE_IN_BYTES
d1201	c5t600144F00C8A8B0000004AB12BB30035d0s6	32559267840
d1202	c5t600144F00C8A8B0000004AB12BB40036d0s6	32559267840
d1203	c5t600144F00C8A8B0000004AB12BB50037d0s6	32559267840
d1204	c5t600144F00C8A8B0000004AB12BB60038d0s6	32559267840
d1205	c5t600144F00C8A8B0000004AB12BB60039d0s6	32559267840
d1206	c5t600144F00C8A8B0000004AB12BB6003Ad0s6	32559267840
d1207	c5t600144F00C8A8B0000004AB12BB6003Bd0s6	32559267840

d1208 c5t600144F00C8A8B0000004AB12BB6003Cd0s6 32559267840
d1209 c5t600144F00C8A8B0000004AB12BB6003Dd0s6 32559267840
d1210 c5t600144F00C8A8B0000004AB12BB6003Ed0s6 32559267840
d1211 c5t600144F00C8A8B0000004AB12BB7003Fd0s6 30462115840
d1212 c5t600144F00C8A8B0000004AB12BB70040d0s6 30462115840
d1213 c5t600144F00C8A8B0000004AB12BB70041d0s6 30462115840
d1214 c5t600144F00C8A8B0000004AB12BB70042d0s6 30462115840
d1215 c5t600144F00C8A8B0000004AB12BB70043d0s6 30462115840
d1216 c5t600144F00C8A8B0000004AB12BB70044d0s6 30462115840
d1217 c5t600144F00C8A8B0000004AB12BB70045d0s6 30462115840
d1218 c5t600144F00C8A8B0000004AB12BB70046d0s6 30462115840
d1219 c5t600144F00C8A8B0000004AB12BB70047d0s6 30462115840
d1220 c5t600144F00C8A8B0000004AB12BB80048d0s6 30462115840
d1221 c5t600144F00C8A8B0000004AB12BB80049d0s6 67067904000
d1222 c5t600144F00C8A8B0000004AB12BB8004Ad0s6 67067904000
d1223 c5t600144F00C8A8B0000004AB12BB8004Bd0s6 67067904000
d1224 c5t600144F00C8A8B0000004AB12BB8004Cd0s6 67067904000
d1225 c5t600144F00C8A8B0000004AB12BB8004Dd0s6 67067904000
d1226 c5t600144F00C8A8B0000004AB12BB8004Ed0s6 67067904000
d1227 c5t600144F00C8A8B0000004AB12BB8004Fd0s6 16432168960
d1228 c5t600144F00C8A8B0000004AB12BB80050d0s6 16757227520
d1229 c5t600144F00C8A8B0000004AB12BB80051d0s6 27494645760
d1230 c5t600144F00C8A8B0000004AB12BB90052d0s6 4195287040
d1231 c5t600144F00C8A8B0000004AB12BB90053d0s6 27672903680
d1232 c5t600144F00C8A8B0000004AB12BB90054d0s6 27672903680
d1233 c5t600144F00C8A8B0000004AB12BB90055d0s6 420413440
d9990 c5t600144F00C8A8B0000004AC27C4C0001d0s6 168895119360
d9991 c5t600144F00C8A8B0000004AC27C4C0002d0s6 192614957056
d9992 c5t600144F00C8A8B0000004AC27C4C0003d0s6 221870227456
d9993 c5t600144F00C8A8B0000004AC27C4C0004d0s6 221545168896
d8999 c5t600144F00C8A8B0000004AC27C4D0005d0s6 358720929792
c7t0d0s6 c5t600144F00C8A8B0000004AC27C4D0006d0s6 892771825664

Mapping on comstar node db5-san3

SVM_DEV	DEVICE_ON_DBNODE	SIZE_IN_BYTES
d1201	c5t600144F0A426CD0000004AB12BB30034d0s6	32559267840
d1202	c5t600144F0A426CD0000004AB12BB40035d0s6	32559267840
d1203	c5t600144F0A426CD0000004AB12BB50036d0s6	32559267840
d1204	c5t600144F0A426CD0000004AB12BB60037d0s6	32559267840
d1205	c5t600144F0A426CD0000004AB12BB60038d0s6	32559267840
d1206	c5t600144F0A426CD0000004AB12BB60039d0s6	32559267840
d1207	c5t600144F0A426CD0000004AB12BB6003Ad0s6	32559267840
d1208	c5t600144F0A426CD0000004AB12BB6003Bd0s6	32559267840
d1209	c5t600144F0A426CD0000004AB12BB6003Cd0s6	32559267840
d1210	c5t600144F0A426CD0000004AB12BB6003Dd0s6	32559267840
d1211	c5t600144F0A426CD0000004AB12BB6003Ed0s6	30462115840
d1212	c5t600144F0A426CD0000004AB12BB7003Fd0s6	30462115840
d1213	c5t600144F0A426CD0000004AB12BB70040d0s6	30462115840
d1214	c5t600144F0A426CD0000004AB12BB70041d0s6	30462115840
d1215	c5t600144F0A426CD0000004AB12BB70042d0s6	30462115840
d1216	c5t600144F0A426CD0000004AB12BB70043d0s6	30462115840
d1217	c5t600144F0A426CD0000004AB12BB70044d0s6	30462115840
d1218	c5t600144F0A426CD0000004AB12BB70045d0s6	30462115840
d1219	c5t600144F0A426CD0000004AB12BB70046d0s6	30462115840
d1220	c5t600144F0A426CD0000004AB12BB70047d0s6	30462115840
d1221	c5t600144F0A426CD0000004AB12BB80048d0s6	67067904000
d1222	c5t600144F0A426CD0000004AB12BB80049d0s6	67067904000
d1223	c5t600144F0A426CD0000004AB12BB8004Ad0s6	67067904000
d1224	c5t600144F0A426CD0000004AB12BB8004Bd0s6	67067904000

d1225 c5t600144F0A426CD0000004AB12BB8004Cd0s6 67067904000
d1226 c5t600144F0A426CD0000004AB12BB8004Dd0s6 67067904000
d1227 c5t600144F0A426CD0000004AB12BB8004Ed0s6 16432168960
d1228 c5t600144F0A426CD0000004AB12BB8004Fd0s6 16757227520
d1229 c5t600144F0A426CD0000004AB12BB80050d0s6 27494645760
d1230 c5t600144F0A426CD0000004AB12BB80051d0s6 27672903680
d1231 c5t600144F0A426CD0000004AB12BB90052d0s6 27672903680
d1232 c5t600144F0A426CD0000004AB12BB90053d0s6 66606530560
d1233 c5t600144F0A426CD0000004AB12BB90054d0s6 20228014080
d9990 c5t600144F0A426CD0000004AC27C4C0001d0s6 149087518720
d9991 c5t600144F0A426CD0000004AC27C4C0002d0s6 169137340416
d9992 c5t600144F0A426CD0000004AC27C4C0003d0s6 221870227456
d9993 c5t600144F0A426CD0000004AC27C4C0004d0s6 182611542016
d8999 c5t600144F0A426CD0000004AC27C4C0005d0s6 25672296544
c7t0d0s6 c5t600144F0A426CD0000004AC27C4D0006d0s6 892771825664

Mapping on comstar node db5-san4

SVM_DEV	DEVICE_ON_DBNODE	SIZE_IN_BYTES
d1201	c5t600144F06833C60000004AB12BB30035d0s6	32559267840
d1202	c5t600144F06833C60000004AB12BB40036d0s6	32559267840
d1203	c5t600144F06833C60000004AB12BB40037d0s6	32559267840
d1204	c5t600144F06833C60000004AB12BB50038d0s6	32559267840
d1205	c5t600144F06833C60000004AB12BB50039d0s6	32559267840
d1206	c5t600144F06833C60000004AB12BB5003Ad0s6	32559267840
d1207	c5t600144F06833C60000004AB12BB5003Bd0s6	32559267840
d1208	c5t600144F06833C60000004AB12BB6003Cd0s6	32559267840
d1209	c5t600144F06833C60000004AB12BB6003Dd0s6	32559267840
d1210	c5t600144F06833C60000004AB12BB6003Ed0s6	32559267840
d1211	c5t600144F06833C60000004AB12BB6003Fd0s6	30462115840
d1212	c5t600144F06833C60000004AB12BB60040d0s6	30462115840
d1213	c5t600144F06833C60000004AB12BB60041d0s6	30462115840
d1214	c5t600144F06833C60000004AB12BB60042d0s6	30462115840
d1215	c5t600144F06833C60000004AB12BB60043d0s6	30462115840
d1216	c5t600144F06833C60000004AB12BB60044d0s6	30462115840
d1217	c5t600144F06833C60000004AB12BB60045d0s6	30462115840
d1218	c5t600144F06833C60000004AB12BB70046d0s6	30462115840
d1219	c5t600144F06833C60000004AB12BB70047d0s6	30462115840
d1220	c5t600144F06833C60000004AB12BB70048d0s6	30462115840
d1221	c5t600144F06833C60000004AB12BB70049d0s6	67067904000
d1222	c5t600144F06833C60000004AB12BB7004Ad0s6	67067904000
d1223	c5t600144F06833C60000004AB12BB7004Bd0s6	67067904000
d1224	c5t600144F06833C60000004AB12BB7004Cd0s6	67067904000
d1225	c5t600144F06833C60000004AB12BB7004Dd0s6	67067904000
d1226	c5t600144F06833C60000004AB12BB7004Ed0s6	16432168960
d1227	c5t600144F06833C60000004AB12BB7004Fd0s6	16757227520
d1228	c5t600144F06833C60000004AB12BB80050d0s6	27494645760
d1229	c5t600144F06833C60000004AB12BB80051d0s6	8490254336
d1230	c5t600144F06833C60000004AB12BB80052d0s6	27672903680
d1231	c5t600144F06833C60000004AB12BB80053d0s6	27672903680
d1232	c5t600144F06833C60000004AB12BB80054d0s6	66606530560
d1233	c5t600144F06833C60000004AB12BB80055d0s6	74383360
d9990	c5t600144F06833C60000004AC27C4C0001d0s6	188245540864
d9991	c5t600144F06833C60000004AC27C4C0002d0s6	219773075456
d9992	c5t600144F06833C60000004AC27C4C0003d0s6	221545168896
d9993	c5t600144F06833C60000004AC27C4C0004d0s6	171874123776
d8999	c5t600144F06833C60000004AC27C4D0005d0s6	289000062976
c7t0d0s6	c5t600144F06833C60000004AC27C4D0006d0s6	892771825664

Mapping on comstar node db5-san5

SVM_DEV	DEVICE_ON_DBNODE	SIZE_IN_BYTES
d1201	c5t600144F01C66860000004AB12BB30036d0s6	32559267840
d1202	c5t600144F01C66860000004AB12BB40037d0s6	32559267840
d1203	c5t600144F01C66860000004AB12BB40038d0s6	32559267840
d1204	c5t600144F01C66860000004AB12BB50039d0s6	32559267840
d1205	c5t600144F01C66860000004AB12BB5003Ad0s6	32559267840
d1206	c5t600144F01C66860000004AB12BB5003Bd0s6	32559267840
d1207	c5t600144F01C66860000004AB12BB5003Cd0s6	32559267840
d1208	c5t600144F01C66860000004AB12BB6003Dd0s6	32559267840
d1209	c5t600144F01C66860000004AB12BB6003Ed0s6	32559267840
d1210	c5t600144F01C66860000004AB12BB6003Fd0s6	32559267840
d1211	c5t600144F01C66860000004AB12BB60040d0s6	30462115840
d1212	c5t600144F01C66860000004AB12BB60041d0s6	30462115840
d1213	c5t600144F01C66860000004AB12BB60042d0s6	30462115840
d1214	c5t600144F01C66860000004AB12BB60043d0s6	30462115840
d1215	c5t600144F01C66860000004AB12BB60044d0s6	30462115840
d1216	c5t600144F01C66860000004AB12BB60045d0s6	30462115840
d1217	c5t600144F01C66860000004AB12BB60046d0s6	30462115840
d1218	c5t600144F01C66860000004AB12BB70047d0s6	30462115840
d1219	c5t600144F01C66860000004AB12BB70048d0s6	30462115840
d1220	c5t600144F01C66860000004AB12BB70049d0s6	30462115840
d1221	c5t600144F01C66860000004AB12BB7004Ad0s6	67067904000
d1222	c5t600144F01C66860000004AB12BB7004Bd0s6	67067904000
d1223	c5t600144F01C66860000004AB12BB7004Cd0s6	67067904000
d1224	c5t600144F01C66860000004AB12BB7004Dd0s6	67067904000
d1225	c5t600144F01C66860000004AB12BB7004Ed0s6	67067904000
d1226	c5t600144F01C66860000004AB12BB7004Fd0s6	16432168960
d1219	c5t600144F01C66860000004AB12BB80050d0s6	16757227520
d1228	c5t600144F01C66860000004AB12BB80051d0s6	27494645760
d1229	c5t600144F01C66860000004AB12BB80052d0s6	15729623040
d1230	c5t600144F01C66860000004AB12BB80053d0s6	27672903680
d1231	c5t600144F01C66860000004AB12BB80054d0s6	27672903680
d1232	c5t600144F01C66860000004AB12BB80055d0s6	661585920
d1233	c5t600144F01C66860000004AB12BB80056d0s6	263127040
d9990	c5t600144F01C66860000004AC27C4C0001d0s6	180817428480
d9991	c5t600144F01C66860000004AC27C4C0002d0s6	219773075456
d9992	c5t600144F01C66860000004AC27C4C0003d0s6	221545168896
d9993	c5t600144F01C66860000004AC27C4C0004d0s6	237819068416
d8999	c5t600144F01C66860000004AC27C4D0005d0s6	404781727744
c7t0d0s6	c5t600144F01C66860000004AC27C4D0006d0s6	892771825664

Mapping on comstar node db6-san1

SVM_DEV	DEVICE_ON_DBNODE	SIZE_IN_BYTES
d1201	c5t600144F0684D8D0000004AB12BB30037d0s6	32559267840
d1202	c5t600144F0684D8D0000004AB12BB40038d0s6	32559267840
d1203	c5t600144F0684D8D0000004AB12BB40039d0s6	32559267840
d1204	c5t600144F0684D8D0000004AB12BB5003Ad0s6	32559267840
d1205	c5t600144F0684D8D0000004AB12BB5003Bd0s6	32559267840
d1206	c5t600144F0684D8D0000004AB12BB5003Cd0s6	32559267840
d1207	c5t600144F0684D8D0000004AB12BB5003Dd0s6	32559267840
d1208	c5t600144F0684D8D0000004AB12BB5003Ed0s6	32559267840
d1209	c5t600144F0684D8D0000004AB12BB5003Fd0s6	32559267840
d1210	c5t600144F0684D8D0000004AB12BB60040d0s6	32559267840
d1211	c5t600144F0684D8D0000004AB12BB60041d0s6	30462115840
d1212	c5t600144F0684D8D0000004AB12BB60042d0s6	30462115840
d1213	c5t600144F0684D8D0000004AB12BB60043d0s6	30462115840

d1214 c5t600144F0684D8D0000004AB12BB60044d0s6 30462115840
d1215 c5t600144F0684D8D0000004AB12BB60045d0s6 30462115840
d1216 c5t600144F0684D8D0000004AB12BB60046d0s6 30462115840
d1217 c5t600144F0684D8D0000004AB12BB60047d0s6 30462115840
d1218 c5t600144F0684D8D0000004AB12BB60048d0s6 30462115840
d1219 c5t600144F0684D8D0000004AB12BB70049d0s6 30462115840
d1220 c5t600144F0684D8D0000004AB12BB7004Ad0s6 30462115840
d1221 c5t600144F0684D8D0000004AB12BB7004Bd0s6 67067904000
d1222 c5t600144F0684D8D0000004AB12BB7004Cd0s6 67067904000
d1223 c5t600144F0684D8D0000004AB12BB7004Dd0s6 67067904000
d1224 c5t600144F0684D8D0000004AB12BB7004Ed0s6 67067904000
d1225 c5t600144F0684D8D0000004AB12BB7004Fd0s6 67067904000
d1226 c5t600144F0684D8D0000004AB12BB70050d0s6 67067904000
d1227 c5t600144F0684D8D0000004AB12BB70051d0s6 16432168960
d1228 c5t600144F0684D8D0000004AB12BB70052d0s6 16757227520
d1229 c5t600144F0684D8D0000004AB12BB80053d0s6 27494645760
d1230 c5t600144F0684D8D0000004AB12BB80054d0s6 4195287040
d1231 c5t600144F0684D8D0000004AB12BB80055d0s6 27672903680
d1232 c5t600144F0684D8D0000004AB12BB80056d0s6 27672903680
d1233 c5t600144F0684D8D0000004AB12BB80057d0s6 5464064000
d1234 c5t600144F0684D8D0000004AB12BB80058d0s6 64247234560
d9990 c5t600144F0684D8D0000004AC27C4C0001d0s6 163851468800
d9991 c5t600144F0684D8D0000004AC27C4C0002d0s6 128367656960
d9992 c5t600144F0684D8D0000004AC27C4C0003d0s6 221870227456
d9993 c5t600144F0684D8D0000004AC27C4C0004d0s6 221545168896
d8999 c5t600144F0684D8D0000004AC27C4C0005d0s6 241040293888
c7t0d0s6 c5t600144F0684D8D0000004AC27C4D0006d0s6 892771825664

Mapping on comstar node db6-san2

SVM_DEV	DEVICE_ON_DBNODE	SIZE_IN_BYTES
d1201	c5t600144F0D86C460000004AB12BB30035d0s6	32559267840
d1202	c5t600144F0D86C460000004AB12BB40036d0s6	32559267840
d1203	c5t600144F0D86C460000004AB12BB40037d0s6	32559267840
d1204	c5t600144F0D86C460000004AB12BB50038d0s6	32559267840
d1205	c5t600144F0D86C460000004AB12BB50039d0s6	32559267840
d1206	c5t600144F0D86C460000004AB12BB5003Ad0s6	32559267840
d1207	c5t600144F0D86C460000004AB12BB5003Bd0s6	32559267840
d1208	c5t600144F0D86C460000004AB12BB6003Cd0s6	32559267840
d1209	c5t600144F0D86C460000004AB12BB6003Dd0s6	32559267840
d1210	c5t600144F0D86C460000004AB12BB6003Ed0s6	32559267840
d1211	c5t600144F0D86C460000004AB12BB6003Fd0s6	30462115840
d1212	c5t600144F0D86C460000004AB12BB60040d0s6	30462115840
d1213	c5t600144F0D86C460000004AB12BB60041d0s6	30462115840
d1214	c5t600144F0D86C460000004AB12BB60042d0s6	30462115840
d1215	c5t600144F0D86C460000004AB12BB60043d0s6	30462115840
d1216	c5t600144F0D86C460000004AB12BB60044d0s6	30462115840
d1217	c5t600144F0D86C460000004AB12BB70045d0s6	30462115840
d1218	c5t600144F0D86C460000004AB12BB70046d0s6	30462115840
d1219	c5t600144F0D86C460000004AB12BB70047d0s6	30462115840
d1220	c5t600144F0D86C460000004AB12BB70048d0s6	30462115840
d1221	c5t600144F0D86C460000004AB12BB70049d0s6	67067904000
d1222	c5t600144F0D86C460000004AB12BB7004Ad0s6	67067904000
d1223	c5t600144F0D86C460000004AB12BB7004Bd0s6	67067904000
d1224	c5t600144F0D86C460000004AB12BB7004Cd0s6	67067904000
d1225	c5t600144F0D86C460000004AB12BB7004Dd0s6	67067904000
d1226	c5t600144F0D86C460000004AB12BB7004Ed0s6	67067904000
d1227	c5t600144F0D86C460000004AB12BB8004Fd0s6	16432168960
d1228	c5t600144F0D86C460000004AB12BB80050d0s6	16757227520
d1229	c5t600144F0D86C460000004AB12BB80051d0s6	27494645760

d1230 c5t600144F0D86C460000004AB12BB80052d0s6 4195287040
d1231 c5t600144F0D86C460000004AB12BB80053d0s6 27672903680
d1232 c5t600144F0D86C460000004AB12BB80054d0s6 27672903680
d1233 c5t600144F0D86C460000004AB12BB80055d0s6 420413440
d9990 c5t600144F0D86C460000004AC27C4C0001d0s6 168895119360
d9991 c5t600144F0D86C460000004AC27C4C0002d0s6 192614957056
d9992 c5t600144F0D86C460000004AC27C4C0003d0s6 221870227456
d9993 c5t600144F0D86C460000004AC27C4C0004d0s6 221545168896
d8999 c5t600144F0D86C460000004AC27C4C0005d0s6 358720929792
c7t0d0s6 c5t600144F0D86C460000004AC27C4D0006d0s6 892771825664

Mapping on comstar node db6-san3

SVM_DEV	DEVICE_ON_DBNODE	SIZE_IN_BYTES
d1201	c5t600144F0E4EF400000004AB12BB40034d0s6	32559267840
d1202	c5t600144F0E4EF400000004AB12BB60035d0s6	32559267840
d1203	c5t600144F0E4EF400000004AB12BB70036d0s6	32559267840
d1204	c5t600144F0E4EF400000004AB12BB90037d0s6	32559267840
d1205	c5t600144F0E4EF400000004AB12BB90038d0s6	32559267840
d1206	c5t600144F0E4EF400000004AB12BBA0039d0s6	32559267840
d1207	c5t600144F0E4EF400000004AB12BBA003Ad0s6	32559267840
d1208	c5t600144F0E4EF400000004AB12BBA003Bd0s6	32559267840
d1209	c5t600144F0E4EF400000004AB12BBA003Cd0s6	32559267840
d1210	c5t600144F0E4EF400000004AB12BBA003Dd0s6	32559267840
d1211	c5t600144F0E4EF400000004AB12BBA003Ed0s6	30462115840
d1212	c5t600144F0E4EF400000004AB12BBA003Fd0s6	30462115840
d1213	c5t600144F0E4EF400000004AB12BBA0040d0s6	30462115840
d1214	c5t600144F0E4EF400000004AB12BBA0041d0s6	30462115840
d1215	c5t600144F0E4EF400000004AB12BBB0042d0s6	30462115840
d1216	c5t600144F0E4EF400000004AB12BBB0043d0s6	30462115840
d1217	c5t600144F0E4EF400000004AB12BBB0044d0s6	30462115840
d1218	c5t600144F0E4EF400000004AB12BBB0045d0s6	30462115840
d1219	c5t600144F0E4EF400000004AB12BBB0046d0s6	30462115840
d1220	c5t600144F0E4EF400000004AB12BBB0047d0s6	30462115840
d1221	c5t600144F0E4EF400000004AB12BBB0048d0s6	67067904000
d1222	c5t600144F0E4EF400000004AB12BBB0049d0s6	67067904000
d1223	c5t600144F0E4EF400000004AB12BBB004Ad0s6	67067904000
d1224	c5t600144F0E4EF400000004AB12BBC004Bd0s6	67067904000
d1225	c5t600144F0E4EF400000004AB12BBC004Cd0s6	67067904000
d1226	c5t600144F0E4EF400000004AB12BBC004Dd0s6	67067904000
d1227	c5t600144F0E4EF400000004AB12BBC004Ed0s6	16432168960
d1228	c5t600144F0E4EF400000004AB12BBC004Fd0s6	16757227520
d1229	c5t600144F0E4EF400000004AB12BBC0050d0s6	27494645760
d1230	c5t600144F0E4EF400000004AB12BBC0051d0s6	27672903680
d1231	c5t600144F0E4EF400000004AB12BBC0052d0s6	27672903680
d1232	c5t600144F0E4EF400000004AB12BBC0053d0s6	66606530560
d1233	c5t600144F0E4EF400000004AB12BBD0054d0s6	20228014080
d9990	c5t600144F0E4EF400000004AC27C4C0001d0s6	149087518720
d9991	c5t600144F0E4EF400000004AC27C4C0002d0s6	169137340416
d9992	c5t600144F0E4EF400000004AC27C4C0003d0s6	221870227456
d9993	c5t600144F0E4EF400000004AC27C4C0004d0s6	182611542016
d8999	c5t600144F0E4EF400000004AC27C4C0005d0s6	256722796544
c7t0d0s6	c5t600144F0E4EF400000004AC27C4D0006d0s6	892771825664

Mapping on comstar node db6-san4

SVM_DEV	DEVICE_ON_DBNODE	SIZE_IN_BYTES
d1201	c5t600144F01062450000004AB12BB30035d0s6	32559267840

d1202 c5t600144F01062450000004AB12BB40036d0s6 32559267840
d1203 c5t600144F01062450000004AB12BB50037d0s6 32559267840
d1204 c5t600144F01062450000004AB12BB60038d0s6 32559267840
d1205 c5t600144F01062450000004AB12BB70039d0s6 32559267840
d1206 c5t600144F01062450000004AB12BB7003Ad0s6 32559267840
d1207 c5t600144F01062450000004AB12BB7003Bd0s6 32559267840
d1208 c5t600144F01062450000004AB12BB7003Cd0s6 32559267840
d1209 c5t600144F01062450000004AB12BB7003Dd0s6 32559267840
d1210 c5t600144F01062450000004AB12BB7003Ed0s6 32559267840
d1211 c5t600144F01062450000004AB12BB7003Fd0s6 30462115840
d1212 c5t600144F01062450000004AB12BB70040d0s6 30462115840
d1213 c5t600144F01062450000004AB12BB70041d0s6 30462115840
d1214 c5t600144F01062450000004AB12BB70042d0s6 30462115840
d1215 c5t600144F01062450000004AB12BB80043d0s6 30462115840
d1216 c5t600144F01062450000004AB12BB80044d0s6 30462115840
d1217 c5t600144F01062450000004AB12BB80045d0s6 30462115840
d1218 c5t600144F01062450000004AB12BB80046d0s6 30462115840
d1219 c5t600144F01062450000004AB12BB80047d0s6 30462115840
d1220 c5t600144F01062450000004AB12BB80048d0s6 30462115840
d1221 c5t600144F01062450000004AB12BB80049d0s6 67067904000
d1222 c5t600144F01062450000004AB12BB8004Ad0s6 67067904000
d1223 c5t600144F01062450000004AB12BB9004Bd0s6 67067904000
d1224 c5t600144F01062450000004AB12BB9004Cd0s6 67067904000
d1225 c5t600144F01062450000004AB12BB9004Dd0s6 67067904000
d1226 c5t600144F01062450000004AB12BB9004Ed0s6 16432168960
d1227 c5t600144F01062450000004AB12BB9004Fd0s6 16757227520
d1228 c5t600144F01062450000004AB12BB90050d0s6 27494645760
d1229 c5t600144F01062450000004AB12BB90051d0s6 8490254336
d1230 c5t600144F01062450000004AB12BB90052d0s6 27672903680
d1231 c5t600144F01062450000004AB12BBA0053d0s6 27672903680
d1232 c5t600144F01062450000004AB12BBA0054d0s6 66606530560
d1233 c5t600144F01062450000004AB12BBA0055d0s6 74383360
d9990 c5t600144F01062450000004AC27C4C0001d0s6 188245540864
d9991 c5t600144F01062450000004AC27C4C0002d0s6 219773075456
d9992 c5t600144F01062450000004AC27C4C0003d0s6 221545168896
d9993 c5t600144F01062450000004AC27C4C0004d0s6 171874123776
d8999 c5t600144F01062450000004AC27C4C0005d0s6 289000062976
c7t0d0s6 c5t600144F01062450000004AC27C4D0006d0s6 892771825664

Mapping on comstar node db6-san5

SVM_DEV	DEVICE_ON_DBNODE	SIZE_IN_BYTES
d1201	c5t600144F06CF70900000004AB12BB30036d0s6	32559267840
d1202	c5t600144F06CF70900000004AB12BB40037d0s6	32559267840
d1203	c5t600144F06CF70900000004AB12BB50038d0s6	32559267840
d1204	c5t600144F06CF70900000004AB12BB50039d0s6	32559267840
d1205	c5t600144F06CF70900000004AB12BB5003Ad0s6	32559267840
d1206	c5t600144F06CF70900000004AB12BB6003Bd0s6	32559267840
d1207	c5t600144F06CF70900000004AB12BB6003Cd0s6	32559267840
d1208	c5t600144F06CF70900000004AB12BB6003Dd0s6	32559267840
d1209	c5t600144F06CF70900000004AB12BB6003Ed0s6	32559267840
d1210	c5t600144F06CF70900000004AB12BB6003Fd0s6	32559267840
d1211	c5t600144F06CF70900000004AB12BB60040d0s6	30462115840
d1212	c5t600144F06CF70900000004AB12BB60041d0s6	30462115840
d1213	c5t600144F06CF70900000004AB12BB60042d0s6	30462115840
d1214	c5t600144F06CF70900000004AB12BB60043d0s6	30462115840
d1215	c5t600144F06CF70900000004AB12BB70044d0s6	30462115840
d1216	c5t600144F06CF70900000004AB12BB70045d0s6	30462115840
d1217	c5t600144F06CF70900000004AB12BB70046d0s6	30462115840
d1218	c5t600144F06CF70900000004AB12BB70047d0s6	30462115840

d1219 c5t600144F06CF70900000004AB12BB70048d0s6 30462115840
d1220 c5t600144F06CF70900000004AB12BB70049d0s6 30462115840
d1221 c5t600144F06CF70900000004AB12BB7004Ad0s6 67067904000
d1222 c5t600144F06CF70900000004AB12BB7004Bd0s6 67067904000
d1223 c5t600144F06CF70900000004AB12BB7004Cd0s6 67067904000
d1224 c5t600144F06CF70900000004AB12BB7004Dd0s6 67067904000
d1225 c5t600144F06CF70900000004AB12BB8004Ed0s6 67067904000
d1226 c5t600144F06CF70900000004AB12BB8004Fd0s6 16432168960
d1227 c5t600144F06CF70900000004AB12BB80050d0s6 16757227520
d1228 c5t600144F06CF70900000004AB12BB80051d0s6 27494645760
d1229 c5t600144F06CF70900000004AB12BB80052d0s6 15729623040
d1230 c5t600144F06CF70900000004AB12BB80053d0s6 27672903680
d1231 c5t600144F06CF70900000004AB12BB80054d0s6 27672903680
d1232 c5t600144F06CF70900000004AB12BB80055d0s6 661585920
d1233 c5t600144F06CF70900000004AB12BB80056d0s6 263127040
d9990 c5t600144F06CF70900000004AC27C4C0001d0s6 180817428480
d9991 c5t600144F06CF70900000004AC27C4C0002d0s6 219773075456
d9992 c5t600144F06CF70900000004AC27C4C0003d0s6 221545168896
d9993 c5t600144F06CF70900000004AC27C4C0004d0s6 237819068416
d8999 c5t600144F06CF70900000004AC27C4C0005d0s6 404781727744
c7t0d0s6 c5t600144F06CF70900000004AC27C4D0006d0s6 892771825664

Mapping on comstar node db7-san1

SVM_DEV	DEVICE_ON_DBNODE	SIZE_IN_BYTES
d1201	c5t600144F04C654300000004AB12BB30036d0s6	32559267840
d1202	c5t600144F04C654300000004AB12BB40037d0s6	32559267840
d1203	c5t600144F04C654300000004AB12BB50038d0s6	32559267840
d1204	c5t600144F04C654300000004AB12BB60039d0s6	32559267840
d1205	c5t600144F04C654300000004AB12BB6003Ad0s6	32559267840
d1206	c5t600144F04C654300000004AB12BB6003Bd0s6	32559267840
d1207	c5t600144F04C654300000004AB12BB6003Cd0s6	32559267840
d1208	c5t600144F04C654300000004AB12BB6003Dd0s6	32559267840
d1209	c5t600144F04C654300000004AB12BB7003Ed0s6	32559267840
d1210	c5t600144F04C654300000004AB12BB7003Fd0s6	32559267840
d1211	c5t600144F04C654300000004AB12BB70040d0s6	30462115840
d1212	c5t600144F04C654300000004AB12BB70041d0s6	30462115840
d1213	c5t600144F04C654300000004AB12BB70042d0s6	30462115840
d1214	c5t600144F04C654300000004AB12BB70043d0s6	30462115840
d1215	c5t600144F04C654300000004AB12BB70044d0s6	30462115840
d1216	c5t600144F04C654300000004AB12BB70045d0s6	30462115840
d1217	c5t600144F04C654300000004AB12BB70046d0s6	30462115840
d1218	c5t600144F04C654300000004AB12BB80047d0s6	30462115840
d1219	c5t600144F04C654300000004AB12BB80048d0s6	30462115840
d1220	c5t600144F04C654300000004AB12BB80049d0s6	30462115840
d1221	c5t600144F04C654300000004AB12BB8004Ad0s6	67067904000
d1222	c5t600144F04C654300000004AB12BB8004Bd0s6	67067904000
d1223	c5t600144F04C654300000004AB12BB8004Cd0s6	67067904000
d1224	c5t600144F04C654300000004AB12BB8004Dd0s6	67067904000
d1225	c5t600144F04C654300000004AB12BB8004Ed0s6	67067904000
d1226	c5t600144F04C654300000004AB12BB8004Fd0s6	67067904000
d1227	c5t600144F04C654300000004AB12BB90050d0s6	16432168960
d1228	c5t600144F04C654300000004AB12BB90051d0s6	16757227520
d1229	c5t600144F04C654300000004AB12BB90052d0s6	27494645760
d1230	c5t600144F04C654300000004AB12BB90053d0s6	4195287040
d1231	c5t600144F04C654300000004AB12BB90054d0s6	27672903680
d1232	c5t600144F04C654300000004AB12BB90055d0s6	27672903680
d1233	c5t600144F04C654300000004AB12BB90056d0s6	5464064000
d1234	c5t600144F04C654300000004AB12BB90057d0s6	64247234560
d9990	c5t600144F04C654300000004AC27C4C0001d0s6	163851468800

d9991 c5t600144F04C65430000004AC27C4C0002d0s6 128367656960
d9992 c5t600144F04C65430000004AC27C4C0003d0s6 221870227456
d9993 c5t600144F04C65430000004AC27C4C0004d0s6 221545168896
d8999 c5t600144F04C65430000004AC27C4D0005d0s6 220165242880
c7t0d0s6 c5t600144F04C65430000004AC27C4D0006d0s6 892771825664

Mapping on comstar node db7-san2

SVM_DEV	DEVICE_ON_DBNODE	SIZE_IN_BYTES
d1201	c5t600144F02C90490000004AB12BB30034d0s6	32559267840
d1202	c5t600144F02C904900000004AB12BB40035d0s6	32559267840
d1203	c5t600144F02C904900000004AB12BB50036d0s6	32559267840
d1204	c5t600144F02C904900000004AB12BB50037d0s6	32559267840
d1205	c5t600144F02C904900000004AB12BB50038d0s6	32559267840
d1206	c5t600144F02C904900000004AB12BB60039d0s6	32559267840
d1207	c5t600144F02C904900000004AB12BB6003Ad0s6	32559267840
d1208	c5t600144F02C904900000004AB12BB6003Bd0s6	32559267840
d1209	c5t600144F02C904900000004AB12BB6003Cd0s6	32559267840
d1210	c5t600144F02C904900000004AB12BB6003Dd0s6	32559267840
d1211	c5t600144F02C904900000004AB12BB6003Ed0s6	30462115840
d1212	c5t600144F02C904900000004AB12BB6003Fd0s6	30462115840
d1213	c5t600144F02C904900000004AB12BB60040d0s6	30462115840
d1214	c5t600144F02C904900000004AB12BB60041d0s6	30462115840
d1215	c5t600144F02C904900000004AB12BB70042d0s6	30462115840
d1216	c5t600144F02C904900000004AB12BB70043d0s6	30462115840
d1217	c5t600144F02C904900000004AB12BB70044d0s6	30462115840
d1218	c5t600144F02C904900000004AB12BB70045d0s6	30462115840
d1219	c5t600144F02C904900000004AB12BB70046d0s6	30462115840
d1220	c5t600144F02C904900000004AB12BB70047d0s6	30462115840
d1221	c5t600144F02C904900000004AB12BB70048d0s6	67067904000
d1222	c5t600144F02C904900000004AB12BB70049d0s6	67067904000
d1223	c5t600144F02C904900000004AB12BB7004Ad0s6	67067904000
d1224	c5t600144F02C904900000004AB12BB8004Bd0s6	67067904000
d1225	c5t600144F02C904900000004AB12BB8004Cd0s6	67067904000
d1226	c5t600144F02C904900000004AB12BB8004Dd0s6	67067904000
d1227	c5t600144F02C904900000004AB12BB8004Ed0s6	16432168960
d1228	c5t600144F02C904900000004AB12BB8004Fd0s6	16757227520
d1229	c5t600144F02C904900000004AB12BB80050d0s6	27494645760
d1230	c5t600144F02C904900000004AB12BB80051d0s6	4195287040
d1231	c5t600144F02C904900000004AB12BB80052d0s6	27672903680
d1232	c5t600144F02C904900000004AB12BB80053d0s6	27672903680
d1233	c5t600144F02C904900000004AB12BB80054d0s6	420413440
d9990	c5t600144F02C904900000004AC27C4C0001d0s6	168895119360
d9991	c5t600144F02C904900000004AC27C4C0002d0s6	192614957056
d9992	c5t600144F02C904900000004AC27C4C0003d0s6	221870227456
d9993	c5t600144F02C904900000004AC27C4C0004d0s6	221545168896
d8999	c5t600144F02C904900000004AC27C4C0005d0s6	358749241344
c7t0d0s6	c5t600144F02C904900000004AC27C4D0006d0s6	892771825664

Mapping on comstar node db7-san3

SVM_DEV	DEVICE_ON_DBNODE	SIZE_IN_BYTES
d1201	c5t600144F094AD810000004AB12BB30035d0s6	32559267840
d1202	c5t600144F094AD810000004AB12BB40036d0s6	32559267840
d1203	c5t600144F094AD810000004AB12BB40037d0s6	32559267840
d1204	c5t600144F094AD810000004AB12BB50038d0s6	32559267840
d1205	c5t600144F094AD810000004AB12BB50039d0s6	32559267840
d1206	c5t600144F094AD810000004AB12BB5003Ad0s6	32559267840

d1207 c5t600144F094AD810000004AB12BB5003Bd0s6 32559267840
d1208 c5t600144F094AD810000004AB12BB5003Cd0s6 32559267840
d1209 c5t600144F094AD810000004AB12BB6003Dd0s6 32559267840
d1210 c5t600144F094AD810000004AB12BB6003Ed0s6 32559267840
d1211 c5t600144F094AD810000004AB12BB6003Fd0s6 30462115840
d1212 c5t600144F094AD810000004AB12BB60040d0s6 30462115840
d1213 c5t600144F094AD810000004AB12BB60041d0s6 30462115840
d1214 c5t600144F094AD810000004AB12BB60042d0s6 30462115840
d1215 c5t600144F094AD810000004AB12BB60043d0s6 30462115840
d1216 c5t600144F094AD810000004AB12BB60044d0s6 30462115840
d1217 c5t600144F094AD810000004AB12BB60045d0s6 30462115840
d1218 c5t600144F094AD810000004AB12BB70046d0s6 30462115840
d1219 c5t600144F094AD810000004AB12BB70047d0s6 30462115840
d1220 c5t600144F094AD810000004AB12BB70048d0s6 30462115840
d1221 c5t600144F094AD810000004AB12BB70049d0s6 67067904000
d1222 c5t600144F094AD810000004AB12BB7004Ad0s6 67067904000
d1223 c5t600144F094AD810000004AB12BB7004Bd0s6 67067904000
d1224 c5t600144F094AD810000004AB12BB7004Cd0s6 67067904000
d1225 c5t600144F094AD810000004AB12BB7004Dd0s6 67067904000
d1226 c5t600144F094AD810000004AB12BB8004Ed0s6 67067904000
d1227 c5t600144F094AD810000004AB12BB8004Fd0s6 16432168960
d1228 c5t600144F094AD810000004AB12BB80050d0s6 16757227520
d1229 c5t600144F094AD810000004AB12BB80051d0s6 27494645760
d1230 c5t600144F094AD810000004AB12BB80052d0s6 27672903680
d1231 c5t600144F094AD810000004AB12BB80053d0s6 27672903680
d1232 c5t600144F094AD810000004AB12BB80054d0s6 66606530560
d1233 c5t600144F094AD810000004AB12BB80055d0s6 20228014080
d9990 c5t600144F094AD810000004AC27C4C0001d0s6 149087518720
d9991 c5t600144F094AD810000004AC27C4C0002d0s6 169137340416
d9992 c5t600144F094AD810000004AC27C4C0003d0s6 221870227456
d9993 c5t600144F094AD810000004AC27C4C0004d0s6 182611542016
d8999 c5t600144F094AD810000004AC27C4C0005d0s6 190115151872
c7t0d0s6 c5t600144F094AD810000004AC27C4D0006d0s6 892771825664

Mapping on comstar node db7-san4

SVM_DEV	DEVICE_ON_DBNODE	SIZE_IN_BYTES
d1201	c5t600144F088DDC00000004AB12BB30036d0s6	32559267840
d1202	c5t600144F088DDC00000004AB12BB40037d0s6	32559267840
d1203	c5t600144F088DDC00000004AB12BB50038d0s6	32559267840
d1204	c5t600144F088DDC00000004AB12BB50039d0s6	32559267840
d1205	c5t600144F088DDC00000004AB12BB5003Ad0s6	32559267840
d1206	c5t600144F088DDC00000004AB12BB6003Bd0s6	32559267840
d1207	c5t600144F088DDC00000004AB12BB6003Cd0s6	32559267840
d1208	c5t600144F088DDC00000004AB12BB6003Dd0s6	32559267840
d1209	c5t600144F088DDC00000004AB12BB6003Ed0s6	32559267840
d1210	c5t600144F088DDC00000004AB12BB6003Fd0s6	32559267840
d1211	c5t600144F088DDC00000004AB12BB60040d0s6	30462115840
d1212	c5t600144F088DDC00000004AB12BB60041d0s6	30462115840
d1213	c5t600144F088DDC00000004AB12BB60042d0s6	30462115840
d1214	c5t600144F088DDC00000004AB12BB60043d0s6	30462115840
d1215	c5t600144F088DDC00000004AB12BB70044d0s6	30462115840
d1216	c5t600144F088DDC00000004AB12BB70045d0s6	30462115840
d1217	c5t600144F088DDC00000004AB12BB70046d0s6	30462115840
d1218	c5t600144F088DDC00000004AB12BB70047d0s6	30462115840
d1219	c5t600144F088DDC00000004AB12BB70048d0s6	30462115840
d1220	c5t600144F088DDC00000004AB12BB70049d0s6	30462115840
d1221	c5t600144F088DDC00000004AB12BB7004Ad0s6	67067904000
d1222	c5t600144F088DDC00000004AB12BB7004Bd0s6	67067904000
d1223	c5t600144F088DDC00000004AB12BB7004Cd0s6	67067904000

d1224 c5t600144F088DDC00000004AB12BB8004Dd0s6 67067904000
d1225 c5t600144F088DDC00000004AB12BB8004Ed0s6 67067904000
d1226 c5t600144F088DDC00000004AB12BB8004Fd0s6 16432168960
d1227 c5t600144F088DDC00000004AB12BB80050d0s6 16757227520
d1228 c5t600144F088DDC00000004AB12BB80051d0s6 27494645760
d1229 c5t600144F088DDC00000004AB12BB80052d0s6 8490254336
d1230 c5t600144F088DDC00000004AB12BB80053d0s6 27672903680
d1231 c5t600144F088DDC00000004AB12BB80054d0s6 27672903680
d1232 c5t600144F088DDC00000004AB12BB80055d0s6 66606530560
d1233 c5t600144F088DDC00000004AB12BB80056d0s6 74383360
d9990 c5t600144F088DDC00000004AC27C4C0001d0s6 188245540864
d9991 c5t600144F088DDC00000004AC27C4C0002d0s6 219773075456
d9992 c5t600144F088DDC00000004AC27C4C0003d0s6 221545168896
d9993 c5t600144F088DDC00000004AC27C4C0004d0s6 171874123776
d8999 c5t600144F088DDC00000004AC27C4C0005d0s6 280508694528
c7t0d0s6 c5t600144F088DDC00000004AC27C4D0006d0s6 892771825664

Mapping on comstar node db7-san5

SVM_DEV	DEVICE_ON_DBNODE	SIZE_IN_BYTES
d1201	c5t600144F00CE7490000004AB12BB30036d0s6	32559267840
d1202	c5t600144F00CE7490000004AB12BB40037d0s6	32559267840
d1203	c5t600144F00CE7490000004AB12BB50038d0s6	32559267840
d1204	c5t600144F00CE7490000004AB12BB60039d0s6	32559267840
d1205	c5t600144F00CE7490000004AB12BB6003Ad0s6	32559267840
d1206	c5t600144F00CE7490000004AB12BB6003Bd0s6	32559267840
d1207	c5t600144F00CE7490000004AB12BB6003Cd0s6	32559267840
d1208	c5t600144F00CE7490000004AB12BB6003Dd0s6	32559267840
d1209	c5t600144F00CE7490000004AB12BB6003Ed0s6	32559267840
d1210	c5t600144F00CE7490000004AB12BB6003Fd0s6	32559267840
d1211	c5t600144F00CE7490000004AB12BB60040d0s6	30462115840
d1212	c5t600144F00CE7490000004AB12BB60041d0s6	30462115840
d1213	c5t600144F00CE7490000004AB12BB70042d0s6	30462115840
d1214	c5t600144F00CE7490000004AB12BB70043d0s6	30462115840
d1215	c5t600144F00CE7490000004AB12BB70044d0s6	30462115840
d1216	c5t600144F00CE7490000004AB12BB70045d0s6	30462115840
d1217	c5t600144F00CE7490000004AB12BB70046d0s6	30462115840
d1218	c5t600144F00CE7490000004AB12BB70047d0s6	30462115840
d1219	c5t600144F00CE7490000004AB12BB70048d0s6	30462115840
d1220	c5t600144F00CE7490000004AB12BB70049d0s6	30462115840
d1221	c5t600144F00CE7490000004AB12BB7004Ad0s6	67067904000
d1222	c5t600144F00CE7490000004AB12BB8004Bd0s6	67067904000
d1223	c5t600144F00CE7490000004AB12BB8004Cd0s6	67067904000
d1224	c5t600144F00CE7490000004AB12BB8004Dd0s6	67067904000
d1225	c5t600144F00CE7490000004AB12BB8004Ed0s6	67067904000
d1226	c5t600144F00CE7490000004AB12BB8004Fd0s6	16432168960
d1227	c5t600144F00CE7490000004AB12BB80050d0s6	16757227520
d1228	c5t600144F00CE7490000004AB12BB80051d0s6	27494645760
d1229	c5t600144F00CE7490000004AB12BB80052d0s6	15729623040
d1230	c5t600144F00CE7490000004AB12BB80053d0s6	27672903680
d1231	c5t600144F00CE7490000004AB12BB80054d0s6	27672903680
d1232	c5t600144F00CE7490000004AB12BB90055d0s6	661585920
d1233	c5t600144F00CE7490000004AB12BB90056d0s6	263127040
d9990	c5t600144F00CE7490000004AC27C4C0001d0s6	180817428480
d9991	c5t600144F00CE7490000004AC27C4C0002d0s6	219773075456
d9992	c5t600144F00CE7490000004AC27C4C0003d0s6	221545168896
d9993	c5t600144F00CE7490000004AC27C4C0004d0s6	237819068416
d8999	c5t600144F00CE7490000004AC27C4C0005d0s6	397542359040
c7t0d0s6	c5t600144F00CE7490000004AC27C4D0006d0s6	892771825664

Mapping on comstar node db8-san1

SVM_DEV	DEVICE_ON_DBNODE	SIZE_IN_BYTES
d1201	c5t600144F0D4CA020000004AB12BB30036d0s6	32559267840
d1202	c5t600144F0D4CA020000004AB12BB40037d0s6	32559267840
d1203	c5t600144F0D4CA020000004AB12BB50038d0s6	32559267840
d1204	c5t600144F0D4CA020000004AB12BB60039d0s6	32559267840
d1205	c5t600144F0D4CA020000004AB12BB6003Ad0s6	32559267840
d1206	c5t600144F0D4CA020000004AB12BB6003Bd0s6	32559267840
d1207	c5t600144F0D4CA020000004AB12BB6003Cd0s6	32559267840
d1208	c5t600144F0D4CA020000004AB12BB6003Dd0s6	32559267840
d1209	c5t600144F0D4CA020000004AB12BB6003Ed0s6	32559267840
d1210	c5t600144F0D4CA020000004AB12BB6003Fd0s6	32559267840
d1211	c5t600144F0D4CA020000004AB12BB60040d0s6	30462115840
d1212	c5t600144F0D4CA020000004AB12BB60041d0s6	30462115840
d1213	c5t600144F0D4CA020000004AB12BB70042d0s6	30462115840
d1214	c5t600144F0D4CA020000004AB12BB70043d0s6	30462115840
d1215	c5t600144F0D4CA020000004AB12BB70044d0s6	30462115840
d1216	c5t600144F0D4CA020000004AB12BB70045d0s6	30462115840
d1217	c5t600144F0D4CA020000004AB12BB70046d0s6	30462115840
d1218	c5t600144F0D4CA020000004AB12BB70047d0s6	30462115840
d1219	c5t600144F0D4CA020000004AB12BB70048d0s6	30462115840
d1220	c5t600144F0D4CA020000004AB12BB70049d0s6	30462115840
d1221	c5t600144F0D4CA020000004AB12BB7004Ad0s6	67067904000
d1222	c5t600144F0D4CA020000004AB12BB8004Bd0s6	67067904000
d1223	c5t600144F0D4CA020000004AB12BB8004Cd0s6	67067904000
d1224	c5t600144F0D4CA020000004AB12BB8004Dd0s6	67067904000
d1225	c5t600144F0D4CA020000004AB12BB8004Ed0s6	67067904000
d1226	c5t600144F0D4CA020000004AB12BB8004Fd0s6	67067904000
d1227	c5t600144F0D4CA020000004AB12BB80050d0s6	16432168960
d1228	c5t600144F0D4CA020000004AB12BB80051d0s6	16757227520
d1229	c5t600144F0D4CA020000004AB12BB80052d0s6	27494645760
d1230	c5t600144F0D4CA020000004AB12BB80053d0s6	4195287040
d1231	c5t600144F0D4CA020000004AB12BB80054d0s6	27672903680
d1232	c5t600144F0D4CA020000004AB12BB90055d0s6	27672903680
d1233	c5t600144F0D4CA020000004AB12BB90056d0s6	5464064000
d1234	c5t600144F0D4CA020000004AB12BB90057d0s6	2148466688
d9990	c5t600144F0D4CA020000004AC27C4C0001d0s6	163851468800
d9991	c5t600144F0D4CA020000004AC27C4C0002d0s6	190466424832
d9992	c5t600144F0D4CA020000004AC27C4C0003d0s6	221870227456
d9993	c5t600144F0D4CA020000004AC27C4C0004d0s6	221545168896
d8999	c5t600144F0D4CA020000004AC27C4C0005d0s6	282264010752
c7t0d0s6	c5t600144F0D4CA020000004AC27C4D0006d0s6	892771825664

Mapping on comstar node db8-san2

SVM_DEV	DEVICE_ON_DBNODE	SIZE_IN_BYTES
d1201	c5t600144F05C60CC0000004AB12BB30034d0s6	32559267840
d1202	c5t600144F05C60CC0000004AB12BB40035d0s6	32559267840
d1203	c5t600144F05C60CC0000004AB12BB50036d0s6	32559267840
d1204	c5t600144F05C60CC0000004AB12BB60037d0s6	32559267840
d1205	c5t600144F05C60CC0000004AB12BB60038d0s6	32559267840
d1206	c5t600144F05C60CC0000004AB12BB60039d0s6	32559267840
d1207	c5t600144F05C60CC0000004AB12BB6003Ad0s6	32559267840
d1208	c5t600144F05C60CC0000004AB12BB6003Bd0s6	32559267840
d1209	c5t600144F05C60CC0000004AB12BB7003Cd0s6	32559267840
d1210	c5t600144F05C60CC0000004AB12BB7003Dd0s6	32559267840
d1211	c5t600144F05C60CC0000004AB12BB7003Ed0s6	30462115840

d1212 c5t600144F05C60CC0000004AB12BB7003Fd0s6 30462115840
d1213 c5t600144F05C60CC0000004AB12BB70040d0s6 30462115840
d1214 c5t600144F05C60CC0000004AB12BB70041d0s6 30462115840
d1215 c5t600144F05C60CC0000004AB12BB70042d0s6 30462115840
d1216 c5t600144F05C60CC0000004AB12BB70043d0s6 30462115840
d1217 c5t600144F05C60CC0000004AB12BB70044d0s6 30462115840
d1218 c5t600144F05C60CC0000004AB12BB80045d0s6 30462115840
d1219 c5t600144F05C60CC0000004AB12BB80046d0s6 30462115840
d1220 c5t600144F05C60CC0000004AB12BB80047d0s6 30462115840
d1221 c5t600144F05C60CC0000004AB12BB80048d0s6 67067904000
d1222 c5t600144F05C60CC0000004AB12BB80049d0s6 67067904000
d1223 c5t600144F05C60CC0000004AB12BB8004Ad0s6 67067904000
d1224 c5t600144F05C60CC0000004AB12BB8004Bd0s6 67067904000
d1225 c5t600144F05C60CC0000004AB12BB8004Cd0s6 67067904000
d1226 c5t600144F05C60CC0000004AB12BB9004Dd0s6 67067904000
d1227 c5t600144F05C60CC0000004AB12BB9004Ed0s6 16432168960
d1228 c5t600144F05C60CC0000004AB12BB9004Fd0s6 16757227520
d1229 c5t600144F05C60CC0000004AB12BB90050d0s6 27494645760
d1230 c5t600144F05C60CC0000004AB12BB90051d0s6 4195287040
d1231 c5t600144F05C60CC0000004AB12BB90052d0s6 27672903680
d1232 c5t600144F05C60CC0000004AB12BB90053d0s6 27672903680
d1233 c5t600144F05C60CC0000004AB12BB90054d0s6 420413440
d9990 c5t600144F05C60CC0000004AC27C4C0001d0s6 168891519360
d9991 c5t600144F05C60CC0000004AC27C4C0002d0s6 192614957056
d9992 c5t600144F05C60CC0000004AC27C4C0003d0s6 221870227456
d9993 c5t600144F05C60CC0000004AC27C4C0004d0s6 221545168896
d8999 c5t600144F05C60CC0000004AC27C4C0005d0s6 358749241344
c7t0d0s6 c5t600144F05C60CC0000004AC27C4D0006d0s6 892771825664

Mapping on comstar node db8-san3

SVM_DEV	DEVICE_ON_DBNODE	SIZE_IN_BYTES
d1201	c5t600144F0C0AE810000004AB12BB30035d0s6	32559267840
d1202	c5t600144F0C0AE810000004AB12BB40036d0s6	32559267840
d1203	c5t600144F0C0AE810000004AB12BB50037d0s6	32559267840
d1204	c5t600144F0C0AE810000004AB12BB60038d0s6	32559267840
d1205	c5t600144F0C0AE810000004AB12BB60039d0s6	32559267840
d1206	c5t600144F0C0AE810000004AB12BB6003Ad0s6	32559267840
d1207	c5t600144F0C0AE810000004AB12BB6003Bd0s6	32559267840
d1208	c5t600144F0C0AE810000004AB12BB6003Cd0s6	32559267840
d1209	c5t600144F0C0AE810000004AB12BB6003Dd0s6	32559267840
d1210	c5t600144F0C0AE810000004AB12BB6003Ed0s6	32559267840
d1211	c5t600144F0C0AE810000004AB12BB6003Fd0s6	30462115840
d1212	c5t600144F0C0AE810000004AB12BB60040d0s6	30462115840
d1213	c5t600144F0C0AE810000004AB12BB70041d0s6	30462115840
d1214	c5t600144F0C0AE810000004AB12BB70042d0s6	30462115840
d1215	c5t600144F0C0AE810000004AB12BB70043d0s6	30462115840
d1216	c5t600144F0C0AE810000004AB12BB70044d0s6	30462115840
d1217	c5t600144F0C0AE810000004AB12BB70045d0s6	30462115840
d1218	c5t600144F0C0AE810000004AB12BB70046d0s6	30462115840
d1219	c5t600144F0C0AE810000004AB12BB70047d0s6	30462115840
d1220	c5t600144F0C0AE810000004AB12BB70048d0s6	30462115840
d1221	c5t600144F0C0AE810000004AB12BB70049d0s6	67067904000
d1222	c5t600144F0C0AE810000004AB12BB8004Ad0s6	67067904000
d1223	c5t600144F0C0AE810000004AB12BB8004Bd0s6	67067904000
d1224	c5t600144F0C0AE810000004AB12BB8004Cd0s6	67067904000
d1225	c5t600144F0C0AE810000004AB12BB8004Dd0s6	67067904000
d1226	c5t600144F0C0AE810000004AB12BB8004Ed0s6	67067904000
d1227	c5t600144F0C0AE810000004AB12BB8004Fd0s6	16432168960
d1228	c5t600144F0C0AE810000004AB12BB80050d0s6	16757227520

d1229 c5t600144F0C0AE810000004AB12BB80051d0s6 27494645760
d1230 c5t600144F0C0AE810000004AB12BB80052d0s6 27672903680
d1231 c5t600144F0C0AE810000004AB12BB90053d0s6 27672903680
d1232 c5t600144F0C0AE810000004AB12BB90054d0s6 66606530560
d1233 c5t600144F0C0AE810000004AB12BB90055d0s6 20228014080
d9990 c5t600144F0C0AE810000004AC27C4C0001d0s6 149087518720
d9991 c5t600144F0C0AE810000004AC27C4C0002d0s6 169137340416
d9992 c5t600144F0C0AE810000004AC27C4C0003d0s6 221870227456
d9993 c5t600144F0C0AE810000004AC27C4C0004d0s6 182611542016
d8999 c5t600144F0C0AE810000004AC27C4D0005d0s6 190115151872
c7t0d0s6 c5t600144F0C0AE810000004AC27C4D0006d0s6 892771825664

Mapping on comstar node db8-san4

SVM_DEV	DEVICE_ON_DBNODE	SIZE_IN_BYTES
d1201	c5t600144F050AB020000004AB12BB30036d0s6	32559267840
d1202	c5t600144F050AB020000004AB12BB40037d0s6	32559267840
d1203	c5t600144F050AB020000004AB12BB40038d0s6	32559267840
d1204	c5t600144F050AB020000004AB12BB50039d0s6	32559267840
d1205	c5t600144F050AB020000004AB12BB5003Ad0s6	32559267840
d1206	c5t600144F050AB020000004AB12BB5003Bd0s6	32559267840
d1207	c5t600144F050AB020000004AB12BB5003Cd0s6	32559267840
d1208	c5t600144F050AB020000004AB12BB5003Dd0s6	32559267840
d1209	c5t600144F050AB020000004AB12BB5003Ed0s6	32559267840
d1210	c5t600144F050AB020000004AB12BB6003Fd0s6	32559267840
d1211	c5t600144F050AB020000004AB12BB60040d0s6	30462115840
d1212	c5t600144F050AB020000004AB12BB60041d0s6	30462115840
d1213	c5t600144F050AB020000004AB12BB60042d0s6	30462115840
d1214	c5t600144F050AB020000004AB12BB60043d0s6	30462115840
d1215	c5t600144F050AB020000004AB12BB60044d0s6	30462115840
d1216	c5t600144F050AB020000004AB12BB60045d0s6	30462115840
d1217	c5t600144F050AB020000004AB12BB60046d0s6	30462115840
d1218	c5t600144F050AB020000004AB12BB60047d0s6	30462115840
d1219	c5t600144F050AB020000004AB12BB70048d0s6	30462115840
d1220	c5t600144F050AB020000004AB12BB70049d0s6	30462115840
d1221	c5t600144F050AB020000004AB12BB7004Ad0s6	67067904000
d1222	c5t600144F050AB020000004AB12BB7004Bd0s6	67067904000
d1223	c5t600144F050AB020000004AB12BB7004Cd0s6	67067904000
d1224	c5t600144F050AB020000004AB12BB7004Dd0s6	67067904000
d1225	c5t600144F050AB020000004AB12BB7004Ed0s6	67067904000
d1226	c5t600144F050AB020000004AB12BB7004Fd0s6	16432168960
d1227	c5t600144F050AB020000004AB12BB70050d0s6	16757227520
d1228	c5t600144F050AB020000004AB12BB80051d0s6	27494645760
d1229	c5t600144F050AB020000004AB12BB80052d0s6	8490254336
d1230	c5t600144F050AB020000004AB12BB80053d0s6	27672903680
d1231	c5t600144F050AB020000004AB12BB80054d0s6	27672903680
d1232	c5t600144F050AB020000004AB12BB80055d0s6	66606530560
d1233	c5t600144F050AB020000004AB12BB80056d0s6	74383360
d9990	c5t600144F050AB020000004AC27C4C0001d0s6	188245540864
d9991	c5t600144F050AB020000004AC27C4C0002d0s6	219773075456
d9992	c5t600144F050AB020000004AC27C4C0003d0s6	221545168896
d9993	c5t600144F050AB020000004AC27C4C0004d0s6	171874123776
d8999	c5t600144F050AB020000004AC27C4C0005d0s6	280508694528
c7t0d0s6	c5t600144F050AB020000004AC27C4D0006d0s6	892771825664

Mapping on comstar node db8-san5

SVM_DEV	DEVICE_ON_DBNODE	SIZE_IN_BYTES
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d1201 c5t600144F0FC7B4A0000004AB12BB30036d0s6 32559267840
d1202 c5t600144F0FC7B4A0000004AB12BB40037d0s6 32559267840
d1203 c5t600144F0FC7B4A0000004AB12BB40038d0s6 32559267840
d1204 c5t600144F0FC7B4A0000004AB12BB50039d0s6 32559267840
d1205 c5t600144F0FC7B4A0000004AB12BB5003Ad0s6 32559267840
d1206 c5t600144F0FC7B4A0000004AB12BB5003Bd0s6 32559267840
d1207 c5t600144F0FC7B4A0000004AB12BB5003Cd0s6 32559267840
d1208 c5t600144F0FC7B4A0000004AB12BB5003Dd0s6 32559267840
d1209 c5t600144F0FC7B4A0000004AB12BB5003Ed0s6 32559267840
d1210 c5t600144F0FC7B4A0000004AB12BB6003Fd0s6 32559267840
d1211 c5t600144F0FC7B4A0000004AB12BB60040d0s6 30462115840
d1212 c5t600144F0FC7B4A0000004AB12BB60041d0s6 30462115840
d1213 c5t600144F0FC7B4A0000004AB12BB60042d0s6 30462115840
d1214 c5t600144F0FC7B4A0000004AB12BB60043d0s6 30462115840
d1215 c5t600144F0FC7B4A0000004AB12BB60044d0s6 30462115840
d1216 c5t600144F0FC7B4A0000004AB12BB60045d0s6 30462115840
d1217 c5t600144F0FC7B4A0000004AB12BB60046d0s6 30462115840
d1218 c5t600144F0FC7B4A0000004AB12BB70047d0s6 30462115840
d1219 c5t600144F0FC7B4A0000004AB12BB70048d0s6 30462115840
d1220 c5t600144F0FC7B4A0000004AB12BB70049d0s6 30462115840
d1221 c5t600144F0FC7B4A0000004AB12BB7004Ad0s6 67067904000
d1222 c5t600144F0FC7B4A0000004AB12BB7004Bd0s6 67067904000
d1223 c5t600144F0FC7B4A0000004AB12BB7004Cd0s6 67067904000
d1224 c5t600144F0FC7B4A0000004AB12BB7004Dd0s6 67067904000
d1225 c5t600144F0FC7B4A0000004AB12BB7004Ed0s6 67067904000
d1226 c5t600144F0FC7B4A0000004AB12BB7004Fd0s6 16432168960
d1227 c5t600144F0FC7B4A0000004AB12BB80050d0s6 16757227520
d1228 c5t600144F0FC7B4A0000004AB12BB80051d0s6 27494645760
d1229 c5t600144F0FC7B4A0000004AB12BB80052d0s6 15729623040
d1230 c5t600144F0FC7B4A0000004AB12BB80053d0s6 27672903680
d1231 c5t600144F0FC7B4A0000004AB12BB80054d0s6 27672903680
d1232 c5t600144F0FC7B4A0000004AB12BB80055d0s6 661585920
d1233 c5t600144F0FC7B4A0000004AB12BB80056d0s6 263127040
d9990 c5t600144F0FC7B4A0000004AC27C4C0001d0s6 180817428480
d9991 c5t600144F0FC7B4A0000004AC27C4C0002d0s6 21973075456
d9992 c5t600144F0FC7B4A0000004AC27C4C0003d0s6 221545168896
d9993 c5t600144F0FC7B4A0000004AC27C4C0004d0s6 237819068416
d8999 c5t600144F0FC7B4A0000004AC27C4C0005d0s6 397542359040
c7t0d0s6 c5t600144F0FC7B4A0000004AC27C4D0006d0s6 892771825664

Mapping on comstar node db9-san1

SVM_DEV	DEVICE_ON_DBNODE	SIZE_IN_BYTES
=====		
d1201	c5t600144F0B4598C0000004AB12B9B0036d0s6	32559267840
d1202	c5t600144F0B4598C0000004AB12B9C0037d0s6	32559267840
d1203	c5t600144F0B4598C0000004AB12B9C0038d0s6	32559267840
d1204	c5t600144F0B4598C0000004AB12B9D0039d0s6	32559267840
d1205	c5t600144F0B4598C0000004AB12B9D003Ad0s6	32559267840
d1206	c5t600144F0B4598C0000004AB12B9D003Bd0s6	32559267840
d1207	c5t600144F0B4598C0000004AB12B9D003Cd0s6	32559267840
d1208	c5t600144F0B4598C0000004AB12B9E003Dd0s6	32559267840
d1209	c5t600144F0B4598C0000004AB12B9E003Ed0s6	32559267840
d1210	c5t600144F0B4598C0000004AB12B9E003Fd0s6	32559267840
d1211	c5t600144F0B4598C0000004AB12B9E0040d0s6	30462115840
d1212	c5t600144F0B4598C0000004AB12B9E0041d0s6	30462115840
d1213	c5t600144F0B4598C0000004AB12B9E0042d0s6	30462115840
d1214	c5t600144F0B4598C0000004AB12B9E0043d0s6	30462115840
d1215	c5t600144F0B4598C0000004AB12B9E0044d0s6	30462115840
d1216	c5t600144F0B4598C0000004AB12B9E0045d0s6	30462115840
d1217	c5t600144F0B4598C0000004AB12B9F0046d0s6	30462115840

d1218 c5t600144F0B4598C0000004AB12B9F0047d0s6 30462115840
d1219 c5t600144F0B4598C0000004AB12B9F0048d0s6 30462115840
d1220 c5t600144F0B4598C0000004AB12B9F0049d0s6 30462115840
d1221 c5t600144F0B4598C0000004AB12B9F004Ad0s6 67067904000
d1222 c5t600144F0B4598C0000004AB12B9F004Bd0s6 67067904000
d1223 c5t600144F0B4598C0000004AB12B9F004Cd0s6 67067904000
d1224 c5t600144F0B4598C0000004AB12B9F004Dd0s6 67067904000
d1225 c5t600144F0B4598C0000004AB12B9F004Ed0s6 67067904000
d1226 c5t600144F0B4598C0000004AB12B9F004Fd0s6 67067904000
d1227 c5t600144F0B4598C0000004AB12BA00050d0s6 16432168960
d1228 c5t600144F0B4598C0000004AB12BA00051d0s6 16757227520
d1229 c5t600144F0B4598C0000004AB12BA00052d0s6 27494645760
d1230 c5t600144F0B4598C0000004AB12BA00053d0s6 4195287040
d1231 c5t600144F0B4598C0000004AB12BA00054d0s6 27672903680
d1232 c5t600144F0B4598C0000004AB12BA00055d0s6 27672903680
d1233 c5t600144F0B4598C0000004AB12BA00056d0s6 5464064000
d1234 c5t600144F0B4598C0000004AB12BA00057d0s6 25166807040
d9990 c5t600144F0B4598C0000004AC27C6B0001d0s6 163851468800
d9991 c5t600144F0B4598C0000004AC27C6B0002d0s6 167448084480
d9992 c5t600144F0B4598C0000004AC27C6B0003d0s6 221870227456
d9993 c5t600144F0B4598C0000004AC27C6B0004d0s6 221545168896
d8999 c5t600144F0B4598C0000004AC27C6C0005d0s6 259245670400
c7t0d0s6 c5t600144F0B4598C0000004AC27C6C0006d0s6 892771825664

Mapping on comstar node db9-san2

SVM_DEV	DEVICE_ON_DBNODE	SIZE_IN_BYTES
=====		
d1201	c5t600144F0A811CB0000004AB12B9B0034d0s6	32559267840
d1202	c5t600144F0A811CB0000004AB12B9C0035d0s6	32559267840
d1203	c5t600144F0A811CB0000004AB12B9D0036d0s6	32559267840
d1204	c5t600144F0A811CB0000004AB12B9D0037d0s6	32559267840
d1205	c5t600144F0A811CB0000004AB12B9D0038d0s6	32559267840
d1206	c5t600144F0A811CB0000004AB12B9D0039d0s6	32559267840
d1207	c5t600144F0A811CB0000004AB12B9E003Ad0s6	32559267840
d1208	c5t600144F0A811CB0000004AB12B9E003Bd0s6	32559267840
d1209	c5t600144F0A811CB0000004AB12B9E003Cd0s6	32559267840
d1210	c5t600144F0A811CB0000004AB12B9E003Dd0s6	32559267840
d1211	c5t600144F0A811CB0000004AB12B9E003Ed0s6	30462115840
d1212	c5t600144F0A811CB0000004AB12B9E003Fd0s6	30462115840
d1213	c5t600144F0A811CB0000004AB12B9E0040d0s6	30462115840
d1214	c5t600144F0A811CB0000004AB12B9E0041d0s6	30462115840
d1215	c5t600144F0A811CB0000004AB12B9E0042d0s6	30462115840
d1216	c5t600144F0A811CB0000004AB12B9E0043d0s6	30462115840
d1217	c5t600144F0A811CB0000004AB12B9F0044d0s6	30462115840
d1218	c5t600144F0A811CB0000004AB12B9F0045d0s6	30462115840
d1219	c5t600144F0A811CB0000004AB12B9F0046d0s6	30462115840
d1220	c5t600144F0A811CB0000004AB12B9F0047d0s6	30462115840
d1221	c5t600144F0A811CB0000004AB12B9F0048d0s6	67067904000
d1222	c5t600144F0A811CB0000004AB12B9F0049d0s6	67067904000
d1223	c5t600144F0A811CB0000004AB12B9F004Ad0s6	67067904000
d1224	c5t600144F0A811CB0000004AB12B9F004Bd0s6	67067904000
d1225	c5t600144F0A811CB0000004AB12B9F004Cd0s6	67067904000
d1226	c5t600144F0A811CB0000004AB12BA0004Dd0s6	67067904000
d1227	c5t600144F0A811CB0000004AB12BA0004Ed0s6	16432168960
d1228	c5t600144F0A811CB0000004AB12BA0004Fd0s6	16757227520
d1229	c5t600144F0A811CB0000004AB12BA00050d0s6	27494645760
d1230	c5t600144F0A811CB0000004AB12BA00051d0s6	4195287040
d1231	c5t600144F0A811CB0000004AB12BA00052d0s6	27672903680
d1232	c5t600144F0A811CB0000004AB12BA00053d0s6	27672903680
d1233	c5t600144F0A811CB0000004AB12BA00054d0s6	420413440

d19990 c5t600144F0A811CB0000004AC27C6B0001d0s6 168895119360
d9991 c5t600144F0A811CB0000004AC27C6B0002d0s6 192614957056
d9992 c5t600144F0A811CB0000004AC27C6B0003d0s6 221870227456
d9993 c5t600144F0A811CB0000004AC27C6B0004d0s6 221545168896
d8999 c5t600144F0A811CB0000004AC27C6C0005d0s6 358749241344
c7t0d0s6 c5t600144F0A811CB0000004AC27C6C0006d0s6 892771825664

Mapping on comstar node db9-san3

SVM_DEV	DEVICE_ON_DBNODE	SIZE_IN_BYTES
d1201	c5t600144F010790D0000004AB12B9B0035d0s6	32559267840
d1202	c5t600144F010790D0000004AB12B9C0036d0s6	32559267840
d1203	c5t600144F010790D0000004AB12B9C0037d0s6	32559267840
d1204	c5t600144F010790D0000004AB12B9D0038d0s6	32559267840
d1205	c5t600144F010790D0000004AB12B9D0039d0s6	32559267840
d1206	c5t600144F010790D0000004AB12B9D003Ad0s6	32559267840
d1207	c5t600144F010790D0000004AB12B9D003Bd0s6	32559267840
d1208	c5t600144F010790D0000004AB12B9D003Cd0s6	32559267840
d1209	c5t600144F010790D0000004AB12B9E003Dd0s6	32559267840
d1210	c5t600144F010790D0000004AB12B9E003Ed0s6	32559267840
d1211	c5t600144F010790D0000004AB12B9E003Fd0s6	30462115840
d1212	c5t600144F010790D0000004AB12B9E0040d0s6	30462115840
d1213	c5t600144F010790D0000004AB12B9E0041d0s6	30462115840
d1214	c5t600144F010790D0000004AB12B9E0042d0s6	30462115840
d1215	c5t600144F010790D0000004AB12B9E0043d0s6	30462115840
d1216	c5t600144F010790D0000004AB12B9E0044d0s6	30462115840
d1217	c5t600144F010790D0000004AB12B9E0045d0s6	30462115840
d1218	c5t600144F010790D0000004AB12B9E0046d0s6	30462115840
d1219	c5t600144F010790D0000004AB12B9F0047d0s6	30462115840
d1220	c5t600144F010790D0000004AB12B9F0048d0s6	30462115840
d1221	c5t600144F010790D0000004AB12B9F0049d0s6	67067904000
d1222	c5t600144F010790D0000004AB12B9F004Ad0s6	67067904000
d1223	c5t600144F010790D0000004AB12B9F004Bd0s6	67067904000
d1224	c5t600144F010790D0000004AB12B9F004Cd0s6	67067904000
d1225	c5t600144F010790D0000004AB12B9F004Dd0s6	67067904000
d1226	c5t600144F010790D0000004AB12B9F004Ed0s6	67067904000
d1227	c5t600144F010790D0000004AB12B9F004Fd0s6	16432168960
d1228	c5t600144F010790D0000004AB12BA00050d0s6	16757227520
d1229	c5t600144F010790D0000004AB12BA00051d0s6	27494645760
d1230	c5t600144F010790D0000004AB12BA00052d0s6	27672903680
d1231	c5t600144F010790D0000004AB12BA00053d0s6	27672903680
d1232	c5t600144F010790D0000004AB12BA00054d0s6	66606530560
d1233	c5t600144F010790D0000004AB12BA00055d0s6	20228014080
d9990	c5t600144F010790D0000004AC27C6B0001d0s6	149087518720
d9991	c5t600144F010790D0000004AC27C6B0002d0s6	169137340416
d9992	c5t600144F010790D0000004AC27C6B0003d0s6	221870227456
d9993	c5t600144F010790D0000004AC27C6B0004d0s6	182611542016
d8999	c5t600144F010790D0000004AC27C6B0005d0s6	190115151872
c7t0d0s6	c5t600144F010790D0000004AC27C6C0006d0s6	892771825664

Mapping on comstar node db9-san4

SVM_DEV	DEVICE_ON_DBNODE	SIZE_IN_BYTES
d1201	c5t600144F058C4470000004AB12B9B0036d0s6	32559267840
d1202	c5t600144F058C4470000004AB12B9C0037d0s6	32559267840
d1203	c5t600144F058C4470000004AB12B9C0038d0s6	32559267840
d1204	c5t600144F058C4470000004AB12B9D0039d0s6	32559267840
d1205	c5t600144F058C4470000004AB12B9D003Ad0s6	32559267840

d1206 c5t600144F058C4470000004AB12B9D003Bd0s6 32559267840
d1207 c5t600144F058C4470000004AB12B9D003Cd0s6 32559267840
d1208 c5t600144F058C4470000004AB12B9D003Dd0s6 32559267840
d1209 c5t600144F058C4470000004AB12B9E003Ed0s6 32559267840
d1210 c5t600144F058C4470000004AB12B9E003Fd0s6 32559267840
d1211 c5t600144F058C4470000004AB12B9E0040d0s6 30462115840
d1212 c5t600144F058C4470000004AB12B9E0041d0s6 30462115840
d1213 c5t600144F058C4470000004AB12B9E0042d0s6 30462115840
d1214 c5t600144F058C4470000004AB12B9E0043d0s6 30462115840
d1215 c5t600144F058C4470000004AB12B9E0044d0s6 30462115840
d1216 c5t600144F058C4470000004AB12B9E0045d0s6 30462115840
d1217 c5t600144F058C4470000004AB12B9E0046d0s6 30462115840
d1218 c5t600144F058C4470000004AB12B9F0047d0s6 30462115840
d1219 c5t600144F058C4470000004AB12B9F0048d0s6 30462115840
d1220 c5t600144F058C4470000004AB12B9F0049d0s6 30462115840
d1221 c5t600144F058C4470000004AB12B9F004Ad0s6 67067904000
d1222 c5t600144F058C4470000004AB12B9F004Bd0s6 67067904000
d1223 c5t600144F058C4470000004AB12B9F004Cd0s6 67067904000
d1224 c5t600144F058C4470000004AB12B9F004Dd0s6 67067904000
d1225 c5t600144F058C4470000004AB12B9F004Ed0s6 67067904000
d1226 c5t600144F058C4470000004AB12B9F004Fd0s6 16432168960
d1227 c5t600144F058C4470000004AB12B9F0050d0s6 16757227520
d1228 c5t600144F058C4470000004AB12BA00051d0s6 27494645760
d1229 c5t600144F058C4470000004AB12BA00052d0s6 8490254336
d1230 c5t600144F058C4470000004AB12BA00053d0s6 27672903680
d1231 c5t600144F058C4470000004AB12BA00054d0s6 27672903680
d1232 c5t600144F058C4470000004AB12BA00055d0s6 66606530560
d1233 c5t600144F058C4470000004AB12BA00056d0s6 74383360
d9990 c5t600144F058C4470000004AC27C6B0001d0s6 188245540864
d9991 c5t600144F058C4470000004AC27C6B0002d0s6 219773075456
d9992 c5t600144F058C4470000004AC27C6B0003d0s6 221545168896
d9993 c5t600144F058C4470000004AC27C6B0004d0s6 171874123776
d8999 c5t600144F058C4470000004AC27C6C0005d0s6 280508694528
c7t0d0s6 c5t600144F058C4470000004AC27C6C0006d0s6 892771825664

Mapping on comstar node db9-san5

SVM_DEV	DEVICE_ON_DBNODE	SIZE_IN_BYTES
d1201	c5t600144F04CBF8E0000004AB12B9B0036d0s6	32559267840
d1202	c5t600144F04CBF8E0000004AB12B9C0037d0s6	32559267840
d1203	c5t600144F04CBF8E0000004AB12B9C0038d0s6	32559267840
d1204	c5t600144F04CBF8E0000004AB12B9D0039d0s6	32559267840
d1205	c5t600144F04CBF8E0000004AB12B9D003Ad0s6	32559267840
d1206	c5t600144F04CBF8E0000004AB12B9D003Bd0s6	32559267840
d1207	c5t600144F04CBF8E0000004AB12B9E003Cd0s6	32559267840
d1208	c5t600144F04CBF8E0000004AB12B9E003Dd0s6	32559267840
d1209	c5t600144F04CBF8E0000004AB12B9E003Ed0s6	32559267840
d1210	c5t600144F04CBF8E0000004AB12B9E003Fd0s6	32559267840
d1211	c5t600144F04CBF8E0000004AB12B9E0040d0s6	30462115840
d1212	c5t600144F04CBF8E0000004AB12B9E0041d0s6	30462115840
d1213	c5t600144F04CBF8E0000004AB12B9E0042d0s6	30462115840
d1214	c5t600144F04CBF8E0000004AB12B9E0043d0s6	30462115840
d1215	c5t600144F04CBF8E0000004AB12B9E0044d0s6	30462115840
d1216	c5t600144F04CBF8E0000004AB12B9F0045d0s6	30462115840
d1217	c5t600144F04CBF8E0000004AB12B9F0046d0s6	30462115840
d1218	c5t600144F04CBF8E0000004AB12B9F0047d0s6	30462115840
d1219	c5t600144F04CBF8E0000004AB12B9F0048d0s6	30462115840
d1220	c5t600144F04CBF8E0000004AB12B9F0049d0s6	30462115840
d1221	c5t600144F04CBF8E0000004AB12B9F004Ad0s6	67067904000
d1222	c5t600144F04CBF8E0000004AB12B9F004Bd0s6	67067904000

d1223 c5t600144F04CBF8E0000004AB12B9F004Cd0s6 67067904000
d1224 c5t600144F04CBF8E0000004AB12B9F004Dd0s6 67067904000
d1225 c5t600144F04CBF8E0000004AB12B9F004Ed0s6 67067904000
d1226 c5t600144F04CBF8E0000004AB12BA0004Fd0s6 16432168960
d1227 c5t600144F04CBF8E0000004AB12BA00050d0s6 16757227520
d1228 c5t600144F04CBF8E0000004AB12BA00051d0s6 27494645760
d1229 c5t600144F04CBF8E0000004AB12BA00052d0s6 15729623040
d1230 c5t600144F04CBF8E0000004AB12BA00053d0s6 27672903680
d1231 c5t600144F04CBF8E0000004AB12BA00054d0s6 26712903680
d1232 c5t600144F04CBF8E0000004AB12BA00055d0s6 666585920
d1233 c5t600144F04CBF8E0000004AB12BA00056d0s6 263127040
d9990 c5t600144F04CBF8E0000004AC27C6B0001d0s6 180817428480
d9991 c5t600144F04CBF8E0000004AC27C6B0002d0s6 219773075456
d9992 c5t600144F04CBF8E0000004AC27C6B0003d0s6 221545168896
d9993 c5t600144F04CBF8E0000004AC27C6B0004d0s6 237819068416
d8999 c5t600144F04CBF8E0000004AC27C6C0005d0s6 397542359040
c7t0d0s6 c5t600144F04CBF8E0000004AC27C6C0006d0s6 892771825664

Mapping on comstar node db10-san1

SVM_DEV	DEVICE_ON_DBNODE	SIZE_IN_BYTES
d1201	c5t600144F0382CC00000004AB12B9B0036d0s6	32559267840
d1202	c5t600144F0382CC00000004AB12B9C0037d0s6	32559267840
d1203	c5t600144F0382CC00000004AB12B9C0038d0s6	32559267840
d1204	c5t600144F0382CC00000004AB12B9D0039d0s6	32559267840
d1205	c5t600144F0382CC00000004AB12B9D003Ad0s6	32559267840
d1206	c5t600144F0382CC00000004AB12B9D003Bd0s6	32559267840
d1207	c5t600144F0382CC00000004AB12B9D003Cd0s6	32559267840
d1208	c5t600144F0382CC00000004AB12B9D003Dd0s6	32559267840
d1209	c5t600144F0382CC00000004AB12B9E003Ed0s6	32559267840
d1210	c5t600144F0382CC00000004AB12B9E003Fd0s6	32559267840
d1211	c5t600144F0382CC00000004AB12B9E0040d0s6	30462115840
d1212	c5t600144F0382CC00000004AB12B9E0041d0s6	30462115840
d1213	c5t600144F0382CC00000004AB12B9E0042d0s6	30462115840
d1214	c5t600144F0382CC00000004AB12B9E0043d0s6	30462115840
d1215	c5t600144F0382CC00000004AB12B9E0044d0s6	30462115840
d1216	c5t600144F0382CC00000004AB12B9E0045d0s6	30462115840
d1217	c5t600144F0382CC00000004AB12B9E0046d0s6	30462115840
d1218	c5t600144F0382CC00000004AB12B9E0047d0s6	30462115840
d1219	c5t600144F0382CC00000004AB12B9F0048d0s6	30462115840
d1220	c5t600144F0382CC00000004AB12B9F0049d0s6	30462115840
d1221	c5t600144F0382CC00000004AB12B9F004Ad0s6	67067904000
d1222	c5t600144F0382CC00000004AB12B9F004Bd0s6	67067904000
d1223	c5t600144F0382CC00000004AB12B9F004Cd0s6	67067904000
d1224	c5t600144F0382CC00000004AB12B9F004Dd0s6	67067904000
d1225	c5t600144F0382CC00000004AB12B9F004Ed0s6	67067904000
d1226	c5t600144F0382CC00000004AB12B9F004Fd0s6	67067904000
d1227	c5t600144F0382CC00000004AB12B9F0050d0s6	16432168960
d1228	c5t600144F0382CC00000004AB12BA00051d0s6	16757227520
d1229	c5t600144F0382CC00000004AB12BA00052d0s6	27494645760
d1230	c5t600144F0382CC00000004AB12BA00053d0s6	27672903680
d1231	c5t600144F0382CC00000004AB12BA00054d0s6	27672903680
d1232	c5t600144F0382CC00000004AB12BA00055d0s6	27672903680
d1233	c5t600144F0382CC00000004AB12BA00056d0s6	54604064000
d1234	c5t600144F0382CC00000004AB12BA00057d0s6	126812160
d9990	c5t600144F0382CC00000004AC27C6B0001d0s6	163851468800
d9991	c5t600144F0382CC00000004AC27C6B0002d0s6	192488079360
d9992	c5t600144F0382CC00000004AC27C6B0003d0s6	221870227456
d9993	c5t600144F0382CC00000004AC27C6B0004d0s6	221545168896
d8999	c5t600144F0382CC00000004AC27C6C0005d0s6	284285665280

c7t0d0s6 c5t600144F0382CC00000004AC27C6C0006d0s6 892771825664

Mapping on comstar node db10-san2

SVM_DEV	DEVICE_ON_DBNODE	SIZE_IN_BYTES
d1201	c5t600144F0E476490000004AB12B9D0034d0s6	32559267840
d1202	c5t600144F0E476490000004AB12B9F0035d0s6	32559267840
d1203	c5t600144F0E476490000004AB12BA20036d0s6	32559267840
d1204	c5t600144F0E476490000004AB12BA40037d0s6	32559267840
d1205	c5t600144F0E476490000004AB12BA40038d0s6	32559267840
d1206	c5t600144F0E476490000004AB12BA40039d0s6	32559267840
d1207	c5t600144F0E476490000004AB12BA4003Ad0s6	32559267840
d1208	c5t600144F0E476490000004AB12BA4003Bd0s6	32559267840
d1209	c5t600144F0E476490000004AB12BA4003Cd0s6	32559267840
d1210	c5t600144F0E476490000004AB12BA5003Dd0s6	32559267840
d1211	c5t600144F0E476490000004AB12BA5003Ed0s6	30462115840
d1212	c5t600144F0E476490000004AB12BA5003Fd0s6	30462115840
d1213	c5t600144F0E476490000004AB12BA50040d0s6	30462115840
d1214	c5t600144F0E476490000004AB12BA50041d0s6	30462115840
d1215	c5t600144F0E476490000004AB12BA50042d0s6	30462115840
d1216	c5t600144F0E476490000004AB12BA50043d0s6	30462115840
d1217	c5t600144F0E476490000004AB12BA50044d0s6	30462115840
d1218	c5t600144F0E476490000004AB12BA50045d0s6	30462115840
d1219	c5t600144F0E476490000004AB12BA60046d0s6	30462115840
d1220	c5t600144F0E476490000004AB12BA60047d0s6	30462115840
d1221	c5t600144F0E476490000004AB12BA60048d0s6	67067904000
d1222	c5t600144F0E476490000004AB12BA60049d0s6	67067904000
d1223	c5t600144F0E476490000004AB12BA6004Ad0s6	67067904000
d1224	c5t600144F0E476490000004AB12BA6004Bd0s6	67067904000
d1225	c5t600144F0E476490000004AB12BA6004Cd0s6	67067904000
d1226	c5t600144F0E476490000004AB12BA6004Dd0s6	67067904000
d1227	c5t600144F0E476490000004AB12BA6004Ed0s6	16432168960
d1228	c5t600144F0E476490000004AB12BA6004Fd0s6	16757227520
d1229	c5t600144F0E476490000004AB12BA70050d0s6	27494645760
d1230	c5t600144F0E476490000004AB12BA70051d0s6	4195287040
d1231	c5t600144F0E476490000004AB12BA70052d0s6	27672903680
d1232	c5t600144F0E476490000004AB12BA70053d0s6	27672903680
d1233	c5t600144F0E476490000004AB12BA70054d0s6	420413440
d9990	c5t600144F0E476490000004AC27C6B0001d0s6	168895119360
d9991	c5t600144F0E476490000004AC27C6B0002d0s6	192614957056
d9992	c5t600144F0E476490000004AC27C6B0003d0s6	221870227456
d9993	c5t600144F0E476490000004AC27C6B0004d0s6	221545168896
d8999	c5t600144F0E476490000004AC27C6C0005d0s6	358749241344
c7t0d0s6	c5t600144F0E476490000004AC27C6C0006d0s6	892771825664

Mapping on comstar node db10-san3

SVM_DEV	DEVICE_ON_DBNODE	SIZE_IN_BYTES
d1201	c5t600144F0A431C10000004AB12B9B0035d0s6	32559267840
d1202	c5t600144F0A431C10000004AB12B9C0036d0s6	32559267840
d1203	c5t600144F0A431C10000004AB12B9D0037d0s6	32559267840
d1204	c5t600144F0A431C10000004AB12B9D0038d0s6	32559267840
d1205	c5t600144F0A431C10000004AB12B9D0039d0s6	32559267840
d1206	c5t600144F0A431C10000004AB12B9E003Ad0s6	32559267840
d1207	c5t600144F0A431C10000004AB12B9E003Bd0s6	32559267840
d1208	c5t600144F0A431C10000004AB12B9E003Cd0s6	32559267840
d1209	c5t600144F0A431C10000004AB12B9E003Dd0s6	32559267840
d1210	c5t600144F0A431C10000004AB12B9E003Ed0s6	32559267840

d1211 c5t600144F0A431C10000004AB12B9E003Fd0s6 30462115840
d1212 c5t600144F0A431C10000004AB12B9E0040d0s6 30462115840
d1213 c5t600144F0A431C10000004AB12B9E0041d0s6 30462115840
d1214 c5t600144F0A431C10000004AB12B9E0042d0s6 30462115840
d1215 c5t600144F0A431C10000004AB12B9E0043d0s6 30462115840
d1216 c5t600144F0A431C10000004AB12B9F0044d0s6 30462115840
d1217 c5t600144F0A431C10000004AB12B9F0045d0s6 30462115840
d1218 c5t600144F0A431C10000004AB12B9F0046d0s6 30462115840
d1219 c5t600144F0A431C10000004AB12B9F0047d0s6 30462115840
d1220 c5t600144F0A431C10000004AB12B9F0048d0s6 30462115840
d1221 c5t600144F0A431C10000004AB12B9F0049d0s6 67067904000
d1222 c5t600144F0A431C10000004AB12B9F004Ad0s6 67067904000
d1223 c5t600144F0A431C10000004AB12B9F004Bd0s6 67067904000
d1224 c5t600144F0A431C10000004AB12B9F004Cd0s6 67067904000
d1225 c5t600144F0A431C10000004AB12BA0004Dd0s6 67067904000
d1226 c5t600144F0A431C10000004AB12BA0004Ed0s6 67067904000
d1227 c5t600144F0A431C10000004AB12BA0004Fd0s6 16432168960
d1228 c5t600144F0A431C10000004AB12BA00050d0s6 16757227520
d1229 c5t600144F0A431C10000004AB12BA00051d0s6 27494645760
d1230 c5t600144F0A431C10000004AB12BA00052d0s6 27672903680
d1231 c5t600144F0A431C10000004AB12BA00053d0s6 27672903680
d1232 c5t600144F0A431C10000004AB12BA00054d0s6 66606530560
d1233 c5t600144F0A431C10000004AB12BA00055d0s6 20228014080
d9990 c5t600144F0A431C10000004AC27C6B0001d0s6 149087518720
d9991 c5t600144F0A431C10000004AC27C6B0002d0s6 169137340416
d9992 c5t600144F0A431C10000004AC27C6B0003d0s6 221870227456
d9993 c5t600144F0A431C10000004AC27C6B0004d0s6 182611542016
d8999 c5t600144F0A431C10000004AC27C6C0005d0s6 190115151872
c7t0d0s6 c5t600144F0A431C10000004AC27C6C0006d0s6 892771825664

Mapping on comstar node db10-san4

SVM_DEV	DEVICE_ON_DBNODE	SIZE_IN_BYTES
d1201	c5t600144F01080450000004AB12B9B0036d0s6	32559267840
d1202	c5t600144F01080450000004AB12B9C0037d0s6	32559267840
d1203	c5t600144F01080450000004AB12B9D0038d0s6	32559267840
d1204	c5t600144F01080450000004AB12B9D0039d0s6	32559267840
d1205	c5t600144F01080450000004AB12B9D003Ad0s6	32559267840
d1206	c5t600144F01080450000004AB12B9E003Bd0s6	32559267840
d1207	c5t600144F01080450000004AB12B9E003Cd0s6	32559267840
d1208	c5t600144F01080450000004AB12B9E003Dd0s6	32559267840
d1209	c5t600144F01080450000004AB12B9E003Ed0s6	32559267840
d1210	c5t600144F01080450000004AB12B9E003Fd0s6	32559267840
d1211	c5t600144F01080450000004AB12B9E0040d0s6	30462115840
d1212	c5t600144F01080450000004AB12B9E0041d0s6	30462115840
d1213	c5t600144F01080450000004AB12B9E0042d0s6	30462115840
d1214	c5t600144F01080450000004AB12B9E0043d0s6	30462115840
d1215	c5t600144F01080450000004AB12B9E0044d0s6	30462115840
d1216	c5t600144F01080450000004AB12B9F0045d0s6	30462115840
d1217	c5t600144F01080450000004AB12B9F0046d0s6	30462115840
d1218	c5t600144F01080450000004AB12B9F0047d0s6	30462115840
d1219	c5t600144F01080450000004AB12B9F0048d0s6	30462115840
d1220	c5t600144F01080450000004AB12B9F0049d0s6	30462115840
d1221	c5t600144F01080450000004AB12B9F004Ad0s6	67067904000
d1222	c5t600144F01080450000004AB12B9F004Bd0s6	67067904000
d1223	c5t600144F01080450000004AB12B9F004Cd0s6	67067904000
d1224	c5t600144F01080450000004AB12B9F004Dd0s6	67067904000
d1225	c5t600144F01080450000004AB12BA0004Ed0s6	67067904000
d1226	c5t600144F01080450000004AB12BA0004Fd0s6	16432168960
d1227	c5t600144F01080450000004AB12BA00050d0s6	16757227520

d1228 c5t600144F01080450000004AB12BA00051d0s6 27494645760
d1229 c5t600144F01080450000004AB12BA00052d0s6 8490254336
d1230 c5t600144F01080450000004AB12BA00053d0s6 27672903680
d1231 c5t600144F01080450000004AB12BA00054d0s6 27672903680
d1232 c5t600144F01080450000004AB12BA00055d0s6 66606530560
d1233 c5t600144F01080450000004AB12BA00056d0s6 74383360
d9990 c5t600144F01080450000004AC27C6B0001d0s6 188245540864
d9991 c5t600144F01080450000004AC27C6B0002d0s6 219773075456
d9992 c5t600144F01080450000004AC27C6B0003d0s6 221545168896
d9993 c5t600144F01080450000004AC27C6B0004d0s6 171874123776
d8999 c5t600144F01080450000004AC27C6C0005d0s6 280508694528
c7t0d0s6 c5t600144F01080450000004AC27C6C0006d0s6 892771825664

Mapping on comstar node db10-san5

SVM_DEV	DEVICE_ON_DBNODE	SIZE_IN_BYTES
d1201	c5t600144F060D7020000004AB12B9B0036d0s6	32559267840
d1202	c5t600144F060D7020000004AB12B9C0037d0s6	32559267840
d1203	c5t600144F060D7020000004AB12B9C0038d0s6	32559267840
d1204	c5t600144F060D7020000004AB12B9D0039d0s6	32559267840
d1205	c5t600144F060D7020000004AB12B9D003Ad0s6	32559267840
d1206	c5t600144F060D7020000004AB12B9D003Bd0s6	32559267840
d1207	c5t600144F060D7020000004AB12B9E003Cd0s6	32559267840
d1208	c5t600144F060D7020000004AB12B9E003Dd0s6	32559267840
d1209	c5t600144F060D7020000004AB12B9E003Ed0s6	32559267840
d1210	c5t600144F060D7020000004AB12B9E003Fd0s6	32559267840
d1211	c5t600144F060D7020000004AB12B9E0040d0s6	30462115840
d1212	c5t600144F060D7020000004AB12B9E0041d0s6	30462115840
d1213	c5t600144F060D7020000004AB12B9E0042d0s6	30462115840
d1214	c5t600144F060D7020000004AB12B9E0043d0s6	30462115840
d1215	c5t600144F060D7020000004AB12B9E0044d0s6	30462115840
d1216	c5t600144F060D7020000004AB12B9E0045d0s6	30462115840
d1217	c5t600144F060D7020000004AB12B9F0046d0s6	30462115840
d1218	c5t600144F060D7020000004AB12B9F0047d0s6	30462115840
d1219	c5t600144F060D7020000004AB12B9F0048d0s6	30462115840
d1220	c5t600144F060D7020000004AB12B9F0049d0s6	30462115840
d1221	c5t600144F060D7020000004AB12B9F004Ad0s6	67067904000
d1222	c5t600144F060D7020000004AB12B9F004Bd0s6	67067904000
d1223	c5t600144F060D7020000004AB12B9F004Cd0s6	67067904000
d1224	c5t600144F060D7020000004AB12B9F004Dd0s6	67067904000
d1225	c5t600144F060D7020000004AB12B9F004Ed0s6	67067904000
d1226	c5t600144F060D7020000004AB12BA0004Fd0s6	16432168960
d1227	c5t600144F060D7020000004AB12BA00050d0s6	16757227520
d1228	c5t600144F060D7020000004AB12BA00051d0s6	27494645760
d1229	c5t600144F060D7020000004AB12BA00052d0s6	15729623040
d1230	c5t600144F060D7020000004AB12BA00053d0s6	27672903680
d1231	c5t600144F060D7020000004AB12BA00054d0s6	27672903680
d1232	c5t600144F060D7020000004AB12BA00055d0s6	661585920
d1233	c5t600144F060D7020000004AB12BA00056d0s6	263127040
d9990	c5t600144F060D7020000004AC27C6B0001d0s6	180817428480
d9991	c5t600144F060D7020000004AC27C6B0002d0s6	219773075456
d9992	c5t600144F060D7020000004AC27C6B0003d0s6	221545168896
d9993	c5t600144F060D7020000004AC27C6B0004d0s6	237819068416
d8999	c5t600144F060D7020000004AC27C6C0005d0s6	397542359040
c7t0d0s6	c5t600144F060D7020000004AC27C6C0006d0s6	892771825664

Mapping on comstar node db11-san1

SVM_DEV	DEVICE_ON_DBNODE	SIZE_IN_BYTES
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d1201 c5t600144F08C93430000004AB12B9B0036d0s6 32559267840
d1202 c5t600144F08C934300000004AB12B9C0037d0s6 32559267840
d1203 c5t600144F08C934300000004AB12B9D0038d0s6 32559267840
d1204 c5t600144F08C934300000004AB12B9D0039d0s6 32559267840
d1205 c5t600144F08C934300000004AB12B9D003Ad0s6 32559267840
d1206 c5t600144F08C934300000004AB12B9D003Bd0s6 32559267840
d1207 c5t600144F08C934300000004AB12B9E003Cd0s6 32559267840
d1208 c5t600144F08C934300000004AB12B9E003Dd0s6 32559267840
d1209 c5t600144F08C934300000004AB12B9E003Ed0s6 32559267840
d1210 c5t600144F08C934300000004AB12B9E003Fd0s6 32559267840
d1211 c5t600144F08C934300000004AB12B9E0040d0s6 30462115840
d1212 c5t600144F08C934300000004AB12B9E0041d0s6 30462115840
d1213 c5t600144F08C934300000004AB12B9E0042d0s6 30462115840
d1214 c5t600144F08C934300000004AB12B9E0043d0s6 30462115840
d1215 c5t600144F08C934300000004AB12B9E0044d0s6 30462115840
d1216 c5t600144F08C934300000004AB12B9F0045d0s6 30462115840
d1217 c5t600144F08C934300000004AB12B9F0046d0s6 30462115840
d1218 c5t600144F08C934300000004AB12B9F0047d0s6 30462115840
d1219 c5t600144F08C934300000004AB12B9F0048d0s6 30462115840
d1220 c5t600144F08C934300000004AB12B9F0049d0s6 30462115840
d1221 c5t600144F08C934300000004AB12B9F004Ad0s6 67067904000
d1222 c5t600144F08C934300000004AB12B9F004Bd0s6 67067904000
d1223 c5t600144F08C934300000004AB12B9F004Cd0s6 67067904000
d1224 c5t600144F08C934300000004AB12B9F004Dd0s6 67067904000
d1225 c5t600144F08C934300000004AB12BA0004Ed0s6 67067904000
d1226 c5t600144F08C934300000004AB12BA0004Fd0s6 67067904000
d1227 c5t600144F08C934300000004AB12BA00050d0s6 16432168960
d1228 c5t600144F08C934300000004AB12BA00051d0s6 16757227520
d1229 c5t600144F08C934300000004AB12BA00052d0s6 27494645760
d1230 c5t600144F08C934300000004AB12BA00053d0s6 163851468800
d1231 c5t600144F08C934300000004AB12BA00054d0s6 27672903680
d1232 c5t600144F08C934300000004AB12BA00055d0s6 27672903680
d1233 c5t600144F08C934300000004AB12BA00056d0s6 5464064000
d1234 c5t600144F08C934300000004AB12BA10057d0s6 21954560
d9990 c5t600144F08C934300000004AC27C6B0001d0s6 163851468800
d9991 c5t600144F08C934300000004AC27C6B0002d0s6 192592936960
d9992 c5t600144F08C934300000004AC27C6B0003d0s6 221870227456
d9993 c5t600144F08C934300000004AC27C6B0004d0s6 221545168896
d8999 c5t600144F08C934300000004AC27C6C0005d0s6 284390522880
c7t0d0s6 c5t600144F08C934300000004AC27C6C0006d0s6 892771825664

Mapping on comstar node db11-san2

SVM_DEV	DEVICE_ON_DBNODE	SIZE_IN_BYTES
d1201	c5t600144F050EE0E00000004AB12B9B0034d0s6	32559267840
d1202	c5t600144F050EE0E00000004AB12B9C0035d0s6	32559267840
d1203	c5t600144F050EE0E00000004AB12B9D0036d0s6	32559267840
d1204	c5t600144F050EE0E00000004AB12B9E0037d0s6	32559267840
d1205	c5t600144F050EE0E00000004AB12B9E0038d0s6	32559267840
d1206	c5t600144F050EE0E00000004AB12B9E0039d0s6	32559267840
d1207	c5t600144F050EE0E00000004AB12B9E003Ad0s6	32559267840
d1208	c5t600144F050EE0E00000004AB12B9F003Bd0s6	32559267840
d1209	c5t600144F050EE0E00000004AB12B9F003Cd0s6	32559267840
d1210	c5t600144F050EE0E00000004AB12B9F003Dd0s6	32559267840
d1211	c5t600144F050EE0E00000004AB12B9F003Ed0s6	30462115840
d1212	c5t600144F050EE0E00000004AB12B9F003Fd0s6	30462115840
d1213	c5t600144F050EE0E00000004AB12B9F0040d0s6	30462115840
d1214	c5t600144F050EE0E00000004AB12B9F0041d0s6	30462115840
d1215	c5t600144F050EE0E00000004AB12B9F0042d0s6	30462115840

d1216 c5t600144F050EE0E00000004AB12B9F0043d0s6 30462115840
d1217 c5t600144F050EE0E00000004AB12BA00044d0s6 30462115840
d1218 c5t600144F050EE0E00000004AB12BA00045d0s6 30462115840
d1219 c5t600144F050EE0E00000004AB12BA00046d0s6 30462115840
d1220 c5t600144F050EE0E00000004AB12BA00047d0s6 30462115840
d1221 c5t600144F050EE0E00000004AB12BA00048d0s6 67067904000
d1222 c5t600144F050EE0E00000004AB12BA00049d0s6 67067904000
d1223 c5t600144F050EE0E00000004AB12BA0004Ad0s6 67067904000
d1224 c5t600144F050EE0E00000004AB12BA1004Bd0s6 67067904000
d1225 c5t600144F050EE0E00000004AB12BA1004Cd0s6 67067904000
d1226 c5t600144F050EE0E00000004AB12BA1004Dd0s6 67067904000
d1227 c5t600144F050EE0E00000004AB12BA1004Ed0s6 16432168960
d1228 c5t600144F050EE0E00000004AB12BA1004Fd0s6 16757227520
d1229 c5t600144F050EE0E00000004AB12BA10050d0s6 27494645760
d1230 c5t600144F050EE0E00000004AB12BA10051d0s6 4195287040
d1231 c5t600144F050EE0E00000004AB12BA10052d0s6 27672903680
d1232 c5t600144F050EE0E00000004AB12BA10053d0s6 27672903680
d1233 c5t600144F050EE0E00000004AB12BA20054d0s6 420413440
d9990 c5t600144F050EE0E00000004AC27C6B0001d0s6 168895119360
d9991 c5t600144F050EE0E00000004AC27C6B0002d0s6 192614957056
d9992 c5t600144F050EE0E00000004AC27C6B0003d0s6 221870227456
d9993 c5t600144F050EE0E00000004AC27C6B0004d0s6 221545168896
d8999 c5t600144F050EE0E00000004AC27C6C0005d0s6 358749241344
c7t0d0s6 c5t600144F050EE0E00000004AC27C6C0006d0s6 892771825664

Mapping on comstar node db11-san3

SVM_DEV	DEVICE_ON_DBNODE	SIZE_IN_BYTES
d1201	c5t600144F0D0308100000004AB12B9B0035d0s6	32559267840
d1202	c5t600144F0D0308100000004AB12B9C0036d0s6	32559267840
d1203	c5t600144F0D0308100000004AB12B9C0037d0s6	32559267840
d1204	c5t600144F0D0308100000004AB12B9D0038d0s6	32559267840
d1205	c5t600144F0D0308100000004AB12B9D0039d0s6	32559267840
d1206	c5t600144F0D0308100000004AB12B9D003Ad0s6	32559267840
d1207	c5t600144F0D0308100000004AB12B9D003Bd0s6	32559267840
d1208	c5t600144F0D0308100000004AB12B9E003Cd0s6	32559267840
d1209	c5t600144F0D0308100000004AB12B9E003Dd0s6	32559267840
d1210	c5t600144F0D0308100000004AB12B9E003Ed0s6	32559267840
d1211	c5t600144F0D0308100000004AB12B9E003Fd0s6	30462115840
d1212	c5t600144F0D0308100000004AB12B9E0040d0s6	30462115840
d1213	c5t600144F0D0308100000004AB12B9E0041d0s6	30462115840
d1214	c5t600144F0D0308100000004AB12B9E0042d0s6	30462115840
d1215	c5t600144F0D0308100000004AB12B9E0043d0s6	30462115840
d1216	c5t600144F0D0308100000004AB12B9E0044d0s6	30462115840
d1217	c5t600144F0D0308100000004AB12B9E0045d0s6	30462115840
d1218	c5t600144F0D0308100000004AB12B9F0046d0s6	30462115840
d1219	c5t600144F0D0308100000004AB12B9F0047d0s6	30462115840
d1220	c5t600144F0D0308100000004AB12B9F0048d0s6	30462115840
d1221	c5t600144F0D0308100000004AB12B9F0049d0s6	67067904000
d1222	c5t600144F0D0308100000004AB12B9F004Ad0s6	67067904000
d1223	c5t600144F0D0308100000004AB12B9F004Bd0s6	67067904000
d1224	c5t600144F0D0308100000004AB12B9F004Cd0s6	67067904000
d1225	c5t600144F0D0308100000004AB12B9F004Dd0s6	67067904000
d1226	c5t600144F0D0308100000004AB12BA0004Ed0s6	67067904000
d1227	c5t600144F0D0308100000004AB12BA0004Fd0s6	16432168960
d1228	c5t600144F0D0308100000004AB12BA00050d0s6	16757227520
d1229	c5t600144F0D0308100000004AB12BA00051d0s6	27494645760
d1230	c5t600144F0D0308100000004AB12BA00052d0s6	27672903680
d1231	c5t600144F0D0308100000004AB12BA00053d0s6	27672903680
d1232	c5t600144F0D0308100000004AB12BA00054d0s6	66606530560

d1233 c5t600144F0D030810000004AB12BA00055d0s6 20228014080
d9990 c5t600144F0D030810000004AC27C6B0001d0s6 149087518720
d9991 c5t600144F0D030810000004AC27C6B0002d0s6 169137340416
d9992 c5t600144F0D030810000004AC27C6B0003d0s6 221870227456
d9993 c5t600144F0D030810000004AC27C6B0004d0s6 182611542016
d8999 c5t600144F0D030810000004AC27C6C0005d0s6 190115151872
c7t0d0s6 c5t600144F0D030810000004AC27C6C0006d0s6 892771825664

Mapping on comstar node db11-san4

SVM_DEV	DEVICE_ON_DBNODE	SIZE_IN_BYTES
d1201	c5t600144F01477430000004AB12B9B0036d0s6	32559267840
d1202	c5t600144F01477430000004AB12B9C0037d0s6	32559267840
d1203	c5t600144F01477430000004AB12B9D0038d0s6	32559267840
d1204	c5t600144F01477430000004AB12B9E0039d0s6	32559267840
d1205	c5t600144F01477430000004AB12B9E003Ad0s6	32559267840
d1206	c5t600144F01477430000004AB12B9E003Bd0s6	32559267840
d1207	c5t600144F01477430000004AB12B9E003Cd0s6	32559267840
d1208	c5t600144F01477430000004AB12B9E003Dd0s6	32559267840
d1209	c5t600144F01477430000004AB12B9E003Ed0s6	32559267840
d1210	c5t600144F01477430000004AB12B9E003Fd0s6	32559267840
d1211	c5t600144F01477430000004AB12B9E0040d0s6	30462115840
d1212	c5t600144F01477430000004AB12B9E0041d0s6	30462115840
d1213	c5t600144F01477430000004AB12B9E0042d0s6	30462115840
d1214	c5t600144F01477430000004AB12B9F0043d0s6	30462115840
d1215	c5t600144F01477430000004AB12B9F0044d0s6	30462115840
d1216	c5t600144F01477430000004AB12B9F0045d0s6	30462115840
d1217	c5t600144F01477430000004AB12B9F0046d0s6	30462115840
d1218	c5t600144F01477430000004AB12B9F0047d0s6	30462115840
d1219	c5t600144F01477430000004AB12B9F0048d0s6	30462115840
d1220	c5t600144F01477430000004AB12B9F0049d0s6	30462115840
d1221	c5t600144F01477430000004AB12B9F004Ad0s6	67067904000
d1222	c5t600144F01477430000004AB12B9F004Bd0s6	67067904000
d1223	c5t600144F01477430000004AB12BA0004Cd0s6	67067904000
d1224	c5t600144F01477430000004AB12BA0004Dd0s6	67067904000
d1225	c5t600144F01477430000004AB12BA0004Ed0s6	67067904000
d1226	c5t600144F01477430000004AB12BA0004Fd0s6	16432168960
d1227	c5t600144F01477430000004AB12BA00050d0s6	16757227520
d1228	c5t600144F01477430000004AB12BA00051d0s6	27494645760
d1229	c5t600144F01477430000004AB12BA00052d0s6	8490254336
d1230	c5t600144F01477430000004AB12BA00053d0s6	27672903680
d1231	c5t600144F01477430000004AB12BA00054d0s6	27672903680
d1232	c5t600144F01477430000004AB12BA10055d0s6	661585920
d1233	c5t600144F01477430000004AB12BA10056d0s6	74383360
d9990	c5t600144F01477430000004AC27C6B0001d0s6	188245540864
d9991	c5t600144F01477430000004AC27C6B0002d0s6	219773075456
d9992	c5t600144F01477430000004AC27C6B0003d0s6	221545168896
d9993	c5t600144F01477430000004AC27C6B0004d0s6	237819068416
d8999	c5t600144F01477430000004AC27C6C0005d0s6	346453639168
c7t0d0s6	c5t600144F01477430000004AC27C6C0006d0s6	892771825664

Mapping on comstar node db11-san5

SVM_DEV	DEVICE_ON_DBNODE	SIZE_IN_BYTES
d1201	c5t600144F0E0A9870000004AB12B9B0035d0s6	32559267840
d1202	c5t600144F0E0A9870000004AB12B9C0036d0s6	32559267840
d1203	c5t600144F0E0A9870000004AB12B9C0037d0s6	32559267840
d1204	c5t600144F0E0A9870000004AB12B9D0038d0s6	32559267840

d1205 c5t600144F0E0A9870000004AB12B9D0039d0s6 32559267840
d1206 c5t600144F0E0A9870000004AB12B9D003Ad0s6 32559267840
d1207 c5t600144F0E0A9870000004AB12B9D003Bd0s6 32559267840
d1208 c5t600144F0E0A9870000004AB12B9D003Cd0s6 32559267840
d1209 c5t600144F0E0A9870000004AB12B9E003Dd0s6 32559267840
d1210 c5t600144F0E0A9870000004AB12B9E003Ed0s6 32559267840
d1211 c5t600144F0E0A9870000004AB12B9E003Fd0s6 30462115840
d1212 c5t600144F0E0A9870000004AB12B9E0040d0s6 30462115840
d1213 c5t600144F0E0A9870000004AB12B9E0041d0s6 30462115840
d1214 c5t600144F0E0A9870000004AB12B9E0042d0s6 30462115840
d1215 c5t600144F0E0A9870000004AB12B9E0043d0s6 30462115840
d1216 c5t600144F0E0A9870000004AB12B9E0044d0s6 30462115840
d1217 c5t600144F0E0A9870000004AB12B9E0045d0s6 30462115840
d1218 c5t600144F0E0A9870000004AB12B9F0046d0s6 30462115840
d1219 c5t600144F0E0A9870000004AB12B9F0047d0s6 30462115840
d1220 c5t600144F0E0A9870000004AB12B9F0048d0s6 30462115840
d1221 c5t600144F0E0A9870000004AB12B9F0049d0s6 67067904000
d1222 c5t600144F0E0A9870000004AB12B9F004Ad0s6 67067904000
d1223 c5t600144F0E0A9870000004AB12B9F004Bd0s6 67067904000
d1224 c5t600144F0E0A9870000004AB12B9F004Cd0s6 67067904000
d1225 c5t600144F0E0A9870000004AB12B9F004Dd0s6 67067904000
d1226 c5t600144F0E0A9870000004AB12B9F004Ed0s6 16432168960
d1227 c5t600144F0E0A9870000004AB12BA0004Fd0s6 16757227520
d1228 c5t600144F0E0A9870000004AB12BA00050d0s6 27494645760
d1229 c5t600144F0E0A9870000004AB12BA00051d0s6 15729623040
d1230 c5t600144F0E0A9870000004AB12BA00052d0s6 27672903680
d1231 c5t600144F0E0A9870000004AB12BA00053d0s6 27672903680
d1232 c5t600144F0E0A9870000004AB12BA00054d0s6 661585920
d1233 c5t600144F0E0A9870000004AB12BA00055d0s6 263127040
d9990 c5t600144F0E0A9870000004AC27C6B0001d0s6 180817428480
d9991 c5t600144F0E0A9870000004AC27C6B0002d0s6 219773075456
d9992 c5t600144F0E0A9870000004AC27C6B0003d0s6 221545168896
d9993 c5t600144F0E0A9870000004AC27C6B0004d0s6 237819068416
d8999 c5t600144F0E0A9870000004AC27C6C0005d0s6 464611377152
c7t0d0s6 c5t600144F0E0A9870000004AC27C6C0006d0s6 892771825664

Mapping on comstar node db12-san1

SVM_DEV	DEVICE_ON_DBNODE	SIZE_IN_BYTES
d1201	c5t600144F0B86C8F0000004AB12B9B0036d0s6	32559267840
d1202	c5t600144F0B86C8F0000004AB12B9C0037d0s6	32559267840
d1203	c5t600144F0B86C8F0000004AB12B9D0038d0s6	32559267840
d1204	c5t600144F0B86C8F0000004AB12B9D0039d0s6	32559267840
d1205	c5t600144F0B86C8F0000004AB12B9D003Ad0s6	32559267840
d1206	c5t600144F0B86C8F0000004AB12B9E003Bd0s6	32559267840
d1207	c5t600144F0B86C8F0000004AB12B9E003Cd0s6	32559267840
d1208	c5t600144F0B86C8F0000004AB12B9E003Dd0s6	32559267840
d1209	c5t600144F0B86C8F0000004AB12B9E003Ed0s6	32559267840
d1210	c5t600144F0B86C8F0000004AB12B9E003Fd0s6	32559267840
d1211	c5t600144F0B86C8F0000004AB12B9E0040d0s6	30462115840
d1212	c5t600144F0B86C8F0000004AB12B9E0041d0s6	30462115840
d1213	c5t600144F0B86C8F0000004AB12B9E0042d0s6	30462115840
d1214	c5t600144F0B86C8F0000004AB12B9E0043d0s6	30462115840
d1215	c5t600144F0B86C8F0000004AB12B9E0044d0s6	30462115840
d1216	c5t600144F0B86C8F0000004AB12B9F0045d0s6	30462115840
d1217	c5t600144F0B86C8F0000004AB12B9F0046d0s6	30462115840
d1218	c5t600144F0B86C8F0000004AB12B9F0047d0s6	30462115840
d1219	c5t600144F0B86C8F0000004AB12B9F0048d0s6	30462115840
d1220	c5t600144F0B86C8F0000004AB12B9F0049d0s6	30462115840
d1221	c5t600144F0B86C8F0000004AB12B9F004Ad0s6	67067904000

d1222 c5t600144F0B86C8F0000004AB12B9F004Bd0s6 67067904000
d1223 c5t600144F0B86C8F0000004AB12B9F004Cd0s6 67067904000
d1224 c5t600144F0B86C8F0000004AB12B9F004Dd0s6 67067904000
d1225 c5t600144F0B86C8F0000004AB12BA0004Ed0s6 67067904000
d1226 c5t600144F0B86C8F0000004AB12BA0004Fd0s6 67067904000
d1227 c5t600144F0B86C8F0000004AB12BA00050d0s6 16432168960
d1228 c5t600144F0B86C8F0000004AB12BA00051d0s6 16757227520
d1229 c5t600144F0B86C8F0000004AB12BA00052d0s6 27494645760
d1230 c5t600144F0B86C8F0000004AB12BA00053d0s6 4195287040
d1231 c5t600144F0B86C8F0000004AB12BA00054d0s6 27672903680
d1232 c5t600144F0B86C8F0000004AB12BA00055d0s6 27672903680
d1233 c5t600144F0B86C8F0000004AB12BA00056d0s6 5464064000
d1234 c5t600144F0B86C8F0000004AB12BA10057d0s6 21954560
d9990 c5t600144F0B86C8F0000004AC27C6B0001d0s6 163851468800
d9991 c5t600144F0B86C8F0000004AC27C6B0002d0s6 192592936960
d9992 c5t600144F0B86C8F0000004AC27C6B0003d0s6 221870227456
d9993 c5t600144F0B86C8F0000004AC27C6B0004d0s6 221545168896
d8999 c5t600144F0B86C8F0000004AC27C6B0005d0s6 346489290752
c7t0d0s6 c5t600144F0B86C8F0000004AC27C6C0006d0s6 892771825664

Mapping on comstar node db12-san2

SVM_DEV	DEVICE_ON_DBNODE	SIZE_IN_BYTES
d1201	c5t600144F0BC38800000004AB12B9B0034d0s6	32559267840
d1202	c5t600144F0BC38800000004AB12B9C0035d0s6	32559267840
d1203	c5t600144F0BC38800000004AB12B9D0036d0s6	32559267840
d1204	c5t600144F0BC38800000004AB12B9D0037d0s6	32559267840
d1205	c5t600144F0BC38800000004AB12B9D0038d0s6	32559267840
d1206	c5t600144F0BC38800000004AB12B9D0039d0s6	32559267840
d1207	c5t600144F0BC38800000004AB12B9E003Ad0s6	32559267840
d1208	c5t600144F0BC38800000004AB12B9E003Bd0s6	32559267840
d1209	c5t600144F0BC38800000004AB12B9E003Cd0s6	32559267840
d1210	c5t600144F0BC38800000004AB12B9E003Dd0s6	32559267840
d1211	c5t600144F0BC38800000004AB12B9E003Ed0s6	30462115840
d1212	c5t600144F0BC38800000004AB12B9E003Fd0s6	30462115840
d1213	c5t600144F0BC38800000004AB12B9E0040d0s6	30462115840
d1214	c5t600144F0BC38800000004AB12B9E0041d0s6	30462115840
d1215	c5t600144F0BC38800000004AB12B9E0042d0s6	30462115840
d1216	c5t600144F0BC38800000004AB12B9F0043d0s6	30462115840
d1217	c5t600144F0BC38800000004AB12B9F0044d0s6	30462115840
d1218	c5t600144F0BC38800000004AB12B9F0045d0s6	30462115840
d1219	c5t600144F0BC38800000004AB12B9F0046d0s6	30462115840
d1220	c5t600144F0BC38800000004AB12B9F0047d0s6	30462115840
d1221	c5t600144F0BC38800000004AB12B9F0048d0s6	67067904000
d1222	c5t600144F0BC38800000004AB12B9F0049d0s6	67067904000
d1223	c5t600144F0BC38800000004AB12B9F004Ad0s6	67067904000
d1224	c5t600144F0BC38800000004AB12B9F004Bd0s6	67067904000
d1225	c5t600144F0BC38800000004AB12B9F004Cd0s6	67067904000
d1226	c5t600144F0BC38800000004AB12BA0004Dd0s6	67067904000
d1227	c5t600144F0BC38800000004AB12BA0004Ed0s6	16432168960
d1228	c5t600144F0BC38800000004AB12BA0004Fd0s6	16757227520
d1229	c5t600144F0BC38800000004AB12BA00050d0s6	27494645760
d1230	c5t600144F0BC38800000004AB12BA00051d0s6	4195287040
d1231	c5t600144F0BC38800000004AB12BA00052d0s6	27672903680
d1232	c5t600144F0BC38800000004AB12BA00053d0s6	27672903680
d1233	c5t600144F0BC38800000004AB12BA00054d0s6	420413440
d9990	c5t600144F0BC38800000004AC27C6B0001d0s6	168895119360
d9991	c5t600144F0BC38800000004AC27C6B0002d0s6	192614957056
d9992	c5t600144F0BC38800000004AC27C6B0003d0s6	221870227456
d9993	c5t600144F0BC38800000004AC27C6B0004d0s6	221545168896

d8999 c5t600144F0BC38800000004AC27C6C0005d0s6 358749241344
c7t0d0s6 c5t600144F0BC38800000004AC27C6C0006d0s6 892771825664

Mapping on comstar node db12-san3

SVM_DEV	DEVICE_ON_DBNODE	SIZE_IN_BYTES
d1201	c5t600144F020A6830000004AB12B9B0035d0s6	32559267840
d1202	c5t600144F020A6830000004AB12B9C0036d0s6	32559267840
d1203	c5t600144F020A6830000004AB12B9C0037d0s6	32559267840
d1204	c5t600144F020A6830000004AB12B9D0038d0s6	32559267840
d1205	c5t600144F020A6830000004AB12B9D0039d0s6	32559267840
d1206	c5t600144F020A6830000004AB12B9D003Ad0s6	32559267840
d1207	c5t600144F020A6830000004AB12B9D003Bd0s6	32559267840
d1208	c5t600144F020A6830000004AB12B9D003Cd0s6	32559267840
d1209	c5t600144F020A6830000004AB12B9E003Dd0s6	32559267840
d1210	c5t600144F020A6830000004AB12B9E003Ed0s6	32559267840
d1211	c5t600144F020A6830000004AB12B9E003Fd0s6	30462115840
d1212	c5t600144F020A6830000004AB12B9E0040d0s6	30462115840
d1213	c5t600144F020A6830000004AB12B9E0041d0s6	30462115840
d1214	c5t600144F020A6830000004AB12B9E0042d0s6	30462115840
d1215	c5t600144F020A6830000004AB12B9E0043d0s6	30462115840
d1216	c5t600144F020A6830000004AB12B9E0044d0s6	30462115840
d1217	c5t600144F020A6830000004AB12B9E0045d0s6	30462115840
d1218	c5t600144F020A6830000004AB12B9F0046d0s6	30462115840
d1219	c5t600144F020A6830000004AB12B9F0047d0s6	30462115840
d1220	c5t600144F020A6830000004AB12B9F0048d0s6	30462115840
d1221	c5t600144F020A6830000004AB12B9F0049d0s6	67067904000
d1222	c5t600144F020A6830000004AB12B9F004Ad0s6	67067904000
d1223	c5t600144F020A6830000004AB12B9F004Bd0s6	67067904000
d1224	c5t600144F020A6830000004AB12B9F004Cd0s6	67067904000
d1225	c5t600144F020A6830000004AB12B9F004Dd0s6	67067904000
d1226	c5t600144F020A6830000004AB12BA0004Ed0s6	67067904000
d1227	c5t600144F020A6830000004AB12BA0004Fd0s6	16432168960
d1228	c5t600144F020A6830000004AB12BA00050d0s6	16757227520
d1229	c5t600144F020A6830000004AB12BA00051d0s6	27494645760
d1230	c5t600144F020A6830000004AB12BA00052d0s6	27672903680
d1231	c5t600144F020A6830000004AB12BA00053d0s6	27672903680
d1232	c5t600144F020A6830000004AB12BA00054d0s6	66606530560
d1233	c5t600144F020A6830000004AB12BA00055d0s6	20228014080
d9990	c5t600144F020A6830000004AC27C6B0001d0s6	149087518720
d9991	c5t600144F020A6830000004AC27C6B0002d0s6	169137340416
d9992	c5t600144F020A6830000004AC27C6B0003d0s6	221870227456
d9993	c5t600144F020A6830000004AC27C6B0004d0s6	182611542016
d8999	c5t600144F020A6830000004AC27C6C0005d0s6	190115151872
c7t0d0s6	c5t600144F020A6830000004AC27C6C0006d0s6	892771825664

Mapping on comstar node db12-san4

SVM_DEV	DEVICE_ON_DBNODE	SIZE_IN_BYTES
d1201	c5t600144F00873890000004AB12B9B0036d0s6	32559267840
d1202	c5t600144F00873890000004AB12B9C0037d0s6	32559267840
d1203	c5t600144F00873890000004AB12B9C0038d0s6	32559267840
d1204	c5t600144F00873890000004AB12B9D0039d0s6	32559267840
d1205	c5t600144F00873890000004AB12B9D003Ad0s6	32559267840
d1206	c5t600144F00873890000004AB12B9D003Bd0s6	32559267840
d1207	c5t600144F00873890000004AB12B9D003Cd0s6	32559267840
d1208	c5t600144F00873890000004AB12B9E003Dd0s6	32559267840
d1209	c5t600144F00873890000004AB12B9E003Ed0s6	32559267840

d1210 c5t600144F00873890000004AB12B9E003Fd0s6 32559267840
d1211 c5t600144F00873890000004AB12B9E0040d0s6 30462115840
d1212 c5t600144F00873890000004AB12B9E0041d0s6 30462115840
d1213 c5t600144F00873890000004AB12B9E0042d0s6 30462115840
d1214 c5t600144F00873890000004AB12B9E0043d0s6 30462115840
d1215 c5t600144F00873890000004AB12B9E0044d0s6 30462115840
d1216 c5t600144F00873890000004AB12B9E0045d0s6 30462115840
d1217 c5t600144F00873890000004AB12B9F0046d0s6 30462115840
d1218 c5t600144F00873890000004AB12B9F0047d0s6 30462115840
d1219 c5t600144F00873890000004AB12B9F0048d0s6 30462115840
d1220 c5t600144F00873890000004AB12B9F0049d0s6 30462115840
d1221 c5t600144F00873890000004AB12B9F004Ad0s6 67067904000
d1222 c5t600144F00873890000004AB12B9F004Bd0s6 67067904000
d1223 c5t600144F00873890000004AB12B9F004Cd0s6 67067904000
d1224 c5t600144F00873890000004AB12B9F004Dd0s6 67067904000
d1225 c5t600144F00873890000004AB12B9F004Ed0s6 67067904000
d1226 c5t600144F00873890000004AB12B9F004Fd0s6 16432168960
d1227 c5t600144F00873890000004AB12BA00050d0s6 16757227520
d1228 c5t600144F00873890000004AB12BA00051d0s6 27494645760
d1229 c5t600144F00873890000004AB12BA00052d0s6 8490254336
d1230 c5t600144F00873890000004AB12BA00053d0s6 27672903680
d1231 c5t600144F00873890000004AB12BA00054d0s6 27672903680
d1232 c5t600144F00873890000004AB12BA00055d0s6 661585920
d1233 c5t600144F00873890000004AB12BA00056d0s6 74383360
d9990 c5t600144F00873890000004AC27C6B0001d0s6 188245540864
d9991 c5t600144F00873890000004AC27C6B0002d0s6 219773075456
d9992 c5t600144F00873890000004AC27C6B0003d0s6 221545168896
d9993 c5t600144F00873890000004AC27C6B0004d0s6 237819068416
d8999 c5t600144F00873890000004AC27C6C0005d0s6 346453639168
c7t0d0s6 c5t600144F00873890000004AC27C6C0006d0s6 892771825664

Mapping on comstar node db12-san5

SVM_DEV	DEVICE_ON_DBNODE	SIZE_IN_BYTES
d1201	c5t600144F0EC60C10000004AB12B9B0035d0s6	32559267840
d1202	c5t600144F0EC60C10000004AB12B9C0036d0s6	32559267840
d1203	c5t600144F0EC60C10000004AB12B9C0037d0s6	32559267840
d1204	c5t600144F0EC60C10000004AB12B9D0038d0s6	32559267840
d1205	c5t600144F0EC60C10000004AB12B9D0039d0s6	32559267840
d1206	c5t600144F0EC60C10000004AB12B9D003Ad0s6	32559267840
d1207	c5t600144F0EC60C10000004AB12B9D003Bd0s6	32559267840
d1208	c5t600144F0EC60C10000004AB12B9E003Cd0s6	32559267840
d1209	c5t600144F0EC60C10000004AB12B9E003Dd0s6	32559267840
d1210	c5t600144F0EC60C10000004AB12B9E003Ed0s6	32559267840
d1211	c5t600144F0EC60C10000004AB12B9E003Fd0s6	30462115840
d1212	c5t600144F0EC60C10000004AB12B9E0040d0s6	30462115840
d1213	c5t600144F0EC60C10000004AB12B9E0041d0s6	30462115840
d1214	c5t600144F0EC60C10000004AB12B9E0042d0s6	30462115840
d1215	c5t600144F0EC60C10000004AB12B9E0043d0s6	30462115840
d1216	c5t600144F0EC60C10000004AB12B9E0044d0s6	30462115840
d1217	c5t600144F0EC60C10000004AB12B9F0045d0s6	30462115840
d1218	c5t600144F0EC60C10000004AB12B9F0046d0s6	30462115840
d1219	c5t600144F0EC60C10000004AB12B9F0047d0s6	30462115840
d1220	c5t600144F0EC60C10000004AB12B9F0048d0s6	30462115840
d1221	c5t600144F0EC60C10000004AB12B9F0049d0s6	67067904000
d1222	c5t600144F0EC60C10000004AB12B9F004Ad0s6	67067904000
d1223	c5t600144F0EC60C10000004AB12B9F004Bd0s6	67067904000
d1224	c5t600144F0EC60C10000004AB12B9F004Cd0s6	67067904000
d1225	c5t600144F0EC60C10000004AB12B9F004Dd0s6	67067904000
d1226	c5t600144F0EC60C10000004AB12B9F004Ed0s6	16432168960

d1227 c5t600144F0EC60C10000004AB12BA0004Fd0s6 16757227520
d1228 c5t600144F0EC60C10000004AB12BA00050d0s6 27494645760
d1229 c5t600144F0EC60C10000004AB12BA00051d0s6 15729623040
d1230 c5t600144F0EC60C10000004AB12BA00052d0s6 27672903680
d1231 c5t600144F0EC60C10000004AB12BA00053d0s6 27672903680
d1232 c5t600144F0EC60C10000004AB12BA00054d0s6 5464064000
d1233 c5t600144F0EC60C10000004AB12BA00055d0s6 263127040
d9990 c5t600144F0EC60C10000004AC27C6B0001d0s6 180817428480
d9991 c5t600144F0EC60C10000004AC27C6B0002d0s6 219773075456
d9992 c5t600144F0EC60C10000004AC27C6B0003d0s6 221545168896
d9993 c5t600144F0EC60C10000004AC27C6B0004d0s6 233016590336
d8999 c5t600144F0EC60C10000004AC27C6C0005d0s6 459808899072
c7t0d0s6 c5t600144F0EC60C10000004AC27C6C0006d0s6 892771825664

Mapping on comstar node db13-san1

SVM_DEV	DEVICE_ON_DBNODE	SIZE_IN_BYTES
d9991	c5t600144F084B4860000004AC2BB290003d0s6	24004706369536
d9992	c5t600144F084B4860000004AC2BB2B0004d0s6	24004706369536
d9993	c5t600144F084B4860000004AC2BB2C0005d0s6	24004706369536
d9994	c5t600144F084B4860000004AC2BB2E0006d0s6	24004706369536
d9995	c5t600144F084B4860000004AC2BB2F0007d0s6	24004706369536
d9996	c5t600144F084B4860000004AC2BB310008d0s6	24004706369536

prtdiag output

System Configuration: Sun Microsystems sun4v T5440
Memory size: 524000 Megabytes

Virtual CPUs			
CPU ID	Frequency	Implementation	Status
0	1580 MHz	SUNW,UltraSPARC-T2+	on-line
1	1580 MHz	SUNW,UltraSPARC-T2+	on-line
2	1580 MHz	SUNW,UltraSPARC-T2+	on-line
3	1580 MHz	SUNW,UltraSPARC-T2+	on-line
4	1580 MHz	SUNW,UltraSPARC-T2+	on-line
5	1580 MHz	SUNW,UltraSPARC-T2+	on-line
6	1580 MHz	SUNW,UltraSPARC-T2+	on-line
7	1580 MHz	SUNW,UltraSPARC-T2+	on-line
8	1580 MHz	SUNW,UltraSPARC-T2+	on-line
9	1580 MHz	SUNW,UltraSPARC-T2+	on-line
10	1580 MHz	SUNW,UltraSPARC-T2+	on-line
11	1580 MHz	SUNW,UltraSPARC-T2+	on-line
12	1580 MHz	SUNW,UltraSPARC-T2+	on-line
13	1580 MHz	SUNW,UltraSPARC-T2+	on-line
14	1580 MHz	SUNW,UltraSPARC-T2+	on-line
15	1580 MHz	SUNW,UltraSPARC-T2+	on-line
16	1580 MHz	SUNW,UltraSPARC-T2+	on-line
17	1580 MHz	SUNW,UltraSPARC-T2+	on-line
18	1580 MHz	SUNW,UltraSPARC-T2+	on-line
19	1580 MHz	SUNW,UltraSPARC-T2+	on-line
20	1580 MHz	SUNW,UltraSPARC-T2+	on-line

16 GB MB/MEM0/CMP0/BR1/CH0/D1
MB/MEM0/CMP0/BR1/CH1/D1
16 GB MB/MEM0/CMP0/BR0/CH0/D2
MB/MEM0/CMP0/BR0/CH1/D2
16 GB MB/MEM0/CMP0/BR1/CH0/D2
MB/MEM0/CMP0/BR1/CH1/D2
16 GB MB/MEM0/CMP0/BR0/CH0/D3
MB/MEM0/CMP0/BR0/CH1/D3
16 GB MB/MEM0/CMP0/BR1/CH0/D3
MB/MEM0/CMP0/BR1/CH1/D3
16 GB MB/CPU1/CMP1/BR0/CH0/D0
MB/CPU1/CMP1/BR0/CH1/D0
16 GB MB/CPU1/CMP1/BR1/CH0/D0
MB/CPU1/CMP1/BR1/CH1/D0
16 GB MB/MEM1/CMP1/BR0/CH0/D1
MB/MEM1/CMP1/BR0/CH1/D1
16 GB MB/MEM1/CMP1/BR1/CH0/D1
MB/MEM1/CMP1/BR1/CH1/D1
16 GB MB/MEM1/CMP1/BR0/CH0/D2
MB/MEM1/CMP1/BR0/CH1/D2
16 GB MB/MEM1/CMP1/BR1/CH0/D2
MB/MEM1/CMP1/BR1/CH1/D2
16 GB MB/MEM1/CMP1/BR0/CH0/D3
MB/MEM1/CMP1/BR0/CH1/D3
16 GB MB/MEM1/CMP1/BR1/CH0/D3
MB/MEM1/CMP1/BR1/CH1/D3
16 GB MB/CPU2/CMP2/BR0/CH0/D0
MB/CPU2/CMP2/BR0/CH1/D0
16 GB MB/CPU2/CMP2/BR1/CH0/D0
MB/CPU2/CMP2/BR1/CH1/D0
16 GB MB/MEM2/CMP2/BR0/CH0/D1
MB/MEM2/CMP2/BR0/CH1/D1
16 GB MB/MEM2/CMP2/BR1/CH0/D1
MB/MEM2/CMP2/BR1/CH1/D1
16 GB MB/MEM2/CMP2/BR0/CH0/D2
MB/MEM2/CMP2/BR0/CH1/D2
16 GB MB/MEM2/CMP2/BR1/CH0/D2
MB/MEM2/CMP2/BR1/CH1/D2
16 GB MB/MEM2/CMP2/BR0/CH0/D3
MB/MEM2/CMP2/BR0/CH1/D3
16 GB MB/MEM2/CMP2/BR1/CH0/D3
MB/MEM2/CMP2/BR1/CH1/D3
16 GB MB/CPU3/CMP3/BR0/CH0/D0
MB/CPU3/CMP3/BR0/CH1/D0
16 GB MB/CPU3/CMP3/BR1/CH0/D0
MB/CPU3/CMP3/BR1/CH1/D0
16 GB MB/MEM3/CMP3/BR0/CH0/D1
MB/MEM3/CMP3/BR0/CH1/D1
16 GB MB/MEM3/CMP3/BR1/CH0/D1
MB/MEM3/CMP3/BR1/CH1/D1
16 GB MB/MEM3/CMP3/BR0/CH0/D2
MB/MEM3/CMP3/BR0/CH1/D2
16 GB MB/MEM3/CMP3/BR1/CH0/D2
MB/MEM3/CMP3/BR1/CH1/D2
16 GB MB/MEM3/CMP3/BR0/CH0/D3
MB/MEM3/CMP3/BR0/CH1/D3
16 GB MB/MEM3/CMP3/BR1/CH0/D3
MB/MEM3/CMP3/BR1/CH1/D3

===== IO Devices =====
Slot + Bus Name + Model

Status	Type	Path	
MB/HBA	PCIE	scsi-pciex1000,58	LSI,1068E
MB/PCIE1	PCIE	scsi-pci@400/pci@0/pci@1/scsi@0	
MB/PCIE1	PCIE	SUNW,emlxs-pciex10df,fc40	LPe12002-S
MB/PCIE1	PCIE	pci@400/pci@0/pci@c/SUNW,emlxs@0	
MB/PCIE1	PCIE	SUNW,emlxs-pciex10df,fc40	LPe12002-S
MB/PCIE1	PCIE	pci@400/pci@0/pci@c/SUNW,emlxs@0,1	
MB	PCIE	network-pciex108e,abcd	SUNW,pcie-neptune
MB	PCIE	pci@500/pci@0/pci@c/network@0	
MB	PCIE	network-pciex108e,abcd	SUNW,pcie-neptune
MB	PCIE	pci@500/pci@0/pci@c/network@0,1	
MB	PCIE	network-pciex108e,abcd	SUNW,pcie-neptune
MB	PCIE	pci@500/pci@0/pci@c/network@0,2	
MB	PCIE	network-pciex108e,abcd	SUNW,pcie-neptune
MB/PCIE4	PCIE	pci@500/pci@0/pci@c/network@0,3	
MB/PCIE4	PCIE	SUNW,qlc-pciex1077,2432	QLE2462
MB/PCIE4	PCIE	pci@500/pci@0/pci@d/SUNW,qlc@0	
MB/PCIE4	PCIE	SUNW,qlc-pciex1077,2432	QLE2462
MB/PCIE4	PCIE	pci@500/pci@0/pci@d/SUNW,qlc@0,1	
MB/PCIE3	PCIE	SUNW,emlxs-pciex10df,fc40	LPe12002-S
MB/PCIE3	PCIE	pci@600/pci@0/pci@9/SUNW,emlxs@0	
MB/PCIE3	PCIE	SUNW,emlxs-pciex10df,fc40	LPe12002-S
MB/PCIE3	PCIE	pci@600/pci@0/pci@9/SUNW,emlxs@0,1	
MB/PCIE2	PCIE	SUNW,qlc-pciex1077,2432	QLE2462
MB/PCIE2	PCIE	pci@600/pci@0/pci@c/SUNW,qlc@0	
MB/PCIE2	PCIE	SUNW,qlc-pciex1077,2432	QLE2462
MB/PCIE2	PCIE	pci@600/pci@0/pci@c/SUNW,qlc@0,1	
MB/PCIE7	PCIE	network-pciex108e,abcd	SUNW,pcie-2xgf
MB/PCIE7	PCIE	pci@700/pci@0/pci@9/network@0	
MB/PCIE7	PCIE	network-pciex108e,abcd	SUNW,pcie-2xgf
MB/PCIE7	PCIE	pci@700/pci@0/pci@9/network@0,1	
MB/PCIE7	PCIE	ethernet	
disabled	PCIE	pci@700/pci@0/pci@9/ethernet	
MB/PCIE7	PCIE	ethernet	
disabled	PCIE	pci@700/pci@0/pci@9/ethernet	
MB/PCIE6	PCIE	SUNW,emlxs-pciex10df,fc40	LPe12002-S
MB/PCIE6	PCIE	pci@700/pci@0/pci@c/SUNW,emlxs@0	
MB/PCIE6	PCIE	SUNW,emlxs-pciex10df,fc40	LPe12002-S
MB/PCIE6	PCIE	pci@700/pci@0/pci@c/SUNW,emlxs@0,1	
MB	PCIX	usb-pci@400/pci@0/pci@9/pci@0/usb@0	
MB	PCIX	usb-pci@400/pci@0/pci@9/pci@0/usb@0	
MB	PCIX	usb-pci@400/pci@0/pci@9/pci@0/usb@0,1	
MB	PCIX	usb-pci@400/pci@0/pci@9/pci@0/usb@0,2	
===== Environmental Status =====			
Fan sensors: All fan sensors are OK.			
Fan indicators: All fan indicators are OK.			
Temperature sensors: All temperature sensors are OK.			
Temperature indicators: All temperature indicators are OK.			
Current sensors: All current sensors are OK.			

Current indicators:
All current indicators are OK.

Voltage sensors:
All voltage sensors are OK.

Voltage indicators:
All voltage indicators are OK.

===== FRU Status =====
All FRUs are enabled.
=====

prtconf output

System Configuration: Sun Microsystems sun4v
Memory size: 524000 Megabytes
System Peripherals (Software Nodes):

SUNW,T5440
 scsi_vhci, instance #0
 disk, instance #4
 disk, instance #5
 ssd, instance #3995
 ssd, instance #3516
 ssd, instance #3517
 ssd, instance #3518
 ssd, instance #3519
 ssd, instance #3520
 ssd, instance #3521
 ssd, instance #3994
 ssd, instance #3510
 ssd, instance #3511
 ssd, instance #3512
 ssd, instance #3513
 ssd, instance #3514
 ssd, instance #3515
 ssd, instance #3988
 ssd, instance #3989
 ssd, instance #3990
 ssd, instance #3991
 ssd, instance #3992
 ssd, instance #3993
 ssd, instance #3996
 ssd, instance #3576
 ssd, instance #3577
 ssd, instance #3578
 ssd, instance #3579
 ssd, instance #3580
 ssd, instance #3581
 ssd, instance #3997
 ssd, instance #3998
 ssd, instance #3999
 ssd, instance #4000
 ssd, instance #4003
 ssd, instance #4001
 ssd, instance #4004
 ssd, instance #4005
 ssd, instance #3616
 ssd, instance #3617
 ssd, instance #4006

ssd, instance #4007
ssd, instance #3424
ssd, instance #3423
ssd, instance #3422
ssd, instance #3421
ssd, instance #3420
ssd, instance #3380
ssd, instance #3381
ssd, instance #3382
ssd, instance #3618
ssd, instance #3193
ssd, instance #3194
ssd, instance #3619
ssd, instance #3195
ssd, instance #3196
ssd, instance #4002
ssd, instance #3600
ssd, instance #3601
ssd, instance #4010
ssd, instance #3528
ssd, instance #3529
ssd, instance #3602
ssd, instance #3603
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ssd, instance #3605
ssd, instance #3531
ssd, instance #3532
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ssd, instance #3477
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ssd, instance #3480
ssd, instance #3481
ssd, instance #3482
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ssd, instance #3384
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ssd, instance #3329
ssd, instance #3429
ssd, instance #3428
ssd, instance #3427
ssd, instance #3426
ssd, instance #3330
ssd, instance #3425
ssd, instance #3379
ssd, instance #3331
ssd, instance #3377
ssd, instance #3332
ssd, instance #3378
ssd, instance #3313
ssd, instance #3314
ssd, instance #3262
ssd, instance #3263
ssd, instance #3023
ssd, instance #3024
ssd, instance #4011
ssd, instance #3564
ssd, instance #3565
ssd, instance #4022
ssd, instance #3432
ssd, instance #3566

ssd, instance #3567
ssd, instance #3568
ssd, instance #3569
ssd, instance #3433
ssd, instance #3434
ssd, instance #3435
ssd, instance #4009
ssd, instance #3534
ssd, instance #3535
ssd, instance #3436
ssd, instance #3437
ssd, instance #3438
ssd, instance #3536
ssd, instance #3439
ssd, instance #3386
ssd, instance #3387
ssd, instance #3537
ssd, instance #3388
ssd, instance #3538
ssd, instance #3539
ssd, instance #3315
ssd, instance #3316
ssd, instance #3317
ssd, instance #3318
ssd, instance #2985
ssd, instance #4008
ssd, instance #3540
ssd, instance #3541
ssd, instance #3542
ssd, instance #3543
ssd, instance #3544
ssd, instance #3545
ssd, instance #4013
ssd, instance #3558
ssd, instance #3559
ssd, instance #3560
ssd, instance #4012
ssd, instance #3561
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ssd, instance #3571
ssd, instance #3572
ssd, instance #3573
ssd, instance #3574
ssd, instance #3575
ssd, instance #4021
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ssd, instance #3489
ssd, instance #3522
ssd, instance #3490
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ssd, instance #3389
ssd, instance #3524
ssd, instance #3390
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ssd, instance #3335
ssd, instance #3336

ssd, instance #3337
ssd, instance #3338
ssd, instance #3269
ssd, instance #3270
ssd, instance #3526
ssd, instance #4014
ssd, instance #3552
ssd, instance #3527
ssd, instance #3553
ssd, instance #3554
ssd, instance #4015
ssd, instance #3546
ssd, instance #3555
ssd, instance #3547
ssd, instance #3556
ssd, instance #3548
ssd, instance #3549
ssd, instance #3557
ssd, instance #3550
ssd, instance #3551
ssd, instance #3440
ssd, instance #3441
ssd, instance #3442
ssd, instance #3443
ssd, instance #3444
ssd, instance #3445
ssd, instance #3392
ssd, instance #3393
ssd, instance #3394
ssd, instance #3323
ssd, instance #3324
ssd, instance #3333
ssd, instance #3334
ssd, instance #3029
ssd, instance #3030
ssd, instance #4016
ssd, instance #4017
ssd, instance #4018
ssd, instance #4019
ssd, instance #4020
ssd, instance #3620
ssd, instance #3621
ssd, instance #3504
ssd, instance #3505
ssd, instance #3506
ssd, instance #3507
ssd, instance #3508
ssd, instance #3509
ssd, instance #3395
ssd, instance #3396
ssd, instance #3397
ssd, instance #3325
ssd, instance #3326
ssd, instance #3327
ssd, instance #3328
ssd, instance #3204
ssd, instance #3205
ssd, instance #3446
ssd, instance #3447
ssd, instance #3448
ssd, instance #3449
ssd, instance #3450

ssd, instance #3451
ssd, instance #3398
ssd, instance #3399
ssd, instance #3400
ssd, instance #3319
ssd, instance #3320
ssd, instance #3321
ssd, instance #3322
ssd, instance #3026
ssd, instance #3027
ssd, instance #3702
ssd, instance #3703
ssd, instance #3704
ssd, instance #3705
ssd, instance #3706
ssd, instance #3707
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ssd, instance #3281
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ssd, instance #3300
ssd, instance #3301
ssd, instance #3302
ssd, instance #3303
ssd, instance #3304
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ssd, instance #3309
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ssd, instance #2868
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ssd, instance #2876
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ssd, instance #2878
ssd, instance #2879
ssd, instance #2880
ssd, instance #2881
ssd, instance #2882
ssd, instance #2883
ssd, instance #3775
ssd, instance #3776
ssd, instance #3777
ssd, instance #3778
ssd, instance #3779
ssd, instance #3780
ssd, instance #2551
ssd, instance #2552
ssd, instance #2553
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ssd, instance #3986
ssd, instance #1790
ssd, instance #1792
ssd, instance #3987
ssd, instance #1625
ssd, instance #1793
ssd, instance #1626
ssd, instance #1794
ssd, instance #1795
ssd, instance #1796
ssd, instance #1797
ssd, instance #1798
ssd, instance #1627
ssd, instance #1628
ssd, instance #1629
ssd, instance #1630
ssd, instance #1799
ssd, instance #1631
ssd, instance #1800
ssd, instance #1632
ssd, instance #1633
ssd, instance #1801
ssd, instance #1634
ssd, instance #1635
ssd, instance #1802
ssd, instance #1803
ssd, instance #1636
ssd, instance #1804
ssd, instance #1637
ssd, instance #1638
ssd, instance #1805
ssd, instance #1806
ssd, instance #3958

ssd, instance #3959
ssd, instance #1639
ssd, instance #1640
ssd, instance #3960
ssd, instance #1641
ssd, instance #1642
ssd, instance #3961
ssd, instance #1643
ssd, instance #1807
ssd, instance #1644
ssd, instance #3962
ssd, instance #3963
ssd, instance #1645
ssd, instance #1260
ssd, instance #1261
ssd, instance #1262
ssd, instance #1646
ssd, instance #1263
ssd, instance #1647
ssd, instance #1264
ssd, instance #1265
ssd, instance #1269
ssd, instance #1270
ssd, instance #1271
ssd, instance #1808
ssd, instance #1272
ssd, instance #1809
ssd, instance #1273
ssd, instance #1275
ssd, instance #1276
ssd, instance #1278
ssd, instance #1280
ssd, instance #1810
ssd, instance #1811
ssd, instance #1281
ssd, instance #1648
ssd, instance #1812
ssd, instance #1649
ssd, instance #1284
ssd, instance #1650
ssd, instance #1813
ssd, instance #1285
ssd, instance #1651
ssd, instance #1814
ssd, instance #1287
ssd, instance #1289
ssd, instance #1815
ssd, instance #1290
ssd, instance #1652
ssd, instance #1291
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ssd, instance #1816
ssd, instance #1293
ssd, instance #1817
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ssd, instance #1819

ssd, instance #1298
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ssd, instance #1656
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ssd, instance #1657
ssd, instance #3708
ssd, instance #3709
ssd, instance #1301
ssd, instance #1305
ssd, instance #3710
ssd, instance #3711
ssd, instance #3712
ssd, instance #1306
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ssd, instance #1179
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ssd, instance #1190
ssd, instance #1551

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ssd, instance #1192
ssd, instance #1197
ssd, instance #1199
ssd, instance #1554
ssd, instance #1555
ssd, instance #1201
ssd, instance #1556
ssd, instance #1557
ssd, instance #1204
ssd, instance #1210
ssd, instance #3745
ssd, instance #1211
ssd, instance #1213
ssd, instance #1214
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ssd, instance #3971
ssd, instance #3972
ssd, instance #3973
ssd, instance #3974
ssd, instance #1500
ssd, instance #3975
ssd, instance #1246
ssd, instance #1501
ssd, instance #2320
ssd, instance #1502
ssd, instance #2321
ssd, instance #1503
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ssd, instance #1504
ssd, instance #1505
ssd, instance #1506
ssd, instance #2323
ssd, instance #1507
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ssd, instance #2324
ssd, instance #1509

ssd, instance #2325
ssd, instance #2326
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ssd, instance #3865
ssd, instance #3866
ssd, instance #1981
ssd, instance #1983
ssd, instance #1985
ssd, instance #1987
ssd, instance #1988
ssd, instance #1990
ssd, instance #1993
ssd, instance #1994
ssd, instance #1996
ssd, instance #1998
ssd, instance #2000
ssd, instance #2001
ssd, instance #2006
ssd, instance #2009
ssd, instance #2010
ssd, instance #2012
ssd, instance #2013
ssd, instance #2015
ssd, instance #2016

[illegible][illegible]

pci, instance #2
pci, instance #9
pci, instance #10
SUNW,emlxs, instance #2
fp (driver not attached)
disk (driver not attached)
tape (driver not attached)
fp, instance #7
fp, instance #8 (driver not attached)
SUNW,emlxs, instance #3
fp (driver not attached)
disk (driver not attached)
tape (driver not attached)
fp, instance #9
fp, instance #11 (driver not attached)
pci, instance #11
SUNW,qlc, instance #2
fp (driver not attached)
disk (driver not attached)
fp, instance #2
ssd, instance #3452
SUNW,qlc, instance #3
fp (driver not attached)
disk (driver not attached)
fp, instance #1
ssd, instance #3495
ssd, instance #3501
ssd, instance #3405
ssd, instance #3470
ssd, instance #3431
ssd, instance #3407
ssd, instance #3469
ssd, instance #3409
ssd, instance #3417
ssd, instance #3462
ssd, instance #3466
ssd, instance #3464
ssd, instance #3461
ssd, instance #3497
ssd, instance #3430
ssd, instance #3492
ssd, instance #3411
ssd, instance #3457
ssd, instance #3454
ssd, instance #3412
ssd, instance #3472
ssd, instance #3459
ssd, instance #3416
ssd, instance #3415
pci, instance #12
pci-performance-counters, instance #2
pci, instance #3
pci, instance #13
pci, instance #14
network, instance #4
network, instance #5
ethernet (driver not attached)
ethernet (driver not attached)
pci, instance #15
SUNW,emlxs, instance #4
fp (driver not attached)
disk (driver not attached)

tape (driver not attached)
fp, instance #12
fp, instance #13 (driver not attached)
SUNW,emlxs, instance #5
fp (driver not attached)
disk (driver not attached)
tape (driver not attached)
fp, instance #14
fp, instance #15 (driver not attached)
pci-performance-counters, instance #3
ramdisk-root (driver not attached)
os-io (driver not attached)
iscsi, instance #0
pseudo, instance #0

=====
/etc/project
=====

system:0:::
user.root:1:::
noproject:2:::
default:3:::project.max-shm-memory=(priv,512,deny)
group.staff:10:::
elcap:100:ELCAP:oracle::process.max-sem-nsems=(priv,64,deny);project.max-msg-ids=(priv,4096,deny);project.max-sem-ids=(priv,32768,deny);project.max-shm-ids=(priv,4096,deny);project.max-shm-memory=(priv,549755813888,deny)
=====

=====
/etc/system
=====

ident " @(#)system 1.18 97/06/27 SMI" / SVR4 1.5 */

*
* SYSTEM SPECIFICATION FILE
*

* moddir:

*
* Set the search path for modules. This has a format similar to the
* csh path variable. If the module isn't found in the first directory
* it tries the second and so on. The default is /kernel /usr/kernel
*

* Example:
* moddir: /kernel /usr/kernel /other/modules

* root device and root filesystem configuration:

*
* The following may be used to override the defaults provided by
* the boot program:
*

* rootfs: Set the filesystem type of the root.
*

* rootdev: Set the root device. This should be a fully
* expanded physical pathname. The default is the
* physical pathname of the device where the boot
* program resides. The physical pathname is
* highly platform and configuration dependent.
*

* Example:

```
*
*      rootfs:ufs
*      rootdev:/sbus@1,f8000000/esp@0,800000/sd@3,0:a
*
*      (Swap device configuration should be specified in /etc/vfstab.)

* exclude:
*
*      Modules appearing in the moddir path which are NOT to be loaded,
*      even if referenced. Note that 'exclude' accepts either a module name,
*      or a filename which includes the directory.
*
*      Examples:
*      exclude: win
*      exclude: sys/shmsys

* forceload:
*
*      Cause these modules to be loaded at boot time, (just before mounting
*      the root filesystem) rather than at first reference. Note that
*      forceload expects a filename which includes the directory. Also
*      note that loading a module does not necessarily imply that it will
*      be installed.
*
*      Example:
*      forceload: drv/foo

* set:
*
*      Set an integer variable in the kernel or a module to a new value.
*      This facility should be used with caution. See system(4).
*
*      Examples:
*
*      To set variables in 'unix':
*
*      set nautoptush=32
*      set maxusers=40
*
*      To set a variable named 'debug' in the module named 'test_module'
*
*      set test_module:debug = 0x13

*****
*
set rlim_fd_cur=1024
set md_mirror:md_resync_bufsz = 2048
set md:mirrored_root_flag=1
#
set hires_tick=1
set lgrp_mem_pset_aware=1
set segspt_minfree=0x80000
set swapfs_minfree=0x80000
set maxphys=1048576
set autoup=3000
set ip:ip_squeue_bind = 0
=====
```

```
/etc/user_attr
=====
#
# Copyright 2007 Sun Microsystems, Inc. All rights reserved.
# Use is subject to license terms.
#
# /etc/user_attr
#
# execution attributes for profiles. see user_attr(4)
#
#ident      "@(#)user_attr      1.1      07/01/31 SMI"
#
#
adm:::profiles=Log Management
lp:::profiles=Printer Management
postgres:::type=role;profiles=Postgres Administration,All
root:::auths=solaris.*,solaris.grant;profiles=Web Console
Management,All;lock_after_retries=no;min_label=admin_low;clearance=admin_high
oracle:::project=elcap
dbbench:::project=elcap
=====

emlxs.conf
=====
# Copyright 2008 Emulex. All rights reserved.
# Use is subject to license terms.
#
#ident      "@(#)emlxs.conf      1.1      08/12/17 SMI"
#
#
# Solaris LightPulse emlxs driver: global initialized data.
#

# console-notices: Sets the verbose level for driver notices to the console.
# console-warnings: Sets the verbose level for driver warnings to the console.
# console-errors: Sets the verbose level for driver errors to the console.
#
# log-notices: Sets the verbose level for driver notices to the system log file*.
# log-warnings: Sets the verbose level for driver warnings to the system log file*.
# log-errors: Sets the verbose level for driver errors to the system log file*.
#
# *NOTE: The system log file is normally found at /var/adm/messages.
#
# Each parameter is a bit mask that enables/disables specific types of messages.
# If the bit is set, then the messages of that type are enabled.
#
# The available message types are listed below:
#
# LOG_MISC      0x00000001 /* Misc events */
# LOG_DRIVER    0x00000002 /* Driver attach and detach events */
# LOG_INIT      0x00000004 /* HBA initialization events */
# LOG_MEM       0x00000008 /* Memory management events */
# LOG_SLI       0x00000010 /* Service Level Interface (SLI) events */
# LOG_MBOX      0x00000020 /* Mailbox events */
# LOG_NODE      0x00000040 /* Node events */
# LOG_LINK      0x00000080 /* Link events */
# LOG_ELS       0x00000100 /* ELS events */
# LOG_PKT       0x00000200 /* General I/O packet events */
# LOG_FCP       0x00000400 /* FCP traffic events */
# LOG_TGTM      0x00000800 /* FCP target mode events */
```

```
# LOG_IP      0x00001000  /* IP traffic events */
# LOG_SFS     0x00002000  /* SFS events */
# LOG_IOCTL   0x00004000  /* IOCTL events */
# LOG_FIRMWARE 0x00008000  /* Firmware download events */
# LOG_CT      0x00010000  /* CT events */
# LOG_FCSP    0x00020000  /* FCSP events */
# LOG_RESERVED 0xfffc0000 /* Reserved for future use */
#
# Range: Min:0 Max:0xffffffff
#
# console-notices = 0; (Default)
# console-warnings = 0; (Default)
# console-errors = 0; (Default)
#
# log-notices = 0xffffffff; (Default)
# log-warnings = 0xffffffff; (Default)
# log-errors = 0xffffffff; (Default)
#
console-notices=0;
console-warnings=0;
console-errors=0;
log-notices=0xffffffff;
log-warnings=0xffffffff;
log-errors=0xffffffff;

# num-iocbs: Sets the number of iocb buffers to allocate.
#
# Range: Min:128 Max:10240 Default:1024
#
num-iocbs=1024;
#num-iocbs=2048;

# max-xfer-size: Sets the maximum SCSI transfer size in bytes per IO
# This parameter is only used by the driver on i386 platforms.
# The driver does not limit transfer size on SPARC platforms.
#
# This parameter determines the scatter gather list buffer size.
# A pool of buffers is reallocated by the driver during boot.
# A larger transfer size requires a larger memory allocation.
#
#   Memory_model    max-xfer-size
# -----
#   Small           131072 - 339968
#   Medium           339969 - 688128
#   Large           688129 - 1388544
#
# Range: Min:131072 Max:1388544 Default:339968
#
max-xfer-size=339968;

# ub-bufs: Sets the number of unsolicited buffers to be allocated.
#
# Range: Min:40 Max:16320 Default:1000
#
ub-bufs=1000;

#
# +++ Variables relating to IP networking support. +++
```

```
#
#
# network-on: Enable/Disable IP networking support in the driver.
#
# 0 = Disables IP networking support in the driver.
# 1 = Enables IP networking support in the driver.
#
# Range: Min:0 Max:1 Default:1
#
network-on=1;

#
# +++ Fibre Channel specific parameters +++
#
# topology: link topology for initializing the Fibre Channel connection.
#
#   0 = attempt loop mode, if it fails attempt point-to-point mode
#   2 = attempt point-to-point mode only
#   4 = attempt loop mode only
#   6 = attempt point-to-point mode, if it fails attempt loop mode
#
# Set point-to-point mode if you want to run as an N_Port.
# Set loop mode if you want to run as an NL_Port.
#
# Range: Min:0 Max:6 Default:0
#
topology=0;

# link-speed: Sets the link speed setting for initializing the Fibre Channel
# connection.
#
# 0 = auto select
# 1 = 1 Gigabaud
# 2 = 2 Gigabaud
# 4 = 4 Gigabaud
# 8 = 8 Gigabaud
#
# Range: Min:0 Max:8 Default:0
#
link-speed=0;

# ack0: Determines if ACK0 is used instead of ACK1 for class 2
# acknowledgement.
#
# 0 = The driver will use ACK1 for class 2 acknowledgement.
# 1 = The driver will use ACK0 for class 2 acknowledgement.
#
# Range: Min:0 Max:1 Default:0
#
ack0=0;

#
# cr-delay: Sets the coalesce response delay in the adapter.
#
# This value specifies a count of milliseconds after which an interrupt
# response is generated if cr-count has not been satisfied. This value is
# set to 0 to disable the Coalesce Response feature as default.
#
# Range: Min:0 Max:63 Default:0
```

```
#
cr-delay=0;

# cr-count: Sets the coalesce response count in the adapter.
#
# This value specifies a count of I/O completions after which an interrupt
# response is generated. This feature is disabled if cr-delay is set to 0.
#
# Range: Min:1 Max:255 Default:1
#
cr-count=1;

# assign-alpa: Sets a preferred ALPA for the adapter.
#
# This is only valid if topology is loop. A zero setting means no preference.
# If multiple adapter instances on the same host are on the same loop,
# you will want to set this value differently for each adapter.
#
# For example: emlsx0-assign-alpa=0x01; assigns ALPA 0x01 to adapter 0
#             emlsx1-assign-alpa=0x02; assigns ALPA 0x02 to adapter 1
#             emlsx2-assign-alpa=0x04; assigns ALPA 0x04 to adapter 2
#
# Range: Min:0x00 Max:0xef Default:0x00 (valid ALPA's only)
#
assign-alpa=0x00;

# adisc-support: Sets the ADISC login support level.
#
# This sets the level of driver support for the Fibre Channel ADISC
# login I/O recovery method.
#
# 0 = No support. Flush active I/O's for all FCP target devices at link down.
# 1 = Partial support. Flush I/O's for non-FCP2 target devices at link down.
# 2 = Full support. Hold active I/O's for all devices at link down.
#
# Range: Min:0 Max:2 Default:1
#
adisc-support=1;

# pm-support: Enable/Disable power management support in the driver.
#
# 0 = Disables power management support in the driver.
# 1 = Enables power management support in the driver.
#
# Range: Min:0 Max:1 Default:0
#
pm-support=0;

# num-nodes: Number of fibre channel nodes (NPorts) the driver will support.
#
# 0 = Indicates auto detect limit of adapter.
#
# Range: Min:0 Max:4096 Default:0
#
num-nodes=0;
```

```
# pci-max-read: Sets the PCI-X max memory read byte count on the adapter.
#
# This value controls the adapter's max PCI-X memory read count.
# On Sunfire x4100/4200 systems this parameter must be changed to
# 1024 bytes. Currently, this parameter should only be modified on
# Sunfire x4100/4200 systems due to the unique nature of the PCI-X bus
# on these systems, otherwise it should be left as default.
#
# Options: 512, 1024, 2048, 4096
#
# Range: Min:512 Max:4096 Default:2048
#
# *Uncomment this parameter for Sunfire x4100/4200 systems only
#pci-max-read=1024;

# linkup-delay: Sets the linkup delay period (seconds) after initialization.
#
# This value controls how long the driver waits for the Fibre Channel
# link to come up after an adapter reset before continuing normal operation.
#
# Range: Min:0 Max:60 Default:10
#
linkup-delay=10;

# enable-npiv: Enables NPIV support in the driver.
#
# Requires SLI3 mode support in the adapter firmware.
#
# Range: Min:0 Max:1 Default:0
#
enable-npiv=0;

# vport-restrict-login: Restricts login to virtual ports to conserve resources.
#
# Requires SLI3 mode support in the adapter firmware.
# Requires enable-npiv parameter to be set to 1.
#
# Range: Min:0 Max:1 Default:1
#
vport-restrict-login=1;

# vport: Virtual port registration table.
# The enable-npiv must be set to 1.
#
# The vport table may have any number of comma delimited entries.
# Each entry must be of the form:
#
# "PHYS_WWPN:VPORT_WWNN:VPORT_WWPN:VPORT_ID"
#
# PHYS_WWPN = World Wide Port Name of adapter's physical port
# VPORT_WWNN = Desired World Wide Node Name of virtual port
# VPORT_WWPN = Desired World Wide Port Name of virtual port
# VPORT_ID = Desired virtual port id (1 to max vports)
# The port ids must start at 1 and increment by 1
# with no gaps in the count.
#
# Example:
#
```

```
# vport="10000000c9123456:28010000c9123456:20010000c9123456:1",
# "10000000c9123456:28020000c9123456:20020000c9123456:2",
# "10000000c9123457:28010000c9123457:20010000c9123457:1",
# "10000000c9123457:28020000c9123457:20020000c9123457:2",
# "10000000c9123457:28030000c9123457:20030000c9123457:3";
#

# enable-auth: Enables DHCHAP support in the driver.
#
# Range: Min:0 Max:1 Default:0
#
enable-auth=0;

# fp & fcp drivers do not yet support FMA, suppress fm-capable ereports
#
fm-capable=0;

=====

fp.conf
=====

#
# Copyright 2006 Sun Microsystems, Inc. All rights reserved.
# Use is subject to license terms.
#
# Sun Fibre Channel Port driver configuration
#
#ident      "@(#)fp.conf"      1.4      06/06/22 SMI"
#

name="fp" class="fibre-channel" port=0;
name="fp" class="fibre-channel" port=1;

#
# Automatic configuration of the fabric is turned on by default
# and thus allows all devices discovered in the SAN zone to be
# enumerated in the Solaris devinfo tree automatically.
#
# The manual_configuration_only property may be used to
# disable the default behavior and force the manual configuration of
# the devices in the SAN. Setting manual_configuration_only=1
# will disable the automatic configuration of devices.
# NOTE: Use of this property is not recommended. If used, the
# fabric devices accessed at boot time need to get manually configured
# before the next reboot. Otherwise, fabric devices that are needed at
# boot time may not get configured and may cause boot problems.
# To manually configure fabric devices, refer to cfgadm_fp(1M).
# manual_configuration_only=1;
#

#
# To generate the binding-set specific 'compatible' forms used to address
# legacy issues the 'scsi-binding-set' property must be defined. (do not remove)
#
scsi-binding-set="fcp";

#
# List of ULP modules for loading during port driver attach time
#
load-ulp-list="1","fcp";
```

```
#
# Force attach driver to support hotplug activity (do not remove the property)
#
ddi-forceattach=1;

#
# I/O multipathing feature (MPxIO) can be enabled or disabled using
# mpzio-disable property. Setting mpzio-disable="no" will activate
# I/O multipathing; setting mpzio-disable="yes" disables the feature.
#
# Global mpzio-disable property:
#
# To globally enable MPxIO on all fp ports set:
# mpzio-disable="no";
#
# To globally disable MPxIO on all fp ports set:
# mpzio-disable="yes";
#
# Per port mpzio-disable property:
#
# You can also enable or disable MPxIO on a per port basis.
# Per port settings override the global setting for the specified ports.
# To disable MPxIO on port 0 whose parent is /pci@8,600000/SUNW,qlc@4 set:
# name="fp" parent="/pci@8,600000/SUNW,qlc@4" port=0 mpzio-disable="yes";
#
# NOTE: If you just want to enable or disable MPxIO on all fp ports, it is
# better to use stmsboot(1M) as it also updates /etc/vfstab.
#
#
# You can describe a list of target port WWNs and LUN numbers which will
# not be configured. LUN numbers will be interpreted as decimal. White
# spaces and ',' can be used in the list of LUN numbers.
#
# pwwn-lun-blacklist=
# "target-port-wwn,lun-list"
#
# To prevent LUNs 1 and 2 from being configured for target
# port 510000f010fd92a1 and target port 510000e012079df1, set:
#
# pwwn-lun-blacklist=
# "510000f010fd92a1,1,2",
# "510000e012079df1,1,2";
mpzio-disable="no";
disable-sata-mpzio="no";

=====

mpt.conf
=====

#
# Copyright 2008 Sun Microsystems, Inc. All rights reserved.
# Use is subject to license terms.
#
#pragma ident      "@(#)mpt.conf"      1.3      08/12/01 SMI"
#

#
# The mpt driver, as a pHCI driver, must specify the vHCI class it
# belongs to(scsi_vhci).
#
ddi-vhci-class="scsi_vhci";
#
# I/O multipathing feature (MPxIO) can be enabled or disabled using
```

```
# mpxio-disable property. Setting mpxio-disable="no" will activate
# I/O multipathing; setting mpxio-disable="yes" disables the feature.
#
# Global mpxio-disable property:
#
# To globally enable MPxIO on all mpt controllers set:
# mpxio-disable="no";
#
# To globally disable MPxIO on all mpt controllers set:
# mpxio-disable="yes";
#
# You can also enable or disable MPxIO on a per HBA basis.
# Per HBA settings override the global setting for the specified HBAs.
# To disable MPxIO on a controller whose parent is /pci@7c0/pci@0/pci@9
# and the unit-address is "0" set:
# name="mpt" parent="/pci@7c0/pci@0/pci@9" unit-address="0" mpxio-disable="yes";
#

#
# SATA mpxio supported
#
# To disable SATA mpxio, set
# disable-sata-mpxio="yes";
# When mpxio-disable="yes" is set, the disable-sata-mpxio property
# has no effect
#
mpxio-disable="no";
disable-sata-mpxio="no";
```

sd.conf

```
#
# Copyright 2009 Sun Microsystems, Inc. All rights reserved.
# Use is subject to license terms.
#
#ident      "@(#)sd.conf      1.11      09/04/15 SMI"
```

```
name="sd" class="scsi" class_prop="atapi"
target=0 lun=0;

name="sd" class="scsi" class_prop="atapi"
target=1 lun=0;

name="sd" class="scsi" class_prop="atapi"
target=2 lun=0;

name="sd" class="scsi" class_prop="atapi"
target=3 lun=0;

name="sd" class="scsi"
target=4 lun=0;

name="sd" class="scsi"
target=5 lun=0;

name="sd" class="scsi"
target=6 lun=0;

name="sd" class="scsi"
target=8 lun=0;
```

```
name="sd" class="scsi"
target=9 lun=0;

name="sd" class="scsi"
target=10 lun=0;

name="sd" class="scsi"
target=11 lun=0;

name="sd" class="scsi"
target=12 lun=0;

name="sd" class="scsi"
target=13 lun=0;

name="sd" class="scsi"
target=14 lun=0;

name="sd" class="scsi"
target=15 lun=0;
#
# Enable Target 7 for the mpt SCSI/SAS/SATA driver. Target 7 has
# traditionally been reserved for legacy SCSI HBAs, but SAS controllers
# supported by the mpt driver do not use target 7 for that purpose.
# Enabling Target 7 allows the use of 8 disks on those controllers.
#
name="sd" parent="mpt"
target=7 lun=0;

#
# The following stub node is needed for pathological bottom-up
# devid resolution on a self-identifying transport.
#
name="sd" class="scsi-self-identifying";
```

```
sd-config-list = "SUN COMSTAR","throttle-max:12";
```

ses.conf

```
#
# Copyright 2005 Sun Microsystems, Inc. All rights reserved.
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#
#
#ident      "@(#)ses.conf      1.12      05/12/08 SMI"
#
```

```
name="ses" parent="sf" target=15;
name="ses" parent="fp" target=15;
name="ses" parent="scsi_vhci" target=15;

name="ses" class="scsi" target=0 lun=0;
name="ses" class="scsi" target=1 lun=0;
name="ses" class="scsi" target=2 lun=0;
name="ses" class="scsi" target=3 lun=0;
name="ses" class="scsi" target=4 lun=0;
name="ses" class="scsi" target=5 lun=0;
name="ses" class="scsi" target=6 lun=0;
name="ses" class="scsi" target=7 lun=0;
name="ses" class="scsi" target=8 lun=0;
name="ses" class="scsi" target=9 lun=0;
```

```
name="ses" class="scsi" target=10 lun=0;
name="ses" class="scsi" target=11 lun=0;
name="ses" class="scsi" target=12 lun=0;
name="ses" class="scsi" target=13 lun=0;
name="ses" class="scsi" target=14 lun=0;
name="ses" class="scsi" target=15 lun=0;
```

```
name="ses" parent="ifp" target=127;
=====
```

ssd.conf

=====

```
#
# Copyright 2009 Sun Microsystems, Inc. All rights reserved.
# Use is subject to license terms.
#
#ident      "@(#)ssd.conf      1.15      09/04/15 SMI"
```

```
name="ssd" parent="sf" target=0;
name="ssd" parent="fp" target=0;
```

```
#
# The following stub node is needed for pathological bottom-up
# devid resolution on a self-identifying transport.
#
name="ssd" class="scsi-self-identifying";
```

```
name="ssd" parent="ifp" target=127;
```

```
ssd-config-list = "SUN    COMSTAR", "throttle-max:16";
=====
```

System interrupts and processor sets

=====

```
#!/bin/ksh
```

```
map_if()
{
    if [ $EMLXS -ne 0 ]
    then
        echo "Setting  Emulex Lightning Flash Device Interrupt mapping"
        sleep 2
        #emlx0
        for i in `grep "emlxs#0" /tmp/mdb.$$ | awk '{ print $6 }' | awk -Fx '{ print $2 }'`
        do
            pcitool /pci@700 -i ino=${i} -w cpu=0C
        done
        #emlx1
        for i in `grep "emlxs#1" /tmp/mdb.$$ | awk '{ print $6 }' | awk -Fx '{ print $2 }'`
        do
            pcitool /pci@400 -i ino=${i} -w cpu=09
        done
        #emlx2
        for i in `grep "emlxs#2" /tmp/mdb.$$ | awk '{ print $6 }' | awk -Fx '{ print $2 }'`
        do
            pcitool /pci@600 -i ino=${i} -w cpu=0A
        done
        #emlx3
        for i in `grep "emlxs#3" /tmp/mdb.$$ | awk '{ print $6 }' | awk -Fx '{ print $2 }'`
        do
            pcitool /pci@600 -i ino=${i} -w cpu=0B
        done
```

```
#emlx4
for i in `grep "emlxs#4" /tmp/mdb.$$ | awk '{ print $6 }' | awk -Fx '{ print $2 }'`
do
    pcitool /pci@700 -i ino=${i} -w cpu=0C
done
#emlx5
for i in `grep "emlxs#5" /tmp/mdb.$$ | awk '{ print $6 }' | awk -Fx '{ print $2 }'`
do
    pcitool /pci@700 -i ino=${i} -w cpu=0D
done
else
echo "Setting  QLC Lightning Flash Device Interrupt mapping"
sleep 2
for q in 0 1 6 7
do
    INO[$q]=`grep "qlc#$q" /tmp/mdb.$$ | head -1 | awk '{ print $6 }' | awk -Fx '{ print $2 }'`
done
#qlc0
pcitool /pci@400 -i ino=${INO[0]} -w cpu=08
#qlc1
pcitool /pci@400 -i ino=${INO[1]} -w cpu=09
#qlc6
pcitool /pci@700 -i ino=${INO[6]} -w cpu=0A
#qlc7
pcitool /pci@700 -i ino=${INO[7]} -w cpu=0B
fi
}
```

```
map_log()
{
    echo "Setting Log Device Interrupt mapping"
    sleep 2
    if [ $EMLXS -ne 0 ]
    then
        INDX=0
        for q in 0 1 2 3 4 5; do
            IN=`grep "qlc#$q" /tmp/mdb.$$ | head -1 | awk '{ print $6 }' | awk -Fx '{ print $2 }'`
            if [ "$IN" != "X" ]; then
                INO[INDX]=$IN
                INDX=`expr $INDX + 1`
            fi
        done
        #qlc2
        pcitool /pci@500 -i ino=${INO[0]} -w cpu=10
        #qlc3
        pcitool /pci@500 -i ino=${INO[1]} -w cpu=11
        #qlc4
        pcitool /pci@600 -i ino=${INO[2]} -w cpu=12
        #qlc5
        pcitool /pci@600 -i ino=${INO[3]} -w cpu=13
    else
        for q in 2 3 4 5
        do
            INO[$q]=`grep "qlc#$q" /tmp/mdb.$$ | head -1 | awk '{ print $6 }' | awk -Fx '{ print $2 }'`
        done
        #qlc2
        pcitool /pci@500 -i ino=${INO[2]} -w cpu=10
        #qlc3
        pcitool /pci@500 -i ino=${INO[3]} -w cpu=11
        #qlc4
        pcitool /pci@600 -i ino=${INO[4]} -w cpu=12
        #qlc5
```



```

    pcitool /pci@600 -i ino=${INO[5]} -w cpu=13
fi
}
map_network()
{
    echo "Setting Network Interrupt mapping"
    sleep 2

    # 10Gb RAC interconnect nxge4
    # Put on last 8 threads because map to pci@700
    C=0
    grep "nxge#4" /tmp/mdb.$$ | awk '{ print $6 }' | awk -Fx '{ print $2 }' > /tmp/ino.$$
    for n in `cat /tmp/ino.$$`
    do
        INO[$C]=$n
        ((C=C+1))
    done
    pcitool /pci@700 -i ino=${INO[0]} -w cpu=F8
    pcitool /pci@700 -i ino=${INO[1]} -w cpu=F9
    pcitool /pci@700 -i ino=${INO[2]} -w cpu=FA
    pcitool /pci@700 -i ino=${INO[3]} -w cpu=FB
    pcitool /pci@700 -i ino=${INO[4]} -w cpu=FC
    pcitool /pci@700 -i ino=${INO[5]} -w cpu=FD
    pcitool /pci@700 -i ino=${INO[6]} -w cpu=FE
    pcitool /pci@700 -i ino=${INO[7]} -w cpu=FF
    rm /tmp/ino.$$

    # 1Gb Heartbeat nxge3
    C=0
    grep "nxge#3" /tmp/mdb.$$ | awk '{ print $6 }' | awk -Fx '{ print $2 }' > /tmp/ino.$$
    for n in `cat /tmp/ino.$$`
    do
        INO[$C]=$n
        ((C=C+1))
    done
    pcitool /pci@500 -i ino=${INO[0]} -w cpu=F6
    pcitool /pci@500 -i ino=${INO[1]} -w cpu=F7
    rm /tmp/ino.$$

    # 1Gb client nxge1 and 2
    # put in psrset with qlc, since lots of space there
    C=0
    egrep "nxge#1|nxge#2" /tmp/mdb.$$ | awk '{ print $6 }' | awk -Fx '{ print $2 }' > /tmp/ino.$$
    for n in `cat /tmp/ino.$$`
    do
        INO[$C]=$n
        ((C=C+1))
    done
    pcitool /pci@500 -i ino=${INO[0]} -w cpu=14
    pcitool /pci@500 -i ino=${INO[1]} -w cpu=15
    pcitool /pci@500 -i ino=${INO[2]} -w cpu=16
    pcitool /pci@500 -i ino=${INO[3]} -w cpu=17
    rm /tmp/ino.$$
}

del_psets()
{
    # first unbind everything to prevent crashes
    pbind -U

    psetcount=`psrset |wc |awk '{print $1}'`

```

```

    if [ $psetcount -gt 0 ]; then
        psrset -d `count 1 $psetcount`
    fi
}

cr_psets()
{
    # first unbind everything to prevent crashes
    pbind -U

    psetcount=`psrset |wc |awk '{print $1}'`
    if [ $psetcount -gt 0 ]; then
        psrset -d `count 1 $psetcount`
    fi

    # Emulex interrupts
    psrset -c 8-15
    # qlc and nxge 1/2 interrupts
    psrset -c 16-23
    # nxge interrupts
    psrset -c 246-255
    # clock interrupt
    psrset -c 0
}

off_interrupts()
{
    psradm -i 1
    psradm -i 3-7
    psradm -i 9-15
    psradm -i 17-23
    psradm -i 25-31
    psradm -i 33-39
    psradm -i 51-55
    psradm -i 58-255
}

check_intr()
{
    echo "LF links"
    echo "      Device Shared Type  MSG #  State  INO   Mondo   Pil   CPU"

    if [ $EMLXS -ne 0 ]
    then # we're using emulex
        for e in 0 1 2 3 4 5; do
            grep "emlxs#$e" /tmp/mdb.$$
        done
    else # we're using qlc
        for q in 0 1 6 7 ; do
            grep "qlc#$q" /tmp/mdb.$$ | head -1
        done
    fi

    echo
    echo
    echo "logs"
    echo "      Device Shared Type  MSG #  State  INO   Mondo   Pil   CPU"

    if [ $EMLXS -ne 0 ]
    then # we're using emulex
        for q in 0 1 2 3 4 5; do
            grep "qlc#$q" /tmp/mdb.$$ | head -1

```

```

done
else
  for q in 2 3 4 5; do
    grep "qlc#$q" /tmp/mdb.$$ | head -1
  done
done
fi

echo
echo
echo NW
echo "      Device Shared Type  MSG #  State  INO   Mondo  Pil   CPU"

for n in 4 3 2 1; do
  grep "nxge#$n" /tmp/mdb.$$
done

```

```

echo
echo
echo "Existing PSRSETS"
psrset
}

do_mdb()
{
echo ::interrupts | mdb -k 2>&1 | grep -v "failed to read" > /tmp/mdb.$$
}

```

```

usage()
{
  echo "interrupts.sh [ -check | -map ]"
}

```

```

# Functions
if [ $# -eq 0 ]; then
  usage
  exit
fi

```

```

while [ $# -ne 0 ]; do
case "$1" in
-map)
  shift
  do_mdb
  EMLXS=`grep emlxs /tmp/mdb.$$ | wc -l`
  echo $EMLXS
  cr_psets
  map_lf
  map_log
  map_network
  #off_interrupts
  rm /tmp/mdb.$$
  exit
  ;;
-check)
  shift
  do_mdb
  EMLXS=`grep emlxs /tmp/mdb.$$ | wc -l`
  check_intr
  rm /tmp/mdb.$$
  exit
  ;;

```

```

-clean)
  del_psets
  lockfs -fa
  exit
  ;;
*)
  echo "option $1 not recognized"
  usage
  exit
  ;;
esac
shift
done

```

Oracle processor sets/process binding

```
#!/bin/sh
```

```

# psrset to use is now 5, since we created a new one for cpu0
PSRSET=5
LGPSR=`expr $PSRSET + 1`
LMSPSR=`expr $PSRSET + 2`

```

```

# unbind everything first, just in case.  djm 10/2/09 8:45a PDT
pbind -U

```

```

# delete these first, just in case.  djm 9/24/09 7a PDT
psrset -d $PSRSET $LGPSR $LMSPSR

```

```

# delete 0, to leave for the clock.  djm 9/18/09
#psrset -c 1-7 24-215
# modify to be only boards 1 and 2.  djm 9/25/09 13:09p
#psrset -c 64-191
# modify to leave clock out.  djm 9/25/09 15:10p
psrset -c 24-215

```

```

#
for f in `ps -u oracle | awk 'NR>1 {print $1}'`; do
  psrset -b $PSRSET $f
done

```

```

# move listener to FX
prioctl -c FX -p 17 -m 17 -s `ps -ef | grep tnslsnr | grep -v grep | awk '{print $2}'`

```

```

# move backgrounds to FX, except lms,lmd,lgw,vktm.  djm 9/23/09, 3p PDT
prioctl -c FX -p 17 -m 17 -s `ps -ef | grep ora_ | grep -v lms | grep -v lmd \
| grep -v lgw | grep -v vktm | grep -v grep | awk '{print $2}'`

```

```

#psrset -a $PSRSET 216-223
# paulr Wednesday, September 23, 2009 3:05:09 AM PDT
# extra sets for lgwr & lms

```

```

# modify to have as many threads as processes, to prevent migrations
# djm, 9/24/09 6:53a PDT

```

```

# paulr: cater for 5th lms - extra CPU 229 aand bind within set.
# Monday, September 28, 2009 7:17:26 PM PDT

```

```

psrset -c 216
for p in `opt/GOODies/bin/count 224 229`; do
  psrset -c $p

```

```
done

psrset -b $LGPSR `ps -eaf | grep lgw | grep -v grep | nawk '{print $2}`

for p in `ps -eaf | grep lms | grep -v grep | nawk '{print $2}'`; do
    psrset -b $LMSPSR $p
    LMSPSR=`expr $LMSPSR + 1`
done
psrset -b $LMSPSR `ps -eaf | grep lmd | grep -v grep | nawk '{print $2}`

#ps -eaf | grep ora_lms | grep -v grep | nawk 'BEGIN {cpu=224}
#{print cpu++, $2}' | while read cpu pid ; do
#  pbind -b $cpu $pid
#done
#
#ps -eaf | grep ora_lmd | grep -v grep | nawk 'BEGIN {cpu=229}
#{print cpu++, $2}' | while read cpu pid ; do
#  pbind -b $cpu $pid
#done

=====

uname output
=====

SunOS db1 5.10 Generic_Patch sun4v sparc SUNW,T5440

=====

/etc/release
=====

        Solaris 10 10/09 s10s_u8wos_05 SPARC
        Copyright 2009 Sun Microsystems, Inc.  All Rights Reserved.
        Use is subject to license terms.
        Assembled 04 August 2009

=====

Oracle Version
=====

SQL> select * from v$version;

BANNER
-----
Oracle Database 11g Enterprise Edition Release 11.1.0.7.0 - 64bit Production
PL/SQL Release 11.1.0.7.0 - Production
CORE 11.1.0.7.0 Production
TNS for Solaris: Version 11.1.0.7.0 - Production
NLSRTL Version 11.1.0.7.0 - Production

=====

CRS Version
=====

Oracle Clusterware active version on the cluster is [11.1.0.7.0]

=====

/etc/vfstab
=====

#device      device      point      mount      FS      fsck      mount      mount
#to mount to fsck      point      type      pass      at boot  options
#
fd      -      /dev/fd      fd      -      no      -
/proc      -      /proc      proc      -      no      -
/dev/dsk/c5t5000C5001301A773d0s1      -      -      swap      -      no      -
```

```
/dev/dsk/c5t5000C500130C0A63d0s6      -      -      swap      -      no      -
/dev/dsk/c5t5000C5001301A773d0s0      /dev/rdisk/c5t5000C5001301A773d0s0      /      ufs      1
no      -
/dev/dsk/c5t5000C5001301A773d0s4      /dev/rdisk/c5t5000C5001301A773d0s4      /export      ufs      2
yes      -
/devices      -      /devices      devfs      -      no      -
sharefs      -      /etc/dfs/sharetab      sharefs      -      no      -
ctfs      -      /system/contract      ctfs      -      no      -
objfs      -      /system/object      objfs      -      no      -
swap      -      /tmp      tmpfs      -      yes      -

=====

/etc/hosts
=====

#
# Internet host table
#
::1      localhost
127.0.0.1      localhost
10.250.1.28      osol250
10.250.6.1 db1      loghost
10.250.1.1 minister
#
# NIS servers for reference
10.250.1.1 minister-250
10.1.141.1 minister minister-141
10.1.142.1 minister-142
# endit

#Private tpcc config
192.168.1.1      db1RAC10g
192.168.1.2      db2RAC10g
192.168.1.3      db3RAC10g
192.168.1.4      db4RAC10g
192.168.1.5      db5RAC10g
192.168.1.6      db6RAC10g
192.168.1.7      db7RAC10g
192.168.1.8      db8RAC10g
192.168.1.9      db9RAC10g
192.168.1.10     db10RAC10g
192.168.1.11     db11RAC10g
192.168.1.12     db12RAC10g

192.168.2.1      db1RAC10g
192.168.2.2      db2RAC10g
192.168.2.3      db3RAC10g
192.168.2.4      db4RAC10g
192.168.2.5      db5RAC10g
192.168.2.6      db6RAC10g
192.168.2.7      db7RAC10g
192.168.2.8      db8RAC10g
192.168.2.9      db9RAC10g
192.168.2.10     db10RAC10g
192.168.2.11     db11RAC10g
192.168.2.12     db12RAC10g

# connections from db nodes to clients

192.168.30.1 db1_c1
192.168.30.2 db1_c2
192.168.30.3 db1_c3
192.168.31.4 db1_c4
```

192.168.31.5 db1_c5	192.168.52.67 db12_c67
192.168.31.6 db1_c6	192.168.52.68 db12_c68
192.168.32.7 db2_c7	192.168.52.69 db12_c69
192.168.32.8 db2_c8	192.168.53.70 db12_c70
192.168.32.9 db2_c9	192.168.53.71 db12_c71
192.168.33.10 db2_c10	192.168.53.72 db12_c72
192.168.33.11 db2_c11	
192.168.33.12 db2_c12	# db side of client networks
192.168.34.13 db3_c13	
192.168.34.14 db3_c14	192.168.30.101 db1_cnx1
192.168.34.15 db3_c15	192.168.31.101 db1_cnx2
192.168.35.16 db3_c16	192.168.32.101 db2_cnx1
192.168.35.17 db3_c17	192.168.33.101 db2_cnx2
192.168.35.18 db3_c18	192.168.34.101 db3_cnx1
192.168.36.19 db4_c19	192.168.35.101 db3_cnx2
192.168.36.20 db4_c20	192.168.36.101 db4_cnx1
192.168.36.21 db4_c21	192.168.37.101 db4_cnx2
192.168.37.22 db4_c22	192.168.38.101 db5_cnx1
192.168.37.23 db4_c23	192.168.39.101 db5_cnx2
192.168.37.24 db4_c24	192.168.40.101 db6_cnx1
192.168.38.25 db5_c25	192.168.41.101 db6_cnx2
192.168.38.26 db5_c26	192.168.42.101 db7_cnx1
192.168.38.27 db5_c27	192.168.43.101 db7_cnx2
192.168.39.28 db5_c28	192.168.44.101 db8_cnx1
192.168.39.29 db5_c29	192.168.45.101 db8_cnx2
192.168.39.30 db5_c30	192.168.46.101 db9_cnx1
192.168.40.31 db6_c31	192.168.47.101 db9_cnx2
192.168.40.32 db6_c32	192.168.48.101 db10_cnx1
192.168.40.33 db6_c33	192.168.49.101 db10_cnx2
192.168.41.34 db6_c34	192.168.50.101 db11_cnx1
192.168.41.35 db6_c35	192.168.51.101 db11_cnx2
192.168.41.36 db6_c36	192.168.52.101 db12_cnx1
192.168.42.37 db7_c37	192.168.53.101 db12_cnx2
192.168.42.38 db7_c38	
192.168.42.39 db7_c39	# connections between clients and the 12 driver networks per driver
192.168.43.40 db7_c40	
192.168.43.41 db7_c41	192.168.4.1 d1.0
192.168.43.42 db7_c42	192.168.4.2 d1.1
192.168.44.43 db8_c43	192.168.4.3 d1.2
192.168.44.44 db8_c44	192.168.4.4 d1.3
192.168.44.45 db8_c45	192.168.4.5 d1.4
192.168.45.46 db8_c46	192.168.4.6 d1.5
192.168.45.47 db8_c47	192.168.4.7 d1.6
192.168.45.48 db8_c48	192.168.4.8 d1.7
192.168.46.49 db9_c49	192.168.4.9 d1.8
192.168.46.50 db9_c50	192.168.4.10 d1.9
192.168.46.51 db9_c51	192.168.4.11 d1.10
192.168.47.52 db9_c52	192.168.4.12 d1.11
192.168.47.53 db9_c53	192.168.4.13 d2.0
192.168.47.54 db9_c54	192.168.4.14 d2.1
192.168.48.55 db10_c55	192.168.4.15 d2.2
192.168.48.56 db10_c56	192.168.4.16 d2.3
192.168.48.57 db10_c57	192.168.4.17 d2.4
192.168.49.58 db10_c58	192.168.4.18 d2.5
192.168.49.59 db10_c59	192.168.4.19 d2.6
192.168.49.60 db10_c60	192.168.4.20 d2.7
192.168.50.61 db11_c61	192.168.4.21 d2.8
192.168.50.62 db11_c62	192.168.4.22 d2.9
192.168.50.63 db11_c63	192.168.4.23 d2.10
192.168.51.64 db11_c64	192.168.4.24 d2.11
192.168.51.65 db11_c65	192.168.4.25 d3.0
192.168.51.66 db11_c66	192.168.4.26 d3.1

192.168.4.27 d3.2	192.168.4.89 d8.4
192.168.4.28 d3.3	192.168.4.90 d8.5
192.168.4.29 d3.4	192.168.4.91 d8.6
192.168.4.30 d3.5	192.168.4.92 d8.7
192.168.4.31 d3.6	192.168.4.93 d8.8
192.168.4.32 d3.7	192.168.4.94 d8.9
192.168.4.33 d3.8	192.168.4.95 d8.10
192.168.4.34 d3.9	192.168.4.96 d8.11
192.168.4.35 d3.10	192.168.4.97 d9.0
192.168.4.36 d3.11	192.168.4.98 d9.1
192.168.4.37 d4.0	192.168.4.99 d9.2
192.168.4.38 d4.1	192.168.4.100 d9.3
192.168.4.39 d4.2	192.168.4.101 d9.4
192.168.4.40 d4.3	192.168.4.102 d9.5
192.168.4.41 d4.4	192.168.4.103 d9.6
192.168.4.42 d4.5	192.168.4.104 d9.7
192.168.4.43 d4.6	192.168.4.105 d9.8
192.168.4.44 d4.7	192.168.4.106 d9.9
192.168.4.45 d4.8	192.168.4.107 d9.10
192.168.4.46 d4.9	192.168.4.108 d9.11
192.168.4.47 d4.10	192.168.4.109 d10.0
192.168.4.48 d4.11	192.168.4.110 d10.1
192.168.4.49 d5.0	192.168.4.111 d10.2
192.168.4.50 d5.1	192.168.4.112 d10.3
192.168.4.51 d5.2	192.168.4.113 d10.4
192.168.4.52 d5.3	192.168.4.114 d10.5
192.168.4.53 d5.4	192.168.4.115 d10.6
192.168.4.54 d5.5	192.168.4.116 d10.7
192.168.4.55 d5.6	192.168.4.117 d10.8
192.168.4.56 d5.7	192.168.4.118 d10.9
192.168.4.57 d5.8	192.168.4.119 d10.10
192.168.4.58 d5.9	192.168.4.120 d10.11
192.168.4.59 d5.10	192.168.4.121 d11.0
192.168.4.60 d5.11	192.168.4.122 d11.1
192.168.4.61 d6.0	192.168.4.123 d11.2
192.168.4.62 d6.1	192.168.4.124 d11.3
192.168.4.63 d6.2	192.168.4.125 d11.4
192.168.4.64 d6.3	192.168.4.126 d11.5
192.168.4.65 d6.4	192.168.4.127 d11.6
192.168.4.66 d6.5	192.168.4.128 d11.7
192.168.4.67 d6.6	192.168.4.129 d11.8
192.168.4.68 d6.7	192.168.4.130 d11.9
192.168.4.69 d6.8	192.168.4.131 d11.10
192.168.4.70 d6.9	192.168.4.132 d11.11
192.168.4.71 d6.10	192.168.4.133 d12.0
192.168.4.72 d6.11	192.168.4.134 d12.1
192.168.4.73 d7.0	192.168.4.135 d12.2
192.168.4.74 d7.1	192.168.4.136 d12.3
192.168.4.75 d7.2	192.168.4.137 d12.4
192.168.4.76 d7.3	192.168.4.138 d12.5
192.168.4.77 d7.4	192.168.4.139 d12.6
192.168.4.78 d7.5	192.168.4.140 d12.7
192.168.4.79 d7.6	192.168.4.141 d12.8
192.168.4.80 d7.7	192.168.4.142 d12.9
192.168.4.81 d7.8	192.168.4.143 d12.10
192.168.4.82 d7.9	192.168.4.144 d12.11
192.168.4.83 d7.10	192.168.4.145 d13.0
192.168.4.84 d7.11	192.168.4.146 d13.1
192.168.4.85 d8.0	192.168.4.147 d13.2
192.168.4.86 d8.1	192.168.4.148 d13.3
192.168.4.87 d8.2	192.168.4.149 d13.4
192.168.4.88 d8.3	192.168.4.150 d13.5

192.168.4.151 d13.6	192.168.4.213 d18.8
192.168.4.152 d13.7	192.168.4.214 d18.9
192.168.4.153 d13.8	192.168.4.215 d18.10
192.168.4.154 d13.9	192.168.4.216 d18.11
192.168.4.155 d13.10	192.168.4.217 d19.0
192.168.4.156 d13.11	192.168.4.218 d19.1
192.168.4.157 d14.0	192.168.4.219 d19.2
192.168.4.158 d14.1	192.168.4.220 d19.3
192.168.4.159 d14.2	192.168.4.221 d19.4
192.168.4.160 d14.3	192.168.4.222 d19.5
192.168.4.161 d14.4	192.168.4.223 d19.6
192.168.4.162 d14.5	192.168.4.224 d19.7
192.168.4.163 d14.6	192.168.4.225 d19.8
192.168.4.164 d14.7	192.168.4.226 d19.9
192.168.4.165 d14.8	192.168.4.227 d19.10
192.168.4.166 d14.9	192.168.4.228 d19.11
192.168.4.167 d14.10	192.168.4.229 d20.0
192.168.4.168 d14.11	192.168.4.230 d20.1
192.168.4.169 d15.0	192.168.4.231 d20.2
192.168.4.170 d15.1	192.168.4.232 d20.3
192.168.4.171 d15.2	192.168.4.233 d20.4
192.168.4.172 d15.3	192.168.4.234 d20.5
192.168.4.173 d15.4	192.168.4.235 d20.6
192.168.4.174 d15.5	192.168.4.236 d20.7
192.168.4.175 d15.6	192.168.4.237 d20.8
192.168.4.176 d15.7	192.168.4.238 d20.9
192.168.4.177 d15.8	192.168.4.239 d20.10
192.168.4.178 d15.9	192.168.4.240 d20.11
192.168.4.179 d15.10	192.168.5.1 d21.0
192.168.4.180 d15.11	192.168.5.2 d21.1
192.168.4.181 d16.0	192.168.5.3 d21.2
192.168.4.182 d16.1	192.168.5.4 d21.3
192.168.4.183 d16.2	192.168.5.5 d21.4
192.168.4.184 d16.3	192.168.5.6 d21.5
192.168.4.185 d16.4	192.168.5.7 d21.6
192.168.4.186 d16.5	192.168.5.8 d21.7
192.168.4.187 d16.6	192.168.5.9 d21.8
192.168.4.188 d16.7	192.168.5.10 d21.9
192.168.4.189 d16.8	192.168.5.11 d21.10
192.168.4.190 d16.9	192.168.5.12 d21.11
192.168.4.191 d16.10	192.168.5.13 d22.0
192.168.4.192 d16.11	192.168.5.14 d22.1
192.168.4.193 d17.0	192.168.5.15 d22.2
192.168.4.194 d17.1	192.168.5.16 d22.3
192.168.4.195 d17.2	192.168.5.17 d22.4
192.168.4.196 d17.3	192.168.5.18 d22.5
192.168.4.197 d17.4	192.168.5.19 d22.6
192.168.4.198 d17.5	192.168.5.20 d22.7
192.168.4.199 d17.6	192.168.5.21 d22.8
192.168.4.200 d17.7	192.168.5.22 d22.9
192.168.4.201 d17.8	192.168.5.23 d22.10
192.168.4.202 d17.9	192.168.5.24 d22.11
192.168.4.203 d17.10	192.168.5.25 d23.0
192.168.4.204 d17.11	192.168.5.26 d23.1
192.168.4.205 d18.0	192.168.5.27 d23.2
192.168.4.206 d18.1	192.168.5.28 d23.3
192.168.4.207 d18.2	192.168.5.29 d23.4
192.168.4.208 d18.3	192.168.5.30 d23.5
192.168.4.209 d18.4	192.168.5.31 d23.6
192.168.4.210 d18.5	192.168.5.32 d23.7
192.168.4.211 d18.6	192.168.5.33 d23.8
192.168.4.212 d18.7	192.168.5.34 d23.9

192.168.5.35 d23.10
192.168.5.36 d23.11
192.168.5.37 d24.0
192.168.5.38 d24.1
192.168.5.39 d24.2
192.168.5.40 d24.3
192.168.5.41 d24.4
192.168.5.42 d24.5
192.168.5.43 d24.6
192.168.5.44 d24.7
192.168.5.45 d24.8
192.168.5.46 d24.9
192.168.5.47 d24.10
192.168.5.48 d24.11
192.168.5.49 d25.0
192.168.5.50 d25.1
192.168.5.51 d25.2
192.168.5.52 d25.3
192.168.5.53 d25.4
192.168.5.54 d25.5
192.168.5.55 d25.6
192.168.5.56 d25.7
192.168.5.57 d25.8
192.168.5.58 d25.9
192.168.5.59 d25.10
192.168.5.60 d25.11
192.168.5.61 d26.0
192.168.5.62 d26.1
192.168.5.63 d26.2
192.168.5.64 d26.3
192.168.5.65 d26.4
192.168.5.66 d26.5
192.168.5.67 d26.6
192.168.5.68 d26.7
192.168.5.69 d26.8
192.168.5.70 d26.9
192.168.5.71 d26.10
192.168.5.72 d26.11
192.168.5.73 d27.0
192.168.5.74 d27.1
192.168.5.75 d27.2
192.168.5.76 d27.3
192.168.5.77 d27.4
192.168.5.78 d27.5
192.168.5.79 d27.6
192.168.5.80 d27.7
192.168.5.81 d27.8
192.168.5.82 d27.9
192.168.5.83 d27.10
192.168.5.84 d27.11
192.168.5.85 d28.0
192.168.5.86 d28.1
192.168.5.87 d28.2
192.168.5.88 d28.3
192.168.5.89 d28.4
192.168.5.90 d28.5
192.168.5.91 d28.6
192.168.5.92 d28.7
192.168.5.93 d28.8
192.168.5.94 d28.9
192.168.5.95 d28.10
192.168.5.96 d28.11

192.168.5.97 d29.0
192.168.5.98 d29.1
192.168.5.99 d29.2
192.168.5.100 d29.3
192.168.5.101 d29.4
192.168.5.102 d29.5
192.168.5.103 d29.6
192.168.5.104 d29.7
192.168.5.105 d29.8
192.168.5.106 d29.9
192.168.5.107 d29.10
192.168.5.108 d29.11
192.168.5.109 d30.0
192.168.5.110 d30.1
192.168.5.111 d30.2
192.168.5.112 d30.3
192.168.5.113 d30.4
192.168.5.114 d30.5
192.168.5.115 d30.6
192.168.5.116 d30.7
192.168.5.117 d30.8
192.168.5.118 d30.9
192.168.5.119 d30.10
192.168.5.120 d30.11
192.168.5.121 d31.0
192.168.5.122 d31.1
192.168.5.123 d31.2
192.168.5.124 d31.3
192.168.5.125 d31.4
192.168.5.126 d31.5
192.168.5.127 d31.6
192.168.5.128 d31.7
192.168.5.129 d31.8
192.168.5.130 d31.9
192.168.5.131 d31.10
192.168.5.132 d31.11
192.168.5.133 d32.0
192.168.5.134 d32.1
192.168.5.135 d32.2
192.168.5.136 d32.3
192.168.5.137 d32.4
192.168.5.138 d32.5
192.168.5.139 d32.6
192.168.5.140 d32.7
192.168.5.141 d32.8
192.168.5.142 d32.9
192.168.5.143 d32.10
192.168.5.144 d32.11
192.168.5.145 d33.0
192.168.5.146 d33.1
192.168.5.147 d33.2
192.168.5.148 d33.3
192.168.5.149 d33.4
192.168.5.150 d33.5
192.168.5.151 d33.6
192.168.5.152 d33.7
192.168.5.153 d33.8
192.168.5.154 d33.9
192.168.5.155 d33.10
192.168.5.156 d33.11
192.168.5.157 d34.0
192.168.5.158 d34.1

192.168.5.159 d34.2
192.168.5.160 d34.3
192.168.5.161 d34.4
192.168.5.162 d34.5
192.168.5.163 d34.6
192.168.5.164 d34.7
192.168.5.165 d34.8
192.168.5.166 d34.9
192.168.5.167 d34.10
192.168.5.168 d34.11
192.168.5.169 d35.0
192.168.5.170 d35.1
192.168.5.171 d35.2
192.168.5.172 d35.3
192.168.5.173 d35.4
192.168.5.174 d35.5
192.168.5.175 d35.6
192.168.5.176 d35.7
192.168.5.177 d35.8
192.168.5.178 d35.9
192.168.5.179 d35.10
192.168.5.180 d35.11
192.168.5.181 d36.0
192.168.5.182 d36.1
192.168.5.183 d36.2
192.168.5.184 d36.3
192.168.5.185 d36.4
192.168.5.186 d36.5
192.168.5.187 d36.6
192.168.5.188 d36.7
192.168.5.189 d36.8
192.168.5.190 d36.9
192.168.5.191 d36.10
192.168.5.192 d36.11
192.168.5.193 d37.0
192.168.5.194 d37.1
192.168.5.195 d37.2
192.168.5.196 d37.3
192.168.5.197 d37.4
192.168.5.198 d37.5
192.168.5.199 d37.6
192.168.5.200 d37.7
192.168.5.201 d37.8
192.168.5.202 d37.9
192.168.5.203 d37.10
192.168.5.204 d37.11
192.168.5.205 d38.0
192.168.5.206 d38.1
192.168.5.207 d38.2
192.168.5.208 d38.3
192.168.5.209 d38.4
192.168.5.210 d38.5
192.168.5.211 d38.6
192.168.5.212 d38.7
192.168.5.213 d38.8
192.168.5.214 d38.9
192.168.5.215 d38.10
192.168.5.216 d38.11
192.168.5.217 d39.0
192.168.5.218 d39.1
192.168.5.219 d39.2
192.168.5.220 d39.3

192.168.5.221 d39.4
192.168.5.222 d39.5
192.168.5.223 d39.6
192.168.5.224 d39.7
192.168.5.225 d39.8
192.168.5.226 d39.9
192.168.5.227 d39.10
192.168.5.228 d39.11
192.168.5.229 d40.0
192.168.5.230 d40.1
192.168.5.231 d40.2
192.168.5.232 d40.3
192.168.5.233 d40.4
192.168.5.234 d40.5
192.168.5.235 d40.6
192.168.5.236 d40.7
192.168.5.237 d40.8
192.168.5.238 d40.9
192.168.5.239 d40.10
192.168.5.240 d40.11
192.168.6.1 d41.0
192.168.6.2 d41.1
192.168.6.3 d41.2
192.168.6.4 d41.3
192.168.6.5 d41.4
192.168.6.6 d41.5
192.168.6.7 d41.6
192.168.6.8 d41.7
192.168.6.9 d41.8
192.168.6.10 d41.9
192.168.6.11 d41.10
192.168.6.12 d41.11
192.168.6.13 d42.0
192.168.6.14 d42.1
192.168.6.15 d42.2
192.168.6.16 d42.3
192.168.6.17 d42.4
192.168.6.18 d42.5
192.168.6.19 d42.6
192.168.6.20 d42.7
192.168.6.21 d42.8
192.168.6.22 d42.9
192.168.6.23 d42.10
192.168.6.24 d42.11
192.168.6.25 d43.0
192.168.6.26 d43.1
192.168.6.27 d43.2
192.168.6.28 d43.3
192.168.6.29 d43.4
192.168.6.30 d43.5
192.168.6.31 d43.6
192.168.6.32 d43.7
192.168.6.33 d43.8
192.168.6.34 d43.9
192.168.6.35 d43.10
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192.168.7.176 d75.7	192.168.7.238 d80.9
192.168.7.177 d75.8	192.168.7.239 d80.10
192.168.7.178 d75.9	192.168.7.240 d80.11
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192.168.7.180 d75.11	# driver master network
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192.168.7.187 d76.6	192.168.8.6 dmast_d1.5
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192.168.7.189 d76.8	192.168.8.8 dmast_d1.7
192.168.7.190 d76.9	192.168.8.9 dmast_d1.8
192.168.7.191 d76.10	192.168.8.10 dmast_d1.9
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192.168.7.211 d78.6	192.168.8.30 dmast_d3.5
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192.168.7.214 d78.9	192.168.8.33 dmast_d3.8
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192.168.7.216 d78.11	192.168.8.35 dmast_d3.10
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192.168.7.218 d79.1	192.168.8.37 dmast_d4.0
192.168.7.219 d79.2	192.168.8.38 dmast_d4.1
192.168.7.220 d79.3	192.168.8.39 dmast_d4.2
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192.168.7.226 d79.9	192.168.8.45 dmast_d4.8
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192.168.7.229 d80.0	192.168.8.48 dmast_d4.11
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192.168.7.234 d80.5	192.168.8.53 dmast_d5.4
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192.168.10.187 dmast_d56.6
192.168.10.188 dmast_d56.7
192.168.10.189 dmast_d56.8
192.168.10.190 dmast_d56.9
192.168.10.191 dmast_d56.10
192.168.10.192 dmast_d56.11
192.168.10.193 dmast_d57.0
192.168.10.194 dmast_d57.1
192.168.10.195 dmast_d57.2

192.168.10.196 dmast_d57.3
192.168.10.197 dmast_d57.4
192.168.10.198 dmast_d57.5
192.168.10.199 dmast_d57.6
192.168.10.200 dmast_d57.7
192.168.10.201 dmast_d57.8
192.168.10.202 dmast_d57.9
192.168.10.203 dmast_d57.10
192.168.10.204 dmast_d57.11
192.168.10.205 dmast_d58.0
192.168.10.206 dmast_d58.1
192.168.10.207 dmast_d58.2
192.168.10.208 dmast_d58.3
192.168.10.209 dmast_d58.4
192.168.10.210 dmast_d58.5
192.168.10.211 dmast_d58.6
192.168.10.212 dmast_d58.7
192.168.10.213 dmast_d58.8
192.168.10.214 dmast_d58.9
192.168.10.215 dmast_d58.10
192.168.10.216 dmast_d58.11
192.168.10.217 dmast_d59.0
192.168.10.218 dmast_d59.1
192.168.10.219 dmast_d59.2
192.168.10.220 dmast_d59.3
192.168.10.221 dmast_d59.4
192.168.10.222 dmast_d59.5
192.168.10.223 dmast_d59.6
192.168.10.224 dmast_d59.7
192.168.10.225 dmast_d59.8
192.168.10.226 dmast_d59.9
192.168.10.227 dmast_d59.10
192.168.10.228 dmast_d59.11
192.168.10.229 dmast_d60.0
192.168.10.230 dmast_d60.1
192.168.10.231 dmast_d60.2
192.168.10.232 dmast_d60.3
192.168.10.233 dmast_d60.4
192.168.10.234 dmast_d60.5
192.168.10.235 dmast_d60.6
192.168.10.236 dmast_d60.7
192.168.10.237 dmast_d60.8
192.168.10.238 dmast_d60.9
192.168.10.239 dmast_d60.10
192.168.10.240 dmast_d60.11
192.168.11.1 dmast_d61.0
192.168.11.2 dmast_d61.1
192.168.11.3 dmast_d61.2
192.168.11.4 dmast_d61.3
192.168.11.5 dmast_d61.4
192.168.11.6 dmast_d61.5
192.168.11.7 dmast_d61.6
192.168.11.8 dmast_d61.7
192.168.11.9 dmast_d61.8
192.168.11.10 dmast_d61.9
192.168.11.11 dmast_d61.10
192.168.11.12 dmast_d61.11
192.168.11.13 dmast_d62.0
192.168.11.14 dmast_d62.1
192.168.11.15 dmast_d62.2
192.168.11.16 dmast_d62.3
192.168.11.17 dmast_d62.4

192.168.11.18 dmast_d62.5
192.168.11.19 dmast_d62.6
192.168.11.20 dmast_d62.7
192.168.11.21 dmast_d62.8
192.168.11.22 dmast_d62.9
192.168.11.23 dmast_d62.10
192.168.11.24 dmast_d62.11
192.168.11.25 dmast_d63.0
192.168.11.26 dmast_d63.1
192.168.11.27 dmast_d63.2
192.168.11.28 dmast_d63.3
192.168.11.29 dmast_d63.4
192.168.11.30 dmast_d63.5
192.168.11.31 dmast_d63.6
192.168.11.32 dmast_d63.7
192.168.11.33 dmast_d63.8
192.168.11.34 dmast_d63.9
192.168.11.35 dmast_d63.10
192.168.11.36 dmast_d63.11
192.168.11.37 dmast_d64.0
192.168.11.38 dmast_d64.1
192.168.11.39 dmast_d64.2
192.168.11.40 dmast_d64.3
192.168.11.41 dmast_d64.4
192.168.11.42 dmast_d64.5
192.168.11.43 dmast_d64.6
192.168.11.44 dmast_d64.7
192.168.11.45 dmast_d64.8
192.168.11.46 dmast_d64.9
192.168.11.47 dmast_d64.10
192.168.11.48 dmast_d64.11
192.168.11.49 dmast_d65.0
192.168.11.50 dmast_d65.1
192.168.11.51 dmast_d65.2
192.168.11.52 dmast_d65.3
192.168.11.53 dmast_d65.4
192.168.11.54 dmast_d65.5
192.168.11.55 dmast_d65.6
192.168.11.56 dmast_d65.7
192.168.11.57 dmast_d65.8
192.168.11.58 dmast_d65.9
192.168.11.59 dmast_d65.10
192.168.11.60 dmast_d65.11
192.168.11.61 dmast_d66.0
192.168.11.62 dmast_d66.1
192.168.11.63 dmast_d66.2
192.168.11.64 dmast_d66.3
192.168.11.65 dmast_d66.4
192.168.11.66 dmast_d66.5
192.168.11.67 dmast_d66.6
192.168.11.68 dmast_d66.7
192.168.11.69 dmast_d66.8
192.168.11.70 dmast_d66.9
192.168.11.71 dmast_d66.10
192.168.11.72 dmast_d66.11
192.168.11.73 dmast_d67.0
192.168.11.74 dmast_d67.1
192.168.11.75 dmast_d67.2
192.168.11.76 dmast_d67.3
192.168.11.77 dmast_d67.4
192.168.11.78 dmast_d67.5
192.168.11.79 dmast_d67.6

192.168.11.80 dmast_d67.7
192.168.11.81 dmast_d67.8
192.168.11.82 dmast_d67.9
192.168.11.83 dmast_d67.10
192.168.11.84 dmast_d67.11
192.168.11.85 dmast_d68.0
192.168.11.86 dmast_d68.1
192.168.11.87 dmast_d68.2
192.168.11.88 dmast_d68.3
192.168.11.89 dmast_d68.4
192.168.11.90 dmast_d68.5
192.168.11.91 dmast_d68.6
192.168.11.92 dmast_d68.7
192.168.11.93 dmast_d68.8
192.168.11.94 dmast_d68.9
192.168.11.95 dmast_d68.10
192.168.11.96 dmast_d68.11
192.168.11.97 dmast_d69.0
192.168.11.98 dmast_d69.1
192.168.11.99 dmast_d69.2
192.168.11.100 dmast_d69.3
192.168.11.101 dmast_d69.4
192.168.11.102 dmast_d69.5
192.168.11.103 dmast_d69.6
192.168.11.104 dmast_d69.7
192.168.11.105 dmast_d69.8
192.168.11.106 dmast_d69.9
192.168.11.107 dmast_d69.10
192.168.11.108 dmast_d69.11
192.168.11.109 dmast_d70.0
192.168.11.110 dmast_d70.1
192.168.11.111 dmast_d70.2
192.168.11.112 dmast_d70.3
192.168.11.113 dmast_d70.4
192.168.11.114 dmast_d70.5
192.168.11.115 dmast_d70.6
192.168.11.116 dmast_d70.7
192.168.11.117 dmast_d70.8
192.168.11.118 dmast_d70.9
192.168.11.119 dmast_d70.10
192.168.11.120 dmast_d70.11
192.168.11.121 dmast_d71.0
192.168.11.122 dmast_d71.1
192.168.11.123 dmast_d71.2
192.168.11.124 dmast_d71.3
192.168.11.125 dmast_d71.4
192.168.11.126 dmast_d71.5
192.168.11.127 dmast_d71.6
192.168.11.128 dmast_d71.7
192.168.11.129 dmast_d71.8
192.168.11.130 dmast_d71.9
192.168.11.131 dmast_d71.10
192.168.11.132 dmast_d71.11
192.168.11.133 dmast_d72.0
192.168.11.134 dmast_d72.1
192.168.11.135 dmast_d72.2
192.168.11.136 dmast_d72.3
192.168.11.137 dmast_d72.4
192.168.11.138 dmast_d72.5
192.168.11.139 dmast_d72.6
192.168.11.140 dmast_d72.7
192.168.11.141 dmast_d72.8

192.168.11.142 dmast_d72.9
192.168.11.143 dmast_d72.10
192.168.11.144 dmast_d72.11
192.168.11.145 dmast_d73.0
192.168.11.146 dmast_d73.1
192.168.11.147 dmast_d73.2
192.168.11.148 dmast_d73.3
192.168.11.149 dmast_d73.4
192.168.11.150 dmast_d73.5
192.168.11.151 dmast_d73.6
192.168.11.152 dmast_d73.7
192.168.11.153 dmast_d73.8
192.168.11.154 dmast_d73.9
192.168.11.155 dmast_d73.10
192.168.11.156 dmast_d73.11
192.168.11.157 dmast_d74.0
192.168.11.158 dmast_d74.1
192.168.11.159 dmast_d74.2
192.168.11.160 dmast_d74.3
192.168.11.161 dmast_d74.4
192.168.11.162 dmast_d74.5
192.168.11.163 dmast_d74.6
192.168.11.164 dmast_d74.7
192.168.11.165 dmast_d74.8
192.168.11.166 dmast_d74.9
192.168.11.167 dmast_d74.10
192.168.11.168 dmast_d74.11
192.168.11.169 dmast_d75.0
192.168.11.170 dmast_d75.1
192.168.11.171 dmast_d75.2
192.168.11.172 dmast_d75.3
192.168.11.173 dmast_d75.4
192.168.11.174 dmast_d75.5
192.168.11.175 dmast_d75.6
192.168.11.176 dmast_d75.7
192.168.11.177 dmast_d75.8
192.168.11.178 dmast_d75.9
192.168.11.179 dmast_d75.10
192.168.11.180 dmast_d75.11
192.168.11.181 dmast_d76.0
192.168.11.182 dmast_d76.1
192.168.11.183 dmast_d76.2
192.168.11.184 dmast_d76.3
192.168.11.185 dmast_d76.4
192.168.11.186 dmast_d76.5
192.168.11.187 dmast_d76.6
192.168.11.188 dmast_d76.7
192.168.11.189 dmast_d76.8
192.168.11.190 dmast_d76.9
192.168.11.191 dmast_d76.10
192.168.11.192 dmast_d76.11
192.168.11.193 dmast_d77.0
192.168.11.194 dmast_d77.1
192.168.11.195 dmast_d77.2
192.168.11.196 dmast_d77.3
192.168.11.197 dmast_d77.4
192.168.11.198 dmast_d77.5
192.168.11.199 dmast_d77.6
192.168.11.200 dmast_d77.7
192.168.11.201 dmast_d77.8
192.168.11.202 dmast_d77.9
192.168.11.203 dmast_d77.10

192.168.11.204 dmast_d77.11
192.168.11.205 dmast_d78.0
192.168.11.206 dmast_d78.1
192.168.11.207 dmast_d78.2
192.168.11.208 dmast_d78.3
192.168.11.209 dmast_d78.4
192.168.11.210 dmast_d78.5
192.168.11.211 dmast_d78.6
192.168.11.212 dmast_d78.7
192.168.11.213 dmast_d78.8
192.168.11.214 dmast_d78.9
192.168.11.215 dmast_d78.10
192.168.11.216 dmast_d78.11
192.168.11.217 dmast_d79.0
192.168.11.218 dmast_d79.1
192.168.11.219 dmast_d79.2
192.168.11.220 dmast_d79.3
192.168.11.221 dmast_d79.4
192.168.11.222 dmast_d79.5
192.168.11.223 dmast_d79.6
192.168.11.224 dmast_d79.7
192.168.11.225 dmast_d79.8
192.168.11.226 dmast_d79.9
192.168.11.227 dmast_d79.10
192.168.11.228 dmast_d79.11
192.168.11.229 dmast_d80.0
192.168.11.230 dmast_d80.1
192.168.11.231 dmast_d80.2
192.168.11.232 dmast_d80.3
192.168.11.233 dmast_d80.4
192.168.11.234 dmast_d80.5
192.168.11.235 dmast_d80.6
192.168.11.236 dmast_d80.7
192.168.11.237 dmast_d80.8
192.168.11.238 dmast_d80.9
192.168.11.239 dmast_d80.10
192.168.11.240 dmast_d80.11

client side of client/driver networks

192.168.12.1 c1d
192.168.12.2 c2d
192.168.12.3 c3d
192.168.12.4 c4d
192.168.12.5 c5d
192.168.12.6 c6d
192.168.12.7 c7d
192.168.12.8 c8d
192.168.12.9 c9d
192.168.12.10 c10d
192.168.12.11 c11d
192.168.12.12 c12d
192.168.12.13 c13d
192.168.12.14 c14d
192.168.12.15 c15d
192.168.12.16 c16d
192.168.12.17 c17d
192.168.12.18 c18d
192.168.12.19 c19d
192.168.12.20 c20d
192.168.12.21 c21d
192.168.12.22 c22d

192.168.12.23 c23d
192.168.12.24 c24d
192.168.12.25 c25d
192.168.12.26 c26d
192.168.12.27 c27d
192.168.12.28 c28d
192.168.12.29 c29d
192.168.12.30 c30d
192.168.12.31 c31d
192.168.12.32 c32d
192.168.12.33 c33d
192.168.12.34 c34d
192.168.12.35 c35d
192.168.12.36 c36d
192.168.12.37 c37d
192.168.12.38 c38d
192.168.12.39 c39d
192.168.12.40 c40d
192.168.12.41 c41d
192.168.12.42 c42d
192.168.12.43 c43d
192.168.12.44 c44d
192.168.12.45 c45d
192.168.12.46 c46d
192.168.12.47 c47d
192.168.12.48 c48d
192.168.12.49 c49d
192.168.12.50 c50d
192.168.12.51 c51d
192.168.12.52 c52d
192.168.12.53 c53d
192.168.12.54 c54d
192.168.12.55 c55d
192.168.12.56 c56d
192.168.12.57 c57d
192.168.12.58 c58d
192.168.12.59 c59d
192.168.12.60 c60d
192.168.12.61 c61d
192.168.12.62 c62d
192.168.12.63 c63d
192.168.12.64 c64d
192.168.12.65 c65d
192.168.12.66 c66d
192.168.12.67 c67d
192.168.12.68 c68d
192.168.12.69 c69d
192.168.12.70 c70d
192.168.12.71 c71d
192.168.12.72 c72d
192.168.12.73 c73d
192.168.12.74 c74d
192.168.12.75 c75d
192.168.12.76 c76d
192.168.12.77 c77d
192.168.12.78 c78d
192.168.12.79 c79d
192.168.12.80 c80d

Each of the nodes configured to export out COMSTAR luns to the database nodes were configured in the same manner, with luns of similar size on each COMSTAR node. Each node had the same tunings. The exception to the above being COMSTAR node 61, which was exporting out extra 60-day space, but again in the exact same manner.

COMSTAR SERVER INFORMATION

format output

Searching for disks...done

AVAILABLE DISK SELECTIONS:

- 0. c7t0d0 <DEFAULT cyl 60797 alt 2 hd 255 sec 126>
/pci@0,0/pci8086,340c@5/pci1000,3150@0/sd@0,0
- 1. c7t1d0 <DEFAULT cyl 60797 alt 2 hd 255 sec 126>
/pci@0,0/pci8086,340c@5/pci1000,3150@0/sd@1,0
- 2. c7t2d0 <DEFAULT cyl 60797 alt 2 hd 255 sec 126>
/pci@0,0/pci8086,340c@5/pci1000,3150@0/sd@2,0
- 3. c7t3d0 <DEFAULT cyl 60797 alt 2 hd 255 sec 126>
/pci@0,0/pci8086,340c@5/pci1000,3150@0/sd@3,0
- 4. c7t4d0 <DEFAULT cyl 60797 alt 2 hd 255 sec 126>
/pci@0,0/pci8086,340c@5/pci1000,3150@0/sd@4,0
- 5. c9t0d0 <DEFAULT cyl 2984 alt 2 hd 255 sec 63>
/pci@0,0/pci8086,340e@7/pci111d,806e@0/pci111d,806e@2/pci1000,3150@0/sd@0,0
- 6. c9t1d0 <DEFAULT cyl 2984 alt 2 hd 255 sec 63>
/pci@0,0/pci8086,340e@7/pci111d,806e@0/pci111d,806e@2/pci1000,3150@0/sd@1,0
- 7. c9t2d0 <DEFAULT cyl 2984 alt 2 hd 255 sec 63>
/pci@0,0/pci8086,340e@7/pci111d,806e@0/pci111d,806e@2/pci1000,3150@0/sd@2,0
- 8. c9t4d0 <DEFAULT cyl 2984 alt 2 hd 255 sec 63>
/pci@0,0/pci8086,340e@7/pci111d,806e@0/pci111d,806e@2/pci1000,3150@0/sd@4,0
- 9. c9t5d0 <DEFAULT cyl 2984 alt 2 hd 255 sec 63>
/pci@0,0/pci8086,340e@7/pci111d,806e@0/pci111d,806e@2/pci1000,3150@0/sd@5,0
- 10. c9t6d0 <DEFAULT cyl 2984 alt 2 hd 255 sec 63>
/pci@0,0/pci8086,340e@7/pci111d,806e@0/pci111d,806e@2/pci1000,3150@0/sd@6,0
- 11. c9t7d0 <DEFAULT cyl 2984 alt 2 hd 255 sec 63>
/pci@0,0/pci8086,340e@7/pci111d,806e@0/pci111d,806e@2/pci1000,3150@0/sd@7,0
- 12. c9t8d0 <DEFAULT cyl 2984 alt 2 hd 255 sec 63>
/pci@0,0/pci8086,340e@7/pci111d,806e@0/pci111d,806e@2/pci1000,3150@0/sd@8,0
- 13. c9t9d0 <DEFAULT cyl 2984 alt 2 hd 255 sec 63>
/pci@0,0/pci8086,340e@7/pci111d,806e@0/pci111d,806e@2/pci1000,3150@0/sd@9,0
- 14. c9t10d0 <DEFAULT cyl 2984 alt 2 hd 255 sec 63>
/pci@0,0/pci8086,340e@7/pci111d,806e@0/pci111d,806e@2/pci1000,3150@0/sd@a,0
- 15. c9t11d0 <DEFAULT cyl 2984 alt 2 hd 255 sec 63>
/pci@0,0/pci8086,340e@7/pci111d,806e@0/pci111d,806e@2/pci1000,3150@0/sd@b,0
- 16. c9t12d0 <DEFAULT cyl 2984 alt 2 hd 255 sec 63>
/pci@0,0/pci8086,340e@7/pci111d,806e@0/pci111d,806e@2/pci1000,3150@0/sd@c,0
- 17. c9t13d0 <DEFAULT cyl 2984 alt 2 hd 255 sec 63>
/pci@0,0/pci8086,340e@7/pci111d,806e@0/pci111d,806e@2/pci1000,3150@0/sd@d,0
- 18. c9t14d0 <DEFAULT cyl 2984 alt 2 hd 255 sec 63>
/pci@0,0/pci8086,340e@7/pci111d,806e@0/pci111d,806e@2/pci1000,3150@0/sd@e,0
- 19. c9t15d0 <DEFAULT cyl 2984 alt 2 hd 255 sec 63>
/pci@0,0/pci8086,340e@7/pci111d,806e@0/pci111d,806e@2/pci1000,3150@0/sd@f,0
- 20. c9t16d0 <DEFAULT cyl 2984 alt 2 hd 255 sec 63>
/pci@0,0/pci8086,340e@7/pci111d,806e@0/pci111d,806e@2/pci1000,3150@0/sd@10,0
- 21. c9t17d0 <DEFAULT cyl 2984 alt 2 hd 255 sec 63>
/pci@0,0/pci8086,340e@7/pci111d,806e@0/pci111d,806e@2/pci1000,3150@0/sd@11,0
- 22. c9t18d0 <DEFAULT cyl 2984 alt 2 hd 255 sec 63>
/pci@0,0/pci8086,340e@7/pci111d,806e@0/pci111d,806e@2/pci1000,3150@0/sd@12,0
- 23. c9t19d0 <DEFAULT cyl 2984 alt 2 hd 255 sec 63>
/pci@0,0/pci8086,340e@7/pci111d,806e@0/pci111d,806e@2/pci1000,3150@0/sd@13,0
- 24. c9t20d0 <DEFAULT cyl 2984 alt 2 hd 255 sec 63>

- /pci@0,0/pci8086,340e@7/pci111d,806e@0/pci111d,806e@2/pci1000,3150@0/sd@14,0
- 25. c10t0d0 <DEFAULT cyl 2984 alt 2 hd 255 sec 63>
/pci@0,0/pci8086,340e@7/pci111d,806e@0/pci111d,806e@4/pci1000,3150@0/sd@0,0
- 26. c10t1d0 <DEFAULT cyl 2984 alt 2 hd 255 sec 63>
/pci@0,0/pci8086,340e@7/pci111d,806e@0/pci111d,806e@4/pci1000,3150@0/sd@1,0
- 27. c10t2d0 <DEFAULT cyl 2984 alt 2 hd 255 sec 63>
/pci@0,0/pci8086,340e@7/pci111d,806e@0/pci111d,806e@4/pci1000,3150@0/sd@2,0
- 28. c10t4d0 <DEFAULT cyl 2984 alt 2 hd 255 sec 63>
/pci@0,0/pci8086,340e@7/pci111d,806e@0/pci111d,806e@4/pci1000,3150@0/sd@4,0
- 29. c10t5d0 <DEFAULT cyl 2984 alt 2 hd 255 sec 63>
/pci@0,0/pci8086,340e@7/pci111d,806e@0/pci111d,806e@4/pci1000,3150@0/sd@5,0
- 30. c10t6d0 <DEFAULT cyl 2984 alt 2 hd 255 sec 63>
/pci@0,0/pci8086,340e@7/pci111d,806e@0/pci111d,806e@4/pci1000,3150@0/sd@6,0
- 31. c10t7d0 <DEFAULT cyl 2984 alt 2 hd 255 sec 63>
/pci@0,0/pci8086,340e@7/pci111d,806e@0/pci111d,806e@4/pci1000,3150@0/sd@7,0
- 32. c10t8d0 <DEFAULT cyl 2984 alt 2 hd 255 sec 63>
/pci@0,0/pci8086,340e@7/pci111d,806e@0/pci111d,806e@4/pci1000,3150@0/sd@8,0
- 33. c10t9d0 <DEFAULT cyl 2984 alt 2 hd 255 sec 63>
/pci@0,0/pci8086,340e@7/pci111d,806e@0/pci111d,806e@4/pci1000,3150@0/sd@9,0
- 34. c10t10d0 <DEFAULT cyl 2984 alt 2 hd 255 sec 63>
/pci@0,0/pci8086,340e@7/pci111d,806e@0/pci111d,806e@4/pci1000,3150@0/sd@a,0
- 35. c10t11d0 <DEFAULT cyl 2984 alt 2 hd 255 sec 63>
/pci@0,0/pci8086,340e@7/pci111d,806e@0/pci111d,806e@4/pci1000,3150@0/sd@b,0
- 36. c10t12d0 <DEFAULT cyl 2984 alt 2 hd 255 sec 63>
/pci@0,0/pci8086,340e@7/pci111d,806e@0/pci111d,806e@4/pci1000,3150@0/sd@c,0
- 37. c10t13d0 <DEFAULT cyl 2984 alt 2 hd 255 sec 63>
/pci@0,0/pci8086,340e@7/pci111d,806e@0/pci111d,806e@4/pci1000,3150@0/sd@d,0
- 38. c10t14d0 <DEFAULT cyl 2984 alt 2 hd 255 sec 63>
/pci@0,0/pci8086,340e@7/pci111d,806e@0/pci111d,806e@4/pci1000,3150@0/sd@e,0
- 39. c10t15d0 <DEFAULT cyl 2984 alt 2 hd 255 sec 63>
/pci@0,0/pci8086,340e@7/pci111d,806e@0/pci111d,806e@4/pci1000,3150@0/sd@f,0
- 40. c10t16d0 <DEFAULT cyl 2984 alt 2 hd 255 sec 63>
/pci@0,0/pci8086,340e@7/pci111d,806e@0/pci111d,806e@4/pci1000,3150@0/sd@10,0
- 41. c10t17d0 <DEFAULT cyl 2984 alt 2 hd 255 sec 63>
/pci@0,0/pci8086,340e@7/pci111d,806e@0/pci111d,806e@4/pci1000,3150@0/sd@11,0
- 42. c10t18d0 <DEFAULT cyl 2984 alt 2 hd 255 sec 63>
/pci@0,0/pci8086,340e@7/pci111d,806e@0/pci111d,806e@4/pci1000,3150@0/sd@12,0
- 43. c10t19d0 <DEFAULT cyl 2984 alt 2 hd 255 sec 63>
/pci@0,0/pci8086,340e@7/pci111d,806e@0/pci111d,806e@4/pci1000,3150@0/sd@13,0
- 44. c10t20d0 <DEFAULT cyl 2984 alt 2 hd 255 sec 63>
/pci@0,0/pci8086,340e@7/pci111d,806e@0/pci111d,806e@4/pci1000,3150@0/sd@14,0
- 45. c11t0d0 <DEFAULT cyl 2984 alt 2 hd 255 sec 63>
/pci@0,0/pci8086,3410@9/pci111d,806e@0/pci111d,806e@2/pci1000,3150@0/sd@0,0
- 46. c11t1d0 <DEFAULT cyl 2984 alt 2 hd 255 sec 63>
/pci@0,0/pci8086,3410@9/pci111d,806e@0/pci111d,806e@2/pci1000,3150@0/sd@1,0
- 47. c11t2d0 <DEFAULT cyl 2984 alt 2 hd 255 sec 63>
/pci@0,0/pci8086,3410@9/pci111d,806e@0/pci111d,806e@2/pci1000,3150@0/sd@2,0
- 48. c11t4d0 <DEFAULT cyl 2984 alt 2 hd 255 sec 63>
/pci@0,0/pci8086,3410@9/pci111d,806e@0/pci111d,806e@2/pci1000,3150@0/sd@4,0
- 49. c11t5d0 <DEFAULT cyl 2984 alt 2 hd 255 sec 63>
/pci@0,0/pci8086,3410@9/pci111d,806e@0/pci111d,806e@2/pci1000,3150@0/sd@5,0
- 50. c11t6d0 <DEFAULT cyl 2984 alt 2 hd 255 sec 63>
/pci@0,0/pci8086,3410@9/pci111d,806e@0/pci111d,806e@2/pci1000,3150@0/sd@6,0
- 51. c11t7d0 <DEFAULT cyl 2984 alt 2 hd 255 sec 63>
/pci@0,0/pci8086,3410@9/pci111d,806e@0/pci111d,806e@2/pci1000,3150@0/sd@7,0
- 52. c11t8d0 <DEFAULT cyl 2984 alt 2 hd 255 sec 63>
/pci@0,0/pci8086,3410@9/pci111d,806e@0/pci111d,806e@2/pci1000,3150@0/sd@8,0
- 53. c11t9d0 <DEFAULT cyl 2984 alt 2 hd 255 sec 63>
/pci@0,0/pci8086,3410@9/pci111d,806e@0/pci111d,806e@2/pci1000,3150@0/sd@9,0
- 54. c11t10d0 <DEFAULT cyl 2984 alt 2 hd 255 sec 63>
/pci@0,0/pci8086,3410@9/pci111d,806e@0/pci111d,806e@2/pci1000,3150@0/sd@a,0
- 55. c11t11d0 <DEFAULT cyl 2984 alt 2 hd 255 sec 63>

/pci@0,0/pci8086,3410@9/pci111d,806e@0/pci111d,806e@2/pci1000,3150@0/sd@b,0
56. c11t12d0 <DEFAULT cyl 2984 alt 2 hd 255 sec 63>
/pci@0,0/pci8086,3410@9/pci111d,806e@0/pci111d,806e@2/pci1000,3150@0/sd@c,0
57. c11t13d0 <DEFAULT cyl 2984 alt 2 hd 255 sec 63>
/pci@0,0/pci8086,3410@9/pci111d,806e@0/pci111d,806e@2/pci1000,3150@0/sd@d,0
58. c11t14d0 <DEFAULT cyl 2984 alt 2 hd 255 sec 63>
/pci@0,0/pci8086,3410@9/pci111d,806e@0/pci111d,806e@2/pci1000,3150@0/sd@e,0
59. c11t15d0 <DEFAULT cyl 2984 alt 2 hd 255 sec 63>
/pci@0,0/pci8086,3410@9/pci111d,806e@0/pci111d,806e@2/pci1000,3150@0/sd@f,0
60. c11t16d0 <DEFAULT cyl 2984 alt 2 hd 255 sec 63>
/pci@0,0/pci8086,3410@9/pci111d,806e@0/pci111d,806e@2/pci1000,3150@0/sd@10,0
61. c11t17d0 <DEFAULT cyl 2984 alt 2 hd 255 sec 63>
/pci@0,0/pci8086,3410@9/pci111d,806e@0/pci111d,806e@2/pci1000,3150@0/sd@11,0
62. c11t18d0 <DEFAULT cyl 2984 alt 2 hd 255 sec 63>
/pci@0,0/pci8086,3410@9/pci111d,806e@0/pci111d,806e@2/pci1000,3150@0/sd@12,0
63. c11t19d0 <DEFAULT cyl 2984 alt 2 hd 255 sec 63>
/pci@0,0/pci8086,3410@9/pci111d,806e@0/pci111d,806e@2/pci1000,3150@0/sd@13,0
64. c11t20d0 <DEFAULT cyl 2984 alt 2 hd 255 sec 63>
/pci@0,0/pci8086,3410@9/pci111d,806e@0/pci111d,806e@2/pci1000,3150@0/sd@14,0
65. c12t0d0 <DEFAULT cyl 2984 alt 2 hd 255 sec 63>
/pci@0,0/pci8086,3410@9/pci111d,806e@0/pci111d,806e@4/pci1000,3150@0/sd@a,0,0
66. c12t1d0 <DEFAULT cyl 2984 alt 2 hd 255 sec 63>
/pci@0,0/pci8086,3410@9/pci111d,806e@0/pci111d,806e@4/pci1000,3150@0/sd@1,0
67. c12t2d0 <DEFAULT cyl 2984 alt 2 hd 255 sec 63>
/pci@0,0/pci8086,3410@9/pci111d,806e@0/pci111d,806e@4/pci1000,3150@0/sd@2,0
68. c12t4d0 <DEFAULT cyl 2984 alt 2 hd 255 sec 63>
/pci@0,0/pci8086,3410@9/pci111d,806e@0/pci111d,806e@4/pci1000,3150@0/sd@4,0
69. c12t5d0 <DEFAULT cyl 2984 alt 2 hd 255 sec 63>
/pci@0,0/pci8086,3410@9/pci111d,806e@0/pci111d,806e@4/pci1000,3150@0/sd@5,0
70. c12t6d0 <DEFAULT cyl 2984 alt 2 hd 255 sec 63>
/pci@0,0/pci8086,3410@9/pci111d,806e@0/pci111d,806e@4/pci1000,3150@0/sd@6,0
71. c12t7d0 <DEFAULT cyl 2984 alt 2 hd 255 sec 63>
/pci@0,0/pci8086,3410@9/pci111d,806e@0/pci111d,806e@4/pci1000,3150@0/sd@7,0
72. c12t8d0 <DEFAULT cyl 2984 alt 2 hd 255 sec 63>
/pci@0,0/pci8086,3410@9/pci111d,806e@0/pci111d,806e@4/pci1000,3150@0/sd@8,0
73. c12t9d0 <DEFAULT cyl 2984 alt 2 hd 255 sec 63>
/pci@0,0/pci8086,3410@9/pci111d,806e@0/pci111d,806e@4/pci1000,3150@0/sd@9,0
74. c12t10d0 <DEFAULT cyl 2984 alt 2 hd 255 sec 63>
/pci@0,0/pci8086,3410@9/pci111d,806e@0/pci111d,806e@4/pci1000,3150@0/sd@a,0
75. c12t11d0 <DEFAULT cyl 2984 alt 2 hd 255 sec 63>
/pci@0,0/pci8086,3410@9/pci111d,806e@0/pci111d,806e@4/pci1000,3150@0/sd@b,0
76. c12t12d0 <DEFAULT cyl 2984 alt 2 hd 255 sec 63>
/pci@0,0/pci8086,3410@9/pci111d,806e@0/pci111d,806e@4/pci1000,3150@0/sd@c,0
77. c12t13d0 <DEFAULT cyl 2984 alt 2 hd 255 sec 63>
/pci@0,0/pci8086,3410@9/pci111d,806e@0/pci111d,806e@4/pci1000,3150@0/sd@d,0
78. c12t14d0 <DEFAULT cyl 2984 alt 2 hd 255 sec 63>
/pci@0,0/pci8086,3410@9/pci111d,806e@0/pci111d,806e@4/pci1000,3150@0/sd@e,0
79. c12t15d0 <DEFAULT cyl 2984 alt 2 hd 255 sec 63>
/pci@0,0/pci8086,3410@9/pci111d,806e@0/pci111d,806e@4/pci1000,3150@0/sd@f,0
80. c12t16d0 <DEFAULT cyl 2984 alt 2 hd 255 sec 63>
/pci@0,0/pci8086,3410@9/pci111d,806e@0/pci111d,806e@4/pci1000,3150@0/sd@10,0
81. c12t17d0 <DEFAULT cyl 2984 alt 2 hd 255 sec 63>
/pci@0,0/pci8086,3410@9/pci111d,806e@0/pci111d,806e@4/pci1000,3150@0/sd@11,0
82. c12t18d0 <DEFAULT cyl 2984 alt 2 hd 255 sec 63>
/pci@0,0/pci8086,3410@9/pci111d,806e@0/pci111d,806e@4/pci1000,3150@0/sd@12,0
83. c12t19d0 <DEFAULT cyl 2984 alt 2 hd 255 sec 63>
/pci@0,0/pci8086,3410@9/pci111d,806e@0/pci111d,806e@4/pci1000,3150@0/sd@13,0
84. c12t20d0 <DEFAULT cyl 2984 alt 2 hd 255 sec 63>
/pci@0,0/pci8086,3410@9/pci111d,806e@0/pci111d,806e@4/pci1000,3150@0/sd@14,0

Specify disk (enter its number):

prtdiag output

System Configuration: SUN MICROSYSTEMS SUN FIRE X4275 SERVER
BIOS Configuration: American Megatrends Inc. 07030004 05/19/2009
BMC Configuration: IPMI 1.5 (KCS: Keyboard Controller Style)

==== Processor Sockets =====	
Version	Location Tag

Intel(R) Xeon(R) CPU	E5540 @ 2.53GHz CPU 1
==== Memory Device Sockets =====	

Type	Status	Set Device Locator	Bank Locator

other	in use	0 D2	BANK2
other	empty	0 D1	BANK1
other	empty	0 D0	BANK0
other	in use	0 D5	BANK5
other	empty	0 D4	BANK4
other	empty	0 D3	BANK3
other	in use	0 D8	BANK8
other	empty	0 D7	BANK7
other	empty	0 D6	BANK6
other	empty	0 D2	BANK2
other	empty	0 D1	BANK1
other	empty	0 D0	BANK0
other	empty	0 D5	BANK5
other	empty	0 D4	BANK4
other	empty	0 D3	BANK3
other	empty	0 D8	BANK8
other	empty	0 D7	BANK7
other	empty	0 D6	BANK6
FLASH	in use	0	

==== On-Board Devices =====	
Zoar 2x GbE.	
Zoar 2x GbE.	
Zoar 2x GbE.	
Zoar 2x GbE.	

===== Upgradeable Slots =====			
ID	Status	Type	Description

0	in use	PCI Express	PCIE0
1	in use	PCI Express	PCIE1
2	in use	PCI Express	PCIE2
3	in use	PCI Express	PCIE3
4	in use	PCI Express	PCIE4
5	in use	PCI Express	PCIE5
=====			

prtconf output

System Configuration: Sun Microsystems i86pc
Memory size: 6136 Megabytes
System Peripherals (Software Nodes):

i86pc
scsi_vhci, instance #0

isa, instance #0
motherboard (driver not attached)
asy, instance #0
motherboard (driver not attached)
pit_beep, instance #0
pci, instance #0
pci108e,4845 (driver not attached)
pci8086,3408, instance #0
pci108e,0, instance #0
pci108e,0, instance #1
pci8086,3409, instance #1
pci108e,0, instance #2
pci108e,0, instance #3
pci8086,340a, instance #2
pci1077,171, instance #1
pci1077,171, instance #2
pci8086,340c, instance #3
pci1000,3150, instance #0
sd, instance #0
sd, instance #1
sd, instance #3
sd, instance #2
sd, instance #4
smp, instance #0
ses, instance #5
pci8086,340e, instance #4
pci111d,806e, instance #6
pci111d,806e, instance #7
pci1000,3150, instance #1
sd, instance #5
sd, instance #54
sd, instance #8
sd, instance #10
sd, instance #35
sd, instance #36
sd, instance #37
sd, instance #38
sd, instance #43
sd, instance #45
sd, instance #46
sd, instance #55
sd, instance #57
sd, instance #62
sd, instance #68
sd, instance #71
sd, instance #72
sd, instance #73
sd, instance #74
sd, instance #75
smp, instance #1
ses, instance #7
pci111d,806e, instance #8
pci1000,3150, instance #2
sd, instance #11
sd, instance #76
sd, instance #12
sd, instance #16
sd, instance #18
sd, instance #19
sd, instance #20
sd, instance #51
sd, instance #58

sd, instance #59
sd, instance #61
sd, instance #77
sd, instance #78
sd, instance #79
sd, instance #80
sd, instance #81
sd, instance #82
sd, instance #83
sd, instance #84
sd, instance #85
smp, instance #4
ses, instance #3
pci8086,3410, instance #5
pci111d,806e, instance #9
pci111d,806e, instance #10
pci1000,3150, instance #3
sd, instance #13
sd, instance #28
sd, instance #14
sd, instance #15
sd, instance #21
sd, instance #22
sd, instance #23
sd, instance #24
sd, instance #25
sd, instance #26
sd, instance #27
sd, instance #29
sd, instance #30
sd, instance #31
sd, instance #32
sd, instance #33
sd, instance #41
sd, instance #42
sd, instance #44
sd, instance #47
smp, instance #2
ses, instance #12
pci111d,806e, instance #11
pci1000,3150, instance #4
sd, instance #6
sd, instance #17
sd, instance #7
sd, instance #9
sd, instance #40
sd, instance #48
sd, instance #49
sd, instance #52
sd, instance #53
sd, instance #56
sd, instance #60
sd, instance #34
sd, instance #50
sd, instance #63
sd, instance #64
sd, instance #65
sd, instance #66
sd, instance #67
sd, instance #69
sd, instance #70
smp, instance #3

```
ses, instance #8
pci8086,342d (driver not attached)
pci8086,342e (driver not attached)
pci8086,3422 (driver not attached)
pci8086,3423, instance #0
pci8086,3438 (driver not attached)
pci108e,4845 (driver not attached)
pci108e,4845 (driver not attached)
pci108e,4845 (driver not attached)
pci108e,4845 (driver not attached)
pci108e,4845 (driver not attached)
pci108e,4845 (driver not attached)
pci108e,4845 (driver not attached)
pci108e,4845 (driver not attached)
pci108e,4845 (driver not attached)
pci108e,4845 (driver not attached)
pci108e,4845 (driver not attached)
pci108e,4845 (driver not attached)
pci108e,4845 (driver not attached)
pci108e,4845 (driver not attached)
pci8086,244e, instance #0
    display, instance #0
pci108e,4845 (driver not attached)
pci108e,4845, instance #0
pci108e,4845 (driver not attached)
ioapics (driver not attached)
    ioapic, instance #0 (driver not attached)
iscsi, instance #0
pseudo, instance #0
xsvc, instance #0
options, instance #0
agpgart, instance #0
used-resources (driver not attached)
cpus, instance #0
    cpu, instance #0
    cpu, instance #1
    cpu, instance #2
    cpu, instance #3
    cpu, instance #4
    cpu, instance #5
    cpu, instance #6
    cpu, instance #7

=====

/etc/release

=====

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Assembled 07 May 2009

=====

uname output

=====

SunOS db1-san1 5.11 snv_111b i86pc i386 i86pc

=====

vfstab output
```

```
=====
#device          device          point          mount          type          FS          fsck          mount          mount
#to mount to fsck          point          type          pass          at boot          options          mount
#
/devices - /devices devfs - no - -
/proc - /proc proc - no -
ctfs - /system/contract ctfs - no -
objfs - /system/object objfs - no -
sharefs - /etc/dfs/sharetab sharefs - no -
fd - /dev/fd fd - no -
swap - /tmp tmpfs - yes -

/dev/zvol/dsk/tpool/swap - - swap - no -

=====

/etc/hosts

=====

# CDDL HEADER START
#
# The contents of this file are subject to the terms of the
# Common Development and Distribution License (the "License").
# You may not use this file except in compliance with the License.
#
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# If applicable, add the following below this CDDL HEADER, with the
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# information: Portions Copyright [yyyy] [name of copyright owner]
#
# CDDL HEADER END
#
# Copyright 2007 Sun Microsystems, Inc. All rights reserved.
# Use is subject to license terms.
#
# ident      "%Z%%M%          %I%          %E% SMI"
#
# Internet host table
#
::1 db1-san1.local localhost loghost
127.0.0.1 db1-san1.local localhost loghost
10.250.6.15 db1-san1 db1-san1.west.sun.com

# NIS masters
10.250.1.1 minister250 minister250.west.sun.com
10.250.1.28 osol250 osol250.west.sun.com

=====

metastat -p output

=====

d8999 -p /dev/md/rdisk/d8000 -o 3310495744 -b 596168704
d8000 -m /dev/md/rdisk/d8001 /dev/md/rdisk/d8002 1
d8001 1 2 /dev/rdisk/c7t1d0s6 /dev/rdisk/c7t3d0s6 -i 2048b
d8002 1 2 /dev/rdisk/c7t2d0s6 /dev/rdisk/c7t4d0s6 -i 2048b
d9993 -p /dev/md/rdisk/d3 -o 523446528 -b 432705536
d3 1 80 /dev/rdisk/c12t0d0s7 /dev/rdisk/c9t0d0s7 /dev/rdisk/c10t0d0s7 /dev/rdisk/c11t0d0s7 /dev/rdisk/c12t1d0s7
/dev/rdisk/c9t1d0s7 /dev/rdisk/c10t1d0s7 /dev/rdisk/c11t1d0s7 /dev/rdisk/c12t2d0s7 /dev/rdisk/c9t2d0s7
/dev/rdisk/c10t2d0s7 /dev/rdisk/c11t2d0s7 /dev/rdisk/c12t4d0s7 /dev/rdisk/c9t4d0s7 /dev/rdisk/c10t4d0s7
```


/dev/rds/c11t4d0s7 /dev/rds/c12t5d0s7 /dev/rds/c9t5d0s7 /dev/rds/c10t5d0s7 /dev/rds/c11t5d0s7
/dev/rds/c12t6d0s7 /dev/rds/c9t6d0s7 /dev/rds/c10t6d0s7 /dev/rds/c11t6d0s7 /dev/rds/c12t7d0s7
/dev/rds/c9t7d0s7 /dev/rds/c10t7d0s7 /dev/rds/c11t7d0s7 /dev/rds/c12t8d0s7 /dev/rds/c9t8d0s7
/dev/rds/c10t8d0s7 /dev/rds/c11t8d0s7 /dev/rds/c12t9d0s7 /dev/rds/c9t9d0s7 /dev/rds/c10t9d0s7
/dev/rds/c11t9d0s7 /dev/rds/c12t10d0s7 /dev/rds/c9t10d0s7 /dev/rds/c10t10d0s7 /dev/rds/c11t10d0s7
/dev/rds/c12t11d0s7 /dev/rds/c9t11d0s7 /dev/rds/c10t11d0s7 /dev/rds/c11t11d0s7 /dev/rds/c12t12d0s7
/dev/rds/c9t12d0s7 /dev/rds/c10t12d0s7 /dev/rds/c11t12d0s7 /dev/rds/c12t13d0s7 /dev/rds/c9t13d0s7
/dev/rds/c10t13d0s7 /dev/rds/c11t13d0s7 /dev/rds/c12t14d0s7 /dev/rds/c9t14d0s7 /dev/rds/c10t14d0s7
/dev/rds/c11t14d0s7 /dev/rds/c12t15d0s7 /dev/rds/c9t15d0s7 /dev/rds/c10t15d0s7 /dev/rds/c11t15d0s7
/dev/rds/c12t16d0s7 /dev/rds/c9t16d0s7 /dev/rds/c10t16d0s7 /dev/rds/c11t16d0s7 /dev/rds/c12t17d0s7
/dev/rds/c9t17d0s7 /dev/rds/c10t17d0s7 /dev/rds/c11t17d0s7 /dev/rds/c12t18d0s7 /dev/rds/c9t18d0s7
/dev/rds/c10t18d0s7 /dev/rds/c11t18d0s7 /dev/rds/c12t19d0s7 /dev/rds/c9t19d0s7 /dev/rds/c10t19d0s7
/dev/rds/c11t19d0s7 /dev/rds/c12t20d0s7 /dev/rds/c9t20d0s7 /dev/rds/c10t20d0s7 /dev/rds/c11t20d0s7 -i 256b
d9992 -p /dev/md/rds/d2 -o 526907648 -b 429244416
d2 1 80 /dev/rds/c11t0d0s6 /dev/rds/c12t0d0s6 /dev/rds/c9t0d0s6 /dev/rds/c10t0d0s6 /dev/rds/c11t1d0s6
/dev/rds/c12t1d0s6 /dev/rds/c9t1d0s6 /dev/rds/c10t1d0s6 /dev/rds/c11t2d0s6 /dev/rds/c12t2d0s6
/dev/rds/c9t2d0s6 /dev/rds/c10t2d0s6 /dev/rds/c11t4d0s6 /dev/rds/c12t4d0s6 /dev/rds/c9t4d0s6
/dev/rds/c10t4d0s6 /dev/rds/c11t5d0s6 /dev/rds/c12t5d0s6 /dev/rds/c9t5d0s6 /dev/rds/c10t5d0s6
/dev/rds/c11t6d0s6 /dev/rds/c12t6d0s6 /dev/rds/c9t6d0s6 /dev/rds/c10t6d0s6 /dev/rds/c11t7d0s6
/dev/rds/c12t7d0s6 /dev/rds/c9t7d0s6 /dev/rds/c10t7d0s6 /dev/rds/c11t8d0s6 /dev/rds/c12t8d0s6
/dev/rds/c9t8d0s6 /dev/rds/c10t8d0s6 /dev/rds/c11t9d0s6 /dev/rds/c12t9d0s6 /dev/rds/c9t9d0s6
/dev/rds/c10t9d0s6 /dev/rds/c11t10d0s6 /dev/rds/c12t10d0s6 /dev/rds/c9t10d0s6 /dev/rds/c10t10d0s6
/dev/rds/c11t11d0s6 /dev/rds/c12t11d0s6 /dev/rds/c9t11d0s6 /dev/rds/c10t11d0s6 /dev/rds/c11t12d0s6
/dev/rds/c12t12d0s6 /dev/rds/c9t12d0s6 /dev/rds/c10t12d0s6 /dev/rds/c11t13d0s6 /dev/rds/c12t13d0s6
/dev/rds/c9t13d0s6 /dev/rds/c10t13d0s6 /dev/rds/c11t14d0s6 /dev/rds/c12t14d0s6 /dev/rds/c9t14d0s6
/dev/rds/c10t14d0s6 /dev/rds/c11t15d0s6 /dev/rds/c12t15d0s6 /dev/rds/c9t15d0s6 /dev/rds/c10t15d0s6
/dev/rds/c11t16d0s6 /dev/rds/c12t16d0s6 /dev/rds/c9t16d0s6 /dev/rds/c10t16d0s6 /dev/rds/c11t17d0s6
/dev/rds/c12t17d0s6 /dev/rds/c9t17d0s6 /dev/rds/c10t17d0s6 /dev/rds/c11t18d0s6 /dev/rds/c12t18d0s6
/dev/rds/c9t18d0s6 /dev/rds/c10t18d0s6 /dev/rds/c11t19d0s6 /dev/rds/c12t19d0s6 /dev/rds/c9t19d0s6
/dev/rds/c10t19d0s6 /dev/rds/c11t20d0s6 /dev/rds/c12t20d0s6 /dev/rds/c9t20d0s6 /dev/rds/c10t20d0s6 -i 256b
d9991 -p /dev/md/rds/d1 -o 727962112 -b 228190208
d1 1 80 /dev/rds/c10t0d0s5 /dev/rds/c11t0d0s5 /dev/rds/c12t0d0s5 /dev/rds/c9t0d0s5 /dev/rds/c10t1d0s5
/dev/rds/c11t1d0s5 /dev/rds/c12t1d0s5 /dev/rds/c9t1d0s5 /dev/rds/c10t2d0s5 /dev/rds/c11t2d0s5
/dev/rds/c12t2d0s5 /dev/rds/c9t2d0s5 /dev/rds/c10t4d0s5 /dev/rds/c11t4d0s5 /dev/rds/c12t4d0s5
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/dev/rds/c12t18d0s5 /dev/rds/c9t18d0s5 /dev/rds/c10t19d0s5 /dev/rds/c11t19d0s5 /dev/rds/c12t19d0s5
/dev/rds/c9t19d0s5 /dev/rds/c10t20d0s5 /dev/rds/c11t20d0s5 /dev/rds/c12t20d0s5 /dev/rds/c9t20d0s5 -i 256b
d9990 -p /dev/md/rds/d0 -o 564634112 -b 391518208
d0 1 80 /dev/rds/c9t0d0s4 /dev/rds/c10t0d0s4 /dev/rds/c11t0d0s4 /dev/rds/c12t0d0s4 /dev/rds/c9t1d0s4
/dev/rds/c10t1d0s4 /dev/rds/c11t1d0s4 /dev/rds/c12t1d0s4 /dev/rds/c9t2d0s4 /dev/rds/c10t2d0s4
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/dev/rds/c12t9d0s4 /dev/rds/c9t10d0s4 /dev/rds/c10t10d0s4 /dev/rds/c11t10d0s4 /dev/rds/c12t10d0s4
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/dev/rds/c9t16d0s4 /dev/rds/c10t16d0s4 /dev/rds/c11t16d0s4 /dev/rds/c12t16d0s4 /dev/rds/c9t17d0s4
/dev/rds/c10t17d0s4 /dev/rds/c11t17d0s4 /dev/rds/c12t17d0s4 /dev/rds/c9t18d0s4 /dev/rds/c10t18d0s4

/dev/rds/c11t18d0s4 /dev/rds/c12t18d0s4 /dev/rds/c9t19d0s4 /dev/rds/c10t19d0s4 /dev/rds/c11t19d0s4
/dev/rds/c12t19d0s4 /dev/rds/c9t20d0s4 /dev/rds/c10t20d0s4 /dev/rds/c11t20d0s4 /dev/rds/c12t20d0s4 -i 256b
d1234 -p /dev/md/rds/d1 -o 602478848 -b 125483008
d1233 -p /dev/md/rds/d0 -o 553961728 -b 10672128
d1232 -p /dev/md/rds/d3 -o 469397504 -b 54048768
d1231 -p /dev/md/rds/d2 -o 472858624 -b 54048768
d1230 -p /dev/md/rds/d1 -o 571756544 -b 30722048
d1229 -p /dev/md/rds/d0 -o 500260864 -b 53700608
d1225 -p /dev/md/rds/d0 -o 369268480 -b 130992128
d1224 -p /dev/md/rds/d3 -o 305675776 -b 130992128
d1223 -p /dev/md/rds/d2 -o 309771776 -b 130992128
d1222 -p /dev/md/rds/d1 -o 309771776 -b 130992128
d1221 -p /dev/md/rds/d0 -o 309771776 -b 59496448
d1220 -p /dev/md/rds/d3 -o 246179072 -b 59496448
d1219 -p /dev/md/rds/d2 -o 250275072 -b 59496448
d1218 -p /dev/md/rds/d1 -o 250275072 -b 59496448
d1217 -p /dev/md/rds/d0 -o 250275072 -b 59496448
d1216 -p /dev/md/rds/d3 -o 186682368 -b 59496448
d1215 -p /dev/md/rds/d2 -o 190778368 -b 59496448
d1228 -p /dev/md/rds/d3 -o 436668160 -b 32729088
d1227 -p /dev/md/rds/d2 -o 440764160 -b 32094208
d1226 -p /dev/md/rds/d1 -o 440764160 -b 130992128
d1214 -p /dev/md/rds/d1 -o 190778368 -b 59496448
d1210 -p /dev/md/rds/d1 -o 127185664 -b 63592448
d1209 -p /dev/md/rds/d0 -o 127185664 -b 63592448
d1208 -p /dev/md/rds/d3 -o 63592960 -b 63592448
d1207 -p /dev/md/rds/d2 -o 63592960 -b 63592448
d1213 -p /dev/md/rds/d0 -o 190778368 -b 59496448
d1212 -p /dev/md/rds/d3 -o 127185664 -b 59496448
d1211 -p /dev/md/rds/d2 -o 127185664 -b 63592448
d1206 -p /dev/md/rds/d1 -o 63592960 -b 63592448
d1205 -p /dev/md/rds/d0 -o 63592960 -b 63592448
d1204 -p /dev/md/rds/d3 -o 256 -b 63592448
d1203 -p /dev/md/rds/d2 -o 256 -b 63592448
d1202 -p /dev/md/rds/d1 -o 256 -b 63592448
d1201 -p /dev/md/rds/d0 -o 256 -b 63592448
d8417 -p /dev/md/rds/d8000 -o 3256793088 -b 53700608
d8413 -p /dev/md/rds/d8000 -o 3006920704 -b 54048768
d8412 -p /dev/md/rds/d8000 -o 2952869888 -b 54048768
d8411 -p /dev/md/rds/d8000 -o 2893371392 -b 59496448
d8410 -p /dev/md/rds/d8000 -o 2882697216 -b 10672128
d8409 -p /dev/md/rds/d8000 -o 2823198720 -b 59496448
d8408 -p /dev/md/rds/d8000 -o 2763700224 -b 59496448
d8416 -p /dev/md/rds/d8000 -o 3224696832 -b 32094208
d8415 -p /dev/md/rds/d8000 -o 3093702656 -b 130992128
d8414 -p /dev/md/rds/d8000 -o 3060971520 -b 32729088
d8407 -p /dev/md/rds/d8000 -o 2704201728 -b 59496448
d8406 -p /dev/md/rds/d8000 -o 2644703232 -b 59496448
d8405 -p /dev/md/rds/d8000 -o 2585204736 -b 59496448
d8404 -p /dev/md/rds/d8000 -o 2525706240 -b 59496448
d8403 -p /dev/md/rds/d8000 -o 2466207744 -b 59496448
d8402 -p /dev/md/rds/d8000 -o 2406709248 -b 59496448
d8401 -p /dev/md/rds/d8000 -o 2347210752 -b 59496448
d8234 -p /dev/md/rds/d8000 -o 2221725696 -b 125483008
d8233 -p /dev/md/rds/d8000 -o 2211051520 -b 10672128
d8232 -p /dev/md/rds/d8000 -o 2157000704 -b 54048768
d8231 -p /dev/md/rds/d8000 -o 2102949888 -b 54048768
d8230 -p /dev/md/rds/d8000 -o 2072225792 -b 30722048
d8229 -p /dev/md/rds/d8000 -o 2018523136 -b 53700608
d8228 -p /dev/md/rds/d8000 -o 1985792000 -b 32729088
d8227 -p /dev/md/rds/d8000 -o 1953695744 -b 32094208
d8226 -p /dev/md/rds/d8000 -o 1822701568 -b 130992128

d8225 -p /dev/md/rdsk/d8000 -o 1691707392 -b 130992128
d8224 -p /dev/md/rdsk/d8000 -o 1560713216 -b 130992128
d8223 -p /dev/md/rdsk/d8000 -o 1429719040 -b 130992128
d8222 -p /dev/md/rdsk/d8000 -o 1298724864 -b 130992128
d8221 -p /dev/md/rdsk/d8000 -o 1239226368 -b 59496448
d8220 -p /dev/md/rdsk/d8000 -o 1179727872 -b 59496448
d8219 -p /dev/md/rdsk/d8000 -o 1120229376 -b 59496448
d8218 -p /dev/md/rdsk/d8000 -o 1060730880 -b 59496448
d8217 -p /dev/md/rdsk/d8000 -o 1001232384 -b 59496448
d8216 -p /dev/md/rdsk/d8000 -o 941733888 -b 59496448
d8215 -p /dev/md/rdsk/d8000 -o 882235392 -b 59496448
d8214 -p /dev/md/rdsk/d8000 -o 822736896 -b 59496448
d8213 -p /dev/md/rdsk/d8000 -o 763238400 -b 59496448
d8212 -p /dev/md/rdsk/d8000 -o 703739904 -b 59496448
d8211 -p /dev/md/rdsk/d8000 -o 640145408 -b 63592448
d8210 -p /dev/md/rdsk/d8000 -o 576550912 -b 63592448
d8209 -p /dev/md/rdsk/d8000 -o 512956416 -b 63592448
d8208 -p /dev/md/rdsk/d8000 -o 449361920 -b 63592448
d8207 -p /dev/md/rdsk/d8000 -o 385767424 -b 63592448
d8206 -p /dev/md/rdsk/d8000 -o 322172928 -b 63592448
d8205 -p /dev/md/rdsk/d8000 -o 258578432 -b 63592448
d8204 -p /dev/md/rdsk/d8000 -o 194983936 -b 63592448
d8203 -p /dev/md/rdsk/d8000 -o 131389440 -b 63592448
d8202 -p /dev/md/rdsk/d8000 -o 67794944 -b 63592448
d8201 -p /dev/md/rdsk/d8000 -o 4200448 -b 63592448
d9001 -p /dev/md/rdsk/d8000 -o 2101248 -b 2097152
d9000 -p /dev/md/rdsk/d8000 -o 2048 -b 2097152

sbdadm output, COMSTAR mapping of raw device to exported device UID

Found 42 LU(s)

GUID	DATA SIZE	SOURCE
600144f0b8718e0000004ac27c1f0006	892771825664	/dev/rdsk/c7t0d0s6
600144f0b8718e0000004ac27c1f0005	305238310912	/dev/md/rdsk/d8999
600144f0b8718e0000004ac27c1f0004	221545168896	/dev/md/rdsk/d9993
600144f0b8718e0000004ac27c1f0003	219773075456	/dev/md/rdsk/d9992
600144f0b8718e0000004ac27c1f0002	116833320960	/dev/md/rdsk/d9991
600144f0b8718e0000004ac27c1e0001	200457256960	/dev/md/rdsk/d9990
600144f0b8718e0000004ab12bc50056	64247234560	/dev/md/rdsk/d1234
600144f0b8718e0000004ab12bc50055	5464064000	/dev/md/rdsk/d1233
600144f0b8718e0000004ab12bc50054	27672903680	/dev/md/rdsk/d1232
600144f0b8718e0000004ab12bc50053	27672903680	/dev/md/rdsk/d1231
600144f0b8718e0000004ab12bc50052	15729623040	/dev/md/rdsk/d1230
600144f0b8718e0000004ab12bc40051	27494645760	/dev/md/rdsk/d1229
600144f0b8718e0000004ab12bc40050	16757227520	/dev/md/rdsk/d1228
600144f0b8718e0000004ab12bc4004f	16432168960	/dev/md/rdsk/d1227
600144f0b8718e0000004ab12bc4004e	67067904000	/dev/md/rdsk/d1226
600144f0b8718e0000004ab12bc4004d	67067904000	/dev/md/rdsk/d1225
600144f0b8718e0000004ab12bc4004c	67067904000	/dev/md/rdsk/d1224
600144f0b8718e0000004ab12bc4004b	67067904000	/dev/md/rdsk/d1223
600144f0b8718e0000004ab12bc4004a	67067904000	/dev/md/rdsk/d1222
600144f0b8718e0000004ab12bc40049	30462115840	/dev/md/rdsk/d1221
600144f0b8718e0000004ab12bc30048	30462115840	/dev/md/rdsk/d1220
600144f0b8718e0000004ab12bc30047	30462115840	/dev/md/rdsk/d1219
600144f0b8718e0000004ab12bc30046	30462115840	/dev/md/rdsk/d1218
600144f0b8718e0000004ab12bc30045	30462115840	/dev/md/rdsk/d1217
600144f0b8718e0000004ab12bc30044	30462115840	/dev/md/rdsk/d1216
600144f0b8718e0000004ab12bc30043	30462115840	/dev/md/rdsk/d1215

600144f0b8718e0000004ab12bc30042	30462115840	/dev/md/rdsk/d1214
600144f0b8718e0000004ab12bc30041	30462115840	/dev/md/rdsk/d1213
600144f0b8718e0000004ab12bc30040	30462115840	/dev/md/rdsk/d1212
600144f0b8718e0000004ab12bc3003f	32559267840	/dev/md/rdsk/d1211
600144f0b8718e0000004ab12bc2003e	32559267840	/dev/md/rdsk/d1210
600144f0b8718e0000004ab12bc2003d	32559267840	/dev/md/rdsk/d1209
600144f0b8718e0000004ab12bc2003c	32559267840	/dev/md/rdsk/d1208
600144f0b8718e0000004ab12bc2003b	32559267840	/dev/md/rdsk/d1207
600144f0b8718e0000004ab12bc2003a	32559267840	/dev/md/rdsk/d1206
600144f0b8718e0000004ab12bc20039	32559267840	/dev/md/rdsk/d1205
600144f0b8718e0000004ab12bc20038	32559267840	/dev/md/rdsk/d1204
600144f0b8718e0000004ab12bc10037	32559267840	/dev/md/rdsk/d1203
600144f0b8718e0000004ab12bc00036	32559267840	/dev/md/rdsk/d1202
600144f0b8718e0000004ab12bc00035	32559267840	/dev/md/rdsk/d1201
600144f0b8718e0000004aa83874002a	1073676288	/dev/md/rdsk/d9001
600144f0b8718e0000004aa8386a0029	1073676288	/dev/md/rdsk/d9000

stmfadm output, COMSTAR UIDs that are exported

LU Name: 600144F0B8718E0000004AA8386A0029
LU Name: 600144F0B8718E0000004AA83874002A
LU Name: 600144F0B8718E0000004AB12BC00035
LU Name: 600144F0B8718E0000004AB12BC00036
LU Name: 600144F0B8718E0000004AB12BC10037
LU Name: 600144F0B8718E0000004AB12BC20038
LU Name: 600144F0B8718E0000004AB12BC20039
LU Name: 600144F0B8718E0000004AB12BC2003A
LU Name: 600144F0B8718E0000004AB12BC2003B
LU Name: 600144F0B8718E0000004AB12BC2003C
LU Name: 600144F0B8718E0000004AB12BC2003D
LU Name: 600144F0B8718E0000004AB12BC2003E
LU Name: 600144F0B8718E0000004AB12BC3003F
LU Name: 600144F0B8718E0000004AB12BC30040
LU Name: 600144F0B8718E0000004AB12BC30041
LU Name: 600144F0B8718E0000004AB12BC30042
LU Name: 600144F0B8718E0000004AB12BC30043
LU Name: 600144F0B8718E0000004AB12BC30044
LU Name: 600144F0B8718E0000004AB12BC30045
LU Name: 600144F0B8718E0000004AB12BC30046
LU Name: 600144F0B8718E0000004AB12BC30047
LU Name: 600144F0B8718E0000004AB12BC30048
LU Name: 600144F0B8718E0000004AB12BC40049
LU Name: 600144F0B8718E0000004AB12BC4004A
LU Name: 600144F0B8718E0000004AB12BC4004B
LU Name: 600144F0B8718E0000004AB12BC4004C
LU Name: 600144F0B8718E0000004AB12BC4004D
LU Name: 600144F0B8718E0000004AB12BC4004E
LU Name: 600144F0B8718E0000004AB12BC4004F
LU Name: 600144F0B8718E0000004AB12BC40050
LU Name: 600144F0B8718E0000004AB12BC40051
LU Name: 600144F0B8718E0000004AB12BC50052
LU Name: 600144F0B8718E0000004AB12BC50053
LU Name: 600144F0B8718E0000004AB12BC50054
LU Name: 600144F0B8718E0000004AB12BC50055
LU Name: 600144F0B8718E0000004AB12BC50056
LU Name: 600144F0B8718E0000004AC27C1E0001
LU Name: 600144F0B8718E0000004AC27C1F0002
LU Name: 600144F0B8718E0000004AC27C1F0003
LU Name: 600144F0B8718E0000004AC27C1F0004
LU Name: 600144F0B8718E0000004AC27C1F0005
LU Name: 600144F0B8718E0000004AC27C1F0006

=====
/etc/system
=====

ident "%Z%%M% %I% %E% SMI" / SVR4 1.5 */
*
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*
*
* SYSTEM SPECIFICATION FILE
*

* moddir:
*
* Set the search path for modules. This has a format similar to the
* csh path variable. If the module isn't found in the first directory
* it tries the second and so on. The default is /kernel /usr/kernel
*
* Example:
* moddir: /kernel /usr/kernel /other/modules

* root device and root filesystem configuration:
*
* The following may be used to override the defaults provided by
* the boot program:
*
* rootfs: Set the filesystem type of the root.
*
* rootdev: Set the root device. This should be a fully
* expanded physical pathname. The default is the
* physical pathname of the device where the boot
* program resides. The physical pathname is
* highly platform and configuration dependent.
*
* Example:
* rootfs:ufs
* rootdev:/sbus@1,f8000000/esp@0,800000/sd@3,0:a
*
* (Swap device configuration should be specified in /etc/vfstab.)

* exclude:
*
* Modules appearing in the moddir path which are NOT to be loaded,
* even if referenced. Note that 'exclude' accepts either a module name,
* or a filename which includes the directory.
*
* Examples:
* exclude: win
* exclude: sys/shmsys

* forceload:
*
* Cause these modules to be loaded at boot time, (just before mounting
* the root filesystem) rather than at first reference. Note that
* forceload expects a filename which includes the directory. Also
* note that loading a module does not necessarily imply that it will
* be installed.
*
* Example:
* forceload: drv/foo

* set:
*
* Set an integer variable in the kernel or a module to a new value.
* This facility should be used with caution. See system(4).
*
* Examples:
*
* To set variables in 'unix':
*
* set nauto push=32
* set maxusers=40
*
* To set a variable named 'debug' in the module named 'test_module'
*
* set test_module:debug = 0x13

exclude: ehci
exclude: uhci
set autoup=300
set maxphys=1048576
set md_mirror:md_resync_bufsz = 2048

=====
mpt.conf output
=====

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The mpt driver, as a pHCI driver, must specify the vHCI class it
belongs to(scsi_vhci).
#

```
ddi-vhci-class="scsi_vhci";
#
# I/O multipathing feature (MPxIO) can be enabled or disabled using
# mpxio-disable property. Setting mpxio-disable="no" will activate
# I/O multipathing; setting mpxio-disable="yes" disables the feature.
#
# Global mpxio-disable property:
#
# To globally enable MPxIO on all mpt controllers set:
# mpxio-disable="no";
#
# To globally disable MPxIO on all mpt controllers set:
# mpxio-disable="yes";
#
# You can also enable or disable MPxIO on a per HBA basis.
# Per HBA settings override the global setting for the specified HBAs.
# To disable MPxIO on a controller whose parent is /pci@7c0/pci@0/pci@9
# and the unit-address is "0" set:
# name="mpt" parent="/pci@7c0/pci@0/pci@9" unit-address="0" mpxio-disable="yes";
#
mpxio-disable="yes";

#
# SATA mpxio supported
#
# To disable SATA mpxio, set
# disable-sata-mpxio="yes";
# When mpxio-disable="yes" is set, the disable-sata-mpxio property
# takes no effect
#
disable-sata-mpxio="no";

pcie_ce_mask=0x1;

=====

/etc/project output
=====

system:0:::
user.root:1:::
noproject:2:::
default:3:::
group.staff:10:::

=====

/etc/user_attr
=====

#

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#

# /etc/user_attr

#

# user attributes. see user_attr(4)

#

#

adm:::profiles=Log Management

dladm:::auths=solaris.smf.manage.wpa,solaris.smf.modify

lp:::profiles=Printer Management

postgres:::type=role;profiles=Postgres Administration,All

root:::type=role;auths=solaris.*,solaris.grant;profiles=All;lock_after_retries=no;min_label=admin_low;clearance=admin_high

zfsnap:::type=role;auths=solaris.smf.manage.zfs-auto-snapshot;profiles=ZFS File System Management

maint:::profiles=Primary Administrator;roles=root
```

CLIENTS

Each client was configured in the exact same manner in both hardware and software. The only exceptions being host/ip address information, and which database server the client was doing transactions against.

Client configuration

format output

Searching for disks...done

AVAILABLE DISK SELECTIONS:
0. c0t0d0 <DEFAULT cyl 36469 alt 2 hd 255 sec 63>
/pci@0,0/pci8086,340a@3/pci1000,3150@0/sd@0,0
Specify disk (enter its number):

prtdiag output

System Configuration: SUN MICROSYSTEMS SUN FIRE X4170 SERVER
BIOS Configuration: American Megatrends Inc. 07023901 04/10/2009
BMC Configuration: IPMI 1.5 (KCS: Keyboard Controller Style)

==== Processor Sockets =====

Version	Location Tag

Intel(R) Xeon(R) CPU	E5540 @ 2.53GHz CPU 1
Intel(R) Xeon(R) CPU	E5540 @ 2.53GHz CPU 2

==== Memory Device Sockets =====

Type	Status	Set	Device	Locator	Bank	Locator

other	in use	0	D2		BANK2	
other	in use	0	D1		BANK1	
other	empty	0	D0		BANK0	
other	in use	0	D5		BANK5	
other	in use	0	D4		BANK4	
other	empty	0	D3		BANK3	
other	in use	0	D8		BANK8	
other	in use	0	D7		BANK7	
other	empty	0	D6		BANK6	
other	in use	0	D2		BANK2	
other	in use	0	D1		BANK1	
other	empty	0	D0		BANK0	
other	in use	0	D5		BANK5	
other	in use	0	D4		BANK4	
other	empty	0	D3		BANK3	
other	in use	0	D8		BANK8	
other	in use	0	D7		BANK7	
other	empty	0	D6		BANK6	
FLASH	in use	0				

==== On-Board Devices =====

Zoar 2x GbE.
Zoar 2x GbE.
Zoar 2x GbE.
Zoar 2x GbE.

==== Upgradeable Slots =====

ID	Status	Type	Description

0	in use	PCI Express	PCIE0
1	in use	PCI Express	PCIE1
2	available	PCI Express	PCIE2

prtconf output

System Configuration: Sun Microsystems i86pc
Memory size: 49144 Megabytes
System Peripherals (Software Nodes):

i86pc
scsi_vhci, instance #0
isa, instance #0
motherboard (driver not attached)
asy, instance #0
motherboard (driver not attached)
pci, instance #0
pci108e,4844 (driver not attached)
pci8086,3408, instance #0
pci108e,0, instance #0
pci108e,0, instance #1
pci8086,3409, instance #1
pci108e,0, instance #2
pci108e,0, instance #3 (driver not attached)
pci8086,340a, instance #2
pci1000,3150, instance #0
sd, instance #0
pci8086,340e (driver not attached)
pci8086,3410 (driver not attached)
pci8086,342d (driver not attached)
pci8086,342e (driver not attached)
pci8086,3422 (driver not attached)
pci8086,3423, instance #0
pci8086,3438 (driver not attached)
pci108e,4844 (driver not attached)
pci108e,4844 (driver not attached)
pci108e,4844 (driver not attached)
pci108e,4844 (driver not attached)
pci108e,4844 (driver not attached)
pci108e,4844 (driver not attached)
pci108e,4844 (driver not attached)
pci108e,4844, instance #0
pci108e,4844, instance #1
pci108e,4844, instance #2
device, instance #0
keyboard, instance #0
mouse, instance #1
pci108e,4844, instance #0
hub, instance #0
pci108e,4844, instance #3
pci108e,4844, instance #4
pci108e,4844, instance #5
pci108e,4844, instance #1
hub, instance #1
pci8086,244e, instance #0
display, instance #0
pci108e,4844 (driver not attached)
pci108e,4844, instance #0
pci108e,4844 (driver not attached)
ioapics (driver not attached)
ioapic, instance #0 (driver not attached)
iscsi, instance #0
pseudo, instance #0
options, instance #0
agpgart, instance #0 (driver not attached)
objmgr, instance #0
xsvc, instance #0

```
used-resources (driver not attached)
cpus, instance #0
  cpu, instance #0
  cpu, instance #1
  cpu, instance #2
  cpu, instance #3
  cpu, instance #4
  cpu, instance #5
  cpu, instance #6
  cpu, instance #7
  cpu, instance #8
  cpu, instance #9
  cpu, instance #10
  cpu, instance #11
  cpu, instance #12
  cpu, instance #13
  cpu, instance #14
  cpu, instance #15
```

=====

uname output

=====

SunOS c1 5.10 Generic_141445-05 i86pc i386 i86pc

=====

/etc/release

=====

Solaris 10 10/09 s10x_u8wos_05 X86
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Assembled 04 August 2009

=====

/etc/vfstab

=====

#device		device		mount		FS		fsck		mount		mount
#to mount to fsck			point		type	pass		at boot		options		
#												
fd	-	/dev/fd	fd	-	no	-						
/proc	-	/proc	proc	-	no	-						
/dev/dsk/c0t0d0s1	-	-	-	swap	-	no		-				
/dev/dsk/c0t0d0s0		/dev/rdisk/c0t0d0s0	/	ufs		1	no	-		-		
/dev/dsk/c0t0d0s4		/dev/rdisk/c0t0d0s4	/export	ufs		2	yes	-		-		
/devices	-	/devices	devfs	-	no	-						
sharefs	-	/etc/dfs/sharetab	sharefs	-	no	-		-				
ctfs	-	/system/contract	ctfs	-	no	-		-				
objfs	-	/system/object	objfs	-	no	-		-				
swap	-	/tmp	tmpfs	-	yes	-						

=====

/etc/hosts

=====

```
#
# Internet host table
#
::1      localhost
127.0.0.1 localhost
10.250.2.1 r1-1      c1 loghost
10.250.1.1 minister
#
```

```
# NIS servers for reference
10.250.1.1 minister-250
10.1.141.1 minister minister-141
10.1.142.1 minister-142
# endit

10.1.140.87  saehrn2
10.1.140.89  saehrn3
```

#Client-Zone Subnet 192.168.21

```
192.168.21.1 d1.1
192.168.21.2 d1.2
192.168.21.3 d1.3
192.168.21.4 d1.4
192.168.21.5 d1.5
192.168.21.6 d1.6
192.168.21.7 d1.7
192.168.21.8 d1.8
192.168.21.9 d1.9
192.168.21.10 d1.10
192.168.21.11 d1.11
192.168.21.12 d1.12
192.168.21.14 gd1
192.168.21.15 wc1
```

```
192.168.21.16 d2.1
192.168.21.17 d2.2
192.168.21.18 d2.3
192.168.21.19 d2.4
192.168.21.20 d2.5
192.168.21.21 d2.6
192.168.21.22 d2.7
192.168.21.23 d2.8
192.168.21.24 d2.9
192.168.21.25 d2.10
192.168.21.26 d2.11
192.168.21.27 d2.12
192.168.21.29 gd2
192.168.21.30 wc2
```

```
192.168.21.31 d3.1
192.168.21.32 d3.2
192.168.21.33 d3.3
192.168.21.34 d3.4
192.168.21.35 d3.5
192.168.21.36 d3.6
192.168.21.37 d3.7
192.168.21.38 d3.8
192.168.21.39 d3.9
192.168.21.40 d3.10
192.168.21.41 d3.11
192.168.21.42 d3.12
192.168.21.44 gd3
192.168.21.45 wc3
```

```
192.168.21.46 d4.1
192.168.21.47 d4.2
192.168.21.48 d4.3
192.168.21.49 d4.4
192.168.21.50 d4.5
192.168.21.51 d4.6
```

192.168.21.52 d4.7
192.168.21.53 d4.8
192.168.21.54 d4.9
192.168.21.55 d4.10
192.168.21.56 d4.11
192.168.21.57 d4.12
192.168.21.59 gd4
192.168.21.60 wc4

192.168.21.61 d5.1
192.168.21.62 d5.2
192.168.21.63 d5.3
192.168.21.64 d5.4
192.168.21.65 d5.5
192.168.21.66 d5.6
192.168.21.67 d5.7
192.168.21.68 d5.8
192.168.21.69 d5.9
192.168.21.70 d5.10
192.168.21.71 d5.11
192.168.21.72 d5.12
192.168.21.74 gd5
192.168.21.75 wc5

192.168.21.76 d6.1
192.168.21.77 d6.2
192.168.21.78 d6.3
192.168.21.79 d6.4
192.168.21.80 d6.5
192.168.21.81 d6.6
192.168.21.82 d6.7
192.168.21.83 d6.8
192.168.21.84 d6.9
192.168.21.85 d6.10
192.168.21.86 d6.11
192.168.21.87 d6.12
192.168.21.89 gd6
192.168.21.90 wc6

192.168.21.91 d7.1
192.168.21.92 d7.2
192.168.21.93 d7.3
192.168.21.94 d7.4
192.168.21.95 d7.5
192.168.21.96 d7.6
192.168.21.97 d7.7
192.168.21.98 d7.8
192.168.21.99 d7.9
192.168.21.100 d7.10
192.168.21.101 d7.11
192.168.21.102 d7.12
192.168.21.104 gd7
192.168.21.105 wc7

192.168.21.106 d8.1
192.168.21.107 d8.2
192.168.21.108 d8.3
192.168.21.109 d8.4
192.168.21.110 d8.5
192.168.21.111 d8.6
192.168.21.112 d8.7
192.168.21.113 d8.8

192.168.21.114 d8.9
192.168.21.115 d8.10
192.168.21.116 d8.11
192.168.21.117 d8.12
192.168.21.119 gd8
192.168.21.120 wc8

192.168.21.121 d9.1
192.168.21.122 d9.2
192.168.21.123 d9.3
192.168.21.124 d9.4
192.168.21.125 d9.5
192.168.21.126 d9.6
192.168.21.127 d9.7
192.168.21.128 d9.8
192.168.21.129 d9.9
192.168.21.130 d9.10
192.168.21.131 d9.11
192.168.21.132 d9.12
192.168.21.134 gd9
192.168.21.135 wc9

192.168.21.136 d10.1
192.168.21.137 d10.2
192.168.21.138 d10.3
192.168.21.139 d10.4
192.168.21.140 d10.5
192.168.21.141 d10.6
192.168.21.142 d10.7
192.168.21.143 d10.8
192.168.21.144 d10.9
192.168.21.145 d10.10
192.168.21.146 d10.11
192.168.21.147 d10.12
192.168.21.149 gd10
192.168.21.150 wc10

192.168.21.151 d11.1
192.168.21.152 d11.2
192.168.21.153 d11.3
192.168.21.154 d11.4
192.168.21.155 d11.5
192.168.21.156 d11.6
192.168.21.157 d11.7
192.168.21.158 d11.8
192.168.21.159 d11.9
192.168.21.160 d11.10
192.168.21.161 d11.11
192.168.21.162 d11.12
192.168.21.164 gd11
192.168.21.165 wc11

192.168.21.166 d12.1
192.168.21.167 d12.2
192.168.21.168 d12.3
192.168.21.169 d12.4
192.168.21.170 d12.5
192.168.21.171 d12.6
192.168.21.172 d12.7
192.168.21.173 d12.8
192.168.21.174 d12.9
192.168.21.175 d12.10

192.168.21.176 d12.11
192.168.21.177 d12.12
192.168.21.179 gd12
192.168.21.180 wc12

#Master-driver access to all client/rte (igb0)

10.250.2.41 d1
10.250.2.42 d2
10.250.2.43 d3
10.250.2.44 d4
10.250.2.45 d5
10.250.2.46 d6
10.250.2.47 d7
10.250.2.48 d8
10.250.2.49 d9
10.250.2.50 d10
10.250.2.51 d11
10.250.2.52 d12
10.250.2.53 d13
10.250.2.54 d14
10.250.2.55 d15
10.250.2.56 d16
10.250.2.57 d17
10.250.2.58 d18
10.250.2.59 d19
10.250.2.60 d20
10.250.2.61 d21
10.250.2.62 d22
10.250.2.63 d23
10.250.2.64 d24
10.250.2.65 d25
10.250.2.66 d26
10.250.2.67 d27
10.250.2.68 d28
10.250.2.69 d29
10.250.2.70 d30
10.250.2.71 d31
10.250.2.72 d32
10.250.2.73 d33
10.250.2.74 d34
10.250.2.75 d35
10.250.2.76 d36
10.250.2.77 d37
10.250.2.78 d38
10.250.2.79 d39
10.250.2.80 d40
10.250.2.121 d41
10.250.2.122 d42
10.250.2.123 d43
10.250.2.124 d44
10.250.2.125 d45
10.250.2.126 d46
10.250.2.127 d47
10.250.2.128 d48
10.250.2.129 d49
10.250.2.130 d50
10.250.2.131 d51
10.250.2.132 d52
10.250.2.133 d53
10.250.2.134 d54
10.250.2.135 d55

10.250.2.136 d56
10.250.2.137 d57
10.250.2.138 d58
10.250.2.139 d59
10.250.2.140 d60
10.250.2.141 d61
10.250.2.142 d62
10.250.2.143 d63
10.250.2.144 d64
10.250.2.145 d65
10.250.2.146 d66
10.250.2.147 d67
10.250.2.148 d68
10.250.2.149 d69
10.250.2.150 d70
10.250.2.151 d71
10.250.2.152 d72
10.250.2.153 d73
10.250.2.154 d74
10.250.2.155 d75
10.250.2.156 d76
10.250.2.157 d77
10.250.2.158 d78
10.250.2.159 d79
10.250.2.160 d80

10.250.2.1 c1
10.250.2.2 c2
10.250.2.3 c3
10.250.2.4 c4
10.250.2.5 c5
10.250.2.6 c6
10.250.2.7 c7
10.250.2.8 c8
10.250.2.9 c9
10.250.2.10 c10
10.250.2.11 c11
10.250.2.12 c12
10.250.2.13 c13
10.250.2.14 c14
10.250.2.15 c15
10.250.2.16 c16
10.250.2.17 c17
10.250.2.18 c18
10.250.2.19 c19
10.250.2.20 c20
10.250.2.21 c21
10.250.2.22 c22
10.250.2.23 c23
10.250.2.24 c24
10.250.2.25 c25
10.250.2.26 c26
10.250.2.27 c27
10.250.2.28 c28
10.250.2.29 c29
10.250.2.30 c30
10.250.2.31 c31
10.250.2.32 c32
10.250.2.33 c33
10.250.2.34 c34
10.250.2.35 c35
10.250.2.36 c36

10.250.2.37 c37
10.250.2.38 c38
10.250.2.39 c39
10.250.2.40 c40
10.250.2.81 c41
10.250.2.82 c42
10.250.2.83 c43
10.250.2.84 c44
10.250.2.85 c45
10.250.2.86 c46
10.250.2.87 c47
10.250.2.88 c48
10.250.2.89 c49
10.250.2.90 c50
10.250.2.91 c51
10.250.2.92 c52
10.250.2.93 c53
10.250.2.94 c54
10.250.2.95 c55
10.250.2.96 c56
10.250.2.97 c57
10.250.2.98 c58
10.250.2.99 c59
10.250.2.100 c60
10.250.2.101 c61
10.250.2.102 c62
10.250.2.103 c63
10.250.2.104 c64
10.250.2.105 c65
10.250.2.106 c66
10.250.2.107 c67
10.250.2.108 c68
10.250.2.109 c69
10.250.2.110 c70
10.250.2.111 c71
10.250.2.112 c72
10.250.2.113 c73
10.250.2.114 c74
10.250.2.115 c75
10.250.2.116 c76
10.250.2.117 c77
10.250.2.118 c78
10.250.2.119 c79
10.250.2.120 c80

connections from db nodes to clients

192.168.30.1 db1_c1
192.168.30.2 db1_c2
192.168.30.3 db1_c3
192.168.31.4 db1_c4
192.168.31.5 db1_c5
192.168.31.6 db1_c6
192.168.32.7 db2_c7
192.168.32.8 db2_c8
192.168.32.9 db2_c9
192.168.33.10 db2_c10
192.168.33.11 db2_c11
192.168.33.12 db2_c12
192.168.34.13 db3_c13
192.168.34.14 db3_c14
192.168.34.15 db3_c15
192.168.35.16 db3_c16

192.168.35.17 db3_c17
192.168.35.18 db3_c18
192.168.36.19 db4_c19
192.168.36.20 db4_c20
192.168.36.21 db4_c21
192.168.37.22 db4_c22
192.168.37.23 db4_c23
192.168.37.24 db4_c24
192.168.38.25 db5_c25
192.168.38.26 db5_c26
192.168.38.27 db5_c27
192.168.39.28 db5_c28
192.168.39.29 db5_c29
192.168.39.30 db5_c30
192.168.40.31 db6_c31
192.168.40.32 db6_c32
192.168.40.33 db6_c33
192.168.41.34 db6_c34
192.168.41.35 db6_c35
192.168.41.36 db6_c36
192.168.42.37 db7_c37
192.168.42.38 db7_c38
192.168.42.39 db7_c39
192.168.43.40 db7_c40
192.168.43.41 db7_c41
192.168.43.42 db7_c42
192.168.44.43 db8_c43
192.168.44.44 db8_c44
192.168.44.45 db8_c45
192.168.45.46 db8_c46
192.168.45.47 db8_c47
192.168.45.48 db8_c48
192.168.46.49 db9_c49
192.168.46.50 db9_c50
192.168.46.51 db9_c51
192.168.47.52 db9_c52
192.168.47.53 db9_c53
192.168.47.54 db9_c54
192.168.48.55 db10_c55
192.168.48.56 db10_c56
192.168.48.57 db10_c57
192.168.49.58 db10_c58
192.168.49.59 db10_c59
192.168.49.60 db10_c60
192.168.50.61 db11_c61
192.168.50.62 db11_c62
192.168.50.63 db11_c63
192.168.51.64 db11_c64
192.168.51.65 db11_c65
192.168.51.66 db11_c66
192.168.52.67 db12_c67
192.168.52.68 db12_c68
192.168.52.69 db12_c69
192.168.53.70 db12_c70
192.168.53.71 db12_c71
192.168.53.72 db12_c72
db side of client networks
192.168.30.101 db1_cnx1 db
192.168.31.101 db1_cnx2
192.168.32.101 db2_cnx1
192.168.33.101 db2_cnx2
192.168.34.101 db3_cnx1

192.168.35.101 db3_cnx2
192.168.36.101 db4_cnx1
192.168.37.101 db4_cnx2
192.168.38.101 db5_cnx1
192.168.39.101 db5_cnx2
192.168.40.101 db6_cnx1
192.168.41.101 db6_cnx2
192.168.42.101 db7_cnx1
192.168.43.101 db7_cnx2
192.168.44.101 db8_cnx1
192.168.45.101 db8_cnx2
192.168.46.101 db9_cnx1
192.168.47.101 db9_cnx2
192.168.48.101 db10_cnx1
192.168.49.101 db10_cnx2
192.168.50.101 db11_cnx1
192.168.51.101 db11_cnx2
192.168.50.101 db11_cnx1
192.168.51.101 db11_cnx2
192.168.52.101 db12_cnx1
192.168.53.101 db12_cnx2

network interfaces

lo0: flags=2001000849<UP,LOOPBACK,RUNNING,MULTICAST,IPv4,VIRTUAL> mtu 8232 index 1
inet 127.0.0.1 netmask ffffffff
igb0: flags=1000843<UP,BROADCAST,RUNNING,MULTICAST,IPv4> mtu 1500 index 2
inet 10.250.2.1 netmask ffff0000 broadcast 10.250.255.255
ether 0:14:4f:e7:5a:f0
igb1: flags=1000843<UP,BROADCAST,RUNNING,MULTICAST,IPv4> mtu 1500 index 3
inet 192.168.21.15 netmask ffffff00 broadcast 192.168.21.255
ether 0:14:4f:e7:5a:f1
igb2: flags=1000843<UP,BROADCAST,RUNNING,MULTICAST,IPv4> mtu 1500 index 4
inet 192.168.30.1 netmask ffffff00 broadcast 192.168.30.255
ether 0:14:4f:e7:5a:f2

Tuxedo Version

INFO: Oracle Tuxedo, Version 10.3.0.0, 64-bit, Patch Level (none)

/etc/system

ident "(#)system 1.18 97/06/27 SMI" / SVR4 1.5 */
*
* SYSTEM SPECIFICATION FILE
*
* moddir:
*
* Set the search path for modules. This has a format similar to the
* csh path variable. If the module isn't found in the first directory
* it tries the second and so on. The default is /kernel /usr/kernel
*
* Example:
* moddir: /kernel /usr/kernel /other/modules

* root device and root filesystem configuration:
*
* The following may be used to override the defaults provided by
* the boot program:
*
* rootfs: Set the filesystem type of the root.
*
* rootdev: Set the root device. This should be a fully
* expanded physical pathname. The default is the
* physical pathname of the device where the boot
* program resides. The physical pathname is
* highly platform and configuration dependent.
*
* Example:
* rootfs:ufs
* rootdev:/sbus@1,f8000000/esp@0,800000/sd@3,0:a
*
* (Swap device configuration should be specified in /etc/vfstab.)
*
* exclude:
*
* Modules appearing in the moddir path which are NOT to be loaded,
* even if referenced. Note that 'exclude' accepts either a module name,
* or a filename which includes the directory.
*
* Examples:
* exclude: win
* exclude: sys/shmsys
*
* forceload:
*
* Cause these modules to be loaded at boot time, (just before mounting
* the root filesystem) rather than at first reference. Note that
* forceload expects a filename which includes the directory. Also
* note that loading a module does not necessarily imply that it will
* be installed.
*
* Example:
* forceload: drv/foo
*
* set:
*
* Set an integer variable in the kernel or a module to a new value.
* This facility should be used with caution. See system(4).
*
* Examples:
*
* To set variables in 'unix':
*
* set nautopush=32
* set maxusers=40
*
* To set a variable named 'debug' in the module named 'test_module'
*
* set test_module:debug = 0x13

set rlim_fd_max=2000000
set rlim_fd_cur=2000000
set sq_max_size=0

*set ip:ip_queue_bind=0
*set ip:ip_queue_fanout=1
*set ip:ip_soft_rings_cnt=2
*set ip_queue_soft_ring=1

set shmsys:shminfo_shmmax=0xffffffff
set shmsys:shminfo_shmmmin=1
set shmsys:shminfo_shmmni=800
set shmsys:shminfo_shmseg=800
*set shmsys:shminfo_shmmni=500
*set shmsys:shminfo_shmseg=600
*

set semsys:seminfo_semmni=24576
set semsys:seminfo_semmns=1500
set semsys:seminfo_semmns=18432
set semsys:seminfo_semmnu=12000
set semsys:seminfo_semopm=500
set semsys:seminfo_semvmx=65536
*

set msgsys:msginfo_msgmni=5000
set msgsys:msginfo_msgmap=200000
set msgsys:msginfo_msgmnb=800000
set msgsys:msginfo_msgmax=32768
set msgsys:msginfo_msgtql=5000
*

=====

/etc/project

=====

system:0:::
user.root:1:::
nopproject:2:::
default:3:::
group.staff:10:::

=====

/etc/user_attr

=====

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/etc/user_attr

execution attributes for profiles. see user_attr(4)

#ident "(@(#)user_attr 1.1 07/01/31 SMI"

adm:::profiles=Log Management
lp:::profiles=Printer Management
postgres:::type=role;profiles=Postgres Administration,All
root:::auths=solaris.*;solaris.grant;profiles=Web Console
Management,All;lock_after_retries=no;min_label=admin_low;clearance=admin_high

Disk partition information

=====

* /dev/rdisk/c0t0d0s2 partition map

*

* Dimensions:

- * 512 bytes/sector
- * 63 sectors/track
- * 255 tracks/cylinder
- * 16065 sectors/cylinder
- * 36471 cylinders
- * 36469 accessible cylinders

*

* Flags:

- * 1: unmountable
- * 10: read-only

*

* Unallocated space:

	First	Sector	Last
* Sector Count Sector			
* 0	122897250	122897249	

*

	First	Sector	Last
* Partition Tag Flags Sector Count Sector Mount Directory			
0	2	00	122897250 122881185 245778434 /
1	3	01	16065 122881185 122897249
2	5	00	0 585874485 585874484
4	0	00	245778435 340096050 585874484 /export
8	1	01	0 16065 16064

=====

tnsnames.ora

=====

tpcc1=(DESCRIPTION=
 (ADDRESS=(PROTOCOL=tcp)(HOST=db)(PORT=1521))
 (CONNECT_DATA=(SID=tpcc1))
)

tpcc2=(DESCRIPTION=
 (ADDRESS=(PROTOCOL=tcp)(HOST=db2)(PORT=1521))
 (CONNECT_DATA=(SID=tpcc2))
)

tpcc3=(DESCRIPTION=
 (ADDRESS=(PROTOCOL=tcp)(HOST=db3)(PORT=1521))
 (CONNECT_DATA=(SID=tpcc3))
)

tpcc4=(DESCRIPTION=
 (ADDRESS=(PROTOCOL=tcp)(HOST=db4)(PORT=1521))
 (CONNECT_DATA=(SID=tpcc4))
)

tpcc5=(DESCRIPTION=
 (ADDRESS=(PROTOCOL=tcp)(HOST=db5)(PORT=1521))
 (CONNECT_DATA=(SID=tpcc5))

```
)

tpcc6=(DESCRIPTION=
  (ADDRESS=(PROTOCOL=tcp)(HOST=db6)(PORT=1521))
  (CONNECT_DATA=(SID=tpcc6))
)

tpcc7=(DESCRIPTION=
  (ADDRESS=(PROTOCOL=tcp)(HOST=db7)(PORT=1521))
  (CONNECT_DATA=(SID=tpcc7))
)

tpcc8=(DESCRIPTION=
  (ADDRESS=(PROTOCOL=tcp)(HOST=db8)(PORT=1521))
  (CONNECT_DATA=(SID=tpcc8))
)

tpcc9=(DESCRIPTION=
  (ADDRESS=(PROTOCOL=tcp)(HOST=db9)(PORT=1521))
  (CONNECT_DATA=(SID=tpcc9))
)

tpcc10=(DESCRIPTION=
  (ADDRESS=(PROTOCOL=tcp)(HOST=db10)(PORT=1521))
  (CONNECT_DATA=(SID=tpcc10))
)

tpcc11=(DESCRIPTION=
  (ADDRESS=(PROTOCOL=tcp)(HOST=db11)(PORT=1521))
  (CONNECT_DATA=(SID=tpcc11))
)

tpcc12=(DESCRIPTION=
  (ADDRESS=(PROTOCOL=tcp)(HOST=db12)(PORT=1521))
  (CONNECT_DATA=(SID=tpcc12))
)
```

Tuxedo ubbconfig

```
*RESOURCES
IPCKEY      40001
MASTER     tpcc_cli
PERM        0666
MAXACCESSERS 8192
MAXSERVERS  4096
MAXSERVICES 4096
MAXBUFTYPE  8192
MAXBUFSTYPE 8192
NOTIFY       IGNORE
MODEL        SHM
LDBAL        Y
SCANUNIT     30
SANITYSCAN   5
BLOCKTIME    10
BBLQUERY     60
OPTIONS      NO_XA,NO_AA
```

```
*MACHINES
"c1" LMID="tpcc_cli"
```

```
TUXCONFIG="/export/home/dbbench/tuxedo/tuxconfig"
ROOTDIR="/opt/tuxedo"
APPDIR="/export/home/dbbench/tuxedo"
ULOGPFX="/export/home/dbbench/tuxedo/logs/ULOGHOST"
TUXDIR="/opt/tuxedo"
SPINCOUNT=100000
```

```
*GROUPS
"group1"      LMID="tpcc_cli"   GRPNO=1
"DEL1"        LMID="tpcc_cli"   GRPNO=2
```

```
*SERVERS
tpcc_srv_del SRVGRP="DEL1" SRVID=1 RQADDR=delq1 REPLYQ=N CLOPT="-A -- 1"
tpcc_srv_del SRVGRP="DEL1" SRVID=2 RQADDR=delq2 REPLYQ=N CLOPT="-A -- 2"
tpcc_srv_del SRVGRP="DEL1" SRVID=3 RQADDR=delq3 REPLYQ=N CLOPT="-A -- 3"
tpcc_srv_del SRVGRP="DEL1" SRVID=4 RQADDR=delq4 REPLYQ=N CLOPT="-A -- 4"
tpcc_srv_del SRVGRP="DEL1" SRVID=5 RQADDR=delq5 REPLYQ=N CLOPT="-A -- 5"
tpcc_srv_del SRVGRP="DEL1" SRVID=6 RQADDR=delq6 REPLYQ=N CLOPT="-A -- 6"
tpcc_srv_del SRVGRP="DEL1" SRVID=7 RQADDR=delq7 REPLYQ=N CLOPT="-A -- 7"
tpcc_srv_del SRVGRP="DEL1" SRVID=8 RQADDR=delq8 REPLYQ=N CLOPT="-A -- 8"
tpcc_srv_del SRVGRP="DEL1" SRVID=9 RQADDR=delq9 REPLYQ=N CLOPT="-A -- 9"
tpcc_srv_del SRVGRP="DEL1" SRVID=10 RQADDR=delq10 REPLYQ=N CLOPT="-A -- 10"
tpcc_srv_del SRVGRP="DEL1" SRVID=11 RQADDR=delq11 REPLYQ=N CLOPT="-A -- 11"
tpcc_srv_del SRVGRP="DEL1" SRVID=12 RQADDR=delq12 REPLYQ=N CLOPT="-A -- 12"
tpcc_srv_del SRVGRP="DEL1" SRVID=13 RQADDR=delq13 REPLYQ=N CLOPT="-A -- 13"
tpcc_srv_del SRVGRP="DEL1" SRVID=14 RQADDR=delq14 REPLYQ=N CLOPT="-A -- 14"
tpcc_srv_del SRVGRP="DEL1" SRVID=15 RQADDR=delq15 REPLYQ=N CLOPT="-A -- 15"
tpcc_srv_del SRVGRP="DEL1" SRVID=16 RQADDR=delq16 REPLYQ=N CLOPT="-A -- 16"
tpcc_srv_del SRVGRP="DEL1" SRVID=17 RQADDR=delq17 REPLYQ=N CLOPT="-A -- 17"
tpcc_srv_del SRVGRP="DEL1" SRVID=18 RQADDR=delq18 REPLYQ=N CLOPT="-A -- 18"
tpcc_srv_del SRVGRP="DEL1" SRVID=19 RQADDR=delq19 REPLYQ=N CLOPT="-A -- 19"
tpcc_srv_del SRVGRP="DEL1" SRVID=20 RQADDR=delq20 REPLYQ=N CLOPT="-A -- 20"
tpcc_srv_del SRVGRP="DEL1" SRVID=21 RQADDR=delq21 REPLYQ=N CLOPT="-A -- 21"
tpcc_srv_del SRVGRP="DEL1" SRVID=22 RQADDR=delq22 REPLYQ=N CLOPT="-A -- 22"
tpcc_srv_del SRVGRP="DEL1" SRVID=23 RQADDR=delq23 REPLYQ=N CLOPT="-A -- 23"
tpcc_srv_del SRVGRP="DEL1" SRVID=24 RQADDR=delq24 REPLYQ=N CLOPT="-A -- 24"
```

```
tpcc_srv_ora SRVGRP="group1" SRVID=101 RQADDR=svcq1 REPLYQ=Y MIN=1 MAX=1
tpcc_srv_ora SRVGRP="group1" SRVID=102 RQADDR=svcq2 REPLYQ=Y MIN=1 MAX=1
tpcc_srv_ora SRVGRP="group1" SRVID=103 RQADDR=svcq3 REPLYQ=Y MIN=1 MAX=1
tpcc_srv_ora SRVGRP="group1" SRVID=104 RQADDR=svcq4 REPLYQ=Y MIN=1 MAX=1
tpcc_srv_ora SRVGRP="group1" SRVID=105 RQADDR=svcq5 REPLYQ=Y MIN=1 MAX=1
tpcc_srv_ora SRVGRP="group1" SRVID=106 RQADDR=svcq6 REPLYQ=Y MIN=1 MAX=1
tpcc_srv_ora SRVGRP="group1" SRVID=107 RQADDR=svcq7 REPLYQ=Y MIN=1 MAX=1
tpcc_srv_ora SRVGRP="group1" SRVID=108 RQADDR=svcq8 REPLYQ=Y MIN=1 MAX=1
tpcc_srv_ora SRVGRP="group1" SRVID=109 RQADDR=svcq9 REPLYQ=Y MIN=1 MAX=1
tpcc_srv_ora SRVGRP="group1" SRVID=110 RQADDR=svcq10 REPLYQ=Y MIN=1 MAX=1
tpcc_srv_ora SRVGRP="group1" SRVID=111 RQADDR=svcq11 REPLYQ=Y MIN=1 MAX=1
tpcc_srv_ora SRVGRP="group1" SRVID=112 RQADDR=svcq12 REPLYQ=Y MIN=1 MAX=1
tpcc_srv_ora SRVGRP="group1" SRVID=113 RQADDR=svcq13 REPLYQ=Y MIN=1 MAX=1
tpcc_srv_ora SRVGRP="group1" SRVID=114 RQADDR=svcq14 REPLYQ=Y MIN=1 MAX=1
tpcc_srv_ora SRVGRP="group1" SRVID=115 RQADDR=svcq15 REPLYQ=Y MIN=1 MAX=1
tpcc_srv_ora SRVGRP="group1" SRVID=116 RQADDR=svcq16 REPLYQ=Y MIN=1 MAX=1
tpcc_srv_ora SRVGRP="group1" SRVID=117 RQADDR=svcq17 REPLYQ=Y MIN=1 MAX=1
tpcc_srv_ora SRVGRP="group1" SRVID=118 RQADDR=svcq18 REPLYQ=Y MIN=1 MAX=1
tpcc_srv_ora SRVGRP="group1" SRVID=119 RQADDR=svcq19 REPLYQ=Y MIN=1 MAX=1
tpcc_srv_ora SRVGRP="group1" SRVID=120 RQADDR=svcq20 REPLYQ=Y MIN=1 MAX=1
tpcc_srv_ora SRVGRP="group1" SRVID=121 RQADDR=svcq21 REPLYQ=Y MIN=1 MAX=1
tpcc_srv_ora SRVGRP="group1" SRVID=122 RQADDR=svcq22 REPLYQ=Y MIN=1 MAX=1
tpcc_srv_ora SRVGRP="group1" SRVID=123 RQADDR=svcq23 REPLYQ=Y MIN=1 MAX=1
tpcc_srv_ora SRVGRP="group1" SRVID=124 RQADDR=svcq24 REPLYQ=Y MIN=1 MAX=1
tpcc_srv_ora SRVGRP="group1" SRVID=125 RQADDR=svcq25 REPLYQ=Y MIN=1 MAX=1
```


tpcc_srv_ora SRVGRP="group1" SRVID=250 RQADDR=svcq150 REPLYQ=Y MIN=1 MAX=1
tpcc_srv_ora SRVGRP="group1" SRVID=251 RQADDR=svcq151 REPLYQ=Y MIN=1 MAX=1
tpcc_srv_ora SRVGRP="group1" SRVID=252 RQADDR=svcq152 REPLYQ=Y MIN=1 MAX=1
tpcc_srv_ora SRVGRP="group1" SRVID=253 RQADDR=svcq153 REPLYQ=Y MIN=1 MAX=1
tpcc_srv_ora SRVGRP="group1" SRVID=254 RQADDR=svcq154 REPLYQ=Y MIN=1 MAX=1
tpcc_srv_ora SRVGRP="group1" SRVID=255 RQADDR=svcq155 REPLYQ=Y MIN=1 MAX=1
tpcc_srv_ora SRVGRP="group1" SRVID=256 RQADDR=svcq156 REPLYQ=Y MIN=1 MAX=1
tpcc_srv_ora SRVGRP="group1" SRVID=257 RQADDR=svcq157 REPLYQ=Y MIN=1 MAX=1
tpcc_srv_ora SRVGRP="group1" SRVID=258 RQADDR=svcq158 REPLYQ=Y MIN=1 MAX=1
tpcc_srv_ora SRVGRP="group1" SRVID=259 RQADDR=svcq159 REPLYQ=Y MIN=1 MAX=1
tpcc_srv_ora SRVGRP="group1" SRVID=260 RQADDR=svcq160 REPLYQ=Y MIN=1 MAX=1
tpcc_srv_ora SRVGRP="group1" SRVID=261 RQADDR=svcq161 REPLYQ=Y MIN=1 MAX=1
tpcc_srv_ora SRVGRP="group1" SRVID=262 RQADDR=svcq162 REPLYQ=Y MIN=1 MAX=1
tpcc_srv_ora SRVGRP="group1" SRVID=263 RQADDR=svcq163 REPLYQ=Y MIN=1 MAX=1
tpcc_srv_ora SRVGRP="group1" SRVID=264 RQADDR=svcq164 REPLYQ=Y MIN=1 MAX=1
tpcc_srv_ora SRVGRP="group1" SRVID=265 RQADDR=svcq165 REPLYQ=Y MIN=1 MAX=1
tpcc_srv_ora SRVGRP="group1" SRVID=266 RQADDR=svcq166 REPLYQ=Y MIN=1 MAX=1
tpcc_srv_ora SRVGRP="group1" SRVID=267 RQADDR=svcq167 REPLYQ=Y MIN=1 MAX=1
tpcc_srv_ora SRVGRP="group1" SRVID=268 RQADDR=svcq168 REPLYQ=Y MIN=1 MAX=1
tpcc_srv_ora SRVGRP="group1" SRVID=269 RQADDR=svcq169 REPLYQ=Y MIN=1 MAX=1
tpcc_srv_ora SRVGRP="group1" SRVID=270 RQADDR=svcq170 REPLYQ=Y MIN=1 MAX=1
tpcc_srv_ora SRVGRP="group1" SRVID=271 RQADDR=svcq171 REPLYQ=Y MIN=1 MAX=1
tpcc_srv_ora SRVGRP="group1" SRVID=272 RQADDR=svcq172 REPLYQ=Y MIN=1 MAX=1
tpcc_srv_ora SRVGRP="group1" SRVID=273 RQADDR=svcq173 REPLYQ=Y MIN=1 MAX=1
tpcc_srv_ora SRVGRP="group1" SRVID=274 RQADDR=svcq174 REPLYQ=Y MIN=1 MAX=1
tpcc_srv_ora SRVGRP="group1" SRVID=275 RQADDR=svcq175 REPLYQ=Y MIN=1 MAX=1
tpcc_srv_ora SRVGRP="group1" SRVID=276 RQADDR=svcq176 REPLYQ=Y MIN=1 MAX=1
tpcc_srv_ora SRVGRP="group1" SRVID=277 RQADDR=svcq177 REPLYQ=Y MIN=1 MAX=1
tpcc_srv_ora SRVGRP="group1" SRVID=278 RQADDR=svcq178 REPLYQ=Y MIN=1 MAX=1
tpcc_srv_ora SRVGRP="group1" SRVID=279 RQADDR=svcq179 REPLYQ=Y MIN=1 MAX=1
tpcc_srv_ora SRVGRP="group1" SRVID=280 RQADDR=svcq180 REPLYQ=Y MIN=1 MAX=1
tpcc_srv_ora SRVGRP="group1" SRVID=281 RQADDR=svcq181 REPLYQ=Y MIN=1 MAX=1
tpcc_srv_ora SRVGRP="group1" SRVID=282 RQADDR=svcq182 REPLYQ=Y MIN=1 MAX=1
tpcc_srv_ora SRVGRP="group1" SRVID=283 RQADDR=svcq183 REPLYQ=Y MIN=1 MAX=1
tpcc_srv_ora SRVGRP="group1" SRVID=284 RQADDR=svcq184 REPLYQ=Y MIN=1 MAX=1
tpcc_srv_ora SRVGRP="group1" SRVID=285 RQADDR=svcq185 REPLYQ=Y MIN=1 MAX=1
tpcc_srv_ora SRVGRP="group1" SRVID=286 RQADDR=svcq186 REPLYQ=Y MIN=1 MAX=1
tpcc_srv_ora SRVGRP="group1" SRVID=287 RQADDR=svcq187 REPLYQ=Y MIN=1 MAX=1
tpcc_srv_ora SRVGRP="group1" SRVID=288 RQADDR=svcq188 REPLYQ=Y MIN=1 MAX=1
tpcc_srv_ora SRVGRP="group1" SRVID=289 RQADDR=svcq189 REPLYQ=Y MIN=1 MAX=1
tpcc_srv_ora SRVGRP="group1" SRVID=290 RQADDR=svcq190 REPLYQ=Y MIN=1 MAX=1
tpcc_srv_ora SRVGRP="group1" SRVID=291 RQADDR=svcq191 REPLYQ=Y MIN=1 MAX=1
tpcc_srv_ora SRVGRP="group1" SRVID=292 RQADDR=svcq192 REPLYQ=Y MIN=1 MAX=1
tpcc_srv_ora SRVGRP="group1" SRVID=293 RQADDR=svcq193 REPLYQ=Y MIN=1 MAX=1
tpcc_srv_ora SRVGRP="group1" SRVID=294 RQADDR=svcq194 REPLYQ=Y MIN=1 MAX=1
tpcc_srv_ora SRVGRP="group1" SRVID=295 RQADDR=svcq195 REPLYQ=Y MIN=1 MAX=1
tpcc_srv_ora SRVGRP="group1" SRVID=296 RQADDR=svcq196 REPLYQ=Y MIN=1 MAX=1
tpcc_srv_ora SRVGRP="group1" SRVID=297 RQADDR=svcq197 REPLYQ=Y MIN=1 MAX=1
tpcc_srv_ora SRVGRP="group1" SRVID=298 RQADDR=svcq198 REPLYQ=Y MIN=1 MAX=1
tpcc_srv_ora SRVGRP="group1" SRVID=299 RQADDR=svcq199 REPLYQ=Y MIN=1 MAX=1
tpcc_srv_ora SRVGRP="group1" SRVID=300 RQADDR=svcq200 REPLYQ=Y MIN=1 MAX=1
tpcc_srv_ora SRVGRP="group1" SRVID=301 RQADDR=svcq201 REPLYQ=Y MIN=1 MAX=1
tpcc_srv_ora SRVGRP="group1" SRVID=302 RQADDR=svcq202 REPLYQ=Y MIN=1 MAX=1
tpcc_srv_ora SRVGRP="group1" SRVID=303 RQADDR=svcq203 REPLYQ=Y MIN=1 MAX=1
tpcc_srv_ora SRVGRP="group1" SRVID=304 RQADDR=svcq204 REPLYQ=Y MIN=1 MAX=1
tpcc_srv_ora SRVGRP="group1" SRVID=305 RQADDR=svcq205 REPLYQ=Y MIN=1 MAX=1
tpcc_srv_ora SRVGRP="group1" SRVID=306 RQADDR=svcq206 REPLYQ=Y MIN=1 MAX=1
tpcc_srv_ora SRVGRP="group1" SRVID=307 RQADDR=svcq207 REPLYQ=Y MIN=1 MAX=1
tpcc_srv_ora SRVGRP="group1" SRVID=308 RQADDR=svcq208 REPLYQ=Y MIN=1 MAX=1
tpcc_srv_ora SRVGRP="group1" SRVID=309 RQADDR=svcq209 REPLYQ=Y MIN=1 MAX=1
tpcc_srv_ora SRVGRP="group1" SRVID=310 RQADDR=svcq210 REPLYQ=Y MIN=1 MAX=1
tpcc_srv_ora SRVGRP="group1" SRVID=311 RQADDR=svcq211 REPLYQ=Y MIN=1 MAX=1

tpcc_srv_ora SRVGRP="group1" SRVID=312 RQADDR=svcq212 REPLYQ=Y MIN=1 MAX=1
tpcc_srv_ora SRVGRP="group1" SRVID=313 RQADDR=svcq213 REPLYQ=Y MIN=1 MAX=1
tpcc_srv_ora SRVGRP="group1" SRVID=314 RQADDR=svcq214 REPLYQ=Y MIN=1 MAX=1
tpcc_srv_ora SRVGRP="group1" SRVID=315 RQADDR=svcq215 REPLYQ=Y MIN=1 MAX=1
tpcc_srv_ora SRVGRP="group1" SRVID=316 RQADDR=svcq216 REPLYQ=Y MIN=1 MAX=1
tpcc_srv_ora SRVGRP="group1" SRVID=317 RQADDR=svcq217 REPLYQ=Y MIN=1 MAX=1
tpcc_srv_ora SRVGRP="group1" SRVID=318 RQADDR=svcq218 REPLYQ=Y MIN=1 MAX=1
tpcc_srv_ora SRVGRP="group1" SRVID=319 RQADDR=svcq219 REPLYQ=Y MIN=1 MAX=1
tpcc_srv_ora SRVGRP="group1" SRVID=320 RQADDR=svcq220 REPLYQ=Y MIN=1 MAX=1
tpcc_srv_ora SRVGRP="group1" SRVID=321 RQADDR=svcq221 REPLYQ=Y MIN=1 MAX=1
tpcc_srv_ora SRVGRP="group1" SRVID=322 RQADDR=svcq222 REPLYQ=Y MIN=1 MAX=1
tpcc_srv_ora SRVGRP="group1" SRVID=323 RQADDR=svcq223 REPLYQ=Y MIN=1 MAX=1
tpcc_srv_ora SRVGRP="group1" SRVID=324 RQADDR=svcq224 REPLYQ=Y MIN=1 MAX=1
tpcc_srv_ora SRVGRP="group1" SRVID=325 RQADDR=svcq225 REPLYQ=Y MIN=1 MAX=1
tpcc_srv_ora SRVGRP="group1" SRVID=326 RQADDR=svcq226 REPLYQ=Y MIN=1 MAX=1

*SERVICES

DEL

NEWO

ORDS

PAYM

STOCK

Webserver 1 config file

<!--
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-->

<server>
 <cluster>
 <local-host>X64</local-host>
 <instance>
 <host>X64</host>
 </instance>
 </cluster>

 <log>
 <log-file>../logs/errors</log-file>
 <log-level>failure</log-level>
 </log>

<platform>64</platform>

<temp-path>/tmp/https-X64-6accbd0a</temp-path>

<dns>
 <enabled>>false</enabled>
 <async>>false</async>
</dns>
<stats>
 <enabled>>false</enabled>
</stats>
<qos>
 <enabled>>false</enabled>
</qos>
<acl-cache>
 <enabled>>false</enabled>
</acl-cache>
<ssl-session-cache>

```
<enabled>>false</enabled>
</ssl-session-cache>
<file-cache>
  <enabled>>false</enabled>
</file-cache>

<user>dbbench</user>

<keep-alive>
  <enabled>true</enabled>
  <threads>4</threads>
  <max-connections>600000</max-connections>
  <timeout>3600</timeout>
  <poll-interval>.01</poll-interval>
</keep-alive>

<thread-pool>
  <queue-size>600000</queue-size>
  <min-threads>1024</min-threads>
  <max-threads>1024</max-threads>
  <stack-size>131072</stack-size>
</thread-pool>

<mime-file>mime.types</mime-file>

<access-log>
  <file>../logs/access</file>
</access-log>

<http-listener>
  <name>http-listener-1</name>
  <ip>192.168.21.15</ip>
  <port>8080</port>
  <acceptor-threads>4</acceptor-threads>
  <listen-queue-size>81920</listen-queue-size>
  <server-name>X64</server-name>
  <default-virtual-server-name>X64</default-virtual-server-name>
</http-listener>
<http-listener>
  <name>http-listener-2</name>
  <ip>192.168.21.15</ip>
  <port>8081</port>
  <acceptor-threads>4</acceptor-threads>
  <listen-queue-size>81920</listen-queue-size>
  <server-name>X64</server-name>
  <default-virtual-server-name>X64</default-virtual-server-name>
</http-listener>
<virtual-server>
  <name>X64</name>
  <host>X64</host>
  <http-listener-name>http-listener-1</http-listener-name>
  <http-listener-name>http-listener-2</http-listener-name>
  <document-root>/sun/webserver7/https-X64/docs</document-root>
</virtual-server>
</server>
```

magnus.conf

```
#
# Copyright 2008 Sun Microsystems, Inc. All rights reserved.
```

```
# Use is subject to license terms.
#
Init fn="load-modules" shlib="/sun/webserver7/tpcc/plugins/tpccApp.so" funcs="TpccInit,TpccService"
Init fn="TpccInit" LateInit="no" max-workers=900
```

obj.conf

```
# # Copyright 2008 Sun Microsystems, Inc. All rights reserved. # Use is subject to license terms. # # You can edit
this file, but comments and formatting changes # might be lost when you use the administration GUI or CLI.
NameTrans fn="assign-name" from="/tpcc*" name="tpcc" nostat="/tpcc*" find-pathinfo-forward=true #NameTrans
fn="assign-name" from="/.perf" name="perf" ObjectType fn="force-type" type="magnus-internal/tpcc" Service
fn="TpccService" method="(GET|POST)" type="magnus-internal/tpcc" Service fn="service-dump"
```

SAN SWITCH CONFIGURATION

SWITCH 1

Switch Information Report for sae5300-1

List of Switches

Switch ID	Worldwide Name	Enet IP Addr	FC IP Addr	Name
1: fffc01	10:00:00:05:1e:ae:ec:50	10.1.140.33	0.0.0.0	"sae5300-1"
2: fffc02	10:00:00:05:1e:a9:be:b8	10.1.140.34	0.0.0.0	"F5300-2"
3: fffc03	10:00:00:05:1e:9a:8e:be	10.1.140.35	0.0.0.0	>"F5300-3"

The Fabric has 3 switches

Current Switch Information

Ethernet IP Address: 10.1.140.33
Ethernet Subnetmask: 255.255.255.0
Fibre Channel IP Address: 0.0.0.0
Fibre Channel Subnetmask: 0.0.0.0
Gateway Address: 10.1.140.5
Ethernet IPv6 Addresses:

Kernel: 2.6.14.2
Fabric OS: v6.2.0c
Made on: Mon Feb 23 19:32:16 2009
Flash: Wed Sep 9 14:59:39 2009
BootProm: 1.0.14

List of Inter-Switch Links

Local Domain ID: 1

Local Port	Domain	Remote Port	State
31	2	79	NB_ST_FULL

List of Ports

switchName: sae5300-1
switchType: 64.3
switchState: Online
switchMode: Native
switchRole: Subordinate
switchDomain: 1
switchId: fffc01
switchWwn: 10:00:00:05:1e:ae:ec:50
zoning: ON (COMSTAR_1stZONE_LOGS_2ndZone)
switchBeacon: OFF
FC Router: OFF
Allow XISL Use: OFF
LS Attributes: [FID: 128, Base Switch: No, Default Switch: Yes]

Area	Port	Media	Speed	State	Proto
0	0	id	N8	Online	F-Port 10:00:00:00:c9:8c:b9:96
1	1	id	N8	Online	F-Port 10:00:00:00:c9:8c:b9:97
2	2	id	N8	Online	F-Port 10:00:00:00:c9:8c:b9:ee

3	3	id	N8	Online	F-Port 10:00:00:00:c9:8c:b9:ef
4	4	id	N8	Online	F-Port 10:00:00:00:c9:8c:b9:e0
5	5	id	N8	Online	F-Port 10:00:00:00:c9:8c:b9:e1
6	6	id	N8	Online	F-Port 10:00:00:00:c9:8c:b9:ba
7	7	id	N8	Online	F-Port 10:00:00:00:c9:8c:b9:bb
8	8	id	N8	Online	F-Port 10:00:00:00:c9:8c:b9:c4
9	9	id	N8	Online	F-Port 10:00:00:00:c9:8c:b9:c5
10	10	id	N8	Online	F-Port 10:00:00:00:c9:8c:b9:98
11	11	id	N8	Online	F-Port 10:00:00:00:c9:8c:b9:99
12	12	id	N8	Online	F-Port 10:00:00:00:c9:8c:b9:e4
13	13	id	N8	Online	F-Port 10:00:00:00:c9:8c:b9:e5
14	14	id	N8	Online	F-Port 10:00:00:00:c9:8c:ba:2e
15	15	id	N8	Online	F-Port 10:00:00:00:c9:8c:ba:2f
16	16	id	N8	Online	F-Port 10:00:00:00:c9:8c:ba:24
17	17	id	N8	Online	F-Port 10:00:00:00:c9:8c:ba:25
18	18	id	N8	Online	F-Port 10:00:00:00:c9:8c:b9:c0
19	19	id	N8	Online	F-Port 10:00:00:00:c9:8c:b9:c1
20	20	id	N8	Online	F-Port 10:00:00:00:c9:8c:52:8e
21	21	id	N8	Online	F-Port 10:00:00:00:c9:8c:52:8f
22	22	id	N8	Online	F-Port 10:00:00:00:c9:8c:b9:d6
23	23	id	N8	Online	F-Port 10:00:00:00:c9:8c:b9:d7
24	24	id	N8	Online	F-Port 21:00:00:1b:32:92:3c:1a
25	25	id	N8	Online	E-Port (Trunk port, master is Port 31)
26	26	id	N8	Online	E-Port (Trunk port, master is Port 31)
27	27	id	N8	Online	E-Port (Trunk port, master is Port 31)
28	28	id	N8	Online	F-Port 21:00:00:1b:32:92:be:19
29	29	id	N8	Online	E-Port (Trunk port, master is Port 31)
30	30	id	N8	Online	E-Port (Trunk port, master is Port 31)
31	31	id	N8	Online	E-Port 10:00:00:05:1e:a9:be:b8 "F5300-2" (upstream)(Trunk master)
32	32	id	N8	Online	F-Port 21:00:00:1b:32:92:86:19
33	33	id	N8	Online	F-Port 21:00:00:1b:32:92:e7:19
34	34	id	N8	Online	F-Port 21:00:00:1b:32:92:08:19
35	35	id	N8	Online	F-Port 21:00:00:1b:32:92:0e:19
36	36	id	N8	Online	F-Port 21:00:00:1b:32:92:14:1a
37	37	id	N8	Online	F-Port 21:00:00:1b:32:92:0d:1a
38	38	id	N8	Online	F-Port 21:00:00:1b:32:92:22:1a
39	39	id	N8	Online	F-Port 21:00:00:1b:32:92:7c:19
40	40	id	N8	Online	F-Port 21:00:00:1b:32:92:49:18
41	41	id	N8	Online	F-Port 21:00:00:1b:32:92:ae:19
42	42	id	N8	Online	F-Port 21:00:00:1b:32:92:22:18
43	43	id	N8	Online	F-Port 21:00:00:1b:32:92:f3:19
44	44	id	N8	Online	F-Port 21:00:00:1b:32:92:78:19
45	45	id	N8	Online	F-Port 21:00:00:1b:32:92:8f:19
46	46	id	N8	Online	F-Port 21:00:00:1b:32:92:1e:1a
47	47	id	N8	Online	F-Port 21:00:00:1b:32:92:cd:19
48	48	id	N8	Online	F-Port 21:00:00:1b:32:92:13:1a
49	49	id	N8	Online	F-Port 21:00:00:1b:32:92:32:18
50	50	id	N8	No_Light	
51	51	id	N8	No_Light	
52	52	id	N8	No_Light	
53	53	id	N8	No_Light	
54	54	id	N8	No_Light	
55	55	id	N8	No_Light	
56	56	id	N8	No_Light	
57	57	id	N8	No_Light	
58	58	id	N8	No_Light	
59	59	id	N8	No_Light	
60	60	id	N8	No_Light	
61	61	id	N8	No_Light	
62	62	id	N8	No_Light	
63	63	id	N8	No_Light	
64	64	id	N4	Online	F-Port 21:01:00:1b:32:ab:8a:ad

65	65	id	N4	Online	F-Port	21:01:00:1b:32:ab:ef:ab
66	66	id	N4	Online	F-Port	21:01:00:1b:32:ab:be:ac
67	67	id	N4	Online	F-Port	21:01:00:1b:32:ab:a0:af
68	68	id	N4	Online	F-Port	21:01:00:1b:32:ab:99:13
69	69	id	N4	Online	F-Port	21:01:00:1b:32:ac:e7:30
70	70	id	N4	Online	F-Port	21:01:00:1b:32:ad:ec:d0
71	71	id	N4	Online	F-Port	21:01:00:1b:32:ad:d3:d6
72	72	id	N4	Online	F-Port	20:22:00:a0:b8:56:64:1a
73	73	id	N4	Online	F-Port	20:22:00:a0:b8:56:2c:ae
74	74	id	N4	Online	F-Port	20:22:00:a0:b8:56:5f:cc
75	75	id	N4	Online	F-Port	20:22:00:a0:b8:56:63:fa
76	76	id	N4	Online	F-Port	20:22:00:a0:b8:56:5c:20
77	77	id	N4	Online	F-Port	20:22:00:a0:b8:56:5f:9e
78	78	id	N4	Online	F-Port	20:28:00:a0:b8:56:64:1e
79	79	id	N4	Online	F-Port	20:22:00:a0:b8:56:11:f4

Name Server

```
{
010000 010100 010200 010300 010400 010500 010600 010700
010800 010900 010a00 010b00 010c00 010d00 010e00 010f00
011000 011100 011200 011300 011400 011500 011600 011700
011800 011c00 012000 012100 012200 012300 012400 012500
012600 012700 012800 012900 012a00 012b00 012c00 012d00
012e00 012f00 013000 013100 014000 014100 014200 014300
014400 014500 014600 014700 014800 014900 014a00 014b00
014c00 014d00 014e00 014f00 020000 020100 020200 020300
020400 020500 020600 020700 020800 020900 020a00 020b00
021000 021100 021200 021300 021400 021500 021600 021700
022000 022100 022200 022300 022400 022500 022600 022700
022800 022900 022a00 022b00 022c00 022d00 022e00 022f00
023000 023100 023200 023300 023400 023500 023600 023700
023800 023900 023a00 023b00 023c00 023d00 023e00 023f00
024000 024100 024200 024300 024400 024500 024600 024700
030000 030800 030900 030a00 030b00 030c00 030d00 030e00
030f00 031000 031100 031200 031300 031400 031500 031600
031700 031800 031900 031a00 031b00 031c00 031d00 031e00
031f00 032000 032100 032200 032300 032400 032500 032600
032700 032800 032900 032a00 032b00 032c00 032d00 032e00
032f00 033000 033100 033200 033300 033400 033500 033600
033700 033800 033900 033a00 033b00 033c00 033d00 033e00
033f00 034000 034100 034200 034300
181 Nx_Ports in the Fabric }
```

```
{
Type Pid  COS  PortName      NodeName      TTL(sec)
N  010000;   3;10:00:00:00:c9:8c:b9:96;20:00:00:00:c9:8c:b9:96; na
FC4s: IPFC FCP
NodeSymb: [36] "Emulex LPe12002-S FV1.00a12 DV2.40q "
Fabric Port Name: 20:00:00:05:1e:ae:ec:50
Permanent Port Name: 10:00:00:00:c9:8c:b9:96
Port Index: 0
Share Area: No
Device Shared in Other AD: No
Redirect: No
N  010100;   3;10:00:00:00:c9:8c:b9:97;20:00:00:00:c9:8c:b9:97; na
FC4s: IPFC FCP
NodeSymb: [36] "Emulex LPe12002-S FV1.00a12 DV2.40q "
Fabric Port Name: 20:01:00:05:1e:ae:ec:50
Permanent Port Name: 10:00:00:00:c9:8c:b9:97
Port Index: 1
Share Area: No
Device Shared in Other AD: No
```

```
Redirect: No
N  010200;   3;10:00:00:00:c9:8c:b9:ee;20:00:00:00:c9:8c:b9:ee; na
FC4s: IPFC FCP
NodeSymb: [39] "Emulex LPe12002-S FV1.00a12 DV2.40q db1"
Fabric Port Name: 20:02:00:05:1e:ae:ec:50
Permanent Port Name: 10:00:00:00:c9:8c:b9:ee
Port Index: 2
Share Area: No
Device Shared in Other AD: No
Redirect: No
N  010300;   3;10:00:00:00:c9:8c:b9:ef;20:00:00:00:c9:8c:b9:ef; na
FC4s: IPFC FCP
NodeSymb: [39] "Emulex LPe12002-S FV1.00a12 DV2.40q db1"
Fabric Port Name: 20:03:00:05:1e:ae:ec:50
Permanent Port Name: 10:00:00:00:c9:8c:b9:ef
Port Index: 3
Share Area: No
Device Shared in Other AD: No
Redirect: No
N  010400;   3;10:00:00:00:c9:8c:b9:e0;20:00:00:00:c9:8c:b9:e0; na
FC4s: IPFC FCP
NodeSymb: [39] "Emulex LPe12002-S FV1.00a12 DV2.40q db1"
Fabric Port Name: 20:04:00:05:1e:ae:ec:50
Permanent Port Name: 10:00:00:00:c9:8c:b9:e0
Port Index: 4
Share Area: No
Device Shared in Other AD: No
Redirect: No
N  010500;   3;10:00:00:00:c9:8c:b9:e1;20:00:00:00:c9:8c:b9:e1; na
FC4s: IPFC FCP
NodeSymb: [39] "Emulex LPe12002-S FV1.00a12 DV2.40q db1"
Fabric Port Name: 20:05:00:05:1e:ae:ec:50
Permanent Port Name: 10:00:00:00:c9:8c:b9:e1
Port Index: 5
Share Area: No
Device Shared in Other AD: No
Redirect: No
N  010600;   3;10:00:00:00:c9:8c:b9:ba;20:00:00:00:c9:8c:b9:ba; na
FC4s: IPFC FCP
NodeSymb: [36] "Emulex LPe12002-S FV1.00a12 DV2.40q "
Fabric Port Name: 20:06:00:05:1e:ae:ec:50
Permanent Port Name: 10:00:00:00:c9:8c:b9:ba
Port Index: 6
Share Area: No
Device Shared in Other AD: No
Redirect: No
N  010700;   3;10:00:00:00:c9:8c:b9:bb;20:00:00:00:c9:8c:b9:bb; na
FC4s: IPFC FCP
NodeSymb: [36] "Emulex LPe12002-S FV1.00a12 DV2.40q "
Fabric Port Name: 20:07:00:05:1e:ae:ec:50
Permanent Port Name: 10:00:00:00:c9:8c:b9:bb
Port Index: 7
Share Area: No
Device Shared in Other AD: No
Redirect: No
N  010800;   3;10:00:00:00:c9:8c:b9:c4;20:00:00:00:c9:8c:b9:c4; na
FC4s: IPFC FCP
NodeSymb: [36] "Emulex LPe12002-S FV1.00a12 DV2.40q "
Fabric Port Name: 20:08:00:05:1e:ae:ec:50
Permanent Port Name: 10:00:00:00:c9:8c:b9:c4
Port Index: 8
Share Area: No
```

Device Shared in Other AD: No
Redirect: No
N 010900; 3;10:00:00:00:c9:8c:b9:c5;20:00:00:00:c9:8c:b9:c5; na
FC4s: IPFC FCP
NodeSymb: [39] "Emulex LPe12002-S FV1.00a12 DV2.40q db2"
Fabric Port Name: 20:09:00:05:1e:ae:ec:50
Permanent Port Name: 10:00:00:00:c9:8c:b9:c5
Port Index: 9
Share Area: No
Device Shared in Other AD: No
Redirect: No
N 010a00; 3;10:00:00:00:c9:8c:b9:98;20:00:00:00:c9:8c:b9:98; na
FC4s: IPFC FCP
NodeSymb: [39] "Emulex LPe12002-S FV1.00a12 DV2.40q db2"
Fabric Port Name: 20:0a:00:05:1e:ae:ec:50
Permanent Port Name: 10:00:00:00:c9:8c:b9:98
Port Index: 10
Share Area: No
Device Shared in Other AD: No
Redirect: No
N 010b00; 3;10:00:00:00:c9:8c:b9:99;20:00:00:00:c9:8c:b9:99; na
FC4s: IPFC FCP
NodeSymb: [39] "Emulex LPe12002-S FV1.00a12 DV2.40q db2"
Fabric Port Name: 20:0b:00:05:1e:ae:ec:50
Permanent Port Name: 10:00:00:00:c9:8c:b9:99
Port Index: 11
Share Area: No
Device Shared in Other AD: No
Redirect: No
N 010c00; 3;10:00:00:00:c9:8c:b9:e4;20:00:00:00:c9:8c:b9:e4; na
FC4s: IPFC FCP
NodeSymb: [36] "Emulex LPe12002-S FV1.00a12 DV2.40q "
Fabric Port Name: 20:0c:00:05:1e:ae:ec:50
Permanent Port Name: 10:00:00:00:c9:8c:b9:e4
Port Index: 12
Share Area: No
Device Shared in Other AD: No
Redirect: No
N 010d00; 3;10:00:00:00:c9:8c:b9:e5;20:00:00:00:c9:8c:b9:e5; na
FC4s: IPFC FCP
NodeSymb: [36] "Emulex LPe12002-S FV1.00a12 DV2.40q "
Fabric Port Name: 20:0d:00:05:1e:ae:ec:50
Permanent Port Name: 10:00:00:00:c9:8c:b9:e5
Port Index: 13
Share Area: No
Device Shared in Other AD: No
Redirect: No
N 010e00; 3;10:00:00:00:c9:8c:ba:2e;20:00:00:00:c9:8c:ba:2e; na
FC4s: IPFC FCP
NodeSymb: [36] "Emulex LPe12002-S FV1.00a12 DV2.40q "
Fabric Port Name: 20:0e:00:05:1e:ae:ec:50
Permanent Port Name: 10:00:00:00:c9:8c:ba:2e
Port Index: 14
Share Area: No
Device Shared in Other AD: No
Redirect: No
N 010f00; 3;10:00:00:00:c9:8c:ba:2f;20:00:00:00:c9:8c:ba:2f; na
FC4s: IPFC FCP
NodeSymb: [39] "Emulex LPe12002-S FV1.00a12 DV2.40q db3"
Fabric Port Name: 20:0f:00:05:1e:ae:ec:50
Permanent Port Name: 10:00:00:00:c9:8c:ba:2f
Port Index: 15

Share Area: No
Device Shared in Other AD: No
Redirect: No
N 011000; 3;10:00:00:00:c9:8c:ba:24;20:00:00:00:c9:8c:ba:24; na
FC4s: IPFC FCP
NodeSymb: [39] "Emulex LPe12002-S FV1.00a12 DV2.40q db3"
Fabric Port Name: 20:10:00:05:1e:ae:ec:50
Permanent Port Name: 10:00:00:00:c9:8c:ba:24
Port Index: 16
Share Area: No
Device Shared in Other AD: No
Redirect: No
N 011100; 3;10:00:00:00:c9:8c:ba:25;20:00:00:00:c9:8c:ba:25; na
FC4s: IPFC FCP
NodeSymb: [39] "Emulex LPe12002-S FV1.00a12 DV2.40q db3"
Fabric Port Name: 20:11:00:05:1e:ae:ec:50
Permanent Port Name: 10:00:00:00:c9:8c:ba:25
Port Index: 17
Share Area: No
Device Shared in Other AD: No
Redirect: No
N 011200; 3;10:00:00:00:c9:8c:b9:c0;20:00:00:00:c9:8c:b9:c0; na
FC4s: IPFC FCP
NodeSymb: [36] "Emulex LPe12002-S FV1.00a12 DV2.40q "
Fabric Port Name: 20:12:00:05:1e:ae:ec:50
Permanent Port Name: 10:00:00:00:c9:8c:b9:c0
Port Index: 18
Share Area: No
Device Shared in Other AD: No
Redirect: No
N 011300; 3;10:00:00:00:c9:8c:b9:c1;20:00:00:00:c9:8c:b9:c1; na
FC4s: IPFC FCP
NodeSymb: [36] "Emulex LPe12002-S FV1.00a12 DV2.40q "
Fabric Port Name: 20:13:00:05:1e:ae:ec:50
Permanent Port Name: 10:00:00:00:c9:8c:b9:c1
Port Index: 19
Share Area: No
Device Shared in Other AD: No
Redirect: No
N 011400; 3;10:00:00:00:c9:8c:52:8e;20:00:00:00:c9:8c:52:8e; na
FC4s: IPFC FCP
NodeSymb: [36] "Emulex LPe12002-S FV1.00a12 DV2.40q "
Fabric Port Name: 20:14:00:05:1e:ae:ec:50
Permanent Port Name: 10:00:00:00:c9:8c:52:8e
Port Index: 20
Share Area: No
Device Shared in Other AD: No
Redirect: No
N 011500; 3;10:00:00:00:c9:8c:52:8f;20:00:00:00:c9:8c:52:8f; na
FC4s: IPFC FCP
NodeSymb: [39] "Emulex LPe12002-S FV1.00a12 DV2.40q db4"
Fabric Port Name: 20:15:00:05:1e:ae:ec:50
Permanent Port Name: 10:00:00:00:c9:8c:52:8f
Port Index: 21
Share Area: No
Device Shared in Other AD: No
Redirect: No
N 011600; 3;10:00:00:00:c9:8c:b9:d6;20:00:00:00:c9:8c:b9:d6; na
FC4s: IPFC FCP
NodeSymb: [39] "Emulex LPe12002-S FV1.00a12 DV2.40q db4"
Fabric Port Name: 20:16:00:05:1e:ae:ec:50
Permanent Port Name: 10:00:00:00:c9:8c:b9:d6

Port Index: 22
Share Area: No
Device Shared in Other AD: No
Redirect: No
N 011700; 3;10:00:00:00:c9:8c:b9:d7;20:00:00:00:c9:8c:b9:d7; na
FC4s: IPFC FCP
NodeSymb: [39] "Emulex LPe12002-S FV1.00a12 DV2.40q db4"
Fabric Port Name: 20:17:00:05:1e:ae:ec:50
Permanent Port Name: 10:00:00:00:c9:8c:b9:d7
Port Index: 23
Share Area: No
Device Shared in Other AD: No
Redirect: No
N 011800; 3;21:00:00:1b:32:92:3c:1a;20:00:00:1b:32:92:3c:1a; na
FC4s: FCP
PortSymb: [6] "qlt1,0"
NodeSymb: [8] "db1-san1"
Fabric Port Name: 20:18:00:05:1e:ae:ec:50
Permanent Port Name: 21:00:00:1b:32:92:3c:1a
Port Index: 24
Share Area: No
Device Shared in Other AD: No
Redirect: No
N 011c00; 3;21:00:00:1b:32:92:be:19;20:00:00:1b:32:92:be:19; na
FC4s: FCP
PortSymb: [6] "qlt1,0"
NodeSymb: [8] "db1-san2"
Fabric Port Name: 20:1c:00:05:1e:ae:ec:50
Permanent Port Name: 21:00:00:1b:32:92:be:19
Port Index: 28
Share Area: No
Device Shared in Other AD: No
Redirect: No
N 012000; 3;21:00:00:1b:32:92:86:19;20:00:00:1b:32:92:86:19; na
FC4s: FCP
PortSymb: [6] "qlt1,0"
NodeSymb: [8] "db1-san3"
Fabric Port Name: 20:20:00:05:1e:ae:ec:50
Permanent Port Name: 21:00:00:1b:32:92:86:19
Port Index: 32
Share Area: No
Device Shared in Other AD: No
Redirect: No
N 012100; 3;21:00:00:1b:32:92:e7:19;20:00:00:1b:32:92:e7:19; na
FC4s: FCP
PortSymb: [6] "qlt1,0"
NodeSymb: [8] "db1-san4"
Fabric Port Name: 20:21:00:05:1e:ae:ec:50
Permanent Port Name: 21:00:00:1b:32:92:e7:19
Port Index: 33
Share Area: No
Device Shared in Other AD: No
Redirect: No
N 012200; 3;21:00:00:1b:32:92:08:19;20:00:00:1b:32:92:08:19; na
FC4s: FCP
PortSymb: [6] "qlt1,0"
NodeSymb: [8] "db1-san5"
Fabric Port Name: 20:22:00:05:1e:ae:ec:50
Permanent Port Name: 21:00:00:1b:32:92:08:19
Port Index: 34
Share Area: No
Device Shared in Other AD: No

Redirect: No
N 012300; 3;21:00:00:1b:32:92:0e:19;20:00:00:1b:32:92:0e:19; na
FC4s: FCP
PortSymb: [6] "qlt1,0"
NodeSymb: [8] "db2-san1"
Fabric Port Name: 20:23:00:05:1e:ae:ec:50
Permanent Port Name: 21:00:00:1b:32:92:0e:19
Port Index: 35
Share Area: No
Device Shared in Other AD: No
Redirect: No
N 012400; 3;21:00:00:1b:32:92:14:1a;20:00:00:1b:32:92:14:1a; na
FC4s: FCP
PortSymb: [6] "qlt1,0"
NodeSymb: [8] "db2-san2"
Fabric Port Name: 20:24:00:05:1e:ae:ec:50
Permanent Port Name: 21:00:00:1b:32:92:14:1a
Port Index: 36
Share Area: No
Device Shared in Other AD: No
Redirect: No
N 012500; 3;21:00:00:1b:32:92:0d:1a;20:00:00:1b:32:92:0d:1a; na
FC4s: FCP
PortSymb: [6] "qlt1,0"
NodeSymb: [8] "db2-san3"
Fabric Port Name: 20:25:00:05:1e:ae:ec:50
Permanent Port Name: 21:00:00:1b:32:92:0d:1a
Port Index: 37
Share Area: No
Device Shared in Other AD: No
Redirect: No
N 012600; 3;21:00:00:1b:32:92:22:1a;20:00:00:1b:32:92:22:1a; na
FC4s: FCP
PortSymb: [6] "qlt1,0"
NodeSymb: [8] "db2-san4"
Fabric Port Name: 20:26:00:05:1e:ae:ec:50
Permanent Port Name: 21:00:00:1b:32:92:22:1a
Port Index: 38
Share Area: No
Device Shared in Other AD: No
Redirect: No
N 012700; 3;21:00:00:1b:32:92:7c:19;20:00:00:1b:32:92:7c:19; na
FC4s: FCP
PortSymb: [6] "qlt1,0"
NodeSymb: [8] "db2-san5"
Fabric Port Name: 20:27:00:05:1e:ae:ec:50
Permanent Port Name: 21:00:00:1b:32:92:7c:19
Port Index: 39
Share Area: No
Device Shared in Other AD: No
Redirect: No
N 012800; 3;21:00:00:1b:32:92:49:18;20:00:00:1b:32:92:49:18; na
FC4s: FCP
PortSymb: [6] "qlt1,0"
NodeSymb: [8] "db3-san1"
Fabric Port Name: 20:28:00:05:1e:ae:ec:50
Permanent Port Name: 21:00:00:1b:32:92:49:18
Port Index: 40
Share Area: No
Device Shared in Other AD: No
Redirect: No
N 012900; 3;21:00:00:1b:32:92:ae:19;20:00:00:1b:32:92:ae:19; na

FC4s: FCP
PortSymb: [6] "qlt1,0"
NodeSymb: [8] "db3-san2"
Fabric Port Name: 20:29:00:05:1e:ae:ec:50
Permanent Port Name: 21:00:00:1b:32:92:ae:19
Port Index: 41
Share Area: No
Device Shared in Other AD: No
Redirect: No
N 012a00; 3;21:00:00:1b:32:92:22:18;20:00:00:1b:32:92:22:18; na
FC4s: FCP
PortSymb: [6] "qlt1,0"
NodeSymb: [8] "db3-san3"
Fabric Port Name: 20:2a:00:05:1e:ae:ec:50
Permanent Port Name: 21:00:00:1b:32:92:22:18
Port Index: 42
Share Area: No
Device Shared in Other AD: No
Redirect: No
N 012b00; 3;21:00:00:1b:32:92:f3:19;20:00:00:1b:32:92:f3:19; na
FC4s: FCP
PortSymb: [6] "qlt1,0"
NodeSymb: [8] "db3-san4"
Fabric Port Name: 20:2b:00:05:1e:ae:ec:50
Permanent Port Name: 21:00:00:1b:32:92:f3:19
Port Index: 43
Share Area: No
Device Shared in Other AD: No
Redirect: No
N 012c00; 3;21:00:00:1b:32:92:78:19;20:00:00:1b:32:92:78:19; na
FC4s: FCP
PortSymb: [6] "qlt1,0"
NodeSymb: [8] "db3-san5"
Fabric Port Name: 20:2c:00:05:1e:ae:ec:50
Permanent Port Name: 21:00:00:1b:32:92:78:19
Port Index: 44
Share Area: No
Device Shared in Other AD: No
Redirect: No
N 012d00; 3;21:00:00:1b:32:92:8f:19;20:00:00:1b:32:92:8f:19; na
FC4s: FCP
PortSymb: [6] "qlt1,0"
NodeSymb: [8] "db4-san1"
Fabric Port Name: 20:2d:00:05:1e:ae:ec:50
Permanent Port Name: 21:00:00:1b:32:92:8f:19
Port Index: 45
Share Area: No
Device Shared in Other AD: No
Redirect: No
N 012e00; 3;21:00:00:1b:32:92:1e:1a;20:00:00:1b:32:92:1e:1a; na
FC4s: FCP
PortSymb: [6] "qlt1,0"
NodeSymb: [8] "db4-san2"
Fabric Port Name: 20:2e:00:05:1e:ae:ec:50
Permanent Port Name: 21:00:00:1b:32:92:1e:1a
Port Index: 46
Share Area: No
Device Shared in Other AD: No
Redirect: No
N 012f00; 3;21:00:00:1b:32:92:cd:19;20:00:00:1b:32:92:cd:19; na
FC4s: FCP
PortSymb: [6] "qlt1,0"

NodeSymb: [8] "db4-san3"
Fabric Port Name: 20:2f:00:05:1e:ae:ec:50
Permanent Port Name: 21:00:00:1b:32:92:cd:19
Port Index: 47
Share Area: No
Device Shared in Other AD: No
Redirect: No
N 013000; 3;21:00:00:1b:32:92:13:1a;20:00:00:1b:32:92:13:1a; na
FC4s: FCP
PortSymb: [6] "qlt1,0"
NodeSymb: [8] "db4-san4"
Fabric Port Name: 20:30:00:05:1e:ae:ec:50
Permanent Port Name: 21:00:00:1b:32:92:13:1a
Port Index: 48
Share Area: No
Device Shared in Other AD: No
Redirect: No
N 013100; 3;21:00:00:1b:32:92:32:18;20:00:00:1b:32:92:32:18; na
FC4s: FCP
PortSymb: [6] "qlt1,0"
NodeSymb: [8] "db4-san5"
Fabric Port Name: 20:31:00:05:1e:ae:ec:50
Permanent Port Name: 21:00:00:1b:32:92:32:18
Port Index: 49
Share Area: No
Device Shared in Other AD: No
Redirect: No
N 014000; 3;21:01:00:1b:32:ab:8a:ad;20:01:00:1b:32:ab:8a:ad; na
FC4s: IPFC FCP
Fabric Port Name: 20:40:00:05:1e:ae:ec:50
Permanent Port Name: 21:01:00:1b:32:ab:8a:ad
Port Index: 64
Share Area: No
Device Shared in Other AD: No
Redirect: No
N 014100; 3;21:01:00:1b:32:ab:ef:ab;20:01:00:1b:32:ab:ef:ab; na
FC4s: IPFC FCP
Fabric Port Name: 20:41:00:05:1e:ae:ec:50
Permanent Port Name: 21:01:00:1b:32:ab:ef:ab
Port Index: 65
Share Area: No
Device Shared in Other AD: No
Redirect: No
N 014200; 3;21:01:00:1b:32:ab:be:ac;20:01:00:1b:32:ab:be:ac; na
FC4s: IPFC FCP
Fabric Port Name: 20:42:00:05:1e:ae:ec:50
Permanent Port Name: 21:01:00:1b:32:ab:be:ac
Port Index: 66
Share Area: No
Device Shared in Other AD: No
Redirect: No
N 014300; 3;21:01:00:1b:32:ab:a0:af;20:01:00:1b:32:ab:a0:af; na
FC4s: IPFC FCP
Fabric Port Name: 20:43:00:05:1e:ae:ec:50
Permanent Port Name: 21:01:00:1b:32:ab:a0:af
Port Index: 67
Share Area: No
Device Shared in Other AD: No
Redirect: No
N 014400; 3;21:01:00:1b:32:ab:99:13;20:01:00:1b:32:ab:99:13; na
FC4s: IPFC FCP
Fabric Port Name: 20:44:00:05:1e:ae:ec:50

Permanent Port Name: 21:01:00:1b:32:ab:99:13
Port Index: 68
Share Area: No
Device Shared in Other AD: No
Redirect: No
N 014500; 3;21:01:00:1b:32:ac:e7:30;20:01:00:1b:32:ac:e7:30; na
FC4s: IPFC FCP
Fabric Port Name: 20:45:00:05:1e:ae:ec:50
Permanent Port Name: 21:01:00:1b:32:ac:e7:30
Port Index: 69
Share Area: No
Device Shared in Other AD: No
Redirect: No
N 014600; 3;21:01:00:1b:32:ad:ec:d0;20:01:00:1b:32:ad:ec:d0; na
FC4s: IPFC FCP
Fabric Port Name: 20:46:00:05:1e:ae:ec:50
Permanent Port Name: 21:01:00:1b:32:ad:ec:d0
Port Index: 70
Share Area: No
Device Shared in Other AD: No
Redirect: No
N 014700; 3;21:01:00:1b:32:ad:d3:d6;20:01:00:1b:32:ad:d3:d6; na
FC4s: IPFC FCP
Fabric Port Name: 20:47:00:05:1e:ae:ec:50
Permanent Port Name: 21:01:00:1b:32:ad:d3:d6
Port Index: 71
Share Area: No
Device Shared in Other AD: No
Redirect: No
N 014800; 3;20:22:00:a0:b8:56:64:1a;20:02:00:a0:b8:56:64:1a; na
FC4s: FCP [SUN CSM200_R 0750]
Fabric Port Name: 20:48:00:05:1e:ae:ec:50
Permanent Port Name: 20:22:00:a0:b8:56:64:1a
Port Index: 72
Share Area: No
Device Shared in Other AD: No
Redirect: No
N 014900; 3;20:22:00:a0:b8:56:2c:ae;20:02:00:a0:b8:56:2c:ae; na
FC4s: FCP [SUN CSM200_R 0750]
Fabric Port Name: 20:49:00:05:1e:ae:ec:50
Permanent Port Name: 20:22:00:a0:b8:56:2c:ae
Port Index: 73
Share Area: No
Device Shared in Other AD: No
Redirect: No
N 014a00; 3;20:22:00:a0:b8:56:5f:cc;20:02:00:a0:b8:56:5f:cc; na
FC4s: FCP [SUN CSM200_R 0750]
Fabric Port Name: 20:4a:00:05:1e:ae:ec:50
Permanent Port Name: 20:22:00:a0:b8:56:5f:cc
Port Index: 74
Share Area: No
Device Shared in Other AD: No
Redirect: No
N 014b00; 3;20:22:00:a0:b8:56:63:fa;20:02:00:a0:b8:56:63:fa; na
FC4s: FCP [SUN CSM200_R 0750]
Fabric Port Name: 20:4b:00:05:1e:ae:ec:50
Permanent Port Name: 20:22:00:a0:b8:56:63:fa
Port Index: 75
Share Area: No
Device Shared in Other AD: No
Redirect: No
N 014c00; 3;20:22:00:a0:b8:56:5c:20;20:02:00:a0:b8:56:5c:20; na

FC4s: FCP [SUN CSM200_R 0750]
Fabric Port Name: 20:4c:00:05:1e:ae:ec:50
Permanent Port Name: 20:22:00:a0:b8:56:5c:20
Port Index: 76
Share Area: No
Device Shared in Other AD: No
Redirect: No
N 014d00; 3;20:22:00:a0:b8:56:5f:9e;20:02:00:a0:b8:56:5f:9e; na
FC4s: FCP [SUN CSM200_R 0750]
Fabric Port Name: 20:4d:00:05:1e:ae:ec:50
Permanent Port Name: 20:22:00:a0:b8:56:5f:9e
Port Index: 77
Share Area: No
Device Shared in Other AD: No
Redirect: No
N 014e00; 3;20:28:00:a0:b8:56:64:1e;20:08:00:a0:b8:56:64:1e; na
FC4s: FCP [SUN CSM200_R 0750]
Fabric Port Name: 20:4e:00:05:1e:ae:ec:50
Permanent Port Name: 20:28:00:a0:b8:56:64:1e
Port Index: 78
Share Area: No
Device Shared in Other AD: No
Redirect: No
N 014f00; 3;20:22:00:a0:b8:56:11:f4;20:02:00:a0:b8:56:11:f4; na
FC4s: FCP [SUN CSM200_R 0750]
Fabric Port Name: 20:4f:00:05:1e:ae:ec:50
Permanent Port Name: 20:22:00:a0:b8:56:11:f4
Port Index: 79
Share Area: No
Device Shared in Other AD: No
Redirect: No

The Local Name Server has 60 entries }

Zoning Information

Defined configuration:
cfg: COMSTAR_1stZONE_LOGS_2ndZone
DB_EMLX_AND_COMSTAR_PORTS; DB_QLC_AND_6140_LOG_PORTS
cfg: NO_DEVS_One_Port
cfg: dbsan_to_port_mapping
db1_thru_db4_devs; db5_thru_db8_devs; db9_thru_12_all
zone: ALL_DEVICES
1,62; 1,63; 1,64; 1,65; 1,66; 1,67; 1,68; 1,69; 1,70; 1,71;
1,72; 1,73; 1,74; 1,75; 1,76; 1,77; 1,78; 1,79;
20:00:00:00:c9:8c:52:8e; 20:00:00:00:c9:8c:52:8f;
20:00:00:00:c9:8c:b9:7c; 20:00:00:00:c9:8c:b9:7d;
20:00:00:00:c9:8c:b9:8a; 20:00:00:00:c9:8c:b9:8b;
20:00:00:00:c9:8c:b9:8c; 20:00:00:00:c9:8c:b9:8d;
20:00:00:00:c9:8c:b9:96; 20:00:00:00:c9:8c:b9:97;
20:00:00:00:c9:8c:b9:98; 20:00:00:00:c9:8c:b9:99;
20:00:00:00:c9:8c:b9:a0; 20:00:00:00:c9:8c:b9:a1;
20:00:00:00:c9:8c:b9:a2; 20:00:00:00:c9:8c:b9:a3;
20:00:00:00:c9:8c:b9:a4; 20:00:00:00:c9:8c:b9:a5;
20:00:00:00:c9:8c:b9:a8; 20:00:00:00:c9:8c:b9:a9;
20:00:00:00:c9:8c:b9:aa; 20:00:00:00:c9:8c:b9:ab;
20:00:00:00:c9:8c:b9:b0; 20:00:00:00:c9:8c:b9:b1;
20:00:00:00:c9:8c:b9:b4; 20:00:00:00:c9:8c:b9:b5;
20:00:00:00:c9:8c:b9:b6; 20:00:00:00:c9:8c:b9:b7;
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20:02:00:a0:b8:56:63:fa; 20:02:00:a0:b8:56:64:0c;
20:02:00:a0:b8:56:64:1a; 20:02:00:a0:b8:56:64:5c;

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zone: DB_QLC_AND_6140_LOG_PORTS
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zone: One_Port
1,61
zone: db1_thru_db4_devs
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zone: db5_db12_all_device
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20:00:00:1b:32:86:70:8c; 20:00:00:1b:32:86:71:8c;
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20:02:00:a0:b8:56:2c:ae; 20:02:00:a0:b8:56:3b:58;
20:02:00:a0:b8:56:3e:02; 20:02:00:a0:b8:56:50:9a;
20:02:00:a0:b8:56:54:48; 20:02:00:a0:b8:56:5a:b8;
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20:02:00:a0:b8:56:64:1a; 20:02:00:a0:b8:56:64:5c;
20:04:00:a0:b8:56:5f:98
zone: db5_db8_p1_db5san1_db5san3
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zone: db5_db8_p2_db5san4_db6san1
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zone: db5_db8_p3_db6san2_db6san4
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zone: db5_db8_p4_db6san5_db7san3

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zone: db5_db8_p5_db7san4_db8san1	1,32
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zone: db5_db8_p6_db8san2_db8san5	1,34
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zone: db5_thru_db8_devs	1,36
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2,70; 2,71	1,43
zone: db5san1thru5_to_db5thru8_data1	1,44
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zone: db6san1thru5_to_db5thru8_data2	1,47
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zone: db7san1thru5_to_db5thru8_data3	1,49
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zone: db8san1thru5_to_db5thru8_data4	2,1
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zone: db9_thru_12_all	2,3
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zone: four_node1	2,9
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3,62; 3,63; 3,64; 3,65; 3,66; 3,67	2,33
	2,34
Effective configuration:	2,35
cfg: COMSTAR_1stZONE_LOGS_2ndZone	2,36
zone: DB_EMLX_AND_COMSTAR_PORTS	2,37
1,0	2,38
1,1	2,39
1,2	2,40
1,3	2,41
1,4	2,42
1,5	2,43
1,6	2,44
1,7	2,45
1,8	2,46
1,9	2,47
1,10	2,48
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1,12	2,50
1,13	2,51
1,14	2,52
1,15	2,53
1,16	2,54
1,17	2,55
1,18	2,64
1,19	2,65
1,20	2,66
1,21	2,67
1,22	2,68
1,23	2,69
1,24	2,70

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3,67
zone: DB_QLC_AND_6140_LOG_PORTS
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3,31	
SFP Serial ID Information	
Port 0: id (sw) Vendor: BROCADE	Serial No: UAF109350000J76 Speed: 200,400,800_MB/s
Port 1: id (sw) Vendor: BROCADE	Serial No: UAF109350000K2A Speed: 200,400,800_MB/s
Port 2: id (sw) Vendor: BROCADE	Serial No: UAF109350000HPZ Speed: 200,400,800_MB/s
Port 3: id (sw) Vendor: BROCADE	Serial No: UAF109350000K2E Speed: 200,400,800_MB/s
Port 4: id (sw) Vendor: BROCADE	Serial No: UAF109350000J8C Speed: 200,400,800_MB/s
Port 5: id (sw) Vendor: BROCADE	Serial No: UAF109350000EN6 Speed: 200,400,800_MB/s
Port 6: id (sw) Vendor: BROCADE	Serial No: UAF109350000JM2 Speed: 200,400,800_MB/s
Port 7: id (sw) Vendor: BROCADE	Serial No: UAF1093500006TA Speed: 200,400,800_MB/s
Port 8: id (sw) Vendor: BROCADE	Serial No: UAF109350000FPG Speed: 200,400,800_MB/s
Port 9: id (sw) Vendor: BROCADE	Serial No: UAF109350000FRR Speed: 200,400,800_MB/s
Port 10: id (sw) Vendor: BROCADE	Serial No: UAF109350000HR6 Speed: 200,400,800_MB/s
Port 11: id (sw) Vendor: BROCADE	Serial No: UAF109350000J6P Speed: 200,400,800_MB/s
Port 12: id (sw) Vendor: BROCADE	Serial No: UAF1093500006TP Speed: 200,400,800_MB/s
Port 13: id (sw) Vendor: BROCADE	Serial No: UAF1093500006TG Speed: 200,400,800_MB/s
Port 14: id (sw) Vendor: BROCADE	Serial No: UAF1093500002U4 Speed: 200,400,800_MB/s
Port 15: id (sw) Vendor: BROCADE	Serial No: UAF1093500006TM Speed: 200,400,800_MB/s
Port 16: id (sw) Vendor: BROCADE	Serial No: UAF1093500003LV Speed: 200,400,800_MB/s
Port 17: id (sw) Vendor: BROCADE	Serial No: UAF109350000K81 Speed: 200,400,800_MB/s
Port 18: id (sw) Vendor: BROCADE	Serial No: UAF109350000JZ9 Speed: 200,400,800_MB/s
Port 19: id (sw) Vendor: BROCADE	Serial No: UAF109350000J94 Speed: 200,400,800_MB/s
Port 20: id (sw) Vendor: BROCADE	Serial No: UAF109350000HS7 Speed: 200,400,800_MB/s
Port 21: id (sw) Vendor: BROCADE	Serial No: UAF109350000HPT Speed: 200,400,800_MB/s
Port 22: id (sw) Vendor: BROCADE	Serial No: UAF109350000JZC Speed: 200,400,800_MB/s
Port 23: id (sw) Vendor: BROCADE	Serial No: UAF109350000JNR Speed: 200,400,800_MB/s
Port 24: id (sw) Vendor: BROCADE	Serial No: UAF109350000J8R Speed: 200,400,800_MB/s
Port 25: id (sw) Vendor: BROCADE	Serial No: UAF109350000HRN Speed: 200,400,800_MB/s
Port 26: id (sw) Vendor: BROCADE	Serial No: UAF109350000J87 Speed: 200,400,800_MB/s

Port 27: id (sw) Vendor: BROCADE
Port 28: id (sw) Vendor: BROCADE
Port 29: id (sw) Vendor: BROCADE
Port 30: id (sw) Vendor: BROCADE
Port 31: id (sw) Vendor: BROCADE
Port 32: id (sw) Vendor: BROCADE
Port 33: id (sw) Vendor: BROCADE
Port 34: id (sw) Vendor: BROCADE
Port 35: id (sw) Vendor: BROCADE
Port 36: id (sw) Vendor: BROCADE
Port 37: id (sw) Vendor: BROCADE
Port 38: id (sw) Vendor: BROCADE
Port 39: id (sw) Vendor: BROCADE
Port 40: id (sw) Vendor: BROCADE
Port 41: id (sw) Vendor: BROCADE
Port 42: id (sw) Vendor: BROCADE
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Port 44: id (sw) Vendor: BROCADE
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Port 74: id (sw) Vendor: BROCADE
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Port 76: id (sw) Vendor: BROCADE
Port 77: id (sw) Vendor: BROCADE
Port 78: id (sw) Vendor: BROCADE
Port 79: id (sw) Vendor: BROCADE

Serial No: UAF109350000J82 Speed: 200,400,800_MB/s
Serial No: UAF109350000J6W Speed: 200,400,800_MB/s
Serial No: UAF109350000J6T Speed: 200,400,800_MB/s
Serial No: UAF109350000HP8 Speed: 200,400,800_MB/s
Serial No: UAF109350000K49 Speed: 200,400,800_MB/s
Serial No: UAF109350000F8N Speed: 200,400,800_MB/s
Serial No: UAF109350000FSU Speed: 200,400,800_MB/s
Serial No: UAF109350000DV8 Speed: 200,400,800_MB/s
Serial No: UAF109350000DVV Speed: 200,400,800_MB/s
Serial No: UAF109350000GDB Speed: 200,400,800_MB/s
Serial No: UAF109350000F72 Speed: 200,400,800_MB/s
Serial No: UAF109340000LS2 Speed: 200,400,800_MB/s
Serial No: UAF109350000HJ4 Speed: 200,400,800_MB/s
Serial No: UAF109350000CSD Speed: 200,400,800_MB/s
Serial No: UAF109350000HHT Speed: 200,400,800_MB/s
Serial No: UAF109350000HHM Speed: 200,400,800_MB/s
Serial No: UAF109350000GBM Speed: 200,400,800_MB/s
Serial No: UAF109350000GDP Speed: 200,400,800_MB/s
Serial No: UAF109350000FKD Speed: 200,400,800_MB/s
Serial No: UAF109340000MPR Speed: 200,400,800_MB/s
Serial No: UAF109350000FL9 Speed: 200,400,800_MB/s
Serial No: UAF109350000J7R Speed: 200,400,800_MB/s
Serial No: UAF109350000J8N Speed: 200,400,800_MB/s
Serial No: UAF109350000J91 Speed: 200,400,800_MB/s
Serial No: UAF1093500006U2 Speed: 200,400,800_MB/s
Serial No: UAF109350000J72 Speed: 200,400,800_MB/s
Serial No: UAF109350000EN4 Speed: 200,400,800_MB/s
Serial No: UAF109350000HSE Speed: 200,400,800_MB/s
Serial No: UAF109350000FPW Speed: 200,400,800_MB/s
Serial No: UAF109350000K4B Speed: 200,400,800_MB/s
Serial No: UAF109350000J33 Speed: 200,400,800_MB/s
Serial No: UAF109350000J8F Speed: 200,400,800_MB/s
Serial No: UAF109350000FSA Speed: 200,400,800_MB/s
Serial No: UAF109350000HP1 Speed: 200,400,800_MB/s
Serial No: UAF109350000ENU Speed: 200,400,800_MB/s
Serial No: UAF109350000K54 Speed: 200,400,800_MB/s
Serial No: UAF109350000HPG Speed: 200,400,800_MB/s
Serial No: UAF109350000K2Z Speed: 200,400,800_MB/s
Serial No: UAF109350000FS2 Speed: 200,400,800_MB/s
Serial No: UAF109350000EMZ Speed: 200,400,800_MB/s
Serial No: UAF109350000JMF Speed: 200,400,800_MB/s
Serial No: UAF109350000K3A Speed: 200,400,800_MB/s
Serial No: UAF109350000JPW Speed: 200,400,800_MB/s
Serial No: UAF109350000ENE Speed: 200,400,800_MB/s
Serial No: UAF109350000JKF Speed: 200,400,800_MB/s
Serial No: UAF1093500001N7 Speed: 200,400,800_MB/s
Serial No: UAF109350000FRN Speed: 200,400,800_MB/s
Serial No: UAF1093500002YZ Speed: 200,400,800_MB/s
Serial No: UAF1093500003E7 Speed: 200,400,800_MB/s
Serial No: UAF1093500003E5 Speed: 200,400,800_MB/s
Serial No: UAF109350000JNJ Speed: 200,400,800_MB/s
Serial No: UAF109350000FS3 Speed: 200,400,800_MB/s
Serial No: UAF109350000HK9 Speed: 200,400,800_MB/s

SWITCH 2

Switch Information Report for F5300-2

List of Switches

Switch ID	Worldwide Name	Enet IP Addr	FC IP Addr	Name
1:	fff001 10:00:00:05:1e:ae:ec:50	10.1.140.33	0.0.0.0	"sae5300-1"

2: fff002 10:00:00:05:1e:a9:be:b8 10.1.140.34 0.0.0.0 "F5300-2"
3: fff003 10:00:00:05:1e:9a:8e:be 10.1.140.35 0.0.0.0 >"F5300-3"

The Fabric has 3 switches

Current Switch Information

Ethernet IP Address: 10.1.140.34
Ethernet Subnetmask: 255.255.255.0
Fibre Channel IP Address: 0.0.0.0
Fibre Channel Subnetmask: 0.0.0.0
Gateway Address: 10.1.140.5
Ethernet IPv6 Addresses:

Kernel: 2.6.14.2
Fabric OS: v6.2.0c
Made on: Mon Feb 23 19:32:16 2009
Flash: Wed Jul 29 08:06:56 2009
BootProm: 1.0.14

List of Inter-Switch Links

Local Domain ID: 2

Local Port	Domain	Remote Port	State
31	3	79	NB_ST_FULL
79	1	31	NB_ST_FULL

List of Ports

switchName: F5300-2
switchType: 64.3
switchState: Online
switchMode: Native
switchRole: Subordinate
switchDomain: 2
switchId: fff002
switchWwn: 10:00:00:05:1e:a9:be:b8
zoning: ON (COMSTAR_1stZONE_LOGS_2ndZone)
switchBeacon: OFF
FC Router: OFF
Allow XISL Use: OFF
LS Attributes: [FID: 128, Base Switch: No, Default Switch: Yes]

Area	Port	Media	Speed	State	Proto
0	0	id	N8	Online	F-Port 21:00:00:1b:32:86:2a:8c
1	1	id	N8	Online	F-Port 21:00:00:1b:32:86:35:8c
2	2	id	N8	Online	F-Port 21:00:00:1b:32:86:f9:8b
3	3	id	N8	Online	F-Port 21:00:00:1b:32:86:63:8c
4	4	id	N8	Online	F-Port 21:00:00:1b:32:86:f5:8b
5	5	id	N8	Online	F-Port 21:00:00:1b:32:86:9d:8c
6	6	id	N8	Online	F-Port 21:00:00:1b:32:86:b7:8b
7	7	id	N8	Online	F-Port 21:00:00:1b:32:86:ae:8b
8	8	id	N8	Online	F-Port 21:00:00:1b:32:86:33:8c
9	9	id	N8	Online	F-Port 21:00:00:1b:32:86:bc:8b
10	10	id	N8	Online	F-Port 21:00:00:1b:32:86:b5:8c
11	11	id	N8	Online	F-Port 21:00:00:1b:32:86:d2:8b
12	12	id	N8	No_Light	
13	13	id	N8	No_Light	
14	14	id	N8	No_Light	
15	15	id	N8	No_Light	
16	16	id	N4	Online	F-Port 21:01:00:1b:32:ac:d9:2c

17	17	id	N4	Online	F-Port	21:01:00:1b:32:ac:20:31
18	18	id	N4	Online	F-Port	21:01:00:1b:32:ac:32:30
19	19	id	N4	Online	F-Port	21:01:00:1b:32:ad:6d:cf
20	20	id	N4	Online	F-Port	21:01:00:1b:32:ac:d8:2d
21	21	id	N4	Online	F-Port	21:01:00:1b:32:ad:40:cd
22	22	id	N4	Online	F-Port	21:01:00:1b:32:ad:fa:d2
23	23	id	N4	Online	F-Port	21:01:00:1b:32:ac:18:30
24	24	id	N8	No_Light		
25	25	id	N8	Online	E-Port	(Trunk port, master is Port 31)
26	26	id	N8	Online	E-Port	(Trunk port, master is Port 31)
27	27	id	N8	Online	E-Port	(Trunk port, master is Port 31)
28	28	id	N8	No_Light		
29	29	id	N8	Online	E-Port	(Trunk port, master is Port 31)
30	30	id	N8	Online	E-Port	(Trunk port, master is Port 31)
31	31	id	N8	Online	E-Port	10:00:00:05:1e:9a:8e:be "F5300-3" (upstream)(Trunk master)
32	32	id	N8	Online	F-Port	10:00:00:00:c9:8c:b9:a8
33	33	id	N8	Online	F-Port	10:00:00:00:c9:8c:b9:a9
34	34	id	N8	Online	F-Port	10:00:00:00:c9:8c:b9:a0
35	35	id	N8	Online	F-Port	10:00:00:00:c9:8c:b9:a1
36	36	id	N8	Online	F-Port	10:00:00:00:c9:8c:ba:28
37	37	id	N8	Online	F-Port	10:00:00:00:c9:8c:ba:29
38	38	id	N8	Online	F-Port	10:00:00:00:c9:8c:b9:c2
39	39	id	N8	Online	F-Port	10:00:00:00:c9:8c:b9:c3
40	40	id	N8	Online	F-Port	10:00:00:00:c9:8c:b9:b6
41	41	id	N8	Online	F-Port	10:00:00:00:c9:8c:b9:b7
42	42	id	N8	Online	F-Port	10:00:00:00:c9:8c:ba:22
43	43	id	N8	Online	F-Port	10:00:00:00:c9:8c:ba:23
44	44	id	N8	Online	F-Port	10:00:00:00:c9:8c:ba:26
45	45	id	N8	Online	F-Port	10:00:00:00:c9:8c:ba:27
46	46	id	N8	Online	F-Port	10:00:00:00:c9:8c:b9:b4
47	47	id	N8	Online	F-Port	10:00:00:00:c9:8c:b9:b5
48	48	id	N8	Online	F-Port	21:00:00:1b:32:86:d6:8b
49	49	id	N8	Online	F-Port	21:00:00:1b:32:86:74:8b
50	50	id	N8	Online	F-Port	21:00:00:1b:32:86:1d:8c
51	51	id	N8	Online	F-Port	21:00:00:1b:32:86:f4:8b
52	52	id	N8	Online	F-Port	21:00:00:1b:32:86:b1:8b
53	53	id	N8	Online	F-Port	21:00:00:1b:32:86:f1:8b
54	54	id	N8	Online	F-Port	21:00:00:1b:32:86:84:8b
55	55	id	N8	Online	F-Port	21:00:00:1b:32:86:4f:8c
56	56	id	N4	Online	F-Port	20:22:00:a0:b8:56:3e:02
57	57	id	N4	Online	F-Port	20:22:00:a0:b8:56:64:0c
58	58	id	N4	Online	F-Port	20:22:00:a0:b8:56:5f:a0
59	59	id	N4	Online	F-Port	20:22:00:a0:b8:56:63:ae
60	60	id	N4	Online	F-Port	20:22:00:a0:b8:56:64:5c
61	61	id	N4	Online	F-Port	20:22:00:a0:b8:56:63:b0
62	62	id	N4	Online	F-Port	20:22:00:a0:b8:56:5f:94
63	63	id	N4	Online	F-Port	20:22:00:a0:b8:56:63:c6
64	64	id	N8	Online	F-Port	10:00:00:00:c9:8c:b9:b0
65	65	id	N8	Online	F-Port	10:00:00:00:c9:8c:b9:b1
66	66	id	N8	Online	F-Port	10:00:00:00:c9:8c:ba:18
67	67	id	N8	Online	F-Port	10:00:00:00:c9:8c:ba:19
68	68	id	N8	Online	F-Port	10:00:00:00:c9:8c:ba:02
69	69	id	N8	Online	F-Port	10:00:00:00:c9:8c:ba:03
70	70	id	N8	Online	F-Port	10:00:00:00:c9:8c:b9:c8
71	71	id	N8	Online	F-Port	10:00:00:00:c9:8c:b9:c9
72	72	id	N8	No_Light		
73	73	id	N8	Online	E-Port	(Trunk port, master is Port 79)
74	74	id	N8	Online	E-Port	(Trunk port, master is Port 79)
75	75	id	N8	Online	E-Port	(Trunk port, master is Port 79)
76	76	id	N8	No_Light		
77	77	id	N8	Online	E-Port	(Trunk port, master is Port 79)
78	78	id	N8	Online	E-Port	(Trunk port, master is Port 79)

79	79	id	N8	Online	E-Port	10:00:00:05:1e:ae:ec:50 "sae5300-1" (downstream)(Trunk master)
----	----	----	----	--------	--------	--

Name Server

```
{
010000 010100 010200 010300 010400 010500 010600 010700
010800 010900 010a00 010b00 010c00 010d00 010e00 010f00
011000 011100 011200 011300 011400 011500 011600 011700
011800 011c00 012000 012100 012200 012300 012400 012500
012600 012700 012800 012900 012a00 012b00 012c00 012d00
012e00 012f00 013000 013100 014000 014100 014200 014300
014400 014500 014600 014700 014800 014900 014a00 014b00
014c00 014d00 014e00 014f00 020000 020100 020200 020300
020400 020500 020600 020700 020800 020900 020a00 020b00
021000 021100 021200 021300 021400 021500 021600 021700
022000 022100 022200 022300 022400 022500 022600 022700
022800 022900 022a00 022b00 022c00 022d00 022e00 022f00
023000 023100 023200 023300 023400 023500 023600 023700
023800 023900 023a00 023b00 023c00 023d00 023e00 023f00
024000 024100 024200 024300 024400 024500 024600 024700
030000 030800 030900 030a00 030b00 030c00 030d00 030e00
030f00 031000 031100 031200 031300 031400 031500 031600
031700 031800 031900 031a00 031b00 031c00 031d00 031e00
031f00 032000 032100 032200 032300 032400 032500 032600
032700 032800 032900 032a00 032b00 032c00 032d00 032e00
032f00 033000 033100 033200 033300 033400 033500 033600
033700 033800 033900 033a00 033b00 033c00 033d00 033e00
033f00 034000 034100 034200 034300
181 Nx_Ports in the Fabric }

{
Type Pid  COS  PortName      NodeName      TTL(sec)
N  020000;   3;21:00:00:1b:32:86:2a:8c;20:00:00:1b:32:86:2a:8c; na
FC4s: FCP
PortSymb: [6] "qlt0,0"
NodeSymb: [8] "db5-san1"
Fabric Port Name: 20:00:00:05:1e:a9:be:b8
Permanent Port Name: 21:00:00:1b:32:86:2a:8c
Port Index: 0
Share Area: No
Device Shared in Other AD: No
Redirect: No
N  020100;   3;21:00:00:1b:32:86:35:8c;20:00:00:1b:32:86:35:8c; na
FC4s: FCP
PortSymb: [6] "qlt0,0"
NodeSymb: [8] "db5-san2"
Fabric Port Name: 20:01:00:05:1e:a9:be:b8
Permanent Port Name: 21:00:00:1b:32:86:35:8c
Port Index: 1
Share Area: No
Device Shared in Other AD: No
Redirect: No
N  020200;   3;21:00:00:1b:32:86:f9:8b;20:00:00:1b:32:86:f9:8b; na
FC4s: FCP
PortSymb: [6] "qlt0,0"
NodeSymb: [8] "db5-san3"
Fabric Port Name: 20:02:00:05:1e:a9:be:b8
Permanent Port Name: 21:00:00:1b:32:86:f9:8b
Port Index: 2
Share Area: No
Device Shared in Other AD: No
Redirect: No
N  020300;   3;21:00:00:1b:32:86:63:8c;20:00:00:1b:32:86:63:8c; na
```

FC4s: FCP
PortSymb: [6] "qlt0,0"
NodeSymb: [8] "db5-san4"
Fabric Port Name: 20:03:00:05:1e:a9:be:b8
Permanent Port Name: 21:00:00:1b:32:86:63:8c
Port Index: 3
Share Area: No
Device Shared in Other AD: No
Redirect: No
N 020400; 3;21:00:00:1b:32:86:f5:8b;20:00:00:1b:32:86:f5:8b; na
FC4s: FCP
PortSymb: [6] "qlt0,0"
NodeSymb: [8] "db5-san5"
Fabric Port Name: 20:04:00:05:1e:a9:be:b8
Permanent Port Name: 21:00:00:1b:32:86:f5:8b
Port Index: 4
Share Area: No
Device Shared in Other AD: No
Redirect: No
N 020500; 3;21:00:00:1b:32:86:9d:8c;20:00:00:1b:32:86:9d:8c; na
FC4s: FCP
PortSymb: [6] "qlt0,0"
NodeSymb: [8] "db6-san1"
Fabric Port Name: 20:05:00:05:1e:a9:be:b8
Permanent Port Name: 21:00:00:1b:32:86:9d:8c
Port Index: 5
Share Area: No
Device Shared in Other AD: No
Redirect: No
N 020600; 3;21:00:00:1b:32:86:b7:8b;20:00:00:1b:32:86:b7:8b; na
FC4s: FCP
PortSymb: [6] "qlt0,0"
NodeSymb: [8] "db6-san2"
Fabric Port Name: 20:06:00:05:1e:a9:be:b8
Permanent Port Name: 21:00:00:1b:32:86:b7:8b
Port Index: 6
Share Area: No
Device Shared in Other AD: No
Redirect: No
N 020700; 3;21:00:00:1b:32:86:ae:8b;20:00:00:1b:32:86:ae:8b; na
FC4s: FCP
PortSymb: [6] "qlt0,0"
NodeSymb: [8] "db6-san3"
Fabric Port Name: 20:07:00:05:1e:a9:be:b8
Permanent Port Name: 21:00:00:1b:32:86:ae:8b
Port Index: 7
Share Area: No
Device Shared in Other AD: No
Redirect: No
N 020800; 3;21:00:00:1b:32:86:33:8c;20:00:00:1b:32:86:33:8c; na
FC4s: FCP
PortSymb: [6] "qlt0,0"
NodeSymb: [8] "db8-san2"
Fabric Port Name: 20:08:00:05:1e:a9:be:b8
Permanent Port Name: 21:00:00:1b:32:86:33:8c
Port Index: 8
Share Area: No
Device Shared in Other AD: No
Redirect: No
N 020900; 3;21:00:00:1b:32:86:bc:8b;20:00:00:1b:32:86:bc:8b; na
FC4s: FCP
PortSymb: [6] "qlt0,0"

NodeSymb: [8] "db8-san3"
Fabric Port Name: 20:09:00:05:1e:a9:be:b8
Permanent Port Name: 21:00:00:1b:32:86:bc:8b
Port Index: 9
Share Area: No
Device Shared in Other AD: No
Redirect: No
N 020a00; 3;21:00:00:1b:32:86:b5:8c;20:00:00:1b:32:86:b5:8c; na
FC4s: FCP
PortSymb: [6] "qlt0,0"
NodeSymb: [8] "db8-san4"
Fabric Port Name: 20:0a:00:05:1e:a9:be:b8
Permanent Port Name: 21:00:00:1b:32:86:b5:8c
Port Index: 10
Share Area: No
Device Shared in Other AD: No
Redirect: No
N 020b00; 3;21:00:00:1b:32:86:d2:8b;20:00:00:1b:32:86:d2:8b; na
FC4s: FCP
PortSymb: [6] "qlt0,0"
NodeSymb: [8] "db8-san5"
Fabric Port Name: 20:0b:00:05:1e:a9:be:b8
Permanent Port Name: 21:00:00:1b:32:86:d2:8b
Port Index: 11
Share Area: No
Device Shared in Other AD: No
Redirect: No
N 021000; 3;21:01:00:1b:32:ac:d9:2c;20:01:00:1b:32:ac:d9:2c; na
FC4s: IPFC FCP
Fabric Port Name: 20:10:00:05:1e:a9:be:b8
Permanent Port Name: 21:01:00:1b:32:ac:d9:2c
Port Index: 16
Share Area: No
Device Shared in Other AD: No
Redirect: No
N 021100; 3;21:01:00:1b:32:ac:20:31;20:01:00:1b:32:ac:20:31; na
FC4s: IPFC FCP
Fabric Port Name: 20:11:00:05:1e:a9:be:b8
Permanent Port Name: 21:01:00:1b:32:ac:20:31
Port Index: 17
Share Area: No
Device Shared in Other AD: No
Redirect: No
N 021200; 3;21:01:00:1b:32:ac:32:30;20:01:00:1b:32:ac:32:30; na
FC4s: IPFC FCP
Fabric Port Name: 20:12:00:05:1e:a9:be:b8
Permanent Port Name: 21:01:00:1b:32:ac:32:30
Port Index: 18
Share Area: No
Device Shared in Other AD: No
Redirect: No
N 021300; 3;21:01:00:1b:32:ad:6d:cf;20:01:00:1b:32:ad:6d:cf; na
FC4s: IPFC FCP
Fabric Port Name: 20:13:00:05:1e:a9:be:b8
Permanent Port Name: 21:01:00:1b:32:ad:6d:cf
Port Index: 19
Share Area: No
Device Shared in Other AD: No
Redirect: No
N 021400; 3;21:01:00:1b:32:ac:d8:2d;20:01:00:1b:32:ac:d8:2d; na
FC4s: IPFC FCP
Fabric Port Name: 20:14:00:05:1e:a9:be:b8

Permanent Port Name: 21:01:00:1b:32:ac:d8:2d
Port Index: 20
Share Area: No
Device Shared in Other AD: No
Redirect: No
N 021500; 3;21:01:00:1b:32:ad:40:cd;20:01:00:1b:32:ad:40:cd; na
FC4s: IPFC FCP
Fabric Port Name: 20:15:00:05:1e:a9:be:b8
Permanent Port Name: 21:01:00:1b:32:ad:40:cd
Port Index: 21
Share Area: No
Device Shared in Other AD: No
Redirect: No
N 021600; 3;21:01:00:1b:32:ad:fa:d2;20:01:00:1b:32:ad:fa:d2; na
FC4s: IPFC FCP
Fabric Port Name: 20:16:00:05:1e:a9:be:b8
Permanent Port Name: 21:01:00:1b:32:ad:fa:d2
Port Index: 22
Share Area: No
Device Shared in Other AD: No
Redirect: No
N 021700; 3;21:01:00:1b:32:ac:18:30;20:01:00:1b:32:ac:18:30; na
FC4s: IPFC FCP
Fabric Port Name: 20:17:00:05:1e:a9:be:b8
Permanent Port Name: 21:01:00:1b:32:ac:18:30
Port Index: 23
Share Area: No
Device Shared in Other AD: No
Redirect: No
N 022000; 3;10:00:00:00:c9:8c:b9:a8;20:00:00:00:c9:8c:b9:a8; na
FC4s: IPFC FCP
NodeSymb: [36] "Emulex LPe12002-S FV1.00a12 DV2.40q "
Fabric Port Name: 20:20:00:05:1e:a9:be:b8
Permanent Port Name: 10:00:00:00:c9:8c:b9:a8
Port Index: 32
Share Area: No
Device Shared in Other AD: No
Redirect: No
N 022100; 3;10:00:00:00:c9:8c:b9:a9;20:00:00:00:c9:8c:b9:a9; na
FC4s: IPFC FCP
NodeSymb: [36] "Emulex LPe12002-S FV1.00a12 DV2.40q "
Fabric Port Name: 20:21:00:05:1e:a9:be:b8
Permanent Port Name: 10:00:00:00:c9:8c:b9:a9
Port Index: 33
Share Area: No
Device Shared in Other AD: No
Redirect: No
N 022200; 3;10:00:00:00:c9:8c:b9:a0;20:00:00:00:c9:8c:b9:a0; na
FC4s: IPFC FCP
NodeSymb: [36] "Emulex LPe12002-S FV1.00a12 DV2.40q "
Fabric Port Name: 20:22:00:05:1e:a9:be:b8
Permanent Port Name: 10:00:00:00:c9:8c:b9:a0
Port Index: 34
Share Area: No
Device Shared in Other AD: No
Redirect: No
N 022300; 3;10:00:00:00:c9:8c:b9:a1;20:00:00:00:c9:8c:b9:a1; na
FC4s: IPFC FCP
NodeSymb: [39] "Emulex LPe12002-S FV1.00a12 DV2.40q db5"
Fabric Port Name: 20:23:00:05:1e:a9:be:b8
Permanent Port Name: 10:00:00:00:c9:8c:b9:a1
Port Index: 35

Share Area: No
Device Shared in Other AD: No
Redirect: No
N 022400; 3;10:00:00:00:c9:8c:ba:28;20:00:00:00:c9:8c:ba:28; na
FC4s: IPFC FCP
NodeSymb: [36] "Emulex LPe12002-S FV1.00a12 DV2.40q "
Fabric Port Name: 20:24:00:05:1e:a9:be:b8
Permanent Port Name: 10:00:00:00:c9:8c:ba:28
Port Index: 36
Share Area: No
Device Shared in Other AD: No
Redirect: No
N 022500; 3;10:00:00:00:c9:8c:ba:29;20:00:00:00:c9:8c:ba:29; na
FC4s: IPFC FCP
NodeSymb: [36] "Emulex LPe12002-S FV1.00a12 DV2.40q "
Fabric Port Name: 20:25:00:05:1e:a9:be:b8
Permanent Port Name: 10:00:00:00:c9:8c:ba:29
Port Index: 37
Share Area: No
Device Shared in Other AD: No
Redirect: No
N 022600; 3;10:00:00:00:c9:8c:b9:c2;20:00:00:00:c9:8c:b9:c2; na
FC4s: IPFC FCP
NodeSymb: [39] "Emulex LPe12002-S FV1.00a12 DV2.40q db6"
Fabric Port Name: 20:26:00:05:1e:a9:be:b8
Permanent Port Name: 10:00:00:00:c9:8c:b9:c2
Port Index: 38
Share Area: No
Device Shared in Other AD: No
Redirect: No
N 022700; 3;10:00:00:00:c9:8c:b9:c3;20:00:00:00:c9:8c:b9:c3; na
FC4s: IPFC FCP
NodeSymb: [39] "Emulex LPe12002-S FV1.00a12 DV2.40q db6"
Fabric Port Name: 20:27:00:05:1e:a9:be:b8
Permanent Port Name: 10:00:00:00:c9:8c:b9:c3
Port Index: 39
Share Area: No
Device Shared in Other AD: No
Redirect: No
N 022800; 3;10:00:00:00:c9:8c:b9:b6;20:00:00:00:c9:8c:b9:b6; na
FC4s: IPFC FCP
NodeSymb: [36] "Emulex LPe12002-S FV1.00a12 DV2.40q "
Fabric Port Name: 20:28:00:05:1e:a9:be:b8
Permanent Port Name: 10:00:00:00:c9:8c:b9:b6
Port Index: 40
Share Area: No
Device Shared in Other AD: No
Redirect: No
N 022900; 3;10:00:00:00:c9:8c:b9:b7;20:00:00:00:c9:8c:b9:b7; na
FC4s: IPFC FCP
NodeSymb: [36] "Emulex LPe12002-S FV1.00a12 DV2.40q "
Fabric Port Name: 20:29:00:05:1e:a9:be:b8
Permanent Port Name: 10:00:00:00:c9:8c:b9:b7
Port Index: 41
Share Area: No
Device Shared in Other AD: No
Redirect: No
N 022a00; 3;10:00:00:00:c9:8c:ba:22;20:00:00:00:c9:8c:ba:22; na
FC4s: IPFC FCP
NodeSymb: [39] "Emulex LPe12002-S FV1.00a12 DV2.40q db7"
Fabric Port Name: 20:2a:00:05:1e:a9:be:b8
Permanent Port Name: 10:00:00:00:c9:8c:ba:22

Port Index: 42
Share Area: No
Device Shared in Other AD: No
Redirect: No
N 022b00; 3;10:00:00:00:c9:8c:ba:23;20:00:00:00:c9:8c:ba:23; na
FC4s: IPFC FCP
NodeSymb: [39] "Emulex LPe12002-S FV1.00a12 DV2.40q db7"
Fabric Port Name: 20:2b:00:05:1e:a9:be:b8
Permanent Port Name: 10:00:00:00:c9:8c:ba:23
Port Index: 43
Share Area: No
Device Shared in Other AD: No
Redirect: No
N 022c00; 3;10:00:00:00:c9:8c:ba:26;20:00:00:00:c9:8c:ba:26; na
FC4s: IPFC FCP
NodeSymb: [36] "Emulex LPe12002-S FV1.00a12 DV2.40q "
Fabric Port Name: 20:2c:00:05:1e:a9:be:b8
Permanent Port Name: 10:00:00:00:c9:8c:ba:26
Port Index: 44
Share Area: No
Device Shared in Other AD: No
Redirect: No
N 022d00; 3;10:00:00:00:c9:8c:ba:27;20:00:00:00:c9:8c:ba:27; na
FC4s: IPFC FCP
NodeSymb: [36] "Emulex LPe12002-S FV1.00a12 DV2.40q "
Fabric Port Name: 20:2d:00:05:1e:a9:be:b8
Permanent Port Name: 10:00:00:00:c9:8c:ba:27
Port Index: 45
Share Area: No
Device Shared in Other AD: No
Redirect: No
N 022e00; 3;10:00:00:00:c9:8c:b9:b4;20:00:00:00:c9:8c:b9:b4; na
FC4s: IPFC FCP
NodeSymb: [39] "Emulex LPe12002-S FV1.00a12 DV2.40q db8"
Fabric Port Name: 20:2e:00:05:1e:a9:be:b8
Permanent Port Name: 10:00:00:00:c9:8c:b9:b4
Port Index: 46
Share Area: No
Device Shared in Other AD: No
Redirect: No
N 022f00; 3;10:00:00:00:c9:8c:b9:b5;20:00:00:00:c9:8c:b9:b5; na
FC4s: IPFC FCP
NodeSymb: [39] "Emulex LPe12002-S FV1.00a12 DV2.40q db8"
Fabric Port Name: 20:2f:00:05:1e:a9:be:b8
Permanent Port Name: 10:00:00:00:c9:8c:b9:b5
Port Index: 47
Share Area: No
Device Shared in Other AD: No
Redirect: No
N 023000; 3;21:00:00:1b:32:86:d6:8b;20:00:00:1b:32:86:d6:8b; na
FC4s: FCP
PortSymb: [6] "qlt0,0"
NodeSymb: [8] "db6-san4"
Fabric Port Name: 20:30:00:05:1e:a9:be:b8
Permanent Port Name: 21:00:00:1b:32:86:d6:8b
Port Index: 48
Share Area: No
Device Shared in Other AD: No
Redirect: No
N 023100; 3;21:00:00:1b:32:86:74:8b;20:00:00:1b:32:86:74:8b; na
FC4s: FCP
PortSymb: [6] "qlt0,0"

NodeSymb: [8] "db6-san5"
Fabric Port Name: 20:31:00:05:1e:a9:be:b8
Permanent Port Name: 21:00:00:1b:32:86:74:8b
Port Index: 49
Share Area: No
Device Shared in Other AD: No
Redirect: No
N 023200; 3;21:00:00:1b:32:86:1d:8c;20:00:00:1b:32:86:1d:8c; na
FC4s: FCP
PortSymb: [6] "qlt0,0"
NodeSymb: [8] "db7-san1"
Fabric Port Name: 20:32:00:05:1e:a9:be:b8
Permanent Port Name: 21:00:00:1b:32:86:1d:8c
Port Index: 50
Share Area: No
Device Shared in Other AD: No
Redirect: No
N 023300; 3;21:00:00:1b:32:86:f4:8b;20:00:00:1b:32:86:f4:8b; na
FC4s: FCP
PortSymb: [6] "qlt0,0"
NodeSymb: [8] "db7-san2"
Fabric Port Name: 20:33:00:05:1e:a9:be:b8
Permanent Port Name: 21:00:00:1b:32:86:f4:8b
Port Index: 51
Share Area: No
Device Shared in Other AD: No
Redirect: No
N 023400; 3;21:00:00:1b:32:86:b1:8b;20:00:00:1b:32:86:b1:8b; na
FC4s: FCP
PortSymb: [6] "qlt0,0"
NodeSymb: [8] "db7-san3"
Fabric Port Name: 20:34:00:05:1e:a9:be:b8
Permanent Port Name: 21:00:00:1b:32:86:b1:8b
Port Index: 52
Share Area: No
Device Shared in Other AD: No
Redirect: No
N 023500; 3;21:00:00:1b:32:86:f1:8b;20:00:00:1b:32:86:f1:8b; na
FC4s: FCP
PortSymb: [6] "qlt0,0"
NodeSymb: [8] "db7-san4"
Fabric Port Name: 20:35:00:05:1e:a9:be:b8
Permanent Port Name: 21:00:00:1b:32:86:f1:8b
Port Index: 53
Share Area: No
Device Shared in Other AD: No
Redirect: No
N 023600; 3;21:00:00:1b:32:86:84:8b;20:00:00:1b:32:86:84:8b; na
FC4s: FCP
PortSymb: [6] "qlt0,0"
NodeSymb: [8] "db7-san5"
Fabric Port Name: 20:36:00:05:1e:a9:be:b8
Permanent Port Name: 21:00:00:1b:32:86:84:8b
Port Index: 54
Share Area: No
Device Shared in Other AD: No
Redirect: No
N 023700; 3;21:00:00:1b:32:86:4f:8c;20:00:00:1b:32:86:4f:8c; na
FC4s: FCP
PortSymb: [6] "qlt0,0"
NodeSymb: [8] "db8-san1"
Fabric Port Name: 20:37:00:05:1e:a9:be:b8

Permanent Port Name: 21:00:00:1b:32:86:4f:8c
Port Index: 55
Share Area: No
Device Shared in Other AD: No
Redirect: No
N 023800; 3;20:22:00:a0:b8:56:3e:02;20:02:00:a0:b8:56:3e:02; na
FC4s: FCP [SUN CSM200_R 0750]
Fabric Port Name: 20:38:00:05:1e:a9:be:b8
Permanent Port Name: 20:22:00:a0:b8:56:3e:02
Port Index: 56
Share Area: No
Device Shared in Other AD: No
Redirect: No
N 023900; 3;20:22:00:a0:b8:56:64:0c;20:02:00:a0:b8:56:64:0c; na
FC4s: FCP [SUN CSM200_R 0750]
Fabric Port Name: 20:39:00:05:1e:a9:be:b8
Permanent Port Name: 20:22:00:a0:b8:56:64:0c
Port Index: 57
Share Area: No
Device Shared in Other AD: No
Redirect: No
N 023a00; 3;20:22:00:a0:b8:56:5f:a0;20:02:00:a0:b8:56:5f:a0; na
FC4s: FCP [SUN CSM200_R 0750]
Fabric Port Name: 20:3a:00:05:1e:a9:be:b8
Permanent Port Name: 20:22:00:a0:b8:56:5f:a0
Port Index: 58
Share Area: No
Device Shared in Other AD: No
Redirect: No
N 023b00; 3;20:22:00:a0:b8:56:63:ae;20:02:00:a0:b8:56:63:ae; na
FC4s: FCP [SUN CSM200_R 0750]
Fabric Port Name: 20:3b:00:05:1e:a9:be:b8
Permanent Port Name: 20:22:00:a0:b8:56:63:ae
Port Index: 59
Share Area: No
Device Shared in Other AD: No
Redirect: No
N 023c00; 3;20:22:00:a0:b8:56:64:5c;20:02:00:a0:b8:56:64:5c; na
FC4s: FCP [SUN CSM200_R 0750]
Fabric Port Name: 20:3c:00:05:1e:a9:be:b8
Permanent Port Name: 20:22:00:a0:b8:56:64:5c
Port Index: 60
Share Area: No
Device Shared in Other AD: No
Redirect: No
N 023d00; 3;20:22:00:a0:b8:56:63:b0;20:02:00:a0:b8:56:63:b0; na
FC4s: FCP [SUN CSM200_R 0750]
Fabric Port Name: 20:3d:00:05:1e:a9:be:b8
Permanent Port Name: 20:22:00:a0:b8:56:63:b0
Port Index: 61
Share Area: No
Device Shared in Other AD: No
Redirect: No
N 023e00; 3;20:22:00:a0:b8:56:5f:94;20:02:00:a0:b8:56:5f:94; na
FC4s: FCP [SUN CSM200_R 0750]
Fabric Port Name: 20:3e:00:05:1e:a9:be:b8
Permanent Port Name: 20:22:00:a0:b8:56:5f:94
Port Index: 62
Share Area: No
Device Shared in Other AD: No
Redirect: No
N 023f00; 3;20:22:00:a0:b8:56:63:c6;20:02:00:a0:b8:56:63:c6; na

FC4s: FCP [SUN CSM200_R 0750]
Fabric Port Name: 20:3f:00:05:1e:a9:be:b8
Permanent Port Name: 20:22:00:a0:b8:56:63:c6
Port Index: 63
Share Area: No
Device Shared in Other AD: No
Redirect: No
N 024000; 3;10:00:00:00:c9:8c:b9:b0;20:00:00:00:c9:8c:b9:b0; na
FC4s: IPFC FCP
NodeSymb: [36] "Emulex LPe12002-S FV1.00a12 DV2.40q "
Fabric Port Name: 20:40:00:05:1e:a9:be:b8
Permanent Port Name: 10:00:00:00:c9:8c:b9:b0
Port Index: 64
Share Area: No
Device Shared in Other AD: No
Redirect: No
N 024100; 3;10:00:00:00:c9:8c:b9:b1;20:00:00:00:c9:8c:b9:b1; na
FC4s: IPFC FCP
NodeSymb: [36] "Emulex LPe12002-S FV1.00a12 DV2.40q "
Fabric Port Name: 20:41:00:05:1e:a9:be:b8
Permanent Port Name: 10:00:00:00:c9:8c:b9:b1
Port Index: 65
Share Area: No
Device Shared in Other AD: No
Redirect: No
N 024200; 3;10:00:00:00:c9:8c:ba:18;20:00:00:00:c9:8c:ba:18; na
FC4s: IPFC FCP
NodeSymb: [36] "Emulex LPe12002-S FV1.00a12 DV2.40q "
Fabric Port Name: 20:42:00:05:1e:a9:be:b8
Permanent Port Name: 10:00:00:00:c9:8c:ba:18
Port Index: 66
Share Area: No
Device Shared in Other AD: No
Redirect: No
N 024300; 3;10:00:00:00:c9:8c:ba:19;20:00:00:00:c9:8c:ba:19; na
FC4s: IPFC FCP
NodeSymb: [39] "Emulex LPe12002-S FV1.00a12 DV2.40q db6"
Fabric Port Name: 20:43:00:05:1e:a9:be:b8
Permanent Port Name: 10:00:00:00:c9:8c:ba:19
Port Index: 67
Share Area: No
Device Shared in Other AD: No
Redirect: No
N 024400; 3;10:00:00:00:c9:8c:ba:02;20:00:00:00:c9:8c:ba:02; na
FC4s: IPFC FCP
NodeSymb: [36] "Emulex LPe12002-S FV1.00a12 DV2.40q "
Fabric Port Name: 20:44:00:05:1e:a9:be:b8
Permanent Port Name: 10:00:00:00:c9:8c:ba:02
Port Index: 68
Share Area: No
Device Shared in Other AD: No
Redirect: No
N 024500; 3;10:00:00:00:c9:8c:ba:03;20:00:00:00:c9:8c:ba:03; na
FC4s: IPFC FCP
NodeSymb: [39] "Emulex LPe12002-S FV1.00a12 DV2.40q db7"
Fabric Port Name: 20:45:00:05:1e:a9:be:b8
Permanent Port Name: 10:00:00:00:c9:8c:ba:03
Port Index: 69
Share Area: No
Device Shared in Other AD: No
Redirect: No
N 024600; 3;10:00:00:00:c9:8c:b9:c8;20:00:00:00:c9:8c:b9:c8; na

FC4s: IPFC FCP
NodeSymb: [36] "Emulex LPe12002-S FV1.00a12 DV2.40q "
Fabric Port Name: 20:46:00:05:1e:a9:be:b8
Permanent Port Name: 10:00:00:00:c9:8c:b9:c8
Port Index: 70
Share Area: No
Device Shared in Other AD: No
Redirect: No
N 024700; 3;10:00:00:00:c9:8c:b9:c9;20:00:00:00:c9:8c:b9:c9; na
FC4s: IPFC FCP
NodeSymb: [39] "Emulex LPe12002-S FV1.00a12 DV2.40q db8"
Fabric Port Name: 20:47:00:05:1e:a9:be:b8
Permanent Port Name: 10:00:00:00:c9:8c:b9:c9
Port Index: 71
Share Area: No
Device Shared in Other AD: No
Redirect: No

The Local Name Server has 60 entries }

Zoning Information

Defined configuration:

cfg: COMSTAR_1stZONE_LOGS_2ndZone
DB_EMLX_AND_COMSTAR_PORTS; DB_QLC_AND_6140_LOG_PORTS
cfg: NO_DEVS One_Port
cfg: dbsan_to_port_mapping
db1_thru_db4_devs; db5_thru_db8_devs; db9_thru_12_all
zone: ALL_DEVICES

1,62; 1,63; 1,64; 1,65; 1,66; 1,67; 1,68; 1,69; 1,70; 1,71;
1,72; 1,73; 1,74; 1,75; 1,76; 1,77; 1,78; 1,79;
20:00:00:00:c9:8c:52:8e; 20:00:00:00:c9:8c:52:8f;
20:00:00:00:c9:8c:b9:7c; 20:00:00:00:c9:8c:b9:7d;
20:00:00:00:c9:8c:b9:8a; 20:00:00:00:c9:8c:b9:8b;
20:00:00:00:c9:8c:b9:8c; 20:00:00:00:c9:8c:b9:8d;
20:00:00:00:c9:8c:b9:96; 20:00:00:00:c9:8c:b9:97;
20:00:00:00:c9:8c:b9:98; 20:00:00:00:c9:8c:b9:99;
20:00:00:00:c9:8c:b9:a0; 20:00:00:00:c9:8c:b9:a1;
20:00:00:00:c9:8c:b9:a2; 20:00:00:00:c9:8c:b9:a3;
20:00:00:00:c9:8c:b9:a4; 20:00:00:00:c9:8c:b9:a5;
20:00:00:00:c9:8c:b9:a8; 20:00:00:00:c9:8c:b9:a9;
20:00:00:00:c9:8c:b9:aa; 20:00:00:00:c9:8c:b9:ab;
20:00:00:00:c9:8c:b9:b0; 20:00:00:00:c9:8c:b9:b1;
20:00:00:00:c9:8c:b9:b4; 20:00:00:00:c9:8c:b9:b5;
20:00:00:00:c9:8c:b9:b6; 20:00:00:00:c9:8c:b9:b7;
20:00:00:00:c9:8c:b9:ba; 20:00:00:00:c9:8c:b9:bb;
20:00:00:00:c9:8c:b9:be; 20:00:00:00:c9:8c:b9:bf;
20:00:00:00:c9:8c:b9:c0; 20:00:00:00:c9:8c:b9:c1;
20:00:00:00:c9:8c:b9:c2; 20:00:00:00:c9:8c:b9:c3;
20:00:00:00:c9:8c:b9:c4; 20:00:00:00:c9:8c:b9:c5;
20:00:00:00:c9:8c:b9:c6; 20:00:00:00:c9:8c:b9:c7;
20:00:00:00:c9:8c:b9:c8; 20:00:00:00:c9:8c:b9:c9;
20:00:00:00:c9:8c:b9:d6; 20:00:00:00:c9:8c:b9:d7;
20:00:00:00:c9:8c:b9:e0; 20:00:00:00:c9:8c:b9:e1;
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20:00:00:00:c9:8c:b9:fe; 20:00:00:00:c9:8c:b9:fd;
20:00:00:00:c9:8c:b9:fe; 20:00:00:00:c9:8c:b9:ff;
20:00:00:00:c9:8c:ba:02; 20:00:00:00:c9:8c:ba:03;
20:00:00:00:c9:8c:ba:10; 20:00:00:00:c9:8c:ba:11;
20:00:00:00:c9:8c:ba:18; 20:00:00:00:c9:8c:ba:19;
20:00:00:00:c9:8c:ba:1c; 20:00:00:00:c9:8c:ba:1d;
20:00:00:00:c9:8c:ba:22; 20:00:00:00:c9:8c:ba:23;
20:00:00:00:c9:8c:ba:24; 20:00:00:00:c9:8c:ba:25;

20:00:00:00:c9:8c:ba:26; 20:00:00:00:c9:8c:ba:27;
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20:00:00:1b:32:86:71:8c; 20:00:00:1b:32:86:74:8b;
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20:00:00:1b:32:92:e7:19; 20:00:00:1b:32:92:f3:19;
20:02:00:a0:b8:32:35:98; 20:02:00:a0:b8:48:a6:bc;
20:02:00:a0:b8:48:dd:78; 20:02:00:a0:b8:56:11:f4;
20:02:00:a0:b8:56:13:90; 20:02:00:a0:b8:56:28:fe;
20:02:00:a0:b8:56:2c:ae; 20:02:00:a0:b8:56:3b:58;
20:02:00:a0:b8:56:3e:02; 20:02:00:a0:b8:56:50:9a;
20:02:00:a0:b8:56:54:48; 20:02:00:a0:b8:56:5a:b8;
20:02:00:a0:b8:56:5a:e8; 20:02:00:a0:b8:56:5c:20;
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20:02:00:a0:b8:56:5f:9e; 20:02:00:a0:b8:56:5f:a0;
20:02:00:a0:b8:56:5f:cc; 20:02:00:a0:b8:56:63:40;
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20:02:00:a0:b8:56:63:ae; 20:02:00:a0:b8:56:63:b0;
20:02:00:a0:b8:56:63:c6; 20:02:00:a0:b8:56:63:ca;
20:02:00:a0:b8:56:63:fa; 20:02:00:a0:b8:56:64:0c;
20:02:00:a0:b8:56:64:1a; 20:02:00:a0:b8:56:64:5c;
20:04:00:a0:b8:56:5f:98; 20:08:00:a0:b8:56:64:1e

zone: DB_EMLX_AND_COMSTAR_PORTS

1,0; 1,1; 1,2; 1,3; 1,4; 1,5; 1,6; 1,7; 1,8; 1,9; 1,10; 1,11;
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3,60; 3,61; 3,62; 3,63; 3,64; 3,65; 3,66; 3,67
zone: DB_QLC_AND_6140_LOG_PORTS
1,64; 1,65; 1,66; 1,67; 1,68; 1,69; 1,70; 1,71; 1,72; 1,73;
1,74; 1,75; 1,76; 1,77; 1,78; 1,79; 2,16; 2,17; 2,18; 2,19;
2,20; 2,21; 2,22; 2,23; 2,56; 2,57; 2,58; 2,59; 2,60; 2,61;
2,62; 2,63; 3,0; 3,16; 3,17; 3,18; 3,19; 3,20; 3,21; 3,22;
3,23; 3,24; 3,25; 3,26; 3,27; 3,28; 3,29; 3,30; 3,31
zone: One_Port
1,61
zone: db1_thru_db4_devs
1,0; 1,1; 1,2; 1,3; 1,4; 1,5; 1,6; 1,7; 1,8; 1,9; 1,10; 1,11;
1,12; 1,13; 1,14; 1,15; 1,16; 1,17; 1,18; 1,19; 1,20; 1,21;
1,22; 1,23; 1,24; 1,28; 1,32; 1,33; 1,34; 1,35; 1,36; 1,37;
1,38; 1,39; 1,40; 1,41; 1,42; 1,43; 1,44; 1,45; 1,46; 1,47;
1,48; 1,49
zone: db5_db12_all_device
3,52; 3,53; 3,54; 3,55; 20:00:00:1b:32:86:1d:8c;
20:00:00:1b:32:86:1e:8c; 20:00:00:1b:32:86:22:8c;
20:00:00:1b:32:86:25:8c; 20:00:00:1b:32:86:26:8c;
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20:00:00:1b:32:86:31:8c; 20:00:00:1b:32:86:33:8c;
20:00:00:1b:32:86:35:8c; 20:00:00:1b:32:86:42:8c;
20:00:00:1b:32:86:4f:8c; 20:00:00:1b:32:86:63:8c;
20:00:00:1b:32:86:70:8c; 20:00:00:1b:32:86:71:8c;
20:00:00:1b:32:86:74:8b; 20:00:00:1b:32:86:84:8b;
20:00:00:1b:32:86:8e:8c; 20:00:00:1b:32:86:91:8c;
20:00:00:1b:32:86:9a:8c; 20:00:00:1b:32:86:9d:8c;
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20:00:00:1b:32:86:a9:8b; 20:00:00:1b:32:86:ae:8b;
20:00:00:1b:32:86:b0:8b; 20:00:00:1b:32:86:b1:8b;
20:00:00:1b:32:86:b5:8c; 20:00:00:1b:32:86:b7:8b;
20:00:00:1b:32:86:ba:8b; 20:00:00:1b:32:86:bc:8b;
20:00:00:1b:32:86:d0:8b; 20:00:00:1b:32:86:d2:8b;
20:00:00:1b:32:86:d6:8b; 20:00:00:1b:32:86:ef:8b;
20:00:00:1b:32:86:f1:8b; 20:00:00:1b:32:86:f4:8b;
20:00:00:1b:32:86:f5:8b; 20:00:00:1b:32:86:f9:8b;
20:00:00:1b:32:86:fe:8b; 20:02:00:a0:b8:48:a6:bc;
20:02:00:a0:b8:56:13:90; 20:02:00:a0:b8:56:28:fc;
20:02:00:a0:b8:56:5f:92; 20:02:00:a0:b8:56:63:aa;
20:02:00:a0:b8:56:63:ac; 20:02:00:a0:b8:56:63:ca;
20:04:00:a0:b8:56:5f:98
zone: db5_db8_p1_db5san1_db5san3
2,0; 2,1; 2,2; 2,32; 2,36; 2,40; 2,44
zone: db5_db8_p2_db5san4_db6san1
2,3; 2,4; 2,5; 2,33; 2,37; 2,41; 2,45
zone: db5_db8_p3_db6san2_db6san4
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zone: db5_db8_p4_db6san5_db7san3
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zone: db5_db8_p5_db7san4_db8san1
2,53; 2,54; 2,55; 2,64; 2,66; 2,68; 2,70
zone: db5_db8_p6_db8san2_db8san5
2,8; 2,9; 2,10; 2,11; 2,65; 2,67; 2,69; 2,71
zone: db5_thru_db8_devs
2,0; 2,1; 2,2; 2,3; 2,4; 2,5; 2,6; 2,7; 2,8; 2,9; 2,10; 2,11;
2,12; 2,13; 2,14; 2,15; 2,16; 2,17; 2,18; 2,19; 2,20; 2,21;
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2,60; 2,61; 2,62; 2,63; 2,64; 2,65; 2,66; 2,67; 2,68; 2,69;
2,70; 2,71
zone: db5san1thru5_to_db5thru8_data1

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2,40; 2,44
zone: db6san1thru5_to_db5thru8_data2
2,5; 2,6; 2,7; 2,33; 2,37; 2,41; 2,45; 2,48; 2,49
zone: db7san1thru5_to_db5thru8_data3
2,34; 2,38; 2,42; 2,46; 2,50; 2,51; 2,52; 2,53; 2,54
zone: db8san1thru5_to_db5thru8_data4
2,8; 2,9; 2,10; 2,11; 2,35; 2,39; 2,43; 2,47; 2,55
zone: db9_thru_12_all
3,8; 3,9; 3,10; 3,11; 3,12; 3,13; 3,14; 3,15; 3,20; 3,24;
3,28; 3,32; 3,33; 3,34; 3,35; 3,36; 3,37; 3,38; 3,39; 3,40;
3,41; 3,42; 3,43; 3,44; 3,45; 3,46; 3,47; 3,48; 3,49; 3,50;
3,51; 3,52; 3,53; 3,54; 3,55; 3,56; 3,57; 3,58; 3,59; 3,60;
3,61; 3,62; 3,63; 3,64; 3,65; 3,66; 3,67; 3,68
zone: four_node1
3,32; 3,33; 3,34; 3,35; 3,36; 3,37; 3,38; 3,39; 3,40; 3,41;
3,42; 3,43; 3,44; 3,45; 3,46; 3,47; 3,48; 3,49; 3,50; 3,51;
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3,62; 3,63; 3,64; 3,65; 3,66; 3,67

Effective configuration:
cfg: COMSTAR_1stZONE_LOGS_2ndZone
zone: DB_EMLX_AND_COMSTAR_PORTS

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3,64
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zone: DB_QLC_AND_6140_LOG_PORTS

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SFP Serial ID Information

Port 0: id (sw) Vendor: BROCADE
Port 1: id (sw) Vendor: BROCADE
Port 2: id (sw) Vendor: BROCADE
Port 3: id (sw) Vendor: BROCADE
Port 4: id (sw) Vendor: BROCADE
Port 5: id (sw) Vendor: BROCADE
Port 6: id (sw) Vendor: BROCADE
Port 7: id (sw) Vendor: BROCADE
Port 8: id (sw) Vendor: BROCADE
Port 9: id (sw) Vendor: BROCADE
Port 10: id (sw) Vendor: BROCADE
Port 11: id (sw) Vendor: BROCADE
Port 12: id (sw) Vendor: BROCADE
Port 13: id (sw) Vendor: BROCADE
Port 14: id (sw) Vendor: BROCADE
Port 15: id (sw) Vendor: BROCADE
Port 16: id (sw) Vendor: BROCADE
Port 17: id (sw) Vendor: BROCADE
Port 18: id (sw) Vendor: BROCADE
Port 19: id (sw) Vendor: BROCADE
Port 20: id (sw) Vendor: BROCADE
Port 21: id (sw) Vendor: BROCADE
Port 22: id (sw) Vendor: BROCADE
Port 23: id (sw) Vendor: BROCADE
Port 24: id (sw) Vendor: BROCADE
Port 25: id (sw) Vendor: BROCADE
Port 26: id (sw) Vendor: BROCADE
Port 27: id (sw) Vendor: BROCADE
Port 28: id (sw) Vendor: BROCADE
Port 29: id (sw) Vendor: BROCADE
Port 30: id (sw) Vendor: BROCADE
Port 31: id (sw) Vendor: BROCADE
Port 32: id (sw) Vendor: BROCADE
Port 33: id (sw) Vendor: BROCADE
Port 34: id (sw) Vendor: BROCADE
Port 35: id (sw) Vendor: BROCADE
Port 36: id (sw) Vendor: BROCADE
Port 37: id (sw) Vendor: BROCADE
Port 38: id (sw) Vendor: BROCADE
Port 39: id (sw) Vendor: BROCADE

Serial No: UAF1084500004G0 Speed: 200,400,800_MB/s
Serial No: UAF1084500004GH Speed: 200,400,800_MB/s
Serial No: UAF108450000661 Speed: 200,400,800_MB/s
Serial No: UAF108450000494 Speed: 200,400,800_MB/s
Serial No: UAF1084500001M2 Speed: 200,400,800_MB/s
Serial No: UAF1084500004EH Speed: 200,400,800_MB/s
Serial No: UAF10845000065Z Speed: 200,400,800_MB/s
Serial No: UAF10845000022Y Speed: 200,400,800_MB/s
Serial No: UAF1084500004KW Speed: 200,400,800_MB/s
Serial No: UAF1084500002AB Speed: 200,400,800_MB/s
Serial No: UAF1084500008K2 Speed: 200,400,800_MB/s
Serial No: UAF1084500004GF Speed: 200,400,800_MB/s
Serial No: UAF1084500004EM Speed: 200,400,800_MB/s
Serial No: UAF1084500004FB Speed: 200,400,800_MB/s
Serial No: UAF10845000029L Speed: 200,400,800_MB/s
Serial No: UAF1084500004FD Speed: 200,400,800_MB/s
Serial No: UAF108440000NMW Speed: 200,400,800_MB/s
Serial No: UAF1092900008GF Speed: 200,400,800_MB/s
Serial No: UAF108440000MPL Speed: 200,400,800_MB/s
Serial No: UAF1092900008GH Speed: 200,400,800_MB/s
Serial No: UAF10929000095H Speed: 200,400,800_MB/s
Serial No: UAF108440000MP6 Speed: 200,400,800_MB/s
Serial No: UAF108440000PAL Speed: 200,400,800_MB/s
Serial No: UAF108440000MKZ Speed: 200,400,800_MB/s
Serial No: UAF109290000942 Speed: 200,400,800_MB/s
Serial No: UAF10929000095C Speed: 200,400,800_MB/s
Serial No: UAF108440000NL9 Speed: 200,400,800_MB/s
Serial No: UAF10929000089J Speed: 200,400,800_MB/s
Serial No: UAF1092900008BT Speed: 200,400,800_MB/s
Serial No: UAF1092900008Z4 Speed: 200,400,800_MB/s
Serial No: UAF10929000095K Speed: 200,400,800_MB/s
Serial No: UAF108440000NNK Speed: 200,400,800_MB/s
Serial No: UAF1092900008F1 Speed: 200,400,800_MB/s
Serial No: UAF109290000956 Speed: 200,400,800_MB/s
Serial No: UAF109290000946 Speed: 200,400,800_MB/s
Serial No: UAF109290000947 Speed: 200,400,800_MB/s
Serial No: UAF1092900008B8 Speed: 200,400,800_MB/s
Serial No: UAF1092900008CE Speed: 200,400,800_MB/s
Serial No: UAF1092900008ZN Speed: 200,400,800_MB/s
Serial No: UAF10929000089F Speed: 200,400,800_MB/s

Port 40: id (sw) Vendor: BROCADE
Port 41: id (sw) Vendor: BROCADE
Port 42: id (sw) Vendor: BROCADE
Port 43: id (sw) Vendor: BROCADE
Port 44: id (sw) Vendor: BROCADE
Port 45: id (sw) Vendor: BROCADE
Port 46: id (sw) Vendor: BROCADE
Port 47: id (sw) Vendor: BROCADE
Port 48: id (sw) Vendor: BROCADE
Port 49: id (sw) Vendor: BROCADE
Port 50: id (sw) Vendor: BROCADE
Port 51: id (sw) Vendor: BROCADE
Port 52: id (sw) Vendor: BROCADE
Port 53: id (sw) Vendor: BROCADE
Port 54: id (sw) Vendor: BROCADE
Port 55: id (sw) Vendor: BROCADE
Port 56: id (sw) Vendor: BROCADE
Port 57: id (sw) Vendor: BROCADE
Port 58: id (sw) Vendor: BROCADE
Port 59: id (sw) Vendor: BROCADE
Port 60: id (sw) Vendor: BROCADE
Port 61: id (sw) Vendor: BROCADE
Port 62: id (sw) Vendor: BROCADE
Port 63: id (sw) Vendor: BROCADE
Port 64: id (sw) Vendor: BROCADE
Port 65: id (sw) Vendor: BROCADE
Port 66: id (sw) Vendor: BROCADE
Port 67: id (sw) Vendor: BROCADE
Port 68: id (sw) Vendor: BROCADE
Port 69: id (sw) Vendor: BROCADE
Port 70: id (sw) Vendor: BROCADE
Port 71: id (sw) Vendor: BROCADE
Port 72: id (sw) Vendor: BROCADE
Port 73: id (sw) Vendor: BROCADE
Port 74: id (sw) Vendor: BROCADE
Port 75: id (sw) Vendor: BROCADE
Port 76: id (sw) Vendor: BROCADE
Port 77: id (sw) Vendor: BROCADE
Port 78: id (sw) Vendor: BROCADE
Port 79: id (sw) Vendor: BROCADE

Serial No: UAF1092900008FK Speed: 200,400,800_MB/s
Serial No: UAF1092900008ZT Speed: 200,400,800_MB/s
Serial No: UAF108440000PB3 Speed: 200,400,800_MB/s
Serial No: UAF1092900008Z8 Speed: 200,400,800_MB/s
Serial No: UAF1092900008ZJ Speed: 200,400,800_MB/s
Serial No: UAF108440000NGN Speed: 200,400,800_MB/s
Serial No: UAF108440000NB6 Speed: 200,400,800_MB/s
Serial No: UAF109280000J46 Speed: 200,400,800_MB/s
Serial No: UAF1090500000BM Speed: 200,400,800_MB/s
Serial No: UAF10905000006G Speed: 200,400,800_MB/s
Serial No: UAF10905000009M Speed: 200,400,800_MB/s
Serial No: UAF1090500000MY Speed: 200,400,800_MB/s
Serial No: UAF10905000009A Speed: 200,400,800_MB/s
Serial No: UAF1090500000NN Speed: 200,400,800_MB/s
Serial No: UAF109050000093 Speed: 200,400,800_MB/s
Serial No: UAF10905000006D Speed: 200,400,800_MB/s
Serial No: UAF10905000007K Speed: 200,400,800_MB/s
Serial No: UAF1090500000NE Speed: 200,400,800_MB/s
Serial No: UAF10905000005T Speed: 200,400,800_MB/s
Serial No: UAF1090500000T4 Speed: 200,400,800_MB/s
Serial No: UAF1090500000NJ Speed: 200,400,800_MB/s
Serial No: UAF109050000076 Speed: 200,400,800_MB/s
Serial No: UAF10905000001WA Speed: 200,400,800_MB/s
Serial No: UAF1090500000NM Speed: 200,400,800_MB/s
Serial No: UAF109040000182V Speed: 200,400,800_MB/s
Serial No: UAF1090500000ST Speed: 200,400,800_MB/s
Serial No: UAF109040000182W Speed: 200,400,800_MB/s
Serial No: UAF1090500000SU Speed: 200,400,800_MB/s
Serial No: UAF1090500000SA Speed: 200,400,800_MB/s
Serial No: UAF109040000182Z Speed: 200,400,800_MB/s
Serial No: UAF1090500000NS Speed: 200,400,800_MB/s
Serial No: UAF1090500000SZ Speed: 200,400,800_MB/s
Serial No: UAF10905000006T Speed: 200,400,800_MB/s
Serial No: UAF10905000006E Speed: 200,400,800_MB/s
Serial No: UAF10905000005V Speed: 200,400,800_MB/s
Serial No: UAF109050000064 Speed: 200,400,800_MB/s
Serial No: UAF1090500000A1 Speed: 200,400,800_MB/s
Serial No: UAF1090500000T0 Speed: 200,400,800_MB/s
Serial No: UAF10905000006S Speed: 200,400,800_MB/s
Serial No: UAF10905000007B Speed: 200,400,800_MB/s

SWITCH 3

Switch Information Report for F5300-3

List of Switches

Switch ID	Worldwide Name	Enet IP Addr	FC IP Addr	Name
1:	fffc01 10:00:00:05:1e:ae:ec:50	10.1.140.33	0.0.0.0	"sae5300-1"
2:	fffc02 10:00:00:05:1e:a9:be:b8	10.1.140.34	0.0.0.0	"F5300-2"
3:	fffc03 10:00:00:05:1e:9a:8e:be	10.1.140.35	0.0.0.0	>"F5300-3"

The Fabric has 3 switches

Current Switch Information

Ethernet IP Address: 10.1.140.35
Ethernet Subnetmask: 255.255.255.0
Fibre Channel IP Address: 0.0.0.0
Fibre Channel Subnetmask: 0.0.0.0

Gateway Address: 10.1.140.5

Ethernet IPv6 Addresses:

Kernel: 2.6.14.2
Fabric OS: v6.2.0c
Made on: Mon Feb 23 19:32:16 2009
Flash: Thu May 7 13:14:02 2009
BootProm: 1.0.14

List of Inter-Switch Links

Local Domain ID: 3

Local Port	Domain	Remote Port	State
79	2	31	NB_ST_FULL

List of Ports

switchName: F5300-3
switchType: 64.3
switchState: Online
switchMode: Native
switchRole: Principal
switchDomain: 3
switchId: fffc03
switchWwn: 10:00:00:05:1e:9a:8e:be
zoning: ON (COMSTAR_1stZONE_LOGS_2ndZone)
switchBeacon: OFF
FC Router: OFF
Allow XISL Use: OFF
LS Attributes: [FID: 128, Base Switch: No, Default Switch: Yes]

Area	Port	Media	Speed	State	Proto
------	------	-------	-------	-------	-------

0	0	id	N8	Online	F-Port 21:00:00:1b:32:86:be:8b
1	1	id	N8	No_Light	
2	2	id	N8	No_Light	
3	3	id	N8	No_Light	
4	4	id	N8	No_Light	
5	5	id	N8	No_Light	
6	6	id	N8	No_Light	
7	7	id	N8	No_Light	
8	8	id	N8	Online	F-Port 10:00:00:00:c9:8c:ba:1c
9	9	id	N8	Online	F-Port 10:00:00:00:c9:8c:ba:1d
10	10	id	N8	Online	F-Port 10:00:00:00:c9:8c:b9:a2
11	11	id	N8	Online	F-Port 10:00:00:00:c9:8c:b9:a3
12	12	id	N8	Online	F-Port 10:00:00:00:c9:8c:b9:fc
13	13	id	N8	Online	F-Port 10:00:00:00:c9:8c:b9:fd
14	14	id	N8	Online	F-Port 10:00:00:00:c9:8c:b9:a4
15	15	id	N8	Online	F-Port 10:00:00:00:c9:8c:b9:a5
16	16	id	N4	Online	F-Port 21:01:00:1b:32:ab:c1:10
17	17	id	N4	Online	F-Port 21:01:00:1b:32:ac:c6:27
18	18	id	N4	Online	F-Port 21:01:00:1b:32:ab:04:11
19	19	id	N4	Online	F-Port 21:01:00:1b:32:ab:2e:16
20	20	id	N4	Online	F-Port 21:01:00:1b:32:ac:da:30
21	21	id	N4	Online	F-Port 21:01:00:1b:32:ac:81:30
22	22	id	N4	Online	F-Port 21:01:00:1b:32:ac:bd:30
23	23	id	N4	Online	F-Port 21:01:00:1b:32:ac:25:2d
24	24	id	N4	Online	F-Port 20:22:00:a0:b8:56:5f:92
25	25	id	N4	Online	F-Port 20:24:00:a0:b8:56:5f:98
26	26	id	N4	Online	F-Port 20:22:00:a0:b8:48:a6:bc
27	27	id	N4	Online	F-Port 20:22:00:a0:b8:56:63:ca
28	28	id	N4	Online	F-Port 20:22:00:a0:b8:56:63:aa

29	29	id	N4	Online	F-Port 20:22:00:a0:b8:56:28:fc
30	30	id	N4	Online	F-Port 20:22:00:a0:b8:56:13:90
31	31	id	N4	Online	F-Port 20:22:00:a0:b8:56:63:ac
32	32	id	N8	Online	F-Port 21:00:00:1b:32:86:25:8c
33	33	id	N8	Online	F-Port 21:00:00:1b:32:86:a5:8b
34	34	id	N8	Online	F-Port 21:00:00:1b:32:86:8e:8c
35	35	id	N8	Online	F-Port 21:00:00:1b:32:86:d0:8b
36	36	id	N8	Online	F-Port 21:00:00:1b:32:86:42:8c
37	37	id	N8	Online	F-Port 21:00:00:1b:32:86:71:8c
38	38	id	N8	Online	F-Port 21:00:00:1b:32:86:fe:8b
39	39	id	N8	Online	F-Port 21:00:00:1b:32:86:2b:8c
40	40	id	N8	Online	F-Port 21:00:00:1b:32:86:31:8c
41	41	id	N8	Online	F-Port 21:00:00:1b:32:86:1e:8c
42	42	id	N8	Online	F-Port 21:00:00:1b:32:86:b0:8b
43	43	id	N8	Online	F-Port 21:00:00:1b:32:86:ba:8b
44	44	id	N8	Online	F-Port 21:00:00:1b:32:86:70:8c
45	45	id	N8	Online	F-Port 21:00:00:1b:32:86:a9:8b
46	46	id	N8	Online	F-Port 21:00:00:1b:32:86:91:8c
47	47	id	N8	Online	F-Port 21:00:00:1b:32:86:a8:8b
48	48	id	N8	Online	F-Port 21:00:00:1b:32:86:26:8c
49	49	id	N8	Online	F-Port 21:00:00:1b:32:86:9a:8c
50	50	id	N8	Online	F-Port 21:00:00:1b:32:86:22:8c
51	51	id	N8	Online	F-Port 21:00:00:1b:32:86:ef:8b
52	52	id	N8	Online	F-Port 10:00:00:00:c9:8c:b9:8c
53	53	id	N8	Online	F-Port 10:00:00:00:c9:8c:b9:8d
54	54	id	N8	Online	F-Port 10:00:00:00:c9:8c:b9:8a
55	55	id	N8	Online	F-Port 10:00:00:00:c9:8c:b9:8b
56	56	id	N8	Online	F-Port 10:00:00:00:c9:8c:b9:c6
57	57	id	N8	Online	F-Port 10:00:00:00:c9:8c:b9:c7
58	58	id	N8	Online	F-Port 10:00:00:00:c9:8c:b9:7c
59	59	id	N8	Online	F-Port 10:00:00:00:c9:8c:b9:7d
60	60	id	N8	Online	F-Port 10:00:00:00:c9:8c:ba:10
61	61	id	N8	Online	F-Port 10:00:00:00:c9:8c:ba:11
62	62	id	N8	Online	F-Port 10:00:00:00:c9:8c:b9:aa
63	63	id	N8	Online	F-Port 10:00:00:00:c9:8c:b9:ab
64	64	id	N8	Online	F-Port 10:00:00:00:c9:8c:b9:fe
65	65	id	N8	Online	F-Port 10:00:00:00:c9:8c:b9:ff
66	66	id	N8	Online	F-Port 10:00:00:00:c9:8c:b9:be
67	67	id	N8	Online	F-Port 10:00:00:00:c9:8c:b9:bf
68	68	id	N8	No_Light	
69	69	id	N8	No_Light	
70	70	id	N8	No_Light	
71	71	id	N8	No_Light	
72	72	id	N8	No_Light	
73	73	id	N8	Online	E-Port (Trunk port, master is Port 79)
74	74	id	N8	Online	E-Port (Trunk port, master is Port 79)
75	75	id	N8	Online	E-Port (Trunk port, master is Port 79)
76	76	id	N8	No_Light	
77	77	id	N8	Online	E-Port (Trunk port, master is Port 79)
78	78	id	N8	Online	E-Port (Trunk port, master is Port 79)
79	79	id	N8	Online	E-Port 10:00:00:05:1e:a9:be:b8 "F5300-2" (downstream)(Trunk master)

Name Server

{
010000 010100 010200 010300 010400 010500 010600 010700
010800 010900 010a00 010b00 010c00 010d00 010e00 010f00
011000 011100 011200 011300 011400 011500 011600 011700
011800 011c00 012000 012100 012200 012300 012400 012500
012600 012700 012800 012900 012a00 012b00 012c00 012d00
012e00 012f00 013000 013100 014000 014100 014200 014300
014400 014500 014600 014700 014800 014900 014a00 014b00
014c00 014d00 014e00 014f00 020000 020100 020200 020300

020400 020500 020600 020700 020800 020900 020a00 020b00
021000 021100 021200 021300 021400 021500 021600 021700
022000 022100 022200 022300 022400 022500 022600 022700
022800 022900 022a00 022b00 022c00 022d00 022e00 022f00
023000 023100 023200 023300 023400 023500 023600 023700
023800 023900 023a00 023b00 023c00 023d00 023e00 023f00
024000 024100 024200 024300 024400 024500 024600 024700
030000 030800 030900 030a00 030b00 030c00 030d00 030e00
030f00 031000 031100 031200 031300 031400 031500 031600
031700 031800 031900 031a00 031b00 031c00 031d00 031e00
031f00 032000 032100 032200 032300 032400 032500 032600
032700 032800 032900 032a00 032b00 032c00 032d00 032e00
032f00 033000 033100 033200 033300 033400 033500 033600
033700 033800 033900 033a00 033b00 033c00 033d00 033e00
033f00 034000 034100 034200 034300
181 Nx_Ports in the Fabric }

```
{
  Type Pid  COS  PortName      NodeName      TTL(sec)
N   030000;   3;21:00:00:1b:32:86:be:8b;20:00:00:1b:32:86:be:8b; na
  FC4s: FCP
  PortSymb: [6] "qlt0,0"
  NodeSymb: [9] "db13-san1"
  Fabric Port Name: 20:00:00:05:1e:9a:8e:be
  Permanent Port Name: 21:00:00:1b:32:86:be:8b
  Port Index: 0
  Share Area: No
  Device Shared in Other AD: No
  Redirect: No
N   030800;   3;10:00:00:00:c9:8c:ba:1c;20:00:00:00:c9:8c:ba:1c; na
  FC4s: IPFC FCP
  NodeSymb: [39] "Emulex LPe12002-S FV1.00a12 DV2.40q db9"
  Fabric Port Name: 20:08:00:05:1e:9a:8e:be
  Permanent Port Name: 10:00:00:00:c9:8c:ba:1c
  Port Index: 8
  Share Area: No
  Device Shared in Other AD: No
  Redirect: No
N   030900;   3;10:00:00:00:c9:8c:ba:1d;20:00:00:00:c9:8c:ba:1d; na
  FC4s: IPFC FCP
  NodeSymb: [39] "Emulex LPe12002-S FV1.00a12 DV2.40q db9"
  Fabric Port Name: 20:09:00:05:1e:9a:8e:be
  Permanent Port Name: 10:00:00:00:c9:8c:ba:1d
  Port Index: 9
  Share Area: No
  Device Shared in Other AD: No
  Redirect: No
N   030a00;   3;10:00:00:00:c9:8c:b9:a2;20:00:00:00:c9:8c:b9:a2; na
  FC4s: IPFC FCP
  NodeSymb: [40] "Emulex LPe12002-S FV1.00a12 DV2.40q db10"
  Fabric Port Name: 20:0a:00:05:1e:9a:8e:be
  Permanent Port Name: 10:00:00:00:c9:8c:b9:a2
  Port Index: 10
  Share Area: No
  Device Shared in Other AD: No
  Redirect: No
N   030b00;   3;10:00:00:00:c9:8c:b9:a3;20:00:00:00:c9:8c:b9:a3; na
  FC4s: IPFC FCP
  NodeSymb: [40] "Emulex LPe12002-S FV1.00a12 DV2.40q db10"
  Fabric Port Name: 20:0b:00:05:1e:9a:8e:be
  Permanent Port Name: 10:00:00:00:c9:8c:b9:a3
  Port Index: 11
```

Share Area: No
Device Shared in Other AD: No
Redirect: No
N 030c00; 3;10:00:00:00:c9:8c:b9:fc;20:00:00:00:c9:8c:b9:fc; na
FC4s: IPFC FCP
NodeSymb: [40] "Emulex LPe12002-S FV1.00a12 DV2.40q db11"
Fabric Port Name: 20:0c:00:05:1e:9a:8e:be
Permanent Port Name: 10:00:00:00:c9:8c:b9:fc
Port Index: 12
Share Area: No
Device Shared in Other AD: No
Redirect: No
N 030d00; 3;10:00:00:00:c9:8c:b9:fd;20:00:00:00:c9:8c:b9:fd; na
FC4s: IPFC FCP
NodeSymb: [40] "Emulex LPe12002-S FV1.00a12 DV2.40q db11"
Fabric Port Name: 20:0d:00:05:1e:9a:8e:be
Permanent Port Name: 10:00:00:00:c9:8c:b9:fd
Port Index: 13
Share Area: No
Device Shared in Other AD: No
Redirect: No
N 030e00; 3;10:00:00:00:c9:8c:b9:a4;20:00:00:00:c9:8c:b9:a4; na
FC4s: IPFC FCP
NodeSymb: [40] "Emulex LPe12002-S FV1.00a12 DV2.40q db12"
Fabric Port Name: 20:0e:00:05:1e:9a:8e:be
Permanent Port Name: 10:00:00:00:c9:8c:b9:a4
Port Index: 14
Share Area: No
Device Shared in Other AD: No
Redirect: No
N 030f00; 3;10:00:00:00:c9:8c:b9:a5;20:00:00:00:c9:8c:b9:a5; na
FC4s: IPFC FCP
NodeSymb: [40] "Emulex LPe12002-S FV1.00a12 DV2.40q db12"
Fabric Port Name: 20:0f:00:05:1e:9a:8e:be
Permanent Port Name: 10:00:00:00:c9:8c:b9:a5
Port Index: 15
Share Area: No
Device Shared in Other AD: No
Redirect: No
N 031000; 3;21:01:00:1b:32:ab:c1:10;20:01:00:1b:32:ab:c1:10; na
FC4s: IPFC FCP
Fabric Port Name: 20:10:00:05:1e:9a:8e:be
Permanent Port Name: 21:01:00:1b:32:ab:c1:10
Port Index: 16
Share Area: No
Device Shared in Other AD: No
Redirect: No
N 031100; 3;21:01:00:1b:32:ac:c6:27;20:01:00:1b:32:ac:c6:27; na
FC4s: IPFC FCP
Fabric Port Name: 20:11:00:05:1e:9a:8e:be
Permanent Port Name: 21:01:00:1b:32:ac:c6:27
Port Index: 17
Share Area: No
Device Shared in Other AD: No
Redirect: No
N 031200; 3;21:01:00:1b:32:ab:04:11;20:01:00:1b:32:ab:04:11; na
FC4s: IPFC FCP
Fabric Port Name: 20:12:00:05:1e:9a:8e:be
Permanent Port Name: 21:01:00:1b:32:ab:04:11
Port Index: 18
Share Area: No
Device Shared in Other AD: No

Redirect: No
N 031300; 3;21:01:00:1b:32:ab:2e:16;20:01:00:1b:32:ab:2e:16; na
FC4s: IPFC FCP
Fabric Port Name: 20:13:00:05:1e:9a:8e:be
Permanent Port Name: 21:01:00:1b:32:ab:2e:16
Port Index: 19
Share Area: No
Device Shared in Other AD: No
Redirect: No
N 031400; 3;21:01:00:1b:32:ac:da:30;20:01:00:1b:32:ac:da:30; na
FC4s: IPFC FCP
Fabric Port Name: 20:14:00:05:1e:9a:8e:be
Permanent Port Name: 21:01:00:1b:32:ac:da:30
Port Index: 20
Share Area: No
Device Shared in Other AD: No
Redirect: No
N 031500; 3;21:01:00:1b:32:ac:81:30;20:01:00:1b:32:ac:81:30; na
FC4s: IPFC FCP
Fabric Port Name: 20:15:00:05:1e:9a:8e:be
Permanent Port Name: 21:01:00:1b:32:ac:81:30
Port Index: 21
Share Area: No
Device Shared in Other AD: No
Redirect: No
N 031600; 3;21:01:00:1b:32:ac:bd:30;20:01:00:1b:32:ac:bd:30; na
FC4s: IPFC FCP
Fabric Port Name: 20:16:00:05:1e:9a:8e:be
Permanent Port Name: 21:01:00:1b:32:ac:bd:30
Port Index: 22
Share Area: No
Device Shared in Other AD: No
Redirect: No
N 031700; 3;21:01:00:1b:32:ac:25:2d;20:01:00:1b:32:ac:25:2d; na
FC4s: IPFC FCP
Fabric Port Name: 20:17:00:05:1e:9a:8e:be
Permanent Port Name: 21:01:00:1b:32:ac:25:2d
Port Index: 23
Share Area: No
Device Shared in Other AD: No
Redirect: No
N 031800; 3;20:22:00:a0:b8:56:5f:92;20:02:00:a0:b8:56:5f:92; na
FC4s: FCP [SUN CSM200_R 0750]
Fabric Port Name: 20:18:00:05:1e:9a:8e:be
Permanent Port Name: 20:22:00:a0:b8:56:5f:92
Port Index: 24
Share Area: No
Device Shared in Other AD: No
Redirect: No
N 031900; 3;20:24:00:a0:b8:56:5f:98;20:04:00:a0:b8:56:5f:98; na
FC4s: FCP [SUN CSM200_R 0750]
Fabric Port Name: 20:19:00:05:1e:9a:8e:be
Permanent Port Name: 20:24:00:a0:b8:56:5f:98
Port Index: 25
Share Area: No
Device Shared in Other AD: No
Redirect: No
N 031a00; 3;20:22:00:a0:b8:48:a6:bc;20:02:00:a0:b8:48:a6:bc; na
FC4s: FCP [SUN CSM200_R 0750]
Fabric Port Name: 20:1a:00:05:1e:9a:8e:be
Permanent Port Name: 20:22:00:a0:b8:48:a6:bc
Port Index: 26

Share Area: No
Device Shared in Other AD: No
Redirect: No
N 031b00; 3;20:22:00:a0:b8:56:63:ca;20:02:00:a0:b8:56:63:ca; na
FC4s: FCP [SUN CSM200_R 0750]
Fabric Port Name: 20:1b:00:05:1e:9a:8e:be
Permanent Port Name: 20:22:00:a0:b8:56:63:ca
Port Index: 27
Share Area: No
Device Shared in Other AD: No
Redirect: No
N 031c00; 3;20:22:00:a0:b8:56:63:aa;20:02:00:a0:b8:56:63:aa; na
FC4s: FCP [SUN CSM200_R 0750]
Fabric Port Name: 20:1c:00:05:1e:9a:8e:be
Permanent Port Name: 20:22:00:a0:b8:56:63:aa
Port Index: 28
Share Area: No
Device Shared in Other AD: No
Redirect: No
N 031d00; 3;20:22:00:a0:b8:56:28:fc;20:02:00:a0:b8:56:28:fc; na
FC4s: FCP [SUN CSM200_R 0750]
Fabric Port Name: 20:1d:00:05:1e:9a:8e:be
Permanent Port Name: 20:22:00:a0:b8:56:28:fc
Port Index: 29
Share Area: No
Device Shared in Other AD: No
Redirect: No
N 031e00; 3;20:22:00:a0:b8:56:13:90;20:02:00:a0:b8:56:13:90; na
FC4s: FCP [SUN CSM200_R 0750]
Fabric Port Name: 20:1e:00:05:1e:9a:8e:be
Permanent Port Name: 20:22:00:a0:b8:56:13:90
Port Index: 30
Share Area: No
Device Shared in Other AD: No
Redirect: No
N 031f00; 3;20:22:00:a0:b8:56:63:ac;20:02:00:a0:b8:56:63:ac; na
FC4s: FCP [SUN CSM200_R 0750]
Fabric Port Name: 20:1f:00:05:1e:9a:8e:be
Permanent Port Name: 20:22:00:a0:b8:56:63:ac
Port Index: 31
Share Area: No
Device Shared in Other AD: No
Redirect: No
N 032000; 3;21:00:00:1b:32:86:25:8c;20:00:00:1b:32:86:25:8c; na
FC4s: FCP
PortSymb: [6] "qlt0,0"
NodeSymb: [8] "db9-san1"
Fabric Port Name: 20:20:00:05:1e:9a:8e:be
Permanent Port Name: 21:00:00:1b:32:86:25:8c
Port Index: 32
Share Area: No
Device Shared in Other AD: No
Redirect: No
N 032100; 3;21:00:00:1b:32:86:a5:8b;20:00:00:1b:32:86:a5:8b; na
FC4s: FCP
PortSymb: [6] "qlt0,0"
NodeSymb: [8] "db9-san2"
Fabric Port Name: 20:21:00:05:1e:9a:8e:be
Permanent Port Name: 21:00:00:1b:32:86:a5:8b
Port Index: 33
Share Area: No
Device Shared in Other AD: No

Redirect: No
N 032200; 3;21:00:00:1b:32:86:8e:8c;20:00:00:1b:32:86:8e:8c; na
FC4s: FCP
PortSymb: [6] "qlt0,0"
NodeSymb: [8] "db9-san3"
Fabric Port Name: 20:22:00:05:1e:9a:8e:be
Permanent Port Name: 21:00:00:1b:32:86:8e:8c
Port Index: 34
Share Area: No
Device Shared in Other AD: No
Redirect: No
N 032300; 3;21:00:00:1b:32:86:d0:8b;20:00:00:1b:32:86:d0:8b; na
FC4s: FCP
PortSymb: [6] "qlt0,0"
NodeSymb: [8] "db9-san4"
Fabric Port Name: 20:23:00:05:1e:9a:8e:be
Permanent Port Name: 21:00:00:1b:32:86:d0:8b
Port Index: 35
Share Area: No
Device Shared in Other AD: No
Redirect: No
N 032400; 3;21:00:00:1b:32:86:42:8c;20:00:00:1b:32:86:42:8c; na
FC4s: FCP
PortSymb: [6] "qlt0,0"
NodeSymb: [8] "db9-san5"
Fabric Port Name: 20:24:00:05:1e:9a:8e:be
Permanent Port Name: 21:00:00:1b:32:86:42:8c
Port Index: 36
Share Area: No
Device Shared in Other AD: No
Redirect: No
N 032500; 3;21:00:00:1b:32:86:71:8c;20:00:00:1b:32:86:71:8c; na
FC4s: FCP
PortSymb: [6] "qlt0,0"
NodeSymb: [9] "db10-san1"
Fabric Port Name: 20:25:00:05:1e:9a:8e:be
Permanent Port Name: 21:00:00:1b:32:86:71:8c
Port Index: 37
Share Area: No
Device Shared in Other AD: No
Redirect: No
N 032600; 3;21:00:00:1b:32:86:fe:8b;20:00:00:1b:32:86:fe:8b; na
FC4s: FCP
PortSymb: [6] "qlt0,0"
NodeSymb: [9] "db10-san2"
Fabric Port Name: 20:26:00:05:1e:9a:8e:be
Permanent Port Name: 21:00:00:1b:32:86:fe:8b
Port Index: 38
Share Area: No
Device Shared in Other AD: No
Redirect: No
N 032700; 3;21:00:00:1b:32:86:2b:8c;20:00:00:1b:32:86:2b:8c; na
FC4s: FCP
PortSymb: [6] "qlt0,0"
NodeSymb: [9] "db10-san3"
Fabric Port Name: 20:27:00:05:1e:9a:8e:be
Permanent Port Name: 21:00:00:1b:32:86:2b:8c
Port Index: 39
Share Area: No
Device Shared in Other AD: No
Redirect: No
N 032800; 3;21:00:00:1b:32:86:31:8c;20:00:00:1b:32:86:31:8c; na

FC4s: FCP
PortSymb: [6] "qlt0,0"
NodeSymb: [9] "db10-san4"
Fabric Port Name: 20:28:00:05:1e:9a:8e:be
Permanent Port Name: 21:00:00:1b:32:86:31:8c
Port Index: 40
Share Area: No
Device Shared in Other AD: No
Redirect: No
N 032900; 3;21:00:00:1b:32:86:1e:8c;20:00:00:1b:32:86:1e:8c; na
FC4s: FCP
PortSymb: [6] "qlt0,0"
NodeSymb: [9] "db10-san5"
Fabric Port Name: 20:29:00:05:1e:9a:8e:be
Permanent Port Name: 21:00:00:1b:32:86:1e:8c
Port Index: 41
Share Area: No
Device Shared in Other AD: No
Redirect: No
N 032a00; 3;21:00:00:1b:32:86:b0:8b;20:00:00:1b:32:86:b0:8b; na
FC4s: FCP
PortSymb: [6] "qlt0,0"
NodeSymb: [9] "db11-san1"
Fabric Port Name: 20:2a:00:05:1e:9a:8e:be
Permanent Port Name: 21:00:00:1b:32:86:b0:8b
Port Index: 42
Share Area: No
Device Shared in Other AD: No
Redirect: No
N 032b00; 3;21:00:00:1b:32:86:ba:8b;20:00:00:1b:32:86:ba:8b; na
FC4s: FCP
PortSymb: [6] "qlt0,0"
NodeSymb: [9] "db11-san2"
Fabric Port Name: 20:2b:00:05:1e:9a:8e:be
Permanent Port Name: 21:00:00:1b:32:86:ba:8b
Port Index: 43
Share Area: No
Device Shared in Other AD: No
Redirect: No
N 032c00; 3;21:00:00:1b:32:86:70:8c;20:00:00:1b:32:86:70:8c; na
FC4s: FCP
PortSymb: [6] "qlt0,0"
NodeSymb: [9] "db11-san3"
Fabric Port Name: 20:2c:00:05:1e:9a:8e:be
Permanent Port Name: 21:00:00:1b:32:86:70:8c
Port Index: 44
Share Area: No
Device Shared in Other AD: No
Redirect: No
N 032d00; 3;21:00:00:1b:32:86:a9:8b;20:00:00:1b:32:86:a9:8b; na
FC4s: FCP
PortSymb: [6] "qlt0,0"
NodeSymb: [9] "db11-san4"
Fabric Port Name: 20:2d:00:05:1e:9a:8e:be
Permanent Port Name: 21:00:00:1b:32:86:a9:8b
Port Index: 45
Share Area: No
Device Shared in Other AD: No
Redirect: No
N 032e00; 3;21:00:00:1b:32:86:91:8c;20:00:00:1b:32:86:91:8c; na
FC4s: FCP
PortSymb: [6] "qlt0,0"

NodeSymb: [9] "db11-san5"
Fabric Port Name: 20:2e:00:05:1e:9a:8e:be
Permanent Port Name: 21:00:00:1b:32:86:91:8c
Port Index: 46
Share Area: No
Device Shared in Other AD: No
Redirect: No
N 032f00; 3;21:00:00:1b:32:86:a8:8b;20:00:00:1b:32:86:a8:8b; na
FC4s: FCP
PortSymb: [6] "qlt0,0"
NodeSymb: [9] "db12-san1"
Fabric Port Name: 20:2f:00:05:1e:9a:8e:be
Permanent Port Name: 21:00:00:1b:32:86:a8:8b
Port Index: 47
Share Area: No
Device Shared in Other AD: No
Redirect: No
N 033000; 3;21:00:00:1b:32:86:26:8c;20:00:00:1b:32:86:26:8c; na
FC4s: FCP
PortSymb: [6] "qlt0,0"
NodeSymb: [9] "db12-san2"
Fabric Port Name: 20:30:00:05:1e:9a:8e:be
Permanent Port Name: 21:00:00:1b:32:86:26:8c
Port Index: 48
Share Area: No
Device Shared in Other AD: No
Redirect: No
N 033100; 3;21:00:00:1b:32:86:9a:8c;20:00:00:1b:32:86:9a:8c; na
FC4s: FCP
PortSymb: [6] "qlt0,0"
NodeSymb: [9] "db12-san3"
Fabric Port Name: 20:31:00:05:1e:9a:8e:be
Permanent Port Name: 21:00:00:1b:32:86:9a:8c
Port Index: 49
Share Area: No
Device Shared in Other AD: No
Redirect: No
N 033200; 3;21:00:00:1b:32:86:22:8c;20:00:00:1b:32:86:22:8c; na
FC4s: FCP
PortSymb: [6] "qlt0,0"
NodeSymb: [9] "db12-san4"
Fabric Port Name: 20:32:00:05:1e:9a:8e:be
Permanent Port Name: 21:00:00:1b:32:86:22:8c
Port Index: 50
Share Area: No
Device Shared in Other AD: No
Redirect: No
N 033300; 3;21:00:00:1b:32:86:ef:8b;20:00:00:1b:32:86:ef:8b; na
FC4s: FCP
PortSymb: [6] "qlt0,0"
NodeSymb: [9] "db12-san5"
Fabric Port Name: 20:33:00:05:1e:9a:8e:be
Permanent Port Name: 21:00:00:1b:32:86:ef:8b
Port Index: 51
Share Area: No
Device Shared in Other AD: No
Redirect: No
N 033400; 3;10:00:00:00:c9:8c:b9:8c;20:00:00:00:c9:8c:b9:8c; na
FC4s: IPFC FCP
NodeSymb: [36] "Emulex LPe12002-S FV1.00a12 DV2.40q "
Fabric Port Name: 20:34:00:05:1e:9a:8e:be
Permanent Port Name: 10:00:00:00:c9:8c:b9:8c

Port Index: 52
Share Area: No
Device Shared in Other AD: No
Redirect: No
N 033500; 3;10:00:00:00:c9:8c:b9:8d;20:00:00:00:c9:8c:b9:8d; na
FC4s: IPFC FCP
NodeSymb: [36] "Emulex LPe12002-S FV1.00a12 DV2.40q "
Fabric Port Name: 20:35:00:05:1e:9a:8e:be
Permanent Port Name: 10:00:00:00:c9:8c:b9:8d
Port Index: 53
Share Area: No
Device Shared in Other AD: No
Redirect: No
N 033600; 3;10:00:00:00:c9:8c:b9:8a;20:00:00:00:c9:8c:b9:8a; na
FC4s: IPFC FCP
NodeSymb: [36] "Emulex LPe12002-S FV1.00a12 DV2.40q "
Fabric Port Name: 20:36:00:05:1e:9a:8e:be
Permanent Port Name: 10:00:00:00:c9:8c:b9:8a
Port Index: 54
Share Area: No
Device Shared in Other AD: No
Redirect: No
N 033700; 3;10:00:00:00:c9:8c:b9:8b;20:00:00:00:c9:8c:b9:8b; na
FC4s: IPFC FCP
NodeSymb: [39] "Emulex LPe12002-S FV1.00a12 DV2.40q db9"
Fabric Port Name: 20:37:00:05:1e:9a:8e:be
Permanent Port Name: 10:00:00:00:c9:8c:b9:8b
Port Index: 55
Share Area: No
Device Shared in Other AD: No
Redirect: No
N 033800; 3;10:00:00:00:c9:8c:b9:c6;20:00:00:00:c9:8c:b9:c6; na
FC4s: IPFC FCP
NodeSymb: [36] "Emulex LPe12002-S FV1.00a12 DV2.40q "
Fabric Port Name: 20:38:00:05:1e:9a:8e:be
Permanent Port Name: 10:00:00:00:c9:8c:b9:c6
Port Index: 56
Share Area: No
Device Shared in Other AD: No
Redirect: No
N 033900; 3;10:00:00:00:c9:8c:b9:c7;20:00:00:00:c9:8c:b9:c7; na
FC4s: IPFC FCP
NodeSymb: [36] "Emulex LPe12002-S FV1.00a12 DV2.40q "
Fabric Port Name: 20:39:00:05:1e:9a:8e:be
Permanent Port Name: 10:00:00:00:c9:8c:b9:c7
Port Index: 57
Share Area: No
Device Shared in Other AD: No
Redirect: No
N 033a00; 3;10:00:00:00:c9:8c:b9:7c;20:00:00:00:c9:8c:b9:7c; na
FC4s: IPFC FCP
NodeSymb: [36] "Emulex LPe12002-S FV1.00a12 DV2.40q "
Fabric Port Name: 20:3a:00:05:1e:9a:8e:be
Permanent Port Name: 10:00:00:00:c9:8c:b9:7c
Port Index: 58
Share Area: No
Device Shared in Other AD: No
Redirect: No
N 033b00; 3;10:00:00:00:c9:8c:b9:7d;20:00:00:00:c9:8c:b9:7d; na
FC4s: IPFC FCP
NodeSymb: [40] "Emulex LPe12002-S FV1.00a12 DV2.40q db10"
Fabric Port Name: 20:3b:00:05:1e:9a:8e:be

Permanent Port Name: 10:00:00:00:c9:8c:b9:7d
Port Index: 59
Share Area: No
Device Shared in Other AD: No
Redirect: No
N 033c00; 3;10:00:00:00:c9:8c:ba:10;20:00:00:00:c9:8c:ba:10; na
FC4s: IPFC FCP
NodeSymb: [36] "Emulex LPe12002-S FV1.00a12 DV2.40q "
Fabric Port Name: 20:3c:00:05:1e:9a:8e:be
Permanent Port Name: 10:00:00:00:c9:8c:ba:10
Port Index: 60
Share Area: No
Device Shared in Other AD: No
Redirect: No
N 033d00; 3;10:00:00:00:c9:8c:ba:11;20:00:00:00:c9:8c:ba:11; na
FC4s: IPFC FCP
NodeSymb: [36] "Emulex LPe12002-S FV1.00a12 DV2.40q "
Fabric Port Name: 20:3d:00:05:1e:9a:8e:be
Permanent Port Name: 10:00:00:00:c9:8c:ba:11
Port Index: 61
Share Area: No
Device Shared in Other AD: No
Redirect: No
N 033e00; 3;10:00:00:00:c9:8c:b9:aa;20:00:00:00:c9:8c:b9:aa; na
FC4s: IPFC FCP
NodeSymb: [36] "Emulex LPe12002-S FV1.00a12 DV2.40q "
Fabric Port Name: 20:3e:00:05:1e:9a:8e:be
Permanent Port Name: 10:00:00:00:c9:8c:b9:aa
Port Index: 62
Share Area: No
Device Shared in Other AD: No
Redirect: No
N 033f00; 3;10:00:00:00:c9:8c:b9:ab;20:00:00:00:c9:8c:b9:ab; na
FC4s: IPFC FCP
NodeSymb: [40] "Emulex LPe12002-S FV1.00a12 DV2.40q db11"
Fabric Port Name: 20:3f:00:05:1e:9a:8e:be
Permanent Port Name: 10:00:00:00:c9:8c:b9:ab
Port Index: 63
Share Area: No
Device Shared in Other AD: No
Redirect: No
N 034000; 3;10:00:00:00:c9:8c:b9:fe;20:00:00:00:c9:8c:b9:fe; na
FC4s: IPFC FCP
NodeSymb: [36] "Emulex LPe12002-S FV1.00a12 DV2.40q "
Fabric Port Name: 20:40:00:05:1e:9a:8e:be
Permanent Port Name: 10:00:00:00:c9:8c:b9:fe
Port Index: 64
Share Area: No
Device Shared in Other AD: No
Redirect: No
N 034100; 3;10:00:00:00:c9:8c:b9:ff;20:00:00:00:c9:8c:b9:ff; na
FC4s: IPFC FCP
NodeSymb: [36] "Emulex LPe12002-S FV1.00a12 DV2.40q "
Fabric Port Name: 20:41:00:05:1e:9a:8e:be
Permanent Port Name: 10:00:00:00:c9:8c:b9:ff
Port Index: 65
Share Area: No
Device Shared in Other AD: No
Redirect: No
N 034200; 3;10:00:00:00:c9:8c:b9:be;20:00:00:00:c9:8c:b9:be; na
FC4s: IPFC FCP
NodeSymb: [36] "Emulex LPe12002-S FV1.00a12 DV2.40q "

Fabric Port Name: 20:42:00:05:1e:9a:8e:be
Permanent Port Name: 10:00:00:00:c9:8c:b9:be
Port Index: 66
Share Area: No
Device Shared in Other AD: No
Redirect: No
N 034300; 3;10:00:00:00:c9:8c:b9:bf;20:00:00:00:c9:8c:b9:bf; na
FC4s: IPFC FCP
NodeSymb: [40] "Emulex LPe12002-S FV1.00a12 DV2.40q db12"
Fabric Port Name: 20:43:00:05:1e:9a:8e:be
Permanent Port Name: 10:00:00:00:c9:8c:b9:bf
Port Index: 67
Share Area: No
Device Shared in Other AD: No
Redirect: No
The Local Name Server has 61 entries }

Zoning Information

Defined configuration:
cfg: COMSTAR_1stZONE_LOGS_2ndZone
DB_EMLX_AND_COMSTAR_PORTS; DB_QLC_AND_6140_LOG_PORTS
cfg: NO_DEVS One_Port
cfg: dbsan_to_port_mapping
db1_thru_db4_devs; db5_thru_db8_devs; db9_thru_12_all
zone: ALL_DEVICES
1,62; 1,63; 1,64; 1,65; 1,66; 1,67; 1,68; 1,69; 1,70; 1,71;
1,72; 1,73; 1,74; 1,75; 1,76; 1,77; 1,78; 1,79;
20:00:00:00:c9:8c:52:8e; 20:00:00:00:c9:8c:52:8f;
20:00:00:00:c9:8c:b9:7c; 20:00:00:00:c9:8c:b9:7d;
20:00:00:00:c9:8c:b9:8a; 20:00:00:00:c9:8c:b9:8b;
20:00:00:00:c9:8c:b9:8c; 20:00:00:00:c9:8c:b9:8d;
20:00:00:00:c9:8c:b9:96; 20:00:00:00:c9:8c:b9:97;
20:00:00:00:c9:8c:b9:98; 20:00:00:00:c9:8c:b9:99;
20:00:00:00:c9:8c:b9:a0; 20:00:00:00:c9:8c:b9:a1;
20:00:00:00:c9:8c:b9:a2; 20:00:00:00:c9:8c:b9:a3;
20:00:00:00:c9:8c:b9:a4; 20:00:00:00:c9:8c:b9:a5;
20:00:00:00:c9:8c:b9:a8; 20:00:00:00:c9:8c:b9:a9;
20:00:00:00:c9:8c:b9:aa; 20:00:00:00:c9:8c:b9:ab;
20:00:00:00:c9:8c:b9:b0; 20:00:00:00:c9:8c:b9:b1;
20:00:00:00:c9:8c:b9:b4; 20:00:00:00:c9:8c:b9:b5;
20:00:00:00:c9:8c:b9:b6; 20:00:00:00:c9:8c:b9:b7;
20:00:00:00:c9:8c:b9:ba; 20:00:00:00:c9:8c:b9:bb;
20:00:00:00:c9:8c:b9:be; 20:00:00:00:c9:8c:b9:bf;
20:00:00:00:c9:8c:b9:c0; 20:00:00:00:c9:8c:b9:c1;
20:00:00:00:c9:8c:b9:c2; 20:00:00:00:c9:8c:b9:c3;
20:00:00:00:c9:8c:b9:c4; 20:00:00:00:c9:8c:b9:c5;
20:00:00:00:c9:8c:b9:c6; 20:00:00:00:c9:8c:b9:c7;
20:00:00:00:c9:8c:b9:c8; 20:00:00:00:c9:8c:b9:c9;
20:00:00:00:c9:8c:b9:d6; 20:00:00:00:c9:8c:b9:d7;
20:00:00:00:c9:8c:b9:e0; 20:00:00:00:c9:8c:b9:e1;
20:00:00:00:c9:8c:b9:e4; 20:00:00:00:c9:8c:b9:e5;
20:00:00:00:c9:8c:b9:ee; 20:00:00:00:c9:8c:b9:ef;
20:00:00:00:c9:8c:b9:fe; 20:00:00:00:c9:8c:b9:fd;
20:00:00:00:c9:8c:b9:fe; 20:00:00:00:c9:8c:b9:ff;
20:00:00:00:c9:8c:ba:02; 20:00:00:00:c9:8c:ba:03;
20:00:00:00:c9:8c:ba:10; 20:00:00:00:c9:8c:ba:11;
20:00:00:00:c9:8c:ba:18; 20:00:00:00:c9:8c:ba:19;
20:00:00:00:c9:8c:ba:1c; 20:00:00:00:c9:8c:ba:1d;
20:00:00:00:c9:8c:ba:22; 20:00:00:00:c9:8c:ba:23;
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20:00:00:00:c9:8c:ba:26; 20:00:00:00:c9:8c:ba:27;
20:00:00:00:c9:8c:ba:28; 20:00:00:00:c9:8c:ba:29;

20:00:00:00:c9:8c:ba:2e; 20:00:00:00:c9:8c:ba:2f;
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20:00:00:1b:32:92:e7:19; 20:00:00:1b:32:92:f3:19;
20:02:00:a0:b8:32:35:98; 20:02:00:a0:b8:48:a6:bc;
20:02:00:a0:b8:48:dd:78; 20:02:00:a0:b8:56:11:f4;
20:02:00:a0:b8:56:13:90; 20:02:00:a0:b8:56:28:fc;
20:02:00:a0:b8:56:2c:ae; 20:02:00:a0:b8:56:3b:58;
20:02:00:a0:b8:56:3e:02; 20:02:00:a0:b8:56:50:9a;
20:02:00:a0:b8:56:54:48; 20:02:00:a0:b8:56:5a:b8;
20:02:00:a0:b8:56:5a:e8; 20:02:00:a0:b8:56:5c:20;
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20:02:00:a0:b8:56:5f:9e; 20:02:00:a0:b8:56:5f:a0;
20:02:00:a0:b8:56:5f:cc; 20:02:00:a0:b8:56:63:40;
20:02:00:a0:b8:56:63:aa; 20:02:00:a0:b8:56:63:ac;
20:02:00:a0:b8:56:63:ae; 20:02:00:a0:b8:56:63:b0;
20:02:00:a0:b8:56:63:c6; 20:02:00:a0:b8:56:63:ca;
20:02:00:a0:b8:56:63:fa; 20:02:00:a0:b8:56:64:0c;
20:02:00:a0:b8:56:64:1a; 20:02:00:a0:b8:56:64:5c;
20:04:00:a0:b8:56:5f:98; 20:08:00:a0:b8:56:64:1e
zone: DB_EMLX_AND_COMSTAR_PORTS
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3,60; 3,61; 3,62; 3,63; 3,64; 3,65; 3,66; 3,67
zone: DB_QLC_AND_6140_LOG_PORTS

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zone: One_Port
1,61
zone: db1_thru_db4_devs
1,0; 1,1; 1,2; 1,3; 1,4; 1,5; 1,6; 1,7; 1,8; 1,9; 1,10; 1,11;
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1,48; 1,49
zone: db5_db12_all_device
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20:02:00:a0:b8:56:5f:92; 20:02:00:a0:b8:56:63:aa;
20:02:00:a0:b8:56:63:ac; 20:02:00:a0:b8:56:63:ca;
20:04:00:a0:b8:56:5f:98
zone: db5_db8_p1_db5san1_db5san3
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zone: db5_db8_p2_db5san4_db6san1
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zone: db5_db8_p3_db6san2_db6san4
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zone: db5_db8_p4_db6san5_db7san3
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zone: db5_db8_p5_db7san4_db8san1
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zone: db5_db8_p6_db8san2_db8san5
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zone: db5_thru_db8_devs
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2,70; 2,71
zone: db5san1thru5_to_db5thru8_data1
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zone: db6san1thru5_to_db5thru8_data2	1,47
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zone: db7san1thru5_to_db5thru8_data3	1,49
2,34; 2,38; 2,42; 2,46; 2,50; 2,51; 2,52; 2,53; 2,54	2,0
zone: db8san1thru5_to_db5thru8_data4	2,1
2,8; 2,9; 2,10; 2,11; 2,35; 2,39; 2,43; 2,47; 2,55	2,2
zone: db9_thru_12_all	2,3
3,8; 3,9; 3,10; 3,11; 3,12; 3,13; 3,14; 3,15; 3,20; 3,24;	2,4
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zone: four_node1	2,9
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3,62; 3,63; 3,64; 3,65; 3,66; 3,67	2,33
Effective configuration:	2,34
cfg: COMSTAR_1stZONE_LOGS_2ndZone	2,35
zone: DB_EMLX_AND_COMSTAR_PORTS	2,36
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1,2	2,39
1,3	2,40
1,4	2,41
1,5	2,42
1,6	2,43
1,7	2,44
1,8	2,45
1,9	2,46
1,10	2,47
1,11	2,48
1,12	2,49
1,13	2,50
1,14	2,51
1,15	2,52
1,16	2,53
1,17	2,54
1,18	2,55
1,19	2,64
1,20	2,65
1,21	2,66
1,22	2,67
1,23	2,68
1,24	2,69
1,28	2,70
1,32	2,71
1,33	3,8
1,34	3,9
1,35	3,10
1,36	3,11
1,37	3,12
1,38	3,13
1,39	3,14
1,40	3,15
1,41	3,32
1,42	3,33
1,43	3,34
1,44	3,35
1,45	3,36
1,46	3,37
	3,38

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3,66
3,67
zone: DB_QLC_AND_6140_LOG_PORTS
1,64
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SFP Serial ID Information

Port 0: id (sw) Vendor: BROCADE	Serial No: UAF109100000BFH	Speed: 200,400,800_MB/s
Port 1: id (sw) Vendor: BROCADE	Serial No: UAF109100000BER	Speed: 200,400,800_MB/s
Port 2: id (sw) Vendor: BROCADE	Serial No: UAF109100000BEV	Speed: 200,400,800_MB/s
Port 3: id (sw) Vendor: BROCADE	Serial No: UAF109100000BEN	Speed: 200,400,800_MB/s
Port 4: id (sw) Vendor: BROCADE	Serial No: UAF109100000BFN	Speed: 200,400,800_MB/s
Port 5: id (sw) Vendor: BROCADE	Serial No: UAF109100000BFR	Speed: 200,400,800_MB/s
Port 6: id (sw) Vendor: BROCADE	Serial No: UAF109100000BFC	Speed: 200,400,800_MB/s
Port 7: id (sw) Vendor: BROCADE	Serial No: UAF109100000BEU	Speed: 200,400,800_MB/s
Port 8: id (sw) Vendor: BROCADE	Serial No: UAF10911000004HV	Speed: 200,400,800_MB/s
Port 9: id (sw) Vendor: BROCADE	Serial No: UAF10911000002FU	Speed: 200,400,800_MB/s
Port 10: id (sw) Vendor: BROCADE	Serial No: UAF109100000A3T	Speed: 200,400,800_MB/s
Port 11: id (sw) Vendor: BROCADE	Serial No: UAF109110000058P	Speed: 200,400,800_MB/s
Port 12: id (sw) Vendor: BROCADE	Serial No: UAF109100000AN3	Speed: 200,400,800_MB/s
Port 13: id (sw) Vendor: BROCADE	Serial No: UAF109100000A2R	Speed: 200,400,800_MB/s
Port 14: id (sw) Vendor: BROCADE	Serial No: UAF109100000AMM	Speed: 200,400,800_MB/s
Port 15: id (sw) Vendor: BROCADE	Serial No: UAF109100000AKZ	Speed: 200,400,800_MB/s
Port 16: id (sw) Vendor: BROCADE	Serial No: UAF109100000ADF	Speed: 200,400,800_MB/s
Port 17: id (sw) Vendor: BROCADE	Serial No: UAF1091100000154	Speed: 200,400,800_MB/s
Port 18: id (sw) Vendor: BROCADE	Serial No: UAF109100000ABS	Speed: 200,400,800_MB/s
Port 19: id (sw) Vendor: BROCADE	Serial No: UAF109100000AKL	Speed: 200,400,800_MB/s
Port 20: id (sw) Vendor: BROCADE	Serial No: UAF109110000015M	Speed: 200,400,800_MB/s
Port 21: id (sw) Vendor: BROCADE	Serial No: UAF109100000B89	Speed: 200,400,800_MB/s
Port 22: id (sw) Vendor: BROCADE	Serial No: UAF1091100000159	Speed: 200,400,800_MB/s
Port 23: id (sw) Vendor: BROCADE	Serial No: UAF109100000AND	Speed: 200,400,800_MB/s
Port 24: id (sw) Vendor: BROCADE	Serial No: UAF109100000APW	Speed: 200,400,800_MB/s
Port 25: id (sw) Vendor: BROCADE	Serial No: UAF109100000ADK	Speed: 200,400,800_MB/s
Port 26: id (sw) Vendor: BROCADE	Serial No: UAF109100000A3P	Speed: 200,400,800_MB/s
Port 27: id (sw) Vendor: BROCADE	Serial No: UAF109100000AEV	Speed: 200,400,800_MB/s
Port 28: id (sw) Vendor: BROCADE	Serial No: UAF109100000A2C	Speed: 200,400,800_MB/s
Port 29: id (sw) Vendor: BROCADE	Serial No: UAF109100000B7H	Speed: 200,400,800_MB/s
Port 30: id (sw) Vendor: BROCADE	Serial No: UAF109100000B80	Speed: 200,400,800_MB/s
Port 31: id (sw) Vendor: BROCADE	Serial No: UAF10911000004J1	Speed: 200,400,800_MB/s
Port 32: id (sw) Vendor: BROCADE	Serial No: UAF109100000BFK	Speed: 200,400,800_MB/s
Port 33: id (sw) Vendor: BROCADE	Serial No: UAF109100000BET	Speed: 200,400,800_MB/s
Port 34: id (sw) Vendor: BROCADE	Serial No: UAF109100000BFJ	Speed: 200,400,800_MB/s
Port 35: id (sw) Vendor: BROCADE	Serial No: UAF109100000BEP	Speed: 200,400,800_MB/s
Port 36: id (sw) Vendor: BROCADE	Serial No: UAF10911000004JO	Speed: 200,400,800_MB/s
Port 37: id (sw) Vendor: BROCADE	Serial No: UAF109110000011W	Speed: 200,400,800_MB/s
Port 38: id (sw) Vendor: BROCADE	Serial No: UAF10911000004HR	Speed: 200,400,800_MB/s
Port 39: id (sw) Vendor: BROCADE	Serial No: UAF1091100000581	Speed: 200,400,800_MB/s
Port 40: id (sw) Vendor: BROCADE	Serial No: UAF109100000BEY	Speed: 200,400,800_MB/s
Port 41: id (sw) Vendor: BROCADE	Serial No: UAF109100000BES	Speed: 200,400,800_MB/s

Port 42: id (sw) Vendor: BROCADE	Serial No: UAF109100000BFB Speed: 200,400,800_MB/s
Port 43: id (sw) Vendor: BROCADE	Serial No: UAF109100000BFE Speed: 200,400,800_MB/s
Port 44: id (sw) Vendor: BROCADE	Serial No: UAF10911000058G Speed: 200,400,800_MB/s
Port 45: id (sw) Vendor: BROCADE	Serial No: UAF10911000057Z Speed: 200,400,800_MB/s
Port 46: id (sw) Vendor: BROCADE	Serial No: UAF109110000585 Speed: 200,400,800_MB/s
Port 47: id (sw) Vendor: BROCADE	Serial No: UAF109110000580 Speed: 200,400,800_MB/s
Port 48: id (sw) Vendor: BROCADE	Serial No: UAF109100000BR3 Speed: 200,400,800_MB/s
Port 49: id (sw) Vendor: BROCADE	Serial No: UAF109100000BR1 Speed: 200,400,800_MB/s
Port 50: id (sw) Vendor: BROCADE	Serial No: UAF109100000BPM Speed: 200,400,800_MB/s
Port 51: id (sw) Vendor: BROCADE	Serial No: UAF109100000BR0 Speed: 200,400,800_MB/s
Port 52: id (sw) Vendor: BROCADE	Serial No: UAF109100000BPZ Speed: 200,400,800_MB/s
Port 53: id (sw) Vendor: BROCADE	Serial No: UAF109100000BRB Speed: 200,400,800_MB/s
Port 54: id (sw) Vendor: BROCADE	Serial No: UAF109100000BR2 Speed: 200,400,800_MB/s
Port 55: id (sw) Vendor: BROCADE	Serial No: UAF109100000BPP Speed: 200,400,800_MB/s
Port 56: id (sw) Vendor: BROCADE	Serial No: UAF109100000F7F Speed: 200,400,800_MB/s
Port 57: id (sw) Vendor: BROCADE	Serial No: UAF109100000BLE Speed: 200,400,800_MB/s
Port 58: id (sw) Vendor: BROCADE	Serial No: UAF109100000F7A Speed: 200,400,800_MB/s
Port 59: id (sw) Vendor: BROCADE	Serial No: UAF109100000F79 Speed: 200,400,800_MB/s
Port 60: id (sw) Vendor: BROCADE	Serial No: UAF109100000F78 Speed: 200,400,800_MB/s
Port 61: id (sw) Vendor: BROCADE	Serial No: UAF109100000F7E Speed: 200,400,800_MB/s
Port 62: id (sw) Vendor: BROCADE	Serial No: UAF109100000BLJ Speed: 200,400,800_MB/s
Port 63: id (sw) Vendor: BROCADE	Serial No: UAF109100000DT0 Speed: 200,400,800_MB/s
Port 64: id (sw) Vendor: BROCADE	Serial No: UAF109100000BPS Speed: 200,400,800_MB/s
Port 65: id (sw) Vendor: BROCADE	Serial No: UAF109100000BPR Speed: 200,400,800_MB/s
Port 66: id (sw) Vendor: BROCADE	Serial No: UAF109100000BR4 Speed: 200,400,800_MB/s
Port 67: id (sw) Vendor: BROCADE	Serial No: UAF109100000BPY Speed: 200,400,800_MB/s
Port 68: id (sw) Vendor: BROCADE	Serial No: UAF109100000BPN Speed: 200,400,800_MB/s
Port 69: id (sw) Vendor: BROCADE	Serial No: UAF109100000BR5 Speed: 200,400,800_MB/s
Port 70: id (sw) Vendor: BROCADE	Serial No: UAF109100000BWW Speed: 200,400,800_MB/s
Port 71: id (sw) Vendor: BROCADE	Serial No: UAF109100000BR6 Speed: 200,400,800_MB/s
Port 72: id (sw) Vendor: BROCADE	Serial No: UAF109100000DT2 Speed: 200,400,800_MB/s
Port 73: id (sw) Vendor: BROCADE	Serial No: UAF109100000BLH Speed: 200,400,800_MB/s
Port 74: id (sw) Vendor: BROCADE	Serial No: UAF109100000DT1 Speed: 200,400,800_MB/s
Port 75: id (sw) Vendor: BROCADE	Serial No: UAF109100000DSZ Speed: 200,400,800_MB/s
Port 76: id (sw) Vendor: BROCADE	Serial No: UAF109100000F7G Speed: 200,400,800_MB/s
Port 77: id (sw) Vendor: BROCADE	Serial No: UAF109100000BLG Speed: 200,400,800_MB/s
Port 78: id (sw) Vendor: BROCADE	Serial No: UAF1091000009BL Speed: 200,400,800_MB/s
Port 79: id (sw) Vendor: BROCADE	Serial No: UAF109100000F6Z Speed: 200,400,800_MB/s